Software House

C•CURE Hardware Configuration Guide

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Table of Contents

Preface 15

Finding More Information 16

Conventions 17

Software House Customer Support Center 18

Chapter 1 - Configuring IPv6 on C•CURE 9000 Servers, Clients, and iSTAR Controllers 20

IPv6 Configuration 21

Requirements and Restrictions 21
C•CURE 9000 Server System and Client System IPv6 Configuration 21
Multi-homed Standalone Servers 22
iSTAR Controller Configuration 22
IP-ACM Configuration 22

Chapter 2 - The Hardware Pane 24

Using the Hardware Pane 25

Partitions 25

Hardware Tree 27

Hardware Tree Objects 27
Hardware Tree Tasks 28
Creating a New Object in the Hardware Tree 28
Deleting an Object in the Hardware Tree 29
Viewing a List of Hardware Tree Objects 29
Add or Remove Reader Card Formats 29
Using Drag and Drop in the Hardware Tree 31
Input calibration 32
Supported input states for the Calibratable input type 32
Input uncalibration 35

Groups Tab for Hardware Devices 36

Editing a Hardware Device Group 36
Adding a Hardware Device to a Group 36
Hardware Groups Tab Definitions 36
Add a Hardware Device to Group from a Dynamic View 37
Refreshing the Hardware Tree 37

Hardware Folders 38

C•CURE Controllers and Dependent Objects 38
Creating a New Hardware Folder 39
Creating and Using a New Hardware Folder Template 39
Renaming a Hardware Folder 40

Templates 41

Creating a Template 41
Editing a Template 42

Creating an Object from a Template 43
Using Templates for Controller Inputs, Outputs, and Readers 43
Deleting a Template 45
Viewing a List of Templates 45
Copying, Pasting, and Renaming Clusters and Controllers 46
Privileges 47
Important Copy and Paste Process Information 47
Copy & Paste Tasks 47
Renaming Clusters and Controllers 55
Trigger Target Events 59
Chapter 3 - Maintenance Mode 61
Maintenance Mode Dialog Box 62
Maintenance Mode Overview 63
Maintenance Mode Objects Supported 64
Maintenance Mode Configuration Tasks 65
Configuring Privileges to Turn Maintenance Mode On and Off 65
Configuring the Application Layout for Maintenance Mode Filtering 65
Turning Maintenance Mode On and Off 66
iSTAR Cluster 66
iSTAR Controller or apC Controller 66
Taking an iSTAR or apC Controller Out of Maintenance Mode. 67
Viewing Maintenance Mode Objects in the Dynamic View 67
Filtering Partitions and Maintenance Mode Objects in the Dynamic View 67
Chapter 4 - Configuring Dialup 68
iSTAR Dialup 69
Dialup Limitations 69
iSTAR Dialup Configuration Sequence 70
Configuring the iSTAR Comm Port 71
iSTAR Comm Port State Images Tab 72
Configuring the Host Modem 74
Creating a Cluster for Dialup 76
Chapter 5 - Configuring C•CURE iSTAR Clusters 79
Cluster Communications Overview 80
Cluster Configuration and Distributed Management 80
Networked iSTAR Controllers (Clusters) 81
Establishing Connections Via the Primary Communications Path 83
Setting Up the Primary Communications Path 83
Downloading Cardholder and Configuration Information 83
Maintaining Communications 84
Establishing a Secondary Communications Path 84
Distributed Cluster Management 85
Unassigned Folder 85
Configuring iSTAR Clusters 86
Creating an iSTAR Cluster 87
Creating and Using an iSTAR Cluster Template 88
iSTAR Cluster Editor 90

iSTAR Cluster Editor Tabs 90
Accessing the iSTAR Cluster Editor 90
iSTAR Cluster General Tab 92
iSTAR Cluster General Tab Tasks 92
Adding a Controller to a Cluster 92
Removing a Controller from a Cluster 92
iSTAR Cluster General Tab Definitions 93
iSTAR Cluster Communications Tab 94
Number of Failed Attempts Before Connection Fails 97
iSTAR Cluster - Cluster Tab 98
iSTAR Cluster Miscellaneous Tab 99
iSTAR Cluster Area Tab 100
Cluster Antipassback Communications Failure Mode 100
Global Antipassback for the Cluster 100
Area Tab Field Definitions 101
iSTAR Cluster Encryption Tab 103
Communication Failure 104
iSTAR Cluster Triggers Tab 105
iSTAR Cluster Dialup Configuration Tab 111
iSTAR Cluster Status Tab 112
iSTAR Cluster State Images Tab 113
Chapter 6 - Configuring C•CURE iSTAR Controllers 114
Understanding C•CURE iSTAR Controllers 115
Configuration Overview for iSTAR Controllers 116
iSTAR Pro Configuration Summary 116
iSTAR eX and iSTAR Edge Configuration Summary 117
iSTAR Ultra Configuration Summary 118
iSTAR Ultra Video Configuration Summary 119
iSTAR Ultra LT Configuration Summary 120
iSTAR Controller Tasks 121
Creating an iSTAR Controller 121
Setting the iSTAR Controller Diagnostic Password 122
Creating a Controller Template 124
Deleting an iSTAR Controller 125
Editing an iSTAR Controller 126
Enabling or Disabling SNMP on the Controller 126
Viewing a List of iSTAR Controllers 126
Viewing a List of GCM Board Serial Numbers 127
Viewing Controller SD Cards with Encryption 127
Using the iSTAR Controller Context Menu 128
Using Set Property for an iSTAR Controller 130
Updating iSTAR Firmware (Ethernet Connections) 130
Updating iSTAR Firmware (Dial-up Connections) 132
Updating Firmware Using ICU 135
Changing the Time Zone of an iSTAR Controller 136
Creating a Local Backup (Ultra, Ultra SE, Ultra LT) 136
iSTAR Pro to iSTAR Ultra SE conversion 137
iSTAR Edge to iSTAR Edge G2 Conversion 139
iSTAR Ultra to iSTAR Ultra G2 Conversion 141

iSTAR Controller Editor 143

iSTAR Classic Controller Editor 143
iSTAR Pro Controller Editor 143
iSTAR eX Controller Editor 144
iSTAR Edge Controller Editor 145
iSTAR Ultra Controller Editor 145
iSTAR Ultra Video Controller Editor 146
iSTAR Ultra LT Controller Editor 146

iSTAR Controller Editor Tabs 148

Basic Tabs 148
iSTAR Specific Tabs 148
iSTAR Controller General Tab 148
iSTAR Ultra LT Controller General Tab 154
iSTAR Ultra Controller Advanced Tab 157
Conditional Access 157
Fast Personnel Download 158
iSTAR Ultra Controller High Assurance Tab 158
iSTAR Controller Triggers Tab 158
iSTAR Controller Status Tab 158
iSTAR Controller Network Status Tab 160
iSTAR Controller User Defined Fields Tab 161
iSTAR Controller State Images Tab 161
iSTAR Schlage Wireless PIMs Tab 161
iSTAR Controller Boards Tab (iSTAR Classic/Pro) 163
iSTAR eX and Edge Controller Inputs Tab 166
iSTAR Edge/eX Controller Outputs Tab 170
iSTAR Edge COM1/COM2/COM3 Tabs 171
iSTAR Edge Controller Wiegand Tab 173
iSTAR eX Controller Wiegand Tab 175
iSTAR eX COM1/COM2 Tabs 177
iSTAR Ultra Controller Editor Inputs Tab 180
iSTAR Ultra Controller Boards Tab 181
iSTAR Ultra Video Controller Boards Tab 183
iSTAR Ultra Controller IP-ACMs Tab 183
iSTAR Ultra COM1/COM2 Tabs 183
iSTAR Ultra LT Controller Inputs Tab 186
iSTAR Ultra LT Controller COM Port Tab 187
iSTAR Ultra IP-ACM Outputs Tab 189

iSTAR Ultra IP-ACM Editor 191

Accessing the iSTAR Ultra IP-ACM Editor 191
iSTAR Ultra IP-ACM Wiegand Tab 192
iSTAR Ultra IP-ACM RS-485 Tab 193
iSTAR Ultra IP-ACM Inputs Tab 193
iSTAR Ultra IP-ACM Status Tab 194

iSTAR Ultra Controller ACM Board Editor 195

iSTAR Ultra ACM Board Editor 195
iSTAR Ultra ACM Board Wiegand Tab 195
iSTAR Ultra ACM Board RS-485 Tab 196
iSTAR Ultra ACM RS-485 Device Port Editor 196
iSTAR Ultra ACM RS-485 Device Port Tabs 197
iSTAR Ultra RS-485 Device Port Readers Tab 197
iSTAR Ultra RS-485 Device Port ACM EXT Tab 198
iSTAR Ultra ACM Board Status Tab 199

iSTAR Classic/Pro Controller ACM Board Editor 201

iSTAR Classic/Pro ACM Board Editor 201
iSTAR ACM Board General Tab 201
iSTAR ACM Board Inputs Tab 202
iSTAR ACM Board Outputs Tab 203
iSTAR ACM Board Readers Tab 204
iSTAR ACM Board ACM Ext Tab 205
iSTAR Input Board Editor 207
Accessing the iSTAR Input Board Editor 208
Configuring iSTAR Input Boards 209
iSTAR Input Board General Tab 209
iSTAR Output Board Editor 211
Accessing the iSTAR Output Board Editor 211
Configuring iSTAR Output Boards 212
iSTAR Output Board General Tab 213
iSTAR Ultra Wireless Readers 215
Assa Abloy Aperio Hubs and Wireless Readers 215
Allegion Schlage PIMs and Wireless Readers 215
iSTAR Ultra Schlage Wireless Types of Connections 216
Wireless - PIM400 and PIM400-TD2 216
Summary Tables 217
Readers per Controller/Panel 219
iSTAR Aperio RS-485 Hub Board Editor (iSTAR Ultra only) 221
iSTAR Aperio RS-485 Hub Board Editor General Tab 221
iSTAR Aperio Hub Board Editor Input Tab 222
iSTAR Aperio Hub Board Editor Input Tab Definitions 222
iSTAR Aperio Hub Board Editor Readers Tab 223
iSTAR Aperio RS-485 Board Hub Editor Readers Tab Definitions 223
iSTAR PIM-485 Board Editor 224
iSTAR PIM-485 Board Editor General Tab 224
iSTAR PIM-485 Board Editor General Tab Definitions 225
iSTAR PIM-485 Board Editor Input Tab 225
iSTAR PIM-485 Board Editor Input Tab Definitions 225
iSTAR PIM-485 Board Editor Readers Tab 226
iSTAR PIM-485 Board Editor Readers Tab Definitions 226
iSTAR Input Editor 227
Accessing the iSTAR Input Editor 228
Configuring an iSTAR Input 230
iSTAR Input General Tab 231
iSTAR Input Intrusion Zone Tab 233
iSTAR Input Triggers Tab 234
iSTAR Input Status Tab 234
iSTAR Input State Images Tab 234
iSTAR Output Editor 236
Accessing the iSTAR Output Editor 236
Configuring an iSTAR Output 239
iSTAR Output General Tab 239
iSTAR Output Status Tab 240
iSTAR Output State Images Tab 240
iSTAR Reader Editor 242
Accessing the iSTAR Reader Editor 243
Configuring iSTAR Readers 243
iSTAR Reader General Tab 244

iSTAR Reader I/O Tab 245
iSTAR Reader Keypad Tab 246
iSTAR Reader Triggers Tab 248
iSTAR Reader Status Tab 248
iSTAR Reader Options Tab 250
After-Hours 251
High Assurance Tab 253
iSTAR Reader State Images Tab 254
iSTAR PIM-485 Reader Editor 256
iSTAR PIM-485 Reader I/O Tab 257
iSTAR Aperio Reader Editor 260
iSTAR Aperio Reader I/O Tab 261
iSTAR Aperio Reader Keypad Tab 263
Triggers Tab for iSTAR Devices 264
Defining a Trigger for an iSTAR Device 264
Removing a Trigger 265
iSTAR Triggers Tab Definitions 266
State Images Tab for iSTAR Devices 267
iSTAR State Images Tabs Definitions 267
Customizing State Images for an iSTAR Device 267
Restore a Default State Image 267
Chapter 7 - Configuring the IP-ACM 269
IP-ACM Overview 270
Limitations 270
IP-ACM Configuration Sequence 270
IP-ACM Offline Mode Configuration Information 272
Stored Credentials 272
Door Configuration 273
IP-ACM v1 to IP-ACM v2 Board Conversion 274
Requirements and Limitations 274
Configuring the IP-ACM 277
iSTAR Ultra IP-ACM Editor 279
Accessing the iSTAR Ultra IP-ACM Editor 279
iSTAR Ultra IP-ACM Inputs Tab 280
iSTAR Ultra IP-ACM Outputs Tab 281
iSTAR Ultra IP-ACM Wiegand Tab 282
iSTAR Ultra IP-ACM RS-485 Tab 283
iSTAR Ultra IP-ACM Triggers Tab 285
iSTAR Ultra IP-ACM Status Tab 285
Viewing the IP-ACM Board Serial Numbers 285
Chapter 8 - Configuring Advanced Processing Controllers (apC) 287
apC Panel Overview 288
Features of apC Panels 288
Inputs and Alarm Device States 290
Outputs and Readers 291
Optional Boards 291
apC Time Zones 292
Changing the Time Zone of an apC Controller 294

apC Time Zone Reports 294
apC Firmware Update 297
apC Controller Configuration Summary 299
apC Comm Port Editor 301
apC Comm Port Triggers Tab 305
apC Comm Port Status Tab 306
apC Comm Port State Images Tab 307
apC Controller Editor 309
apC Controller General Tab 310
apC Controller Communications Tab 311
apC Controller Inputs Tab 312
apC Controller Outputs Tab 312
apC Controller Readers Tab 313
apC Controller Add-On Board Tab 313
apC Controller Status Tab 313
apC Controller Triggers Tab 313
apC Controller Holiday Groups Tab 314
Configuring Holiday Groups for an apC Panel 314
apC Controller User Defined Fields Tab 316
apC Controller State Images Tab 316
apC Input Editor 318
apC Input General Tab 318
apC Input Board Triggers Tab 319
apC Input Board - Status Tab 319
apC Inputs State Images Tab 320
apC Output Editor 321
apC Output General Tab 321
apC Output Status Tab 322
apC Output State Images Tab 322
apC Reader Editor 323
apC Reader General Tab 323
apC Reader Input/Output Tab 324
apC Reader Keypad Tab 325
apC Reader Triggers Tab 325
apC Reader Status Tab 325
apC Reader State Images Tab 325
apC Add-on Board Editor 327
apC Add-On Board General Tab 327
apC Add-On Board Input Boards Tab 328
apC Add-On Board Output Boards Tab 328
apC Add-On Board Star Coupler Tab 331
apC Input Board Editor (I32 and I8) 333
apC I32 Input Board General Tab 333
apC I32 Input Board 1-16 Inputs Tab 334
apC I32 Input Board 17-32 Inputs Tab 335
apC I8 Input Board General Tab 335
apC Star Coupler Board Editor 336
Star Coupler Readers Tab 337
Star Coupler Unsupervised Inputs Tab 337
Star Coupler Outputs Tab 337
Triggers Tab for apC Devices 339

Defining a Trigger for an apC Device 339
apC Triggers Tab Definitions 340
Mini Star Coupler Board Editor 342
Wiegand Proximity Star Coupler Editor 343

Chapter 9 - Floors 344
Floors Overview 345
Configuring Floors 346
Creating a Floor 347
Creating a Floor Template 348
Deleting a Floor 348
Modifying a Floor 349
Viewing a List of Floors 349
Using Set Property to Configure Floors 349
Add Floors to a Group 349

Chapter 10 - Doors 351
Door Overview 352
Door Tasks 353
Creating a Door 353
Creating a Door Template 354
Deleting a Door 355
Modifying a Door 355
Viewing a List of Doors 355
Using Set Property to Configure Doors 356
Add a Hardware Device to Group from a Dynamic View 357
apC Door Editor 358
Configuring an apC Door 358
apC Door General Tab 359
apC Door Readers Tab 361
apC Door Timing Tab 362
apC Door Triggers Tab 362
apC Door Status Tab 363
apC Door State Images Tab 363
apC Door Special Actions Tab 363
apC Door Definitions 366
apC Door Readers Tab Definitions 366
apC Door Timing Tab Definitions 367
apC Door Triggers Tab Definitions 368
apC Door Trigger Properties 369
apC Door Groups Tab Definitions 369
apC Door Status Tab Definitions 369
apC Door State Images Tab Fields and Icons 370
iSTAR Door Editor 371
iSTAR Door Editor Tabs 371
iSTAR Door General Tab 371
iSTAR Door Timing Tab 374
iSTAR Door Areas & Zones Tab 375
iSTAR Door Double Swipe Tab 375
iSTAR Door Conditional Access Tab 378
iSTAR Door Triggers Tab 380
iSTAR Door Status Tab 381

iSTAR Door Monitoring Tab 382
iSTAR Door State Images Tab 382
iSTAR Door Special Actions tab 382
iSTAR Door Definitions 385
iSTAR Door Timing Tab Definitions 386
iSTAR Door Areas and ZonesTab Definitions 387
iSTAR Door Double Swipe Tab Definitions 387
iSTAR Door Conditional Access Tab Definitions 388
iSTAR Door Triggers Tab Definitions 388
iSTAR Triggers Properties 389
iSTAR Triggers Actions 390
iSTAR Door Groups Tab Definitions 391
iSTAR Door Status Tab Definitions: 391
iSTAR Door State Images Tab Definitions: 392
iSTAR Aperio Door Editor 393
Chapter 11 - Configuring Advanced Door Monitoring 394
Understanding Advanced Door Monitoring 395
Features 395
Hardware Requirements 397
Advanced Door Monitoring Definitions 398
New Definitions, Acronyms, and Abbreviations 398
Advanced Door Monitoring Components 400
Lock Sensor Devices 400
Lock Release Devices 400
Expanded Door Inputs 401
Advanced Door Alarms 401
Expanded Event Actions 402
Advanced Door Monitoring Configurations 404
Multiple RTE Configurations 404
Multiple DSM Configurations 405
DSM Configuration Guidelines 408
Configuration Overview 410
Configuring an Advanced Door 411
Sample Door 411
Configuring RM4-1 and RM4-2 Reader, Inputs, and Output 411
Configuring Lock Releases on the I/8 414
Configuring the Advanced Door 415
Understanding Timing 418
Kinds of Timing Options 418
Grace Time Options 419
Change Time Options 419
Shunt Time Options 421
Special Timing Considerations 421
Monitoring Door Activity 422
Using Monitoring Station Commands 422
Using Journal Reports 422
Understanding Door Alarms 423
Alarms 423
New Activity / Journal Reports 423

Managing Message Traffic 423
Clearing Alarms 424
Door Triggers 424
Privilege Modifications 425
Reports 426
Advanced Door Monitoring Details 427
Door Monitoring Screen 428
Consecutive Rejects Activate an Event 430
Chapter 12 - Configuring Readers 433
Reader Overview 434
OSDP Reader Configuration 435
Readers Supported 435
Features 436
Restrictions and Limitations 436
HID iCLASS SE Reader Information 437
Allegion aptiQ Reader Information 437
Wiring Options Using OSDP 438
Wiring Details for OSDP Readers 439
Configuring OSDP in C•CURE 439
Configuring the Readers 440
Changing the OSDP Reader Baud Rate 440
OSDP Conversion for Wiegand and RM readers 441
OSDP Reader File Transfer 444
OSDP Secure Channel Custom Key 445
OSDP Troubleshooting 445
Innometriks High Assurance Reader Configuration 447
Hardware and Firmware Requirements 447
Reader Configuration Requirements Checklist 447
Importing the Enrollment Service XML file 449
Configuring the FICAM Plugin User-Defined Field 449
CHUID Templates for use with Card Formats 450
Enrolling Users 452
Reader Configuration 453
TST-100 Touchscreen Terminal Reader Configuration 456
RM Mode Configuration 456
Smart Mode Configuration 456
Updating TST-100 Touchscreen Terminal Firmware 458
Updating Schlage PIM and Reader Firmware 460
Supported readers/locksets and PIMs 460
Prerequisites 460
Completing a Schlage PIM and reader firmware download 460
Schlage Minimum Firmware Requirements for Firmware Download 461
Schlage Limitations 462
Reader Editor 464
Accessing the Reader Editor 464
Reader Tab Definitions 465
apC Readers 465
iSTAR Readers 465
iSTAR Reader Editor 466

Accessing the iSTAR Reader Editor 467
Configuring iSTAR Readers 467
iSTAR Reader General Tab 468
iSTAR Reader I/O Tab 469
iSTAR Reader Keypad Tab 470
iSTAR Reader Triggers Tab 472
iSTAR Reader Status Tab 472
iSTAR Reader Options Tab 474
After-Hours 475
iSTAR Reader Touchscreen Tab 477
High Assurance Tab 478
iSTAR Reader State Images Tab 478
iSTAR PIM-485 Reader Editor 480
iSTAR PIM-485 Reader I/O Tab 481
iSTAR Aperio Reader Editor 484
iSTAR Aperio Reader I/O Tab 485
apC Reader Editor 487
apC Reader General Tab 487
apC Reader Input/Output Tab 488
apC Reader Keypad Tab 489
apC Reader Triggers Tab 489
apC Reader Status Tab 489
apC Reader State Images Tab 489
Chapter 13 - Configuring Reader LCD Messages, LED Colors, LED Patterns, and Beep Patterns 491
LCD Message Set 492
Accessing the Reader LCD Message Set Editor 492
Changing the Language for the Default LCD Messages 496
Reader LCD Message Set Editor 497
Reader LCD Message Set Tasks 498
Configuring a Reader LCD Message Set 499
LED Colors, LED Patterns and Beep Patterns 503
Limitations 503
LED Color Configuration 504
LED Pattern Configuration 504
Beep Pattern Configuration 505
Chapter 14 - Two Factor Authentication 507
Two Factor Authentication Overview 508
Prerequisites 508
Two Factor Authentication in an Enterprise Environment 508
Supporting Hardware 508
Enabling Two Factor Authentication for C•CURE through DUO APIs 509
Configuring iSTAR Readers and Doors for Two Factor Authentication 510
Configuring Fallback to One Factor Authentication 511
Configuring fallback when the C-CURE host and two factor authentication provider fail to communicate 511
Two Factor Authentication Behaviors 513
Chapter 15 - Configuring Elevators 514
Elevator Configuration Overview 515

Elevator Tasks 516
Creating an Elevator 516
Creating an Elevator Template 516
Deleting an Elevator 517
Modifying an Elevator 517
Viewing a List of Elevators 517
Using Set Property for Elevators 518
Adding Elevators to a Group 518
iSTAR Elevators 519
Configuring a Floor for an iSTAR Elevator 519
iSTAR Elevator General Tab 520
iSTAR Elevator Buttons Tab 524
iSTAR Elevator Status Tab 525
iSTAR Elevator Triggers Tab 526
iSTAR Elevator State Images Tab 527
iSTAR Elevator Definitions 528
apC Elevators 533
Configuring a Floor for an apC Elevator 533
apC Elevator General Tab 534
apC Elevator Buttons Tab 536
apC Elevator Status Tab 537
apC Elevator Triggers Tab 538
apC Elevator State Images Tab 538
apC Elevator Definitions 539

Preface

This *C•CURE 9000 Hardware Configuration Guide* is designed for new and experienced security system users. The manual describes the various hardware objects in the C•CURE 9000 application program and presents procedures for configuring and using them.

The manual assumes that you have already installed C•CURE 9000 and have familiarized yourself with the basic C•CURE 9000 information provided in the *C•CURE 9000 Getting Started Guide*.

In this preface

Finding More Information 16
Conventions 17
Software House Customer Support Center 18

Finding More Information

You can access C•CURE 9000 manuals and online Help for more information about C•CURE 9000.

Manuals

C•CURE 9000 software manuals are available in Adobe PDF format on the C•CURE 9000 installation media. You can access the manuals if you copy the appropriate PDF files from the C•CURE 9000 installation media **Manuals\CCURE** folder.

The available C•CURE 9000 and Software House manuals are listed in the *C•CURE 9000 Installation and Upgrade Guide*.

These manuals are also available from the Software House Member Center website (http://www.swhouse.com/TechnicalLibrary/TechLibSW.aspx).

Online Help

You can access C•CURE 9000 Help by pressing **F1** or clicking Help from the menu bar in the Administration/Monitoring Station applications.

Conventions

This manual uses the following text formats and symbols.

Convention	Meaning
Bold	This font indicates screen elements, and also indicates when you should take a direct action in a procedure. Bold font describes one of the following items: • A command or character to type, or • A button or option on the screen to press, or • A key on the keyboard to press • A screen element or name
blue color text	Indicates a hyperlink to a URL, or a cross-reference to a figure, table, or section in this guide.
Regular italic font	Indicates a new term.
<text>	Indicates a variable.

The following items are used to indicate important information.

NOTE Indicates a note. Notes call attention to any item of information that may be of special importance.

TIP Indicates an alternate method of performing a task.

⚠ Indicates a caution. A caution contains information essential to avoid damage to the system. A caution can pertain to hardware or software.

🚫 Indicates a warning. A warning contains information that advises users that failure to avoid a specific action could result in physical harm to the user or to the hardware.

🛑 Indicates a danger. A danger contains information that users must know to avoid death or serious injury.

Software House Customer Support Center

Technical Support Portal

The Technical Support Portal provides knowledge-based articles, technical documents, and tips to install and use Software House products.

Qualified Integrators can register to access the Technical Support Portal at http://www.swhouse.com. Click **Support** and select **Support Portal** to access the Support Portal log in page.

The email address you use to register for access to the portal must be the same one you used for the certification course.

If the request is approved, log in credentials are emailed twenty-four to forty-eight hours after received.

Telephone Technical Support

During the period of the Agreement, the following guidelines apply:

- Software House accepts service calls **only** from employees of the Systems Integrator of Record for the installation associated with the support inquiry.

Before Calling

Ensure that you:

- Are the Dealer of record for this account.
- Are certified by Software House for this product.
- Have a valid license and current Software Support Agreement (SSA) for the system.
- Have your system serial number available.
- Have your certification number available.

Hours	Normal Support Hours	Monday through Friday, 8:00 a.m. to 8:00 p.m., EST. Except holidays.
	Emergency Support Hours	24 hours/day, seven days a week, 365 days/year. Requires Enhanced SSA "7 x 24" Standby Telephone Support (emergency) provided to Certified Technicians. For all other customers, billable on time and materials basis. Minimum charges apply – See MSRP.
Phone	For telephone support contact numbers for all regions, see http://www.swhouse.com/support/contact_technical_support.aspx.	

EMEA

Hours: 8:00 a.m. to 6:00 p.m. CET

- Toll Free: +800 CALLTYCO or +800-2255 8926
- Direct: +31 475 352 722

Local Direct Dial Numbers:

- UK: +44 330 777 1300
- Israel: +972-772 201 350
- Spain: 900 99 31 61

- Denmark: +45-4494 9001
- France: 0800 90 79 72
- Germany: 0800 1806 757
- Italy: +39-0230 510 112
- Belgium: 0800 76 452
- Ireland: 1800943570
- Nordic: 04494 9001
- Greece: 00800-312 294 53
- South Africa: +27-211 003 882
- Russia: 81080020521031
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- UAE: 800-03107123
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Asia Pacific

Hours: 9:00 a.m. to 5:00 p.m. CST

- Toll Free: +800 CALLTYCO or (+800-2255 8926)
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- India only Hotline: 1-800-1082-008
- Australia: 02-9684-3980

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- El Salvador: + 503 21368703
- Guatemala: + 502 22681206
- Panamá: + 507 836-6265
- Mexico: + 52 5585261801
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- Venezuela: + 58 212-720-2340
- Buenos Aires: + 54 11 5199 3104
- Santiago de Chile: + 56 2 3210 9662
- Sao Paulo: + 55 11 3181 7377

1

Configuring IPv6 on C•CURE 9000 Servers, Clients, and iSTAR Controllers

This chapter describes the requirements and configuration for IPv6 on C•CURE 9000 servers, C•CURE 9000 clients, iSTAR controllers, and IP-ACMs.

In this chapter

IPv6 Configuration 21

IPv6 Configuration

Requirements and Restrictions

- Supported on iSTAR Ultra, iSTAR Ultra SE (Ultra Mode) and iSTAR Ultra LT, either using a static IPv6 or DHCPv6 when in IPv6 mode.
- **If there are iSTAR controllers with firmware versions lower than v6.6.0, and they support IPv6, you should set the specified Host IPv6 address on your system (SAS or Standalone).**

  Perform the following procedure in the C•CURE 9000 Administration Station:

  a. Enter the Host IPv6 address for the iSTAR controllers in the Options & Tools >System Variables >iSTAR Driver> Specified Host IPv6 Address field.

  b. Restart the driver.

  Alternately, you can lock the Host IPv6 address for each controller in the ICU. In the Controller dialog box, click the Host tab, enter the IPv6 address and click 🔒.
- IPv6 requires iSTAR firmware version 6.5.2 or higher.
- IPv6 is supported on C•CURE 9000 standalone servers and supported in an Enterprise environment.
- The C•CURE 9000 server, standalone or Enterprise, must be configured with dual IP address modes (IPv4 and IPv6) if there is a mixture of panels using IPv4 and IPv6.
- All panels in a cluster must have the same Address Family - either IPv4 or IPv6.
- The IP-ACM supports either static IPv6 or Stateless Auto Configuration in IPv6 mode.
- Communication does not work if the Address Family is set to IPv6 and the iSTAR controller firmware is below version 6.5.2.
- The iSTAR Configuration Utility (ICU) must be version 6.5.2 or later.
- The Address Family must match in C•CURE 9000 and in the ICU to establish communication (refer to the ICU help or the *iSTAR Configuration Utility User Guide* for IPv6 configuration information.).
- If there are panels in the cluster that contain firmware lower than version 6.5.2, all panels in that cluster must be set to IPv4.
- The iSTAR Ultra, Ultra SE, and the Ultra LT factory default is set to IPv4. If you reset the iSTAR back to its factory defaults, after the controller reset is complete, use the ICU to set the controller IP address family to IPv6 and then change the C•CURE settings accordingly.
- To use IPv6 to communicate with an iSTAR Cluster, the C•CURE 9000 server system must be configured to use IPv6. See C•CURE 9000 Server System and Client System IPv6 Configuration on Page 21.

C•CURE 9000 Server System and Client System IPv6 Configuration

To configure the system running the C•CURE Server or client to use IPv6:

1. Open the Control Panel.
2. Select **Network and Sharing Center**.
3. Select **Local Area Connection**.
4. Select **Properties** to open Local Area Connection Properties.
5. Scroll to **Internet Protocol Version 6 (TCP/IPv6)**:
   - If **Internet Protocol Version 6 (TCP/IPv6)** is not selected (clear), select it and click **Properties**.

- If **Internet Protocol Version 6 (TCP/IPv6)** is selected (checked), click **Properties**.

6. Configure a Static IPv6 address or obtain an IPv6 address automatically.
7. Configure a static DNS server Address or obtain the DNS server address automatically.
8. Click **OK**, **Close**, and **Close** to complete the configuration.

NOTE C•CURE 9000 server only:

The SQL Server and SQL Server Native Client fully support both Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6). When Windows is configured with IPv6 SQL Server, components automatically recognize the existence of IPv6. No special SQL Server configuration is necessary.

Multi-homed Standalone Servers

When using a multi-homed 9000 standalone server with multiple network adapters on multiple networks, specify an IP address for IP communication to ensure consistent communication with the iSTAR fast personnel download.

Set the IP address as the host address for the iSTAR controllers in the **Options & Tools > System Variables > iSTAR Driver>Specified Host IPv6 Address** field. Then restart the driver.

iSTAR Controller Configuration

The IP Address Family selection for the iSTAR controller, in C•CURE 9000, is located in the iSTAR Controller Editor General tab.

This setting must match the IP Address Family selected in the ICU. The ICU must be used to switch the controller's Address Family.

ICU

The IP Address Family is selected on the Controller editor **Ethernet Adapter** tab in the ICU. The ICU must be used to switch the controller's Address Family.

IP-ACM Configuration

The IP-ACM Configuration/Status web page is used to configure the Address Family.

To configure the IP-ACM to use IPv6:

- From a browser:

  a. Enter the IP-ACM IP address.

  b. Enter the password in the login screen and click **Login**.

NOTE The default password is "iSTAR".

  c. Select **IPv6** for the **IP-Type**.

  d. Select the **Alloc Type**, **Stateless Auto Config** or**Static**.

  If you select **Static**, enter the **IP-ACM Addr** and the **IP-ACM Prefix Length**.

  e. Enter the iSTAR Controller IPv6 address in the **iSTAR IP Addr** field.

f. Click **Save**.

g. Click **Reboot**.

- From the ICU:

a. Click the **IP ACM** button to display the IP-ACM's on the network.

b. Locate the IP-ACM in the list.

c. Right-click on the IP-ACM and select **Configure IP-ACM**.

d. Enter the password in the log in screen and click **Login**.

NOTE The default password is "iSTAR".

e. Select **IPv6** for the **IP-Type**.

f. Select the **Alloc Type**, **Stateless Auto Config** or**Static**.

If you select **Static**, enter the **IP-ACM Addr** and the **IP-ACM Prefix Length**.

g. Enter the iSTAR Controller IPv6 address in the **iSTAR IP Addr** field.

h. Click **Save**.

i. Click **Reboot**.

2

The Hardware Pane

This chapter explains how to use the C•CURE 9000 Hardware pane to configure and manage the hardware components that are connected to the C•CURE 9000 server.

In this chapter

Using the Hardware Pane 25
Hardware Tree 27
Groups Tab for Hardware Devices 36
Hardware Folders 38
Templates 41
Copying, Pasting, and Renaming Clusters and Controllers 46

Using the Hardware Pane

The Hardware pane displays a tree structure that shows how you have configured the hardware on the C•CURE 9000 system. For example, the hardware tree shows you which readers, inputs, and outputs are configured for each controller.

You can use the Hardware Tree to navigate to hardware components you want to view or edit, or to create new hardware components, such as a reader you want to add to a controller.

The Hardware Tree displays, by default, folders for Digital Certificates, Floors, Reader LCD Message Sets, and a Hardware Folder called **Company Name**.

The folder called **Company Name** is the default container for apC Comm Ports and the Controllers, Readers, Doors, Elevators, Inputs, and Outputs.

This folder is re-nameable so that you can customize the C•CURE 9000 Hardware Tree to your site's needs.

You can create additional Hardware Folders as needed.

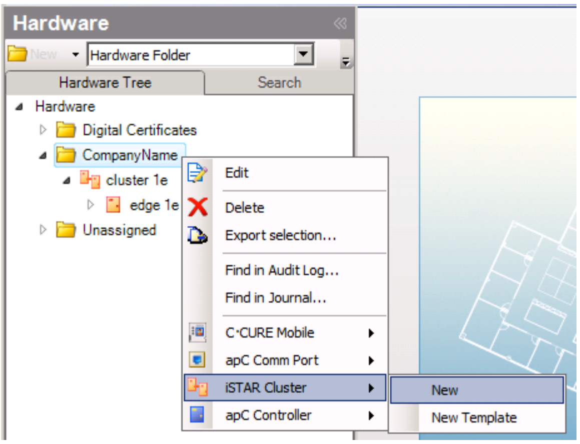
You can click on the ⊞ to the left of a folder or object to expand the tree.

When you select a folder or object in the tree, you can right-click to display a context menu that shows the objects you can create under the selected folder or object.

Example:

> If you right-click on the **Company Name** folder, the context menu shows that you can create a wide variety of Hardware Tree objects in this folder.

Figure 1: Hardware Tree Context Menu



The following topics provide more information about using the Hardware pane.

- Partitions on Page 25
- Hardware Tree on Page 27
- Hardware Tree Objects on Page 27
- Hardware Tree Tasks on Page 28

Partitions

If you partition the C•CURE 9000, a new Hardware folder is created for each Partition you create, and given the same name as the Partition.

You can also create additional Hardware folders to contain hardware devices if you need to separately group hardware to reflect, for example, a multi-tenant building, a campus, or a multi-site company.

You can use Partitioning and Privileges to control Operator access to each tenant's hardware folder(s) if you don't want one tenant to be able to view another tenant's security access hardware and personnel.

The **New Object Partition** setting in the Administration Workstation determines the Partition in which an Operator can create objects, in addition to Hardware Tree objects such as Floors that reside at the root of the Hardware Tree. You can use the Privilege Editor to grant or deny an Operator access to a Partition, which affects whether they can view or create objects in that Partition.

For example, you could create a privilege that has no access to the Partition (and Hardware folder) called Company A, but with full access to Company B, and assign it to Operators from Company B, so that they can view their configuration but not the configuration for Company A. See the *C•CURE 9000 Software Configuration Guide* for more information about the Privilege Editor.

You can also drag and drop objects to move them in the Hardware Tree. For example, you can move C•CURE Mobile objects from one Hardware folder to another. See Using Drag and Drop in the Hardware Tree on Page 31 for more information.

Hardware Tree

The Hardware pane displays a tree structure that shows how you have configured the hardware on the C•CURE 9000 system. For example, the hardware tree shows you which readers, inputs, and outputs are configured for each controller.

You can use the Hardware Tree to navigate to hardware components you want to view or edit, or to create new hardware components, such as a reader you want to add to a controller.

The Hardware Tree displays, by default, folders for Floors, Digital Certificates, and a Hardware Folder called **Company Name**.

The folder called **Company Name** is the container for your Comm Ports, Controllers, Readers, Doors, Elevators, Inputs, and Outputs.

This folder is re-nameable so that you can customize the C•CURE 9000 Hardware Tree to your site's needs.

You can click on the ⊞ to the left of a folder or object to expand the tree.

When you select a folder or object in the tree, you can right-click to display a context menu that shows the objects you can create under the selected folder or object. For example, if you right-click on the **Company Name** folder, the context menu shows that you can create a wide variety of Hardware Tree objects in this folder.

If you Partition your C•CURE 9000, a new Hardware folder is created for each Partition you create. This hardware folder is given the same name as the Partition.

You can also create additional Hardware folders to contain hardware devices if you need to separately group hardware to reflect, for example, a multi-tenant building, a campus, or a multi-site company.

You can use Partitioning and Privileges to control Operator access to each tenant's hardware folder(s) if you don't want one tenant to be able to view another tenant's security access hardware and personnel.

For example, you could create a privilege that has no access to the Partition (and Hardware folder) called Company A, but with full access to Company B, so that Operators from Company B can view their configuration but not the configuration for Company A.

You can also drag and drop objects to move them in the Hardware Tree. For example, you can move C•CURE Mobile objects from one Hardware folder to another. See Using Drag and Drop in the Hardware Tree on Page 31 for more information.

- Hardware Tree Objects on Page 27
- Hardware Tree Tasks on Page 28

Hardware Tree Objects

Table 1 on Page 27 shows the types of objects (and objects that reside under them as child objects) in the Hardware Tree.

Table 1: Hardware Tree Objects

Object	Description
Hardware Folder	See Hardware Folders on Page 38.
Digital Certificate	These objects reside in the Hardware Tree but they are created using **Encryption Options** from the Options & Tools pane. See the *C•CURE 9000 System Maintenance Guide* for more information.
Floor	See Floors Overview on Page 345.

Hardware Tree Objects (continued)

Object	Description
Reader LCD Message Set	See LCD Message Set on Page 492
apC Comm Port	See apC Comm Port Editor on Page 301.
C•CURE Mobile device	These objects reside in the Hardware Tree but they are documented in the *C•CURE Mobile Handheld Reader User Guide*. NOTE: C•CURE Mobile cannot be used in UL applications.
iSTAR Cluster	See Configuring iSTAR Clusters on Page 86.
apC Controller	See apC Panel Overview on Page 288.

Hardware Tree Tasks

- Creating a New Object in the Hardware Tree on Page 28
- Deleting an Object in the Hardware Tree on Page 29
- Viewing a List of Hardware Tree Objects on Page 29
- Using Drag and Drop in the Hardware Tree on Page 31
- Refreshing the Hardware Tree on Page 37
- Creating a New Hardware Folder on Page 39
- Creating and Using a New Hardware Folder Template on Page 39
- Creating a New Hardware Folder on Page 39
- Renaming a Hardware Folder on Page 40

Creating a New Object in the Hardware Tree

Most objects in the Hardware Tree support a right-click Context Menu that shows you the actions you can perform on that object.

The right-click Context Menu for an object has selections for objects that you can create under that object.

For example, if you want to create an iSTAR Cluster in a Hardware Folder, right-click on the Hardware Folder and select iSTAR Cluster from the menu.

To Create a New Object in the Hardware Tree

1. Select the Folder or Object that will contain the object you want to create.
2. Right-click on the object and you should see in the Context menu a list of the objects that you can create.
3. Select the object you wish to create and select **New** from the menu.
4. The Editor for the object opens and you can configure the object.

Deleting an Object in the Hardware Tree

You can delete objects from the Hardware Tree if they are no longer needed. If you delete an object that has a child object (such as a Door or Reader) below it, those objects are also deleted.

To Delete an Object in the Hardware Tree

1. Select the Folder or Object that you wish to delete.
2. Right-click on the object and select **Delete**.
3. A confirmation dialog box appears to confirm that you want to delete the object. Click **Yes** to delete the object, or **No** to cancel the deletion.
4. A dialog box appears to confirm the deletion. You can click:
   - **OK** to close the dialog box.
   - **Print** to print the deletion message.
   - **Email** to send the deletion message to the email address you have configured in the Customer Support section of the C•CURE 9000 System Variables.

Viewing a List of Hardware Tree Objects

You can view a list of any type of Hardware Tree object.

To View a List of Hardware Tree Objects

1. Click the **Hardware** button in the Navigation Pane to open the Hardware Tree.
2. Use the drop-down list in the Hardware pane to select the object type that you want to list.
3. Click ➡ ▾ and a Dynamic View listing the object type appears in the content area.
4. You can filter, sort, group, and add columns to the list. See the *C•CURE 9000 Data Views User Guide* chapter on Dynamic Views for more information.

The Dynamic View for an object type includes a column that displays the Time Zone in which the object resides. This can be useful in determining when an Event or Trigger is activated for an object in a different Time Zone than the C•CURE 90000 Server.

If you right-click a row in the Dynamic View, a context menu is displayed. This menu contains a number of standard selections, as well as selections that are specific for different object types. See **Using the Object List Context Menu** in the *C•CURE 9000 Getting Started Guide* for more information about the object context menu.

The context menu for iSTAR, apC, ASSA ABLOY, Connected Program readers allows you to select one or more readers and Add or Remove Cards formats. See Add or Remove Reader Card Formats on Page 29 for more information.

Add or Remove Reader Card Formats

The context menu for iSTAR, apC, ASSA ABLOY, and Connected Program readers allows you to select one or more readers and add or remove Cards formats. For iSTAR, the APERIO, Schlage Wireless, Direct Connect Wiegand, and RM readers offer this selection.

The context menu actions are equivalent to opening each of the selected readers and adding/removing the card format from each reader.

The limits for card formats allowed for apC (8 per reader) and iSTAR (10 per reader) are enforced when using these menu actions.

If the selected Card Formats cannot be added or removed from the selected readers, the confirmation dialog box for the Add/Remove displays "Already has card format" or "Nothing to remove...". Errors that occur are shown in the confirmation dialog box as well.

To Add or Remove Card Formats from a Reader via a Dynamic View

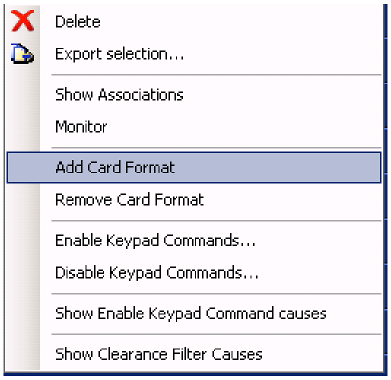
1. From the Hardware pane, use the drop-down menu to select the type of Reader you want to display in a dynamic View, and click ➔ ▾.

   Example:

   If you select iSTAR Reader, the Dynamic View displays multiple types of iSTAR Reader. If you select iSTAR Aperio Reader, only that type of reader is displayed.

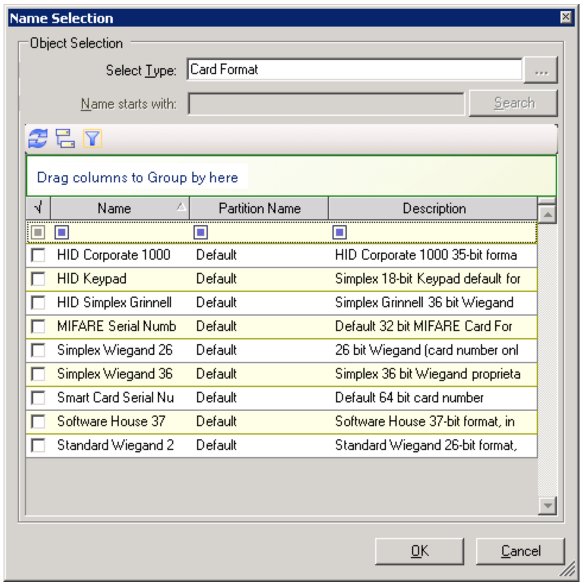
2. Select one or more readers from the list (you can use multiple selection keystrokes such as **CTRL+Left-click** and **SHIFT+Left-click** to select more than one reader).

3. Right-click the selected readers to display the context menu.


Delete
Export selection...
Show Associations
Monitor
Add Card Format
Remove Card Format
Enable Keypad Commands...
Disable Keypad Commands...
Show Enable Keypad Command causes
Show Clearance Filter Causes

4. Select **Add Card Format** or **Remove Card Format** from the menu.

5. The Card Format Name Selection dialog box appears. Select (☑) each Card Format that you want to add or remove from the readers, then click **OK**.

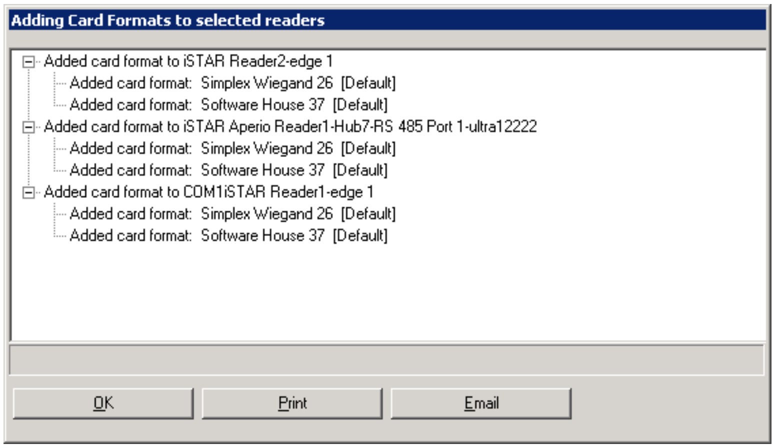


Select Type: Card Format

Name starts with:

√	Name	Partition Name	Description
□	HID Corporate 1000	Default	HID Corporate 1000 35-bit forma
□	HID Keypad	Default	Simplex 18-bit Keypad default for
□	HID Simplex Grinnell	Default	Simplex Grinnell 36 bit Wiegand
□	MIFARE Serial Numb	Default	Default 32 bit MIFARE Card For
□	Simplex Wiegand 26	Default	26 bit Wiegand (card number onl
□	Simplex Wiegand 36	Default	Simplex 36 bit Wiegand proprieta
□	Smart Card Serial Nu	Default	Default 64 bit card number
□	Software House 37	Default	Software House 37-bit format, in
□	Standard Wiegand 2	Default	Standard Wiegand 26-bit format,

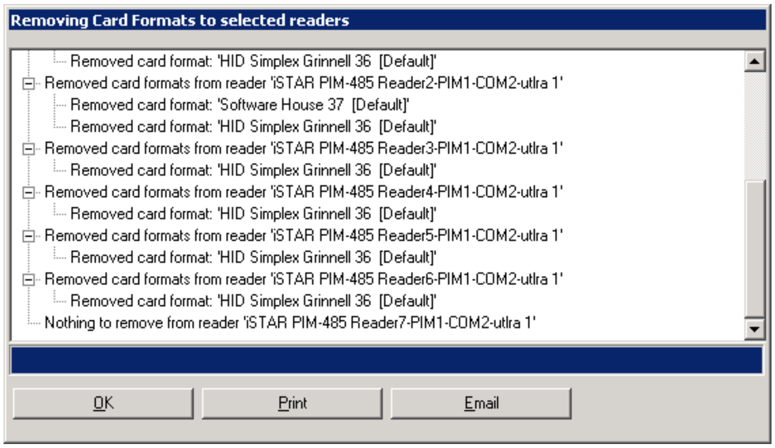
6. If you added readers, a confirmation dialog box appears, showing the formats added:



Adding Card Formats to selected readers

```
⊟ Added card format to iSTAR Reader2-edge 1
    Added card format:  Simplex Wiegand 26  [Default]
    Added card format:  Software House 37  [Default]
⊟ Added card format to iSTAR Aperio Reader1-Hub7-RS 485 Port 1-ultra12222
    Added card format:  Simplex Wiegand 26  [Default]
    Added card format:  Software House 37  [Default]
⊟ Added card format to COM1iSTAR Reader1-edge 1
    Added card format:  Simplex Wiegand 26  [Default]
    Added card format:  Software House 37  [Default]
```

7. If you removed readers, a confirmation dialog box appears, show the formats removed:



Removing Card Formats to selected readers

```
    Removed card format: 'HID Simplex Grinnell 36  [Default]'
⊟ Removed card formats from reader 'iSTAR PIM-485 Reader2-PIM1-COM2-utlra 1'
    Removed card format: 'Software House 37  [Default]'
    Removed card format: 'HID Simplex Grinnell 36  [Default]'
⊟ Removed card formats from reader 'iSTAR PIM-485 Reader3-PIM1-COM2-utlra 1'
    Removed card format: 'HID Simplex Grinnell 36  [Default]'
⊟ Removed card formats from reader 'iSTAR PIM-485 Reader4-PIM1-COM2-utlra 1'
    Removed card format: 'HID Simplex Grinnell 36  [Default]'
⊟ Removed card formats from reader 'iSTAR PIM-485 Reader5-PIM1-COM2-utlra 1'
    Removed card format: 'HID Simplex Grinnell 36  [Default]'
⊟ Removed card formats from reader 'iSTAR PIM-485 Reader6-PIM1-COM2-utlra 1'
    Removed card format: 'HID Simplex Grinnell 36  [Default]'
  Nothing to remove from reader 'iSTAR PIM-485 Reader7-PIM1-COM2-utlra 1'
```

8. Click **OK** to complete the Add/Remove.

Using Drag and Drop in the Hardware Tree

You can drag and drop objects to move them in the Hardware Tree, within certain restrictions.

- You cannot move Root level objects such as Folders and Floors.
- You cannot move objects in Hardware Folders to the Root level.
- You cannot move objects that are Folders, such as a folder named C•CURE Mobile (but you can move their contents to another C•CURE Mobile folder).
- You cannot move child objects of one Controller to another Controller.

NOTE Some objects cannot be moved to another partition via drag and drop. For example, you cannot move an iSTAR Controller to a different Partition via drag and drop, nor can you move a non-partitionable object. Also, you cannot move an iSTAR Cluster to a different Partition if the Cluster is Enabled.

To determine if you can drag and drop an object, click on the object and then drag to the right with the mouse. If the ↖ cursor appears, you can drag and drop the object. If you try to drop the object in an invalid location, the object instead remains in its original location. For example, if you tried to drop an apC Comm Port in an iSTAR Cluster, the object is not be moved, and an error message “Invalid Hardware Folder” appears.

To Drag and Drop an Object in the Hardware Tree

1. Click the **Hardware** button in the Navigation Pane to open the Hardware Tree.
2. Click on an object to select it (the object will be highlighted when selected).
3. Drag to the right with the mouse. The drag and drop cursor appears. (If it does not appear, you cannot drag and drop the object.)
4. Drag the object to the location you want and release the mouse button. If you have chosen a valid location for the object, it then appears in the new location.

   Example

   If you drag an apC Controller to a different Hardware Folder, the apC and all its child objects are moved to that Hardware Folder.

Input calibration

To support the use of random unknown resistor values in an input's supervised circuit, you can manually calibrate the resistor value of an input from the hardware tree or in the dynamic view of iSTAR inputs.

The input must be an iSTAR General Purpose Input that is attached to an iSTAR Ultra Controller in G2 mode with a firmware version of 6.8.2 or later.

The Calibrate Input operation is available in the context menu in the hardware tree. The Calibrate Input operation only appears in the context menu if the input is set to Calibratable in the input object editor. In dynamic view you can view which inputs have a input supervision type of Calibratable. You can also access the Calibrate Input operation in the dynamic view of iSTAR inputs if the selected input is a General Purpose Input.

The following circuit types are supported for the inactive state:

- NC circuits within the range of 400 to 5,000 ohms
- NO circuits within the range of 1,000 ohms to 5,000 ohms

NOTE

- Before you start the calibration, ensure the input circuit is in a Normal or Secure state. For more information, see Supported input states for the Calibratable input type on Page 32.
- If a board that holds calibration data needs to be replaced, you must recalibrate the inputs attached to that board.

For more information on calibrating an input, see Calibrating an iSTAR Ultra input on Page 232.

To uncalibrate an input, see Input uncalibration on Page 35.

Supported input states for the Calibratable input type

The standard Software House dual 1K resistor circuit supports the five following states:

- Secure/normal
- Active/alarm
- Open
- Short

NOTE Wiring Trouble is not a supported input type. A calibrated input will report as active for any resistance that is not secure/normal, open, or short.

The following table contains the supported input states using a dual resistor circuit with a typical 1,000 ohm resistance value for secure:

Table 2: Supported input states for a dual resistor circuit with a typical 1,000 ohm resistance value for secure

State	Resistance range	Nominal R value
Short	0-100	0 (short)
Active (Alarm)	100-700	500
Inactive (Secure or Normal)	700-1400	1000
Active (Alarm)	1400-11,000	2000
Open	>11,000	Open

Figure 2: NO dual resistor circuit with two 1K resistors

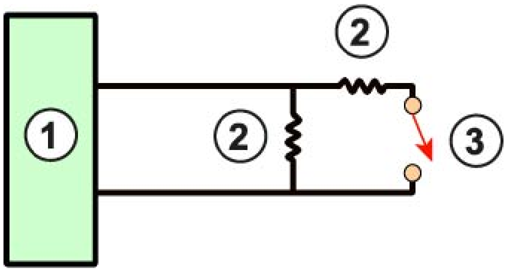


Table 3: NO dual resistor circuit with two 1K resistors

Callout	Name	Description
1	Input circuit	
2	Resistor	1,000 ohm
3	NO	Normal = 1,000 ohm
		Alert = 500 ohm

Figure 3: NC dual resistor circuit with two 1K resistors

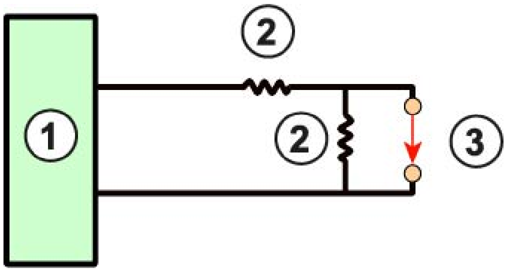


Table 4: NC dual resistor circuit with two 1K resistors

Callout	Name	Description
1	Input circuit	
2	Resistor	1,000 ohm
3	NO	Normal = 1,000 ohm
		Alert = 2,000 ohm

The following table contains the supported input states using a circuit with a 500 ohm nominal Inactive value.

NOTE

- At this low resistance value, only NC circuits are supported.
- A separate active range for the 250 ohm nominal state is not supported.

Table 5: Supported input states for a dual resistor circuit with a circuit with a 500 ohm nominal Inactive value

State	Resistance range	Nominal R value
Short	0-100	0 (short)
Active (Alarm)	100-300	250 (not realistic)
Inactive (Secure or Normal)	300-700	500
Active (Alarm)	700-11,000	1000
Open	>11,000	Open

If you use a single resistor in a NC series circuit, the resistance ranges of the Active state will normally not occur and the circuit behaves like a three-state input.

When the input is in an Active state, the circuit is open and the input reports an Open state, rather than an Active state. To cause an Alarm, you must set up a trigger on the input’s Supervision Error State property. In an Active state, an event triggers to annunciate the alarm condition.

Table 6: Supported input states for a single resistor circuit

State	Resistance range	Nominal R value
Short	0-100	0 (short)
Active (Alarm)	100-700	500
Inactive (Secure or Normal)	700-1400	1000
Active (Alarm)	1400-11,000	2000
Open	>11,000	Open

NOTE

- Only use the Calibratable Input circuit for a single resistor circuit when the field resistance is not a SWH standard, pre-configured single resistor value of 1,000 ohm, 5,000 ohm, or 10,000 ohm. When a 1,000 ohm, 5,000 ohm, or 10,000 ohm circuit is selected, a true Alarm state can then be annunciated.

The following wiring diagram displays a single resistor NC circuit with a 1K resistor.

Figure 4: NC dual resistor circuit with two 1K resistors

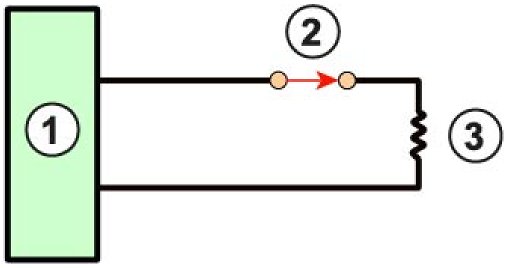


Table 7: NC dual resistor circuit with one 1K resistors

Callout	Name	Description
1	Input circuit	
2	NC	Normal = 1,000 ohm
		Alert = Open
3	Resistor	

Input uncalibration

If an input device resistor pack fails and you want to delete the previous calibration data before you replace the device, you can manually uncalibrate an input from the hardware tree or in the dynamic view of iSTAR inputs.

The input must be an iSTAR General Purpose Input that is attached to an Ultra Controller in G2 mode or a Legacy Ultra with a Firmware version of 6.8.2 or later.

The Uncalibrate Input operation is available in the context menu in the hardware tree. The Uncalibrate Input operation only appears in the context menu if the input is set to Calibratable in the input object editor. To set an input to Calibratable, see **Supervising Resistor Configuration** in Table 81 on Page 231.

NOTE Do not use the uncalibrate input manual action to recalibrate an input point. Instead, use the Calibrate command - the new configuration will overwrite the previous configuration.

You can also access the Uncalibrate Input operation in the dynamic view of iSTAR inputs if the selected input is a General Purpose Input.

To uncalibrate an input, see Uncalibrating an iSTAR Ultra input on Page 233.

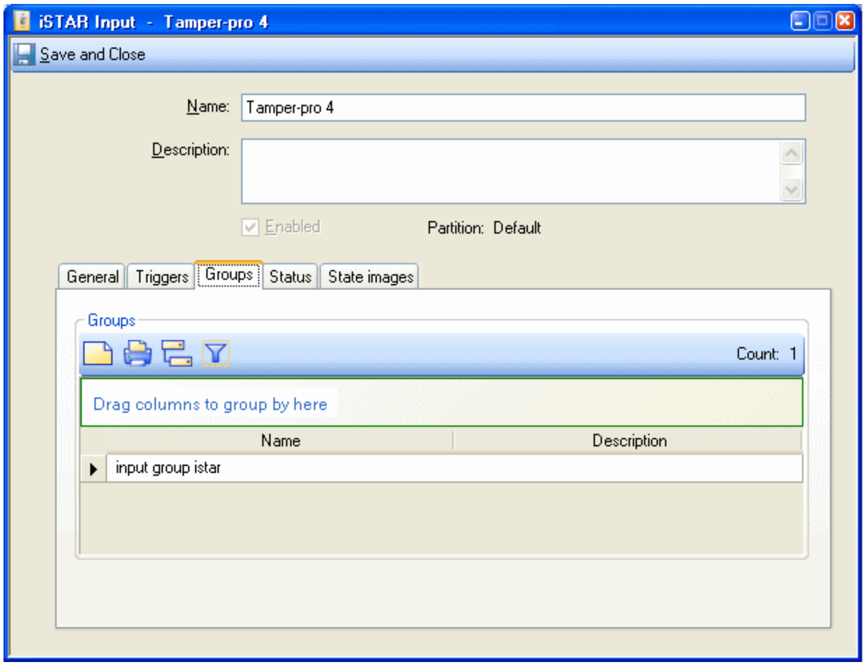
For more information on input calibration, see Input calibration on Page 32.

Groups Tab for Hardware Devices

The Groups tab for a Hardware device lists all of the Groups to which the Hardware device currently being edited belongs. The Groups in the list are lists of Hardware devices of the same type (such as Inputs, Readers, and so on).

Figure 5 on Page 36 shows the Groups tab for an iSTAR Input, which is typical for a Hardware device.

Figure 5: Typical iSTAR Group Tab



Name: Tamper-pro 4

Description:

☑ Enabled   Partition: Default

Count: 1

Drag columns to group by here

Name	Description
input group istar	

Hardware Groups Tab Definitions on Page 36 provides definitions for the fields and buttons on an iSTAR Device Group tab.

Editing a Hardware Device Group

You can edit any of the Groups in the list on the Groups tab by double-clicking on the Group’s name in the list of Groups.

Adding a Hardware Device to a Group

To add a Hardware device to a Group, you need to either:

- Edit the Group by opening the Configuration pane and using the Group Editor.

  or

- Display a list of devices of that type and use the context menu **Add to Group** selection. You cannot add the Hardware device to a Group from the Groups tab (the device is already a member of every Group that is listed here).

  See Add a Hardware Device to Group from a Dynamic View on Page 357 for more information.

Hardware Groups Tab Definitions

Table 8 on Page 37 provides definitions of the fields and buttons on the Groups tab for a Hardware pane device.

Table 8: Groups Tab Definitions

Field/Button	Icon	Description
Card View		Displays the list of Groups in Card View.
Print		Prints the list of Groups.
Group		Click to enable Grouping of the list. You can drag a column heading to the area labeled **Drag columns to group by here** to group the list by that heading.
Filter		Click to display the filter bar. See the *C•CURE 9000 Data Views Guide* for more information about filtering a Dynamic View list.
Row Selector	▸	Click to select a row in the table.
Count		This field displays the number of Groups in the list.
Name		This column lists the names of the Groups of which this device is a member.
Description		This column lists the descriptions of the Groups of which this device is a member.

Add a Hardware Device to Group from a Dynamic View

When you select a Hardware device from a Dynamic View and then right-click for the context menu, **Add to group** appears as a menu selection. This function enables you to add the object(s) to a Group. For more information about the Group function see Groups Tab for Hardware Devices on Page 36.

To Add a Hardware Device To a Group

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Select a Hardware device from the Hardware pane drop-down list.
3. Click to open a **Dynamic View** showing all objects of that type.
4. Right-click on the object that you want to add to a Group and select **Add To Group**. A list of Groups is displayed.
5. Select the Group from the list, and the object is added to that group.
6. Click **OK** to confirm your choice.

Refreshing the Hardware Tree

To make sure that all the folders and objects in the Hardware Tree are accurately displayed on the screen, you can Refresh the Hardware Tree.

To Refresh the Hardware Tree

1. Click the **Hardware** button in the Navigation Pane to open the Hardware Tree.
2. Right-click on **Hardware** and select **Refresh Tree** from the context menu. The Hardware Tree is updated.

Hardware Folders

You can create additional Hardware Folders if you need to organize the Controllers and access hardware into separate folders.

When you create a new Partition, a new Hardware Folder is automatically created to contain objects that reside in that Partition.

A Hardware Folder pane displays a tree structure that shows how you have configured the hardware on the C•CURE 9000 system. For example, the hardware tree shows you which readers, inputs, and outputs are configured for each controller.

You can use the Hardware Tree to navigate to hardware components you want to view or edit, or to create new hardware components, such as a reader you want to add to a controller.

The following topics provide more information about Hardware folders.

- C•CURE Controllers and Dependent Objects on Page 38
- Creating a New Hardware Folder on Page 39
- Creating and Using a New Hardware Folder Template on Page 39
- Renaming a Hardware Folder on Page 40

C•CURE Controllers and Dependent Objects

Dependent (child) objects that are managed under iSTAR and apC controllers include inputs, outputs, readers, boards, elevators, floors and doors. Controllers are parent objects to these and are created first. The parent objects are created within the company name folder in the hardware tree and must be created before the child objects in their respective classes, such as apC and iSTAR.

For iSTAR controllers, a cluster object encompasses a system of one or more iSTAR controllers, determining communications between individual controllers. To configure an iSTAR controller in the C•CURE 9000 system, you must first create a cluster. Each cluster is configured as either Non-encrypted (iSTAR Classic/Pro and Ultra) or Encrypted (iSTAR eX/Edge and Ultra) controllers. The cluster must have a controller that is the primary communication path to the host and may have an optional secondary communication path. The secondary communication path can be set to the same controller as the primary path.

In the instance of apC controllers, a communications port must be set up before these controllers and their dependent objects can be configured.

Elevators are similar to doors, but have many exit points which are determined by the floor objects. Floors are created independently but are added into the system through the selection of elevator buttons. Elevators also require readers, inputs, and outputs. The inputs are used to determine at which floor the cardholder exited and the outputs are used to control the elevator buttons.

NOTE Elevators (configured on iSTAR or apC controllers) have not been evaluated by UL.

Doors which are configured as part of an apC or iSTAR controller have properties that are unique to each controller, whereas a Door object is a base class that recognizes only those properties which are common to all controllers. Accordingly, door objects are created last because each door object requires the controller-specific dependent objects to exist for the door. Doors typically require readers, inputs and outputs. The inputs are used for door state monitors and exit devices. The outputs are used for locks and automatic door openers.

Example:

C•CURE 9000 dependent object hierarchy examples:

- iSTAR Cluster>iSTAR Controller>Readers, Inputs, Outputs> iSTAR Doors
- apC Comm Port>apC Controller>Readers, Inputs, Outputs>apC Doors

Creating a New Hardware Folder

Perform the following steps to create a new Hardware Folder.

To Create a New Hardware Folder

1. Click the **Hardware** button in the Navigation Pane to open the Hardware Tree.
2. Right-click on **Hardware** in the tree and select **Hardware Folder>New** from the context menu. The Hardware Folder dialog box opens.
3. Type the name for the new folder into the **Name** field.
4. Optionally type a description for the new folder into the **Description** field.
5. Click **Save and Close** to save the new folder.
6. Right-click on **Hardware** and select **Refresh Tree** from the context menu. The Hardware Tree is updated to display the new folder.

Creating and Using a New Hardware Folder Template

You can create a Hardware Folder Template that you can use as a basis for creating additional Hardware Folders.

In a template, you can fill in field values that will have the same values for all Hardware Folders, and then use the template when you are creating new Hardware Folders.

To Create a New Hardware Folder Template

1. Click the **Hardware** button in the Navigation Pane to open the Hardware Tree.
2. Right-click on **Hardware** in the tree and select **Hardware Folder>New Template** from the context menu. The Hardware Folder dialog box opens.
3. Type the name for the new folder into the **Name** field.
4. Optionally type a description for the new folder into the **Description** field.
5. Click **Save and Close** to save the new folder template.

To Use a Hardware Folder Template to Create New Hardware Folders

1. Click the **Hardware** button in the Navigation Pane to open the Hardware Tree.
2. Right-click on **Hardware** in the tree and select **Hardware Folder** from the context menu. The next level menu appears listing the Hardware Folder Templates you have previously created under the ---- *Templates* category.
3. Click on the name of the Hardware Folder Template you wish to use as the basis for the new Hardware Folder.
4. Type the name for the new folder into the **Name** field.
5. Optionally type a description for the new folder into the **Description** field.
6. Click **Save and Close** to save the new folder.

7. Right-click on **Hardware** and select **Refresh Tree** from the context menu. The Hardware Tree is updated to display the new folder.

Renaming a Hardware Folder

You can rename a Hardware Folder to customize it to your site's needs. Typically, you will want to rename the default folder, **Company Name**, with a more suitable name.

To Rename a Hardware Folder

1. Click the **Hardware** button in the Navigation Pane to open the Hardware Tree.
2. Right-click on the folder that you want to rename, and select **Edit** from the context menu. The Hardware Folder Editor dialog box opens.
3. Type the new name for the folder into the **Name** field.
4. Optionally type a description for the folder into the **Description** field.
5. Click **Save and Close** to save the renamed folder.

Templates

The C•CURE 9000 Hardware pane supports the concept of Templates for almost all objects in the Hardware Tree. A Template is a re-usable object you can create and configure with settings that you would like to use when creating other objects. For example, if all of the iSTAR Readers are the same reader type, using the same card format, you could create a Reader Template that contained those settings, and apply that Template to any iSTAR Reader object that you create, to make Reader configuration faster and more consistent. The Template objects you create do not appear in the Hardware Tree, but they are available to be applied when you create an object of the same type as the Template.

The following topics provide more information about using the Hardware Templates.

- Creating a Template on Page 41
- Editing a Template on Page 42
- Creating an Object from a Template on Page 43
- Using Templates for Controller Inputs, Outputs, and Readers on Page 43
- Viewing a List of Templates on Page 45
- Deleting a Template on Page 45

Creating a Template

To create a new Template for an object, it is necessary to create an instance of the parent object for the object so that the object type for the Template appears in the Hardware Tree. For example, to create a Template for the iSTAR eX Controller object type, you need to create an iSTAR Cluster that can contain iSTAR eX Controllers first, then create the iSTAR eX Controller Template.

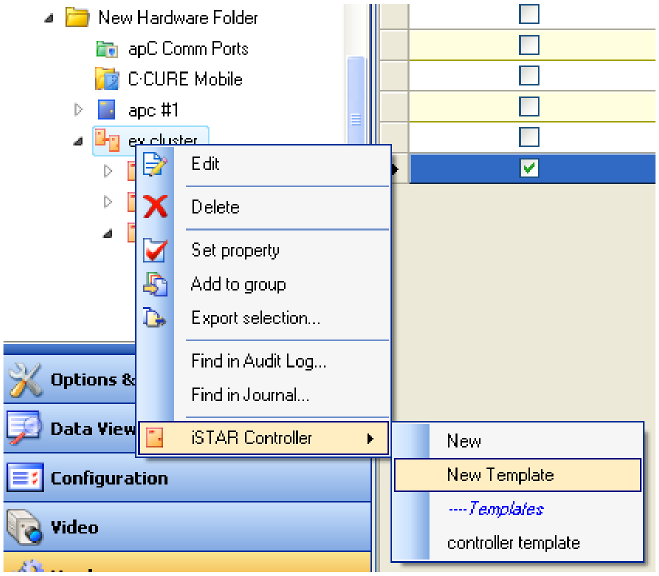
To Create a Template

1. In the Navigation pane of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Navigate to the Hardware folder that contains the object type for which you want to create a new Template.

   Example:

   If you want to create a Template for an iSTAR eX Controller, navigate to a folder that contains an iSTAR Cluster for iSTAR eX Controllers.
3. Select the parent object type (in this case, iSTAR Cluster) and right-click to display the context menu.
4. Select the object type for the Template from the context menu, then select **New Template**. See the example in Figure 6 on Page 42.

Figure 6: Creating a New Controller Template



5. The editor for the object opens the new Template.
6. Configure any settings you want to include in the Template.
7. To save the new Template, click **Save and Close**.

The new template appears under ---- *Templates* in that object type's context menu drop-down list in the Hardware tree. For example, in Figure 6 on Page 42, an iSTAR Controller Template named **controller template** appears in the context menu.

Editing a Template

If you have created a Template and need to make changes to it, you need to locate the Template to edit it. Because you cannot view Templates in the Hardware Tree, and most default Dynamic Views do not list Templates, you may need to create a new Dynamic View that shows the Templates you have created.

This section will use Inputs as an example, and show you how to create a Dynamic View that lists the Input Templates along with the Controller Inputs.

Note that you can create a Dynamic View that shows only apC Inputs or iSTAR Inputs by choosing that object type, or you can create a View that lists all Input (or Door or Reader) objects, then filter that view to show only the Inputs (or Doors or Readers) of a particular type.

To View Templates in a Dynamic View

1. Navigate to Data Views and choose **Dynamic View** from the Data Views drop-down list.
2. Click **New**. The Dynamic View editor opens.
3. Type a name for your Dynamic View in the **Name** field. Include 'with Templates' in the name of the Dynamic View so that you can find the view again easily.

   Example:

   Inputs Dynamic View (with Templates)
4. Type a description of the view in the **Description** field.
5. Click ... in the **View Type** field. A dialog box appears listing the object types you can choose for your Dynamic View.

6. Click on ‘Click here to filter data’ and type the first letter of the name of the object type for which you wish to create a Dynamic View. The list of object types is filtered to show only the types that begin with that letter.

   Example:

   To create a list of Inputs, type ‘i’ then click on **Input**.

7. Click **Add** to add a column to the Dynamic View.
8. Click [...] in **Column Property**, then click **Name** to add the Name Property to display in the column.
9. Click **Add** to add a column to the Dynamic View.
10. Click [...] in **Column Property**, then click **Template** to add the Template Property to display in the column.
11. You can click **Add** again to add more columns as needed.
12. Click **Save and Close** to save the Dynamic View.
13. In the Data Views pane, click → ▾ to display a list of your Dynamic Views.
14. Double-click on the Dynamic View you just created. When it appears, it will list all of the objects of the object type you specified, and the Template column identifies which objects are Templates.
15. Find the Template you wish to edit, and double-click it to open the editor to edit the Template.
16. When you have completed making changes to the Template, click **Save and Close** to save your changes.

Creating an Object from a Template

You can create objects such as Controllers, Doors, and Elevators from Templates.

To Create an Object from a Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Navigate to the Hardware folder that contains the parent object in which you want to create the new object from a Template.
3. Select the parent object and right-click to display the context menu.
4. Select the object type and click the Template you want to use from the context menu.

   Example:

   In Figure 6 on Page 42, you could select **controller template** to create an iSTAR Controller from a Template.

5. The Editor for the object opens so that you can edit the new object. The settings from your Template are already configured.
6. Configure any additional settings.
7. To save the new object, click **Save and Close**.

Using Templates for Controller Inputs, Outputs, and Readers

You can use Templates as the basis for objects that you create while configuring Controllers in C•CURE 9000. For example, if you are configuring an iSTAR Controller that has an I/8 board, you can create an Input template and use that template as the basis for one or more iSTAR Inputs on that I/8 board.

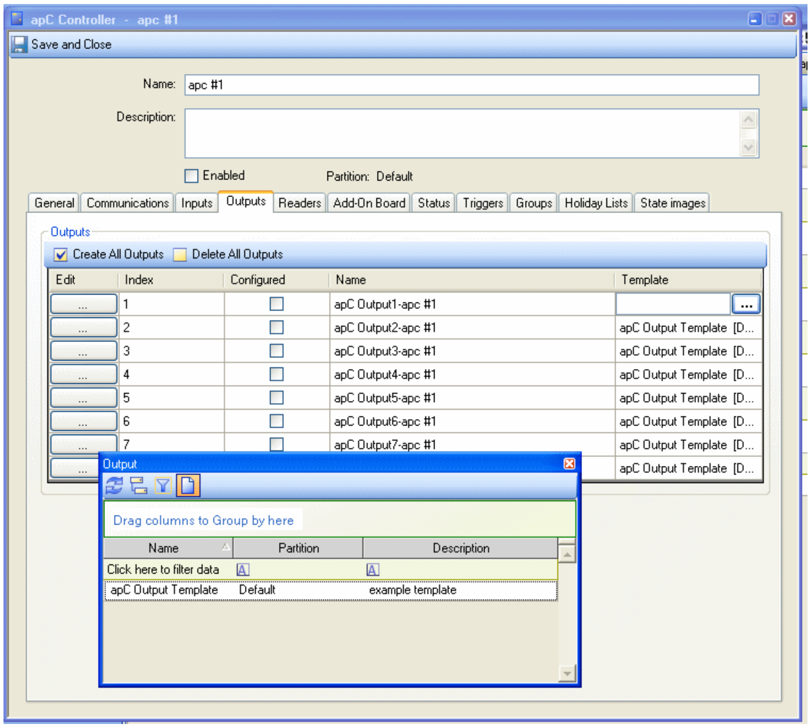
Typically, you create these objects from a tab within the Controller editor. The tab where you create such an object contains a table that includes a Template column for you to identify a Template to use as a basis for the objects you create.

Example:

The apC Controller editor has tabs for Inputs, Outputs, and Readers. On each of these tabs, there is a **Template** column that lets you select a Template to use for creating new objects.

Figure 7 on Page 44 shows an example of an apC Outputs tab with an apC Template selected in the **Template** column.

Figure 7: apC Outputs Template



apC Controller - apc #1

Save and Close

Name: apc #1

Description:

□ Enabled   Partition: Default

General | Communications | Inputs | Outputs | Readers | Add-On Board | Status | Triggers | Groups | Holiday Lists | State images

Outputs

☑ Create All Outputs □ Delete All Outputs

Edit	Index	Configured	Name	Template
...	1	□	apC Output1-apc #1	...
...	2	□	apC Output2-apc #1	apC Output Template [D...
...	3	□	apC Output3-apc #1	apC Output Template [D...
...	4	□	apC Output4-apc #1	apC Output Template [D...
...	5	□	apC Output5-apc #1	apC Output Template [D...
...	6	□	apC Output6-apc #1	apC Output Template [D...
...	7	□	apC Output7-apc #1	apC Output Template [D...
...				apC Output Template [D...

Output

Drag columns to Group by here

Name	Partition	Description
Click here to filter data		
apC Output Template	Default	example template

By default, when you select a Template for one object in the list, the same Template is added as the basis for each object. You can use more than one Template by configuring the objects for which you want to use one Template, then choosing one or more different Templates for the remaining objects.

To Use Templates for Controller Inputs, Outputs, or Readers

1. From the Hardware pane, open the Controller Editor for the Controller you want to configure.
2. Click the tab in the Controller Editor for the objects you want to configure.

   ### Example:

   In the apC Editor, click the Outputs tab to configure Outputs on this apC.
3. To specify a Template for an object you want to configure, click in the **Template** column of an object that is not yet configured (**Configured** column value is □).
4. Click ... to select a Template. A dialog box opens listing the available Templates. See Figure 7 on Page 44 for an example.
5. Click on a Template in the list to select it. That Template is added to every object in the table that is not already configured.
6. Select the Configured column ☑ for each object you want to configure with the selected Template.
7. If you want to select a different Template for any of the remaining objects in the table that you have not yet configured (Configured column value is □):

   a. Click in the **Template** column of that object, then click ... to select a Template. A dialog box opens listing the available Templates.

   b. Click on a Template in the list to select it. That Template is added to every object in the table that is not already configured.

   c. Select the **Configured** column ☑ for each object you want to configure with the selected Template.

8. Repeat Step 7 for any additional objects for which you want to choose a different Template.

9. To edit any of the objects, click ... in the **Edit** column for that object. The editor for that object opens. The fields that were configured in the Template are already configured in the object you are editing.

10. When you have completed configuring an object from the Template, click **Save and Close** in the object editor to save the object.

11. Click **Save and Close** in the Controller editor to save the your changes to the Controller.

Deleting a Template

You can delete a template that you have created by using the right-click context menu in a Dynamic View.

To Delete a Template

1. In the Navigation pane, select the type of object you want to delete from the drop-down list. (For example, in the Hardware pane, choose apC Comm Port from the drop-down list.)
2. Click the Search pane.
3. Select the **Template** check box
4. Click ... to display a list of the objects that includes the Templates you have defined.
5. Select the Template(s) from the list that you wish to delete.
6. Right-click on a selected Template to bring up the context menu for the object.
7. Select **Delete** from the menu to delete the Template.

Viewing a List of Templates

You can include Templates in a list of objects of a type.

Typically the Dynamic View for an object type does not include Template objects. You can use the Template check box to cause the Dynamic View to list all the Templates you have created.

To View a List of Templates

1. In the Navigation pane, select the type of object you wish to view from the drop-down list. (For example, in the Hardware pane, choose apC Comm Port from the drop-down list.)
2. Click the Search pane.
3. Select the **Template** check box
4. Click ... to display a list of the objects that includes the Templates you have defined.

Copying, Pasting, and Renaming Clusters and Controllers

The C•CURE 9000 supports the ability to duplicate an existing configured iSTAR Cluster with all of its included Security Objects - Controllers, Boards, Inputs, Outputs, Readers, Doors, Elevators, Triggers (plus associated Events).

- The **Copy & Paste** context menu selection can be used to make a duplicate of a Cluster and its Child Objects on the same partition on the same system.
- The **Copy To** context menu selection can be used to make a duplicate of a Cluster and its Child Objects on a different partition on the same system, using Paste From.
- With a flash drive or other portable memory device or shared drive, the **Copy To** and **Paste From** context menu selections can be used to duplicate the Cluster and Children on another system.
- The **Rename** context menu selection is used to give these duplicated Objects new names.
- If you are extensively using the **Copy & Paste** and **Rename** features, it is good practice to establish a naming convention for the site and then rename based on that convention.

Example:

Create the new Clusters and Controllers with -Bldg appended to all of the objects. While Copying and Pasting you can use **Search and Replace** to change **-BLDG-Copy-datetime** to **-BLDG-A**. See Using Search and Replace on Page 49.

NOTE The Export and Import of Clusters does not include all the doors, elevators and events (configured via triggers). **Copy & Paste** includes all of those objects.

When an iSTAR Cluster is selected and **Copy & Paste** is used, the following objects that belong to that cluster are copied and pasted:

- All configured Controllers plus the following components of each Controller:
  - Boards (all the boards including GCM, ACMs, Aperio Hubs or Schlage PIMs, etc.)
  - Inputs (including I/8s, I/8-CSIs)
  - Outputs (including R/8s)
  - Readers (all types)
  - Doors
  - Elevators
  - Triggers, including their associated Events and actions

When an iSTAR Controller is selected and **Copy & Paste** is used, the following objects that belong to that Controller are copied and pasted:

- Boards (all the boards including GCM, ACMs, Aperio Hubs or Schlage PIMs, etc.)
- Inputs (including I/8s, I/8-CSIs)
- Outputs (including R/8s)
- Readers (all types)
- Doors
- Elevators
- Triggers, including their associated Events and actions

Privileges

To use the **Copy & Paste**, **Copy To**, **Copy From** and **Rename** features, you must be an Administrator or an operator that has a Privilege with those Permissions granted for **iSTAR Controller** and **iSTAR Cluster**.

The **iSTAR Controller** and **iSTAR Cluster** Privilege Permission features are located in the **Privileges** dialog box **Defaults** tab. Click on the **Hardware**>**Controllers**>**iSTAR**. Locate the **iSTAR Controller** and **iSTAR Cluster** for the Permissions for the Privilege.

See the *C•CURE 9000 Software Configuration Guide* 'Privileges' chapter for more information.

Important Copy and Paste Process Information

- All the child objects that are copied and pasted follow the same naming convention (i.e., **Copy [date-time]** will be appended to their original names.)
- If copying and pasting on the same system, the objects are pasted in the same partition as the source objects. If you are pasting on another system, the pasted objects will have the same partition as the object or folder on which user right-clicked and selected **Paste From**.
- All the export files are .xml files.
- During import, the secondary objects must exist on the destination system. If not, then the import of object that refers to secondary object will be aborted. For example, Event A is configured to activate Event B. Here Event B is the secondary object and it must already exist otherwise the import will be aborted.
- **Copy & Paste** copies all triggers assigned to the object, including the events and event actions, but not all of the event action targets, such as a sound object.
- When copying a panel which has panel events associated with it, the panel events are copied but not assigned to the panel. The panel must be assigned manually after the copy is complete and host events must be reconfigured.

Copy & Paste Tasks

⚠ When you copy a Controller, or a Controller in a Cluster, the MAC address is also copied. The copied Controller MAC address must be changed to a unique MAC address before the unit can be enabled.

You can perform the following tasks using **Copy & Paste**:

- Copying and Pasting on the Same System on Page 47
- Copying to a Mapped Drive or Another System Using a Flash Drive on Page 50
- Copying and Pasting from Partition to Partition on Page 53

NOTE The same procedures can be used to copy and paste individual Controller configurations.

Copying and Pasting on the Same System

The following procedure is used to create a copy of the following:

- A Cluster, plus all the objects within that Cluster with the same names as the existing ones with **-Copy [date-time]** appended to their names.
- A Controller with **-Copy [date-time]** appended to its name, plus all the objects within that Controller.

Example:

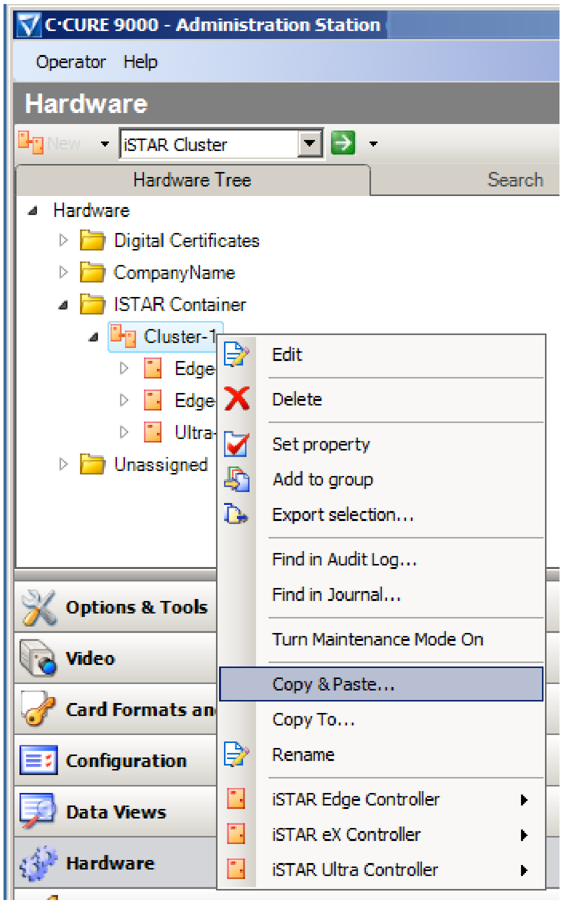
For a Cluster named Cluster5, the new cluster's name will be Cluster5-Copy [date-time], and if the Cluster has a Controller named Controller7, the new name will be Controller7-Copy [date-time].

For a Controller named Controller6, the new name will be Controller6-Copy [date-time].

To Create a Copy of an Existing Cluster or Controller on the Same System

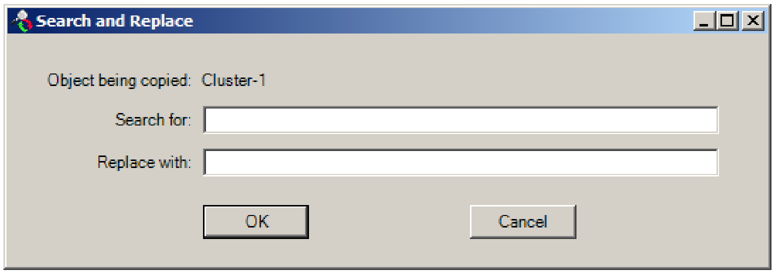
1. Right-click on an existing Cluster, or Controller, in the Hardware tree and select **Copy & Paste** from the context menu. Figure 8 on Page 48 shows selecting to copy and paste a Cluster.

Figure 8: Copy & Paste Context Menu Selection



The **Search and Replace** dialog box, as shown in Figure 9 on Page 48, appears.

Figure 9: Search and Replace Dialog Box



Object being copied: Cluster-1

Search for:

Replace with:

Using Search and Replace

Prior to the paste operation, the system provides the ability to replace a particular string in the names of objects being copied in the objects being pasted. Normally, the pasted objects will have the string **-Copy [date-time]** appended to the names. The **Search and Replace** dialog box allows you to replace the name.

— Any string can be entered in the **Search for** field, and the string that it will replace in the **Replace with** field.

— Objects in conflict will have **-Copy [date-time]** appended to their names

— Partial matches are considered. For example, if **Door** is entered in the search field and **Dr** in the replace field with an object named **FrontDoorReader** then it is renamed as **FrontDrReader**. Selecting the **Cancel** button will abort the Paste operation.

— If both the **Search for** and **Replace with** fields are left blank, the object names are appended with **-Copy [date-time]**.

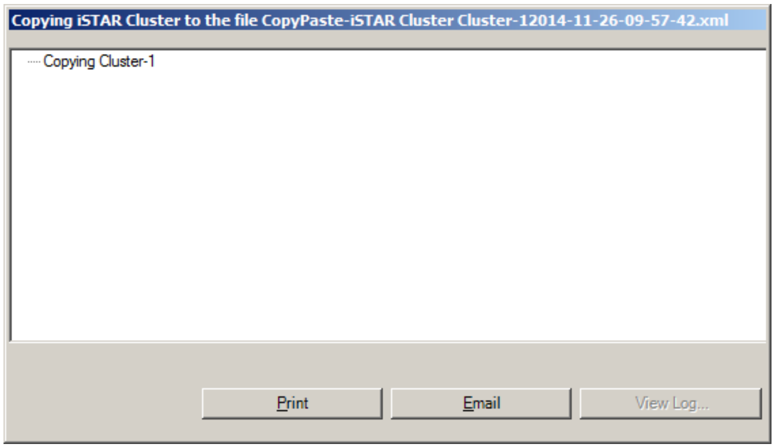
— Both **Search for** and **Replace with** fields must have a string entered or both fields must be blank. Leaving one field blank is not allowed by the C•CURE 9000 software.

NOTE If the **Copy & Paste** operation is stopped before it completes, the entire operation is canceled.

2. Click **OK**. If you selected to search and replace, the system searches for the string and performs the replace while copying the Cluster or Controller.

   The **Copying Status** Window, shown in Figure 10 on Page 49, appears. The time required depends on the complexity of the Cluster or Controller. The time is 10 to 60 seconds for most Clusters.

Figure 10: Copying Status Window

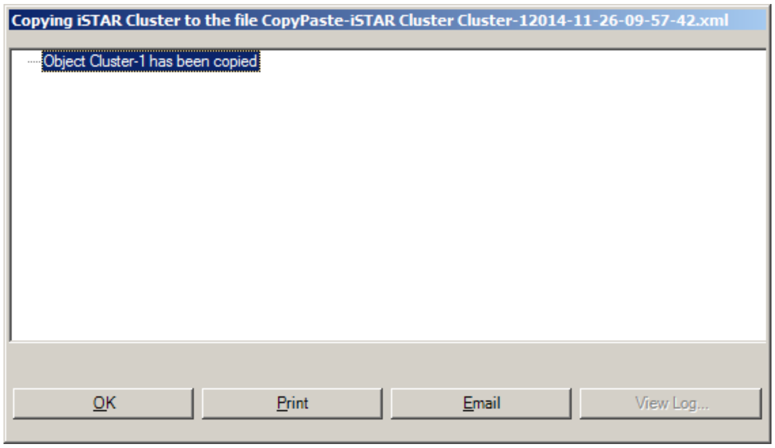


Copying iSTAR Cluster to the file CopyPaste-iSTAR Cluster Cluster-12014-11-26-09-57-42.xml

Copying Cluster-1

3. Click **OK** when the object is displayed as copied, as shown in Copying Status Window on Page 49.

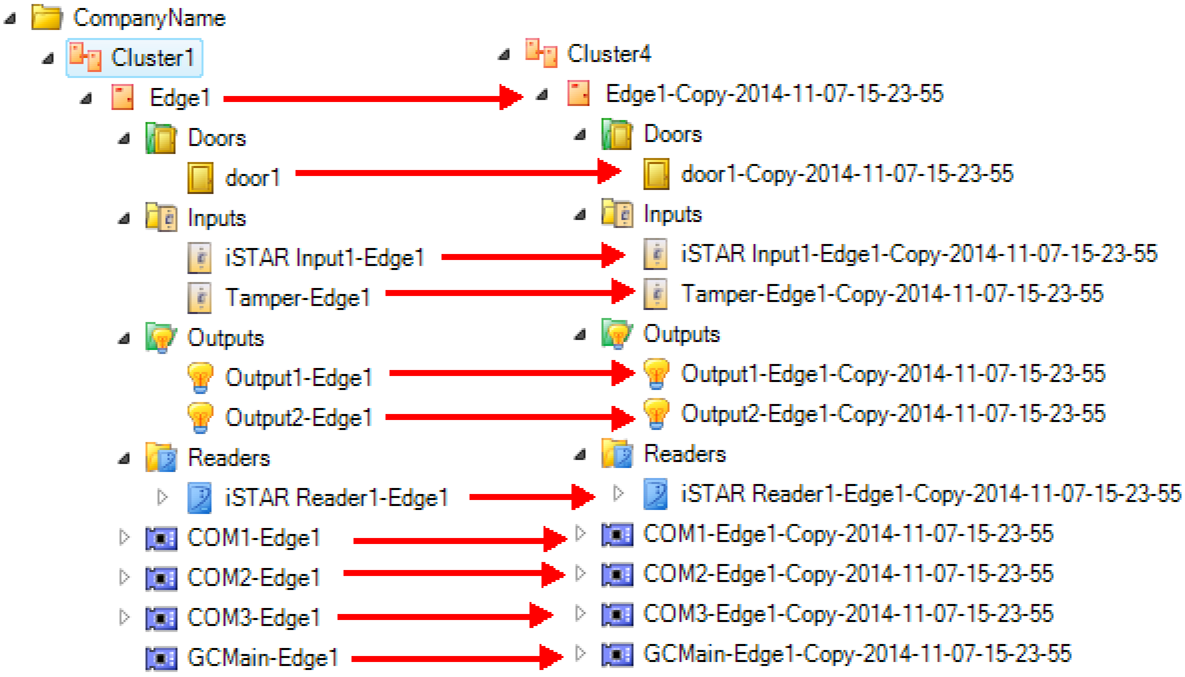
Figure 11: Copying Status Window - Complete


Copying iSTAR Cluster to the file CopyPaste-iSTAR Cluster Cluster-12014-11-26-09-57-42.xml

Object Cluster-1 has been copied

When the copy is complete, shown side-by-side in Figure 12 on Page 50, all Readers, Inputs, Outputs, Doors, etc. have **- Copy [date-time**] appended to their names.

Figure 12: Hardware Tree - Copy Complete

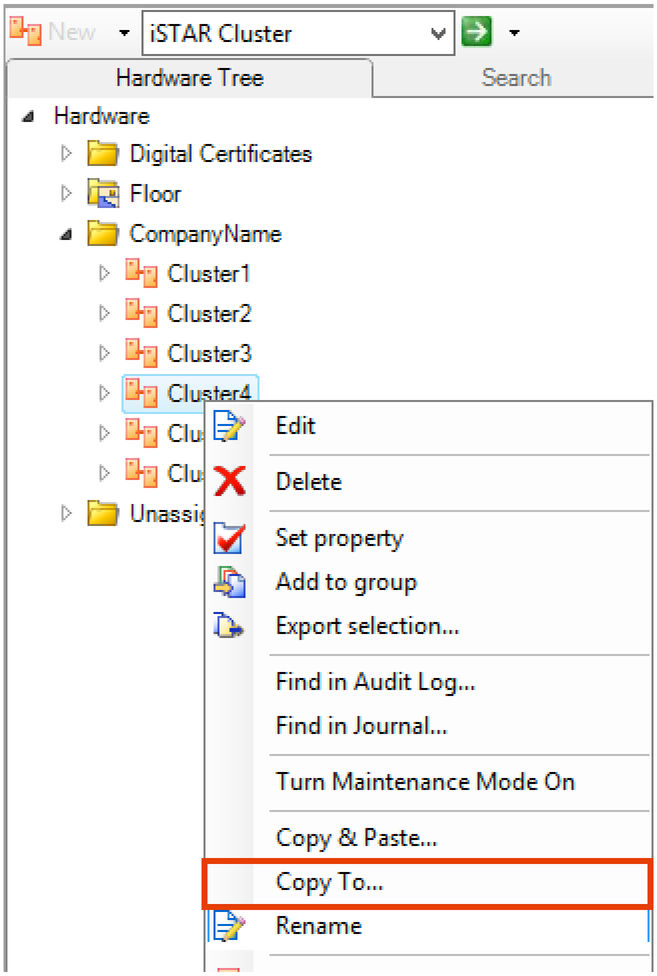

CompanyName
Cluster1
Edge1
Doors
door1
Inputs
iSTAR Input1-Edge1
Tamper-Edge1
Outputs
Output1-Edge1
Output2-Edge1
Readers
iSTAR Reader1-Edge1
COM1-Edge1
COM2-Edge1
COM3-Edge1
GCMain-Edge1
Cluster4
Edge1-Copy-2014-11-07-15-23-55
Doors
door1-Copy-2014-11-07-15-23-55
Inputs
iSTAR Input1-Edge1-Copy-2014-11-07-15-23-55
Tamper-Edge1-Copy-2014-11-07-15-23-55
Outputs
Output1-Edge1-Copy-2014-11-07-15-23-55
Output2-Edge1-Copy-2014-11-07-15-23-55
Readers
iSTAR Reader1-Edge1-Copy-2014-11-07-15-23-55
COM1-Edge1-Copy-2014-11-07-15-23-55
COM2-Edge1-Copy-2014-11-07-15-23-55
COM3-Edge1-Copy-2014-11-07-15-23-55
GCMain-Edge1-Copy-2014-11-07-15-23-55

Copying to a Mapped Drive or Another System Using a Flash Drive

To Copy a Cluster or a Controller to a Mapped Drive or Another System

1. Right-click on the Cluster and select **Copy to**.

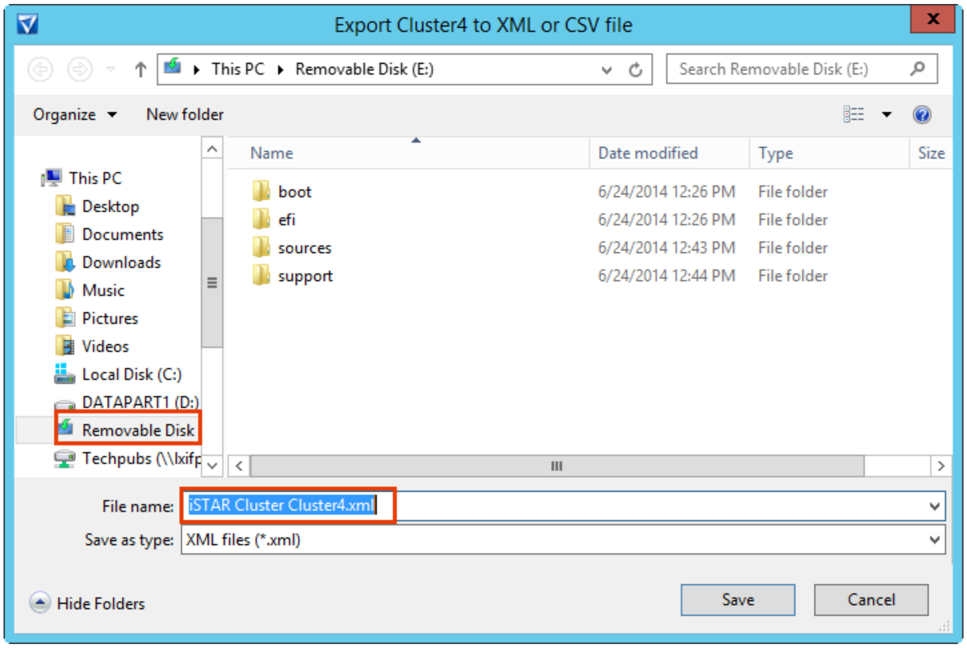
Figure 13: Copy To Menu Selection



The Export Window, shown in Figure 14 on Page 52, opens.

2. Select the Flash Drive (or the mapped drive), and edit the **File name** if desired.

Figure 14: Copy to Flash Drive



Export Cluster4 to XML or CSV file

This PC ▸ Removable Disk (E:)

Name	Date modified	Type	Size
boot	6/24/2014 12:26 PM	File folder	
efi	6/24/2014 12:26 PM	File folder	
sources	6/24/2014 12:43 PM	File folder	
support	6/24/2014 12:44 PM	File folder	

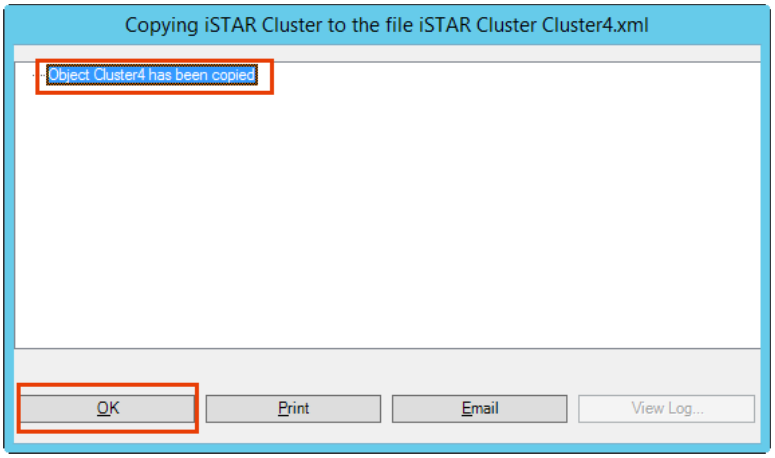
File name: iSTAR Cluster Cluster4.xml

Save as type: XML files (*.xml)

3. Click **Save**.

   The **Copy To Status** Window, shown in Figure 15 on Page 52, appears.

Figure 15: Copy To Status Window



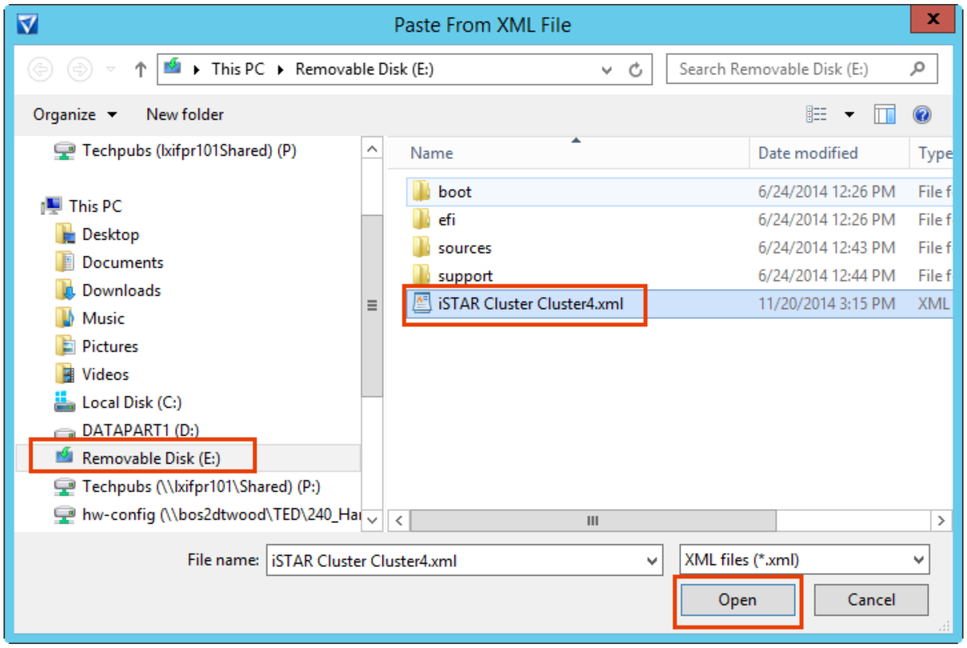
Copying iSTAR Cluster to the file iSTAR Cluster Cluster4.xml

Object Cluster4 has been copied

4. Click **OK** when the object is displayed as copied.
5. Insert the Flash drive into the system where you want to copy the objects. Or, browse to the mapped drive on the system.

   In this example, a **simulated** hardware folder is representing the other system.
6. Right-click on the target folder in the new system's **Hardware** tree and select **iSTAR Cluster>Paste From**.
7. Select the Flash Drive (or the mapped drive), the **.xml** file, and click **Open** as shown in Figure 16 on Page 53Figure 16 on Page 53

Figure 16: Paste From Window


Paste From XML File
This PC ▸ Removable Disk (E:)
Search Removable Disk (E:)
Organize
New folder
Techpubs (lxifpr101Shared) (P)
This PC
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
DATAPART1 (D:)
Removable Disk (E:)
Techpubs (\\lxifpr101\Shared) (P:)
hw-config (\\bos2dtwood\TED\240_Ha
Open
Cancel

Name	Date modified	Type
boot	6/24/2014 12:26 PM	File f
efi	6/24/2014 12:26 PM	File f
sources	6/24/2014 12:43 PM	File f
support	6/24/2014 12:44 PM	File f
iSTAR Cluster Cluster4.xml	11/20/2014 3:15 PM	XML

File name: iSTAR Cluster Cluster4.xml

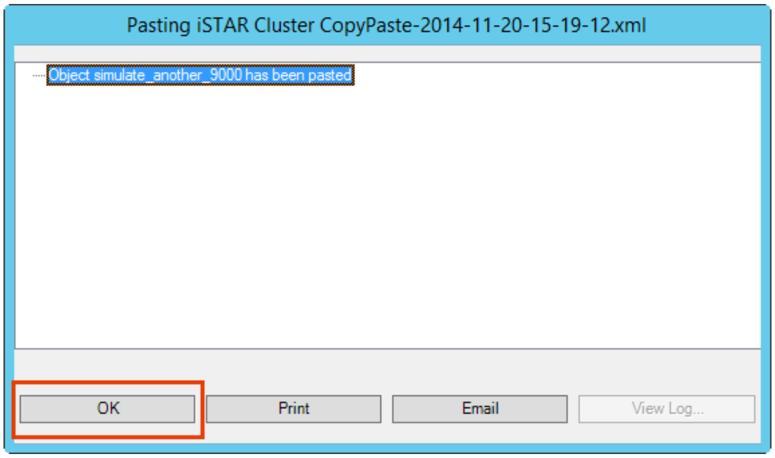
XML files (*.xml)

The **Search and Replace** dialog box appears. For information about Search and Replace, see Using Search and Replace on Page 49

8. Click **OK** in the **Search and Replace** dialog box. If you selected to search and replace, the system searches for the string and performs the replace while copying the objects.

   The **Pasting Status** Window, shown in Figure 17 on Page 53, appears.

Figure 17: Pasting Status Window



Object simulate_another_9000 has been pasted

9. Click **OK** in the Pasting Status Window when the object is displayed as pasted.

   The copied Cluster appears under the simulated folder in the **Hardware** tree on the system.

Copying and Pasting from Partition to Partition

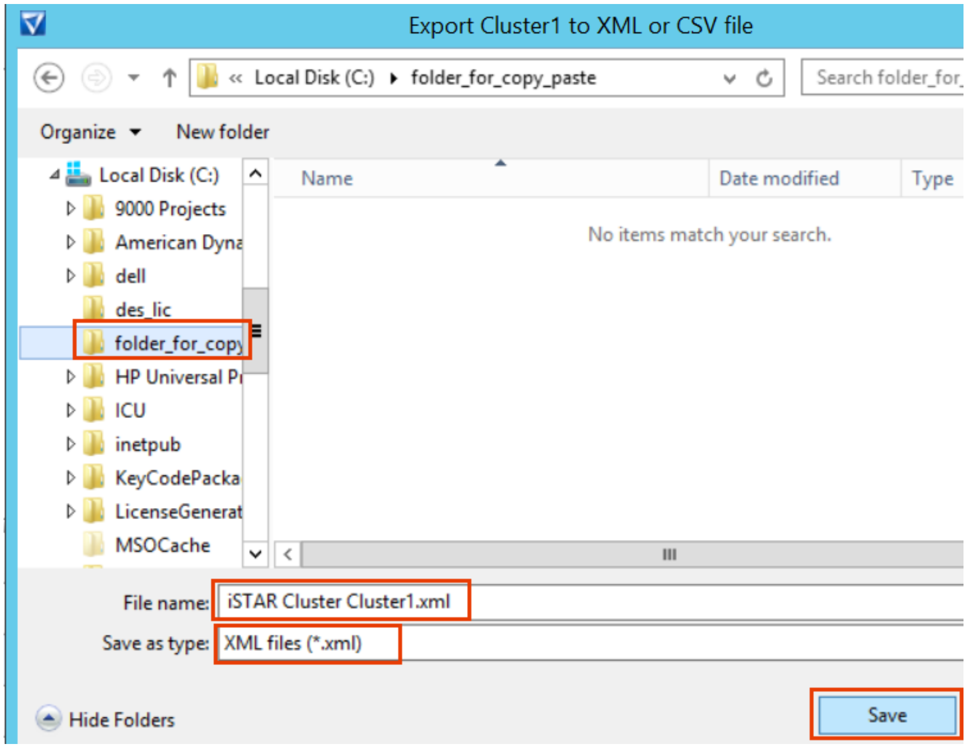
To Copy and Paste for a Partition to a Partition

1. Right-click on the Cluster or Controller and select **Copy To**.

   The **Export** Window appears.

2. Select a folder on the system to save the .xml file, and click **Save**, as shown in Figure 18 on Page 54.

Figure 18: Export Window



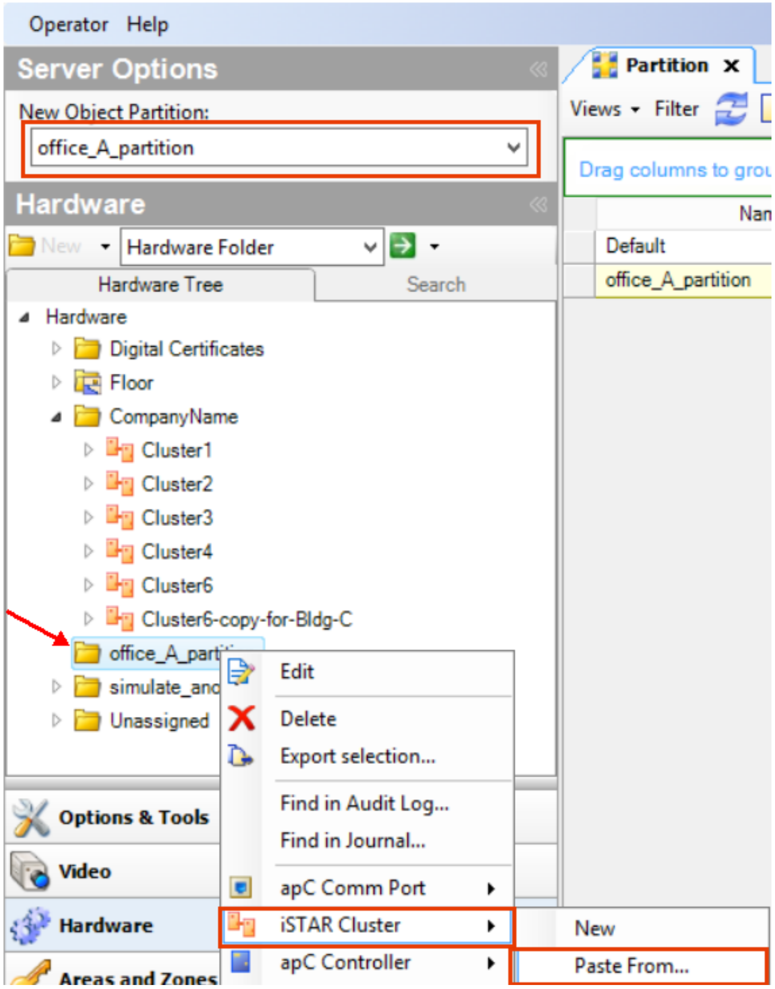
File name: iSTAR Cluster Cluster1.xml

Save as type: XML files (*.xml)

3. Select the other partition where you want to copy the object.

4. Right-click on the **Hardware** folder in the partition and select **iSTAR Cluster>Paste from**, as shown in Figure 19 on Page 55Figure 19 on Page 55

Figure 19: Partition Selection



The **Paste From** Window appears.

5. Browse to the .xml file you saved on the system.
6. Select the .xml file and click **Open**.

   The **Search and Replace** dialog box appears. For information about **Search and Replace**, see Using Search and Replace on Page 49

7. Click **OK** in the **Search and Replace** dialog box. If you selected to search and replace, the system searches for the string and performs the replace while copying the objects.

   The Pasting Status Window appears.

8. Click **OK** in the **Pasting Status** Window when the object is displayed as pasted.

   The copied object appears in the Partition.

Renaming Clusters and Controllers

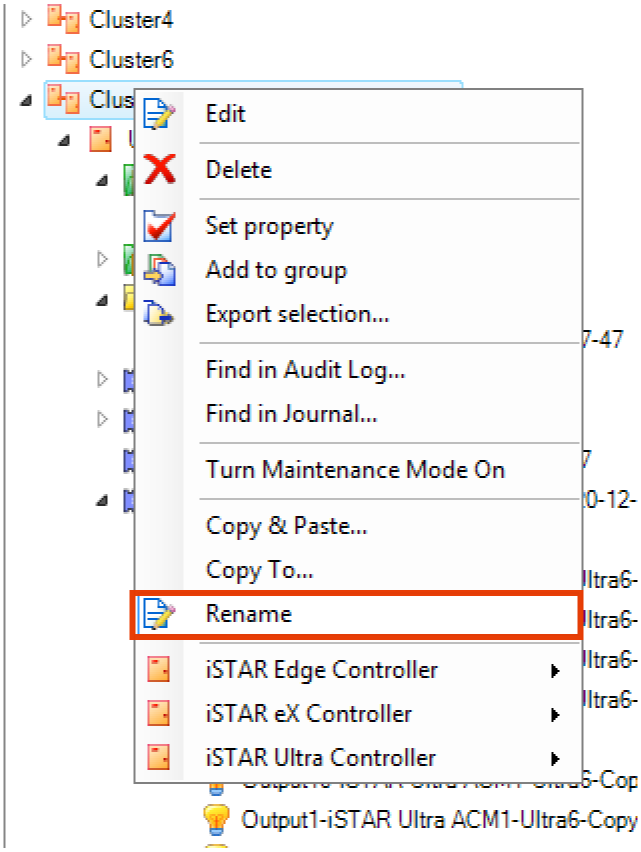
If you did not use the **Search and Replace** option in the **Copy & Paste** procedure, you can use the **Rename** selection on the Context menu.

The following procedure renames **-Copy [date-time]** that was appended to the end of a Cluster and its objects during **Copy & Paste** to **-Bldg-C**.

To Rename Clusters and Controllers

1. Right-click on the object and select **Rename**, as shown in Figure 20 on Page 56.

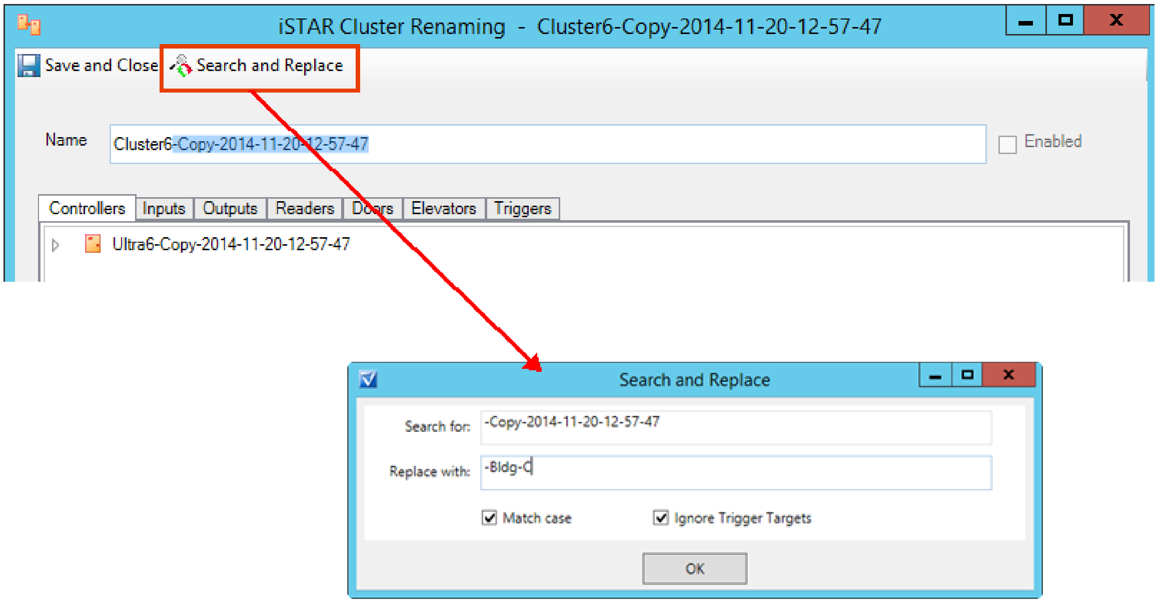
Figure 20: Rename Cluster



The **Renaming** dialog box appears.

2. Click **Search and Replace** to open the **Search and Replace** dialog box, as shown in Figure 21 on Page 57.

Figure 21: Cluster Renaming



iSTAR Cluster Renaming - Cluster6-Copy-2014-11-20-12-57-47

Name: Cluster6-Copy-2014-11-20-12-57-47 □ Enabled

Ultra6-Copy-2014-11-20-12-57-47

Search and Replace

Search for: -Copy-2014-11-20-12-57-47

Replace with: -Bldg-C

☑ Match case ☑ Ignore Trigger Targets

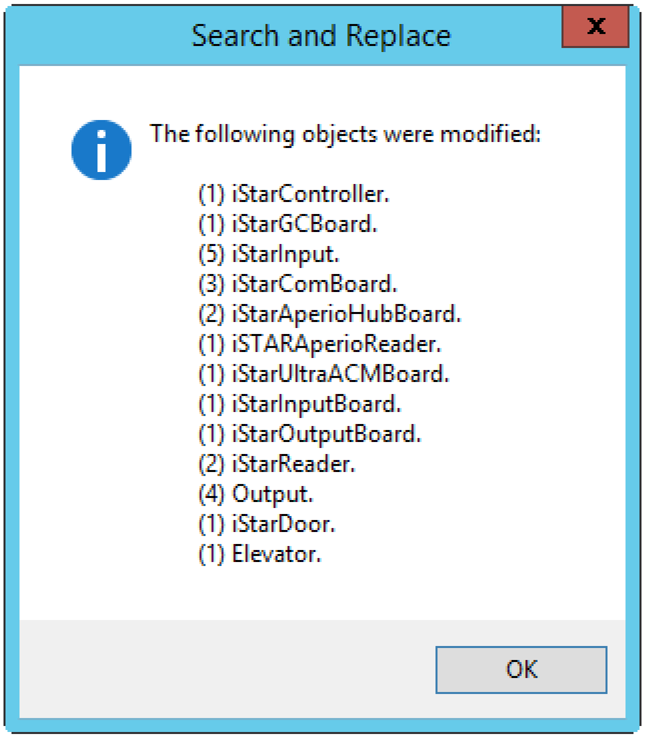
3. Enter the new name in the **Replace with** field (in this example it's **-Bldg-C**).
4. Optional selections
   - Click on the **Match case** check box to match the case entered.
   - Click in the **Ignore Trigger Targets** check box to ignore Trigger target events.

Use caution if renaming original Events. The Events may be linked to other objects. Use the **Show Association** feature to determine if they are. See the *C•CURE 9000 Getting Started Guide* for information about using Show Association.

5. Click **OK**.

   An informational dialog box appears displaying all the objects that were modified with the new name.

Figure 22: Rename Results



Search and Replace

The following objects were modified:

(1) iStarController.
(1) iStarGCBoard.
(5) iStarInput.
(3) iStarComBoard.
(2) iStarAperioHubBoard.
(1) iSTARAperioReader.
(1) iStarUltraACMBoard.
(1) iStarInputBoard.
(1) iStarOutputBoard.
(2) iStarReader.
(4) Output.
(1) iStarDoor.
(1) Elevator.

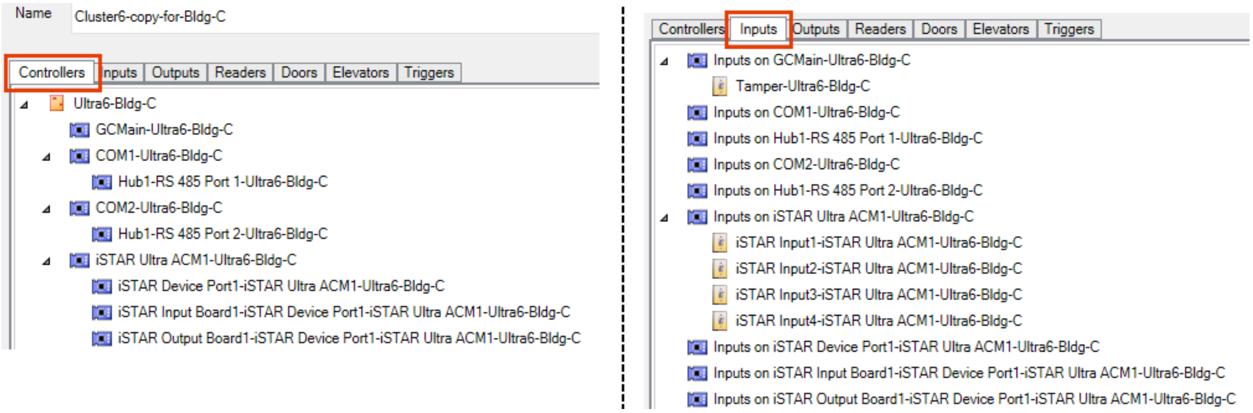
6. Click **OK**.
7. Verify that the rename changes are complete. Click on the tabs in Renaming dialog box.

NOTE Because **Ignore Trigger Targets** was selected in the **Search and Replace** dialog box, the original Trigger Target Events were not renamed, but another copy of the Events exist with the **- Copy [date-time]** appended to the end.

Rename Results

The next series of graphics illustrate the effect of the Rename operation.

Figure 23: Controller Tab and Input Tab



Name Cluster6-copy-for-Bldg-C

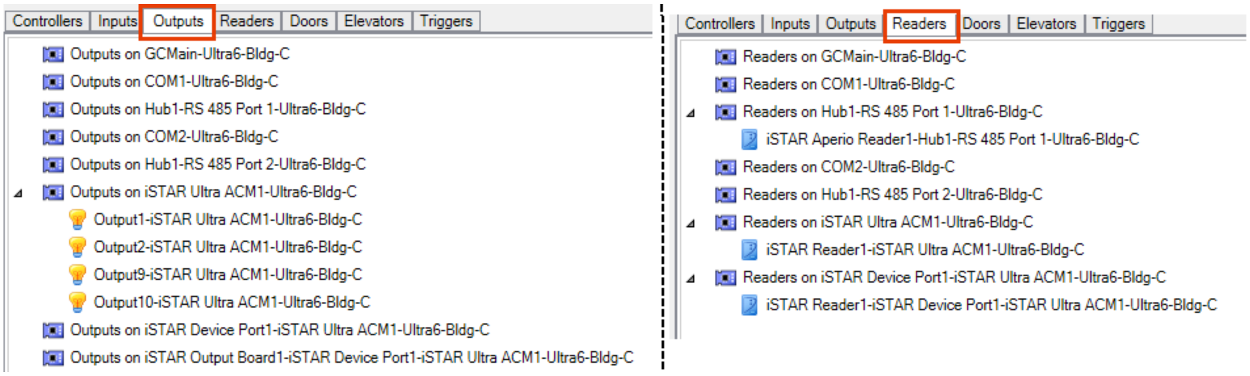
Controllers | Inputs | Outputs | Readers | Doors | Elevators | Triggers

Ultra6-Bldg-C
GCMain-Ultra6-Bldg-C
COM1-Ultra6-Bldg-C
Hub1-RS 485 Port 1-Ultra6-Bldg-C
COM2-Ultra6-Bldg-C
Hub1-RS 485 Port 2-Ultra6-Bldg-C
iSTAR Ultra ACM1-Ultra6-Bldg-C
iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C
iSTAR Input Board1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C
iSTAR Output Board1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C

Controllers | Inputs | Outputs | Readers | Doors | Elevators | Triggers

Inputs on GCMain-Ultra6-Bldg-C
Tamper-Ultra6-Bldg-C
Inputs on COM1-Ultra6-Bldg-C
Inputs on Hub1-RS 485 Port 1-Ultra6-Bldg-C
Inputs on COM2-Ultra6-Bldg-C
Inputs on Hub1-RS 485 Port 2-Ultra6-Bldg-C
Inputs on iSTAR Ultra ACM1-Ultra6-Bldg-C
iSTAR Input1-iSTAR Ultra ACM1-Ultra6-Bldg-C
iSTAR Input2-iSTAR Ultra ACM1-Ultra6-Bldg-C
iSTAR Input3-iSTAR Ultra ACM1-Ultra6-Bldg-C
iSTAR Input4-iSTAR Ultra ACM1-Ultra6-Bldg-C
Inputs on iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C
Inputs on iSTAR Input Board1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C
Inputs on iSTAR Output Board1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C

Figure 24: Outputs Tab and Readers Tab



Outputs on GCMain-Ultra6-Bldg-C
Outputs on COM1-Ultra6-Bldg-C
Outputs on Hub1-RS 485 Port 1-Ultra6-Bldg-C
Outputs on COM2-Ultra6-Bldg-C
Outputs on Hub1-RS 485 Port 2-Ultra6-Bldg-C
Outputs on iSTAR Ultra ACM1-Ultra6-Bldg-C
- Output1-iSTAR Ultra ACM1-Ultra6-Bldg-C
- Output2-iSTAR Ultra ACM1-Ultra6-Bldg-C
- Output9-iSTAR Ultra ACM1-Ultra6-Bldg-C
- Output10-iSTAR Ultra ACM1-Ultra6-Bldg-C

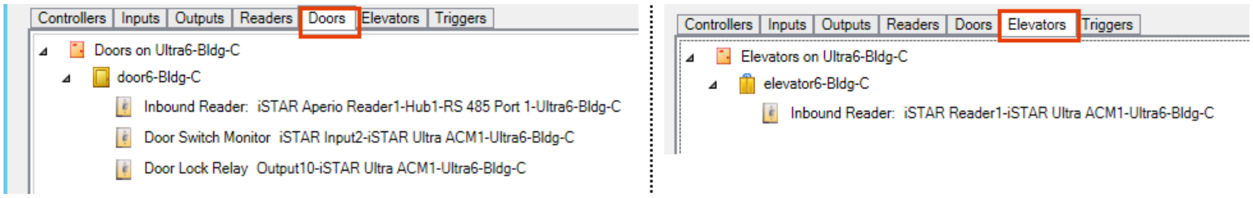
Outputs on iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C
Outputs on iSTAR Output Board1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C

Readers on GCMain-Ultra6-Bldg-C
Readers on COM1-Ultra6-Bldg-C
Readers on Hub1-RS 485 Port 1-Ultra6-Bldg-C
- iSTAR Aperio Reader1-Hub1-RS 485 Port 1-Ultra6-Bldg-C

Readers on COM2-Ultra6-Bldg-C
Readers on Hub1-RS 485 Port 2-Ultra6-Bldg-C
Readers on iSTAR Ultra ACM1-Ultra6-Bldg-C
- iSTAR Reader1-iSTAR Ultra ACM1-Ultra6-Bldg-C

Readers on iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C
- iSTAR Reader1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra6-Bldg-C

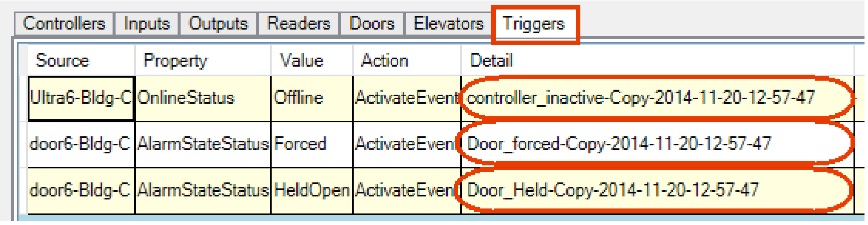
Figure 25: Doors Tab and Elevators Tab



Doors on Ultra6-Bldg-C
- door6-Bldg-C
  - Inbound Reader: iSTAR Aperio Reader1-Hub1-RS 485 Port 1-Ultra6-Bldg-C
  - Door Switch Monitor iSTAR Input2-iSTAR Ultra ACM1-Ultra6-Bldg-C
  - Door Lock Relay Output10-iSTAR Ultra ACM1-Ultra6-Bldg-C

Elevators on Ultra6-Bldg-C
- elevator6-Bldg-C
  - Inbound Reader: iSTAR Reader1-iSTAR Ultra ACM1-Ultra6-Bldg-C

Figure 26: Triggers Tab



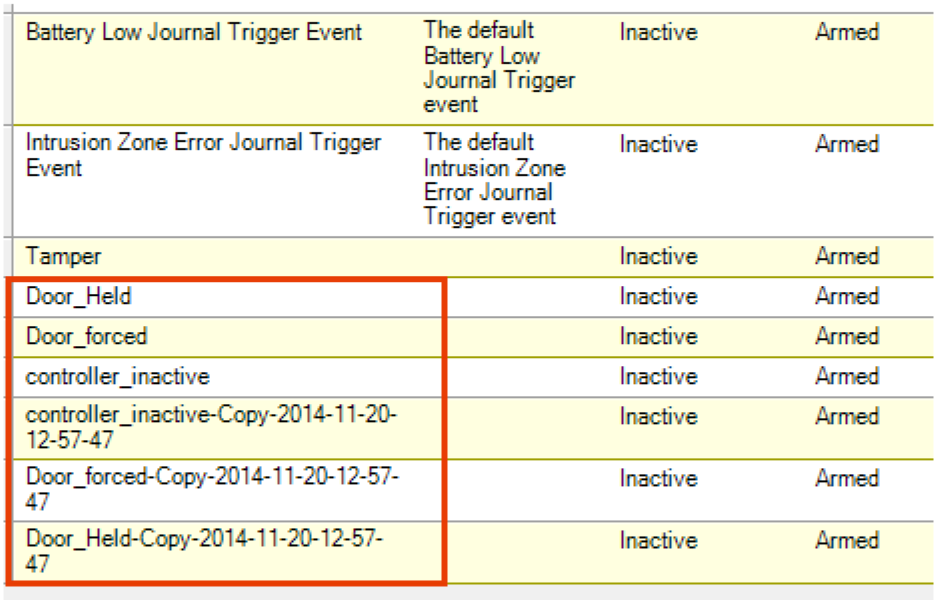
Source	Property	Value	Action	Detail
Ultra6-Bldg-C	OnlineStatus	Offline	ActivateEvent	controller_inactive-Copy-2014-11-20-12-57-47
door6-Bldg-C	AlarmStateStatus	Forced	ActivateEven	Door_forced-Copy-2014-11-20-12-57-47
door6-Bldg-C	AlarmStateStatus	HeldOpen	ActivateEven	Door_Held-Copy-2014-11-20-12-57-47

Trigger Target Events

Notice that the original Trigger Target Events were not renamed, but another copy of the Events exists with the [**-Copy-date-time**] stamp. The date-time stamped ones can be further renamed and used as desired.

Use caution if renaming original Events. The Events may be linked to other objects. Use the **Show Association** feature to determine if they are. See the *C•CURE 9000 Getting Started Guide* for information about using Show Association.

Figure 27: Trigger Targets



Battery Low Journal Trigger Event	The default Battery Low Journal Trigger event	Inactive	Armed
Intrusion Zone Error Journal Trigger Event	The default Intrusion Zone Error Journal Trigger event	Inactive	Armed
Tamper		Inactive	Armed
Door_Held		Inactive	Armed
Door_forced		Inactive	Armed
controller_inactive		Inactive	Armed
controller_inactive-Copy-2014-11-20-12-57-47		Inactive	Armed
Door_forced-Copy-2014-11-20-12-57-47		Inactive	Armed
Door_Held-Copy-2014-11-20-12-57-47		Inactive	Armed

3

Maintenance Mode

This chapter describes how to configure and use Maintenance Mode.

In this chapter:

Maintenance Mode Dialog Box 62
Maintenance Mode Overview 63
Maintenance Mode Objects Supported 64
Maintenance Mode Configuration Tasks 65

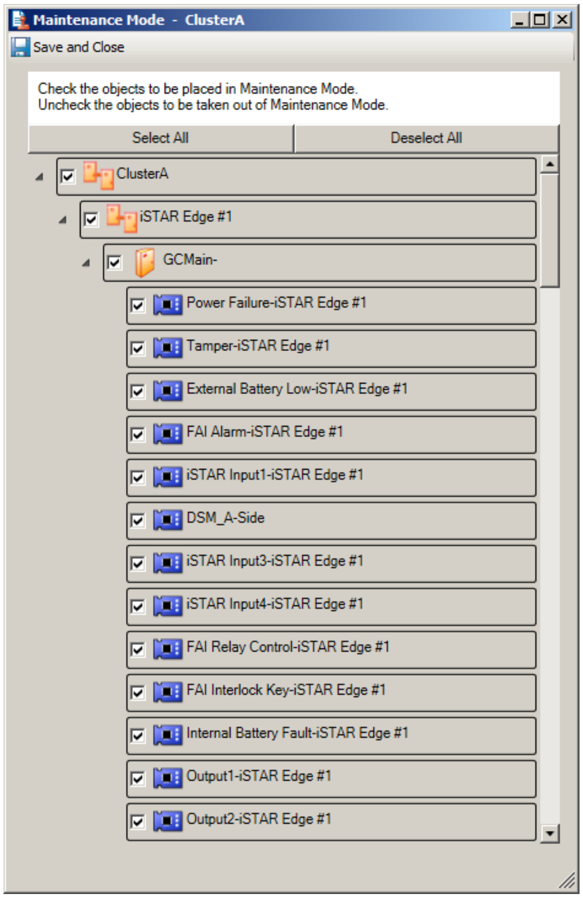
Maintenance Mode Dialog Box

The Maintenance Mode dialog box, shown in Figure 28 on Page 62, opens when Maintenance Mode is selected or deselected.

See the following for more information:

- Maintenance Mode Overview on Page 63
- Maintenance Mode Objects Supported on Page 64
- Maintenance Mode Configuration Tasks on Page 65

Figure 28: Maintenance Mode Dialog Box (Cluster)



Check the objects to be placed in Maintenance Mode.
Uncheck the objects to be taken out of Maintenance Mode.

- ☑ ClusterA
  - ☑ iSTAR Edge #1
    - ☑ GCMain-
      - ☑ Power Failure-iSTAR Edge #1
      - ☑ Tamper-iSTAR Edge #1
      - ☑ External Battery Low-iSTAR Edge #1
      - ☑ FAI Alarm-iSTAR Edge #1
      - ☑ iSTAR Input1-iSTAR Edge #1
      - ☑ DSM_A-Side
      - ☑ iSTAR Input3-iSTAR Edge #1
      - ☑ iSTAR Input4-iSTAR Edge #1
      - ☑ FAI Relay Control-iSTAR Edge #1
      - ☑ FAI Interlock Key-iSTAR Edge #1
      - ☑ Internal Battery Fault-iSTAR Edge #1
      - ☑ Output1-iSTAR Edge #1
      - ☑ Output2-iSTAR Edge #1

Maintenance Mode Overview

Maintenance Mode is used to limit information about an object displayed on the Monitoring Station. Maintenance Mode only affects what is reported at the Monitoring Station.

Some examples for using Maintenance Mode:

- To not display information about:
  - Parts of the system being installed by an integrator
  - Hardware being serviced, requiring maintenance, or being tested.
- To only monitor information about hardware being serviced, requiring maintenance, or being tested.
- To view information about all objects, including those tagged Maintenance Mode.

Placing an object into Maintenance Mode does not prevent actions from occurring. For example, if an event assigned to an intrusion zone in Maintenance Mode activates an output that turns on the building-wide evacuation alarm, the activation of the output will still occur.

Arming and disarming of inputs and events do not affect what is reported when the object is activated. In other words, arming of an event by an event assigned to a Maintenance Mode intrusion zone will be reported as activity.

Maintenance Mode is only reported in Journal messages when an object is tagged Maintenance Mode. When the object is taken out of Maintenance Mode it is not reported in a Journal message.

NOTE Messages from objects in Maintenance Mode displayed in the Journal are not displayed in the Monitoring Station if it is configured to filter out messages from objects in Maintenance Mode.

Operator Privilege and Application Layout Filtering assignments determine whether or not an object in Maintenance Mode is viewable as being in Maintenance Mode on the Monitoring Station. Only Monitoring Station operators with the correct privilege and Application Layout Filtering can view objects in Maintenance Mode.

See the following for more information:

- Maintenance Mode Objects Supported on Page 64
- Maintenance Mode Configuration Tasks on Page 65

Maintenance Mode Objects Supported

The following objects are supported in Maintenance Mode:

- apC Comm Ports
- apC Controllers
- apC Add-On Boards
- apC I32 Input Boards
- apC I8 Input Boards
- apC R48 Output Boards
- apC R8 Output Boards
- apC Inputs
- apC Readers
- apC Doors
- Areas
- C•CURE Mobile
- Elevators
- Events
- Floors
- Intrusion Zones
- Keypad Commands
- iSTAR Clusters
- iSTAR Controllers
- iSTAR Doors
- iSTAR Inputs
- iSTAR Readers
- iSTAR Aperio Hub
- iSTAR Aperio Readers
- iSTAR Aperio Doors
- iSTAR Comm Ports
- iSTAR PIM-485 Readers
- iSTAR Schlage Readers
- iSTAR Schlage Doors
- iSTAR Device Ports
- iSTAR ACM Boards
- iSTAR GCM Boards
- iSTAR Input Boards
- iSTAR Output Boards
- iSTAR Ultra ACMs
- Outputs
- Star Coupler Ministar
- Star Coupler Star
- Star Coupler WPSC

Maintenance Mode Configuration Tasks

Operator privileges and application layout assignments must be configured to use, view, or filter objects in maintenance mode.

The following tasks are described:

- Configuring Privileges to Turn Maintenance Mode On and Off on Page 65
- Configuring the Application Layout for Maintenance Mode Filtering on Page 65
- Turning Maintenance Mode On and Off on Page 66
- Viewing Maintenance Mode Objects in the Dynamic View on Page 67
- Filtering Partitions and Maintenance Mode Objects in the Dynamic View on Page 67

Configuring Privileges to Turn Maintenance Mode On and Off

Only operators who have the **Turn Maintenance Mode On** and/or **Turn Maintenance Mode Off** privilege assigned to them can put an object into Maintenance Mode and take an object out of Maintenance Mode.

The following procedure describes how to configure the privilege to include Maintenance Mode.

To Configure the Privilege

1. Click the **Configuration** pane.
2. Select **Privilege** from the **Configuration** drop-down menu to open the Privileges dialog box.
3. Click the **Defaults** tab.
4. Under **Classes**, click an object to view the permissions for that object.
5. Scroll down to locate **Turn Maintenance Mode On** and **Turn Maintenance Mode Off.**
6. Click in the **Grant** column next to **Turn Maintenance Mode On** and/or **Turn Maintenance Mode Off** to enable the permission(s) for this Privilege configuration.
7. See the *C•CURE 9000 Software Configuration Guide* for complete Privilege configuration information.
8. Click **Save and Close** when done with the configuration.

Configuring the Application Layout for Maintenance Mode Filtering

Application layouts can be configured to allow operators to filter objects in Maintenance Mode in the Monitoring Station and the Administration application Dynamic Views.

The following procedure describes how to configure the application layout to allow Maintenance Mode filtering. The Operator must have the correct privileges to use filtering. See Configuring Privileges to Turn Maintenance Mode On and Off on Page 65.

See the *C•CURE 9000 Data Views Guide* for more information about configuring the application layout.

To Configure Maintenance Mode Filtering in the Application Layout

1. Click the **Data Views** pane.
2. Select **Application Layout** from the **Data Views** drop-down menu.
3. Edit or add an Application Layout.
4. Click the **Filtering** tab.

5. See the *C•CURE 9000 Data Views Guide* "Application Layout chapter" for information about the Filtering tab fields.
6. Click **Save and Close** when done with the configuration.

Turning Maintenance Mode On and Off

NOTE To use Maintenance Mode, operators must have the correct privilege permissions assigned to them. See Configuring Privileges to Turn Maintenance Mode On and Off on Page 65

There are several ways to turn Maintenance Mode on and off:

- Right-click on an object in the object tree and select **Turn Maintenance Mode On** or **Turn Maintenance Mode Off**.
- Right-click on an object in the Dynamic View and select **Turn Maintenance Mode On** or **Turn Maintenance Mode Off**.
- Click in the Maintenance Mode column check box in the Dynamic View.
- Open the object editor and select the **Maintenance Mode** check box. Deselect the check box to turn it off.

iSTAR Cluster

To Put a Cluster Into Maintenance Mode

1. Click the **Hardware** pane.
2. Locate the Cluster in the Hardware tree, or in the Dynamic View.
3. Right-click on the Cluster name and select **Turn Maintenance Mode On** to open the Maintenance Mode dialog box.
4. The Maintenance Mode dialog box opens with the Cluster and all of its components/objects selected.
5. Click **Save and Close**.

To Take a Cluster Out of Maintenance Mode

1. Click the **Hardware** pane.
2. In the **Hardware** tree, or in the Dynamic View, right-click on the Cluster and select **Turn Maintenance Mode Off** to open the Maintenance Mode dialog box.
3. Click **Deselect All**.
4. Click **Save and Close**.

To Add an iSTAR to a Cluster in Maintenance Mode

1. Right-click on the Cluster name and select **Turn Maintenance Mode Off** to open the Maintenance Mode dialog box.
2. Select the check box next to the iSTAR name.
3. Click **Save and Close**.

iSTAR Controller or apC Controller

To Put iSTAR or apC Components/Objects into Maintenance Mode

1. Click the **Hardware** pane.
2. Locate the controller in the Hardware tree or in the Dynamic View.

3. Right-click on the iSTAR or apC, controller and select **Turn Maintenance Mode On** to open the Maintenance Mode dialog box.
4. Click the iSTAR or apC, controller name, or click **Select All** to select all components and objects belonging to the controller. Or, click on the separate components and objects that you want to put into Maintenance Mode.
5. Click **Save and Close**.

Taking an iSTAR or apC Controller Out of Maintenance Mode.

To Take an iSTAR or apC Components/Objects Out of Maintenance Mode

1. Click the **Hardware** pane.
2. In the **Hardware** tree, click on the Cluster where the iSTAR, or apC, controller belongs.
3. Right-click on the controller and select **Turn Maintenance Mode Off** to open the Maintenance Mode dialog box.
4. Deselect the controller, components and/or objects.
5. Click **Save and Close**.

Putting Objects (Doors, Readers, Events, Elevators, etc.) into Maintenance Mode

To Put Objects into Maintenance Mode

1. Click the **Hardware** pane.
2. Locate the object, right-click on it and select **Turn Maintenance Mode On**.

   To turn off Maintenance Mode, right-click on the object and select **Turn Maintenance Mode Off**.

Viewing Maintenance Mode Objects in the Dynamic View

The Dynamic View can be customized to display objects that are in Maintenance Mode. See the *C•CURE 9000 Data Views User Guide* for information about adding the Maintenance Mode column to the Dynamic View.

Filtering Partitions and Maintenance Mode Objects in the Dynamic View

Application Layout Filtering configuration allows Operators to filter a Dynamic View to show only selected partitions and/or to view objects that are in Maintenance Mode in the Administration application and in the Monitoring Station. Only Operators with the correct privilege and Application Layout assigned to them are allowed to use filtering.

See Configuring Privileges to Turn Maintenance Mode On and Off on Page 65 and Configuring the Application Layout for Maintenance Mode Filtering on Page 65

4

Configuring Dialup

This chapter explains how to configure dial up for use with the iSTAR Pro and the iSTAR Ultra SE (Pro Mode only).

In this chapter

iSTAR Dialup 69
iSTAR Dialup Configuration Sequence 70
Configuring the iSTAR Comm Port 71
Configuring the Host Modem 74
Creating a Cluster for Dialup 76

iSTAR Dialup

Dialup enables you to connect the C•CURE 9000 to the iSTAR Pro and iSTAR Ultra SE (in Pro Mode with a USB-based modem card) controllers at remote locations using modems and standard telephone lines.

The C•CURE host and iSTAR phone line/modem connection is based primarily on Windows standard telephony communications and Routing and Remote Access Service (RRAS).

- The lowest level of the communications, which deals with modem states, is handled by the Microsoft Windows Telephony Application Programming Interface (TAPI). TAPI supports the use of any type of standard modem on the host.
- The higher level of the communications, which deals with the transmission of C•CURE relevant data, is handled by Microsoft RRAS. RRAS treats dial-up connections as if they were network connections. Consequently, the C•CURE host views the connection established between the iSTAR and itself via a phone line and modem as any other network connection.
- Serial port-based dialup modems and USB port based modems are supported.

Dialup Limitations

- Dialup is only supported on Windows Server 2008 R2, 2012, and 2012 R2.
- Dialup is not supported in configurations using redundancy.
- Dialup can be used only as the primary connection method **or** the secondary communication method, not as both.

  Example:

  — Dialup is used as the primary communication method and there is no secondary communication method.

  — TCP/IP is used as the primary communication method and Dialup is used as the secondary communication method.
- A cluster used for dialup can only contain one iSTAR controller.
- Fast Personnel download is not supported.
- Dialup is not supported on a separate RRAS server.

iSTAR Dialup Configuration Sequence

NOTE The configuration information in this section only applies to the C•CURE 9000, and assumes that you completed the operating system setup as described in the *Operating System Setup for Dialup Guide*. This guide is located in the C•CURE 9000 Installation DVD English\Manuals folder.

The dialup configuration sequence is described in Table 9 on Page 70.

Table 9: iSTAR Dialup Configuration Sequence

Step	Task	See...
1	Configure the Comm ports to which the host modems are attached in C•CURE 9000 using the iSTAR Comm Port Editor.	Configuring the iSTAR Comm Port on Page 71
2	Configure the host modems in C•CURE 9000 using the Host Modem editor.	Configuring the Host Modem on Page 74
3	Create an iSTAR Cluster. Click the **Dialup** tab to configure dialup settings.	Creating a Cluster for Dialup on Page 76
4	Configure the iSTAR controller.	iSTAR Pro Controller Editor on Page 143
5	1. Open the iSTAR Cluster you created in Step 3. 2. Click the **Communications** tab. 3. Add the controller you configured in Step 4. 4. Configure the communication with the host.	Configuring iSTAR Clusters on Page 86
6	Configure/Grant Privileges for the iSTAR Controller dialup permissions using the Privilege editor.	*C•CURE 9000 Software Configuration Guide*
7	Configure Events to download to the controller and select the dial up conditions using the Event editor. Select the Dialup settings from the Event Editor General tab.	*C•CURE 9000 Software Configuration Guide*
8	Configure the System Variables **Dialup** settings (dial-up user name, password, domain, grace seconds, cycle seconds) to use RRAS.	*C•CURE 9000 System Maintenance Guide*

Configuring the iSTAR Comm Port

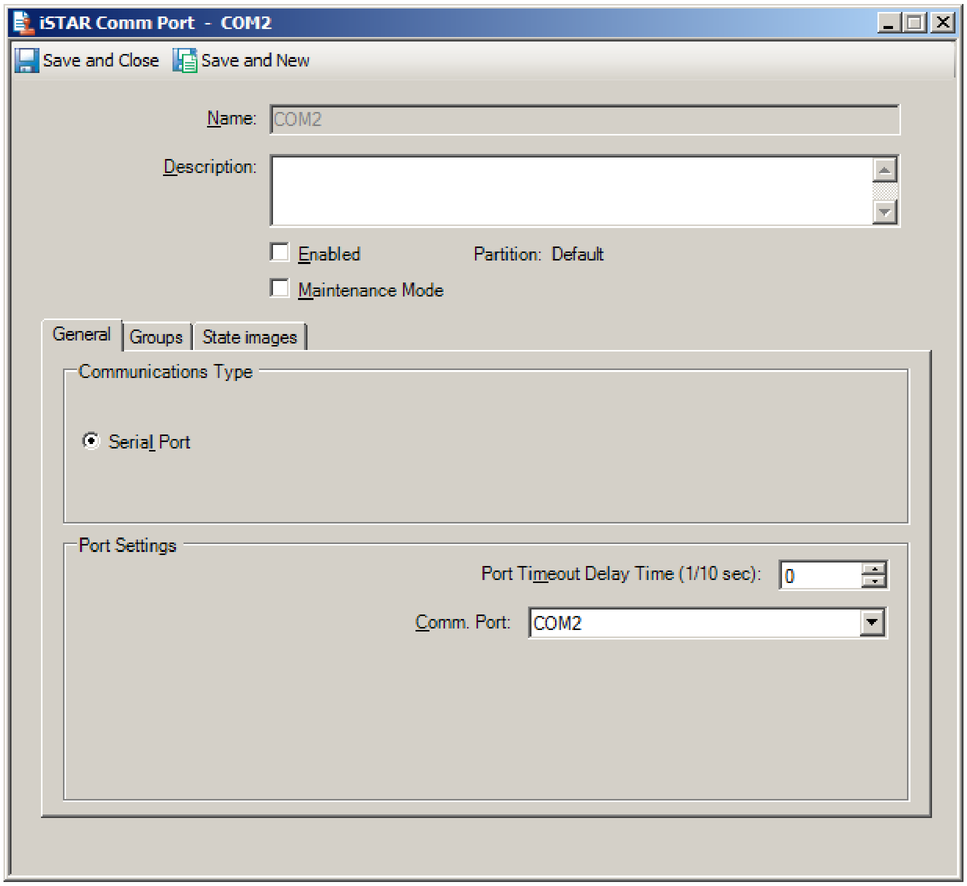
Use the iSTAR Comm Port dialog box, shown in Figure 29 on Page 71, to communicate with a serial port connection.

See Table 10 on Page 71 for descriptions of the fields on the Comm Port editor General Tab.

NOTE

- The iSTAR Comm Port only supports a serial port.
- Triggers are not supported.

Figure 29: iSTAR Comm Port Editor Dialog Box



Name: COM2

Description:

□ Enabled   Partition: Default

□ Maintenance Mode

Communications Type

● Serial Port

Port Settings

Port Timeout Delay Time (1/10 sec): 0

Comm. Port: COM2

Table 10: iSTAR Comm Port Field Definitions

Field	Description
Name	The Name field will reflect the Comm Port you select.
Description	Enter a textual comment about the controller, such as its location or purpose. This text is for information only.
Enabled	This setting determines whether or not the iSTAR Comm Port is able to provide communication between the iSTAR Controller and the C•CURE 9000 Server. Select **Enabled** to set the Comm Port online. To take the Comm Port offline, clear the **Enabled** selection. If the iSTAR Comm Port is currently in use by iSTAR controllers, you must disable all the controllers before you attempt to take the Comm Port offline. If any iSTAR controllers are enabled when you attempt to take the iSTAR Comm Port offline, an error message is displayed - "Port cannot be disabled with enabled controllers. Please disable controllers first. When the controllers are re-enabled they will do a full personnel download." The message explains that when you re-enable the iSTAR Comm Port and then re-enable the iSTAR controllers, each controller will perform a full personnel download. NOTE: Fast Personnel Download is not supported.

iSTAR Comm Port Field Definitions (continued)

Field	Description
Maintenance Mode	Click to put the iSTAR Comm Port into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition.
Communications Type	
Serial Port	Selected by default.
Port Settings	
Port Timeout Delay Time (1/10 sec)	The **Port Timeout Delay Time** is the extra interval that the host waits for a response from the iSTAR panel after sending a message to the panel. If the host does not receive a response in the specified time, the host re-transmits the message or declares a communications failure. This field allows you to set the timeout delay for all panels that use a specific port. Software House recommends that you set this period to 20 (2 seconds). However, if you require additional delay time because iSTAR controllers run on a Digiboard, Equinox board, or over a network, you may need to increase this value. Keep this value as small as possible, or system performance may be affected. If your panel goes into communications failure often, try setting this value between 30 (3 seconds) and 50 (5 seconds). Range: 0 through 99. Default: 0.
Comm Port	Select the Communications Serial Port from the drop-down list. The Name field will reflect the port number that you select. The range is COM1 to COM256.

To Configure the iSTAR Comm Port

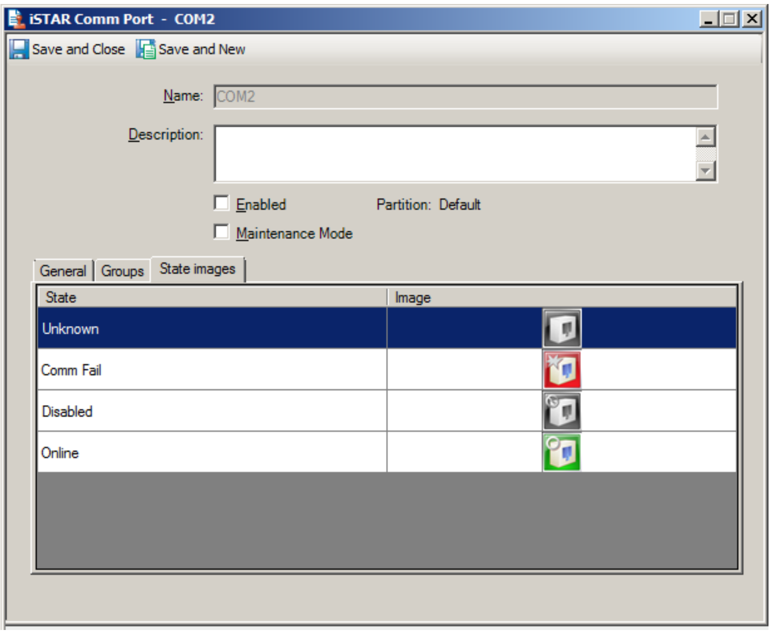
1. Open the C•CURE 9000 Administration **Hardware Pane**, select the Hardware Folder in which you want the iSTAR Comm Port to reside.
2. Right-click the folder to display the context menu, click **iSTAR Comm Port** and, then click **New**. The **iSTAR Comm Port** editor appears.

   You may also choose **New Template**. For further information about creating Templates, see Creating a Template on Page 41.
3. Enter a unique Host Communications Port name in the **Name** field (required).
4. Enter a textual description of the Comm Port (optional) in the **Description** field.
5. You can set a **Port Timeout Delay Time** in tenths of a second units by entering it in the field or by using the up/down arrows.
6. Select the **Comm Port** from the drop-down list.
7. Select the **Enabled** check box to put the Comm Port online after you have completed the configuration procedure.
8. Click **Save and Close**.
9. Go to Configuring the Host Modem on Page 74.

iSTAR Comm Port State Images Tab

The **State images** tab, shown in Figure 30 on Page 73, provides a means to change the default images used to indicate communication port states. These images appear on the Monitoring Station and change according to the state of the object that they represent.

Figure 30: iSTAR Comm Port State Images Tab



Name: COM2

Description:

□ Enabled Partition: Default

□ Maintenance Mode

State	Image
Unknown	
Comm Fail	
Disabled	
Online	

To Change a State Image

1. Double-click the existing image. A Windows Open dialog box appears allowing you to browse for a folder in which you have placed replacement images.
2. When you locate the replacement image, select it and click **Open** to add it to the image listing.
3. If you are done editing the iSTAR Comm Port, click **Save and Close** to save the Comm Port's configuration. Alternatively, if you want to save the Comm Port and create a new one, click **Save and New**. The Comm Port Editor remains open to allow you to create a new Comm Port.

To Restore to the Default Image

- Right-click on the new image and select **Restore Default**.

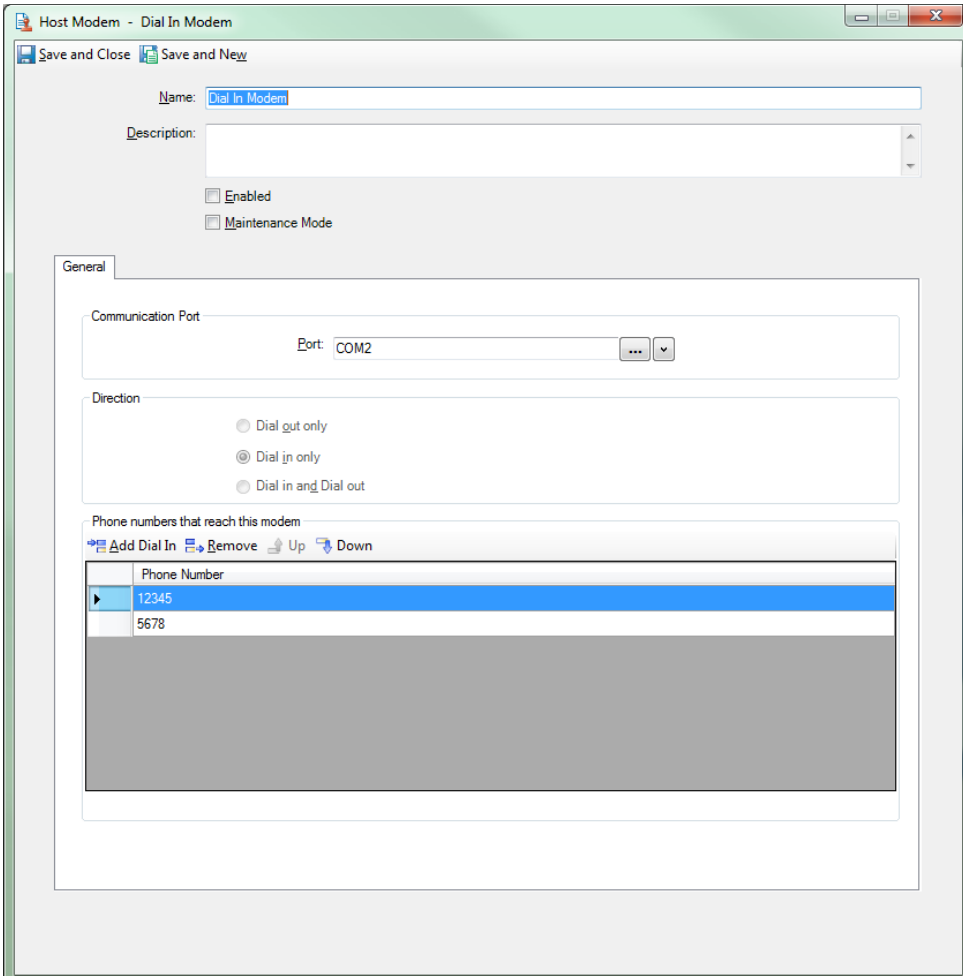
Configuring the Host Modem

The Host Modem dialog box, shown in Figure 31 on Page 74, lets you specify the communication port, the dialing direction, and the phone numbers the iSTAR Pro/SE Pro Mode can use.

> **NOTE** Hyphens, parentheses, and spaces are not allowed in phone numbers.

The Host Modem dialog box definitions are described in Table 11 on Page 74.

Figure 31: Host Modem Dialog Box



Name: Dial In Modem

Description:

□ Enabled

□ Maintenance Mode

Communication Port

Port: COM2

Direction

○ Dial out only

● Dial in only

○ Dial in and Dial out

Phone numbers that reach this modem

Phone Number
12345
5678

Table 11: Host Modem Dialog Box Definitions

Field	Description
Name	Enter a unique name for the host modem configuration.
Description	A textual comment for information only.
Enabled	Select **Enabled** to set the host modem online. To take the host modem offline, clear the **Enabled** selection.
Maintenance Mode	Click to put the iSTAR Comm Port into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.

Table 11: Host Modem Dialog Box Definitions (continued)

Field	Description
Partition	This read-only field identifies the Partition in which this Controller resides.
Communication Port	Click ... to open the **Name Selection** dialog to select the iSTAR Comm Port. NOTE: The iSTAR communication ports must already be configured. See Configuring the iSTAR Comm Port on Page 71
Direction	**Dial out only** Select this option to specify that this modem is used only for dialing out to panels/controllers **Dial in only** Select this option to specify that this modem is used only for dialing into the host. **Dial in and Dial out** Select this option to specify that this modem is used for both incoming and outgoing calls.
Phone numbers that reach this modem	Displays the list of phone numbers that reach this host modem. Use the buttons to the right of the list to modify the numbers in the list. • The phone number can be up to 35 characters long. • Hyphens, parentheses, and spaces are not allowed in phone numbers. • If **Dial out only** is selected in the Direction box, this box and the **Add Dial In**, and **Remove** buttons are unavailable.

To Configure Modems for the Host

1. Ensure that the iSTAR communication ports are configured. See Configuring the iSTAR Comm Port on Page 71.
2. Open the C•CURE 9000 Administration **Hardware** Pane, select the Hardware Folder in which you want the iSTAR modem configuration to reside.
3. Right-click the folder to display the context menu, click **Host Modem**, and then click **New**.

   The Host Modem dialog box, shown in Figure 31 on Page 74, appears.
4. Enter a unique Host Modem name in the **Name** field (required).
5. Enter a textual description (optional) of the Host Modem configuration in the **Description** field.
6. Click ... in the **Port** field to open the **Name selection** dialog box and click the iSTAR Comm Port you want to use.
7. Select the dial Direction: **Dial out only**, **Dial in only**, or **Dial in and Dial out**.
8. In the **Phone numbers that reach this modem** box:

   a. Click **Add Dial In** to add a new row.

   b. Click in the new row and enter a phone number.

   c. Repeat step a and step b for each phone number you want to add.
9. Click **Enabled** to put the Host Modem online.
10. Optional. Click on the **State Images** tab to change the default images used to indicate communication port states on the Monitoring Station.
11. Click **Save and Close**.
12. Go to Creating a Cluster for Dialup on Page 76.

Creating a Cluster for Dialup

This section describes how to create a cluster to use dial-up on the iSTAR Pro or Ultra SE Pro Mode controller.

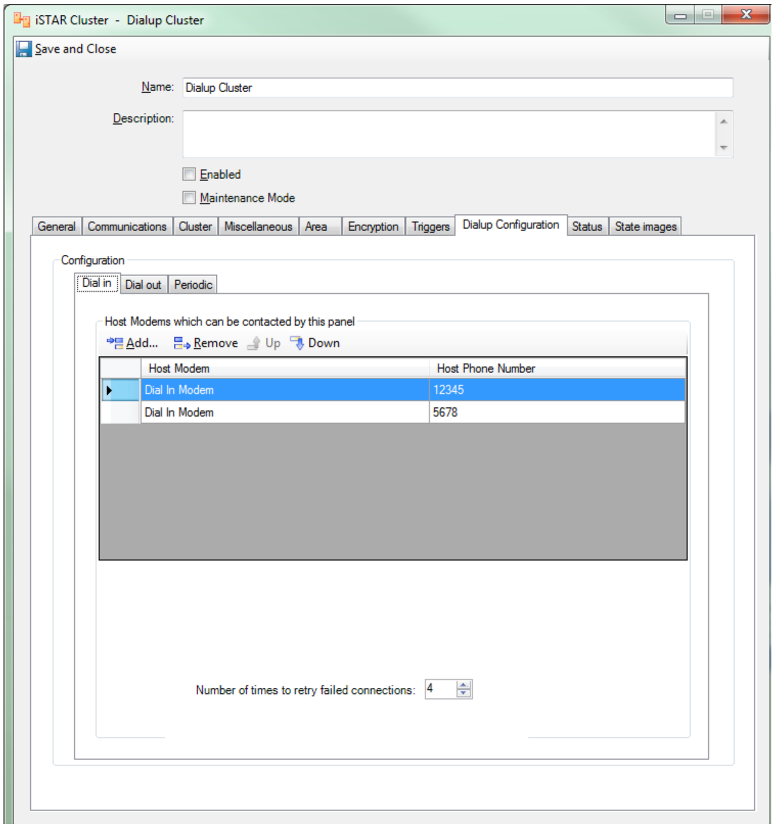
The **Dialup Configuration** tab in the **iSTAR Cluster** Editor dialog box, shown in Figure 32 on Page 76, lets you select pre-configured host modems and specify other dial-up configurations.

This tab is only available for unencrypted clusters and for use with the iSTAR Pro or iSTAR Ultra SE in Pro Mode.

NOTE

- You can only have one controller in a cluster that uses dialup.
- To enable a cluster, a dial-in and a dial-out phone number must be configured.
- Alternate master is not supported.

Figure 32: iSTAR Cluster Dialup Configuration Tab



Name: Dialup Cluster

Description:

□ Enabled

□ Maintenance Mode

Host Modems which can be contacted by this panel

Host Modem	Host Phone Number
Dial In Modem	12345
Dial In Modem	5678

Number of times to retry failed connections: 4

There are three tabs under Configuration:

- **Dial In** lets you select host modems that the controller can call when dialing the host.
- **Dial Out** lets you select host modems that the controller can use to dial out.
- **Periodic** lets you specify a controller to periodically upload activity to the host, receive download configuration changes, and cardholder information from the host at that time.

Table 12: iSTAR Cluster Dialup Configuration Tab Definitions

Field	Description
Dial In Tab	
Host Modem/Host Phone Number	Click to **Add** to open the **Name Selection** dialog box host to select the host modems and host phone numbers that the host can use to contact this controller. • The host calls the modems in the order that they are listed. • A modem/phone combination can be listed more than once, but you cannot enter more than 8 modem/phone combinations.
Number of times to try connections	Specify the number of times the controller dials each telephone number in the list when the controller cannot contact the host. **Example:** If 2 is entered in this field, the controller dials each telephone number in the list two times. If the requisite connection attempts with all the phone numbers in the list fail, the controller is considered to be in Comm fail. The system will use the **Retry interval during communication failure** value to set the timing of communication attempts. Default: 2 Range: 0-99
Dial Out Tab	
Host Modems/ Remote Phone Number	Click **Add** to add host modems and remote phone numbers that the host can use to dial out. • The host calls the modems in the order that they are listed. • A modem/phone combination can be listed more than once, but you cannot enter more than 8 modem/phone combinations.
Automatically initiate connection when configuration changes after hh:mm	Specify the time to automatically download configuration changes to the dial-up controller. Then, click on the check box to enable the download time. **Example:** Cardholder additions and deletions. NOTE: - Leaving this unselected means that configuration changes will not be downloaded until the next normal connection with the controller. - Selected with a time of 00.00 indicates immediate download. - Changes to the controller, such as change to an object’s name or description, do not cause a download to the controller. Range: 0 to 23 hours 59 minutes.
Periodic Tab NOTE: To make changes to the Periodic tab you must clear the **Enabled**, click **Save and Close** and then reopen the Cluster editor.	
Redial interval during communications failure	Specify the interval of time the host waits to redial the controller when there is a communication failure. Enter the time in hh:mm format. • Default: 30 minutes. • Range: 0 minutes to 24 hours 59 minutes.
Schedule	Click ... to open the **Name Selection** dialog box to select a non-recurring schedule for periodic dialing, and downloading configuration changes and cardholder information. NOTE: If the predefined **'Always'** schedule is selected, the controller will only use the time interval specified by **Dial interval outside of schedule**.The **Dial interval during schedule** setting will be ignored.

Table 12: iSTAR Cluster Dialup Configuration Tab Definitions (continued)

Field	Description
Dial interval during schedule	Specify the frequency that the host dials the controller when the time specification is in effect. • Enter the time in hh:mm format. • Range: 0 to 24:00 hours.
Dial interval outside schedule	Specify the frequency that the host dials the controller when the time specification is not in effect. • Enter the time in hh:mm format. • Range: 0 to 24:00 hours.

To Configure a Cluster for Dialup

1. Click on the **Dialup Configuration** tab in the iSTAR Cluster Editor dialog box.
2. See Table 12 on Page 77 for **Dial In**, **Dial Out**, and **Periodic** tab configuration information.
3. Click **Save and Close** when done.
4. Go to iSTAR Pro Controller Editor on Page 143 to configure the controller.

5

Configuring C•CURE iSTAR Clusters

This chapter explains how to configure iSTAR Clusters in the C•CURE 9000 system.

In this chapter

Cluster Communications Overview 80
Configuring iSTAR Clusters 86
Creating an iSTAR Cluster 87
Creating and Using an iSTAR Cluster Template 88
iSTAR Cluster Editor 90
iSTAR Cluster General Tab 92
iSTAR Cluster Communications Tab 94
iSTAR Cluster - Cluster Tab 98
iSTAR Cluster Miscellaneous Tab 99
iSTAR Cluster Area Tab 100
iSTAR Cluster Encryption Tab 103
iSTAR Cluster Triggers Tab 105
iSTAR Cluster Dialup Configuration Tab 111
iSTAR Cluster Status Tab 112
iSTAR Cluster State Images Tab 113

Cluster Communications Overview

iSTAR controllers are organized for network communications into user-defined, logical groups called *Clusters.* Clusters contain one or more iSTAR controllers. A C•CURE 9000 server (host) can be connected to multiple iSTAR clusters. An iSTAR Controller must belong to a Cluster.

NOTE A Cluster can have a maximum of sixteen controllers.

- Cluster Configuration and Distributed Management on Page 80
- Networked iSTAR Controllers (Clusters) on Page 81
- Establishing Connections Via the Primary Communications Path on Page 83
- Setting Up the Primary Communications Path on Page 83
- Downloading Cardholder and Configuration Information on Page 83
- Maintaining Communications on Page 84
- Establishing a Secondary Communications Path on Page 84
- Distributed Cluster Management on Page 85
- Unassigned Folder on Page 85

Cluster Configuration and Distributed Management

One or more controllers can be configured for communications purposes into user-defined groups called **Clusters**. Clusters have a primary communication path to the host that use **Masters** to control communications among cluster members and the host over the network. Clusters also support a backup communications path, the secondary communications path. The cluster can use the secondary path to communicate with the host when a communications failure occurs on the primary path. Secondary paths can only exist on the Master.

NOTE The Alternate Master capability cannot be configured in newly-created iSTAR clusters in version 2.20 or later.

iSTAR Clusters that already have an Alternate Master, when upgraded to version 2.20 or later, retain the Alternate Master, but if the cluster is edited and the Alternate Master is removed, this change will permanently remove the ability to configure an Alternate Master for this cluster.

See the iSTAR Cluster Communications Tab on Page 94 for more information.

NOTE Secondary communications paths have not been evaluated by UL.

Communications among iSTAR controllers provide distributed functionality at the controller level that is not typically available on security management systems.

A cluster can only contain controllers that support compatible methods of encryption (or do not use encryption).

- You can create a Non-Encrypted Cluster containing iSTAR Classic, iSTAR Pro, or iSTAR Ultra Controllers.
- You can create an Encrypted Cluster containing iSTAR eX, iSTAR Edge, or iSTAR Ultra Controllers.

NOTE

> Previously, clusters were categorized by **Controller Type** rather than **Encryption Setting**. The composition of clusters and the models of controllers they contain has not changed. When C•CURE 9000 is upgraded, cluster types are changed to reflect **Encryption Settings**, but existing controllers remain in the same clusters.
>
> This change has the following additional effects:
>
> - Existing Reports: ControllerType field is ignored.
> - Existing Queries: If ControllerType is included, the query cannot run until the Query is edited and ControllerType is removed.
> - Dynamic Views: ControllerType is replaced by EncryptionSetting.
> - Existing Imports: ControllerType is marked as an Import Only property and used to set the Encryption Setting value.

Master controllers use the primary or secondary communications path to communicate with the C•CURE System host. Establishing and maintaining a connection with the host involves the following administrative actions through the use of iSTAR Clusters:

- Establishing connections via the primary communications path. You set up a primary communications path for a cluster when configuring controllers and clusters.
- Downloading cardholder and configuration information from the host to the controller.
- Maintaining communications via the primary communications path. If a communications failure occurs on the primary communications path, controllers can re-establish communications via a secondary communications path.

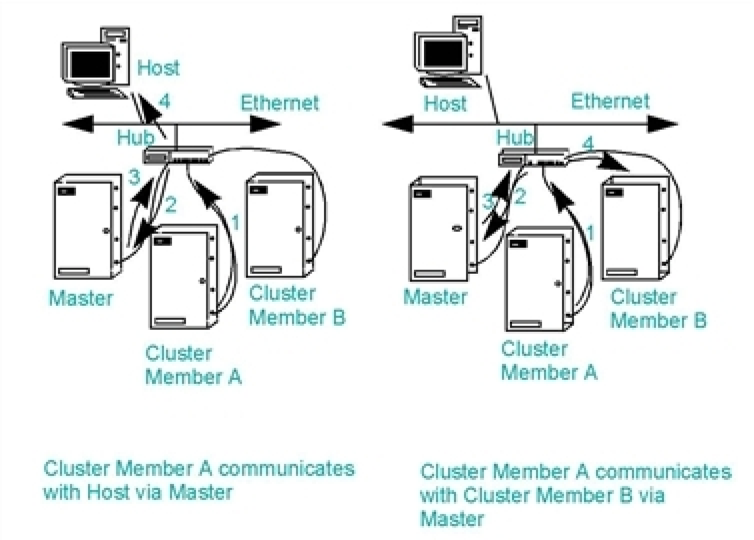
Networked iSTAR Controllers (Clusters)

Controllers are organized for network communications into user-defined or logical groups called **Clusters**. This section describes the key elements of clusters.

Master and Cluster Members

Each cluster has one controller that serves as the **Master** with all other controllers in the cluster acting as **Cluster Members**. The master manages all communications between the cluster and a host computer. Cluster members can communicate with each other via the master, over an Ethernet network. Cluster members cannot communicate with each other directly. Figure 33 on Page 82 (left) shows how Cluster Member A communicates with the host via the master. The figure (right) shows how Cluster Member A communicates with Cluster Member B via the master.

Figure 33: Cluster Members



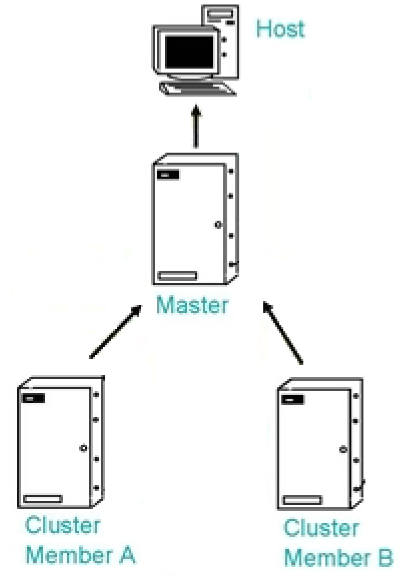
The Primary Communications Path

The **Primary Communications Path** is the first communications path that master controllers use to establish communications with the host. Controllers communicate with the host directly. The **Connection type** is TCP/IP over Ethernet.

The **Master** is the one controller in a cluster that is responsible for passing messages between the host and cluster members. Cluster members do not communicate with the host directly; they communicate with the host through the master. Connections are established in the following bottom-to-top order:

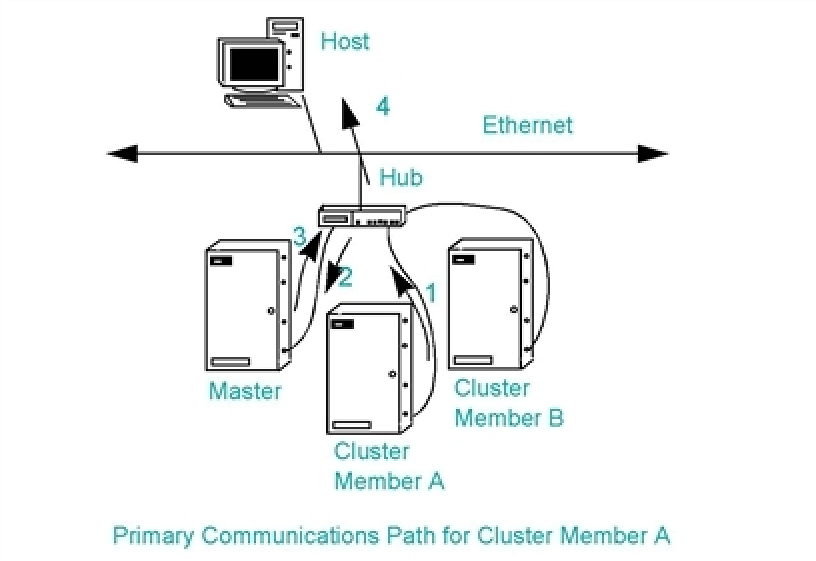
- The **Master** is responsible for establishing a connection with the host. The host does not establish a connection with the master.
- **Cluster Members** are responsible for establishing connections with the master. The master never tries to establish a connection with a cluster member, as shown in Figure 34 on Page 82.

Figure 34: Cluster Communication Path



The **Connection type** is how the master connects to the host: TCP/IP over Ethernet. Cluster members are connected to the master via Ethernet only. Figure 35 on Page 83 shows the Primary Communications Path for Cluster Member A. The master/host connection type is TCP/IP over Ethernet.

Figure 35: Primary Communications Path



Establishing Connections Via the Primary Communications Path

The primary communications path is comprised of the following connections:

- The master connects directly to the host using a network connection.
- Cluster members connect to the master using a network connection. After connections are established, the master manages cluster communications by passing messages between cluster members and the host.

Connections are established in a bottom-to-top order. Thus, clusters members are responsible for establishing connections with the master, and the master is responsible for establishing a connection with the host.

Setting Up the Primary Communications Path

Before controllers can establish any connections, you must configure the cluster’s primary communications path by performing the following tasks:

- Use the C•CURE 9000 Administration Application to first configure the cluster and then the iSTAR Controllers. See Configuring iSTAR Clusters on Page 86 and Configuration Overview for iSTAR Controllers on Page 116 for information.
- Use the iSTAR Configuration Utility (ICU) to manually configure the master. After you configure the master, it reboots and then establishes a connection with the C•CURE 9000 Server. The server downloads cardholder and configuration information to the master.

  After downloading information from the host, the master auto-configures its cluster members. Cluster members then reboot and establish connections with the master.

Downloading Cardholder and Configuration Information

The following information is downloaded to the master and its cluster members from the host:

- Cardholder data for personnel with clearances on the controller.

- Configuration information for inputs, outputs, and readers on the controller.
- Events that are controlled by the controller.
- Cluster information that the controller uses to communicate with other cluster members.

NOTE The C•CURE 9000 Server downloads cardholder and configuration information to the controller under the following conditions:

- Initial configuration
- Each time the controller is powered on
- Each time the cluster is taken offline/online

Changes to personnel, clearances, inputs, outputs, readers, and events are immediately downloaded.

Maintaining Communications

Although a communications link may be open between two devices, long periods of time can exist when devices do not communicate because of low system activity. In the absence of this type of communications, devices send “keep-alive” messages, called **Connection Verification** messages, to verify that connections are alive.

Example:

> The master and host send these messages to each other to confirm that the connection between them is open. If the host does not receive a connection verification message from the master in a specified amount of time, the host closes the communications link with the master and waits for a connection attempt from the cluster. When the master does not receive a connection verification message from the host in the specified amount of time, it also declares a communications failure for the primary communications path and then notifies its cluster members of the communications failure. At this time, cluster communications revert to the secondary communications path.

Use the **Communications** and **Cluster** tabs in the C•CURE 9000 Administration Application, iSTAR Cluster dialog box, to configure connection verification messages for the master, host and cluster members. See Configuring iSTAR Clusters on Page 86 for more information.

Establishing a Secondary Communications Path

If a communications failure occurs on the primary communications path, communications can be re-established via the cluster’s secondary communications path. The secondary communications path must be a second connection between the master and the host. The network connection must be one that is not already being used as the primary path.

While communicating via the secondary path, the cluster attempts to re-establish communications with the host on the primary communications path. When a connection is re-established on the primary path, communications revert to the primary path and the communications link on the secondary path is closed.

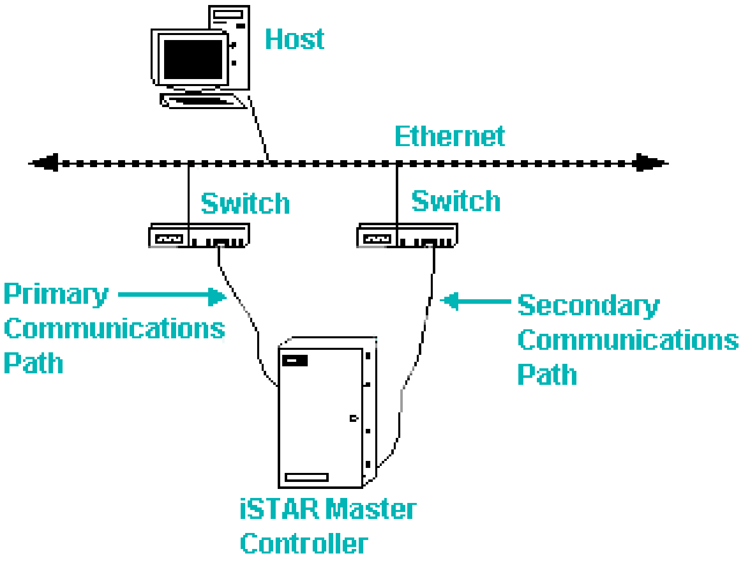
Use the **Communications** tab in the **Cluster** dialog box in the C•CURE 9000 Administration Application to configure the secondary communications path (see iSTAR Cluster Communications Tab on Page 94).

The Secondary Communications Path

A **Secondary Communications Path** is the host communications path that is used by a controller if a communications failure occurs on the primary communications path. The secondary path is activated by the iSTAR Controller’s dual network capability.

Figure 36 on Page 85 shows an example of a secondary communications path on the host using an Ethernet connection and a secondary communications path on another network card, using an Ethernet connection.

Figure 36: Primary and Secondary Communications Path to Host



Distributed Cluster Management

Cluster communications allow iSTAR controllers to share information and control actions throughout a cluster without host intervention. **Distributed Cluster Management** is the distribution of system functionality from the host to cluster members.

Distributed cluster management lets a controller perform many actions locally and share information with other cluster members even when the controller is not communicating with the host, during a communications failure for example.

NOTE Cluster members communicate with each other through the master. Although a communications failure with the host may not affect cluster communications, a communications failure with the master can cause communications problems in the cluster.

Unassigned Folder

The Unassigned folder is a repository for iSTAR controllers that have been configured for an iSTAR cluster, in an existing partition, but which have been removed from the iSTAR cluster, or the cluster has been deleted. Such controllers will be listed under the Unassigned folder until they are reassigned to another iSTAR cluster or deleted.

Configuring iSTAR Clusters

Before you can create and configure iSTAR Controllers, you must create an iSTAR Cluster. The Cluster dialog box lets you configure clusters by performing the following tasks:

- Add controllers to the cluster.
- Configure a primary communications path for the cluster.
- Configure a secondary communications path for the cluster.
- Configure communications between cluster members and the master.
- Configure the number of unacknowledged messages for controllers.
- Set Triggers for the cluster.
- Evaluate cluster status.
- Change state images that appear on the Monitoring Station.

Creating an iSTAR Cluster

You can create an iSTAR Cluster in a Hardware Folder in the Hardware tree. You can either select a folder, then pick iSTAR Cluster from the Hardware tree drop-down list, or right-click on the folder and select iSTAR Cluster from the context menu.

To Create an iSTAR Cluster

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Expand the Hardware tree and select the folder where you want to create the iSTAR Cluster.
3. Right-click on the folder and select **iSTAR Cluster**>**New** to create a cluster for one or more iSTAR controllers. The iSTAR Cluster Editor dialog box opens, as shown in Figure 39 on Page 91.

   See iSTAR Cluster Editor on Page 90 for instructions on configuring the Cluster.
4. In the **Name** field, enter a name for the Cluster.
5. **Optional:** In the **Description** field, enter a description for the Cluster.
6. Select an **Encryption Setting**:
   - **Encrypted** for a Cluster that will contain iSTAR eX, iSTAR Edge, or iSTAR Ultra controllers that will use an iSTAR encryption method.
   - **Non-Encrypted** for a Cluster that will contain iSTAR Pro, iSTAR Classic, or iSTAR Ultra controllers that will not use an iSTAR encryption method.

NOTE

This field becomes Read-only once you add iSTAR controllers to the Cluster and save it, because changing this setting while there are controllers in the cluster would cause problems.

If you need to change this setting, you must remove all controllers from the Cluster, change the Encryption Settings on the Cluster Encryption tab (see iSTAR Cluster Encryption Tab on Page 103), then add controllers of the appropriate type.

7. Click **Save and Close** to save the Cluster. The new iSTAR Cluster icon displays in the tree, one level below the folder that you selected.

If you disable a working cluster, remove the master controller, and save, the resulting cluster has no master. The master controller is reset as a cluster member, and the entire cluster will not behave as expected. Before you re-enable the cluster, you must reconfigure your master panel. Use the iSTAR web page or the ICU to select the master check box for that controller.

Creating and Using an iSTAR Cluster Template

You can create an iSTAR Cluster Template that you can use as the basis for creating new iSTAR Clusters with specific settings that you choose when creating the Template.

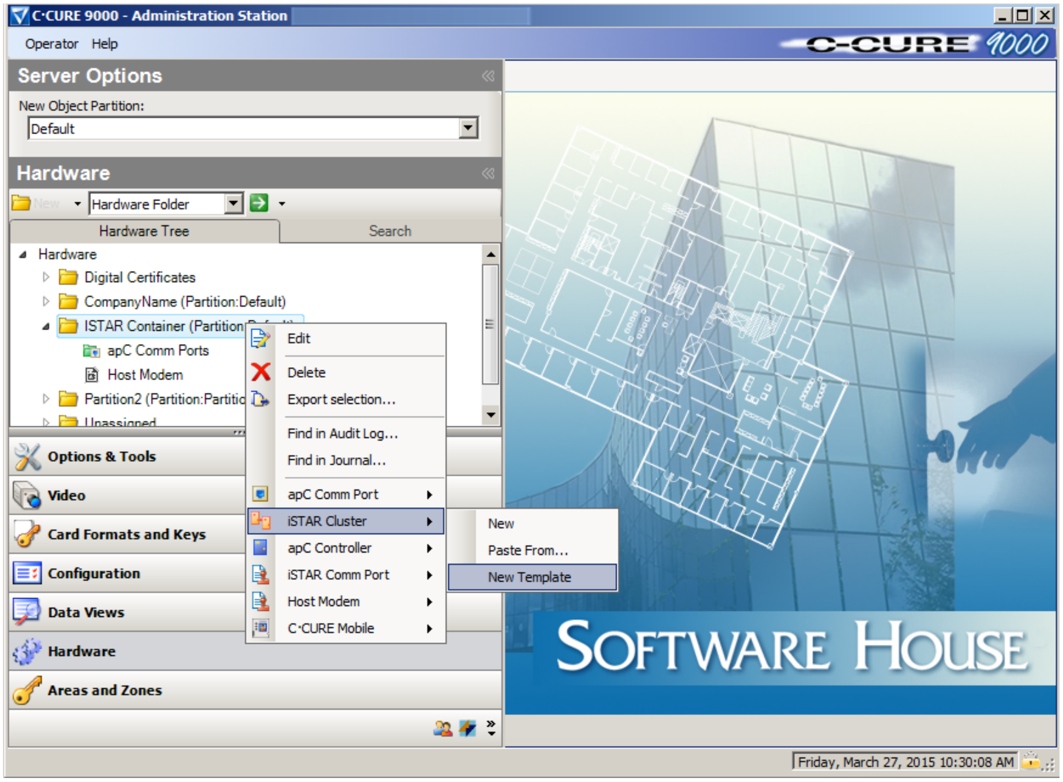
Example

If you want all of your iSTAR Clusters to use 60 seconds instead of the default 10 seconds for the Connection to Host Interval, you can create an iSTAR Cluster Template with Connection to Host Interval set to 60 seconds, and every iSTAR Cluster you create from this Template will inherit that setting.

To Create an iSTAR Cluster Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Expand the Hardware tree and a hardware folder.
3. Right-click on the folder and select **iSTAR Cluster>New Template** from the context menu (see Figure 37 on Page 88).

Figure 37: New Cluster Template from Hardware Folder Context Menu



Alternatively, select **iSTAR Cluster** in the Hardware pane drop-down list, click the down-arrow next to the **New** button, then select **iSTAR Cluster>New Template** from the menu.

The iSTAR Cluster Editor opens a new Template that you can configure and save.

4. Enter a unique name for the Template in the **Name** field (required) and type a textual description for the Template in the **Description** field (optional).
5. Select the **Encryption Setting** for the Cluster Template. Only controllers of the types supported by this setting can subsequently be added to Clusters created from this Template. (This field becomes read-only after you save the Cluster Template).

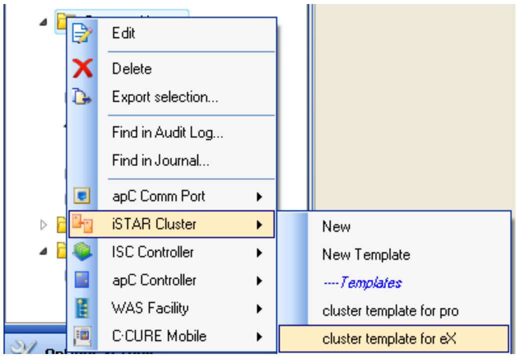
6. Navigate to the Communications, Cluster, Miscellaneous, Encryption, Triggers, and State Images tabs and configure any settings that you would like to be included in your Template. See iSTAR Cluster Editor on Page 90 for more information about the iSTAR Cluster Editor tabs.
7. Click **Save and Close**. The Cluster Template is saved with your settings. You can now use the Template as the basis of new iSTAR Clusters you subsequently create.

NOTE A Cluster Template is not saved inside of a Hardware folder, and it is not visible in the Hardware tree. To edit a Cluster Template, select **iSTAR Cluster** from the Hardware drop-down list and click to display a Dynamic View listing all iSTAR Clusters, including Cluster Templates. Double-click on a Cluster Template in the Dynamic View to edit it.

To Create an iSTAR Cluster from a Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Expand the Hardware tree and a hardware folder.
3. Right-click on the folder and select **iSTAR Cluster>New** from the context menu (see Figure 38 on Page 89).

Figure 38: New iSTAR Cluster from a Template



The iSTAR Cluster Editor and you can edit the new Cluster.

4. Enter a unique name for the Cluster in the **Name** field (required) and type a textual description for the Cluster in the **Description** field (optional).
5. Select the **Encryption Setting** for the Cluster Template. Only controllers of the types supported by this setting can subsequently be added to Clusters created from this Template. (This field becomes read-only after you save the Cluster Template).
6. Navigate to the Communications, Cluster, Miscellaneous, Encryption, Triggers, and State Images tabs and configure any settings that you would like to be included in your Cluster. See iSTAR Cluster Editor on Page 90 for more information about the iSTAR Cluster Editor tabs.
7. Click **Save and Close**. The iSTAR Cluster is saved with your settings.

iSTAR Cluster Editor

The iSTAR Cluster Editor is used to configure iSTAR Clusters for your C•CURE 9000 system. All iSTAR Controllers must be contained in an iSTAR Cluster in order to communicate with a C•CURE 9000 Server. You need to create at least one iSTAR Cluster before you can create any iSTAR Controllers.

iSTAR Cluster Editor Tabs

The iSTAR Cluster Editor includes the following tabs:

- iSTAR Cluster General Tab on Page 92
- iSTAR Cluster Communications Tab on Page 94
- iSTAR Cluster - Cluster Tab on Page 98
- iSTAR Cluster Miscellaneous Tab on Page 99
- iSTAR Cluster Area Tab on Page 100
- iSTAR Cluster Encryption Tab on Page 103
- iSTAR Cluster Triggers Tab on Page 105
- iSTAR Cluster Dialup Configuration Tab on Page 111
- iSTAR Cluster Status Tab on Page 112
- iSTAR Cluster State Images Tab on Page 113

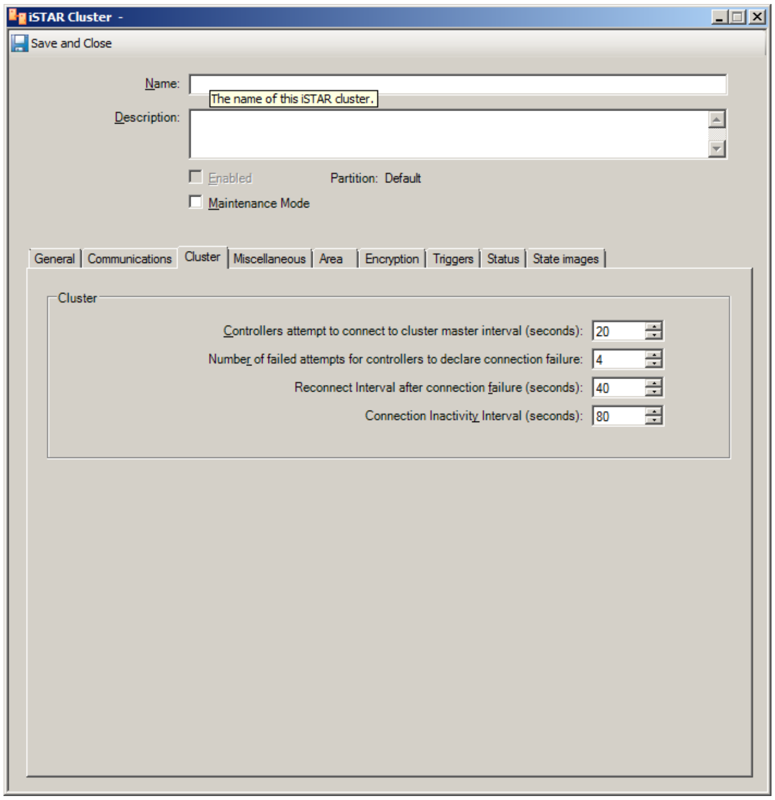
Accessing the iSTAR Cluster Editor

Perform the following steps to access the iSTAR Cluster Editor.

To Access the iSTAR Cluster Editor

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane (see on Page 86).
2. Expand the Hardware tree and select the Cluster that you want to configure.
3. Right- click and select **iSTAR Cluster**>**Edit** to open the selected Cluster in the iSTAR Cluster Editor (see Figure 39 on Page 91).

Figure 39: iSTAR Cluster Editor



Name:

The name of this iSTAR cluster.

Description:

□ Enabled

Partition: Default

□ Maintenance Mode

Cluster

Controllers attempt to connect to cluster master interval (seconds): 20

Number of failed attempts for controllers to declare connection failure: 4

Reconnect Interval after connection failure (seconds): 40

Connection Inactivity Interval (seconds): 80

iSTAR Cluster General Tab

The iSTAR Cluster General Tab provides an interface to manage controllers that you have configured for a cluster. From the General tab, you can add or remove iSTAR Controllers from a Cluster. An example of an iSTAR Cluster General tab is shown in Figure 39 on Page 91.

See iSTAR Cluster General Tab Definitions on Page 93 for definitions of the fields and buttons on the iSTAR Cluster

iSTAR Cluster General Tab Tasks

You can perform the following tasks from the iSTAR Cluster General Tab.

- Adding a Controller to a Cluster on Page 92.
- Removing a Controller from a Cluster on Page 92.

Adding a Controller to a Cluster

To Add a Controller to a Cluster

1. Open the iSTAR Cluster editor for the Cluster to which you wish to add a Controller. See To Access the iSTAR Cluster Editor on Page 90.
2. Click **Add**.

   The iSTAR Controller selection dialog box opens. This dialog box lists all iSTAR Controllers that can be added to this Cluster. Only iSTAR Controllers with the same Encryption Setting as the Cluster (Encrypted or Non-encrypted) that are currently Unassigned (not currently attached to an iSTAR Cluster) appear in this dialog box.
3. Select one or more iSTAR Controllers from the dialog box. You can use multiple selection keystrokes such as **CTRL+Left-click** and **SHIFT+Left-click** to select more than one Controller.
4. Click **OK** to add the selected iSTAR Controllers to the list of Controllers in the iSTAR Cluster.
5. Click **Save and Close** to save your changes.

Removing a Controller from a Cluster

You can remove iSTAR Controllers from an iSTAR Cluster using the iSTAR Cluster General tab. Once you remove a Controller from an iSTAR cluster, the Controller is moved to the **Unassigned** folder and can subsequently be added to a different iSTAR Cluster with the same Encryption Setting.

To Remove a Controller from a Cluster

1. Open the iSTAR Cluster Editor for the Cluster to which you wish to add a Controller. See To Access the iSTAR Cluster Editor on Page 90.
2. From the Controller(s) list on the General tab, select one or more iSTAR Controllers you wish to remove from the Cluster. You can use multiple selection keystrokes such as **CTRL+Left-click** and **SHIFT+Left-click** to select more than one Controller.

   If the Cluster is **Enabled**, you cannot remove a Controller that is selected on the Communications tab as either the controller having primary communications with the host (C•CURE 9000 Server) or the controller having secondary communications with the host. The **Remove** button becomes unavailable if you select such a controller.
3. Click **Remove**. The Controllers you selected are deleted from the Controller(s) list of this Cluster.

4. Click **Save and Close** to save your changes. The Controllers you removed from this Cluster now appear in the **Unassigned** folder in the Hardware tree, and can be re-assigned to another Cluster with the same Encryption Setting.

iSTAR Cluster General Tab Definitions

The iSTAR Cluster General tab includes the fields and buttons described in Table 13 on Page 93.

Table 13: iSTAR Cluster General Tab Definitions

Field/Button	Description
Name	Enter a name (up to 100 characters long) of the iSTAR Cluster that you are configuring.
Description	Type a description of the iSTAR Cluster that you are configuring.
Enabled	Enabled is grayed out until: 1. The controller's are configured. See Chapter 6, Configuring C•CURE iSTAR Controllers 2. A **Controller having primary communications with host** is selected on the **iSTAR Cluster Communications tab**. 3. Click **Enabled** to put the cluster online.
Maintenance Mode	Click to put the Cluster or iSTARs and/or their components into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this iSTAR Cluster resides. Select the **Encryption Setting** for the Cluster Template. Only controllers of the types supported by this setting can subsequently be added to Clusters created from this Template. (This field becomes read-only after you save the Cluster Template). you want to change the Partition of a Cluster, see Using Drag and Drop in the Hardware Tree on Page 31.
Encryption Setting	A read-only field displaying the Encryption Setting for the Cluster.
Controllers	
Add	To add an iSTAR Controller to your Cluster, click **Add** to display the iSTAR Controller selection dialog box. Select one or more controllers and click **OK** to add it to the iSTAR Cluster.
Remove	To remove an iSTAR Controller from your Cluster, select the iSTAR Controller you want to remove in the list, then click **Remove**.
Name column	Displays the name of the controller.
Description column	Displays the description text for the controller.

iSTAR Cluster Communications Tab

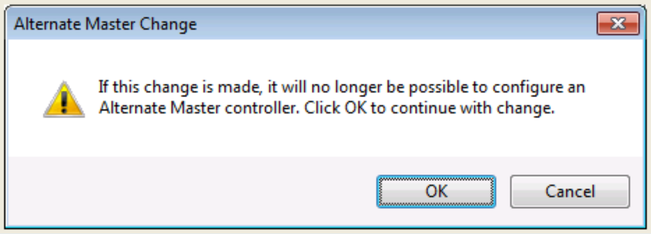
The **Communications** tab in the **iSTAR Cluster** dialog box lets you configure communications from the Controllers in a cluster to the C•CURE 9000 Server (Host). Primary and Secondary communications can be configured for an iSTAR controller that has two Onboard Ethernet Adapters. When one adapter is chosen as primary, the other can become the secondary.

If you are using iSTAR Pro dialup, the cluster must be configured for dialup communication.

NOTE

For a cluster that existed prior to version 2.20, you can have one controller configured for the Primary communications path as a Master controller, and a second, different, controller configured for the Secondary communications path as an Alternate Master.

However, if you remove the Alternate Master from the cluster, you will no longer be able to configure an Alternate Master for the cluster. A message box appears when you change **Controller having secondary communications with host** to None, informing you that the change will remove the Alternate Master.


Alternate Master Change

If this change is made, it will no longer be possible to configure an Alternate Master controller. Click OK to continue with change.

For a new cluster created in version 2.20 or later, you cannot configure an Alternate Master. If you configure both a Primary and Secondary communications path, you must use the same controller, which must have two onboard Ethernet Adapters.

NOTE

Dialup can be used only as the primary connection method or the secondary communication method, not as both.

Example:

- Dialup is used as the primary communication method and there is no secondary communication method.
- TCP/IP is used as the primary communication method and Dialup is used as the secondary communication method.

Communications tab definitions are listed in Table 14 on Page 96.

Number of Failed Attempts Before Connection Fails on Page 97 explains how to configure the cluster's controllers to attempt to connect to the cluster, and resolve communications failures.

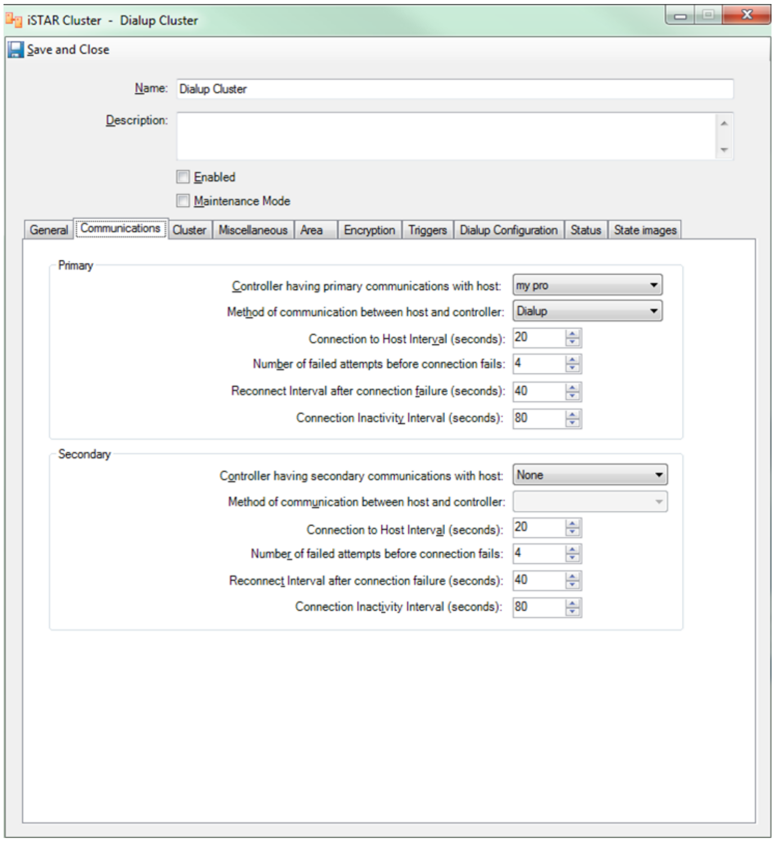
NOTE

Secondary communications paths have not been evaluated by UL.

To Configure the iSTAR Cluster - Communications Tab

1. From the **iSTAR Controller** dialog box, click the **Communications** tab. The **Communications** tab opens, shown in Figure 40 on Page 95.

Figure 40: iSTAR Cluster Communications Tab



iSTAR Cluster - Dialup Cluster

Save and Close

Name: Dialup Cluster

Description:

□ Enabled

□ Maintenance Mode

General | Communications | Cluster | Miscellaneous | Area | Encryption | Triggers | Dialup Configuration | Status | State images

Primary

Controller having primary communications with host: my pro

Method of communication between host and controller: Dialup

Connection to Host Interval (seconds): 20

Number of failed attempts before connection fails: 4

Reconnect Interval after connection failure (seconds): 40

Connection Inactivity Interval (seconds): 80

Secondary

Controller having secondary communications with host: None

Method of communication between host and controller:

Connection to Host Interval (seconds): 20

Number of failed attempts before connection fails: 4

Reconnect Interval after connection failure (seconds): 40

Connection Inactivity Interval (seconds): 80

2. **Controllers having primary/secondary communication with host** allows you to select the controller in the cluster that has **primary** or **secondary** communications with the host (C•CURE 9000 server). Choose a controller using the drop-down selection.

3. **Method of communication between host and controller** allows a selection of the communication type designated for the iSTAR controller that communicates with the host. Choose the connection type of **Onboard Ethernet** or **Dialup** (iSTAR Pro or iSTAR Ultra Pro Mode only) using the drop-down selection.

4. In the **Connection to Host Interval** entry field, specify the number of seconds that a controller waits between attempts to connect to the host.

   UL requires a maximum of 200 seconds supervision on the Communications link between the protected premise equipment and the central station.

5. In the **Number of failed attempts before connection fails** field, specify the number of attempts that a controller makes to first connect to the host before the controller is declared to be in communications failure. See Number of Failed Attempts Before Connection Fails on Page 97 for more information.

6. In the **Reconnect Interval after connection failure** field, specify the number of seconds that controllers wait between attempts to re-connect to the host. This field sets the rate at which controllers attempt to reconnect or connect to the host after a communications failure occurs between the host and the controller. The default interval is 40 seconds. The maximum value is 9999 seconds and the minimum is 1 second.

7. In the **Connection Inactivity Interval** field, specify the number of seconds that a controller waits between attempts to connect to the host. The default interval is 80 seconds. The possible values are between 15 and 80 seconds.

8. Navigate to the iSTAR Cluster - Cluster Tab on Page 98 or click **Save and Close** to save the cluster and begin configuring iSTAR Controllers.

Table 14: iSTAR Cluster Communications Tab Definitions

Field	Description
Controllers having primary or secondary communication with host	This field allows you to select the controller that has primary or secondary communications with the host. Choose a controller using the drop-down selection.
Method of communication between host and controller	This field allows you to select the communication type designated for the iSTAR controllers, **PCMCIA Ethernet, Onboard Ethernet** or **Dialup** (iSTAR Pro/iSTAR Ultra SE Pro Mode only).
Connection to Host Interval [seconds]	Specify the number of seconds that a controller waits between attempts to connect to the host. Use the **Number of failed attempts before connection fails** field in the **Communications tab** to specify the number of connection attempts a controller makes before a communications failure is declared for the controller. The maximum value is 9999 seconds and the minimum is 1 second. The default value is 20 seconds.
Number of failed attempts before connection fails	Specify the number of attempts that a controller makes to first connect to the host before the controller is declared to be in communications failure. See Number of Failed Attempts Before Connection Fails on Page 97. The default value is 4 attempts.
Reconnect Interval after connection failure [seconds]	Specify the number of seconds that controllers wait between attempts to re-connect to the host. This field sets the rate at which controllers attempt to reconnect or connect to the host after a communications failure occurs between the host and the controller. The default interval is 40 seconds. The maximum value is 9999 seconds and the minimum is 1 second.
Connection Inactivity Interval [seconds]	Specify the number of seconds that a controller waits between attempts to connect to the host. The default interval is 80 seconds. The possible values are between 15 and 80 seconds.

Number of Failed Attempts Before Connection Fails

The **Number of failed attempts before connection fails** field in the **Communications tab** specifies the number of connection attempts a controller makes before a communications failure is declared for the controller. The default is 4 attempts. The maximum is 99 attempts and the minimum is 1 attempt.

If a connection is established, the controller and host use connection verification messages to maintain the connection.

If a connection is not made in the specified number of attempts, a communications failure is declared for the controller, and the following connections are attempted:

- If the secondary communications path uses an alternate host, the controller attempts to connect to the alternate host, which passes the controller's messages to the host. At the same time, the controller tries to re-establish a connection with the host at the rate specified in the **Reconnect Interval after connection failure** field.
- If the secondary communications path does not use an alternate host, the controller attempts to connect to the host forever, or until a connection is established. The controller attempts to connect to the host at the rate specified in the **Reconnect Interval after connection failure** field.
- The controller broadcasts a request across its subnet for the host's IP Address. The host responds to the request. If the host does not respond in a set amount of time and the iSTAR Configuration Utility is configured for auto-response, the utility responds to the controller. See the ***iSTAR eX Installation and Configuration Guide*** for information.

If a communications failure occurs, the following connections are attempted simultaneously:

- If the secondary communications path uses an alternate host, the controller attempts to connect to the alternate host, which passes the controller's messages to the host. At the same time, the controller tries to re-establish a connection with the host at the rate specified in the **Reconnect Interval after connection failure** field.
- If the secondary communications path does not use an alternate host, the controller attempts to re-connect to the host forever or until a connection is established. The controller attempts to reconnect to the host at the rate specified in the **After connection failure, controller attempts to reconnect every XX seconds** field.
- The controller broadcasts a request across its subnet for the host's IP Address. The host responds to the request. If the host does not respond in a set amount of time and the iSTAR Configuration Utility is configured for auto-response, the utility can respond to the controller. See the ***iSTAR eX Installation and Configuration Guide*** for information. If a connection is established, the controller and host use connection verification messages to maintain the connection. The default is 4 attempts. The maximum is 99 attempts and the minimum is 1 attempt.

iSTAR Cluster - Cluster Tab

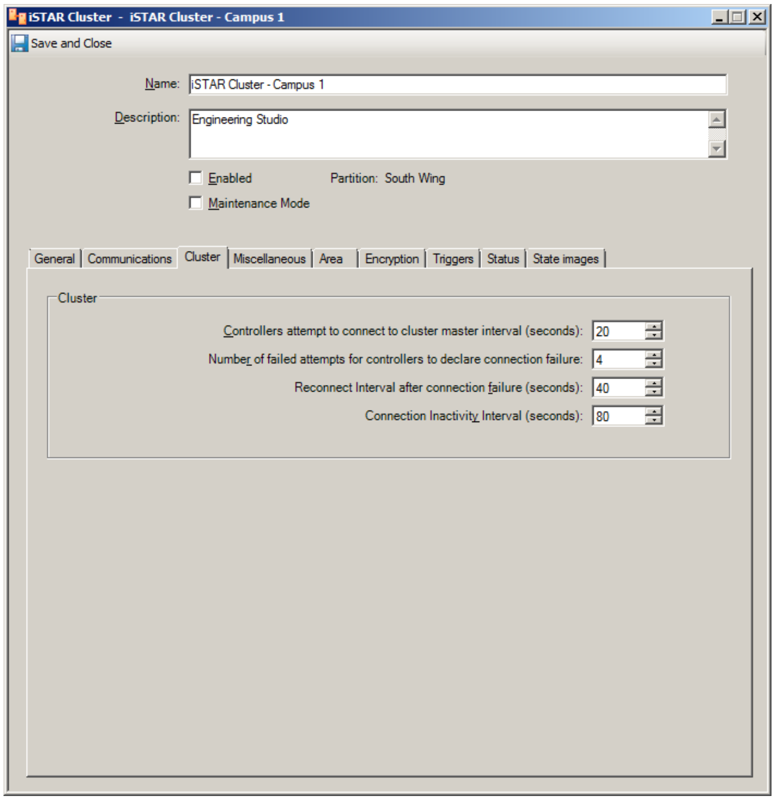
The Cluster tab regulates the connection and reconnection intervals between the primary iSTAR Controller and those controllers which are cluster members.

NOTE The Cluster tab has not been evaluated by UL.

To Configure the iSTAR Cluster - Cluster Tab

1. From the **iSTAR Controller** dialog box, click the **Cluster** tab. The **Cluster** tab opens, shown in Figure 41 on Page 98.
2. Specify the number of seconds that the primary controller attempts to connect with the host server in the **Controllers attempt to connect to cluster master interval** entry field. The range is from 1 to 9999 seconds; the default value is 20 seconds.

Figure 41: iSTAR Cluster Cluster Tab



Name: iSTAR Cluster - Campus 1

Description: Engineering Studio

☐ Enabled Partition: South Wing

☐ Maintenance Mode

Cluster

Controllers attempt to connect to cluster master interval (seconds): 20

Number of failed attempts for controllers to declare connection failure: 4

Reconnect Interval after connection failure (seconds): 40

Connection Inactivity Interval (seconds): 80

3. Enter the number of instances after which the primary controller transmits a connection failure in the **Number of failed attempts for controllers to declare a connection failure** entry field. The range is from 1 to 99; the default value is 4.
4. Specify the number of seconds after which the primary controller attempts to reconnect after a connection failure in the **Reconnection Interval after connection failure** entry field. The range is from 1 to 9999 seconds; the default value is 40 seconds.
5. Enter the number of seconds after which the primary controller transmits a connection failure if there is no message while it is connected, in the **Connection Inactivity Interval** entry field. The range is from 15 to 80 seconds; the default value is 80 seconds
6. Navigate to the **Miscellaneous** tab or **Save and Close** to save the cluster and begin configuring iSTAR Controllers.

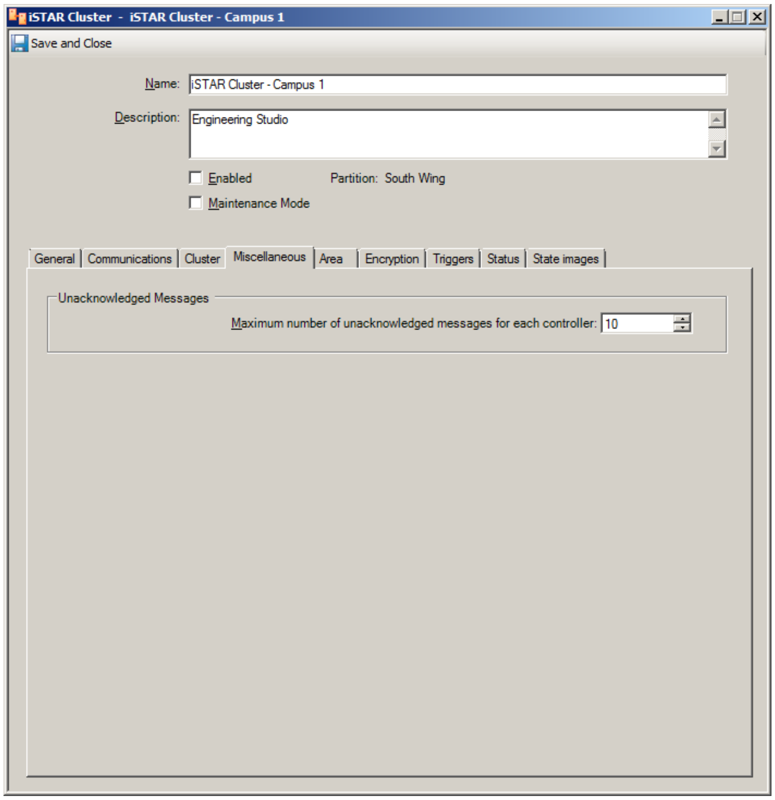
iSTAR Cluster Miscellaneous Tab

The iSTAR Cluster Miscellaneous tab allows you to set the maximum number of unacknowledged messages that are allowed for each iSTAR Controller

To Configure the iSTAR Cluster - Miscellaneous Tab

1. From the **iSTAR Controller** dialog box, click the **Miscellaneous** tab. The **Miscellaneous** tab opens, shown in Figure 42 on Page 99.

Figure 42: iSTAR Cluster Miscellaneous Tab



Name: iSTAR Cluster - Campus 1

Description: Engineering Studio

□ Enabled Partition: South Wing

□ Maintenance Mode

Unacknowledged Messages

Maximum number of unacknowledged messages for each controller: 10

2. In the **Unacknowledged Messages** box specify the maximum number of unacknowledged messages that are allowed for each iSTAR Controller in the **Maximum number of unacknowledged messages for each controller** field.

   If you have a network with high latency, you may want to set this value to a higher number; if the network has low latency, the default value (10) should be sufficient.

NOTE

- This setting does not result in lost messages.
- For Proprietary Burglar Alarm applications, the Send state changes to the monitoring station option must be selected.
- The range is from 1 to 99 and the default value is 10. For UL applications, set the range to 99.

3. Navigate to the **Antipassback** tab or **Save and Close** to save the cluster and begin configuring iSTAR Controllers.

iSTAR Cluster Area Tab

The iSTAR Cluster Area tab allows you to configure the following:

- How Cluster Antipassback works for iSTAR Cluster Areas during a communications failure when the Cluster members lose communication with the Cluster master.
- Whether or not the Cluster is configured for both Global Antipassback and Cluster Antipassback or solely for Cluster Antipassback.

NOTE Modifying either of these options can only be done if the Cluster is **not** Enabled.

You configure how Global Antipassback works during a communications failure through a system variable in the iSTAR Driver section, "iSTAR Global Antipassback Communication Failure Mode". For more information, see the *C•CURE 9000 System Maintenance Guide*.

Cluster Antipassback Communications Failure Mode

As long as the communication within the Cluster is good, the Cluster members do not store any antipassback information. During communications failure, the Cluster members (the Controllers) begin to enforce antipassback locally, based on the Failure Mode you configure for the Area's Cluster on this tab.

For iSTAR Cluster Areas, all Doors and Readers must be within the same iSTAR Cluster. Adjacent Areas can be on any Cluster and can also be Cross-Cluster Areas.

Using Antipassback restricts access to Cluster Areas as follows:

- Regular antipassback – Personnel **cannot** exit an Area they are **not** in, **nor** re-enter an Area without exiting it first.
- Timed antipassback – Personnel **cannot** re-enter an Area until a specified amount of time has passed.

The violation triggered when personnel enter a specified Area is called an entry violation. The violation triggered when personnel exit a specified Area is an exit violation.

NOTE To ensure that personnel are always appropriately prevented from entering Lockout Areas, make sure that you configure the Communications Failure Mode for the Area’s iSTAR Cluster as **No access** Mode, instead of **Local** Mode.

Global Antipassback for the Cluster

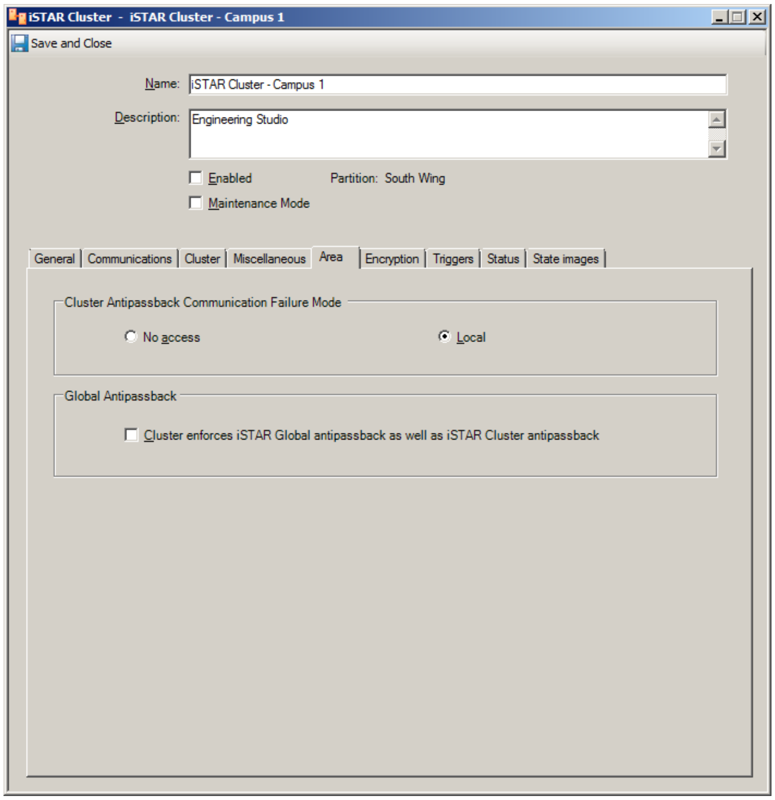
iSTAR Global Antipassback gives a higher level of security, but also means that when a person's card moves from one Cluster to another, the card must be transferred through the Host. Transfer through the Host is slower than within a Cluster and also requires the Cluster to Host network connections to be good. Access within the Cluster is faster since it only relies on the member-to-master network connections.

For more information on Areas and Antipassback, see the *C•CURE 9000 Areas and Zones Configuration Guide*.

To Configure the iSTAR Cluster - Area Tab for Cluster Antipassback Communications Failure Mode

1. From the **iSTAR Cluster** dialog box, click the **Area** tab. The **Area** tab opens, shown in Figure 43 on Page 101.

Figure 43: iSTAR Cluster Area Tab



Name: iSTAR Cluster - Campus 1

Description: Engineering Studio

□ Enabled Partition: South Wing

□ Maintenance Mode

Cluster Antipassback Communication Failure Mode

○ No access ● Local

Global Antipassback

□ Cluster enforces iSTAR Global antipassback as well as iSTAR Cluster antipassback

2. In the **Cluster Antipassback Communication Failure Mode** box, click to select either the **No access** or **Local** option.

NOTE Make sure that you leave the **Cluster enforces iSTAR Global antipassback as well as iSTAR Cluster antipassback** check box **unselected**.

To Configure the iSTAR Cluster - Area Tab for both Global Antipassback and Cluster Antipassback

1. From the **iSTAR Cluster** dialog box, click the **Area** tab. The **Area** tab opens, shown in Figure 43 on Page 101.
2. In the **Global Antipassback** box, click to select the **Cluster enforces iSTAR Global antipassback as well as iSTAR Cluster antipassback** option.

Area Tab Field Definitions

Area tab definitions are listed in Table 15 on Page 101.

Table 15: Area Tab Definitions

Fields	Description
Cluster Antipassback Communication Failure Mode	
The options in this box are available only if the **Cluster enforces iSTAR Global antipassback as well as iSTAR Cluster antipassback** option in the **Global Antipassback** box is **not** selected.	

Table 15: Area Tab Definitions (continued)

Fields	Description
No access (Hard)	Select this option to configure **No access** as the Communications Failure mode for this Cluster. • Access is denied by any member Controller in the Cluster in communications failure. • Member Controllers still in communications with the Master continue to request normal antipassback decisions for entry to the Area. • Master Controllers need no communication to make antipassback decisions and always do so regardless of host or member communication. (In this mode, the person is presumed to be **in violation**, unless proven otherwise.)
Local (Soft)	Select this option to configure **Local** as the Communications Failure mode for this Cluster. • The Controller uses locally available information to grant or deny access. Even if this information is insufficient, the Controller admits the person presenting the card. (In this mode, the person is presumed **not-in-violation**, unless proven otherwise.) When **Local** mode is configured, the person is allowed in unless the Controllers making the decision determine beyond doubt that they are guilty of an antipassback violation.
Global Antipassback	
Cluster enforces iSTAR Global antipassback as well as iSTAR Cluster antipassback	Select this check box to indicate that this Cluster shares data with all the other Clusters that use iSTAR Global Antipassback. (The default is cleared indicating that the Cluster does not share data with any other Clusters.) NOTE: When this option is selected, the **Cluster Antipassback Communication Failure** Mode box options become unavailable.

iSTAR Cluster Encryption Tab

This tab allows you to configure the encryption mode for an Encrypted Cluster. The encryption setting will apply to all iSTARs and IP-ACMv2s in the cluster.

To use FIPS 140-2 Validate mode, the **Encryption Options** must be configured in the **Options and Tools** pane before you can configure Cluster encryption.

NOTE

- This tab is Read-only for a Non-encrypted Cluster, and does not apply. Non-encrypted Clusters do not use 256-bit AES (FIPS 197) encryption. The iSTAR eX, iSTAR Edge, and encrypted iSTAR Ultra LT, iSTAR Ultra, iSTAR Ultra SE (in Ultra Mode) controllers use 256-bit AES (FIPS 197) encryption by default.
- Encryption is supported on IP-ACM v2 when connected to a controller with firmware v6.6.5 and higher. If you are already using custom certificates on the controller, you need to upgrade to firmware v6.6.5 and generate a new certificate.
- The 256-bit AES (FIPS 197) encryption method satisfies the Proprietary Burglar Alarm application requirements.
- Software House recommends that you configure the Tamper Input for a 'dark mode' controller to trigger an Alarm Event that will be displayed on the Monitoring State if the input changes state.

FIPS 140-2 mode requires a custom certificate key, either host based or controller based. Software House recommends a controller based certificate key. Once you set the cluster to FIPS 140-2 compliant mode, the iSTAR encrypted controllers and IP-ACM v2s will be in “dark mode.” They will not be visible on the network.

To Configure FIPS 140-2 Encryption for an iSTAR Encrypted Cluster

1. Click the **Options and Tools** pane.
2. Click **Encryption Options** to open the dialog box.
3. Select from the following options:
   - **Controller-Based Encryption Mode** modifies the system-wide Key Management Policy to Custom - Controller supplied. The controller supplies public and private keys, and the host signs public keys.
   - **Host-Based Encryption Mode** modifies the system-wide Key Management Policy to Custom - Host supplied. The Host supplies all public and private keys.
4. To use FIPS 140-2 mode, Software House recommends that you use the Controller-Based Encryption Mode.

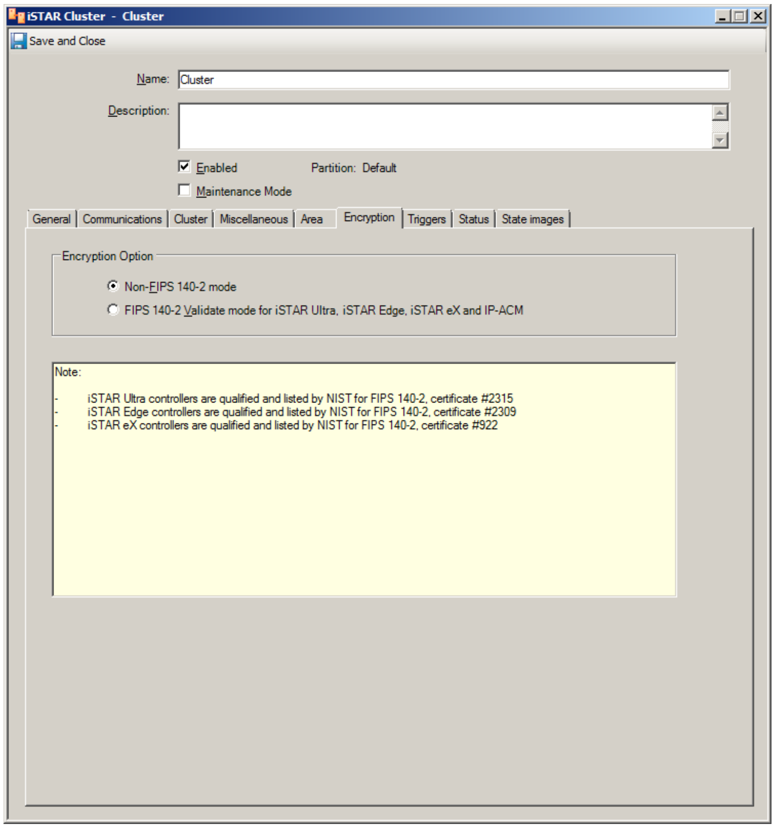
NOTE

Software House recommends Controller-based Encryption for two reasons:

1. Host-based Encryption requires a private key to be transmitted to the controllers non-encrypted. Controller-based Encryption does not. The tradeoff is that the controller-based method requires a signature at the host that recognizes the iSTAR to be valid.
2. The second reason is that it is much easier to recover from a controller-based error situation than to recover from a host-based area. Host based recovery of encryption keys is more difficult.

3. Click the **Hardware** pane.
4. Locate the iSTAR Cluster in the Hardware tree and double-click on it.
5. In the iSTAR Cluster dialog box, click the **Encryption** tab. The **Encryption** options are shown in Figure 44 on Page 104.

Figure 44: iSTAR Cluster Encryption Tab



Name: Cluster

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

Encryption Option

● Non-FIPS 140-2 mode

○ FIPS 140-2 Validate mode for iSTAR Ultra, iSTAR Edge, iSTAR eX and IP-ACM

Note:

- iSTAR Ultra controllers are qualified and listed by NIST for FIPS 140-2, certificate #2315
- iSTAR Edge controllers are qualified and listed by NIST for FIPS 140-2, certificate #2309
- iSTAR eX controllers are qualified and listed by NIST for FIPS 140-2, certificate #922

6. Select from the available Encryption modes: **Non-FIPS 140-2** or **FIPS 140-2 Validate mode for iSTAR Ultra, iSTAR Edge, iSTAR eX, and IP-ACM**.
7. Navigate to the **Triggers** tab or **Save and Close** to save the cluster and begin configuring iSTAR Controllers.

NOTE FIPS 140-2 compliant mode has not been evaluated by UL.

Communication Failure

This section applies if you selected **FIPS 140-2 Validate mode for iSTAR Ultra, iSTAR Edge, iSTAR eX, and IP-ACM**.

If any of the controllers are disabled or in communication failure after the change in policy, use one of the following methods to re-establish communication:

- If the C•CURE 9000 server is the Certificate Authority, use the ICU to initiate the Signature Request process. If the request fails, clear the controller memory, reboot the controller, and then use ICU to reinitiate the Signature Request process.
- If a third-party is the Certificate Authority, export the controller certificate to a USB drive, insert the USB drive into the controller, and then reboot the controller.

iSTAR Cluster Triggers Tab

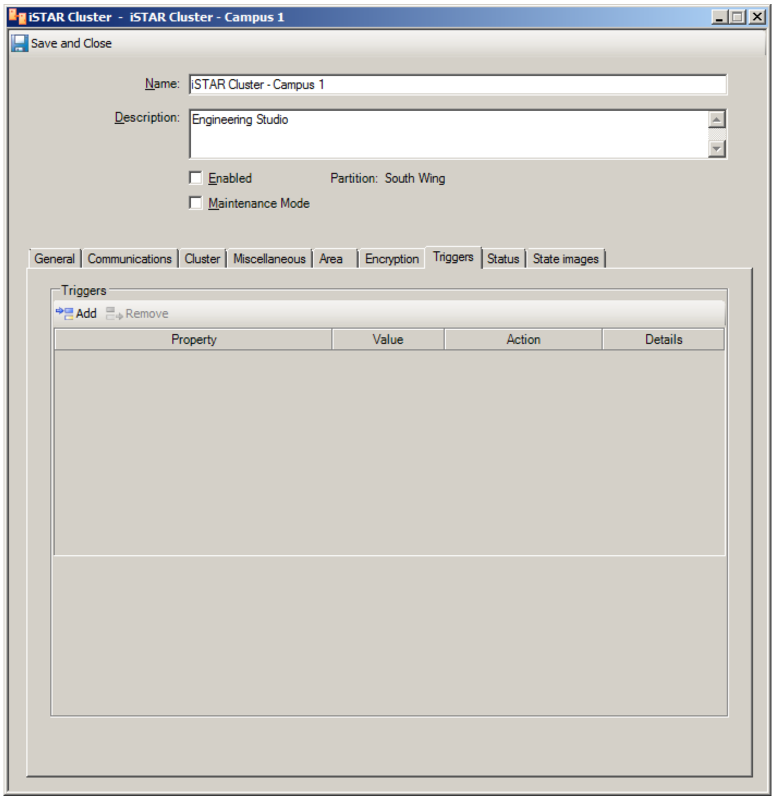
C•CURE 9000 uses **Triggers**, which are configured procedures used for activating security actions. A Trigger automatically executes a specified **Action** when a particular predefined condition occurs. When a Trigger is defined, the Actions available depend on the property selected. This section illustrates the use of Triggers to monitor a cluster master power failure.

NOTE The Triggers tab is not available for iSTAR Pro or iSTAR Ultra SE Pro Mode dialup configurations.

To Configure the iSTAR Cluster Triggers Tab

1. Navigate to the **Triggers** tab, shown in Figure 46 on Page 106.

Figure 45: iSTAR Cluster Triggers Tab



Name: iSTAR Cluster - Campus 1

Description: Engineering Studio

□ Enabled Partition: South Wing

□ Maintenance Mode

Property	Value	Action	Details

This tab provides you with ability to define the activation/deactivation, enable/disable, and arm/disarm, etc. of such objects as: events, inputs, outputs, camera actions, door status changes, etc. Triggers can also be used to launch events which also can be used to launch imports and exports, email and reports, viewer and message displays, personnel ID number state changes, controller downloads, sound activation, communication notifications, etc.

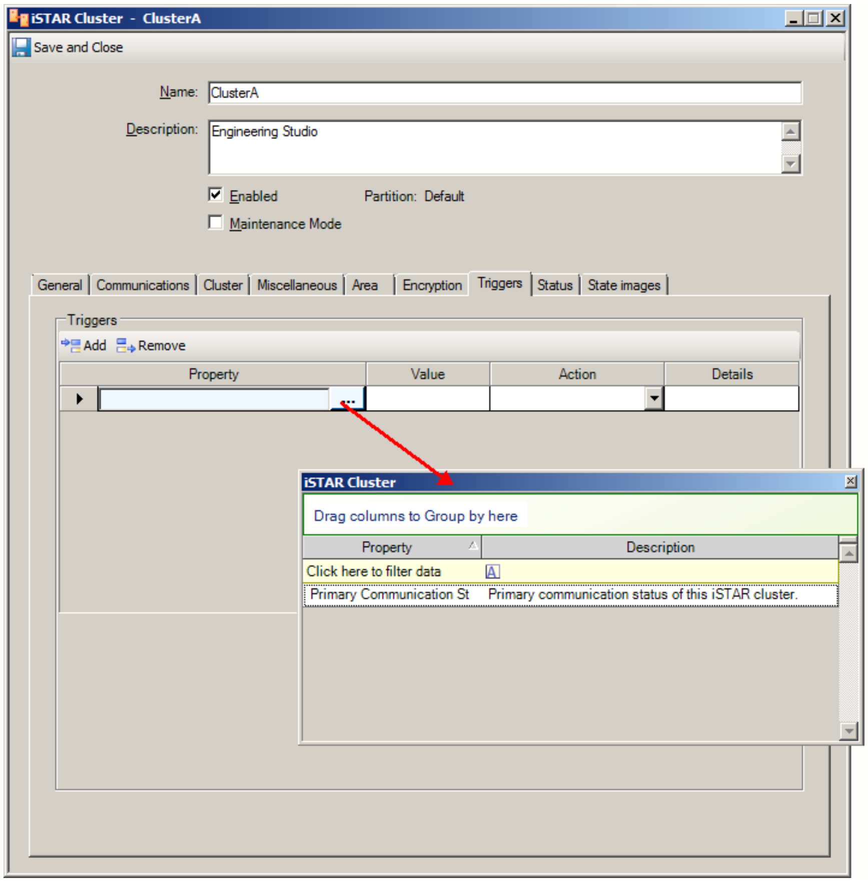
2. Click **Add** in the **Triggers** tab to create a new trigger.

   a. Click within the **Property** column to display **...**.

   When you select this button, the **Property** browser opens presenting properties available for the controller.

   b. Click a **Property** to select it and add it to the column (see Figure 46 on Page 106).

Figure 46: iSTAR Cluster Triggers Tab - Property Selection



Name: ClusterA

Description: Engineering Studio

☑ Enabled Partition: Default

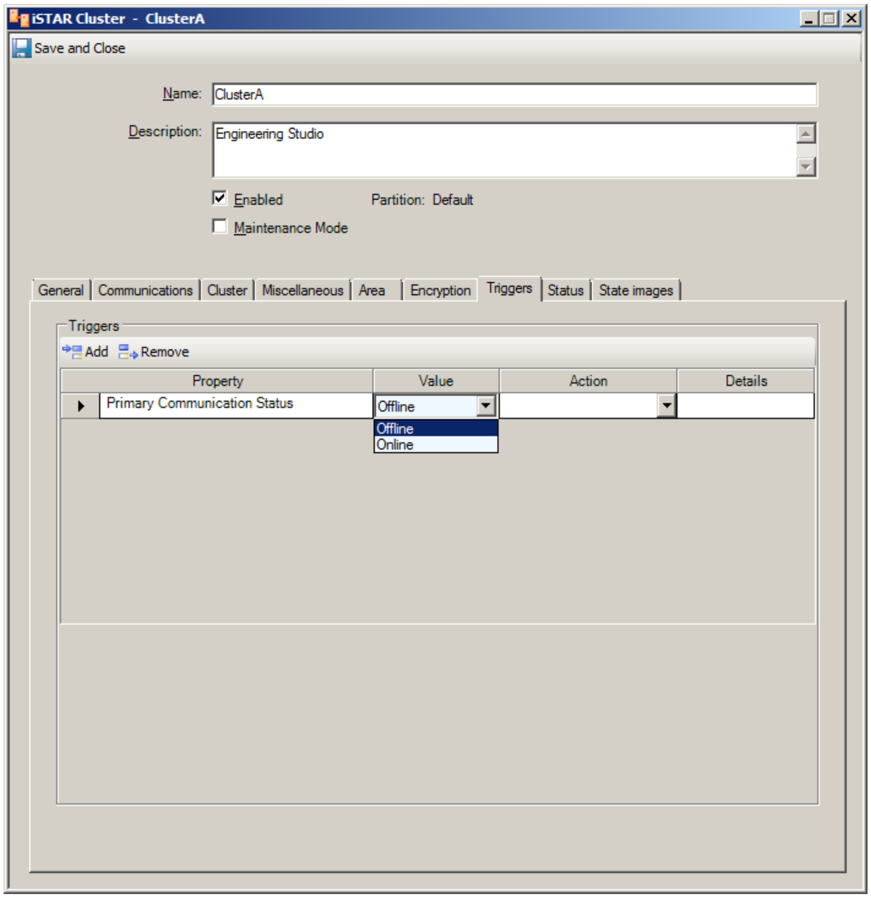
□ Maintenance Mode

Property	Value	Action	Details

Property	Description
Primary Communication St	Primary communication status of this iSTAR cluster.

c. Click within the **Value** column to display a drop-down list of Values associated with the **Property** that you have selected. Then click on a **Value** that you want to include as a parameter for the trigger to add it to the column (see Figure 47 on Page 107).

Figure 47: iSTAR Cluster Triggers Tab - Value



Name: ClusterA

Description: Engineering Studio

☑ Enabled   Partition: Default

□ Maintenance Mode

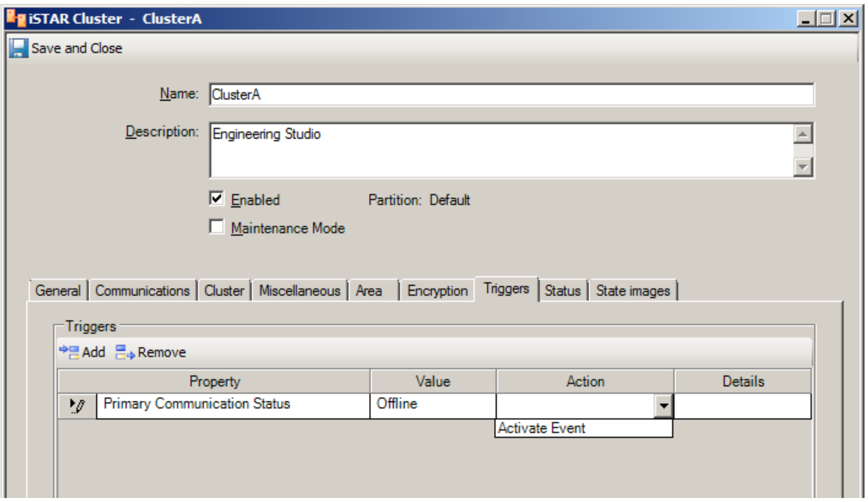
Triggers

Property	Value	Action	Details
Primary Communication Status	Offline Offline Online		

When a **Trigger** is added, an **Action** must be configured in the Action column. This is the Action that will occur when the object's selected **Property** receives the selected **Value**.

d. Click within the column to display a drop-down list of valid actions. Click an **Action** that you want to include as a parameter for the trigger to add it to the column (see Figure 48 on Page 107).

Figure 48: iSTAR Cluster Triggers Tab - Action



Name: ClusterA

Description: Engineering Studio

☑ Enabled   Partition: Default

□ Maintenance Mode

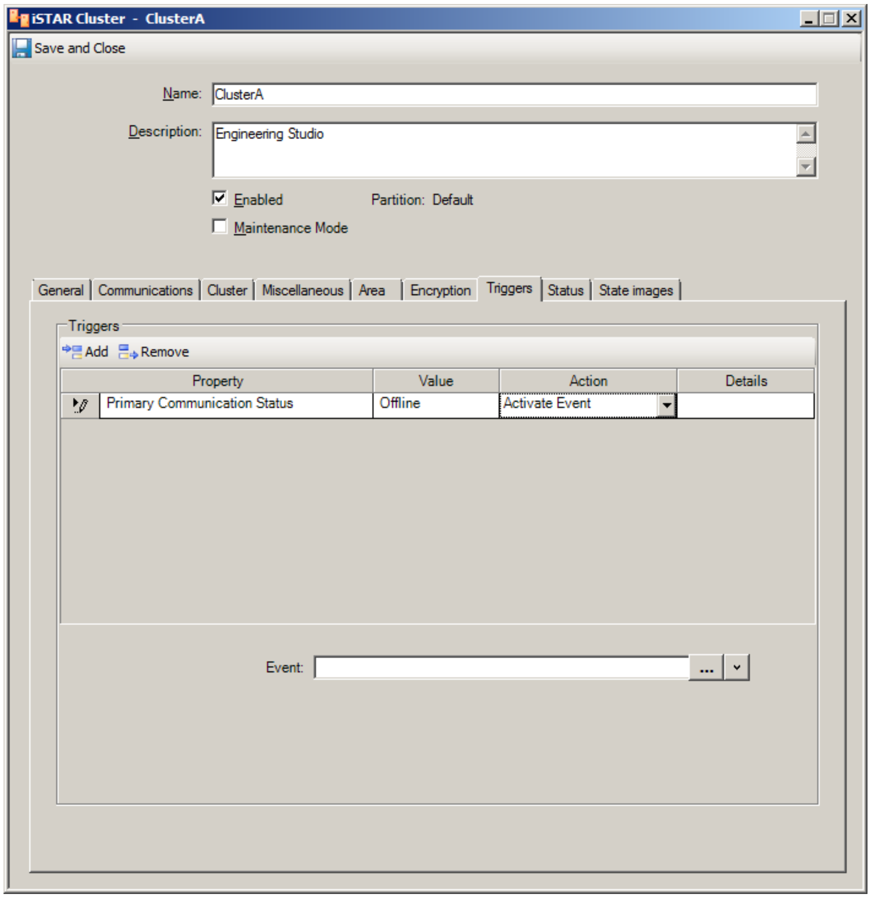
Triggers

Property	Value	Action	Details
Primary Communication Status	Offline	Activate Event	

As the Action is selected, the lower pane in the Triggers box displays a corresponding entry field, or group of entry fields, specific to the selected Action, such as an Event or Output (see Figure 49 on Page 108).

In the case of the **Primary Communications Status Property**, the available **Action** is to activate an event.

Figure 49: iSTAR Cluster Triggers Tab - Action Event



iSTAR Cluster - ClusterA

Name: ClusterA

Description: Engineering Studio

☑ Enabled   Partition: Default

□ Maintenance Mode

General | Communications | Cluster | Miscellaneous | Area | Encryption | Triggers | Status | State images

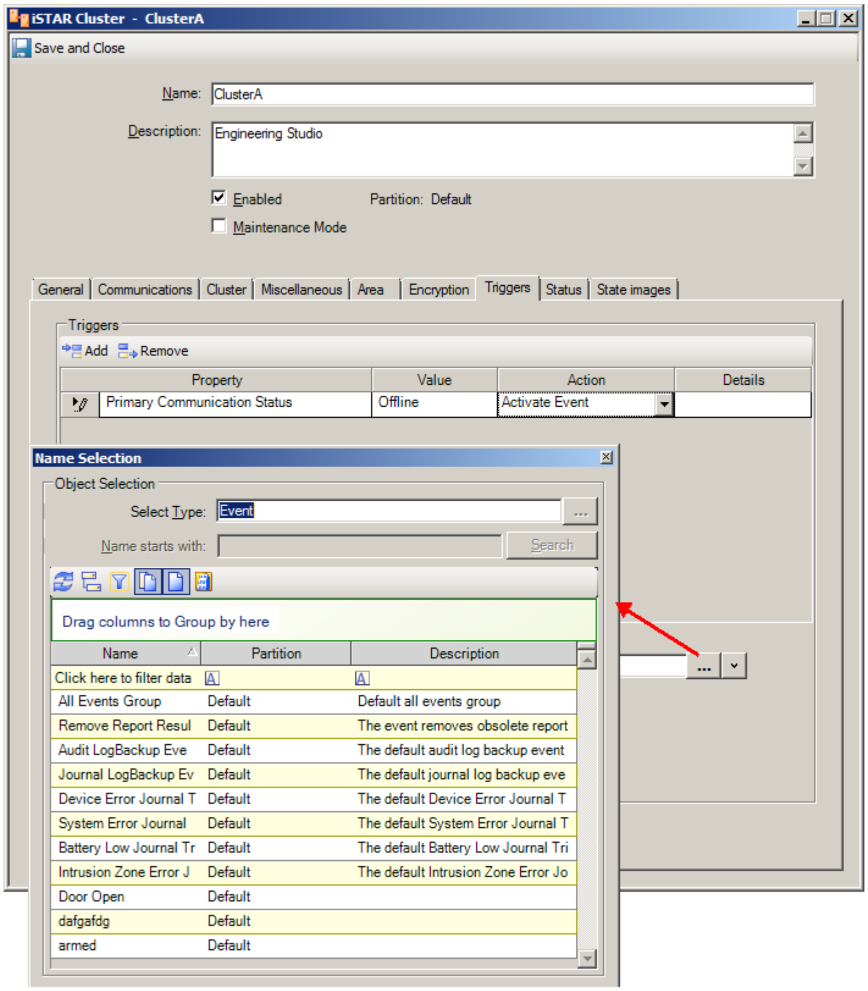
Triggers

Property	Value	Action	Details
Primary Communication Status	Offline	Activate Event	

Event:

e. In the **Event** field, click ... to select a **Event** that you want to associate with the trigger (see Figure 50 on Page 109). Events are created in the Configuration Pane. See the *C•CURE 9000 Software Configuration Guide* for more information.

Figure 50: iSTAR Cluster Triggers Tab - Event Selection



iSTAR Cluster - ClusterA

Save and Close

Name: ClusterA

Description: Engineering Studio

☑ Enabled   Partition: Default

☐ Maintenance Mode

General | Communications | Cluster | Miscellaneous | Area | Encryption | Triggers | Status | State images

Triggers

Add   Remove

Property	Value	Action	Details
Primary Communication Status	Offline	Activate Event	

Name Selection

Object Selection

Select Type: Event

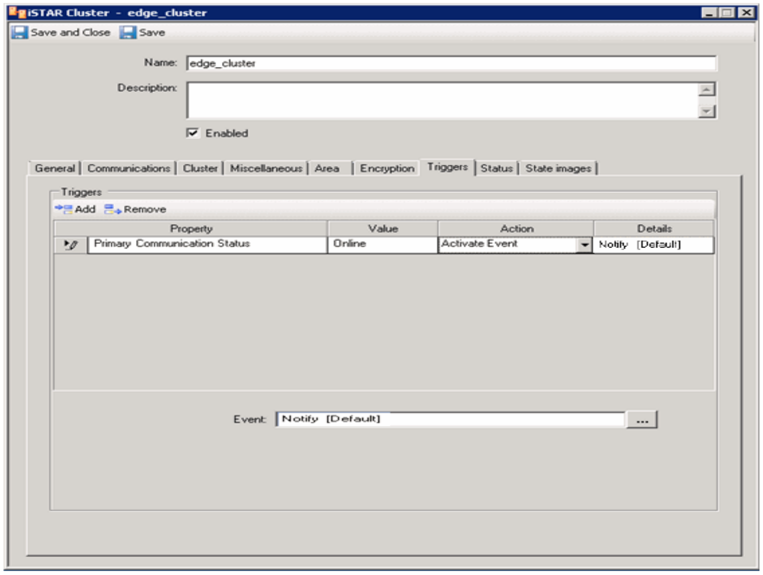
Name starts with: Search

Drag columns to Group by here

Name	Partition	Description
Click here to filter data		
All Events Group	Default	Default all events group
Remove Report Resul	Default	The event removes obsolete report
Audit LogBackup Eve	Default	The default audit log backup event
Journal LogBackup Ev	Default	The default journal log backup eve
Device Error Journal T	Default	The default Device Error Journal T
System Error Journal	Default	The default System Error Journal T
Battery Low Journal Tr	Default	The default Battery Low Journal Tri
Intrusion Zone Error J	Default	The default Intrusion Zone Error Jo
Door Open	Default	
dafgafdg	Default	
armed	Default	

Once the field (or group of fields) is completed, the **Details** column will show information about how the Action has been configured.

Figure 51: iSTAR Cluster Triggers Tab - Finished



iSTAR Cluster - edge_cluster

Save and Close   Save

Name: edge_cluster

Description:

☑ Enabled

General | Communications | Cluster | Miscellaneous | Area | Encryption | Triggers | Status | State images

Triggers

Add   Remove

Property	Value	Action	Details
Primary Communication Status	Online	Activate Event	Notify [Default]

Event: Notify [Default]

NOTE To activate or arm iSTAR Cluster events by a trigger condition, the schedule value is restricted to **Always**.

3. To Remove a Trigger, select the row using the ▸ button and click **Remove**.

   A completed Trigger that notifies you of communications failure in the cluster is shown in Figure 51 on Page 109.

4. Navigate to the **Status** tab or **Save and Close** to save the cluster and begin configuring iSTAR Controllers.

iSTAR Cluster Dialup Configuration Tab

The **Dialup Configuration** tab is used to configure a cluster to use dial-up on the iSTAR Pro or Ultra SE Pro Mode controller.

See Chapter 4: Configuring Dialup for the dial-up configuration sequence to follow and configuration information.

iSTAR Cluster Status Tab

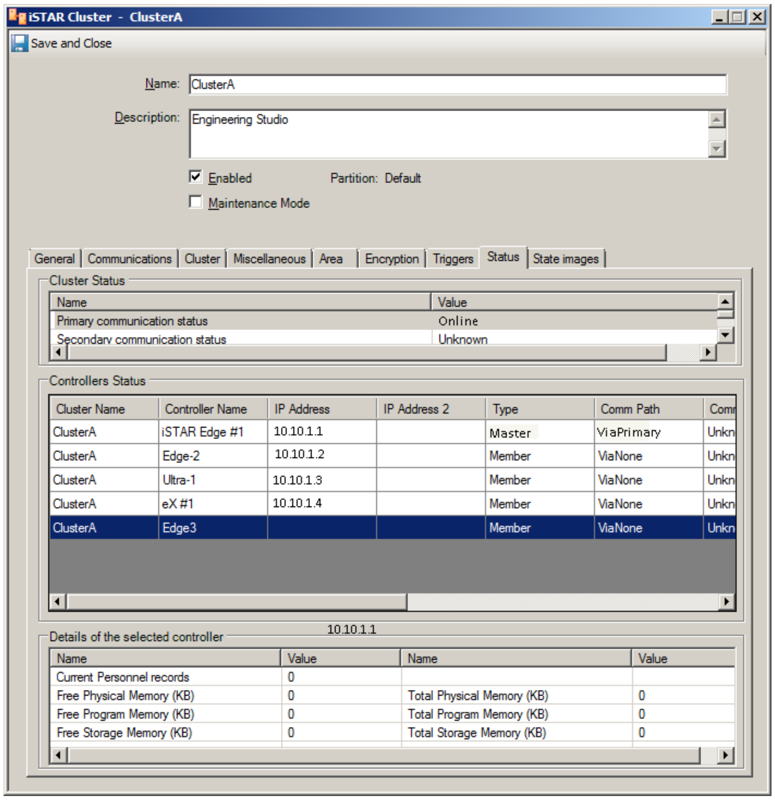
The **Status** tab provides a read-only listing of critical information about the operational status of the iSTAR controllers associated with the cluster. Such information includes:

- Cluster Name
- Controller Name
- IP Address
- IP Address 2
- Type
- Comm Path
- Comm State
- Conn Path
- Boards State
- Panel State
- Firmware Version
- Board Type

The **Details of the selected controller section** displays the same status fields that are displayed on that controller's Status tab. For more information on the status fields that are displayed for each controller type, see the iSTAR Controller Status Tab on Page 158.

The **Status** tab is shown in Figure 52 on Page 112.

Figure 52: iSTAR Cluster Status Tab



Name: ClusterA

Description: Engineering Studio

☑ Enabled   Partition: Default

☐ Maintenance Mode

Cluster Status

Name	Value
Primary communication status	Online
Secondary communication status	Unknown

Controllers Status

Cluster Name	Controller Name	IP Address	IP Address 2	Type	Comm Path	Comn
ClusterA	iSTAR Edge #1	10.10.1.1		Master	ViaPrimary	Unkn
ClusterA	Edge-2	10.10.1.2		Member	ViaNone	Unkn
ClusterA	Ultra-1	10.10.1.3		Member	ViaNone	Unkn
ClusterA	eX #1	10.10.1.4		Member	ViaNone	Unkn
ClusterA	Edge3			Member	ViaNone	Unkn

10.10.1.1

Details of the selected controller

Name	Value	Name	Value
Current Personnel records	0		
Free Physical Memory (KB)	0	Total Physical Memory (KB)	0
Free Program Memory (KB)	0	Total Program Memory (KB)	0
Free Storage Memory (KB)	0	Total Storage Memory (KB)	0

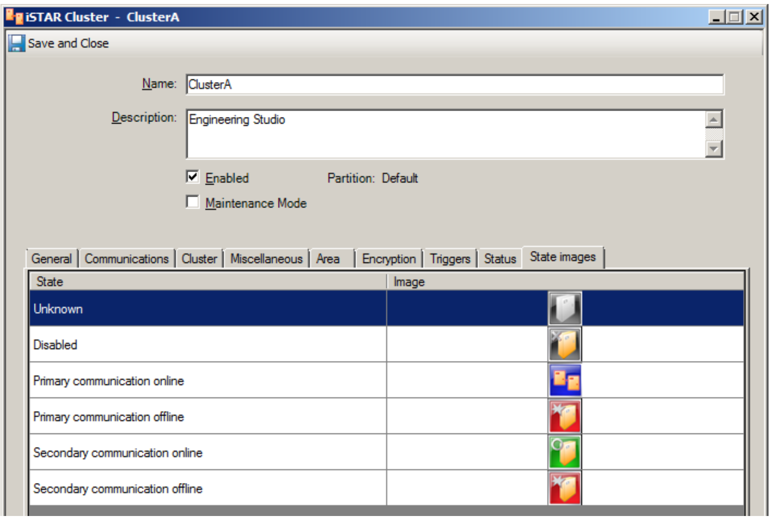
Using the Cluster Status Tab

1. The **Cluster Status** box displays Communications Status values for the iSTAR Cluster.
2. When you select an iSTAR Controller within the **Controllers Status** list, its status values are displayed in the **Details of selected controller** box.
3. Navigate to the **State Images** tab or **Save and Close** to save the cluster and begin configuring iSTAR Controllers.

iSTAR Cluster State Images Tab

The **State Images** tab, shown in Figure 53 on Page 113, provides a means to change the default images used to indicate Cluster states that are displayed in the Monitoring Station.

Figure 53: iSTAR Cluster State Images Tab



iSTAR Cluster - ClusterA

Save and Close

Name: ClusterA

Description: Engineering Studio

☑ Enabled Partition: Default

□ Maintenance Mode

General | Communications | Cluster | Miscellaneous | Area | Encryption | Triggers | Status | State images

State	Image
Unknown	
Disabled	
Primary communication online	
Primary communication offline	
Secondary communication online	
Secondary communication offline	

To Change an Image

1. Double-click the existing image.

   A **Windows Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.

2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click the new image and select **Restore Default**.
4. Click **Save and Close** to save changes to the cluster state images.

6

Configuring C•CURE iSTAR Controllers

The C•CURE iSTAR controller is an intelligent controller for networked security systems. C•CURE iSTAR controllers communicate with the C•CURE 9000 server (acting as a database and journal host) and the system security hardware, providing direct control of events and system activity. This chapter explains how to configure iSTAR controllers, and the devices related to them, in the C•CURE 9000 System.

In this chapter

Understanding C•CURE iSTAR Controllers 115
Configuration Overview for iSTAR Controllers 116
iSTAR Controller Tasks 121
iSTAR Controller Editor 143
iSTAR Controller Editor Tabs 148
iSTAR Ultra IP-ACM Editor 191
iSTAR Ultra Controller ACM Board Editor 195
iSTAR Classic/Pro Controller ACM Board Editor 201
iSTAR Input Board Editor 207
iSTAR Output Board Editor 211
iSTAR Ultra Wireless Readers 215
iSTAR Aperio RS-485 Hub Board Editor (iSTAR Ultra only) 221
iSTAR PIM-485 Board Editor 224
iSTAR Input Editor 227
iSTAR Output Editor 236
iSTAR Reader Editor 242
iSTAR PIM-485 Reader Editor 256
iSTAR Aperio Reader Editor 260
Triggers Tab for iSTAR Devices 264
State Images Tab for iSTAR Devices 267

Understanding C•CURE iSTAR Controllers

The iSTAR controller is an intelligent, network-ready controller for security systems. The heart of the iSTAR controller is the **General Controller Module** (**GCM**) - an embedded microprocessor-based controller card. Add-on **Access Control Modules** (**ACM Boards**) provide access control functionality by supporting readers, outputs, and inputs.

To install and configure the controller hardware and its connected devices see the following manuals:

- *iSTAR Pro Installation and Configuration Guide*
- *iSTAR eX Installation and Configuration Guide*
- *iSTAR Edge Installation and Configuration Guide*
- *iSTAR Ultra Installation and Configuration Guide*
- *iSTAR Ultra SE Installation and Configuration Guide*
- *iSTAR Ultra LT Installation and Configuration Guide*

For information on configuring host and panel Events for an iSTAR controller, see the Events chapter in the *C•CURE 9000 Software Configuration Guide*.

The following sections provide the information you need to configure the iSTAR Controllers.

- iSTAR Controller Tasks on Page 121
- Configuration Overview for iSTAR Controllers on Page 116
- iSTAR Controller Editor on Page 143

Configuration Overview for iSTAR Controllers

Configuring the iSTAR controllers involves setting up the hardware and configuring the software components. See the *iSTAR Hardware Installation Guides* for instructions about setting up controllers and related hardware.

NOTE

- Before configuring a controller, make sure you know the MAC address of the controller NIC you are using. The MAC address is built into the GCM and cannot be changed. You can find a controller's MAC address(es) on a label attached to the GCM.
- If you configuring the iSTAR Ultra Video controller, the MAC address is the MAC Address of the iSTAR Ultra Video device.

To Configure an iSTAR Controller

1. Create an iSTAR Controller (see Creating an iSTAR Controller on Page 121) or edit an existing iSTAR Controller (see Editing an iSTAR Controller on Page 126. The iSTAR Controller General tab appears, as shown in Figure 63 on Page 149.
2. On the iSTAR Controller **General** tab, configure the basic communications settings for the Controller, such as the MAC address, the primary and optional secondary network connections, and the Controller Time Zone.
3. Click on each of the tabs for attached devices, such as the **Boards** tab for iSTAR Classic/Pro Controllers, or the **Readers** tab for iSTAR eX Controllers, and configure the devices and their settings.
   - For iSTAR Classic/Pro Controllers, refer to the iSTAR Pro Configuration Summary on Page 116.
   - For iSTAR eX/Edge Controllers, refer to the iSTAR eX and iSTAR Edge Configuration Summary on Page 117.
   - For iSTAR Ultra, refer to the iSTAR Ultra Configuration Summary on Page 118.
   - For iSTAR Ultra Video, refer to the iSTAR Ultra Video Configuration Summary on Page 119.
   - For iSTAR Ultra LT, refer to the iSTAR Ultra LT Configuration Summary on Page 120.
4. Click on the iSTAR **Triggers** tab to configure actions that can activate Events, lock or unlock Doors, sound audible alarms, or a wide range of other security functions.
5. Click on the iSTAR **State** Images tab to customize the images that are displayed on the Monitoring Station to represent the Controllers.
6. Click **Save and Close** to save your settings.

NOTE

When using a multi-homed 9000 standalone server with multiple network adapters on multiple networks, use a selected IP address for IP communication to ensure consistent communication with the iSTAR fast personnel download. Set the IP address as the host address for the iSTAR controllers and in the **Options & Tools > System Variables > iSTAR Driver> Specified Host IPv4 Address** and/or **Specified Host IPv6 Address** field. Then restart the driver.

iSTAR Pro Configuration Summary

Table 16 on Page 116 provides a summary of the tasks involved in configuring an iSTAR Pro Controller.

Table 16: iSTAR Pro Configuration Summary

Step	Task	Reference
1.	Create and save an iSTAR Pro Cluster for the Controller.	Creating an iSTAR Cluster on Page 87

Table 16: iSTAR Pro Configuration Summary (continued)

Step	Task	Reference
2.	Create an iSTAR Pro Controller under the iSTAR Cluster in the Hardware Tree.	Creating an iSTAR Controller on Page 121
3.	Use the iSTAR Controller General tab to configure the basic communications settings for the Controller and to assign Reader LCD Message Sets.	iSTAR Controller General Tab on Page 148
4.	Use the Boards tab to create and configure Inputs, Outputs, and ACM boards for the Controller.	iSTAR Controller Boards Tab (iSTAR Classic/Pro) on Page 163
5.	Use the Advanced tab to	
5.	If you have Schlage Wireless PIMs and Readers, use the Schlage Wireless PIMs tab to configure these devices.	iSTAR Schlage Wireless PIMs Tab on Page 161
6.	From the Hardware Tree, create iSTAR Door objects for the Controller.	iSTAR Door Editor on Page 371
7.	From the Hardware Tree, create iSTAR Elevator objects for the Controller.	iSTAR Elevators on Page 519
8.	Use the iSTAR Triggers tab to create new triggers for the Controller.	iSTAR Controller Triggers Tab on Page 158
9.	Use the iSTAR State Images tab to customize the state images that are displayed on the Monitoring Station for the iSTAR Controller.	iSTAR Controller State Images Tab on Page 161

iSTAR eX and iSTAR Edge Configuration Summary

Table 17 on Page 117 provides a summary of the tasks involved in configuring an iSTAR eX or iSTAR Edge Controller.

Table 17: iSTAR eX/Edge Configuration Summary

Step	Task	Reference
1.	Create and save an iSTAR eX/Edge Cluster for the Controller.	Creating an iSTAR Cluster on Page 87
2.	Create an iSTAR eX/Edge Controller under the iSTAR Cluster in the Hardware Tree.	Creating an iSTAR Controller on Page 121
3.	Use the iSTAR Controller General tab to configure the basic communications settings for the Controller and to assign Reader LCD Message Sets.	iSTAR Controller General Tab on Page 148
4.	Use the iSTAR Controller Inputs tab to create the Inputs on the Controller.	iSTAR eX and Edge Controller Inputs Tab on Page 166
5.	Use the iSTAR Controller Outputs tab to create the Outputs on the Controller.	iSTAR Edge/eX Controller Outputs Tab on Page 170
6.	Use the iSTAR Controller Wiegand tab to create the direct connect Wiegand Readers on the Controller.	iSTAR eX Controller Wiegand Tab on Page 175

Table 17: iSTAR eX/Edge Configuration Summary (continued)

Step	Task	Reference
7.	Use the iSTAR Controller tabs to create the Input Boards, Output Boards, and Readers on the Controller.	iSTAR eX COM1/COM2 Tabs on Page 177 iSTAR Edge COM1/COM2/COM3 Tabs on Page 171
8.	If you have Schlage Wireless PIMs and Readers, open the iSTAR PIM-485 Board editor to configure these devices.	iSTAR PIM-485 Board Editor on Page 224
9.	From the Hardware Tree, create iSTAR Door objects for the Controller.	iSTAR Door Editor on Page 371
10.	From the Hardware Tree, create iSTAR Elevator objects for the Controller.	iSTAR Elevators on Page 519
11.	Use the iSTAR Triggers tab to create new triggers for the Controller.	iSTAR Controller Triggers Tab on Page 158
12.	Use the iSTAR State Images tab to change the images that display on the Monitoring Station for the iSTAR Controller.	iSTAR Controller State Images Tab on Page 161

iSTAR Ultra Configuration Summary

Table 18 on Page 118 provides a summary of the tasks involved in configuring a iSTAR Ultra Controller.

Table 18: iSTAR Ultra Configuration Summary

Step	Task	Reference
1	Create and save an iSTAR Ultra Cluster for the Controller.	Creating an iSTAR Cluster on Page 87
2	Create an iSTAR Ultra Controller under the iSTAR Cluster in the Hardware Tree.	Creating an iSTAR Controller on Page 121
3	Use the iSTAR Controller General tab to configure the basic communications settings for the Controller and to assign Reader LCD Message Sets.	iSTAR Controller General Tab on Page 148
4	Use the Boards tab to create and configure Inputs, Outputs, and ACM boards for the Controller.	iSTAR Ultra Controller Boards Tab on Page 181
5	Open the iSTAR IP-ACMs tab to create Inputs, Outputs, and Readers for the Controller.	iSTAR Ultra Controller IP-ACMs Tab on Page 183
6	Click the Com1 and Com2 tab to configure Aperio Hubs and Schlage PIMs	iSTAR Ultra COM1/COM2 Tabs on Page 183
7	From the Hardware Tree, create iSTAR Door objects for your Controller.	iSTAR Door Editor on Page 371
8	From the Hardware Tree, create iSTAR Elevator objects for your Controller.	iSTAR Elevators on Page 519
9	Use the iSTAR Triggers tab to configure the triggers for controller events.	iSTAR Controller Triggers Tab on Page 158
10	Use the iSTAR State Images tab to customize the state images that are displayed on the Monitoring Station for your iSTAR Controller.	iSTAR Controller State Images Tab on Page 161

iSTAR Ultra Video Configuration Summary

Table 19 on Page 119 provides a summary of the tasks involved in configuring the iSTAR Ultra Video Controller.

Table 19: iSTAR Ultra Video Configuration Summary

Step	Task	Reference
1	Create and save an iSTAR Cluster.	Creating an iSTAR Cluster on Page 87
2	Create an iSTAR Ultra Video Controller under the iSTAR Cluster in the Hardware Tree. Right-click on the Cluster and select **iSTAR Ultra Video Controller**.	Creating an iSTAR Controller on Page 121
3	Use the iSTAR Controller **General** tab to configure the basic communications settings for the Controller.	iSTAR Controller General Tab on Page 148
4	Use the iSTAR Controller **Boards** tab to create and configure Inputs, Outputs, and Readers. NOTE: Ensure that **iSTAR Ultra ACM** is selected as the **ACM type**. 1. Create the **ACM Boards** that you need by clicking **Create All ACMs**, or by selecting the **Configured** check box for only the ACMs you wish to create. 2. Click ... in the **Edit** column to configure an ACM.	iSTAR Ultra Controller Boards Tab on Page 181 iSTAR Ultra Controller ACM Board Editor on Page 195
5	Use the iSTAR Controller **IP-ACMs** tab to configure the IP-ACMs Inputs, Outputs, Readers and Triggers. 1. Create the **IP-ACM Boards** that you need by clicking **Create All IP-ACMs**, or by selecting the **Configured** check box for only the ACMs you wish to create. 2. Click ... in the **Edit** column to configure an IP-ACM.	Configuring the IP-ACM on Page 277
6	Use the iSTAR Controller **Triggers** tab to configure the triggers for controller events.	Triggers Tab for iSTAR Devices on Page 264
7	Use the iSTAR Controller **State** Images tab to customize the state images that are displayed on the Monitoring Station for your iSTAR Controller.	iSTAR Controller State Images Tab on Page 161
8	From the Hardware Tree, create iSTAR Door objects for your Controller.	iSTAR Door Editor on Page 371

iSTAR Ultra LT Configuration Summary

Table 20 on Page 120 provides a summary of the tasks involved in configuring a iSTAR Ultra LT Controller.

Table 20: iSTAR Ultra LT Configuration Summary

Step	Task	Reference
1	Create and save an iSTAR Ultra LT Cluster for the Controller.	Creating an iSTAR Cluster on Page 87
2	Create an iSTAR Ultra LT Controller under the iSTAR Cluster in the Hardware Tree.	Creating an iSTAR Controller on Page 121
3	Use the iSTAR Controller **General** tab to configure the basic communications settings for the Controller and to assign Reader LCD Message Sets.	iSTAR Ultra LT Controller General Tab on Page 154
4	Use the **Inputs** tab to create and configure Inputs for the Controller.	iSTAR Ultra LT Controller Inputs Tab on Page 186
5	Use the iSTAR **IP-ACM** tab to open the configure offline mode of IP-ACMs and open the IP-ACM Board Editor and create Inputs, Outputs, and Readers for the Controller.	Configuring the IP-ACM on Page 277
6	Click the **COM Port** tab to configure Aperio Hubs or Schlage Wireless PIMs.	iSTAR Ultra LT Controller COM Port Tab on Page 187
7	From the **Hardware Tree**, create iSTAR Door objects for your Controller.	iSTAR Door Editor on Page 371
8	From the **Hardware Tree**, create iSTAR Elevator objects for your Controller.	iSTAR Elevators on Page 519
9	Use the iSTAR **Triggers** tab to configure the triggers for controller events.	iSTAR Controller Triggers Tab on Page 158
10	Use the iSTAR **State Images** tab to customize the state images that are displayed on the Monitoring Station for your iSTAR Controller.	iSTAR Controller State Images Tab on Page 161

iSTAR Controller Tasks

You can perform the following tasks to manage iSTAR Controllers.

- Creating an iSTAR Controller on Page 121
- Creating a Controller Template on Page 124
- Deleting an iSTAR Controller on Page 125
- Editing an iSTAR Controller on Page 126
- Setting the iSTAR Controller Diagnostic Password on Page 122
- Viewing a List of iSTAR Controllers on Page 1
- Viewing a List of GCM Board Serial Numbers on Page 127
- Using the iSTAR Controller Context Menu on Page 128
- Using Set Property for an iSTAR Controller on Page 1
- Updating iSTAR Firmware (Ethernet Connections) on Page 130
- Updating iSTAR Firmware (Dial-up Connections) on Page 132
- Updating Firmware Using ICU on Page 135
- Changing the Time Zone of an iSTAR Controller on Page 136
- Creating a Local Backup (Ultra, Ultra SE, Ultra LT) on Page 136
- iSTAR Pro to iSTAR Ultra SE conversion on Page 137
- iSTAR Edge to iSTAR Edge G2 Conversion on Page 139

Creating an iSTAR Controller

You can create a new iSTAR Controller only within an iSTAR Cluster of the appropriate type.

NOTE The iSTAR Ultra S1-1 encryption switch enables FIPS 197 AES 256-bit encryption. The switch setting must match the software configuration of the cluster and the controller. See the *iSTAR Ultra Installation and Configuration Guide* for more information.

To Create a iSTAR Controller

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Navigate to the Hardware folder that contains the iSTAR Cluster in which you want to create the new Controller.
3. Select the iSTAR Cluster and right-click to display the context menu.
4. Select the controller you wish to create:

NOTE For an iSTAR Ultra SE in Pro Mode, select **iSTAR Pro Controller**.

- For an Encrypted Cluster, you can select:
  - **iSTAR Edge Controller>New**
  - **iSTAR eX Controller>New**
  - **iSTAR Ultra Controller>New**
  - **iSTAR Ultra Video Controller>New**

    - **iSTAR Ultra LT >New**
- For a Non-encrypted Cluster, you can select:
    - **iSTAR Classic Controller>New**
    - **iSTAR Pro Controller>New**
    - **iSTAR Ultra Controller>New**
    - **iSTAR Ultra Video Controller>New**
    - **iSTAR Ultra LT >New**

The iSTAR Controller Editor opens to allow you to configure the Controller. See iSTAR Controller Editor on Page 143

Setting the iSTAR Controller Diagnostic Password

Starting in C•CURE 9000 v2.80, you need to set a Diagnostic password on new controllers and previously configured controllers once you open the controller's Editor dialog box. The Diagnostic password is used to access the web pages for controller status and configuration.

You set the password in the iSTAR Controller editor dialog box. You can also use the iSTAR Controller Dynamic View to set a password on a controller and to set the same password on multiple controllers.

> **NOTE** You are not required to set a diagnostic password for the iSTAR Ultra Video controller.

See the following:

- Requirements and Limitations on Page 122
- Setting the Diagnostic Password on a Controller on Page 123
- Setting the Diagnostic Password on Multiple Controllers on Page 123
- Changing the Diagnostic Password on Page 124

Requirements and Limitations

- You must have administrative privileges.
- Administrators must have the iSTAR Controller **Set Password Grant** privilege selected.
- The password configured for the controller overrides the system-wide **Diagnostic Web Page Password** system variable. The Diagnostic Web Page system variable is disabled after C•CURE v2.80 is installed.
- If you have controllers previously configured using the **Diagnostic Web Page Password** system variable, those controllers will continue to use that password until updated.

Granting the Set Diagnostic Password Privilege

To grant the controller set password privilege

1. Click the **Configuration** pane.
2. Select **Privilege** from the Configuration drop-down menu.
3. Click ➔ ▾ to open a Dynamic view of privileges.
4. Select the privilege assigned to the administer you want to edit.
5. Navigate to **Hardware>Controllers>iSTAR>iSTAR Controller**.

6. Scroll down to **Set Password**.
7. Select the **Grant** check box.
8. Ensure that **Enabled** is selected.
9. Click **Save and Close**.

Setting the Diagnostic Password on a Controller

To set the diagnostic password on a controller

1. Click the **Hardware** pane.
2. Select a controller in the Hardware tree, right-click on it and select **Edit**. The iSTAR Controller editor opens.

   Alternately, configure a new controller.
3. On the **General** tab, under **Diagnostic Password**, click **Set Password**. The **Set Diagnostic Password for this Controller** dialog box opens.

   Password requirements:

   - Password length: >= 10
   - Contains at least one uppercase letter (A-Z)
   - Contains at least one lowercase letter (a-z)
   - Contains at least one digit (0-9)
   - Contains a special character
   - Password Strength must be >= 80
4. Enter the password, confirm the password and click **OK**.

Setting the Diagnostic Password on Multiple Controllers

You can set multiple controllers to use the same password in the Dynamic View.

To set the diagnostic password on multiple controllers

1. Click the **Hardware** pane.
2. Select **iSTAR Controller** from the Hardware drop-down menu.
3. Click ➡ ▾ to open a Dynamic View displaying all configured controllers.
4. Press and hold **Ctrl** and click on the controllers.
5. Right-click on a selected controller and select **Set Password**. The **Set Diagnostic Password for this Controller** dialog box opens.

   Password requirements:

   - Password length: >= 10
   - Contains at least one uppercase letter (A-Z)
   - Contains at least one lowercase letter (a-z)
   - Contains at least one digit (0-9)
   - Contains a special character
   - Password Strength must be >= 80

6. Enter the password, confirm the password and click **OK**.

Changing the Diagnostic Password

Changing the diagnostic password on a controller

1. Click the **Hardware** pane.
2. Select a controller in the Hardware tree, right-click on it and select **Edit**. The iSTAR Controller editor opens.
3. On the **General** tab, under **Diagnostic Password**, click **Set Controller Password**. The **Set Diagnostic Password for this Controller** dialog box opens.
4. Follow the password requirements described in Setting the Diagnostic Password on a Controller on Page 123.

Changing the diagnostic password on multiple controllers

1. Click the **Hardware** pane.
2. Select **iSTAR Controller** from the Hardware drop-down menu.
3. Click ➡ ▾ to open a Dynamic View displaying all configured controllers.
4. Press and hold **Ctrl** and click on the controllers.
5. Right-click on a selected controller and select **Set Password**. The **Set Diagnostic Password for this Controller** dialog box opens.
6. Follow the password requirements described in Setting the Diagnostic Password on Multiple Controllers on Page 123.

Creating a Controller Template

You can create a template for an iSTAR Controller. A Controller Template saves you time because you can save the configuration settings and re-use the template to create new Controller objects with the those settings pre-defined.

To Create a Controller Template

1. In the Navigation pane of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Navigate to the Hardware folder that contains the iSTAR Cluster in which you want to create the new Controller Template.
3. Select the iSTAR Cluster and right-click to display the context menu.
4. Select the iSTAR controller you wish to create a template for:
   - **iSTAR Edge Controller**>**New Template**.
   - **iSTAR eX Controller**>**New Template**.
   - **iSTAR Classic Controller**>**New Template**.
   - **iSTAR Pro Controller**>**New Template**.
   - **iSTAR Ultra Controller**>**New Template**.
   - **iSTAR Ultra LT** >**New Template**
5. The iSTAR Controller Editor opens a new Template.
6. Configure any settings you want to include in the Template.
7. To save the new iSTAR Controller Template, click **Save and Close**.

The new Controller template appears under ---- *Templates* in the iSTAR Controller context menu drop-down list in the Hardware tree.

To Create an iSTAR Controller from a Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Navigate to the Hardware folder that contains the iSTAR Cluster in which you want to create the new Controller.
3. Select the iSTAR Cluster and right-click to display the context menu.
4. Select **iSTAR Controller** and click the Template you want to use from the context menu.
5. The iSTAR Controller Editor opens so that you can edit the new Controller. The settings from your Template are already configured.
6. Configure any additional settings. See Configuration Overview for iSTAR Controllers on Page 116 for more information.
7. To save the new iSTAR Controller, click **Save and Close**.

Deleting an iSTAR Controller

You can delete an iSTAR Controller from the Hardware tree, or one or more iSTAR Controllers from a Dynamic View.

To Delete an iSTAR Controller from the Hardware Tree

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Navigate to the iSTAR Cluster that contains the Controller that you want to delete.
3. Right-click on the iSTAR Controller that you want to delete and select **Delete** from the context menu.
4. Click **Yes** in the “**Are you sure you want to delete the selected iSTAR Controller object?**” message box. A dialog box appears showing the progress of the deletion.
5. When the object has been deleted, click one of the following buttons:
   - **OK** to close the dialog box.
   - **Print** to print the deletion message.
   - **Email** to send the deletion message to the email address you have configured in the Customer Support section of the C•CURE 9000 System Variables.

To Delete iSTAR Controllers from a Dynamic View

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select iSTAR **Controller** from the **Hardware** pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all **iSTAR Controller** objects.
4. Select one or more iSTAR controllers from the Dynamic View list of iSTAR Controllers.
5. Right-click one of the **Controllers** in the list that you want to delete and select **Delete** from the context menu.
6. Click **Yes** in the “**Are you sure you want to delete the selected iSTAR Controller object(s)?**” message box. A dialog box appears showing the progress of the deletion(s).
7. When the object(s) have been deleted, click one of the following buttons:
   - **OK** to close the dialog box.
   - **Print** to print the deletion message.

- **Email** to send the deletion message to the email address you have configured in the Customer Support section of the C•CURE 9000 System Variables.

Editing an iSTAR Controller

You can edit an iSTAR Controller to change settings or add new Input, Output, or Reader objects to the Controller.

To Edit an Controller or Board

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **iSTAR Controller** from the **Hardware** pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all iSTAR Controller objects.
4. Double-click the **Controller** in the list that you want to modify and select **Edit** from the context menu. The iSTAR Controller editor opens (see iSTAR Controller Editor on Page 143).
5. See Configuration Overview for iSTAR Controllers on Page 116 for information about how to use the iSTAR Controller Editor to configure your iSTAR Controller.

Enabling or Disabling SNMP on the Controller

Use this setting to enable or disable SNMP on the iSTAR Ultra, iSTAR Ultra SE, or the iSTAR Ultra LT controller.

This setting overrides the SNMP setting in the iSTAR Configuration Utility.

To enable or disable SNMP on the controller:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **iSTAR Controller** from the **Hardware** pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all iSTAR Controllers.
4. Right-click on the controller and select **SNMP Enabled** or **SNMP Disabled**.

To add the SNMP status to the Controller Dynamic View:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **iSTAR Controller** from the **Hardware** pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all iSTAR Controllers.
4. Right-click on a column name and select **SNMP Enabled** to add it to the Dynamic View.
5. Locate the controller in the list.
6. Scroll to the **SNMP Enabled** column. A check mark indicates that the controller is SNMP enabled.

Viewing a List of iSTAR Controllers

You can view a list of iSTAR Controllers in a Dynamic View.

To View a List of iSTAR Controllers

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.

2. Select iSTAR Controller from the **Hardware** pane drop-down list.

3. Click ➡ ▾ to open a **Dynamic View** showing all iSTAR Controller objects

4. You can filter, group, and print the list of iSTAR Controllers in the Dynamic View. See the *C•CURE 9000 Data Views Guide* for more information about using the features provided by Dynamic Views.

5. You can select one or more Controllers in the list (using **CTRL+Left-click** or **SHIFT+Left-click** for multiple selection) and right-click to display a context menu (see Viewing a List of iSTAR Controllers on Page 126).

Viewing a List of GCM Board Serial Numbers

You can view a list of iSTAR GCM board manufacturer unique serial numbers in the Dynamic View.

To View the Serial Numbers:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.

2. Select **iSTAR GC Board** from the **Hardware** pane drop-down list.

3. Click ➡ ▾ to open a **Dynamic View** showing all GCM boards. The GCM boards are listed by the names you gave the controllers.

4. Right-click on a column heading and select **Serial Number Status**. The serial numbers are listed under the Serial Number Status column.

NOTE Once you select **Serial Number Status** the serial numbers are visible whenever the **iSTAR GCM Board** Dynamic View is displayed.

Viewing Controller SD Cards with Encryption

Starting with iSTAR Controller firmware v6.6.B, iSTAR Ultra, Ultra SE, and Ultra LT controllers ship with an encrypted SD card for enhanced security. Firmware v6.6.B also provides the opportunity to upgrade existing SD cards in controllers to use the new encryption security though the iSTAR Ultra Web Page.

Encrypted SD cards, and firmware upgrades to v6.6.B and higher, are controller specific and cannot be used in any other controller.

To determine if your controller SD card is encrypted:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.

2. Select **iSTAR Controller** from the **Hardware** pane drop-down list.

3. Click ➡ ▾ to open a **Dynamic View** showing all iSTAR Controllers.

4. Right-click on a column name and select **SD Card Encryption Status** to add it to the Dynamic View.

5. Locate the controller in the list.

6. Scroll to the **SD Card Encryption Status** column.

   - **Encrypted** indicates the SD is encrypted. The controller either shipped with the encrypted SD card or the SD card was encrypted during the firmware v6.6.B and higher upgrade.
   - **Unencrypted** indicates the SD card is unencrypted.
   - **Unknown** indicates the SD card is unknown (not an Ultra, Ultra SE, or Ultra LT).

Using the iSTAR Controller Context Menu

To access the controller context menu, right-click on a controller in the Hardware tree or in the Dynamic View.

The selections described in Table 21 on Page 128 are not available for all controllers. Selections available are also based on the privileges granted.

Table 21: iSTAR Controller Context Menu

Selection	Description
Edit	Click this menu selection to edit the selected iSTAR Controller. The iSTAR Controller editor opens. You can rename the iSTAR Controller, change its description, and any other attributes.
Delete	Click this menu selection to delete the selected iSTAR Controller(s). A prompt appears asking you to confirm that you want to delete the iSTAR Controller. Click **Yes** to delete the Input or **No** to cancel the deletion. When you delete an iSTAR Controller, all of the child objects you have defined for the Controller are also deleted.
Set Property	Click this menu selection to change the value of a property in the selected controller(s). A dialog box appears asking you to select a property to change. Click **...** to open a selection list and click the property you wish to change. See Using Set Property for an iSTAR Controller on Page 130.
Add to Group	Click this menu selection to add the iSTAR Controller to a Group. .A dialog box listing the iSTAR Controller Groups in the system appears. Click on a Group in the list to add the iSTAR Controller(s) to that Group. See Add a Hardware Device to Group from a Dynamic View on Page 357.
Export Selection...	Opens an Export dialog box from which you can export one or more records displayed in a Dynamic View to either an XML or a CSV file. This allows you to quickly and easily create XML/CSV reports on selected C•CURE 9000 data. NOTE: Although XML is the initial default file type, once you choose a type in the **Save as type** field, whether XML or CSV, that becomes the default the next time this dialog box opens. CSV-formatted exports **cannot** be imported. If you require importing functionality, export to XML. • When you export to an XML file, all available data for the selected object(s), whether displayed in the Dynamic View or not, as well as all the child objects of the selected record(s), is exported. • When you export to a CSV file, only data in the columns displaying in the Dynamic View is exported, and in the order displayed. This allows you to both select and arrange data fields for your report. In addition, exporting to a CSV file allows you to view the exported data in an Excel spreadsheet and further manipulate it for your use. NOTE: When you click **Export Selection**, you are running the export on the client computer. Consequently, the system does not use the Default Export Directory Path—which is on the server. It opens a directory on the client, reverting to the last directory used. You can navigate to the default export server directory, if you wish. Or to avoid confusion or use the same destination folder for both client and server computers, you can use UNC (Universal Naming Convention) paths. **Example:** \\Computer Name\Program Files\Software House\SWHouse\SWHSystem\Export.
Find in Audit Log...	Opens a Query Parameters dialog box in which you can enter prompts and/or modify the query criteria to search for entries in the Audit Log that reference the selected iSTAR Controller. The results display in a separate Dynamic View. This selection is not available if you select multiple Controllers.
Find in Journal...	Opens a Query Parameters dialog box in which you can enter prompts and/or modify the query criteria to search for entries in the Journal that reference the selected iSTAR Controller. The results display in a separate Dynamic View. This selection is not available if you select multiple Controllers.
Set GIS Location	Used to set the GIS location of the object.
Associate Tag	Associates the object with a tag configured in the Tag Manager.

Table 21: iSTAR Controller Context Menu (continued)

Selection	Description
Perform Full Controller Download	Downloads configuration and personnel records appropriate to the controller.
Update Firmware...	Updates the firmware for an iSTAR controller. See Updating iSTAR Firmware (Ethernet Connections) on Page 130 and Updating iSTAR Firmware (Dial-up Connections) on Page 132. NOTE: If you are using dial-up to update the firmware, you must manually connect to the iSTAR before Update Firmware is visible in the context menu.
Diagnostics...	• Opens the iSTAR Controller Diagnostics System web page for the iSTAR eX, Edge and Pro Controllers. • Opens the iSTAR Ultra Web Diagnostics page for the iSTAR Ultra, Ultra SE, and Ultra LT Controllers. • Opens the iSTAR Ultra Video log in page for the iSTAR Ultra Video Controller.
Turn Maintenance Mode On	Opens the Maintenance Mode dialog box to put the iSTAR Controller and/or its components into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Turn Maintenance Mode Off	Opens the Maintenance Mode dialog box to take the iSTAR Controller and/or its components out of Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Associations	Displays all objects associated with the selected object.
Disable Web Diagnostics	Click to disable Web Diagnostics on the controller.
Disable/Enable SNMP	Click to enable or disable SNMP on the controller. This setting overrides the SNMP settings in the iSTAR Configuration Utility.
Copy and Paste...	Used to make a duplicate of a Cluster and its Child Objects on the same partition on the same system. See Copying, Pasting, and Renaming Clusters and Controllers on Page 46.
Copy To...	Used to make a duplicate of a Cluster and its Child Objects on a different partition on the same system, using **Paste From**. See Copying, Pasting, and Renaming Clusters and Controllers on Page 46.
🖥	If there are multiple monitors attached to your system you can use the monitor icon, located at the end of the **Monitor** and **Associations** context menu selections, to display the activity on a selected monitor. NOTE: The monitors displayed is based on the monitor configuration settings.
Monitor	Click this menu selection to view activity for the selected iSTAR Controller(s), and any Add-on Board, Door, Elevator, Input, Output, Reader, and Trigger-with-target-Event children, on an Admin Monitor Activity Viewer. NOTE: Which Add-on Boards display on the Monitor—as well as which of their Input, Output, Reader, and Trigger-with-target-Event children—Depends on the Controller type and what is turned on. For more information, see "Monitoring an Object from the Administration Station" in the *C•CURE 9000 Getting Started Guide*.
Connect Dialup Panel	This menu selection is only available for an iSTAR using dialup (Pro/Ultra SE Pro Mode). Click to open the Manual Action dialog box to enter a starting time, ending time, and priority to connect using dialup. It is recommended that you set the **Start** and **End** time to maintain a connection for a minimum of two hours.
Reset Dial-up Panel	This menu selection is only available on an iSTAR Master using dialup (Pro/Ultra SE Pro Mode). Click to reboot the iSTAR controller.

Table 21: iSTAR Controller Context Menu (continued)

Selection	Description
Reset All IP-ACM Panels	Resets all IP-ACMs configured on the controller.
Show Associations	Opens a Show Association dialog box that lists all the security objects associated with the object selected.
iSTAR Door	Click to configure a new door or a door template.
Elevator	Click to configure a new elevator or an elevator template.
iSTAR Input	Click to configure a new input or an input template.
Output	Click to configure a new output or an output template.
iSTAR Reader	Click to configure a new reader or a reader template.

Using Set Property for an iSTAR Controller

You can use **Set Property** to quickly set a property for a Controller without opening the iSTAR Controller Editor. **Set Property** allows you to select multiple Controllers in a Dynamic View and right-click to set a specific property for all of them. So, for example, if you wanted to change a setting for 20 Controllers, you could select all of them and do it in one step.

To Set a Property for an iSTAR Controller

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select iSTAR Controller from the **Hardware** pane drop-down list.
3. Click ➡ ▾ to open a **Dynamic View** showing all iSTAR Controller objects.
4. Select the iSTAR Controllers in the list for which you want to set a property, using multiple selection (CTRL+Left-click to select more than one Controller, or SHIFT+Left-click to select a range of Controllers) as needed.
5. Right-click a selected iSTAR **Controller** and select **Set Property** from the context menu.
6. Click ... in the **Property** field to open a selection dialog box and select the property you want to set.
7. Enter the value for the property in the **Value** field and click **OK**.

Updating iSTAR Firmware (Ethernet Connections)

You can update the iSTAR firmware on iSTAR panels using Ethernet connections from either the Administration Client or the Monitoring Station client.

NOTE You cannot update the iSTAR Ultra Video controller firmware from C•CURE 9000. See the *iSTAR Ultra Video Installation and Configuration Guide* for upgrade information.

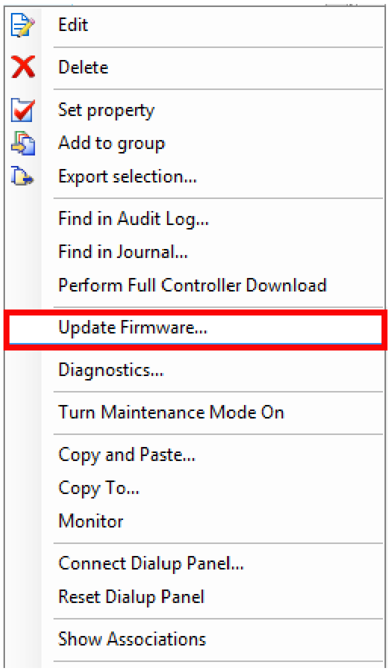
You can initiate a firmware update by right-clicking on the iSTAR controller:

- In the Hardware Tree
- In a Dynamic View in the Administration Client
- In the Status List - Controller in the Monitoring Station

To Update Firmware on an iSTAR Controller

1. Right-click on the controller and select **Update Firmware** from the context menu as shown in Figure 54 on Page 131.

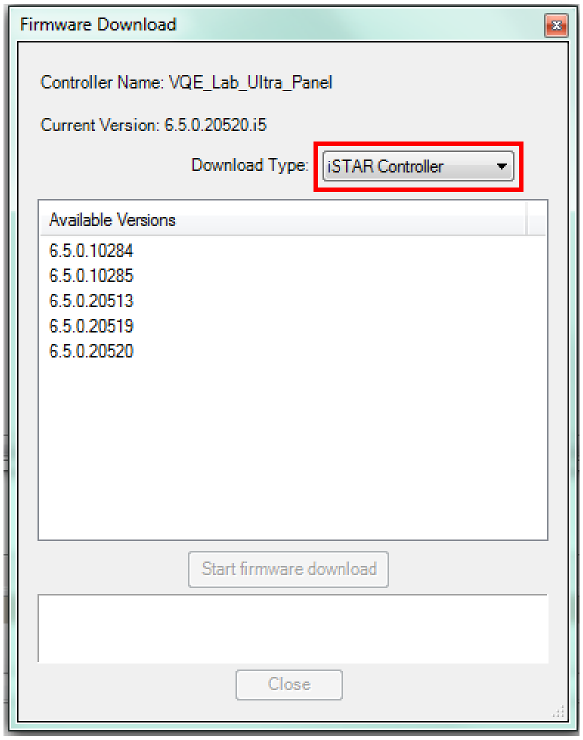
Figure 54: iSTAR Context Menu



NOTE Update Firmware will not appear on the context menu if the iSTAR is not Enabled or is off-line.

The Firmware Download dialog box, shown in Figure 55 on Page 132, opens.

Figure 55: Firmware Download Dialog Box



Firmware Download

Controller Name: VQE_Lab_Ultra_Panel

Current Version: 6.5.0.20520.i5

Download Type: iSTAR Controller

Available Versions
6.5.0.10284
6.5.0.10285
6.5.0.20513
6.5.0.20519
6.5.0.20520

2. Select **iSTAR Controller** from the **Download Type** drop-down menu.
3. Select the firmware version that you want to download from the list in the dialog box.
4. Click **Start firmware download**. A progress bar shows you when the download is completed.
5. When the download has completed, click **Close** to close the dialog box.

Updating iSTAR Firmware (Dial-up Connections)

You can update the iSTAR firmware on iSTAR Pro and iSTAR Ultra SE Pro Mode panels using dial-up from either the Administration Client or the Monitoring Station client.

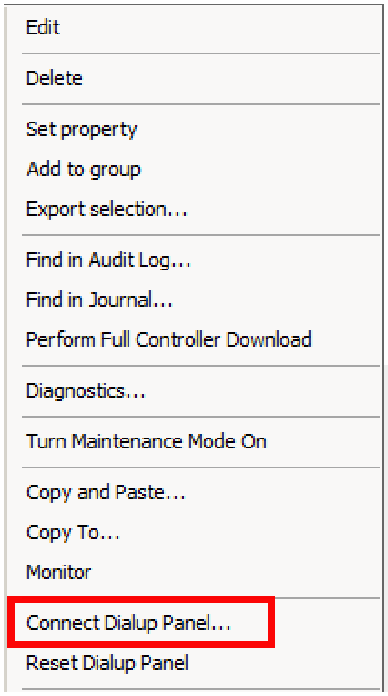
You can initiate a firmware update by right-clicking on the iSTAR controller:

- In the Hardware Tree
- In a Dynamic View in the Administration Client
- In the Status List - Controller in the Monitoring Station

To Update Firmware on an iSTAR Controller

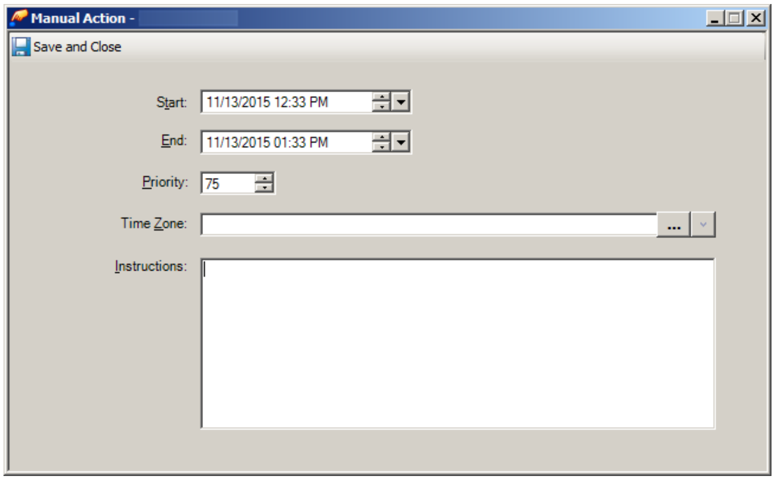
1. Manually connect to the dial-up iSTAR controller. Right-click on the dial-up iSTAR controller and select **Connect Dialup Panel** as shown in Figure 56 on Page 133.

Figure 56: iSTAR Context Menu - Dialup Connection



The Manual Actions dialog box, shown in Figure 57 on Page 133, opens.

Figure 57: Manual Action Dialog Box



Start: 11/13/2015 12:33 PM

End: 11/13/2015 01:33 PM

Priority: 75

Time Zone:

Instructions:

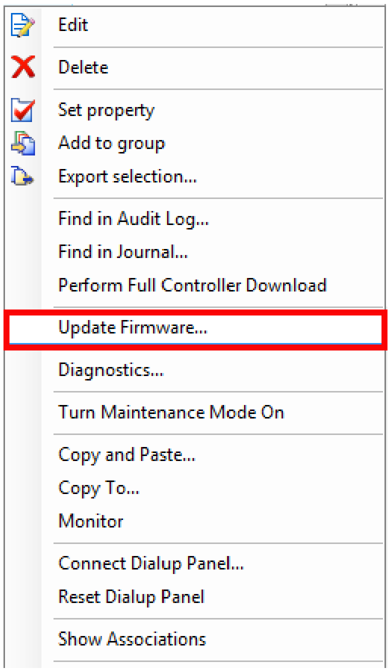
2. Ensure that the **Start** and **End** Time is set to a minimum of two hours.

3. Click **Save and Close**.

4. After the connection is established, right-click on the controller and select **Update Firmware** as shown in Figure 58 on Page 134.

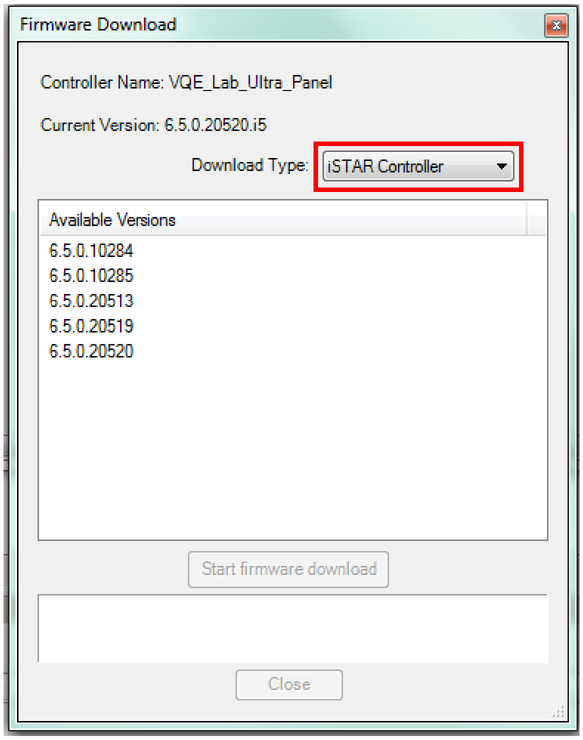
NOTE Update Firmware will not appear on the context menu if the iSTAR is not Enabled or is off-line.

Figure 58: iSTAR Context Menu - Update Firmware



The Firmware Download dialog box, shown in Figure 59 on Page 134, opens.

Figure 59: Firmware Download



Controller Name: VQE_Lab_Ultra_Panel

Current Version: 6.5.0.20520.i5

Download Type: iSTAR Controller

Available Versions
6.5.0.10284
6.5.0.10285
6.5.0.20513
6.5.0.20519
6.5.0.20520

5. Select **iSTAR Controller** from the **Download Type** drop-down menu.
6. Select the firmware version that you want to download from the list in the dialog box.
7. Click **Start firmware download**. A progress bar shows you when the download is completed.
8. When the download has completed, click **Close** to close the dialog box.

Updating Firmware Using ICU

You can use the ICU (iSTAR Configuration Utility) to quickly download firmware updates to one or more controllers. Copy the new firmware file to **C:\Program Files (x86) Tyco\CrossFire\ServerComponents\istar\ICU\Firmware** (the default folder location) before starting the download process.

Before starting the firmware download, note the following:

- If you moved the ICU folder, then you must go back to the ICU Controller dialog box and change the Server Root Directory to match that path. See the ICU help for information about changing the Server Root Directory.
- If the default Server HTTP Port (9701) that is used for firmware downloads is in use by another application, you have to specify another port to use for firmware downloads. See the ICU help for information about changing the Server Root Directory.

NOTE These procedures use default passwords. If you changed the default passwords, then you must use those.

To Download Firmware to the Controller Using the ICU

NOTE You cannot use the ICU to upgrade the iSTAR Ultra Video Controller. See the *iSTAR Ultra Video Installation and Configuration Guide* for upgrade information.

NOTE If you are downloading firmware to a controller using dialup, perform the following steps before you download the firmware:

1. Right-click on the controller an select **Connect to Controller**.

2. Monitor the connection in the Monitoring Station. Once complete, proceed to Step 1 below.

1. Click the **Options & Tools** pane.
2. Click **ICU**.
3. Enter the ICU password and click **OK**. The default password is **manager**. The ICU starts and the main window opens.
4. Select the controller(s) that you want to update. You can select multiple controllers by pressing the **Ctrl** key while you are selecting them.
5. After selecting the controller(s), right-click in the ICU window and select **Download Firmware** from the context menu.
6. You are prompted for a password if the iSTAR controller is an Ultra or Ultra SE.

   Enter "iSTAR", the default password and click **OK**.
7. Click **Browse** and navigate to **C:\Program Files (x86) Tyco\CrossFire\ServerComponents\istar\ICU\Firmware** (the default folder location) .
8. Select the firmware image file and click **Open**. The selected file is displayed in the Firmware Image File to Download box.

6. Click **Start Download** to initiate the download to all controllers in the Download Firmware list.

   The firmware is downloaded simultaneously to all controllers in the list. The Progress bar on each line indicates when the download is complete for each controller.

NOTE The controller may reboot more than once during the upgrade process.

- To cancel a download, select the controller and right-click to select **Cancel Download** from the context menu.
- If a Controller returns a Download Failed message, you can select the controller and right-click to select **Retry** from the context menu to restart the firmware download.

9. When all of the downloads have completed, click **Exit** to close the Firmware Download dialog box.

Changing the Time Zone of an iSTAR Controller

You can change the value of the iSTAR controller **Time Zone** field only when the iSTAR Controller is not enabled (**Enabled** field is blank ☐). You must edit the controller, clear the **Enabled** field, save the controller, then re-open it to change the Time Zone.

If you change the Time Zone of the iSTAR controller, the Time Zone settings of all child objects of that iSTAR controller are changed as well. A warning message appears if you change the Time Zone and any Events or Triggers have controller-based actions on this iSTAR controller and the Event is configured to use a different Time Zone than this iSTAR controller.

Host-based actions with Schedules respect the controller Time Zone: a host-based Event that unlocks doors according to a Schedule uses the controller Time Zone to determine when the Schedule is active for devices on that controller.

However, if a Time Zone is assigned to the host-based Event itself, the Event actions will activate on the Schedule based on the host Time Zone.

Example:

With a C•CURE 9000 Server in the Eastern US Time Zone (GMT -5:00) and an iSTAR controller in the Central US Time Zone (GMT -6:00):

- A host Event that does not include an Event Time Zone unlocks specific Doors by Schedule on an iSTAR controller according to the controller Time Zone.
- A host Event that includes an Event Time Zone unlocks specific doors by Schedule on an iSTAR controller according to the C•CURE 9000 Server Time Zone.

To Change the Time Zone of an iSTAR Controller

1. From the **Hardware** pane, select the iSTAR controller you wish to change. Right-click and select **Edit**.
2. Clear the **Enabled** field (change ☑ to ☐).
3. Click **Save and Close** to save the change.
4. From the **Hardware** pane, select the iSTAR controller again. Right-click and select **Edit**.
5. When the iSTAR controller editor opens, the **Time Zone** field can be changed.
6. Click **Save and Close** to save the change.

Creating a Local Backup (Ultra, Ultra SE, Ultra LT)

NOTE

- The information this section only applies to the **iSTAR Ultra**, **Ultra SE**, and **Ultra LT**.
- If CPNI mode is enabled on the controller, then all database and transactions are stored in RAM. The database and transactions are not backed up on the SD card.

The iSTAR Ultra SE configuration data (doors, personnel, etc.) is held in volatile RAM during normal operation (IP settings are stored in the controller's onboard flash memory). This data is backed up to non-volatile SD Card memory on a periodic basis during normal operation. Data is automatically backed up after a fast download to the panel, and, upon a soft reset on the GCM board.

NOTE The non-rechargeable lithium coin cell battery maintains the controller's clock only during a power outage for up to 30 days.

To ensure that the database backup is always current, Software House recommends that you create an event to trigger a database backup when the **Low Battery** or **AC Fail input** is activated on the GCM board. An event with the action "**Backup iSTAR Database**" can trigger the event from the **Low Battery** or **AC Fail input**. If your power supply does not support the Low Battery or AC fail, then you can trigger the database backup event using a schedule. For example, set a schedule to run every Monday at 2AM.

When power is restored after an outage, the controller first attempts to connect to its host server. If successful, the host will download the current time to the controller, and download the current database. However, if the host is not present, then the controller will use its local backed-up time, and it will use the last saved database from the SD card.

When the host is offline, transaction buffers of card activity and other activity are automatically written to non-volatile memory, and do not require database backup configuration.

iSTAR Pro to iSTAR Ultra SE conversion

You can convert an iSTAR Pro panel to an iSTAR Ultra SE panel through the C•CURE Administration Client.

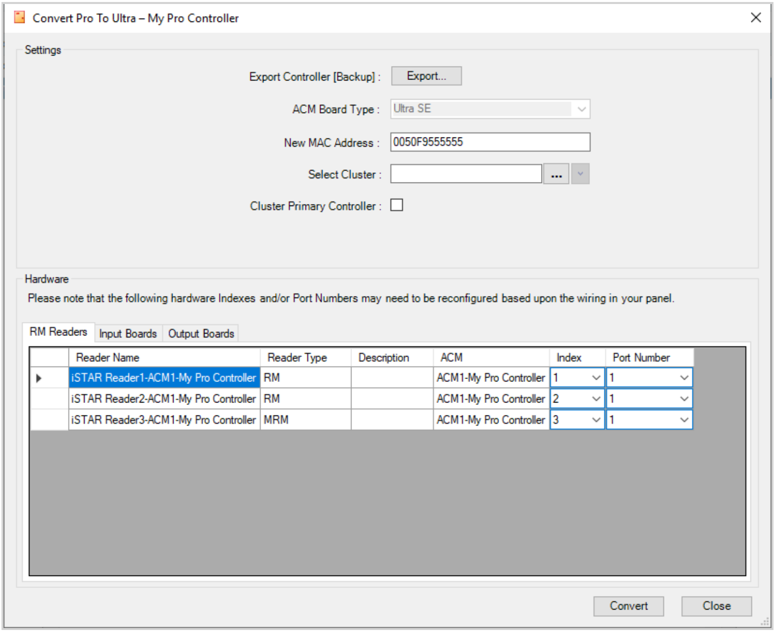
The conversion process converts an iSTAR Pro panel to an iSTAR Ultra SE panel within the C•CURE database. The conversion process retains the iSTAR Pro's name, and the object GUIDs of the iSTAR, boards, doors, readers, events, actions, and any associated objects. You do not need to create new objects, edit events, or map icons. In addition, C•CURE retains the iSTAR Pro's journal history.

NOTE For this conversion process, you do not need to stop or restart the iSTAR drivers or the CrossFire services.

Overview

You can start the conversion process from the iSTAR Pro controller's editor window. When you click the Convert to Ultra button, the conversion dialog box appears.

Figure 60: The conversion dialog box



Convert Pro To Ultra – My Pro Controller

Settings

Export Controller [Backup] : Export...

ACM Board Type : Ultra SE

New MAC Address : 0050F9555555

Select Cluster :

Cluster Primary Controller : □

Hardware

Please note that the following hardware Indexes and/or Port Numbers may need to be reconfigured based upon the wiring in your panel.

Reader Name	Reader Type	Description	ACM	Index	Port Number
iSTAR Reader1-ACM1-My Pro Controller	RM		ACM1-My Pro Controller	1	1
iSTAR Reader2-ACM1-My Pro Controller	RM		ACM1-My Pro Controller	2	1
iSTAR Reader3-ACM1-My Pro Controller	MRM		ACM1-My Pro Controller	3	1

In the Settings area, you can perform the following actions:

- To export the iSTAR Pro's database and child objects to an XML file, click the Export button. After the conversion process is complete, you cannot revert the new iSTAR Ultra back to an iSTAR Pro. However, you can use this XML file to re-create the iSTAR Pro controller.
- If you want to replace an iSTAR Pro with an iSTAR Ultra SE, enter a new MAC address for the iSTAR Ultra SE controller. If your current controller is an iSTAR Ultra SE that is running in Pro mode, you do not need to change the MAC address.
- You can select a new parent cluster for the iSTAR Ultra SE. If you select an encrypted cluster, the iSTAR Ultra SE is also encrypted.

NOTE If there are any triggers in your C•CURE system that are linked to the cluster that contains the iSTAR Pro panel, you must re-create these triggers after the conversion process is complete.

  If you do not want to select a new parent cluster, you can convert the iSTAR Pro to an iSTAR Ultra SE in its current parent cluster. However, the iSTAR Ultra SE is not encrypted.

- You can also make the converted controller the primary controller for its cluster. If the cluster already has a primary controller, is already set, this will override that setting.

In the Hardware area, you can configure indexes and port numbers for RM readers, Input Boards, and Output Boards. These objects are automatically assigned indexes and port numbers, but you can edit these settings based on your installation.

- Wiegand readers are automatically converted, as they do not require a mapping to an RS485 device port.
- Schlage readers are automatically converted to COM1 on the Ultra SE.
- The conversion process validates these settings, to ensure that the assigned indexes and port numbers are not duplicated for multiple boards or readers.
- If the controller does not have objects of that type, then the corresponding tab does not appear in the Hardware area. If the controller does not have any RM readers, or R8/I8 boards, then the Hardware area does not appear.

After the conversion is complete, you can access an XML file that contains a log of all the changes to the controller and its child objects. A popup message displays the path to this file. From this popup message, you can also choose to edit the new iSTAR Ultra SE controller.

NOTE If any errors occur during the conversion process, the process stops and the original iSTAR Pro object and child objects are restored.

Hardware requirements

The iSTAR conversion function is limited to the following hardware:

- iSTAR Pro with on-board NIC (no PCMCIA network card)
- One or two Pro ACM boards
- Either RM readers or Wiegand readers
- I8 and R8 input and output expansion modules
- iSTAR Ultra SE with firmware version 6.6.B or later

Converting an iSTAR Pro controller to an iSTAR Ultra SE controller

To perform the conversion process, ensure that you use an Operator account that has the Convert Controller privilege.

1. Right-click an iSTAR Pro Controller and click **Edit**.

2. To start the conversion process, in the iSTAR Controller's **General** tab, click the **Convert to Ultra** button.

   The conversion tool popup window appears.

3. In the **Settings** area, configure the following options:

   a. **Optional:** Click **Export** to export the iSTAR Pro's database to an XML file.

   b. In the **New MAC Address** field, enter the new port 1 MAC address for the iSTAR Ultra SE

   c. From the **Select Cluster** list, select a new cluster for the iSTAR Ultra SE, or type the new cluster name in the field.

   d. **Optional:** To make this controller the primary controller for a cluster, select the **Cluster Primary Controller** check box.

4. In the **Hardware** area, configure the index numbers and port numbers on the following tabs:

NOTE Depending on your controller configuration, some of these tabs may not be visible.

- The RM Readers tab.
- The Input Boards tab.
- The Output Boards tab.

5. Click **Convert**.
6. Read the conversion instructions, select the I understand and accept the instructions mentioned above check box, and then click **Yes**.
7. When the conversion process is complete, a popup window appears. If you want to edit the converted iSTAR controller, click **Yes**.

iSTAR Edge to iSTAR Edge G2 Conversion

You can convert an iSTAR Edge panel to iSTAR Edge G2 panel through the C•CURE Administration Client. The conversion process converts an iSTAR Edge panel to iSTAR Edge G2 panel within the C•CURE database.

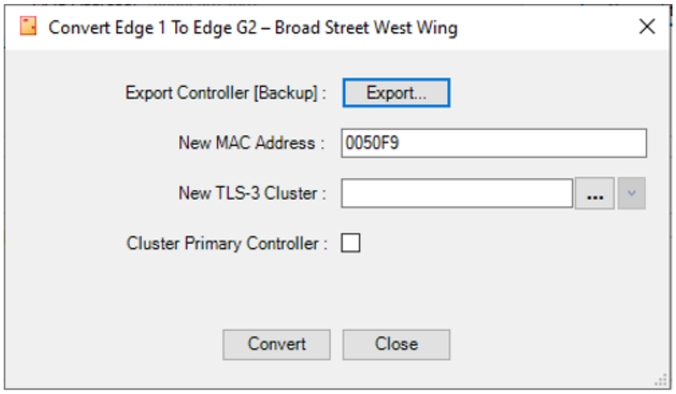
The conversion retains the iSTAR Edge's name, and the object GUIDs of the iSTAR, boards, doors, readers, events, actions, and any associated objects. You do not need to create new objects, edit events, or map icons. C•CURE also retains the iSTAR Edge's journal history.

NOTE For this conversion process, you do not need to stop or restart the iSTAR drivers or the CrossFire services.

Overview

Start the conversion process from the iSTAR Edge controller's editor window. On the General tab, click Convert to Edge G2. The conversion process dialog box opens.

Figure 61: iSTAR Edge to iSTAR Edge G2 conversion dialog box



Convert Edge 1 To Edge G2 – Broad Street West Wing

Export Controller [Backup] : Export...

New MAC Address : 0050F9

New TLS-3 Cluster : ...

Cluster Primary Controller : □

In the Settings area, you can configure the following conversion settings:

- You can click the Export button to export this iSTAR Edge's parent cluster and it's database and child objects to an XML file. You can use this XML file to re-create the iSTAR Edge controller if the conversion process fails.
- You must enter the MAC address of the new iSTAR Edge G2 controller.
- You must select a TLS 1.3 cluster for the iSTAR Edge G2.
- You can use the Cluster Primary Controller check box to make the converted controller the primary controller for its cluster.

Prerequisites

Before you start the conversion process, complete the following tasks:

- Create a new Cluster for the iSTAR Edge G2 panel and disable the cluster.
- To perform the conversion process, ensure that you use an Operator account that has the Convert Controller privilege.

Converting an iSTAR Edge controller to an iSTAR Edge G2 controller

1. Right-click an iSTAR Edge controller and click **Edit**.
2. To start the conversion process, in the iSTAR Controller's **General** tab, click the **Convert to Edge G2** button.

   The conversion tool popup window appears.
3. In the Settings area, configure the following options:

   a. **Optional:** Click **Export** to export the iSTAR Edge's database to an XML file.

   b. In the **New MAC Address** field, enter the new MAC address of the controller.

   c. In the **New TLS-3 Cluster** field, enter the location of the new cluster or click on the ellipsis button to select a new cluster.

   d. **Optional:** To make this controller the primary controller for a cluster, select the **Cluster Primary Controller** check box.
4. Click the **Convert** button. On the conversion prompt and acknowledgment dialog box, check the **I understand and accept the instructions above** check box and click **Yes** to proceed with the conversion.

NOTE The controller can be brought online immediately. It does not require a driver restart. Events associated with the controller will continue to operate as they did before the conversion.

iSTAR Ultra to iSTAR Ultra G2 Conversion

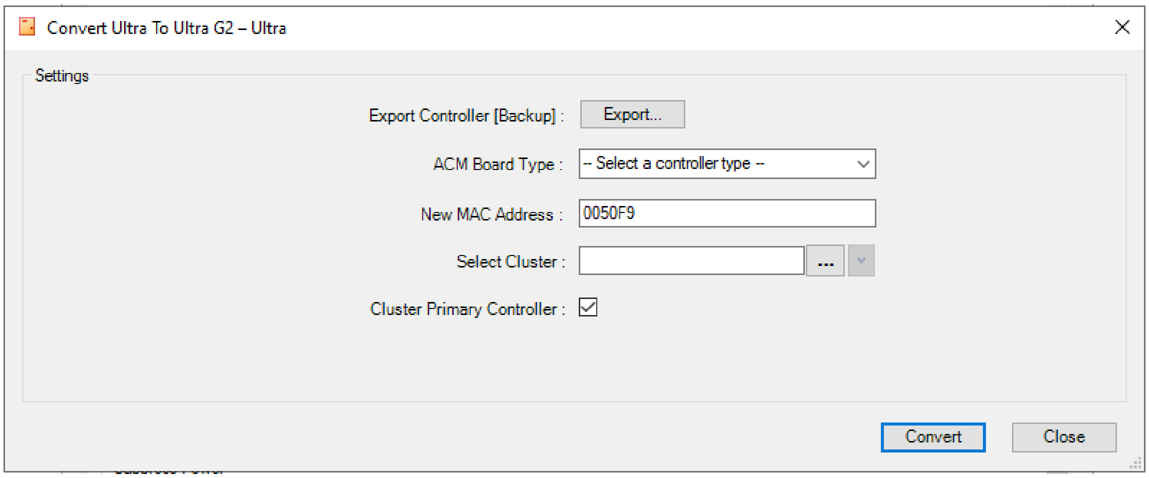
You can use the iSTAR Ultra to iSTAR Ultra G2 conversion utility to transfer the data of an iSTAR Ultra to a new iSTAR Ultra G2 controller. The conversion process transfers the original iSTAR Ultra panel name, and the object GUIDs of the iSTAR, boards, doors, readers, events, actions, and any associated objects to a new iSTAR Ultra G2 controller. You can also select different destination ACM board types as part of the conversion process.

NOTE You do not need to stop or restart the iSTAR drivers or the CrossFire services during the conversion process.

Overview

Start the conversion process from the iSTAR Ultra controller's editor window. On the General tab, click Convert to Ultra G2. The conversion process dialog box opens.

Figure 62: iSTAR Ultra to iSTAR Ultra G2 conversion dialog box



Convert Ultra To Ultra G2 – Ultra

Settings

Export Controller [Backup] : Export...

ACM Board Type : -- Select a controller type --

New MAC Address : 0050F9

Select Cluster :

Cluster Primary Controller : ☑

You can configure various conversion settings in the conversion dialog box. Conversion dialog box settings fields details the fields in the conversion dialog box.

Table 22: Conversion dialog box settings fields

Field	Description
Export Controller (Backup)	Click the Export button to export the iSTAR Ultra parent cluster, controller, and child objects to an XML file. You can use this XML file to re-create the iSTAR Ultra controller if the conversion process fails.
ACM Board Type	Use the dropdown to select one of the following destination ACM types: • Ultra G2 with Ultra SE ACM • Ultra G2 with Ultra G2 SE ACM
New MAC Address	Use this field to enter the MAC address of the new iSTAR Ultra G2 controller.
Select Cluster	Use this field to select the destination parent cluster for the controller when it is converted. NOTE: Ultra G2 clusters must use TLS 1.3 but TLS 1.2 can be used if the original parent cluster supported TLS 1.2.

Field	Description
Cluster Primary Controller	Check this check box if you want the controller to be the primary controller on the destination cluster. NOTE: The box is checked by default if the source Ultra controller was the primary controller. Checking the box overrides any existing primary controller on the cluster.

Prerequisites

Before you start the conversion process, complete the following tasks:

- Ensure that no other users are editing the controller or objects associated with the controller during the conversion.
- To perform the conversion process, ensure that you use an Operator account that has the Convert Controller privilege.
- **Optional:** Create a new TLS 1.3-enabled cluster for the iSTAR Ultra G2 panel and disable the cluster.

Converting an iSTAR Ultra controller to an iSTAR Ultra G2 controller

1. Right-click an iSTAR Ultra controller and click **Edit**.
2. In the iSTAR controller's **General** tab, click the **Convert to Ultra G2** button. The conversion utility popup window is displayed.
3. Configure the following options in the conversion utility popup window:

   a. **Optional:** Click **Export** to export the iSTAR Ultra controller's parent cluster and child objects to a backup XML file.

   b. In the **ACM board type** dropdown, select the destination ACM board type.

   c. In the **New MAC Address** field, enter the new MAC address of the new iSTAR Ultra G2 controller.

   d. In the **Select Cluster** field, select the destination parent cluster. You can use any existing TLS 1.3-enabled cluster or you can use a newly created cluster.

   e. **Optional:** Check the Cluster Primary Controller check box if you want the controller to be the primary controller on the destination cluster.

NOTE The box is checked by default if the source Ultra controller was the primary controller. Checking the box overrides any existing primary controller. The primary controller setting will be set on the destination TLS 1.3 cluster.

   f. Click the **Convert** button. On the conversion prompt and acknowledgment dialog box, check the **I understand and accept the instructions above** check box and click **Yes** to proceed with the conversion.

   When the conversion process is complete the controller completion dialog box displays the location of the conversion log file and contains an option to edit the converted controller.

iSTAR Controller Editor

The iSTAR Controller editor dialog box allows you to configure an iSTAR Controller and its attached devices.

You use the iSTAR Controller editor to configure the Controller settings and specify the Inputs, Outputs, and Readers that are connected to the Controller.

For information about the iSTAR Controller editor for a specific iSTAR model, see:

- iSTAR Classic Controller Editor on Page 143
- iSTAR Pro Controller Editor on Page 143
- iSTAR eX Controller Editor on Page 144
- iSTAR Edge Controller Editor on Page 145
- iSTAR Ultra Controller Editor on Page 145
- iSTAR Ultra LT Controller Editor on Page 146
- iSTAR Ultra Video Controller Editor on Page 146

iSTAR Classic Controller Editor

On iSTAR Classic Controllers, you can configure the GCM and any installed ACM Boards. Two ACM Boards can be installed on an iSTAR Classic Controller.

The iSTAR Classic Controller Editor has the tabs listed in Table 23 on Page 143.

Table 23: iSTAR Classic Controller Editor Tabs

Tab	See...
General	iSTAR Controller General Tab on Page 148
Boards	iSTAR Controller Boards Tab (iSTAR Classic/Pro) on Page 163
Schlage Wireless PIMs	iSTAR Schlage Wireless PIMs Tab on Page 161
Triggers	iSTAR Controller Triggers Tab on Page 158
Advanced	iSTAR Ultra Controller Advanced Tab on Page 157
Groups	Groups Tab for Hardware Devices on Page 36
Status	iSTAR Controller Status Tab on Page 158
Network Status	iSTAR Controller Network Status Tab on Page 160
User Defined Fields	iSTAR Controller User Defined Fields Tab on Page 161
State Images	iSTAR Controller State Images Tab on Page 161

iSTAR Pro Controller Editor

On iSTAR Pro Controllers, you can configure the GCM and any installed ACM Boards. Two ACM Boards can be installed on an iSTAR Pro Controller.

The iSTAR Pro Controller Editor has the tabs listed in Table 24 on Page 144.

Table 24: iSTAR Pro Controller Editor Tabs

Tab	See...
General	iSTAR Controller General Tab on Page 148
Boards	iSTAR Controller Boards Tab (iSTAR Classic/Pro) on Page 163
Schlage Wireless PIMs	iSTAR Schlage Wireless PIMs Tab on Page 161
Triggers	iSTAR Controller Triggers Tab on Page 158
Advanced	iSTAR Ultra Controller Advanced Tab on Page 157
Groups	Groups Tab for Hardware Devices on Page 36
Status	iSTAR Controller Status Tab on Page 158
Network Status	iSTAR Controller Network Status Tab on Page 160
User Defined Fields	iSTAR Controller User Defined Fields Tab on Page 161
State Images	iSTAR Controller State Images Tab on Page 161

iSTAR eX Controller Editor

On iSTAR eX Controllers, you can configure the GCM and any boards connected to the Power Management Board (PMB).

The tabs for the iSTAR eX Controller Editor are listed in Table 25 on Page 144.

Table 25: iSTAR eX Controller Editor Tabs

Tab	See...
General	iSTAR Controller General Tab on Page 148
Inputs	iSTAR eX and Edge Controller Inputs Tab on Page 166
Outputs	iSTAR Edge/eX Controller Outputs Tab on Page 170
Wiegand	iSTAR eX Controller Wiegand Tab on Page 175
COM1	iSTAR eX COM1/COM2 Tabs on Page 177
COM2	iSTAR eX COM1/COM2 Tabs on Page 177
Advanced	iSTAR Ultra Controller Advanced Tab on Page 157
Triggers	iSTAR Controller Triggers Tab on Page 158
Groups	Groups Tab for Hardware Devices on Page 36
Status	iSTAR Controller Status Tab on Page 158
Network Status	iSTAR Controller Network Status Tab on Page 160
User Defined Fields	iSTAR Controller User Defined Fields Tab on Page 161
State Images	iSTAR Controller State Images Tab on Page 161

iSTAR Edge Controller Editor

The tabs for the iSTAR Edge Controller Editor are listed in Table 26 on Page 145.

Table 26: iSTAR Edge Controller Editor Tabs

Tab	See...
General	iSTAR Controller General Tab on Page 148
Inputs	iSTAR eX and Edge Controller Inputs Tab on Page 166
Outputs	iSTAR Edge/eX Controller Outputs Tab on Page 170
Wiegand	iSTAR Edge Controller Wiegand Tab on Page 173
COM1	iSTAR Edge COM1/COM2/COM3 Tabs on Page 171
COM2	iSTAR Edge COM1/COM2/COM3 Tabs on Page 171
COM3	iSTAR Edge COM1/COM2/COM3 Tabs on Page 171
Advanced	iSTAR Ultra Controller Advanced Tab on Page 157
Triggers	iSTAR Controller Triggers Tab on Page 158
Groups	Groups Tab for Hardware Devices on Page 36
Status	iSTAR Controller Status Tab on Page 158
Network Status	iSTAR Controller Network Status Tab on Page 160
User Defined Fields	iSTAR Controller User Defined Fields Tab on Page 161
State Images	iSTAR Controller State Images Tab on Page 161

iSTAR Ultra Controller Editor

The tabs for the iSTAR Ultra Controller Editor tabs are listed in Table 27 on Page 145.

Table 27: iSTAR Ultra Controller Editor Tabs

Tab	See...
General	iSTAR Controller General Tab on Page 148
Inputs	iSTAR Ultra Controller Editor Inputs Tab on Page 180
Boards	iSTAR Ultra Controller Boards Tab on Page 181
IP ACMs	iSTAR Ultra Controller IP-ACMs Tab on Page 183
COM1	iSTAR Ultra COM1/COM2 Tabs on Page 183
COM2	iSTAR Ultra COM1/COM2 Tabs on Page 183

iSTAR Ultra Controller Editor Tabs (continued)

Tab	See...
Advanced	iSTAR Ultra Controller Advanced Tab on Page 157
Triggers	iSTAR Controller Triggers Tab on Page 158
Groups	Groups Tab for Hardware Devices on Page 36
Status	iSTAR Controller Status Tab on Page 158
Network Status	iSTAR Controller Network Status Tab on Page 160
User Defined Fields	iSTAR Controller User Defined Fields Tab on Page 161
State Images	iSTAR Controller State Images Tab on Page 161

iSTAR Ultra Video Controller Editor

The tabs for the iSTAR Ultra Video Controller Editor tabs are listed in Table 28 on Page 146.

Table 28: iSTAR Ultra Video Controller Editor Tabs

Tab	See...
General	iSTAR Controller General Tab on Page 148
Boards	iSTAR Ultra Video Controller Boards Tab on Page 183
IP ACMs	iSTAR Ultra Controller IP-ACMs Tab on Page 183
Advanced	iSTAR Ultra Controller Advanced Tab on Page 157
Triggers	iSTAR Controller Triggers Tab on Page 158
Groups	Groups Tab for Hardware Devices on Page 36
Status	iSTAR Controller Status Tab on Page 158
User Defined Fields	iSTAR Controller User Defined Fields Tab on Page 161
State Images	iSTAR Controller State Images Tab on Page 161

iSTAR Ultra LT Controller Editor

The tabs for the iSTAR Ultra LT Controller Editor tabs are listed in Table 29 on Page 146.

Table 29: iSTAR Ultra LT Controller Editor Tabs

Tab	See...
General	iSTAR Ultra LT Controller General Tab on Page 154
Inputs	iSTAR Ultra LT Controller Inputs Tab on Page 186

iSTAR Ultra LT Controller Editor Tabs (continued)

Tab	See...
IP ACMs	iSTAR Ultra Controller IP-ACMs Tab on Page 183
COM Port	iSTAR Ultra LT Controller COM Port Tab on Page 187
Advanced	iSTAR Ultra Controller Advanced Tab on Page 157
Triggers	iSTAR Controller Triggers Tab on Page 158
Groups	Groups Tab for Hardware Devices on Page 36
Status	iSTAR Controller Status Tab on Page 158
Network Status	iSTAR Controller Network Status Tab on Page 160
User Defined Fields	iSTAR Controller User Defined Fields Tab on Page 161
State Images	iSTAR Controller State Images Tab on Page 161

iSTAR Controller Editor Tabs

The iSTAR Controller editor tabs available depend on the iSTAR Controller type.

The iSTAR Controller editor basic tabs and iSTAR specific tabs are listed below.

Basic Tabs

- iSTAR Controller General Tab on Page 148
- iSTAR Controller Boards Tab (iSTAR Classic/Pro) on Page 163
- iSTAR Controller Triggers Tab on Page 158
- iSTAR Controller Status Tab on Page 158
- iSTAR Controller Network Status Tab on Page 160
- iSTAR Controller State Images Tab on Page 161
- iSTAR Controller User Defined Fields Tab on Page 161

iSTAR Specific Tabs

- iSTAR Schlage Wireless PIMs Tab on Page 161
- iSTAR eX and Edge Controller Inputs Tab on Page 166
- iSTAR Edge/eX Controller Outputs Tab on Page 170
- iSTAR Edge COM1/COM2/COM3 Tabs on Page 171
- iSTAR Edge Controller Wiegand Tab on Page 173
- iSTAR eX Controller Wiegand Tab on Page 175
- iSTAR eX COM1/COM2 Tabs on Page 177
- iSTAR Ultra Controller Editor Inputs Tab on Page 180
- iSTAR Ultra COM1/COM2 Tabs on Page 183
- iSTAR Ultra Controller IP-ACMs Tab on Page 183
- iSTAR Ultra Controller High Assurance Tab on Page 158
- iSTAR Ultra Controller Advanced Tab on Page 157
- iSTAR Ultra LT Controller Inputs Tab on Page 186
- iSTAR Ultra LT Controller COM Port Tab on Page 187
- iSTAR Ultra Video Controller Boards Tab on Page 183

iSTAR Controller General Tab

The iSTAR Controller General tab provides a means to set the controller’s onboard and PCMCIA Ethernet adapters, MAC address, Reader LCD Message Sets, Time Zone, and to enable FICAM High Assurance readers. All iSTAR controller's General tab settings are described in this topic.

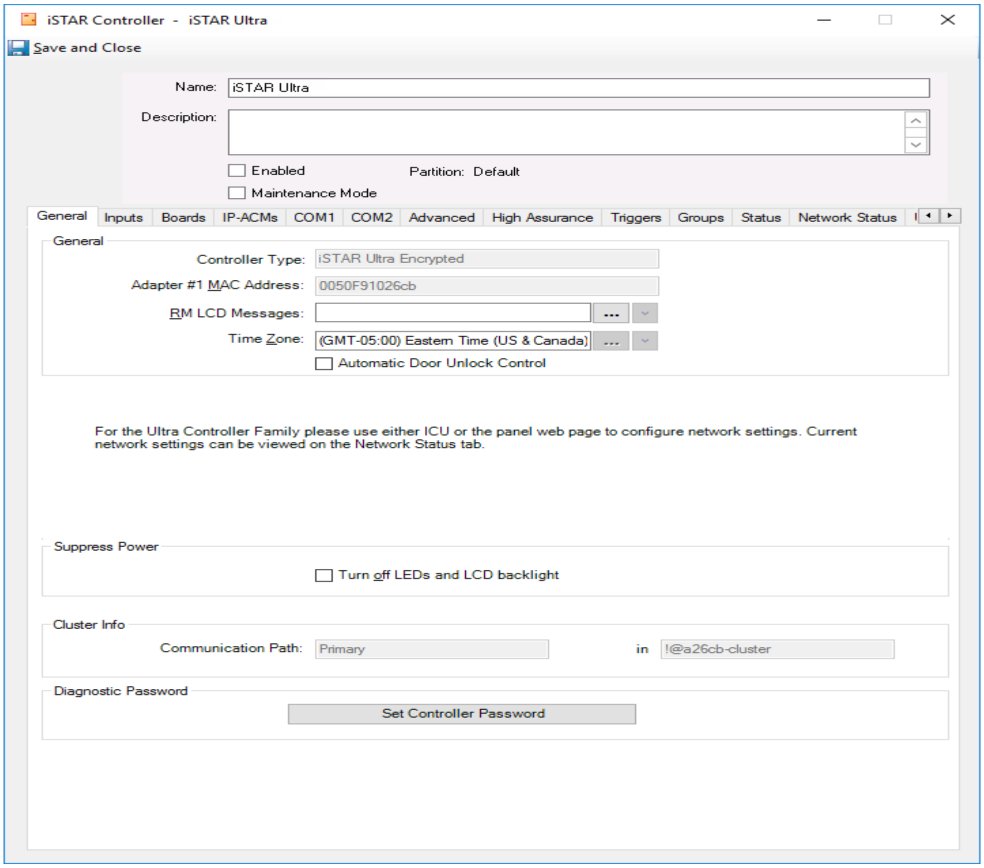
NOTE Starting in C•CURE 9000 v2.70, iSTAR Ultra family controllers with firmware version 6.6.x must use the iSTAR Configuration Utility (ICU) or the iSTAR Ultra Web pages to configure network settings. The IP address and IP family settings will not be displayed and are not configurable in C•CURE 9000.

NOTE

- PCMCIA Ethernet adapters have not been evaluated by UL.
- Not all configuration fields are available for all controllers.

See iSTAR Controller General Tab Definitions on Page 151 for field descriptions.

Figure 63: iSTAR Controller General Tab (iSTAR Ultra shown)



Name: iSTAR Ultra

Description:

□ Enabled Partition: Default

□ Maintenance Mode

General

Controller Type: iSTAR Ultra Encrypted

Adapter #1 MAC Address: 0050F91026cb

RM LCD Messages:

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

□ Automatic Door Unlock Control

For the Ultra Controller Family please use either ICU or the panel web page to configure network settings. Current network settings can be viewed on the Network Status tab.

Suppress Power

□ Turn off LEDs and LCD backlight

Cluster Info

Communication Path: Primary in !@a26cb-cluster

Diagnostic Password

To Configure the iSTAR Controller General Tab

1. Create or edit an iSTAR Controller. See either:
   - Creating an iSTAR Controller on Page 121
   - Editing an iSTAR Controller on Page 126.
2. Enter a unique controller name in the **Name** field at the top of the **iSTAR Controller** dialog box.
3. Enter a textual description (optional) in the **Description** field.
4. Enter the last six hexadecimal characters after the vendor portion of the address in the **MAC Address** entry field for the controller. The first six characters of a controller's MAC address are set at 00-50-F9. The last six characters of a controller's MAC address must be within the range of hexadecimal values (for example, 0-9 and a-f).
5. To select a particular customized set of LCD messages for the RM Readers, click ... to display a Reader LCD Message Set selection list. If you leave this field blank (the default), the Readers use the default messages. See LCD Message Set on Page 492 for more information. (Edge, eX, Ultra, Ultra SE, Ultra LT, Pro)

6. If you are configuring iSTAR controllers that are located in different time zones, you can use the **Time Zone** entry field. Click ... to display a time zone selection. Greenwich Mean Time is equivalent to Zulu or Universal Time. If you leave the Time Zone field blank, the iSTAR is considered to be in the C•CURE 9000 server's Time Zone.

   You can only change the Time Zone setting for the iSTAR controller when the controller is not **Enabled** (☐). See Changing the Time Zone of an iSTAR Controller on Page 136.

7. To use the **Automatic Door Unlock Control** feature, select the check box.

   With this feature, the controller turns the strike relay off when the door opens, or if a delay relock is configured, after the delay relock time expires. Then if a second person swipes while door is open, the controller normally does not re-activate the relay, under the assumption that if the door is open, the relay activation is not needed.

8. You can type an **IP Address** in the **Onboard Ethernet IP Address** field, although it is recommended that you select **Use DCHP** to use the Dynamic Host Configuration Protocol (DHCP) option to automatically assign an IP address to the Controller.

9. For an iSTAR eX Controller, you can enter an IP Address for the **Onboard Ethernet Adapter #2**. Alternatively, you can select **Use DHCP**.

NOTE The DHCP Server has not been evaluated by UL.

10. For an iSTAR Classic/Pro Controller:

    a. If you have a PCMCIA Ethernet Adapter, select **Adapter Installed**.

    b. You can either enter an **IP Address** for the PCMCIA adapter or select **Use DHCP**.

    c. If you are using the PCMCIA Ethernet Adapter as the primary connection to the host, select **Use as Primary Communications Adapter**.

11. If you are configuring an iSTAR eX or iSTAR Edge Controller, you need to select the supervising resistor configuration for the GCM Inputs. The default setting is **NO/NC Double EOL 1K**. See Table 30 on Page 151 for more information.

NOTE The supervision method for Inputs on the iSTAR Ultra is configured for each separate Input on the Input Editor.

12. Enter the IP address.

13. If any Doors on this controller need to be configured for Conditional Access, see iSTAR Ultra Controller Advanced Tab on Page 157 to select the **Include Personnel Without Clearance in Personnel Downloads** option in the Conditional Access box. The **Conditional Access** tab is available on the **iSTAR Doors** Editor **only** if this option is selected. See iSTAR Door Conditional Access Tab on Page 378.

NOTE Since selecting this option causes a full Personnel download to the controller (including all credentials except for Lost, Stolen Not Active, and Expired), a warning displays about the 250,000-record-download limit.

14. To support Innometriks High Assurance readers attached to this controller (Ultra and Ultra SE in Ultra Mode), see .iSTAR Ultra Controller High Assurance Tab on Page 158.

15. You can optionally click other tabs on the iSTAR Controller Editor to configure other settings prior to saving the Controller.

16. Click the **Enabled** check box to put the controller online when you are finished configuring the iSTAR Controller **General** tab. You must have entered a valid **MAC Address** and a setting for the **IP Address** before enabling the Controller or you will receive an error message if you try to save the Controller settings with **Enabled** selected.

17. Click **Save and Close** to save your settings for the Controller and close the iSTAR Controller Editor.

iSTAR Controller General Tab Definitions

Table 30 on Page 151 includes further information for fields in the **Controller** Editor **General** tab. The fields available differ by controller type, as indicated in this table.

Table 30: iSTAR Controller Editor General Tab Fields

Field	Description
Name	Enter a unique name up to 50 characters long for the controller. If you enter the name of an existing object, the system returns an error message indicating there is a conflict.
Description	Enter a textual comment about the controller, such as its location or purpose. This text is for information only.
Enabled	Click the **Enabled** check box to put the Controller online. You must specify the MAC address and IP address for the Controller prior to selecting **Enabled** or you will receive an error message when you save the Controller.
Maintenance Mode	Click to put the iSTAR Controller and/or its components into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this Controller resides. If you are creating a new Controller, the Partition that is currently the New Object Partition for your Operator account is automatically assigned to each Controller you create. If you want to change the Partition of a Controller, you must move the Cluster in which the Controller resides. See Using Drag and Drop in the Hardware Tree on Page 31.
General	
Controller Type	This field displays the controller type: **iSTAR Classic/Pro**, **iSTAR Edge**, **iSTAR eX**, **iSTAR Ultra**, **Ultra LT**,or **iSTAR Ultra Video**. The Controller Type is determined when you initially create the controller object. When you save the controller object, this field becomes read-only for all subsequent editing sessions.
Hardware (MAC) Address Adapter #1 MAC Address	The Hardware/Adapter MAC address for the controller. The MAC address is built into the GCM and cannot be changed. You can find a controller's MAC address on a label attached to the GCM or view the address using the iSTAR Configuration Utility. The first six nibbles (or characters) of a controller's MAC address are set at 00-50-F9. The last six nibbles (or characters) of a controller's MAC address must hexadecimal numbers between 0-9 and A-F. NOTE: The iSTAR Ultra Video controller does not use the MAC address format described above. The MAC address displayed is the MAC address of the iSTAR Ultra Video device.
Reader LCD Message Sets (Classic/Pro, Edge, eX, Ultra, Ultra SE, Ultra LT)	If you want customized LCD messages to display on the RM Readers, specify a Reader LCD Message Set. Click ... to display a Reader LCD Message Set selection list. By default, this field is blank indicating that the Readers are use the default messages. For more information, see LCD Message Set on Page 492.

Table 30: iSTAR Controller Editor General Tab Fields (continued)

Field	Description
Time Zone	If you are managing controllers in different time zones, specify a time zone for the controller. Click ... to display a time zone selection. The following objects are associated with the controller's time zone: • Inputs, outputs, and readers on the controller. • Doors and door groups with inputs, outputs, or readers on the controller. • Elevators and elevator groups with inputs, outputs, or readers on the controller. NOTE: Only Schedules and clearances that use the same time zone as the controller are downloaded to the controller. If you change the controller's time zone after a Schedule or clearance has been downloaded to the controller, a matching violation occurs. The time zone is downloaded to the controller, and the clearance is deleted from the controller. See the *C•CURE 9000 Software Configuration Guide* for more information.
Automatic Door Unlock Control	Select this check box to enable the Automatic Door Unlock Control feature for the controller. If enabled, the controller turns the strike relay off when the door opens, or if a delay relock is configured, after the delay relock time expires. Then if a second person swipes while door is open, the controller normally does not re-activate the relay, under the assumption that if the door is open, the relay activation is not needed. You can use this feature to cover the case where you require the relay activation. • If you clear the check box, the behavior of the controller is normal, and an admit processed while the door is open means the relay is not activated. • If you select the check box, the relay activates for the configured unlock time selected in the iSTAR Door editor. You need to select this check box for every controller you want to use this feature. You can set this value on the Dynamic View from the Set Property selection. This selection is audited in the Audit Log. The default setting is disabled.
Onboard Ethernet IP Address	1. Enter a static IP address or select **DHCP**. 2. Select the Address Family. NOTE: The Address Family must match in C•CURE 9000 and in the ICU to establish communication.
Onboard Ethernet Adapter (1/2)	Enter the unique IP address for Onboard Ethernet as 4 numbers between 0 and 255, separated by periods, such as 100.10.10.1.
Use DHCP	Select this check box to obtain an IP Address from a DHCP Server for the iSTAR Controller's Onboard Ethernet Adapter.
PCMCIA Ethernet (iSTAR Classic/Pro and Ultra SE in Pro Mode)	
Adapter Installed	Select this check box to indicate that an PCMCIA Ethernet adapter is installed.
IP Address	Enter the unique IP address for the PCMCIA Ethernet Adapter as 4 integers between 0 and 255, separated by periods, such as 100.10.10.1.
Use DHCP	Select this check box to obtain an IP Address from a DHCP Server for the PCMCIA Ethernet Adapter.
Use as Primary Ethernet Adapter	Select this check box to indicate that the PCMCIA Ethernet Adapter is to be used as the Primary Ethernet Adapter.

Table 30: iSTAR Controller Editor General Tab Fields (continued)

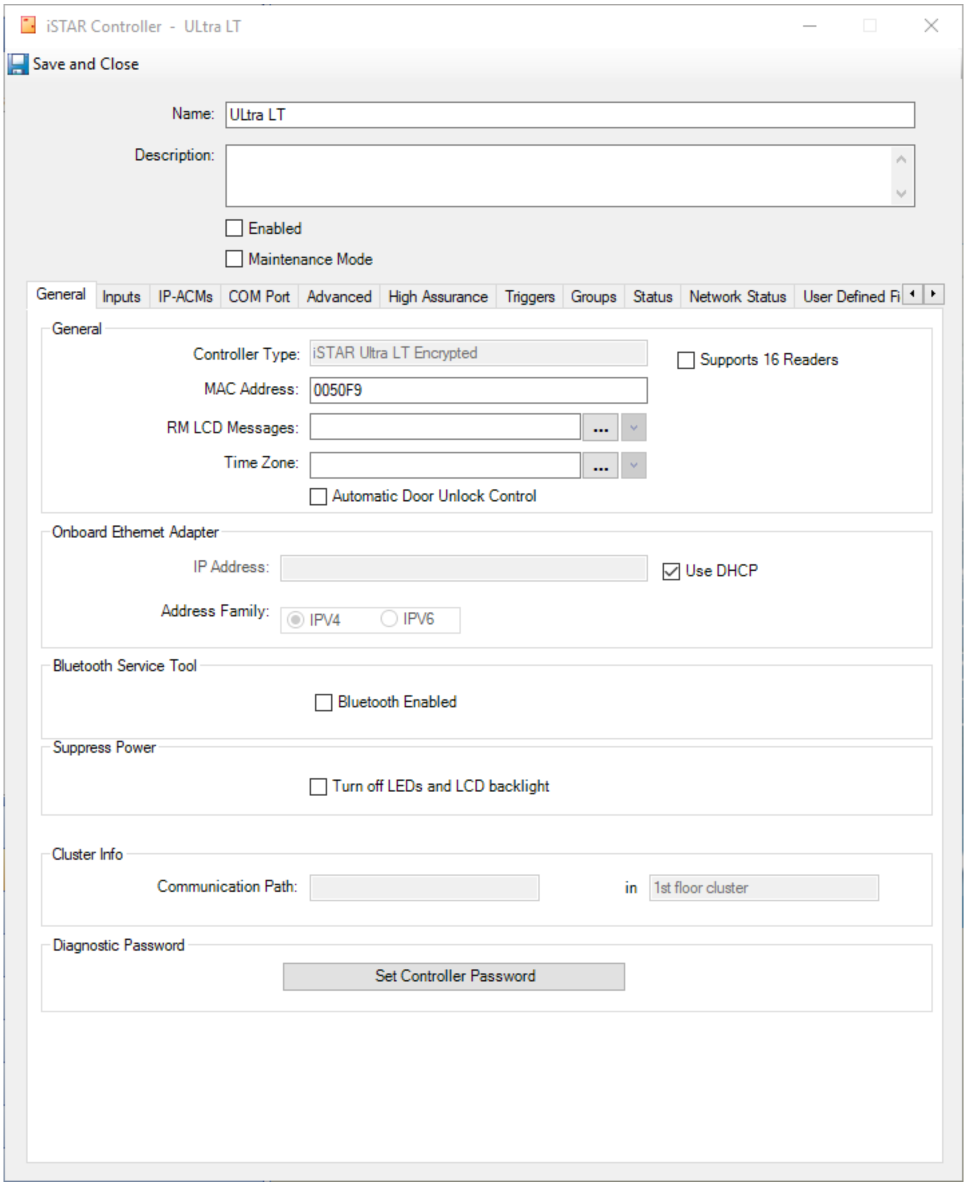
Field	Description
Bluetooth Service Tool (not supported, future release)	
Bluetooth enabled	Select this check box to allow troubleshooting messages to appear on the Bluetooth device. NOTE: Software House recommends to disable this feature after use.
Suppress Power / LED Control	
Turn off LEDs and LCD backlight (Edge, Ultra, Ultra SE (Ultra Mode), Ultra Video, Ultra LT)	You can to configure the LCD backlight and various status LEDs to always be off by selecting (☑), regardless of tamper state. Selecting this option does not affect the Power LED or the bright white external power indicator.
Onboard reader LED control (iSTAR Edge)	Specify the method used on this controller to drive the direct connect reader LEDs: • 3-wire (Red, Green, Yellow) • External Bi-Color (2-wire Red, Green) • 1-wire (A, B, C)
Supervising resistor configuration (iSTAR eX and iSTAR Edge)	All iSTAR eX GCM Inputs and iSTAR Edge inputs must be wired in the same way and use the same supervision method. All supervised settings assume either one or two end of line (EOL) resistors. You can use the **Reverse Sense** option if you need a particular Input to differ from the selected setting (for example, if you choose a NO setting here, but you need a door switch monitor Input to be NC, you can set that Input for **Reverse Sense** in the iSTAR Input Editor (see iSTAR Input Editor on Page 227 for more information). • NO = Normally Open • NC = Normally Closed • EOL = End of Line Select one of the resistor values in the drop-down list. NO/NC Double EOL 1K is the default, and the traditional Software House method
Cluster Info	
Communications Path	These read-only fields display the Communications Path and the name of the iSTAR Cluster through which this controller communicates with the C•CURE 9000 Server.
Diagnostic Password	
Set Password	For security, a password must be set for the controller. Click **Set Password** to open the **Set Diagnostic Password for this Controller** dialog box. Password requirements: • Password length: >= 10 • Contains at least one uppercase letter (A-Z) • Contains at least one lowercase letter (a-z) • Contains at least one digit (0-9) • Contains a special character Enter the password, confirm the password and click **OK**. See Setting the iSTAR Controller Diagnostic Password on Page 122

iSTAR Ultra LT Controller General Tab

The iSTAR Ultra LT Controller General tab, shown in Figure 64 on Page 154, provides a means to set the controller's onboard Ethernet adapter, MAC address, Reader LCD Message Sets, and Time Zone. The General tab fields are described in Table 31 on Page 156.

NOTE Starting in C•CURE 9000 v2.70, iSTAR Ultra family controllers with firmware version 6.6.x must use the iSTAR Configuration Utility (ICU) or the iSTAR Ultra Web pages to configure network settings. The IP address and IP family settings will not be displayed and are not configurable in C•CURE 9000.

Figure 64: iSTAR Ultra LT Controller General Tab



Name: ULtra LT

Description:

□ Enabled

□ Maintenance Mode

General

Controller Type: iSTAR Ultra LT Encrypted

□ Supports 16 Readers

MAC Address: 0050F9

RM LCD Messages:

Time Zone:

□ Automatic Door Unlock Control

Onboard Ethernet Adapter

IP Address:

☑ Use DHCP

Address Family: ● IPV4 ○ IPV6

Bluetooth Service Tool

□ Bluetooth Enabled

Suppress Power

□ Turn off LEDs and LCD backlight

Cluster Info

Communication Path: in 1st floor cluster

Diagnostic Password

Set Controller Password

To Configure the iSTAR Ultra LT Controller General Tab

1. Enter a unique controller name in the **Name** field.
2. Enter a textual description (optional) in the **Description** field.

3. There are two Ultra LT boards, one board supports 8 readers and the other supports 16 readers. If the iSTAR Ultra LT board supports 16 readers, select the **Supports 16 Readers** check box, or leave it blank for 8 reader support. The default reader support is 8.
   - The controller must be disabled (Enabled deselected).
   - If you switch from 8 reader support to 16 reader support, or vice versa, you need to **Save and Close** then reopen the dialog box for the reader support to change.
   - If you switch from 16 readers to 8 readers, all hardware configured beyond the eight reader version support will be deleted.
     - — Everything configured under IP-ACMv1-9 to IP-ACMv1-16 boards will be deleted
     - — Everything configured under IP-ACMv2-9 to IP-ACMv2-16 boards will be deleted
     - — Everything configured under Hub9 to Hub16 for Aperio protocol will be deleted
     - — Everything configured under PIM9 to PIM16 for Schlage protocol will be deleted
4. Enter the last six hexadecimal characters after the vendor portion of the address in the **MAC Address** entry field for the controller. The first six characters of a controller's MAC address are set at 00-50-F9. The last six characters of a controller's MAC address must be within the range of hexadecimal values (for example, 0-9 and a-f).
5. To select a particular customized set of LCD messages for the RM Readers, click ... to display a Reader LCD Message Set selection list. If you leave this field blank (the default), the Readers use the default messages. See LCD Message Set on Page 492 for more information.
6. If you are configuring iSTAR controllers that are located in different time zones, you can use the **Time Zone** entry field. Click ... to display a time zone selection. Greenwich Mean Time is equivalent to Zulu or Universal Time. If you leave the Time Zone field blank, the iSTAR is considered to be in the C•CURE 9000 server's Time Zone.

   You can only change the Time Zone setting for the iSTAR controller when the controller is not **Enabled** (□). See Changing the Time Zone of an iSTAR Controller on Page 136.
7. To use a Static IP address, deselect the **DHCP** check box and enter the IP address.

NOTE The DHCP Server has not been evaluated by UL.

8. Select the radio button for the IP Address family of the controller, either **IPv4** or **IPv6**. See IPv6 Configuration on Page 21 for IPv6 configuration requirements and configuration information.
9. You can optionally click other tabs on the iSTAR Controller Editor to configure other settings prior to saving the controller.
10. Click the **Enabled** check box to put the controller online when you are finished configuring the iSTAR Controller **General** tab. You must have entered a valid **MAC Address** and a setting for the **IP Address** before enabling the controller or you will receive an error message if you try to save the controller settings with **Enabled** selected.
11. Click **Save and Close** to save your settings for the controller and close the iSTAR Controller Editor.

iSTAR Controller General Tab Definitions

on Page 154 includes further information for fields in the Controller Editor **General** tab. The fields available differ by controller type, as indicated in this table.

Table 31: iSTAR Controller Editor General Tab Fields

Field	Description
Name	Enter a unique name up to 50 characters long for the controller. If you enter the name of an existing object, the system returns an error message indicating there is a conflict.
Description	Enter a textual comment about the controller, such as its location or purpose. This text is for information only.
Enabled	Click the **Enabled** check box to put the Controller online. You must specify the MAC address and IP address for the Controller prior to selecting **Enabled** or you will receive an error message when you save the Controller.
Maintenance Mode	Click to put the iSTAR Controller and/or its components into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this Controller resides. If you are creating a new Controller, the Partition that is currently the New Object Partition for your Operator account is automatically assigned to each Controller you create. If you want to change the Partition of a Controller, you must move the Cluster in which the Controller resides. See Using Drag and Drop in the Hardware Tree on Page 31.
General	
Controller Type	This field displays the controller type. The Controller Type is determined when you initially create the controller object. When you save the controller object, this field becomes read-only for all subsequent editing sessions.
Supports 16 Readers	Deselected, the default, supports the 8 reader Ultra LT board. Select the check box if the Ultra Lt board supports 16 readers.
MAC Address	The Hardware/Adapter MAC address for the controller. The MAC address is built into the GCM and cannot be changed. You can find a controller's MAC address on a label attached to the GCM or view the address using the iSTAR Configuration Utility. The first six nibbles (or characters) of a controller's MAC address are set at 00-50-F9. The last six nibbles (or characters) of a controller's MAC address must hexadecimal numbers between 0-9 and A-F.
RM LCD Message Sets	If you want customized LCD messages to display on the RM Readers, specify a Reader LCD Message Set. Click ... to display a Reader LCD Message Set selection list. By default, this field is blank indicating that the Readers are use the default messages. For more information, see LCD Message Set on Page 492.
Time Zone	If you are managing controllers in different time zones, specify a time zone for the controller. Click ... to display a time zone selection. The following objects are associated with the controller's time zone: • Inputs, outputs, and readers on the controller. • Doors and door groups with inputs, outputs, or readers on the controller. • Elevators and elevator groups with inputs, outputs, or readers on the controller. NOTE: Only Schedules and clearances that use the same time zone as the controller are downloaded to the controller. If you change the controller's time zone after a Schedule or clearance has been downloaded to the controller, a matching violation occurs. The time zone is downloaded to the controller, and the clearance is deleted from the controller. See the *C•CURE 9000 Software Configuration Guide* for more information.
Onboard Ethernet Adapter	
IP Address	Deselect the **Use DHCP** check box to enter a static IP address or select **Use DHCP** (the default).

Table 31: iSTAR Controller Editor General Tab Fields (continued)

Field	Description
Address Family	Select the radio button for the IP Address family of the controller, either IPv4 or **IPv6**. **NOTE**: See IPv6 Configuration on Page 21 for IPv6 requirements and configuration information.
Bluetooth Service Tool (not supported, future release)	
Bluetooth enabled	Select this check box to allow troubleshooting messages to appear on the Bluetooth device. NOTE: Software House recommends to disable this feature after use.
Suppress Power	
Turn off LEDs and LCD backlight	You can to configure the LCD back light and various status LEDs to always be off by selecting (☑), regardless of tamper state. Selecting this option does not affect the Power LED or the bright white external power indicator.
Cluster Info	
Communications Path	These read-only fields display the Communications Path and the name of the iSTAR Cluster through which this controller communicates with the C•CURE 9000 Server.
Diagnostic Password	
Set Controller Password	For security, a password must be set for the controller. Click **Set Controller Password** to open the Set Diagnostic Password for this Controller dialog box. Enter the password, confirm the password and click **OK**. Password Requirements: • Password length: >= 10 • Contains at least one uppercase letter (A-Z) • Contains at least one lowercase letter (a-z) • Contains at least one digit (0-9) • Contains a special character Enter the password, confirm the password and click **OK**. See Setting the iSTAR Controller Diagnostic Password on Page 122 for more information.

iSTAR Ultra Controller Advanced Tab

Use this tab to enable conditional access for doors on the controller and to enable fast personnel download.

Conditional Access

If any Doors on this controller need to be configured for **Conditional Access**, select the **Include Personnel Without Clearance in Personnel Downloads** option in the Conditional Access box. The Conditional Access tab is available on the iSTAR Doors Editor only if this option is selected. For information, see iSTAR Door Conditional Access Tab on Page 378.

NOTE Selecting this option causes a full Personnel download to the controller. This includes all credentials, except for Lost, Stolen Not Active, and Expired. There is a 250,000-record-download limit.

Fast Personnel Download

NOTE This number overrides the iSTAR Driver "Threshold to use for fast download " variable.

When numerous controllers require fast download, the download starts with controllers configured with High priority.

Table 32: iSTAR Controller Editor Advanced Tab Fields

Field	Description
Conditional Access	
Include Personnel Without Clearance in Personnel Downloads	If you want to enable conditional access for Doors on this Controller, allow entry to Personnel without Clearances, click to select this option. The Conditional Access tab is available on the iSTAR Doors Editor only if this option is selected. For more information, see iSTAR Door Conditional Access Tab on Page 378. NOTE: Since selecting this option causes a full Personnel download to the controller (including all credentials except for Lost, Stolen Not Active, and Expired), a warning displays about the 250,000-record-download limit.
Personnel Fast Download	
Fast download Priority	When numerous controllers require fast download, the download starts with controllers configured with High priority. The download priority can be set to High, Normal, or Low.
Threshold to use fast download	The number of personnel records in the queue when personnel download starts.

iSTAR Ultra Controller High Assurance Tab

Use this tab to enable high assurance on this controller to support High Assurance readers.

iSTAR Controller Triggers Tab

C•CURE 9000 uses **Triggers**, which are configured procedures used for activating security actions. A Trigger automatically executes a specified **Action** when a particular predefined condition occurs. When a Trigger is defined, the Actions available depend on the property selected. The Triggers are usually used to activate an Event which can activate numerous actions.

See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

iSTAR Controller Status Tab

The Status tab provides a read-only listing of critical information about the operational status of the selected iSTAR controller.

on Page 158 provides definitions of the fields and buttons on the iSTAR Controller Status tab.

iSTAR Controller Status Tab Definitions

Field/Button	Description
Dynamic Status	
Online Status	Indicates whether the controller has been **Enabled** (see the **General** tab).

iSTAR Controller Status Tab Definitions (continued)

Field/Button	Description
Firmware Version	The version of the firmware currently in use by the controller.
Boot Time	The last date/time the controller was restarted (GMT or Zulu time)
Free Program Memory	Unused program memory in the controller's microprocessor, in kilobytes.
Total Program Memory	Total storage memory in the controller's microprocessor, in kilobytes.
Free Storage Memory	Unused storage memory in the controller's microprocessor, in kilobytes.
Total Storage Memory	Total storage memory in the controller's microprocessor, in kilobytes.
Free Physical Memory	Unused physical memory in the controller's microprocessor, in kilobytes.
Total Physical Memory	Total physical memory in the controller's microprocessor, in kilobytes.
Reader Security Key Status (eX only)	This field applies only to iSTAR eX controllers. It displays whether or not the eX 8-Reader Security Key is in place. Possible status values are: **Detected** – the key is plugged in and 8 readers are operational on the iSTAR eX. **NotDetected** – the key is not plugged in, and only four Readers will be operational. **Unknown** – the key status cannot be determined (for example, the status is Unknown if the controller is out of communication with C•CURE 9000). You can determine the status by observing the LCD on the iSTAR eX.
Encryption Setting Status (Edge, Classic/Pro)	A Read-only field that displays the Encryption Setting. Encryption settings are Encrypted (AES), Unknown, or Not Encrypted.
Free RAM (Ultra/ Ultra Video)	Unused program memory available to the microprocessor in megabytes.
Total RAM (Ultra/ Ultra Video)	Total storage memory available to the microprocessor in megabytes.
Free Nand Flash Database Memory (Ultra/ Ultra Video)	Unused flash memory in megabytes.
Total Nand Flash Database Memory (iSTAR Ultra/ Ultra Video)	Total flash memory in megabytes.
PoE Board Installed (iSTAR Edge)	The field displays whether the Power over Ethernet (PoE) Board is installed. Possible status values are **True** or **False**.
Edge Model Status	The field displays the iSTAR Edge Model Status, either 2-door or 4-door.

iSTAR Controller Status Tab Definitions (continued)

Field/Button	Description
Advanced	
SNMP	The check box is enabled (checked) if SNMP was enabled in the ICU for the controller.
Web Diagnostics	The check box is enabled (checked) if Web Diagnostic was enabled in the ICU for the controller.
eX8 Reader USB Key (iSTAR eX only)	The check box is enabled (checked) if the iSTAR eX 8-Reader USB key was enabled in the ICU for the controller.

iSTAR Controller Network Status Tab

The Controller Network Status tab displays read-only information. You cannot edit the information.

To change the controller configuration, use the iSTAR Configuration Utility (ICU) or the iSTAR Ultra Web Utility (iSTAR Ultra, Ultra SE, Ultra LT).

Table 33: iSTAR Controller Network Status Tab Definitions

Field	Description
NetBIOS Name	The NetBIOS name of the iSTAR controller.
Host IP Address	The IP address or name of the Primary connection to the C•CURE host or to the master controller for the cluster.
NAT IP Address	The Network Address Translator (NAT) address for the server used to download firmware to the controller.
IP Mode	The IP address family, IPv4 or IPv6.
Host IP Address Locked	If the check box is selected, indicates the controller does not accept an IP address from any source.
Use NAT	If the check box is selected, indicates that Network Address Translator (NAT) address for the server is used to download firmware to the controller.
Ethernet Adapter 1 / Ethernet Adapter 2	
IP Address	The IP address assigned.
Subnet Mask	The subnet mask.
Default Gateway	The IP address of the default gateway router for the controller.
Primary DNS	The IP address of the primary domain name server for this Ethernet card.
Secondary DNS	The IP address of the secondary domain name server for this Ethernet card.
DNS query suffix	The domain name of the DNS server for which you supplied the IP address.
Lock IP Address	If the check box is selected, indicates the controller can accept a translated address downloaded from a Network Address Translator, C•CURE system, or other remote device.

iSTAR Controller User Defined Fields Tab

The User Defined Fields tab displays user-defined fields in the system for hardware. User-defined fields are configured in the **Configuration** pane. If there are no user-defined fields configured, then the tab is empty.

See the *C•CURE 9000 Software Configuration Guide* for more information.

iSTAR Controller State Images Tab

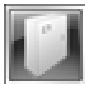
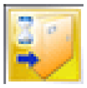
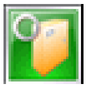
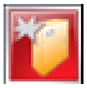
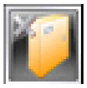
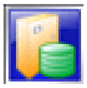
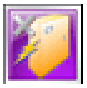
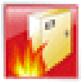
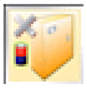
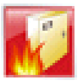
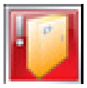
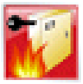
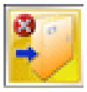
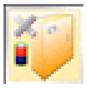
The **State Images** tab provides a means to change the default images that are displayed on the C•CURE 9000 Monitoring Station to indicate controller states. See State Images Tab for iSTAR Devices on Page 267 for information on using the State Images tab for your iSTAR Controller.

iSTAR Controller State Images Tab Definitions

Table 34 on Page 161 describes iSTAR Controller State Images.

NOTE The state images shown in the table do not apply to all iSTARS.

Table 34: iSTAR Controller State Images Tab Definitions

Icon	Description		Icon	Description
	Unknown			Download in Progress
	Online			Comm Fail
	Disabled			Database Back Up
	Power Failure			Fire Alarm Supervision State
	Battery Low			FAI Relay Control
	Tamper			FAI Key Supervision State
	Download Error			Internal Battery Fault

iSTAR Schlage Wireless PIMs Tab

This tab allows you to configure up to 16 Schlage Wireless Panel Interface Modules (PIMs) on an iSTAR Classic/Pro.

An iSTAR controller can support up to 16 Schlage Wireless readers. The number of PIM boards needed to support your readers can vary, depending upon Reader type and the physical location of the reader/lock hardware. You could connect 16 readers to a single PIM if all readers are within the range/distance specifications for wireless readers. If some readers are farther away, additional PIMs may be needed to place a PIM within wireless range of each reader. You can configure no more than 16 PIMs and 16 Readers per controller.

The AD300 and AD400 series readers have an integrated PIM in the reader/lock hardware - these readers require you to configure an iSTAR PIM board with only that reader attached to the PIM.

PIM and Reader Addresses

Each PIM has an address between 0 (zero) and 15. On an iSTAR, boards are numbered starting at 1, not 0. As a result, a PIM with address 0 is configured on the iSTAR as PIM #1.

Each Reader has a reader address between 0 (zero) and 15. On an iSTAR, readers are numbered starting at 1, not 0. As a result, a reader with address 0 is configured on the iSTAR as reader #1.

Example

> If you have PIMs with addresses of 4, 8, 12, and 15, you should configure these PIMs on the iSTAR as PIM5, PIM9, PIM13, and PIM16.
>
> If you have readers with addresses 0 through 5, you should configure these readers on the iSTAR as iSTAR PIM 485 Reader1 through iSTAR PIM 485 Reader6.

Once you have assigned a reader address to one PIM, that reader address will be unavailable on all other PIM boards on the iSTAR.

Example

> You configure Reader address #1 on PIM Board #1. On every other PIM Board you configure on this iSTAR, Reader address #1 is unavailable (grayed out).

The address ranges for readers connected to PIMs cannot overlap. If you set up your PIM hardware so that a specific PIM controls reader addresses 0 through 5, you cannot assign a different PIM to control any of the addresses in between.

Example

> You have two PIMs. You set one to control Reader addresses 0 through 5 (readers 1 through 6 on the iSTAR). You other PIM must be setup to control readers outside this range, such as Reader addresses 8 through 11 (Readers 9 through 12 on the iSTAR).
>
> If you add another PIM, that PIM cannot be assigned to control any of the already assigned addresses, even if the address are not in use at this time by one of the two existing PIMs. The new PIM could only be assigned Reader addresses 6 and 7 (Readers 7 and 8) and/or Reader addresses 12 through 15 (Readers 13 through 16).

iSTAR Schlage Wireless PIMs Tab Definitions

The fields and buttons on the iSTAR Schlage Wireless PIMs tab are described in Table 35 on Page 162.

Table 35: iSTAR Schlage Wireless PIM Tab

Field/Button	Description
Create All PIMs	Click to create all 16 PIMs. When you click **Create All PIMs** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR PIM-485 Board Editor to configure a PIMs.

Field/Button	Description
Delete All PIMs	When you click **Delete All PIMs**, the check boxes in the **Configured** column are cleared for all 16 PIMs, and all 16 PIM boards are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR PIM-485 Board Editor to configure a PIM. See iSTAR PIM-485 Board Editor on Page 224.
PIM Index column	This column displays the number of each PIM Board.
Configured column	Click □ in this column to create a PIM Board (make it available to be edited)**.**
Name column	Displays the name for this PIM Board The name is system-generated by default, but you can edit this name by clicking in this field.
Save and Close	Click to save your configuration changes and close the iSTAR Controller editor.

iSTAR Controller Boards Tab (iSTAR Classic/Pro)

The Boards tab is available for iSTAR Classic and iSTAR Pro Controllers only.

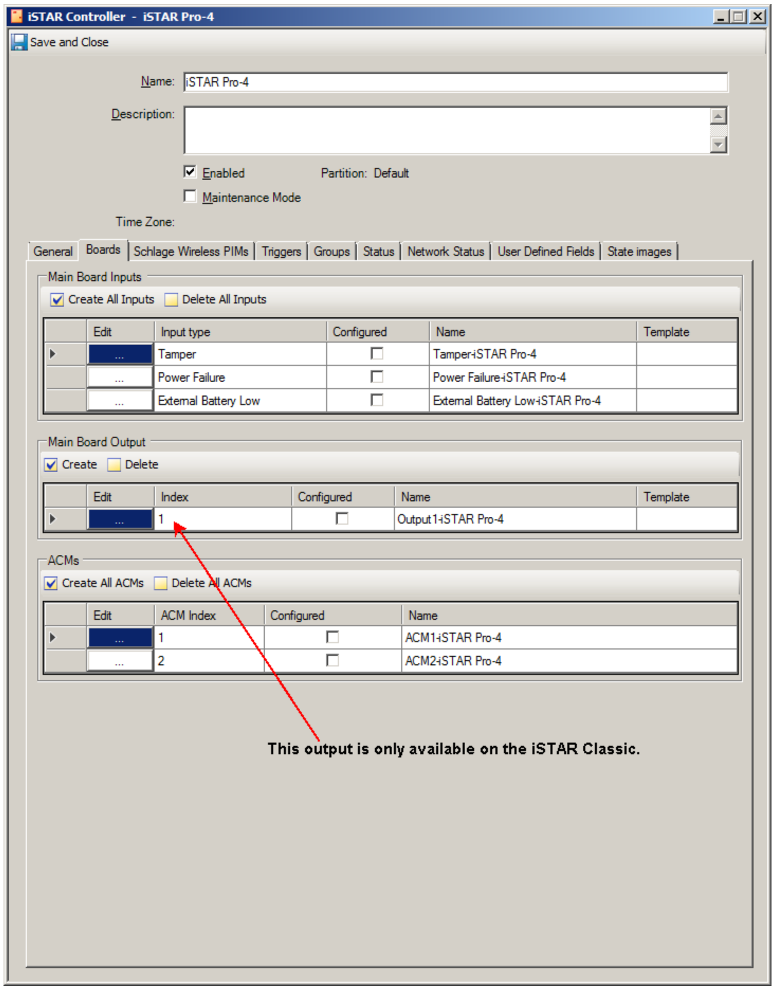
The Boards tab in the iSTAR Controller Editor lets you configure the following inputs, outputs, and ACM boards.

- Main Board Inputs on the GCM.
  - **Tamper** - this input activates when the controller cabinet is opened.
  - **Power Failure** - this input monitors for AC power failure of the apS or UPS supplying power to the controller. When this alarm input activates, it specifies that the GCM has lost its primary power source, and is operating on batteries.
  - **External Battery Low** (iSTAR Ultra/Classic/Pro) - this input activates when the external emergency battery (from the apS or UPS) is running low on power.
  - **Internal Battery Fault** (iSTAR Ultra only) - this is a logical input that reports the state of the onboard battery.
  - **General** (iSTAR Ultra only) - this input is a general purpose Supervised Input on the GCM.
- Main Board Output on the GCM (iSTAR Classic only).
- ACM 1 and ACM 2 Boards for the Controller (iSTAR Classic/Pro only).

  Add-on Access Control Modules (**ACM Boards**) provide access control functionality by supporting readers, outputs and inputs.
- ACM 1, ACM 2, ACM 3, and ACM 4 Boards on SPI port 1 (iSTAR Ultra only. FW 6.8.2 or higher) - used to configure Inputs, Outputs, and Readers on an iSTAR ACM Board attached to SPI port 1 on an iSTAR Ultra Controller.
- ACM 1, ACM 2, ACM 3, and ACM 4 Boards on SPI port 2 (iSTAR Ultra only. FW 6.8.2 or higher) - used to configure Inputs, Outputs, and Readers on an iSTAR ACM Board attached to SPI port 2 on an iSTAR Ultra Controller.

The iSTAR Controller Boards tab is shown in Figure 65 on Page 164.

Figure 65: iSTAR Controller Editor Boards Tab



iSTAR Controller - iSTAR Pro-4

Save and Close

Name: iSTAR Pro-4

Description:

☑ Enabled Partition: Default

□ Maintenance Mode

Time Zone:

Main Board Inputs

☑ Create All Inputs □ Delete All Inputs

	Edit	Input type	Configured	Name	Template
▸	...	Tamper	□	Tamper-iSTAR Pro-4	
	...	Power Failure	□	Power Failure-iSTAR Pro-4	
	...	External Battery Low	□	External Battery Low-iSTAR Pro-4	

Main Board Output

☑ Create □ Delete

	Edit	Index	Configured	Name	Template
▸	...	1	□	Output 1-iSTAR Pro-4	

ACMs

☑ Create All ACMs □ Delete All ACMs

	Edit	ACM Index	Configured	Name
▸	...	1	□	ACM1-iSTAR Pro-4
	...	2	□	ACM2-iSTAR Pro-4

This output is only available on the iSTAR Classic.

To Configure the iSTAR Controller Boards Tab

1. From the iSTAR Controller editor, click the **Boards** tab.

2. Create the **Main Board Inputs** that you need by clicking **Create All Inputs** or by selecting the **Configured** check box for only the Inputs you wish to create.

3. To use an existing Input Template to create one or more of the Main Board Inputs, click in the **Template** Column, then click **...**. A list of available iSTAR Input Templates appears. Click on the Template you wish to use. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more detailed information about using Templates to create Controller Inputs.

4. Click **...** in the **Edit** column to configure individual Main Board Inputs. See the definitions of the Main Board Inputs in Table 36 on Page 165.

5. Create the **Main Board Output** if needed by clicking **Create Output** or by selecting the **Configured** check box for the Main Board Output.

6. Click **...** in the **Edit** column to configure the Main Board Output. See the definition of the Main Board Output in Table 36 on Page 165 and see iSTAR Output Editor on Page 236 for configuration instructions.

7. Create the **ACM Boards** that you need by clicking **Create All ACMs** or by selecting the **Configured** check box for only the ACMs you wish to create.

8. Click ... in the **Edit** column to configure an ACM. See iSTAR Classic/Pro Controller ACM Board Editor on Page 201 for configuration instructions.

9. Click **Save and Close** to save the settings you have configured on the iSTAR Controller Boards tab, or click another tab in the iSTAR Controller Editor to perform additional configuration.

iSTAR Controller Boards Tab Definitions

The iSTAR Controller Boards tab includes the fields and buttons described in Table 36 on Page 165.

Table 36: iSTAR Controller Boards Tab Definitions

Field/Button	Description
Main Board Inputs	
Create All Inputs	Click to create the three Main Board Inputs. When you click **Create All Inputs** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Input Editor to configure an Input.
Delete All Inputs	When you click **Delete All Inputs**, the check boxes in the **Configured** column are cleared for all three Main Board Inputs, and all three Inputs are immediately deleted (any settings you have configured are lost).
Tamper	The Tamper input activates when the controller cabinet is opened or removed from its mounting surface. NOTE: For UL applications, this field must be enabled. Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Input Editor General tab to configure the Tamper input. From the Input Editor you can configure the Options, Triggers, Groups, Status and State Images that are associated with the Tamper Input. The **Template** column shows the template name chosen if you selected a Template prior to creating the Input.
Power Failure	The AC power failure input monitors the AC power failure output of a battery backup unit, such as the Advanced Power System (apS). When this alarm input activates, it specifies that the GCM has lost its primary power source, and is operating on batteries. NOTE: For UL applications, this field must be enabled. Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Input Editor General tab to configure the AC Power Fail Input. From the Input Editor you can configure the Options, Triggers, Groups, Status and State Images that are associated with the AC Power Fail Input. The **Template** column shows the template name chosen if you selected a Template prior to creating the Input.
External Battery Low (iSTAR Classic/Pro)	The External Battery Low input activates when the emergency battery is running low on power. NOTE: For UL applications, this field must be enabled. NOTE: This field for iSTAR Pro and Classic is on the Boards Tab. For iSTAR eX and Edge, this field is on the Inputs Tab.
External Battery Low (iSTAR eX/Edge/Ultra)	Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Input Editor General tab to configure the Options, Triggers, Groups, Status and State Images that are associated with the Battery Low Input. The **Template** column shows the template name chosen if you selected a Template prior to creating the Input.

Table 36: iSTAR Controller Boards Tab Definitions (continued)

Field/Button	Description
Internal Battery Fault (iSTAR Ultra)	A logical input that reports the state of the onboard battery. This Input is configured (☑) by default when the controller is created.
General (iSTAR Ultra)	A physical input that can be used to monitor a condition, particularly useful for Ultra configurations that are GCM only.
Main Board Output (Classic and Ultra only)	
Create	Click to create the Main Board Output. When you click **Create** the **Configured** column check box is selected, and you can click [...] in the **Edit** column to open the iSTAR Output Editor to configure the Output.
Delete (iSTAR Classic/Ultra)	When you click **Delete**, the check box in the Configured column is cleared for the Main Board Output, and the Output is immediately deleted (any settings you have configured are lost).
1	Select the check box in the **Configured** column and click [...] located in the **Edit** column to open the iSTAR Output Editor General tab to configure the Options, Groups, Status and State Images that are associated with the Main Board Output. The **Template** column shows the template name chosen if you selected a Template prior to creating the Output.
ACMs	
Create All ACMs (iSTAR Classic/Pro only)	Click to create all the ACM Boards. When you click **Create All ACMs** the Configured column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR ACM Board Editor to configure an ACM Board.
Delete All ACMs (iSTAR Classic/Pro only)	When you click **Delete All ACMs**, the check boxes in the Configured column are cleared for both Main Board ACM Boards, and both ACM Boards are immediately deleted (any settings you have configured are lost).
Board1	Select the check box in the **Configured** column and click [...] located in the **Edit** column to open the iSTAR ACM Editor General tab to configure the Inputs, Outputs, and Readers that are associated with the first ACM board.
Board2	Select the check box in the **Configured** column and click [...] located in the **Edit** column to open the iSTAR ACM Editor General tab to configure the Inputs, Outputs, and Readers that are associated with the second ACM board.

iSTAR eX and Edge Controller Inputs Tab

The iSTAR Controller Inputs tab is available only on the iSTAR eX Controller editor and the iSTAR Edge Controller editor.

The Inputs tab lets you define the Special Purpose and General Purpose Inputs for the Controller.

All of the inputs support event triggers based on their active or inactive states. These triggers can activate alarms, send emails, run a Roll Call Report, etc.

iSTAR eX Controller Inputs

Special Purpose Inputs

- **Tamper** input – Activates when the controller cabinet is opened.

- **Power Failure** input – Monitors the AC power failure output of the PMB. When this alarm input activates, it indicates that the PMB has had an AC Power Failure and is now supplying battery power to the controller.

  Similarly, if the eX is the NPS (No Power Supply) version, the Power Fail output of the UPS or apS is monitored with the same result.

- **External Battery Low** input – Activates when the battery connected to the PMB emergency battery has reached a yellow warning level. This will be followed, after some further use, with a Backup Now condition (Battery really low) which will backup the configuration and data and then shut down the controller.

  If the eX is the NPS (No Power Supply) version, the Battery Low output of the UPS or apS is monitored and will signal low battery. It is recommended to shut down the unit being powered by the low battery.

NOTE Tamper, AC power fail, and Low battery inputs must be programmed for UL applications.

General Purpose Inputs

- iSTAR eX provides 16 general purpose inputs.

iSTAR Edge Controller Inputs

Special Purpose Inputs

- **Tamper** input – Activates when the controller cabinet is opened.
- **Power Failure** input – Monitors the AC power failure output of the UPS (Un-interruptible Power Supply) or apS and indicates an AC Power Failure resulting in the UPS or apS supplying battery power to the controller.
- **Battery Low** input – Activates when the UPS or apS emergency battery has reached a yellow warning level. It is recommended to shut down the unit being powered by the low battery. Do not confuse this input with **Onboard Battery Low**.

NOTE Tamper, AC power fail, and Low battery inputs must be programmed for UL applications.

- **Onboard Battery Low** input – This input activates when the voltage of all four onboard AA alkaline batteries in series reaches 4.6 volts, or if a battery is missing or disconnected.

NOTE The following Fire Alarm Interface (FAI) features are only supported on these iSTAR Edge models:

- 0312-5010-02
- 0312-5010-04

- **FAI Supervision State** input – This input represents the F (Fire) Input State - the state of the F (Fire) input coming into J40 of the iSTAR Edge. In other words, this is the fire alarm. The Fire Alarm Interface activates the relays on the iSTAR Edge when the F input goes True. This input is supervised as NC (Normally Closed).
- **FAI Relay Control** input – The FAI relay control is a pseudo input that indicates the state of the Relay Drive signal that activates or latches the selected relays when the F (Fire) input is True.
- **FAI Key Supervision State**input – This input represents the K (Key) Input State. The K input is used to unlatch the latched relays, which removes the relay drive signal, once it is clear that the fire emergency is over. The K (Key) input is usually a momentary contact key switch. The K input is supervised as NO (Normally Open).

General Purpose Inputs

- iSTAR Edge provides eight general purpose inputs.

Fire Alarm Interface

FAI (Fire Alarm Interface) is a hardware feature on the iSTAR Edge that is typically used to perform the following tasks when a fire alarm signal is present.

- Unlock all doors when fire is present.
- Remove power from various devices when fire is present.

All three of the FAI Inputs support Event triggers based on their active or inactive states. These Event triggers can be configured to activate alarms, send emails, run a Roll Call Report, etc based on the state changes of the three FAI inputs.

FAI Modes

There are two basic FAI modes that can be configured at the controller.

- FAI without Latch - This method requires the F (Fire) input (NC) of J40 plus the individual enable switches for each relay (SW2 through SW5).
- FAI with Latch and subsequent Unlatch - This method requires the F (Fire) input of J40 plus the individual enable switches for each relay (SW2 through SW5), plus SW6 to enable the Latch and J40 K (Key) input (NO) to reset the Latch.

The Key input is usually a key switch that momentarily closes when the key is inserted and rotated.

The FAI mode chosen at the controller will determine how you might want to use the Triggers and Actions available in the software to provide notification of a fire alarm and related actions. See the *iSTAR Edge Installation and Configuration Guide* for detailed information about wiring the FAI inputs.

To Configure the iSTAR eX/Edge Controller Inputs Tab

1. From the iSTAR Ex/Edge Controller Editor, click the **Inputs** tab.
2. Create the **Special Purpose Inputs** that you need by clicking **Create All Inputs** or by selecting the **Configured** check box for only the Inputs you wish to create.
3. Click ... in the **Edit** column to configure individual Special Purpose Inputs. See the definitions of the Special Purpose Inputs in Table 37 on Page 168 and see iSTAR Input Editor on Page 227 for configuration instructions.
4. Create the **General Purpose Inputs** that you need by clicking **Create All Inputs** or by selecting the **Configured** check box for only the Inputs you wish to create.
5. Click ... in the **Edit** column to configure individual General Purpose Inputs. See the definitions of the General Purpose Inputs in Table 37 on Page 168 and see iSTAR Input Editor on Page 227.
6. Click **Save and Close** to save the settings you have configured on the iSTAR Controller Inputs tab, or click another tab in the iSTAR Controller Editor to perform additional configuration.

iSTAR eX/Edge Controller Inputs Tab Definitions

The iSTAR eX and iSTAR Edge Inputs tabs include the fields and buttons detailed in Table 37 on Page 168.

Table 37: iSTAR eX and iSTAR Edge Inputs Tab Definitions

Field/Button	Description
Special Purpose Inputs	

iSTAR eX and iSTAR Edge Inputs Tab Definitions (continued)

Field/Button	Description
Create All Inputs	Click to create all the Special Purpose Inputs. When you click **Create All Inputs** the Configured column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Input Editor to configure an Input.
Delete All Inputs	When you click **Delete All Inputs**, the check boxes in the **Configured** column are cleared for all Special Purpose Inputs, and all these Inputs are immediately deleted (any settings you have configured are lost). You will need to confirm each deletion.
Edit column	Click [...] in the **Edit** column to open the iSTAR Input Editor to configure a Special Purpose Input. See iSTAR Input Editor on Page 227.
Input Type column	This column displays the type of each Special Purpose Input.
Configured column	Click □ in this column to create an input (make it available to be edited)**.**
Name column	Displays the name for this Input. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column, then click [...] to select an Input template to use for creating this Input from the list of available Input templates. You can only select a Template prior to creating the input.
Tamper	The **Tamper** input activates when the controller cabinet is opened or removed from its mounting surface. Select the check box in the **Configured** column and click [...] in the **Edit** column to open the iSTAR Input Editor. From the Input Editor you can configure the settings and link to events through triggers.
Power Failure	The **Power Failure** input monitors the AC power failure output of a battery backup unit, such as the Advanced Power System (apS). When this alarm input activates, it specifies that the GCM has lost its primary power source, and is operating on batteries.
Battery Low	The **Battery Low** input activates when the emergency DC battery is running low on power.
FAI Supervision State	(iSTAR Edge only) – This is the F (Fire) Input State. Indicates the state of the F (Fire) input coming into J40 of the iSTAR Edge. In other words, this is the fire alarm.
FAI Key Supervision State	(iSTAR Edge only) – This is the K (Key) input state. Indicates the state of the K (Key) switch at J40 of the iSTAR Edge.
FAI Relay Control	(iSTAR Edge only) – This pseudo input indicates the state of the Relay Drive signal that activates or latches the selected relays when the F (Fire) input is true,
Onboard Battery Low (iSTAR Edge only)	The **Onboard Battery Low** activates when the voltage of all four onboard AA alkaline batteries in series reaches 4.6 volts, or if a battery is missing or disconnected. Upon loss of external or PoE power to the Edge, data is written to onboard flash. Four onboard non-rechargeable alkaline AA batteries provide power for the backup process and maintaining the clock. Backup is valid for the period the onboard batteries can maintain the clock. The period has been tested for >3 days, but should reasonably last for 2 weeks.
General Purpose Inputs	
Create All Inputs	Click to create all the General Purpose Inputs. When you click **Create All Inputs** the **Configured** column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Input Editor to configure an Input.
Delete All Inputs	When you click **Delete All Inputs**, the check boxes in the Configured column are cleared for all General Purpose Inputs, and all these Inputs are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Input Editor to configure a General Purpose Input. See iSTAR Input Editor on Page 227.

iSTAR eX and iSTAR Edge Inputs Tab Definitions (continued)

Field/Button	Description
Index column	This column displays the number of each General Purpose Input.
Configured column	Click □ in this column to create an input (make it available to be edited).
Name column	Displays the name for this Input. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Template column	Click in this column, then click ... to select an Input template to use for creating this Input from the list of available Input templates. You can only select a Template prior to creating the input.
Index 1 - 8 (iSTAR Edge) Index 1 - 16 (iSTAR eX)	The General Purpose Inputs can be configured in an iSTAR Door as door switch monitor or request to exit inputs. Select the check box in the **Configured** column and click ... in the **Edit** column to open the iSTAR Input Editor. From the editor you can configure the settings for a General Purpose Input.

iSTAR Edge/eX Controller Outputs Tab

The iSTAR Controller Outputs tab is available only on the iSTAR eX Controller editor and the iSTAR Edge Controller editor.

The Outputs tab in the iSTAR Controller Editor lets you define four Relay Outputs and four Open Collector Outputs (on the iSTAR eX only).

To Configure the iSTAR eX/Edge Outputs Tab

1. From the iSTAR Ex/Edge Controller Editor, click the Outputs tab.
2. Create the **Relay Outputs** that you need by clicking **Create All Outputs** or by selecting the **Configured** check box for only the Outputs you wish to create.
3. Click ... in the **Edit** column to configure individual Relay Outputs. See the definitions of the Relay Outputs in Table 38 on Page 170 and see iSTAR Output Editor on Page 236 for configuration instructions.
4. On an iSTAR eX, create the **Open Collector Outputs** that you need by clicking **Create All Outputs** or by selecting the **Configured** check box for only the Outputs you wish to create.
5. Click ... in the **Edit** column to configure individual Open Collector Outputs. See the definitions of the Open Collector Outputs in Table 38 on Page 170 and see iSTAR Output Editor on Page 236 for configuration instructions.
6. Click **Save and Close** to save the settings you have configured on the iSTAR Controller Outputs tab, or click another tab in the iSTAR Controller Editor to perform additional configuration.

iSTAR eX/Edge Controller Outputs Tab Definitions

The iSTAR eX and iSTAR Edge Outputs tab includes the fields and buttons detailed in Table 38 on Page 170.

Table 38: iSTAR eX and iSTAR Edge Outputs Tab Definitions

Box	Description
Relay Outputs (iSTAR ex and iSTAR Edge)	

Table 38: iSTAR eX and iSTAR Edge Outputs Tab Definitions (continued)

Box	Description
Create All Outputs	Click to create all the Relay Outputs. When you click **Create All Outputs** the **Configured** column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Output Editor to configure an Output.
Delete All Inputs	When you click **Delete All Outputs**, the check boxes in the **Configured** column are cleared for all Relay Outputs, and all these Outputs are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Output Editor to configure a Relay Output. See iSTAR Output Editor on Page 236.
Index column	This column displays the number of each Relay Output.
Configured column	Click □ in this column to create an Output (make it available to be edited).
Name column	Displays the name for this Output. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column, then click [...] to select an Output template to use for creating this Output from the list of available Output templates. You can only select a Template prior to creating the Output.
Relay Outputs 1 - 4	Select the check box in the **Configured** column and click [...] located in the **Edit** column to open the iSTAR Output Editor. From the editor you can configure the settings for the Relay Output.
Open Collector Outputs (iSTAR eX Only)	
Create All Outputs	Click to create all the Open Collector Outputs. When you click **Create All Outputs** the **Configured** column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Output Editor to configure an Output.
Delete All Outputs	When you click **Delete All Outputs**, the check boxes in the **Configured** column are cleared for all Open Collector Outputs, and all these Outputs are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Output Editor to configure an Open Collector Output. See iSTAR Output Editor on Page 236.
Index column	This column displays the type of each Open Collector Output.
Configured column	Click □ in this column to create an Output (make it available to be edited).
Name column	Displays the name for this Output. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column, then click [...] to select an Output template to use for creating this Output from the list of available Output templates. You can only select a Template prior to creating the Output.
Open Collector Outputs 5 - 8	Select the check box in the **Configured** column and click [...] located in the **Edit** column to open the iSTAR Output Editor. From the editor you can configure the settings for an Open Collector Output.

iSTAR Edge COM1/COM2/COM3 Tabs

The COM1, COM2, and COM3 tabs in the iSTAR Edge Controller Editor let you define security objects that are connected to the COM1, COM2, and COM3 ports. RM readers, I/8s, and R/8s can be connected to the COMx ports.

The iSTAR Edge can support either two or four Readers, depending on the model.

These Readers can be configured on either the Readers tab or on the COM1, COM2, or COM3 tabs in any combination, as long as the total number of Readers does not exceed the maximum allowed.

The number of I/8 and R/8 bus modules that are supported on the COMx ports depend upon the model:

- Four I/8 s and four R/8s are supported on the two-reader model.
- Eight I/8 s and eight R/8s are supported on the four-reader model.

To Configure the iSTAR Edge COM1, COM2, or COM3 Tab

1. From the iSTAR Edge Controller Editor, click the COMx tab.
2. In the Input Boards table, create the **Input Boards** that you need by clicking **Create All Input Boards** or by selecting the **Configured** check box for only the Input Boards you wish to create.
3. Click ... in the Edit column to configure individual Input Boards. See the definitions of the Input Boards in Table 42 on Page 179 and see iSTAR Input Board Editor on Page 207 for configuration instructions.
4. In the Output Boards table, create the **Output Boards** that you need by clicking **Create All Outputs** or by selecting the **Configured** check box for only the Output boards you wish to create.
5. Click ... in the Edit column to configure individual Output Boards. See the definitions of the Output Boards in Table 42 on Page 179 and see iSTAR Output Board Editor on Page 211 for configuration instructions.
6. In the Reader Boards table, create the **Readers** that you need by clicking **Create All Readers** or by selecting the **Configured** check box for only the Reader you wish to create.
7. Click ... in the Edit column to configure individual Readers. See the definitions of the Readers in Table 42 on Page 179 and see iSTAR Reader Editor on Page 466 for configuration instructions.
8. Click **Save and Close** to save the settings you have configured on the iSTAR Controller COM tabs, or click another tab in the iSTAR Controller Editor to perform additional configuration.

iSTAR Edge COM Tabs Definitions

Table 39: iSTAR Edge COM Tabs Definitions

Box	Description
Input Boards	
Create All Input Boards	Click to create all the Input Boards. When you click **Create All Input Boards** the Configured column check boxes are selected, and you can click ... in the Edit column to open the iSTAR Input Board Editor to configure an Input Board.
Delete All Inputs Boards	When you click **Delete All Input Boards**, the check boxes in the Configured column are cleared for all Input Boards, and all these Input Boards are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Input Board Editor to configure an Input Board. See iSTAR Input Board Editor on Page 207.
Index column	This column displays the number of each Input Board.
Configured column	Click □ in this column to create an Input Board (make it available to be edited).

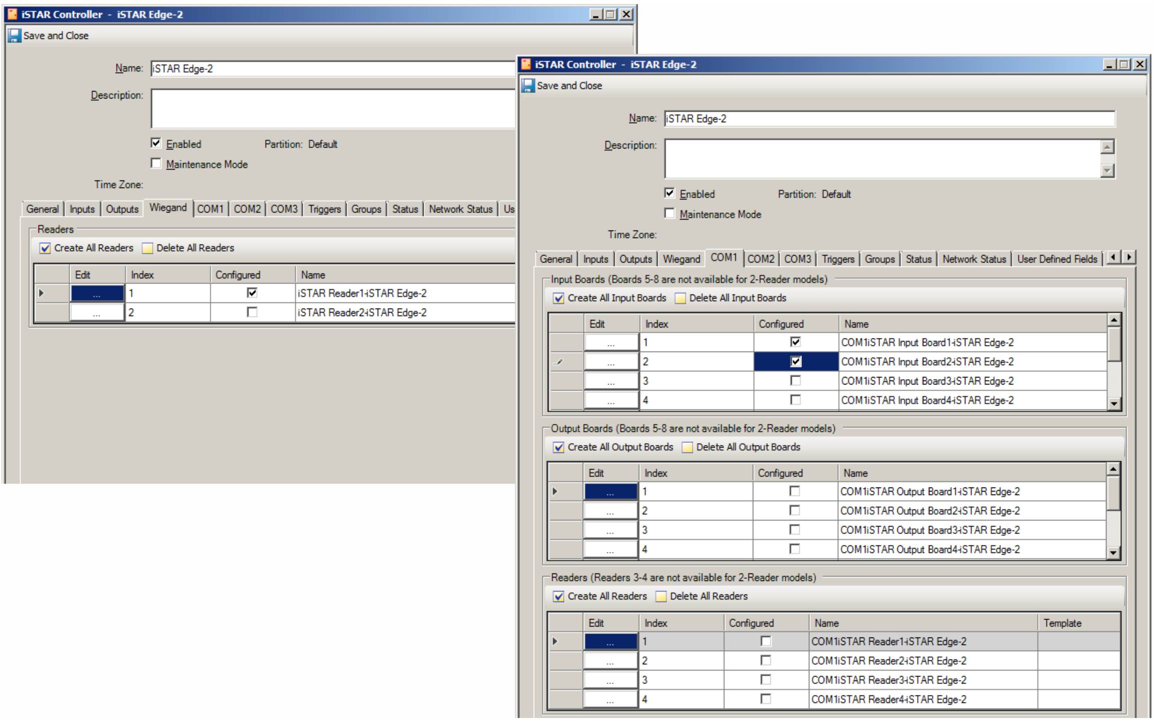
Table 39: iSTAR Edge COM Tabs Definitions (continued)

Box	Description
Name column	Displays the name for this Input Board. The name is system-generated by default, but you can edit this name by clicking in this field.
Input Boards 1 - 8	Select the check box in the **Configured** column and click ... in the **Edit** column to open the iSTAR Input Board Editor. From the editor you can configure the settings for the Input Board.
Output Boards	
Create All Output Boards	Click to create all the Output Boards. When you click **Create All Output Boards** the Configured column check boxes are selected, and you can click ... in the Edit column to open the iSTAR Output Board Editor to configure an Output Board.
Delete All Output Boards	When you click **Delete All Output Boards**, the check boxes in the Configured column are cleared for all Output Boards, and all these Output Boards are immediately deleted (any settings you have configured are lost).
Output Boards 1 - 8	Select the check box in the **Configured** column and click ... in the **Edit** column to open the iSTAR Output Board Editor. From the editor you can configure the settings for the Output Board.
Readers	
Create All Readers	Click to create all the Readers. When you click **Create All Readers** the **Configured** column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Reader Editor to configure a Reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all Readers, and all these Readers are immediately deleted (any settings you have configured are lost).
Readers 1 - 4	Select the check box in the **Configured** column and click ... in the **Edit** column to open the iSTAR Reader Editor. From the editor you can configure the settings for the Reader. You can create up to four Readers in this table for an iSTAR Edge, but if your iSTAR Edge is not a 4-reader model, Readers 3 - 4 will not function. The Template column shows the template name if you selected a Template prior to creating the Reader.

iSTAR Edge Controller Wiegand Tab

The iSTAR Edge Controller Editor Wiegand tab, shown in Figure 66 on Page 174, allows you to configure direct connect Reader devices. Readers that are not connected directly are configured on the COM1, COM2, or COM3 tabs.

Figure 66: iSTAR Edge Controller Editor Wiegand and COM Tabs



iSTAR Controller - iSTAR Edge-2

Save and Close

Name: iSTAR Edge-2

Description:

☑ Enabled Partition: Default

□ Maintenance Mode

Time Zone:

General | Inputs | Outputs | Wiegand | COM1 | COM2 | COM3 | Triggers | Groups | Status | Network Status | Us

Readers

☑ Create All Readers □ Delete All Readers

Edit	Index	Configured	Name
...	1	☑	iSTAR Reader1-iSTAR Edge-2
...	2	□	iSTAR Reader2-iSTAR Edge-2

iSTAR Controller - iSTAR Edge-2

Save and Close

Name: iSTAR Edge-2

Description:

☑ Enabled Partition: Default

□ Maintenance Mode

Time Zone:

General | Inputs | Outputs | Wiegand | COM1 | COM2 | COM3 | Triggers | Groups | Status | Network Status | User Defined Fields

Input Boards (Boards 5-8 are not available for 2-Reader models)

☑ Create All Input Boards □ Delete All Input Boards

Edit	Index	Configured	Name
...	1	☑	COM1iSTAR Input Board1-iSTAR Edge-2
...	2	☑	COM1iSTAR Input Board2-iSTAR Edge-2
...	3	□	COM1iSTAR Input Board3-iSTAR Edge-2
...	4	□	COM1iSTAR Input Board4-iSTAR Edge-2

Output Boards (Boards 5-8 are not available for 2-Reader models)

☑ Create All Output Boards □ Delete All Output Boards

Edit	Index	Configured	Name
...	1	□	COM1iSTAR Output Board1-iSTAR Edge-2
...	2	□	COM1iSTAR Output Board2-iSTAR Edge-2
...	3	□	COM1iSTAR Output Board3-iSTAR Edge-2
...	4	□	COM1iSTAR Output Board4-iSTAR Edge-2

Readers (Readers 3-4 are not available for 2-Reader models)

☑ Create All Readers □ Delete All Readers

Edit	Index	Configured	Name	Template
...	1	□	COM1iSTAR Reader1-iSTAR Edge-2	
...	2	□	COM1iSTAR Reader2-iSTAR Edge-2	
...	3	□	COM1iSTAR Reader3-iSTAR Edge-2	
...	4	□	COM1iSTAR Reader4-iSTAR Edge-2	

The Readers can be configured on either the **Wiegand** tab or on the **COM1**, **COM2**, or **COM3** tab in any combination, as long as the total number of Readers does not exceed the maximum allowed.

The iSTAR Edge supports a maximum of either two readers or four readers depending on the model.

You can configure up to two Readers on the Wiegand tab, and the remaining Readers, in any combination, on the COM1, COM2, and COM3 tabs. See the *iSTAR Edge Installation and Configuration Guide* for more information about the two models.

Example:

> If you configure two Readers on the iSTAR Edge Wiegand tab, the iSTAR Edge Controller Editor makes the Reader 1 - 2 objects on the COM1 and COM2 tabs unavailable (shaded gray) leaving Reader 3 - 4 objects available.

To Configure the iSTAR Edge Wiegand Tab

1. From the iSTAR Edge Controller Editor, click the Wiegand tab.
2. Create the **Readers** that you need by clicking **Create All Readers** or by selecting the **Configured** check box for only the Readers you wish to create.
3. Click **...** in the **Edit** column to configure individual Readers. See the definitions of the Readers in Table 40 on Page 175 and see iSTAR Reader Editor on Page 466 for configuration instructions.
4. Click **Save and Close** to save the settings you have configured on the iSTAR Controller Wiegand tab, or click another tab in the iSTAR Controller Editor to perform additional configuration.

iSTAR Edge Controller Wiegand Tab Definitions

The iSTAR Edge Wiegand tab includes the fields and buttons detailed in Table 40 on Page 175.

Table 40: iSTAR Edge Wiegand Tab Definitions

Box	Description
Create All Readers	Click to create all the Readers. When you click **Create All Readers**, the **Configured** column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Reader Editor to configure a Reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all Readers, and all these Readers are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Reader Editor to configure a Reader. See iSTAR Reader Editor on Page 466.
Index column	This column displays the number for each reader. This number is the physical port number for a Direct Connect Wiegand reader.
Configured column	Click □ in this column to create a reader (make it available to be edited).
Name column	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column prior to creating the Reader, then click ... to select a Reader template from the list of available Reader templates. The **Template** column shows the template name chosen if you selected a Template prior to creating the Reader.
Readers 1 - 2	Select the check box in the **Configured** column for a Reader and click ... located in the **Edit** column to open the iSTAR Reader Editor General tab to configure the Options, Triggers, Groups, Status and State Images that are associated with a Reader. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Readers. If the row in this table for a particular reader is unavailable for selection (shaded gray) it indicates that this reader number is configured on one of the COM tabs in the iSTAR Controller Editor. The **Name** column displays a name comprised of the Reader Type and the iSTAR Controller name. You can click in this column to edit the Reader name.

iSTAR eX Controller Wiegand Tab

The iSTAR eX Wiegand tab, shown in Figure 67 on Page 176, allows you to configure direct connect Reader devices. Readers that are not connected directly are configured on the COM1 or COM2 tabs.

The iSTAR eX can support up to a total of eight Readers if an iSTAR eX Security Key is installed, or four Readers without the Security Key.

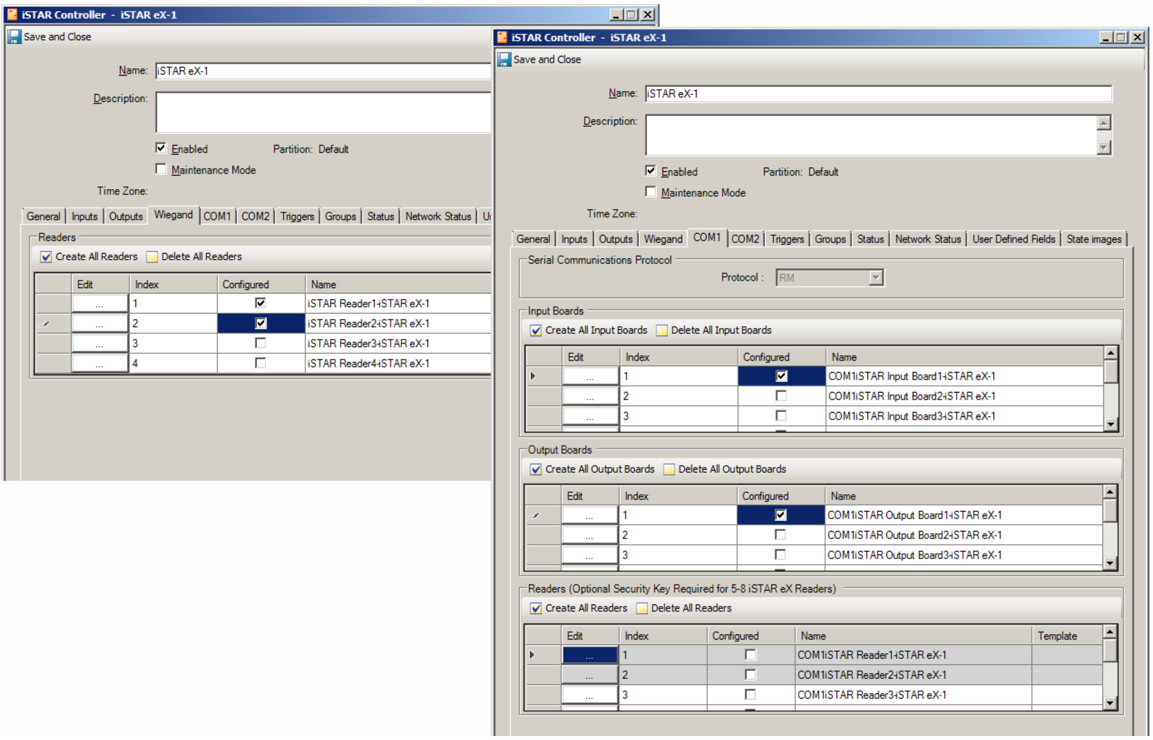
These Readers can be configured on either the Readers tab or on the COM1 or COM2 tabs in any combination, as long as the total number of Readers does not exceed the maximum allowed.

For iSTAR eX, you can configure up to four of these Readers on the iSTAR eX Wiegand tab, and the remaining Readers, in any combination, on the COM1 and COM2 tabs. See the *iSTAR eX Installation and Configuration Guide* for more information about the iSTAR eX Security Key.

Example:

> If you configure Readers 1 and 2 on the iSTAR eX Wiegand tab, the iSTAR eX Controller Editor makes the Reader 1 and 2 objects on the COM1 and COM2 tabs unavailable (shaded gray). Conversely, when you add Readers 3 and 4 to one of the COMx tabs, the corresponding readers on the Wiegand tab are unavailable.

Figure 67: iSTAR eX Wiegand and COM Tabs


iSTAR Controller - iSTAR eX-1
Save and Close
General | Inputs | Outputs | Wiegand | COM1 | COM2 | Triggers | Groups | Status | Network Status | U
Readers
iSTAR Controller - iSTAR eX-1
Save and Close
General | Inputs | Outputs | Wiegand | COM1 | COM2 | Triggers | Groups | Status | Network Status | User Defined Fields | State images
Serial Communications Protocol
Input Boards
Output Boards
Readers (Optional Security Key Required for 5-8 iSTAR eX Readers)

Name: iSTAR eX-1

Description:

☑ Enabled Partition: Default

☐ Maintenance Mode

Time Zone:

☑ Create All Readers ☐ Delete All Readers

Edit	Index	Configured	Name
...	1	☑	iSTAR Reader1-iSTAR eX-1
...	2	☑	iSTAR Reader2-iSTAR eX-1
...	3	☐	iSTAR Reader3-iSTAR eX-1
...	4	☐	iSTAR Reader4-iSTAR eX-1

Name: iSTAR eX-1

Description:

☑ Enabled Partition: Default

☐ Maintenance Mode

Time Zone:

Protocol : RM

☑ Create All Input Boards ☐ Delete All Input Boards

Edit	Index	Configured	Name
...	1	☑	COM1iSTAR Input Board1-iSTAR eX-1
...	2	☐	COM1iSTAR Input Board2-iSTAR eX-1
...	3	☐	COM1iSTAR Input Board3-iSTAR eX-1

☑ Create All Output Boards ☐ Delete All Output Boards

Edit	Index	Configured	Name
...	1	☑	COM1iSTAR Output Board1-iSTAR eX-1
...	2	☐	COM1iSTAR Output Board2-iSTAR eX-1
...	3	☐	COM1iSTAR Output Board3-iSTAR eX-1

☑ Create All Readers ☐ Delete All Readers

Edit	Index	Configured	Name	Template
...	1	☐	COM1iSTAR Reader1-iSTAR eX-1	
...	2	☐	COM1iSTAR Reader2-iSTAR eX-1	
...	3	☐	COM1iSTAR Reader3-iSTAR eX-1	

To Configure the iSTAR eX Wiegand Tab

1. From the iSTAR eX Controller Editor, click the Wiegand tab.
2. Create the **Readers** that you need by clicking **Create All Readers** or by selecting the **Configured** check box for only the Readers you wish to create.
3. Click **...** in the **Edit** column to configure individual Readers. See the definitions of the Readers in Table 41 on Page 176 and see iSTAR Reader Editor on Page 466 for configuration instructions.
4. Click **Save and Close** to save the settings you have configured on the iSTAR Controller Wiegand tab, or click another tab in the iSTAR Controller Editor to perform additional configuration.

iSTAR eX Controller Wiegand Tab Definitions

The iSTAR eX Wiegand tab includes the fields and buttons detailed in Table 41 on Page 176.

Table 41: iSTAR eX Wiegand Tab Definitions

Box	Description
Create All Readers	Click to create all the Readers. When you click **Create All Readers**, the **Configured** column check boxes are selected, and you can click **...** in the **Edit** column to open the iSTAR Reader Editor to configure a Reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all Readers, and all these Readers are immediately deleted (any settings you have configured are lost).
Edit column	Click **...** in the **Edit** column to open the iSTAR Reader Editor to configure a Reader. See iSTAR Reader Editor on Page 466.

Table 41: iSTAR eX Wiegand Tab Definitions (continued)

Box	Description
Index column	This column displays the number for each reader. This number is the physical port number for a Direct Connect Wiegand reader.
Configured column	Click □ in this column to create a reader (make it available to be edited).
Name column	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column prior to creating the Reader, then click ... to select a Reader template from the list of available Reader templates. The **Template** column shows the template name chosen if you selected a Template prior to creating the Reader.
Readers 1 - 8 Readers 5 - 8 are only available if the 8 reader USB key is present in the GCM.	Select the check box in the **Configured** column for a Reader and click ... located in the **Edit** column to open the iSTAR Reader Editor General tab to configure the Options, Triggers, Groups, Status and State Images that are associated with a Reader. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Readers. If the row in this table for a particular reader is unavailable for selection (shaded gray) it indicates that this reader number is configured on one of the COM tabs in the iSTAR Controller Editor. In Figure 67 on Page 176, for example, Reader #4 is configured on another tab. The **Name** column displays a name comprised of the Reader Type and the iSTAR Controller name. You can click in this column to edit the Reader name.

iSTAR eX COM1/COM2 Tabs

The COM1 and COM2 tabs in the iSTAR eX Controller Editor, let you define security objects that are connected to the COM1 and COM2 ports.

The iSTAR eX Controller COM1 and COM2 tabs have a **Protocol** drop-down list that lets you choose the type of serial communications board is connected to the controller:

- COM1 or COM2 Schlage Wireless PIM on Page 177
- COM1 or COM2 RM Communications on Page 178

The options available on the COM1 or COM2 tab depend upon which Serial Communications option you select.

COM1 or COM2 Schlage Wireless PIM

If you select **Schlage Wireless** from the Protocol drop-down list, the COM1 or COM2 tab displays 16 possible PIM Boards that you can configure.

To Configure the iSTAR eX COM1 or COM2 Tab for Schlage Wireless PIMs

1. From the iSTAR Ex Controller Editor, click one of the COM tabs.
2. Select **Schlage Wireless** from the **Protocol** drop-down list.
3. In the Schlage Wireless PIMs table that appears, create the **PIMs** that you need by clicking **Create All PIMs** or by selecting the **Configured** check box for only the PIMs you wish to create.
4. Click ... in the Edit column to configure individual PIMs. See:
   - iSTAR Schlage Wireless PIMs Tab Definitions on Page 162 for definitions for the PIM board fields and buttons.
   - iSTAR PIM-485 Reader I/O Tab on Page 481 for configuration instructions.

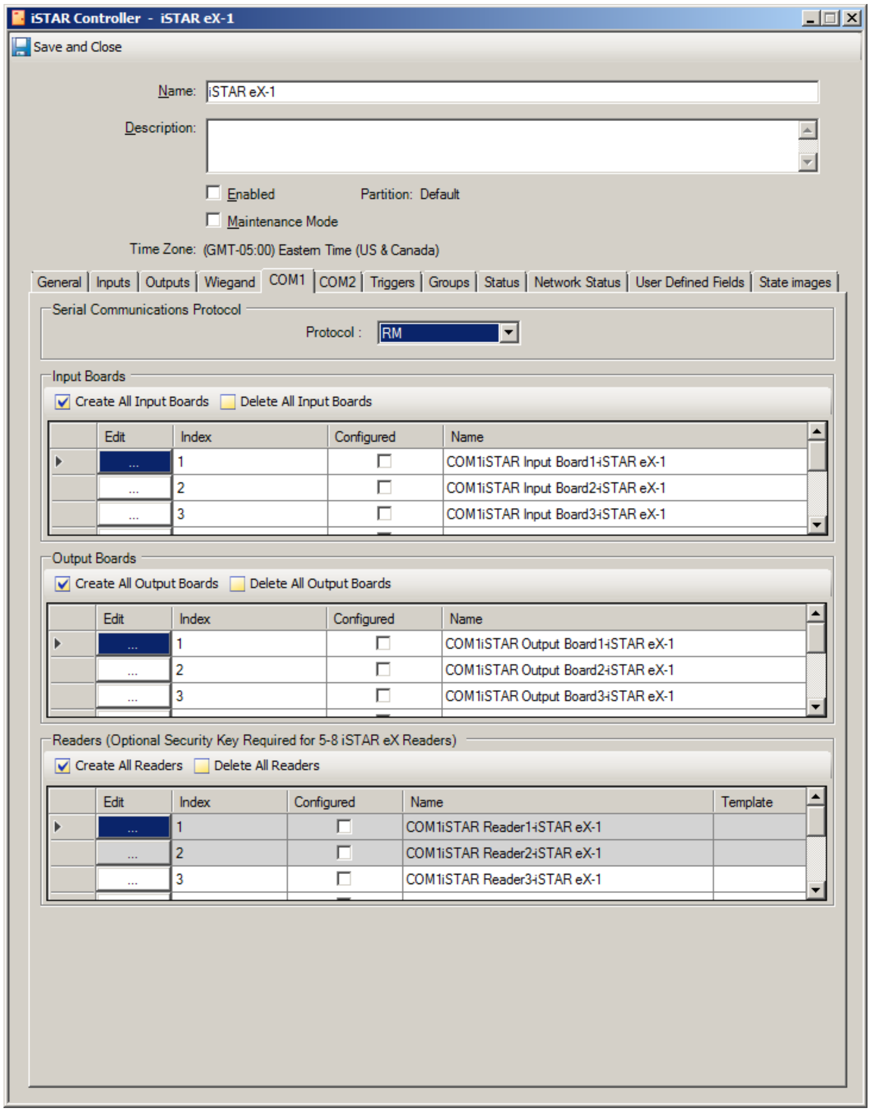
5. Click **Save and Close** to save the settings you have configured on the iSTAR Controller COM tabs.

COM1 or COM2 RM Communications

If you select the **RM** option from the Protocol drop-down list, the COM1 or COM2 tab displays 4 Input Boards, 4 Output Boards, and up to 8 RM Readers that you can configure.

Figure 68 on Page 178 shows the COM1 and COM2 tabs for an iSTAR eX.

Figure 68: iSTAR eX Controller COM Tabs



Name: iSTAR eX-1

Description:

☐ Enabled Partition: Default

☐ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Serial Communications Protocol

Protocol : RM

Input Boards

☑ Create All Input Boards ☐ Delete All Input Boards

Edit	Index	Configured	Name
...	1	☐	COM1iSTAR Input Board1-iSTAR eX-1
...	2	☐	COM1iSTAR Input Board2-iSTAR eX-1
...	3	☐	COM1iSTAR Input Board3-iSTAR eX-1

Output Boards

☑ Create All Output Boards ☐ Delete All Output Boards

Edit	Index	Configured	Name
...	1	☐	COM1iSTAR Output Board1-iSTAR eX-1
...	2	☐	COM1iSTAR Output Board2-iSTAR eX-1
...	3	☐	COM1iSTAR Output Board3-iSTAR eX-1

Readers (Optional Security Key Required for 5-8 iSTAR eX Readers)

☑ Create All Readers ☐ Delete All Readers

Edit	Index	Configured	Name	Template
...	1	☐	COM1iSTAR Reader1-iSTAR eX-1	
...	2	☐	COM1iSTAR Reader2-iSTAR eX-1	
...	3	☐	COM1iSTAR Reader3-iSTAR eX-1	

The iSTAR eX can support up to four Readers, and an additional four Readers if equipped with an iSTAR eX Security Key.

These Readers can be configured on either the Readers tab or on the COM1 or COM2 tabs, in any combination, as long as the total number of Readers does not exceed the maximum allowed.

Example:

If you configure two Readers on the iSTAR eX Controller Readers tab and two Readers on the COM1 tab, the Editor makes the remaining Reader connections on the Reader, COM1, and COM2 tabs unavailable. Sections of the COM tab are shaded gray (unavailable) to signify that these devices are configured on another tab.

If you select the RM option from the **Protocol** drop-down list, COM1 and COM2 are configured to support RM bus readers. The iSTAR eX can support up to four RM reader devices (or eight Readers if the iSTAR eX Security Key is installed). A total of eight I/8 and eight R/8 devices can also be configured on the iSTAR eX on COM1 and/or COM2.

NOTE However you configure iSTAR eX Readers, they must match the setting of the S1 switch on the PMB. The S1 switches define which COM port the RM ports are connected to in the hardware. See the *iSTAR eX Installation and Configuration Guide*.

To Configure the iSTAR eX COM1 or COM2 Tab

1. From the iSTAR Ex Controller Editor, click one of the COM tabs.
2. Select RM from the **Protocol** drop-down list.
3. In the Input Boards table, create the **Input Boards** that you need by clicking **Create All Input Boards** or by selecting the **Configured** check box for only the Input Boards you wish to create.
4. Click ... in the Edit column to configure individual Input Boards. See the definitions of the Input Boards in Table 42 on Page 179 and see iSTAR Input Board Editor on Page 207 for configuration instructions.
5. In the Output Boards table, create the **Output Boards** that you need by clicking **Create All Outputs** or by selecting the **Configured** check box for only the Output boards you wish to create.
6. Click ... in the Edit column to configure individual Output Boards. See the definitions of the Output Boards in Table 42 on Page 179 and see iSTAR Output Board Editor on Page 211 for configuration instructions.
7. In the Readers Boards table, create the **Readers** that you need by clicking **Create All Readers** or by selecting the **Configured** check box for only the Reader you wish to create.
8. Click ... in the Edit column to configure individual Readers. See the definitions of the Readers in Table 42 on Page 179 and see iSTAR Reader Editor on Page 466 for configuration instructions.
9. Click **Save and Close** to save the settings you have configured on the iSTAR Controller COM tabs, or click another tab in the iSTAR Controller Editor to perform additional configuration.

iSTAR eX COM Tabs Definitions

Table 42 on Page 179 contains definitions for the fields and buttons on the iSTAR eX COM tabs.

Table 42: iSTAR eX COM Tabs Definitions

Box	Description
Input Boards	
Create All Input Boards	Click to create all the Input Boards. When you click **Create All Input Boards** the Configured column check boxes are selected, and you can click ... in the Edit column to open the iSTAR Input Board Editor to configure an Input Board.
Delete All Inputs Boards	When you click **Delete All Input Boards**, the check boxes in the Configured column are cleared for all Input Boards, and all these Input Boards are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Input Board Editor to configure an Input Board. See iSTAR Input Board Editor on Page 207.
Index column	This column displays the number of each Input Board.

Table 42: iSTAR eX COM Tabs Definitions (continued)

Box	Description
Configured column	Click □ in this column to create an Input Board (make it available to be edited).
Name column	Displays the name for this Input Board. The name is system-generated by default, but you can edit this name by clicking in this field.
Input Boards 1 - 8	Select the check box in the **Configured** column and click … in the **Edit** column to open the iSTAR Input Board Editor. From the editor you can configure the settings for the Input Board.
Output Boards	
Create All Output Boards	Click to create all the Output Boards. When you click **Create All Output Boards** the Configured column check boxes are selected, and you can click … in the Edit column to open the iSTAR Output Board Editor to configure an Output Board.
Delete All Output Boards	When you click **Delete All Output Boards**, the check boxes in the Configured column are cleared for all Output Boards, and all these Output Boards are immediately deleted (any settings you have configured are lost).
Output Boards 1 - 8	Select the check box in the **Configured** column and click … in the **Edit** column to open the iSTAR Output Board Editor. From the editor you can configure the settings for the Output Board.
Readers	
Create All Readers	Click to create all the Readers. When you click **Create All Readers** the **Configured** column check boxes are selected, and you can click … in the **Edit** column to open the iSTAR Reader Editor to configure a Reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all Readers, and all these Readers are immediately deleted (any settings you have configured are lost).
Readers 1 - 8	Select the check box in the **Configured** column and click … in the **Edit** column to open the iSTAR Reader Editor. From the editor you can configure the settings for the Reader. You can create up to eight Readers in this table for an iSTAR eX, but if your iSTAR eX does not have an iSTAR eX Security key, Readers 5-8 will not function. The Template column shows the template name if you selected a Template prior to creating the Reader.

iSTAR Ultra Controller Editor Inputs Tab

The Inputs tab lets you define the Main Board (GCM) inputs for the Controller.

All of the inputs support event triggers based on their active or inactive states. These triggers can activate alarms, send emails, run a Roll Call Report, etc.

The Input tab fields and buttons are described in Table 43 on Page 181.

Table 43: Ultra Inputs Tab Definitions

Field/Button	Description
Main Board Inputs	
Create All Inputs	Click to create all the Main Board Inputs. When you click **Create All Inputs** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Input Editor to configure an Input.
Delete All Inputs	When you click **Delete All Inputs**, the check boxes in the **Configured** column are cleared for all Main Board Inputs, and all these Inputs are immediately deleted (any settings you have configured are lost). You will need to confirm each deletion.
Edit column	Click ... in the **Edit** column to open the iSTAR Input Editor to configure a Main Board Input. See iSTAR Input Editor on Page 227.
Input Type column	This column displays the type of each Main Board Input.
Configured column	Click □ in this column to create an input (make it available to be edited).
Name column	Displays the name for this Input. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column, then click ... to select an Input template to use for creating this Input from the list of available Input templates. You can only select a Template prior to creating the input.
Input Type	
Tamper	Activates when the controller cabinet is opened or removed from its mounting surface. Select the check box in the **Configured** column and click ... in the **Edit** column to open the iSTAR Input Editor. From the Input Editor you can configure the settings and link to events through triggers.
Power Failure	Monitors the AC power failure output of a battery backup unit. When this alarm input activates, it specifies that the GCM has lost its primary power source, and is operating on batteries.
External Battery Low	Activates when the emergency DC battery is running low on power.
Port Power RS 485 Port 1/2	Activates if there is a problem with the power on the port.
CPNI Alarm	Activates if the CPNI (Center for the Protection of National Infrastructure) switch S1-2 is changed.

NOTE Tamper, AC power fail, and Low battery inputs must be programmed for UL applications.

iSTAR Ultra Controller Boards Tab

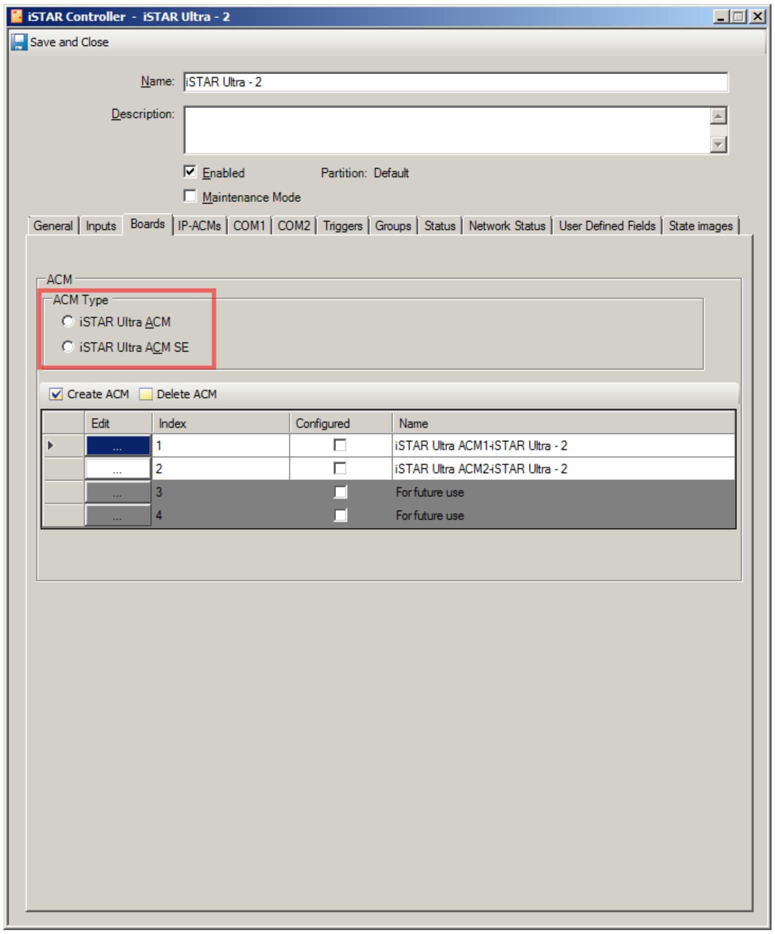
Use the iSTAR Controller Editor Boards tab, shown in Figure 69 on Page 182, to select the ACM type and to open the iSTAR ACM Board editor to configure readers, outputs and inputs.

NOTE You must select the correct ACM type used by the controller:

- iSTAR Ultra - select **iSTAR Ultra ACM**.
- iSTAR Ultra SE - select **iSTAR Ultra ACM SE**.

The ACMs listed in the table are not configurable until the ACM type is selected.

Figure 69: iSTAR Ultra Controller Boards Tab



iSTAR Controller - iSTAR Ultra - 2
Save and Close
General | Inputs | Boards | IP-ACMs | COM1 | COM2 | Triggers | Groups | Status | Network Status | User Defined Fields | State images
ACM
ACM Type
Create ACM
Delete ACM

Name: iSTAR Ultra - 2

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

○ iSTAR Ultra ACM

○ iSTAR Ultra ACM SE

Edit	Index	Configured	Name
...	1	□	iSTAR Ultra ACM1-iSTAR Ultra - 2
...	2	□	iSTAR Ultra ACM2-iSTAR Ultra - 2
...	3	□	For future use
...	4	□	For future use

To Configure the iSTAR Controller Boards Tab

1. From the iSTAR Controller editor, click the **Boards** tab.
2. Select the **ACM Type**:
   - iSTAR Ultra - select **iSTAR Ultra ACM**.
   - iSTAR Ultra SE - select **iSTAR Ultra ACM SE**.
3. Create the **ACM Boards** that you need by clicking **Create All ACMs**, or by selecting the **Configured** check box for only the ACMs you wish to create.
4. Click ... in the **Edit** column to configure an ACM. See iSTAR Ultra Controller ACM Board Editor on Page 195
5. Click **Save and Close**.

Table 44: iSTAR Controller Boards Tab Definitions

Field/Button	Description
ACM Type	Select the iSTAR ACM type from the **ACM Type** drop-down menu. • iSTAR Ultra - select **iSTAR Ultra ACM**. • iSTAR Ultra SE - select **iSTAR Ultra SE ACM**

Table 44: iSTAR Controller Boards Tab Definitions (continued)

Field/Button	Description
Create ACM	When you click **Create ACM** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Ultra ACM Editor to configure the ACM.
Delete ACM	When you click **Delete ACM**, the check boxes in the **Configured** column are cleared for all ACMs, and are deleted (all configuration settings are lost).
Index	Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Ultra ACM Editor to configure the Inputs, Outputs, and Readers that are associated with the ACM board.

iSTAR Ultra Video Controller Boards Tab

Use the iSTAR Controller Editor Boards tab to select the ACM type and to open the iSTAR ACM Board editor to configure readers, outputs and inputs.

To Configure the iSTAR Controller Boards Tab

1. From the iSTAR Controller editor, click the **Boards** tab.
2. Create the **ACM Boards** that you need by clicking **Create All ACMs**, or by selecting the **Configured** check box for only the ACMs you wish to create.
3. Click ... in the **Edit** column to configure an ACM. See iSTAR Ultra Controller ACM Board Editor on Page 195
4. Click **Save and Close**.

Table 45: iSTAR Controller Boards Tab Definitions

Field/Button	Description
Create ACM	When you click **Create ACM** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Ultra ACM Editor to configure the ACM.
Delete ACM	When you click **Delete ACM**, the check boxes in the **Configured** column are cleared for all ACMs, and are deleted (all configuration settings are lost).
Configured	The check box in this column must be selected to be able to configure the ACM.
Index	Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Ultra ACM Editor to configure the Inputs, Outputs, and Readers that are associated with the ACM board.

iSTAR Ultra Controller IP-ACMs Tab

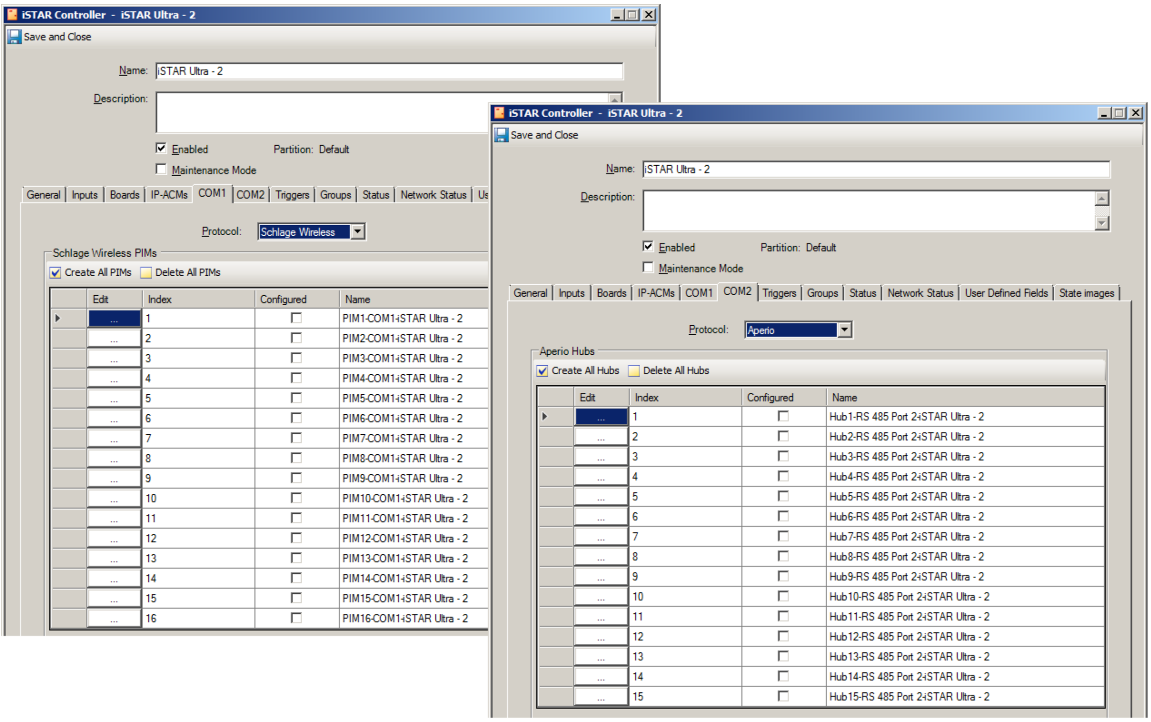
The IP-ACMs tab is used to configure the IP-ACM Offline Mode, readers, inputs, outputs, and triggers.

See Chapter 7, Configuring the IP-ACM for information about configuring the IP-ACM.

iSTAR Ultra COM1/COM2 Tabs

The COM1 and COM2 tabs in the iSTAR Ultra Controller Editor let you define security objects that are connected to the COM1 and COM2 ports. Aperio Hubs and Schlage PIMs can be configured for the COM1 and COM2 ports.

Figure 70: iSTAR Ultra Controller COM Tabs


iSTAR Controller - iSTAR Ultra - 2
Save and Close
General | Inputs | Boards | IP-ACMs | COM1 | COM2 | Triggers | Groups | Status | Network Status | Us

Name: iSTAR Ultra - 2

Description:

☑ Enabled Partition: Default

☐ Maintenance Mode

Protocol: Schlage Wireless

Schlage Wireless PIMs

☑ Create All PIMs ☐ Delete All PIMs

Edit	Index	Configured	Name
...	1	☐	PIM1-COM1-iSTAR Ultra - 2
...	2	☐	PIM2-COM1-iSTAR Ultra - 2
...	3	☐	PIM3-COM1-iSTAR Ultra - 2
...	4	☐	PIM4-COM1-iSTAR Ultra - 2
...	5	☐	PIM5-COM1-iSTAR Ultra - 2
...	6	☐	PIM6-COM1-iSTAR Ultra - 2
...	7	☐	PIM7-COM1-iSTAR Ultra - 2
...	8	☐	PIM8-COM1-iSTAR Ultra - 2
...	9	☐	PIM9-COM1-iSTAR Ultra - 2
...	10	☐	PIM10-COM1-iSTAR Ultra - 2
...	11	☐	PIM11-COM1-iSTAR Ultra - 2
...	12	☐	PIM12-COM1-iSTAR Ultra - 2
...	13	☐	PIM13-COM1-iSTAR Ultra - 2
...	14	☐	PIM14-COM1-iSTAR Ultra - 2
...	15	☐	PIM15-COM1-iSTAR Ultra - 2
...	16	☐	PIM16-COM1-iSTAR Ultra - 2

iSTAR Controller - iSTAR Ultra - 2
Save and Close
General | Inputs | Boards | IP-ACMs | COM1 | COM2 | Triggers | Groups | Status | Network Status | User Defined Fields | State images

Name: iSTAR Ultra - 2

Description:

☑ Enabled Partition: Default

☐ Maintenance Mode

Protocol: Aperio

Aperio Hubs

☑ Create All Hubs ☐ Delete All Hubs

Edit	Index	Configured	Name
...	1	☐	Hub1-RS 485 Port 2-iSTAR Ultra - 2
...	2	☐	Hub2-RS 485 Port 2-iSTAR Ultra - 2
...	3	☐	Hub3-RS 485 Port 2-iSTAR Ultra - 2
...	4	☐	Hub4-RS 485 Port 2-iSTAR Ultra - 2
...	5	☐	Hub5-RS 485 Port 2-iSTAR Ultra - 2
...	6	☐	Hub6-RS 485 Port 2-iSTAR Ultra - 2
...	7	☐	Hub7-RS 485 Port 2-iSTAR Ultra - 2
...	8	☐	Hub8-RS 485 Port 2-iSTAR Ultra - 2
...	9	☐	Hub9-RS 485 Port 2-iSTAR Ultra - 2
...	10	☐	Hub10-RS 485 Port 2-iSTAR Ultra - 2
...	11	☐	Hub11-RS 485 Port 2-iSTAR Ultra - 2
...	12	☐	Hub12-RS 485 Port 2-iSTAR Ultra - 2
...	13	☐	Hub13-RS 485 Port 2-iSTAR Ultra - 2
...	14	☐	Hub14-RS 485 Port 2-iSTAR Ultra - 2
...	15	☐	Hub15-RS 485 Port 2-iSTAR Ultra - 2

The iSTAR Ultra can support up to 32 Readers. There can be up to 16 ACM Readers and up to 32 Aperio Readers or Schlage Readers, but the total number of readers cannot exceed 32. If you try to configure any additional readers, an error message appears. The iSTAR Ultra supports either Aperio or Schlage Wireless Readers. There cannot be a mixture of the two readers on one iSTAR Ultra.

The ACM Readers can be configured as Wiegand direct connect or RM bus as long as the total number of Readers does not exceed eight per ACM or sixteen per iSTAR Ultra.

The Aperio Readers can be configured on any of the possible 30 Hubs, in any combination, as long as the total number of Readers does not exceed 32.

There can be up to 15 Aperio Hubs per COMx port, allowing for a total of 30 Hubs per iSTAR Ultra. Each Hub can support up to 8, or 1, Assa Abloy Readers with a maximum of 16 readers per COMx port. This provides for a maximum of 32 readers per iSTAR Ultra.

NOTE

If using a 1 Reader Hub, the maximum is 30 Aperio Readers (i.e., 1 Reader per Hub).

To Configure the iSTAR Ultra COM1 or COM2 Tab for Aperio

1. From the iSTAR Ultra Controller Editor, click the **COM**x tab.
2. Select **Aperio** in the **Protocol** field. This will also select Aperio in the other COMx tab.
3. In the **Aperio Hubs** table, create the **Aperio Hubs** that you need by selecting the **Configured** check box for only the Hubs you wish to create.
4. Click **...** in the Edit column to configure individual Hubs. See the definitions of the Hubs in iSTAR Ultra COM Tabs Definitions on Page 185 and see iSTAR Aperio RS-485 Hub Board Editor (iSTAR Ultra only) on Page 221 for configuration instructions.
5. Click **Save and Close** to save the settings you have configured on the iSTAR Controller COM tabs, or click another tab in the iSTAR Controller Editor to perform additional configurations.

To Configure the iSTAR Ultra COM1 or COM2 Tab for Schlage

1. From the iSTAR Ultra Controller Editor, click the **COM**x tab.
2. Select **Schlage** in the **Protocol** field. This will also select Schlage in the other COMx tab.
3. In the **Schlage Wireless PIMs** table, create the **Schlage PIMs** that you need by selecting the **Configured** check box for only the PIMs you wish to create.
4. Click [...] in the Edit column to configure individual PIMS.
5. Click **Save and Close** to save the settings you have configured on the iSTAR Controller COM tabs, or click another tab in the iSTAR Controller Editor to perform additional configurations.

iSTAR Ultra COM Tabs Definitions

Table 46: iSTAR Ultra COM Tabs Definitions

Box	Description
Aperio Hubs	
Create All Hubs	Click to create all the Aperio Hubs. When you click **Create All Hubs** the **Configured** column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Aperio RS-485 Hub Board Editor to configure an Aperio Hub.
Delete All Hubs	When you click **Delete All Hubs**, the check boxes in the Configured column are cleared for all Hubs, and all these Hubs are deleted after you confirm each deletion (any settings you have configured are lost).
Protocol	Select **Aperio**.
Edit column	Click [...] in the **Edit** column to open the iSTAR Aperio RS-485 Hub Board Editor to configure an Aperio Hub. See iSTAR Aperio RS-485 Hub Board Editor (iSTAR Ultra only) on Page 221.
Index column	This column displays the number of each Hub (from 1 to 15).
Configured column	Click □ in this column to create an Aperio Hub (make it available to be edited).
Name column	Displays the name for this Aperio Hub. The name is system-generated by default, but you can edit this name by clicking in this field.
Hubs 1 - 15	Select the check box in the **Configured** column and click [...] in the **Edit** column to open the iSTAR Aperio RS-485 Hub Board editor. From the editor you can configure the settings for the Hub.
Schlage PIMs	
Create All PIMs	Click to create all the Schlage PIMs. When you click **Create All PIMs** the **Configured** column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Schlage RS-485 PIM Board Editor to configure a Schlage PIM.
Delete All PIMs	When you click **Delete All PIMs**, the check boxes in the **Configured** column are cleared for all PIMs, and all these PIMs are deleted after you confirm each deletion (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Schlage RS-485 PIM Board Editor to configure a Schlage PIM.
Index column	This column displays the number of each PIM (from 1 to 16).

Table 46: iSTAR Ultra COM Tabs Definitions (continued)

Box	Description
Configured column	Click □ in this column to create a Schlage PIM (make it available to be edited).
Name column	Displays the name for this Schlage PIM. The name is system-generated by default, but you can edit this name by clicking in this field.
PIMs 1 - 16	Select the check box in the **Configured** column and click in the **Edit** column to open the iSTAR Schlage RS-485 PIM Board editor. From the editor you can configure the settings for the PIM.

iSTAR Ultra LT Controller Inputs Tab

The Inputs tab lets you define the General Control Module (GCM) inputs for the Controller.

All of the inputs support event triggers based on their active or inactive states. These triggers can activate alarms, send emails, run a Roll Call Report, etc.

The Input tab fields and buttons are described in Table 47 on Page 186.

Table 47: Ultra LT Inputs Tab Definitions

Field/Button	Description
Main Board Inputs	
Create All Inputs	Click to create all the Main Board Inputs. When you click **Create All Inputs** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Input Editor to configure an Input.
Delete All Inputs	When you click **Delete All Inputs**, the check boxes in the **Configured** column are cleared for all Main Board Inputs, and all these Inputs are immediately deleted (any settings you have configured are lost). You will need to confirm each deletion.
Edit column	Click ... in the **Edit** column to open the iSTAR Input Editor to configure a Main Board Input. See iSTAR Input Editor on Page 227.
Input Type column	This column displays the type of each Main Board Input.
Configured column	Click □ in this column to create an input (make it available to be edited).
Name column	Displays the name for this Input. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column, then click ... to select an Input template to use for creating this Input from the list of available Input templates. You can only select a Template prior to creating the input.
Input Type	
Tamper	Activates when the controller cabinet is opened or removed from its mounting surface. Select the check box in the **Configured** column and click ... in the **Edit** column to open the iSTAR Input Editor. From the Input Editor you can configure the settings and link to events through triggers.
Power Failure	Monitors the AC power failure output of a battery backup unit. When this alarm input activates, it specifies that the GCM has lost its primary power source, and is operating on batteries.

Ultra LT Inputs Tab Definitions (continued)

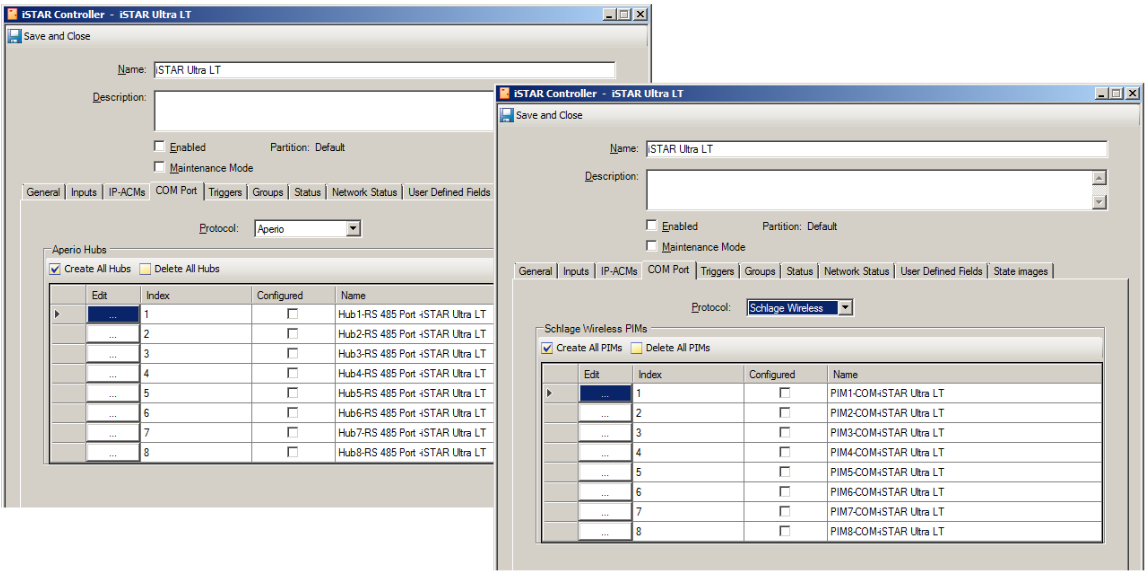
Field/Button	Description
External Battery Low	Activates when the emergency DC battery is running low on power.
Port Power RS 485 Port 1	Activates if there is a problem with the power on the port.
CPNI Alarm	Activates if the CPNI (Center for the Protection of National Infrastructure) switch S1-2 is changed.

NOTE Tamper, AC power fail, and Low battery inputs must be programmed for UL applications.

iSTAR Ultra LT Controller COM Port Tab

The **COM Port** tab in the iSTAR Ultra LT Controller Editor defines security objects that are connected to the COM port. Aperio Hubs and Schlage PIMs can be configured for the COM port.

Figure 71: Ultra LT COM Port Tab



iSTAR Controller - iSTAR Ultra LT

Save and Close

Name: iSTAR Ultra LT

Description:

□ Enabled Partition: Default

□ Maintenance Mode

General | Inputs | IP-ACMs | COM Port | Triggers | Groups | Status | Network Status | User Defined Fields

Protocol: Aperio

Aperio Hubs

☑ Create All Hubs □ Delete All Hubs

Edit	Index	Configured	Name
...	1	□	Hub1-RS 485 Port -iSTAR Ultra LT
...	2	□	Hub2-RS 485 Port -iSTAR Ultra LT
...	3	□	Hub3-RS 485 Port -iSTAR Ultra LT
...	4	□	Hub4-RS 485 Port -iSTAR Ultra LT
...	5	□	Hub5-RS 485 Port -iSTAR Ultra LT
...	6	□	Hub6-RS 485 Port -iSTAR Ultra LT
...	7	□	Hub7-RS 485 Port -iSTAR Ultra LT
...	8	□	Hub8-RS 485 Port -iSTAR Ultra LT

iSTAR Controller - iSTAR Ultra LT

Save and Close

Name: iSTAR Ultra LT

Description:

□ Enabled Partition: Default

□ Maintenance Mode

General | Inputs | IP-ACMs | COM Port | Triggers | Groups | Status | Network Status | User Defined Fields | State images

Protocol: Schlage Wireless

Schlage Wireless PIMs

☑ Create All PIMs □ Delete All PIMs

Edit	Index	Configured	Name
...	1	□	PIM1-COM-iSTAR Ultra LT
...	2	□	PIM2-COM-iSTAR Ultra LT
...	3	□	PIM3-COM-iSTAR Ultra LT
...	4	□	PIM4-COM-iSTAR Ultra LT
...	5	□	PIM5-COM-iSTAR Ultra LT
...	6	□	PIM6-COM-iSTAR Ultra LT
...	7	□	PIM7-COM-iSTAR Ultra LT
...	8	□	PIM8-COM-iSTAR Ultra LT

The iSTAR Ultra LT can support up to 8 or 16 readers, with connection to a maximum of sixteen IP-ACM Ethernet Door Modules.

If you try to configure any additional readers, an error message appears. The iSTAR Ultra LT supports either Aperio or Schlage Wireless Readers. There cannot be a mixture of the two readers on one iSTAR Ultra LT .

The Aperio Readers can be configured on any of the possible 8 Hubs, in any combination, as long as the total number of Readers does not exceed 8.

There can be up to 8 or 16 Aperio Hubs for the COM port, allowing for a total of 8 or 16 Hubs per iSTAR Ultra LT . Each Hub can support up to 8 or 16, ASSA ABLOY Readers with a maximum of 8 or 16 readers per COM port. This provides for a maximum of 8 or 16 readers per iSTAR Ultra LT .

NOTE If using a 1 Reader Hub, the maximum is 8 Aperio Readers (i.e., 1 Reader per Hub).

To Configure the iSTAR Ultra LT COM Port Tab for Aperio

1. From the iSTAR Ultra LT Controller Editor, click the **COM Port**tab.
2. Select **Aperio** in the **Protocol** field.
3. In the **Aperio Hubs** table, create the **Aperio Hubs** that you need by selecting the **Configured** check box for only the Hubs you wish to create.
4. Click [...] in the Edit column to configure individual Hubs. See the definitions of the Hubs in iSTAR Ultra LT COM Port Tab Definitions on Page 188 and see iSTAR Aperio RS-485 Hub Board Editor (iSTAR Ultra only) on Page 221 for configuration instructions.
5. Click **Save and Close** to save the settings you have configured on the iSTAR Controller **COM Port** tab, or click another tab in the iSTAR Controller Editor to perform additional configurations.

To Configure the iSTAR Ultra LT COM Port Tab for Schlage

1. From the iSTAR Ultra LT Controller Editor, click the **COM Port** tab.
2. Select **Schlage** in the **Protocol** field.
3. In the **Schlage Wireless PIMs** table, create the **Schlage PIMs** that you need by selecting the **Configured** check box for only the PIMs you wish to create.
4. Click [...] in the Edit column to configure individual PIMs.
5. Click **Save and Close** to save the settings you have configured on the iSTAR Controller **COM Port** tab, or click another tab in the iSTAR Controller Editor to perform additional configurations.

iSTAR Ultra LT COM Port Tab Definitions

Table 48: iSTAR Ultra LT COM Port Tab Definitions

Box	Description
Aperio Hubs	
Create All Hubs	Click to create all the Aperio Hubs. When you click **Create All Hubs** the **Configured** column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Aperio RS-485 Hub Board Editor to configure an Aperio Hub.
Delete All Hubs	When you click **Delete All Hubs**, the check boxes in the Configured column are cleared for all Hubs, and all these Hubs are deleted after you confirm each deletion (any settings you have configured are lost).
Protocol	Select **Aperio**.
Edit column	Click [...] in the **Edit** column to open the iSTAR Aperio RS-485 Hub Board Editor to configure an Aperio Hub. See iSTAR Aperio RS-485 Hub Board Editor (iSTAR Ultra only) on Page 221.
Index column	This column displays the number of each Hub (from 1 to 15).
Configured column	Click □ in this column to create an Aperio Hub (make it available to be edited).

Table 48: iSTAR Ultra LT COM Port Tab Definitions (continued)

Box	Description
Name column	Displays the name for this Aperio Hub. The name is system-generated by default, but you can edit this name by clicking in this field.
Hubs 1 - 15	Select the check box in the **Configured** column and click [...] in the **Edit** column to open the iSTAR Aperio RS-485 Hub Board editor. From the editor you can configure the settings for the Hub.
Schlage PIMs	
Create All PIMs	Click to create all the Schlage PIMs. When you click **Create All PIMs** the **Configured** column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR Schlage RS-485 PIM Board Editor to configure a Schlage PIM.
Delete All PIMs	When you click **Delete All PIMs**, the check boxes in the **Configured** column are cleared for all PIMs, and all these PIMs are deleted after you confirm each deletion (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Schlage RS-485 PIM Board Editor to configure a Schlage PIM.
Index column	This column displays the number of each PIM (from 1 to 16).
Configured column	Click □ in this column to create a Schlage PIM (make it available to be edited).
Name column	Displays the name for this Schlage PIM. The name is system-generated by default, but you can edit this name by clicking in this field.
PIMs 1 - 16	Select the check box in the **Configured** column and click in the **Edit** column to open the iSTAR Schlage RS-485 PIM Board editor. From the editor you can configure the settings for the PIM.

iSTAR Ultra IP-ACM Outputs Tab

The Outputs tab is used to configure the Outputs for the IP-ACM.

Table 49 on Page 189 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM Board Outputs tab.

Table 49: iSTAR Ultra IP-ACM Outputs Tab General Tab Definitions

Field/Button	Description
Name	Displays the name for this Output board. The name is system-generated by default, but you can edit this name by clicking this field.
Description	Enter a textual comment about the Output board, such as its location or purpose. This text is for information only.
Partition	This read-only field identifies the Partition in which this Output board resides.
Maintenance Mode	Click to put the iSTAR Outboard Board into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Location	
Controller	This read-only field identifies the iSTAR Controller to which this Output is attached.
Board	This read-only field identifies the iSTAR Controller board to which this Output board is attached.

Table 49: iSTAR Ultra IP-ACM Outputs Tab General Tab Definitions (continued)

Field/Button	Description
Board Index	This read-only field identifies the board index (which represents the SW1 address switch setting on the R/8 board) for this Output board.
Outputs	
Create All Outputs	Click to create all Outputs. The check boxes in the **Configured** column are set to ☑.
Delete All Outputs	Click to delete all Outputs. The check boxes in the **Configured** column are set to □.
Edit column	Click [...] in this column to open the iSTAR Output Editor to edit this Output. NOTE: The **Configured** check box must be selected to open the Output Editor.
Index column	This read-only field identifies the position of each Output (1 - 2) on the IP-ACM board.
Configured column	☑ indicates that the Output has been configured. □ indicates that the Output has not been configured. NOTE: The **Configured** check box must be selected to open the Output Editor.
Name column	Displays the system-generated name for this Output. You can edit this name by clicking in the field.
Template column	Displays the Template used for creating this Output. If the Output is not yet configured, you can click in this column, then click to select an Output Template. If the **Configured** column displays ☑, this field cannot be edited.

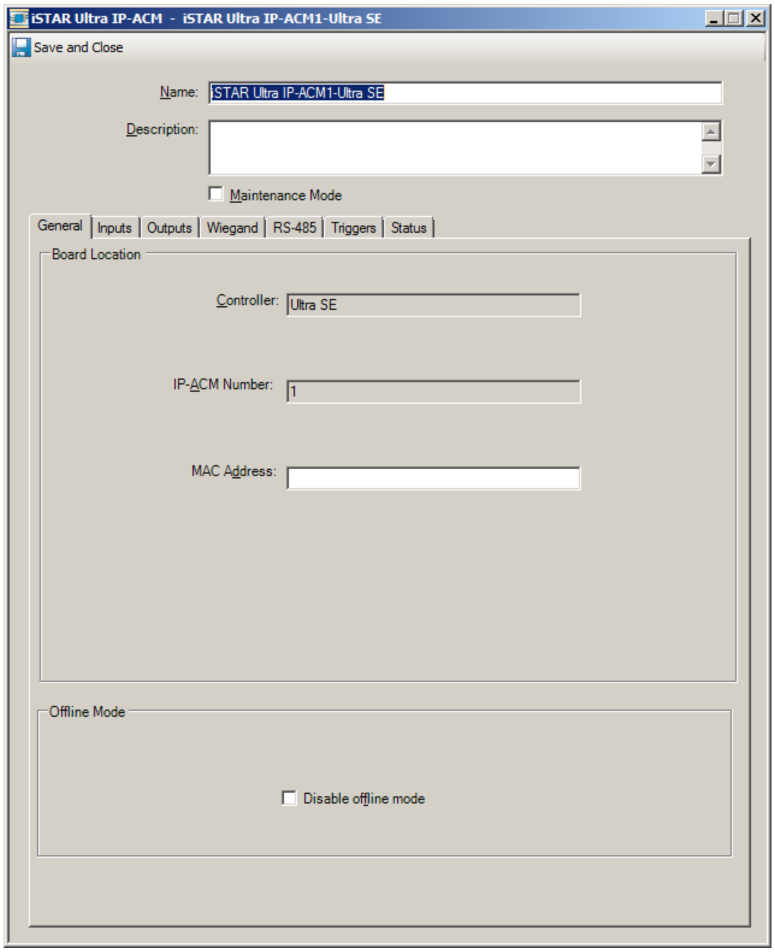
iSTAR Ultra IP-ACM Editor

The iSTAR Ultra IP-ACM editor, shown in Figure 72 on Page 191, is used to configure readers, inputs and outputs.

See the following for more information:

- Accessing the iSTAR Ultra IP-ACM Editor on Page 191
- iSTAR Ultra IP-ACM Inputs Tab on Page 280
- iSTAR Ultra IP-ACM Outputs Tab on Page 281
- iSTAR Ultra IP-ACM Wiegand Tab on Page 282
- iSTAR Ultra IP-ACM RS-485 Tab on Page 283
- iSTAR Ultra IP-ACM Triggers Tab on Page 285.
- iSTAR Ultra IP-ACM Status Tab on Page 285

Figure 72: iSTAR Ultra IP-ACM Editor - General Tab



iSTAR Ultra IP-ACM - iSTAR Ultra IP-ACM1-Ultra SE

Name: iSTAR Ultra IP-ACM1-Ultra SE

Description:

□ Maintenance Mode

Controller: Ultra SE

IP-ACM Number: 1

MAC Address:

□ Disable offline mode

Accessing the iSTAR Ultra IP-ACM Editor

To Access the iSTAR Ultra IP-ACM Editor

1. From the iSTAR Ultra Controller editor dialog box, click the **IP ACMs** tab.
2. Click on the **Configured** check box in the Index row that you want to add/edit.

3. Click ... in the **Edit** column of the Index row to open the iSTAR Ultra IP-ACM editor.

Table 50: iSTAR Ultra Controller IP-ACM Editor General Tab Definitions

Field/Button	Description
Partition	This read-only field identifies the Partition.
Maintenance Mode	Click to put the IP-ACM into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Board Location	
Controller	This field is read-only.
IP-ACM Number	This field is read-only.
MAC Address	Enter the MAC address of the IP-ACM.
Offline Mode	
Disable offline mode	Click the check box to disable offline mode on this IP-ACM. NOTE: This selection will override the **Offline Mode of all IP-ACMs** selections in the iSTAR Controller Editor IP-ACMs tab for this IP-ACM. See IP-ACM Offline Mode Configuration Information on Page 272. If using online mode, all components of the door must come from the same IP-ACM board.
Switch Port (J5) Options (option for IP-ACM v2 only)	Select the check box to enable the J5 Switch Port. Clear this check box to disable this port. This check box is selected by default.

iSTAR Ultra IP-ACM Wiegand Tab

The Wiegand tab is used to configure Wiegand readers connected to the IP-ACM board.

Table 51 on Page 192 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM Wiegand tab.

Table 51: iSTAR Ultra IP-ACM Wiegand Tab Definitions

Box	Description
Create All Readers	Click to create all the Readers. When you click **Create All Readers**, the **Configured** column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Reader Editor to configure a direct connect Wiegand Reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all Readers, and all these Readers are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Reader Editor to configure a Reader. See iSTAR Reader Editor on Page 466.
Index column	This column displays the number for each reader. This number is the physical port number for a Direct Connect Wiegand reader.
Configured column	Click □ in this column to create a reader (make it available to be edited).

Table 51: iSTAR Ultra IP-ACM Wiegand Tab Definitions (continued)

Box	Description
Name column	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column prior to creating the Reader, then click ... to select a Reader template from the list of available Reader templates. The **Template** column shows the template name chosen if you selected a Template prior to creating the Reader.
Readers 1 - 2	Select the check box in the **Configured** column for a Reader and click ... located in the **Edit** column to open the iSTAR Reader Editor General tab to configure the Keypad, Triggers, Groups, Status and State Images that are associated with a Reader. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Readers. The **Name** column displays a name comprised of the Reader Type and the iSTAR Controller name. You can click in this column to edit the Reader name.

iSTAR Ultra IP-ACM RS-485 Tab

The RS-485 tab is used to configure RS-485 ports connected to the iSTAR Ultra IP-ACM Board.

The iSTAR Device Port Editor, accessed by clicking in the **Configured** check box of the port and click **Edit**, allows you to select the RM, BLE, or OSDP protocols. See IP-ACM iSTAR Device Port Dialog Box on Page 283

Table 52 on Page 193 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM RS-485 tab.

Table 52: iSTAR Ultra IP-ACM Board RS-485 Tab Definitions

Field/Button	Description
Create All Ports	Click to create the RS-485 Ports. When you click **Create All Ports** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Device Port Editor to configure an RS-485 Port.
Delete All Ports	When you click **Delete All Ports**, the check boxes in the **Configured** column are cleared for all Ports, and all Ports are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Device Port Editor to configure Device Ports for the IP-ACM. See iSTAR Ultra ACM RS-485 Device Port Editor on Page 196.
Index column	This column displays the number for each Device Port.
Configured column	Click □ in this column to create a Device Port (make it available to be edited).
Name column	Displays the name for this Device Port. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Device Ports 1 - 2	Select the check box in the **Configured** column for a Device Port and click ... located in the **Edit** column to open the iSTAR Device Port Editor General tab to configure the Readers and ACM extensions that are associated with the Device Port. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Device Ports. The **Name** column displays a name comprised of the Device Port and the iSTAR Controller name. You can click in this column to edit the Device Port name.

iSTAR Ultra IP-ACM Inputs Tab

The Inputs tab is used to create and configure the Inputs that are attached to this Ultra IP-ACM Board.

You can use an existing Input Template to create one or more of the IP-ACM Board Inputs. Click in the **Template** Column, then click .... A list of available iSTAR Input Templates appears. Click on the Template you wish to use. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more detailed information about using Templates to create Inputs.

Table 53 on Page 194 provides definitions for the buttons and fields on the iSTAR Ultra IP-ACM Inputs tab.

Table 53: iSTAR Ultra IP-ACM Board Inputs Tab Definitions

Field/Button	Description
Special Purpose Inputs	
Tamper	The **Tamper** input activates when the controller cabinet is opened or removed from its mounting surface. NOTE: For UL applications, this field must be enabled. Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Input Editor General tab to configure the Tamper input. From the Input Editor you can configure the Options, Triggers, Groups, Status and State Images that are associated with the Tamper Input. The **Template** column shows the template name chosen if you selected a Template prior to creating the Input.
Communication Fail	A logical unsupervised input that reflects the state of the communication between the GCM board and Processor-A on this IP-ACM board.
Port Power Alarm Status 1 Port Power Alarm Status 2	Power indicator input for each RM / Weigand port.
Lock Power Alarm Status 1 Lock Power Alarm Status 2	IP-ACM can provide power for the locks directly from the 2 Output connectors (Lock Power 1 & 2). There are automatic over-current shut-off switches on each Lock Power. The Lock Power Alarm Status inputs go Active when the over-current shut-off switches are active (i.e., when Lock Power has been shut off).
General Purpose Inputs	
Inputs 1 through 4	These standard general purpose supervised inputs are available on iSTAR Ultra IP-ACM boards.

iSTAR Ultra IP-ACM Status Tab

The Status tab displays a read-only listing of information about the operational status of the selected iSTAR Ultra IP-ACM Board.

Table 54 on Page 194 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM Board Status tab.

Table 54: iSTAR Ultra IP-ACM Board Status Tab Definitions

Field/Button	Description
Communication Status	Unknown, Offline, or Online.
Firmware Version	Processor firmware, such as 00.00.36.00008
IP Address	The IP-ACM IP address.
High Latency Alarm	Possible status values are True or False.

iSTAR Ultra Controller ACM Board Editor

Add-on Access Control Modules (ACM Boards) provide access control functionality by supporting readers, outputs and inputs.

The iSTAR Ultra ACM Board dialog box is accessed from the iSTAR Controller editor Boards tab.

iSTAR Ultra ACM Board Editor

The iSTAR Ultra ACM Board editor allows you to define and configure inputs, outputs and readers for an ACM Board. The ACM Wiegand tab allows you to configure Wiegand readers, while the ACM RS-485 tab lets you configure RS-485-connected devices.

The iSTAR Ultra ACM Board editor has six tabs:

- iSTAR ACM Board General Tab on Page 201
- iSTAR ACM Board Inputs Tab on Page 202
- iSTAR ACM Board Outputs Tab on Page 203
- iSTAR Ultra ACM Board Wiegand Tab on Page 195
- iSTAR Ultra ACM Board RS-485 Tab on Page 196
- iSTAR Ultra ACM Board Status Tab on Page 199

For more information see the *iSTAR Controller Installation and Configuration Guide*.

iSTAR Ultra ACM Board Wiegand Tab

The iSTAR Ultra ACM Board Wiegand tab provides configuration for Wiegand readers connected to the iSTAR Ultra ACM Board.

iSTAR Ultra ACM Board Wiegand Tab Definitions

Table 55 on Page 195 provides definitions of the fields and buttons on the iSTAR Ultra ACM Board Wiegand Tab.

Table 55: iSTAR Ultra ACM Board Wiegand Tab Definitions

Box	Description
Create All Readers	Click to create all the Readers. When you click **Create All Readers**, the **Configured** column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Reader Editor to configure a direct connect Wiegand Reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all Readers, and all these Readers are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Reader Editor to configure a Reader. See iSTAR Reader Editor on Page 466.
Index column	This column displays the number for each reader. This number is the physical port number for a Direct Connect Wiegand reader.
Configured column	Click □ in this column to create a reader (make it available to be edited).
Name column	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in this field.

Table 55: iSTAR Ultra ACM Board Wiegand Tab Definitions (continued)

Box	Description
Template column	Click in this column prior to creating the Reader, then click ... to select a Reader template from the list of available Reader templates. The **Template** column shows the template name chosen if you selected a Template prior to creating the Reader.
Readers 1 - 8	Select the check box in the **Configured** column for a Reader and click ... located in the **Edit** column to open the iSTAR Reader Editor General tab to configure the Keypad, Triggers, Groups, Status and State Images that are associated with a Reader. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Readers. The **Name** column displays a name comprised of the Reader Type and the iSTAR Controller name. You can click in this column to edit the Reader name.

iSTAR Ultra ACM Board RS-485 Tab

The iSTAR Ultra ACM Board RS-485 tab provides configuration for RS-485 devices connected to the iSTAR Ultra ACM Board.

iSTAR Ultra ACM Board RS-485 Tab Definitions

Table 56 on Page 196 provides definitions of the fields and buttons on the iSTAR Ultra ACM Board RS-485 Tab.

Table 56: iSTAR Ultra ACM Board RS-485 Tab Definitions

Field/Button	Description
RS-485 Ports	
Create All Ports	Click to create the RS-485 Ports. When you click **Create All Ports** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Device Port Editor to configure an RS-485 Port.
Delete All Ports	When you click **Delete All Ports**, the check boxes in the **Configured** column are cleared for all Ports, and allPorts are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Device Port Editor to configure Device Ports for the iSTAR Ultra. See iSTAR Reader Editor on Page 466.
Index column	This column displays the number for each Device Port.
Configured column	Click □ in this column to create a Device Port (make it available to be edited).
Name column	Displays the name for this Device Port. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Device Ports 1 - 8	Select the check box in the **Configured** column for a Device Port and click ... located in the **Edit** column to open the iSTAR Device Port Editor General tab to configure the Readers and ACM extensions that are associated with the Device Port. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Device Ports. The **Name** column displays a name comprised of the Device Port and the iSTAR Controller name. You can click in this column to edit the Device Port name.

iSTAR Ultra ACM RS-485 Device Port Editor

The iSTAR Ultra ACM RS-485 Device Port Editor lets you create and configure RM Readers, and direct-connect Wiegand Readers.

iSTAR Ultra ACM RS-485 Device Port Tabs

- iSTAR Ultra ACM/IP-ACM RS-485 Device Port General Tab on Page 197
- iSTAR Ultra RS-485 Device Port Readers Tab on Page 197
- iSTAR Ultra RS-485 Device Port ACM EXT Tab on Page 198

iSTAR Ultra ACM/IP-ACM RS-485 Device Port General Tab

The iSTAR Ultra RS-485 Device Port General tab displays three Read-only fields that identify the Controller, Port Number, and Protocol for the RM reader and Wiegand Reader Device Port. Table 57 on Page 197 describes the fields on this tab.

Table 57: iSTAR Ultra ACM RS-485 Device Port General Tab Definitions

Field	Description
Controller	This field identifies the controller for this ACM RS-485 Device Port.
Port Number	This field identifies the index number of the Device Port on the ACM for the Readers.
Protocol	Click on the drop-down menu to select the Protocol type. • **RM** (Software House Reader Protocol) • **BLE** (Bluetooth Low Energy) • **OSDP** (Open Supervised Device Protocol) Only one reader can be configured per device port. • **Smart** Default: RM

iSTAR Ultra RS-485 Device Port Readers Tab

The iSTAR Ultra RS-485 Device Port Readers tab lets you create and configure the Readers that are attached to an RS-485 port on the iSTAR Ultra.

You can use an existing Reader Template to create one or more of the RS-485 Readers. Click in the **Template** Column, then click [...]. A list of available iSTAR Reader Templates appears. Click on the Template you wish to use. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more detailed information about using Templates to create Readers.

iSTAR Ultra RS-485 Device Port Readers Tab Definitions

Table 58 on Page 197 provides definitions for the buttons and fields on the iSTAR Ultra RS-485 Device Port Readers tab.

Table 58: iSTAR Ultra RS-485 Device Port Readers Tab Definitions

Field/Button	Description
Create All Readers	Click to create all the readers. When you click **Create All Readers** the Configured column check boxes are selected, and you can click [...] in the Edit column to edit that reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the Configured column are cleared for all readers, and all these readers are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Reader Editor to configure an Reader. See iSTAR Reader Editor on Page 466.

iSTAR Ultra RS-485 Device Port Readers Tab Definitions (continued)

Field/Button	Description
Index column	This column displays the number of each Reader.
Configured column	Click □ in this column to create a Reader (make it available to be edited).
Name column	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Template column	The Template column shows the template name if you selected a Template prior to creating the Readers. Click in this column, then click ... to select a Reader template to use for creating this Reader from the list of available Reader templates. You can only select a Template prior to creating the Reader.

iSTAR Ultra RS-485 Device Port ACM EXT Tab

The iSTAR Ultra RS-485 Device Port ACM Ext tab lets you create and configure the Input boards and Output boards that are attached to this iSTAR Ultra RS-485 Device Port.

Figure 73: iSTAR Ultra RS-485 Device Port ACM Ext Tab

Configuring the iSTAR Ultra RS-485 Device Port ACM Ext Tab

When you configure the iSTAR Ultra RS-485 Device Port ACM Ext tab, you are defining the Input boards and Output boards that are attached to the port. You can then click to open the Input Boards Editor to configure individual Input Boards, or open the Output Boards Editor to configure individual Output Boards.

To Configure the iSTAR Ultra RS-485 Device Port ACM Ext Tab

1. From the iSTAR Ultra Boards tab, create an ACM on either SPI Port 1 or SPI Port 2 by clicking in the **Configure** column.
2. Click ... to open the iSTAR Ultra ACM Board editor. Access the Input Board Editor for the Input Board you wish to edit (see iSTAR Ultra Controller ACM Board Editor on Page 195).
3. Click the RS-485 tab.
4. Create an RS-485 port by clicking in the **Configure** column, then click ... to open the iSTAR Ultra Device Port editor.
5. Click the ACM Ext tab.
6. Create an Input board by clicking in the **Configure** column for one of the Input Boards (1-8), then click ... to open the iSTAR Input Board editor. See the iSTAR Input Board Editor on Page 207 for configuration instructions.
7. Create an Output board by clicking in the **Configure** column for one of the Output Boards (1-8), then click ....to open the iSTAR Output Board editor. See the iSTAR Output Board Editor on Page 211 for configuration instructions.
8. When you have finished configuring the Inputs on the iSTAR Ultra RS-485 Device Port ACM Ext tab, click **Save and Close** to save the settings you have configured.

iSTAR Ultra RS-485 Device Port ACM Ext tab Definitions

Table 66 on Page 206 provides definitions for the buttons and fields on the iSTAR Ultra RS-485 Device Port ACM Ext tab.

Table 59: iSTAR Ultra RS-485 Device Port ACM Ext Tab Definitions

Field/Button	Description
Input Boards	
Create All Boards	Click to create all the Input Boards. When you click **Create All Boards** the Configured column check boxes are selected, and you can click [...] in the Edit column to edit that Input Board.
Delete All Boards	When you click **Delete All Boards**, the check boxes in the Configured column are cleared for all Input Boards, and all these Input Boards are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Input Board Editor. See iSTAR Input Board Editor on Page 207.
Index column	This column displays the number of each Input Board.
Configured column	Click □ in this column to create an Input Board (make it available to be edited).
Name column	Displays the name for this Input board. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Output Boards	
Create All Boards	Click to create all the Output Boards. When you click **Create All Boards** the Configured column check boxes are selected, and you can click [...] in the Edit column to edit that Output Board.
Delete All Boards	When you click **Delete All Boards**, the check boxes in the Configured column are cleared for all Output Boards, and all these Output Boards are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Output Board Editor. See iSTAR Output Board Editor on Page 211.
Index column	This column displays the number of each Output Board.
Configured column	Click □ in this column to create an Output Board (make it available to be edited).
Name column	Displays the name for this Output board. The name is system-generated by default, but you can edit this name by clicking in click in this field.

iSTAR Ultra ACM Board Status Tab

The iSTAR Ultra ACM Board Status tab provides a read-only listing of information about the operational status of the selected iSTAR Ultra ACM Board.

iSTAR Ultra ACM Board Status Tab Definitions

Table 60 on Page 199 provides definitions of the fields and buttons on the iSTAR Ultra ACM Board Status tab.

Table 60: iSTAR Ultra ACM Board Status Tab Definitions

Field/Button	Description
Processor 1 Communications Status	Offline or Online.
Processor 2 Communications Status	Offline or Online.

Table 60: iSTAR Ultra ACM Board Status Tab Definitions (continued)

Field/Button	Description
Processor 1 Firmware Version	Processor firmware, such as 00.00.36.00008
Processor 2 Firmware Version	Processor firmware, such as 00.00.36.00008
FAI Key Latch Enabled Status	Enabled or disabled.
Lock 1 Power (Volts)	Lock power in Volts. Possible vales are: 0.0V, 12.0V, 24.0V.
Lock 2 Power (Volts)	Lock power in Volts. Possible vales are: 0.0V, 12.0V, 24.0V.
Reader Power	Voltage reported for Readers. Reader power is the basic power to the GCM and ACMs. Typically reads about 13.8V.
FAI Outputs Enabled	List of Outputs with FAI enabled.

iSTAR Classic/Pro Controller ACM Board Editor

Add-on Access Control Modules (ACM Boards) provide access control functionality by supporting readers, outputs and inputs.

The ACM Board dialog box is accessed from the iSTAR Controller editor Boards tab.

iSTAR Classic/Pro ACM Board Editor

The iSTAR Classic/Pro ACM Board editor allows you to define and configure inputs, outputs and readers for the ACM Board. The ACM Extension (ACM Ext) tab allows you to configure the I/8 input and R/8 output boards connected to the ACM Board.

The iSTAR Classic/Pro ACM Board editor has five tabs:

- iSTAR ACM Board General Tab on Page 201
- iSTAR ACM Board Inputs Tab on Page 202
- iSTAR ACM Board Outputs Tab on Page 203
- iSTAR ACM Board Readers Tab on Page 204
- iSTAR ACM Board ACM Ext Tab on Page 205

For more information see the *iSTAR Pro Installation and Configuration Guide*.

iSTAR ACM Board General Tab

The ACM Board General tab identifies the ACM Board. The fields on this tab are read-only.

iSTAR ACM Board General Tab Definitions

Table 61 on Page 201 provides definitions for the fields on the iSTAR ACM Board General tab.

Table 61: iSTAR ACM Board General Tab Definitions

Field/Button	Description
Name	Displays the name for this ACM board. The name is system-generated by default, but you can edit this name by clicking in this field.
Description	Enter a textual comment about the ACM board, such as its location or purpose. This text is for information only.
Maintenance Mode	Click to put the iSTAR ACM board into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which the iSTAR Controller for this ACM Board resides.
Board Location	
Controller	This read-only field identifies the Controller to which this board is attached.
ACM Number/IP-ACM Number	This read-only field displays the number of the ACM board or the iSTAR Ultra IP-ACM number.
Board Type	This read-only field displays the iSTAR ACM type.

iSTAR ACM Board Inputs Tab

The ACM Board Inputs tab lets you create and configure the Inputs that are attached to this ACM Board.

You can use an existing Input Template to create one or more of the ACM Board Inputs. Click in the **Template** Column, then click [...]. A list of available iSTAR Input Templates appears. Click on the Template you wish to use. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more detailed information about using Templates to create Inputs.

iSTAR ACM Board Inputs Tab Definitions

- Table 62 on Page 202 provides definitions for the buttons and fields on the ACM Board Inputs tab.
- Table 63 on Page 203 provides definitions for the iSTAR ACM Board Inputs tab.

Table 62: iSTAR Pro/Classic ACM Board Inputs Tab Definitions

Field/Button	**Description**
Create All Inputs	Click to create all the Inputs. When you click **Create All Inputs** the Configured column check boxes are selected, and you can click [...] in the Edit column to edit that Input.
Delete All Inputs	When you click **Delete All Inputs**, the check boxes in the Configured column are cleared for all Inputs, and all these Inputs are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Input Editor to configure an Input. See iSTAR Input Editor on Page 227.
Index column	This column displays the number of each Input.
Configured column	Click □ in this column to create an Input (make it available to be edited).
Name column	Displays the name for this Input. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	The Template column shows the template name if you selected a Template prior to creating the Input. Click in this column, then click [...] to select an Input template to use for creating this Input from the list of available Input templates. You can only select a Template prior to creating the input.
Inputs	These standard general purpose supervised inputs are available on iSTAR Pro ACM boards.

iSTAR Ultra ACM Board Inputs Tab Definitions

Table 63 on Page 203 provides definitions for the buttons and fields on the iSTAR Ultra ACM Board Inputs tab.

Table 63: iSTAR Ultra / Ultra SE/ Ultra Video ACM Board Inputs Tab Definitions

Field/Button	Description
Special Purpose Inputs (iSTAR Ultra/ Ultra SE/ Ultra Video only)	
Tamper	The **Tamper** input activates when the controller cabinet is opened or removed from its mounting surface. NOTE: For UL applications, this field must be enabled. Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Input Editor General tab to configure the Tamper input. From the Input Editor you can configure the Options, Triggers, Groups, Status and State Images that are associated with the Tamper Input. The **Template** column shows the template name chosen if you selected a Template prior to creating the Input.
Comm Fail Processor 1	A logical unsupervised input that reflects the state of the communication between the GCM board and Processor-A on this ACM board.
Comm Fail Processor 2	A logical unsupervised input that reflects the state of the communication between the GCM board and Processor-B on this ACM board.
FAI Alarm	This is the Fire Alarm Input signal. It is NC supervised.
FAI Relay Control	FAI Relay Control. When the FAI signal is true, the HW drives all selected relays to activate. Each relay has a switch indicating whether it is selected to behave in this way.
FAI Interlock Key	The FAI K input is usually a key switch. It is supervised as NO. It is used in conjunction with Latch mode. If latching is enabled, the F signal will turn on all selected outputs. They will stay that way until the Fire Chief inserts the key in the key switch and announces all clear.
Port 1 Power Status through Port 8 Power Status	Power indicator input for each RM port.
General Purpose Inputs (iSTAR Ultra/ Ultra SE/ Ultra Video only)	
Inputs 1 through 24 (Ultra and Ultra Video) Inputs 1 though 16 Ultra SE (Ultra Mode)	These standard general purpose supervised inputs are available on iSTAR Ultra ACM boards.

iSTAR ACM Board Outputs Tab

The ACM Board Outputs tab lets you create and configure the Outputs that are attached to this ACM Board.

You can use an existing Output Template to create one or more of the ACM Board Outputs. Click in the **Template** Column, then click ... . A list of available iSTAR Output Templates appears. Click on the Template you wish to use. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more detailed information about using Templates to create Outputs.

iSTAR ACM Board Outputs Tab Definitions

Table 64 on Page 204 provides definitions for the buttons and fields on the iSTAR ACM Board Outputs tab.

Table 64: iSTAR ACM Board Outputs Tab Definitions

Field/Button	Description
Create All Outputs	Click to create all the outputs. When you click **Create All Outputs** the Configured column check boxes are selected, and you can click [...] in the Edit column to edit that output.
Delete All Outputs	When you click **Delete All Outputs**, the check boxes in the Configured column are cleared for all outputs, and all these outputs are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR Output Editor to configure an Output. See iSTAR Output Editor on Page 236.
Index column	This column displays the number of each Output.
Configured column	Click □ in this column to create an Output (make it available to be edited).
Name column	Displays the name for this Output. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	The Template column shows the template name if you selected a Template prior to creating the Outputs. Click in this column, then click [...] to select an Output template to use for creating this Output from the list of available Output templates. You can only select a Template prior to creating the Output.
Primary Relay Outputs	
Outputs 1 through 8	These outputs can be used for a Fire Alarm Interface (FAI). They are rated at 5 Amps, and are socket mounted. Click □ in the **Configure** column, then click [...] in the **Edit** column to open the iSTAR Output Editor to configure a Primary Output. See iSTAR Output Board Editor on Page 211
Secondary Relay Outputs	
Outputs 1 through 8	These outputs cannot be used for a Fire Alarm Interface (FAI). They are rated at 0.75 or 1 Amp, and are permanently soldered to the ACM. Click □ in the **Configure** column, then click [...] in the **Edit** column to open the iSTAR Output Editor to configure a Secondary Output. See iSTAR Output Board Editor on Page 211

iSTAR ACM Board Readers Tab

The ACM Board Readers tab lets you create and configure the Readers that are attached to this ACM Board.

You can use an existing Reader Template to create one or more of the ACM Board Readers. Click in the **Template** Column, then click [...]. A list of available iSTAR Reader Templates appears. Click on the Template you wish to use. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more detailed information about using Templates to create Readers.

iSTAR ACM Board Readers Tab Definitions

Table 65 on Page 204 provides definitions for the buttons and fields on the iSTAR ACM Board Readers tab.

Table 65: iSTAR ACM Board Readers Tab Definitions

Field/Button	Description
Create All Readers	Click to create all the readers. When you click **Create All Readers** the Configured column check boxes are selected, and you can click [...] in the Edit column to edit that reader.

iSTAR ACM Board Readers Tab Definitions (continued)

Field/Button	Description
Delete All Readers	When you click **Delete All Readers**, the check boxes in the Configured column are cleared for all readers, and all these readers are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Reader Editor to configure an Reader. See iSTAR Reader Editor on Page 466.
Index column	This column displays the number of each Reader.
Configured column	Click □ in this column to create a Reader (make it available to be edited).
Name column	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	The Template column shows the template name if you selected a Template prior to creating the Readers. Click in this column, then click ... to select a Reader template to use for creating this Reader from the list of available Reader templates. You can only select a Template prior to creating the Reader.

iSTAR ACM Board ACM Ext Tab

The ACM Board ACM Ext tab lets you create and configure the Input boards and Output boards that are attached to this ACM Board.

Configuring the iSTAR ACM Board ACM Ext Tab

When you configure the iSTAR ACM Board ACM Ext tab, you are defining the Input boards and Output boards that are attached to the ACM. You can then click to open the Input Boards Editor to configure individual Input Boards, or open the Output Boards Editor to configure individual Output Boards.

To Configure the iSTAR ACM Board ACM EXT Tab

1. From the iSTAR controller Boards tab, create an ACM and click ... to access the iSTAR ACM Board Editor.
2. Click the ACM EXT tab.
3. Create the **Input Boards** that you need by clicking **Create All Boards** or by selecting the **Configured** check box for only the Input Boards you wish to create.
4. Click ... in the **Edit** column to open the iSTAR Input Board editor to configure individual Inputs. See the iSTAR Input Board Editor on Page 207 for configuration instructions.
5. Create the **Output Boards** that you need by clicking **Create All Boards** or by selecting the **Configured** check box for only the Output Boards you wish to create.
6. Click ... in the **Edit** column to open the iSTAR Output Board editor to configure individual Outputs. See the iSTAR Output Board Editor on Page 211 for configuration instructions.
7. When you have finished configuring the Input Boards and Output Boards, click **Save and Close** to save the settings you have configured.

iSTAR ACM Board ACM Ext Tab Definitions

Table 66 on Page 206 provides definitions for the buttons and fields on the iSTAR ACM Board ACM Ext tab.

Table 66: iSTAR ACM Board ACM Ext Tab Definitions

Field/Button	Description
Input Boards	
Create All Boards	Click to create all the Input Boards. When you click **Create All Boards** the Configured column check boxes are selected, and you can click ... in the Edit column to edit that Input Board.
Delete All Boards	When you click **Delete All Boards**, the check boxes in the Configured column are cleared for all Input Boards, and all these Input Boards are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Input Board Editor. See iSTAR Input Board Editor on Page 207.
Index column	This column displays the number of each Input Board.
Configured column	Click □ in this column to create an Input Board (make it available to be edited).
Name column	Displays the name for this Input board. The name is system-generated by default, but you can edit this name by clicking in this field.
Output Boards	
Create All Boards	Click to create all the Output Boards. When you click **Create All Boards** the Configured column check boxes are selected, and you can click ... in the Edit column to edit that Output Board.
Delete All Boards	When you click **Delete All Boards**, the check boxes in the Configured column are cleared for all Output Boards, and all these Output Boards are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Output Board Editor. See iSTAR Output Board Editor on Page 211.
Index column	This column displays the number of each Output Board.
Configured column	Click □ in this column to create an Output Board (make it available to be edited).
Name column	Displays the name for this Output board. The name is system-generated by default, but you can edit this name by clicking in this field.

iSTAR Input Board Editor

The iSTAR Input Board editor lets you configure an iSTAR Input Board that you created on the iSTAR Classic/Pro ACM Board ACM Ext tab, the iSTAR eX and iSTAR Edge COM1, COM2, and COM3 tabs, or the iSTAR Ultra, Ultra SE, and Ultra LT COM1, COM2 or COM Port tabs.

The iSTAR Input Board editor (see Figure 74 on Page 207) has the following tabs:

- **iSTAR Input Board General Tab**

  Lists the Inputs and Status Inputs on an I/8 board that is connected to an iSTAR Classic/Pro, iSTAR eX, or iSTAR Edge. See iSTAR Input Board General Tab on Page 209.

- **iSTAR Input Board Group Tab**

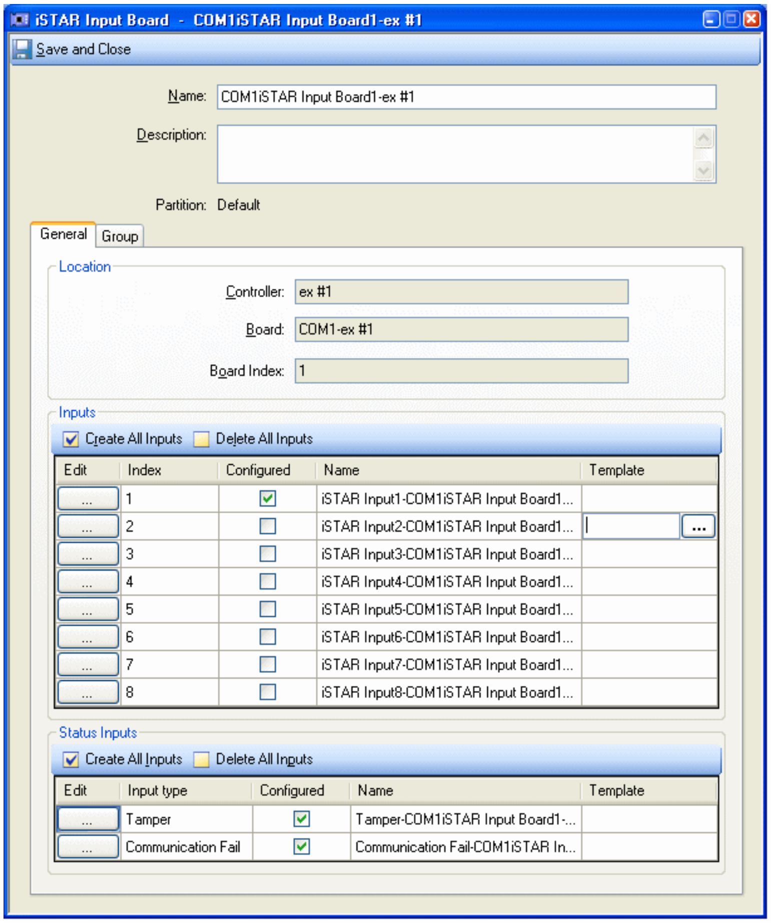
  If you have created a Group containing iSTAR Input Boards and added this Input Board to it, the iSTAR Input Board editor also displays a Group tab.

  This tab lists the Input Board groups to which this Input Board belongs. See Groups Tab for Hardware Devices on Page 36 for information on using the Group tab for the iSTAR Input board.

ISTAR Input Board editor Tasks:

- Accessing the iSTAR Input Board Editor on Page 208
- Configuring iSTAR Input Boards on Page 209

Figure 74: iSTAR Input Board Editor



Name: COM1iSTAR Input Board1-ex #1

Description:

Partition: Default

Controller: ex #1

Board: COM1-ex #1

Board Index: 1

☑ Create All Inputs □ Delete All Inputs

Edit	Index	Configured	Name	Template
...	1	☑	iSTAR Input1-COM1iSTAR Input Board1...	
...	2	□	iSTAR Input2-COM1iSTAR Input Board1...	...
...	3	□	iSTAR Input3-COM1iSTAR Input Board1...	
...	4	□	iSTAR Input4-COM1iSTAR Input Board1...	
...	5	□	iSTAR Input5-COM1iSTAR Input Board1...	
...	6	□	iSTAR Input6-COM1iSTAR Input Board1...	
...	7	□	iSTAR Input7-COM1iSTAR Input Board1...	
...	8	□	iSTAR Input8-COM1iSTAR Input Board1...	

☑ Create All Inputs □ Delete All Inputs

Edit	Input type	Configured	Name	Template
...	Tamper	☑	Tamper-COM1iSTAR Input Board1-...	
...	Communication Fail	☑	Communication Fail-COM1iSTAR In...	

Accessing the iSTAR Input Board Editor

You can access the iSTAR Input Board Editor in the following ways:

- To Access the iSTAR Input Board Editor (iSTAR eX/Edge Controller) on Page 208
- To Access the iSTAR Input Board Editor (iSTAR Classic/Pro Controller) on Page 208
- To Access the iSTAR Input Board Editor from the Hardware Tree on Page 208

To Access the iSTAR Input Board Editor (iSTAR eX/Edge Controller)

1. From the iSTAR Controller Editor, click on the appropriate COM tab (COM1, COM2, or COM3).
2. In the Input Boards table on this tab, click ... in the **Edit** column for the Input board you want to Edit.
3. The iSTAR Input Board Editor opens.

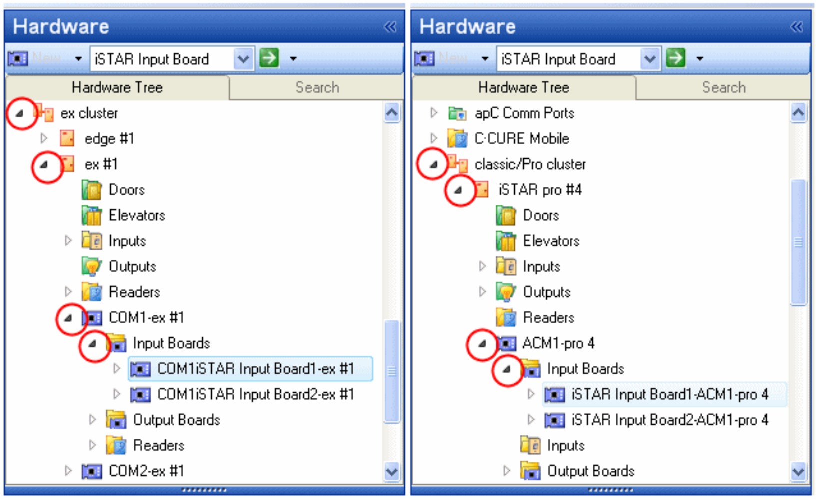
To Access the iSTAR Input Board Editor (iSTAR Classic/Pro Controller)

1. From the iSTAR Controller Editor, click on the **Boards** tab.
2. In the ACMs table on this tab, click ... in the **Edit** column for the ACM that contains the Input board you want to Edit. The ACM Board Editor opens.
3. Click the **ACM Ext** tab.
4. In the Input Boards table on this tab, click ... in the **Edit** column for the Input board you want to Edit.
5. The iSTAR Input Board Editor opens.

To Access the iSTAR Input Board Editor from the Hardware Tree

1. Navigate from your iSTAR Controller in the Hardware Tree to the appropriate COM Board (on an iSTAR eX or iSTAR Edge Controller) or ACM Board (iSTAR Classic/Pro Controller).
2. Click on **Input Boards**, as shown in Figure 75 on Page 208. This figure shows the hardware tree for an iSTAR eX on the left and an iSTAR Pro on the right.

Figure 75: iSTAR Input Board in the Hardware Tree



3. Double-click on the Input Board you wish to edit. The iSTAR Input Board Editor opens.

Configuring iSTAR Input Boards

When you configure an iSTAR Input Board, you are defining the Inputs that are attached to a particular I/8 board. You can then click to open the Inputs Editor to configure individual Inputs.

To Configure an iSTAR Input Board Tab

1. Access the Input Board Editor for the Input Board you wish to edit (see Accessing the iSTAR Input Board Editor on Page 208).
2. If you wish to use an Input Template to configure one or more of the I/8 board Inputs, click in the **Template** column, then click ... to open a dialog box listing the available Input Templates. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more information.
3. Create the **Inputs** that you need by clicking **Create All Inputs** or by selecting the **Configured** check box for only the Inputs you wish to create.
4. Click ... in the **Edit** column to open the iSTAR Input Editor to configure individual Inputs. See the iSTAR Input Editor on Page 227 for configuration instructions.
5. If you wish to use an Input Template to configure one or more of the I/8 board Status Inputs, click in the **Template** column, then click ... to open a dialog box listing the available Input Templates. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more information.
6. Create the Status Inputs that you need by clicking **Create All Inputs** or by selecting the **Configured** check box for only the Inputs you wish to create.
7. Click ... in the **Edit** column to configure individual Status Inputs. See the definitions of the Status Inputs in Table 67 on Page 209 and see iSTAR Input Editor on Page 227.
8. When you have finished configuring the Inputs on the Input Board Editor General tab, click **Save and Close** to save the settings you have configured on the iSTAR Input Board editor.

iSTAR Input Board General Tab

The iSTAR Input Board General tab allows you to configure the Inputs on an I/8 board attached to your iSTAR Controller, as well as the Status Inputs for Tamper and Communications Failure.

iSTAR Input Board General Tab Definitions

Table 67 on Page 209 lists the fields and buttons that appear on the iSTAR Input Board General tab.

Table 67: iSTAR Input Board General Tab Definitions

Field/Button	Description
Identification	
Name	Displays the name for this Input board. The name is system-generated by default, but you can edit this name by clicking in this field.
Description	Enter a textual comment about the Input Board, such as its location or purpose. This text is for information only.
Maintenance Mode	Click to put the Input Board into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.

Table 67: iSTAR Input Board General Tab Definitions (continued)

Field/Button	Description
Partition	This read-only field identifies the Partition in which this Input board resides.
Controller	This read-only field identifies the iSTAR Controller to which this Input board is attached.
Location	
Board	This read-only field identifies the iSTAR Controller board to which this Input board is attached.
Board Index	This read-only field identifies the board index (which represents the SW1 address switch setting on the I/8 board) for this Input board.
Inputs	
Create All Inputs	Click to create all eight Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete all eight Inputs. The check boxes in the **Configured** column are set to □.
Edit column	Click ... in this column to open the iSTAR Input Editor to edit this Input.
Index column	This read-only field identifies the position of each Input (P1 - P8) on the I/8 board.
Configured column	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name column	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template column	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.
Status Inputs	
Create All Inputs	Click to create the Tamper and Communications Fail Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete the Tamper and Communications Fail Inputs. The check boxes in the **Configured** column are set to □.
Edit column	Click ... in this column to open the iSTAR Input Editor to edit this Input.
Input Type column	The Input Type Column displays: **Tamper** – Represents the Tamper Input on the I/8 board. NOTE: For UL applications, the **Tamper** Input on the iSTAR Input Board General tab must be enabled. **Communications Fail** – Represents the Communications Fail Input on the I/8 board. NOTE: For UL applications, the Communications Failure Input on the iSTAR Input Board General tab must be enabled.
Configured column	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name column	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template column	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.

iSTAR Output Board Editor

The iSTAR Output Board editor lets you configure an iSTAR Output Board that you created on the iSTAR Classic/Pro ACM Board ACM Ext tab or the iSTAR eX and iSTAR Edge COM1, COM2, and COM3 tabs.

The iSTAR Output Board editor (see Figure 76 on Page 211) has the following tabs:

- **iSTAR Output Board General Tab**

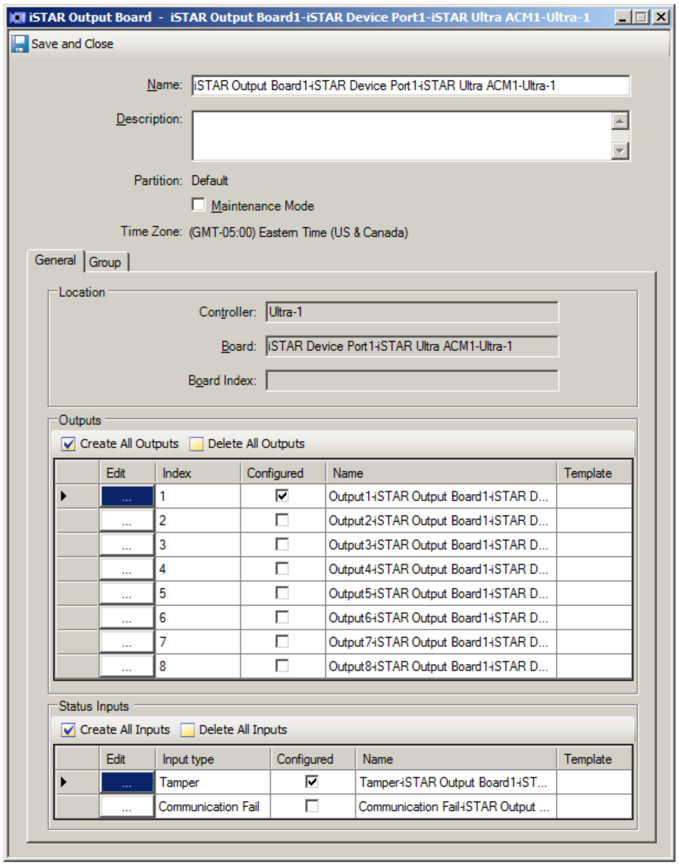
  Lists the Outputs and Status Inputs on an R/8 board that is connected to an iSTAR Classic/Pro, iSTAR eX, or iSTAR Edge. See iSTAR Output Board General Tab on Page 213.

- **iSTAR Output Board Group Tab**

  If you have created a Group containing iSTAR Output Boards and added this Output Board to it, the iSTAR Output Board editor also displays a Group tab.

  This tab lists the Output Board groups to which this Output Board belongs. See Groups Tab for Hardware Devices on Page 36 for information on using the Group tab for the iSTAR Output Board.

Figure 76: iSTAR Output Board Editor


iSTAR Output Board - iSTAR Output Board1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra-1
Save and Close
General
Group

Name: iSTAR Output Board1-iSTAR Device Port1-iSTAR Ultra ACM1-Ultra-1

Description:

Partition: Default

☐ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Location

Controller: Ultra-1

Board: iSTAR Device Port1-iSTAR Ultra ACM1-Ultra-1

Board Index:

Outputs

☑ Create All Outputs ☐ Delete All Outputs

	Edit	Index	Configured	Name	Template
▶	...	1	☑	Output1-iSTAR Output Board1-iSTAR D...	
	...	2	☐	Output2-iSTAR Output Board1-iSTAR D...	
	...	3	☐	Output3-iSTAR Output Board1-iSTAR D...	
	...	4	☐	Output4-iSTAR Output Board1-iSTAR D...	
	...	5	☐	Output5-iSTAR Output Board1-iSTAR D...	
	...	6	☐	Output6-iSTAR Output Board1-iSTAR D...	
	...	7	☐	Output7-iSTAR Output Board1-iSTAR D...	
	...	8	☐	Output8-iSTAR Output Board1-iSTAR D...	

Status Inputs

☑ Create All Inputs ☐ Delete All Inputs

	Edit	Input type	Configured	Name	Template
▶	...	Tamper	☑	Tamper-iSTAR Output Board1-iST...	
	...	Communication Fail	☐	Communication Fail-iSTAR Output ...	

Accessing the iSTAR Output Board Editor

You can access the iSTAR Output Board Editor in three ways:

- To Access the iSTAR Output Board Editor (iSTAR eX/Edge Controller) on Page 212
- To Access the iSTAR Output Board Editor (iSTAR Classic/Pro Controller) on Page 212
- To Access the iSTAR Output Board Editor from the Hardware Tree on Page 212

To Access the iSTAR Output Board Editor (iSTAR eX/Edge Controller)

1. From the iSTAR Controller Editor, click on the appropriate COM tab (COM1, COM2, or COM3).
2. In the Output Boards table on this tab, click ... in the **Edit** column for the Output board you want to Edit.
3. The iSTAR Output Board Editor opens (see iSTAR Output Board Editor on Page 211).

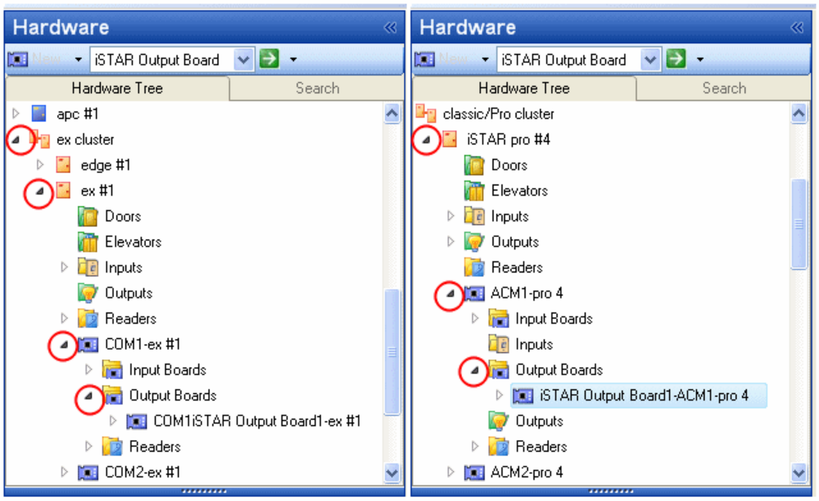
To Access the iSTAR Output Board Editor (iSTAR Classic/Pro Controller)

1. From the iSTAR Controller Editor, click on the Boards tab.
2. In the ACMs table on this tab, click ... in the **Edit** column for the ACM that contains the Output board you want to Edit. The ACM Board Editor opens.
3. Click the ACM Ext tab.
4. In the Output Boards table on this tab, click ... in the **Edit** column for the Output board you want to Edit.
5. The iSTAR Output Board Editor opens (see iSTAR Output Board Editor on Page 211).

To Access the iSTAR Output Board Editor from the Hardware Tree

1. Navigate from your iSTAR Controller in the Hardware Tree to the appropriate COM Board (on an iSTAR eX or iSTAR Edge Controller) or ACM Board (iSTAR Classic/Pro Controller).
2. Click on **Output Boards**, as shown in Figure 77 on Page 212. This figure shows the hardware tree for an iSTAR eX on the left and an iSTAR Pro on the right.

Figure 77: iSTAR Output Board in the Hardware Tree



3. Double-click on the Output Board you wish to edit. The iSTAR Output Board Editor opens (see iSTAR Output Board Editor on Page 211).

Configuring iSTAR Output Boards

When you configure an iSTAR Output Board, you are defining the Outputs that are attached to a particular R/8 board. You can then click to open the Outputs Editor to configure individual Outputs.

To Configure an iSTAR Output Board

1. Access the Output Board Editor for the Output Board you wish to edit (see Accessing the iSTAR Output Board Editor on Page 211).
2. If you wish to use an Output Template to configure one or more of the R/8 board Outputs, click in the **Template** column, then click ... to open a dialog box listing the available Output Templates. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more information.
3. Create the **Outputs** that you need by clicking **Create All Outputs** or by selecting the **Configured** check box for only the Outputs you wish to create.
4. Click ... in the **Edit** column to open the iSTAR Output Editor to configure individual Outputs. See the iSTAR Output Editor on Page 236 for configuration instructions.
5. If you wish to use an Output Template to configure one or more of the R/8 board Status Inputs, click in the **Template** column, then click ... to open a dialog box listing the available Input Templates. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more information.
6. Create the Status Inputs that you need by clicking **Create All Inputs** or by selecting the **Configured** check box for only the Inputs you wish to create.
7. Click ... in the **Edit** column to configure individual Status Inputs. See the definitions of the Status Inputs in Table 68 on Page 213 and see iSTAR Input Editor on Page 227.
8. When you have finished configuring these Outputs and Inputs on the Output Board Editor General tab, click **Save and Close** to save the settings you have configured on the iSTAR Output Board editor.

iSTAR Output Board General Tab

The iSTAR Output Board General tab allows you to configure the Outputs on an R/8 board attached to your iSTAR Controller, as well as the Status Inputs for Tamper and Communications Failure.

iSTAR Output Board General Tab Definitions

Table 68 on Page 213 lists the fields and buttons that appear on the iSTAR Output Board General tab.

Table 68: iSTAR Output Board General Tab Definitions

Field/Button	Description
Identification	
Name	Displays the name for this Output board. The name is system-generated by default, but you can edit this name by clicking this field.
Description	Enter a textual comment about the Output board, such as its location or purpose. This text is for information only.
Maintenance Mode	Click to put the iSTAR Outboard Board into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this Output board resides.
Location	
Controller	This read-only field identifies the iSTAR Controller to which this Output board is attached.

Table 68: iSTAR Output Board General Tab Definitions (continued)

Field/Button	Description
Board	This read-only field identifies the iSTAR Controller board to which this Output board is attached.
Board Index	This read-only field identifies the board index (which represents the SW1 address switch setting on the R/8 board) for this Output board.
Outputs	
Create All Outputs	Click to create all eight Outputs. The check boxes in the **Configured** column are set to ☑.
Delete All Outputs	Click to delete all eight Outputs. The check boxes in the **Configured** column are set to □.
Edit column	Click ... in this column to open the iSTAR Output Editor to edit this Output.
Index column	This read-only field identifies the position of each Output (P1 - P8) on the R/8 board.
Configured column	☑ indicates that the Output has been configured. □ indicates that the Output has not been configured.
Name column	Displays the system-generated name for this Output. You can edit this name by clicking in the field.
Template column	Displays the Template used for creating this Output. If the Output is not yet configured, you can click in this column, then click to select an Output Template. If the **Configured** column displays ☑, this field cannot be edited.
Status Inputs	
Create All Inputs	Click to create the Tamper and Communications Fail Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete the Tamper and Communications Fail Inputs. The check boxes in the **Configured** column are set to □.
Edit column	Click ... in this column to open the iSTAR Input Editor to edit this Input.
Index column	The Input Type Column displays: **Tamper** – Represents the Tamper Input on the R/8 board. NOTE: For UL applications, the Tamper Input on the iSTAR Output Board General tab must be enabled. **Communications Fail** – Represents the Communications Fail Input on the R/8 board. NOTE: For UL applications, the Communications Failure Input on the iSTAR Output Board General tab must be enabled.
Configured column	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name column	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template column	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.

iSTAR Ultra Wireless Readers

The iSTAR Ultra supports either ASSA ABLOY Aperio or Allegion Schlage® wireless readers. The interface is through the RS-485 ports on the Ultra GCM board. The default setting is Aperio, with Schlage as the only other option currently. Both ports must use the protocol, and they are synchronized so that both ports change whenever the protocol changes on either of them.

NOTE The protocol cannot be changed while any Schlage PIM or Aperio Hub exists.

Assa Abloy Aperio Hubs and Wireless Readers

- Each RS-485 port (for example, GCM Port1, Port2) supports up to 15 Hubs. The iSTAR Ultra supports up to 32 readers paired to any of the 30 Hubs.
- If there are fewer than 32 Aperio readers, there can be up to 16 usual (RM bus or direct Wiegand) readers on the iSTAR Ultra. If only Aperio readers are used, there is no need for an ACM on the Ultra.
- Either 8 Port or 1 Port Hubs can be used, but usually 8 Port Hubs are configured.
- There are 11, plus a generic, types of locks that can be configured on the Ultra GCM.
- Only IN100 v3 readers with upgraded hubs can perform manual actions.
- Right click on the Aperio Door item in a Dynamic view to display the context menu items Unlock, Lock, Momentary Unlock, and Show Locked Causes , which are available to those who have permissions to perform these manual actions. The context menu items display for all Aperio reader types, but not all types will unlock, lock, or momentary unlock. Refer to the C•CURE 9000 Software Configuration Guide for more information on Manual Actions.
- Groups that contain Aperio doors with any reader type will display Unlock, Lock, Momentary Unlock and Show Locked Causes context menu items if the user has those permissions and the panel that controls the door is online. The context menu displays, but only the IN100 v3 readers respond to the command

Allegion Schlage PIMs and Wireless Readers

- Each RS-485 port (i.e., GCM Port1, Port2) supports up to 16 PIMs. The iSTAR Ultra supports up to 32 readers connected to any of the 32 PIMs. Schlage use a proprietary protocol named RS-485 RSI for communication on the bus.
- If there are fewer than 32 Schlage readers, there can be up to 16 usual (RM bus or direct Wiegand) readers on the iSTAR Ultra. If only Schlage readers are used, there is no need for an ACM on the Ultra.
- When assigning reader numbers, it is best practice to use sequential numbers, If you configure reader 1 and reader 5, Schlage will not use readers 2, 3, and 4. Although, those reader numbers are available for the up to 16 ACM RM or Wiegand readers.

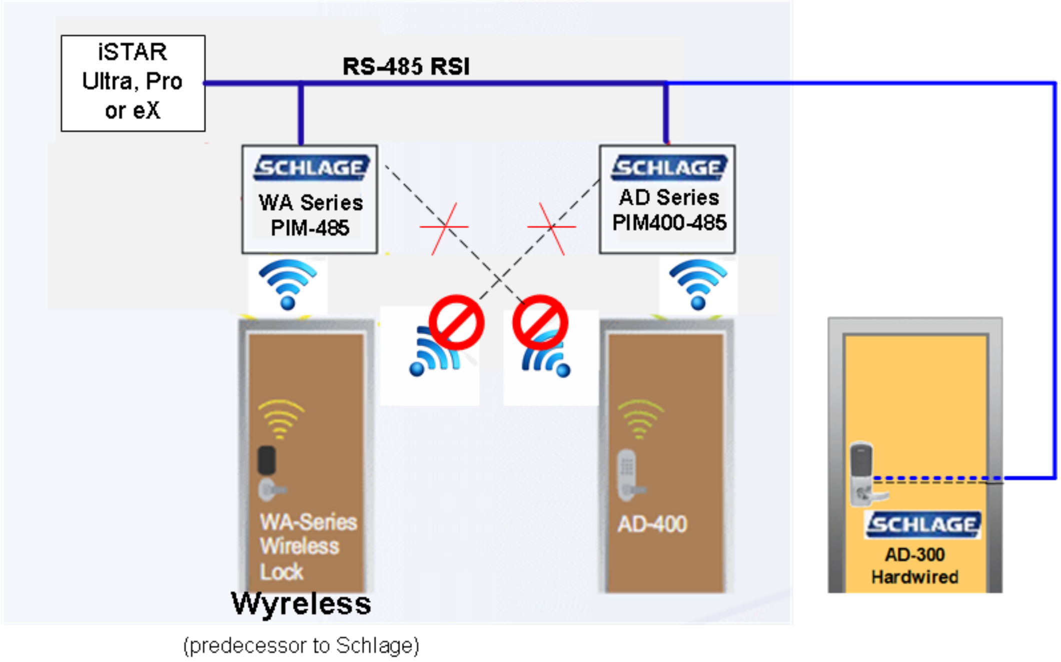
NOTE Schlage addresses are one less than the C•CURE index. For example, if you setup a reader on Schlage address 1, then it's C•CURE index 2.

- There are 4 types of PIMs that can be connected to Port 1 or Port 2.
  - PIM400-485 (AD-400 Series Locks)
  - AD-300 (AD-300 Series Locks)
  - PIM-485 (WA Series Locks)
  - GWE Gateway (NDE/LE Series Locks)

NOTE The iSTAR eX and iSTAR Pro support the same PIMs and Locks through the RS-485 ports on the Pro GCM and the eX PMB board. The RM ports on the eX PMB are multiplexed to the COM1 and COM2 ports that are visible in the C•CURE 9000 software.

Figure 78 on Page 216 shows Schlage wireless connection methods.

Figure 78: Schlage Wireless Connection Methods



iSTAR Ultra Schlage Wireless Types of Connections

The Schlage Readers interface to C•CURE hardware using one of eight basic methods:

1. PIM400-485 (AD400 Wireless to Ultra GCM, Pro GCM and eX PMB)
2. PIM400-485 TD2 (AD400 Wireless to all iSTARs and all apCs) (Can use Wiegand or Magnetic signaling)
3. AD300 Built-in PIM (AD300 Wired to Ultra, Pro and eX)
4. AD300 PIB300 (AD300 Wired to all iSTARs and all apCs)
5. PIM485 (Wyreless Wireless to Ultra GCM, Pro GCM and eX PMB)
6. PIM TD2 (Wyreless Wireless to all iSTARs and all apCs) (2 Reader - Can use Wiegand or Magnetic signaling)
7. PIM TD4 (Wyreless Wireless to all iSTARs and all apCs) (4 reader - Can use Wiegand or Magnetic signaling)
8. GWE Gateway (NDE and LE wireless to Ultra GCM, Pro GMC and eX PMB.

Each of the first four methods are repeated for FIPS-201:

1. PIM401-485 (AD400 Wireless to Ultra, Pro and eX)
2. PIM401-485 TD2 (AD400 Wireless to all iSTARs and all apCs)
3. AD301 Built-in PIM (AD300 Wired to Ultra, Pro and eX)
4. AD301 PIB301 (AD301 Wired to all iSTARs and all apCs)

Wireless - PIM400 and PIM400-TD2

- Up to 16 AD400 wireless readers can be associated with 1 PIM400. Up to 2 AD400 wireless readers can be associated with 1 PIM400-TD2.

- The PIM400 interfaces with iSTAR Ultra, Pro and eX using RS-485 RSI.
- The PIM400-TD2 interfaces with either Wiegand signaling or Clock/Data Magnetic ABA2 signaling. The method is determined by the type of reader.
- A magnetic card reader (swipe or insertion) will use Clock and Data which will be passed through the TD2 to the C•CURE hardware. The magnetic signaling must be connected to an RM4/4E and then to an RM port.
- A Wiegand signaling reader will use Data 1 and Data 0 which will also be passed through the TD2. the Wiegand signaling can be connected to any direct Wiegand port or to an RM4/4E.
- In addition to AD400 Readers, the PIM400-485 can also communicate with WRI400, WPR400, and TK400 devices.

Summary Tables

The tables in this section provides a matrix of the possible connections between Schlage devices and iSTARs and apCs.

AD400 Wireless

Table 69: AD400 Series

Controller/Panel	Locks Supported	RS485 RSI Chain	Wiegand Signal (D0/D1) to Panel	Magnetic Signal (CLK/DATA) to Panel
iSTAR Ultra iSTAR Pro iSTAR Classic	AD400 (All styles)	PIM400-485 RSI to GCM	PIM400-TD2 to ACM Wiegand PIM400-TD2 to RM4x to ACM RM	PIM400-TD2 to RM4x to ACM RM
iSTAR eX	AD400 (All styles)	PIM400-485 RSI to PMB	PIM400-TD2 to GCM Wiegand PIM400-TD2 to RM4x to PMB RM	PIM400-TD2 to RM4x to PMB RM
iSTAR Edge	AD400 (All styles)		PIM400-TD2 to Edge Wiegand PIM400-TD2 to RM4x to Edge RM	PIM400-TD2 to RM4x to Edge RM
apC/8X	AD400 (All styles)		PIM400-TD2 to WPSC Wiegand PIM400-TD2 to RM4x to apC RM	PIM400-TD2 to RM4x to apC RM
apC/L	AD400 (All styles)		PIM400-TD2 to RM4x to apC/L RM	PIM400-TD2 to RM4x to apC/L RM

AD401 Wireless (FIPS-201)

NOTE The AD401 (FIPS-201) configuration only supports a Multi-technology reader with Keypad and Wiegand signaling.

The reader appears as a standard Wiegand reader connected to:

- iSTAR ACM Wiegand Port
- iSTAR eX GCM Wiegand Port
- iSTAR Edge Wiegand Port
- apC/8X WPSC Wiegand Port
- RM4 or RM4E to any RM Port on iSTAR or apC.

The PIB401-TD2 is used for all connections.

Table 70: AD401 Series

Controller/Panel	Locks Supported	RS485 RSI Chain	Wiegand Signal (D0/D1) to Panel	Magnetic Signal (CLK/DATA) to Panel
iSTAR Ultra iSTAR Pro iSTAR Classic	AD401 (Multi-Technology with keypad only)	N/A	PIM401-TD2 to ACM Wiegand PIM401-TD2 to RM4x to ACM RM	N/A
iSTAR eX	AD401 (Multi-Technology with keypad only)	N/A	PIM401-TD2 to GCM Wiegand PIM401-TD2 to RM4x to PMB RM	N/A
iSTAR Edge	AD401 (Multi-Technology with keypad only)		PIM401-TD2 to Edge Wiegand PIM401-TD2 to RM4x to Edge RM	N/A
apC/8X	AD401 (Multi-Technology with keypad only)		PIM401-TD2 to WPSC Wiegand PIM401-TD2 to RM4x to apC RM	N/A
apC/L	AD401 (Multi-Technology with keypad only)		PIM401-TD2 to RM4x to apC/L RM	N/A

AD300 Hard Wired

Table 71: AD300 Series

Controller/Panel	Locks Supported	RS485 RSI Chain	Wiegand Signal (D0/D1) to Panel	Magnetic Signal (CLK/DATA) to Panel
iSTAR Ultra iSTAR Pro iSTAR Classic	AD300 (All styles)	Built in PIM400-485 RSI to GCM	PIB300-TD2 to ACM Wiegand PIB300-TD2 to RM4x to ACM RM	PIB300-TD2 to RM4x to ACM RM
iSTAR eX	AD300 (All styles)	Built in PIM400-485 RSI to PMB	PIB300-TD2 to GCM Wiegand PIB300-TD2 to RM4x to PMB RM	PIB300-TD2 to RM4x to PMB RM
iSTAR Edge	AD300 (All styles)		PIB300-TD2 to Edge Wiegand PIB300-TD2 to RM4x to Edge RM	PIB300-TD2 to RM4x to Edge RM
apC/8X	AD300 (All styles)		PIB300-TD2 to WPSC Wiegand PIB300-TD2 to RM4x to apC RM	PIB300-TD2 to RM4x to apC RM
apC/L	AD300 (All styles)		PIB300-TD2 to RM4x to apC/L RM	PIB300-TD2 to RM4x to apC/L RM

AD301 Hard Wired FIPS-201

NOTE The AD301 (FIPS-201) configuration only supports a Multi-technology reader with Keypad and Wiegand signaling.

The PIB301-TD2 is used for all connections.

Table 72: AD301 Series

Controller/Panel	Locks Supported	RS485 RSI Chain	Wiegand Signal (D0/D1) to Panel	Magnetic Signal (CLK/DATA) to Panel
iSTAR Ultra iSTAR Pro iSTAR Classic	AD301 (Multi-Technology with keypad only)	N/A	PIB301-TD2 to ACM Wiegand PIB301-TD2 to RM4x to ACM RM	N/A
iSTAR eX	AD301 (Multi-Technology with keypad only)	N/A	PIB301-TD2 to GCM Wiegand PIB301-TD2 to RM4x to PMB RM	N/A
iSTAR Edge	AD301 (Multi-Technology with keypad only)		PIB301-TD2 to Edge Wiegand PIB301-TD2 to RM4x to Edge RM	N/A
apC/8X	AD301 (Multi-Technology with keypad only)		PIB301-TD2 to WPSC Wiegand PIB301-TD2 to RM4x to apC RM	N/A
apC/L	AD301 (Multi-Technology with keypad only)		PIB301-TD2 to RM4x to apC/L RM	N/A

Readers per Controller/Panel

Aperio Wireless Readers

Table 73: Aperio Wireless Readers

Controller/Panel	Interface Device	Max # of Aperio Hubs	Max # of Non-Aperio Readers	Max # of Aperio Readers	Max # of both Combined	Notes
iSTAR Ultra	Aperio Hub (8 Port or 1 Port)	30 15 per RS-485 Port	16	32	32	iSTAR Ultra is the only iSTAR that supports Wireless Aperio Hubs.

Schlage Wireless Readers

Table 74: Readers per Controller/Panel - including Schlage Readers

Controller/Panel	Interface Device	Max # of Non-Schlage Readers	Max # of Schlage Readers	Max # of both Combined	Notes
iSTAR Ultra	PIM, AD300 to GCM	16	32	32	Max of 32 PIM(s) and 32 Readers
iSTAR Pro	PIM, AD300 to GCM	16	16	16	Max of 16 PIM(s) and 16 Readers
iSTAR eX 4 door	PIM, AD300 to PMB	4	16	16	16, but non-Schlage readers must be numbered 1-4
iSTAR eX 8 door	PIM, AD300 to PMB	8	16	16	16, but non-Schlage Readers must be numbered 1-8
iSTAR Pro Direct	TD2, PIB to ACM	16	16	16	2 Readers per TD2 or PIB
iSTAR eX 4 door Direct	TD2, PIB to GCM or PMB	4	4	4	2 Readers per TD2 or PIB
iSTAR eX 8 door Direct	TD2, PIB to GCM or PMB	8	8	8	Requires USB key 2 Readers per TD2 or PIB
iSTAR Edge 1 door Direct	TD2, PIB to Edge board	1	1	1	2 Readers per TD2 or PIB
iSTAR Edge 2 door Direct	TD2, PIB to Edge board	2	2	2	2 Readers per TD2 or PIB
iSTAR Edge 4 door Direct	TD2, PIB to Edge board	4	4	4	2 Readers per TD2 or PIB
apC/8X Direct	TD2, PIB to apC, WPSC, or Star Coupler	8	8	8	2 Readers per TD2 or PIB
apC/L Direct	TD2, PIB to apC/L	2	2	2	2 Readers per TD2 or PIB

iSTAR Aperio RS-485 Hub Board Editor (iSTAR Ultra only)

The iSTAR Aperio RS-485 Hub Board editor allows you to configure wireless Aperio Readers on the Hub. The Hub supports either one or eight Aperio wireless readers.

The iSTAR Aperio RS-485 Hub Board Editor has three tabs:

- General tab - see iSTAR Aperio RS-485 Hub Board Editor General Tab on Page 221
- Inputs tab - see iSTAR Aperio Hub Board Editor Input Tab on Page 222
- Readers tab - see iSTAR Aperio Hub Board Editor Readers Tab on Page 223

iSTAR Aperio RS-485 Hub Board Editor General Tab

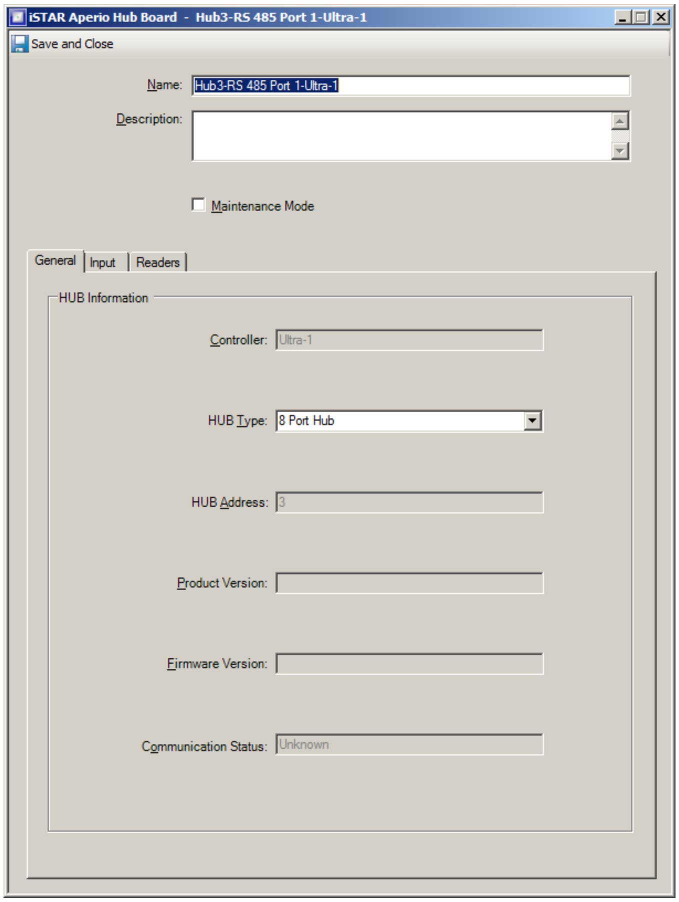
The iSTAR Aperio RS-485 Hub Board editor General tab lets you specify the Aperio RS-485 Hub on which you can create Aperio readers.

You select the type of Hub you want to configure by choosing a type from the HUB Type drop-down list. That selection determines the options that are available on the other tabs.

To access the iSTAR Aperio RS-485 Hub Board editor General tab, click on the COM 1 or COM 2 tab in the iSTAR Controller editor dialog box. Then, click on **Edit** in the row name of the RS-485 Port that you want to edit.

Figure 79 on Page 221 shows the iSTAR Aperio RS-485 Hub Board General tab.

Figure 79: iSTAR Aperio RS-485 Hub Board General Tab



iSTAR Aperio Hub Board - Hub3-RS 485 Port 1-Ultra-1

Name: Hub3-RS 485 Port 1-Ultra-1

Description:

☐ Maintenance Mode

HUB Information

Controller: Ultra-1

HUB Type: 8 Port Hub

HUB Address: 3

Product Version:

Firmware Version:

Communication Status: Unknown

iSTAR Aperio Hub Board Editor General Tab Definitions

The fields and buttons on the iSTAR Aperio RS-485 Board editor General tab are described in Table 75 on Page 222.

Table 75: iSTAR Aperio RS-485 Board Editor General Tab

Field/Button	Description
Name	This field displays the name of the Aperio Hub
Description	You can enter a textual description of the Aperio Board in the **Description** field.
Maintenance Mode	Click to put the Aperio RS-485 Hub Board into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Controller	The name of the iSTAR Ultra controller; this is a read-only field.
HUB Type	This drop-down list allows you to select the type of Aperio board you are configuring. The default selection is 8 Port Hub
HUB Number	This read-only field contains the HUB number - the same HUB Index number as shown on the iSTAR Ultra COM1/COM2 Tabs on Page 183.
Product Version	Displays the Product Version. For example, 2.0.0.
Firmware Version	Displays the Firmware Version. For example: 6.2.28176.
Communication Status	This read-only field displays whether the controller is in Online, Offline or Unknown state.
Save and Close	Click to save your configuration changes and close the iSTARAperio Hub Board editor.

iSTAR Aperio Hub Board Editor Input Tab

This tab allows you to configure a Communications Fail input for the Aperio Hub board.

iSTAR Aperio Hub Board Editor Input Tab Definitions

The fields and buttons on the iSTAR Aperio Board editor Input tab are described in Table 76 on Page 222.

Table 76: iSTAR Aperio RS-485 Board Editor

Field/Button	Description
Create All Inputs	Click to create the Communication Fail Input. When you click **Create All Inputs**, the **Configured** column check box is selected, and you can click ... in the **Edit** column to open the iSTAR Input editor (see iSTAR Input Editor on Page 227.
Delete All Inputs	When you click **Delete Input**, the check box in the **Configured** column is cleared for the Communications Fail Input, and the Input is deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the Input Editor to configure the Communications Fail Input. See iSTAR Input Editor on Page 227.
Input type column	This column displays the input type (Communications Fail).

iSTAR Aperio RS-485 Board Editor (continued)

Field/Button	Description
Configured column	Click □ in this column to create the Communications Fail Input (make it available to be edited).
Name column	Displays the name for this Input. The name is system-generated, but you can edit the name.
Save and Close	Click to save your configuration changes and close the Aperio Hub Board editor.

iSTAR Aperio Hub Board Editor Readers Tab

The iSTAR Aperio Hub Board editor Readers tab allows you to identify the readers you want to configure, and to access the iSTAR Aperio Reader editor to configure the readers.

The following Aperio Reader types can be configured: C100, E100, L100, PR100, IN100, A100, H100, K100, M100, KS100, R100, AS100, and Generic types.

iSTAR Aperio RS-485 Board Hub Editor Readers Tab Definitions

The fields and buttons on the iSTAR Aperio RS-485 Board editor Readers tab are described in Table 77 on Page 223.

Table 77: iSTAR Aperio RS-485 Board Editor Readers Tab

Field/Button	Description
Create All Readers	Click to create all 8 readers. When you click **Create All Readers** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Aperio Reader Editor to configure a Reader. See iSTAR Aperio Reader Editor on Page 484.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all 8 Readers, and all 8 Readers are deleted (any settings you have configured are lost). NOTE: If you **Delete all Readers** on this tab, the Aperio Door objects that were created automatically for these readers are also deleted.
Edit column	Click ... in the **Edit** column to open the iSTAR Aperio Reader editor to configure a Reader. See iSTAR Aperio Reader Editor on Page 484.
Reader Index column	This column displays the number of each Reader.
Configured column	Click □ in this column to create a Reader (make it available to be edited). Clearing this check box deletes this Aperio Reader, and any automatically created Aperio Door associated with this Reader, after you click **Yes** to confirm the deletion in the Warning box that appears.
Name column	Displays the name for this Reader. The name is system-generated, and the Name field is editable.
Save and Close	Click to save your configuration changes and close the iSTAR Aperio Hub Board editor.

iSTAR PIM-485 Board Editor

Use the iSTAR PIM-485 Board editor to configure Schlage Wireless Readers that are connected to a PIM-485 Panel Interface Module (PIM). This board supports up to 16 wireless readers connected via RS-485.

The following PIMs are supported:

- PIM400-485 (AD400 Series Locks)
- AD300 (AD300 Series Locks)
- PIM-485 (WA Series Locks)

The iSTAR PIM-485 Board Editor has three tabs:

- General tab - see iSTAR PIM-485 Board Editor General Tab on Page 224
- Inputs tab - see iSTAR PIM-485 Board Editor Input Tab on Page 225
- Readers tab - see iSTAR PIM-485 Board Editor Readers Tab on Page 226

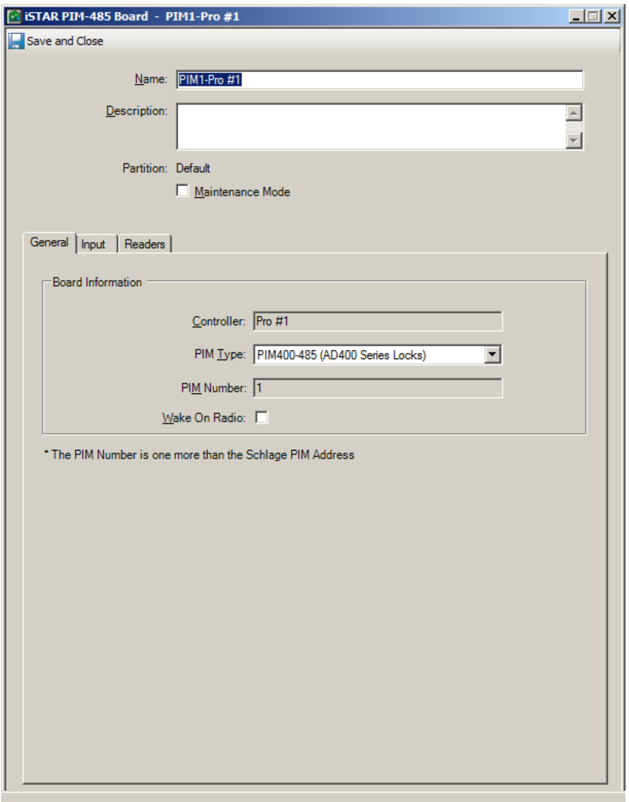
iSTAR PIM-485 Board Editor General Tab

The iSTAR PIM-485 Board editor General tab lets you specify the type of PIM Board to which you can configure Schlage Wireless readers. You select the type of PIM you want to configure by choosing a type from the PIM Type drop-down list. That selection determines the options that are available on the other tabs.

If you choose the AD300 (AD300 Series Locks), the Input tab is removed, because the AD300 does not support a Tamper Input.

Figure 80 on Page 224 shows the iSTAR PIM-485 Board General tab.

Figure 80: iSTAR PIM-485 Board General Tab



iSTAR PIM-485 Board - PIM1-Pro #1

Name: PIM1-Pro #1

Description:

Partition: Default

□ Maintenance Mode

Board Information

Controller: Pro #1

PIM Type: PIM400-485 (AD400 Series Locks)

PIM Number: 1

Wake On Radio: □

* The PIM Number is one more than the Schlage PIM Address

iSTAR PIM-485 Board Editor General Tab Definitions

The fields and buttons on the iSTAR PIM-485 Board editor General tab are described in Table 78 on Page 225.

Table 78: iSTAR PIM-485 Board Editor General Tab

Field/Button	Description
Name	This field displays the name of the PIM Board
Description	You can enter a textual description of the PIM Board in the **Description** field.
Maintenance Mode	Click to put the iSTAR PIM-485 Board into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Controller	The name of the controller; this is a read-only field.
PIM Type	This drop-down list allows you to select the type of PIM board you are configuring. • PIM400-485 (AD400 Series Locks) • AD300 (AD300 Series Locks) • PIM-485 (WA Series Locks)
PIM Number	This read-only field contains the PIM number - the same PIM Index number as shown on the iSTAR Schlage Wireless PIMs Tab on Page 161 or the iSTAR eX COM1/COM2 Tabs on Page 177.
Wake on Radio	Wake on Radio allows a battery-powered lock device to receive an immediate command from the iSTAR panel that is out of sequence with the regular heartbeat communications between the panel and the lock (the default heartbeat interval is 10 minutes). The Wake on Radio interval is 10 seconds. Enabling this feature allows the reader and lock to respond more quickly (within ten seconds rather than within ten minutes) to manual actions. Typically the command from the iSTAR panel to the device will be for a lock or unlock.
Save and Close	Click to save your configuration changes and close the iSTAR PIM-485 Board editor.

iSTAR PIM-485 Board Editor Input Tab

This tab allows you to configure a Tamper input for the PIM400-485 and PIM-485.

If you select the AD300 series lock in the PIM Type Drop-down list on the General tab, the Input tab is removed because the AD300 series does not have a Tamper Input.

iSTAR PIM-485 Board Editor Input Tab Definitions

The fields and buttons on the iSTAR PIM-485 Board editor Input tab are described in Table 79 on Page 225.

Table 79: iSTAR PIM-485 Board Editor

Field/Button	Description
Create Input	Click to create the Tamper Input. When you click **Create Input**, the **Configured** column check box is selected, and you can click **...** in the **Edit** column to open the iSTAR Input editor (see iSTAR Input Editor on Page 227.
Delete Input	When you click **Delete Input**, the check box in the **Configured** column is cleared for the Tamper Input, and the Tamper Input is immediately deleted (any settings you have configured are lost).

iSTAR PIM-485 Board Editor (continued)

Field/Button	Description
Edit column	Click [...] in the **Edit** column to open the Input Editor to configure the Tamper Input. See iSTAR Input Editor on Page 227.
Input type column	This column displays the input type (Tamper).
Configured column	Click □ in this column to create the Tamper Input (make it available to be edited).
Name column	Displays the name for this Input. The name is system-generated and is read-only.
Template Column	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.
Save and Close	Click to save your configuration changes and close the iSTAR PIM-485 Board editor.

iSTAR PIM-485 Board Editor Readers Tab

The iSTAR PIM-485 Board editor Readers tab allows you to identify the readers you want to configure, and to access the iSTAR PIM-485 Reader editor to configure the readers.

iSTAR PIM-485 Board Editor Readers Tab Definitions

The fields and buttons on the iSTAR PIM-485 Board editor Readers tab are described in Table 80 on Page 226.

Table 80: iSTAR PIM-485 Board Editor Readers Tab

Field/Button	Description
Create All Readers	Click to create all 16 readers. When you click **Create All Readers** the Configured column check boxes are selected, and you can click [...] in the **Edit** column to open the iSTAR PIM-485 Board Editor to configure a Reader. See iSTAR PIM-485 Reader Editor on Page 480.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all 16 Readers, and all 16 Readers are immediately deleted (any settings you have configured are lost).
Edit column	Click [...] in the **Edit** column to open the iSTAR PIM-485 reader Editor to configure a Reader. See iSTAR PIM-485 Reader Editor on Page 480.
Reader Index column	This column displays the number of each Reader.
Configured column	Click □ in this column to create a Reader (make it available to be edited).
Name column	Displays the name for this Reader. The name is system-generated, and the field is read-only.
Save and Close	Click to save your configuration changes and close the iSTAR PIM-485 Board editor.

iSTAR Input Editor

Use the iSTAR Input editor to configure an iSTAR Input that you created on an iSTAR Input Board.

The iSTAR Input editor (see Figure 81 on Page 228) has the following tabs:

- **iSTAR Input General Tab on Page 231**

  Identifies the Controller and Board this Input is configured on, the type of the Input (such as Door Switch), and the object the Input is assigned to, such as a Door.

- **iSTAR Input Intrusion Zone Tab on Page 233**

  This tab appears only if you have included this iSTAR Controller in an Intrusion Zone and added this Input as a Controlled Input.

- **iSTAR Input Triggers Tab on Page 234**

  This tab lets you define Triggers that can activate C•CURE 9000 Events and activate outputs.

  See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

- **Groups Tab for Hardware Devices on Page 36**

  If you have created a Group containing iSTAR Inputs and added this Input to it, the iSTAR Input editor also displays a Group tab.

  This tab lists the Input groups to which this Input belongs. for information on using the Group tab for your iSTAR Input.

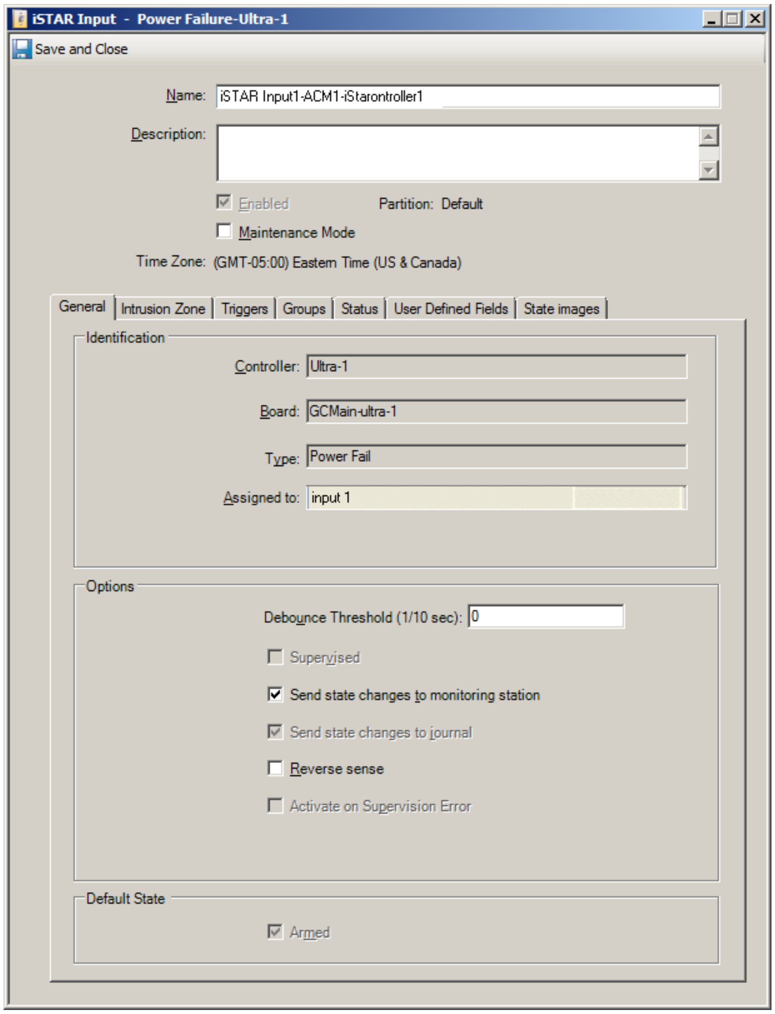
- **iSTAR Input Status Tab on Page 234**

  This tab displays several read-only fields that report the Active, Armed, Hardware, and Supervision status of the Input.

- **iSTAR Input State Images Tab on Page 234**

  This tab shows the images that are displayed in the Monitoring Station to represent this input. You can change the image used for any of the Input states.

Figure 81: iSTAR Input Editor



iSTAR Input - Power Failure-Ultra-1

Save and Close

Name: iSTAR Input1-ACM1-iStarontroller1

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Identification

Controller: Ultra-1

Board: GCMain-ultra-1

Type: Power Fail

Assigned to: input 1

Options

Debounce Threshold (1/10 sec): 0

□ Supervised

☑ Send state changes to monitoring station

☑ Send state changes to journal

□ Reverse sense

□ Activate on Supervision Error

Default State

☑ Armed

Accessing the iSTAR Input Editor

You can access the iSTAR Input Editor in several ways:

- To Access the iSTAR Input Editor (iSTAR eX/Edge Controller) on Page 228.
- To Edit a Main Board Input (iSTAR Classic/Pro Controller) on Page 229.
- To Edit an ACM Board Input (iSTAR Classic/Pro Controller) on Page 229.
- To Edit an Input on an ACM Ext I/8 Board (iSTAR Classic/Pro Controller) on Page 229.
- To Edit a Main Board Input from the Hardware Tree on Page 229.
- To Edit a COM1/COM2/COM3 or ACM Input from the Hardware Tree on Page 229

To Access the iSTAR Input Editor (iSTAR eX/Edge Controller)

1. From the iSTAR Controller Editor, click on the appropriate tab (Inputs, COM1, COM2, or COM3).
2. Click in the **Configured** column to create a Main Board or General Purpose Input.
3. Click the **Edit** button ... for the Input you want to edit.

- To edit a Main Board or General Purpose Input from the Inputs tab, click [...] in the **Edit** column for the Input you want to edit.
- To edit I/8 Inputs from the COM1/COM2/COM3 tab, click [...] in the **Edit** column for the Input Board containing the Input you want to Edit. The iSTAR Input Board Editor opens. Click [...] in the **Edit** column for the Input you want to edit.

The iSTAR Input Editor opens (see iSTAR Input Editor on Page 227).

To Edit a Main Board Input (iSTAR Classic/Pro Controller)

1. From the iSTAR Controller Editor, click on the Boards tab.
2. Click [...] in the **Edit** column for the Input you want to edit.

   The iSTAR Input Editor opens (see iSTAR Input Editor on Page 227).

To Edit an ACM Board Input (iSTAR Classic/Pro Controller)

1. From the iSTAR Controller Editor, click on the Boards tab.
2. Click [...] in the **Edit** column for the ACM that contains the Input you want to Edit. The ACM Board Editor opens.
3. Click the Inputs tab.
4. Click [...] in the **Edit** column for the Input you want to edit.

   The iSTAR Input Editor opens (see iSTAR Input Editor on Page 227).

To Edit an Input on an ACM Ext I/8 Board (iSTAR Classic/Pro Controller)

1. From the iSTAR Controller Editor, click on the Boards tab.
2. Click [...] in the **Edit** column for the ACM that contains the Input you want to Edit. The ACM Board Editor opens.
3. Click the ACM Ext tab.
4. Click [...] in the **Edit** column for the Input board that contains the Input.
5. In the Inputs table on this tab, click [...] in the **Edit** column for the Input you want to Edit.

   The iSTAR Input Editor opens (see iSTAR Input Editor on Page 227).

To Edit a Main Board Input from the Hardware Tree

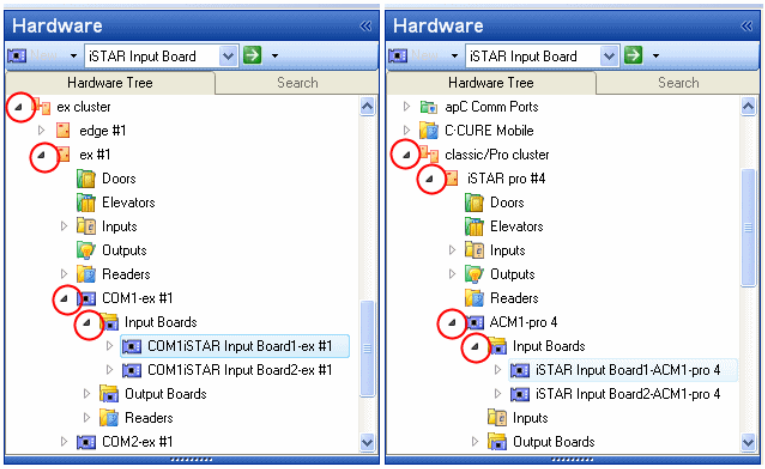
1. Navigate to your iSTAR Controller in the Hardware Tree and click ▷.
2. Click the **Inputs** folder.
3. Double-click on the Input you want to edit.

   The iSTAR Input Editor opens (see iSTAR Input Editor on Page 227).

To Edit a COM1/COM2/COM3 or ACM Input from the Hardware Tree

1. Navigate from your iSTAR Controller in the Hardware Tree to the appropriate COM Board (on an iSTAR eX or iSTAR Edge Controller) or ACM Board (on an iSTAR Classic/Pro Controller).
2. Click ▷ on **Input Boards**, as shown in Figure 77 on Page 212.

Figure 82: iSTAR Input Boards in the Hardware Tree



3. Click ▷ on the Input board that contains the Input you wish to edit.
4. Click ▷ on **Inputs** under that board.
5. Double-click on the Input you wish to edit.

   The iSTAR Input Editor opens.

Configuring an iSTAR Input

When you configure an iSTAR Input, you use the Input Editor tabs to define the Options, Default State, Triggers, and State Images for the Input.

To Configure an iSTAR Input

1. Access the Input Editor for the Input you wish to edit (see Accessing the iSTAR Input Editor on Page 228).
2. Click the Input General tab:
   - Modify the name of the Input in the **Name** field, if desired.
   - Add a textual description of the Input to the **Description** field.
   - Enable the Input by clicking the **Enabled** field.
   - Modify the Options settings for the Input. See the definitions for the Options fields in on Page 231.
   - Set the Default State for the Input to **Armed** (☑) or not **Armed** (□).
3. Click the Intrusion Zone tab (if available) to view the name of the **Intrusion Zone** this Input is part of, and the **Display Name** used by the Intrusion Zone for this Input.
4. Click the Input Triggers tab. iSTAR Input Triggers Tab on Page 234 defines the Input Properties you can use in triggers. Configure the triggers you need for this Input by following the steps in Triggers Tab for iSTAR Devices on Page 264.
5. Click the Input Status tab to view the Active, Armed, Hardware, and Supervision status of the Input.
6. Click the Input State Images tab to view the state images for this Input. If you wish to customize the state images for this Input, follow the steps in State Images Tab for iSTAR Devices on Page 267.
7. When you have finished configuring this Input in the Input Editor, click **Save and Close** to save the settings you have configured.

iSTAR Input General Tab

The iSTAR Input General tab displays information that identifies the Input and allows you to configure the Options and Default State for the input. Figure 81 on Page 228 shows the iSTAR Input General tab.

iSTAR Input General Tab Definitions

Table 81 on Page 231 lists the fields and buttons that appear on the iSTAR Input General tab.

Table 81: iSTAR Input General Tab Definitions

Field/Button	Description
Name	Displays the name for this Input. The name is system-generated by default, but you can edit this name by clicking in this field.
Description	Enter a textual comment about the Input, such as its location or purpose. This text is for information only.
Enabled	Click ☑ to enable the Input.
Maintenance Mode	Click to put the iSTAR Input into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this Input resides.
Supervising Resistor Configuration	To default the input resistor configuration to the SWH 1K double resistor setting, select **Calibratable**. For more information on input calibration, see Input calibration on Page 32.
Identification	
Controller	This read-only field identifies the iSTAR Controller to which this Input is attached.
Board	This read-only field identifies the iSTAR Controller board to which this Input is attached.
Type	Reflects whether the Input has been assigned to a Door or other object. These include: • General • Door Switch • Request to Exit • Elevator
Assigned to	Displays the Elevator or Door object name with which this Input is configured.
Connection	Identifies the Input number on the hardware board to which this Input is connected.
Options	
Debounce Threshold (1/10 sec)	In this field, enter the time that an input must be in a particular state before it is reported as a state change. It is used to filter out spurious changes. The units range from 0 – 60 seconds, the default is 0. NOTE: For Proprietary Burglar Alarm applications, the **Debounce Threshold** field must be programmed for a maximum of 90 seconds.
Supervised	This field indicates that the inputs on the board are Supervised. This is a read-only field. NOTE: For Proprietary Burglar Alarm applications, the **Supervised** check box must be selected.

Table 81: iSTAR Input General Tab Definitions (continued)

Field/Button	Description
Send state changes to monitoring station	To have a notification of changes in state of the Input sent to the guard station, select the **Send state changes to the monitoring station** check box. NOTE: For Proprietary Burglar Alarm applications, the **Send state changes to the monitoring station** option must be selected.
Send state change to journal	To have a notification of changes in state of the Input sent to the journal, select the **Send state changes to journal** check box. This option will be selected by default.
Reverse sense	When this option is selected, the interpretation of the board's Supervised Resistors is reversed.
Activate on Supervision Error	When this option is selected, the Input will be activated on a Supervision error.
Default State	
Armed	When this option is selected, the Input is armed by default. This is useful if you are not providing arming via an event.

Calibrating an iSTAR Ultra input

For more information on input calibration, see Input calibration on Page 32.

NOTE The input must be an iSTAR General Purpose Input that is attached to an Ultra Controller in G2 mode or a Legacy Ultra with a firmware version of 6.8.2 or later.

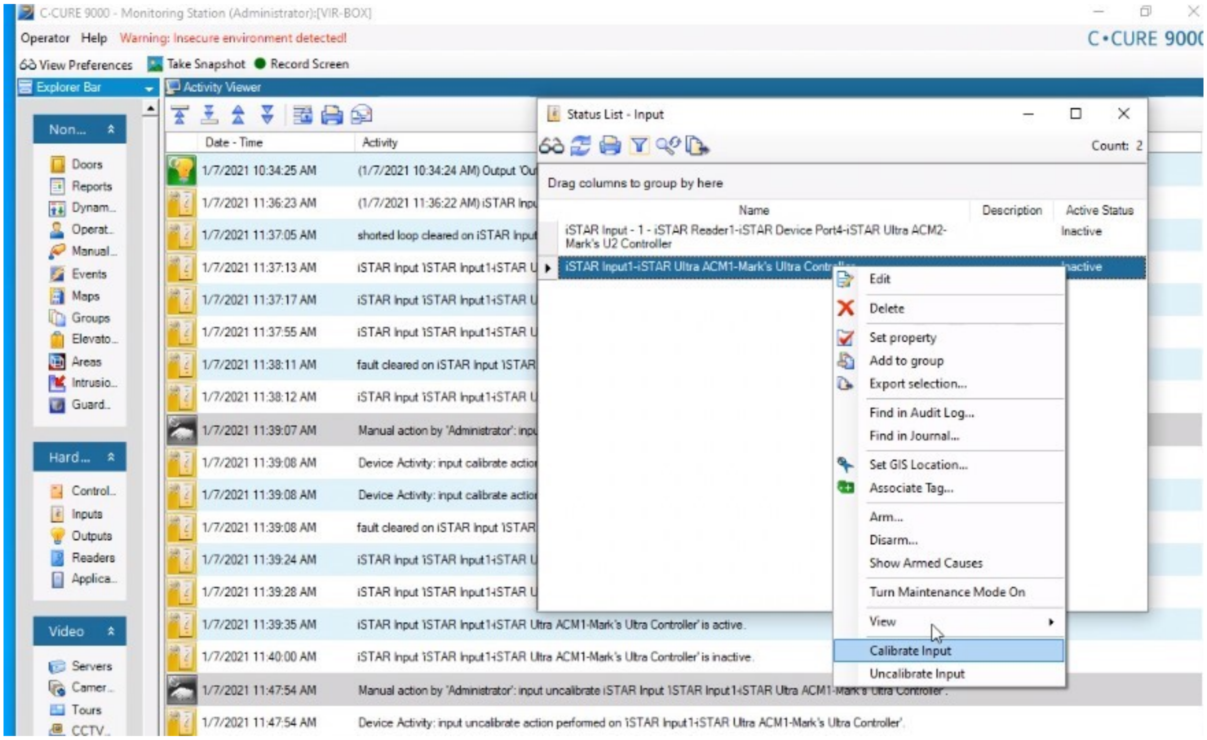
1. Open the Input Editor for the general purpose input you want to calibrate.
2. On the **General** tab, from **Supervisor Resistor Configuration**, select **Calibratable**.
3. Right-click the input and from the Context menu, select **Calibrate**. A dialog box appears. If the input a Normal or Secure state, click **OK**. For more information, see Supported input states for the Calibratable input type on Page 32.

NOTE You can calibrate only one input at a time.

The controller measures the input circuit. If the resistance is within the range of 400 to 5,000 ohms and the controller board is online, the calibration is performed and the Secure state is defined. If the calibration fails, the input circuit will go to the default uncalibrated state.

To uncalibrate an input, see Input uncalibration on Page 35.

Figure 83: Calibrate and uncalibrate options in dynamic view



Date - Time	Activity
1/7/2021 10:34:25 AM	(1/7/2021 10:34:24 AM) Output 'Ou
1/7/2021 11:36:23 AM	(1/7/2021 11:36:22 AM) iSTAR Inpu
1/7/2021 11:37:05 AM	shorted loop cleared on iSTAR Input
1/7/2021 11:37:13 AM	iSTAR Input 'iSTAR Input1-iSTAR U
1/7/2021 11:37:17 AM	iSTAR Input 'iSTAR Input1-iSTAR U
1/7/2021 11:37:55 AM	iSTAR Input 'iSTAR Input1-iSTAR U
1/7/2021 11:38:11 AM	fault cleared on iSTAR Input 'iSTAR
1/7/2021 11:38:12 AM	iSTAR Input 'iSTAR Input1-iSTAR U
1/7/2021 11:39:07 AM	Manual action by 'Administrator': inpu
1/7/2021 11:39:08 AM	Device Activity: input calibrate actio
1/7/2021 11:39:08 AM	Device Activity: input calibrate actio
1/7/2021 11:39:08 AM	fault cleared on iSTAR Input 'iSTAR
1/7/2021 11:39:24 AM	iSTAR Input 'iSTAR Input1-iSTAR U
1/7/2021 11:39:28 AM	iSTAR Input 'iSTAR Input1-iSTAR U
1/7/2021 11:39:35 AM	iSTAR Input 'iSTAR Input1-iSTAR Ultra ACM1-Mark's Ultra Controller' is active.
1/7/2021 11:40:00 AM	iSTAR Input 'iSTAR Input1-iSTAR Ultra ACM1-Mark's Ultra Controller' is inactive.
1/7/2021 11:47:54 AM	Manual action by 'Administrator': input uncalibrate iSTAR Input 'iSTAR Input1-iSTAR Ultra ACM1-Mark's Ultra Controller'.
1/7/2021 11:47:54 AM	Device Activity: input uncalibrate action performed on 'iSTAR Input1-iSTAR Ultra ACM1-Mark's Ultra Controller'.

Name	Description	Active Status
iSTAR Input - 1 - iSTAR Reader1-iSTAR Device Port4-iSTAR Ultra ACM2-Mark's U2 Controller		Inactive
iSTAR Input1-iSTAR Ultra ACM1-Mark's Ultra Contr		Inactive

Uncalibrating an iSTAR Ultra input

For more information on uncalibrating an input, see Input uncalibration on Page 35.

1. Navigate to the general purpose input you want to uncalibrate.
2. Right-click the input and from the Context menu, select **Calibrate**.

For more information on calibrating an input, see Input calibration on Page 32.

iSTAR Input Intrusion Zone Tab

The iSTAR Input Intrusion Zone tab appears only if the iSTAR Input is included in an Intrusion Zone.

An Input assigned as an iSTAR Intrusion Zone Controlled or Protected Input displays read-only assignment information on the Intrusion Zone tab of the Input Editor. This tab only displays when the Input is assigned to a zone. At the same time, the value in the Type field on the Input General tab changes from 'General' to 'Intrusion Zone'.

The iSTAR Input Intrusion Zone tab displays read-only fields that give Intrusion Zone assignment information for this Input.

Table 82: iSTAR Input Intrusion Zone Tab Definitions

Field/Button	Description
Intrusion Zone	Name of iSTAR Intrusion Zone this Input is assigned to
Display Name	Displays the name you entered for this Input on the iSTAR Intrusion Zones Editor Inputs tab in the **Controlled Inputs** table. NOTE: This is the unique LCD display name for this Input that is used whenever the Intrusion Zone needs to display this door as an 'offnormal' point on the Reader LCD.

NOTE The Dynamic View for iSTAR Inputs also allows you to add a column that identifies the Intrusion Zone to which the Inputs belong.

iSTAR Input Triggers Tab

You can create iSTAR Input Triggers for the properties shown in Table 83 on Page 234.

For iSTAR Main Board and Special Purpose Inputs such as Tamper, Power Failure, and Battery Low, you can only create Triggers for the **Active Status** property.

You can create input triggers for Schlage wireless reader deadbolt and illuminated push-button (IPB) inputs for latch events, toggle events, and unlatch events.

Table 83: iSTAR Input Trigger Properties

Property	Description
Active Status	Values that you can use for Triggers are “Active” and “Inactive”.
Armed Status	Values that you can use for Triggers are “Armed” and “No Error”.
Supervision Error Status	Values that you can use for Triggers are “Error” and “No Error”.

See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

iSTAR Input Status Tab

The iSTAR Input Status tab displays several Input properties in read-only fields. Table 84 on Page 234 lists the fields on the iSTAR Input Status tab.

Table 84: iSTAR Input Status Tab Definitions

Field/Button	Description
Active Status	Displays whether the Input is Active or Inactive.
Armed Status	Displays whether the Input is Armed or Disarmed.
Hardware Status	Displays the Hardware Status value for the Input. Possible values are Secure, Active, Open Loop, Shorted Loop, Fault, or Ground.
Supervision Status	Displays the Supervision Status value for the Input. Possible values are: • Unknown - the host has not received the input status reported from the panel yet. • Uninitialized - the panel reports no error on the input. • Error - the input is in error state, and the detail can be seen in the Hardware Status field.

iSTAR Input State Images Tab

The iSTAR Input State Images tab provides a means to change the default images that are displayed on the C•CURE 9000 Monitoring Station to indicate iSTAR Input states.

See State Images Tab for iSTAR Devices on Page 267 for information on using the State Images tab for an iSTAR Input.

iSTAR Input State Images Tab Definitions

Table 85 on Page 235 shows the iSTAR Input States and the default State Images.

Table 85: STAR Input State Images Tab Definitions

Icon	Description
	Unknown
	Active
	Armed Enabled
	Disarmed Enabled
	Supervision Error
	Disabled
	Update Disabled

iSTAR Output Editor

The iSTAR Output editor lets you configure an iSTAR Output that you created on an iSTAR Output Board.

The iSTAR Output editor (see on Page 236) has the following tabs:

- **iSTAR Output General tab**

  Identifies the Controller and Board this Output is configured on, the type of the Output (such as Alternate Shunt Relay), and the object the Input is assigned to, such as a Door. See iSTAR Output General Tab on Page 239.

- **iSTAR Output Groups tab**

  If you have created a Group containing iSTAR Outputs and added this Output to it, the iSTAR Output editor also displays a Group tab.

  This tab lists the Output groups to which this Output belongs. See Groups Tab for Hardware Devices on Page 36 for information on using the Group tab for the iSTAR Output.

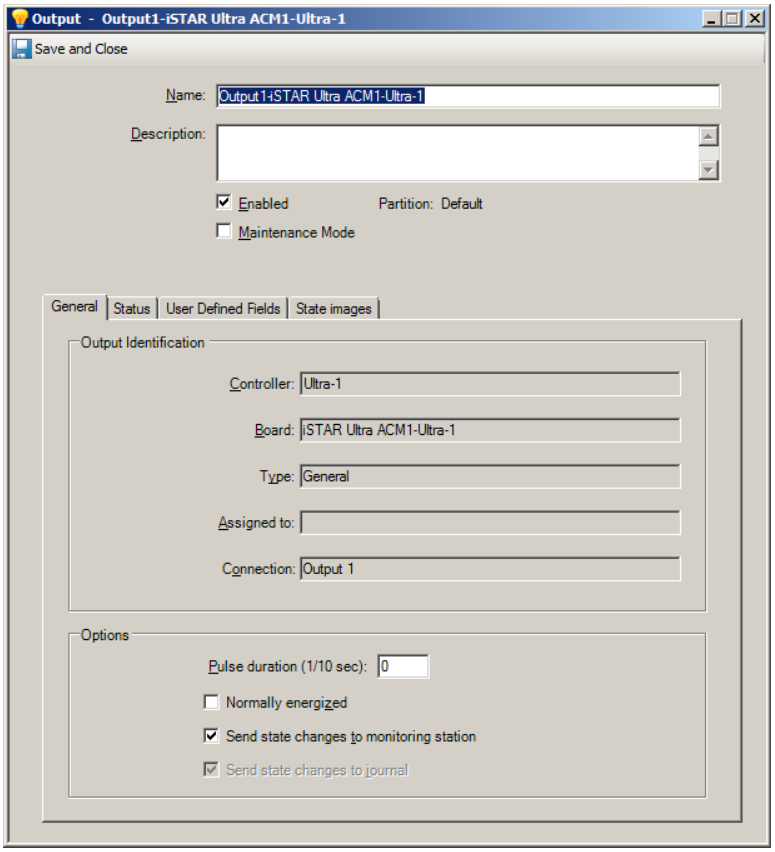
- **iSTAR Output Status tab**

  This tab displays several read-only fields that report the Active, Armed, Hardware, and Supervision status of the Output. See iSTAR Output Status Tab on Page 240.

- **iSTAR Output State Images tab**

  See iSTAR Output State Images Tab on Page 240.

Figure 84: iSTAR Output Editor



Output - Output1-iSTAR Ultra ACM1-Ultra-1

Save and Close

Name: Output1-iSTAR Ultra ACM1-Ultra-1

Description:

☑ Enabled   Partition: Default

☐ Maintenance Mode

General | Status | User Defined Fields | State images

Output Identification

Controller: Ultra-1

Board: iSTAR Ultra ACM1-Ultra-1

Type: General

Assigned to:

Connection: Output 1

Options

Pulse duration (1/10 sec): 0

☐ Normally energized

☑ Send state changes to monitoring station

☑ Send state changes to journal

Accessing the iSTAR Output Editor

You can access the iSTAR Output Editor in several ways:

- To Access the iSTAR Output Editor (iSTAR eX/Edge Outputs Tab) on Page 237.

- To Access the iSTAR Output Editor (iSTAR eX/Edge COM Tabs) on Page 237.
- To Edit a Main Board Output (iSTAR Classic/Pro Boards Tab) on Page 237.
- To Access the iSTAR Output Editor (iSTAR Classic/Pro ACM Board Outputs Tab) on Page 237
- To Access the iSTAR Output Editor (iSTAR Classic/Pro ACM Board ACM Ext Tab) on Page 238
- To Edit a Main Board Output from the Hardware Tree on Page 238.
- To Edit a COM1/COM2/COM3 or ACM Output from the Hardware Tree on Page 238

To Access the iSTAR Output Editor (iSTAR eX/Edge Outputs Tab)

1. From the iSTAR Controller Editor, click on the Outputs tab.
2. Click in the **Configured** column to create a Relay Output or an Open Collector Output.
3. Click the **Edit** button [...] for the Output you want to edit.

   The iSTAR Output Editor opens (see iSTAR Output Editor on Page 236).

To Access the iSTAR Output Editor (iSTAR eX/Edge COM Tabs)

1. From the iSTAR Controller Editor, click on the COM1, COM2, or COM3 (iSTAR Edge only) tab.
2. Click in the **Configured** column of the Output Boards table to create an Output Board.
3. Click [...] in the **Edit** column for the Output board you want to edit.

   The iSTAR Output Board Editor opens (see iSTAR Output Board Editor on Page 211).
4. Click in the **Configured** column of the Outputs table to create an Output.
5. Click the **Edit** button [...] for the Output you want to edit.

   The iSTAR Output Editor opens (see iSTAR Output Editor on Page 236).

To Edit a Main Board Output (iSTAR Classic/Pro Boards Tab)

1. From the iSTAR Controller Editor, click on the Boards tab.
2. Click in the **Configured** column to create a Main Board Output.
3. Click [...] in the **Edit** column for the Main Board Output.

   The iSTAR Output Editor opens (see iSTAR Output Editor on Page 236).

To Access the iSTAR Output Editor (iSTAR Classic/Pro ACM Board Outputs Tab)

1. From the iSTAR Controller Editor, click on the Boards tab.
2. Click in the **Configured** column of the ACMs table to create an ACM Board.
3. Click [...] in the **Edit** column for the ACM Board that contains the Input you want to Edit. The ACM Board Editor opens.
4. Click the Outputs tab on the ACM Board Editor.
5. Click in the **Configured** column to create an Output.
6. In the Outputs table on this tab, click [...] in the **Edit** column for the Output you want to Edit.

   The iSTAR Output Editor opens (see iSTAR Output Editor on Page 236).

To Access the iSTAR Output Editor (iSTAR Classic/Pro ACM Board ACM Ext Tab)

1. From the iSTAR Controller Editor, click on the Boards tab.
2. Click in the **Configured** column of the ACMs table to create an ACM Board.
3. Click ... in the **Edit** column for the ACM Board that contains the Input you want to Edit. The ACM Board Editor opens.
4. Click the ACM Ext tab on the ACM Board Editor.
5. Click in the **Configured** column of the Output Boards table to create an Output Board.
6. In the Output Boards table on this tab, click ... in the **Edit** column for the Output Board you want to Edit.

   The iSTAR Output Board Editor opens (see iSTAR Output Board Editor on Page 211).
7. Click in the **Configured** column of the Outputs table to create an Output .
8. In the Output Boards table on this tab, click ... in the **Edit** column for the Output Board you want to Edit.

   The iSTAR Output Editor opens (see Figure 84 on Page 236).

To Edit a Main Board Output from the Hardware Tree

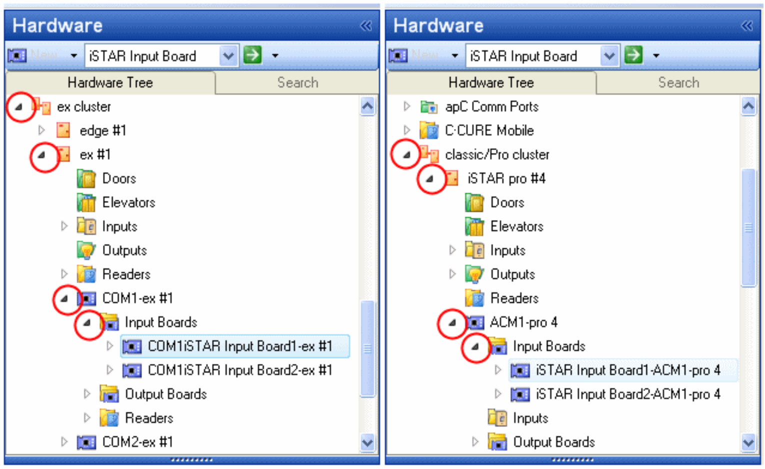
1. Navigate to your iSTAR Controller in the Hardware Tree and click ▷ .
2. Click the **Outputs** folder.
3. Double-click on the Output you want to edit.

   The iSTAR Output Editor opens (see iSTAR Output Editor on Page 236).

To Edit a COM1/COM2/COM3 or ACM Output from the Hardware Tree

1. Navigate from your iSTAR Controller in the Hardware Tree to the appropriate COM Board (on an iSTAR eX or iSTAR Edge Controller) or ACM Board (on an iSTAR Classic/Pro Controller).
2. Click ▷ on **Output Boards**, as shown in Figure 85 on Page 238.

Figure 85: iSTAR Output Boards in the Hardware Tree



3. Click ▷ on the Output board that contains the Input you wish to edit.
4. Click ▷ on **Outputs** under that board.
5. Double-click on the Output you wish to edit.

The iSTAR Output Editor opens (see iSTAR Output Editor on Page 236).

Configuring an iSTAR Output

When you configure an iSTAR Output, you use the Output Editor tabs to define the Options and State Images for the Output.

To Configure an iSTAR Output

1. Access the Output Editor for the Output you wish to edit (see Accessing the iSTAR Output Editor on Page 236).
2. Click the Output General tab:
   - Modify the name of the Output in the **Name** field, if desired.
   - Add a textual description of the Output to the **Description** field.
   - Enable the Output by clicking the **Enabled** field.
   - Modify the Options settings for the Output. See the definitions for the Options fields in Table 86 on Page 239.
3. Click the Output Status tab to view the **Active Status** of the Output.
4. Click the Output State Images tab to view the state images for this Output. If you wish to customize the state images for this Output, follow the steps in State Images Tab for iSTAR Devices on Page 267.
5. When you have finished configuring this Output in the Output Editor, click **Save and Close** to save the settings you have configured.

iSTAR Output General Tab

The iSTAR Output General tab displays information that identifies the Output and allows you to configure the Options for the Output. Figure 84 on Page 236 shows the iSTAR Output General tab.

iSTAR Output General Tab Definitions

Table 86 on Page 239 lists the fields and buttons that appear on the iSTAR Output General tab.

Table 86: iSTAR Output General Tab Definitions

Field/Button	Description
Identification	
Name	Displays the name for this Output. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Description	Enter a textual comment about the Output, such as its location or purpose. This text is for information only.
Enabled	Click ☑ to enable the Output.
Maintenance Mode	Click to place the iSTAR Output into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this Output resides.

Table 86: iSTAR Output General Tab Definitions (continued)

Field/Button	Description
Output Identification	
Controller	This read-only field identifies the iSTAR Controller to which this Output is attached.
Board	This read-only field identifies the iSTAR Controller board to which this Output is attached.
Type	Reflects whether the Output has been assigned to a Door or other object. These include: • General • Door Lock • Shunt Expiration Relay • Alternate Shunt Relay • Elevator Button NOTE: The Elevator output assignment has not been evaluated by UL.
Assigned to	Displays the Elevator or Door object name with which this Output is configured.
Connection	Identifies the Input number on the hardware board to which this Output is connected.
Options	
Pulse Duration (1/10 sec)	This is a momentary activation which is entered in second intervals with a default of 0 seconds.
Normally energized	This field is used to specify whether the Output is wired such that current is normally on or not. The default setting (not selected) signifies that the Output is wired so that the current is normally off and when the Output is in an On state, the circuit is energized.
Send state changes to monitoring station	To have a notification of changes in state of the Output sent to the Monitoring station, select the Send state changes to the monitoring station check box. NOTE: For Proprietary Burglar Alarm applications, the **Send state changes to the monitoring station** option must be selected. This selection is unavailable for an iSTAR Door Output. State changes for a Door Output are not sent to the Monitoring Station.
Send state changes to journal	To have a notification of changes in state of the Output sent to the journal, select **Send state changes to journal**. This option is selected by default. This selection is unavailable for an iSTAR Door Output. State changes for a Door Output are not sent to the journal.

iSTAR Output Status Tab

The iSTAR Output Status tab displays the State of the Output.

Table 87: iSTAR Output Status Tab Definitions

Field/Button	Description
Active Status	Displays the status of the Output - either Active or Inactive.

iSTAR Output State Images Tab

The iSTAR Output State Images tab provides a means to change the default images that are displayed on the C•CURE 9000 Monitoring Station to indicate iSTAR Output states.

See State Images Tab for iSTAR Devices on Page 267 for information on using the State Images tab for an iSTAR Output.

iSTAR Output State Images Tab Definitions

Table 88 on Page 241 shows the iSTAR Output States and the default State Images.

Table 88: iSTAR Output State Images Tab Definitions

Icon	Description		Icon	Description
	Unknown			Inactive
	Active			Disabled
	Flashing			

iSTAR Reader Editor

The iSTAR Reader editor lets you configure an iSTAR Reader that you created on an iSTAR Controller.

The iSTAR Reader editor (see Figure 86 on Page 243) has the following tabs:

- **iSTAR Reader General tab**

  Lists the Reader name, connections, and card formats for a reader connected to an iSTAR. See iSTAR Reader General Tab on Page 468.

- **iSTAR Reader I/O tab**

  This tab lets you configure the available Inputs and Outputs for the Reader. See iSTAR Reader I/O Tab on Page 469.

- **iSTAR Reader Keypad tab**

  This tab lets you configure the settings and options for the Reader Keypad. See iSTAR Reader Keypad Tab on Page 470.

- **iSTAR Reader Triggers tab**

  See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

- **iSTAR Reader Groups tab**

  If you have created a Group containing iSTAR readers and added this Reader to the Group, the iSTAR Reader editor displays a Group tab.

  This tab lists the Reader groups to which this Reader belongs. See Groups Tab for Hardware Devices on Page 36 for information on using the Group tab for the iSTAR Reader.

- **iSTAR Reader Options tab**

  Use this tab to enable two factor authentication on the reader and to configure LED Control and Beep on Card Read for Wiegand Readers. See iSTAR Reader Options Tab on Page 474.

- **iSTAR Reader Status tab**

  This tab displays several read-only fields that report the Communications, PIN Required, and Keypad Command Allow Status of the Reader. See iSTAR Reader Status Tab on Page 472.

- **iSTAR Reader After-Hours tab**

  This tab enables the After-Hours Readers Group feature. See After-Hours on Page 475 for further information and procedures to configure this feature.

  Use this tab to select the Innometriks reader high assurance settings. See High Assurance Tab on Page 478

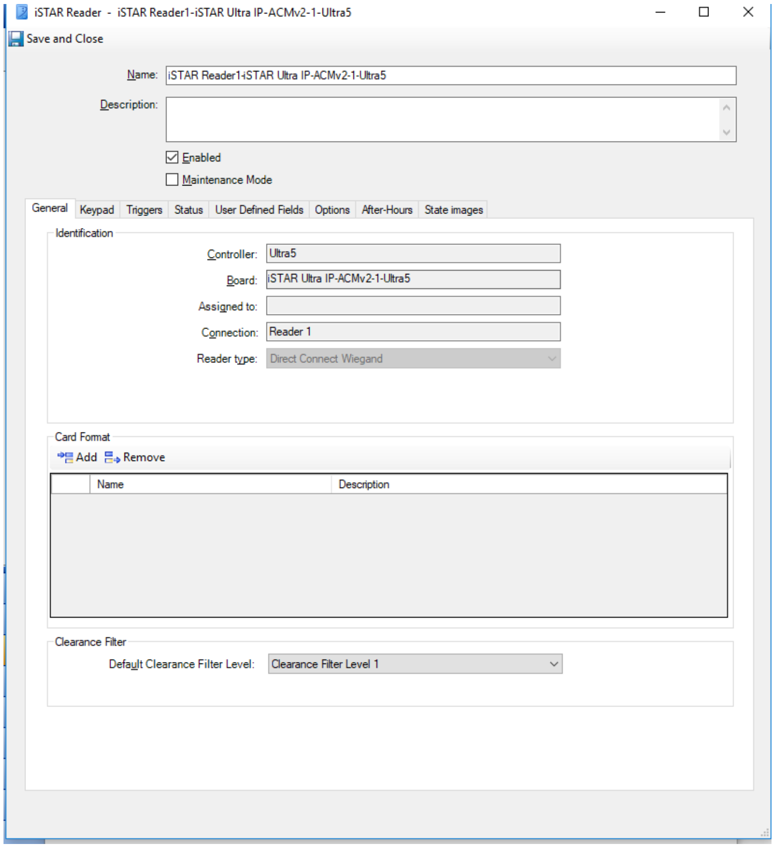
- **Touchscreen tab**

  Use this tab to set the TST-100 Touchscreen Terminal Reader's Automatic Dim brightness and time. This tab also displays the card types supported and allows you to reorder the card type priority. See iSTAR Reader Touchscreen Tab on Page 477.

- **iSTAR Reader State Images tab**

  This tab displays the default images used to depict this reader in the Monitoring Station. You can use this tab to customize these state images. See iSTAR Reader State Images Tab on Page 478.

Figure 86: iSTAR Reader Editor



Name: iSTAR Reader1-iSTAR Ultra IP-ACMv2-1-Ultra5

Description:

☑ Enabled

□ Maintenance Mode

Identification

Controller: Ultra5

Board: iSTAR Ultra IP-ACMv2-1-Ultra5

Assigned to:

Connection: Reader 1

Reader type: Direct Connect Wiegand

Card Format

	Name	Description

Clearance Filter

Default Clearance Filter Level: Clearance Filter Level 1

You can add or remove Card Formats from multiple Readers on the iSTAR Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

Accessing the iSTAR Reader Editor

You can access the iSTAR Reader editor in several ways:

- From the iSTAR Ultra iSTAR Controller Boards Tab (iSTAR Classic/Pro) on Page 163, iSTAR Ultra Controller IP-ACMs Tab on Page 183, and iSTAR Ultra COM1/COM2 Tabs on Page 183.
- From the iSTAR PIM-485 Board Editor Readers Tab on Page 226.
- From the iSTAR Ultra IP-ACM RS-485 Tab on Page 283
- From the iSTAR eX Controller Wiegand Tab on Page 175 or iSTAR Edge Controller Wiegand Tab on Page 173.
- From the iSTAR eX COM1/COM2 Tabs on Page 177 or iSTAR Edge COM1/COM2/COM3 Tabs on Page 171
- From the iSTAR Classic/Pro Controller iSTAR ACM Board Readers Tab on Page 204.
- From the Hardware Tree, edit a Reader on a COM board or ACM board.

In each case, you must select the **Configure** column to configure ☑ the reader, then click ... to open the iSTAR Reader editor.

Configuring iSTAR Readers

When you configure an iSTAR Reader, you use the Reader Editor tabs to define the Options and State Images for the Reader.

To Configure an iSTAR Reader

1. Access the Reader Editor for the Reader you wish to edit (see Accessing the iSTAR Reader Editor on Page 467).
2. Click the Reader **General** tab:
   - Modify the name of the Reader in the **Name** field, if desired.
   - Add a textual description of the Reader to the **Description** field.
   - Enable the Reader by clicking the **Enabled** field.
   - For some Readers, you need to select the correct Reader type from the drop-down list.
   - Add the Card Formats that the Reader uses to the Card Format table. See Configuring iSTAR Readers on Page 243.
   - Select options in the **Reader Options** section if it applies. For instance, if you are configuring a Touchscreen reader.
3. Click the Reader Status tab to view the **Active Status** of the Reader.
4. Click the Reader State Images tab to view the state images for this Reader. If you wish to customize the state images for this Reader, follow the steps in State Images Tab for iSTAR Devices on Page 267.
5. When you have finished configuring this Reader in the Reader Editor, click **Save and Close** to save the settings you have configured.

iSTAR Reader General Tab

The iSTAR Reader General tab displays information that identifies the Reader and allows you to configure the Options for the Reader. Figure 151 on Page 467 shows the iSTAR Reader General tab.

iSTAR Reader General Tab Definitions

Table 89 on Page 244 lists the fields and buttons that appear on the iSTAR Reader General tab.

Table 89: iSTAR Reader General Tab Definitions

Field/Button	Description
Identification	
Name	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Description	Enter a textual comment about the Reader, such as its location or purpose. This text is for information only.
Enabled	Click ☑ to enable the Reader.
Maintenance Mode	Click to put the iSTAR Reader into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this reader resides.
Controller	This read-only field identifies the iSTAR Controller to which this reader is attached.
Board	This read-only field identifies the iSTAR Controller board to which this reader is attached.
Assigned to	Displays the Elevator or Door object name with which this reader is configured.

iSTAR Reader General Tab Definitions (continued)

Field/Button	Description
Connection	Identifies the Reader number on the hardware board to which this reader is connected.
Device ID	The 15-character ID of the Aperio Reader. (Aperio Reader only.)
Reader Type	Displays the reader type: • **RM** (Software House Reader Protocol) • **BLE** (Bluetooth Low Energy) Future feature. • **OSDP** (Open Supervised Device Protocol) • **Smart** (select for the TST-100 Touchscreen Terminal reader) Default: RM
Card Format	
Add	Click **Add** to add a Card Format. If the card format you desire is not in the Name Selection dialog box list, click ... in the **Select Type** field to select a card format.
Remove	Click the row selector ▸ to select one or more Card Format rows (hold down **SHIFT** or **Ctrl** to select multiple rows), then click **Remove** to delete the row(s) for this field.
Name	Displays the Name of each Card Format you have chosen for this Reader.
Description	Displays the Description for the Card Format. This field is read-only.
Clearance Filter	
Default Clearance Filter Level	Select a Clearance Filter Level for the reader from the drop-down list. The available Clearance Filter Levels are numbered 1 through 6. Personnel assigned with lower Clearance Filter Levels, in the Personnel than the reader configuration are denied access. • Level 6 is the highest level. • Level 1 is the lowest level and the default setting.
Reader Options (available only for Smart protocol)	
Beep on Key Press	Select this check box for the TS-100 Touchscreen Terminal reader to beep when pressing a key.
Beep on Card Read	Select this check box for the TS-100 Touchscreen Terminal reader to beep on a card read.
Date Format Time Format	Select the date format and/or the time format to use.

iSTAR Reader I/O Tab

The iSTAR Reader **I/O** tab displays information that identifies the Reader and allows you to configure the Options for the Reader.

iSTAR Reader I/O Tab Definitions

Definitions for the fields and buttons on the Reader I/O tab are described in Table 90 on Page 246.

Definitions for the Inputs on the iSTAR Aperio Reader I/O Tab are described in iSTAR Aperio Reader I/O Tab on Page 485.

The fields on this tab vary depending upon the type of Reader you are configuring. For example, a Direct Connect Wiegand Reader displays only the Communications Fail Input on the I/O tab.

Table 90: iSTAR Reader I/O Tab Definitions

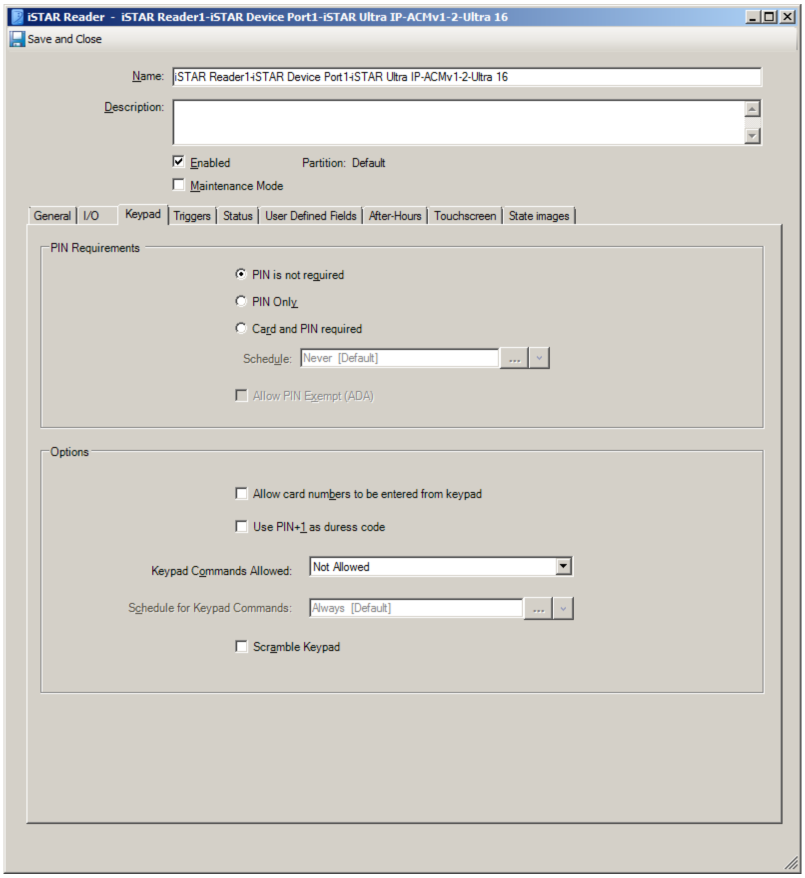
Field/Button	Description
Inputs	
Create All Inputs	Click to create all eight Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete all eight Inputs. The check boxes in the **Configured** column are set to ☐.
Edit	Click [...] in this column to open the iSTAR Input Editor to edit this Input.
Connection	This read-only field identifies the position of each Input on the I/O tab.
Configured	☑ indicates that the Input has been configured. ☐ indicates that the Input has not been configured.
Name	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.
Supervised 1	Represents Supervised Input #1 on iSTAR Readers. Not available on direct connect Wiegand Readers.
Supervised 2	Represents Supervised Input #2 on iSTAR Readers. Not available on direct connect Wiegand Readers.
Tamper	Represents the Tamper Input on iSTAR Readers. Not available on direct connect Wiegand Readers.
Communications Fail	Represents the Communications Failure Input on iSTAR Readers.
Outputs	
Create All Outputs	Click to create all Outputs. The check boxes in the **Configured** column are set to ☑.
Delete All Outputs	Click to delete all Outputs. The check boxes in the **Configured** column are set to ☐.
1	Represents Output #1 on iSTAR Readers.
2	Represents Output #2 on iSTAR Readers. Not available on direct connect Wiegand Readers.

iSTAR Reader Keypad Tab

The iSTAR Reader **Keypad** tab allows you to configure settings for the keypad on the Reader. You can specify how the Reader accepts PIN entries, and whether the Reader accepts Keypad Commands.

NOTE Some features may not be supported by your reader.

Figure 87: iSTAR Reader Keypad Tab



Name: iSTAR Reader1-iSTAR Device Port1-iSTAR Ultra IP-ACMv1-2-Ultra 16

Description:

☑ Enabled Partition: Default

□ Maintenance Mode

● PIN is not required

○ PIN Only

○ Card and PIN required

Schedule: Never [Default]

□ Allow PIN Exempt (ADA)

□ Allow card numbers to be entered from keypad

□ Use PIN+1 as duress code

Keypad Commands Allowed: Not Allowed

Schedule for Keypad Commands: Always [Default]

□ Scramble Keypad

iSTAR Reader Keypad Tab Definitions

Table 91: iSTAR Reader Keypad Tab Definitions

Field/Button	Description
PIN is not required	If selected, only a card swipe is required for successful access to the door connected to this reader.
PIN only	If selected, this reader can be used for PIN-Only access. NOTE: **PIN only** cannot be used as a Query filter value for the PIN Required Status field.
Card and PIN required	If selected, this reader requires both a card swipe and a PIN entry at the keypad for access.
Schedule	If **Card and PIN Required** is selected, you can select a Schedule object to determine when Card and PIN Required is enforced. When the Schedule is active, both Card and PIN are required for access. When the Schedule is inactive, only a card swipe is required.
Allow PIN Exempt (ADA)	If **Card and PIN Required** is selected, Personnel records configured with **PIN Exempt (ADA)** are exempt from having to enter a PIN for access.
Allow card numbers to be entered from keypad	If you have selected **PIN is not required** or **Card and PIN required**, you can enable **Allow card numbers to be entered from the keypad** by selecting the check box. If you chose **PIN Only**, this option is unavailable because the Keypad must be used to enter a PIN.

Table 91: iSTAR Reader Keypad Tab Definitions (continued)

Field/Button	Description
Use PIN+1 as duress code	If you have selected **PIN is not required** or **Card and PIN required**, you can enable **Use PIN+1 as duress code** by selecting the check box. If you chose **PIN Only**, this option is unavailable.
Keypad Commands Allowed	Indicates whether or not Keypad Commands can be entered on this Reader's Keypad and when. Select one of the following options from the drop-down list. The default is **Not Allowed**. • **Not Allowed** – Keypad Commands cannot be used at the Reader • **Always Allowed** – Keypad Commands can always be used at the Reader • **Allowed during specified schedule** – Keypad Commands can be used at the Reader during the period specified in the following field. When you select this option, the Schedule for Keypad Commands field becomes available.
Scramble Keypad	TST-100 Touchscreen Terminal Reader using the Smart Protocol only. If the reader is using the Smart protocol on the reader, you must select this check box to enable Scramble Keypad on the reader. When the PIN is being entered, the LED displays a randomly allocated set of numbers from 0 to 9. The position of the numbers changes every time the keypad is activated. NOTE: This field is not visible if the reader is using the RM Protocol. To enable Scramble Keypad on a reader using the RM protocol, place the TST-100 Touchscreen Terminal Reader S2-5 switch to the ON position.
Schedule for Keypad Commands	Select a Schedule from the list to specify when Keypad Commands can be used at this Reader. When the Schedule is active, Keypad Commands can be used. When the Schedule is inactive, Keypad Commands cannot be used.

iSTAR Reader Triggers Tab

The iSTAR Reader Triggers tab allows you to configure triggers for the Reader. You can set up triggers based on Communication Status, PIN Required Status, and Tamper Status.

See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

For iSTAR Readers you can create Triggers for the properties shown in Table 92 on Page 248.

Table 92: iSTAR Reader Trigger Properties

Property	Description
Communication Status	Possible values are **Normal** or **Comm Fail**.
PIN Required Status	Possible values are **Not Required** or **Card and PIN Required**, based on the setting for PIN Requirements on the Keypad tab.
Tamper Status	Boolean value; **True** if the Tamper input has been activated, or **False** if the Tamper Input has not been activated.

iSTAR Reader Status Tab

The iSTAR Reader Status tab displays read-only status fields, such as reader battery level status, that allow you to see the current status of the Reader. The fields displayed in this tab depend on the type of reader.

- iSTAR Reader Status Tab Definitions on Page 249.
- iSTAR PIM-485 Reader Status Tab Definitions on Page 249.
- iSTAR Aperio Reader Status Tab Definitions on Page 250

iSTAR Reader Status Tab Definitions

Table 93: iSTAR Reader Status Tab Definitions

Field/Button	Description
Firmware Version	The version number of the reader firmware.
Communications	Communications displays the value Normal if the Controller can communicate with the Reader or Comm Fail if the Controller cannot communicate with the Reader.
PIN Required	PIN Required displays the value **True** if **PIN Required** has been selected on the Keypad tab or **False** otherwise.
Tamper	Displays the status of the Tamper Input. Not available on Direct Connect Wiegand readers.
Keypad Command Allow Status	This field displays status of the **Keypad Commands Allowed** setting from the Reader Editor Keypad tab: • Not Allowed • Allowed • Allowed during specified schedule.

iSTAR PIM-485 Reader Status Tab Definitions

Table 94: iSTAR PIM-485 Reader Status Tab Definitions

Field/Button	Description
Firmware Version	The version number of the reader firmware.
Communications	Communications displays the value Normal if the Controller can communicate with the Reader or Comm Fail if the Controller cannot communicate with the Reader.
PIN Required	PIN Required displays the value **True** if **PIN Required** has been selected on the Keypad tab or **False** otherwise.
Tamper	**True** if a Tamper status is detected for the PIM Reader, or **False** if no Tamper condition is detected.
Keypad Command Allow Status	This field displays status of the **Keypad Commands Allowed** setting from the Reader Editor Keypad tab: • Not Allowed • Allowed • Allowed during specified schedule.
[PIM1-pro 1] - PIM Tamper	**True** if a Tamper status is detected for the PIM-485 board to which this reader is attached, or **False** if no Tamper condition is detected.
Motor Stall	**True** if a Motor Stall condition (a problem with the latching mechanism of the door strike) is detected, or **False** if no Motor Stall condition is detected. Available only for PIM-485 WA Series Locks, not for other AD Locks.
Low Battery	**True** if a Low Battery condition is detected for the PIM Reader, or **False** if no Low Battery condition is detected. Available only for PIM-485 connected Readers.
Manual Lock Override	**True** if the Manual Lock Override has been activated (unlocked by a physical key), or **False** if the Manual Lock Override has not been activated. Available only for PIM-485 connected Readers.

iSTAR PIM-485 Reader Status Tab Definitions (continued)

Field/Button	Description
Push Button	**True** if the Push Button on the lock panel (inside the room) has been pressed, or **False** if the Push Button has not been pressed. Available only for PIM-485 connected Readers.
Deadbolt Status	**Active** if the deadbolt has been manually locked using the deadbolt knob or exterior key. **Inactive** if the deadbolt has been manually unlocked using the deadbolt knob or exterior key. A status message is sent to the Monitoring Station when the status changes.
Lock Clutch Position Status	**Active** for approximately 5 seconds if a valid card is swiped on the reader lockset. This unlocks the door for approximately 5 seconds. **Inactive** if there is no card swipe or an invalid card is used.
Reader Lockset Battery Level Status	Displays the battery voltage level of the reader lockset in a range from 0-6.4V or 0-12.8V depending on what battery pack powers the reader. Battery level can be viewed and sorted on a Dynamic View. NOTE: Replace the batteries in the lockset if the voltage is below 4.7V on this status (this is valid for AD400/NDE/NDEB/LE/LEB-series Schlage locks).

iSTAR Aperio Reader Status Tab Definitions

Table 95: iSTAR Aperio Reader Status Tab Definitions

Field/Button	Description
Communications	Communications displays the value **Normal** if the Controller can communicate with the Reader or **Comm Fail** if the Controller cannot communicate with the Reader.
Tamper	**True** if a Tamper status is detected for the Reader, or **False** if no Tamper condition is detected.
Low Battery	**True** if a Low Battery condition is detected for the Reader, or **False** if no Low Battery condition is detected.

iSTAR Reader Options Tab

- Use this tab to enable two factor authentication on the reader.
- Use this tab to configure OSDP Secure Channel and Installation Mode.

Table 96 on Page 251 lists the additional fields and buttons that appear on the iSTAR Reader **Options** tab for iSTAR Ultra Wiegand Readers.

Table 96: iSTAR Ultra Wiegand Reader Options Tab Definitions

Field/Button	Description
Dual Authentication	
Enable Dual Authentication on this Reader	Select to enable, deselect to disable. See Configuring iSTAR Readers and Doors for Two Factor Authentication on Page 510 for more information.
OSDP Options	
Installation Mode Enabled	When enabled, allows C•CURE 9000 to communicate securely with a new reader that does not have encryption keys. The **OSDP Secure Channel Enabled** check box must be also selected. • If **OSDP Secure Channel Enabled** is On (selected) and **Installation Mode Enabled** is Off (deselected) and a new reader is presented, it will not communicate with C•CURE 9000. • If **OSDP Secure Channel Enabled** is Off (deselected), then communication is always available and the installation mode is disabled. • If **Installation Mode Enabled** is On (selected), then the keys will be exchanged and communication will begin. Default: Enabled. Software House recommends that you disable (clear) this feature for maximum security.
OSDP Secure Channel Enabled	When enabled, the 485 communication port is encrypted using keys exchanged between the panel and the readers. See **Installation Mode Enabled**. **IMPORTANT:** Enabling or disabling the OSDP Secure Channel requires the reader to be restarted for the changes take effect. This can be accomplished by power cycling the reader, resetting the ACM, or by resetting the controller. Default: Enabled
Reader Options (available only for Smart protocol)	**Reader Options (available only for Smart protocol)**
Beep on Key Press	Select this check box for the TS-100 Touchscreen Terminal reader to beep when pressing a key.
Beep on Card Read	Select this check box for the TS-100 Touchscreen Terminal reader to beep on a card read.
Date Format Time Format	Select the date format and/or the time format to use.
Enable Dual Authentication on this Reader	Select to enable, deselect to disable. See Configuring iSTAR Readers and Doors for Two Factor Authentication on Page 510 for more information.

After-Hours

When configured, the After-Hours Reader feature defines a schedule, an enabling reader, and an iSTAR reader group. Cardholders with clearance gain access by an enabling door to normally restricted, secure spaces after business hours. Within this schedule, readers configured as members of an **After-Hours Reader Group** will reject access to all cardholders that have not first presented their card to the enabling reader for that particular reader group, even when those cardholders have valid clearance to member readers. Once a card has been presented and accepted at the enabling reader, it will then have access to any members of the associated After-Hours group to which it has a valid clearance for the remainder of the schedule.

The After-Hours feature supersedes clearance restrictions only relative to admission during the schedule. Outside of the defined schedule, cardholders will have the normally expected access to readers within the After-Hours Reader Group. Refer to After-Hours Readers Under Offline State Conditions on Page 253 for information regarding After-Hours enabled readers during offline conditions.

The After-Hours restriction can be overridden for certain cardholders by using the **AntiPassback Exempt Flag** to indicate After-Hours Exemption. The **AntiPassback Exempt Flag** is on the **General** tab of the Personnel record. Use of the **AntiPassback Exempt Flag** to override After-Hours is set in **System Variables**. Refer to Setting the AntiPassback Exempt Flag on Page 252 for instructions on setting the **AntiPassback Exempt Flag**.

NOTE For proper functionality, when configuring an After-Hours Reader feature, the After-Hours Reader Group, the enabling reader, and the schedule that is assigned to these units must all be configured in the same time zone.

Configuring the After-Hours Readers Feature

This section provides instructions for configuring the After-Hours Reader Group, Schedule, and Enabling Readers required for the After-Hours Readers feature.

Configuring an After-Hours Reader Group

1. If creating the first **After-Hours Reader Group**, open the **Hardware** pane and right-click the **Hardware** folder at the top of the **Hardware** tree. Select **After-Hours Reader Groups** from the drop-down menu. Click **New** and an **After-Hours Reader Group** editor appears.
   or
   If the **After-Hours Reader Group** folder already exists in the **Hardware** tree, select the **After-Hours Reader Group** folder and click **New**.

2. Enter information in the **Name** and **Description** fields.
3. In the **Objects in Group** section, select **Add** and choose previously configured readers to add to this group.
4. Save and close the **After-Hours Reader Group** editor. A folder appears in the **Hardware** tree containing all configured After-Hours Reader Groups.

Configuring an After-Hours Enabling Reader

1. Open the Reader editor that you want to enable as an After-Hours reader. Follow the procedures for accessing a Reader editor as described in Reader Overview on Page 434.
2. Select the **After-Hours** tab.
3. Select the **Enable After-Hours Reader Group** check box. By default, this feature is disabled.
4. Click [...] to select an **After-Hours Reader Group** to associate with the Enabling Reader.
5. Click [...] to select an **After-Hours Schedule** during which the After-Hours feature is active.

NOTE If required, follow the instructions for creating and configuring an After-Hours Schedule as explained in the *C•CURE 9000 Software Configuration Guide*.

6. Save and close the reader editor.

Setting the AntiPassback Exempt Flag

1. In the **Administration Station**, select **Options & Tools** and click **System Variables**. The System Variables screen appears.
2. Expand the **iSTAR Driver** section and select the **After-Hours AntiPassback Exempt** system variable. Enter **True** into the value field. The default setting is **False**.
3. Close the **System Variables** window. A restart of the iSTAR is required to implement this system variables change.

After-Hours Readers Under Offline State Conditions

The After-Hours Enabling Reader is a host-based feature which does not operate effectively if the iSTAR controller that controls the enabling reader (or member readers of a reader group) is in an offline or communication failure state. During such communication failures, readers which are out of communication with the host will not have a means of granting access to cardholders.

If the enabling reader is controlled by a panel that is offline:

- Any card holder that is already granted access by the enabling reader before a panel is put offline will still be able to gain access to all member readers.
- Any new cardholder that is not granted access by the enabling reader before the panel is put offline will not be able to gain access at any member readers

If the enabling reader is not controlled by a panel that is offline:

- Any cardholder that is already granted access by the enabling reader before a panel is put offline will still be able to gain access to all member readers.
- Any new cardholder that is not granted access by the enabling reader before the panel is put offline will not be able to gain access at the member readers on this offline panel. If this cardholder is then granted access by the enabling reader, it will be able to gain access to the other remaining member readers that are not on an offline panel.

Once communication with the host is restored, the panel controlling the enabling reader resumes normal operation.

High Assurance Tab

Use this tab to configure the Innometriks reader high assurance settings.

High assurance is supported on the iSTAR Ultra, Ultra SE (Ultra Mode), and Ultra LT controllers.

NOTE The CHUID (Cardholder Unique Identifier) container is always sent.

CAK, PIN, and Biometrics are single factor authentications when used alone. Any two together are a double factor authentication, and all three together are a triple factor authentication.

See Innometriks High Assurance Reader Configuration on Page 447 for configuration information.

iSTAR Reader High Assurance Tab Definitions

Field/Button	Description
High Assurance Reader	
Support High Assurance Reader	When selected (enabled), the **High Assurance Operation Modes** become available for selection. Default: Disabled (clear)
High Assurance Operation Mode	
Normal Mode	Select the authentications listed to run in normal mode.
Secure Mode	Select the authentications listed to support high assurance.
CAK	Card authentication.

iSTAR Reader High Assurance Tab Definitions (continued)

Field/Button	Description
PAK	Physical Access Control System (PAK). Card plus PIN authentication. NOTE: If you select **PAK**, **Card PIN** is automatically selected.
Card PIN	Personal Identification Number (PIN) authentication from a card or panel. If you select **Card PIN**, **PAK** is automatically selected.
Biometrics	Biometric authentication from card.

iSTAR Reader State Images Tab

The State Images tab for a Reader provides a means to change the default images used to indicate iSTAR Reader device states on the Monitoring Station.

See State Images Tab for iSTAR Devices on Page 267 for information on using the State Images tab for an iSTAR Reader.

See Table 97 on Page 254 for default State Images for an iSTAR RM reader

See Table 98 on Page 254 for default State Images for an iSTAR PIM-485 reader (Schlage wireless lock and reader).

iSTAR Reader State Images Tab Definitions

Table 97: iSTAR Reader State Images Tab Definitions

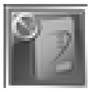
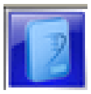
Icon	Description		Icon	Description
	Unknown			Tampered
	Comm Fail			Normal

Table 98: iSTAR PIM 485 Reader State Images Definitions

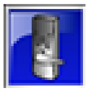
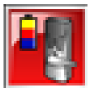
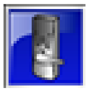
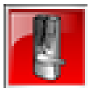
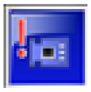
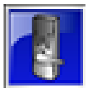
Icon	Description		Icon	Description	Icon	Description
	Unknown			Normal		Low Battery
	Comm Fail			Motor Stall (Schlage Wireless Only)		Manual Lock Override (Schlage Wireless Only)
	Tampered			PIM Tamper (Schlage Wireless Only)		Push Button (Schlage Wireless Only)

Table 99: iSTAR Aperio Reader State Images Definitions

Icon	Description		Icon	Description
	Unknown			Key Cylinder Override (Aperio only)
	Comm Fail			Lock State Locked (Aperio only)
	Tampered			Lock State Jammed (Aperio only)
	Normal			

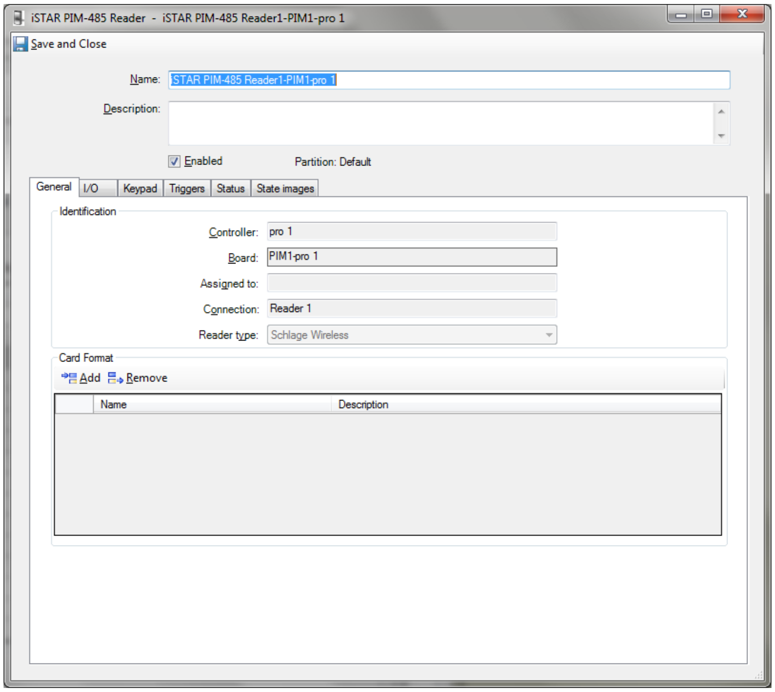
iSTAR PIM-485 Reader Editor

Use the iSTAR PIM-485 Reader Editor to configure the settings for a Schlage PIM-485 reader/lock wirelessly connected to an iSTAR Pro/eX or iSTAR Ultra G2 controller PIM-485 board.

NOTE iSTAR Schlage Doors do not support Momentary Unlock.

The iSTAR PIM-485 Reader editor is shown in Figure 88 on Page 256.

Figure 88: iSTAR PIM-485 Reader Editor



iSTAR PIM-485 Reader - iSTAR PIM-485 Reader1-PIM1-pro 1

Name: iSTAR PIM-485 Reader1-PIM1-pro 1

Description:

☑ Enabled

Partition: Default

Identification

Controller: pro 1

Board: PIM1-pro 1

Assigned to:

Connection: Reader 1

Reader type: Schlage Wireless

Card Format

Name	Description

The iSTAR PIM-485 Reader editor dialog box has the following tabs.

- **iSTAR Reader General tab**

  Lists the Reader name, connections, and card formats for a reader connected to an iSTAR Classic/Pro, iSTAR eX, or iSTAR Ultra G2. See iSTAR Reader General Tab on Page 468.

- **iSTAR PIM-485 Reader I/O tab**

  This tab lets you configure the available Inputs and Outputs for the Reader. See the iSTAR PIM-485 Reader I/O Tab on Page 481.

- **iSTAR Reader Keypad tab**

  This tab lets you configure the settings and options for the Reader Keypad on iSTAR Schlage Readers. See iSTAR Reader Keypad Tab on Page 470.

  Only Schlage Keypad Mode 1 keypad output format (4 data bits per key with no parity) is supported. The mode is configured on the Schlage device.

- **iSTAR Reader Triggers tab**

  See the Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

  You can define triggers for the following Properties of the iSTAR PIM-485 Reader:

Property	Value
Communication Status	Normal or Comm Fail
Low Battery	Active ☑ or inactive □
Manual Lock Override	Active ☑ or inactive □
Motor Stall	Active ☑ or inactive □
Parent PIM Tamper	Active ☑ or inactive □
PIN Required Status	Not Required, Card and PN Required, or PIN Only
Push Button	Active ☑ or inactive □
Tamper Status	Active ☑ or inactive □

- **iSTAR Reader Groups tab**

  If you have created a Group containing iSTAR readers and added this Reader to it, the iSTAR Reader editor also displays a Groups tab.

  This tab lists the Reader groups to which this Reader belongs. See the Groups Tab for Hardware Devices on Page 36 for information on using the Group tab for the iSTAR Reader.

- **iSTAR Reader Status tab**

  This tab displays several read-only fields that report the Communications, PIN Required, and Keypad Command Allow Status of the Reader. See the iSTAR Reader Status Tab on Page 472.

- **iSTAR Reader State Images tab**

  This tab displays the default images used to depict this reader in the Monitoring Station. You can use this tab to customize these state images. See the iSTAR Reader State Images Tab on Page 478.

You can add or remove Card Formats from multiple Readers via an iSTAR PIM-485 Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

iSTAR PIM-485 Reader I/O Tab

The iSTAR PIM-485 Reader I/O tab lets you configure the inputs and outputs for the reader. Each input and output is pre-assigned to a specific function for the reader. Typically you can use the **Create All** buttons to create the inputs and outputs, and then click the button in the **Edit** column to configure each input and output individually.

You can configure these inputs and outputs by clicking on ... in the **Edit** column. You can then create triggers that can activate Events based on state changes.

Example:

> You can create a trigger to activate an Event if the **Low Battery** Input status changes to Active (indicating that the reader battery charge is low). See Triggers Tab for iSTAR Devices on Page 264.

Definitions for the fields and buttons on the Reader I/O tab are described in Table 100 on Page 258.

Table 100: iSTAR Reader I/O Tab Definitions

Field/Button	Description
Inputs	
Create All Inputs	Click to create all eight Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete all eight Inputs. The check boxes in the **Configured** column are set to □.
Edit	Click ... in this column to open the iSTAR Input editor to edit the Input.
Connection	This read-only field identifies the position of each Input on the I/O tab.
Configured	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.
Wireless DSM	Represents the Wireless Door Switch Monitor (DSM) for the door.
Wireless REX	Represents the Wireless Request To Exit (REX) for the door.
Wireless Reader Tamper	Represents the Tamper Input on the Wireless Reader.
Wireless Reader Communications Fail	Represents the Communications Failure Input on the Wireless Reader.
Motor Stall	Represents the Motor Stall Input on the Wireless Reader.
Low Battery	Represents the Low Battery Input on the Wireless Reader.
Manual Lock Override	When this input is active, it indicates that the lock has been unlocked by a physical key. The Manual Lock Override status is available on the Status tab for this reader. This property is available for use in triggers.
Push Button	When this input is active, it indicates that the push button on the lock panel (inside the room) has been pushed. The Push Button Input status is available on the Status tab for this reader. This property is available for use in triggers.
Outputs	
Create All Outputs	Click to create all Outputs. The check boxes in the **Configured** column are set to ☑.
Delete All Outputs	Click to delete all Outputs. The check boxes in the **Configured** column are set to □.
Door Latch Relay	Represents the Door Latch Relay Output that is used to unlock the door.
Edit	Click ... in this column to open the iSTAR Output editor to edit the Output.
Connection	This read-only field identifies the position of the Output on the I/O tab.

Table 100: iSTAR Reader I/O Tab Definitions (continued)

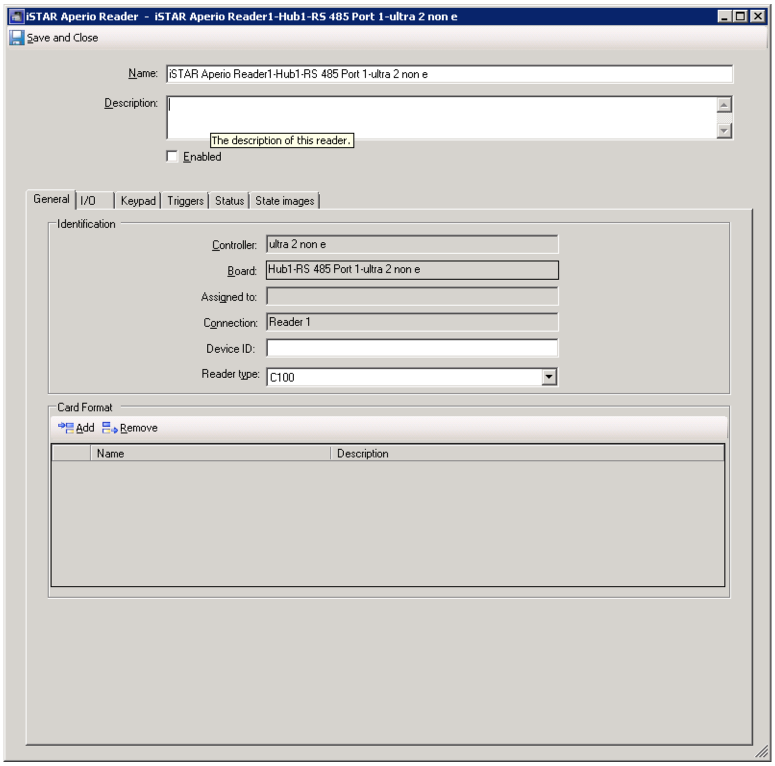
Field/Button	Description
Configured	☑ indicates that the Output has been configured. □ indicates that the Output has not been configured.
Name	Displays the system-generated name for this Output. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Output. If the Output is not yet configured, you can click in this column, then click to select an Output Template. If the **Configured** column displays ☑, this field cannot be edited.

iSTAR Aperio Reader Editor

The iSTAR Aperio Reader editor allows you to configure the settings for an Aperio reader/lock wirelessly connected to an iSTAR Ultra controller Aperio RS-485 Hub board.

The iSTAR Aperio Reader editor is shown in Figure 89 on Page 260.

Figure 89: iSTAR Aperio Reader Editor



iSTAR Aperio Reader - iSTAR Aperio Reader1-Hub1-RS 485 Port 1-ultra 2 non e

Save and Close

Name: iSTAR Aperio Reader1-Hub1-RS 485 Port 1-ultra 2 non e

Description:

The description of this reader.

□ Enabled

General | I/O | Keypad | Triggers | Status | State images

Identification

Controller: ultra 2 non e

Board: Hub1-RS 485 Port 1-ultra 2 non e

Assigned to:

Connection: Reader 1

Device ID:

Reader type: C100

Card Format

Add Remove

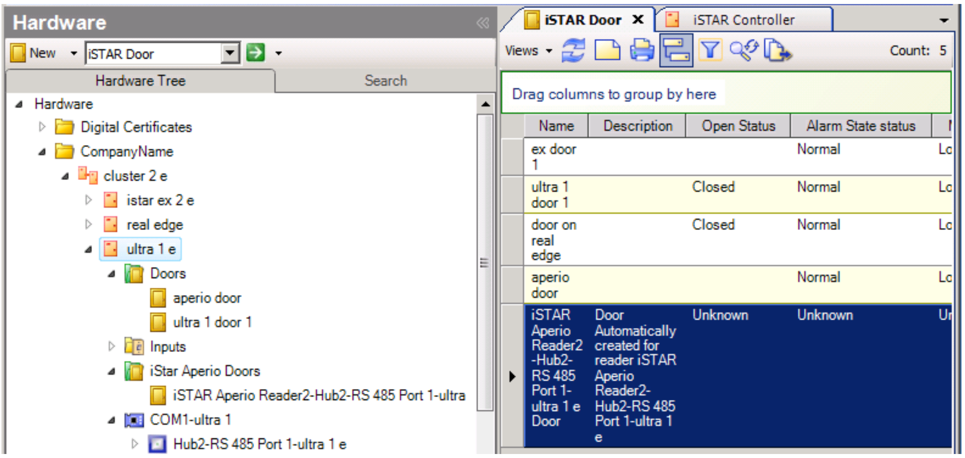
Name	Description

When you add an iSTAR Aperio Reader, **Enable** it in the Aperio Reader editor, and **Save and Close** the editor, a Door object for that reader is added to the parent Ultra controller in the iSTAR Aperio Doors folder in the Hardware tree.

If you delete an iSTAR Aperio Reader, the iSTAR Aperio Door associated with the reader is also deleted.

If you display a list of iSTAR Doors, the new Aperio Door appears on the list. See iSTAR Aperio Door Editor on Page 393 for more information on Aperio Doors.

Figure 90: iSTAR Aperio Doors



- Hardware
  - Digital Certificates
  - CompanyName
    - cluster 2 e
      - istar ex 2 e
      - real edge
      - ultra 1 e
        - Doors
          - aperio door
          - ultra 1 door 1
        - Inputs
        - iStar Aperio Doors
          - iSTAR Aperio Reader2-Hub2-RS 485 Port 1-ultra
        - COM1-ultra 1
          - Hub2-RS 485 Port 1-ultra 1 e

Name	Description	Open Status	Alarm State status	I
ex door 1			Normal	Lc
ultra 1 door 1		Closed	Normal	Lc
door on real edge		Closed	Normal	Lc
aperio door			Normal	Lc
iSTAR Aperio Reader2 -Hub2-RS 485 Port 1-ultra 1 e Door	Door Automatically created for reader iSTAR Aperio Reader2-Hub2-RS 485 Port 1-ultra 1 e	Unknown	Unknown	Ur

The iSTAR Aperio Reader editor dialog box has the following tabs.

- **iSTAR Reader General tab**

  Lists the Ultra controller name, Hub board, Assigned to Door, Reader number, Device ID, and Reader type. See iSTAR Reader General Tab on Page 468.

- **iSTAR Aperio Reader I/O tab**

  This tab lets you configure the available Inputs and Outputs for the Reader. See the iSTAR Aperio Reader I/O Tab on Page 485.

- **iSTAR Reader Keypad tab**

  This tab lets you configure the settings and options for the Reader Keypad on iSTAR Aperio Readers. See iSTAR Aperio Reader Keypad Tab on Page 263.

- **iSTAR Reader Triggers tab**

  See the Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR Ultra device.

  You can define triggers for the following Properties of the iSTAR Aperio Reader:

Property	Value
Communication Status	Normal or Comm Fail
Key Cylinder Override	Active ☑ or inactive ☐
Lock State Jammed	Active ☑ or inactive ☐
Lock State Locked	Active ☑ or inactive ☐
Low Battery Status	Active ☑ or inactive ☐
Tamper Status	Active ☑ or inactive ☐

- **iSTAR Reader Status tab**

  This tab displays several read-only fields that report the Communications, Tamper, and Low Battery status of the Reader. See the iSTAR Reader Status Tab on Page 472.

- **iSTAR Reader State Images tab**

  This tab displays the default images used to depict this reader in the Monitoring Station. You can use this tab to customize these state images. See the iSTAR Reader State Images Tab on Page 478.

You can add or remove Card Formats from multiple Readers via an iSTAR Aperio Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

iSTAR Aperio Reader I/O Tab

The iSTAR Aperio Reader I/O tab lets you configure the inputs for the reader. Each input is pre-assigned to a specific function for the reader. Typically you can use the **Create All** buttons to create the inputs, and then click the button in the **Edit** column to configure each input individually.

The number of inputs available on this tab varies, depending upon the reader model configured on the General tab in the **Reader Type** field.

NOTE

When an Aperio reader input is changed from active to inactive while the iSTAR Controller is offline, the controller continues to report the input as active when the controller comes back online.

Workaround: Activate and then deactivate the input to synchronize the input with the controller.

You can configure these inputs by clicking on [...] in the **Edit** column. You can then create triggers that can activate Events based on state changes.

Example:

You can create a trigger to activate an Event if the **Lock Low Battery** Input status changes to Active (indicating that the reader battery charge is low). See Triggers Tab for iSTAR Devices on Page 264.

Definitions for the fields and buttons on the Reader I/O tab are described in Table 101 on Page 262.

Definitions for the input types are described in Table 102 on Page 262.

Table 101: iSTAR Reader I/O Tab Definitions

Field/Button	Description
Create All Inputs	Click to create all Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete all Inputs. The check boxes in the **Configured** column are set to □.
Edit	Click [...] in this column to open the iSTAR Input editor to edit the Input.
Connection	This read-only field indicates the three standard inputs (Comm Fail, Low Battery, and Lock State Jammed.
Configured	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.

Table 102: iSTAR Reader I/O Tab Input Definitions

Field/Button	Description
Lock Reader Tamper	Represents the state of the Tamper input on the lock.
Handle State / Request to Exit	Represents the state of the Request to Exit input associated with the door handle.
Lock State Locked	Represents the
Key Cylinder Override	Represents the state of the Key Cylinder Override.
Door Position State	Represents state of the Door Switch Monitor for the door associated with this reader.
Lock Communications Fail	Represents the Lock Communications Failure Input on the Aperio Reader.
Lock State Jammed	Represents the Lock State Jammed Input on the Aperio Reader.
Lock Low Battery	Represents the Lock Low Battery Input on the Aperio Reader.

iSTAR Aperio Reader Keypad Tab

The iSTAR Reader Keypad tab allows you to configure settings for the keypad on the Reader. You can specify how the Reader accepts PIN entries.

iSTAR Aperio Reader Keypad Tab Definitions

Table 103: iSTAR Aperio Reader Keypad Tab Definitions

Field/Button	Description
PIN is not required	If selected, only a card swipe is required for successful access to the door connected to this reader.
PIN only	If selected, this reader can be used for PIN-Only access. NOTE: **PIN only** cannot be used as a Query filter value for the PIN Required Status field.
Card and PIN required	If selected, this reader requires both a card swipe and a PIN entry at the keypad for access.
Schedule	If **Card and PIN Required** is selected, you can select a Schedule object to determine when Card and PIN Required is enforced. When the Schedule is active, both Card and PIN are required for access. When the Schedule is inactive, only a card swipe is required.
Allow card numbers to be entered from keypad	If you have selected **PIN is not required** or **Card and PIN required**, you can enable **Allow card numbers to be entered from the keypad** by selecting the check box. If you chose **PIN Only**, this option is unavailable (because the Keypad must be used to enter a PIN).
Use PIN+1 as duress code	If you have selected **PIN is not required** or **Card and PIN required**, you can enable **Use PIN+1 as duress code** by selecting the check box. If you chose **PIN Only**, this option is unavailable.

Triggers Tab for iSTAR Devices

C•CURE 9000 uses Triggers, which are configured procedures for activating actions, to activate Events or Outputs for an iSTAR device. A Trigger automatically executes a specified Action when a particular Condition occurs (when the object Property specified in the Trigger reports the Value specified in the Trigger).

Example:

> To provide an audible and visible alarm for a power failure condition, you can create two triggers for the AC Power Fail Input on an iSTAR controller that are activated when the Input's status changes:
>
> **Activate Output** that energizes an audible sounder.
>
> **Activate Output** that energizes an LED alarm light installed near an arming/disarming keypad reader.

Table 104 on Page 264 provides an example of a configured iSTAR Trigger.

Table 104: Triggers Tab Settings Example

<table>
<tr><td colspan="6">The following Triggers Tab settings:</td></tr>
<tr><th>Property</th><th>Value</th><th>Action</th><th>Details</th><th>Schedule</th><th>Time Zone</th></tr>
<tr><td>Active Status</td><td>Active</td><td>Activate Event</td><td>iSTAR Input Event</td><td>Always</td><td>Time Zone of the iSTAR controller</td></tr>
<tr><td colspan="6">This creates the following Trigger:
Any time (<b>Always Schedule</b>) the Active Status (<b>Property</b>) equals Active (<b>Value</b>), activate the event (<b>Action</b>) named iSTAR Input Event (<b>Details</b>).
iSTAR Input Event is an Event that you create using the Event Editor.</td></tr>
</table>

NOTE You cannot assign a Schedule to an iSTAR Controller trigger. Effectively, iSTAR Controller triggers use an **Always** Schedule.

From the Triggers tab of an iSTAR device (such as a Controller, Input, or Reader), you can perform the following tasks.

- Defining a Trigger for an iSTAR Device on Page 264.
- Removing a Trigger on Page 265.

iSTAR Triggers Tab Definitions on Page 266 provides definitions for the fields and buttons on an iSTAR Device Triggers tab.

Defining a Trigger for an iSTAR Device

You can use the Triggers tab to define a Trigger for an iSTAR device. The typical usage for an iSTAR Trigger is to activate an Event or an Output as the result of a state change of an iSTAR device Property.

Example:

> When an iSTAR Tamper Input changes from the Inactive (normal) to Active (abnormal) state, you wish to activate an Event and activate an audible alarm (an iSTAR Output).

Time Zones for iSTAR Triggers

If you specify a Time Zone in your Trigger definition, you can control when the Schedule for the Trigger is active. You can only select the C•CURE 9000 server Time Zone or the Time Zone of the iSTAR you are editing.

Example:

If you have iSTAR controllers that are in different Time Zones than your C•CURE 9000 server, you may want to have some Triggers activate according to the iSTAR controller's Time Zone, while other Triggers are activated according to the server Time Zone.

When you specify the Time Zone for a Trigger definition to be the same as the iSTAR controller Time Zone, the Schedule activation times for the Trigger occur according to the iSTAR controller Time Zone.

If you have an iSTAR controller in the Pacific Time Zone (GMT - 08:00) and a server in the Eastern Time Zone (GMT - 05:00), a Schedule that is active from Midnight to 6:00 AM is activated from Midnight to 6:00 AM in Pacific Time (GMT - 08:00) rather than Eastern time (three hours later).

To Define a Trigger for an iSTAR Device

1. Click on the Triggers tab for your iSTAR device.
2. Click **Add** on the Triggers tab to create a new Trigger.
3. Click ... within the **Property** column to open the Property dialog box showing the Properties available for the device.
4. Click a Property in the list to select it and add it to the **Property** column.
5. Click ... within the **Value** column to display a drop-down list of Values associated with the Property that you have selected. Click a **Value** that you want to include as a parameter for the trigger to add it to the column. (If there is no set list of Values, you can type in a Value.)
6. Click ... within the **Action** column to display a drop-down list of valid actions. Click an Action that you want to include as a parameter for the trigger to add it to the column.
7. When you select an Action, the lower pane in the Triggers box displays an entry field or group of entry fields, specific to the selected Action, so that you can configure the Details for the Action.
8. Once you define the Action details, the **Details** column displays information about how the Action has been configured.
9. For example, if an Event field is displayed in **Details**, you can click to select an Event that you want to associate with the Trigger.
10. If the Triggers tab includes a **Time Zone** column, click within the **Time Zone** column to display a drop-down list of available Time Zones. Most of the time, you will want to select a Time Zone that is the same as the iSTAR controller Time Zone. If you do not select a Time Zone, the Time Zone of the C•CURE 9000 server is used by default.
11. Click **Save and Close** to save the iSTAR Trigger.

Removing a Trigger

If you no longer need a Trigger defined for a Device, you can remove the Trigger.

To Remove a Trigger

1. Click the Triggers tab for your device.
2. Click the row selector ▸ to select a Trigger row.
3. Click **Remove** to delete the selected row.
4. Click **Save and Close** to save the device.

iSTAR Triggers Tab Definitions

Table 105 on Page 266 provides definitions for the fields and buttons on an iSTAR Triggers tab.

Table 105: iSTAR Triggers Tab Definitions

Field/Button	Description
Add	Click **Add** in the Triggers tab to create a new trigger.
Remove	Click the Row Selector ▶, then click **Remove** in the Triggers tab to delete a trigger.
▶	Click the Row Selector to select a row in the Triggers table.
Property	Click within the **Property** column, and then click **...**. The Property browser opens presenting properties available for the Comm Port. Click a Property to select it and add it to the column.
Value	Click within the **Value** column to display a drop-down list of Values associated with the Property that you have selected. Click a Value that you want to include as a parameter for the trigger to add it to the column.
Action	Click **...** within the **Action** column to display a drop-down list of valid actions. Click an Action that you want to include as a parameter for the trigger to add it to the column. As you select an Action, a corresponding entry field, or group of entry fields, appear at the bottom of the dialog box. Click to select entries for these fields.
Details	Displays details about how the Action was configured.
Schedule	Click within the **Schedule** column to select a Schedule. Click **...** to select a Schedule that you want to associate with the trigger. Schedules are created in the Configuration Pane. Refer to the *C•CURE 9000 Software Configuration Guide* for more information on creating Schedules.
Time Zone	Click within the **Time Zone** column to select a Time Zone for Schedule activation. Click **...** to select a Time Zone that you want to associate with the trigger Schedule. Typically you can chose either the C•CURE 9000 server (host) Time Zone or the Time Zone of the iSTAR controller. If you specify a Time Zone, the Schedule start and end times are calculated using that Time Zone. **Example:** A Schedule that becomes active at 3:00 AM would become active at 3:00 AM in the Pacific Time Zone, if that Time Zone was specified. Refer to the *C•CURE 9000 Software Configuration Guide* for more information on Time Zones and Events.

State Images Tab for iSTAR Devices

The State Images tab provides a means to change the default images used to indicate iSTAR device states on the Monitoring Station.

From the State Images tab of an iSTAR device (such as a Controller, Input, Output, or Reader), you can perform the following tasks.

- Customizing State Images for an iSTAR Device on Page 267
- Restore a Default State Image on Page 267

You can replace the default images with JPG formatted files of your choice, to uniquely identify your objects when activities are displayed on the Monitoring Station Client.

iSTAR State Images Tabs Definitions on Page 267 provides definitions for the fields and buttons on an iSTAR Device State Images tab.

iSTAR State Images Tabs Definitions

iSTAR State Images Tabs have the State Images tabs as shown in Table 106 on Page 267.

Table 106: iSTAR State Images Tabs Definitions

Field/Button	Description
State	This column lists the states that are defined for this iSTAR device. These are the states that are reported on the Monitoring Station to reflect the status of this iSTAR device.
Image	This column shows the images that are assigned to each of the iSTAR device states. There are images assigned by default to every iSTAR device you create. For any individual iSTAR device, you can use the State Images tab to substitute a different.JPG/JPEG image for the default image. See Customizing State Images for an iSTAR Device on Page 267 for instructions.
Save and Close	After you have made changes to any settings for the iSTAR device, click **Save and Close** to save those changes and Close the editor for the device.

Customizing State Images for an iSTAR Device

From the State Images tab, you can change the images that appear in the Monitoring Station to represent an iSTAR device.

To Customize an iSTAR Device State Image

1. Navigate to the State Images tab for the iSTAR device.
2. Double-click the existing image.

   A Windows Open dialog box appears, allowing you to browse for a folder in which you have placed replacement images.
3. When you locate the replacement image, select it and click **Open** to replace the default image with this image.
4. When you are done editing the device, click **Save and Close** to save the configuration.

Restore a Default State Image

You can restore the default state image for any of the states of an iSTAR device.

To Restore the Default State Image

1. From the State Images tab, select an existing image.
2. Right-click the image and select **Restore Default**.
3. Click **Save and Close** to save the configuration.

7

Configuring the IP-ACM

This chapter explains how to configure the IP-ACM in C•CURE 9000.

In this chapter

IP-ACM Overview 270
IP-ACM Offline Mode Configuration Information 272
IP-ACM v1 to IP-ACM v2 Board Conversion 274
Configuring the IP-ACM 277
iSTAR Ultra IP-ACM Editor 279

IP-ACM Overview

The IP-ACM provides connection and management of readers. There are two types of IP-ACM boards:

- IP-ACM v1 - contains one Ethernet port
- IP-ACM v2 - contains two Ethernet ports

The IP-ACM contains RJ45 ports:

- Port 1: Ethernet port, internally bound to MAC with the MAC address and used as the network connection port for the board (10/100/1000)
- Port 2 (IP-ACM v2 only): Switch port, not a secondary port, used for iSTAR Ultra LT connection (10/100, no PoE)

The IP-ACM, when configured in Offline mode (enabled), acts as its own entity if it becomes disconnected from the iSTAR. Readers will remain active, with limitations. Offline access operation is buffered, and will be reported to the iSTAR Controller when communication is restored (determined by available memory.) Refer to IP-ACM Offline Mode Configuration Information on Page 272 for further details regarding the offline mode of the IP-ACM.

Limitations

- C•CURE 9000 only supports four readers (any combination of RM, Wiegand, Smart and OSDP readers) or up to two BLE readers connected to an IP-ACM.
- The IP-ACM is supported on the iSTAR Ultra, the iSTAR Ultra SE in Ultra Mode, the iSTAR Ultra Video, and the iSTAR Ultra LT.
- Offline mode is not supported for two RM readers. Two reader configuration for a single door must be: one RM for entry and one Wiegand for exit.
- Offline mode is not supported for BLE or OSDP readers connected to the IP-ACM v1.
- Offline mode is not supported for BLE, RM, Smart or OSDP readers connected to the IP-ACM v2.

IP-ACM Configuration Sequence

The IP-ACM configuration sequence is described in Table 107 on Page 270.

Table 107: IP-ACM Configuration Sequence

Step	Task	See...
1	Connect the IP-ACM to the network.	*IP-ACM Hardware Configuration Guide*
2	Add the IP-ACM to the subnet: 1. Open the iSTAR Configuration Utility (ICU). 2. Click IP-ACM to discover all IP-ACMs in the subnet. 3. Right-click on the IP-ACM in the list and select **Configure IP-ACM**. Recommended browsers: Internet Explorer 10, Internet Explorer 11, Firefox, or Chrome. NOTE: If you are using Internet Explorer 9, and the web page does not display properly or if the session page expires and was not directed to the log in page, relaunch the web page.	*iSTAR Configuration Utility User Guide*
3	Ensure that the iSTAR Controller (Ultra or Ultra SE in Ultra Mode) is configured in the C•CURE 9000.	Creating an iSTAR Controller on Page 121

Table 107: IP-ACM Configuration Sequence (continued)

Step	Task	See...
4	Access the iSTAR Controller dialog box **IP-ACMs** tab: 1. Add the IP-ACM(s) to the controller. 2. Configure the IP-ACMs Offline Mode. 3. Configure the readers to connect to the IP-ACM. 4. Configure the inputs, outputs, and triggers.	iSTAR Ultra Controller IP-ACMs Tab on Page 277 iSTAR Ultra IP-ACM Editor on Page 279
5	Configure a door with the readers connected to the IP-ACM.	iSTAR Door Editor on Page 371

IP-ACM Offline Mode Configuration Information

Offline Mode allows a limited level of access and control if communication is interrupted between the IP-ACM and the iSTAR. Offline mode allows up to the last 1,000 valid credentials and/or a specific personnel group of no more than 100. Offline Access stores a set of credentials in non-volatile memory on the IP-ACM. Clearances are not downloaded to the IP-ACM and are not stored.

Offline Mode is configured in the iSTAR Controller dialog box in the **IP-ACMs** tab.

⚠ Card + PIN access is not supported in Offline Mode. Card-only access is supported.

NOTE

- Offline Mode is only supported on IP-ACM v1 when connected to an iSTAR Ultra controller with firmware 6.5.2 and higher.
- Wiegand readers are supported on IP-ACM v2 when connected to an iSTAR Ultra controller with firmware 6.5.4 and higher.
- OSDP readers are supported on the IP-ACM when connected to an iSTAR Ultra controller with firmware v6.6.3 and higher.
- All readers on the IP-ACM must be of the same type, either Wiegand or OSDP.

See the following:

- Stored Credentials on Page 272
- Door Configuration on Page 273

Stored Credentials

Predefined Credentials

Predefined credentials are downloaded from the iSTAR controller in the form of raw data (Static Card Data). When the IP-ACM is offline, access is granted when the predefined credentials (from the Static Card Data stored on the IP-ACM) are presented to the readers.

The following restrictions apply to stored predefined credentials in Offline Mode:

- Personnel groups configured for Offline Mode must all share the same card format and facility code.
- Card formats supported are:
  - Wiegand 26
  - Wiegand 37
  - Two-parity bit style formats
  - 32-bit serial number type formats
- The Offline Mode Personnel Group can only be configured or edited in C•CURE. Offline Mode Personnel Group changes are sent to the IP-ACM immediately (including deleting credentials, if necessary), if the iSTAR controller and the IP-ACM are online. Any change in the Personnel Group deletes and recreates the IP-ACM static records.

Credentials Last Granted Access

In Offline Mode, the IP-ACM board admits cards that are among the last *xxx* previous admitted cards in addition to a pre-defined personnel group.

- Admits cards up to the last 1,000 credentials most previously admitted (number of admits configurable), including personnel in personnel groups.
- Maximum 100 personnel in the personnel group.
- If you set the **Personnel** system variable "**Maximum Cards Per Person**", then that value must be taken into consideration.

Example:

> If you set the "Maximum Cards Per Person" value to 3, then only 1000 - 100 x 3 = 700 is allowed in the "Admit the last admitted cards" field for configuration.

Door Configuration

NOTE

- In Offline Mode, all components of the door must come from the same IP-ACM board.

In Offline Mode, the readers, inputs, and outputs must be configured on the IP-ACM as detailed below:

- Wiegand:
  - A reader configured on Wiegand Port 1 as the entry reader.
  - A reader configured on Wiegand Port 2 as the exit reader.
- RS-485 (used for OSDP readers):
  - A reader configured on RS-485 Port 1 assigned to OSDP address 0 as the entry reader.
  - A reader configured on RS-485 Port 2 assigned to OSDP address 0 as the exit reader.
- An input configured on Input 1 as the DSM (Door State Monitor).
- An input configured on Input 2 as the REX (Request to Exit).
- An output configured on Output 1 as the Door lock.

- Door configurations not complying with the above restrictions may result in unexpected operation between online and offline modes.
- If the readers, in the list above, inputs/outputs are configured for a different purpose in C•CURE, the Offline Mode door controller will use them for the door control functions listed above, even if they are not configured for the door in C•CURE.

The door operation parameters are fixed when the IP-ACM goes into offline mode and cannot be changed. The door parameters revert to their configured settings when the IP-ACM goes back online.

Offline fixed parameters:

- Shunt time: 10 seconds
- Unlock time: 5 seconds
- Relock delay time: ½ second
- Debounce time: ½ second
- Unlock on RTE: Enabled
- Shunt on RTE: Enabled
- DSM shunted full shunt time: Disabled
- Delay Relock full shunt time: Disabled

IP-ACM v1 to IP-ACM v2 Board Conversion

This section describes the configuration steps required to complete the IP-ACM v1 to IP-ACM v2 board conversion.

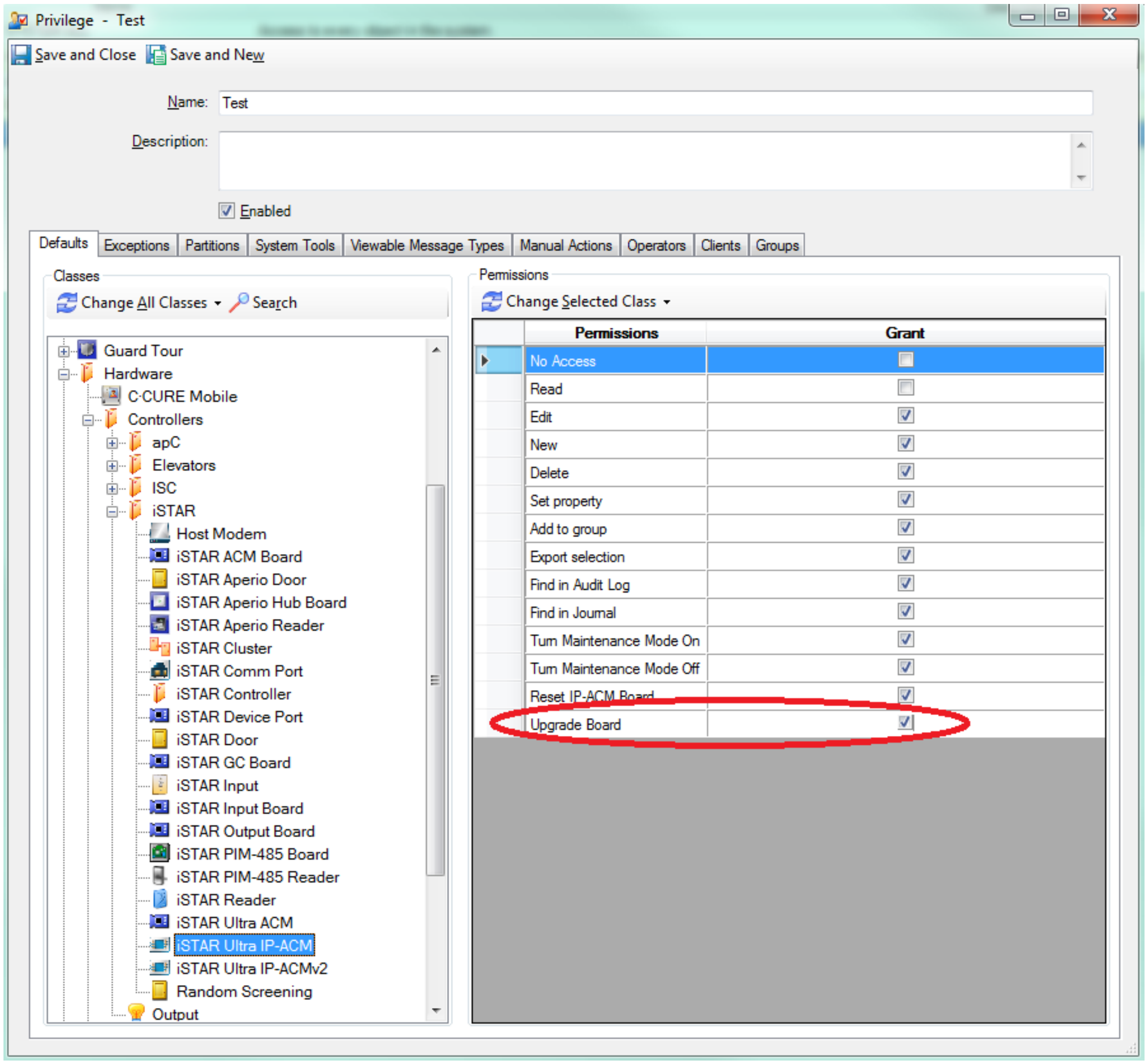
Requirements and Limitations

- The IP-ACM v1 board must be physically replaced with the IP-ACM v2 board.
- The IP-ACM v2 cables and power must be connected.
- Personnel performing the board upgrade must have the proper privilege. Step 1 of this conversion procedure explains how to assign the privilege.
- The controller must be disabled during the conversion. If there is one controller in the cluster, the cluster can be disabled.
- The conversion procedure must be repeated on each IP-ACM v1 board.

To complete the conversion:

1. Ensure that the user has the privilege **Upgrade Board** selected in the assigned Privilege configuration:
   a. Click the **Configuration** pane button.
   b. Select **Privilege** from the drop-down menu.
   c. Click ➡ ▾ to view a list of configured privileges in the Dynamic view.
   d. Double-click on the privilege to open the Privilege dialog box.
   e. Click **Hardware**.
   f. Click **iSTAR** and select **iSTAR Ultra IP-ACM**, as shown in Figure 91 on Page 275.
   g. Click in the **Upgrade board** row and select the **Grant** check box.

Figure 91: Privilege Editor - iSTAR IP-ACM



Name: Test

Description:

☑ Enabled

Permissions	Grant
No Access	☐
Read	☐
Edit	☑
New	☑
Delete	☑
Set property	☑
Add to group	☑
Export selection	☑
Find in Audit Log	☑
Find in Journal	☑
Turn Maintenance Mode On	☑
Turn Maintenance Mode Off	☑
Reset IP-ACM Board	☑
Upgrade Board	☑

h. Click **Save and Close**.

2. Click the **Hardware** pane button.

a. Locate the Cluster and the iSTAR Controller where the IP-ACM v1 resides.

b. Open the iSTAR Controller editor dialog box.

c. Disable the iSTAR Controller by clearing the **Enabled** check box.

NOTE If there is only one controller in the cluster, you can disable the cluster.

- Click on the **IP-ACMs** tab.

d. Select the IP-ACM v1 board you want to convert to an IP-ACM v2 board and click **Edit**.

e. Under **Upgrade Options**, click **Upgrade**.

NOTE The **Upgrade** button is only enabled if the controller or the cluster is disabled.

f. Enter the MAC address of the new board in the prompt and click **OK**.

A prompt appears to confirm that you want to perform the upgrade.

g. Click **Yes** to confirm the upgrade.

h. Click **OK** in the dialog box displaying the results of the conversion.

— If the conversion is successful, the iSTAR Controller dialog box automatically closes.

— If the conversion is not successful, the iSTAR Controller dialog box remains open.

i. If there are additional IP-ACM v2 boards you want to convert for this controller, and other controllers in the same cluster, repeat steps b through step i.

3. Open the iSTAR Controller editor (for each controller disabled in the cluster), or the Cluster dialog box, and click **Enabled**.

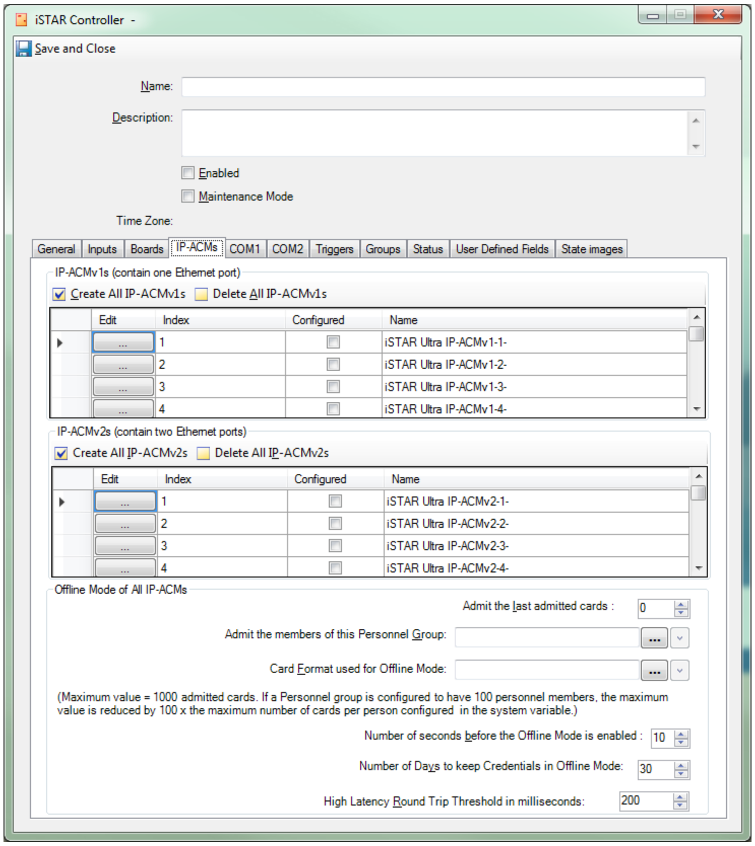
4. Repeat Step 1 through Step 3 on each IP-ACM v1 board you want to convert.

Configuring the IP-ACM

The IP-ACM configuration is accessed through the iSTAR Controller editor dialog box **IP-ACMs** tab. Figure 92 on Page 277 shows the iSTAR Ultra IP-ACMs tab.

See Table 108 on Page 278 for descriptions of the fields.

Figure 92: iSTAR Ultra Controller IP-ACMs Tab



iSTAR Controller -

Save and Close

Name:

Description:

□ Enabled

□ Maintenance Mode

Time Zone:

IP-ACMv1s (contain one Ethernet port)

☑ Create All IP-ACMv1s □ Delete All IP-ACMv1s

Edit	Index	Configured	Name
...	1	□	iSTAR Ultra IP-ACMv1-1-
...	2	□	iSTAR Ultra IP-ACMv1-2-
...	3	□	iSTAR Ultra IP-ACMv1-3-
...	4	□	iSTAR Ultra IP-ACMv1-4-

IP-ACMv2s (contain two Ethernet ports)

☑ Create All IP-ACMv2s □ Delete All IP-ACMv2s

Edit	Index	Configured	Name
...	1	□	iSTAR Ultra IP-ACMv2-1-
...	2	□	iSTAR Ultra IP-ACMv2-2-
...	3	□	iSTAR Ultra IP-ACMv2-3-
...	4	□	iSTAR Ultra IP-ACMv2-4-

Offline Mode of All IP-ACMs

Admit the last admitted cards : 0

Admit the members of this Personnel Group:

Card Format used for Offline Mode:

(Maximum value = 1000 admitted cards. If a Personnel group is configured to have 100 personnel members, the maximum value is reduced by 100 x the maximum number of cards per person configured in the system variable.)

Number of seconds before the Offline Mode is enabled : 10

Number of Days to keep Credentials in Offline Mode: 30

High Latency Round Trip Threshold in milliseconds: 200

To Configure the IP-ACM

1. From the iSTAR Controller editor, click the **IP ACMs** tab, as shown in Figure 92 on Page 277.

NOTE

Be sure to select the correct configuration table for the IP-ACM.

- IP-ACMv1s for IP-ACM boards with one Ethernet port.
- IP-ACMv2s for IP-ACM boards with two Ethernet ports.

2. Click on the **Configured** check box in the **Index** row where you want to add, or edit, an IP-ACM.
3. Click **...** in the **Edit** column of the Index row to open the iSTAR Ultra IP-ACM Editor on Page 279. The iSTAR Ultra IP-ACM editor is used to configure the inputs, outputs, and readers (Wiegand, RM, BLE, OSDP, and Smart).
4. Configure the **Offline Mode of All IP-ACM's** configured on this controller.

   See Table 108 on Page 278 for descriptions of the fields.
5. When the IP-ACMs configuration is complete, click in the **Enabled** check box, and click **Save and Close**.

Table 108: iSTAR Controller IP-ACMs Tab Definitions

Field/Button	Description
IP-ACMs	
Create All IP-ACMv1s Create All IP-ACMv2s	Click to create the IP-ACMs. When you click **Create All IP ACMv1s**, or **Create All IP ACMv2s**, the **Configured** column check boxes are selected, Click ... in the **Edit** column to open the iSTAR Ultra IP ACM Editor to configure the IP ACM.
Delete All IP-ACMv1s Delete All IP-ACMv2s	When you click **Delete All IP-ACMv1s**,or **Delete All IP-ACMv2s**, the check boxes in the **Configured** column of the table are cleared for all IP-ACMs. When the configuration is saved, a prompt appears to confirm deletion of each IP-ACM.
Offline Mode of All IP-ACMs	
NOTE: The selections made in the Offline Mode of All IP-ACMs section will apply to all IP-ACMs (iP-ACMv1s and IP-ACMv2s) configured on the controller. In offline mode, the IP-ACM board will admit cards that are among the last *xxx* previous admitted cards in addition to a pre-defined personnel group. - A total of 1000 credentials (not personnel) for both previous admitted credentials and credentials in the personnel group. - Maximum 100 personnel in the personnel group. - If you set the **Personnel** system variable "**Maximum Cards Per Person**", then that value must be taken into consideration. Example: If you set the "Maximum Cards Per Person" value to 3, then only 1000 - 100 x 3 = 700 is allowed in the "Admit the last admitted cards" field for configuration. This is true, even if the personnel count in the personnel group selected is less than 100.	
Admit the last admitted cards	Select a number from the menu that will apply to the previous cards that were admitted. Default: 0 Value: 0 to 1000
Card Format used for Offline Mode	Select a card format to be used for personnel when in offline mode. Only individual card formats are selectable. The card format is used to determine the card data stream for each person in the personnel group. All personnel will use the same card format. The first facility code and site code in the list will be used if that format has multiple values.
Admit the members of this personnel group	Click ... to select a pre-configured personnel group. NOTE: The maximum value is 1000 admitted cards. If a Personnel Group is configured to have 100 personnel members, the maximum value is reduced by 100 times the maximum number of cards per person configured in the System Variable.
Number of seconds before Offline Mode is enabled.	The time in seconds that the IP ACM waits to enter offline mode after it loses communication with the GCM board. This setting will apply to all IP ACMs on this controller unless specified in the iSTAR Ultra IP ACM Editor General tab. Default: 10 seconds. Range: 5 to 30 seconds.
Number of Days to Keep Credentials in Offline Mode	The number of days a credential is kept while in offline mode. A value of 0 indicates not to keep a credential when in offline mode. Default: 30 days Range: 0 to 9999 days
High Latency Threshold in milliseconds	The number of milliseconds that will cause a round-trip latency alarm. This value will apply to all IP-ACM's configured for this controller. Default: 200 milliseconds (0.2 seconds) Range: 100- 2000 milliseconds (0.1 to 2 seconds)

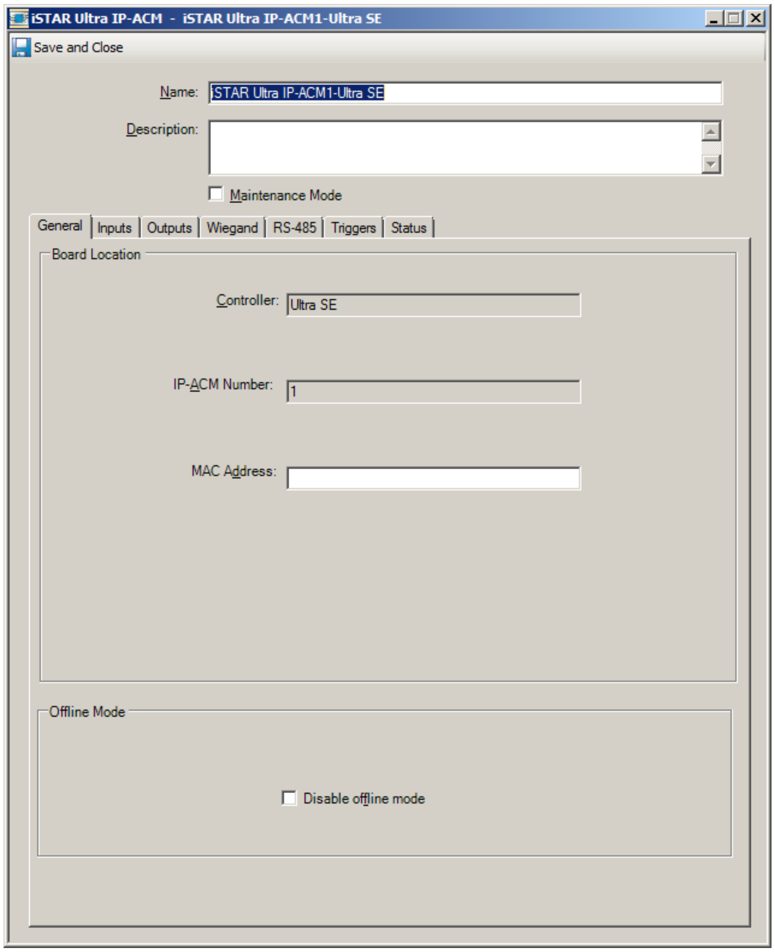
iSTAR Ultra IP-ACM Editor

The iSTAR Ultra IP-ACM editor, shown in Figure 93 on Page 279, is used to configure readers, inputs and outputs.

See the following for more information:

- Accessing the iSTAR Ultra IP-ACM Editor on Page 279
- iSTAR Ultra IP-ACM Inputs Tab on Page 280
- iSTAR Ultra IP-ACM Outputs Tab on Page 281
- iSTAR Ultra IP-ACM Wiegand Tab on Page 282
- iSTAR Ultra IP-ACM RS-485 Tab on Page 283
- iSTAR Ultra IP-ACM Triggers Tab on Page 285.
- iSTAR Ultra IP-ACM Status Tab on Page 285

Figure 93: iSTAR Ultra IP-ACM Editor - General Tab



iSTAR Ultra IP-ACM - iSTAR Ultra IP-ACM1-Ultra SE

Name: iSTAR Ultra IP-ACM1-Ultra SE

Description:

□ Maintenance Mode

Board Location

Controller: Ultra SE

IP-ACM Number: 1

MAC Address:

Offline Mode

□ Disable offline mode

Accessing the iSTAR Ultra IP-ACM Editor

To Access the iSTAR Ultra IP-ACM Editor

1. From the iSTAR Ultra Controller editor dialog box, click the **IP ACMs** tab.
2. Click on the **Configured** check box in the Index row that you want to add/edit.

3. Click ... in the **Edit** column of the Index row to open the iSTAR Ultra IP-ACM editor.

Table 109: iSTAR Ultra Controller IP-ACM Editor General Tab Definitions

Field/Button	Description
Partition	This read-only field identifies the Partition.
Maintenance Mode	Click to put the IP-ACM into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Board Location	
Controller	This field is read-only.
IP-ACM Number	This field is read-only.
MAC Address	Enter the MAC address of the IP-ACM.
Offline Mode	
Disable offline mode	Click the check box to disable offline mode on this IP-ACM. NOTE: This selection will override the **Offline Mode of all IP-ACMs** selections in the iSTAR Controller Editor IP-ACMs tab for this IP-ACM. See IP-ACM Offline Mode Configuration Information on Page 272. If using online mode, all components of the door must come from the same IP-ACM board.
Switch Port (J5) Options (option for IP-ACM v2 only)	Select the check box to enable the J5 Switch Port. Clear this check box to disable this port. This check box is selected by default.

iSTAR Ultra IP-ACM Inputs Tab

The Inputs tab is used to create and configure the Inputs that are attached to this Ultra IP-ACM Board.

You can use an existing Input Template to create one or more of the IP-ACM Board Inputs. Click in the **Template** Column, then click ... . A list of available iSTAR Input Templates appears. Click on the Template you wish to use. See Using Templates for Controller Inputs, Outputs, and Readers on Page 43 for more detailed information about using Templates to create Inputs.

Table 110 on Page 280 provides definitions for the buttons and fields on the iSTAR Ultra IP-ACM Inputs tab.

Table 110: iSTAR Ultra IP-ACM Board Inputs Tab Definitions

Field/Button	Description
Special Purpose Inputs	
Tamper	The **Tamper** input activates when the controller cabinet is opened or removed from its mounting surface. NOTE: For UL applications, this field must be enabled. Select the check box in the **Configured** column and click ... located in the **Edit** column to open the iSTAR Input Editor General tab to configure the Tamper input. From the Input Editor you can configure the Options, Triggers, Groups, Status and State Images that are associated with the Tamper Input. The **Template** column shows the template name chosen if you selected a Template prior to creating the Input.
Communication Fail	A logical unsupervised input that reflects the state of the communication between the GCM board and Processor-A on this IP-ACM board.

Table 110: iSTAR Ultra IP-ACM Board Inputs Tab Definitions (continued)

Field/Button	Description
Port Power Alarm Status 1 Port Power Alarm Status 2	Power indicator input for each RM / Weigand port.
Lock Power Alarm Status 1 Lock Power Alarm Status 2	IP-ACM can provide power for the locks directly from the 2 Output connectors (Lock Power 1 & 2). There are automatic over-current shut-off switches on each Lock Power. The Lock Power Alarm Status inputs go Active when the over-current shut-off switches are active (i.e., when Lock Power has been shut off).
General Purpose Inputs	
Inputs 1 through 4	These standard general purpose supervised inputs are available on iSTAR Ultra IP-ACM boards.

iSTAR Ultra IP-ACM Outputs Tab

The Outputs tab is used to configure the Outputs for the IP-ACM.

Table 111 on Page 281 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM Board Outputs tab.

Table 111: iSTAR Ultra IP-ACM Outputs Tab General Tab Definitions

Field/Button	Description
Name	Displays the name for this Output board. The name is system-generated by default, but you can edit this name by clicking this field.
Description	Enter a textual comment about the Output board, such as its location or purpose. This text is for information only.
Partition	This read-only field identifies the Partition in which this Output board resides.
Maintenance Mode	Click to put the iSTAR Outboard Board into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Location	
Controller	This read-only field identifies the iSTAR Controller to which this Output is attached.
Board	This read-only field identifies the iSTAR Controller board to which this Output board is attached.
Board Index	This read-only field identifies the board index (which represents the SW1 address switch setting on the R/8 board) for this Output board.
Outputs	
Create All Outputs	Click to create all Outputs. The check boxes in the **Configured** column are set to ☑.
Delete All Outputs	Click to delete all Outputs. The check boxes in the **Configured** column are set to □.

Table 111: iSTAR Ultra IP-ACM Outputs Tab General Tab Definitions (continued)

Field/Button	Description
Edit column	Click ... in this column to open the iSTAR Output Editor to edit this Output. NOTE: The **Configured** check box must be selected to open the Output Editor.
Index column	This read-only field identifies the position of each Output (1 - 2) on the IP-ACM board.
Configured column	☑ indicates that the Output has been configured. □ indicates that the Output has not been configured. NOTE: The **Configured** check box must be selected to open the Output Editor.
Name column	Displays the system-generated name for this Output. You can edit this name by clicking in the field.
Template column	Displays the Template used for creating this Output. If the Output is not yet configured, you can click in this column, then click to select an Output Template. If the **Configured** column displays ☑, this field cannot be edited.

iSTAR Ultra IP-ACM Wiegand Tab

The Wiegand tab is used to configure Wiegand readers connected to the IP-ACM board.

Table 112 on Page 282 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM Wiegand tab.

Table 112: iSTAR Ultra IP-ACM Wiegand Tab Definitions

Box	Description
Create All Readers	Click to create all the Readers. When you click **Create All Readers**, the **Configured** column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Reader Editor to configure a direct connect Wiegand Reader.
Delete All Readers	When you click **Delete All Readers**, the check boxes in the **Configured** column are cleared for all Readers, and all these Readers are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Reader Editor to configure a Reader. See iSTAR Reader Editor on Page 466.
Index column	This column displays the number for each reader. This number is the physical port number for a Direct Connect Wiegand reader.
Configured column	Click □ in this column to create a reader (make it available to be edited).
Name column	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in this field.
Template column	Click in this column prior to creating the Reader, then click ... to select a Reader template from the list of available Reader templates. The **Template** column shows the template name chosen if you selected a Template prior to creating the Reader.
Readers 1 - 2	Select the check box in the **Configured** column for a Reader and click ... located in the **Edit** column to open the iSTAR Reader Editor General tab to configure the Keypad, Triggers, Groups, Status and State Images that are associated with a Reader. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Readers. The **Name** column displays a name comprised of the Reader Type and the iSTAR Controller name. You can click in this column to edit the Reader name.

iSTAR Ultra IP-ACM RS-485 Tab

The RS-485 tab is used to configure RS-485 ports connected to the iSTAR Ultra IP-ACM Board.

The iSTAR Device Port Editor, accessed by clicking in the **Configured** check box of the port and click **Edit**, allows you to select the RM, BLE, or OSDP protocols. See IP-ACM iSTAR Device Port Dialog Box on Page 283

Table 113 on Page 283 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM RS-485 tab.

Table 113: iSTAR Ultra IP-ACM Board RS-485 Tab Definitions

Field/Button	Description
Create All Ports	Click to create the RS-485 Ports. When you click **Create All Ports** the Configured column check boxes are selected, and you can click ... in the **Edit** column to open the iSTAR Device Port Editor to configure an RS-485 Port.
Delete All Ports	When you click **Delete All Ports**, the check boxes in the **Configured** column are cleared for all Ports, and all Ports are immediately deleted (any settings you have configured are lost).
Edit column	Click ... in the **Edit** column to open the iSTAR Device Port Editor to configure Device Ports for the IP-ACM. See iSTAR Ultra ACM RS-485 Device Port Editor on Page 196.
Index column	This column displays the number for each Device Port.
Configured column	Click □ in this column to create a Device Port (make it available to be edited).
Name column	Displays the name for this Device Port. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Device Ports 1 - 2	Select the check box in the **Configured** column for a Device Port and click ... located in the **Edit** column to open the iSTAR Device Port Editor General tab to configure the Readers and ACM extensions that are associated with the Device Port. See iSTAR Reader Editor on Page 466 for detailed instructions for configuring iSTAR Device Ports. The **Name** column displays a name comprised of the Device Port and the iSTAR Controller name. You can click in this column to edit the Device Port name.

IP-ACM iSTAR Device Port Dialog Box

Use the iSTAR IP-ACM Device Port dialog box, shown in Figure 94 on Page 284, to select the Protocol, select or configure the reader, and configure the Inputs.

There are four protocols supported by the IP-ACM readers:

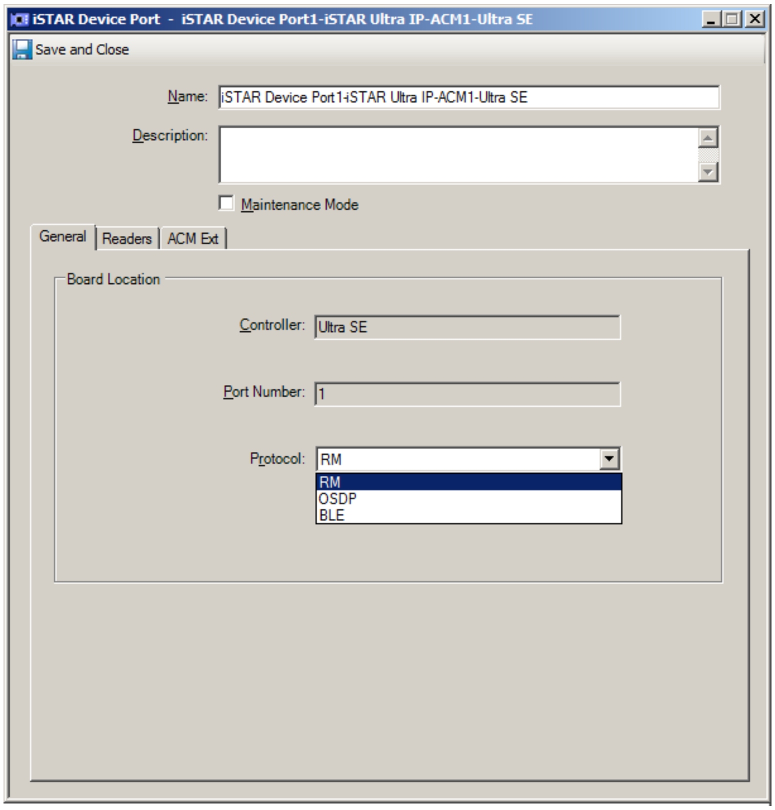
- BLE (Bluetooth Low Energy): supported on the Software House BLE reader module.
- RM (Software House Reader Protocol): supported on RM readers, Touchscreen readers, RM modules, I8, and R8 modules.
- OSDP (Open Supervised Device Protocol): supported on HID iCLASS SE readers and Allegion aptiQ readers.
- Smart: supported on the Touchscreen reader.

Limitations

- C•CURE 9000 only supports up to two readers (any combination of RM/Wiegand/OSDP readers, and up to two BLE readers) connected to an IP-ACM.
- Offline mode is not supported for BLE readers or OSDP readers connected to the IP-ACM.

- One I8 input module and one R8 module may be assigned to each device port when the port is assigned as an RM protocol.

Figure 94: iSTAR Device Port Dialog Box



iSTAR Device Port - iSTAR Device Port1-iSTAR Ultra IP-ACM1-Ultra SE

Save and Close

Name: iSTAR Device Port1-iSTAR Ultra IP-ACM1-Ultra SE

Description:

□ Maintenance Mode

Board Location

Controller: Ultra SE

Port Number: 1

Protocol: RM

To Configure the IP-ACM Readers, Inputs, and Outputs

1. On the **General** tab, select the **Protocol** from the drop-down menu.

NOTE

- If you select OSDP, you can select a supported Baud Rate. In most cases, the default, 9600 baud, is acceptable.
- Readers that are configured with the wrong Baud Rate may cause communication problems with other readers. Connecting a chain of readers with any mismatched Baud Rate can keep the entire chain offline.

2. Click the **Reader** tab to configure the readers.
3. Click in the **Configured** check box of the Reader you want to configure, and click **Edit**. The iSTAR Reader editor opens. See Configuring iSTAR Readers on Page 467.
4. Click the **ACM ext** tab to configure the inputs and outputs.
5. Click in the **Configured** check box of the Input/Output you want to configure, and click **Edit**. See iSTAR Ultra RS-485 Device Port ACM EXT Tab on Page 198.
6. Click **Save and Close** when done.

iSTAR Ultra IP-ACM Triggers Tab

The Triggers tab is used to configure Triggers, which are configured procedures for activating actions, to activate Events or Outputs for an iSTAR device. A Trigger automatically executes a specified Action when a particular Condition occurs (when the object Property specified in the Trigger reports the Value specified in the Trigger).

For the iSTAR Ultra IP-ACM, you can create the IP-ACM High Latency Alarm Trigger for an iSTAR.

To Define a Trigger for an iSTAR Device

1. Click on the Triggers tab.
2. Click **Add** on the Triggers tab to create a new Trigger.
3. Click in the **Property** column and click ... to open the Property dialog box showing the Properties available for the device.
4. Click the Property (**IP-ACM High Latency Alarm**) in the list to select it and add it to the **Property** column.
5. Click the **Action** column drop-down menu to display a drop-down list of valid actions. Click an Action (**Activate Event**) that you want to include as a parameter for the trigger to add it to the column.

   When you select **Activate Event**, the lower pane in the Triggers box displays **Event**.
6. Click the Event field ... to select an event to associate with the property.
7. Click in the **Value** column to enable the trigger. Checked is enabled, cleared is disabled.
8. Click **Save and Close** to save the iSTAR Trigger.

iSTAR Ultra IP-ACM Status Tab

The Status tab displays a read-only listing of information about the operational status of the selected iSTAR Ultra IP-ACM Board.

Table 114 on Page 285 provides definitions of the fields and buttons on the iSTAR Ultra IP-ACM Board Status tab.

Table 114: iSTAR Ultra IP-ACM Board Status Tab Definitions

Field/Button	Description
Communication Status	Unknown, Offline, or Online.
Firmware Version	Processor firmware, such as 00.00.36.00008
IP Address	The IP-ACM IP address.
High Latency Alarm	Possible status values are True or False.

Viewing the IP-ACM Board Serial Numbers

You can view a list of IP-ACM board manufacturer unique serial numbers in the Dynamic View.

To View the Serial Numbers:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **iSTAR Ultra IP-ACM** from the **Hardware** pane drop-down list.

3. Click ➡ ▾ to open a **Dynamic View** showing all IP-ACM boards and the controllers they are connected to.
4. Right-click on a column heading and select **Serial Number Status**. The serial numbers are listed under the Serial Number Status column.

NOTE Once you select **Serial Number Status** the serial numbers are visible whenever the **iSTAR Ultra IP-ACM** Dynamic View is displayed.

Configuring Advanced Processing Controllers (apC)

This chapter explains how to configure the apC, apC/8X, and apC/L software components to work with C•CURE 9000.

In this chapter

apC Panel Overview 288
apC Controller Configuration Summary 299
apC Comm Port Editor 301
apC Controller Editor 309
apC Input Editor 318
apC Output Editor 321
apC Reader Editor 323
apC Add-on Board Editor 327
apC Add-On Board Star Coupler Tab 331
apC Input Board Editor (I32 and I8) 333
apC Star Coupler Board Editor 336
Triggers Tab for apC Devices 339
Mini Star Coupler Board Editor 342
Wiegand Proximity Star Coupler Editor 343

apC Panel Overview

The **advanced processing Controller** (apC) panel is an intelligent field device that performs basic access control tasks. The apC, apC/8X, and apC/L are access control field panels that coordinate communication between the C•CURE 9000 server and the system security hardware, such as card readers.

The apC/L is a smaller version of the apC, making it ideal for parking garages and small office buildings. All apC/8Xs and some apC/Ls provide Flash ROM support, which lets you download firmware from the server to the panel. Up to three versions of firmware are available for download. See the *Monitoring Station User's Guide* for information about downloading firmware.

Each apC, apC/8X, or apC/L in the system supports Wiegand, proximity, magnetic stripe, and RFID card technologies. The apC (apC/8X) configuration supports eight card readers wired in a daisy-chain arrangement. The apC/L configuration supports two card readers.

NOTE The apC and apC/L have not been evaluated by UL.

See the following sections for more information:

- Features of apC Panels on Page 288
- Inputs and Alarm Device States on Page 290
- Outputs and Readers on Page 291
- Optional Boards on Page 291
- apC Time Zones on Page 292
- Changing the Time Zone of an apC Controller on Page 294
- apC Time Zone Reports on Page 294
- apC Firmware Update on Page 297
- apC Controller Configuration Summary on Page 299

Features of apC Panels

Several different types of add-on module expansion boards can be used for additional inputs and outputs. The apC firmware offers software-controlled features such as timed activation/deactivation commands, 32-bit card numbers, elevator access and anti-passback control. An apC panel can use multiple card technologies, site codes, and company codes. The apC's full-year real time calendar/clock allows activation and deactivation of cards on specified days. The apC panels can be connected via serial RS-232/485 or networked terminal servers.

apC Panel

The basic apC panel has eight supervised inputs, eight relay outputs and one reader port, capable of handling a maximum of eight readers, which are wired in a multi-drop configuration. Expansion boards can add reader ports, supervised inputs and additional outputs. By using expansion boards, bus modules and RM-4s, an apC can have as many as 128 inputs and 192 outputs. Depending on the amount of available memory, an apC panel can hold up to 40,000 cards in its database. See Table 115 on Page 289 for a listing of the standard apC panel's inputs, outputs and readers. Total indicates that this is the total number of inputs, outputs or readers for the apC panel.

There are three Star Coupler expansion boards that can be used with the apC panel to add inputs, outputs and readers :

- Star Coupler – 8 RM readers, 8 relay outputs, 8 unsupervised inputs (see apC Add-On Board Star Coupler Tab on Page 331 for more information)
- Mini-Star Coupler – 8 RM Readers (this is the same board as Star Coupler but inputs and outputs are not populated)

- WPSC – Wiegand Prox Star Coupler includes 2 boards:
  - Lower board – 4 Wiegand signaling readers and 4 supervised inputs
  - Upper board – 4 Wiegand signaling readers and 4 supervised inputs (the upper board plugs into lower board)

A Star Coupler Reader is an RM reader connected to a Star Coupler. The Mini Star Coupler Reader is an RM reader connected to the Mini Star Coupler and it differs from the Star Coupler only due to its having no inputs or outputs. The readers used by these Star Coupler expansion boards are RM or Wiegand signaling readers that are connected to a Star Coupler.

Table 115: apC Inputs, Outputs and Readers Available

Board	Inputs	Outputs	Readers
Tamper Input	1		
Power Failure Input	1		
Supervised Inputs	8		
Outputs		8	
Readers			8 total
Supervised Reader Inputs	16 total		
Reader Outputs		16 total	
Add-On Boards			
I32 Supervised Input Board	32		
I8 Supervised Input Board	64		
R48 Output Board		96	
R8 Output Board		64	
Star Coupler Readers			8 total
Star Coupler Reader Supervised Inputs	16 total		
Star Coupler Reader Outputs		16 total	
Star Coupler Unsupervised Inputs	8		
Star Coupler Outputs		8	
Star Coupler - Ministar Readers			8 total
Star Coupler - Ministar - Reader Supervised Inputs	16 total		
Star Coupler - Ministar - Reader Outputs		16 total	
Wiegand Proximity Star Coupler Readers [Upper and Lower Boards]			8 total
Wiegand Proximity Star Coupler Reader Supervised Inputs [Upper and Lower Boards]	8		

apC/L Panel

A basic apC/L panel has two readers and two relay outputs. An apC/L is expandable up to 36 inputs and 38 outputs using RM-4s and bus modules. Depending on the amount of available memory, an apC/L panel can hold up to 40,000 cards in its database. apC/L panels with Flash EPROMS installed can have firmware upgrades downloaded from the host system.

NOTE The apC/L has not been evaluated by UL.

Table 116: apC/L Standard Inputs, Outputs and Readers Available

Board	Inputs	Outputs	Readers
Tamper Input	1		
Power Failure Input	1		
Outputs		2	
Readers			2
Supervised Reader Inputs	4		
Reader Outputs		4	
Add-On Boards			
I8 Supervised Input Board	32		
R8 Output Board		32	

apC/8X Panel

A basic apC/8X panel has eight supervised inputs, eight relay outputs and one reader port, capable of handling a maximum of eight readers, which are wired in a multi-drop configuration. Expansion boards can add reader ports, supervised input and additional outputs. Depending on available memory, an apC/8X panel can hold up to 160,000 cards in its database. apC/8X panels with Flash EPROMS installed can have firmware upgrades downloaded from the host system. See Table 115 on Page 289 for a listing of the apC/8X panel’s inputs, outputs and readers. Total indicates that this is the total number of inputs, outputs or readers for the apC panel.

Inputs and Alarm Device States

An input is an object that associates an alarm device with an input on the panel or on an input board. There are two kinds of inputs: supervised and unsupervised. All alarm devices can be in one of two states: active or inactive. An **input** reports the state of the alarm device.

A **supervised** input reports on the status of the wiring between the panel and the alarm device when changes in circuit resistance are detected. If wiring is cut, the system reports an open circuit. If someone attempts to create a jumper across the wiring (to prevent the device from reporting), the system reports a shorted circuit. Supervised inputs can report a total of five conditions to the apC: Short, Open Loop, Line Fault, Inactive or Active. The main board on the apC has eight supervised inputs.

An **unsupervised** input does not monitor the wiring. Unsupervised inputs can report two conditions to the panel: Active or Inactive. With the star couplers, the apC has eight unsupervised inputs available. See To Configure apC Controller Inputs on Page 312 for more information.

NOTE Unsupervised inputs have not been evaluated by UL.

Supervised inputs can report five states:

- Short
- Open Loop
- Normal
- Alert
- Line Fault

Outputs and Readers

Outputs

An **output** is an object that associates an alarm device with an output on the panel board or add-on module. The output turns alarm devices, such as closed circuit TV or alarm dialers, on or off. See apC Controller Outputs Tab on Page 312 for more information.

Readers

A **reader** is a hardware device that accepts access requests. To make an access request, a person swipes or presents a card at the reader. The card reader scans the information encoded on the card and sends it to the apC panel, which grants or denies access. See apC Controller Readers Tab on Page 313 for more information.

Optional Boards

apCs and apC/8X panels support these optional (add-on) boards and controller:

- 8 apC I/8 - input modules and 1 apC I/32 input board, and
- 8 apC R/8 - output modules and 2 apC R/48 output boards, and
- 1 Standard Star Coupler, or
- 1 Mini Star Coupler, or
- 1 Wiegand Proximity Star Coupler

Star couplers enable you to wire the apC panel's 8 readers in a star, daisy-chain, or combination configuration. Star couplers also provide unsupervised inputs and additional outputs and readers for the apC and apC/8X.

NOTE apC/L controllers and Mini Star Couplers have not been evaluated by UL.

NOTE The apC/L supports two types of optional boards: four I/8 - input modules and four R/8 - output modules.

See apC Controller Add-On Board Tab on Page 313 for more information.

NOTE Before you configure apC panels, the apC Hardware Interface must be started using the Server Management application - Server Components tab. Right-click the apC Hardware Interface and click **Start Server Component**.

apC Time Zones

You can specify the Time Zone for an apC panel, so that the apC panel can support panel-based operations using the local date/time, and the display of the local date/time at door readers, in controller status screens, in Journal Messages, and in Reports.

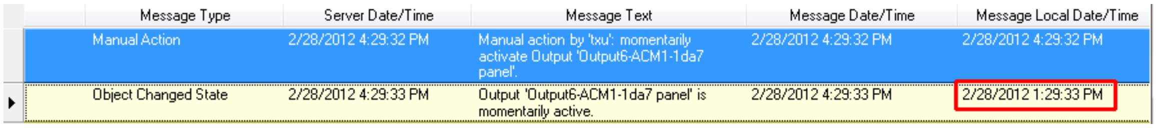
Example:

If you specify that an apC panel is in the Pacific Time Zone (GMT- 08:00), and the C•CURE 9000 server is in the Eastern Time Zone (GMT- 05:00), a timed-based action that occurs at the apC panel, such as unlocking a Door, happens at local time (Pacific Time Zone) for the apC panel.

Example:

If you specify that an apC panel is in the Pacific Time Zone (GMT- 08:00), and the C•CURE 9000 server is in the Eastern Time Zone (GMT- 05:00), a server-based Journal message shows the server date/time (EST), while a panel-based Journal Message shows the panel date/time (PST) as highlighted in Figure 95 on Page 292.

Figure 95: Journal Message Showing Local Date/Time



Message Type	Server Date/Time	Message Text	Message Date/Time	Message Local Date/Time
Manual Action	2/28/2012 4:29:32 PM	Manual action by 'txu': momentarily activate Output 'Output6-ACM1-1da7 panel'.	2/28/2012 4:29:32 PM	2/28/2012 4:29:32 PM
Object Changed State	2/28/2012 4:29:33 PM	Output 'Output6-ACM1-1da7 panel' is momentarily active.	2/28/2012 4:29:33 PM	2/28/2012 1:29:33 PM

Example:

If you specify that an apC panel is in the Pacific Time Zone (GMT- 08:00), and the C•CURE 9000 server is in the Eastern Time Zone (GMT- 05:00), a Credential with an Expiration Date set as today at 5:00 PM will expire at 5:00 PM Eastern time, rather than Pacific Time, because the expiration occurs at the server, which is in the Eastern Time Zone.

The Time Zone setting is configured on the apC controller General tab by selecting a Time Zone from the **Time Zone** field. See apC Controller General Tab on Page 310 for more information.

You can change the value of the apC controller **Time Zone** field only when the apC Controller is not enabled (**Enabled** field is blank ☐). See Changing the Time Zone of an apC Controller on Page 294 for more information.

apC Time Zones and Schedules

Schedules in C•CURE 9000 are not configured directly with any Time Zone. They are dynamically associated with a local Time Zone when they are used in the C•CURE 9000 Server or are downloaded to a controller. That means that the same schedule can be activated at different times if it is used in different Time Zones.

This is flexible, but also potentially complicated if you have controllers in different Time Zones.

Example:

You create a Schedule to manage Clearances for your night shift. When downloaded to an apC in another Time Zone, the Schedule works as expected. However, if you apply the Schedule to a C•CURE 9000 Server-based Event ("Lock all Doors" using the **All Doors** Group) that affects the Pacific Time Zone apC, the Event's actions would be triggered in the Server's Time Zone, rather than the Time Zone where the apC resides, perhaps causing Doors to be locked at the wrong time.

However, if you create separate Schedules and name them to make it clear which Time Zone (or which controller) they are intended to be used with, you can avoid problems with Time Zone differences.

Example:

> You create a Schedule to assign to Door and Elevator Clearances on your apC in the Pacific Time Zone called "Doors & Elevators - Pacific" and only use this Schedule for Pacific Zone. The Door and Elevator Clearances are downloaded to the apC controller

The schedules used in an apC panel for timed actions are primarily associated with Door or Elevator clearances.

When a Schedule becomes active, the Journal Message that is displayed identifies the Time Zone associated with the object (such as an apC panel) to which the Schedule is related.

You can see the active/inactive status of your Schedules with the **Schedule by Time Zones** Dynamic View, accessible from the Configuration pane. See the Schedules chapter in the *C•CURE 9000 Software Configuration Guide* for more information.

Using apC Panel Time Zones with Trigger Schedules

apC Triggers support the ability to designate a Time Zone for a Trigger, so that you can specify that the Schedule for activating the Trigger uses the same Time Zone as the apC panel. If you do not specify a Time Zone for the Trigger, the Trigger Schedule uses the C•CURE 9000 server Time Zone to determine when the Trigger can be activated.

See Defining a Trigger for an apC Device on Page 339 for more information about specifying a Time Zone for an apC Trigger.

Using apC Panel Time Zones with Events

You can add a Time Zone to an Event if you intend to activate a timed Action with that Event. The Event General tab includes a **Time Zone** field that you can use to determine when a Schedule you attach to the Event is Activated. See the Events chapter in the *C•CURE 9000 Software Configuration Guide*.

Time Zone for apC Panel Events

For timed Actions defined in an Event (the Event is armed and/or activated by a Schedule) that the apC driver downloads to an apC panel to execute , the Time Zone for the Action is automatically set to the Time Zone of the apC Panel. You cannot change the Time Zone setting to a different Time Zone.

Example:

> The C•CURE 9000 server is in the Eastern Time Zone (GMT - 05:00). The apC Panel is in the Pacific Time Zone (GMT - 08:00). If the Event is activated by a Schedule at 10:00 AM, it will be activated at 10:00 AM Pacific Time (the apC panel's Time Zone), not 10:00 AM Eastern Time.

For an apC time-based action defined in a Event, if a Time Zone is specified in the Event, the apC driver only downloads the action to apC controllers with the same time zone as the Event.

If the apC panel is online when the Event is activated by the Schedule, the apC driver sends the timed Action command to the apC panel.

If the apC Panel is offline when the Event is activated by the Schedule, the apC panel performs the timed Action. However, the apC does not have the capability, after communication is re-established, to display activation and deactivation messages for an Event that occurred while the apC was offline.

Time Zone for apC Host Events

For a host Event (an Event that is initiated at the C•CURE 9000 server, without timed Actions downloaded to the apC Panel), you can specify any Time Zone for the Schedule on the Event General tab. The Time Zone does not need to match the time Zone of the apC panel.

However, if the Time Zone of the Event Schedule and the Time Zone of the apC panel are different, a warning message appears to inform you of the discrepancy, called a Time Zone Mismatch, so that you will be aware that the timed Action will be activated according to the host Time Zone, not the apC panel Time Zone.

Example:

> The C•CURE 9000 server is in the Eastern Time Zone (GMT - 05:00). The apC Panel is in the Pacific Time Zone (GMT - 08:00). If the Event is activated by a Schedule at 10:00 AM, it will be activated at 10:00 AM Eastern Time (server time), not 10:00 AM Pacific Time.

If the apC panel is online when the host Event is activated by the Schedule, the apC driver sends the timed Action command to the apC panel.

If the apC Panel is offline when the host Event is activated by the Schedule, the apC panel does not perform the timed Action, because the Event was not downloaded to the apC panel, and the panel is offline from the host.

Changing the Time Zone of an apC Controller

You can change the value of the apC controller **Time Zone** field only when the apC Controller is not enabled (**Enabled** field is blank □). To change the Time Zone, you must edit the controller, clear the **Enabled** field, save the controller, then re-open it to change the Time Zone.

If you change the Time Zone of the apC controller, the Time Zone settings of all child objects of that apC controller are changed as well. A warning message appears if you change the Time Zone and any Events have controller-based actions on this apC controller and the Event is configured to use a different Time Zone than this apC controller.

To Change the Time Zone of an apC Controller

1. From the Hardware pane, select the apC controller you wish to change. Right-click and select **Edit**.
2. Clear the **Enabled** field (change ☑ to □).
3. Click **Save and Close** to save the change.
4. From the Hardware pane, select the apC controller again. Right-click and select **Edit**.
5. When the apC controller editor opens, the **Time Zone** field can be changed.
6. Click **Save and Close** to save the change.

apC Time Zone Reports

C•CURE 9000 provides several pre-defined Reports (and Queries) that can help you find Time Zone mismatches - where the C•CURE 9000 server and the apC panel are in different Time Zones, such that a host Event will be unable to activate an object on an apC that is offline.) for Events associated with apC panels in different Time Zones than the C•CURE 9000 server.

Table 117: apC Time Zone Reports/Queries

Report	Query
SWH70 - apC Input Groups with Time Zones	
SWH71 - apC Door Groups with Time Zones	
SWH 72 - apC Time Zone Mismatch Actions	SWHrep72 - apC Time Zone Mismatch Actions

apC Time Zone Reports/Queries (continued)

Report	Query
SWH 73 - apC Online Only Actions	SWHrep73 - apC Online Only Actions
SWH 74 - Actions with Time Zone Mismatch	SWHrep74 - Actions with Time Zone Mismatch Query

See the Reports chapter of the *C•CURE 9000 Data Views Guide* for more information about these Reports and Queries.

Creating Custom Reports for apC Actions and Time Zones

In addition, you can use the Report Editor to create custom reports on apC controller actions, including Time Zone information. You can use the pre-defined Reports as starting points for your own custom Reports by clicking **Create Copy** and then customizing the copy.

apC Controller Actions Report

You can create a custom Report that lists apC Controller objects and all the actions triggered by the controller and its child objects (like doors, readers and inputs), as well as action items that should be loaded into the apC because they are configured in Event objects.

If a Report Query is not specified, the report lists all the apC Controllers and all the actions, noting each action is **Online Only** - performed only if the apC panel is Online - if the custom fields in the Action Item class are selected.

Specifying a Report Query allows you to select any apC Controller field and any Action Item field, including these custom fields:

- **Online Only** - whether the action can occur only on an online apC)
- **Online Only Reason** - the reason that an action can only occur on an online apC. Possible values are:
    - Time Zone Mismatch - The Time Zone of the timed action is different from the Time Zone of the controller.
    - No Firmware Support - The action is not supported by the controller, so it must be executed on the host.
    - Cross Panel Action - The action is activated by one controller and modifies an object on another controller.
    - Invalid Configuration - The action cannot be activated (for example, a change in Comm Fail status should cause an Event to activate an Output on the same controller, but the Comm Fail prevents the Event from communicating with the Output.)

To Create an apC Controller Actions Report

1. Create a new Report - From the Data Views pane, select **Report** from the drop-down list of objects, then click **New**.
2. Select **apC Controller** as the **Report type** field.
3. Select **apC Controller Actions** as the **Sub type** field.
4. Click on **apC Controller** in the Class Selector.
5. In in the Field Selector, select the fields for the apC Controller class that you want to display in the Report.
6. Click on **Action Item** in the Class Selector.
7. In the Fields Selector, select any fields you want in the report (including the custom fields **Online Only** and **Online Only Reason**) for the Action Item class.
8. Optionally, you can click to select a Report Query as the basis of the report. SWHrep72 and SWHrep73 are available in the **Report Query** drop-down list for this purpose.

9. Click **Save and Close** to save the Report.
10. The Report is added to the Reports Dynamic View. You can double-click the Report to run it.

Action Item Time Zones Report

You can create a custom Report that lists Action Item objects (with the ability to query on any Action Item property) and additionally query on three additional custom fields in the Action Item Time Zone Sub type:

- Source Time Zone - the Time Zone of the Source object of the action item (if any).
- Target Time Zone - the Time Zone of the Target object (if any).
- Time Zone Mismatch - set to TRUE if the Time Zone of the Action Item is not equal to the Time Zone of the Source object and/or not equal to the Time Zone of the Target.

To Create an Action Item Time Zones Report

1. Create a new Report - From the Data Views pane, select **Report** from the drop-down list of objects, then click **New**.
2. Select **Action Items** as the **Report type** field.
3. Select **Action Item Time Zone** in the **Sub type** field.
4. Click on **apC Controller** in the Class Selector.
5. In the Field Selector, select the fields for the apC Controller class that you want to display in the Report.
6. Click on **Action Item Time Zone** in the Class Selector.
7. In the Fields Selector, select any fields you want in the report (including the custom fields **Online Only** and **Online Only Reason**) for the Action Item Time Zone class.
8. Optionally, you can click to select a Report Query as the basis of the report. SWHrep74 is available in the Report Query drop-down list for this purpose.
9. Click **Save and Close** to save the Report.
10. The Report is added to the Reports Dynamic View. You can double-click the Report to run it.

apC Door Group and Input Group Time Zones Report

You can create a custom Report that lists either apC Door Groups or apC Input Groups and their Time Zones by editing the following pre-defined Reports, creating a copy, adding a Query, or customizing the Report Layout:

- SWH70 - apC Input Groups with Time Zones
- SWH71 - apC Door Groups with Time Zones

Both of these pre-defined Reports:

- Start with a Group Report
- Use the Group Member field **Time Zone Name** to output the Time Zone of the objects in the Report.

To Create an apC Door Group or apC Input Group with Time Zones Report

1. From the Data Views pane, select **Report** from the drop-down list of objects, then click .
2. Select either:
   - SWH70 - apC Input Groups with Time Zones
   - SWH71 - apC Door Groups with Time Zones

3. Right-click and choose **Edit**. The Report editor opens.
4. Click **Create Copy**. A new Report opens in the Report editor, based on the pre-defined Report you chose.
5. Click ... in the **Report form** field if you want to select a different Report From.
6. Click ... in the **Report query** field if you want to select a Query for the Report.
7. Select **Prompt for Query** ☑ if you want to display a Query Parameter Prompt when the report is run.
8. Click the drop-down list for the **Layout style** if you want to change the Report layout.
9. Change the fields in the **Class selector** and the **Field selector** if you want to change the fields displayed on the Report.
10. Click the Layout Design tab if you want to manually change the Report design.
11. Click the Layout Preview tab to see a preview of how the Report will look.
12. Click **Save and Close** to save the Report.
13. The Report is added to the Reports Dynamic View. You can double-click the Report to run it.

apC Firmware Update

You can update the apC, apC/8X or apC/L firmware on apC panels from either the Admin Client or the Monitoring Station client. You can initiate a firmware update by right-clicking on the apC controller:

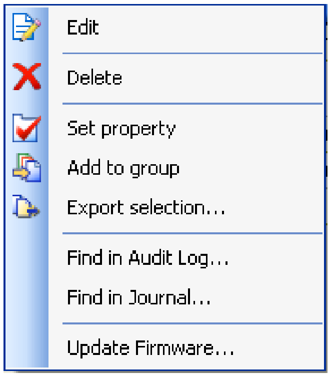
- In the Hardware Tree.
- In a Dynamic View in the Administration Client.
- In the Status List - Controller in the Monitoring Station.

NOTE The UL approved firmware to be used for the apC/8x panel is x.7ZF

To Update Firmware on an apC

1. Right-click on the apC that you want to update.
2. Select Update Firmware from the context menu that appears (see Figure 96 on Page 297).

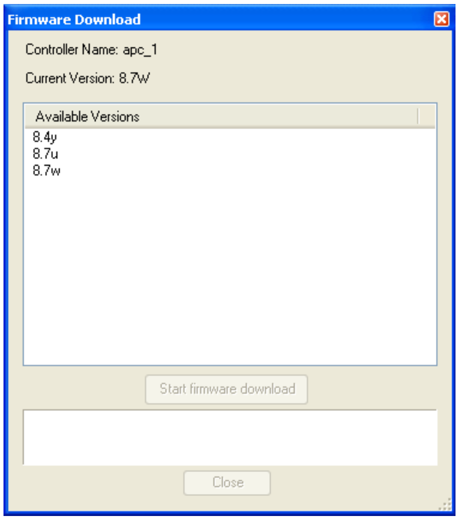
Figure 96: apC Context Menu



NOTE The Update Firmware selection does not appear if the apC is not Enabled or is off-line.

3. The apC Firmware Download dialog box opens (see Figure 97 on Page 298).

Figure 97: apC Firmware Download Dialog Box



Firmware Download

Controller Name: apc_1

Current Version: 8.7W

Available Versions

8.4y
8.7u
8.7w

4. Select the firmware version that you want to download from the list in the dialog box.
5. Click **Start firmware download**. A progress bar shows you the when the download is completed.
6. When the download has completed, click **Close** to close this dialog box.

TIP Do not attempt to download firmware to more than one apC panel on a chain at one time, and do not attempt to download firmware if that chain is busy doing a personnel download.

apC Controller Configuration Summary

Configuring an apC is a multiple task process because of the number of options available on the apC.

The following summary gives you an outline of the configuration process, with links to topics that provide the details.

Table 118: apC Configuration Summary

Configuration	See...
1. Create and configure an apC Comm Port.	apC Comm Port Editor on Page 301
2. Create an apC Controller.	To Create an apC Controller on Page 309
3. Use the apC Controller General Tab to configure the Connection Type, Comm Port, Reader LCD Message set, apC Type, Time Zone, and apC Address.	apC Controller General Tab on Page 310
4. Use the apC Controller Communications Tab to configure communications parameters for the apC.	apC Controller Communications Tab on Page 311
5. Use the apC Controller Inputs Tab to configure Panel Status Inputs and Supervised Inputs.	apC Controller Inputs Tab on Page 312
Edit each apC Input on the apC Input Editor Triggers tab, and State Images tab, and view the Input's status on the Status tab.	apC Input Editor on Page 318
6. Use the apC Controller Outputs Tab to configure apC Outputs.	apC Controller Outputs Tab on Page 312
Edit each apC Output on the apC Output General Tab and State Images tab, and view the Input's groups and status on the Groups tab and Status tab.	apC Output General Tab on Page 321
7. Use the apC Controller Readers Tab to configure apC Readers and options.	apC Controller Readers Tab on Page 313
Edit each apC Reader on the apC Reader General Tab, I/O tab, Keypad tab, Triggers tab, and State Images tab, and view the Input's status on the Status tab.	apC Reader General Tab on Page 487
8. Use the apC Controller Add-On Board Tab to create and configure an apC add-on board.	apC Controller Add-On Board Tab on Page 313
Edit each apC Add-on Board from the apC Add-on Board Editor, configuring Input Boards, Output boards, and Star Couplers.	apC Add-on Board Editor on Page 327
Edit the apC Input boards from the apC Input Editor, creating I/32 and I/8 Input boards, as needed. Edit each apC Input from the apC Input Editor, configuring Supervised Inputs and Status Inputs.	apC Input Editor on Page 318
If you created a Star Coupler, use the apC Star Coupler Board Editor to create Readers, unsupervised inputs, and outputs.	apC Star Coupler Board Editor on Page 336
If you created a Mini Star Coupler, use the Mini Star Coupler Board Editor to create apC Readers.	Mini Star Coupler Board Editor on Page 342
If you created a WPSC, use the Wiegand Proximity Star Coupler Editor to create Readers and Inputs.	Wiegand Proximity Star Coupler Editor on Page 343
9. Use the apC Controller Triggers Tab to set up triggers for Actions based on apC controller property states.	apC Controller Triggers Tab on Page 313

apC Configuration Summary (continued)

Configuration	See...
10. Use the apC Controller Holiday Groups Tab to add Holiday Lists to the apC.	apC Controller Holiday Groups Tab on Page 314
11. You can view Controller Status from the apC Controller Status Tab.	apC Controller Status Tab on Page 313
12. You can change the state images that appear in the Monitoring Station to represent this controller on the apC Controller State Images Tab.	apC Controller State Images Tab on Page 316
13. You can view the apC Controller groups to which this apC belongs on the Groups Tab for Hardware Devices on.	Groups Tab for Hardware Devices on Page 36

apC Comm Port Editor

You need to create and configure an apC Comm Port object for your apC to establish communications with C•CURE 9000.

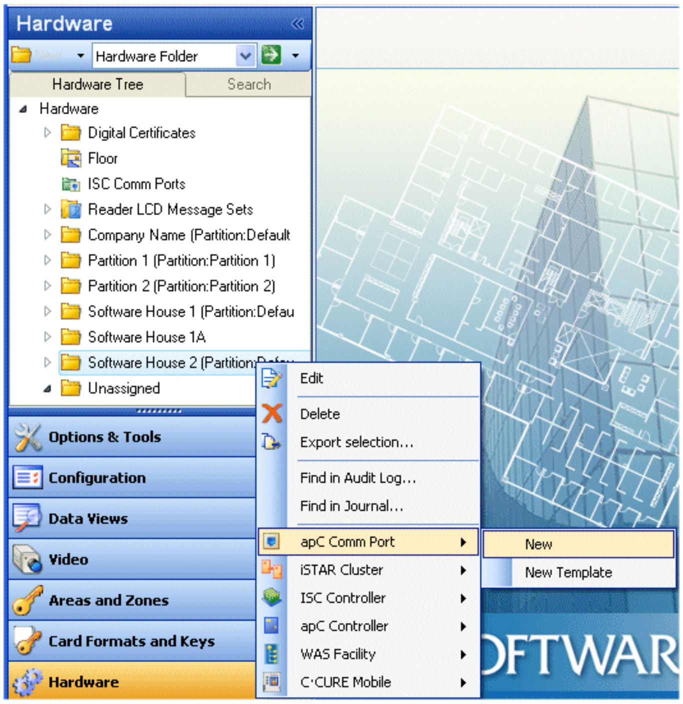
An apC panel can communicate with serial port connections, using RS-232 connections to an RS-485 converter, or via an Ethernet-connected network.

For general instructions about the Hardware pane see Using the Hardware Pane on Page 25.

To Configure an apC Comm Port

1. To configure an **apC Comm Port**, open the **Hardware Pane**,select the Hardware Folder in which you want the apC Comm Port to reside, and right-click to display the Hardware Folder context menu. Click **apC Comm Port** then click **New**.

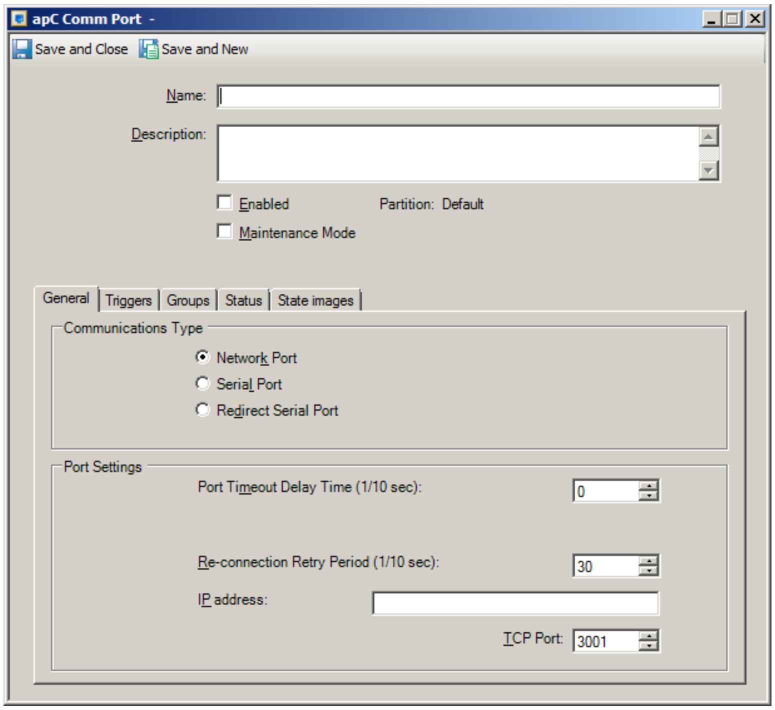
Figure 98: Creating an apC Comm Port



The **apC Comm Port** editor appears (see Figure 99 on Page 302). See Table 119 on Page 304 for definitions of the fields on the Comm Port editor General Tab

.

Figure 99: apC Comm Port Editor



Name:

Description:

☐ Enabled   Partition: Default

☐ Maintenance Mode

Communications Type

● Network Port

○ Serial Port

○ Redirect Serial Port

Port Settings

Port Timeout Delay Time (1/10 sec): 0

Re-connection Retry Period (1/10 sec): 30

IP address:

TCP Port: 3001

You may also choose **New Template**. For further information about creating Templates, see Creating a Template on Page 41.

2. Enter a unique Host Communications Port **Name** (required).
3. Optionally, enter a textual description of the apC Comm Port in the **Description** field.
4. Select the **Enabled** check box if you want the Comm Port online after you have completed the configuration procedure.
5. Select the **Communications Type**.
   - For an apC Controller that uses a network communications path, click **Network Port**. See Configuring an apC Comm Port Network Connection on Page 302.
   - For an apC that uses a serial connection to the C•CURE 9000 server, click **Serial Port**. See Configuring an apC Comm Port Serial Port on Page 303
   - For an apC that uses a redirected serial connection to the C•CURE 9000 server, click **Redirect Serial Port**. See Configuring an apC Comm Port Redirect Serial Port on Page 303.
6. You can set a **Port Timeout Delay Time** in tenths of a second units by typing it within the entry field or by using the selection arrows. The range is 0 through 99; the default entry is 0.
7. When you have completed configuring the apC Comm Port General tab, you can click **Save and Close** to save your changes, or you can click the Triggers tab (see apC Comm Port Triggers Tab on Page 305) to continue configuring the apC Comm port.

Configuring an apC Comm Port Network Connection

To Configure an apC Comm Port Network Connection

1. Type a unique **IP Address** in the **IP Address** field. This must be the IP Address of the terminal server being used to communicate with the C•CURE 9000 system.

2. Select a **TCP Port**, the address of the node from which the apC Host TCP Port communicates with the C•CURE 9000 system. The values range from 0 through 9999. The default entry is 3001.

3. Select a **Re-connection Retry Period** in tenths of a second units by typing it within the entry field or by using the selection arrows. The values range from 0 through 99. The default entry is 30 (3 seconds).

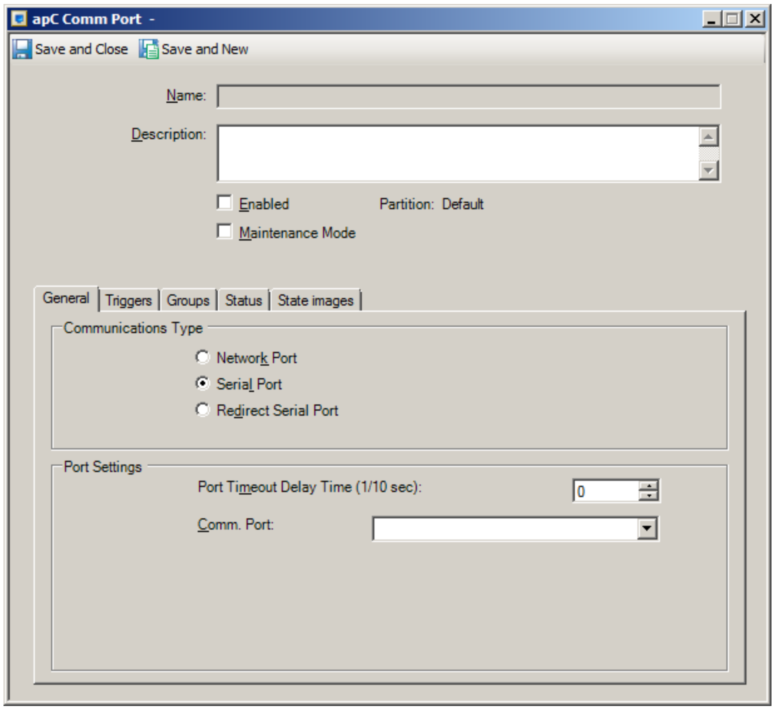
Configuring an apC Comm Port Serial Port

To Configure an apC Comm Port Serial Port

1. When you choose to configure a **Serial Port**, select the Communications Type **Serial Port** from the drop-down list. The **Name** field will reflect the port number that you select. The range is COM1 through COM256.

2. As in the Network Comm Port, you can set a **Port Timeout Delay Time** in tenths of a second. The range is 0 through 99, the default entry is 0.

Figure 100: apC Comm Port **Editor, Serial Port options**



Name:

Description:

□ Enabled

Partition: Default

□ Maintenance Mode

Communications Type

○ Network Port

● Serial Port

○ Redirect Serial Port

Port Settings

Port Timeout Delay Time (1/10 sec): 0

Comm. Port:

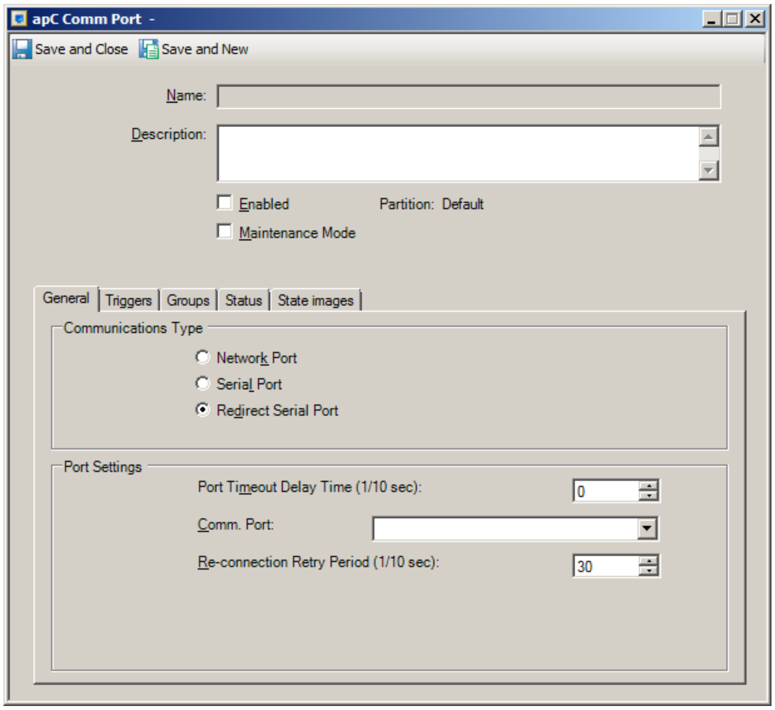
Configuring an apC Comm Port Redirect Serial Port

To Configure a Redirect Serial Port

1. When you choose to configure a **Redirect Serial Port**, select the Communications Type **Redirect Serial Port** button. In the Port Settings box, select a com port from the drop-down list. The **Name** field will reflect the port number that you select. The range is COM1 through COM256.

2. As in the Network Comm Port, you can set a **Port Timeout Delay Time** in tenths of a second. The range is 0 through 99, the default entry is 0.

Figure 101: apC Comm Port Editor, Redirect Serial Port Options



Name:

Description:

□ Enabled

Partition: Default

□ Maintenance Mode

Communications Type

○ Network Port

○ Serial Port

● Redirect Serial Port

Port Settings

Port Timeout Delay Time (1/10 sec): 0

Comm. Port:

Re-connection Retry Period (1/10 sec): 30

The Fields on the apC Comm Port General tab are described in Table 119 on Page 304.

Table 119: apC Comm Port Field Definitions

Field	Description
Name	Enter a unique name up to 50 characters long for the controller. If you enter the name of an existing object, the system returns an error message indicating there is a conflict.
Description	Enter a textual comment about the controller, such as its location or purpose. This text is for information only.
Enabled	This setting determines whether or not the apC Comm Port is able to provide communication between the apC Controller and the C•CURE 9000 Server. Select **Enabled** to set the Comm Port online. To take the Comm Port offline, you can clear the **Enabled** selection. NOTE: If the apC Comm Port is currently in use by apC controllers, you must disable all of the controllers before you attempt to take the Comm Port offline. If any apC controllers are enabled when you attempt to take the apC Comm Port offline, an error message is displayed - "Port cannot be disabled with enabled controllers. Please disable controllers first. When the controllers are re-enabled they will do a full personnel download." The message explains that when you re-enable the apC Comm Port, then re-enable the apC controllers, each controller will perform a full personnel download.
Maintenance Mode	Click to put the apC Comm Port into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this Controller resides. If you are creating a new Controller, the Partition that is currently the New Object Partition for your Operator account is automatically assigned to each Controller you create. If you want to change the Partition of a Controller, you must move the Cluster in which the Controller resides. See Using Drag and Drop in the Hardware Tree on Page 31.
Communications Type	

apC Comm Port Field Definitions (continued)

Field	Description
Network Port	Select **Network Port** if you are using a terminal server to connect your apC to C•CURE 9000.
Serial Port	Select **Serial Port** if you are using a serial connection for your apC.
Redirect Serial Port	Select **Redirect Serial Port** if you are redirecting the serial connection for an apC to a serial port that is physically on a Terminal Server, but logically on the C•CURE 9000 Server.
Port Settings	
Port Timeout Delay Time (1/10 sec)	The **Port Timeout Delay Time** is the extra interval that the host waits for a response from the apC panel after sending a message to the panel. If the host does not receive a response in the specified time, the host retransmits the message or declares a communications failure. This field allows you to set the timeout delay for all panels that use a specific port. Software House recommends that you set this period to 20 (2 seconds). However, if you require additional delay time because apC panels run on a Digiboard, Equinox board, or over a network, you may need to increase this value. Keep this value as small as possible, or system performance may be affected. If your panel goes into communications failure often, try setting this value between 30 (3 seconds) and 50 (5 seconds).
Re-connection Retry Period (1/10 sec)	**Re-connection Retry Period** is the duration that the host waits to declare an unresponsive panel to be in failure. Software House recommends that you set this period to 300 (30 seconds) which is the default value.
IP Address	The IP address of the terminal server C•CURE 9000 that is being used to communicate with the C•CURE 9000 system.
TCP Port	The address of the node from which the apC Host TCP Port communicates with the C•CURE 9000 system. The values range from 0 through 9999. The default entry is 3001.
Serial Port and Redirect Serial Port Options	
COM Port	Select the Communications Type Serial Port from the drop-down list. The Name field will reflect the port number that you select. The range is COM1 through COM256.

apC Comm Port Triggers Tab

The apC Comm Port Triggers tab allows you to set up Triggers – configured procedures used by C•CURE 9000 to activate specific actions when a particular predefined condition occurs.

This tab provides you with ability to activate an event based on the Comm Status of the apC Comm Port. If the Comm Status property of the apC Comm Port changes, you can specify the event you want to activate.

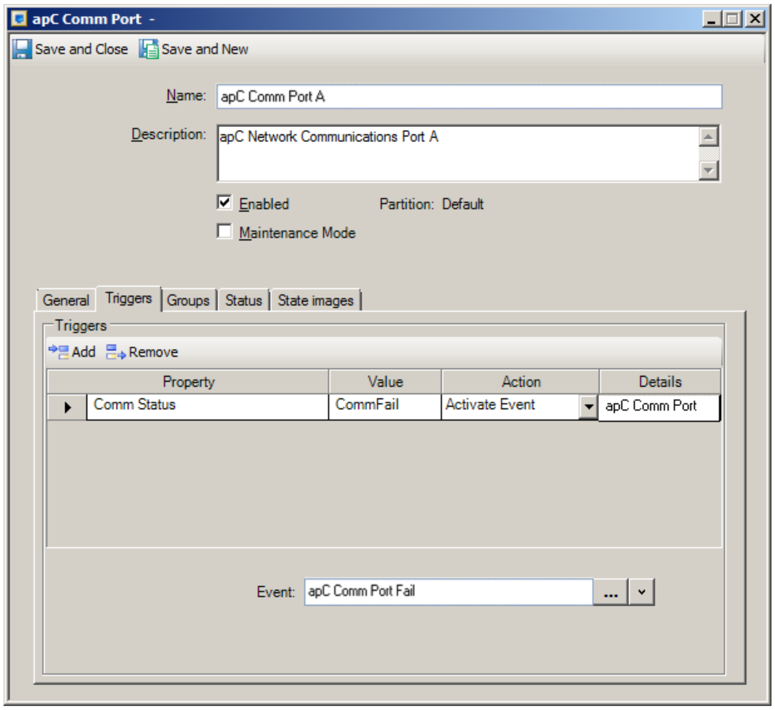
A typical use for a Comm Port trigger would be to warn the Monitoring Station of a communications failure. You can configure an event that would send a message requiring acknowledgment when the apC panels are unable to communicate with the host.

1. Click the apC Comm Port **Triggers** tab to provide a means to link the Comm Port to an event.

   Example:

   A typical use for a Comm Port trigger would be to warn the Monitoring Station of a communications failure. You can configure an event that might send a message requiring acknowledgment when the apC panels are unable to communicate with the host, as shown in Figure 102 on Page 306.

Figure 102: apC Comm Port Triggers Tab



Name: apC Comm Port A

Description: apC Network Communications Port A

☑ Enabled Partition: Default

□ Maintenance Mode

	Property	Value	Action	Details
▶	Comm Status	CommFail	Activate Event	apC Comm Port

Event: apC Comm Port Fail

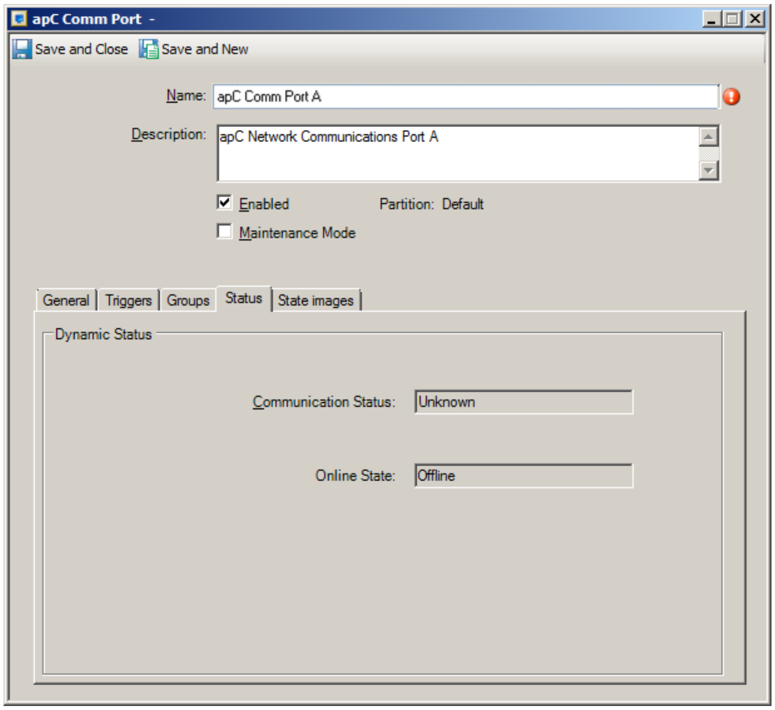
2. Choose a Property for the Trigger from the **Property** drop-down list.
3. Select the value that you want to activate the Trigger from the **Value** drop-down list.
4. Pick the Action you want the Trigger to perform from the Action drop-down list.
5. Depending upon the Action you chose, you may need to select the Action details from the Details field. For example, if you chose to Activate an Event with the Action, you need to select an Event from the Details field. Click ... and select an Event from the selection box that appears.
6. Click **Save and Close** to save the Trigger settings for the apC Comm Port.

apC Comm Port Status Tab

The Status tab provides a read-only listing of critical information about the operational status of the selected apC Comm Port including:

- **Communications Status** - displays the values Unknown or CommFail.
- **Online Status** - displays the values: Online, Disabled or Offline.

Figure 103: apC Comm Port - Status Tab



apC Comm Port -

Save and Close | Save and New

Name: apC Comm Port A

Description: apC Network Communications Port A

☑ Enabled Partition: Default

☐ Maintenance Mode

Communication Status: Unknown

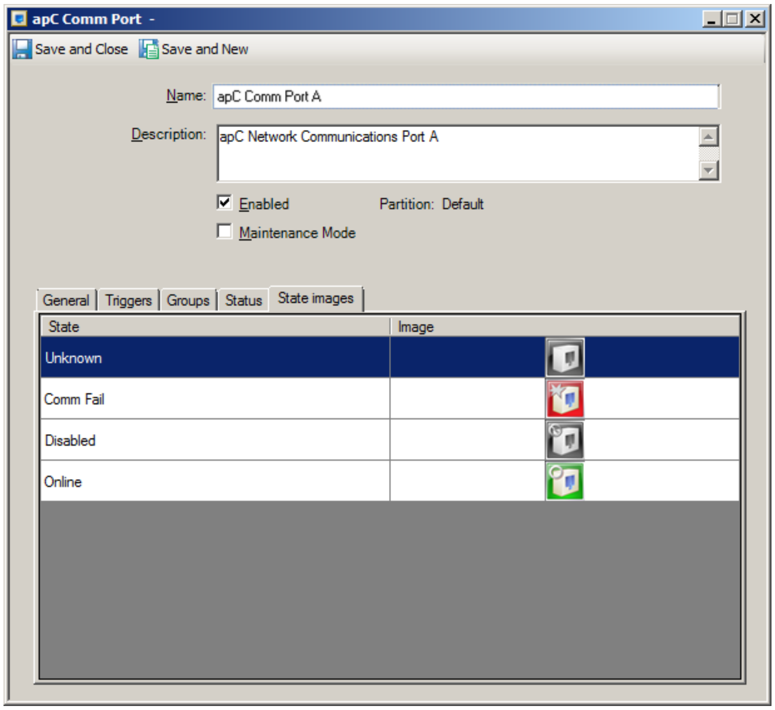
Online State: Offline

apC Comm Port State Images Tab

The **State Images** tab provides a means to change the default images used to indicate communication port states. These images appear on the Monitoring Station and change according to the state of the object that they represent.

The **apC Comm Port - State Images** tab is shown in Figure 104 on Page 307.

Figure 104: apC Comm Port State Images Tab



apC Comm Port -

Save and Close | Save and New

Name: apC Comm Port A

Description: apC Network Communications Port A

☑ Enabled Partition: Default

☐ Maintenance Mode

State	Image
Unknown	
Comm Fail	
Disabled	
Online	

To Change a State Image

1. Double-click the existing image. A Windows Open dialog box appears allowing you to browse for a folder in which you have placed replacement images.
2. When you locate the replacement image, select it and click **Open** to add it to the image listing.
3. If you are done editing the apC Comm Port, click **Save and Close** to save the Comm Port’s configuration. Alternatively, if you want to save the Comm Port and create a new one, click **Save and New**. The Comm Port Editor remains open to allow you to create a new Comm Port.

To restore the default image, right-click on the new image and select Restore Default.

apC Controller Editor

The apC Controller editor allows you to configure apC, apC/8X, and apC/L panels and their connected Input boards, Output Boards, Readers, Inputs, and Outputs in C•CURE 9000. For more detailed information about the apC panel and its options, see the apC Panel Overview on Page 288.

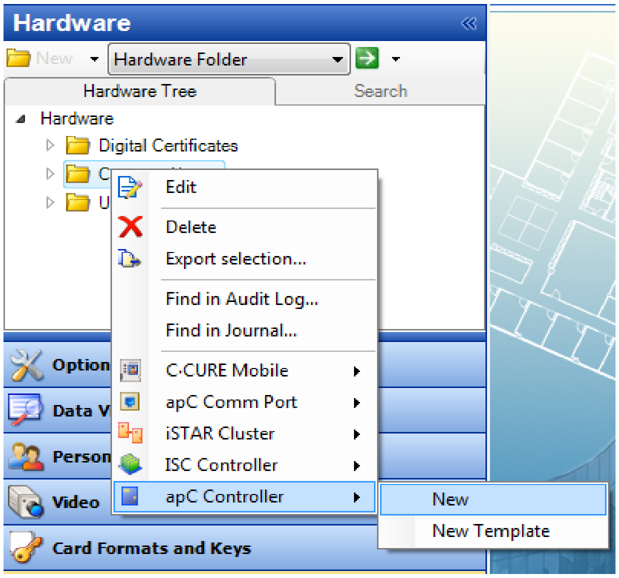
The apC Controller Editor has the following tabs:

- apC Controller General Tab on Page 310
- apC Controller Communications Tab on Page 311
- apC Controller Inputs Tab on Page 312
- apC Controller Outputs Tab on Page 312
- apC Controller Readers Tab on Page 313
- apC Controller Add-On Board Tab on Page 313
- apC Controller Status Tab on Page 313
- apC Controller Triggers Tab on Page 313
- Groups Tab for Hardware Devices on Page 36
- apC Controller Holiday Groups Tab on Page 314
- apC Controller User Defined Fields Tab on Page 316
- apC Controller State Images Tab on Page 316

To Create an apC Controller

1. To configure an apC controller from the C•CURE 9000 Administration **Hardware** pane, select the Hardware folder for which you want to configure an apC Controller and right-click to display the context menu, as shown in Figure 105 on Page 309.

Figure 105: Hardware Pane apC Controller Selection



2. From the **Hardware** context menu, choose **apC Controller** and **New**. The **apC Controller General** tab appears, as shown in Figure 106 on Page 310.

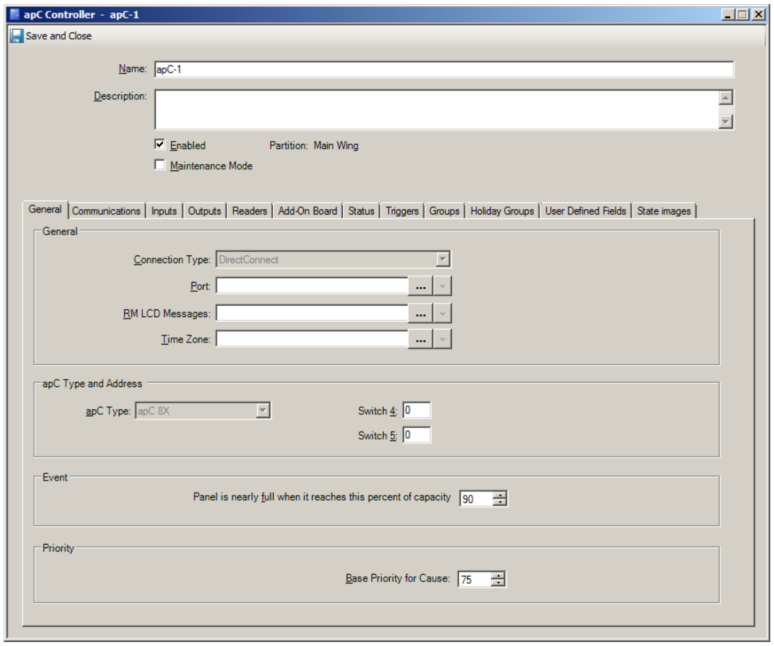
   You may also choose **New Template**. For further information about creating Templates, see Templates on Page 41.

If the **New** and **New Template** selections are unavailable, you may be trying to create an apC in a Partition that is not your New Object Partition, or you do not have Privileges to create objects in this Partition. Check the C•CURE 9000 Menus to verify that your New Object Partition setting is correct, and check with your C•CURE 9000 administrator that you have the correct Privileges.

apC Controller General Tab

The apC Controller General tab provides a means to select the Communications Port, Reader LCD Message Sets, and to identify the apC panel type.

Figure 106: apC Controller General Tab



apC Controller - apC-1

Save and Close

Name: apC-1

Description:

☑ Enabled   Partition: Main Wing

□ Maintenance Mode

General | Communications | Inputs | Outputs | Readers | Add-On Board | Status | Triggers | Groups | Holiday Groups | User Defined Fields | State images

General

Connection Type: DirectConnect

Port:

RM LCD Messages:

Time Zone:

apC Type and Address

apC Type: apC 8X

Switch 4: 0

Switch 5: 0

Event

Panel is nearly full when it reaches this percent of capacity 90

Priority

Base Priority for Cause: 75

To Configure the apC Controller General Tab

1. In the **apC Controller** General tab, type a unique controller **Name** and a corresponding **Description** (optional) in the identification fields at the top of the **apC Controller** dialog box.
2. **Maintenance Mode** - Click to put the apC Controller and/or its components into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
3. Click the **Enabled** check box when you are ready for the apC to establish communications with the C•CURE 9000 server. **You should wait** until you have configured the controller settings and some or all of the Inputs, Outputs, and Readers before enabling the apC.

NOTE The apC Comm Port you choose in Step 5 must also be Enabled; otherwise, the apC cannot remain enabled. If you save the apC controller after assigning a disabled apC Comm Port, the apC will go offline and when you open the apC object again in the apC editor, the **Enabled** check box will no longer be checked.

4. Select **Direct Connect** as the type of connection between the host and the apC. Use the **Port** field in this dialog box to specify a port to which the apC chain is connected.
5. To select a host communications Port for the apC controller, click **...** in the **Port** field to select an **apC Comm Port**.

NOTE Software House strongly recommends that you select an apC comm port that is in the same partition as your apC.

The example in Figure 106 on Page 310 shows the selection of a Serial Port connection.

6. To select a particular customized set of LCD messages for the RM Readers, click [...] to display a Reader LCD Message Set selection list. If you leave this field blank (the default), the Readers use the default messages.

7. Select the **Time Zone** in which your apC panel resides by clicking [...] and selecting the Time Zone from the list that appears. If you leave this field blank, the apC panel Time Zone defaults to the C•CURE 9000 server setting. You can only change the value of the apC controller Time Zone when the apC Controller is not enabled (**Enabled** field is blank □). See Changing the Time Zone of an apC Controller on Page 294.

8. Select the type of apC panel you are configuring from the **apC Type and Address** box:

    - **apC**
    - **apC/8X**
    - **apC/L**

9. Rotary switch settings can also be set on the apC panels using the two **Switch** entry fields.

    For apC/L panels, the rotary switches are labeled **3-8** and **1**. For all the other apC types, switches **4** and **5** are displayed. The range of settings is 0 through 9 or A through F for all but **Switch 3-8**, which has a range of 0 or 1.

    The values you enter for **Switch 4**, **Switch 5**, **Switch 1**, and **Switch 3-8** should match the switch settings on the physical apC controller.

10. The **Panel is nearly full when it reaches the percent of capacity** field allows you to enter a range from 0% to 99%.

11. The final entry field on the apC Controller - General tab is in the Priority box. Select a numeric value to assign a **Base Priority for Cause**. The range is from 0 to 255.

    When configuring an Event, you can assign an Event Priority. The Event Priority allows you to rank the importance of a particular Event relative to other Events in the system. If Events occur simultaneously, Event Priorities enable the system to execute responses in the proper sequence.
    C•CURE 9000 provides eight priority ranges, each containing 25 priority settings, for a total of 200 possible Event Priorities.

12. Click the **Communications** tab to display it, as shown in on Page 311.

    You can also click **Save and Close** to return to the **Hardware Pane** and finish the **apC Controller** configuration later.

apC Controller Communications Tab

To Configure the apC Panel Communications Tab

1. In the **Communications** tab enter the period in tenths of a second that the panel driver (on the Server) attempts to communicate with this panel in the **Poll Period** field. For example, if you enter 10, the panel driver communicates with this panel a minimum of once per second.

    You can set different poll periods for each panel that you configure. This field is not available when **Dialup** is selected in the **Connection Type** list box.

    Software House recommends that you set the poll period to 20 (2 seconds). Setting this value lower than 20 causes the host to receive activity from the panel more quickly but could cause the driver to interfere with other programs running on the server at larger installations. This is especially true if the panel is on a network port. The range is 0 - 850.

NOTE Setting the poll period to more than 30 will result in up to a 3 or 4 seconds delay between reading the card and opening the door.

2. Enter the extra interval in tenths of a second that the host waits for a response from this panel after sending a message to the panel in the **Poll Timeout delay time** field. If the host does not receive a response in the specified time, the host retransmits the message or declares a communications failure.

   Software House recommends that you set this period to 80 (8 seconds). However, if you require additional delay time because the panel runs on a Digiboard, Equinox board, or over a network, you may need to increase this value. Keep this value as small as possible, or system performance may be affected. If your panel goes into communications failure often, try setting this value between 80 to 110. The range is 0 - 999.

3. Enter the interval in tenths of a second that the host waits to declare an unresponsive panel to be in failure in the **Panel communications failure delay time**. A message appears on the **Monitoring Station** in the case of a panel failure.

   Software House recommends that you set this period to 200 (20 seconds). The range is 0 - 850.

4. Enter the interval in tenths of a second that the system polls the panel while it is in communications failure in the **Poll period while in communications failure** entry field. Typically, you should set this value higher than the value for the initial poll period to avoid slowing down polling of other units on the chain.

   Software House recommends that you set this period to 200 (20 seconds). The range is 0 - 999.

5. Enter the time period in minutes and seconds (mm:ss format) that the panel waits for a message from the host after receiving the communications failure message from the host in the **Host communications failure delay time** entry field. If the panel does not receive a message in the specified time, the panel declares a communications failure.

   Software House recommends that you set this period to 1:00 (1 minute).

6. Click the **Inputs** tab to display it.

apC Controller Inputs Tab

To Configure apC Controller Inputs

To configure **Inputs**, select the check box in the **Configured** column and click [...] located in the **Edit** column to display the apC Input editor General tab. See the apC Input Editor on Page 318.

NOTE Click the **Delete All** check box where ever it appears and then click **Save and Close** if you want to eliminate all the Inputs, Outputs, or Readers that you have configured in a given dialog box.

To take an apC panel offline, remove the check from the **Enabled** option check box located below each **Reader**, **Input**, or **Output** board **Description** entry field (located in General tabs).

TIP Use the Template column to quickly configure all in a particular set of inputs, outputs or readers.

apC Controller Outputs Tab

To Configure apC Outputs

1. To configure **Outputs**, select the check box in the **Configured** column in the **apC Outputs** tab.
2. Click [...] located in the **Edit** column to display the apC Output Board General tab.
3. Use the apC Output editor to configure the output (See apC Output Editor on Page 321)

apC Controller Readers Tab

The apC Controller Readers tab allows you to configure devices that supply Wiegand, magnetic stripe and proximity card signaling.

To Configure an apC Reader

1. Select the check box in the **Configured** column for the **apC Reader** (Index 1 through 8) you want to configure.
2. Click ... located in the **Edit** column to open the **apC Readers General** tab(see apC Reader General Tab on Page 487).
3. Choose either of the following options for all readers on the Readers tab:
   - **Allow card numbers to be entered from the keypad**.
   - **Use PIN+1 as duress code**.
   - **Always use Shunt Expire Output on Door**

NOTE

> You may configure an apC Reader from the apC panel Readers tab or from the Add-on Board tab. A reader index configured on one tab will be unavailable on the other tab. The location chosen will affect the possible reader type and reader input/output option selection.

apC Controller Add-On Board Tab

The **Add-On Board** tab provides a means to expand the capabilities of the apC panels. Expansion boards can add reader ports, supervised inputs and additional outputs.

To Configure Add-On Boards Using the apC Add-On Board Tab

To start the configuration of **Add-On Boards**, select the check box in the **Configured** column in the **apC Add-On Board** tab and click ... located in the **Edit** column to display the **apC Add-On BoardGeneral** tab (see apC Add-on Board Editor on Page 327).

apC Controller Status Tab

The Status tab provides a read-only listing of critical information about the operational status of the selected apC Controller including:

- **Online Status** - indicates whether the controller is online and communicating with the system.
- **Firmware Version** - the version of the firmware used by the controller.
- **Communications Status** - displays the values Unknown, CommFail, Comm. Normal, Comm. Loss, Comm. Password Fail, Firmware Download, Card Download, Comm. Tamper, Comm. Power Fail or Comm. Battery Low.
- **Connection Type Status** - displays the values: Unknown, Conn. Normal, Conn. Direct, Conn. Dialup, Conn. Dialing, Conn. Disconnected, or Conn. Connected.
- **Current Personnel Records** - displays the number of records.
- **Panel state status** – displays the values Unknown, Panel Normal, Panel Tamper, Panel Power Failure, Configuration Download, Full Personnel Download, Full Download, Database Backup or Panel Battery Low.

apC Controller Triggers Tab

See the following for information on apC Triggers:

- Triggers Tab for apC Devices on Page 339.
- Defining a Trigger for an apC Device on Page 339.
- Removing a Trigger on Page 265.

You can click **Save and Close** after configuring apC triggers, or navigate to the Status tab.

apC Controller Holiday Groups Tab

A Holiday is a day or set of days that you configure to allow scheduling access control variations to time-based events and to vary the normal lock and unlock time specifications.

You can include a Holiday in a Holiday Group and assign a Holiday Group to a schedule.

You need to configure the Holiday Groups that should apply to each apC, so that schedules on that apC respect the correct Holidays. If a Holiday Group is not listed on this tab, the Holidays it contains are not applied to this apC.

NOTE Holiday Groups were called Holiday Lists in C•CURE 800/8000.

If a schedule downloaded to the apC has a Holiday Group assigned, and that Holiday Group is listed on this tab, the activation times in the Holiday Group are evaluated. If the schedule is active and one of the Holidays in the Holiday Group is active, the start time and end time assigned with the Holiday Group become the schedule's start time and end time.

For more information about apC Holiday Groups, see the *C•CURE 9000 Software Configuration Guide*.

To use the Holiday Groups tab, see Configuring Holiday Groups for an apC Panel on Page 314 for more information.

Configuring Holiday Groups for an apC Panel

You can download any holiday Group to an apC panel from the **Holiday Group Configuration** dialog box.

A Holiday Group downloaded to an apC panel acts as an override to prevent activation of normally scheduled clearances on the Holidays defined in the Holiday Group. You can configure up to 8 holiday groups for each apC panel.

🚫 Only Holiday Groups that are downloaded to an apC panel will affect access control at that panel.

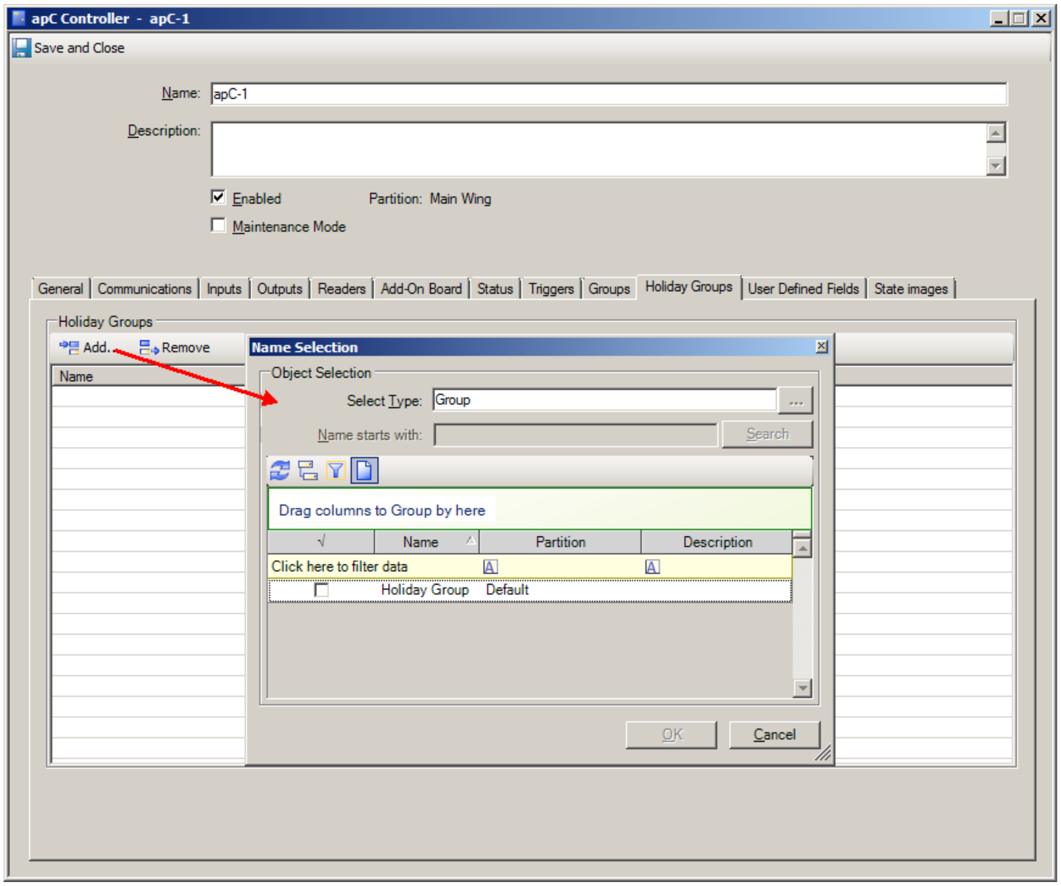
To Select Holiday Groups for the Panel

1. On the **Holiday Groups** tab of the **apC Controller** dialog box, click the **Add** button.

   The **Group** selection box appears allowing you to choose the Holiday Groups that you have configured, as shown in Figure 107 on Page 315.

2. For each Group that you want to download to the apC panel, click that Holiday Group in the Group box and click **OK** to add it to the **Holiday Group(s)** box. You can select more than one Holiday Group when you click the Control (Ctrl) key as you select the available Holiday Group.

Figure 107: apC Controller HolidayGroups Tab



Name: apC-1

Description:

☑ Enabled Partition: Main Wing

□ Maintenance Mode

Select Type: Group

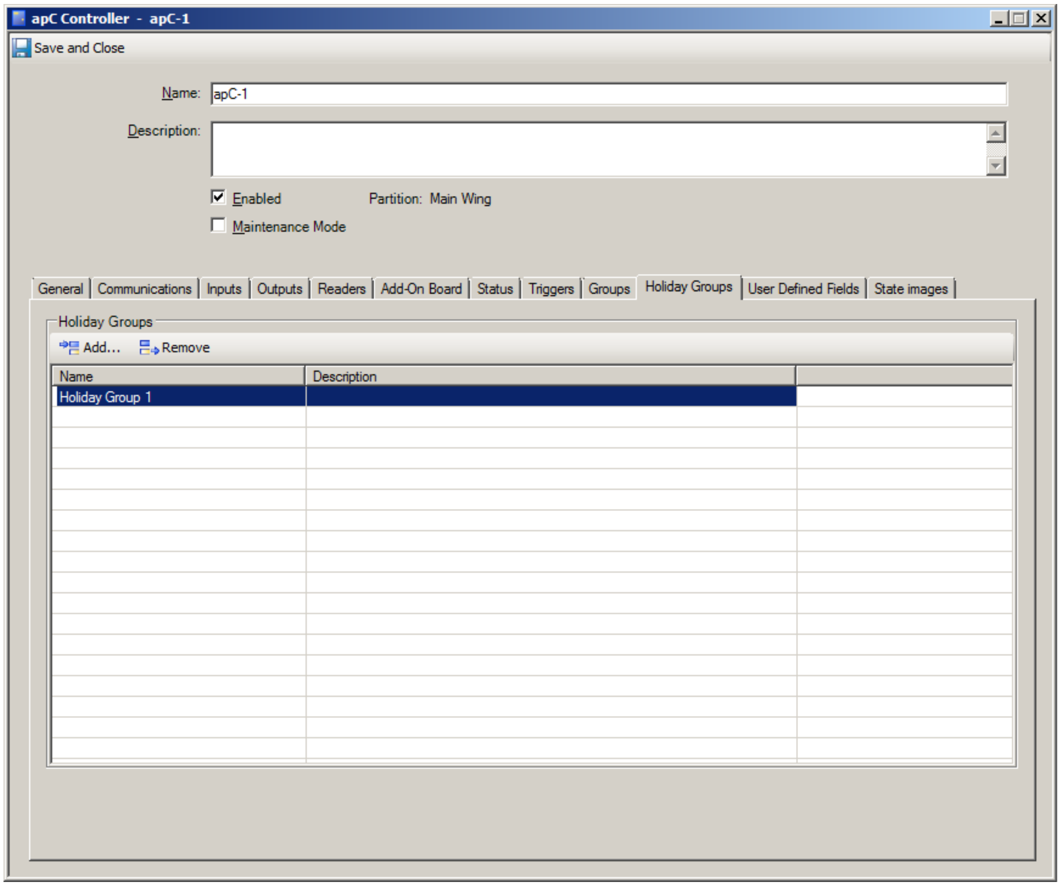
Name starts with:

√	Name	Partition	Description
□	Holiday Group	Default	

3. Click **OK** to save add the selected Holiday Groups.

4. A selected Holiday Group appears in the **Holiday Group(s**) box, as shown in Figure 108 on Page 316.

Figure 108: apC Controller HolidayGroups Tab



Name: apC-1

Description:

☑ Enabled Partition: Main Wing

□ Maintenance Mode

Holiday Groups

Name	Description
Holiday Group 1	

5. To remove one or more Holiday Groups, click a Holiday Group to select it (use **CTRL+Left-click** to select multiple Groups), then click **Remove** to remove the selected **Holiday Groups** from the panel.
6. Click the **State Images** tab to display it, as shown in on Page 316.

   - Or -

   Click **Save and Close** to return to the **Hardware Pane** to finish the **apC Controller** configuration.

apC Controller User Defined Fields Tab

The User Defined Fields tab displays user-defined fields in the system for hardware. User-defined fields are configured in the **Configuration** pane. If there are no user-defined fields configured, then the tab is empty.

See the *C•CURE 9000 Software Configuration Guide* for more information.

apC Controller State Images Tab

The apC Controller **State Images** tab provides a means to change the default images used to indicate controller states. These images appear on the Monitoring Station and change according to the state of the object that they represent.

To Change an Image

1. Double-click the existing image.

   A **Windows Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.
2. When you locate the replacement image, select it to add it to the image listing.

3. To restore the default image, right-click on the new image and select **Restore Default**.
4. Click **Save and Close** to finish the **apC Controller** configuration and return to the **Hardware Pane**.

apC Input Editor

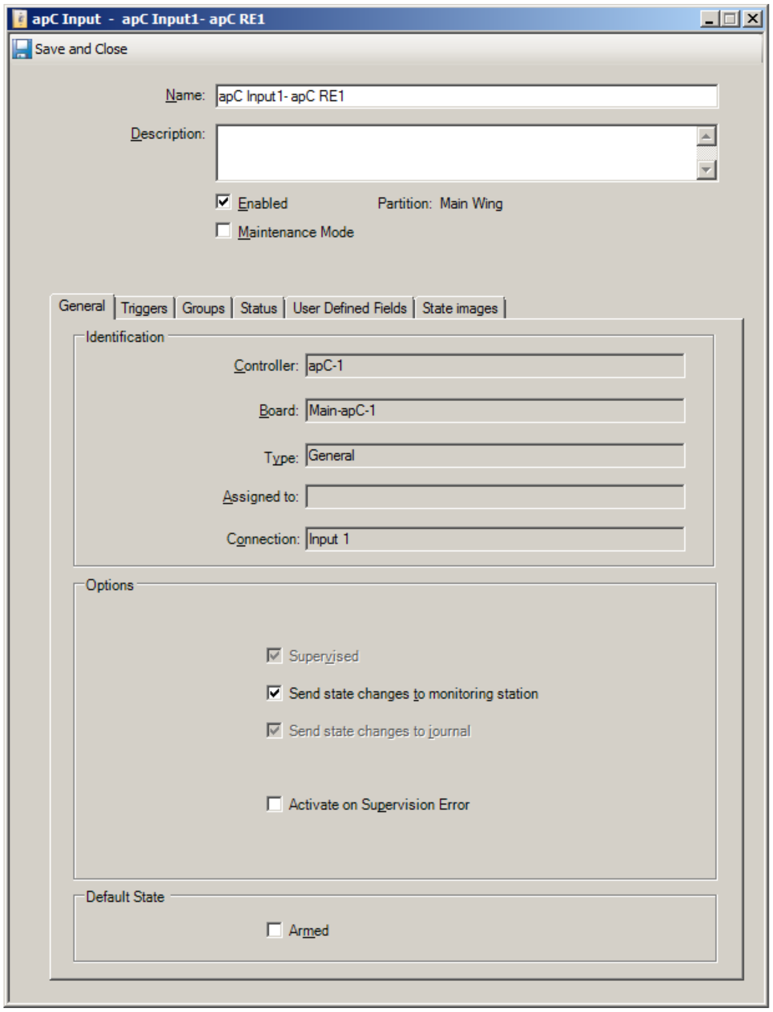
The apC Input Editor is used to configure apC Inputs that you have created on the apC Controller Inputs tab.

- apC Input General Tab on Page 318
- apC Input Board Triggers Tab on Page 319
- Groups Tab for Hardware Devices on Page 36
- apC Input Board - Status Tab on Page 319
- apC Inputs State Images Tab on Page 320

apC Input General Tab

The apC Input - General Tab, shown in Figure 109 on Page 318, displays five read-only the **Identification** fields. The apC Controller name is shown in the **Controller** field and the Input Board in the **Board** field.

Figure 109: apC Controller Inputs - General Tab



Name: apC Input1- apC RE1

Description:

☑ Enabled

Partition: Main Wing

□ Maintenance Mode

Identification

Controller: apC-1

Board: Main-apC-1

Type: General

Assigned to:

Connection: Input 1

Options

☑ Supervised

☑ Send state changes to monitoring station

☑ Send state changes to journal

□ Activate on Supervision Error

Default State

□ Armed

The following Input fields are read-only:

Type - reflects whether the Input has been assigned to a Door or other object or has a special purpose. These include:

- Tamper
- Comm Fail

- General

Assigned To - displays the name of an associated Door or Elevator Button. If the Input is used for a door, then the Name field is read-only displaying the name of the controlled door.

Connection - specifies the input connection point on the Input Board and is assigned when the Board is configured.

To Configure the apC Inputs General Tab

1. When the **Supervised** check box is selected, this read-only field indicates that the panel supports input supervision.

   NOTE The Supervised check box must be selected for Proprietary Burglar Alarm applications.

2. To have a notification of changes in state of the Input sent to the guard station, select the **Send state changes to the monitoring station** check box.

   NOTE The **Send state changes to the monitoring station** option must be selected for Proprietary Burglar Alarm applications.

3. To have a notification of changes in state of the Input sent to the journal, select the **Send state changes to journal** check box. This option will be selected by default.

   NOTE You may limit the transmission of state change messages to the journal exclusively, when you click to de-select the **Send state changes to the monitoring station** option and instead, select the **Send state changes to journal** option. Use of the latter option can decrease the messaging traffic derived from the apC Input during normal operations. To further limit messaging, you may also leave both check boxes unselected.

   You may select multiple Inputs in a dynamic view and use the **Set Property** option to limit the transmission of state changes. See Using Set Property for an iSTAR Controller on Page 130, for more information.

4. **Activate on Supervision Error** – Select this check box if the input is supervised and you want it to activate when a supervision error occurs.

5. Click **Save and Close** or the **Triggers** tab to display it, as shown in on Page 319.

apC Input Board Triggers Tab

The **Triggers** tab allows you to set up **Triggers**, configured procedures used by C•CURE 9000 to activate specific actions when a particular predefined condition occurs.

See the following for information on apC Triggers:

- Triggers Tab for apC Devices on Page 339.
- Defining a Trigger for an apC Device on Page 339.
- Removing a Trigger on Page 265

apC Input Board - Status Tab

The Status tab provides a read-only listing of critical information about the operational status of the selected apC Input including:

- **Active Status** - displays the values Active or Inactive.
- **Armed Status** - displays the values Armed or Disarmed.

- **Hardware Status** - displays the values: Secure, Active, Open Loop, Shorted Loop, or Fault.
- **Supervision Status** - displays the values: Un-initialized (not in supervision error), Open Loop, Shorted Loop, or Fault.

apC Inputs State Images Tab

The apC Inputs **State Images** tab provides a means to change the default images used to indicate input states. These images appear on the Monitoring Station and change according to the state of the object that they represent.

To Change an Image

1. Double-click the existing image.

   A Windows **Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.

2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click on the new image and select **Restore Default**.
4. Click **Save and Close**.

apC Output Editor

The apC Output Editor is used to configure apC Outputs that you have created on the apC Controller Outputs tab.

- apC Output General Tab on Page 321
- Groups Tab for Hardware Devices on Page 36
- apC Output Status Tab on Page 322
- apC Output State Images Tab on Page 322

apC Output General Tab

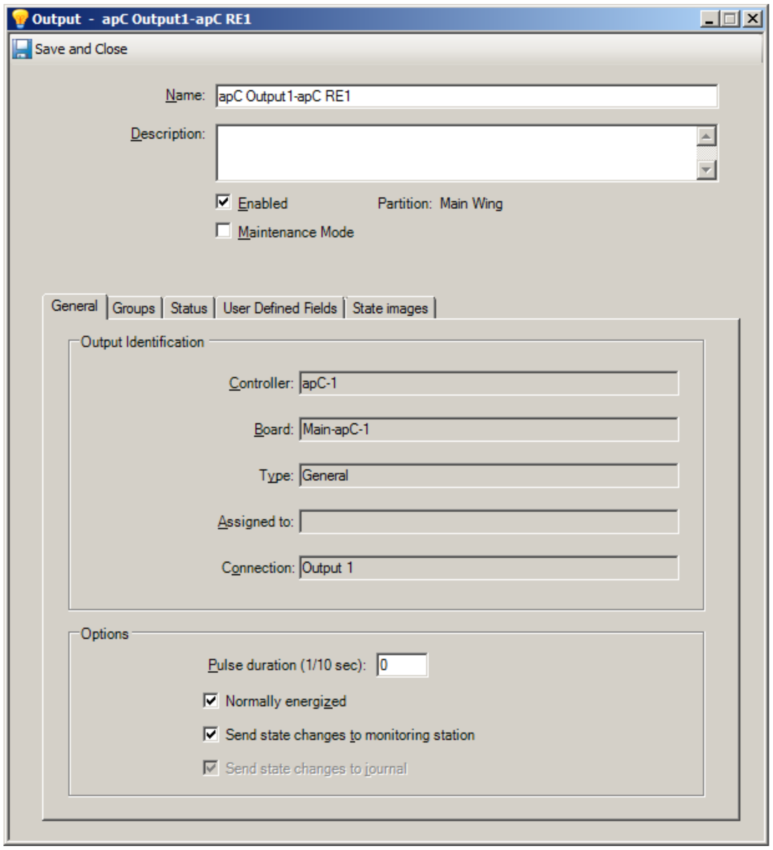
To Configure Outputs Using the apC Output General Tab

The **apC Output General** tab lists the following read-only fields:

Type - reflects whether the Output has been assigned to a Door or other object. For apC panels, General is the unassigned output type.

Assigned To - displays the Elevator or Door object name. For any Output, the **Connection** field indicates the index number on the board.

Figure 110: apC Controller Outputs General Tab



Name: apC Output1-apC RE1

Description:

☑ Enabled   Partition: Main Wing

□ Maintenance Mode

Controller: apC-1

Board: Main-apC-1

Type: General

Assigned to:

Connection: Output 1

Pulse duration (1/10 sec): 0

☑ Normally energized

☑ Send state changes to monitoring station

☑ Send state changes to journal

1. The following **Options** are configurable for an Output:

   a. **Pulse Duration** – (momentary activation) is entered in tenths of a second intervals with a default of 0 seconds. The range is 0 to 1000.

   b. **Normally Energized** – When checked, the output is energized (power is supplied to the relay) when it is inactive. When the output is activated, power is removed.

c. To have a notification of changes in state of the Output sent to the Monitoring station, select the **Send state changes to the monitoring station** check box. This selection is unavailable for an apC Door Output. State changes for a Door Output are not sent to the Monitoring Station.

d. To have a notification of changes in state of the Output sent to the journal, select the **Send state changes to journal** check box. This option is selected by default. This selection is unavailable for an apC Door Output. State changes for a Door Output are not sent to the journal.

NOTE

You may limit the transmission of state change messages to the journal exclusively, when you click to de-select the **Send state changes to the monitoring station** option and instead, select the **Send state changes to journal** option. Use of the latter option can decrease the messaging traffic derived from the apC Output during normal operations. To further limit messaging, you may also leave both check boxes unselected.

You may select multiple Outputs in a dynamic view and use the **Set Property** option to limit the transmission of state changes. See Using Set Property for an iSTAR Controller on Page 130, for more information.

2. Click **Save and Close** or the **apC Outputs** - **Status** tab to display it, as shown in on Page 322.

   For further information about the use of the **Groups** tab, see Groups Tab for Hardware Devices on Page 36.

apC Output Status Tab

The Status tab provides a read-only listing of critical information about the operational status of the selected apC Board Output including:

- **Active Status** - displays the values Active or Inactive.
- **Active State** - displays Unknown.
- **Mode** - displays Unknown
- **Active Reason** - displays Unknown

apC Output State Images Tab

The **State Images** tab provides a means to change the default images used to indicate output states. These images appear on the Monitoring Station and change according to the state of the object that they represent.

To Change an Image

1. Double-click the existing image.

   A **Windows Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.

2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click the new image and select **Restore**.
4. Click **Save and Close**.

apC Reader Editor

The apC Reader Editor is used to configure apC Readers that you have created on the apC Controller Readers tab.

The apC Reader editor has the following tabs:

- apC Reader General Tab on Page 487
- apC Reader Input/Output Tab on Page 488
- apC Reader Keypad Tab on Page 489
- Hardware Groups Tab Definitions on Page 36
- apC Reader Triggers Tab on Page 489
- apC Reader Status Tab on Page 489
- apC Reader State Images Tab on Page 489

You can add or remove Card Formats from multiple Readers via an apC Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

apC Reader General Tab

To Configure a Reader Using the apC Reader General Tab

1. Select a **Reader Type: MRM**, **Direct Connect Wiegand**, or **RM**, as shown in Figure 111 on Page 324.

   The Reader Type selected should match the connected apC panel since the type will affect the inputs and outputs available on the Reader I/O tab.

   Example:

   - The RM has 2 supervised inputs and 2 outputs.
   - the MRM has 2 supervised inputs and 1 output.

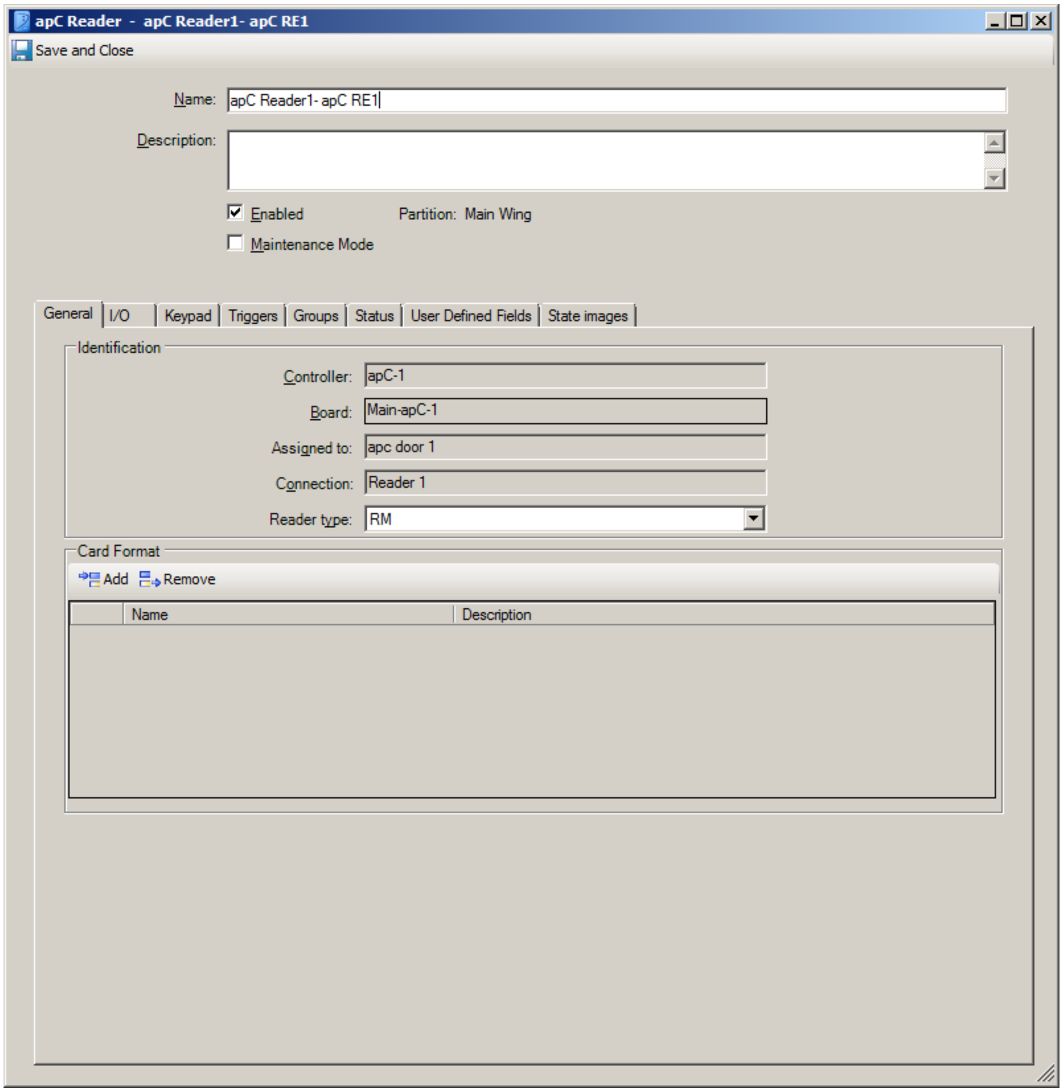
   The **Identification** area in the Readers - **General** tab displays read-only, previously-configured information.

2. To choose a card format for the reader that you have selected, click **Add** in the **Card Format** area. The **Card Format** browser appears, as shown in Figure 111 on Page 324.

NOTE

> You may configure an apC Reader from the apC panel Readers tab or from the Add-on Board tab. A reader index configured on one tab will be unavailable on the other tab. The location chosen will affect the possible reader type and reader input/output option selection.
>
> See the *C•CURE 9000 Getting Started Guide* - Table 1-5 for a list of UL approved card formats and readers.

Figure 111: apC Controller - Readers - General Tab



Name: apC Reader1- apC RE1

Description:

☑ Enabled Partition: Main Wing

□ Maintenance Mode

Controller: apC-1

Board: Main-apC-1

Assigned to: apc door 1

Connection: Reader 1

Reader type: RM

3. Click the applicable row in the **Card Format** browser to select **Card Format**. Repeat for multiple formats.
4. Navigate to the **Input/Output** (I/O) tab (see on Page 488).

apC Reader Input/Output Tab

Dedicated Supervised Inputs and Outputs vary on the apC Readers I/O tab, depending upon the Reader Type selected in the Reader General tab.

To Configure the I/O Tab

1. To configure the **Inputs**, follow the instructions given in To Configure apC Controller Inputs on Page 312.
2. To configure **Outputs**, follow the instructions given in To Configure apC Outputs on Page 312.
3. Navigate to the **Keypad** tab to configure the PIN requirements for the reader.

apC Reader Keypad Tab

The apC Readers - Keypad tab provides a means to control reader keypads. Keypad configuration on an apC panel allows specification of **Card and PIN required**. The Schedule is configurable when a PIN is required and restricts the time when the PIN must be entered. The default Schedule is **Always** and is the initial value of the Schedule browser.

To Configure the apC Readers - Keypad Tab

1. Choose one of three options for **PIN Requirements**:
   - **PIN is not required** - to require a card swipe only;
   - PIN Only
   - **Card and PIN required** - to require a both a card swipe or presentation with a PIN entry.
2. Click ... to select a **Schedule**, which is set up in the **Configuration Pane**.

   If you selected **PIN is not required** or **Card and PIN required** for PIN Requirements, two choices appear in the **Options** area.
3. Choose either of the following options:
   - **Allow card numbers to be entered from the keypad**.
   - **Use PIN+1 as duress code**.

apC Reader Triggers Tab

See the following for information on apC Triggers:

- Triggers Tab for apC Devices on Page 339.
- Defining a Trigger for an apC Device on Page 339.
- Removing a Trigger on Page 265

You can click **Save and Close** after configuring apC Reader triggers, or navigate to the Status tab.

apC Reader Status Tab

The apC Reader **Status** tab provides a read-only listing of critical information about the operational status of the selected apC Readers including:

- **Communications** - displays the values Normal or Comm Fail
- **Tamper - displays the values True or False.**
- **PIN Required** - displays the values True or False.

apC Reader State Images Tab

The **State Images** tab provides a means to change the default images used to indicate reader states These images appear on the Monitoring Station and change according to the state of the object.

To Change an Image

1. Double-click the existing image. A Windows **Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.

2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click on the new image and select **Restore Default**.
4. Click **Save and Close**.

apC Add-on Board Editor

The apC Add-on Board Editor provides a means to configure boards that expand the capabilities of the apC panels. Expansion boards can add reader ports, supervised inputs and additional outputs.

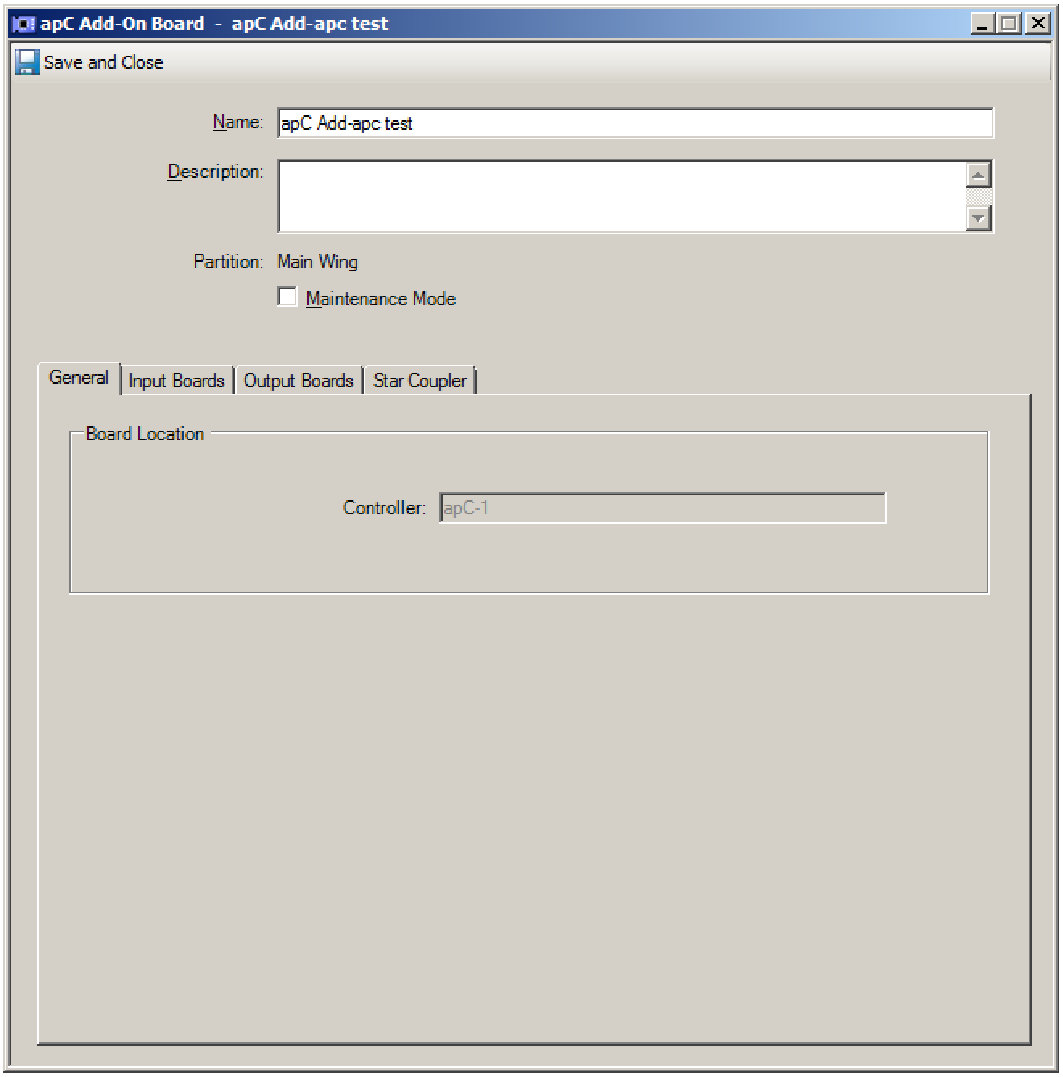
The apC Add-On Board Editor displays the following tabs:

- apC Add-On Board General Tab on Page 327
- apC Add-On Board Input Boards Tab on Page 328
- apC Add-On Board Output Boards Tab on Page 328
- apC Add-On Board Star Coupler Tab on Page 331

apC Add-On Board General Tab

The **apC Add-On Board General** tab displays the Board Location **Controller** field, which is a read-only field that displays the associated apC panel. Navigate to the **Input Boards** tab. See Figure 112 on Page 327.

Figure 112: apC Controller Ad d-On Board General Tab



Name: apC Add-apc test

Description:

Partition: Main Wing

□ Maintenance Mode

Board Location

Controller: apC-1

apC Add-On Board Input Boards Tab

The apC Add-On Board Input Boards tab allows you to add a Supervised I32 Input Board (Index 1) and eight Supervised I8 Input Boards (Index 1 through 8).

To Configure the I32 Input Board Using the apC Input Boards Tab

- To configure the **I32 Input Board**, select the check box in the **Configured** column in the **apC Add-On Board - Input Boards** tab and click ... located in the **Edit** column of the **Supervised I32 Input Board** box to display the **apC I32 Input BoardGeneral** tab.

apC Add-On Board Output Boards Tab

The apC Add-On Board Output Boards tab allows you to add two R48 and eight R8 Output Boards.

- R48 Output Board on Page 328
- R8 Output Board on Page 328

R48 Output Board

To Configure the R48 Output Board

1. To configure the **R48 Output Board**, select the check box in the **Configured** column in the apC Add-On Board Output Boards tab and click ... located in the **Edit** column of the **R48 Output Boards** box to display the apC R48 Output Board General tab.

   The apC R48 Output Board General tab displays three read-only fields:

   - Controller
   - Board
   - Board Index

   These fields locate the Output that you have chosen to configure. As you configure more Add-On Board Outputs for this controller, the Board Index field reflects the output placement on the R48 output board, ranging from 1 through 2.

2. To configure Outputs, select the apC R48 Output 1-16 Outputs tab.

3. To configure the Outputs on the Add-On Board R48 Outputs 1-16 Outputs, 17-32 Outputs and 33-48 Outputs tabs, follow the instructions given in To Configure apC Outputs on Page 312.

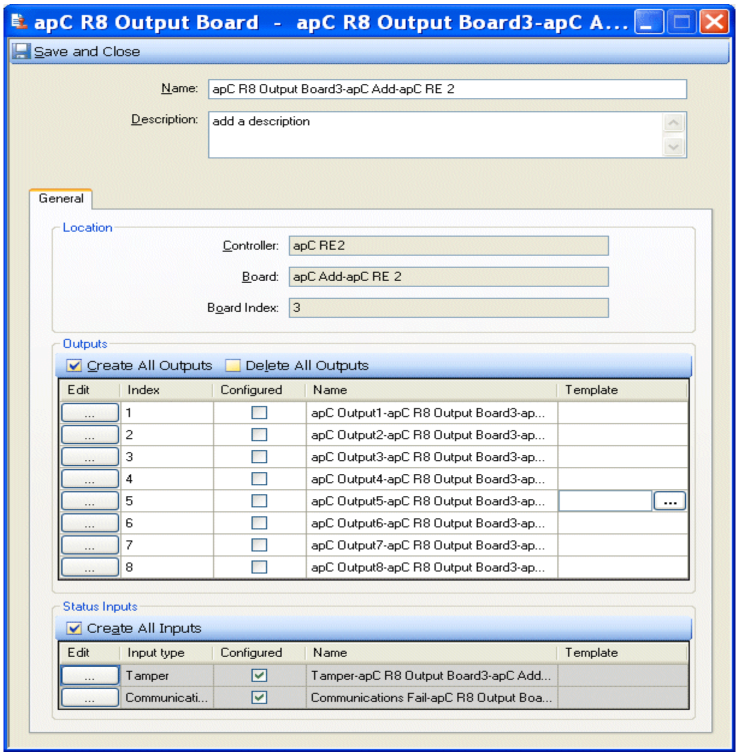
4. Once you have finished configuring the R48 Outputs, click **Save and Close** to return to the apC Add-On Board Output Boards tab.

R8 Output Board

To Configure an R8 Output Board

1. To configure the **R8 Output Boards**, select the check box in the **Configured** column in the apC Add-On Board Output Boards tab and click ... located in the **Edit** column of the R8 Output Boards box to display the apC R8 Output Board General tab.

Figure 113: apC Controller Add-On Board Output Boards General Tab



apC R8 Output Board - apC R8 Output Board3-apC A...

Save and Close

Name: apC R8 Output Board3-apC Add-apC RE 2

Description: add a description

General

Location

Controller: apC RE2

Board: apC Add-apC RE 2

Board Index: 3

Outputs

☑ Create All Outputs □ Delete All Outputs

Edit	Index	Configured	Name	Template
...	1	□	apC Output1-apC R8 Output Board3-ap...	
...	2	□	apC Output2-apC R8 Output Board3-ap...	
...	3	□	apC Output3-apC R8 Output Board3-ap...	
...	4	□	apC Output4-apC R8 Output Board3-ap...	
...	5	□	apC Output5-apC R8 Output Board3-ap...	...
...	6	□	apC Output6-apC R8 Output Board3-ap...	
...	7	□	apC Output7-apC R8 Output Board3-ap...	
...	8	□	apC Output8-apC R8 Output Board3-ap...	

Status Inputs

☑ Create All Inputs

Edit	Input type	Configured	Name	Template
...	Tamper	☑	Tamper-apC R8 Output Board3-apC Add...	
...	Communicati...	☑	Communications Fail-apC R8 Output Boa...	

The apC R8 Output Board General tab displays three read-only fields:

- Controller
- Board
- Board Index

These fields locate the Output that you have chosen to configure. As you configure more Add-On Board Outputs for this controller, the Board Index field will reflect the output placement on the R8 output board, ranging from 1 through 8.

There are also two Status inputs available for the R8 Output Board:

- Board Tampered, which indicates tampering with the Add-On Board
- Communications Fail, which detects a communications failure.

NOTE You will not see comm fail or tamper until at least one of the inputs or outputs is configured.

2. To configure the **R8 Output**, select the check box in the **Configured** column in the apC R8 Output Board General tab and click ... located in the **Edit** column of the **R8 Outputs** box, as shown in Figure 113 on Page 329.
3. To configure each **R8 Output**, follow the instructions given in To Configure apC Outputs on Page 312.
4. Once you have finished reader the **R8 Outputs**, click **Save and Close** to return to the apC Add-On Board Output Boards tab.
5. Click the **Star Coupler** tab to configure Star Coupler Readers, Inputs and Outputs, Mini Star Readers and WPSC (Wiegand Proximity Star Coupler) Readers and Supervised Inputs.

NOTE

Because the apC can only support 8 readers, some of the Reader ports on the Star Coupler may be unavailable to configure on C•CURE 9000 if readers are configured directly on the apC Readers tab. For example, if Readers 1 and 6 are configured on the Readers tab, Readers 1 and 6 will be unavailable on the Star Coupler (Configured check box is read-only). Conversely, if Readers 1 and 6 are configured on the Star Coupler, then Readers 1 and 6 on the Readers tab will be unavailable.

apC Add-On Board Star Coupler Tab

The **apC Add-On Board** Star Coupler tab allows you to add one of the following:

- Star Coupler, with up to 8 Star Coupler Readers, 8 Unsupervised Inputs and 8 Outputs. See the apC Star Coupler Board Editor on Page 336.

  or

- Mini Star with up to 8 Mini Star Readers. See the Mini Star Coupler Board Editor on Page 342.

NOTE The Mini Star Reader has not been evaluated by UL and cannot be used in UL Listed applications.

or

- WPSC (Wiegand Proximity Star Coupler) with up to 8 WPSC Readers and 8 Supervised Inputs on upper and lower boards. See the Wiegand Proximity Star Coupler Editor on Page 343.

NOTE Unsupervised inputs cannot be used in Proprietary Burglar Alarm applications.

Configuring the apC Add-On Board Star Coupler Tab

You use the apC Add-On Board Star Coupler tab to configure the type of Star Coupler board you have connected to your apC controller.

To Configure the apC Add-On Board Star Coupler Tab

1. Open the apC Add-On Board Editor by navigating in the Hardware Tree to the apC controller you want to edit, then navigating in the tree to the apC Add-On Board you want to edit.
2. Double-click on the apC Add-On Board. The apC Add-On Board Editor opens.
3. Click on the Star Coupler tab.
4. For the Star Coupler board type that is attached to your apC, click in the Configured column to enable that board.

   Example:

   If you have attached a Mini Star Coupler to your apC, click Configured for the Mini Star in the Star Coupler table.

NOTE If you select a Star Coupler and then try to enable a different one, a message appears asking "Are you sure you want to delete the Star Coupler object ,object-name>?" because you can only have one Star Coupler configured.

Click **Yes** if you want to delete the Star Coupler you configured and replace it with your new choice.

Click **No** if you want to keep the Star Coupler you configured and cancel this action.

apC Add-On Board Star Coupler Tab Definitions

The apC Add-On Board Star Coupler tab has the following file and buttons.

Table 120: apC Add-On Board Star Coupler Tab Definitions

Field/Button	Description
Edit Column	Click ... in the **Edit** column to open the editor for the Star Coupler you have enabled.
Star Coupler Column	This column displays the type of each Star Couplers you can enable and configure.
Configured	Click □ in this column to enable a Star Coupler, Mini Star, or WPSC (make it available to be edited).
Name	Displays the name for this Star Coupler. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Star Coupler	The Star Coupler is a single expansion board that attaches to the apC/8X or apC to allow the RM readers, I/8 inputs, and R/8 outputs to be wired in a Star topology.
Mini Star	A Mini Star is a single expansion board that attaches to the apC/8X or apC panels to allow the RM readers to be wired in a star topology.
WPSC	The Wiegand/Proximity Star Coupler (WPSC) consists of a two board set that attaches to the apC or apC/8X to allow direct connection of up to 8 read heads using Wiegand signaling.

apC Input Board Editor (I32 and I8)

The apC Input Board editor is used to configure apC Input Boards that you have created on the apC Add-on Boards tab.

The apC Input Board editor has the following tabs:

- apC I32 Input Board General Tab on Page 333
- apC I32 Input Board 1-16 Inputs Tab on Page 334
- apC I32 Input Board 17-32 Inputs Tab on Page 335
- apC I8 Input Board General Tab on Page 335

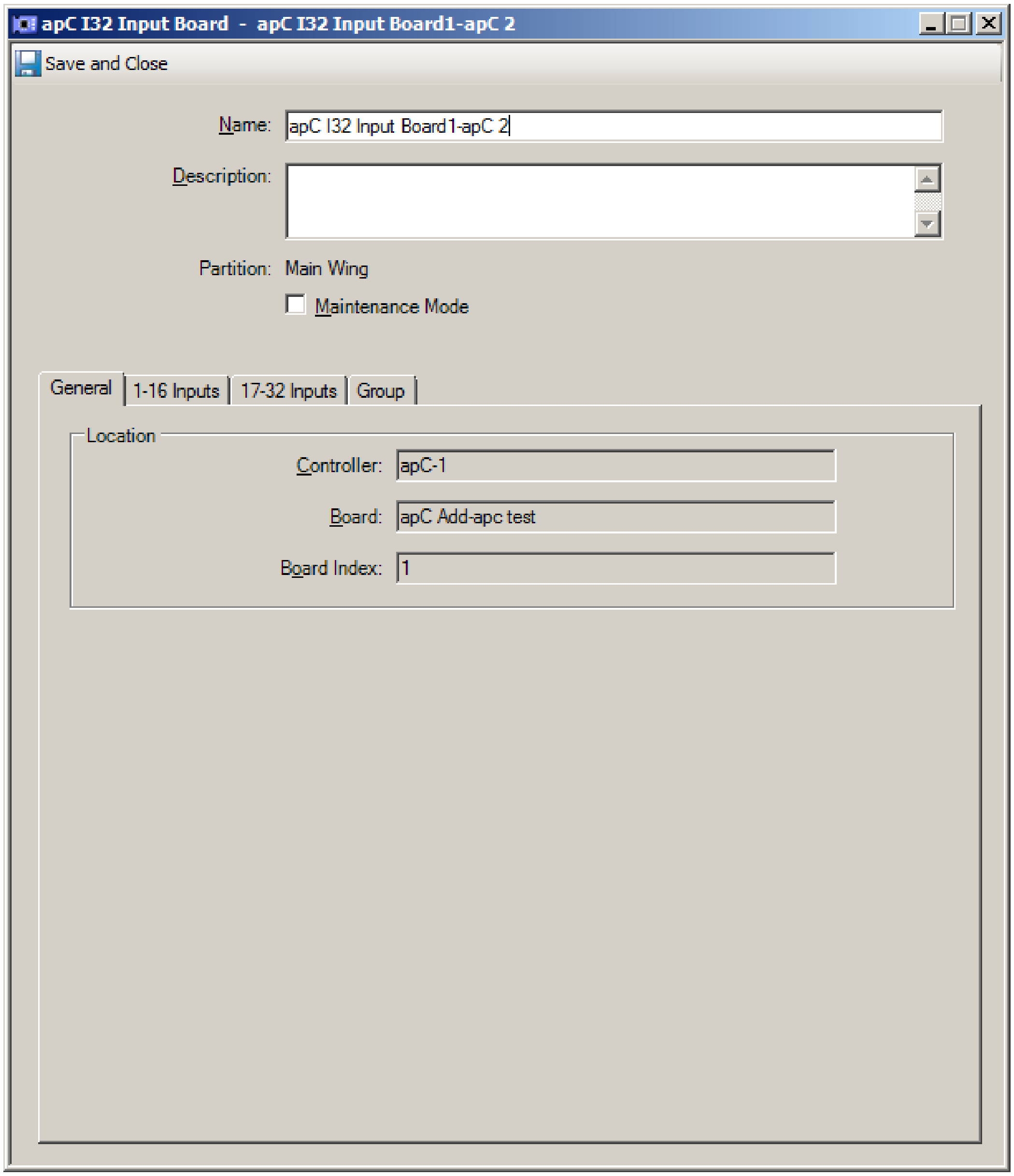
apC I32 Input Board General Tab

The **apC I32 Input Board** - **General** tab, as shown in Figure 114 on Page 334, displays the Input Location - **Controller**, **Board** and **Board Index** fields. These are read-only fields that display the apC panel, the apC Add-On Board and Index (for the I32 Inputs the Index is 1) associated with the I32 Supervised Inputs.

These fields identify the Input board that you have chosen to configure. The Board Index field reflects the position of the I32 input board on the apC.

Navigate to the **1-16 Inputs** tab.

Figure 114: apC Controller I32 Add-On Board General Tab



apC I32 Input Board - apC I32 Input Board1-apC 2

Name: apC I32 Input Board1-apC 2

Description:

Partition: Main Wing

□ Maintenance Mode

Location

Controller: apC-1

Board: apC Add-apc test

Board Index: 1

apC I32 Input Board 1-16 Inputs Tab

The **apC I32 Input Board** 1-16 Inputs tab allows you to add 16 Supervised Inputs on the I32 Input Board (Board Index 1).

To Configure the 1-16 Inputs Board

1. To configure the **1-16 Supervised Inputs**, select the check box in the **Configured** column in the **apC Add-On Board - I32 Input Board - 1-16 Inputs** tab and click ... located in the **Edit** column of the **Supervised Inputs** box to display the **apC Input** (Index Numbers 1 through 16) **I32 Input Board1 - General** tab.

   The **apC Input General** tab displays the Input Location - **Controller**, **Board** and **Connection** fields. These are read-only fields that display the apC panel, the apC Add-On Board and Input Number associated with an I32 Supervised Input. These fields locate the Input that you have chosen to configure.

2. To configure the **Inputs** on the **I32 Input Board - 1-16 Inputs** tab, follow the instructions given in To Configure apC Controller Inputs on Page 312.
3. Navigate to the **17-32 Inputs** tab.

apC I32 Input Board 17-32 Inputs Tab

The **apC I32 Input Board** 17-32 Inputs tab allows you to add 16 Supervised Inputs on the I32 Inputs Board (Board Index 1).

To Configure the 17-32 Inputs Board

1. To configure the **17-32 Supervised Inputs**, select the check box in the **Configured** column in the **apC Add-On Board - I32 Input Board - 17-32 Inputs** tab and click ... located in the **Edit** column of the **Supervised I32 Input Board** box to display the **apC Input** (Index Numbers 17 through 32) **I32 Input Board1 General** tab.
2. To configure the **Inputs** on the **I32 Add-On Board - 17-32 Inputs** tab, follow the instructions given in To Configure apC Controller Inputs on Page 312.

apC I8 Input Board General Tab

You can also add-on up to 64 Supervised Inputs (8 Inputs available on 8 I8 Input Boards) with Triggers available for each input.

To Configure the I8 Input Board

1. To configure an **I8 Input Board**, select the check box in the **Configured** column on the **apC Add-On Board - Input Boards** tab and click ... located in the **Edit** column of the **Supervised I8 Input Board** box to display the **apC I8 Input Board - General** tab.
2. To configure **Inputs**, select the check box in the **Configured** column in the **apC I8 Inputs** tab and click ... located in the **Edit** column to display the **apC Add-On Board - apC I8 Input Board - General** tab.
3. To configure the **Inputs** on the **I8 Add-On Board - I8 Inputs** tab, follow the instructions given in To Configure apC Controller Inputs on Page 312.

   There are also two Status inputs available for the I8 Input Board:

   - Board Tampered, which indicates tampering with the Add-On Board
   - Communications Fail, which detects a communications failure.
4. Once you have finished reader the I8 Inputs, click **Save and Close**.

apC Star Coupler Board Editor

The apC Star Coupler Board Editor is used to configure apC Star Coupler boards.

Star Couplers are single expansion boards that attach to the apC/8X or apC to allow the RM readers, I/8 inputs, and R/8 outputs to be wired in a Star topology. The Star Coupler Board allows addition of:

- 8 MRM/RM Reader ports
- 8 Unsupervised Inputs
- 8 dry contact, form C, relay Outputs

The Star Coupler can be installed on apC and apC/8X panels. For more information, see the *Star Coupler - Mini Star Coupler Quick Start Installation Guide.*

This editor is accessed from the apC Add-on Board Editor Star Coupler tab (see apC Add-On Board Star Coupler Tab on Page 331).

To Configure the Star Coupler Board

1. To configure the **Star Coupler Board**, select the check box in the **Configured** column in the **apC Add-On Board Star Coupler** tab and click ... located in the **Edit** column of the **Star Coupler** box (see on Page 331) to display the **Star Coupler General** tab, as shown in Figure 115 on Page 336.

   The **apC Star Coupler Board General** tab displays three read-only fields:

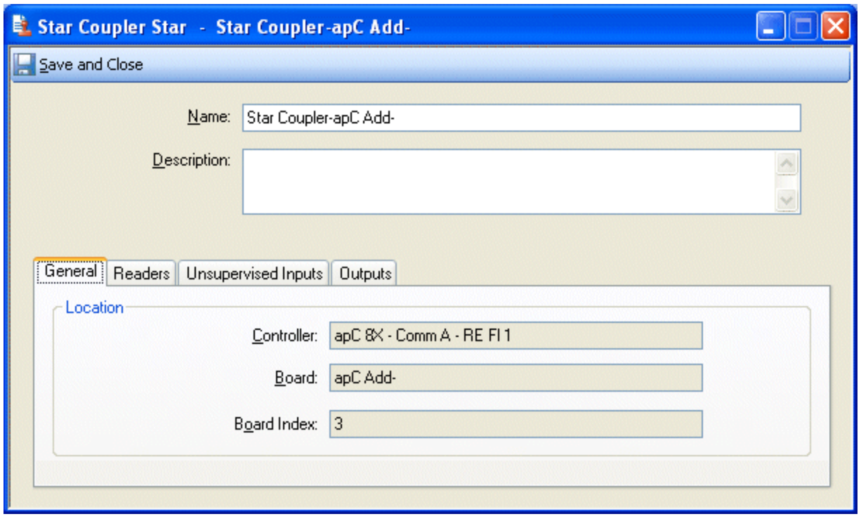
   — Controller

   — Board

   — Board Index

   These fields are located on the Star Coupler that you have chosen to configure. As you configure more Add-On Boards for this controller, the Board Index field will reflect each placement, to differentiate board locations.

Figure 115: apC Star Coupler General Tab



Star Coupler Star - Star Coupler-apC Add-

Name: Star Coupler-apC Add-

Description:

Controller: apC 8X - Comm A - RE Fl 1

Board: apC Add-

Board Index: 3

2. Click the **Readers** tab to configure the Star Coupler readers. See Star Coupler Readers Tab on Page 337 for the Star Coupler Readers tab.
3. Click the **Unsupervised Inputs** tab to configure the Star Coupler unsupervised inputs. See Star Coupler Unsupervised Inputs Tab on Page 337 for the Star Coupler Unsupervised Inputs tab.

4. Click the **Outputs** tab to configure the Star Coupler outputs. See Star Coupler Outputs Tab on Page 337 for the Star Coupler Outputs tab.
5. When you have completed configuring the Star Coupler and its attached devices, you can click **Save and Close** to save your changes.

Star Coupler Readers Tab

The Star Coupler Readers tab allows you to configure the readers connected to your Star Coupler.

To Configure Star Coupler Readers

1. Navigate from the apC Controller Add-On Board Tab on Page 313 to the apC Add-On Board Star Coupler Tab on Page 331
2. Click Star Coupler to open the apC Star Coupler Board Editor on Page 336.
3. Click the **Readers** tab to configure readers for the **Star Coupler**.
4. To create all available readers for the Star Coupler, click **Create All Readers**. apC Readers that have previously been created on other board connections are unavailable (shaded gray) to be created here.
5. To create an individual reader, select the check box in the **Configured** column for the **Star Coupler Readers** (Index 1 through 8) and click ... located in the **Edit** column. The apC Reader Editor opens to allow you to configure this reader. See **apC Reader Editor on Page 487 for details on configuring an apC Reader.**
6. When you have finished creating and configuring readers for the Star Coupler, you can click **Save and Close** to save your changes.

Star Coupler Unsupervised Inputs Tab

The Star Coupler Unsupervised Inputs tab allows you to configure the inputs connected to your Star Coupler.

To Configure Star Coupler Unsupervised Inputs

1. Navigate from the apC Controller Add-On Board Tab on Page 313 to the apC Add-On Board Star Coupler Tab on Page 331, and click Star Coupler to open the apC Star Coupler Board Editor on Page 336.
2. Click the **Unsupervised Inputs** tab to configure Unsupervised Inputs for the Star Coupler.
3. To create all Unsupervised Inputs for the Star Coupler, click **Create All Inputs**.
4. To create an individual input, select the check box in the **Configured** column for the **Star Coupler Inputs** (Index 9 through 16) and click ... located in the **Edit** column. The apC Input Editor opens to allow you to configure this input. See **apC Input Editor on Page 318 for details on configuring an apC Input.**
5. When you have finished creating and configuring inputs for the Star Coupler, you can click **Save and Close** to save your changes.

Star Coupler Outputs Tab

The Star Coupler Outputs tab allows you to configure the outputs connected to your Star Coupler.

To Configure Star Coupler Outputs

1. Navigate from the apC Controller Add-On Board Tab on Page 313 to the apC Add-On Board Star Coupler Tab on Page 331
2. Click Star Coupler to open the apC Star Coupler Board Editor on Page 336.

3. Click the **Outputs** tab to configure outputs for the Star Coupler.
4. To create all outputs for the Star Coupler, click **Create All Outputs**.
5. To create an individual output, select the check box in the **Configured** column for the **Star Coupler Outputs** (Index 9 through 16) and click ... located in the **Edit** column. The apC Output Editor opens to allow you to configure this output. See **apC Output Editor on Page 321 for details on configuring an apC Output.**
6. When you have finished creating and configuring outputs for the Star Coupler, you can click **Save and Close** to save your changes.

Triggers Tab for apC Devices

C•CURE 9000 uses Triggers, which are configured procedures for activating actions, to activate Events or Outputs for an apC device. A Trigger automatically executes a specified Action when a particular Condition occurs (when the object Property specified in the Trigger reports the Value specified in the Trigger). Navigate to the **Triggers** tab.

A triggers tab provides you with the ability to define the activation/deactivation, enable/disable, and arm/disarm, etc. of such objects as: events, inputs, outputs, camera actions, door status changes, etc. Triggers can also be used to launch imports and exports, email and reports, viewer and message displays, personnel ID number state changes, controller downloads, sound activation, communication notifications, etc.

Table 121 on Page 339 provides an example of a configured apC Trigger.

Table 121: Triggers Tab Settings Example

The following Triggers Tab settings:					
Property	**Value**	**Action**	**Details**	**Schedule**	**Time Zone**
Active Status	Active	Activate Event	apC Input Event	Always	(Time Zone of apC or C•CURE 9000 Server)
Would create the following Trigger: Any time (Always **Schedule**) the Active Status (**Property**) equals Active (**Value**), activate the event (**Action**) named iSTAR Input Event (**Details**). iSTAR Input Event is an Event that you would need to create using the Event Editor.					

From the Triggers tab of an apC device (such as a Controller, Input, or Reader), you can perform the following tasks.

- Defining a Trigger for an apC Device on Page 339.
- Removing a Trigger on Page 265.

apC Triggers Tab Definitions on Page 340 provides definitions for the fields and buttons on an apC Device Triggers tab.

Defining a Trigger for an apC Device

You can use the Triggers tab to define a Trigger for an apC device. The typical usage for an apC Trigger is to activate an Event or an Output as the result of a state change of an apC device Property.

This tab provides you with the ability to define the activation/deactivation, enable/disable, and arm/disarm, etc. of such objects as: events, inputs, outputs, camera actions, door status changes, etc. Triggers can also be used to launch imports and exports, email and reports, viewer and message displays, personnel ID number state changes, controller downloads, sound activation, communication notifications, etc.

Example:

> When an apC Tamper Input changes from the Inactive (normal) to Active (abnormal) state, you wish to activate an Event and activate an audible alarm (an apC Output).

Time Zones for apC Panel Triggers

If you specify a Time Zone in your Trigger definition, you can control when the Schedule for the Trigger is active. You can only select the C•CURE 9000 server Time Zone or the Time Zone of the apC panel you are editing.

Example:

> If you have apC panels that are in different Time Zones than your C•CURE 9000 server, you may want to have some Triggers activate according to the apC panel's Time Zone, while other Triggers are activated according to the server Time

Zone.

When you specify the Time Zone for a Trigger definition to be the same as the apC Panel Time Zone, the Schedule activation times for the Trigger occur according to the apC Panel Time Zone.

If you have an apC panel in the Pacific Time Zone (GMT - 08:00) and a server in the Eastern Time Zone (GMT - 05:00), a Schedule that is active from Midnight to 6:00 AM is activated from Midnight to 6:00 AM in Pacific Time rather than Eastern time (three hours later).

To Define a Trigger for an apC Device

1. Click on the Triggers tab for your apC device.
2. Click **Add** on the Triggers tab to create a new Trigger.
3. Click ... within the **Property** column to open the Property dialog box showing the Properties available for the device.
4. Click a Property in the list to select it and add it to the **Property** column.
5. Click ... within the **Value** column to display a drop-down list of Values associated with the Property that you have selected. Click a **Value** that you want to include as a parameter for the trigger to add it to the column. (If there is no set list of Values, you can type in a Value.)
6. Click ... within the **Action** column to display a drop-down list of valid actions. Click an Action that you want to include as a parameter for the trigger to add it to the column.
7. When you select an Action, the lower pane in the Triggers box displays an entry field or group of entry fields, specific to the selected Action, so that you can configure the Details for the Action.
8. Once you define the Action details, the **Details** column displays information about how the Action has been configured.

   For example, if an Event field is displayed in **Details**, you can click to select an Event that you want to associate with the Trigger.

9. If the Triggers tab includes a **Schedule** column, click within the **Schedule** column to display a drop-down list of pre-configured schedules. Click ... to select a **Schedule** that you want to associate with the trigger. Schedules are created in the Configuration Pane. See the *C•CURE 9000 Software Configuration Guide* for more information.
10. If the Triggers tab includes a **Time Zone** column, click within the **Time Zone** column to display a drop-down list of available Time Zones. If the Time Zone column is blank, or you do not select a Time Zone, the Time Zone of the C•CURE 9000 server is used by default.
11. Click **Save and Close** to save the apC trigger.

NOTE Triggers related to apC objects cannot activate an Event that is downloaded to an iSTAR controller.

apC Triggers Tab Definitions

Table 122 on Page 340 provides definitions for the fields and buttons on an apC Triggers tab.

Table 122: apC Triggers Tab Definitions

Field/Button	Description
Add	Click **Add** in the Triggers tab to create a new trigger.
Remove	Click the Row Selector ▸, then click **Remove** in the Triggers tab to delete a trigger.

Table 122: apC Triggers Tab Definitions (continued)

Field/Button	Description
▶	Click the Row Selector to select a row in the Triggers table.
Property	Click within the **Property** column, and then click ... . The Property browser opens presenting properties available for the Comm Port. Click a Property to select it and add it to the column.
Value	Click within the **Value** column to display a drop-down list of Values associated with the Property that you have selected. Click a Value that you want to include as a parameter for the trigger to add it to the column.
Action	Click ... within the **Action** column to display a drop-down list of valid actions. Click an Action that you want to include as a parameter for the trigger to add it to the column. As you select an Action, a corresponding entry field, or group of entry fields, appear at the bottom of the dialog box. Click to select entries for these fields.
Details	Displays details about how the Action was configured.
Schedule	Click within the **Schedule** column to select a Schedule. Click ... to select a Schedule that you want to associate with the trigger. Schedules are created in the Configuration Pane. Refer to the *C•CURE 9000 Software Configuration Guide* for more information on creating Schedules.
Time Zone	Click within the **Time Zone** column to select a Time Zone for Schedule activation. Click ... to select a Time Zone that you want to associate with the trigger Schedule. If you specify a Time Zone, the Schedule start and end times are calculated using that Time Zone. For example, a Schedule that becomes active at 3:00 AM would become active at 3:00 AM in the Pacific Time Zone, if that Time Zone was specified. Refer to the *C•CURE 9000 Software Configuration Guide* for more information on Time Zones.

Mini Star Coupler Board Editor

Mini Star Couplers are single expansion boards that attach to the apC/8X or apC panels to allow the RM readers to be wired in a star topology. For more information, see the *Star Coupler - Mini Star Coupler Quick Start Installation Guide.*

NOTE Mini Star Coupler Boards have not been evaluated by UL and cannot be used in UL Listed applications

To Configure the Mini Star Coupler Board

1. To configure the **Mini Star Coupler Board**, select the check box in the **Configured** column in the **apC Add-On Board - Star Coupler** tab and click ... located in the **Edit** column of the **Star Coupler** box to display the **Mini Star Coupler - General** tab.

   The **Mini Star Coupler Board** - **General** tab displays three read-only fields:

   — Controller

   — Board

   — Board Index

   These fields are located on the Mini Star Coupler that you have chosen to configure. As you configure more Add-On Boards for this controller, the Board Index field will reflect each placement, to differentiate board locations.

2. Click the **Readers** tab to configure readers for the **Mini Star Coupler**.

3. Select the check box in the **Configured** column for the **Mini Star Coupler Readers** (Index 1 through 8) and click ... located in the **Edit** column to display the **Mini Star Coupler Readers - General** tab.

   The 8 available Mini Star Coupler Readers allow up to 2 Supervised Inputs and 2 Outputs. For further instructions for reader readers, see To Configure an apC Reader on Page 313.

   NOTE Readers that are unavailable have already been configured on the apC panel Readers tab.

4. Click **Save and Close** to return to the **apC Controller - Add-On Board - Star Coupler** tab.

   Be sure that the **Mini Star Coupler Board** is installed correctly on the apC or apC/8X. For more information, see the *Star Coupler - Mini Star Coupler Quick Start Installation Guide.*

5. Click **Save and Close** to return to the **apC Controller - Add-On Board** tab.

Wiegand Proximity Star Coupler Editor

The Wiegand/Proximity Star Coupler (WPSC) consists of a two board set that attaches to the apC or apC/8X to allow direct connection of up to 8 read heads using Wiegand signaling. The WPSC board set consists of a Lower Board and an Upper Board. The Lower Board provides connections for 4 readers indexed 1-4 and 4 inputs indexed 17-23. The Upper Board provides connections for 4 readers indexed 5-8 and 4 inputs indexed 25-31.

When using the WPSC Add-On Board, the standard Star Coupler cannot be used because the WPSC board set attaches to the same bus connector as the Star Coupler.

Each board provides one supervised input for each reader, which should be used in conjunction with one of the 8 supervised inputs on the apC main board to provide a total of two supervised inputs for each reader.

NOTE The supervised inputs on the WPSC remain inactive in the Monitoring Station unless readers are configured in the WPSC editor.

Since the WPSC board set does not provide output relays, it is recommended that the 8 on-board apC relays be used. For more information, see the *WPSC Quick Start Installation Guide*.

To Configure the Wiegand/Proximity Star Coupler Board

1. To configure the **Wiegand/Proximity Star Coupler** (**WPSC**) **Board**, select the **WPSC** check box in the **Configured** column in the **apC Add-On Board - Star Coupler** tab and click **...** located in the WPSC **Edit** column of the **Star Coupler** box.

   The **Wiegand/Proximity Star Coupler Board General** tab displays three read-only fields:

   — Controller

   — Board

   — Board Index

   These fields are located on the Wiegand/Proximity Star Coupler that you have chosen to configure. As you configure more Add-On Boards for this controller, the Board Index field will reflect each placement, to differentiate board locations.

2. Click the Lower Board tab to display the 4 available WPSC Readers and 4 Unsupervised WPSC Inputs.

3. Select the check box in the **Configured** column for the **WPSC Readers** (Index 1 through 4) and click **...** located in the **Edit** column to display the **apC Readers - General** tab.

   You can configure the reader keypad and triggers for each of the 4 available WPSC Readers. For further instructions see apC Controller Readers Tab on Page 313.

4. To configure **Inputs**, select the check box in the **Configured** column in the **Wiegand/Proximity Star Coupler - Inputs** tab and click **...** located in the **Edit** column to display the **apC Add-On Board - Wiegand/Proximity Star Coupler** Input - **General** tab.

5. To configure the **Inputs** on the **Wiegand/Proximity Star Coupler Add-On Board - Inputs** tab, follow the instructions given in To Configure apC Controller Inputs on Page 312.

6. Click **Save and Close** to return to the **apC Controller - Add-On Board - Star Coupler** tab.

   Be sure that the **Wiegand/Proximity Star Coupler Board** is installed correctly on the apC or apC/8X. For more information, see the *WPSC Quick Start Installation Guide.*

7. Click **Save and Close** to return to the **apC Controller - Add-On Board** tab.

8. Click the **Status** tab to display it.

   - Or -

   Click **Save and Close** to return to the **Hardware Pane** and finish the **apC Controller** configuration later.

9

Floors

This chapter explains how to configure Floors in C•CURE 9000. Floors are part of Elevator access control. An Elevator associates a Floor with an Input or Output.

In this chapter

Floors Overview 345
Configuring Floors 346

Floors Overview

Floors are configured to define Elevator control. Floors are paired with inputs and outputs to control floor access through elevators. Before you can configure elevators, you must configure floors and/or floor groups. See Elevator Configuration Overview on Page 515 for more information.

When a person presents a card at an elevator, the system checks the clearances associated with the card for the elevator and associated floors. If the person’s clearances do not allow access, the access attempt is rejected before the person presses an elevator button. If the person has access to a floor, the system grants access to the person and activates the output attached to the button for that floor.

A Floor has only Name, Description and Enabled properties. If the Floor has been assigned to any Elevators, they will appear in a read-only list on the Floor General tab.

NOTE Elevator controls have not been evaluated by UL.

Configuring Floors

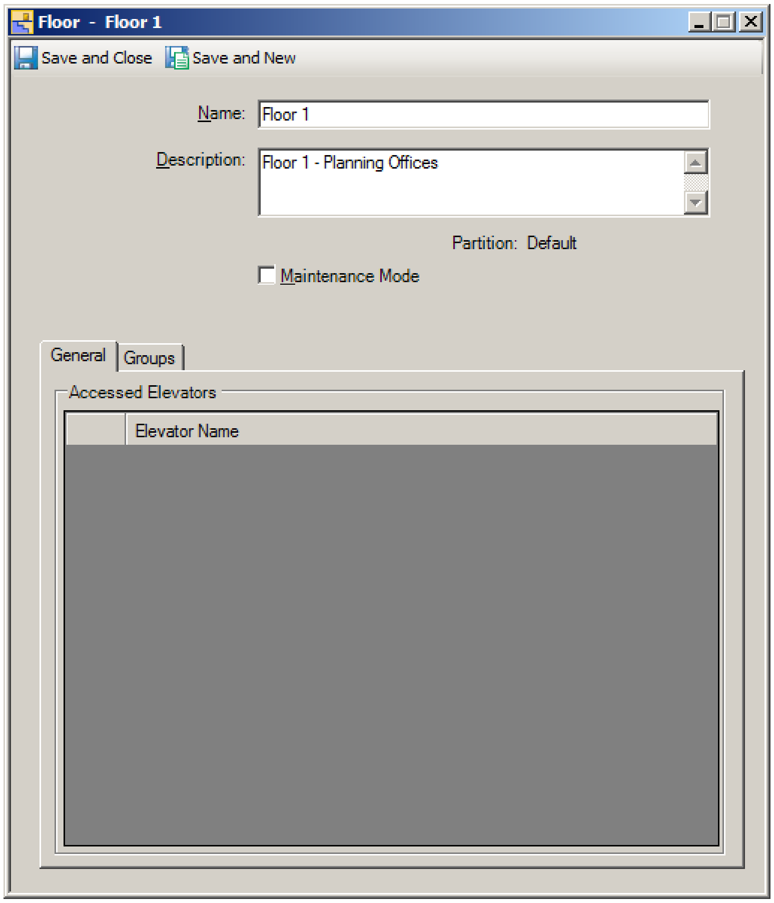
Accessing the Floor Editor

You can access the Floor editor from the C•CURE 9000 Hardware pane.

To Access the Floor Editor

1. Click the **Hardware** pane button.
2. Click the **Hardware** drop-down list and select **Floor**.
3. Click ➔▾ to open a **Dynamic View** showing all **Floor** objects.
4. Double-click the **Floor** in the list that you want to edit, and the **Floor General** tab opens, as shown in Figure 116 on Page 346.

Figure 116: Floor General Tab



Name: Floor 1

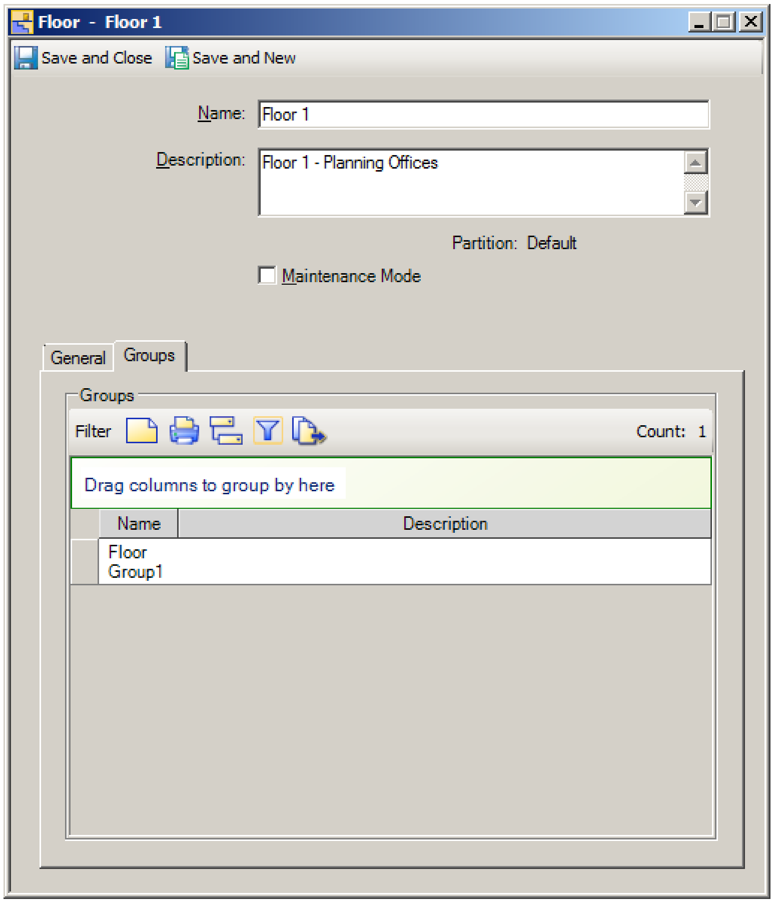
Description: Floor 1 - Planning Offices

Partition: Default

☐ Maintenance Mode

5. Type a name for the **Floor** in the **Floor Name** field.
6. Type a description for the **Floor** in the **Description** field.
7. Select **Enable** to indicate that the Floor is available for use. **Elevators** that are assigned to the **Floor** will be shown in the **Accessed Elevators** box.
8. **Maintenance Mode** - Click to put the Floor into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
9. Click **Save and Close** when you are finished.
10. When you create a Floor group, a Group tab will appear with the Floor General tab, as shown in Figure 117 on Page 347.

Figure 117: Floor Groups Tab



Name: Floor 1

Description: Floor 1 - Planning Offices

Partition: Default

□ Maintenance Mode

Groups

Count: 1

Name	Description
Floor Group1	

Floor Definitions

The definitions for the fields and buttons on the Floor General tab are listed in Table 123 on Page 347.

Table 123: Floor General Tab

Field/Button	Description
Name	Enter a name for the floor.
Description	Enter a brief description for this floor.
Maintenance Mode	Click to put the floor into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Enabled	Check this box to put the floor online. When the floor is offline, the C•CURE 9000 System ignores the floor.
Accessed Elevators	Displays a list of elevators with buttons associated with this floor. These associations are set when you configure the Elevators.
Save and Close	Click **Save and Close** to accept your changes to the Floor configuration.

Creating a Floor

You can create a new Floor.

To Create a Floor

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Floor** from the **Hardware** pane drop-down list.
3. Click **New** to create a new **Floor**. The **Floor Editor** opens and you can configure the **Floor**.
4. To save your new **Floor**, click **Save and Close**.

   Alternatively, if you want to save the **Floor** and then create a new one, click **Save and New**. The current **Floor** is saved and closed, but the **Floor Editor** remains open to allow you to create a new **Floor**.

Creating a Floor Template

You can create a new template for a Floor. A Floor template saves you time because you can reuse the same configuration repeatedly.

To Create a Floor Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Floor** from the **Hardware** pane drop-down list.
3. Click the drop-down arrow next to **New** and select **Template**.
4. The **Floor Template** opens and you can configure the Floor template.
5. To save your new **Floor Template**, click **Save and Close**.

The new Floor template appears under Templates in the Template drop-down list.

To Select a Floor Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Floor** from the **Hardware** pane drop-down list.
3. Click the drop-down arrow next to **New** and select **Template**.
4. Select the template you wish to use under Templates.

Deleting a Floor

You can delete a Floor.

To Delete a Floor

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Floor** from the **Hardware** pane drop-down list.
3. Click ➡ ▾ to open a **Dynamic View** showing all Floor objects.
4. Right-click the Floor in the list that you want to delete and select **Delete** from the context menu.
5. Click **Yes** on the “**Are you sure you want to delete the selected Floor?**” message box.

Modifying a Floor

You can edit a Floor.

To Edit a Floor

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Floor** from the **Hardware** pane drop-down list.
3. Click ➡ ▾ to open a **Dynamic View** showing all Floor objects.
4. Double-click the **Floor** in the list that you want to modify and select **Edit** from the context menu. The **Floor Editor** opens.

Viewing a List of Floors

You can view a list of Floors.

To View a List of Floors

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Floor** from the **Hardware** pane drop-down list.
3. Click ➡ ▾ to open a **Dynamic View** showing all **Floor** objects.

Using Set Property to Configure Floors

You can use Set Property to quickly set a property for a Floor without opening a Floor. Set Property allows you to select multiple Floors in the dynamic list, and right-click to use Set Property to set a specific property for all of them. So, for example, if you wanted to change a setting for 20 Floors, you could select all of them and do it in one step.

To Set a Property for a Floor

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Floor** from the **Hardware** pane drop-down list.
3. Click ➡ ▾ to open a **Dynamic View** showing all **Floor** objects.
4. Right-click the **Floor** in the list for which you want to set the property and select **Set Property** from the context menu.
5. Specify the property for the **Floor**. Click the drop-down button to see a list of properties.
6. Enter the value for the property and click **OK**.
7. Click **OK** on the **Setting Properties of Floor** message box.

Add Floors to a Group

You can use Add To Group for Floors. Add Floors To Group enables you to add the Floor object to the group. When you create a Floor group, a Group tab will appear with the Floor - General tab.

To Add Floors To a Group

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.

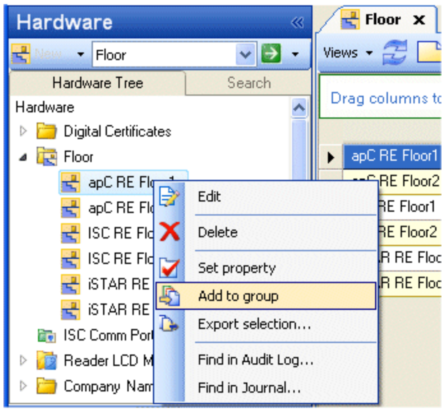
2. Select **Floor** from the **Hardware** pane drop-down list.

3. Click ➔ ▾ to open a **Dynamic View** showing all **Floor** objects.

4. Right-click the **Floor** in the list that you want to add to a group and select **Add To Group** from the context menu.

   Figure 118 on Page 350 displays the Hardware pane and the context menu from which you can add a floor object to a Group.

Figure 118: Hardware Pane - Adding a Floor to a Group



10

Doors

A Door in C•CURE 9000 provides access control by specifying the controllers, readers, inputs, and outputs associated with an entrance. From the application's hardware tree, you will configure the specific controller type first, then configure the associated readers, inputs, and outputs, and then configure the Door. This sequence of reader the security components is necessary because each door requires the associated components to operate with their apC or iSTAR controllers.

In this chapter

Door Overview 352
Door Tasks 353
apC Door Editor 358
apC Door Definitions 366
iSTAR Door Editor 371
iSTAR Door Monitoring Tab 382
iSTAR Door Definitions 385
iSTAR Aperio Door Editor 393

Door Overview

In general, a door is a logical structure that ties together a controller and its associated readers, inputs, and outputs for access control. In C•CURE 9000, before you configure the door you must first configure the type of controller that is to be used for the readers, input, and outputs. Then you can configure the door associated with the components.

Figure 119 on Page 352 represents the way readers, inputs, outputs, events, and areas are related to Doors in C•CURE 9000, while Table 124 on Page 352 describes typical door components.

Figure 119: Typical Door Configuration

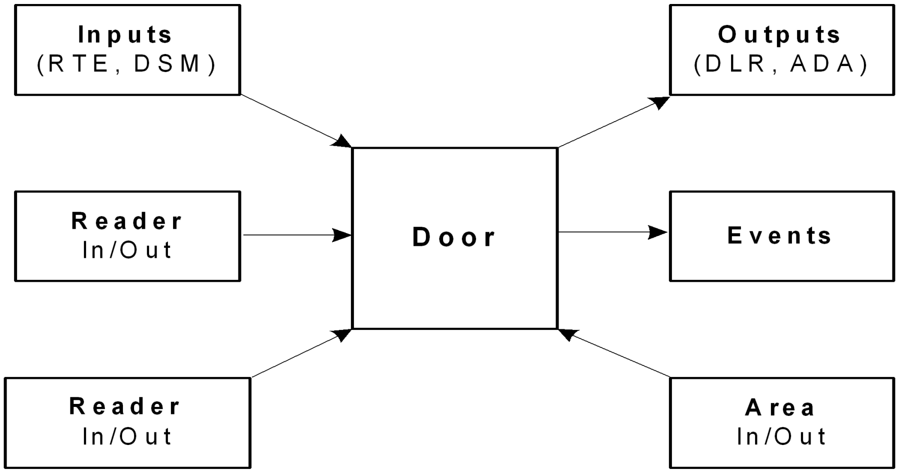


Table 124: Typical Door Components

Component	Description
RTE Input	A Request To Exit (RTE) input sends a signal that lets C•CURE 9000 know that someone is going to open the door to exit. Typically this device is a motion sensor or a press to exit button.
DSM Input	A Door Switch Monitor (DSM) sends a signal that lets C•CURE 9000 know whether the door is open or closed.
DLR Output	A Door Latch Relay (DLR) is used to send a signal from C•CURE 9000 to a door latch to lock or unlock the door.
ADA Output	An output that activates a door assistance mechanism, usually installed for compliance with the Americans with Disabilities Act (ADA).
Reader In/Out	Defines the card readers that control entry or egress through this door.
Events	Door events are usually triggered by state changes in the Door inputs and outputs. You specify the Event you want to activate when a change, such as "Door held open," occurs.
Area In/Out	Defines the Area a cardholder enters and the area a cardholder leaves through this door. **Example:** A cardholder passing through a door named "Sales" is leaving an Area called "Lobby" and entering an Area called "Sales Office."

Door Tasks

You can perform the following general tasks to configure iSTAR and apC Doors.

- Creating a Door on Page 353
- Creating a Door Template on Page 354
- Deleting a Door on Page 355
- Modifying a Door on Page 355
- Viewing a List of Doors on Page 355
- Using Set Property to Configure Doors on Page 356
- Add a Hardware Device to Group from a Dynamic View on Page 357

Creating a Door

A door object must be configured for the type of controller to which it is connected: iSTAR or apC controllers. The process is essentially the same when creating each door object type. First you must create the controller, then configure the controller's General tab and Board tab to configure inputs, outputs and readers. One exception is that with the iSTAR controllers, you are required to first create an iSTAR cluster and then create controllers within that cluster.

Once you have created and configured the door controller, you may create as many doors as that type of controller can accommodate.

To Create a Door

Follow the steps below to create a door for an apC controller. To create an iSTAR door, first refer to the next set of steps for reader the iSTAR Cluster and Controller before reader the iSTAR door.

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. In the Hardware tree, expand the facility folder where you want to create a door. You must create a door by highlighting a controller icon, board icon, or door icon in the hardware tree:
   - **apC** - highlight the **apC controller** icon, right click, and select **apC Door** > **New**.
   - **iSTAR** - highlight the **iSTAR controller** icon, right click, and select **iSTAR Door** > **New**.

   You can also create a new door from the door icon in a folder: highlight the door icon, right click, and select **Door** > **New**. A new Door Dialog box opens. When the **Door Dialog** box opens on the General tab, configure the Door.
3. Enter a **Name** and **Description**.
4. **Maintenance Mode** - Click to put the door into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
5. Configure the fields on the General tab, as needed. The fields listed below are on the apC and iSTAR Door dialog boxes.
   - **Controller** - This is a read-only field that indicates the controller associated with the door.
   - **Door Switch Monitor** - Click ... to display a list of inputs available for the controller. This signal is true when the door is open. It is used to determine Admit Unused, Door Held, and Door Forced. Click an Input to select it and assign it to the Door Switch Monitor field.
   - **Door Lock Relay** - Click ... to display a list of outputs available for the controller. T his output is used to open the door. Click an Output to select it and assign it to the Door Lock Relay field.

- **Alternate Shunt Relay** - Click ... to display a list of outputs available for the controller. Alternate Shunt is used for cardholders with disability and sometimes for aircraft loading doors. Click an Output to select it and assign it to the Alternate Shunt Relay field .
- **Shunt Expiration Relay** - Click ... to display a list of outputs available for the controller. This output will indicate the expiration of the shunt. Click an Output to select it and assign it to the Shunt Expiration Relay field.
- **Inbound Reader** - Click ... to display a list of Readers available. Inbound and Outbound Readers are required for Area related functions such as Occupancy and Anti-Passback Click a Reader to select it and assign it to the Inbound Reader field.
- **Outbound Reader** - Click ... to display a list of Readers available. Inbound and Outbound Readers are required for Area related functions such as Occupancy and Anti-Passback Click a Reader to select it and assign it to the Outbound Reader field.
- **Readers are continuously active** - Click this check box to enable continuous reader activity. Continuously Active is not normally used. It is typically used for subway gates and other high volume applications.
- **Request to Exit Input** - Click ... to display a list of Inputs available. Click an Input to select it and assign it to the field.
- **Unlock Door on RTE** - Click this check box to unlock the door at a Request to Exit. This is usually checked, but certain high security areas may use the REX as a signal to the Security Officer who verifies the person and opens the door.
- **Shunt DSM while RTE is active** - Click this check box to Shunt Door Switch Monitor While Request to Exit is Active. This is frequently used to correct a race condition between REX and DSM.

6. To save your new Door, click **Save and Close**.

   To save the **Door** and create a new one, click **Save and New**. The current **Door** is saved and closed, but the **Door Editor** remains open to allow you to create a new **Door**.

   The following controller creation provides a sample of the steps involved in the creation of an iSTAR Cluster and Controller. For more detailed information about the creation of iSTAR Clusters, refer to Configuring iSTAR Clusters on Page 86. For more detailed information about the creation of controllers, refer to:

   - Creating an iSTAR Controller on Page 121
   - Configuration Overview for iSTAR Controllers on Page 116
   - apC Panel Overview on Page 288.

Creating a Door Template

You can create a template for a Door. A Door template saves you time because you can reuse the same configuration repeatedly.

To Create a Door Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select either an **apC** or **iSTAR Door** from the **Hardware** pane drop-down list.
3. Click the drop-down arrow next to **New** and select **Template**.
4. The **Door Template** opens and you can configure it.
5. To save your new **Door Template**, click **Save and Close**.

The new Door template appears in the Template drop down list under *Templates*.

To Select a Door Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select either an **apC** or **iSTAR Door** from the **Hardware** pane drop-down list.
3. Click the drop-down arrow next to **New** and select **Template**.
4. Select the template you wish to use under the **Templates** list and configure the door as explained in Creating a Door on Page 353.

Deleting a Door

You can delete a Door from a controller.

To Delete a Door

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select either an **apC** or **iSTAR Door** from the **Hardware** pane drop-down list.
3. Click ➔▾ to open a **Dynamic View** showing Door objects of the same type.
4. Right-click the Door in the list that you want to delete and select **Delete** from the context menu.
5. Click **Yes** on the "**Are you sure you want to delete the selected Door?**" message box.

Modifying a Door

You can edit a Door.

To Edit a Door

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select either an **apC** or **iSTAR Door** from the **Hardware** pane drop-down list.
3. Click ➔▾ to open a **Dynamic View** showing Door objects of the same type.
4. Double-click the **Door** in the list that you want to modify, and the **Door Editor** opens. Or, you can select the door in the list, right click, and select **Edit** from the context menu.

Viewing a List of Doors

You can view a list of Doors.

To View a List of Doors

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select either an **apC** or **iSTAR Door** from the **Hardware** pane drop-down list.
3. Click ➔▾ to open a **Dynamic View** showing **Door** objects of the same type.

NOTE In the Dynamic View, you can right-click the column header and select new columns from the list to add them to the Dynamic View. (For iSTAR Doors you can add a column that identifies the Intrusion Zone to which the Doors belong.)

If you right-click a row in the Door Dynamic View, a context menu is displayed. This menu contains a number of standard selections, as well as selections that are specific for Doors.

See **Using the Object List Context Menu** in the *C•CURE 9000 Getting Started Guide* for more information about the object context menu.

See Table 125 on Page 356 for context menu selections that are specific to Doors.

There are additional context menu selections for Advanced Door monitoring. See Advanced Door Monitoring Details on Page 427 for more information.

Table 125: Doors Context Menu Selections

Selection	Description
Lock	Opens a Manual action dialog box that lets you lock the selected Door.
Unlock	Opens a Manual action dialog box that lets you unlock the selected Door.
Momentary Unlock	Opens a Manual action dialog box that lets you momentarily unlock the selected Door.
Show Locked Causes	Opens the Cause List viewer for this Door.
Door Monitoring	Opens the Doors Monitoring Screen for the Door you selected. See Door Monitoring Screen on Page 428 for information about the Doors Monitoring screen.
Show Association	Click this menu selection to view a list of Security Objects associated with this iSTAR or apC Door. For more information, see "Showing Associations for an Object" in the *C•CURE 9000 Getting Started Guide*.
Monitor	Click this menu selection to view activity for the selected iSTAR and apC Door(s), and any Input, Output, Reader, and Trigger-with-target-Event children, on an Admin Monitor Activity Viewer. For more information, see "Monitoring an Object from the Administration Station" in the *C•CURE 9000 Getting Started Guide*.

Using Set Property to Configure Doors

You can use Set Property to quickly set a property for an iSTAR or apC Door without opening an iSTAR or apC Door editor. Set Property allows you to select multiple Doors objects in the dynamic list, and right-click to use Set Property to set a specific property for all of them.

Example:

If you wanted to change an unlock property setting for 20 apC Doors, you could select all of them listed in the dynamic list and do it in one step.

To Set a Property for a Door

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select either an **apC** or **iSTAR Door** from the **Hardware** pane drop-down list.
3. Click ➡▾ to open a **Dynamic View** showing all **Door** objects.
4. Right-click the **Door** (or set of doors) in the list for which you want to set a property and select **Set Property** from the context menu.
5. Specify the property for the **Door**. Click the Browse button to see a list of properties.

6. Enter the value for the property and click **OK**.
7. Click **OK** on the **Select a property and value for object** message box.

Add a Hardware Device to Group from a Dynamic View

When you select a Hardware device from a Dynamic View and then right-click for the context menu, **Add to group** appears as a menu selection. This function enables you to add the object(s) to a Group. For more information about the Group function see Groups Tab for Hardware Devices on Page 36.

To Add a Hardware Device To a Group

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Select a Hardware device from the Hardware pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all objects of that type.
4. Right-click on the object that you want to add to a Group and select **Add To Group**. A list of Groups is displayed.
5. Select the Group from the list, and the object is added to that group.
6. Click **OK** to confirm your choice.

apC Door Editor

The apC Door editor has the following tabs:

- apC Door General Tab on Page 359
- apC Door Readers Tab on Page 361
- apC Door Timing Tab on Page 362
- apC Door Triggers Tab on Page 362
- Groups Tab for Hardware Devices on Page 36
- apC Door Status Tab on Page 363
- apC Door Special Actions Tab on Page 363
- apC Door State Images Tab on Page 363

Configuring an apC Door

To configure a Door associated with an apC controller, first you must configure an apC panel, along with its readers, input, and outputs. For more information see apC Controller Configuration Summary on Page 299. To configure the door, perform the following tasks.

NOTE The apC and apC/L controllers have not been evaluated by UL.

To Configure the apC Door

1. In the C•CURE 9000 **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.

2. Configure the apC panel's Readers, Inputs, and Outputs.

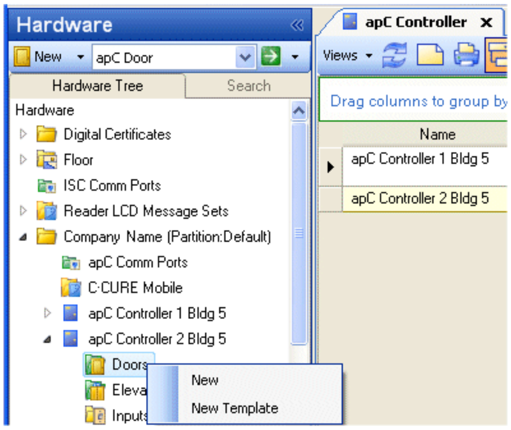
3. In the Hardware tree, find the apc **Controller** to which you want to associate the new apC Door, and click the "+" to expand the contents of that directory. A list displays that includes Doors, Elevators, Inputs, Outputs, and Readers. These objects are also directories.

   If you already have some apC doors configured, you can display all existing doors for the controller. Highlight Doors and click ➔ ▾ to open a **Dynamic View** showing all **Door** objects of this type (see Figure 120 on Page 359). Edit an existing door by double-clicking the door in the Dynamic View to open the door's editor window.

4. Highlight the **Doors** directory in the Hardware tree, right-click to display the context menu, and select **New**. A new apC Door editor displays. See apC Door - General tab, as shown in Figure 121 on Page 360.

   Another way to create the new apC door is to highlight the Controller in the Hardware tree, right click, and select **apC Door**>**New**.

Figure 120: Hardware Pane - Create an apC Door



5. Configure the door on the **General** tab and any other tabs, as needed. You will need to have already configured the apC Readers, Inputs, and Outputs to fully configure an apC door.
6. Configure remaining tabs for this door, or click **Save and Close**. The new door displays under the Doors directory in the Hardware tree.

apC Door General Tab

Configure the door on the **General** tab and other tabs, as required. You will need to have configured the apC Readers, Inputs, and Outputs to configure an apC door. Refer to the apC Controller Configuration Summary on Page 299 for further information.

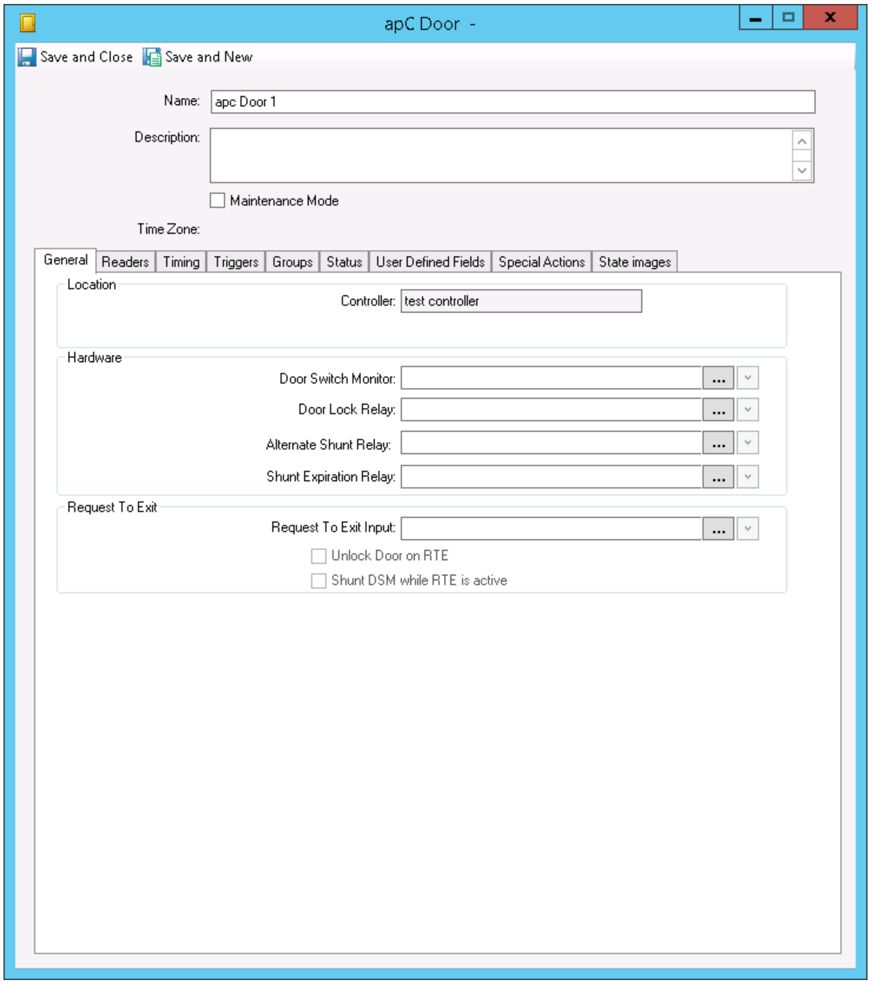
The following section documents the tasks required to configure a basic Door object for apC panel access control. The Door Reader buttons and entry fields on the Door General tab, shown in Figure 121 on Page 360, allow you to specify the card readers associated with this Door, and to configure door-specific settings for these readers.

To Configure the apC Door General Tab

1. Use the Identification box to enter a **Name** and brief **Description** (optional) of the door that you are reader.

   The Controller that you have chosen to operate the door is listed in the read-only Controller field.
2. Click ... for the **Door Switch Monitor**. When you click this button to select an input to assign to the **Door Switch Monitor**, a browser opens presenting a list of inputs available for the controller. Click an **Input** to select it and add it to the entry field (see Figure 121 on Page 360).

Figure 121: apC Door General Tab



Name: apc Door 1

Description:

□ Maintenance Mode

Time Zone:

Location

Controller: test controller

Hardware

Door Switch Monitor: ...

Door Lock Relay: ...

Alternate Shunt Relay: ...

Shunt Expiration Relay: ...

Request To Exit

Request To Exit Input: ...

□ Unlock Door on RTE

□ Shunt DSM while RTE is active

3. Click ... for the **Door Lock Relay**. When you click this button to select an output to assign to the **Door Lock Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.

4. Click ... for the **Alternate Shunt Relay**. When you click this button to select an output to assign to the **Alternate Shunt Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.

5. Click ... for the **Shunt Expiration Relay**. When you click this button to select an output to assign to the **Shunt Expiration Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.

6. Click ... for the **Request to Exit Input**. When you click this button to select an input to assign to the **Request to Exit**, a browser opens presenting a list of inputs available for the controller. Click an RTE **Input** to select it and add it to the entry field.

7. Select the **Unlock Door on RTE** check box to unlock the door at a **Request to Exit**.

8. Select the **Shunt DSM While RTE is Active** check box to **Shunt Door Switch Monitor While Request to Exit is Active**.

9. Navigate to the Readers tab, or click **Save and Close** to return to the Hardware pane.

apC Door Readers Tab

The apC Door - Readers tab allows configuration of inbound and outbound access readers and for bi-directional readers installed at apC controlled doors. All the readers on the door must be located on the same apC panel.

The Readers tab also lets you configure doors as "ordinary" or turnstile for escorted access for visitors by selecting the **Readers Are Continuously Active** check box.

To Configure the apC Door Readers Tab

1. Click ... for the **Inbound Access Reader**. When you click this button to select a reader to assign to the **Inbound Access Reader**, a browser opens presenting a list of readers available for the panel. Click a **Reader** to select it and add it to the entry field.

   When specifying an access reader, follow these guidelines:

   - Both access readers on the door must be located on the same apC panel.
   - If you are using a bi-directional reader, specify the same reader in the inbound and outbound access reader fields.

2. Click ... for the **Outbound Access Reader**. When you click this button to select a reader to assign to the **Outbound Access Reader**, a browser opens presenting a list of readers available for the controller. Click a **Reader** to select it and add it to the entry field.

3. Select the **Readers are Continuously Active** check box to enable continuous reader activity, enabling readers to read and process cards even when the doors associated with them are unlocked or open because of another card access request. This mode is typically used for turnstiles or other high traffic situations that would result in unacceptable delays if the reader went through its normal sequence of read-open-close for each cardholder.

   Example:

   Suppose a user swipes their card and unlocks a door. Before the door opens and closes, another person swipes his card. If this box is checked, the system treats the second swipe as an access request. If you leave this box cleared, the system ignores the second swipe. This feature is useful at high volume doors where you don’t want to wait for the door to close after every access.

   For escorted access for visitors to work at:

   - "Ordinary" doors — multiple person access on each access cycle — select the Readers Are Continuously Active check box.
   - "Turnstiles" (or Mantraps) — one person access only on each access cycle — clear the Readers Are Continuously Active check box.

4. Click ... to select an input for the apC Bi-directional Reader in the **Activation of the Input Determines Inbound Movement** entry field. When you click this button to select an input to assign to the inbound input, a browser opens presenting a list of inputs available for the panel. Click an **Input** to select it and add it to the entry field.

   The selected input tests for inbound movement at the apC controlled door. When this input activates within the directional link time, the system determines that the card is moving in the inbound direction. The apC panel uses this information for access control decisions.

   The inbound input must be on the same apC as the bi-directional readers on this door.

5. If the door has an inbound input defined in the **Activation of This Input Determines Inbound Movement** field, enter the time in tenths of seconds that the panel waits between card reads and input state changes to determine that the card is entering the area in the **Must Activate Within** entry field. The range for this field is from 0 to 99.99 seconds in units of 0.1 seconds.

   If the input changes state within the specified time, the panel determines that the card is moving into the inbound area.

6. Click [...] to select an input for the apC Bi-directional Reader in the **Activation of the Input Determines Outbound Movement** entry field. When you click this button to select an input to assign to the outbound input, a browser opens presenting a list of inputs available for the panel. Click an **Input** to select it and add it to the entry field.

   The selected input tests for outbound movement at the apC controlled door. When this input activates within the directional link time, the system determines that the card is moving in the outbound direction. The apC uses this information for access control.

   The outbound input must be on the same apC as the bi-directional readers on this door.

7. If the door has an outbound input defined in the **Activation of This Input Determines Outbound Movement** field, enter the time in tenths of seconds that the panel waits between card reads and input state changes to determine that the card is entering the area in the **Must Activate Within** entry field. The range for this field is from 0 to 99.99 seconds in units of 0.1 seconds.

   If the input changes state within the specified time, the panel determines that the card is moving into the outbound area.

8. Navigate to the Timing tab, or click **Save and Close** to return to the Hardware pane.

apC Door Timing Tab

A door that is controlled by an apC panel is constrained to a single set of door timing values for each side of the door. Required apC door sequences use the same set of timing values regardless of schedule. Only one alternate set of timer values is used in each door sequence. This corresponds to a personnel record configured to use **Alternate Shunt Time**.

Setting apC Door Timing

1. **Delay Relock** – Enter the number of seconds to delay door relock after the door is opened (after a request to exit, for example). The range in seconds is 0:0:0 to 0:16:39 (999 seconds); the default is 0:0:0.

2. **Shunt Time** – Enter the number of seconds that the door can remain open before a door held open alert is generated within the range of 0:0:0 to 0:16:39 (999 seconds); the default is 0:0:10 (10 seconds).

3. **Unlock Time** – Enter the number of seconds the Door remains unlocked after a valid card swipe, RTE activation, or momentary unlock within the range of 0:0:0 to 0:4:15 (255 seconds); the default is 0:0:5 (5 seconds).

4. **Alternate Shunt Time** – Enter the number of hours, minutes, and seconds the Door can remain open before a door held open alert is generated after a valid card swipe by a cardholder with the **Alternate Shunt** flag set in their personnel record. This value is used only if it is set to a greater time than the **Shunt time** value within the range of 00:00:00 (default) to 18:00:00 (18 hours).

5. **Shunt Expiration Warning Time** – If set, the Shunt expiration relay is fired regardless of the shunt time used. If set to 0 (the default), the Shunt expiration relay will only be fired if the Alternate shunt time was used. The Shunt Expiration Warning has a range of 0:0:0 to 0:4:0 (4 minutes).

6. **Door Close Debounce Time** - Setting this value to 0 indicates that there is no timer. The range is 0 - 25.5 seconds units of 0.1 seconds.

7. **Door Open Grace Time** – Also known as **Door Open Debounce Time**. Setting this value to 0 indicates that there is no timer; as soon as the door opens, door forced open is reported. The range for this field is from 0 to 25.5 seconds in units of 0.1 seconds.

8. Navigate to the Triggers tab, or click **Save and Close** to return to the Hardware pane.

apC Door Triggers Tab

You can create Triggers for apC Doors using the apC Doors Triggers tab. A Trigger executes a specified **Action** when a particular predefined condition occurs. When a Trigger is defined, the Actions available depend on the property selected

See the following for information on apC Triggers:

- Triggers Tab for apC Devices on Page 339.
- Defining a Trigger for an apC Device on Page 339.
- Removing a Trigger on Page 265

You can click **Save and Close** after configuring apC Door triggers, or navigate to the Status tab.

apC Door Status Tab

The Door Status tab provides a read-only listing of critical information about the operational status of the selected Door including:

- **Alarm State** - displays the values Normal, Forced, Held Open, or Unknown.
- **Admit Status** - displays the values Admit, Reject Admit, Duress, Admit Visitor, Reject Visitor, Request To Exit, Reject No Escort, Reject No PIN, Reject Not Time, Reject Unknown, Reject Unknown PIN, or Reject Duress.
- **Open Status** - displays the values Open, Closed, or Unknown.
- **Mode** - displays the values Locked, Unlocked, No Access, or Unknown.
- Navigate to the **State Images** tab or click **Save and Close**.

apC Door State Images Tab

The **State Images** tab on the Inputs Board provides a means to change the default images used to indicate controller states.

To Change an Image

1. Double-click the existing image.

   A **Windows Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.
2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click the new image and select **Restore Default**.
4. Click **Save and Close** to return to the **Hardware** pane.

apC Door Special Actions Tab

Use the apC Door Special Actions to configure Doors with Visitor Management and Access Management actions. You can configure a door to automatically Check-in and Check-out Visitors, and configure a door so that an access request is automatically created and sent to the C•CURE Portal when a card swipe is rejected.

For more information about Check-in and Check-out of a Visitor via Visitor Management, and access requests via Access Management and the C•CURE Portal, see the C•CURE 9000 Visitor and Access Management Guide.

To Configure a Door Action for Check-In

1. In the C•CURE 9000 Admin Client, navigate to the Door you wish to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.
4. Chose the Visitor Management Action **Check Visitors In**.

5. Select the Direction for the action to take place.
   - Choose **In** for Visitors to Check-in using an inbound reader.
   - Choose **Out** for Visitors to Check-in using an outbound reader.
   - Choose **In and Out** for Visitors to Check-in using either the inbound or outbound reader.
6. Select a Schedule for the action to be active.
7. Click **Save and Close**

To Configure a Door Action for Check-out

1. In the C•CURE 9000 Admin Client, navigate to the Door you wish to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.
4. Chose the Visitor Management Action **Check Visitors Out**.
   - Check Out Visitors and Return Badge.
5. Select the Direction for the action to take place.
   - Choose **In** for Visitors to Check-out using an inbound reader.
   - Choose **Out** for Visitors to Check-out using an outbound reader.
   - Choose **In and Out** for Visitors to Check-out using either the inbound or outbound reader.
6. Select a Schedule for the action to be active.
7. Click **Save and Close**

To Configure a Door Action for Check-out

This presumes that a Badge Return mechanism is set up at the Check-out reader.

1. In the C•CURE 9000 Admin Client, navigate to the Door you wish to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.
4. Select the **Check Visitors Out and Return Badge**.
5. Select the Direction for the action to take place.
   - Choose **In** for Visitors to Check-out and Return the Badge using an inbound reader.
   - Choose **Out** for Visitors to Check-out and Return the Badge using an outbound reader.
   - Choose **In and Out** for Visitors to Check-out and Return the Badge using either the inbound or outbound reader.
6. Select a Schedule for the action to be active.
7. Click **Save and Close**

Configuring a Door Action for Creating Access Requests

1. In the C•CURE 9000 navigation pane, navigate to the Door you want to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.

4. From the Door Action dropdown, select **Create Access Request**.
5. Select the **Direction** for the action to take place.
   - Select **In** to create an access request for an inbound reader.
   - Select **Out** to create an access request for an outbound reader.
   - Select **In and Out**to create an access request for an inbound or outbound reader.
6. Select a **Schedule** for the action to be active.
7. Select a **Clearance** to apply to the door.
8. Click **Save and Close**.

apC Door Definitions

The definitions of the various fields and buttons on the apC Door editor are given in the following tables.

apC Door General Tab Definitions

Field/Button	Description
Name	Use the Identification box to enter a name (up to 50 characters long) and brief description of the door you are configuring.
Description	A description of the door that you are configuring.
Maintenance Mode	Click to put the apC door into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	The Partition label indicates to which partition the door belongs.
Hardware	
Door Switch Monitor	Click ... for the **Door Switch Monitor**. When you click this button to select inputs to assign to the **Door Switch Monitor**, a browser opens presenting a list of inputs available for the controller. Click a **Switch** or other pre-configured **Input** to select it and add it to the entry field.
Door Lock Relay	Click ... for the **Door Lock Relay**. When you click this button to select an output to assign to the **Door Lock Relay**, a browser opens presenting a list of outputs available for the controller. Click a **Lock** or other pre-configured **Output** to select it and add it to the entry field.
Alternate Shunt Relay	Click ... for the **Alternate Shunt Relay**. When you click this button to select an input to assign to the **Alternate Shunt Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.
Shunt Expiration Relay	Click ... for the **Shunt Expiration Relay**. When you click this button to select an output to assign to the **Shunt Expiration Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.
Request to Exit	
Request to Exit Input	Click ... for the **Request to Exit Input**. When you click this button to select an input to assign to the **Request to Exit Input**, a browser opens presenting a list of inputs available for the controller. Click an **Input** to select it and add it to the entry field.
Unlock Door on RTE	Select the **Unlock Door on RTE** check box to unlock the door at a **Request to Exit**.
Shunt DSM while RTE is active	Select the **Shunt DSM While RTE is Active** check box to **Shunt Door Switch Monitor While Request to Exit is Active**.

apC Door Readers Tab Definitions

Table 126: apC Door Readers Tab Definitions

Field/Button	Description
Access Readers	
Inbound Access Reader	When you click ... to select an Inbound Access Reader, a browser opens presenting a list of readers available for the panel. Click a Reader to select it and add it to the entry field.

apC Door Readers Tab Definitions (continued)

Field/Button	Description
Outbound Access Reader	When you click ... to select an Outbound Access Reader, a browser opens presenting a list of readers available for the panel. Click a Reader to select it and add it to the entry field.
Readers are Continuously Active	Select the **Readers Are Continuously Active** check box if you want readers to read and process cards even when the doors associated with them are unlocked or open because of another card access request.
Bi-directional Readers	
Activation of the Input Determines Inbound Movement	Click ... to select an input for the apC Bi-directional Reader in the Activation of the Input Determines Inbound Movement entry field. When you click this button to select an input to assign to the inbound input, a browser opens presenting a list of inputs available for the panel. Click an **Input** to select it and add it to the entry field. The selected input tests for inbound movement at the apC controlled door. When this input activates within the directional link time, the system determines that the card is moving in the inbound direction. The apC panel uses this information for access control decisions. The inbound input must be on the same apC as the bi-directional readers on this door.
Must Activate Within	If the door has an inbound input defined in the Activation of This Input Determines Inbound Movement field, enter the time in tenths of seconds that the panel waits between card reads and input state changes to determine that the card is entering the area in the Must Activate Within entry field. The range for this field is from 0 to 99.99 seconds in units of 0.1 seconds. If the input changes state within the specified time, the panel determines that the card is moving into the inbound area.
Activation of the Input Determines Outbound Movement	Click ... to select an input for the apC Bi-directional Reader in the Activation of the Input Determines Outbound Movement entry field. When you click this button to select an input to assign to the outbound input, a browser opens presenting a list of inputs available for the panel. Click an **Input** to select it and add it to the entry field. The selected input tests for outbound movement at the apC controlled door. When this input activates within the directional link time, the system determines that the card is moving in the outbound direction. The apC uses this information for access control. The outbound input must be on the same apC as the bi-directional readers on this door.
Must Activate Within	If the door has an outbound input defined in the **Activation of This Input Determines Outbound Movement** field, enter the time in tenths of seconds that the panel waits between card reads and input state changes to determine that the card is entering the area in the **Must Activate Within** entry field. The range for this field is from 0 to 99.99 seconds in units of 0.1 seconds. If the input changes state within the specified time, the panel determines that the card is moving into the outbound area.

apC Door Timing Tab Definitions

Table 127: apC Door Timing Tab Definitions

Field/Button	Description
Timers	
Delay Relock	Type the number of seconds to delay door relock after the door is opened (after a request to exit, for example). The range in seconds is 0:0:0 to 0:16:39 (999 seconds); the default is 0:0:0.
Shunt Time	**Shunt Time** – type the number of seconds that the door can remain open before a door held open alert is generated within the range of 0:0:0 to 0:16:39 (999 seconds); the default is 0:0:10 (10 seconds).
Unlock Time	**Unlock Time** – type the number of seconds the Door remains unlocked after a valid card swipe, RTE activation, or momentary unlock within the range of 0:0:0 to 0:4:15 (255 seconds); the default is 0:0:5 (5 seconds).

apC Door Timing Tab Definitions (continued)

Field/Button	Description
Alternate Shunt Time	**Alternate Shunt Time** – type the number of hours, minutes, and seconds the Door can remain open before a door held open alert is generated after a valid card swipe by a cardholder with the **Alternate Shunt** flag set in their personnel record (This value is used only if it is set to a greater time than the **Shunt time** value) within the range of default/minimum: 0:0:0; maximum:18:0:0 (18 hours).
Shunt Expiration Warning Time	If set, the Shunt expiration relay fires regardless of the shunt time used. If set to 0 (the default), the Shunt expiration relay fires only if the Alternate shunt time is used. The Shunt Expiration Warning has a range of 0:0:0 to 0:4:0 (4 minutes).
Door Close Debounce Time	Specifies the time (in 1/10th of a second intervals) that the C•CURE 9000 ignores DSM inputs, to allow for bouncing doors. Setting this value to 0 indicates that there is no timer. The range for this field is from 0 to 25.5 seconds in units of 0.1 seconds.
Door Open Grace Time	Specifies the time (in 1/10th of a second intervals) that the C•CURE 9000 waits for an RTE, card admit, or momentary unlock signal after receiving the signal from the DSM. Setting this value to 0 indicates that there is no timer; as soon as the door opens, door forced open is reported. The range for this field is from 0 to 25.5 seconds in units of 0.1 seconds.

apC Door Triggers Tab Definitions

Table 128: apC Door Triggers Tab Definitions

Field/Button	Description
Triggers	
Add	Click **Add** in the **Triggers** tab to create a new trigger.
Remove	Click the row selector ▸, then click **Remove** to delete a trigger.
Property	Click within the **Property** column to display ..., When you select this button, the **Property** browser opens presenting properties available for the controller. Click a **Property** to select it and add it to the column.
Value	Click within the **Value** column to display a drop-down list of Values associated with the **Property** that you have selected. Click on a **Value** that you want to include as a parameter for the trigger to add it to the column.
Action	Click within the **Action** column to display a drop-down list of valid actions. Click on an **Action** that you want to include as a parameter for the trigger to add it to the column. When a **Trigger** is added, an **Action** must be configured in the Action column. This is the Action that will occur when the object's selected **Property** receives the selected **Value**. As the Action is selected, the lower pane in the Triggers box will show a corresponding entry field, or group of entry fields, specific to the selected Action. Click ... to select entries for these fields. Once the field (or group of fields) is completed, the **Details** column will show information about how the Action has been configured.
Details	Displays details concerning the security objects that are associated with the selected Action.
Schedule	Click within the **Schedule** column to display a drop-down list of pre-configured schedules. Click ... to select a **Schedule** that you want to associate with the trigger. Schedules are created in the Configuration Pane. See the *C•CURE 9000 Software Configuration Guide* for more information.

apC Door Trigger Properties

Table 129: apC Door Trigger Properties

Property	Description
Admit Status Values are: AdmitReject Duress Noticed Admit Noticed Reject	For any one of the Admit Status values (see the Value column list) you can choose one of the following Actions to create a Trigger: **Activate Event** – When this status occurs and the Schedule is Active (you can choose any Schedule). **Activate Event Outside Schedule** – An event is activated when this status occurs while the Schedule is Inactive (choose any Schedule). **Activate Output** – When this status occurs (only works with the Always Schedule). Only these three Actions are supported for Admit Status.
Alarm StateStatus Values are: Forced Held Open	1. Choose a value for the Property from the **Values** column. 2. Select an Action from the **Action** drop-down list: **Activate Event** - Select an Event to activate when this status occurs. **Activate Event Outside Schedule** - Select an Event to activate when this status occurs while the Schedule is inactive. **Activate Output** - Select an Output to activate when this status occurs. Must use the **Always** Schedule. 3. Select a Schedule by clicking in the Schedule column, then click ... to select the Schedule that you want to associate with the trigger. For example, if you chose **Forced** as an Alarm State Status for which you want to define an action, you could then select **Activate Event**. In Details, select the Event you want to activate. Then select a Schedule to determine during what time periods you want the Forced Alarm State Status to activate an Event.

apC Door Groups Tab Definitions

Table 130: apC Door Groups Tab Definitions

Field/Button	Description
Groups	
	For more information about the use of the Toolbar buttons, see Chapter 2, "Dynamic Views" in the *C•CURE 9000 Data Views Guide*
Name	This column displays the name entered for the group when it was configured. The selected door is a member of any group (s) listed in this column.
Description	This column displays the description entered for the group when it was configured.

apC Door Status Tab Definitions

Table 131: apC Door apC Status Tab Definitions

Field/Button	Description
Alarm Status	Displays the values Normal, Forced, Held Open, or Unknown.

apC Door apC Status Tab Definitions (continued)

Field/Button	Description
Admit Status	Displays the values Admit, Reject Admit, Duress, Admit Visitor, Reject Visitor, Request To Exit, Reject No Escort, Reject No PIN, Reject Not Time, Reject Unknown, Reject Unknown PIN, or Reject Duress.
Open Status	Displays the values Open, Closed, or Unknown.
Mode	Displays the values Locked, Unlocked, No Access, or Unknown.

apC Door State Images Tab Fields and Icons

Table 132: apC Door State Images Tab Definitions

Field/Button	Description		Field/Button	Description
Unknown	🚪		Locked	🚪
Forced	🚪		Unlocked	🚪
Held Open	🚪		No Access	🚪
Open	🚪		Momentary Unlock	🚪

iSTAR Door Editor

You use the iSTAR Door editor to configure iSTAR Doors.

To configure a Door associated with an iSTAR controller, first you must:

- Create an iSTAR cluster
- Create the iSTAR controller in that cluster
- Create the inputs, outputs and readers that are associated with the Door.

iSTAR Door Editor Tabs

The iSTAR Door Editor includes the following tabs:

- iSTAR Door General Tab on Page 371
- iSTAR Door Timing Tab on Page 374
- iSTAR Door Areas & Zones Tab on Page 375
- iSTAR Door Double Swipe Tab on Page 375
- iSTAR Door Conditional Access Tab on Page 378
- iSTAR Door Triggers Tab on Page 380
- Groups Tab for Hardware Devices on Page 36
- iSTAR Door Status Tab on Page 381
- iSTAR Door Monitoring Tab on Page 382
- iSTAR Door Special Actions tab on Page 382
- iSTAR Door State Images Tab on Page 382

iSTAR Door General Tab

Perform the following steps to configure a basic Door object for iSTAR Controller access control. The Door Reader buttons and entry fields on the Door dialog box General tab, shown in Figure 122 on Page 372, allow you to specify the card readers associated with this Door, and to configure door-specific settings for these readers.

NOTE

If the first Input, Output, or Reader you assign is a Schlage Wireless I/O component, a message box appears asking if you wish to auto-fill the remaining objects for the door. If you click **Yes** the remaining objects are selected automatically. This option only appears if all of the options are blank when you assign the first object. See iSTAR PIM-485 Reader I/O Tab on Page 481 for information about Schlage Wireless Reader I/O components.

Schlage Wireless I/O component Latch, Unlatch, and Toggle triggers are not displayed on the iSTAR Door editor.

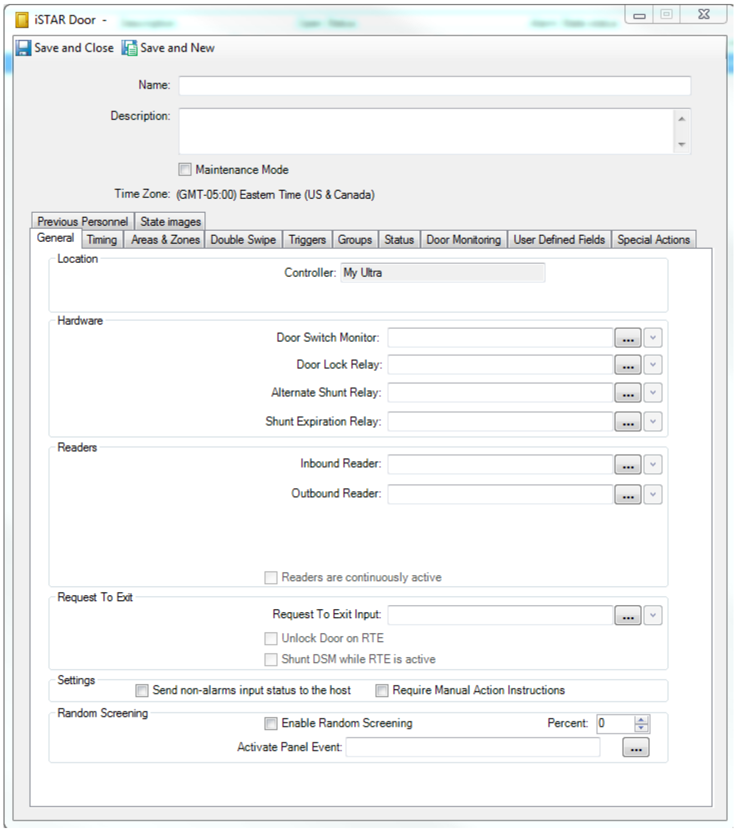
NOTE

An iSTAR Aperio Door does not have the following tabs: Areas & Zones, Double Swipe, and Door Monitoring. Also, for Aperio Doors, some of the General tab settings are unavailable because these Inputs and Outputs are integral to the reader and not user-selectable.

To Configure the iSTAR Door General Tab

1. Use the Identification box to enter a **Name** and brief **Description** (optional) of the door that you are configuring.

Figure 122: iSTAR Door General Tab



Name:

Description:

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Controller: My Ultra

Door Switch Monitor:

Door Lock Relay:

Alternate Shunt Relay:

Shunt Expiration Relay:

Inbound Reader:

Outbound Reader:

□ Readers are continuously active

Request To Exit Input:

□ Unlock Door on RTE

□ Shunt DSM while RTE is active

□ Send non-alarms input status to the host □ Require Manual Action Instructions

□ Enable Random Screening Percent: 0

Activate Panel Event:

The Controller that you have chosen to operate the door is listed in the Controller read-only field.

2. Click ... for the **Door Switch Monitor**. When you click this button to select an input to assign to the **Door Switch Monitor**, a browser opens presenting a list of inputs available for the controller. Click an **Input** to select it and add it to the entry field (see Figure 122 on Page 372).

3. Click ... for the **Door Lock Relay**. When you click this button to select an input to assign to the **Door Lock Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.

4. Click ... for the **Alternate Shunt Relay**. When you click this button to select an input to assign to the **Alternate Shunt Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.

5. Click ... for the **Shunt Expiration Relay**. When you click this button to select an output to assign to the **Shunt Expiration Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.

6. Click ... to select a reader for the **Inbound Reader**. A selection dialog box opens presenting a list of readers available for the controller. Click a reader to select it and add it to the entry field.

7. Click ... to select a reader for the **Outbound Reader**. A selection dialog box opens presenting a list of readers available for the controller. Click a reader to select it and add it to the entry field.

8. Click ... to select a reader for the **Secondary Inbound Reader**. A selection dialog box opens presenting a list of readers available for the controller. Click a reader to select it and add it to the entry field.

9. Click ... to select a reader for the **Secondary Outbound Reader**. A selection dialog box opens presenting a list of readers available for the controller. Click a reader to select it and add it to the entry field.

10. Select the **Readers are Continuously Active** check box to enable continuous reader activity, enabling readers to read and process cards even when the doors associated with them are unlocked or open because of another card access request. This mode is typically used for turnstiles or other high traffic situations that would result in unacceptable delays if the reader went through its normal sequence of read-open-close for each cardholder.

    Example:

    Suppose a user swipes their card and unlocks a door. Before the door opens and closes, another person swipes his card. If this box is checked, the system treats the second swipe as an access request. If you leave this box cleared, the system ignores the second swipe. This feature is useful at high volume doors where you don't want to wait for the door to close after every access.

    - "Ordinary" doors — multiple person access on each access cycle — select the **Readers Are Continuously Active** check box.
    - "Turnstiles" (or Mantraps) — one person access only on each access cycle — clear the **Readers Are Continuously Active** check box.

    Selecting this option for a Reader on an iSTAR Area Door permits the Area to be configured for Escorted Access in Companion mode. Leaving this option unselected causes Escorted Access to operate in Remote Escort (or Turnstile) mode.

11. Click [...] for the **Request to Exit Input**. When you click this button to select an input to assign to the **Request to Exit**, a browser opens presenting a list of inputs available for the controller. Click an **Input** to select it and add it to the entry field.

12. Select the **Unlock Door on RTE** check box to unlock the door at a **Request to Exit**.

13. Select the **Shunt DSM While RTE is Active** check box to **Shunt Door Switch Monitor While Request to Exit is Active**.

14. Select the **Send non-alarms input status to the host** check box to instruct the system to send non-alarm input status to the host.

    Leaving the check box unselected (the default setting) instructs the system not to send non-alarm input status to the host. Doing this reduces network traffic demand when expecting large volumes of non-critical activity notifications.

15. Select the **Requires Manual Action Instructions** check box to prompt the user to enter instructions whenever a momentary unlock manual action is performed. The instructions must be entered before a momentary unlock manual action can be performed. The information entered in the Instruction dialog box is displayed in the journal in the Message Text column.

16. Select the **Enable Random Screening** check box to activate the **Random Screening** feature, which rejects a selected percentage of card access requests.

    Example:

    An airport has a security entrance that passengers must go through before boarding. A selected percentage of access requests from individuals are denied for subsequent random screening. When their access request is rejected, an event is activated. This event can be associated with an output, such as a light or buzzer which notifies the guard or operator for further action. This feature is useful at high volume access points where random screening of personnel is required.

    To configure the **Percent** field, increase or decrease the percentage of card swipes randomly screened. Click [...] to associate this feature with an event. When you click this button selecting an event to associate with **Random Screening**, a browser opens presenting a list of configured events. Select an event and add it to the field.

NOTE **Random Screening** is supported on the iSTAR Ultra and Ultra SE (in Ultra Mode) with firmware version 6.5 or later.

17. Click **Save and Close** or navigate to the **Timing** tab.

iSTAR Door Timing Tab

Like the Door General tab, the layout of this tab depends upon the controller type. For an iSTAR-connected Door, Timings are configured using separate entry fields.

Setting iSTAR Door Timing

The following timers and check boxes appear on the iSTAR Door Timing tab:

1. **Delay Relock** – Type the number of seconds to delay door relock after the door is opened (after a request to exit, for example). The range in seconds is 0 to 999 seconds (0:16:39); the default is 0.
2. **Shunt Time** – Type the number of seconds that the door can remain open before a door held open alert is generated within the range of 00.00.00 to 2:46:00 (2 hours and forty-six minutes), the default is 00.00.00.
3. **Unlock Time** – Type the number of seconds the Door remains unlocked after a valid card swipe, RTE activation, or momentary unlock within the range of 0 to 255 seconds (0:4:15); the default is 5 seconds.

NOTE A value of 0 actually represents a token unlock time (300 microseconds) that can be used, for example, to unlock a turnstile so that one person may pass, but tailgating is not possible.

Also, a setting of 0 disables Momentary Unlock manual actions, so choose a non-zero Unlock Time if you need to use Momentary Unlock with this Door.

4. **Alternate Shunt Time** – Type the number of hours, minutes, and seconds the Door can remain open before a door held open alert is generated after a valid card swipe by a cardholder with the **Alternate Shunt** flag set in their personnel record (see the *C•CURE 9000 Personnel Configuration Guide*) within the range of default/minimum: 00:00:00; maximum: 18:00:00 (18 hours). This value is used only if it is set to a greater time than the **Shunt time** value.
5. **Shunt Expiration Warning Time** – If set, the Shunt expiration relay is fired regardless of the shunt time used. If set to 0 (the default), the Shunt expiration relay will only be fired if the Alternate shunt time was used. The Shunt Expiration Warning has a range of 0:0 to 15:0 (15 minutes).
6. **Door Close Debounce Time** - Setting this value to 0 indicates that there is no timer. The range is from 0 to 25.5 seconds in units of 0.1 seconds.
7. **Door Open Grace Time** – Also known as **Door Open Debounce Time**. Setting this value to 0 indicates that there is no timer; as soon as the door opens, door forced open is reported. The range is from 0 to 25.5 seconds in units of 0.1 seconds.
8. **Door Unlock Grace Time** – Specifies the time that the system waits for a door open signal after the door unlock time has expired. This timing prevents a false door forced message in situations where signals are nearly simultaneous. The range is from 0 to 100 seconds in units of 0.1 seconds.
9. **Always Use Shunt Expire Output** – If this check box is selected, the Shunt expiration relay is fired regardless of the shunt time used. If the **Shunt Expiration Warning Time** is set to 0 (the default), the Shunt expiration relay shall only be fired if the Alternate shunt time was used.
10. **Delay Relock While Door Open After Valid Access** - If access is valid, delays the relock of the door until the door closes, if this check box is selected. This differs from standard relock operations, where relock occurs when the door opens and the relock delay expires. If the door is open, the lock is energized. The C•CURE 9000 system sends an alarm when the shunt time expires.
11. **Shunt Door for full Shunt Time** - If this check box is selected, the door is shunted for the full shunt time. If selected with Delay relock while door open for valid access, the lock is energized and the door unlocked for the full shunt time, regardless of whether the door is open or closed.

iSTAR Door Areas & Zones Tab

If this Door is assigned to an iSTAR Cluster Area and/or an iSTAR Intrusion Zone, the **Areas & Zones** tab displays read-only assignment information about the Door.

If the Door is **not** assigned to either an iSTAR Cluster Area or Intrusion Zone, the relevant box is blank.

NOTE The Dynamic View for iSTAR Doors allows you to add a column that identifies the Intrusion Zone to which the Doors belong.

The **Areas & Zones** tab has the read-only fields shown in iSTAR Door Definitions on Page 385.

iSTAR Door Double Swipe Tab

In addition to the typical, single-swipe use of a card at a door's card reader, the **Double Swipe** tab of the Door editor configures a door to enable its reader to interpret a double card swipe as a means to unlock the door's lock state for an indefinite amount of time in a mode called **Toggle Mode** or configures the requirement of two separate personnel card swipes to unlock a door in a mode called **Two Person Mode**.

Toggle Mode configures a door to enable its reader to interpret a double card swipe as a means to toggle the door’s lock state until a subsequent double swipe resets the lock state. For example, this can be used when a guard double swipes their card to unlock the common area door at the beginning of the day and then double swipes at the end of the day to lock the common area door.

Two Person Mode for iSTAR Ultra hardware requires the swipe of two personnel with clearance before they can unlock a door. This mode can be configured to require personnel card swipes from two different Personnel Groups to allow entry. For instance, if an employee requires entrance into a restricted area, the door requires the swipe of the employee and a supervisor to allow entry.

NOTE

- If the door being configured is assigned a Schlage Wireless Reader, the contents of this tab are disabled because the Schlage readers do not support this feature.
- Do not configure **Toggle** mode or **Two Person** mode on a Door that is used with Antipassback, Escort, Conditional Access, Areas, Area Counting, or Intrusion Zone functionality.
- **Toggle Mode** requires iSTAR firmware version 4.3 or later for Classic, Pro, or eX.
- **Two Person Mode** requires version 6.5 or later for Ultra.
- The iSTAR Ultra SE does not support **Two Person Mode** while configured in Pro mode.
- Aperio doors do not support **Two Person Mode**.
- A Double Swipe to Lock or Unlock a door also may be configured to trigger an **Event**. This is configured on the **Triggers** tab (see Using Double Swipe to Trigger an Event on Page 380).

Table 133: Fields of the **Double Swipe** tab

Field	Description
Double Swipe Operation Mode	
None	If **None** is selected, Double Swipe is not enabled at the door. If Double Swipe is active at the door, you may turn off Double Swipe by selecting None on this tab. Normal card swipe access at the reader is still in effect, if so configured. This is the default setting.
Toggle Mode	Selecting this option enables the Double Swipe feature. This is configured in the **Permission to cardholders** section.
Two Person	This option enables entry to a door only when personnel from the selected Personnel Groups both swipe their cards. This feature is only available for the Ultra with firmware version 6.5 or later.
Permission to cardholders	
With clearance	Selecting this option enables the door to require that cardholders who use Double Swipe at the reader must have a clearance for access to this particular door configured for them in the Personnel screen, Clearances tab.
With clearance and in personnel group(s)	Selecting this option will require that cardholders who use **Toggle mode** or **Two Person mode** at the reader must have a clearance for access to this door configured for them in the **Personnel** screen, **Clearances** tab, and they also must be in the personnel group whose members have access to this door.
Personnel Group	Click ... to select a personnel group. If a group is selected for Double Swipe, each cardholder who uses Double Swipe at the reader must be a member of the selected Personnel Group. The personnel group may be configured in the Configuration pane, Group dialog box. If selecting groups for **Two Person** mode, ensure two groups are selected.
Options **NOTE**: The **Options** section is not available when configuring the **Double Swipe** tab if configuring **Two Person** mode.	
Priority (0 - 200)	Select a Priority for Double Swipe requests at the door. The default is 75. In the case of a manual action with higher priority than the priority configured for the door, the manual action takes precedence. If the door's priority is higher, the double swipe takes precedence. For two actions with the same priority, the most recent one takes precedence. **NOTE**: If you change the **Priority** setting on the **Double Swipe** tab while a double swipe cause is active for the door, that cause will be removed from the cause list, and any the double swipe action is canceled.
Double Swipe Cancellation Schedule	Click ... to select a schedule. The canceling schedule will delete any existing double swipe causes on the door at the start of the schedule. Any double swipe actions currently in effect will be canceled. **NOTE**: This field applied to **Toggle Mode** only.

Configuring Toggle Mode

Follow the steps to access the door editor in the Admin application, as described in Creating a Door on Page 353.

1. In the Door editor, select the **Double Swipe** tab and then select the **Toggle Mode** radio button.
2. In the **Permission to cardholders** section, select either **With clearance** or **With clearance and in personnel group(s)** radio button. If selecting **With clearance and in personnel group(s)**, click ... to select a personnel group.

3. If required, select a priority setting in the **Options** section. In the case of a manual action with higher priority than the priority configured for the door, the manual action takes precedence. If the door's priority is higher, the double swipe takes precedence. For two actions with the same priority, the most recent one takes precedence.
4. Click [...] to select a **Double Swipe Cancellation Schedule**.

For the Monitoring Station's Activity Viewer to display Double Swipe lock/unlock messages, the Application Layout must have an Activity Viewer pane configured to display Double Swipe messages. The Activity Viewer pane may be added, if needed, as described below.

Configuring Two Person Mode

Follow the steps to access the door editor in the Admin application, as described in Creating a Door on Page 353.

1. In the Door editor, select the **Double Swipe** tab and then select the **Two Person Mode** radio button.
2. Select the **With clearance** or **With clearance and in personnel group(s)** radio button depending on configuration. If selecting **With clearance**, the **Personnel Groups** section is unavailable.
3. In the **Personnel Groups** section, click [...] to select personnel groups. If a group is selected, each cardholder who uses this feature at the reader must be a member of the selected Personnel Group. The personnel group may be configured in the **Configuration** pane, Group dialog box.
4. Save and close the door editor.

For the Monitoring Station's Activity Viewer to display Double Swipe lock/unlock messages, the Application Layout must have an Activity Viewer pane configured to display Double Swipe messages. The Activity Viewer pane may be added, if needed, as described below.

To Edit the Application Layout for Double Swipe

1. In the Admin application, select the **Data Views** pane.
2. At the top of the pane, select **Application Layout** from the drop-down menu, and click the green arrow. In the right-hand pane, a new tab displays with a list of application layouts.
3. Select a layout to edit for Double Swipe messages, right click, and select **Edit**. The application layout screen opens.
4. To add an Activity Viewer pane, click **Add Pane**, and a new pane displays.
   a. Click and drag the Activity Viewer icon from the left side of the application layout screen to the new pane. The Activity Viewer dialog box displays.
   b. Select the Double Swipe check box to display Double Swipe messages at the Monitoring Station. If the box is clear, messages will not display at the Monitoring Station. By default, the Activity Viewer displays all these Message Types.
   c. Click **Save and Close** .
5. To edit an existing Activity Viewer pane to display Double Swipe messages at the Monitoring Station, click the **Activity Viewer tab** on the pane, right click and select **Properties**. The Activity Viewer dialog box displays.
   a. Select the Double Swipe check box to display Double Swipe messages at the Monitoring Station. If the box is clear, messages will not display at the Monitoring Station. By default, the Activity Viewer displays all these Message Types.
   b. Click **Save and Close** .

Using Double Swipe at the Door

To Use Double Swipe at a Card Reader:

Double Swipe is enabled by:

- the cardholder(s) having a clearance to the specific door

  - or -

- the cardholder(s) having a clearance to the specific door and being a member of the personnel group, if the “With clearance and in personnel group” option is selected on the Double Swipe tab.

The following steps describe how a double swipe at the card reader toggles the door lock, to lock or unlock the door.

To Unlock a Door if the Current State is Lock:

Cardholder swipes the card twice at the reader, within the shunt time.

> If the cardholder has the correct clearance set for access to the door or has the correct clearance and is in the correct personnel group, the door toggles to Unlock. The card reader displays the state of the door, and the door remains unlocked until it is locked again by another double swipe, or by other causes such as manual action, scheduled events, and so forth.
>
> If the cardholder swipes only once, a Momentary Unlock occurs for an authorized cardholder.

To Lock a Door if the Current State is Unlock:

Cardholder swipes the card twice at the reader, within the shunt time.

> If the cardholder has the correct clearance set for access to the door or has the correct clearance and is in the correct personnel group, the door toggles to Lock. The card reader displays the state of the door, and the door remains locked until it is unlocked by another double swipe, or by other causes such as manual action, scheduled events, and so forth.

For continuous card reader activity, make sure that the **Readers are Continuously Active** check box is selected in the **Readers** section of the **General** tab.

To associate Double Swipe with a trigger to cause an event, refer to Using Double Swipe to Trigger an Event on Page 380.

iSTAR Door Conditional Access Tab

The **Conditional Access** tab allows you to configure a door so that appropriately authorized Personnel can grant access to Personnel without Clearance for that Door.

This tab is available on the iSTAR Doors Editor only if the **Include Personnel Without Clearance in Personnel Downloads** option in the **Conditional Access** box is selected on the General tab of the door's iSTAR controller editor.

NOTE The Conditional Access process can only be started by Personnel Credentials rejected for having no Clearance at the door. Rejections for Lost, Stolen, Not Active, Expired, or Unknown Card or for Antipassback, Occupancy, Lockout, or PIN cause immediate rejection.

This feature is usually used on doors into iSTAR Areas where a person inside can grant entry to the Area to personnel lacking clearance, after validating their identities. (In the latter situation, it can also be used in conjunction with Dynamic Area Manager. See the Areas chapter in the *C•CURE 9000 Areas and Zones Guide*.)

Example:

> A bank has a secure area that it uses for counting cash. Two authorized employees with clearance for the entry door (Susan and Tom) have already entered the room and are working. A third employee without clearance (Martin) needs to confer with them and swipes his card at the door. Since the door is configured for Conditional Access, a Conditional Access event is activated and triggers an output inside the room, such as a flashing light or bell, to announce that someone wants to enter. Through the glass pane in the door, Susan sees that it is Martin waiting there. She pushes the button on the wall, activating a 'Conditional Access Response' event whose action opens the door. Martin enters the

room. (The iSTAR Area Status tab would show that there were currently a total of three people in the area and that one of them had been admitted conditionally.)

The **iSTAR Area Status** tab keeps track of the number of Personnel currently in the area who were admitted via Conditional Access. See the Areas chapter in the *C•CURE 9000 Areas and Zones Guide*. The **iSTAR Door Status** tab indicates whether or not Conditional Access is configured for an iSTAR door. See iSTAR Door Status Tab on Page 381.

This feature could also be used on any door to allow a guard at a Monitoring Station, with video capability to validate a person's identity, to activate the 'Conditional Access Response' event and let that person through the door.

NOTE

- Conditional Access is **only** supported on doors on iSTAR Pro, eX, Edge, and Ultra Controllers.
- The controller must also have the **Include Personnel Without Clearance in Personnel Downloads** option in the **Conditional Access** box selected on the **General** tab. (Normally credentials for personnel without clearance for any doors on the controller are **not** downloaded to the controller.)
- **Conditional Access** should **not** be configured on a door that is used with Escort or Double Swipe functionality.

See iSTAR Door Conditional Access Tab Definitions on Page 388 for definitions of the fields on the Conditional Access tab.

Configuring Conditional Access

To Configure Conditional Access for this iSTAR Door

1. Follow the steps to create/edit the iSTAR Pro, eX, Edge, or Ultra controller that this door will be on, as described in Creating an iSTAR Controller on Page 121 and in Editing an iSTAR Controller on Page 126.
2. On the **General** tab of the iSTAR Controller editor, select the **Include Personnel Without Clearance in Personnel Downloads** option in the **Conditional Access** box, as described in To Configure the iSTAR Controller General Tab on Page 149.
3. Configure the Events needed for the feature:

   a. Configure a panel event for this door's controller that will act as the Conditional Access Event on the iSTAR Door Conditional Access tab—and initiate the 'Conditional Access' process. This event should trigger an output, such as a buzzer or flashing light, that notifies appropriate personnel that someone without the requisite clearance wants to go through this door.

   b. Configure a host or panel event with the action **Allow Conditional Access Cycle** to be activated to open the door conditionally.

   For information, see the Events Chapter in the *C•CURE 9000 Software Configuration Guide*.
4. Follow the steps to access the iSTAR Door editor in the Administration application, as described in Creating a Door on Page 353, and then open the **Conditional Access** tab.
5. Click ... for **Conditional Access Schedule** to select the schedule during which Conditional Access is enabled for this door.
6. Click ... for **Conditional Access Event** to select the event that requests Conditional Access at this door for a person without Clearance. (Only panel events within this controller's cluster are available for selection.)
7. In the **Conditional Access Response Time** field, enter the number of seconds that the door will wait for the 'Allow Conditional Access Cycle' event action to open the door after the Conditional Access event entered in the preceding field has been activated. (The range is 1 - 150 seconds with a default of 10 seconds.)
8. Click **Save and Close** to save the settings and close the window, or click **Save and New** to save the settings and configure a new door.

iSTAR Door Triggers Tab

You can create Triggers for iSTAR Doors using the iSTAR Door Triggers tab. A Trigger executes a specified **Action** when a particular predefined condition occurs. When a Trigger is defined, the Actions available depend on the property selected.

See the following for information on iSTAR Triggers:

- Triggers Tab for iSTAR Devices on Page 264.
- Defining a Trigger for an iSTAR Device on Page 264.
- Removing a Trigger on Page 265

Using Double Swipe to Trigger an Event

You can create a trigger to associate Double Swipe activity with the ability to activate an event on a schedule when the door's reader receives a double-swipe to Lock or Unlock.

To Create the Trigger for an Event

1. Navigate to the **Triggers** tab.
2. Click **Add** on the **Triggers** tab to create a new trigger.
3. Click within the **Property** column to display the browse button .... A window opens, presenting the list of properties for the door.

   a. Select the **Double Swipe** Property to add it to the column.

NOTE Selecting the **Reject Limit Reached** property requires setting the System Variables iSTAR Driver "Number of Consecutive Rejects Cause Event" and "Reader Consecutive Rejects Timer". Otherwise, the default values of 0 is used. See the *C•CURE 9000 System Maintenance Guide* or "Consecutive Rejects Activate an Event" on page 430 for more information.

4. Click in the **Value** column to display the list of Values associated with the Double Swipe Property. Select either **Locked** or **Unlocked** as the value for the trigger and add it to the column. Do not select "Unknown" as a value because it is not a valid option and would be ignored.
5. Click in the **Action** column to display a drop-down list of actions. Select **Activate Event** as the action for the trigger and add it to the column. The other actions in the list are not valid for the double swipe trigger and will be ignored. The lower pane on the Triggers tab will display an event entry field that is specific to the selected Action.

   For the combination of Double Swipe Property and Locked or Unlocked Value, **Activate Event** is currently the only action supported.
6. In the **Event** field, click ... to display a list of pre-configured Events. Click on an event in the list to add it to the field. This Event will occur when the conditions of the trigger are met.

   Events may be created from the Configuration pane and "Event" in the drop-down menu on the Administration application. See the *C•CURE 9000 Software Configuration Guide* for more information.
7. Click in the **Schedule** column, then click ... to select a Schedule to associate with the trigger. Notice that when you click in the Schedule column, the details of the Event you selected display in the Details column. If the event has no description entered, the Details cell will remain empty.

   Schedules may be created from the Configuration pane and "Schedule" in the drop-down menu on the Administration application.
8. Navigate to another tab or click **Save and Close** to save the trigger, or click **Save and New** to open a new door editor.

iSTAR Door Status Tab

The Door Status tab provides a read-only listing of critical information about the operational status of the selected Door including:

- **Alarm State** - displays the values Normal, Forced, Held Open, or Unknown.
- **Open Status** - displays the values Open, Closed, or Unknown.
- **Mode** - displays the values Locked, Unlocked, No Access, or Unknown.
- **Double Swipe Lock Status** - displays the values Locked, Unlocked, or Unknown.
- **Conditional Access Mode** - displays the values True, False, or Unknown. (This field displays only if Conditional Access has been enabled by selecting the **Include Personnel Without Clearance in Personnel Downloads** option in the Conditional Access box on the **General** tab of the iSTAR Controller editor.)

Navigate to the **State Images** tab or click **Save and Close**.

iSTAR Door Monitoring Tab

The iSTAR Door Monitoring tab lets you configure Doors with additional monitoring inputs and lock sensing equipment. You can use this tab to integrate with third-party lock release inputs, such as fire and crash bar devices, that control emergency exit from C•CURE 9000 doors. For more information about Door Monitoring, see Understanding Advanced Door Monitoring on Page 395.

See Advanced Door Monitoring Definitions on Page 398 for definitions of the fields on the Door Monitoring tab.

iSTAR Door State Images Tab

The **State Images** tab provides a means to change the default images used to indicate controller states.

To Change an Image

1. Double-click the existing image.

   A **Windows Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.
2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click the new image and select **Restore Default**.
4. Click **Save and Close** to return to the **Hardware** pane.

iSTAR Door Special Actions tab

You can configure Doors with Door Actions on the iSTAR Door for the following purposes:

- To automatically Check-in and Check-out Visitors.
- To configure Doors with an Access Management action that creates an access request when a card swipe at a door is rejected.
- To pulse an Event, such as a Temporary Clearance Filter Event. See the Temporary Clearance Filter section of the *C•CURE 9000 Personnel Guide* for more information.

NOTE

- Once a special door action pulses an event, it provides information about the person who swiped the card to the event's action. This information can be used in some special actions like **Set Temporary Clearance Filter** or **Revert Temporary Clearance Filter**.
- A Door can have more than one Special Door Action.

For more information about Check-in and Check-out of Visitor via Visitor Management, and Access Requests via Access Management, see the *C•CURE 9000 Visitor and Access Management Guide*.

Configuring a Door Action for Check-In

1. In the C•CURE 9000 Administration Station, navigate to the Door you wish to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.
4. From the **Door Action** drop-down list, select **Check Visitors In**.
5. Select the **Direction** for the action to take place.
   - Choose **In** for Visitors to Check-in using an inbound reader.
   - Choose **Out** for Visitors to Check-in using an outbound reader.
   - Choose **In and Out** for Visitors to Check-in using either the inbound or outbound reader.

6. Select a **Schedule** for the action to be active.
7. Click **Save and Close**.

Configuring a Door Action for Check-out

1. In the C•CURE 9000 Administration Station, navigate to the Door you wish to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.
4. From the **Door Action** drop-down list, select **Check Visitors Out**.
   - Check Out Visitors and Return Badge.
5. Select the **Direction** for the action to take place.
   - Choose **In** for Visitors to Check-out using an inbound reader.
   - Choose **Out** for Visitors to Check-out using an outbound reader.
   - Choose **In and Out** for Visitors to Check-out using either the inbound or outbound reader.
6. Select a **Schedule** for the action to be active.
7. Click **Save and Close**.

Configuring a Door Action for Creating Access Requests

1. In the C•CURE 9000 navigation pane, navigate to the Door you want to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.
4. From the Door Action dropdown, select **Create Access Request**.
5. Select the **Direction** for the action to take place.
   - Select **In** to create an access request for an inbound reader.
   - Select **Out** to create an access request for an outbound reader.
   - Select **In and Out**to create an access request for an inbound or outbound reader.
6. Select a **Schedule** for the action to be active.
7. From the bottom of the window, select a **Clearance** to be requested for a person after the person swipes the card at the door and gets rejected (access request is a subject for approval by the clearance owner). The Clearance selection control is only visible after the user selects a particular **Creating Access Request** Door Action in the grid.
8. Click **Save and Close**.

Configuring a Door Action for Pulse Event

1. In the C•CURE 9000 navigation pane, navigate to the Door you want to configure.
2. Click the **Special Actions** tab.
3. Click **Add Action**.
4. From the Door Action dropdown, select **Pulse Event**.
5. Select the **Direction** for the action to take place.
   - Select **In** for pulsing the event for an inbound reader.

- Select **Out** for pulsing the event for an outbound reader.
- Select **In and Out** for pulsing the event for an inbound or outbound reader. Use this option if the door has only one reader configured, so the application can avoid checking the direction of the Card Admitted messages.

6. Select a **Schedule** for the action to be active.
7. From the **Event** field at the bottom of the window, select an Event to be pulsed when a person swipes their card at the door and gets admitted. The field is only visible after the user selects a particular **Pulse Event** Door Action in the grid.

iSTAR Door Definitions

The fields and buttons are described in Table 134.

Table 134: iSTAR Door General Tab Definitions

Field/Button	Description
Name	Use the Identification box to enter a name (up to 100 characters long) and brief description of the door you are configuring.
Description	A description of the door that you are configuring.
Maintenance Mode	Click to put the iSTAR door into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Location	
Controller	This read-only field displays the iSTAR Controller that is connected to the Door.
Hardware	
Door Switch Monitor	Click ... for the **Door Switch Monitor**. When you click this button to select an input to assign to the **Door Switch Monitor**, a browser opens presenting a list of inputs available for the controller. Click an **Input** to select it and add it to the entry field.
Door Lock Relay	Click ... for the **Door Lock Relay**. When you click this button to select an input to assign to the **Door Lock Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.
Alternate Shunt Relay	Click ... for the **Alternate Shunt Relay**. When you click this button to select an output to assign to the **Alternate Shunt Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field. Timing for this output is set on the iSTAR Door Timing Tab on Page 374. Cardholders with the Alternate Shunt ADA setting enabled on the Personnel General tab (See the *C•CURE 9000 Personnel Configuration Guide*) are granted the additional Alternate Shunt time before a door held alarm is generated.
Shunt Expiration Relay	Click ... for the **Shunt Expiration Relay**. When you click this button to select an output to assign to the **Shunt Expiration Relay**, a browser opens presenting a list of outputs available for the controller. Click an **Output** to select it and add it to the entry field.
Readers	
Entrance Reader	Click ... for the **Entrance Reader**. When you click this button to select a reader to assign to the **Entrance Reader**, a browser opens presenting a list of readers available for the controller. Click a **Reader** to select it and add it to the entry field.
Exit Reader	Click ... for the **Exit Reader**. When you click this button to select a reader to assign to the **Exit Reader**, a browser opens presenting a list of readers available for the controller. Click a **Reader** to select it and add it to the entry field.
Readers are Continuously Active	Select the **Readers are Continuously Active** check box to enable continuous reader activity. Selecting this option for a Reader on an iSTAR Area Door permits the Area to be configured for **Companion** mode Escorted Access. Leaving this option unselected causes Escorted Access to operate in **Remote Escort** (or **Turnstile**) mode.
Request to Exit	
Request to Exit	Click ... for the **Request to Exit**. When you click this button to select an input to assign to the **Request to Exit**, a browser opens presenting a list of inputs available for the controller. Click an **Input** to select it and add it to the entry field.
Unlock Door on RTE	Select the **Unlock Door on RTE** check box to unlock the door at a **Request to Exit**.
Shunt DSM While RTE is Active	Select the **Shunt DSM While RTE is Active** check box to **Shunt Door Switch Monitor While Request to Exit is Active**.

iSTAR Door Timing Tab Definitions

Table 135: iSTAR Door Timing Tab Definitions

Field/Button	Description
Timers	
Delay Relock	Type the number of seconds to delay door relock after the door is opened (after a request to exit, for example). The range in seconds is 0:0:0 to 0:16:39 (999 seconds); the default is 0:0:0.
Shunt Time	**Shunt Time** – type the number of seconds that the door can remain open before a door held open alert is generated within the range of 0:0:0 to 2:46:00 (9999 seconds); the default is 0:0:10 (10 seconds).
Unlock Time	**Unlock Time** – type the number of seconds the Door remains unlocked after a valid card swipe, RTE activation, or momentary unlock within the range of 0:0:0 to 0:4:15 (255 seconds); the default is 0:0:5 (5 seconds).
Alternate Shunt Time	**Alternate Shunt Time** – type the number of hours, minutes, and seconds the Door can remain open before a door held open alert is generated after a valid card swipe by a cardholder with the **Alternate Shunt** flag set in their personnel record (This value is used only if it is set to a greater time than the **Shunt time** value) within the range of default/minimum: 0:0:0; maximum:18:0:0 (18 hours).
Shunt Expiration Warning Time	If set, the Shunt expiration relay fires regardless of the shunt time used. If set to 0 (the default), the Shunt expiration relay fires only if the Alternate shunt time is used. The Shunt Expiration Warning has a range of 0:0:0 to 0:15:0 (15 minutes).
Door Close Debounce Time	Specifies the time (in 1/10th of a second intervals) that the C•CURE 9000 ignores DSM inputs, to allow for bouncing doors. Setting this value to 0 indicates that there is no timer. The range is 0 - 25.5 seconds.
Door Open Grace Time	Specifies the time (in 1/10th of a second intervals) that the C•CURE 9000 waits for an RTE, card admit, or momentary unlock signal after receiving the signal from the DSM. Setting this value to 0 indicates that there is no timer; as soon as the door opens, door forced open is reported. The range is 0 - 25.5 seconds.
Door Unlock Grace Time	Specifies the time (in 1/10th of a second intervals) that the C•CURE 9000 waits for a door open signal after the door unlock time has expired. This timing prevents a false door forced message in situations where signals are nearly simultaneous. The range is 0 - 100 seconds.
Options	
Always Use Shunt Expire Output	if this option is selected, the Shunt expiration relay is fired regardless of the shunt time used. If the **Shunt Expiration Warning Time** is set to 0 (the default), the Shunt expiration relay shall only be fired if the Alternate shunt time was used.
Delay Relock While Door Open After Valid Access	If access is valid, delays the relock of the door until the door closes, if this check box is selected. This differs from standard relock operations, where relock occurs when the door opens and the relock delay expires If the door is open, the lock is energized. The C•CURE 9000 sends an alarm when the shunt time expires.
Shunt Door for full Shunt Time	If this option is selected, the door is shunted for the full shunt time. If selected with Delay relock while door open for valid access, the lock is energized and the door unlocked for the full shunt time, regardless of whether the door is open or closed.

iSTAR Door Areas and ZonesTab Definitions

Table 136: iSTAR Door Areas & Zones Tab Fields

Box/Fields	Description
Areas	
Entry Area	Name of Area to which this Door is an ‘Access In’ Door.
Exit Area	Name of Area to which this Door is an ‘Access Out’ Door.
Intrusion Zones	
Intrusion Zone	Name of iSTAR Intrusion Zone this Door is assigned to
Zone Direction	**I n** indicates that this Door is assigned as an **Entrance Door** for the Intrusion Zone. **Out** indicates that this Door is assigned as an **Exit Door** for the Intrusion Zone.
Display Name	Displays the name you entered for this Door on the iSTAR Intrusion Zones Editor General tab.

iSTAR Door Double Swipe Tab Definitions

Table 137: iSTAR Door Double Swipe tab definitions

Field/Button	**Description**
Permission to Cardholders	
None	If this option is selected, Double Swipe is not enabled at the door. If Double Swipe is active at the door, you may turn off Double Swipe by selecting None on this tab. Normal card swipe access at the reader is still in effect, if so configured.
With clearance	Selecting this option will enable the door to require that a cardholder who uses Double Swipe also has Double Swipe clearance configured for them in the Personnel screen, Clearances tab.
With clearance and in personnel group	Selecting this option will require that a cardholder who uses Double Swipe at the reader have a Double Swipe clearance set and also be in the personnel group that may be selected in the next fields
Personnel group	Click ... to select a personnel group whose members may be admitted on Double Swipe as long as each member has the proper clearance set for them in the Personnel screen, Clearances tab.
Options	
Priority	Select a priority (from 0 - 200) for Double Swipe requests at the door. In the case of a manual action with higher priority than the priority configured for the door, the manual action takes precedence. If the door’s priority is higher, the double swipe takes precedence. For two actions with the same priority, the most recent one takes precedence.
Double Swipe Cancellation Schedule	Click ... to select a schedule. The canceling schedule will delete any existing double swipe causes on the door at the start of the time spec. Any double swipe actions currently in effect will be canceled.

iSTAR Door Conditional Access Tab Definitions

Table 138: iSTAR Conditional Access Tab Definitions

Field/Button	Description
Conditional Access Schedule	Click ... to select the schedule during which the door is 'Conditional Access-enabled'. This can be any schedule in the same time zone as the controller. The **iSTAR Door Status** tab will indicate whether Conditional Access is enabled or not.
Conditional Access Event	Click ... to select the event that requests 'Conditional Access' at this door for a person without Clearance. Only panel events within this controller's cluster are available for selection. This event **cannot** be the same one that targets this door with the 'Allow Conditional Access Cycle' action—lets the person through the door.
Conditional Access Response Time	Specifies the time (in seconds) that the door waits for an 'Allow Conditional Access Cycle' event action in response to the activation of the Conditional Access event. The range is 1 - 150 seconds with a default of 10 seconds.
NOTE: You can choose to display columns on the **iSTAR Door Dynamic View** that indicate for a given door: • Whether or not Conditional Access is enabled. • The selected Conditional Access schedule, event, and response (delay) time.	

iSTAR Door Triggers Tab Definitions

Table 139: iSTAR Door Triggers Tab Definitions

Field/Button	Description
Triggers	
Add	Click **Add** in the **Triggers** tab to create a new trigger.
Remove	Click the row selector ▶, then click **Remove** to delete a trigger.
Property	Click within the **Property** column to display ..., When you select this button, the **Property** browser opens presenting properties available for the controller. Click a **Property** to select it and add it to the column.
Value	Click within the **Value** column to display a drop-down list of Values associated with the **Property** that you have selected. Click on a **Value** that you want to include as a parameter for the trigger to add it to the column.
Action	Click within the **Action** column to display a drop-down list of valid actions. Click on an **Action** that you want to include as a parameter for the trigger to add it to the column. When a **Trigger** is added, an **Action** must be configured in the Action column. This is the Action that will occur when the object's selected **Property** receives the selected **Value**. As the Action is selected, the lower pane in the Triggers box will show a corresponding entry field, or group of entry fields, specific to the selected Action. Click ... to select entries for these fields. Once the field (or group of fields) is completed, the **Details** column will show information about how the Action has been configured.
Details	Displays details concerning the security objects that are associated with the selected Action.
Schedule	Click within the **Schedule** column, then click ... to select a **Schedule** that you want to associate with the trigger. Schedules are created in the Configuration Pane. See the *C•CURE 9000 Software Configuration Guide* for more information.

iSTAR Triggers Properties

Table 140: iSTAR Triggers Properties

Property	Description
Admit Status Admit Admit Visitor Reject Visitor Reject Duress Noticed Admit Noticed Reject Pre-Admit	For any one of the **Admit Status**, **Mode Status**, or **Open Status** values (see the Value column drop-down list) you can choose one of the following Actions to create a Trigger: **Activate Event** – When this status occurs and the Schedule is Active (you can choose any Schedule). You must set a **Minimum Activation Time** in the Event or the actions in the Event will not activate. **Activate Event Outside Schedule** – An event is activated when this status occurs while the Schedule is Inactive (choose any Schedule). **Activate Output** – Activate an Output when this status occurs (only works with the **Always** Schedule). **Pre-Admit** status is a special case used to activate a panel Event on a card swipe before the door is opened. It is used with the Activate Event action to activate an Event that can, for example, change the state of an output on the iSTAR panel.
Mode Status Unlocked Locked No Access Momentary Unlock	
Open Status Open Closed	
Double Swipe Status Locked Unlocked	For any one of the **Double-Swipe Status** values (see the Value column drop-down list) you can choose one of the following Actions to create a Trigger: **Activate Event** – When this status occurs and the Schedule is Active (you can choose any Schedule). You must set a **Minimum Activation Time** in the Event or the actions in the Event will not activate. **Activate Event Outside Schedule** – An event is activated when this status occurs while the Schedule is Inactive (choose any Schedule).
Alarm State Status Normal Forced Held Open	1. Choose a value for the Property from the Values column. 2. Select an Action from the Action drop-down list. See iSTAR Trigger Actions in Table 141 on Page 390. 3. Select a Schedule by clicking in the Schedule column, then click to select the Schedule that you want to associate with the trigger. For example, if you chose **Forced** as an Alarm State Status for which you want to define an action, you could then select **CCTV Action** if you wanted to send a command to a CCTV Switch, then in Details, select the Switch and the Command (such as **Call Up Camera**) that you wanted to activate when a Forced status occurred.

iSTAR Triggers Actions

Table 141: iSTAR Triggers Actions

Action	Description
Activate Event	Select an Event to activate when this status occurs
Activate Event Outside Schedule	Select an Event to activate when this status occurs while the Schedule is inactive.
Activate Output	Select an Output to activate when this status occurs. Must use the **Always** Schedule.
Arm Event	Select an Event to arm. An armed Event can be activated; a disarmed Event cannot be activated.
Arm Input	Select an Input to arm. An armed Input can be activated. A disarmed Input cannot be activated.
CCTV Action	Select a CCTV Action to perform by choosing a CCTV Switch and Command from the Details area, and filling in one or more Values for the Command's parameters.
Control Access	Select an Elevator Button which you want the Action to set for controlled access, turning on security restrictions on the use of this button.
Deactivate Event	Select an Event to be deactivated. If the Event is Active when this action occurs, the action deactivates the Event.
Deactivate Output	Select an Output to be deactivated. If the Output is Active when this action occurs, the action deactivates the Output.
Disable Keypad Commands	Disable Keypad Commands on the iSTAR Reader you select in **Details**.
Disable PIN	Set the Reader you select to no longer require that a cardholder perform a card swipe, then enter a PIN to be granted access.
Disarm Event	Select an Event to disarm. A disarmed Event cannot be activated; an Event must be armed to be activated.
Disarm Input	Select an Input to disarm. A disarmed Input cannot be activated; an Input must be armed to be activated.
Enable Keypad Commands	Set the Reader you select to accept Keypad Commands on the reader.
Enable PIN	Set the Reader you select to require that a cardholder perform a card swipe, then enter a PIN to be granted access.
Latch Event	Select an Event to activate when a Schlage Wireless Lock latch is active.
Lock Door	Select a Door to Lock from the Door field in the Details area.
Momentary Unlock Door	Select a Door to Momentarily Unlock from the Door field in the Details area.
Pulse Output	Select an Output to activate for the duration specified in the Output's Pulse Duration field.

Table 141: iSTAR Triggers Actions (continued)

Action	Description
Secure Door	Select a Door that you want to secure. A secure Door cannot be unlocked; this action disarms the reader associated with the Door.
Send Email	Send an email message to the email address specified in the Details area Recipient **Email Address** field. You can designate an Event to activate if the email attempt fails. You can click the Message tab to type the text of the message and optionally choose to send the date, time, and name of the Event triggered. For Send Email to work, you must configure the E**mail Server** and the **Sender Email Address** in **Options & Tools>System Variables** in the Customer Support area.
Toggle Event	Select an Event to toggle when a Schlage Wireless Lock latch is operated.
Uncontrol Access	Select an Elevator Button which you want the Action to set for uncontrolled access, turning off security restrictions on the use of this button.
Unlatch Event	Select an Event to activate when a Schlage Wireless Lock latch is inactive (unlatched).
Unlock Door	Select a Door to unlock from the Door field in the Details area.
Video Camera Action	Select a Video Camera Action to perform by choosing a Video Server and Camera from the Details area Camera tab, and choosing one of the following Action Types. • **Record Camera** lets you set a Pre Alarm Time and Post Alarm Time for retrieving recorded video. • **Camera Preset Command** allows you to designate a Camera Preset to activate when this action is triggered. • **Camera Pattern Command** lets you designate a Camera Pattern to activate when this action is triggered. • **Save clip** creates and saves a video clip. For more information, refer to the *Clip Management* section of the *C•CURE Monitoring Station Guide*.

iSTAR Door Groups Tab Definitions

Table 142: iSTAR Door Groups Tab Definitions

Field/Button	Description
Groups	
	For more information about the use of the Toolbar buttons, see Chapter 2, “Dynamic Views” in the *C•CURE 9000 Data Views Guide*
Name	This column displays the name entered for the group when it was configured. The selected door is a member of any group (s) listed in this column.
Description	This column displays the description entered for the group when it was configured.

iSTAR Door Status Tab Definitions:

Table 143: iSTAR Door Status Tab Definitions

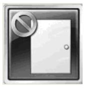
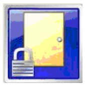
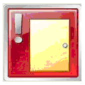
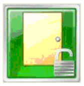
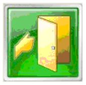
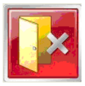
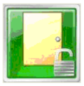
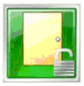
Field/Button	Description
Alarm State	Displays the values Normal, Forced, Held Open, or Unknown.

Table 143: iSTAR Door Status Tab Definitions (continued)

Field/Button	Description
Open Status	Displays the values Open, Closed, or Unknown.
Mode	Displays the values Locked, Unlocked, No Access, or Unknown.
Double Swipe Lock Status	Indicates the current status of a door configured for Double Swipe access: Locked, Unlocked, or Unknown. If the door is not configured for double swipe access, the field displays Unknown.
Conditional Access Mode	Displays the values True, False, or Unknown.

iSTAR Door State Images Tab Definitions:

Table 144: iSTAR Door State Images Tab Definitions

Field/Button	Description		Field/Button	Description
Unknown			Locked	
Forced			Unlocked	
Held Open			No Access	
Open			Momentary Unlock	

iSTAR Aperio Door Editor

You use the iSTAR Aperio Door editor to configure iSTAR Aperio Doors.

iSTAR Aperio Doors are created automatically when you configure and enable an iSTAR Aperio Reader (see iSTAR Aperio Reader Editor on Page 484). You cannot manually create an iSTAR Aperio Door.

If you delete an iSTAR Aperio Door, the iSTAR Aperio Reader associated with the door is also deleted.

NOTE

iSTAR Aperio Doors do not support manual actions for Lock, Unlock, and Momentary Unlock.

You cannot create Door Groups that combine iSTAR Aperio Doors with other types of iSTAR Doors.

The iSTAR Aperio Door Editor includes the following tabs:

- iSTAR Door General Tab on Page 371
- iSTAR Door Timing Tab on Page 374
- iSTAR Door Triggers Tab on Page 380
- Groups Tab for Hardware Devices on Page 36
- iSTAR Door Status Tab on Page 381
- iSTAR Door Special Actions tab on Page 382
- iSTAR Door State Images Tab on Page 382

11

Configuring Advanced Door Monitoring

This chapter explains the concepts of Advanced Door monitoring, and also includes the procedures that are used to create various types of monitored doors.

In this chapter

Understanding Advanced Door Monitoring 395
Hardware Requirements 397
Advanced Door Monitoring Definitions 398
Advanced Door Monitoring Components 400
Advanced Door Monitoring Configurations 404
Configuration Overview 410
Configuring an Advanced Door 411
Understanding Timing 418
Monitoring Door Activity 422
Understanding Door Alarms 423
Advanced Door Monitoring Details 427
Door Monitoring Screen 428
Consecutive Rejects Activate an Event 430

Understanding Advanced Door Monitoring

Advanced Doors are C•CURE 9000 doors that provide increased security for sites with complex requirements, like airports or hospitals. Standard Doors use the Door State Monitor (DSM) to monitor for Admit Used, Admit Unused, Door Forced and Door Held.

Advanced Doors support additional monitoring inputs and lock sensing equipment. Advanced Doors also integrate with third-party lock release inputs, such as fire and crash bar devices, that control emergency exit from C•CURE 9000 doors.

Features

Use Advanced Door Monitoring to configure:

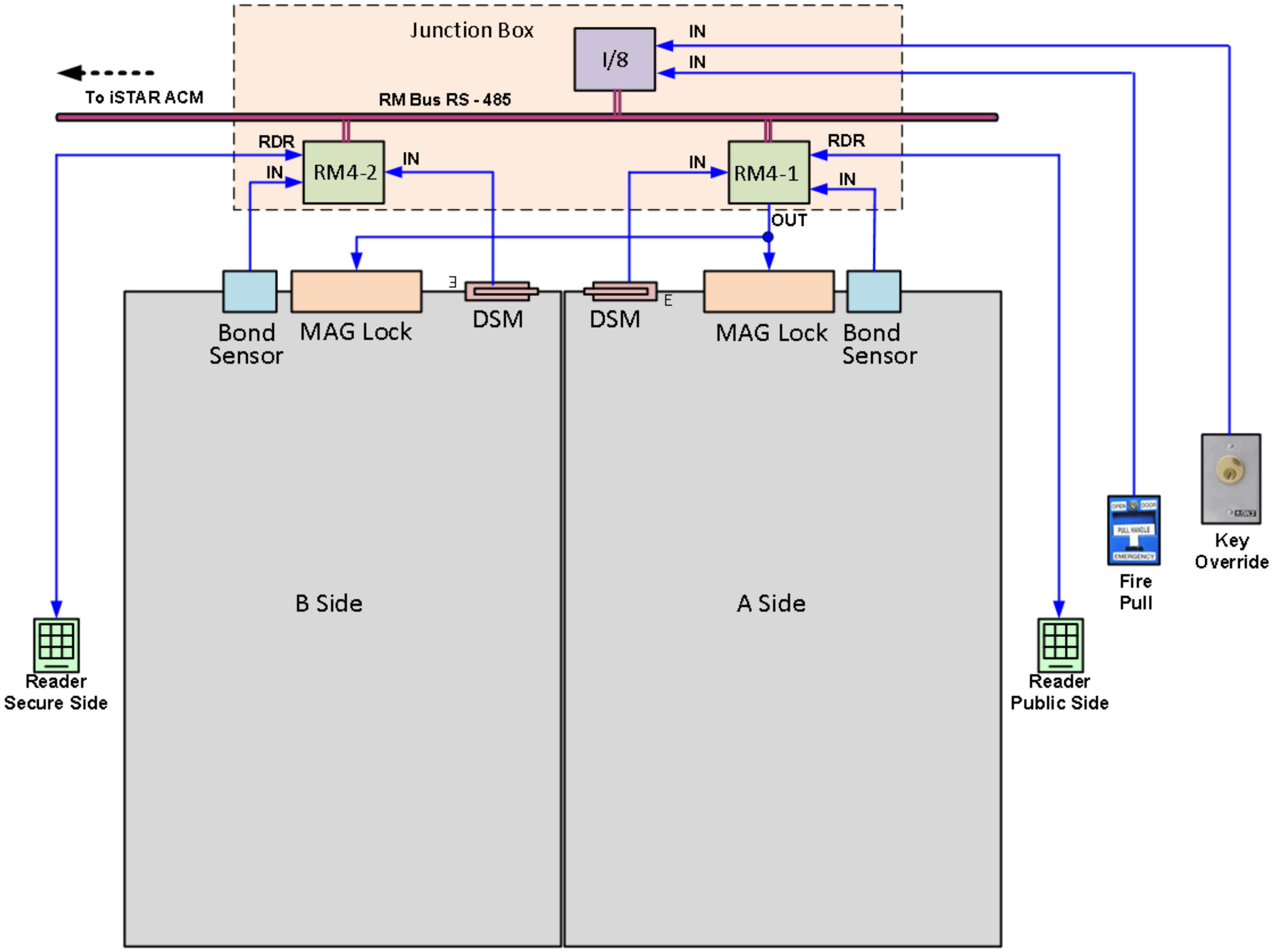
- Multiple inputs – Advanced Doors provide up to 16 inputs, 14 more than on a standard door configuration.
- More complex door configurations – including single- and double-leaf doors with multiple DSM or Request To Exit (RTE) inputs.
- Lock sensing devices – to monitor locking on magnetic bonds, bolts, and cams.
- Integrated lock releases – to integrate door unlocking with fire, crash bar, power fail, and key switch inputs.
- Special events and actions – to create keypad commands that lock, unlock, and secure doors for a specific time period.
- Alarm Suppression and RTE control on a per door basis.
- Enhanced Shunt control.
- Grace and change timing options – to fine tune C•CURE 9000 timing to avoid the effects of ‘door bounce’ and to correct other door timing situations at the site.
- Journal reports and Monitor Station activities – to manage the system and monitor door activity.
- Additional Event Actions related to Advanced Doors.

Example:

Figure 123 on Page 396 shows a double-leaf Advanced Door, configured into A and B sides. Each side contains a maglock, bond sensor, and DSM input that connects to RM4 modules in a nearby junction box. Access on the public side of the door is controlled using the public-side read head. This read head is also configured to accept keypad commands that allow personnel to lock and unlock the door for specific time intervals. Exit from the secure side of the door is controlled by the secure-side read head.

Locks can be released for fire alarm, crash bar, power failure, or manual key switch. Inputs from the fire pull and key switch over-ride are shown connected to an I/8 board in the local junction box.

Figure 123: Typical Advanced Door Configuration



Hardware Requirements

The following guidelines apply to Advanced Doors:

- Advanced Door monitoring is available only on iSTAR configurations.
- Advanced Door inputs can be any mix of lock sensors, lock releases, or DSM or RTE connections.
- Each Advanced Door supports up to 16 input connections. However, the number of available inputs per door is limited by the number of doors in the configuration and the input capacity of the fully loaded iSTAR controller.
- All Door components, Readers, Inputs, and Outputs, must reside on the same Controller. The table below shows that some controllers may not have enough Inputs for the maximum configuration. In actual practice, these limits will rarely, if ever, be reached.,

Table 145: Maximum Inputs per iSTAR

Controller	Max Doors	Max Advanced Door Inputs	Max Inputs on Controller	Result
iSTAR Ultra	16	16 x 16 = 256	336	Adequate Inputs
iSTAR Pro	16	16 x 16 = 256	192	- 64 Inputs
iSTAR eX 8 Door	8	8 x 16 = 128	96	- 32 Inputs
iSTAR eX 4 Door	4	4 x 16 = 64	88	Adequate Inputs
iSTAR Edge 4 Door	4	4 x 16 = 64	64	Adequate Inputs
iSTAR Edge 2 Door	2	2 x 16 = 32	32	Adequate Inputs
iSTAR Edge 1 Door	1	1 x 16 = 16	4	- 12 Inputs

- Advanced Doors support the same number and types of outputs as standard doors—which are as follows:
  - Door Latch Relay (1)
  - Alternate Shunt (ADA) Relay (1)
  - Shunt Expiration warning Relay (1)

Advanced Door Monitoring Definitions

New Definitions, Acronyms, and Abbreviations

- **Lock Sensor** - An input that monitors the state of the lock on a door. This is not the same as the Door Switch Monitor (DSM) that monitors whether the door is physically open or closed.
  - **Bond Sensor** - A type of lock sensor input that monitors the condition of a magnetic lock on door. A normal bond sensor input will be active when the door is unlocked (meaning that the door latch relay is active), regardless of whether the door is open or closed, but will also be active when the door is open, regardless of whether the door is unlocked or not unlocked. In other words, it should be active when the door is unlocked and/or when the door is open. The bond sensor should not be active when the door is closed and locked.
  - **Cam Detector** - A type of lock sensor input that monitors the condition of the cam on an electric strike on a door. A normal cam detector input will be active when the door is unlocked. The Cam detector should not be active when the door is locked.
  - **Latch Bolt Detector** - A type of lock sensor input that monitors the condition of a latch bolt on an electric strike on a door. A normal latch bolt will be active or inactive while the door is unlocked, and will be active when the door is open. The latch bolt should not be active when the door is closed and locked.
- **Lock Release Device** - A external device that may unlock a door that is also controlled by the access control system. Indication that the lock release device is active will be supplied through an input.
  - **Fire Alarm Lock Release** - An input that indicates that the fire alarm system has unlocked the door.
  - **Crash Bar Lock Release** - An input that indicates that the door has been unlocked by local crash bar / panic hardware.
  - **Key Switch Lock Release** - An input that indicates that the door has been unlocked by local key switch override.
  - **Power Fail Lock Release** - An input that indicates that the door has been unlocked by a lock release device because of power fail.

Lock Sensor States

Table 146 on Page 398 indicates operational differences in the Lock Sensors.

0 = False or Not Active

1 = True or Active

Table 146: Lock Sensor States

Door and Lock State	DSM	Bond Sensor	Cam Detector	Latch Bolt Detector
1. Door Closed and Locked	0	0	0	0
2. Door Closed and Unlocked	0	1	1	1
3. Door Open and Unlocked	1	1	1	1
4. Door Open and Locked	1	1	0	1

1. When the door is Closed and Locked, none of the sensors are active.
2. When the door is Closed and Unlocked, all of the sensors are active except for the DSM because the Door is still closed.
3. When the door is Open and Unlocked, all of the sensors are active including the DSM because the Door is now open.
4. When the door is Open and Locked, all of the sensors are active except for the Cam Detector because the Door is Locked.

In this case, the Latch Bolt Detector is active because the door is Locked. When the Latch Bolt Detector is active, along with the door being open, there is a possibility of damaging the door frame. The Latch Bolt lock is like a dead bolt in that the bolt is extended when the door is locked.

Advanced Door Monitoring Components

In addition to standard door components, Advanced Doors support:

- Lock sensor devices
- Lock release devices
- Alarms based on lock sensor, lock release, and multiple DSM inputs to the C•CURE 9000
- Expanded Door Triggers
- Expanded Event Actions

Lock Sensor Devices

A **lock sensing device** monitors the state of a door lock.

Table 147 on Page 400 shows the types of lock sensing devices that can be configured on an Advanced Door.

Table 147: Lock Sensing Devices

Lock Sensing Device	Function
Bond sensor	Monitors the condition of a magnetic lock on a door.
Cam detector	Monitors the condition of the cam on an electric strike on a door.
Latch bolt detector	Monitors the condition of a latch bolt on an electric strike on a door.

Lock Release Devices

A **lock release device** is a third-party device that controls door unlock activities. Lock release devices operate independently from C•CURE 9000 and function even if the C•CURE system is not running.

To inter-operate, the lock release device has an output, called a lock release input, that is input to the C•CURE 9000. The C•CURE 9000 uses the lock release input to:

- Monitor the lock release activities on a door
- Monitor lock sensor activity
- Decide if an open door is reported as door forced open, door open, or door open by one of the lock release inputs.

Table 148 on Page 400 and Figure 124 on Page 401 show the types of lock release devices that can be configured on an Advanced Door.

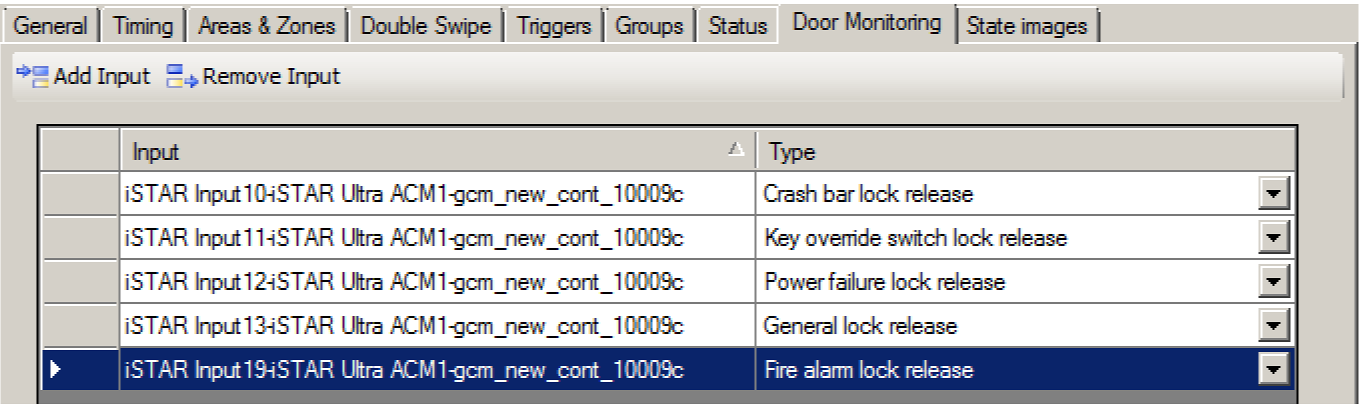
Table 148: Lock Release Devices

Lock Release Device	Function
Crash bar lock release	Input to C•CURE 9000 from crash bar or panic hardware
Key override switch lock release	Input to C•CURE 9000 from a key override switch
Power failure lock release	Input to C•CURE 9000 from power fail hardware

Lock Release Devices (continued)

Lock Release Device	Function
General Lock Release	Input to C•CURE 9000 from a Fire Alarm System or iSTAR.
Fire alarm lock release	Input to C•CURE 9000 from a Fire Alarm System

Figure 124: Lock Release Devices in the Door Monitoring Tab

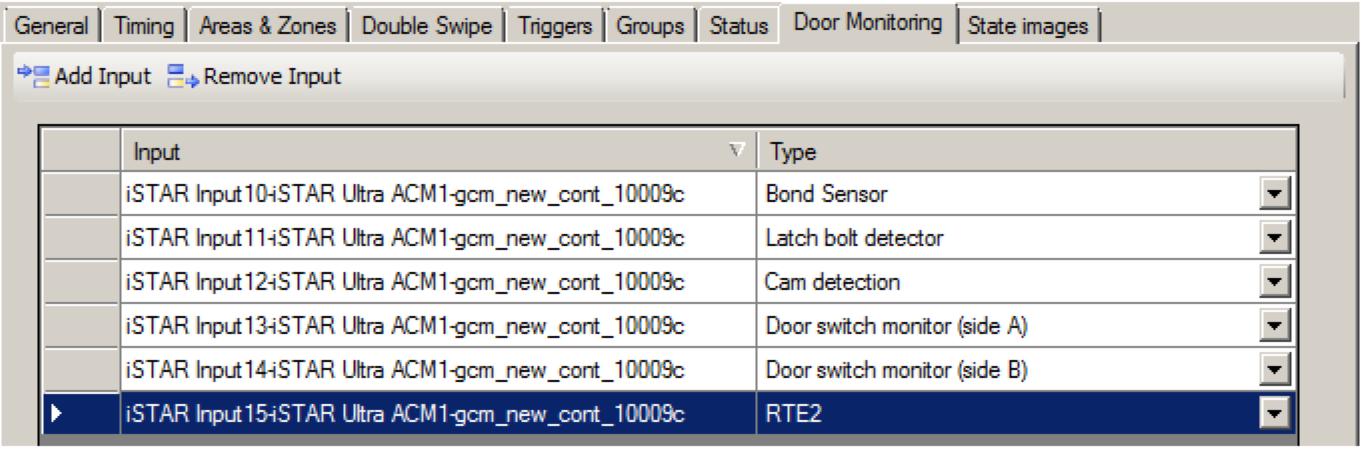


	Input	Type
	iSTAR Input10-iSTAR Ultra ACM1-gcm_new_cont_10009c	Crash bar lock release
	iSTAR Input11-iSTAR Ultra ACM1-gcm_new_cont_10009c	Key override switch lock release
	iSTAR Input12-iSTAR Ultra ACM1-gcm_new_cont_10009c	Power failure lock release
	iSTAR Input13-iSTAR Ultra ACM1-gcm_new_cont_10009c	General lock release
▶	iSTAR Input19-iSTAR Ultra ACM1-gcm_new_cont_10009c	Fire alarm lock release

Expanded Door Inputs

In addition to the Lock Sensors, there are also additional inputs for multiple DSMs and RTEs as shown in Figure 125 on Page 401.

Figure 125: Expanded Door Inputs in the Door Monitoring Tab



	Input	Type
	iSTAR Input10-iSTAR Ultra ACM1-gcm_new_cont_10009c	Bond Sensor
	iSTAR Input11-iSTAR Ultra ACM1-gcm_new_cont_10009c	Latch bolt detector
	iSTAR Input12-iSTAR Ultra ACM1-gcm_new_cont_10009c	Cam detection
	iSTAR Input13-iSTAR Ultra ACM1-gcm_new_cont_10009c	Door switch monitor (side A)
	iSTAR Input14-iSTAR Ultra ACM1-gcm_new_cont_10009c	Door switch monitor (side B)
▶	iSTAR Input15-iSTAR Ultra ACM1-gcm_new_cont_10009c	RTE2

Advanced Door Alarms

Table 149 on Page 402 and Figure 126 on Page 402 show the alarm operations available for Advanced Doors. Each alarm reports the name of the input (lock sensor, lock release device, DSM) that caused the alarm.

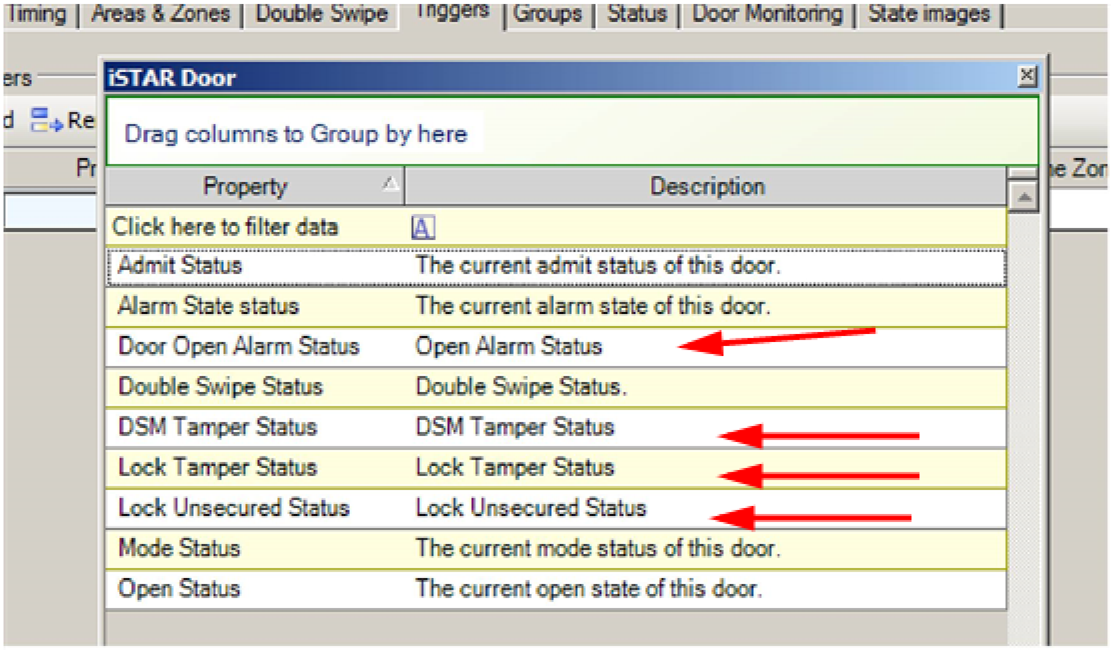
Table 149: Advanced Door Alarms

Alarm	Description
Door Open	Door opens without valid card or RTE, and one of the lock release devices is active.
Lock Unsecured	A lock sensor activates when it should be inactive. Indicates that the hardware failed to return to the locked position after a valid lock release.
Lock Tamper	A lock sensor is inactive when it should be active. Indicates lock tampering while the door is open, or failure of lock hardware.
DSM Tamper	For doors with multiple DSM devices on a single side. Indicates that one DSM changed state, and that the corresponding change did not occur to other DSMs devices on the same side of the door.

Expanded Door Triggers

There are four additional Door Triggers for Advanced Doors Alarms in the triggers Tab.

Figure 126: Additional Door Triggers

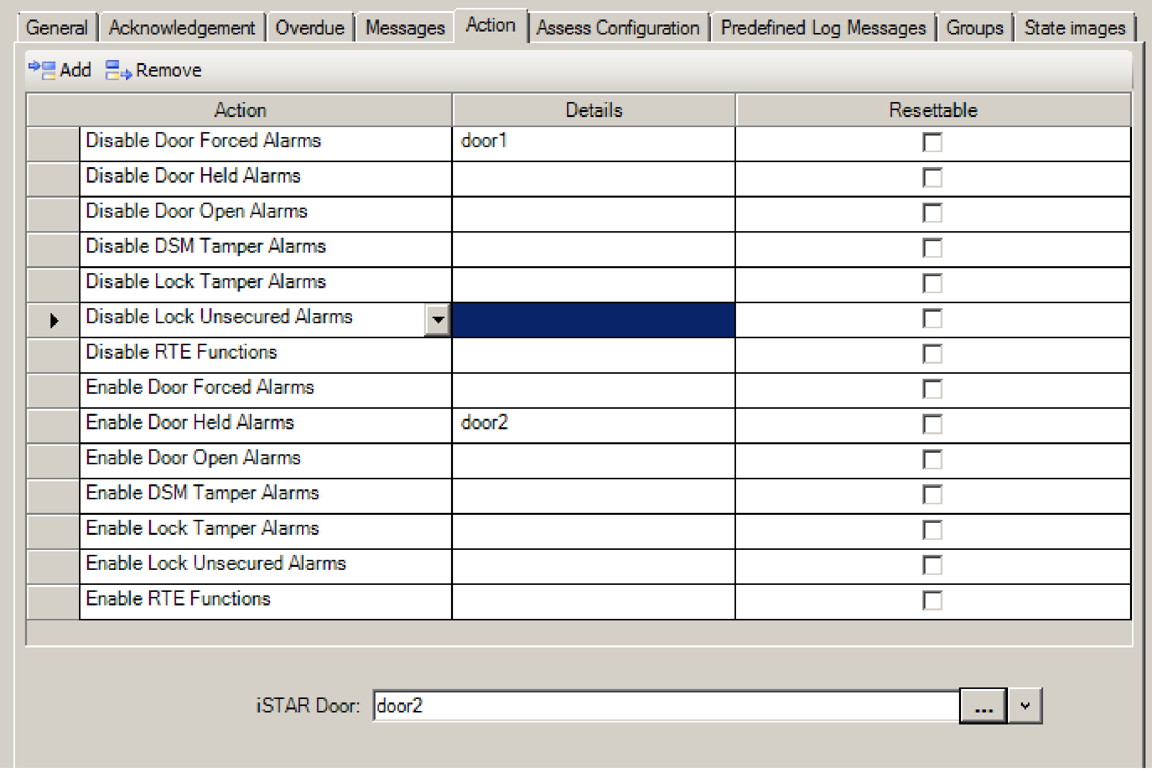


Property	Description
Admit Status	The current admit status of this door.
Alarm State status	The current alarm state of this door.
Door Open Alarm Status	Open Alarm Status
Double Swipe Status	Double Swipe Status.
DSM Tamper Status	DSM Tamper Status
Lock Tamper Status	Lock Tamper Status
Lock Unsecured Status	Lock Unsecured Status
Mode Status	The current mode status of this door.
Open Status	The current open state of this door.

Expanded Event Actions

In addition to the Triggers on the Door, there are seven pairs of actions that toggle the allowance of the various alarms, including Door Held, Door Forced, and RTE Functions. Associate an iSTAR door with each entry. Door Groups are not supported.

Figure 127: Expanded Event Actions



Action	Details	Resettable
Disable Door Forced Alarms	door1	□
Disable Door Held Alarms		□
Disable Door Open Alarms		□
Disable DSM Tamper Alarms		□
Disable Lock Tamper Alarms		□
Disable Lock Unsecured Alarms		□
Disable RTE Functions		□
Enable Door Forced Alarms		□
Enable Door Held Alarms	door2	□
Enable Door Open Alarms		□
Enable DSM Tamper Alarms		□
Enable Lock Tamper Alarms		□
Enable Lock Unsecured Alarms		□
Enable RTE Functions		□

iSTAR Door: door2

Advanced Door Monitoring Configurations

Advanced Doors support configurations that include multiple RTE and DSM inputs. These are described in the following sections.

Multiple RTE Configurations

Multiple RTE devices are typically configured to:

- Provide tight security screens
- Increase coverage over wide areas

Configuration Guidelines

You must specify the first RTE in the **Request to Exit** field of the **Configure Door** dialog box. This activates other request to exit options on the **Configure Door** dialog box. Specify additional RTEs by adding them on the **Configure Advanced Door Monitoring** dialog box.

To Display the Configure Door Dialog Box

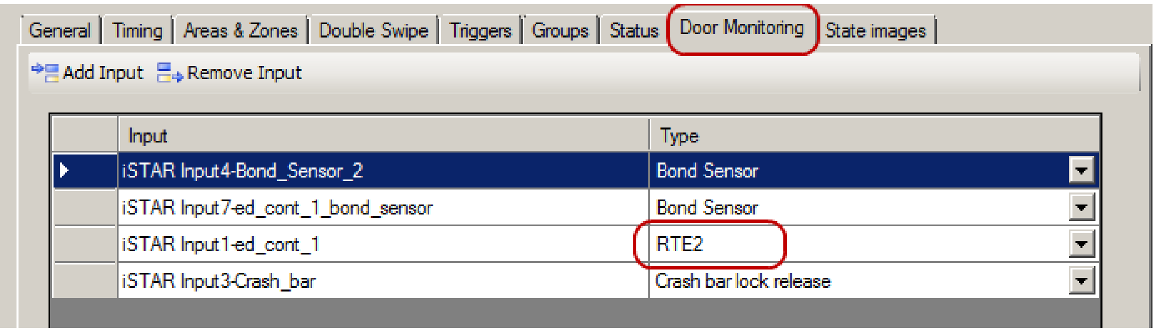
- Select Hardware Pane >Cluster>iSTAR>Doors>Door Name

To Display the Configure Advanced Door Monitoring Dialog Box

- Select Hardware Pane >Cluster>iSTAR>Doors>Door Name>Door Monitoring

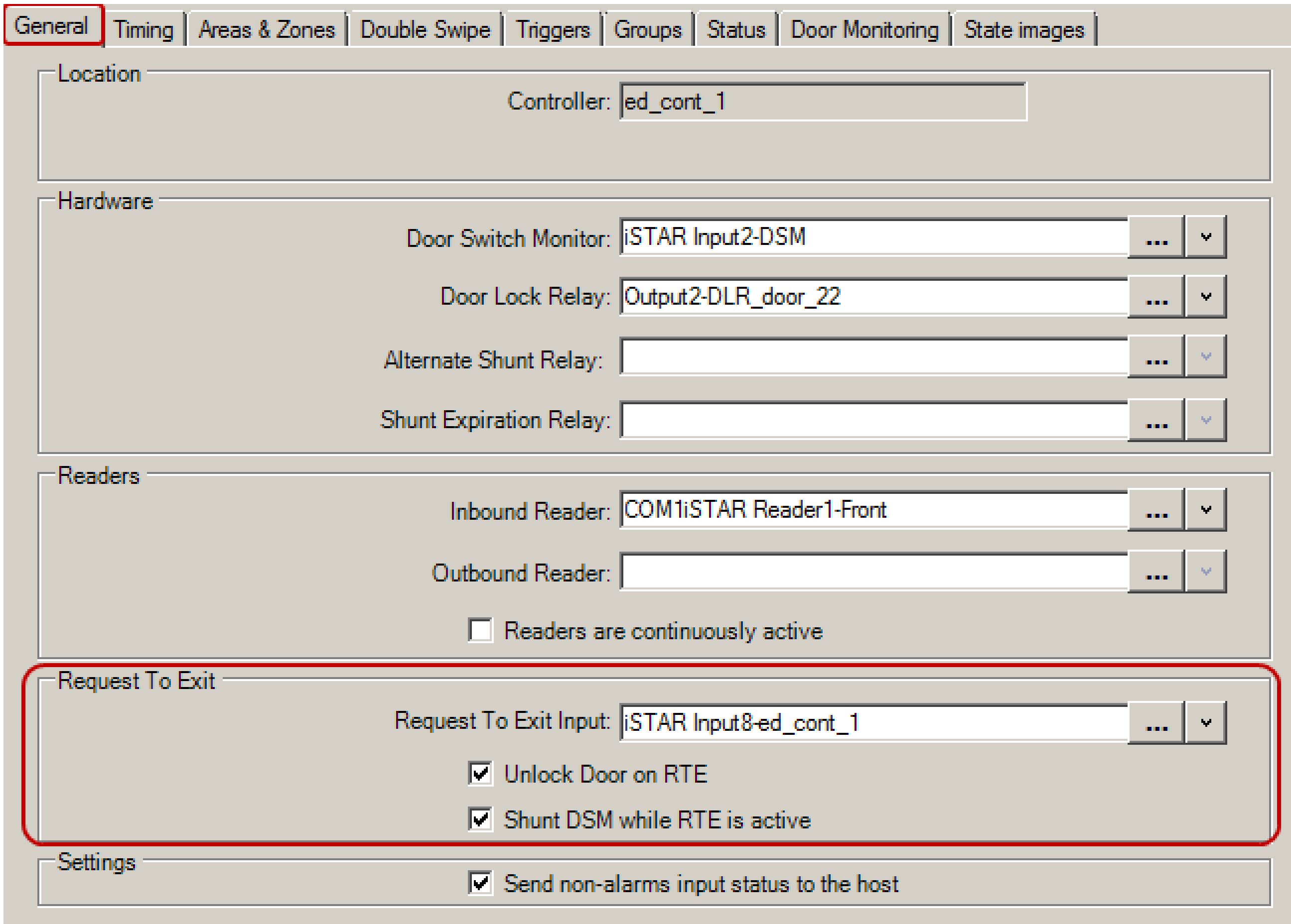
NOTE If a door has multiple RTEs and is configured to shunt the DSM while RTE is active, the C•CURE 9000 will shunt the DSM when any RTE on the door is active.

Figure 128: Door Editor - Door Monitoring Tab



	Input	Type
▶	iSTAR Input4-Bond_Sensor_2	Bond Sensor
	iSTAR Input7-ed_cont_1_bond_sensor	Bond Sensor
	iSTAR Input1-ed_cont_1	RTE2
	iSTAR Input3-Crash_bar	Crash bar lock release

Figure 129: Door Editor General Tab



Location

Controller: ed_cont_1

Hardware

Door Switch Monitor: iSTAR Input2-DSM

Door Lock Relay: Output2-DLR_door_22

Alternate Shunt Relay:

Shunt Expiration Relay:

Readers

Inbound Reader: COM1iSTAR Reader1-Front

Outbound Reader:

☐ Readers are continuously active

Request To Exit

Request To Exit Input: iSTAR Input8-ed_cont_1

☑ Unlock Door on RTE

☑ Shunt DSM while RTE is active

Settings

☑ Send non-alarms input status to the host

Multiple DSM Configurations

Multiple DSM configurations are used for double-leaf doors (side by side), and also to provide a tighter security screen (top and bottom). The following sections describe typical multiple DSM configurations.

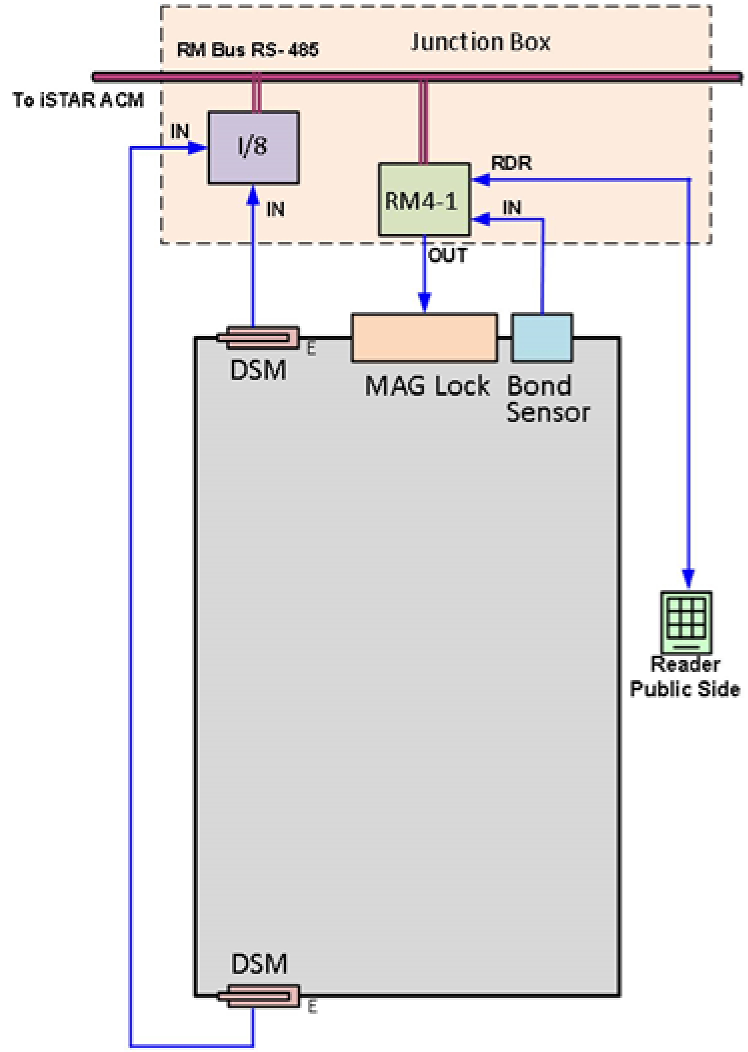
Single-leaf Doors (DSM top and bottom)

Figure 130 on Page 406 shows a single-leaf door with a DSM at the top and bottom. C•CURE 9000 uses the following to determine door state:

- If the door is closed, with both DSMs inactive, and then a DSM activates, the door state is open.
- If either DSM is active, the door state is open. If both DSMs are inactive, the door state is closed.

All DSMs on a single side must activate and deactivate together. If the DSMs do not activate together, C•CURE 9000 issues a DSM Tamper alarm and identifies the DSM that did not change state.

Figure 130: Single-leaf Door with DSM Top and Bottom



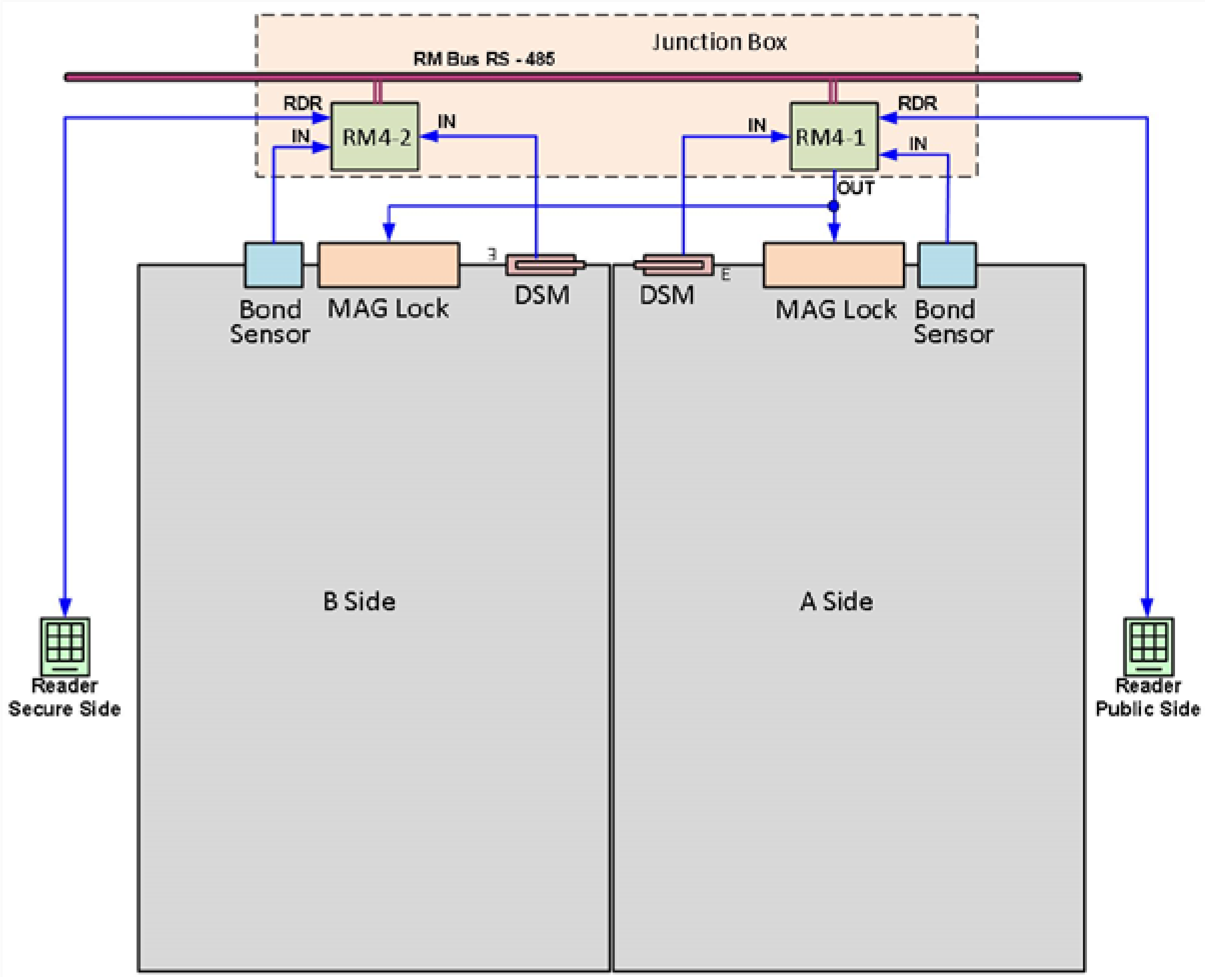
Double- Leaf Doors (DSM each side)

Figure 131 on Page 407 shows a double-leaf door with a DSM on side A and another on side B. C•CURE 9000 uses the following to determine door state:

- If either DSM is active, the door state is open
- If both DSMs are inactive, the door state is closed.

Because double-leaf door configurations with one DSM per side are designed to operate with one leaf open and the other leaf closed, C•CURE 9000 does not issue DSM tamper alarms for this configuration.

Figure 131: Double-leaf Door with DSM on Each Side



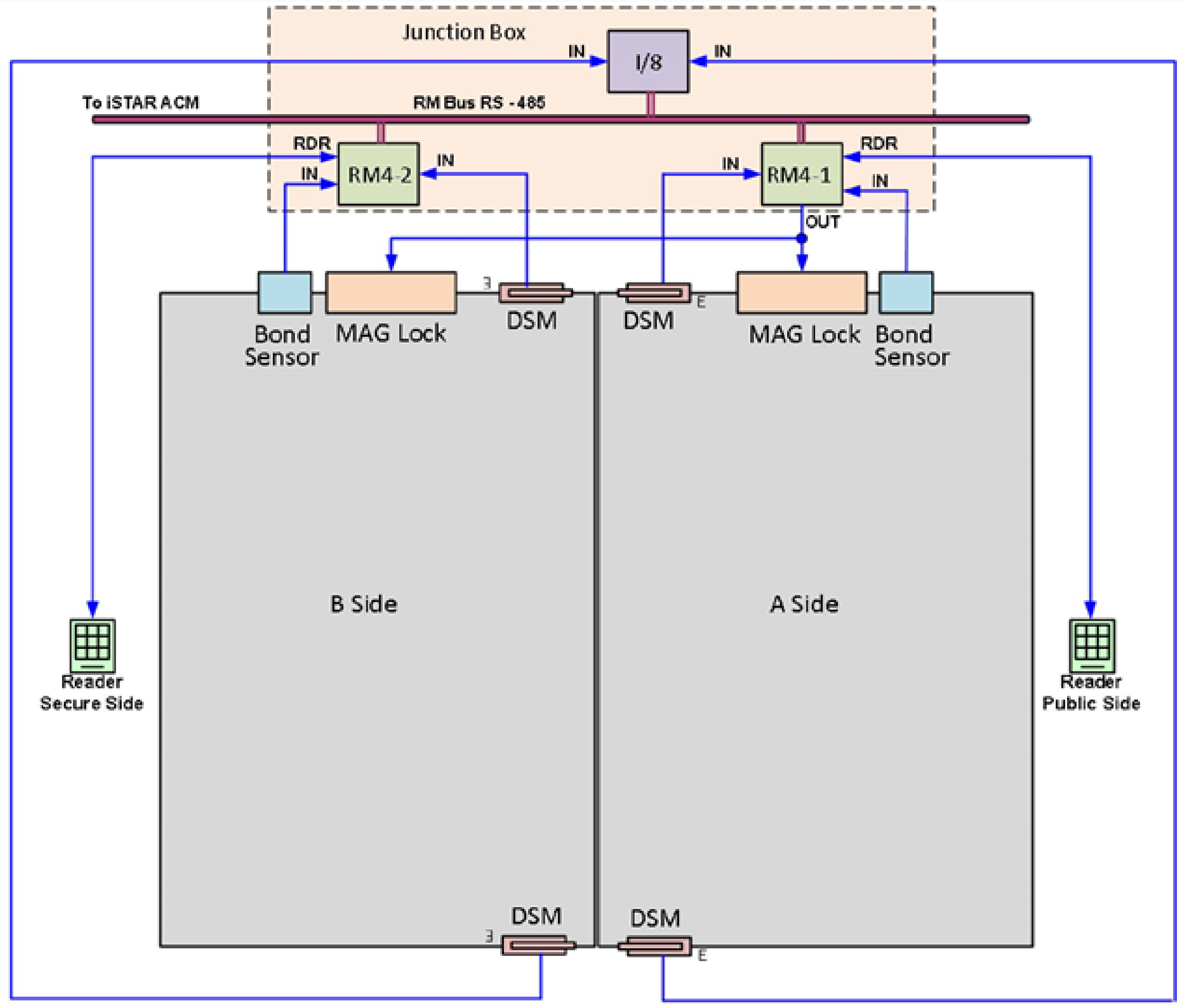
Double-leaf Doors (DSM top and bottom)

Figure 132 on Page 408 shows a double-leaf door with a DSM at the top and bottom of both side A and side B. C•CURE 9000 uses the following to determine door state:

- If the side is closed, and a DSM activates, the side is open
- If the side is open, and a DSM de-activates, the side is closed
- If either side is open, the door is open
- If both sides are closed, the door is closed

All DSMs on a single side must activate and deactivate together. If the DSMs do not activate together, the C•CURE 9000 issues a DSM Tamper alarm and identifies the DSM that did not change state.

Figure 132: Double-leaf Door with DSM Top and Bottom of Each Side



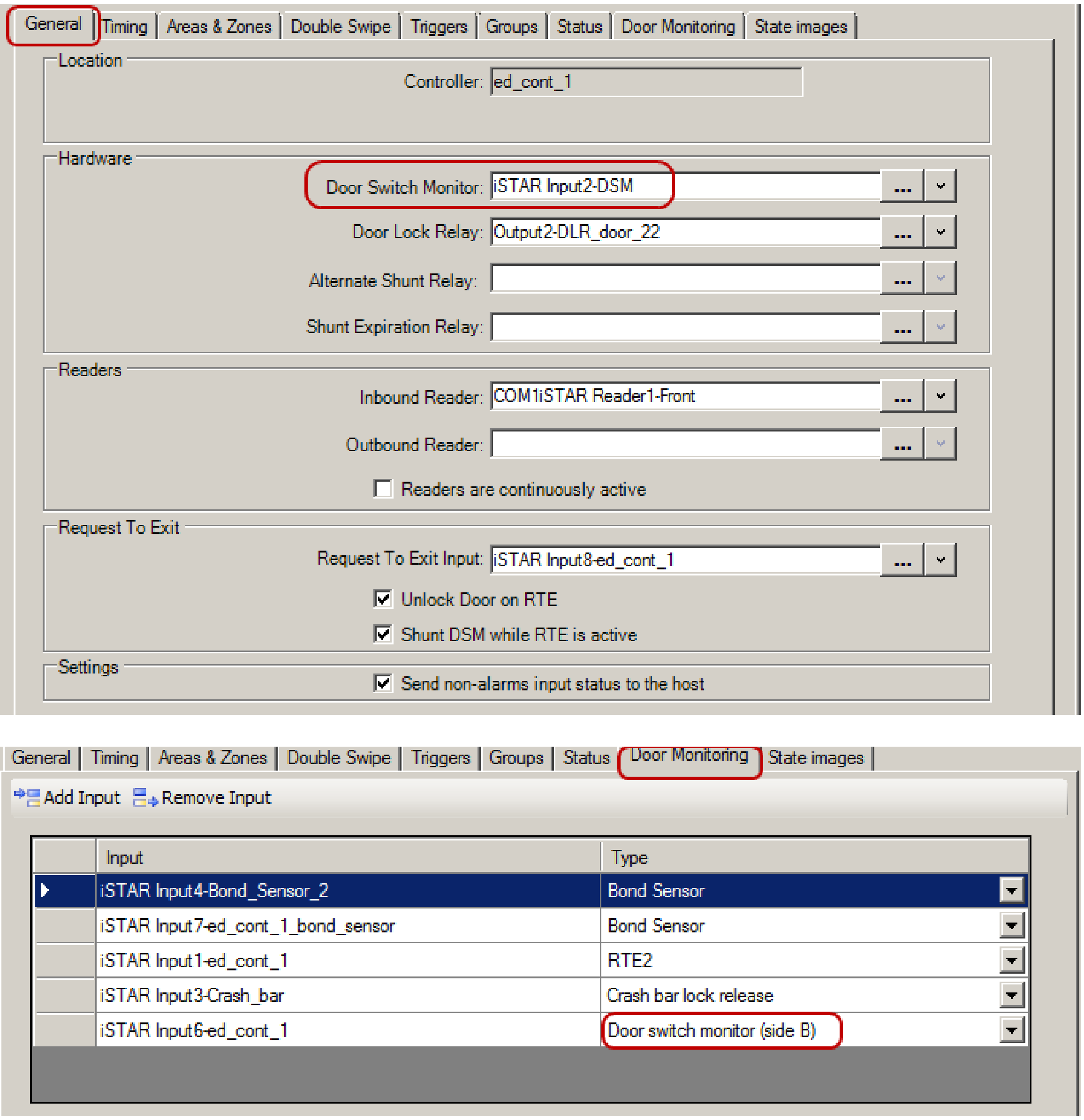
DSM Configuration Guidelines

You can configure DSM inputs in the **Door Switch Monitor** field on the **Configure Door** dialog box, or by adding them on the configure **Door Monitoring** dialog box.

If you specify a DSM in the **Door Switch Monitor** field of the **Configure Door** dialog box, C•CURE 9000 uses that input as the DSM for side A of the door. DSM inputs that are added using the configure **Door Monitoring** dialog box can be either A or B side.

Unlike multiple RTEs, you do not have to use the General Tab for DSM 1. Although the examples show two DSMs and two RTEs, it is possible to have more than two of each.

Figure 133: Multiple DSM Configuration



Location

Controller: ed_cont_1

Hardware

Door Switch Monitor: iSTAR Input2-DSM

Door Lock Relay: Output2-DLR_door_22

Alternate Shunt Relay:

Shunt Expiration Relay:

Readers

Inbound Reader: COM1iSTAR Reader1-Front

Outbound Reader:

□ Readers are continuously active

Request To Exit

Request To Exit Input: iSTAR Input8-ed_cont_1

☑ Unlock Door on RTE

☑ Shunt DSM while RTE is active

Settings

☑ Send non-alarms input status to the host

	Input	Type
▶	iSTAR Input4-Bond_Sensor_2	Bond Sensor
	iSTAR Input7-ed_cont_1_bond_sensor	Bond Sensor
	iSTAR Input1-ed_cont_1	RTE2
	iSTAR Input3-Crash_bar	Crash bar lock release
	iSTAR Input6-ed_cont_1	Door switch monitor (side B)

Configuration Overview

Although Advanced Door configuration procedures vary based on site requirements, most configurations involve the tasks and activities described in Table 150.

Table 150: General Configuration Procedure

Task	Configuration Dialog Box	Description	Additional Information
1. Configure Monitoring Inputs, Readers, and Outputs.	**Hardware Pane > Cluster > Controller > Boards > 1st ACM/2nd ACM**	Configure inputs, readers, and outputs on the iSTAR controller using standard procedures and dialog boxes.	See Configuring RM4-1 and RM4-2 Reader, Inputs, and Output on Page 411
2. Configure Lock Releases	**Hardware Pane > Cluster > Controller > Boards > 1st ACM/2nd ACM**	Configure lock release components on the iSTAR controller using standard controller configuration procedures and dialog boxes. Specify how C•CURE 9000 annunciates the lock release inputs.	See Configuring Lock Releases on the I/8 on Page 414 See Annunciating Lock Releases Inputs on Page 414
3. Configure the Advanced Door	**Hardware Pane > Cluster > Controller > Doors > Door Name** **Hardware Pane > Cluster > Controller > Doors > Door Name > Door Monitoring**	Configure the first RTE and the door latch relay using the standard **Door** dialog box (required). You can also use the Door dialog box to configure the DSM for side A. Add additional components using the **Configure Advanced Door Monitoring** dialog box.	See Configuring the Advanced Door on Page 415
4. Configure Grace and Change Time parameters	**Hardware Pane > Cluster > Controller > Doors > Door Name > Door Monitoring**	Specify timing requirements for unlock grace timers. Also specify the change time options for individual door components, and for door shunts.	See Understanding Timing on Page 418

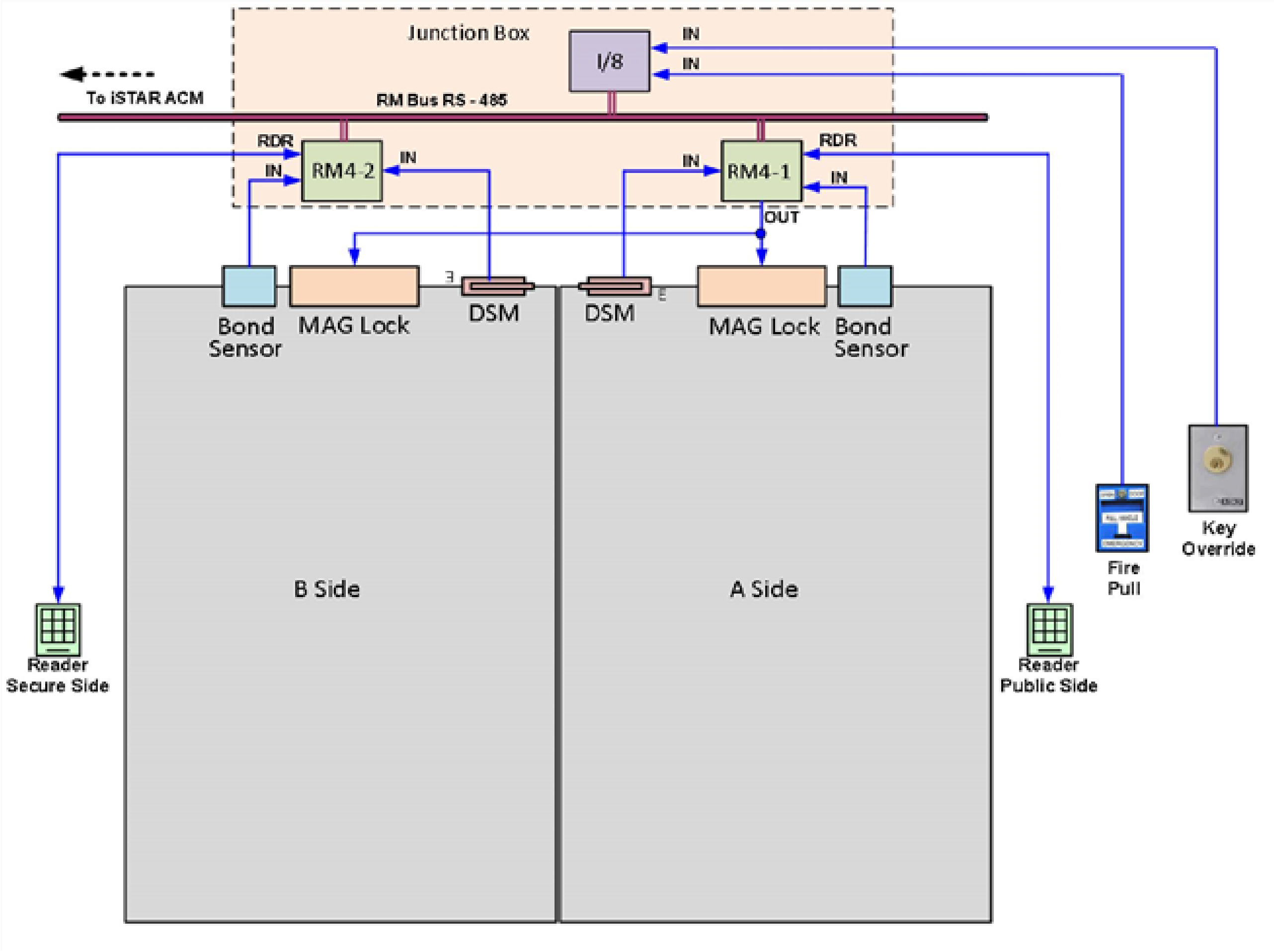
Configuring an Advanced Door

This section provides step-by-step configuration information for a sample Advanced Door configuration.

Sample Door

The configuration for this example, shown in Figure 134 on Page 411, is a double-leaf door with multiple read heads, lock sensors, DSMs, and lock release inputs.

Figure 134: Door Configuration Example



Configuring RM4-1 and RM4-2 Reader, Inputs, and Output

Configuring RM4 inputs for the door in Figure 134 on Page 411 involves using standard controller configuration procedures to configure the monitoring inputs, door latch relays, and read heads for A and B sides of the door. This is detailed in the following procedure.

To Configure RM4 (RS-485) Inputs for the Sample Configuration

1. From the main menu, select **Hardware Pane** > Cluster > **Controller**. From the **iSTAR Controller Selection** browser, select the name of the iSTAR that includes Advanced Door components, and select **Edit**.
2. Select the tab that includes the inputs to be configured. This will vary, depending on the iSTAR model. In some cases you will have to first select the ACMn board and a Port.

The RM Readers are configured under the following Tabs:

- iSTAR Ultra - Boards > ACM 1, ACM 2, ACM 3, or ACM 4> RS-485 Port> Reader Port > Readers

NOTE ACM 3 and ACM 4 are only available for an iSTAR Ultra with firmware 6.8.2 or later.

- iSTAR Pro - Boards > ACM 1 or 2> Readers
- iSTAR Edge - COM1 or COM2 or COM3 > Readers
- iSTAR eX - COM1 or COM2 > Readers

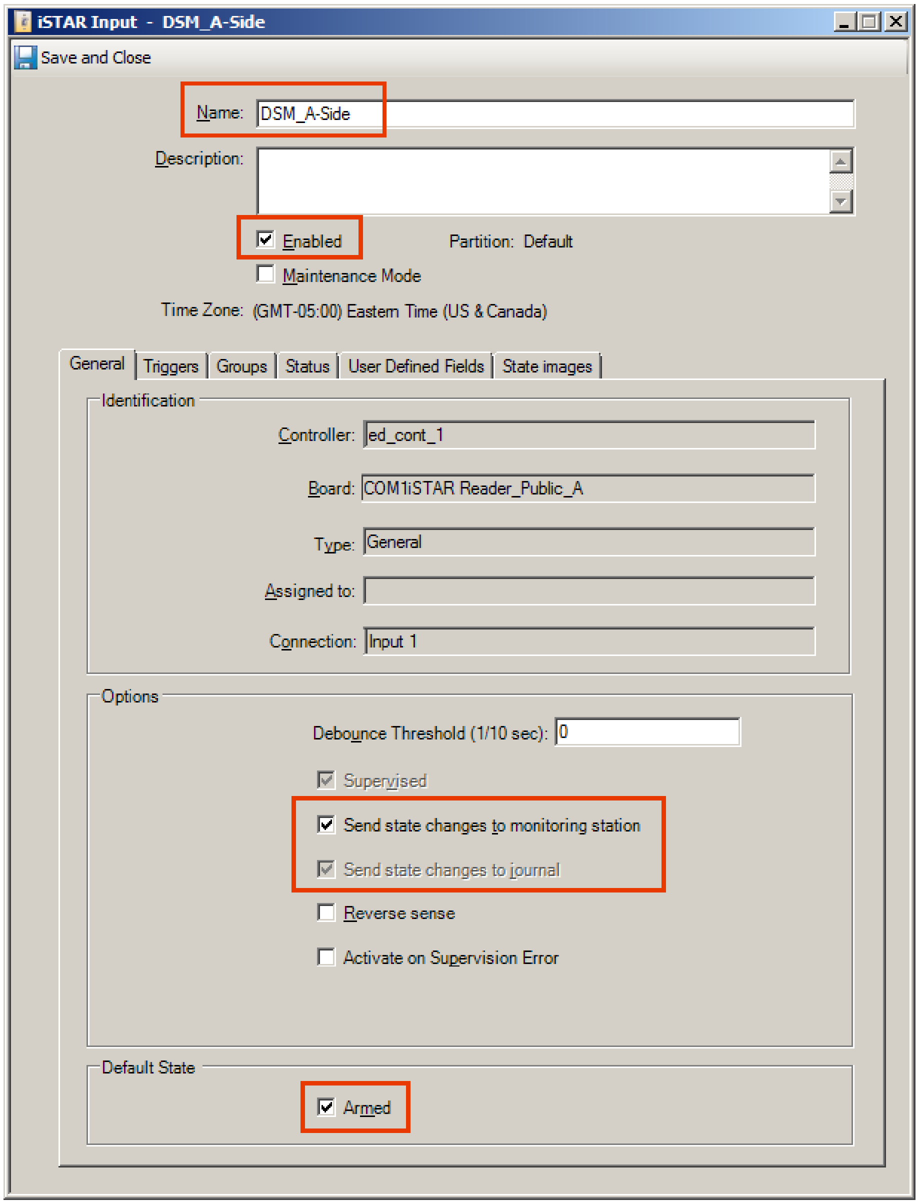
To configure the inputs for side A in Figure 134 on Page 411 (on RM 1), create an RM Reader.

NOTE Software House recommends that the **Communication failure** option be configured for all security devices that connect to the iSTAR. Select the I/O Tab from the Reader Editor, to configure this option.

3. In the General tab of the **Reader** Editor enter the following:
   - **Name** - the name of the reader
   - **Enabled** - activated
4. Go to the I/O Tab
5. In the **Inputs** box, select an input and configure it. Enter at least the following:
   - **Name** - the name of the input
   - **Enabled** - check box checked
   - **Send State changes to Monitoring Station** (and Journal)
   - **Armed** - check box checked. It's good practice to Arm Inputs, but if the Input is a door component, it will be automatically armed.

   To configure the inputs for the example in Figure 134 on Page 411, enter information for DSM side A and the Magnetic Bond Sensor.

Figure 135: iSTAR Input DSM side A



iSTAR Input - DSM_A-Side

Save and Close

Name: DSM_A-Side

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

General | Triggers | Groups | Status | User Defined Fields | State images

Identification

Controller: ed_cont_1

Board: COM1iSTAR Reader_Public_A

Type: General

Assigned to:

Connection: Input 1

Options

Debounce Threshold (1/10 sec): 0

☑ Supervised

☑ Send state changes to monitoring station

☑ Send state changes to journal

□ Reverse sense

□ Activate on Supervision Error

Default State

☑ Armed

6. Click **OK** and **Close**.
7. Repeat step 5 to configure the Bond Sensor Input.

NOTE

For consistency, Advanced Doors that include more than one instance of the same input (two DSMs, for example) should use a naming convention that indicates the area of the door that the device monitors.

Example:

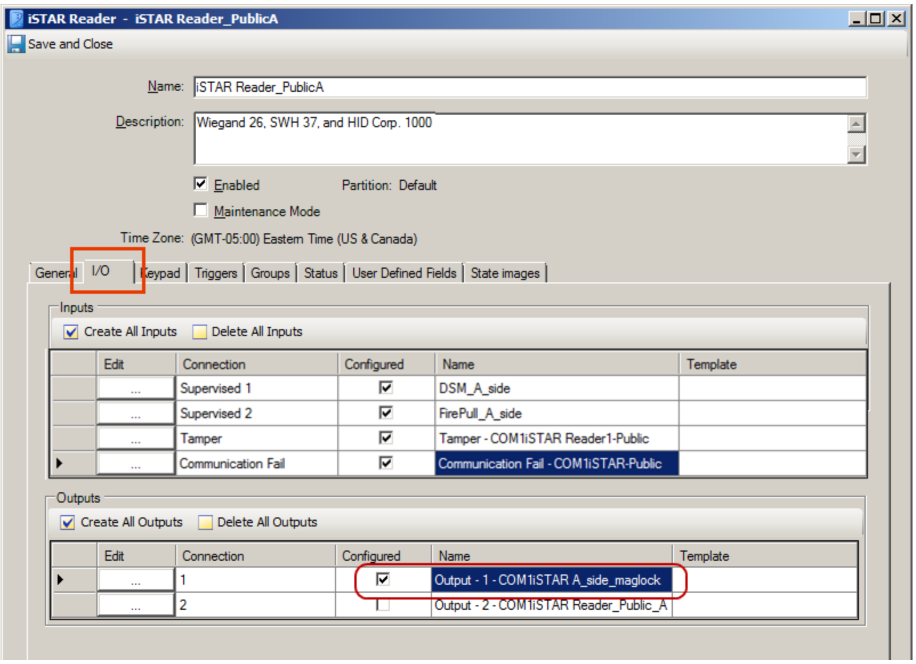
DSM-Lobby-sideA.

8. In the **Outputs** box, select an output and configure it. Enter at least the following:
   - **Name** - the name of the output
   - **Enabled** - check box checked

- **Normally energized** - activated or de-activated, depending on site requirements. Magnetic Locks are usually Normally Energized.

To configure the outputs for the example in Figure 134 on Page 411, enter information for the magnetic lock output.

Figure 136: Reader I/O Tab



Name: iSTAR Reader_PublicA

Description: Wiegand 26, SWH 37, and HID Corp. 1000

☑ Enabled Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Inputs

☑ Create All Inputs □ Delete All Inputs

Edit	Connection	Configured	Name	Template
...	Supervised 1	☑	DSM_A_side	
...	Supervised 2	☑	FirePull_A_side	
...	Tamper	☑	Tamper - COM1iSTAR Reader1-Public	
...	Communication Fail	☑	Communication Fail - COM1iSTAR-Public	

Outputs

☑ Create All Outputs □ Delete All Outputs

Edit	Connection	Configured	Name	Template
...	1	☑	Output - 1 - COM1iSTAR A_side_maglock	
...	2	□	Output - 2 - COM1iSTAR Reader_Public_A	

9. Click **Save and Close** until you return to the Controller editor.

10. Repeat steps 1 through 7 to configure the RM4-2 for the B side of the door.

Configuring Lock Releases on the I/8

Configuring lock releases for the door in Figure 134 on Page 411 involves using standard controller configuration procedures.

You must also specify how C•CURE 9000 annunciates the lock release inputs. For configuration guidelines, see the next section.

Annunciating Lock Releases Inputs

If the lock release input is configured to annunciate, C•CURE 9000 reports input activation and de-activation. Annunciation of inputs has no impact on door actions or lock release operations.

To reduce message traffic, most configurations will choose to annunciate lock release inputs to test or troubleshoot the system, but will not annunciate them for normal door operations.

To Configure Lock Releases for the Sample Configuration

1. From the main menu, select **Hardware>Cluster>Controller**. Right-click the iSTAR that includes lock release components and then **Edit** from the context menu.

2. Select the tab that includes the I/8 to be configured. This will vary, depending on the iSTAR model. In some cases you will have to first select the ACM board and a Port.

   The I/8 boards are configured under the following Tabs:

   - **iSTAR Ultra** - Boards > ACM 1, ACM 2, ACM 3, or ACM 4> RS-485 Port> ACM Ext > I/8 >Input

NOTE ACM 3 and ACM 4 are only available for an iSTAR Ultra with firmware 6.8.2 or later.

- **iSTAR Pro** - Boards > ACM 1 or 2> ACM Ext > I/8 >Input
- **iSTAR Edge** - COM1 or COM2 or COM3 > I/8 >Input
- **iSTAR eX** - COM1 or COM2 > I/8 >Input

3. On the I/8 Editor, select an input and click **Edit**.
4. On the Input Editor, enter at least the following:
   - **Name** - the name of the input
   - **Enabled** - check box checked
   - **Armed** - check box checked
   - **Send state changes to monitoring station** - activated (includes sending to the journal) or deactivated, according to the site requirements
   - **Send state changes to journal** - Read only. Will be activated if Send state changes to Monitoring station is true.
5. Click **Save and Close**. Repeat steps 3 to 5 to configure additional inputs.

Figure 137: I/8 Inputs for Sample Door

6. Click **Save and Close** until you return to the main menu.

Configuring the Advanced Door

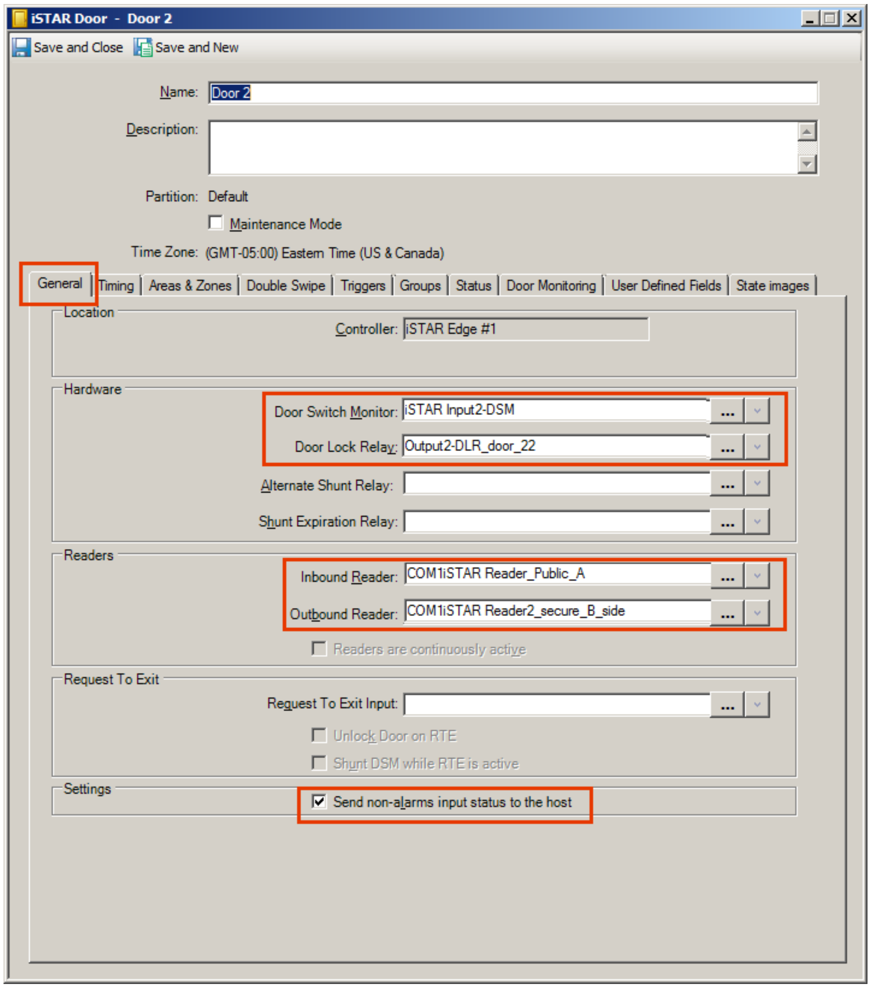
Configuring the Advanced Door involves adding door components using both the standard Door editor and the Door Monitoring Tab editor.

To Configure the Advanced Door in the Sample Configuration:

1. From the **Hardware Pane**, right click on iSTAR to **Configure>Door** and select **New**. Or select an existing door in the controller to edit.
2. On the **iSTAR Door** Editor, click the **General Tab** and enter at least the following:
   - **Door has RTE** - the name of RTE input (if required by the door)
   - **Door switch monitor** - the name of the side A DSM input
   - **Door latch relay** - the name of the door latch relay output
   - Optional - Send non-alarm input status to the host. Similar to input annunciation, this will increase traffic but it is a good mode to understand Advanced Doors.
3. Enter the Readers for the Inbound and Outbound reader fields.
4. Click **Save and Close** until you return to the main menu.

To configure the door in Figure 138 on Page 416, enter the name of the side A DSM and the door latch relay. The sample door uses a read head instead of an RTE. However, doors that use one or more RTE devices must configure the first RTE on the Door Editor.

Figure 138: Sample Door



Name: Door 2

Description:

Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Controller: iSTAR Edge #1

Door Switch Monitor: iSTAR Input2-DSM

Door Lock Relay: Output2-DLR_door_22

Alternate Shunt Relay:

Shunt Expiration Relay:

Inbound Reader: COM1iSTAR Reader_Public_A

Outbound Reader: COM1iSTAR Reader2_secure_B_side

□ Readers are continuously active

Request To Exit Input:

□ Unlock Door on RTE

□ Shunt DSM while RTE is active

☑ Send non-alarms input status to the host

5. Select the **Door Monitoring** tab.
6. To add door components:

   a. Select **Add Input** and pick the appropriate input to add to the Input list.

7. To specify component type:

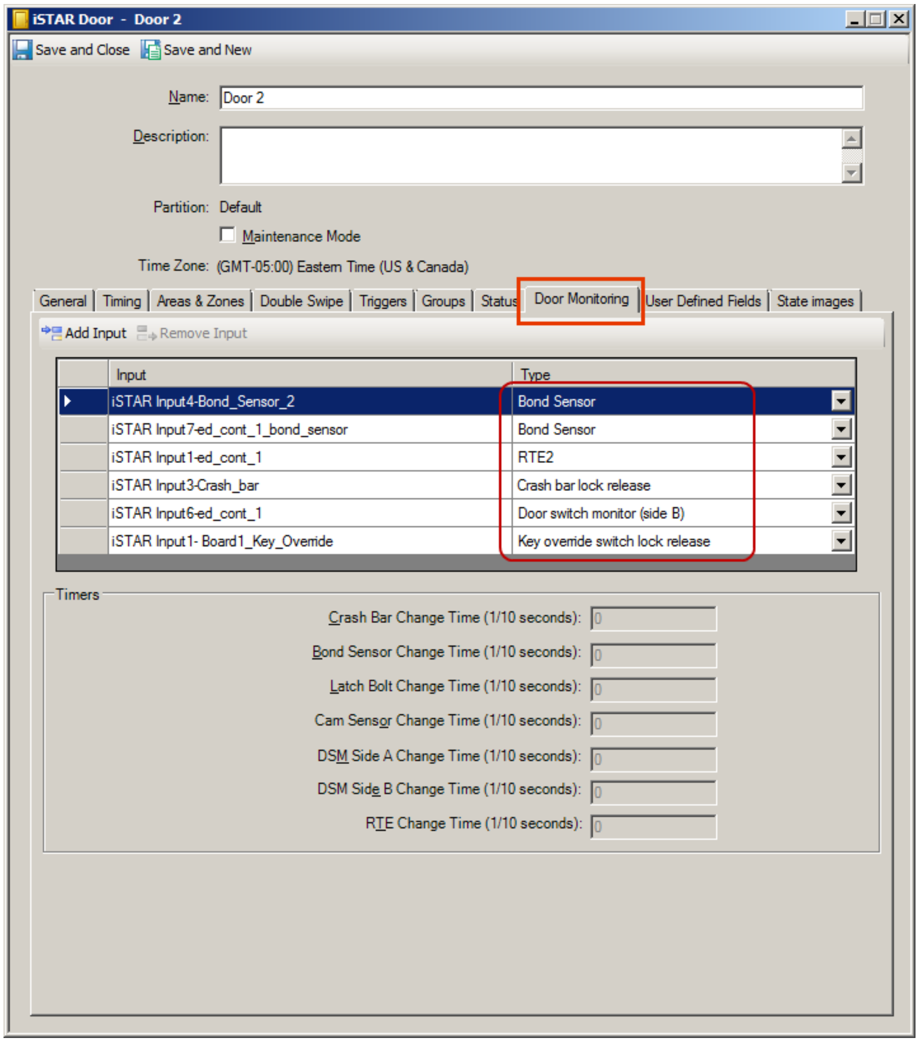
   a. In the **Input** list box, select an input.

   b. Click on the **Type field** and use the drop-down list to select the component's type.

   To configure components and types in Figure 139 on Page 417, add inputs for the key override, fire pull, A and B side bond sensors, and B side DSM. Specify the component type for each of the corresponding inputs. **This field is required**.

8. Click **Save and Close**.

Figure 139: Door Monitoring



Name: Door 2

Description:

Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Input	Type
iSTAR Input4-Bond_Sensor_2	Bond Sensor
iSTAR Input7-ed_cont_1_bond_sensor	Bond Sensor
iSTAR Input1-ed_cont_1	RTE2
iSTAR Input3-Crash_bar	Crash bar lock release
iSTAR Input6-ed_cont_1	Door switch monitor (side B)
iSTAR Input1- Board1_Key_Override	Key override switch lock release

Crash Bar Change Time (1/10 seconds): 0

Bond Sensor Change Time (1/10 seconds): 0

Latch Bolt Change Time (1/10 seconds): 0

Cam Sensor Change Time (1/10 seconds): 0

DSM Side A Change Time (1/10 seconds): 0

DSM Side B Change Time (1/10 seconds): 0

RTE Change Time (1/10 seconds): 0

Understanding Timing

Time Delays

Use timing options to prevent false alerts caused by nearly simultaneous inputs to C•CURE 9000, and also to fine tune timing to meet specialized door and site requirements.

In addition to the normal door de-bounce and grace times, on the Timing Tab, there are seven other timing tweaks that are used to avoid race conditions. The Timers default to zero but it is good practice to set them all at 0.2 or 0.3, and then adjust, as necessary. See Figure 140 on Page 418.

Since input changes cannot occur simultaneously, and if almost simultaneous may be read by our hardware in any order, some input change time values are provided. This change time will be used whenever one of the inputs changes, to allow the system to wait and see if any of the normally accompanying inputs is also going to change.

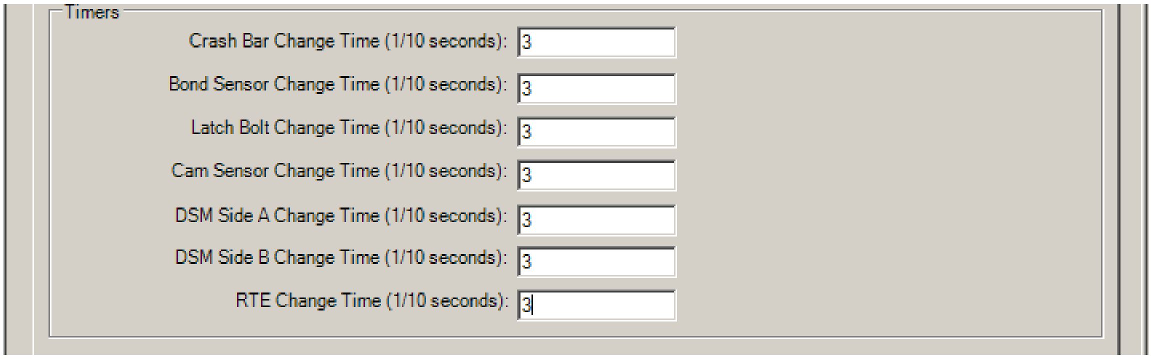
For example, every time the door is open (meaning the DSM input is active), the latch bolt or bond sensor input should also be active. Therefore, every time the door opens, if the input is not already active, a timer will be started with the value of the lock sensor change value. If the timer times out without the lock sensor input activating, then a Lock Tamper alarm will be reported. Then when the door closes and locks, this time value will be the time we allow the lock sensor input to change from active to secure before reporting Lock Unsecured.

Use the **Timers** box on the **Configure Advanced Door Monitoring** dialog box to fine tune timing delays for Advanced Door components.

To Display the Configure Advanced Door Monitoring Dialog Box

- Select **Door**>**Door Monitoring** tab.

Figure 140: Timers



Timers

Crash Bar Change Time (1/10 seconds):	3
Bond Sensor Change Time (1/10 seconds):	3
Latch Bolt Change Time (1/10 seconds):	3
Cam Sensor Change Time (1/10 seconds):	3
DSM Side A Change Time (1/10 seconds):	3
DSM Side B Change Time (1/10 seconds):	3
RTE Change Time (1/10 seconds):	3

Kinds of Timing Options

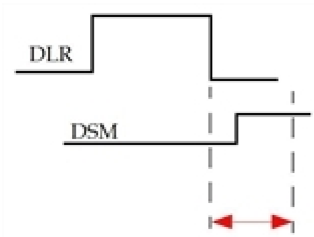
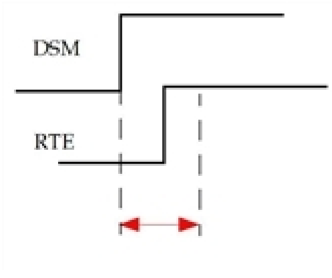
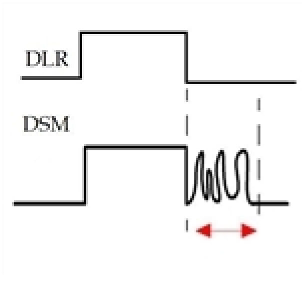
C•CURE 9000 includes timing options that provide:

- **Grace times** - a wait period that prevents false alerts caused by door open, door unlock, and door bouncing inputs.
- **Change times** - a wait period that defines the amount of time allowed for changes in input states. Change times are used with timing values from other door inputs to define how long C•CURE 9000 waits before issuing lock tamper or lock unsecure alarms.
- **Shunt /Delay Relock times** - a wait period that defines the number of seconds the door can remain open before relock or before an alert is sounded.

Grace Time Options

Table 151 on Page 419 describes grace time options.

Table 151: Grace Timing Options

Option	Description	Example
Unlock Grace Time  	Specifies the time that C•CURE 9000 waits for a door open signal after the door unlock timer has expired. Prevents a false "door forced" message in situations where the signals are nearly simultaneous.	Personnel who are granted card access delay opening a door until unlock time is nearly expired, thereby causing nearly simultaneous DSM and unlock timer expiration inputs to C•CURE 9000. If configured, C•CURE 9000 waits the number of seconds you specify for a door open input, thereby preventing a false "door forced open" message.
Door Open Grace Time  	Specifies the time that C•CURE 9000 waits for an RTE, card admit, or momentary unlock signal after receiving the signal from the DSM. Prevents a false "door forced open" message in situations where signals are nearly simultaneous. For additional information, see Special Timing Considerations on Page 421.	Personnel lean on a door release mechanism while pressing the RTE switch, causing nearly simultaneous door open and RTE inputs to C•CURE 9000. If configured, C•CURE 9000 waits the number of seconds you specify for the RTE, card admit, or momentary unlock signal, thereby preventing a false "door forced open" message.
Door Close De-bounce Time  	Specifies the time that C•CURE 9000 ignores DSM inputs, to allow for bouncing doors.	Unintended door movement (bouncing) can activate a DSM input to C•CURE 9000 and cause false "door forced open" messages. If configured, the Door close de-bounce time option ignores DSM inputs for the time specified after the door closes to allow for bouncing doors.

Change Time Options

C•CURE 9000 determines change time based on the door components you have configured (DSM, RTE, lock releases, for example) and the door operation (card access, RTE access, door forced, for example).

NOTE

> Change time is specified in units of 1/10 second. Enter 1 to specify 1/10 second, 5 to specify 5/10 (1/2) second and so forth.
>
> Software House recommends that you set all change times to at least 5/10 second and make adjustments only as necessary.

Table 152 on Page 420 describes how change time options work for lock releases, lock sensors, and DSM and RTE devices.

Table 152: Change Timing Options

Option	Function	Associated Inputs	Activation Criteria
Crash bar change time	Specifies the amount of time C•CURE 9000 allows, after a crash bar state change, for a lock sensor change	C•CURE 9000 uses the crash bar change time to determine changes to corresponding: • Bond sensors • Latch bolts • Cam sensors	Activated by the bond sensor, latch bolt, or cam sensor.
Bond sensor change time	Specifies the amount of time C•CURE 9000 allows for a bond sensor state change. C•CURE 9000 uses this time, and the time of the other door inputs, to determine the wait before issuing a "lock tamper" or "lock unsecure" alarm.	C•CURE 9000 uses the greatest value of the following: • Door open grace time • Door close de-bounce time • Crash bar change time • Bond sensor change time • RTE change time	The bond sensor should be active if: • Door is open • Door latch relay is active • Lock release input(s) are active The bond sensor should be inactive when: • Latch relay is inactive, the door is closed, and the lock release inputs are inactive
Latch bolt change time	Specifies the amount of time C•CURE 9000 allows for a latch bolt state change. C•CURE 9000 uses this time, along with the time of the other door inputs, to determine the wait before issuing a "lock tamper" or "lock unsecure" alarm.	C•CURE 9000 uses the greatest value of the following: • Door open grace time • Door close de-bounce time • Crash bar change time • Latch bolt change time • RTE change time	The latch bolt should be active if the door is open. The latch bolt should be inactive if: • Door is closed • Door latch relay is inactive • Lock release inputs are inactive The latch bolt can be active or inactive if: • Door latch relay is active • Lock release input(s) are active
Cam sensor change time	Specifies the amount of time C•CURE 9000 allows for a cam sensor state change. C•CURE 9000 uses this time, along with the time of the other door inputs, to determine the wait before issuing a "lock tamper" or "lock unsecured" alarm.	C•CURE 9000 uses the greatest value of the following: • Crash bar change time • Cam sensor change time • RTE change time	The cam sensor should be active if: • Door latch relay is active • Lock release input(s) are active The cam sensor should be inactive if the door latch relay is inactive and all lock releases are inactive
DSM side A change time - or - DSM side B change time	Specifies the amount of time C•CURE 9000 allows for a DSM state change. C•CURE 9000 uses this value to determine the wait period before activating a DSM tamper for multiple DSM devices on one side of the door.	Additional DSM inputs on the same door side	DSM change time is active when the first DSM in a group changes state. (DSMs must be located on the same side of the door).
RTE change time	Specifies the amount of time C•CURE 9000 allows, before or after an RTE state change, for a lock sensor change. For additional information, see "Special Timing Considerations" on the next page	C•CURE 9000 uses the RTE change time to determine changes to corresponding: • Bond sensors • Latch bolts • Cam sensors	Activated by the bond sensor, latch bolt, or cam sensor.

Shunt Time Options

Table 153 on Page 421 describes options that control shunt time.

Table 153: Shunt Time Options

Option	Description
Delay relock while door open after valid access	If access is valid, delays the relock of the door until the door closes. This differs from standard relock operations where relock occurs when the: • Door opens. • Door opens and the relock delay expires. If the door is open, the lock is energized. C•CURE 9000 sends an alarm when the shunt time expires.
Shunt door for full shunt time	Activates the shunt for the full time specified. If selected with **Delay relock while door open after valid access**, the lock is energized and the door unlocked for the full shunt time, regardless of whether the door is open or closed.

Special Timing Considerations

Sites that use an RTE motion detector angled over a door can cause C•CURE 9000 to report a valid RTE that is caused by door motion, instead of a forced open alarm. This situation occurs because of a race condition in which the RTE caused by forced motion on the door reports to C•CURE 9000 before the DSM, thereby causing C•CURE 9000 to execute a valid exit instead of a door forced alarm.

You can correct the situation by:

- **Repositioning door hardware** – adjust the position of any RTE motion detectors angled over doors. You should also replace any slow DSM components that may be contributing to the problem.
- **Adjusting the timing of door components** – use the **RTE change time** option to specify timing for incoming traffic and also to change the function of the **Door open grace time** option.

The **RTE change time** option specifies the amount of time that C•CURE 9000 ignores RTE inputs after the door is closed. Use this value to prevent false door forced reports caused by door components (slow bolts or sensors, bouncing door, for example) for outgoing traffic.

The **RTE change time** option also changes the function of the **Door open grace time** option. If you specify a value for **RTE change time**, the **Door open grace time** option now specifies the time C•CURE 9000 ignores RTE changes before the door open occurs. This prevents RTE signals from the motion detector that are caused by door mechanics rather than human access. If C•CURE 9000 sees an RTE on a closed door, and then sees the door open within the period you specify, it cancels the RTE and issues a door forced alarm.

Monitoring Door Activity

You can monitor Advanced Door activities using:

- Door, alarm, and show cause features on the **Monitoring Station**
- Journal reports from the **Administration application**

Using Monitoring Station Commands

To Display Information about Alarms, Alarm Causes, and Door Component Status

1. Select **Doors** from the **Non-Hardware Pane** on the Monitoring Station Explorer Bar.
2. Right click on a Door and select Door Monitoring.
3. Use Door Monitoring to Show Locked Causes and various Alarm States.
4. Door Monitor Inputs are also shown at the top of the Door Monitoring Editor. Right click on an input for further context menu options.

Using Journal Reports

To Display Journal Messages about Advanced Doors

1. From the Administration application, select Options & Tools.
2. Select Journal
3. Enter a range for Start date/time and End date/time.
4. Use the Journal Query Assistant to select:
   - Object Changed State Message Type
   - iSTAR Doors Object Type
   - Door Name(s)
   - You can also use Journal Triggers to get detailed information.

Understanding Door Alarms

Alarms

This section describes how C•CURE 9000 manages alarm traffic and contradictory component reports that can sometimes accompany Advanced Door configurations.

Door Open Alarm - this alarm occurs whenever the door opens without benefit of card or request to exit access, and one of the lock release devices is active. This alarm indicates that some kind of emergency unlock is occurring. The alarm message includes the name of the lock release device as the reason for the door open alarm. In the case that none of the lock release devices is active, this is a normal door forced open alarm.

Lock Unsecured Alarm - this alarm occurs whenever a lock sensor is active when it should be inactive. This indicates that the lock hardware failed to return to locked position after being unlocked by one of the lock release devices or by regular door control. The alarm message includes the name of the lock sensor input that caused the alarm.

Lock Tamper Alarm - this alarm occurs whenever one of the lock sensors is inactive when it should be active. This is whenever one of the lock release devices is active or the door latch relay has been activated by the door or the DSM indicates that the door is open. This may indicate that someone is tampering with the lock sensor while the door is opening or that the lock hardware has failed. The alarm message includes the name of the lock sensor input that caused the alarm.

DSM Tamper Alarm - this alarm is reported if multiple DSM inputs monitor the same door and one of them does not become active when it should. The alarm message includes the name of the input that is not active.

New Activity / Journal Reports

New door activity reports will be added:

- **Lock Tamper Alarm** (reported with input name indicating which input caused the lock tamper alarm condition)
- **Lock Unsecured Alarm** (reported with input name indicating which input caused the lock unsecured alarm condition)
- **Door Open Alarm** (reported with input name indicating which input caused the door open alarm condition)
- **DSM Tamper Alarm** (reported with input name indicating which input caused the DSM tamper alarm condition)

Managing Message Traffic

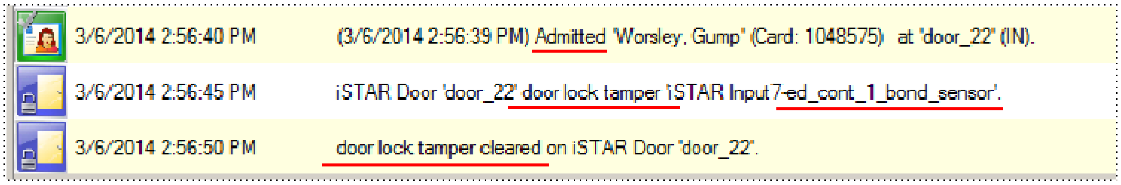
To reduce the redundant door open, lock tamper, DSM tamper, and lock unsecured alarms generated by multiple inputs on Advanced Doors, C•CURE 9000 reports Monitoring Station and journal activity **only** when the alarm changes from an inactive to an active state. Additional inputs to the same alarm are **not** reported. C•CURE 9000 also clears the alarm only when all inputs deactivate.

The example in Figure 141 on Page 424 shows the General Activity Monitor for a simplified door that includes two bond sensor inputs and a DSM. The following actions occurred:

1. Door closed (no inputs inactive).
2. Card admitted, door open (DSM activates, bond sensor 1 activates as expected, bond sensor 2 does not activate).
3. Door Lock unsecured reported (bond sensor 1).
4. Bond sensor 1 deactivates while the door is open, causing a second input to the lock tamper alarm.

   C•CURE 9000 does not display an additional alarm report for bond sensor 2 on the General Activity window.
5. Door closed (DSM deactivates).

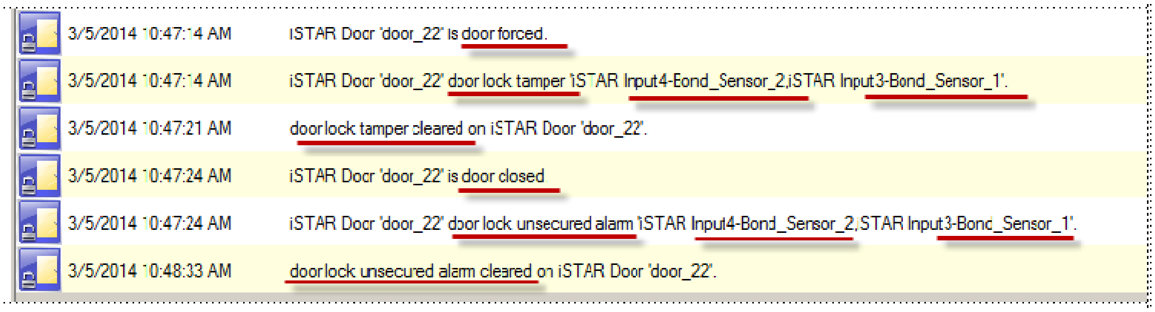
Figure 141: General Activity Alarm Reports Example



```
3/6/2014 2:56:40 PM     (3/6/2014 2:56:39 PM) Admitted 'Worsley, Gump' (Card: 1048575)  at 'door_22' (IN).
3/6/2014 2:56:45 PM     iSTAR Door 'door_22' door lock tamper 'iSTAR Input7-ed_cont_1_bond_sensor'.
3/6/2014 2:56:50 PM     door lock tamper cleared on iSTAR Door 'door_22'.
```

Figure 142 on Page 424 shows the Monitoring Status for the example door activities. C•CURE 9000 reports the first lock tamper (bond sensor 2) and does not clear the alarm. The second lock tamper (bond sensor 1) on the same door does not display on the General Activity Monitor.

Figure 142: General Activity Alarms Reports Example



```
3/5/2014 10:47:14 AM     iSTAR Door 'door_22' is door forced.
3/5/2014 10:47:14 AM     iSTAR Door 'door_22' door lock tamper 'iSTAR Input4-Bond_Sensor_2,iSTAR Input3-Bond_Sensor_1'.
3/5/2014 10:47:21 AM     door lock tamper cleared on iSTAR Door 'door_22'.
3/5/2014 10:47:24 AM     iSTAR Door 'door_22' is door closed.
3/5/2014 10:47:24 AM     iSTAR Door 'door_22' door lock unsecured alarm 'iSTAR Input4-Bond_Sensor_2,iSTAR Input3-Bond_Sensor_1'.
3/5/2014 10:48:33 AM     door lock unsecured alarm cleared on iSTAR Door 'door_22'.
```

Clearing Alarms

Advanced Door alarms may occasionally appear “stuck” because C•CURE 9000 waits for the input to change state before clearing the alarm. This is to reduce unnecessary alarm traffic. If all inputs are functioning properly, you can clear all door and input alarms by performing a normal door access cycle (opening and closing the door).

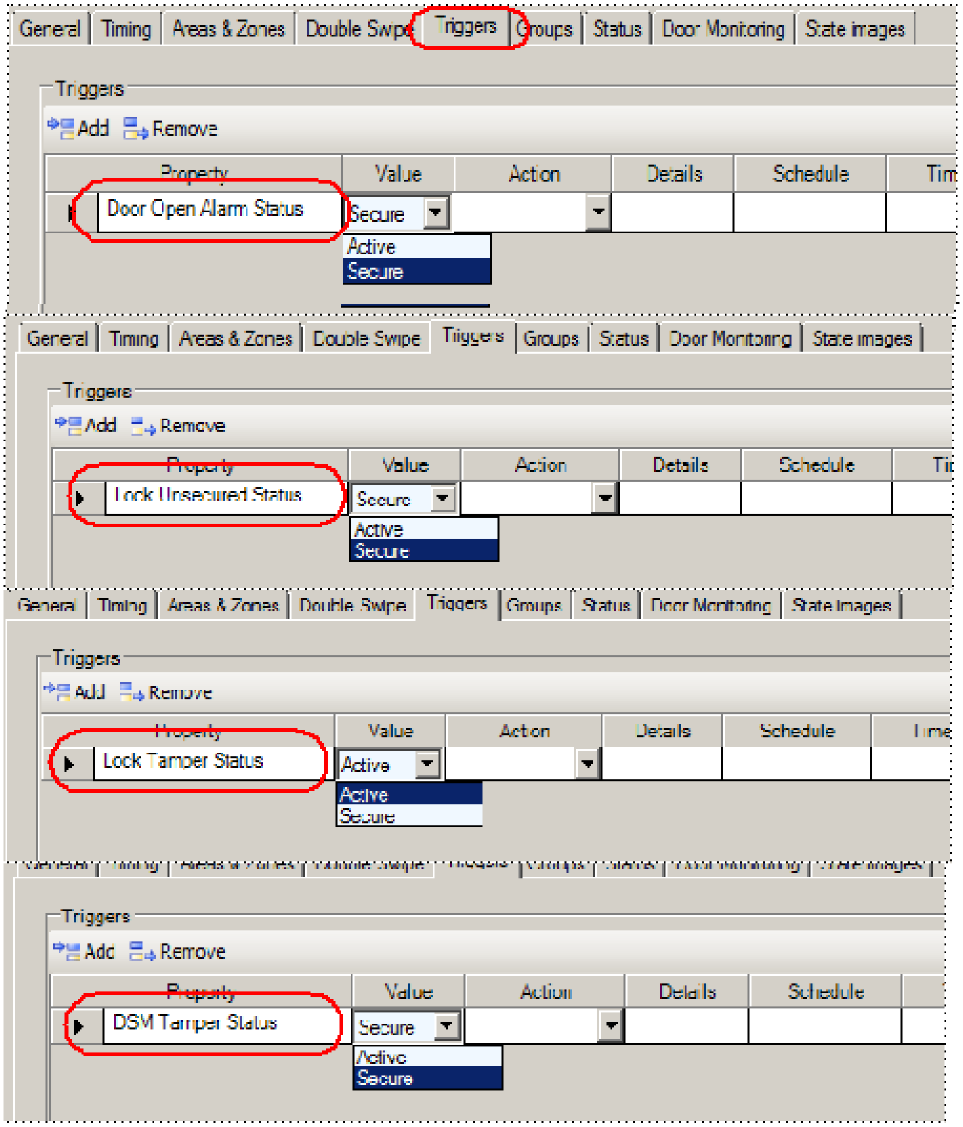
Door Triggers

In addition to the usual five Door Triggers:

- **Admit Status** - Admit, Reject, Noticed Admit, Noticed Reject, Duress
- **Double Swipe Status** - Locked, Unlocked
- **Mode Status** - Unlocked, Locked, No Access
- **Open Status** - Open, Closed
- **Alarm State Status** - Normal, Forced, Held Open

There are four additional Advanced Door Triggers shown in Figure 143 on Page 425.

Figure 143: Advanced Door Triggers



Property	Value	Action	Details	Schedule	Tim
Door Open Alarm Status	Secure				

Property	Value	Action	Details	Schedule	Ti
Lock Unsecured Status	Secure				

Property	Value	Action	Details	Schedule	Time
Lock Tamper Status	Active				

Property	Value	Action	Details	Schedule	
DSM Tamper Status	Secure				

Privilege Modifications

iSTAR Door Permission list

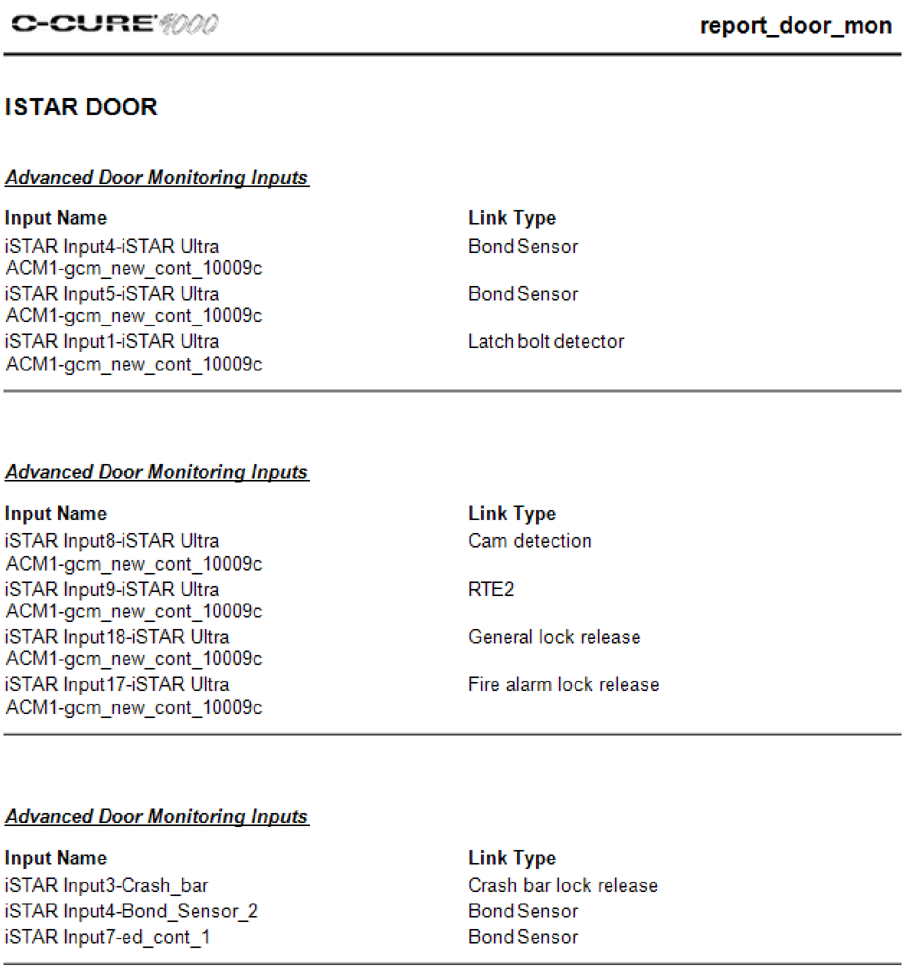
- Enable Door forced alarms
- Disable Door forced alarms
- Enable Door held alarms
- Disable Door held alarms
- Enable RTE functions
- Disable RTE functions
- Enable Lock Tamper alarms
- Disable Lock Tamper alarms
- Enable Lock Unsecured alarms

- Disable Lock Unsecured alarms
- Enable Door Open Tamper alarms
- Disable Door Open Tamper alarms
- Enable DSM Tamper alarms
- Disable DSM Tamper alarms
- Door Monitoring Details

Reports

A standard iSTAR Door Report can be used to list all of the Advanced Door components.

Figure 144: iSTAR Door Report



C-CURE 9000 **report_door_mon**

ISTAR DOOR

Advanced Door Monitoring Inputs

Input Name	Link Type
iSTAR Input4-iSTAR Ultra ACM1-gcm_new_cont_10009c	Bond Sensor
iSTAR Input5-iSTAR Ultra ACM1-gcm_new_cont_10009c	Bond Sensor
iSTAR Input1-iSTAR Ultra ACM1-gcm_new_cont_10009c	Latch bolt detector

Advanced Door Monitoring Inputs

Input Name	Link Type
iSTAR Input8-iSTAR Ultra ACM1-gcm_new_cont_10009c	Cam detection
iSTAR Input9-iSTAR Ultra ACM1-gcm_new_cont_10009c	RTE2
iSTAR Input18-iSTAR Ultra ACM1-gcm_new_cont_10009c	General lock release
iSTAR Input17-iSTAR Ultra ACM1-gcm_new_cont_10009c	Fire alarm lock release

Advanced Door Monitoring Inputs

Input Name	Link Type
iSTAR Input3-Crash_bar	Crash bar lock release
iSTAR Input4-Bond_Sensor_2	Bond Sensor
iSTAR Input7-ed_cont_1	Bond Sensor

Advanced Door Monitoring Details

If you have Advanced Door Monitoring, additional selections are displayed on the Door context menu from a Dynamic View or a Monitoring Station Status List of Doors.

Each of these selections let you initiate a Manual Action to enable or disable the selected function.

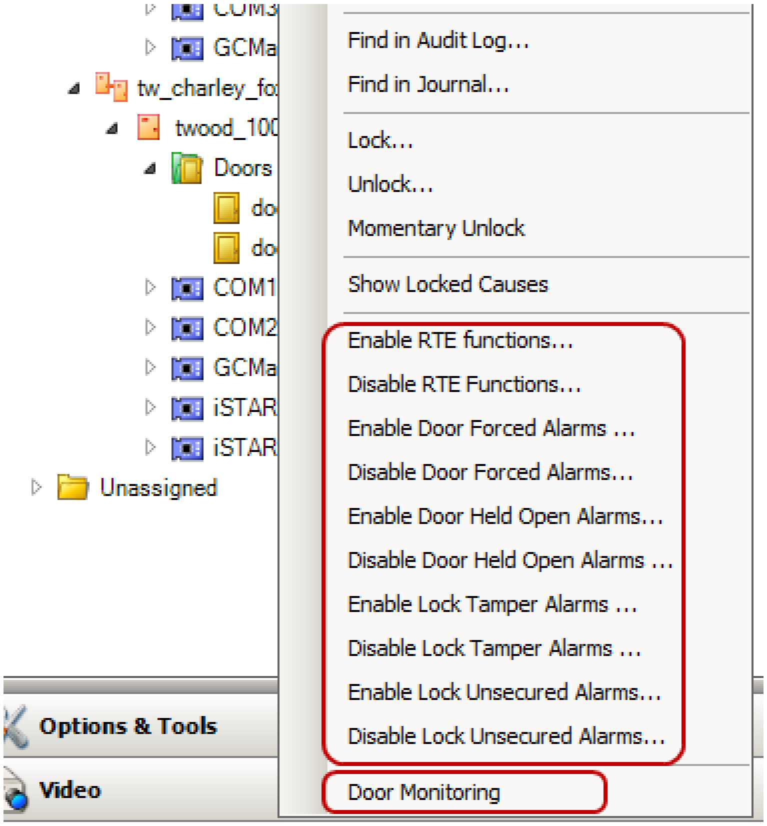
See Viewing a List of Doors on Page 355 for more information about the context menu for Doors.

Advanced Door Monitoring has 7 Cause List type states, and 14 possible manual actions that may be associated with these:

- RTE enable/disable,
- door forced alarm enable/disable,
- door held open alarm enable/disable,
- door open alarm enable/disable,
- lock tamper alarm enable/disable,
- lock unsecured alarm enable/disable,
- DSM tamper alarm enable/disable.

Enter the **Door Monitoring** Status screen for iSTAR doors by right clicking on the Door and selecting Door Monitoring from the context menu. You can also execute the Manual Actions listed above, from this context menu.

Figure 145: Door Context Menu


COM3
GCMa
tw_charley_fo
twood_100
Doors
do
do
COM1
COM2
GCMa
iSTAR
iSTAR
Unassigned
Options & Tools
Video
Find in Audit Log...
Find in Journal...
Lock...
Unlock...
Momentary Unlock
Show Locked Causes
Enable RTE functions...
Disable RTE Functions...
Enable Door Forced Alarms ...
Disable Door Forced Alarms...
Enable Door Held Open Alarms...
Disable Door Held Open Alarms ...
Enable Lock Tamper Alarms ...
Disable Lock Tamper Alarms ...
Enable Lock Unsecured Alarms...
Disable Lock Unsecured Alarms...
Door Monitoring

See Door Monitoring Screen on Page 428 for more information about the **Door Monitoring** screen.

Door Monitoring Screen

The Door Monitoring screen shows all inputs monitored by a door, their state, and any door alarm condition derived from them as well as the Cause Lists.

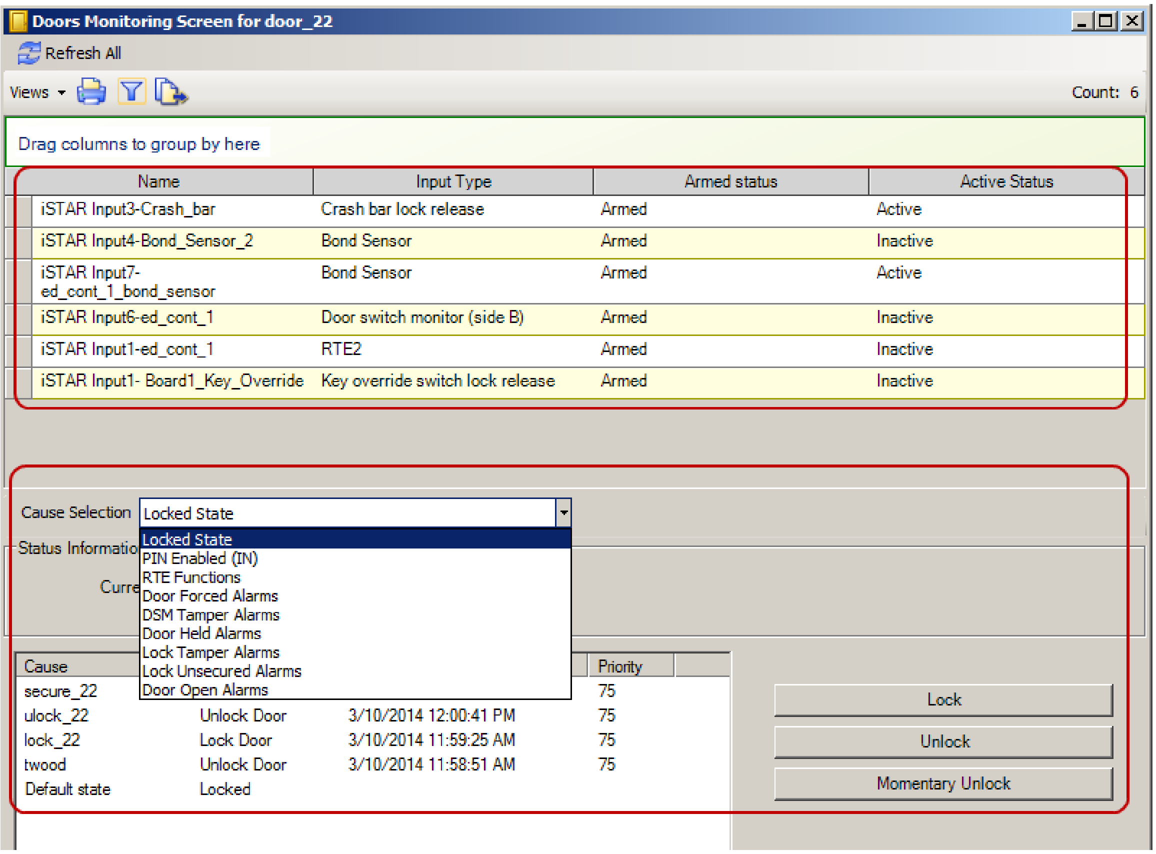
The upper dynamic view displays Door Monitoring Inputs status. The bottom part displays cause lists and all ‘cause list’ standard functionality is available (right mouse click on selected row will activate "Details/Cancel" context menu).

Figure 146 on Page 428 shows an example of the Door Monitoring Screen.

Table 154 on Page 429 provides definitions for the fields and selections on the screen.

Also see Table 149 on Page 402 for an explanation of the Alarms.

Figure 146: Door Monitoring Screen


Doors Monitoring Screen for door_22
Refresh All
Views
Count: 6
Drag columns to group by here

Name	Input Type	Armed status	Active Status
iSTAR Input3-Crash_bar	Crash bar lock release	Armed	Active
iSTAR Input4-Bond_Sensor_2	Bond Sensor	Armed	Inactive
iSTAR Input7-ed_cont_1_bond_sensor	Bond Sensor	Armed	Active
iSTAR Input6-ed_cont_1	Door switch monitor (side B)	Armed	Inactive
iSTAR Input1-ed_cont_1	RTE2	Armed	Inactive
iSTAR Input1- Board1_Key_Override	Key override switch lock release	Armed	Inactive

Cause Selection: Locked State

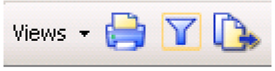
Cause			Priority
secure_22			75
ulock_22	Unlock Door	3/10/2014 12:00:41 PM	75
lock_22	Lock Door	3/10/2014 11:59:25 AM	75
twood	Unlock Door	3/10/2014 11:58:51 AM	75
Default state	Locked		

The availability of manual actions depends on input assignments. The rules to show/hide manual action on the Door Monitoring Screen and show/hide executors on iSTAR Door Dynamic Views are:

- If there is an RTE input then show Enable/Disable RTE;
- If there is a DSM input then show Enable/Disable Door Forced Alarms, Enable/Disable Door Held alarms, if there is also any DSM side A inputs, then Enable/Disable DSM Tamper
- If there is a Bond Sensor input then show Enable/Disable Lock Tamper alarms, Enable/Disable Lock unsecured alarms;
- If there is a Latch Bolt Detector input then show Enable/Disable Lock Tamper alarms, Enable/Disable Lock unsecured alarms;
- If there is a CAM detection input then show Enable/Disable Lock Tamper alarms, Enable/Disable Lock unsecured alarms;
- If there is a DSM Side A input then show Enable/Disable Door Forced Alarms, Enable/Disable Door Held alarms, if there is also a main DSM, or another DSM side A, then Enable/Disable DSM Tamper;

- If there is a DSM Side B input then show Enable/Disable Door Forced Alarms, Enable/Disable Door Held alarms, if there is more than one DSM side B, then Enable/Disable DSM Tamper;
- If there is an RTE2 input then show Enable/Disable RTE.

Table 154: Doors Monitoring Screen Definitions

Field/Button	Description
Refresh All	Click this button to refresh the values of all Inputs on the screen.
	This toolbar lets you perform Dynamic View functions on the list of Door Inputs, such as filtering, printing, and switching to Card View.
Name	This column displays the name of the Input.
Input type	This column displays the function that the Input serves in Door Monitoring.
Armed Status	This column displays the Armed Status of the Input. Inputs associated with Doors are automatically Armed and are reported as unknown.
Active Status	This column displays the Active Status of the Input.
Cause Selection	This drop-down list lets you choose the Cause type to display in the Status Information and Cause List section of the screen.
Status Information	This read-only field displays the current state of the selected Input.
Cause	This read-only field displays the Cause State for the Input.
Action	This read-only field displays the Lock and Unlock actions that are in effect on the door.
DateTime	This read-only field displays the Date and Time the cause occurred.
Priority	This read-only field displays the Event Priority of the cause.
Lock	Click this button to initiate a manual action to lock the Door.
Unlock	Click this button to initiate a manual action to unlock the Door for a defined period.
Momentary Unlock	Click this button to momentarily unlock the Door for the Door Unlock period (usually 5 seconds).
Enable _____	The **Enable** button changes to match the selected **Cause Selection** in the drop-down list. Click this button to enable the selected Cause type. **Example:** If the Cause Selection is **Door Forced Alarms**, then the button reads **Enable Door Forced Alarms**.
Disable _____	The **Disable** button changes to match the selected **Cause Selection** in the drop-down list. Click this button to disable the selected Cause type. **Example:** If the Cause Selection is **Door Forced Alarms**, then the button reads **Disable Door Forced Alarms**.

Consecutive Rejects Activate an Event

This section describes how to configure the number of consecutive rejects and the time period during which consecutive rejects are counted. Consecutive rejects can be cards, keypad entry of card numbers, keypad commands, or pin number rejects. If the number of consecutive rejects occurs before the timer expires, a pre-defined and assigned event message displays on the Monitoring Station.

If a door has one IN and OUT reader, rejects are counted separately for each direction.

The reject count and timer are reset when the following occurs:

- a subsequent reject does not happen in the configured time period. For example, if the configured time period expires after the first reject, then the configured number of rejects and time period are reset to zero.
- the reject timer expires.
- if there is a good card swipe (access granted) following rejects.
- when the iSTAR is rebooted.

Example: Consecutive Rejects from a Single Cardholder

The number of consecutive rejects is set to 3, and the timer is set to 30 seconds. A single cardholder is rejected three times in a row within 30 seconds.

1. Cardholder A presents a card at the door reader and is rejected, reject count = 1.
2. Five seconds later, cardholder A presents the card again and is rejected, reject count = 2.
3. Five seconds later, cardholder A presents the card again and is rejected, reject count = 3.

When the number of consecutive rejects reaches 3, a configured event is activated and sent to the Monitoring Station. The reject count and the reject timer resets to 0.

Example: Consecutive Rejects from Multiple Cardholders

The number of consecutive rejects is set to 3, and the timer is set to 30 seconds. Multiple cardholders (cardholder A with credential X, cardholder B with credential Y, and cardholder C with credential Z) present their cards at the door reader. All three cardholders are rejected within 30 seconds.

1. Cardholder A with credential X presents a card at the door reader and is rejected, reject count = 1.
2. Five seconds later, cardholder B with credential Y presents a card at the door reader and is rejected, reject count = 2.
3. Five seconds later, cardholder C with credential Z presents a card at the door reader and is rejected, reject count = 3.

When the number of consecutive rejects reaches 3, a configured event is activated and sent to the Monitoring Station. The reject count and the reject timer resets to 0.

Example: Consecutive Rejects for Occupancy

The number of consecutive rejects is set to 3, and Area Occupancy is configured with maximum 3 and minimum 2.

1. Cardholders A, B, C, and D plan to enter the area.
2. Cardholder A presents card at the door reader to enter. Cardholder A is rejected because area occupancy minimum set to 2. Reject count = 1.
3. Cardholder B present card at the door reader and both cardholder A and cardholder B enter the area (area occupancy minimum set to 2).
4. Cardholder C presents card at the door reader and enters the area (area occupancy maximum set to 3).

5. Cardholder D present card at door reader and is rejected. Area occupancy maximum was reached with cardholder C. Reject count = 2.
6. Cardholder D presents the card again at the door reader and is rejected, and the reject count = 3.

When the number of consecutive rejects reaches 3, a configured event is activated and sent to the Monitoring Station. The reject count resets to 0.

Example: Consecutive Rejects PIN only

The number of consecutive rejects is set to 3. A single cardholder is rejected three times within 30 seconds.

1. Cardholder A enters the wrong PIN and is rejected, reject count =1.
2. Five seconds later, cardholder A enters the wrong PIN again, and is rejected, reject count = 2.
3. Five seconds later, cardholder A enters the wrong PIN again and is rejected, reject count = 3.

A configured event is activated and sent to the Monitoring Station. The reject count and reject timer are reset to 0.

Example: Consecutive Rejects Bi-directional Door - Two Readers

The number of consecutive rejects is set to 3. The timer is set to 60 seconds. Two cardholders swipe their cards at a door IN and OUT reader and gets rejected three times within 60 seconds.

1. Cardholder A swipes the IN direction reader and is rejected, the IN door reader reject count = 1.
2. Five seconds later, cardholder A swipes the IN direction reader again and is rejected, IN door reader reject = 2.
3. Five seconds later, cardholder B swipes the OUT direction reader and is rejected, OUT door reject count = 1.
4. Five seconds later, cardholder B swipes again at the OUT direction reader and is rejected, OUT door reject count = 2.
5. Five seconds later, cardholder A swipes at the IN direction reader again and is rejected, the IN door reader reject count = 3.
6. Five seconds later, cardholder B swipes the OUT direction reader again and gets rejected, OUT door reader reject count = 3.

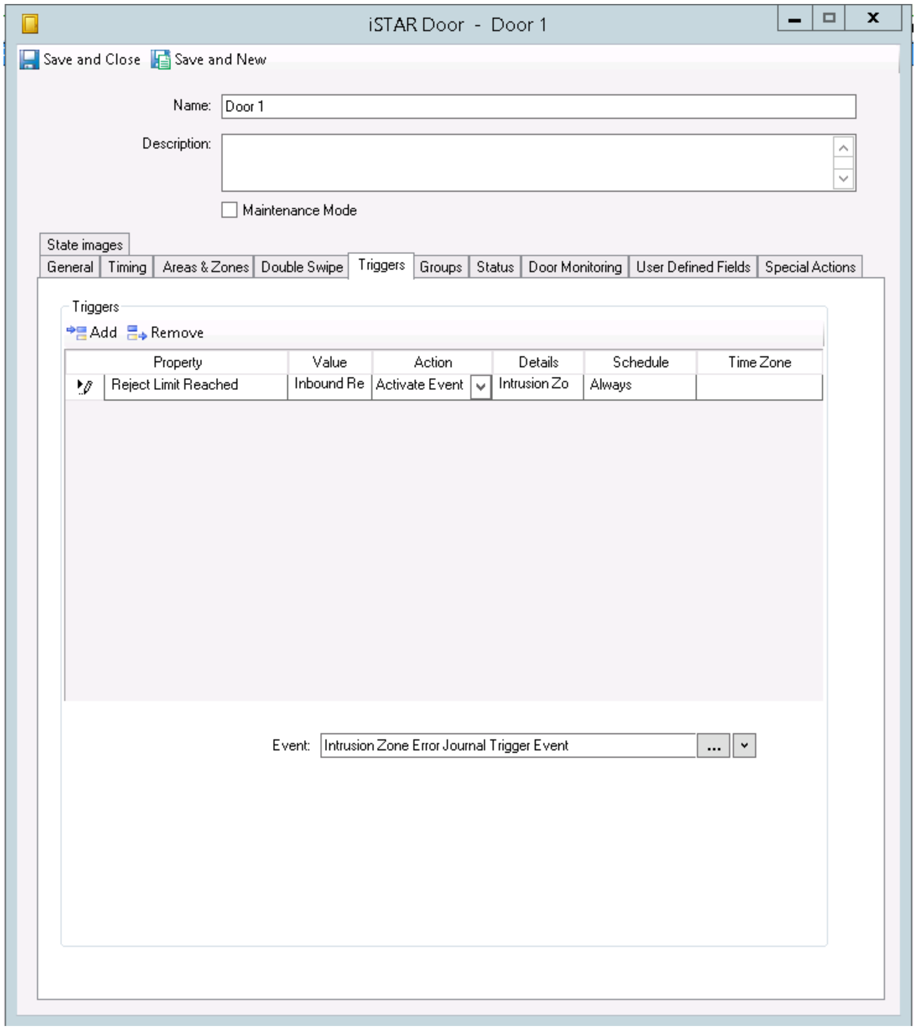
Configured IN and OUT direction events are activated and sent to the Monitoring Station. The IN and OUT direction reject count and reject timers are reset to 0.

Configuring an Event Activation After Consecutive Rejects

1. In the C•CURE 9000 Administration Station, open the **Options & Tools** pane and then select **System Variables**.
2. Expand the **iSTAR Driver** section and select **Number of Consecutive Rejects Cause Event** field to configure the number of consecutive rejects that will cause a message to appear on the Monitoring Station and trigger an event.
3. Enter a value by clicking in the **Value** field.
   The range is 0 to 100. Zero, the default setting, disables the feature.
4. In the **System Variables**, select the **Reader Consecutive Rejects Timer** field to configure the time it takes to reset the reader after consecutive rejects.
5. Enter a value by clicking in the **Value** field.
   The range is 0 to 86400 seconds. Zero, the default setting, disables the feature.
6. Close the **Systems Variables** window.
7. Open the **Hardware** pane and open the door to edit.
8. In the iSTAR Door editor, select the **Triggers** tab. Select **Add**. A new row appears.
9. In the **Property** field, select **Reject Limit Reached** from the drop-down list.

10. In the **Value** field, select **Inbound Reader** or **Outbound Reader** for this trigger.
11. In the **Action** field, select **Activate Event**. An event field appears at the bottom of the window. Choose an event to link with the trigger by selecting ... . An event dialog box appears. Select the configured event and then click **OK**.
12. Change the **Details**, **Schedule**, and **Time Zone** fields if necessary.
13. Select **Save and Close**.

Figure 147: Configuring an Event Activation After Consecutive Rejects



Name: Door 1

Description:

□ Maintenance Mode

Property	Value	Action	Details	Schedule	Time Zone
Reject Limit Reached	Inbound Re	Activate Event	Intrusion Zo	Always	

Event: Intrusion Zone Error Journal Trigger Event

Disabling Event Activation After Consecutive Rejects

1. In the C•CURE 9000 Administration Station, open the **Options & Tools** pane and then select **System Variables**.
2. Expand the **iSTAR Driver** section and select **Number of Consecutive Rejects Cause Event** field.
3. Click in the **Value** field. Enter zero (0) which disables the feature.
4. In the **System Variables**, select the **Reader Consecutive Rejects Timer** field to configure the time it takes to reset the reader after consecutive rejects.
5. Click in the **Value** field. Enter zero (0) which disables the feature.
6. Close the **Systems Variables** window.

12

Configuring Readers

In C•CURE 9000, before you configure a Reader, you must first create and configure the type of controller to which the Reader is connected. Then you can create and configure the Reader from the controller component the Reader is associated with.

In this chapter

Reader Overview 434
OSDP Reader Configuration 435
Innometriks High Assurance Reader Configuration 447
TST-100 Touchscreen Terminal Reader Configuration 456
Updating TST-100 Touchscreen Terminal Firmware 458
Updating Schlage PIM and Reader Firmware 460
Reader Editor 464
Reader Tab Definitions 465
iSTAR Reader Editor 466
iSTAR PIM-485 Reader Editor 480
iSTAR Aperio Reader Editor 484
apC Reader Editor 487

Reader Overview

A Reader is a hardware device that accepts access requests. To make an access request, a person presents a card at the Reader; the card reader scans the information encoded on the card and sends it to the controller, which grants or denies access. The controller reports the activity to the C•CURE 9000 Server.

In C•CURE 9000, before you configure a Reader, you must first create and configure the type of controller to which the Reader is connected. Then you can create and configure the Reader from the controller component the Reader is associated with.

There is a Reader Editor for each type of Reader object in C•CURE 9000:

- apC Reader Editor
- iSTAR Reader Editor
- iSTAR PIM-485 Reader Editor
- iSTAR Aperio Reader Editor

OSDP Reader Configuration

Open Security Device Protocol (OSDP) is an option available on HID® readers, Allegion™ aptiQ readers, Idesco readers, and Innometriks High Assurance readers (see Innometriks High Assurance Reader Configuration on Page 447).

OSDP is supported on the iSTAR Ultra, Ultra SE (Ultra Mode), and Ultra G2 with firmware 6.4.2 and later, and the IP-ACM. OSDP firmware download for Idesco and Schlage devices is supported with firmware 6.9.0 and later.

NOTE

- The OSDP Restrictions and Limitations on Page 436 also apply to Innometriks readers.
- To configure Innometriks High Assurance Phase 2 Readers, see Innometriks High Assurance Reader Configuration on Page 447

⚠ OSDP chains that contain readers from different manufacturers may experience intermittent communications failure. For optimum performance, configure OSDP chains to only contain readers from a single manufacturer.

See the following:

- Readers Supported on Page 435
- Features on Page 436
- Restrictions and Limitations on Page 436
- HID iCLASS SE Reader Information on Page 437
- Allegion aptiQ Reader Information on Page 437
- Wiring Options Using OSDP on Page 438
- Wiring Details for OSDP Readers on Page 439
- Configuring OSDP in C•CURE on Page 439
- Innometriks High Assurance Reader Configuration on Page 447
- Configuring the Readers on Page 440
- Changing the OSDP Reader Baud Rate on Page 440
- OSDP Reader Configuration on Page 435
- OSDP Reader File Transfer on Page 444
- OSDP Secure Channel Custom Key on Page 445
- OSDP Troubleshooting on Page 445

Readers Supported

- HID iCLASS SE
- HID Signo
- Allegion aptiQ
- INID
- Innometriks Cheetah
- Innometriks Rhino
- Innometriks Cheetah SE (supported on C•CURE 9000 v2.70 SP2 and above with iSTAR firmware v6.6.5 and above)
- Wavelynx Ethos
- Idesco OSDP readers

NOTE The readers ship with the OSDP installer key (default key). The readers automatically switch from the default key (installer mode) to a new key when the reader is powered on.

Features

- Secure channel AES128 encryption enabled by default with support for randomly generated 128-bit communication keys between C•CURE and readers.
- Card data and keypad commands.
- Intrusion zones and keypad commands.
- Reader tamper indication.
- Supports up to 8 OSDP readers daisy chain on each iSTAR Ultra/Ultra SE RS-485 device port.

NOTE Each reader on a chain must have a unique address. However, the factory default address for all OSDP readers is 0. Ensure that you change the address for the second reader and each subsequent reader in the chain. Refer to the reader's manufacturer for the address setting process.

- Communication loss alarm.
- Display reader firmware version (iSTAR Reader **Status** tab).
- Point-to-point, half duplex wiring.
- Speed selection:
  - 9600, 38400 and 115200 baud.
  - To change the speed, a reader must have the speed set locally, through a reader configuration card, configuration tool, or configuration app. See your specific reader documentation for more information.

NOTE

- Readers configured with the wrong Baud Rate may cause communication problems with other readers. Connecting a chain of readers with any mismatched Baud Rate can keep the entire chain offline.
- Idesco reader baud rates and addresses cannot be changed in the C•CURE Administration Station but can be changed using a configuration card or reader configuration app.

Restrictions and Limitations

The restrictions and limitations described in this section apply to all OSDP readers unless otherwise indicated.

- **IMPORTANT:** OSDP readers communicating in OSDP Secure Channel and which do not have **Installation Mode** enabled (in both C•CURE and on the reader) will remain offline until the reader is rebooted. A new exchange of keys is required to restore the reader. Before you upgrade the iSTAR Ultra/Ultra SE/Ultra LT controller to firmware v6.6.5, check with your OSDP reader supplier to ensure the reader supports key 1 change as described in Appendix D of the OSDP 2.1.7 Specification. If your reader does not support key 1 change, then you need to set the OSDP reader back to factory defaults (OSDP Install Mode) and enable **Installation Mode** in C•CURE before you can connect to an iSTAR Ultra upgraded to firmware v6.6.5.
- After the firmware iSTAR Ultra/Ultra SE/Ultra LT controller v6.6.5 upgrade, the Installer Mode and OSDP Secure Channel are automatically enabled. For maximum security, manually disable (clear) the Installer Mode Enabled check box for each reader on the iSTAR Reader dialog box General tab.
- Occasionally, when an OSDP reader is first powered on, and not connected to a door, the LED may display unstable status information. This condition should only last 30 seconds.
- Setting both the LED and beep to the same pattern will not always synchronize. The buzzer and LED in the OSDP protocol requires two different protocol messages, and at 9600 baud there is a minimum of 28 ms space between those, and

possibly up to 225 ms between the two requests. When the reader starts the beep pulse and when it starts the LED flash is based on the reader manufacturer.

- Ensure the reader baud rate and reader address match the baud rate on the RS485 port and the reader address configured in C•CURE. Connecting a chain of readers with any mismatched Baud Rate can keep the entire chain offline.
- To utilize the customizable LED/Beep/Message features, the OSDP reader must support the full set of LED/Beep commands in the OSDP specification.
- Innometriks Readers only:
  - The new LED and beep patterns are supported on the Cheetah SE. They are not supported on the older Cheetah and Rhino classic readers.
  - If one of the readers in a multi-drop configuration reboots or performs an initial boot, the rest of the readers in that multi-drop will experience brief communication loss during that time.
- In an OSDP multi-drop environment, use the higher baud rate (38.4K or 115K.) for the customizable LED patterns, Beep patterns, and LCD message set features.
- The double-swipe beep configurations supersede all other beep configurations. Avoid using the ninth pattern (400 ms on/200 off/100 on) and the 10th pattern (100 ms on/200 off/400 on/200 off/100 on/200 off/100 on) if you are using double-swipe for other purposes.
- If you are using LED colors, ensure that the reader supports the colors you choose for the configuration. Check the reader documentation.
- Idesco OSDP readers address and baud rate cannot be changed in C•CURE. This is an Idesco limitation.

HID iCLASS SE Reader Information

- OSDP is an option on HID readers, not a standard feature.
  - OSDP default set for the readers is v1 (non-encrypted)
- SW House ordered OSDP HID readers ship with the following default settings:
  - Address 0, 9600 baud
  - Secure channel encryption enabled

NOTE You may need to use a HID configuration card to enable Secure Channel if you do not purchase HID readers through Software House.

Allegion aptiQ Reader Information

The aptiQ reader models, listed in Table 155 on Page 437, are Wiegand/OSDP models.

Table 155: Allegion aptiQ Reader Models

Model	Description
AQ-MT11-485	Mullion
AQ-MT15-485	Single Gang
AQ-MTK15-485	Single Gang with KP
AQ-MTMS15-485	MT with Mag strip
AQ-MTMSK15-485	MT with Mag stripe & KP

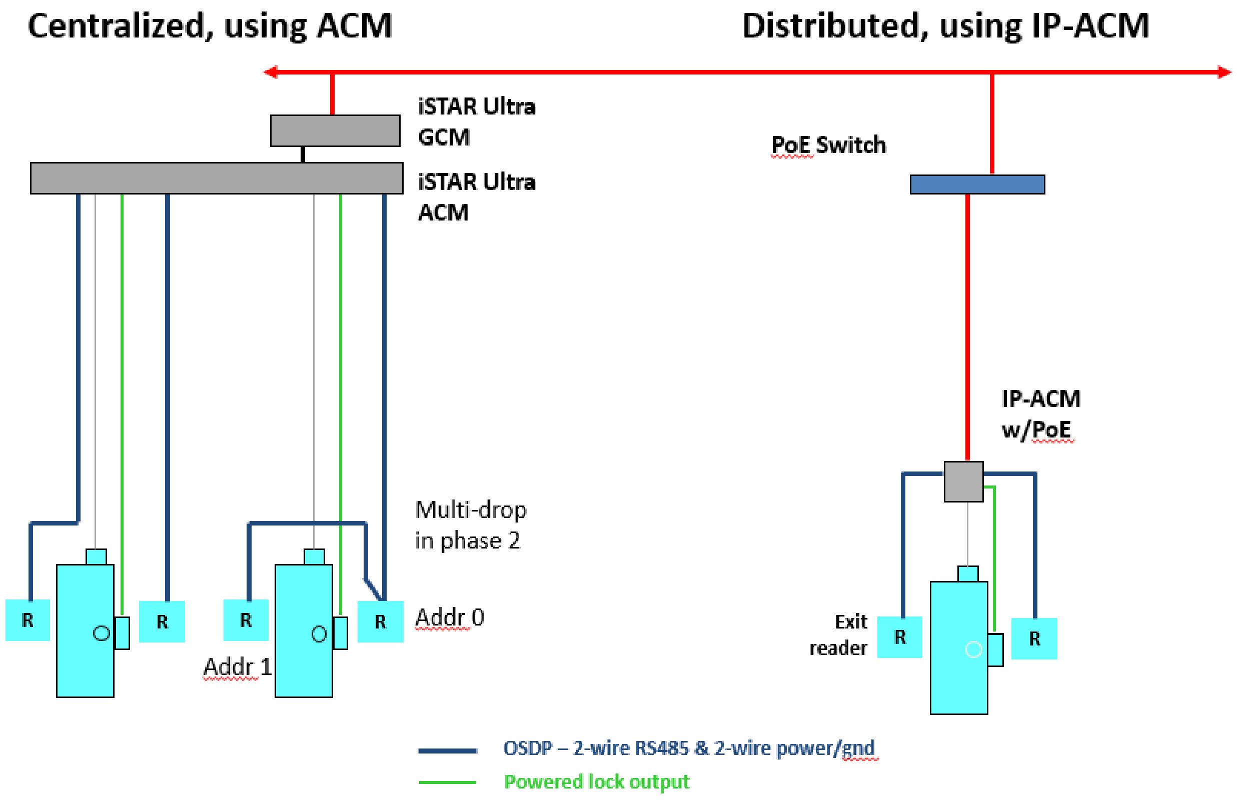
The Wiegand/OSDP models are auto sensing:

- If the reader senses an OSDP command on the RS485 terminal, the reader reverts to OSDP.
- If the reader does not receive an OSDP command within a timeout period, it reverts to Wiegand.

Wiring Options Using OSDP

Wiring options for OSDP are shown in Figure 148 on Page 438.

Figure 148: OSDP Wiring Options



Wiring Details for OSDP Readers

Wiring details from the Ultra to the readers are shown in Figure 149 on Page 439.

Figure 149: OSDP wiring details for HID readers

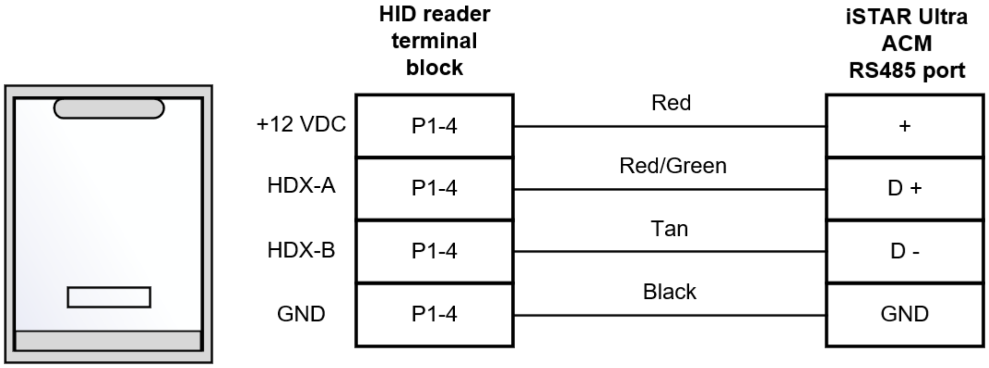
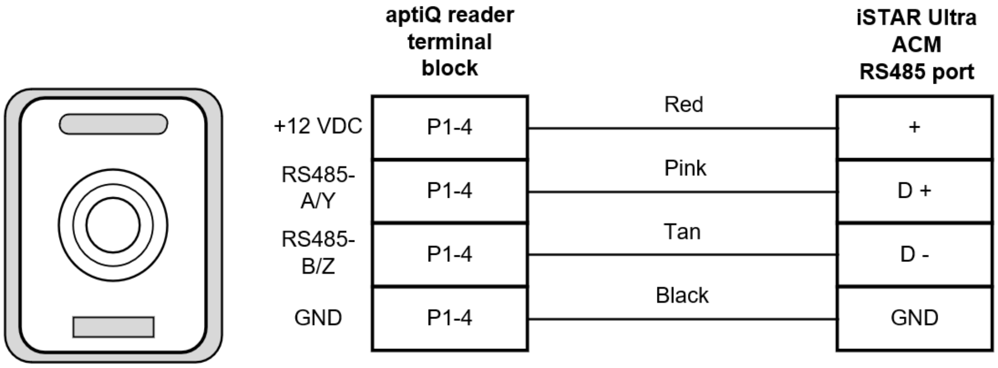


Figure 150: OSDP wiring details for aptiQ readers



NOTE

In most cases, existing Wiegand wiring may be reused for OSDP, with re-termination at both the reader and panel ends. Very long runs using small wire gauges, through electronically noisy areas, should be tested first.

Configuring OSDP in C•CURE

To configure OSDP in C•CURE:

1. Verify that the iSTAR Controller firmware is v6.4.2 or later.
2. To setup the RS485 port on the IP-ACM go to Step 3.
   To setup the RS485 port on the USB ACM go to Step 4.
3. Setup the RS485 port on the IP-ACM (one port per reader):
   a. Open the iSTAR Controller editor.
   b. Click the **IP-ACMs** tab.
   c. Click the **Configured** check box of the IP-ACM and click **Edit**.
   d. In the iSTAR Ultra IP-ACM dialog box, click the **RS-485** tab.
   e. Click the **Configured** check box of the RS-485 port and click **Edit**.
   f. In the iSTAR Device Port dialog box, select **OSDP** from the Protocol drop-down menu.

g. Set the **Baud Rate**.

h. Click **Save and Close**.

4. To setup the RS485 port on the USB ACM:

a. Open the iSTAR Controller editor.

b. Click the **Boards** tab.

c. Click the **Configured** check box of the desired ACM and click the **Edit** button.

d. In the iSTAR Ultra ACM dialog box, click the **RS-485** tab.

e. Click the **Configured** check box of the RS-485 port and click **Edit**.

f. In the iSTAR Device Port dialog box, select **OSDP** from the **Protocol** drop-down menu.

g. Set the Baud Rate.

h. Click **Save and Close**.

Configuring the Readers

To configure the readers:

1. In the iSTAR Device Port dialog box, click the **Readers** tab.
2. Click the **Configured** check box of the reader and click **Edit**.
3. Set the reader address to the desired value between 0 and 8. (Multiple readers on a port must each have a unique address.)
4. Enable the Tamper, Comm Fail, and Supervised Inputs, if needed.
5. Add card formats, complete the configuration.

Changing the OSDP Reader Baud Rate

There are two methods of changing the baud rate.

- Method 1 requires the controller to be reset.
- Method 2 requires removing, adding, and reconfiguring the readers attached to the port without resetting the controller.

NOTE The address and baud rate of Idesco OSDP readers operate with address 0 and a baud rate of 9600. This cannot be changed in the C•CURE Administration Station but can be changed using a configuration card or reader configuration app.

Method 1

This method requires the controller to be reset.

To change the baud rate:

1. Disable the cluster and the controller.
2. Open the iSTAR Controller editor.
3. Click the **IP-ACMs** or **Boards** tab. This depends on the current configuration.
4. Select the appropriate **Configured** check box of the IP-ACM or ACM and click **Edit**. The iSTAR Ultra IP-ACM dialog box or the iSTAR ACM dialog box appears.
5. Click the **RS-485** tab.

6. Select the **Configured** check box of the RS-485 port and click **Edit**. The iSTAR Device Port dialog box opens.
7. Click on the **General** tab.
8. Select a value from the **Baud Rate** drop-down menu.
9. Click **Save and Close**.
10. Enable the controller and the cluster.
11. Reset the controller.

Method 2 (controller reset is not required)

To change the baud rate:

1. Open the iSTAR Controller editor.
2. Click the **IP-ACMs** or **Boards** tab. This depends on the current configuration.
3. Select the **Configured** check box of the IP-ACM or ACM and click **Edit**. The iSTAR Ultra IP-ACM dialog box or the iSTAR ACM dialog box appears.
4. Click the **RS-485** tab.
5. Select the **Configured** check box of the RS-485 port and click **Edit**. The iSTAR Device Port dialog box opens.
6. Click the **Readers** tab.
7. Select **Delete All Readers**.
8. Click the **General** tab.
9. Select **OSDP** from the **Protocol** drop-down menu.
10. Change the **Baud Rate**.
11. Click the **Readers** tab.
12. Add and configure each reader.
13. Click **Save and Close**.

OSDP Conversion for Wiegand and RM readers

Use the following procedures to convert currently configured RM or Direct Connect Wiegand readers to the OSDP protocol for iSTAR Ultra controllers.

For Wiegand readers, the conversion process creates a new device port and moves the Wiegand reader to that port.

For RM readers, you select a single reader for conversion, but you can convert the entire chain of RM readers. When you select a single reader, if it is the only reader on the device port then you can select the current device port to be converted to OSDP. If there are other readers on the device port, you must select a different device port. When you select to convert the entire chain of readers, you can either convert the current device port to OSDP or you can select a different device port.

Prerequisites

- Reader and controller firmware must be at version 6.6.B or later. The Convert reader to OSDP option is not available for devices with incompatible firmware.
- The cluster must be disabled before you start the conversion. You can manually disable the cluster then run the conversion, or the conversion will automatically disable it for you.

NOTE From the OSDP Reader Conversion page, you can select an option to re-enable the cluster after the conversion process is complete.

- Device port indexes must be unique across an ACM.
- OSDP Addresses must be unique across a single device port. Valid values are 0 through 8.
- Any ACM hardware that exists but is not configured in C•CURE is not used in the conversion process. For example, if the controller has two physical ACMs but only one ACM is configured, then only the configured ACM is used.
- If you want to include any device Inputs or Outputs in the conversion, you must un-configure them in C•CURE before you start the conversion process.
- If you want to use Ports for Wiegand and RM conversions, they must be un-configured, or they must be configured as OSDP but have no readers configured. You can also use Ports that are used by RM readers, if you convert all of the RM readers at the same time.

Converting a Wiegand reader to OSDP

1. From a Dynamic View or Hardware Tree, right-click the iSTAR reader and select **Convert reader to OSDP**.
2. In the **OSDP Conversion** window, configure the following conversion settings:

- **Optional:** In the **Cluster** area, select the check box if you want to enable the cluster after the conversion process is complete.
- In the **RS-485 Device Port** area, configure the following settings:
  - From the **RS-485 Device Port Index** list, select a device port.

NOTE If you select an empty OSDP device port from the list, the baud rate is set automatically and cannot be manually changed.

  - From the **Baud Rate** list, select a baud rate.
- In the **Reader(s)** area, configure the following reader settings:
  - **Optional:** Click **OSDP Address** to type in a new OSDP reader address (invalid addresses are flagged).
  - **Optional:** Select the **Secure Channel Enabled** check box to enable a secure channel for the reader.
  - **Optional:** Select the **Enable Installation Mode** check box to enable installation mode.

3. Click **Convert**.
4. In the dialog box, read the instructions, select the check box, and then click **Yes**.
5. After the conversion is complete, click **OK**.

If you select an empty OSDP device port from the list, the baud rate is set automatically, and you cannot change this value.

Converting an RM reader to OSDP

1. From a Dynamic View or Hardware Tree, right-click the iSTAR reader and select **Convert reader to OSDP**.
2. In the **OSDP Conversion** window, configure the following conversion settings:

- **Optional:** In the **Cluster** area, select the check box if you want to enable the cluster after the conversion process is complete.
- In the **RS-485 Device Port** area, configure the following settings:
  - From the **RS-485 Device Port Index** list, select a device port.

NOTE If you select an empty OSDP device port from the list, the baud rate is set automatically and cannot be manually changed.

  - From the **Baud Rate** list, select a baud rate.
- In the **Reader(s)** area, configure the following reader settings:
  - Select one of the following options:
    - Convert only the selected reader.
    - Convert the entire chain of RM readers.
  - **Optional:** Click **OSDP Address** to type in a new OSDP reader address (invalid addresses are flagged).
  - **Optional:** Select the **Secure Channel Enabled** check box to enable a secure channel for the reader.
  - **Optional:** Select the **Enable Installation Mode** check box to enable installation mode.

3. **Optional:** In the **Reader I/O** area, to edit I/O destination mappings, select a destination from the **Destination Index** list. You can select the following options for each input or output object:

- Keep the object mapped to the reader. **Note:** The OSDP reader must support I/O.
- Map the object to an un-configured I/O slot on the ACM.
- (Outputs only) Map the output to an unconfigured R8 board slot.
- Delete the object mapping.

4. Click **Convert**.
5. In the dialog box, read the instructions, select the check box, and then click **Yes**.
6. After the conversion is complete, click **OK**.

OSDP Reader File Transfer

You can transfer files from C•CURE to OSDP readers connected to an iSTAR controller. You can use this file transfer method to upgrade or downgrade OSDP reader firmware, update a reader configuration file, or change an image file on readers with displays.

Supported Readers

The table below displays the readers which have been qualified by Software House to support OSDP reader file transfer.

Table 156: Supported readers for OSDP file transfer

Wavelynx OSDP readers	Idesco OSDP Readers	Innometriks Cheetah SE Readers
Part Number: ET25-6WS Full size reader with keypad CPN: CWL1	8CD 2.0 D Pin OSDPV2 Full size reader with keypad and special function keys.	Keypad and contactless only
Part Number: ET20-3WS Full size reader without keypad CPN: CWL1	8CD 2.0 Slim Pin OSDPV2 Narrow width reader with keypad and no special function keys.	Keypad and contactless and contact
Part number: ET10-2PS Narrow width reader without keypad Model: CV1		Keypad and contactless and biometric
		Keypad and contactless and biometric and contact

NOTE OSDP reader transfer may be supported on other OSDP readers that are not officially qualified by Software House.

Prerequisites

Ensure you meet the following prerequisites before proceeding with a file transfer:

- If you are transferring files to change OSDP reader firmware ensure the firmware file extension is `.bin`.
- Open the iSTAR controller containing the readers you want to transfer a file to and ensure it is online.
- Check the reader communication status and current firmware version by navigating to the **iSTAR Reader Editor**. On the Status tab, check the Communications field and Firmware Version field.

NOTE

- Ensure the iSTAR controller and the target readers are online before attempting the file transfer. If the controller or the readers are offline files will not be transferred.
- Users must have the Controller privilege "Update Firmware Privilege" to access the OSDP File Transfer window.

Completing a file transfer

1. Copy the firmware file to the following folder location: `C\:Program Files (x86) \Tyco\CrossFire\ServerComponents\iSTAR\ICU\Firmware\OSDP`
2. Right-click on the relevant iSTAR controller:

- On the C•CURE hardware tree.
- In the Dynamic View.

Select **OSDP File Transfer** from the context menu. The OSDP File Transfer window is displayed.

Alternatively, open the iSTAR controller, navigate to the Status tab and click **OSDP File Transfer**.

3. In the Reader(s) section, click **Add**. The Name Selection window is displayed.
4. Check the boxes for the OSDP readers that you want to transfer files to and click **OK**. The selected readers are listed in the Reader(s) section of the OSDP File Transfer window. If you are selecting multiple readers, ensure they are on the same iSTAR controller.
5. In the Files to Download section, select the file you want to transfer to the readers. Click **Start file transfer**.
6. You can check the status of the file transfer in the Status section of the OSDP File Transfer window.

NOTE This status only applies to the file transfer from C•CURE and does not provide status on whether the file was successfully read by the reader. See Verifying a file transfer on Page 445 for information on checking if a file was read successfully by the reader.

Verifying a file transfer

You can verify that the file has transferred and can be read by the reader through the Activity Viewer in the C•CURE Monitoring Station.

NOTE Idesco readers running firmware older than S00143 may need to be power-cycled if a file transfer is interrupted and the file transfer re-attempted.

- Successful transfers are displayed as: `Device Activity: reader firmware update completed on...`
- Unsuccessful transfers due to a disconnected reader or a corrupt file are displayed as: `Device Error: reader firmware download error data rejected on device...`

Verifying the reader status

You can verify the reader status, including firmware version, communication status, and other options, on the iSTAR Reader Status Tab on Page 472

OSDP Secure Channel Custom Key

You can create a new 128-bit secure key for communication between C•CURE and OSDP readers.

NOTE

- The reader must be online to generate a custom key.
- The OSDP Secure Channel Custom Key option is off by default to ensure compatibility with older readers and firmware.

Generating a new secure key

1. Open the C•CURE Reader Editor.
2. Check the **OSDP Secure Channel Custom Key** check box to enable the use of a new, randomly generated key for communications with the reader. This method only generates a new key on the first checkbox change.
3. Initiate a new key by right-clicking on a reader in the hardware tree or dynamic view and clicking **Refresh OSDP SC Key** on the context menu.

OSDP Troubleshooting

If OSDP readers do not come online immediately, check the following:

- Wiring – check the wiring of the reader.

NOTE The brown and tan wires on HID equipment are visually similar. Ensure these are routed correctly.

- Configuration – ensure the port is set to OSDP, and that the limit of 8 readers per ACM was not exceeded.
- Check the port’s green TX and RX lights – they should be flashing constantly. If not, the port may not be configured properly.
- Ensure the readers are set for secure channel encryption. Check the reader part number to verify. You may need to use configuration cards to enable secure channel encryption.

Innometriks High Assurance Reader Configuration

This section describes the requirements and the pre-configuration procedures for the Innometriks High Assurance (HA) readers.

HA is supported on C•CURE 9000 v2.70 with v2.70 SP2 installed, and higher.

- See OSDP Reader Restrictions and Limitations on Page 436
- Ensure that all steps in the Reader Configuration Requirements Checklist on Page 447 are completed.

In this section:

- Hardware and Firmware Requirements on Page 447
- Reader Configuration Requirements Checklist on Page 447
- Importing the Enrollment Service XML file on Page 449
- Configuring the FICAM Plugin User-Defined Field on Page 449
- CHUID Templates for use with Card Formats on Page 450
- Enrolling Users on Page 452
- Reader Configuration on Page 453

Hardware and Firmware Requirements

Innometriks HA Reader Firmware Requirement

- Cheetah SE Reader firmware version 1.2.4 and higher.
- Cheetah and Rhino Reader firmware version 5.2.3 or higher.

iSTAR Controllers Supported and Firmware Requirement

iSTAR Ultra and Ultra SE (Ultra Mode) with Firmware version 6.6.5 and higher.

Supported Modules

USB-ACM, SE USB-ACM, or the IP-ACM v2.

NOTE

IP-ACM v1 is not supported.

Reader Configuration Requirements Checklist

Ensure that the following requirements are met before you configure the reader in C•CURE 9000:

1. Configure the Innometriks HA reader for FICAM (Federal Identity, Credential and Access Management). See the Innometriks Reader Guide.
2. Obtain and record the reader IP address using the reader keypad.
   - Innometriks Cheetah SE reader: press **F1** and **F4** simultaneously, then press the **2** key.
   - Innometriks Cheetah and Innometriks Rhino readers: press * and the **F1** key at the same time.

3. Install and configure the Innometriks Identity Server. See the *Innometriks Identity Server User Guide* for installation and configuration information.

4. Install the following Innometriks software services:

   - FICAM High Assurance Services (on the same computer as the C•CURE 9000)
   - FICAM Enrollment Client (can be installed on a different server or desktop system)
   - FICAM Enrollment Plugin (on the same computer as the C•CURE 9000)

   a. Go to http://www.swhouse.com/Support/SoftwareDownloads.aspx. You must be a registered user to access this site.

   b. Select **Innometriks High Assurance** to access and download the installation files.

   c. See the *Innometriks High Assurance Solution Installation and Configuration Guide* for extraction and installation instructions.

NOTE

> The following XML files used are installed to the following locations:
>
> ■ Program Files (X86)\Tyco\CCURE Client\HA_Card Formats
>
> - Card-Format-Government-200-bit-FASC-N.xml
> - Card-Format--PIV-I.xml
>
> **CAUTION: Do not use the CHUID xml files.**
>
> ■ Program Files (X86)\Tyco\CCURE Client\HA_Enrollment:
>
> - Personnel-View-Ficam-Enrollment.xml

5. Attach a smart card enrollment reader device to the operating system where C•CURE 9000 is installed. The reader device is required to read the personnel enrollment data from the cards. See the manufacturer's documentation.

6. Ensure the Innometriks reader is directly connected to the configured ACM or the IP-ACM v2.

7. Ensure the C•CURE license file is applied, and the following information is verified in the License Manager (C•CURE 9000 tab):

   a. System Wide Capabilities:

   — **HA Assurance Readers** lists the correct number of licensed readers.

   b. Licensed Features:

   — Innometriks Enrollment - Plugin

   — Innometriks HA Enrollment Service

   — Innometriks HA Panel Service

8. Ensure the cluster and the controller is configured.

9. Ensure that **FICAM High Assurance** is enabled on the controller to which the reader is connected:

   a. Open the iSTAR Controller editor dialog box and select the General tab.

   b. Click **Enable FICAM High Assurance**.

   c. Click **OK**.

10. The Enrollment Service XML file is imported using the C•CURE Data Import Utility.

    See Importing the Enrollment Service XML file on Page 449.

11. A User Defined Field (UDF) is created for the FICAM plugin.

    See Configuring the FICAM Plugin User-Defined Field on Page 449

12. The HA card format XML files are imported.

See CHUID Templates for use with Card Formats on Page 450

13. Configure the reader in C•CURE.

    See Reader Configuration on Page 453

Importing the Enrollment Service XML file

The Enrollment Service XML file creates the HA Personnel View.

To manually import the Enrollment Services XML file:

1. Click the **Configuration** pane.
2. Select **Data Import** from the Configuration drop-down menu.
3. Click **New**. The Data Import dialog box opens.
4. Enter a name for the FICAM Personnel Data Import.
5. In the **Source Type** field, click ... .
6. Select **XML file import source**.
7. In the **Automation Mode** field, click the drop-down menu, select **Manual only** and click the **Manual Import** button.
8. Navigate to **C:\Program Files (x86)\Tyco\CCURE Client\HA_Enrollment**.
9. Select **Personnel-View-Ficam-Enrollment.xml** and click **Open**. The Importing Data dialog box opens.
10. Ensure that **Enabled** is selected.
11. **Save and Close** the Data Import dialog box.
12. Click **Save and Close**.
13. Go to Configuring the FICAM Plugin User-Defined Field on Page 449.

Configuring the FICAM Plugin User-Defined Field

To configure the FICAM Plugin UDF:

1. Click the **Configuration** pane.
2. Select **User-defined Fields** from the **Configuration** drop-down menu.
3. Click **New**. The User-defined Fields dialog box opens.
4. Enter **HA** in the **Name** field.
5. Click in the **Customer Label** field. HA appears in the field.
6. Select **Custom** from the **Field Type** drop-down menu.
7. Select **Personnel** from the **Object Type** drop down menu.
8. Select **FicamEnrollmentPlugin** from the **Custom Control** drop-down menu.
9. Click **Save and Close**.

CHUID Templates for use with Card Formats

After you select a CHUID format template, you must manually add the system ID to the card format template.

Available CHUID templates:

- Full FASC-N CHUID Format (200 bit) Template
- PIV I CHUID Format (128-bit) template

The procedures in this section apply to the following card formats:

- Card Format Government 200-bit FASC-N on Page 450
- Card Format PIV I Card Format on Page 451

> ⚠ **Do not use the CHUID.xml files that were installed along with the card templates.**

High Assurance Card MAS/SAS Grace Period Configuration

There is a system variable that allows you to expand the time period added after the Source of Authority Certificate (Not valid after) expires if there is a communication failure between the MAS and the SAS. If the Source of Authority Certificate (Not valid after) expires, and the MAS/SAS communication is not restored, then all cards become invalid and require full download to the controller.

Extending the time ensures all cards will remain valid for the period of time selected after the Source of Authority Certificate (Not valid after) expires, if the connectivity between the MAS/SAS be down for an extended period of time.

To extend the time period:

1. Click the **Options & Tools** pane.
2. Click **System Variables** and select the **Personnel** category.
3. Select **Enterprise High Assurance (HA) Grace Period (Hours)** and enter the extended time.

Card Format Government 200-bit FASC-N

This section describes how to locate the system ID, add the ID to the card format template, and how to import the file.

Perform the following steps:

1. Click the **Personnel** pane.
2. Select **CHUID Format** from the **Personnel** drop-down menu.
3. Click the drop-down arrow next to **New** and select **Full FASC-N CHUID Format (200-bit) Template** (for Card Format Government 200-bit FASC-N).

   The CHUID Format dialog box opens.
4. Enter a **Name** for the CHUID Format.
5. Click **Enabled**.
6. Click **Save and Close**.
7. Click ➔ ▾ next to **CHUID Format** to open a Dynamic view listing all CHUID Formats.

8. Right-click on the CHUID format you created from the template you selected in Step 3 and select **Export Selection**.
9. Browse to a location to save the file and click **Open**. The Exporting CHUID Data Format dialog box opens.
10. Click **OK** when the export is complete is displayed in the dialog box.
11. Navigate to the exported CHUID format file.
12. Open the file with Notepad.
13. Locate <objectID> in the file and note the number.

    Example: <objectID>*5004*</objectID>
14. Close the file.
15. Navigate to **C:\Program Files (x86)\Tyco\CCURE Client\HA_Card_Formats.**
16. Locate the **Card-Format-Government-200-bit-FASC-N.xml** file and open it in Notepad.
17. Locate <CHUIDFormatID> in the file and replace the number with the number you noted in step 13.

    Example: <CHUIDFormatID>*5004*</CHUIDFormatID>
18. Save the file.
19. Click the **Configuration** pane.
20. Select **Data Import** from the **Configuration** drop-down menu. The Data Import dialog box opens.
21. Enter a name for the Card Format.
22. In the **Source Type** field, click **...**.
23. Select **XML file import source**.
24. In the **Automation Mode** field, click the drop-down menu, select **Manual only** and click the **Manual Import** button.
25. Browse to **C:/Program Files (x86)/Tyco/CCURE Client/ HA_Card_Formats**
26. Select **Card Format Government 200-bit FASC-N.xml** and click **Open**. The Importing data dialog box opens.
27. Click **OK** when "Import complete" is displayed in the dialog box.
28. Click **Save and Close**.

    The **Government 200-bit FASC-N** card format is now available.

Card Format PIV I Card Format

This section describes how to locate the system ID, add the CHUID ID to your template, and how to import the template.

Perform the following steps:

1. Click the **Personnel** pane.
2. Select **CHUID Format** from the **Personnel** drop-down menu.
3. Click the drop-down arrow next to **New** and select **PIV I CHUID FORMAT (128-bit Template)** (for Card Format PIV I Card Format).

    The CHUID Format dialog box opens.
4. Enter a **Name** for the CHUID Format.
5. Click **Enabled**.

6. Click **Save and Close**.
7. Click ➡ ▾ next to **CHUID Format** to open a Dynamic view listing all CHUID Formats.
8. Right-click on the CHUID format you created from the template and select **Export Selection**.
9. Browse to a location to save the file and click **Open**. The Exporting CHUID Data Format dialog box opens.
10. Click **OK** when the export is complete is displayed in the dialog box.
11. Navigate to the exported CHUID format file.
12. Open the file with Notepad.
13. Locate <objectID> in the file and note the number.

    Example: <objectID>*5004*</objectID>
14. Close the file.
15. Navigate to **C:\Program Files (x86)\Tyco\CCURE Client\HA_Card_Formats**.
16. Locate the **Card-Format-PIV-I-Card-Format.xml** file and open it in Notepad.
17. Locate <CHUIDFormatID> in the file and replace the number with the number you noted in step 13.

    Example: <CHUIDFormatID>*5004*</CHUIDFormatID>
18. Save the file.
19. Click the **Configuration** pane.
20. Select **Data Import** from the **Configuration** drop-down menu. The Data Import dialog box opens.
21. Enter a name for the Card Format.
22. In the **Source Type** field, click **...**.
23. Select **XML file import source**.
24. In the **Automation Mode** field, click the drop-down menu, select **Manual only** and click the **Manual Import** button.
25. Browse to **C:\Program Files (x86)\Tyco\CCURE Client\HA_Card_Formats**.
26. Select the **Card-Format-PIV-I-Card-Format.xml** file and click **Open**. The Importing data dialog box opens.
27. Click **OK** when "Import complete" is displayed in the dialog box.
28. Click **Save and Close**.

    The **PIV I Card Format** is now available.

Enrolling Users

After the services are installed, you must edit existing Personnel records, or create a new Personnel record, to enroll users. The Personnel record uses the HA XML files you manually imported to add the Card Reader tab which allows HA enroll configuration.

To Enroll Users

1. Ensure that the smart card enrollment reader is connected to the operating system.
2. Click the **Personnel** pane.

3. Select **Personnel** from the drop-down menu list and click ➡ ▾ to open a Dynamic View displaying all configured Personnel records.

   or,

   Select **Personnel** from the drop-down menu list and click **New** to create a new personnel record.
4. Select **Ficam Enrollment** from the **Current View** drop-down list, located at the top of the screen.
5. Click the **Card Reader** tab.
6. Select the card reader from the drop-down list of available card readers.
7. Place the configured card on, or in, the smart card enrollment reader and click **Read Card**.

   All information on the card is read into the personnel record and overrides all previous information. Information can be edited once the process is complete.
8. Complete configuration updates.
9. Click **Save and Close** when done.

Reader Configuration

See the following:

- Configuring the HA Reader connected to an IP-ACM v2 on Page 453
- Configuring the HA Reader connected to an ACM on Page 454

Configuring the HA Reader connected to an IP-ACM v2

> **NOTE** IP-ACM v1 modules are not supported.

To configure the reader:

1. Access the controller's editor dialog box for the controller you want to add the reader.
2. On the **General** tab, select the **Support High Assurance Reader** check box.
3. Click the **IP-ACM's** tab.
4. Click on the **Configured** check box in the **Index** row of the configured IP-ACM v2.
5. Click ... in the **Edit** column in the Index row to open the IP-ACM editor. See iSTAR Ultra IP-ACM Editor on Page 279
6. Click the **RS-485** tab for reader connection to the IP-ACM v2 board.
7. Click on the **Configured** check box in the **Index** row of the device port.
8. Click ... in the **Edit** column in the Index row of the device port. The iSTAR Device Port dialog box opens. See iSTAR Ultra ACM RS-485 Device Port Editor on Page 196 for more information about the tabs and fields.
9. Select **OSDP** from the Protocol drop-down menu.
10. Select the **Baud Rate** from the drop down menu. The baud rate must match the baud rate configured on the reader.
11. Click the **Readers** tab.
12. Click on the **Configured** check box in the **Index** row of the reader attached to the RS-485 port on the controller.
13. Click ... in the **Edit** column in the Index row of the reader.

The iSTAR Reader dialog box opens. See iSTAR Reader Editor on Page 466 for more information about the tabs and fields.

> **NOTE**
>
> The iSTAR Reader dialog box name field displays the following information about the reader:
>
> - Reader number
> - Port number
> - IP-ACMv2 number
> - Controller name
>
> Optionally, you can change the reader name.

14. On the **General** tab, select the card format:
    a. Enter the reader address in the Address field.
    b. Under Card format, click **Add**.
    c. Click in the check boxes to select the card formats.
    d. Click **OK**.
15. Click the **High Assurance** tab. See High Assurance Tab on Page 478
    a. Select the **Support High Assurance Reader** check box. The High Assurance Operation Mode selections become available for selection.
    b. Select the High Assurance Operation Mode.
    c. Click **Save and Close** to save the settings and close the dialog box.

Configuring the HA Reader connected to an ACM

To configure the reader connected to the ACM:

1. Access the Controller's Editor dialog box for the controller you want to add the reader.
2. On the General tab, select the **Support High Assurance Reader** check box
3. Click the **Boards** tab.
4. Click on the **Configured** check box in the **Index** row of the configured ACM.
5. Click ... in the **Edit** column in the Index row to open the ACM editor. See iSTAR Ultra Controller ACM Board Editor on Page 195
6. Click the **RS-485** tab for reader connection to the ACM board.
7. Click on the **Configured** check box in the **Index** row of the device port.
8. Click ... in the **Edit** column in the Index row of the device port.

The iSTAR device Port dialog box opens. See iSTAR Ultra ACM RS-485 Device Port Editor on Page 196 for more information about the tabs and fields.

9. Select **OSDP** from the Protocol drop-down menu.
10. Select the **Baud Rate** from the drop down menu. The baud rate must match the baud rate configured on the reader.
11. Click the **Readers** tab.
12. Click on the **Configured** check box in the **Index** row of the reader attached to the port on the controller.
13. Click ... in the **Edit** column in the Index row of the reader.

The iSTAR Reader dialog box opens. See iSTAR Reader Editor on Page 466 for more information about the tabs and fields.

NOTE

> The iSTAR Reader dialog box name field displays the following information about the reader:
>
> - Reader number
> - Port number
> - IP-ACMv2 number
> - Controller name
>
> Optionally, you can change the reader name.

14. On the **General** tab:
    - a. Enter the reader address in the **Address** field.
    - b. Under Card format, click **Add**.
    - c. Click in the check boxes to select the card formats.
    - d. Click **OK**.
15. Click the **High Assurance** tab. See High Assurance Tab on Page 478
    - a. Select the **Support High Assurance Reader** check box. The High Assurance Operation Mode selections become available for selection.
    - b. Select the High Assurance Operation Mode.
    - c. Click **Save and Close** to save the settings and close the dialog box.

TST-100 Touchscreen Terminal Reader Configuration

You can configure the TST-100 Touchscreen Terminal in RM mode or Smart mode. The mode of the reader is dependent on the configuration of the S2 DIP switches. Additionally, the reader is required to be wired as full-duplex for Smart mode and half-duplex for RM mode. Not all features are supported when using the reader in RM mode.

RM Mode Configuration

In RM mode, you can connect the reader to iSTAR Classic, Pro, eX, Edge, Ultra, Ultra SE (Ultra Mode or Pro Mode), or Ultra LT controller.

NOTE Ensure the reader S2-1 DIP switch is in the OFF position and S2-2 is in the ON position.

To Configure the TST-100 Touchscreen Terminal in RM Mode:

1. Open the Hardware Tree for a Controller, navigate in the tree to open the reader folder under that Controller, showing a list of readers.
2. Click on the reader that you want to edit, and the Reader Editor opens.
3. Click the **RS-485** tab.
4. Configure a port by selecting the corresponding check box. The iSTAR Device Port box appears.
5. Click the **General** tab.
6. In the **Protocol** field, select **RM** from the drop-down list.
7. Click the **Readers** tab.
8. Configure the reader by selecting the **Configured** check box of the corresponding reader and click **Edit** in the same row. The iSTAR Reader configuration box appears.
9. Configure the reader by selecting the tabs (General, I/O, Keypad, Triggers, After Hours). See iSTAR Reader Editor on Page 466 for more information.
10. Configure a door and assign the reader you configured to the door. See iSTAR Door Editor on Page 371
11. Ensure that you configure clearances, credentials, and personnel information such as card number for the reader.

Smart Mode Configuration

In Smart mode, you can connect the reader to iSTAR Ultra, Ultra SE (in Ultra Mode), or Ultra LT controller. If using the reader in Smart mode, the iSTAR controller must be connected to an IP-ACM.

NOTE Ensure the reader S2-1 and S2-2 DIP switch are in the OFF position.

To Configure the TST-100 Touchscreen Terminal in Smart Mode:

1. Configure an ACM or IP-ACM. If using the iSTAR IP-ACM for configuration, ensure that the IP-ACM is connected to the controller GCM. You can find this information in the ICU or the IP-ACM Status page using the IP address of the board entered into the navigation bar of a browser.
2. Open the configured controller's Controller Editor dialog box.
3. Select the **IP-ACMs** tab. The IP-ACM dialog box opens.

4. Click the **RS-485** tab of the IP-ACM.
5. Configure a port by selecting the corresponding check box. The iSTAR Device Port box appears.
6. Click the **General** tab.
7. In the **Protocol** field, select **Smart** from the drop-down list.

NOTE The Smart protocol will not be available if offline mode is enabled on the IP-ACM.

8. Click the **Readers** tab.
9. Configure the reader by selecting the check box of the corresponding reader and click **Edit** in the same row. The iSTAR Reader configuration box appears.
10. Configure the reader by selecting the tabs (General, I/O, Keypad, Triggers, After Hours, Touchscreen). See iSTAR Reader Editor on Page 466 for more information.
11. Configure a door and assign the reader you configured to the door. See iSTAR Door Editor on Page 371
12. Ensure that you configure clearances, credentials, and personnel information such as card number for the reader.

Updating TST-100 Touchscreen Terminal Firmware

You can update the TST-100 Touchscreen Terminal reader, in Smart mode, firmware through the iSTAR panel it is connected to from the Administration Client or the Monitoring Station client.

- Firmware updates are only supported on the TST-100 Touchscreen Terminal reader using the Smart mode protocol. You cannot update the TST-100 Touchscreen Terminal firmware if you are using RM mode.
- Firmware updates are only supported on the iSTAR Ultra, Ultra SE (in Ultra mode), or the Ultra LT connected to an IP-ACM.
- Read the TST-100 Touchscreen Terminal firmware release notes before updating the firmware.

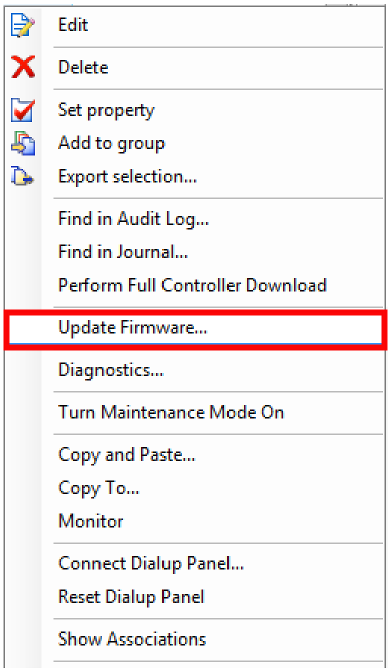
You initiate a firmware update by right-clicking on the iSTAR controller:

- In the Hardware Tree
- In a Dynamic View in the Administration Client
- In the Status List - Controller in the Monitoring Station

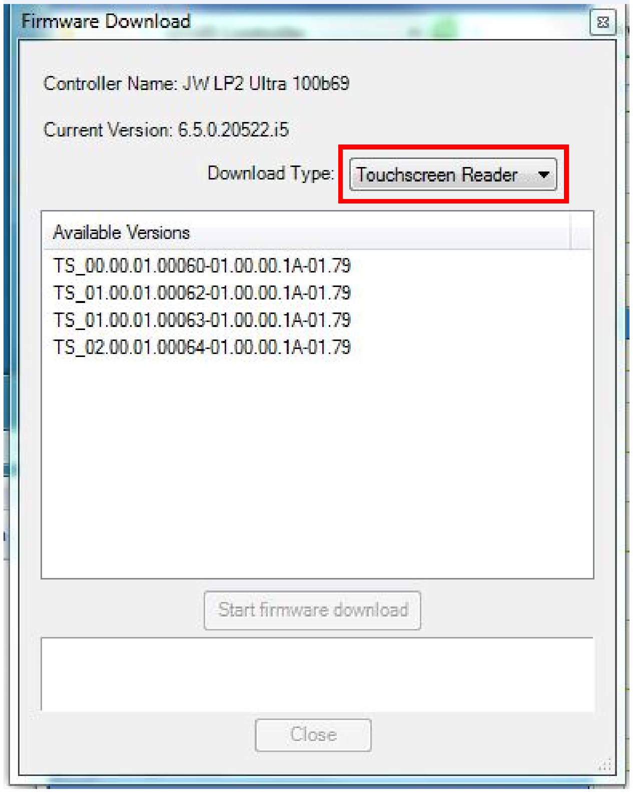
This procedure updates the firmware on all TST-100 Touchscreen Terminals connected to the iSTAR.

To Update Firmware on the TST-100 Touchscreen Terminal

1. Right-click on the controller and select **Update Firmware** from the context menu.



NOTE **Update Firmware** will not appear on the context menu if the iSTAR is not Enabled or is off-line.



Firmware Download

Controller Name: JW LP2 Ultra 100b69

Current Version: 6.5.0.20522.i5

Download Type: Touchscreen Reader

Available Versions
TS_00.00.01.00060-01.00.00.1A-01.79
TS_01.00.01.00062-01.00.00.1A-01.79
TS_01.00.01.00063-01.00.00.1A-01.79
TS_02.00.01.00064-01.00.00.1A-01.79

2. Select **Touchscreen Reader** from the **Download Type** drop-down menu.

NOTE Touchscreen Reader only appears on the drop-down menu if there are Smart mode TST-100 Touchscreen Terminal readers configured on the panel.

3. Select the firmware version that you want to download from the list in the dialog box.
4. Click **Start firmware download**.

   A progress bar indicates the firmware download to the controller is complete.
5. When the download has completed, click **Close** to close the dialog box.

After the download is successful, the controller updates all Smart mode TST-100 Touchscreen Terminal readers connected to the controller, if needed.

The TST-100 Touchscreen Terminal reader firmware update can be verified in the iSTAR Reader Status Tab on Page 472

Updating Schlage PIM and Reader Firmware

You can update Schlage panel interface modules (PIMs) and Schlage wireless readers/locksets with Schlage firmware update files through the C•CURE Administration Station. Schlage firmware update files, when available, are contained in C•CURE service packs.

The Schlage PIM and reader/lockset firmware update process consists of two steps:

- Transferring the firmware update file set to the PIMs and readers/locksets.
- Applying the firmware update file set to the PIMs and readers/locksets.

NOTE

- Before using this feature, check the Schlage Limitations on Page 462 for information on various functional limitations which can affect the use of this feature.
- For an AD-300 or AD-400 reader/lockset, the download time may vary from 30 minutes to over an hour, depending on the network. If multiple readers/locksets download firmware at the same time, the download may take several hours. For example, a firmware download for 16 AD-400 readers/locksets may take up to 11 hours.

Supported readers/locksets and PIMs

- PIM 400
- PIM 485
- AD300
- AD400

Prerequisites

Ensure you meet the following prerequisites before proceeding with a Schlage OSDP reader firmware download:

- On Windows, run the C•CURE Administration Station as administrator.
- Ensure the iSTAR controller type is `iStarUltraEncrypted`, `iStarUltraLiteEncrypted`, or `UltraG2` and is running firmware v6.9.0 or above. See to the iSTAR Controller Editor section for more information on checking controller type and firmware status.
- Ensure the iSTAR controller and the PIM are online.
- Ensure the PIM or reader/lockset meet the minimum firmware version requirements. For more information on minimum firmware version requirements see Schlage Minimum Firmware Requirements for Firmware Download on Page 461.
- Open the iSTAR PIM-485 Board Editor window and, on the General tab, ensure that **Wake On Radio** is enabled.
- Ensure the Communication Status of the PIM and/or reader is normal.

  For more information on adding or removing columns in the Dynamic View, see the *C•CURE 9000 Data Views User Guide* chapter on Dynamic Views.
- Schlage recommend using the same Schlage release package for all PIMs or reader/lockset to ensure a successful update.

Completing a Schlage PIM and reader firmware download

Follow the steps below to transfer firmware file sets to your Schlage PIMs and readers/locksets. When the transfer is complete you then apply the updated firmware files to the PIMs and readers/locksets.

NOTE

Ensure you apply the firmware update to the relevant PIMs before applying it to the readers/locksets.

It is best practice to update all of the readers/locksets on one PIMs at the same time.

Transferring firmware update files to PIMs and readers

1. Open the Hardware tree in the C•CURE Administration Station and select a PIM or reader/lockset.

   Alternatively, you can select multiple PIMs or readers/locksets in the Dynamic View.

2. Check if a file transfer can be completed by right-clicking on the relevant PIM or reader/lockset and clicking **Checking board set iSTAR PIM board file transfer** or **Checking board set iSTAR PIM Reader board file transfer** on the context menu. A dialog box displays confirming if the PIM or reader/lockset can complete the firmware update.

3. Right click on the PIMs or reader/lockset and select the following from the context menu:

   - **iSTAR PIM Board Reader Transfer** if updating PIMs.
   - **iSTAR PIM Reader Transfer** if updating locksets.

   The iSTAR PIM Board Reader File Transfer or iSTAR PIM Reader File Transfer window opens.

4. In the Reader(s) section select the PIMs or readers/locksets you want to transfer files to.

5. In the Files to Transfer section, select the correct firmware file set to transfer. Use the **View Directory Contents** button to view the contents of the file set in the Files to Transfer section. The contents cannot be changed.

6. After selecting the correct firmware file set, click **View Release Notes** to view the Schlage release note file for that update.

7. Click the **Start PIM Reader Download** or **Start PIM Board Download** button to start the transfer. You can check the status of the transfer in the Status section. You can also check the status in the Dynamic View and sort PIMs and readers by status.

8. Open the Monitoring Station Activity Viewer to verify that the transfer has been successful.

   You can view the progress of the firmware download on the **Firmware File Transfer Status** column in the Dynamic View. When **Ready to Update** is displayed in this column, you can continue to apply the firmware update files to your devices.

NOTE File transfers for Schlage AD300 and AD400 readers/locksets are displayed twice in the Activity Viewer as these locksets require two different files.

Apply the firmware update files to PIMs and readers

1. Check if a firmware update can be completed by right-clicking on the relevant PIM or reader/lockset and clicking **Checking board set iSTAR PIM board file upgrade** on the context menu. A dialog box displays confirming if the PIM or reader/lockset can complete the firmware update.

2. Right click on the PIMs or readers/locksets marked as **Ready to Update** and click **iSTAR PIM Reader Firmware Upgrade** on the context menu to start the firmware update.

3. Open the Monitoring Station Activity Viewer to verify that the update has started. The PIM or reader/lockset will display a Comm Fail message in the Activity Viewer as the update occurs. When the update is complete, **Update Complete** will display in the Firmware Download column in the Dynamic View for each updated PIM or reader/lockset.

Schlage Minimum Firmware Requirements for Firmware Download

See the tables below for information on minimum firmware requirements for Schlage PIMs, readers/locksets, non-MTK2 readers and MTK2 readers. You can check the current firmware version on the Firmware Version column in the Dynamic View.

NOTE Do not attempt to upgrade a PIM or reader if it does not meet the minimum firmware version required as this may permanently damage the PIM or reader.

Table 157: Minimum firmware version requirements for Schlage PIMs or reader for non-MTK2 readers

Schlage PIM or reader type	Minimum firmware version
AD-300 reader/lockset	2.43.2
AD-400 reader/lockset	2.43.2
KP/PR(K)/SM(K)/MT(K)/Mi(K)	2.42.1
MG(K)/MS(K)	2.40.1
PIM400-485 PIM	2.23.1

Table 158: Minimum firmware version requirements for Schlage PIMs or reader for MTK2 readers

Schlage PIM or reader type	Minimum firmware version
AD-300 reader/lockset	2.47.2
AD-400 reader/lockset	2.47.2
KP/PR(K)/SM(K)/MT(K)/Mi(K)	2.42.1
MG(K)/MS(K)	2.1.4
PIM400-485 PIM	2.27.1

Schlage Limitations

In C•CURE 9000, Schlage PIMs and readers have several limitations on their use. These limitations are long-term Schlage limitations. For more information on the status of these limitations consult Schlage documentation and Software House Technical Support.

- **Firmware download to the Schlage GWE ENGAGE Gateway**

C•CURE 9000 does not support firmware updates for the Schlage GWE ENGAGE™ Gateway.

- **No support for the download of firmware files from GWE Gateway**

GWE Gateway Readers in the C•CURE 9000 UI do not support the PIM Reader File Transfer feature for Schlage LE, LEB, NDE, OR NDEB Readers. The option does not display in the context menu in the dynamic view or the hardware tree.

- **Starting a Schlage firmware download**

You can only start a firmware download from the dynamic view or hardware tree.

- **Canceling a firmware download**

You can cancel a firmware download for PIMs or readers/locksets during a file transfer, but you cannot stop the download if the PIM or reader/lockset reaches the update phase and flashes the firmware version. At this point, the device is offline.

- **Firmware download times**

For an AD-300 or AD-400 reader/lockset, the download time may vary from 30 minutes to over an hour, depending on the network. If multiple readers download firmware at the same time, the download may take several hours. For example, a firmware download for 16 AD-400 lockset/readers may take up to 11 hours.

- **AD400 readers/locksets may not restore communication automatically after a power cycle or firmware upgrade**

AD400 readers/locksets may not restore communications automatically after a power cycle or firmware upgrade. This is an intermittent problem. Communication can be manually restored by presenting a card to the reader or activating one of its inputs.

- **Simultaneous reader downloads on the same port or PIM**

Due to bandwidth limitations, if there are four or more PIMs on the same port, the time to complete the download increases and you may experience communication errors.

- **AD400 readers/locksets may display older firmware**

Updated readers/locksets may fail to re-establish a connection with PIMs and display an old firmware version in C•CURE. It may take 10 to 60 minutes for a reader to connect to the PIM and display the correct firmware version in C•CURE.

If the correct firmware version does not display, swipe a card at the reader/lockset to establish a connection with the PIM.

- **Cross-cluster panel events**

For Schlage readers, if you configure an event group as the target for a Push Button, Deadbolt Latch, Deadbolt Unlatch, or Toggle trigger, you must only configure cluster panel events in the event group. Do not configure cross-cluster panel events for Schlage readers.

- **Best practice for file transfer for multiple readers on the same PIM**

If you update firmware for multiple readers on the same PIM, it is best practice to select all the readers and perform one file transfer operation. When the readers are in the Ready to Update state, select all the readers and perform the firmware update request.

NOTE If you overlook a reader but want to include it in the set of readers to update, there is a 60 second grace period while the update is pending to add it.

Reader Editor

The Reader Editor in C•CURE 9000 lets you configure and edit Reader objects to control entrances and exits within your facility.

Readers are created as child objects under a controller, rather than directly from the Hardware Tree.

Each Controller type has Reader settings that are Controller-specific. Therefore, there is a Reader Editor for each Controller type.

The following topics give more information about the various Controller-based Reader objects and how to use them.

- Reader Overview
- apC Reader Editor
- iSTAR Reader Editor
- iSTAR PIM-485 Reader Editor
- iSTAR Aperio Reader Editor
- Accessing the Reader Editor

Accessing the Reader Editor

You can access the Reader Editor from the C•CURE 9000 Hardware pane.

To Access the Reader Editor

1. Click on the **Hardware** pane button.
2. You can view a list of all readers of a particular type by Selecting a reader type (apC Reader or iSTAR Reader) from the Hardware pane drop-down list, then click ➡ ▾ to open a Dynamic View showing all Reader objects of that type.

   Alternatively, you can view Readers connected to a specific controller by clicking the pointer (▷) to open the Hardware Tree for a Controller, navigating in the tree to open a Reader folder under that Controller, showing a list of Readers.

3. Double-click on the Reader in the list of Readers that you want to edit, and the Reader Editor opens.

Reader Tab Definitions

Refer to the following topics for definitions of the fields and buttons on Reader Editor screens.

apC Readers

- apC Reader General Tab
- apC Reader Input/Output Tab
- apC Reader Keypad Tab
- apC Reader Triggers Tab
- apC Reader Status Tab

iSTAR Readers

- iSTAR Reader General Tab
- iSTAR Reader Input/Output Tab
- iSTAR Reader Keypad Tab
- iSTAR Reader Triggers Tab
- iSTAR Reader Status Tab
- iSTAR Reader After-Hours Tab

iSTAR Reader Editor

The iSTAR Reader editor lets you configure an iSTAR Reader that you created on an iSTAR Controller.

The iSTAR Reader editor (see Figure 151 on Page 467) has the following tabs:

- **iSTAR Reader General tab**

  Lists the Reader name, connections, and card formats for a reader connected to an iSTAR. See iSTAR Reader General Tab on Page 468.

- **iSTAR Reader I/O tab**

  This tab lets you configure the available Inputs and Outputs for the Reader. See iSTAR Reader I/O Tab on Page 469.

- **iSTAR Reader Keypad tab**

  This tab lets you configure the settings and options for the Reader Keypad. See iSTAR Reader Keypad Tab on Page 470.

- **iSTAR Reader Triggers tab**

  See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

- **iSTAR Reader Groups tab**

  If you have created a Group containing iSTAR readers and added this Reader to the Group, the iSTAR Reader editor displays a Group tab.

  This tab lists the Reader groups to which this Reader belongs. See Groups Tab for Hardware Devices on Page 36 for information on using the Group tab for the iSTAR Reader.

- **iSTAR Reader Options tab**

  Use this tab to enable two factor authentication on the reader and to configure LED Control and Beep on Card Read for Wiegand Readers. See iSTAR Reader Options Tab on Page 474.

- **iSTAR Reader Status tab**

  This tab displays several read-only fields that report the Communications, PIN Required, and Keypad Command Allow Status of the Reader. See iSTAR Reader Status Tab on Page 472.

- **iSTAR Reader After-Hours tab**

  This tab enables the After-Hours Readers Group feature. See After-Hours on Page 475 for further information and procedures to configure this feature.

  Use this tab to select the Innometriks reader high assurance settings. See High Assurance Tab on Page 478

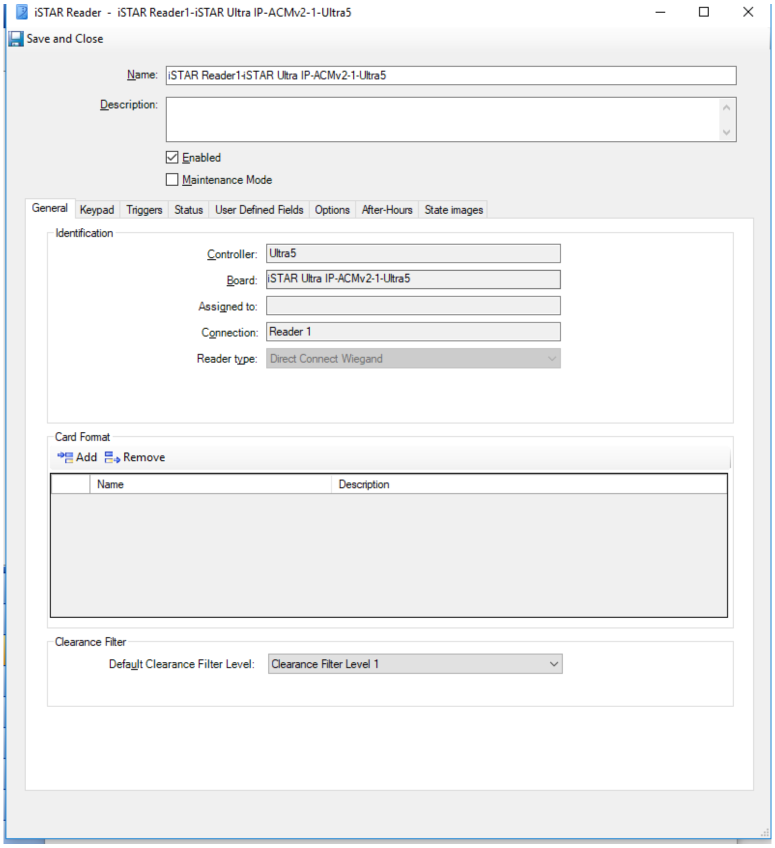
- **Touchscreen tab**

  Use this tab to set the TST-100 Touchscreen Terminal Reader's Automatic Dim brightness and time. This tab also displays the card types supported and allows you to reorder the card type priority. See iSTAR Reader Touchscreen Tab on Page 477.

- **iSTAR Reader State Images tab**

  This tab displays the default images used to depict this reader in the Monitoring Station. You can use this tab to customize these state images. See iSTAR Reader State Images Tab on Page 478.

Figure 151: iSTAR Reader Editor



Name: iSTAR Reader1-iSTAR Ultra IP-ACMv2-1-Ultra5

Description:

☑ Enabled

□ Maintenance Mode

Identification

Controller: Ultra5

Board: iSTAR Ultra IP-ACMv2-1-Ultra5

Assigned to:

Connection: Reader 1

Reader type: Direct Connect Wiegand

Card Format

Name	Description

Clearance Filter

Default Clearance Filter Level: Clearance Filter Level 1

You can add or remove Card Formats from multiple Readers on the iSTAR Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

Accessing the iSTAR Reader Editor

You can access the iSTAR Reader editor in several ways:

- From the iSTAR Ultra iSTAR Controller Boards Tab (iSTAR Classic/Pro) on Page 163, iSTAR Ultra Controller IP-ACMs Tab on Page 183, and iSTAR Ultra COM1/COM2 Tabs on Page 183.
- From the iSTAR PIM-485 Board Editor Readers Tab on Page 226.
- From the iSTAR Ultra IP-ACM RS-485 Tab on Page 283
- From the iSTAR eX Controller Wiegand Tab on Page 175 or iSTAR Edge Controller Wiegand Tab on Page 173.
- From the iSTAR eX COM1/COM2 Tabs on Page 177 or iSTAR Edge COM1/COM2/COM3 Tabs on Page 171
- From the iSTAR Classic/Pro Controller iSTAR ACM Board Readers Tab on Page 204.
- From the Hardware Tree, edit a Reader on a COM board or ACM board.

In each case, you must select the **Configure** column to configure ☑ the reader, then click ... to open the iSTAR Reader editor.

Configuring iSTAR Readers

When you configure an iSTAR Reader, you use the Reader Editor tabs to define the Options and State Images for the Reader.

To Configure an iSTAR Reader

1. Access the Reader Editor for the Reader you wish to edit (see Accessing the iSTAR Reader Editor on Page 467).
2. Click the Reader **General** tab:
   - Modify the name of the Reader in the **Name** field, if desired.
   - Add a textual description of the Reader to the **Description** field.
   - Enable the Reader by clicking the **Enabled** field.
   - For some Readers, you need to select the correct Reader type from the drop-down list.
   - Add the Card Formats that the Reader uses to the Card Format table. See Configuring iSTAR Readers on Page 467.
   - Select options in the **Reader Options** section if it applies. For instance, if you are configuring a Touchscreen reader.
3. Click the Reader Status tab to view the **Active Status** of the Reader.
4. Click the Reader State Images tab to view the state images for this Reader. If you wish to customize the state images for this Reader, follow the steps in State Images Tab for iSTAR Devices on Page 267.
5. When you have finished configuring this Reader in the Reader Editor, click **Save and Close** to save the settings you have configured.

iSTAR Reader General Tab

The iSTAR Reader General tab displays information that identifies the Reader and allows you to configure the Options for the Reader. Figure 151 on Page 467 shows the iSTAR Reader General tab.

iSTAR Reader General Tab Definitions

Table 159 on Page 468 lists the fields and buttons that appear on the iSTAR Reader General tab.

Table 159: iSTAR Reader General Tab Definitions

Field/Button	Description
Identification	
Name	Displays the name for this Reader. The name is system-generated by default, but you can edit this name by clicking in click in this field.
Description	Enter a textual comment about the Reader, such as its location or purpose. This text is for information only.
Enabled	Click ☑ to enable the Reader.
Maintenance Mode	Click to put the iSTAR Reader into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only field identifies the Partition in which this reader resides.
Controller	This read-only field identifies the iSTAR Controller to which this reader is attached.
Board	This read-only field identifies the iSTAR Controller board to which this reader is attached.
Assigned to	Displays the Elevator or Door object name with which this reader is configured.

iSTAR Reader General Tab Definitions (continued)

Field/Button	Description
Connection	Identifies the Reader number on the hardware board to which this reader is connected.
Device ID	The 15-character ID of the Aperio Reader. (Aperio Reader only.)
Reader Type	Displays the reader type: • **RM** (Software House Reader Protocol) • **BLE** (Bluetooth Low Energy) Future feature. • **OSDP** (Open Supervised Device Protocol) • **Smart** (select for the TST-100 Touchscreen Terminal reader) Default: RM
Card Format	
Add	Click **Add** to add a Card Format. If the card format you desire is not in the Name Selection dialog box list, click ... in the **Select Type** field to select a card format.
Remove	Click the row selector ▸ to select one or more Card Format rows (hold down **SHIFT** or **Ctrl** to select multiple rows), then click **Remove** to delete the row(s) for this field.
Name	Displays the Name of each Card Format you have chosen for this Reader.
Description	Displays the Description for the Card Format. This field is read-only.
Clearance Filter	
Default Clearance Filter Level	Select a Clearance Filter Level for the reader from the drop-down list. The available Clearance Filter Levels are numbered 1 through 6. Personnel assigned with lower Clearance Filter Levels, in the Personnel than the reader configuration are denied access. • Level 6 is the highest level. • Level 1 is the lowest level and the default setting.
Reader Options (available only for Smart protocol)	
Beep on Key Press	Select this check box for the TS-100 Touchscreen Terminal reader to beep when pressing a key.
Beep on Card Read	Select this check box for the TS-100 Touchscreen Terminal reader to beep on a card read.
Date Format Time Format	Select the date format and/or the time format to use.

iSTAR Reader I/O Tab

The iSTAR Reader **I/O** tab displays information that identifies the Reader and allows you to configure the Options for the Reader.

iSTAR Reader I/O Tab Definitions

Definitions for the fields and buttons on the Reader I/O tab are described in Table 160 on Page 470.

Definitions for the Inputs on the iSTAR Aperio Reader I/O Tab are described in iSTAR Aperio Reader I/O Tab on Page 485.

The fields on this tab vary depending upon the type of Reader you are configuring. For example, a Direct Connect Wiegand Reader displays only the Communications Fail Input on the I/O tab.

Table 160: iSTAR Reader I/O Tab Definitions

Field/Button	Description
Inputs	
Create All Inputs	Click to create all eight Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete all eight Inputs. The check boxes in the **Configured** column are set to □.
Edit	Click ... in this column to open the iSTAR Input Editor to edit this Input.
Connection	This read-only field identifies the position of each Input on the I/O tab.
Configured	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.
Supervised 1	Represents Supervised Input #1 on iSTAR Readers. Not available on direct connect Wiegand Readers.
Supervised 2	Represents Supervised Input #2 on iSTAR Readers. Not available on direct connect Wiegand Readers.
Tamper	Represents the Tamper Input on iSTAR Readers. Not available on direct connect Wiegand Readers.
Communications Fail	Represents the Communications Failure Input on iSTAR Readers.
Outputs	
Create All Outputs	Click to create all Outputs. The check boxes in the **Configured** column are set to ☑.
Delete All Outputs	Click to delete all Outputs. The check boxes in the **Configured** column are set to □.
1	Represents Output #1 on iSTAR Readers.
2	Represents Output #2 on iSTAR Readers. Not available on direct connect Wiegand Readers.

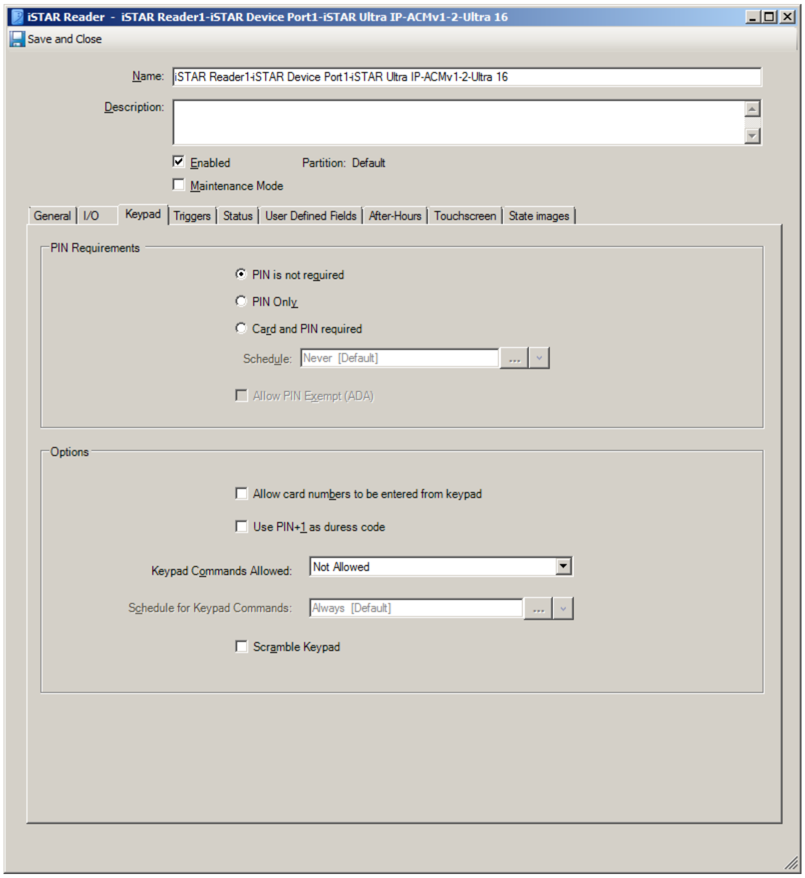
iSTAR Reader Keypad Tab

The iSTAR Reader **Keypad** tab allows you to configure settings for the keypad on the Reader. You can specify how the Reader accepts PIN entries, and whether the Reader accepts Keypad Commands.

NOTE

Some features may not be supported by your reader.

Figure 152: iSTAR Reader Keypad Tab



iSTAR Reader - iSTAR Reader1-iSTAR Device Port1-iSTAR Ultra IP-ACMv1-2-Ultra 16

Name: iSTAR Reader1-iSTAR Device Port1-iSTAR Ultra IP-ACMv1-2-Ultra 16

Description:

☑ Enabled Partition: Default

□ Maintenance Mode

PIN Requirements

● PIN is not required

○ PIN Only

○ Card and PIN required

Schedule: Never [Default]

□ Allow PIN Exempt (ADA)

Options

□ Allow card numbers to be entered from keypad

□ Use PIN+1 as duress code

Keypad Commands Allowed: Not Allowed

Schedule for Keypad Commands: Always [Default]

□ Scramble Keypad

iSTAR Reader Keypad Tab Definitions

Table 161: iSTAR Reader Keypad Tab Definitions

Field/Button	Description
PIN is not required	If selected, only a card swipe is required for successful access to the door connected to this reader.
PIN only	If selected, this reader can be used for PIN-Only access. NOTE: **PIN only** cannot be used as a Query filter value for the PIN Required Status field.
Card and PIN required	If selected, this reader requires both a card swipe and a PIN entry at the keypad for access.
Schedule	If **Card and PIN Required** is selected, you can select a Schedule object to determine when Card and PIN Required is enforced. When the Schedule is active, both Card and PIN are required for access. When the Schedule is inactive, only a card swipe is required.
Allow PIN Exempt (ADA)	If **Card and PIN Required** is selected, Personnel records configured with **PIN Exempt (ADA)** are exempt from having to enter a PIN for access.
Allow card numbers to be entered from keypad	If you have selected **PIN is not required** or **Card and PIN required**, you can enable **Allow card numbers to be entered from the keypad** by selecting the check box. If you chose **PIN Only**, this option is unavailable because the Keypad must be used to enter a PIN.

Table 161: iSTAR Reader Keypad Tab Definitions (continued)

Field/Button	Description
Use PIN+1 as duress code	If you have selected **PIN is not required** or **Card and PIN required**, you can enable **Use PIN+1 as duress code** by selecting the check box. If you chose **PIN Only**, this option is unavailable.
Keypad Commands Allowed	Indicates whether or not Keypad Commands can be entered on this Reader's Keypad and when. Select one of the following options from the drop-down list. The default is **Not Allowed**. • **Not Allowed** – Keypad Commands cannot be used at the Reader • **Always Allowed** – Keypad Commands can always be used at the Reader • **Allowed during specified schedule** – Keypad Commands can be used at the Reader during the period specified in the following field. When you select this option, the Schedule for Keypad Commands field becomes available.
Scramble Keypad	TST-100 Touchscreen Terminal Reader using the Smart Protocol only. If the reader is using the Smart protocol on the reader, you must select this check box to enable Scramble Keypad on the reader. When the PIN is being entered, the LED displays a randomly allocated set of numbers from 0 to 9. The position of the numbers changes every time the keypad is activated. NOTE: This field is not visible if the reader is using the RM Protocol. To enable Scramble Keypad on a reader using the RM protocol, place the TST-100 Touchscreen Terminal Reader S2-5 switch to the ON position.
Schedule for Keypad Commands	Select a Schedule from the list to specify when Keypad Commands can be used at this Reader. When the Schedule is active, Keypad Commands can be used. When the Schedule is inactive, Keypad Commands cannot be used.

iSTAR Reader Triggers Tab

The iSTAR Reader Triggers tab allows you to configure triggers for the Reader. You can set up triggers based on Communication Status, PIN Required Status, and Tamper Status.

See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

For iSTAR Readers you can create Triggers for the properties shown in Table 162 on Page 472.

Table 162: iSTAR Reader Trigger Properties

Property	Description
Communication Status	Possible values are **Normal** or **Comm Fail**.
PIN Required Status	Possible values are **Not Required** or **Card and PIN Required**, based on the setting for PIN Requirements on the Keypad tab.
Tamper Status	Boolean value; **True** if the Tamper input has been activated, or **False** if the Tamper Input has not been activated.

iSTAR Reader Status Tab

The iSTAR Reader Status tab displays read-only status fields, such as reader battery level status, that allow you to see the current status of the Reader. The fields displayed in this tab depend on the type of reader.

- iSTAR Reader Status Tab Definitions on Page 473.
- iSTAR PIM-485 Reader Status Tab Definitions on Page 473.
- iSTAR Aperio Reader Status Tab Definitions on Page 474

iSTAR Reader Status Tab Definitions

Table 163: iSTAR Reader Status Tab Definitions

Field/Button	Description
Firmware Version	The version number of the reader firmware.
Communications	Communications displays the value Normal if the Controller can communicate with the Reader or Comm Fail if the Controller cannot communicate with the Reader.
PIN Required	PIN Required displays the value **True** if **PIN Required** has been selected on the Keypad tab or **False** otherwise.
Tamper	Displays the status of the Tamper Input. Not available on Direct Connect Wiegand readers.
Keypad Command Allow Status	This field displays status of the **Keypad Commands Allowed** setting from the Reader Editor Keypad tab: • Not Allowed • Allowed • Allowed during specified schedule.

iSTAR PIM-485 Reader Status Tab Definitions

Table 164: iSTAR PIM-485 Reader Status Tab Definitions

Field/Button	Description
Firmware Version	The version number of the reader firmware.
Communications	Communications displays the value Normal if the Controller can communicate with the Reader or Comm Fail if the Controller cannot communicate with the Reader.
PIN Required	PIN Required displays the value **True** if **PIN Required** has been selected on the Keypad tab or **False** otherwise.
Tamper	**True** if a Tamper status is detected for the PIM Reader, or **False** if no Tamper condition is detected.
Keypad Command Allow Status	This field displays status of the **Keypad Commands Allowed** setting from the Reader Editor Keypad tab: • Not Allowed • Allowed • Allowed during specified schedule.
[PIM1-pro 1] - PIM Tamper	**True** if a Tamper status is detected for the PIM-485 board to which this reader is attached, or **False** if no Tamper condition is detected.
Motor Stall	**True** if a Motor Stall condition (a problem with the latching mechanism of the door strike) is detected, or **False** if no Motor Stall condition is detected. Available only for PIM-485 WA Series Locks, not for other AD Locks.
Low Battery	**True** if a Low Battery condition is detected for the PIM Reader, or **False** if no Low Battery condition is detected. Available only for PIM-485 connected Readers.
Manual Lock Override	**True** if the Manual Lock Override has been activated (unlocked by a physical key), or **False** if the Manual Lock Override has not been activated. Available only for PIM-485 connected Readers.

iSTAR PIM-485 Reader Status Tab Definitions (continued)

Field/Button	Description
Push Button	**True** if the Push Button on the lock panel (inside the room) has been pressed, or **False** if the Push Button has not been pressed. Available only for PIM-485 connected Readers.
Deadbolt Status	**Active** if the deadbolt has been manually locked using the deadbolt knob or exterior key. **Inactive** if the deadbolt has been manually unlocked using the deadbolt knob or exterior key. A status message is sent to the Monitoring Station when the status changes.
Lock Clutch Position Status	**Active** for approximately 5 seconds if a valid card is swiped on the reader lockset. This unlocks the door for approximately 5 seconds. **Inactive** if there is no card swipe or an invalid card is used.
Reader Lockset Battery Level Status	Displays the battery voltage level of the reader lockset in a range from 0-6.4V or 0-12.8V depending on what battery pack powers the reader. Battery level can be viewed and sorted on a Dynamic View. NOTE: Replace the batteries in the lockset if the voltage is below 4.7V on this status (this is valid for AD400/NDE/NDEB/LE/LEB-series Schlage locks).

iSTAR Aperio Reader Status Tab Definitions

Table 165: iSTAR Aperio Reader Status Tab Definitions

Field/Button	Description
Communications	Communications displays the value **Normal** if the Controller can communicate with the Reader or **Comm Fail** if the Controller cannot communicate with the Reader.
Tamper	**True** if a Tamper status is detected for the Reader, or **False** if no Tamper condition is detected.
Low Battery	**True** if a Low Battery condition is detected for the Reader, or **False** if no Low Battery condition is detected.

iSTAR Reader Options Tab

- Use this tab to enable two factor authentication on the reader.
- Use this tab to configure OSDP Secure Channel and Installation Mode.

  Table 166 on Page 475 lists the additional fields and buttons that appear on the iSTAR Reader **Options** tab for iSTAR Ultra Wiegand Readers.

Table 166: iSTAR Ultra Wiegand Reader Options Tab Definitions

Field/Button	Description
Dual Authentication	
Enable Dual Authentication on this Reader	Select to enable, deselect to disable. See Configuring iSTAR Readers and Doors for Two Factor Authentication on Page 510 for more information.
OSDP Options	
Installation Mode Enabled	When enabled, allows C•CURE 9000 to communicate securely with a new reader that does not have encryption keys. The **OSDP Secure Channel Enabled** check box must be also selected. • If **OSDP Secure Channel Enabled** is On (selected) and **Installation Mode Enabled** is Off (deselected) and a new reader is presented, it will not communicate with C•CURE 9000. • If **OSDP Secure Channel Enabled** is Off (deselected), then communication is always available and the installation mode is disabled. • If **Installation Mode Enabled** is On (selected), then the keys will be exchanged and communication will begin. Default: Enabled. Software House recommends that you disable (clear) this feature for maximum security.
OSDP Secure Channel Enabled	When enabled, the 485 communication port is encrypted using keys exchanged between the panel and the readers. See **Installation Mode Enabled**. **IMPORTANT:** Enabling or disabling the OSDP Secure Channel requires the reader to be restarted for the changes take effect. This can be accomplished by power cycling the reader, resetting the ACM, or by resetting the controller. Default: Enabled
Reader Options (available only for Smart protocol)	**Reader Options (available only for Smart protocol)**
Beep on Key Press	Select this check box for the TS-100 Touchscreen Terminal reader to beep when pressing a key.
Beep on Card Read	Select this check box for the TS-100 Touchscreen Terminal reader to beep on a card read.
Date Format Time Format	Select the date format and/or the time format to use.
Enable Dual Authentication on this Reader	Select to enable, deselect to disable. See Configuring iSTAR Readers and Doors for Two Factor Authentication on Page 510 for more information.

After-Hours

When configured, the After-Hours Reader feature defines a schedule, an enabling reader, and an iSTAR reader group. Cardholders with clearance gain access by an enabling door to normally restricted, secure spaces after business hours. Within this schedule, readers configured as members of an **After-Hours Reader Group** will reject access to all cardholders that have not first presented their card to the enabling reader for that particular reader group, even when those cardholders have valid clearance to member readers. Once a card has been presented and accepted at the enabling reader, it will then have access to any members of the associated After-Hours group to which it has a valid clearance for the remainder of the schedule.

The After-Hours feature supersedes clearance restrictions only relative to admission during the schedule. Outside of the defined schedule, cardholders will have the normally expected access to readers within the After-Hours Reader Group. Refer to After-Hours Readers Under Offline State Conditions on Page 477 for information regarding After-Hours enabled readers during offline conditions.

The After-Hours restriction can be overridden for certain cardholders by using the **AntiPassback Exempt Flag** to indicate After-Hours Exemption. The **AntiPassback Exempt Flag** is on the **General** tab of the Personnel record. Use of the **AntiPassback Exempt Flag** to override After-Hours is set in **System Variables**. Refer to Setting the AntiPassback Exempt Flag on Page 476 for instructions on setting the **AntiPassback Exempt Flag**.

NOTE For proper functionality, when configuring an After-Hours Reader feature, the After-Hours Reader Group, the enabling reader, and the schedule that is assigned to these units must all be configured in the same time zone.

Configuring the After-Hours Readers Feature

This section provides instructions for configuring the After-Hours Reader Group, Schedule, and Enabling Readers required for the After-Hours Readers feature.

Configuring an After-Hours Reader Group

1. If creating the first **After-Hours Reader Group**, open the **Hardware** pane and right-click the **Hardware** folder at the top of the **Hardware** tree. Select **After-Hours Reader Groups** from the drop-down menu. Click **New** and an **After-Hours Reader Group** editor appears.
   or
   If the **After-Hours Reader Group** folder already exists in the **Hardware** tree, select the **After-Hours Reader Group** folder and click **New**.

2. Enter information in the **Name** and **Description** fields.
3. In the **Objects in Group** section, select **Add** and choose previously configured readers to add to this group.
4. Save and close the **After-Hours Reader Group** editor. A folder appears in the **Hardware** tree containing all configured After-Hours Reader Groups.

Configuring an After-Hours Enabling Reader

1. Open the Reader editor that you want to enable as an After-Hours reader. Follow the procedures for accessing a Reader editor as described in Reader Overview on Page 434.
2. Select the **After-Hours** tab.
3. Select the **Enable After-Hours Reader Group** check box. By default, this feature is disabled.
4. Click ... to select an **After-Hours Reader Group** to associate with the Enabling Reader.
5. Click ... to select an **After-Hours Schedule** during which the After-Hours feature is active.

NOTE If required, follow the instructions for creating and configuring an After-Hours Schedule as explained in the *C•CURE 9000 Software Configuration Guide*.

6. Save and close the reader editor.

Setting the AntiPassback Exempt Flag

1. In the **Administration Station**, select **Options & Tools** and click **System Variables**. The System Variables screen appears.
2. Expand the **iSTAR Driver** section and select the **After-Hours AntiPassback Exempt** system variable. Enter **True** into the value field. The default setting is **False**.
3. Close the **System Variables** window. A restart of the iSTAR is required to implement this system variables change.

After-Hours Readers Under Offline State Conditions

The After-Hours Enabling Reader is a host-based feature which does not operate effectively if the iSTAR controller that controls the enabling reader (or member readers of a reader group) is in an offline or communication failure state. During such communication failures, readers which are out of communication with the host will not have a means of granting access to cardholders.

If the enabling reader is controlled by a panel that is offline:

- Any card holder that is already granted access by the enabling reader before a panel is put offline will still be able to gain access to all member readers.
- Any new cardholder that is not granted access by the enabling reader before the panel is put offline will not be able to gain access at any member readers

If the enabling reader is not controlled by a panel that is offline:

- Any cardholder that is already granted access by the enabling reader before a panel is put offline will still be able to gain access to all member readers.
- Any new cardholder that is not granted access by the enabling reader before the panel is put offline will not be able to gain access at the member readers on this offline panel. If this cardholder is then granted access by the enabling reader, it will be able to gain access to the other remaining member readers that are not on an offline panel.

Once communication with the host is restored, the panel controlling the enabling reader resumes normal operation.

iSTAR Reader Touchscreen Tab

The iSTAR Reader Touchscreen tab is used to set the Automatic Dim brightness and time, and to enable the Touchscreen scramble key feature. This tab also displays the card types supported and allows you to reorder the priority of the card types.

iSTAR Reader Touchscreen Tab Definitions

Table 167 on Page 477 lists the fields and buttons that appear on the iSTAR Reader Touchscreen tab.

Table 167: iSTAR Reader Touchscreen Tab Definitions

Field/Button	Description
Touchscreen Configuration	
Automatic Dim Timeout	Select the time the LCD display timeouts and goes dark after no motion is detected in front of the reader. The default is 2 minutes.
Brightness during Auto Dim	Select the percentage of screen brightness when the reader is in use and before the LCD display goes dark due to the Automatic Dim Timeout. The default is 0.
Card Types	
Lists the supported card types, and allows you to select and reorder the priority of the card type to the card type(s) used. To reorder the priority: 1. Click on the card type row to select it. 2. Click **Up** or **Down** to move the card type to the priority in the list.	

High Assurance Tab

Use this tab to configure the Innometriks reader high assurance settings.

High assurance is supported on the iSTAR Ultra, Ultra SE (Ultra Mode), and Ultra LT controllers.

NOTE The CHUID (Cardholder Unique Identifier) container is always sent.

CAK, PIN, and Biometrics are single factor authentications when used alone. Any two together are a double factor authentication, and all three together are a triple factor authentication.

See Innometriks High Assurance Reader Configuration on Page 447 for configuration information.

iSTAR Reader High Assurance Tab Definitions

Field/Button	Description
High Assurance Reader	
Support High Assurance Reader	When selected (enabled), the **High Assurance Operation Modes** become available for selection. Default: Disabled (clear)
High Assurance Operation Mode	
Normal Mode	Select the authentications listed to run in normal mode.
Secure Mode	Select the authentications listed to support high assurance.
CAK	Card authentication.
PAK	Physical Access Control System (PAK). Card plus PIN authentication. NOTE: If you select **PAK**, **Card PIN** is automatically selected.
Card PIN	Personal Identification Number (PIN) authentication from a card or panel. If you select **Card PIN**, **PAK** is automatically selected.
Biometrics	Biometric authentication from card.

iSTAR Reader State Images Tab

The State Images tab for a Reader provides a means to change the default images used to indicate iSTAR Reader device states on the Monitoring Station.

See State Images Tab for iSTAR Devices on Page 267 for information on using the State Images tab for an iSTAR Reader.

See Table 168 on Page 479 for default State Images for an iSTAR RM reader

See Table 169 on Page 479 for default State Images for an iSTAR PIM-485 reader (Schlage wireless lock and reader).

iSTAR Reader State Images Tab Definitions

Table 168: iSTAR Reader State Images Tab Definitions

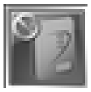
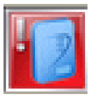
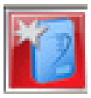
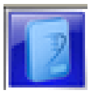
Icon	Description		Icon	Description
	Unknown			Tampered
	Comm Fail			Normal

Table 169: iSTAR PIM 485 Reader State Images Definitions

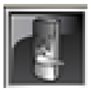
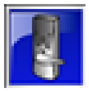
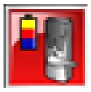
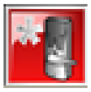
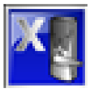
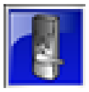
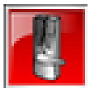
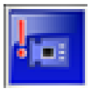
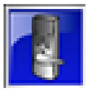
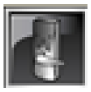
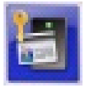
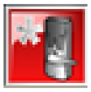
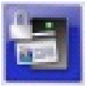
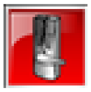
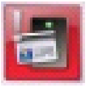
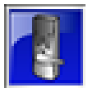
Icon	Description		Icon	Description	Icon	Description
	Unknown			Normal		Low Battery
	Comm Fail			Motor Stall (Schlage Wireless Only)		Manual Lock Override (Schlage Wireless Only)
	Tampered			PIM Tamper (Schlage Wireless Only)		Push Button (Schlage Wireless Only)

Table 170: iSTAR Aperio Reader State Images Definitions

Icon	Description		Icon	Description
	Unknown			Key Cylinder Override (Aperio only)
	Comm Fail			Lock State Locked (Aperio only)
	Tampered			Lock State Jammed (Aperio only)
	Normal			

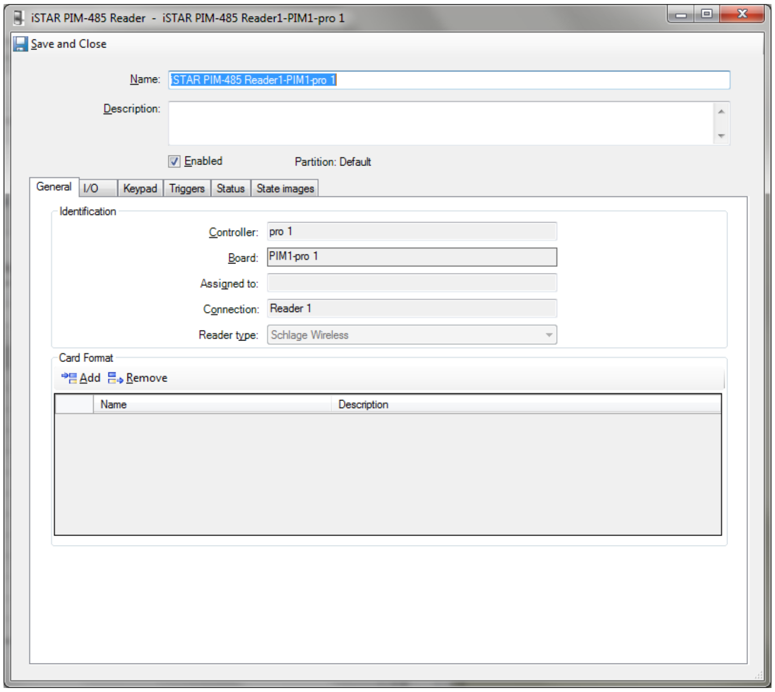
iSTAR PIM-485 Reader Editor

Use the iSTAR PIM-485 Reader Editor to configure the settings for a Schlage PIM-485 reader/lock wirelessly connected to an iSTAR Pro/eX or iSTAR Ultra G2 controller PIM-485 board.

NOTE iSTAR Schlage Doors do not support Momentary Unlock.

The iSTAR PIM-485 Reader editor is shown in Figure 153 on Page 480.

Figure 153: iSTAR PIM-485 Reader Editor



iSTAR PIM-485 Reader - iSTAR PIM-485 Reader1-PIM1-pro 1

Save and Close

Name: iSTAR PIM-485 Reader1-PIM1-pro 1

Description:

☑ Enabled Partition: Default

General | I/O | Keypad | Triggers | Status | State images

Identification

Controller: pro 1

Board: PIM1-pro 1

Assigned to:

Connection: Reader 1

Reader type: Schlage Wireless

Card Format

Add Remove

	Name	Description

The iSTAR PIM-485 Reader editor dialog box has the following tabs.

- **iSTAR Reader General tab**

  Lists the Reader name, connections, and card formats for a reader connected to an iSTAR Classic/Pro, iSTAR eX, or iSTAR Ultra G2. See iSTAR Reader General Tab on Page 468.

- **iSTAR PIM-485 Reader I/O tab**

  This tab lets you configure the available Inputs and Outputs for the Reader. See the iSTAR PIM-485 Reader I/O Tab on Page 481.

- **iSTAR Reader Keypad tab**

  This tab lets you configure the settings and options for the Reader Keypad on iSTAR Schlage Readers. See iSTAR Reader Keypad Tab on Page 470.

  Only Schlage Keypad Mode 1 keypad output format (4 data bits per key with no parity) is supported. The mode is configured on the Schlage device.

- **iSTAR Reader Triggers tab**

  See the Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

  You can define triggers for the following Properties of the iSTAR PIM-485 Reader:

Property	Value
Communication Status	Normal or Comm Fail
Low Battery	Active ☑ or inactive □
Manual Lock Override	Active ☑ or inactive □
Motor Stall	Active ☑ or inactive □
Parent PIM Tamper	Active ☑ or inactive □
PIN Required Status	Not Required, Card and PN Required, or PIN Only
Push Button	Active ☑ or inactive □
Tamper Status	Active ☑ or inactive □

- **iSTAR Reader Groups tab**

  If you have created a Group containing iSTAR readers and added this Reader to it, the iSTAR Reader editor also displays a Groups tab.

  This tab lists the Reader groups to which this Reader belongs. See the Groups Tab for Hardware Devices on Page 36 for information on using the Group tab for the iSTAR Reader.

- **iSTAR Reader Status tab**

  This tab displays several read-only fields that report the Communications, PIN Required, and Keypad Command Allow Status of the Reader. See the iSTAR Reader Status Tab on Page 472.

- **iSTAR Reader State Images tab**

  This tab displays the default images used to depict this reader in the Monitoring Station. You can use this tab to customize these state images. See the iSTAR Reader State Images Tab on Page 478.

You can add or remove Card Formats from multiple Readers via an iSTAR PIM-485 Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

iSTAR PIM-485 Reader I/O Tab

The iSTAR PIM-485 Reader I/O tab lets you configure the inputs and outputs for the reader. Each input and output is pre-assigned to a specific function for the reader. Typically you can use the **Create All** buttons to create the inputs and outputs, and then click the button in the **Edit** column to configure each input and output individually.

You can configure these inputs and outputs by clicking on ... in the **Edit** column. You can then create triggers that can activate Events based on state changes.

Example:

> You can create a trigger to activate an Event if the **Low Battery** Input status changes to Active (indicating that the reader battery charge is low). See Triggers Tab for iSTAR Devices on Page 264.

Definitions for the fields and buttons on the Reader I/O tab are described in Table 171 on Page 482.

Table 171: iSTAR Reader I/O Tab Definitions

Field/Button	Description
Inputs	
Create All Inputs	Click to create all eight Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete all eight Inputs. The check boxes in the **Configured** column are set to □.
Edit	Click [...] in this column to open the iSTAR Input editor to edit the Input.
Connection	This read-only field identifies the position of each Input on the I/O tab.
Configured	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.
Wireless DSM	Represents the Wireless Door Switch Monitor (DSM) for the door.
Wireless REX	Represents the Wireless Request To Exit (REX) for the door.
Wireless Reader Tamper	Represents the Tamper Input on the Wireless Reader.
Wireless Reader Communications Fail	Represents the Communications Failure Input on the Wireless Reader.
Motor Stall	Represents the Motor Stall Input on the Wireless Reader.
Low Battery	Represents the Low Battery Input on the Wireless Reader.
Manual Lock Override	When this input is active, it indicates that the lock has been unlocked by a physical key. The Manual Lock Override status is available on the Status tab for this reader. This property is available for use in triggers.
Push Button	When this input is active, it indicates that the push button on the lock panel (inside the room) has been pushed. The Push Button Input status is available on the Status tab for this reader. This property is available for use in triggers.
Outputs	
Create All Outputs	Click to create all Outputs. The check boxes in the **Configured** column are set to ☑.
Delete All Outputs	Click to delete all Outputs. The check boxes in the **Configured** column are set to □.
Door Latch Relay	Represents the Door Latch Relay Output that is used to unlock the door.
Edit	Click [...] in this column to open the iSTAR Output editor to edit the Output.
Connection	This read-only field identifies the position of the Output on the I/O tab.

Table 171: iSTAR Reader I/O Tab Definitions (continued)

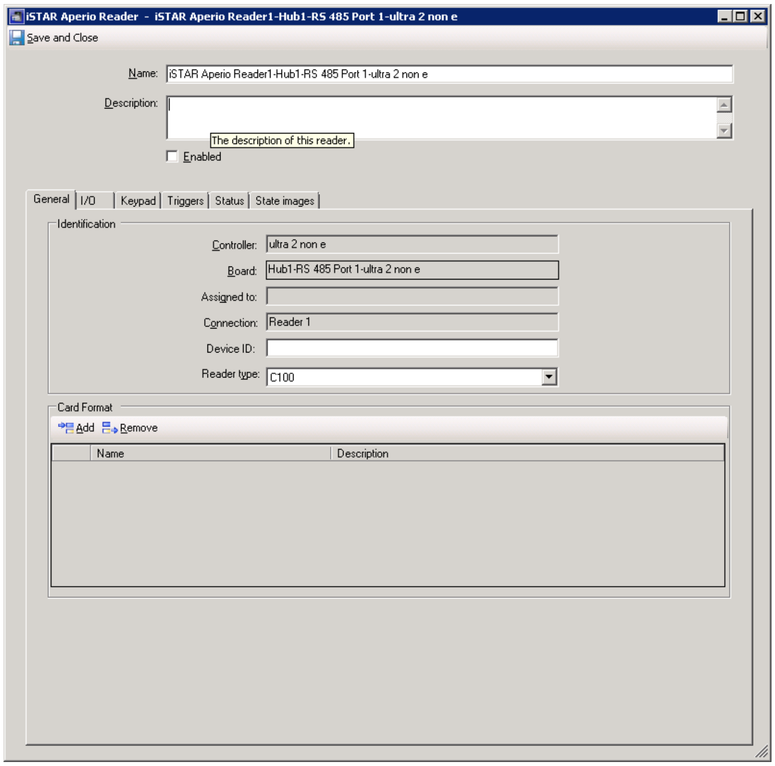
Field/Button	Description
Configured	☑ indicates that the Output has been configured. □ indicates that the Output has not been configured.
Name	Displays the system-generated name for this Output. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Output. If the Output is not yet configured, you can click in this column, then click to select an Output Template. If the **Configured** column displays ☑, this field cannot be edited.

iSTAR Aperio Reader Editor

The iSTAR Aperio Reader editor allows you to configure the settings for an Aperio reader/lock wirelessly connected to an iSTAR Ultra controller Aperio RS-485 Hub board.

The iSTAR Aperio Reader editor is shown in Figure 154 on Page 484.

Figure 154: iSTAR Aperio Reader Editor



iSTAR Aperio Reader - iSTAR Aperio Reader1-Hub1-RS 485 Port 1-ultra 2 non e

Save and Close

Name: iSTAR Aperio Reader1-Hub1-RS 485 Port 1-ultra 2 non e

Description:

The description of this reader.

☐ Enabled

General | I/O | Keypad | Triggers | Status | State images

Identification

Controller: ultra 2 non e

Board: Hub1-RS 485 Port 1-ultra 2 non e

Assigned to:

Connection: Reader 1

Device ID:

Reader type: C100

Card Format

Add Remove

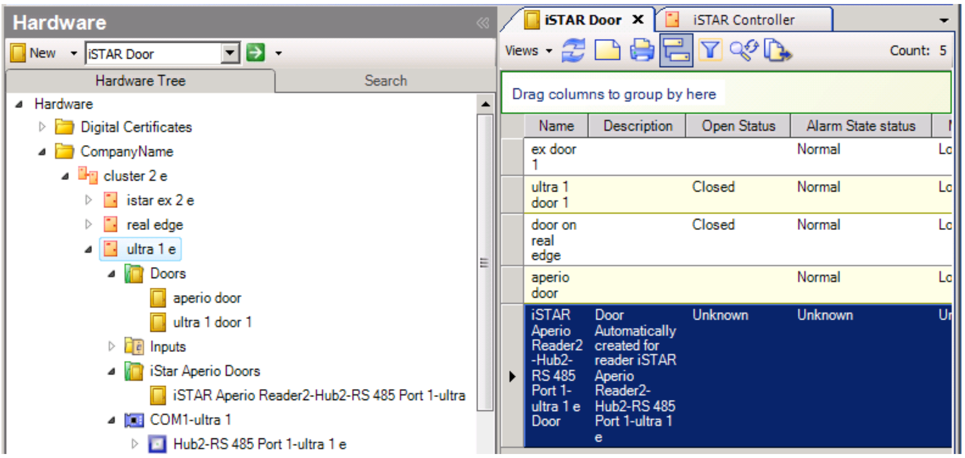
Name	Description

When you add an iSTAR Aperio Reader, **Enable** it in the Aperio Reader editor, and **Save and Close** the editor, a Door object for that reader is added to the parent Ultra controller in the iSTAR Aperio Doors folder in the Hardware tree.

If you delete an iSTAR Aperio Reader, the iSTAR Aperio Door associated with the reader is also deleted.

If you display a list of iSTAR Doors, the new Aperio Door appears on the list. See iSTAR Aperio Door Editor on Page 393 for more information on Aperio Doors.

Figure 155: iSTAR Aperio Doors



Hardware

New | iSTAR Door

Hardware Tree | Search

- Hardware
  - Digital Certificates
  - CompanyName
    - cluster 2 e
      - istar ex 2 e
      - real edge
      - ultra 1 e
        - Doors
          - aperio door
          - ultra 1 door 1
        - Inputs
        - iStar Aperio Doors
          - iSTAR Aperio Reader2-Hub2-RS 485 Port 1-ultra
        - COM1-ultra 1
          - Hub2-RS 485 Port 1-ultra 1 e

iSTAR Door | iSTAR Controller

Views | Count: 5

Drag columns to group by here

Name	Description	Open Status	Alarm State status	I
ex door 1			Normal	Lc
ultra 1 door 1		Closed	Normal	Lc
door on real edge		Closed	Normal	Lc
aperio door			Normal	Lc
iSTAR Aperio Reader2-Hub2-RS 485 Port 1-ultra 1 e Door	Door Automatically created for reader iSTAR Aperio Reader2-Hub2-RS 485 Port 1-ultra 1 e	Unknown	Unknown	Ur

The iSTAR Aperio Reader editor dialog box has the following tabs.

- **iSTAR Reader General tab**

  Lists the Ultra controller name, Hub board, Assigned to Door, Reader number, Device ID, and Reader type. See iSTAR Reader General Tab on Page 468.

- **iSTAR Aperio Reader I/O tab**

  This tab lets you configure the available Inputs and Outputs for the Reader. See the iSTAR Aperio Reader I/O Tab on Page 485.

- **iSTAR Reader Keypad tab**

  This tab lets you configure the settings and options for the Reader Keypad on iSTAR Aperio Readers. See iSTAR Aperio Reader Keypad Tab on Page 263.

- **iSTAR Reader Triggers tab**

  See the Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR Ultra device.

  You can define triggers for the following Properties of the iSTAR Aperio Reader:

Property	Value
Communication Status	Normal or Comm Fail
Key Cylinder Override	Active ☑ or inactive □
Lock State Jammed	Active ☑ or inactive □
Lock State Locked	Active ☑ or inactive □
Low Battery Status	Active ☑ or inactive □
Tamper Status	Active ☑ or inactive □

- **iSTAR Reader Status tab**

  This tab displays several read-only fields that report the Communications, Tamper, and Low Battery status of the Reader. See the iSTAR Reader Status Tab on Page 472.

- **iSTAR Reader State Images tab**

  This tab displays the default images used to depict this reader in the Monitoring Station. You can use this tab to customize these state images. See the iSTAR Reader State Images Tab on Page 478.

You can add or remove Card Formats from multiple Readers via an iSTAR Aperio Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

iSTAR Aperio Reader I/O Tab

The iSTAR Aperio Reader I/O tab lets you configure the inputs for the reader. Each input is pre-assigned to a specific function for the reader. Typically you can use the **Create All** buttons to create the inputs, and then click the button in the **Edit** column to configure each input individually.

The number of inputs available on this tab varies, depending upon the reader model configured on the General tab in the **Reader Type** field.

NOTE

When an Aperio reader input is changed from active to inactive while the iSTAR Controller is offline, the controller continues to report the input as active when the controller comes back online.

Workaround: Activate and then deactivate the input to synchronize the input with the controller.

You can configure these inputs by clicking on [...] in the **Edit** column. You can then create triggers that can activate Events based on state changes.

Example:

You can create a trigger to activate an Event if the **Lock Low Battery** Input status changes to Active (indicating that the reader battery charge is low). See Triggers Tab for iSTAR Devices on Page 264.

Definitions for the fields and buttons on the Reader I/O tab are described in Table 172 on Page 486.

Definitions for the input types are described in Table 173 on Page 486.

Table 172: iSTAR Reader I/O Tab Definitions

Field/Button	Description
Create All Inputs	Click to create all Inputs. The check boxes in the **Configured** column are set to ☑.
Delete All Inputs	Click to delete all Inputs. The check boxes in the **Configured** column are set to □.
Edit	Click [...] in this column to open the iSTAR Input editor to edit the Input.
Connection	This read-only field indicates the three standard inputs (Comm Fail, Low Battery, and Lock State Jammed.
Configured	☑ indicates that the Input has been configured. □ indicates that the Input has not been configured.
Name	Displays the system-generated name for this Input. You can edit this name by clicking in the field.
Template	Displays the Template used for creating this Input. If the Input is not yet configured, you can click in this column, then click to select an Input Template. If the **Configured** column displays ☑, this field cannot be edited.

Table 173: iSTAR Reader I/O Tab Input Definitions

Field/Button	Description
Lock Reader Tamper	Represents the state of the Tamper input on the lock.
Handle State / Request to Exit	Represents the state of the Request to Exit input associated with the door handle.
Lock State Locked	Represents the
Key Cylinder Override	Represents the state of the Key Cylinder Override.
Door Position State	Represents state of the Door Switch Monitor for the door associated with this reader.
Lock Communications Fail	Represents the Lock Communications Failure Input on the Aperio Reader.
Lock State Jammed	Represents the Lock State Jammed Input on the Aperio Reader.
Lock Low Battery	Represents the Lock Low Battery Input on the Aperio Reader.

apC Reader Editor

The apC Reader Editor is used to configure apC Readers that you have created on the apC Controller Readers tab.

The apC Reader editor has the following tabs:

- apC Reader General Tab on Page 487
- apC Reader Input/Output Tab on Page 488
- apC Reader Keypad Tab on Page 489
- Hardware Groups Tab Definitions on Page 36
- apC Reader Triggers Tab on Page 489
- apC Reader Status Tab on Page 489
- apC Reader State Images Tab on Page 489

You can add or remove Card Formats from multiple Readers via an apC Reader Dynamic View. See Add or Remove Reader Card Formats on Page 29 for more information.

apC Reader General Tab

To Configure a Reader Using the apC Reader General Tab

1. Select a **Reader Type: MRM**, **Direct Connect Wiegand**, or **RM**, as shown in Figure 156 on Page 488.

   The Reader Type selected should match the connected apC panel since the type will affect the inputs and outputs available on the Reader I/O tab.

   Example:

   - The RM has 2 supervised inputs and 2 outputs.
   - the MRM has 2 supervised inputs and 1 output.

   The **Identification** area in the Readers - **General** tab displays read-only, previously-configured information.

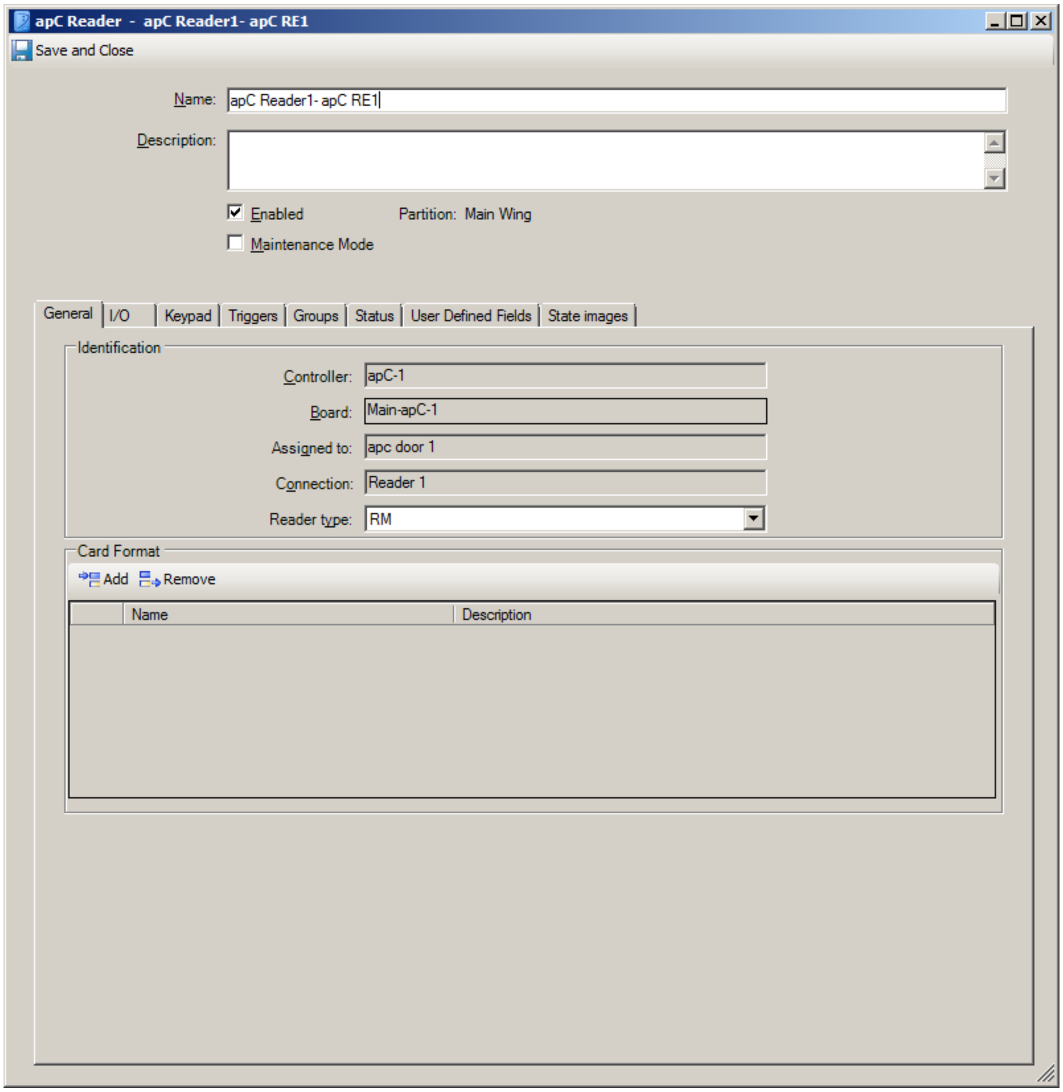
2. To choose a card format for the reader that you have selected, click **Add** in the **Card Format** area. The **Card Format** browser appears, as shown in Figure 156 on Page 488.

NOTE

You may configure an apC Reader from the apC panel Readers tab or from the Add-on Board tab. A reader index configured on one tab will be unavailable on the other tab. The location chosen will affect the possible reader type and reader input/output option selection.

See the *C•CURE 9000 Getting Started Guide* - Table 1-5 for a list of UL approved card formats and readers.

Figure 156: apC Controller - Readers - General Tab



apC Reader - apC Reader1- apC RE1

Name: apC Reader1- apC RE1

Description:

☑ Enabled

Partition: Main Wing

□ Maintenance Mode

Identification

Controller: apC-1

Board: Main-apC-1

Assigned to: apc door 1

Connection: Reader 1

Reader type: RM

Card Format

	Name	Description

3. Click the applicable row in the **Card Format** browser to select **Card Format**. Repeat for multiple formats.
4. Navigate to the **Input/Output** (I/O) tab (see on Page 488).

apC Reader Input/Output Tab

Dedicated Supervised Inputs and Outputs vary on the apC Readers I/O tab, depending upon the Reader Type selected in the Reader General tab.

To Configure the I/O Tab

1. To configure the **Inputs**, follow the instructions given in To Configure apC Controller Inputs on Page 312.
2. To configure **Outputs**, follow the instructions given in To Configure apC Outputs on Page 312.
3. Navigate to the **Keypad** tab to configure the PIN requirements for the reader.

apC Reader Keypad Tab

The apC Readers - Keypad tab provides a means to control reader keypads. Keypad configuration on an apC panel allows specification of **Card and PIN required**. The Schedule is configurable when a PIN is required and restricts the time when the PIN must be entered. The default Schedule is **Always** and is the initial value of the Schedule browser.

To Configure the apC Readers - Keypad Tab

1. Choose one of three options for **PIN Requirements**:
   - **PIN is not required** - to require a card swipe only;
   - PIN Only
   - **Card and PIN required** - to require a both a card swipe or presentation with a PIN entry.
2. Click ... to select a **Schedule**, which is set up in the **Configuration Pane**.

   If you selected **PIN is not required** or **Card and PIN required** for PIN Requirements, two choices appear in the **Options** area.
3. Choose either of the following options:
   - **Allow card numbers to be entered from the keypad**.
   - **Use PIN+1 as duress code**.

apC Reader Triggers Tab

See the following for information on apC Triggers:

- Triggers Tab for apC Devices on Page 339.
- Defining a Trigger for an apC Device on Page 339.
- Removing a Trigger on Page 265

You can click **Save and Close** after configuring apC Reader triggers, or navigate to the Status tab.

apC Reader Status Tab

The apC Reader **Status** tab provides a read-only listing of critical information about the operational status of the selected apC Readers including:

- **Communications** - displays the values Normal or Comm Fail
- **Tamper - displays the values True or False.**
- **PIN Required** - displays the values True or False.

apC Reader State Images Tab

The **State Images** tab provides a means to change the default images used to indicate reader states These images appear on the Monitoring Station and change according to the state of the object.

To Change an Image

1. Double-click the existing image. A Windows **Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.

2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click on the new image and select **Restore Default**.
4. Click **Save and Close**.

13

Configuring Reader LCD Messages, LED Colors, LED Patterns, and Beep Patterns

This chapter explains how to customize sets of messages, such as “Present Card” or “Access Granted,” for your RM, non-RM, and OSDP readers to meet the specific needs of your facility or site. It also explains how to customize OSDP reader LED and beep patterns.

In this chapter

LCD Message Set 492
LED Colors, LED Patterns and Beep Patterns 503

LCD Message Set

Some readers display LCD messages, such as “Present Card” or “Access Granted” to indicate different states to cardholders. You can customize the message sets to meet the specific needs of your facility or site.

Example:

You could change the “Access Granted” message to “Please Enter Now”.

When you assign a set of messages to an iSTAR Controller or an apC Panel, all those types of readers (RM or OSDP) on that controller use the same messages.

The **Reader LCD Message Set Editor** allows you to configure message sets. You can also use the **Reader LCD Message Set Editor** to change the language in which your messages appear. See Changing the Language for the Default LCD Messages on Page 496.

NOTE

Only ASCII characters 0 to 125 are supported for display on the reader.

- There are 94 printable characters. (Code 1 to 31 are non-printing, mostly obsolete characters that affect how text is processed.)
- No accented characters are supported.

Accessing the Reader LCD Message Set Editor

You access the **Reader LCD Message Set Editor** from the C•CURE 9000 **Hardware** pane.

To Access the Reader LCD Message Set Editor

1. Click the **Hardware** button in the Navigation Pane to open the **Hardware** Tree.
2. Right-click the **Hardware** Folder, click **Reader LCD Message Set**, and select **New** on the sub-menu that appears. (Once you create a message set, a **Reader LCD Message Set** folder appears in the **Hardware** Tree.)

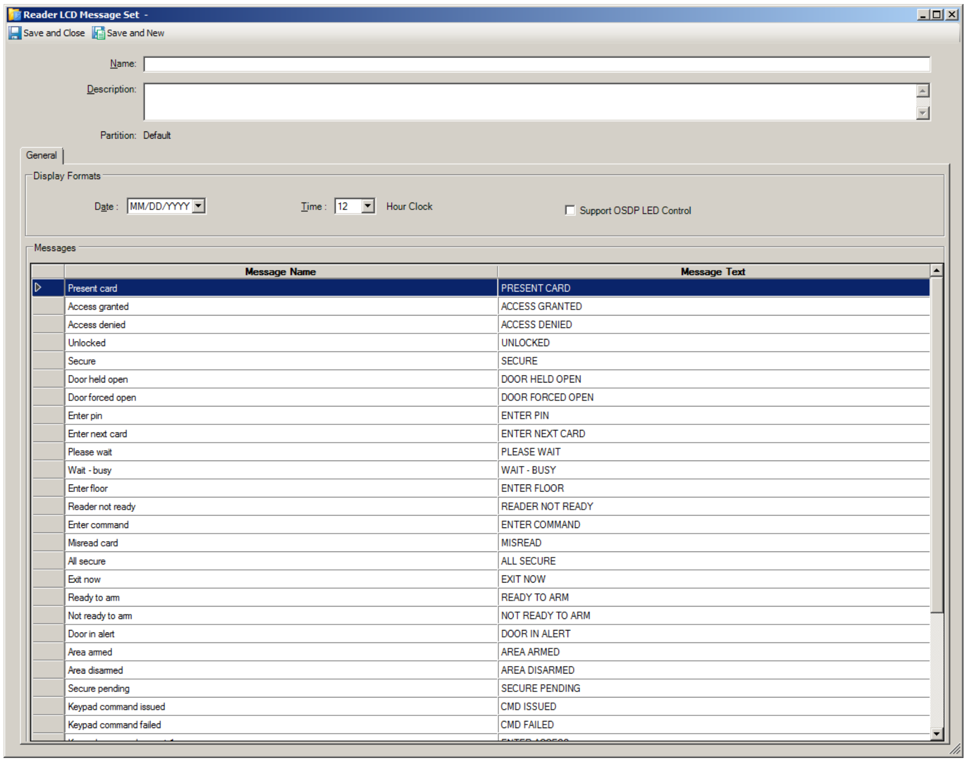
   - or -

   Click the **Hardware** drop-down list and scroll down to select **Reader LCD Message Set**.

   Click ➔ ▾ to open a Dynamic View showing a list of all existing Reader LCD Message Sets, right-click the Reader LCD Message Set you want to change, and click **Edit** from the context menu that appears.

   The **Reader LCD Message Set Editor** opens. Figure 157 on Page 493 shows the Reader LCD Message Set Editor, the default setting.

Figure 157: Reader LCD Message Set Editor



Name:

Description:

Partition: Default

Date : MM/DD/YYYY

Time : 12 Hour Clock

☐ Support OSDP LED Control

Message Name	Message Text
Present card	PRESENT CARD
Access granted	ACCESS GRANTED
Access denied	ACCESS DENIED
Unlocked	UNLOCKED
Secure	SECURE
Door held open	DOOR HELD OPEN
Door forced open	DOOR FORCED OPEN
Enter pin	ENTER PIN
Enter next card	ENTER NEXT CARD
Please wait	PLEASE WAIT
Wait - busy	WAIT - BUSY
Enter floor	ENTER FLOOR
Reader not ready	READER NOT READY
Enter command	ENTER COMMAND
Misread card	MISREAD
All secure	ALL SECURE
Exit now	EXIT NOW
Ready to arm	READY TO ARM
Not ready to arm	NOT READY TO ARM
Door in alert	DOOR IN ALERT
Area armed	AREA ARMED
Area disarmed	AREA DISARMED
Secure pending	SECURE PENDING
Keypad command issued	CMD ISSUED
Keypad command failed	CMD FAILED

To Access OSDP Message Sets and LED Control Configurable Options:

1. Click the **Hardware** button in the Navigation Pane to open the **Hardware** Tree.
2. Right-click the **Hardware** Folder, click **Reader LCD Message Set**, and select **New** on the sub-menu that appears. (Once you create a message set, a **Reader LCD Message Set** folder appears in the **Hardware** Tree.)

   - or -

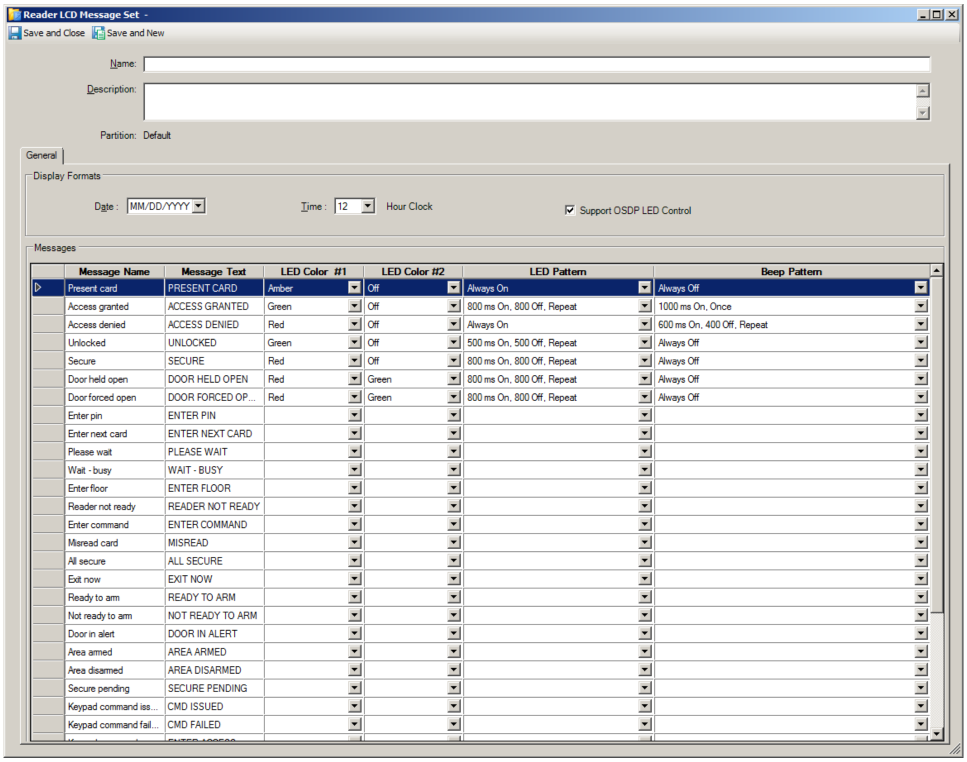
   Click the **Hardware** drop-down list and scroll down to select **Reader LCD Message Set**.

   Click to open a Dynamic View showing a list of all existing Reader LCD Message Sets, right-click the Reader LCD Message Set you want to change, and click **Edit** from the context menu.
3. In the Reader Message Set editor, click Support OSDP LED Control to access OSDP readers configurable message sets and LED control.

   Figure 158 on Page 494 shows the OSDP Reader LCD Message Set and LED Control Editor.

   See LED Colors, LED Patterns and Beep Patterns on Page 503 for configuration information.

Figure 158: OSDP Reader LED Control Message Set Editor



Name:

Description:

Partition: Default

Display Formats

Date : MM/DD/YYYY

Time : 12 Hour Clock

☑ Support OSDP LED Control

Messages

Message Name	Message Text	LED Color #1	LED Color #2	LED Pattern	Beep Pattern
Present card	PRESENT CARD	Amber	Off	Always On	Always Off
Access granted	ACCESS GRANTED	Green	Off	800 ms On, 800 Off, Repeat	1000 ms On, Once
Access denied	ACCESS DENIED	Red	Off	Always On	600 ms On, 400 Off, Repeat
Unlocked	UNLOCKED	Green	Off	500 ms On, 500 Off, Repeat	Always Off
Secure	SECURE	Red	Off	800 ms On, 800 Off, Repeat	Always Off
Door held open	DOOR HELD OPEN	Red	Green	800 ms On, 800 Off, Repeat	Always Off
Door forced open	DOOR FORCED OP...	Red	Green	800 ms On, 800 Off, Repeat	Always Off
Enter pin	ENTER PIN				
Enter next card	ENTER NEXT CARD				
Please wait	PLEASE WAIT				
Wait - busy	WAIT - BUSY				
Enter floor	ENTER FLOOR				
Reader not ready	READER NOT READY				
Enter command	ENTER COMMAND				
Misread card	MISREAD				
All secure	ALL SECURE				
Exit now	EXIT NOW				
Ready to arm	READY TO ARM				
Not ready to arm	NOT READY TO ARM				
Door in alert	DOOR IN ALERT				
Area armed	AREA ARMED				
Area disarmed	AREA DISARMED				
Secure pending	SECURE PENDING				
Keypad command iss...	CMD ISSUED				
Keypad command fail...	CMD FAILED				

Reader LCD Message Set

The **Reader LCD Message Set Editor** fields are described in Table 174 on Page 494Table 175 on Page 495

Table 174: Reader LCD Message Set Editor -

Field/Button	Description
Name	Enter a name for the Reader LCD Message Set.
Description	Enter a brief description for this Reader LCD Message Set.
Partition	This read-only field identifies the Partition to which this Reader LCD Message Set belongs. (This field is visible only if the C•CURE 9000 system is partitioned.)
Display Formats	
Date	Select the format for the date display: **MM/DD/YY** (the default) or **DD/MM/YY**
Time: Hour Clock	Select the format for the time display: **12 hour** (the default) **or 24 hour**.
Support OSDP LED Control	Opens the configurable options for message, LED, and Beep Patterns.
Messages	
Message Name	Name of the Reader LCD Message string.
Message Text	Default text for the Reader LCD Message.

Table 175: Reader LCD Messages

Message Name	Message Text	Description	iSTAR Uses	apC Uses
Access granted	ACCESS GRANTED	Admit text–general use	Yes	Yes
Access denied	ACCESS DENIED	Reject text–general use	Yes	Yes
Enter PIN	ENTER PIN	Enter PIN prompt–general use	Yes	Yes
Enter next card	ENTER NEXT CARD	Enter next card prompt–used for occupancy and visitor/escort features	Yes	Yes
Unlocked	UNLOCKED	Door unlocked mode text–general use	Yes	Yes
Please wait	PLEASE WAIT	Text displayed while access decision pending–general use	Yes	Yes
Wait - busy	WAIT - BUSY	Text displayed when door busy processing a previous access–general use	Yes	Yes
Enter floor	ENTER FLOOR	apC display for elevator admit–general use	**No**	Yes
Reader not ready	READER NOT READY	Text displayed when reader disabled–general use	Yes	Yes
Present card	PRESENT CARD	Locked Door mode text–general use	Yes	Yes
Enter command	ENTER COMMAND	Intrusion entrance delay text–intrusion zone feature	Yes	**No**
Misread card	MISREAD	Visitor/escort misread card feedback text–visitor/escort feature	Yes	**No**
All secure	ALL SECURE	Intrusion zone all inputs secure text–intrusion zone feature	Yes	**No**
Exit now	EXIT NOW	Intrusion exit delay text–intrusion zone feature	Yes	**No**
Ready to arm	READY TO ARM	Intrusion zone ready to arm status text–intrusion zone feature	Yes	**No**
Not ready to arm	NOT READY TO ARM	Intrusion zone not ready to arm status text–intrusion zone feature	Yes	**No**
Door in alert	DOOR IN ALERT	iSTAR reader tampered text, or apC reader tamper or door held forced open text–general use	Yes	Yes
Area armed	AREA ARMED	Intrusion zone armed mode text–intrusion zone feature	Yes	**No**
Area disarmed	AREA DISARMED	Intrusion zone disarmed mode text–intrusion zone feature	Yes	**No**
Secure pending	SECURE PENDING	Intrusion zone disarm pending text–intrusion zone feature	Yes	**No**
Secure	SECURE	Door secure mode text–general use	Yes	Yes
Keypad Command Issued	CMD ISSUED	Keypad command issued text–keypad commands feature	Yes	**No**
Keypad Command Failed	CMD FAILED	Keypad command failed text–keypad commands feature	Yes	**No**

Reader LCD Messages (continued)

Message Name	Message Text	Description	iSTAR Uses	apC Uses
Keypad Command Prompt 1	ENTER ACCESS	Keypad command prompt 1 text–keypad commands feature	Yes	**No**
Keypad Command Prompt 2	ENTER TARGET	Keypad command prompt 2 text–keypad commands feature	Yes	**No**
Acknowledged	ACKNOWLEDGED	Enter next card acknowledgment text–occupancy and visitor/escort features	Yes	**No**
Enter escort	ENTER ESCORT	Request Escort prompt–occupancy and visitor/escort features	Yes	**No**
Secure violated	SECURE VIOLATED	Intrusion zone armed and violated status text–intrusion zone feature	Yes	**No**
Secure offnormal	SECURE OFFNORMAL	Intrusion zone armed but not ready to re-arm status text–intrusion zone feature	Yes	**No**
Lockout HHH:MM	LOCKOUT & T	Area lockout reject & T will be replaced with remaining lockout time HHH:MM–area lockout feature	Yes	**No**
Reject unattended	REJECT UNATTEND	Occupancy reject indicates that supervisor/escort cannot leave supervisees/visitors unattended–occupancy feature	Yes	**No**
Reject occupancy	REJECT OCCUPANCY	Occupancy general reject text–occupancy feature	Yes	**No**
Door held open	DOOR HELD OPEN	iSTAR door held open status text–STAR only (apC displays Door in Alert instead)	Yes	**No**
Door forced open	DOOR FORCED OPEN	iSTAR door forced open status text–iSTAR only (apC displays Door in Alert instead)	Yes	**No**

Changing the Language for the Default LCD Messages

You can use the **Reader LCD Message Set Editor** to easily change the language in which the default messages appear. When you first start the C•CURE 9000, the default messages appear in the system-wide primary language you chose during installation.

Example:

You chose English as the primary system language and configured all the sets of English messages your Boston site needs; you may now want to customize some message sets in French for your Montreal site.

NOTE The C•CURE 9000Multilingual User Interface (MUI) Editor, available as a licensed option when purchasing C•CURE 9000, allows you to localize the C•CURE 9000 user interface for a broad range of languages and cultures. When installed and enabled, the C•CURE 9000 MUI Editor allows anyone with appropriate access permissions to localize individual screens and system messages, including the Reader LCD Message Sets, from within C•CURE 9000 at any time. For information on the MUI Editor see the chapter, "Displaying the C•CURE 9000 in Multiple Languages" in the *C•CURE 9000 System Maintenance Guide*.

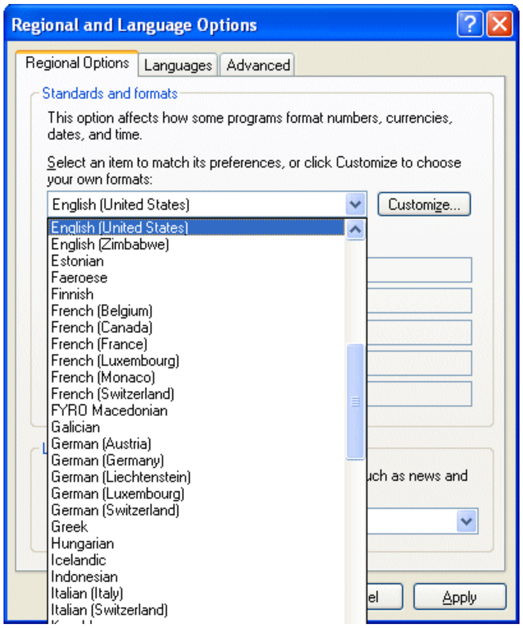
To Change the Language for the Default Message Set

1. Exit the C•CURE 9000 Administration Application.
2. Go to the **Windows Control Panel** and click **Regional and Language Options**.
3. Use the **Regional Options** tab on the **Regional and Language Options** dialog box to change to the language and culture you need by clicking the down- arrow to scroll to your choice and the **Customize** button to specify your own required formats.

   Example:

   French (Canada).

Figure 159: Windows Regional and Language Options Screen



This option affects how some programs format numbers, currencies, dates, and time.

Select an item to match its preferences, or click Customize to choose your own formats:

English (United States)

4. Click **Apply** and then **OK**.
5. Restart the Administration Application, click the **Hardware** button in the Navigation Pane.
6. Right-click the **Reader LCD Message Sets** Folder in the **Hardware** tree and click **New** on the sub-menu that appears, as shown in on Page 492.
7. The **Reader LCD Message Set Editor** opens, and you can customize a set of messages in French.

Reader LCD Message Set Editor

The **Reader LCD Message Set Editor** lets you modify LCD message text for messages that display on the readers.

In addition, the editor lets you select the way the date and time display on the Reader. The **Reader LCD Message Set Editor** has only one tab—the **General** tab.

For more information, see:

- Accessing the Reader LCD Message Set Editor on Page 492
- Reader LCD Message Set on Page 494
- Creating a Reader LCD Message Set on Page 498

Reader LCD Message Set Tasks

You can perform the following tasks to configure Reader LCD Message Sets.

- Creating a Reader LCD Message Set on Page 498
- Creating a Reader LCD Message Set Template on Page 498
- Configuring a Reader LCD Message Set on Page 499
- Assigning New Message Sets and Reassigning Updated Message Sets on Page 499
- Viewing a List of Reader LCD Message Sets on Page 500
- Deleting a Reader LCD Message Set on Page 501
- Using Set Property to Configure Reader LCD Message Set on Page 502

Creating a Reader LCD Message Set

You can create a new Reader LCD Message Set.

To Create a Reader LCD Message Set

1. Click the **Hardware** button in the Navigation Pane to open the **Hardware** Tree.
2. Right-click the **Hardware** Folder, click **Reader LCD Message Set**, and click **New** on the sub-menu that appears.

   - or -

   If Reader LCD Message Sets were already created, right-click the **Reader LCD Message Sets** Folder and click **New** on the sub-menu that appears.
3. The **Reader LCD Message Set Editor** opens, and you can configure the message set.
4. To save your new Reader LCD Message Set, click **Save and Close**.

   - Or -

   Alternatively, if you want to save the Reader LCD Message Set and then create a new one, click **Save and New**. The current Reader LCD Message Set is saved and closed, but the **Reader LCD Message Set Editor** remains open to allow you to create a new Reader LCD Message Set.

Creating a Reader LCD Message Set Template

You can create a new template for a Reader LCD Message Set. A Reader LCD Message Set template saves you time because you can reuse the same configuration repeatedly.

To Create a Reader LCD Message Set Template

1. Click the **Hardware** button in the Navigation Pane to open the **Hardware** Tree.
2. Right-click the **Hardware** Folder, click **Reader LCD Message Set**, and click **New Template** on the sub-menu that appears.

   - or -

   If Reader LCD Message Sets were already created, right-click the **Reader LCD Message Sets** Folder and click **New Template** on the sub-menu that appears.

   The **Reader LCD Message Set Editor** where you can configure the Reader LCD Message Set template opens.

3. Configure the template to meet your requirements. Any fields you configure values for become part of the template; then when you subsequently create a new Reader LCD Message Set from that template, these values are already filled in.
4. In the **Name** field, enter the name you wish to use for the template.

   Example:

   Reader LCD Message Set Template1
5. To save the template, click **Save and Close**.

   The template will be available as an option on the pull-down Template menu.

Configuring a Reader LCD Message Set

You can configure a new Reader LCD Message Set or modify an existing one using the **Reader LCD Message Set Editor**. To modify an assigned message set, see

To Configure a Reader LCD Message Set

1. Create a new Reader LCD Message Set or modify an existing Reader LCD Message Set.

   The **Reader LCD Message Set Editor** opens for you to edit the Reader LCD Message Set making changes as you wish in the fields on the top of the editor and on the **General** tab.
2. Type a **Name** and **Description** for the Reader LCD Message Set that sufficiently identifies this message set and its purpose.
3. Select your desired date format. Use the default **MM/DD/YY** or click the drop-down menu to select the **DD/MM/YY**.
4. Select the time format. Use the default **12** Hour Clock or click the drop-down menu to select the **24** Hour Clock.
5. In the **Messages** box, use the vertical scroll bar to find the message you want to modify in the **Message Name** column and change its related entry in the **Message Text** column as desired.

   There are 34 text messages you can modify for your uses. Many of them are used by, and can be downloaded to, iSTAR and apC controllers. For detailed information about the messages, see Reader LCD Message Set on Page 494.

Assigning New Message Sets and Reassigning Updated Message Sets

This section describes how to assign a message set to all readers on a controller. It also describes the steps to take if the assigned message is updated after it was assigned.

Assigning a Message Set

To Assign a Message Set:

1. Open the controller editor.
2. Click the **General** tab.
3. In the **RM LCD Messages** field, click ....

   A list of message sets applicable to the controller appears.
4. Select the message set in the list.
5. Click **Save and Close**.

Reassigning an Updated Message Set

Updated message sets are not automatically downloaded to the controller. The assigned message must be deleted and then reassigned. Otherwise, the message set updates will not take effect until the controller is rebooted.

To Reassign a Message Set:

1. Open the controller editor.
2. Click the **General** tab.
3. In the **RM LCD Messages** , clear the field with the message set. Highlight the name and click **Delete** on your keyboard.
4. Click ... .
5. Select the message set in the list. Message sets using OSDP control will not appear if the controller does not support OSDP.
6. Click **Save and Close**.

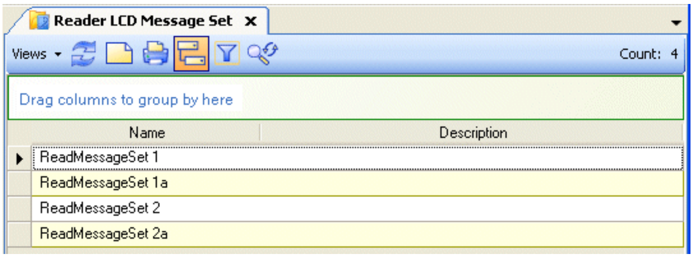
Viewing a List of Reader LCD Message Sets

You can display a list of the Reader LCD Message Sets you have created by opening a Dynamic View of Reader LCD Message Sets.

To View a List of Reader LCD Message Sets

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Reader LCD Message Set** from the **Hardware** drop-down list and click ➔ ▾ to open a Dynamic View showing a list of all existing Reader LCD Message Sets, as shown in Figure 160 on Page 500. (You can also click the down-arrow of this button to either view the list in the current tabbed view or open a new tabbed view).

Figure 160: Reader LCD Message Set List



Name	Description
ReadMessageSet 1	
ReadMessageSet 1a	
ReadMessageSet 2	
ReadMessageSet 2a	

- You can sort, filter, and group items in the list.
- You can right-click a Reader LCD Message Set in the list to open the Reader LCD Message Set Context menu (see Table 176 on Page 501) and perform any of the functions on that menu.
- You can right-click any column heading to open a context menu of all possible Reader LCD Message Set fields that can display as columns and add/remove fields to view certain information.

For more information on using Dynamic Views, see the Dynamic Views chapter in the *C•CURE 9000 Data Views Guide*.

Reader LCD Message Set List Context Menu

The context menu that opens when you right-click a Reader LCD Message Set in the Reader LCD Message Set Dynamic View includes the selections described in Table 176 on Page 501.

Table 176: Reader LCD Message Set List Right-Click Context Menu Options

Menu Selection	Description
Edit	Click this menu selection to edit the selected Reader LCD Message Set. The **Reader LCD Message Set Editor** opens. You can rename the message set and change any of its attributes.
Delete	Click this menu selection to delete the selected Reader LCD Message Set. A prompt appears asking you to confirm that you want to delete the Reader LCD Message Set. Click **Yes** to delete the Reader LCD Message Set or **No** to cancel the deletion. NOTE: You cannot delete a Reader LCD Message Set if it is being used by an iSTAR and/or apC Controller.
Set property	Click this menu selection to change the value of the selected properties in the selected Reader LCD Message Set(s). A dialog box appears asking you to select a property to change. Click ... to open a selection list and click the property you wish to change. You can then change the value of the following property: • **Description** – You can change the textual description of the Reader LCD Message Set(s) by selecting this property and typing in a new value.
Export selection	Click this menu selection to Open an Export...to XML or CSV file dialog box to export one or more of the selected Reader LCD Message Set records to either an XML or a CSV file. This allows you to quickly and easily create XML/CSV reports on the selected data. NOTE: Although XML is the initial default file type, once you choose a type in the **Save as type** field, whether XML or CSV, that becomes the default the next time this dialog box opens. CSV-formatted exports **cannot** be imported. If you require importing functionality, export to XML. • When you export to an XML file, all available data for the selected object(s), whether displayed in the Dynamic View or not—as well as all the child objects of the selected record(s), is exported. • When you export to a CSV file, only data in the columns displaying in the Dynamic View is exported, and in the order displayed. This allows you to both select and arrange data fields for your report. In addition, exporting to a CSV file allows you to view the exported data in an Excel spreadsheet and further manipulate it for your use. For more information, see the Dynamic Views chapter in the *C•CURE 9000 Data Views Guide.* NOTE: When you click **Export Selection**, you are running the export on the client computer. Consequently, the system does not use the Default Export Directory Path—which is on the server. It opens a directory on the client, reverting to the last directory used. You can navigate to the default export server directory, if you wish. Or to avoid confusion or use the same destination folder for both client and server computers, you can use UNC (Universal Naming Convention) paths, for example: \\Computer Name\ Program Files\Software House\SWHouse\SWHSystem\Export.
Find in Audit Log	Click this menu selection to Open a **Query Parameters** dialog box in which you can enter prompts and/or modify the Query criteria to search for entries in the Audit Log that reference the selected Reader LCD Message Set. When found the results display in a separate Dynamic View.
Find in Journal	Click this menu selection to Open a **Query Parameters** dialog box in which you can enter prompts and/or modify the Query criteria to search for entries in the Journal that reference the selected Reader LCD Message Set. When found the results display in a separate Dynamic View.

Deleting a Reader LCD Message Set

You can delete a Reader LCD Message if it is **not** currently being used by any iSTAR and/or apC Controller.

To Delete a Reader LCD Message

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Reader LCD Message Set** from the **Hardware** pane drop-down list.
3. Click ➡ ▾ to open a **Dynamic View** showing all Reader LCD Message objects.
4. Right-click the Reader LCD Message Set(s) in the list that you want to delete and select **Delete** from the context menu. A confirmation message appears.

5. Click **Yes** to confirm the deletion of the Reader LCD Message Set or click **No** to cancel the deletion.

   If you click **Yes**, the **Reader LCD Message Set objects** dialog box appears showing the results of the delete operation, with one line per message set. If no controllers are using the message set(s), the line shows that the message set was deleted. If, however, the message is in use, the message **Unable to delete object - The message set is currently in use by iSTAR or apC controllers. Please remove the message set from the controller(s)** is displayed.

Using Set Property to Configure Reader LCD Message Set

You can use **Set Property** to quickly set a property for one or more Reader LCD Message without opening the **Reader LCD Message Set Editor**, thus making it useful for mass updates. See Table 176 on Page 501 for the properties that can be changed.

To Set a Property for a Reader LCD Message

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Reader LCD Message Set** from the **Hardware** pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all **Reader LCD Message Set** objects.
4. Right-click the **Reader LCD Message Set(s)** in the list for which you want to set the property and select **Set Property** from the context menu.
5. Specify the property for the **Reader LCD Message Set(s)**. Click the drop-down menu to see a list of properties.
6. Enter the value for the property and click **OK**.
7. Click **OK** on the **Setting Properties of Reader LCD Message Set** message box.

LED Colors, LED Patterns and Beep Patterns

LED color, LED pattern, and beep pattern are supported on OSDP readers on iSTAR Ultra, Ultra SE (Ultra Mode), and iSTAR Ultra LT controllers with firmware v6.6.5 and higher.

NOTE RM and Wiegand readers do **NOT** support the new colors and patterns.

Click the **Support OSDP LED Control** check box in the **Reader LCD Message Set** dialog box to access OSDP readers configurable messages and LED control.

LED colors, LED patterns, and beep patterns are supported with the following messages:

- Present Card
- Access granted
- Access denied
- Unlocked
- Secure
- Door held open
- Door forced open

The remaining messages can be used, and their text modified. However, customized LED color, LED pattern and beep pattern are not supported on them in this release.

Limitations

- Changes to patterns do not take effect until there is a new reader transaction or if the reader is restarted.
- To utilize the customizable LED/Beep/Message features, the OSDP reader must support the full set of LED/Beep commands in the OSDP specification.
- In an OSDP multi-drop environment, use the higher baud rate (38.4K or 115K.) for the customizable LED patterns, Beep patterns, and LCD message set features.
- The double-swipe beep configurations supersede all other beep configurations. Avoid using the ninth pattern (400 ms on/200 off/100 on) and the 10th pattern (100 ms on/200 off/400 on/200 off/100 on/200 off/100 on) if you are using double-swipe for other purposes.
- If you are using LED colors, ensure that the reader supports the colors you choose for the configuration. Check the reader documentation.
- Occasionally, OSDP readers when configured, not connected to a door, may display unstable LED status information the first time the reader is powered on. This condition should only last 30 seconds.
- When the ACM/IP-ACM is busy and/or the Baud rate set on the port is low, LED and beep patterns may not reproduce perfectly.
- Setting both the LED and beep to the same pattern will not always synchronize. The buzzer and LED in the OSDP protocol requires two different protocol messages, and at 9600 baud there is a minimum of 28 ms space between those, and possibly up to 225 ms between the two requests. When the reader starts the beep pulse and when it starts the LED flash is based on the reader manufacturer.
- The double-swipe beep configurations supersede all other beep configurations. Avoid using the ninth pattern (400 ms on/200 off/100 on) and the 10th pattern (100 ms on/200 off/400 on/200 off/100 on/200 off/100 on) if you are using double-swipe for other purposes.
- Some readers do not support the blue LED color. Check the reader manufacturer documentation.

LED Color Configuration

Two LED colors can be selected, **LED Color #1** and **LED Color #2**, which appear alternately in the selected pattern.

Supported colors accessed from the **LED Color** (#1, #2) drop-down menu in the Message Name row:

- Off (dark)
- Red
- Green
- Amber
- Blue

NOTE Ensure that your reader supports the colors you choose for the configuration. Most readers do not support the blue LED color.

LED Pattern Configuration

This section describes LED Color #1 and LED Color #2 patterns.

The LED patterns start with color #1, alternating between color #1 and color #2, if applicable. Table 177 on Page 504

LED color patterns are access from the **LED Pattern** drop-down menu in the Message Name row.

NOTE If either color # is not defined, then the LED for that color # will be off for the specified time.

Table 177: LED Color Patterns

Selection	LED Color	LED Color Sequence Each block represents 100 ms X = On, Empty box = Off															
100 ms On, 200 Off, 400 ON	Color #1	X			X	X	X	X									
	Color #2		X	X													
1000 ms On	Color #1	X	X	X	X	X	X	X	X	X	X						
	Color #2																
600 ms On, 400 Off, Repeat	Color #1	X	X	X	X	X	X										
	Color #2							X	X	X	X						
400 ms On, 700 Off, Repeat	Color #1	X	X	X	X												
	Color #2					X	X	X	X	X	X	X					
700 ms On	Color #1	X	X	X	X	X	X	X									
	Color #2																

Selection	LED Color	LED Color Sequence Each block represents 100 ms X = On, Empty box = Off															
400 ms On, 300 Off, Repeat	LED #1	X	X	X	X												
	LED #2					X	X	X									
400 ms On, 200 Off, 100 On, Repeat	LED #1	X	X	X	X			X									
	LED #2					X	X										
100 ms On, 200 Off, 400 On, 200 Off, 100 On, 200 Off, 100 On	LED #1	X			X	X	X	X			X			X			
	LED #2		X	X					X	X		X	X				
300 ms On, 300 Off, Repeat	LED #1	X	X	X													
	LED #2				X	X	X										
800 ms On, 800 Off, Repeat	LED #1	X	X	X	X	X	X	X	X								
	LED #2									X	X	X	X	X	X	X	X
500 ms On, 500 Off, Repeat	LED #1	X	X	X	X	X											
	LED #2						X	X	X	X	X						

Beep Pattern Configuration

Beep pattern configuration selections are accessed from the **Beep Pattern** drop-down menu in the **Message Name** row.

Table 178 on Page 505 describes the beep pattern actions for each selection.

Table 178: Beep Pattern Actions

Selection	Beep Action
Always Off	Beep is off.
Always On	Beep is continuously on.
100 ms On, 200 Off, 400 ON	Beeps for 100 ms, turns off for 200 ms, beeps for 400 ms, and stops.
1000 ms On	Beeps for 1000 ms and stops

Beep Pattern Actions (continued)

Selection	Beep Action
600 ms On, 400 Off, Repeat	Beeps for 600 ms, turns off for 400 ms, then repeats the sequence.
400 ms On, 700 Off, Repeat	Beeps for 400 ms, turns off for 700 ms, then repeats the sequence.
700 ms On	Beeps for 700 ms and stops.
400 ms On, 300 Off, Repeat	Beeps for 400 ms, turns off for 300 ms, then repeats the sequence.
400 ms On, 200 Off, 100 On	Beeps for 400 ms, turns off for 200 ms, beeps for 100 ms, then stops.
100 ms On, 200 Off, 400 On, 200 Off, 100 On, 200 Off, 100 On	Beeps for 100 ms, turns off for 200 ms, beeps for 400 ms, turns off for 200 ms, beeps for 100 ms, turns off for 200 ms, beeps for 100 ms, then stops.
300 ms On, 300 Off, Repeat	Beeps for 300 ms ,turns off for 300 ms, then repeats the sequence.
800 ms On, 800 Off, Repeat	Beeps for 800 ms, turns off for 800 ms, then repeats the sequence.
500 ms On, 500 Off, Repeat	Beeps for 500 ms, turns off for 500 ms, then repeats the sequence.

14

Two Factor Authentication

This chapter explains how to configure Two Factor Authentication in C•CURE 9000.

In this chapter

Two Factor Authentication Overview 508
Configuring iSTAR Readers and Doors for Two Factor Authentication 510
Configuring Fallback to One Factor Authentication 511
Two Factor Authentication Behaviors 513

Two Factor Authentication Overview

The two factor authentication feature provides a further level of security for your C•CURE 9000 system, credentials, and access requests. With this feature, you can gain access to a protected door using a second, additional manner of authentication before access is granted by the reader. By configuring two factor authentication in your system, you can avoid cloned credentials from being used without the knowledge of the original owner of the credential. This software-only security feature is a solution that does not require the deployment of new hardware devices.

The two factor authentication feature in your C•CURE 9000 platform is applied through Duo services. This third party company and its APIs are integrated to provide you with the utmost security from the beginning to the end of access requests by providing the following services:

- Signals a mobile phone that a new authentication request is pending.
- An application or automated call on the mobile phone that you can use to approve or deny the authentication request.

There are two ways Duo services perform the second authentication process for two factor authentication:

- When the cardholder swipes at a two factor authentication protected door and enabled reader, they receive a notification on their mobile phone requesting approval. They can approve or deny the request from the Duo application.
- If a user does not have the Duo application but has a registered phone, they receive an automated call prompting them to press a key to approve the request or terminate the call to deny the request.

Prerequisites

The following components are required to apply two factor authentication to your C•CURE 9000 system and security objects:

- You need to add a license to the server you are using to host the two factor authentication plugin that has:
  - Tyco Web Bridge enabled.
  - 2-Factor Mobile Authentication per Door Annual Subscription License option enabled.
  - The limit you require for the number of personnel that can be enrolled and the number of doors that participate in the two factor authentication process.
- A valid account with Duo that requires access to both the Auth API and Admin API. The Admin API is not available unless you request it directly from Duo.
  - For more information see Enabling Two Factor Authentication for C•CURE through DUO APIs on Page 509.

When successful, the status of **Web Bridge State** in and **Application Server Dynamic View** appears as **Connected**.

Two Factor Authentication in an Enterprise Environment

Two factor authentication is initiated by the Satellite Application Server (SAS) that us connected to hardware and the approved access requests directed to this connected hardware. Therefore, if you are using an Enterprise system, you need to run the two factor authentication services on each SAS which requires them. All servers in an Enterprise environment can share a single Duo account.

Supporting Hardware

Two factor authentication depends on the firmware version applied to the iSTAR family devices you are using in your system. Table 179 on Page 509 lists the devices and firmware versions that support the use of the two factor authentication feature. If the device is not listed, it does not support two factor authentication.

Table 179: Supported Hardware

Device	Firmware version
iSTAR Ultra	v6.5.2 or greater.
iSTAR Ultra SE	v6.5.2 or greater.
iSTAR Ultra LT	v6.5.2 or greater.
iSTAR Edge/eX	v6.2.6 or greater.
iSTAR Pro	v5.2.D or greater

Enabling Two Factor Authentication for C•CURE through DUO APIs

Before you can enable doors to use two factor authentication ensure you have the prerequisites outlined in Prerequisites on Page 508.

The Duo service provides documentation that describes the process of adding these applications in Duo at the following locations:

- For information about getting started with a Duo account, refer to https://duo.com/docs/getting-started.
- For information about the Auth API, refer to https://duo.com/docs/authapi#first-steps.
  - When you access the Auth API, you are provided with the **Integration Key**, **Secret Key**, and **API hostname**. You can use these to securely communicate between the C•CURE host and Duo for the two factor authentication process.
  - In regards to the **Username normalization** section, you can choose the radio button for **Simple**. This provides you with greater flexibility in establishing how C•CURE personnel maps to a Duo user.
- For information about the Admin API, refer to https://duo.com/docs/adminapi#first-steps.
  - When you access the Admin API, you are provided with an **Integration Key** and **Secret Key**. These are different from the Auth API but the **API hostname** is the same.
  - In the Permissions section, you must grant read permissions at a minimum. If your C•CURE host is creating and removing new users as you enable them for two factor authentication, you must also grant write permissions. However, if you manage users through another process you can deny write permissions to guarantee C•CURE cannot alter user information.

The Auth API and Admin API information can be located on C•CURE system here: **C:\Program Files (x86)\Tyco\CrossFire\ServerComponents\ACVS.Enterprise.WebBridge.exe** This is an important integration and the security information in this file should only be accessed by trusted personnel.

NOTE For information about configuring personnel for two factor authentication see the *C•CURE 9000 Personnel Configuration Guide*.

Configuring iSTAR Readers and Doors for Two Factor Authentication

The configuration you provide to the iSTAR readers in your system determines whether a card swipe requires two factor authentication for a cardholder. To fully enable two factor authentication for readers and doors, you need to complete the following configurations:

- The reader has two factor authentication enabled and is associated with a door.
- The cardholder has access to the door.
- The cardholder's Personnel record is configured for two factor authentication.
- The cardholder's Clearance Filter Level is below the reader's current Clearance Filter Level.

When you complete these configurations, two factor authentication is initiated at the reader and the door upon a card swipe.

Configuring iSTAR readers for two factor authentication

1. Open the **iSTAR Reader** editor, select a clearance filter level from the **Default Clearance Filter Level** drop-down list. This choice restricts which cardholders can access the door.
   - The cardholder that presents themselves at this reader must have a Clearance Filter Level below the reader’s current Clearance Filter Level in order to enable the two factor authentication. Cardholder’s with equal or higher clearance filter levels are admitted without a 2FA challenge.
2. Click the **Options** tab.
3. Select the **Enable Two Factor Authentication on this Reader** check box.

Configuring iSTAR doors for two factor authentication

1. Assign a two factor authentication-enabled reader to the door.
2. Ensure you complete the prerequisites for other portions of two factor authentication configuration detailed in the Prerequisites section ofTwo Factor Authentication Overview on Page 508.

Configuring Fallback to One Factor Authentication

There may be situations when your C-CURE host and the two factor authentication provider, or your C-CURE host and the access control panel fail to communicate. In these situations, you may need to configure a contingency plan so that your security system falls back to using one factor authentication.

You can define a trigger and event to maintain security while communications are being fixed in order to do this.

Configuring fallback when the C-CURE host and two factor authentication provider fail to communicate

The C-CURE host periodically confirms connectivity to the two factor authentication provider. If communication fails for any reason the value in the **Web Bridge State** field of the **Application Server Dynamic View** does not appear as **Connected** and the **Web Bridge Connected** check box is clear, which means it is false and not connected.

Configuring fallback to one factor authentication when the C-CURE host and two factor authentication provider fail to communicate

1. Click the **Configuration** pane and select **Event** from the drop-down list.
2. Click **New** to create a new event.
3. In the **Event** editor, click the **Action** tab.
4. Click Add to add a row for the action you want to configure.
5. In the Action drop-down list, select **Set Clearance Filter to Level <x>**, where **x** is a level below the pre-configured **Clearance Filter Level** the reader uses for two factor authentication.
6. In the **Reader** field, click the ellipsis and select the reader you want to apply this action to if there is communications loss between C-CURE and the access control panel.
7. Complete any other configuration options in the **Event** editor you want to pair with this event in the situation it is triggered. Ensure that you select the **Enable** and **Armed** check boxes.
8. Click **Save and Close**. You have created an event that sets the chosen reader to a lower clearance level. To finalize this configuration, you must apply this event to the Application Server in case there is a communication failure.
9. Open the editor for your Application Server and click the **Triggers** tab.
10. In the **Property** section, select **Web Bridge Connected** or **Web Bridge State**. This depends on which field you want to base this trigger on.
11. In the **Value** section, select the value you want to use to trigger the event you configured.
    - If you choose **Web Bridge State** you can choose several options such as, but not limited to: **Disconnected**, **An unexpected error occurred on the connection**, or **Not Licensed**.
    - If you choose Web Bridge Connected you can choose the check box value of selected, True, or clear, False.
12. In the **Action** section, select **Activate Event**.
13. In the **Event** field, click the ellipsis and select the event that you configured which lowers the **Clearance Filter Level** of the reader.
14. Click **Save and Close**. The Application Server is now configured to trigger an event that lowers the clearance level of a reader in case the server has a connection problem.

Configuring fallback to one factor authentication when the C•CURE host and the access control panel fail to communicate

1. Click the **Configuration** pane and select **Event** from the drop-down list.
2. Click **New** to create a new event.
3. In the **Event** editor, click the **Action** tab.
4. Click **Add** to add a row for the action you want to configure.
5. In the **Action** drop-down list, select **Set Clearance Filter to Level <x>**, where x is a level below the pre-configured **Clearance Filter Level** the reader uses for two factor authentication.
6. In the **Reader** field, click the ellipsis and select the reader you want to apply this action to if there is a communication loss between C-CURE and the access control panel.
7. Complete any other configuration options in the **Event** editor you want to pair with this event in the situation it is triggered. Ensure that you select the **Enable** and **Armed** check boxes.
8. Click **Save and Close**. You have created an event that sets the chosen reader to a lower clearance level. To finalize this configuration, you must apply this event to the access control panel in the case there is communication failure.
9. Open the editor for your access control panel cluster and click the **Triggers** tab.
10. Click **Add** to add a row to the **Triggers** section.
11. In the **Property** section, select **Primary Communication Status**.
12. In the **Value** section, select **Offline**.
13. In the **Action** section, select **Activate Event**.
14. In the **Event** field, click the ellipsis and select the event that you configured which lowers the **Clearance Filter Level** of the reader.
15. Click **Save and Close**. The access control panel is now configured to trigger an event that lowers the clearance level of a reader in case the panel has an offline status.

Two Factor Authentication Behaviors

When a cardholder approaches a two factor authentication protected door and swipes their card, the outcomes in the Table 180 on Page 513 are possible.

Table 180: Two Factor Authentication Behaviors

Card swipe is valid or not valid	Clearance Filter Level of the cardholder	Two factor authentication request	Result
Not valid	n/a	n/a	Entry is rejected.
Valid	Equal to or higher than the reader.	n/a	Entry is allowed.
Valid	Less than the reader	Two factor authentication request initiated.	• The request is approved and the door is used. • The request is approved but the door is not used. • The request is denied. The door is never unlocked. • The user is not enrolled with Duo and two factor authentication. The door is never unlocked.

15

Configuring Elevators

This chapter explains how to configure elevators in C•CURE 9000.

In this chapter

Elevator Configuration Overview 515
Elevator Tasks 516
iSTAR Elevators 519
apC Elevators 533

Elevator Configuration Overview

Access to floors is managed through Elevator control. Elevators are similar to doors, but have many exit points which are determined by the floor objects. Floors are created independently from controllers, and are integrated into Elevators through the definition of elevator buttons (see Creating a Floor on Page 347). Elevator control requires readers, inputs, outputs, and Personnel Clearances.

A reader is used to control access to the elevator by authenticating cardholders.

A cardholder is given access to an elevator by assigning a Personnel Clearance that includes the Elevator to the cardholder.

Outputs are used to control the elevator buttons. When the Output is energized, the button for a floor in the Elevator becomes available for use.

Inputs can be configured to determine at which floor the cardholder exited. When the Elevator door opens at a Floor, an Input state change indicates that the door has opened.

Elevators or elevator groups are configured through the use of buttons that represent floors with inputs and outputs. You can then add elevators to clearances that are used to control which cardholders can access the elevators and floors and at what times.

You can configure Elevators for iSTAR and apC controllers.

- iSTAR Elevators on Page 519
- apC Elevators on Page 533

NOTE Elevators are associated with the time zone that is used by the elevator’s inputs, outputs, and readers.

NOTE Elevator controls and Clearances for Elevators have not been evaluated by UL, and cannot be used in UL Listed applications.

Elevator Tasks

You can perform the following general tasks to configure iSTAR and apC Elevators.

- Creating an Elevator on Page 516
- Creating an Elevator Template on Page 516
- Deleting an Elevator on Page 517
- Modifying an Elevator on Page 517
- Viewing a List of Elevators on Page 517
- Using Set Property for Elevators on Page 518
- Adding Elevators to a Group on Page 518

Creating an Elevator

You can create a new Elevator.

To Create an Elevator

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Select **Elevator** from the Hardware pane drop-down list.
3. Right-click the Elevator folder and select **New** to create a new **Elevator**. The Elevator Editor opens and you can configure the **Elevator**.
4. Type an identification for the Elevator in the **Name** and **Description** entry fields.
5. To save your new Elevator, click **Save and Close**.

   Alternatively, if you want to save the Elevator and then create a new one, click **Save and New**. The current Elevator is saved and closed, but the Elevator Editor remains open to allow you to create a new Elevator.

Creating an Elevator Template

You can create a new template for an Elevator. An Elevator template saves you time because you specify some of the Elevator configuration settings in the Template. When you use the Template to create new Elevators, you do not have to enter those configuration settings again.

To Create an Elevator Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Select **Elevator** from the Hardware pane drop-down list.
3. Click the drop-down arrow next to **New** and select **New Template**.
4. The Elevator Template opens and you can configure the Elevator template.
5. To save your new Elevator Template, **click Save and Close**.

   The new Elevator template appears under ----*Templates* in the New Template drop-down list.

To Create an Elevator from an Elevator Template

1. In the **Navigation Pane** of the **Administration Workstation**, click Hardware to open the Hardware pane.
2. Select **Elevator** from the Hardware pane drop-down list.

3. Click the drop-down arrow next to **New** and click a Template name from the list under ----*Templates*. The Elevator editor opens.
4. Configure the Elevator.
5. To save your new Elevator, click **Save and Close**.

Deleting an Elevator

You can delete an existing Elevator.

To Delete an Elevator

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Elevator** from the **Hardware** pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all Elevator objects.
4. Right-click the Elevator in the list that you want to delete and select **Delete** from the context menu.
5. Click **Yes** on the “**Are you sure you want to delete the selected Elevator?**” message box.

Modifying an Elevator

You can edit an Elevator to modify its buttons (Floors and Outputs) and state images.

To Edit an Elevator

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select **Elevator** from the **Hardware** pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all Elevator objects.
4. Double-click the **Elevator** in the list that you want to modify, or right-click and select **Edit** from the context menu. The **Elevator Editor** opens.

Viewing a List of Elevators

You can a open Dynamic View listing your Elevators.

To View a List of Elevators

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Select **Elevator** from the Hardware pane drop-down list.
3. Click ➔ ▾ to open a **Dynamic View** showing all **Elevator** objects.

NOTE You can right-click the column header to add columns—Enabled, Controller, Comm Status, and so forth.

If you right-click a row in the Elevator Dynamic View, a context menu is displayed. This menu contains a number of standard selections, as well as selections that are specific for elevators.

See **Using the Object List Context Menu** in the *C•CURE 9000 Getting Started Guide* for more information about the object context menu.

Using Set Property for Elevators

You can use Set Property to set properties for Elevators to quickly set a property for an Elevator without opening an Elevator. You can select multiple Elevators in a Dynamic View list, and right-click to use Set Property to set a specific property for all of them.

Example:

> To change the setting for **Send to Monitoring Station** for 10 specific Elevators, display a Dynamic View of Elevators (see Viewing a List of Elevators on Page 517), the use multiple selection (typically SHIFT+LEFT-CLICK to select a range or CTRL+LEFT-CLICK to select multiple items) to select the 10 Elevators, then right-click to display the context menu. Choose **Set Property** from the context menu, then click ... to see a list of Elevator properties. Select **Send to Monitoring Station**, then select □ or ☑ for the **Value** setting. When you click **OK** the property will be set for these elevators.

To Set a Property for an Elevator

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Select **Elevator** from the Hardware pane drop-down list.
3. Click ➔ ▾ to open a Dynamic View showing all Elevator objects.
4. Right-click the **Elevator** in the list that you want to set the property for and select **Set Property** from the context menu.
5. Specify the property for the **Elevator**. Click ... to choose from a list of properties.
6. Enter the **Value** for the property and click **OK**.

Adding Elevators to a Group

You can use **Add To Group** for Elevators to add one or more Elevators to a group.

To Add Elevators To Group

1. In the **Navigation Pane** of the **Administration Workstation**, click Hardware to open the Hardware pane.
2. Select **Elevator** from the Hardware pane drop-down list.
3. Click ➔ ▾ to open a Dynamic View showing all Elevator objects.
4. Right-click the **Elevator** in the list that you want to add to the group and select **Add To Group** from the context menu.
5. Select a **Group** from the list that appears.
6. Click **OK** to confirm that the Elevators were added to the Group. Alternatively, you can click:
   - **Print** to print the message.
   - **Email** to send the message to the email address you have configured in the Customer Support section of the C•CURE 9000 System Variables.

iSTAR Elevators

A cluster of iSTAR controllers can be used to manage elevator access. A cluster consists of a system of one or more iSTAR controllers which determine communications between individual controllers. Each cluster is configured for either iSTAR Classic/Pro or iSTAR eX controllers. For more information see Configuring iSTAR Clusters on Page 86.

NOTE Elevator controls have not been evaluated by UL.

After configuring the parent objects, iSTAR Clusters and Controllers, iSTAR Elevators require floors, iSTAR Readers, Inputs, Outputs and Doors. The iSTAR Inputs are used to determine at which floor the cardholder exited and the iSTAR Outputs are used to control the elevator buttons, which are set in the Buttons tab. These dependent objects must be set up before you can configure an iSTAR Elevator. For more information, see the references listed below.

1. Cluster and Controller - for more information see:
   - iSTAR Cluster Editor on Page 90
   - iSTAR Controller Editor on Page 143
2. Floor - for more information see:
   - Floors Overview on Page 345
   - Configuring a Floor for an iSTAR Elevator on Page 519
3. Boards with Readers, Inputs, Outputs - for more information see:
   - iSTAR Controller Boards Tab (iSTAR Classic/Pro) on Page 163
   - iSTAR eX and iSTAR Edge Configuration Summary on Page 117

Once these parent and dependent objects are created, you can continue the elevator configuration process:

1. Elevator name (for more information see iSTAR Elevator General Tab on Page 520).
2. Elevator Buttons (for more information see iSTAR Elevator Buttons Tab on Page 524).
3. Elevator Triggers (see iSTAR Elevator Triggers Tab on Page 526
4. Groups tab (see Groups Tab for Hardware Devices on Page 36).

Configuring a Floor for an iSTAR Elevator

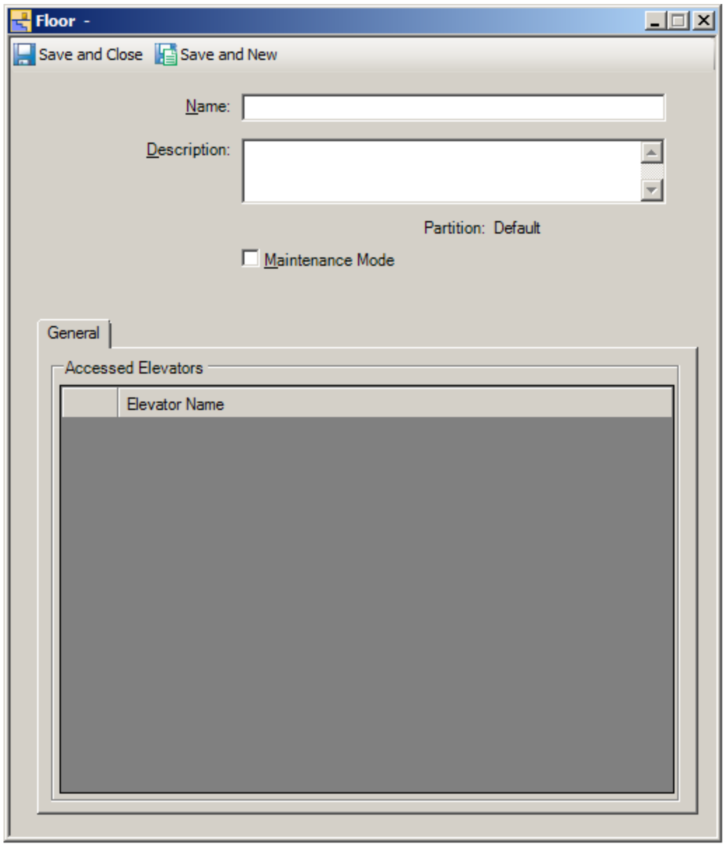
You may create new floors or configure existing floors using the Floor folder displayed in the Hardware tree. After you create the iSTAR cluster and controller(s), you can configure inputs, outputs, readers, elevators, and buttons and associate the these objects with specific floors or elevators for access by authorized cardholders. For more information see Using the Hardware Pane on Page 25.

When you add a floor to a group, the Groups tab will be displayed with the Floor - General tab.

Configuring a Floor for an iSTAR Elevator

1. From the default **Floor** directory of the **Hardware** tree, create a new floor, or edit the name or description of an existing floor.
2. Highlight the **Floor** folder, right-click, and select **New**. A Floor dialog box opens.
3. Enter a **Name** and **Description** for the new floor and click the **Enabled** box if you want to set the floor online.

Figure 161: Floor Dialog Box - General Tab



Name:

Description:

Partition: Default

□ Maintenance Mode

4. Click **Save and Close**. The new floor name displays below the Floors folder in the Hardware tree.

   Continue this creation process until your facility's floors, which you want to access via an elevator, have been assigned to a C•CURE 9000 Floor object.

   The next task that must be completed before you can configure an iSTAR Elevator is to complete the configuration of an iSTAR Cluster, Controller(s), Readers, Inputs, Outputs and Doors. For more information, see the references listed above.

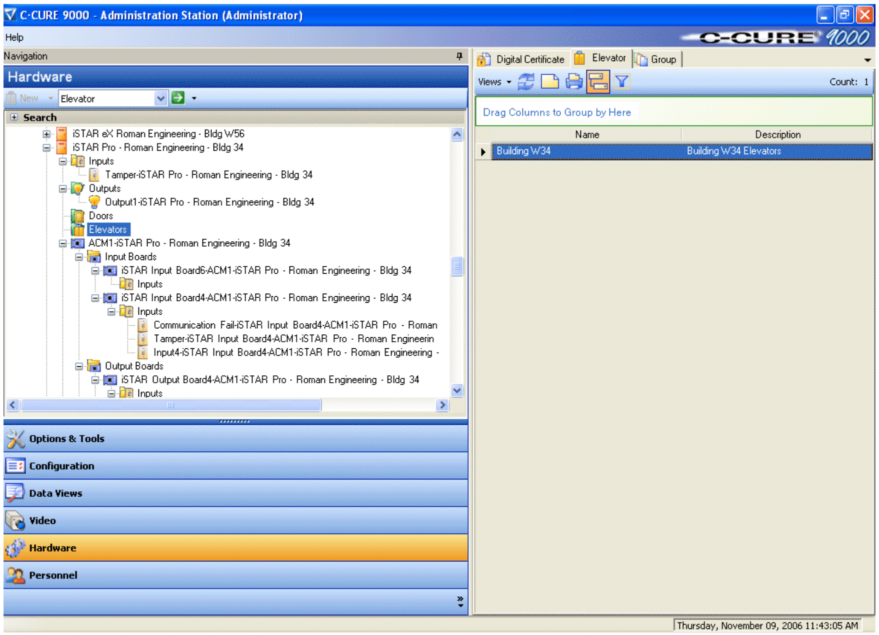
iSTAR Elevator General Tab

You can access the Elevator editor from a configured iSTAR Elevator object in the C•CURE 9000 Hardware pane. See iSTAR Elevator General Tab Definitions on Page 528 for descriptions of the fields on this tab.

To Access the iSTAR Elevator Editor

1. In the C•CURE 9000 **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Click the iSTAR Controller drop-down list and select **Elevator**.
3. Right-click the Elevator listing and click **New** or **New Template**.
4. If you have configured Elevators, double-click the Elevator listing for the selected controller to open a **Dynamic View** showing all existing **Elevator** objects (see Figure 162 on Page 521).
5. Double-click the **Elevator** in the list that you want to edit, and the **Elevator - General** tab opens, shown in Figure 163 on Page 522.

Figure 162: Hardware Pane Elevator Selection


C•CURE 9000 - Administration Station (Administrator)
Help
C•CURE 9000
Navigation
Hardware
New
Elevator
Search
iSTAR eX Roman Engineering - Bldg W56
iSTAR Pro - Roman Engineering - Bldg 34
Inputs
Tamper-iSTAR Pro - Roman Engineering - Bldg 34
Outputs
Output1-iSTAR Pro - Roman Engineering - Bldg 34
Doors
Elevators
ACM1-iSTAR Pro - Roman Engineering - Bldg 34
Input Boards
iSTAR Input Board6-ACM1-iSTAR Pro - Roman Engineering - Bldg 34
Inputs
iSTAR Input Board4-ACM1-iSTAR Pro - Roman Engineering - Bldg 34
Inputs
Communication Fail-iSTAR Input Board4-ACM1-iSTAR Pro - Roman
Tamper-iSTAR Input Board4-ACM1-iSTAR Pro - Roman Engineerin
Input4-iSTAR Input Board4-ACM1-iSTAR Pro - Roman Engineering -
Output Boards
iSTAR Output Board4-ACM1-iSTAR Pro - Roman Engineering - Bldg 34
Inputs
Options & Tools
Configuration
Data Views
Video
Hardware
Personnel
Digital Certificate
Elevator
Group
Views
Count: 1
Drag Columns to Group by Here
Thursday, November 09, 2006 11:43:05 AM

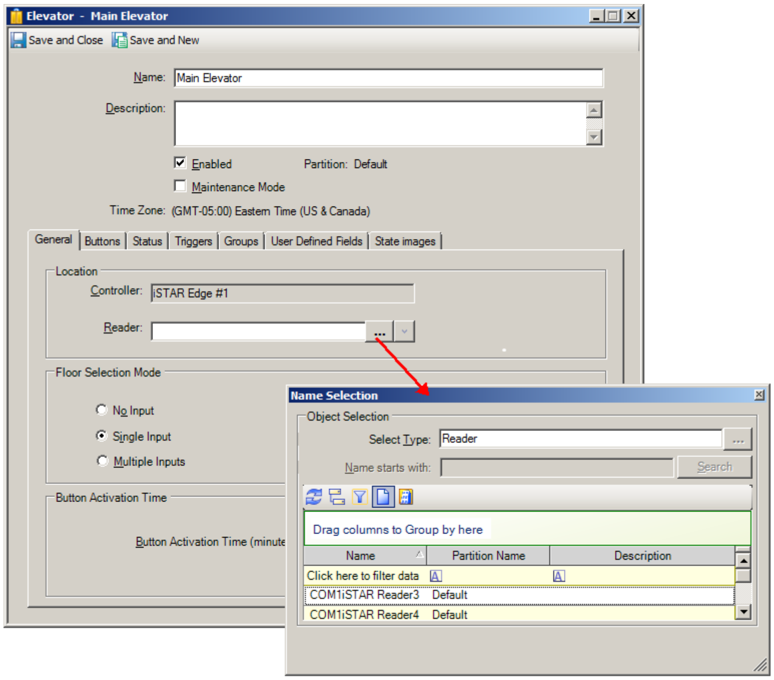
Name	Description
Building W34	Building W34 Elevators

To Configure Elevators

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Right-click the **Elevators** folder in the **Hardware** tree and select **New** to create a new **Elevator**. The **Elevator - General** tab, shown in Figure 163 on Page 522 opens.
3. Enter a **Name** and description (for example, its location or function) for the elevator.
4. Select **Enabled** to put the **Elevator** online once you click **Save and Close**.

   The iSTAR Controller is displayed within the Location box.

Figure 163: iSTAR Elevator General Tab - Reader Selection



Elevator - Main Elevator

Save and Close | Save and New

Name: Main Elevator

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Location

Controller: iSTAR Edge #1

Reader:

Floor Selection Mode

○ No Input

● Single Input

○ Multiple Inputs

Button Activation Time

Button Activation Time (minute

Name Selection

Object Selection

Select Type: Reader

Name starts with:

Name	Partition Name	Description
Click here to filter data		
COM1iSTAR Reader3	Default	
COM1iSTAR Reader4	Default	

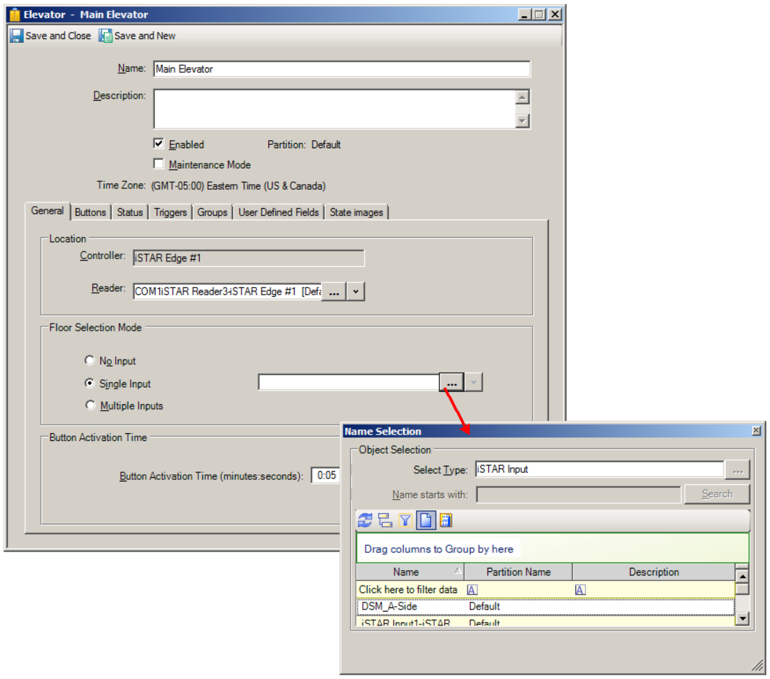
5. Click ... to select a **Reader** in the **Location** area. The Reader list shown in the Reader browser is restricted to unassigned readers on the parent Controller.

6. Choose an Elevator **Floor Selection Mode** for the elevator from the listed options. The possible choices include:

   - **No Input**
   - **Single Input**
   - **Multiple Inputs**

7. If you choose the **Single Input** option, click the browse ... button to select an Input from the Input browser (see Figure 164 on Page 523).

Figure 164: iSTAR Elevator General Tab - Input Selection



Elevator - Main Elevator

Save and Close | Save and New

Name: Main Elevator

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

General | Buttons | Status | Triggers | Groups | User Defined Fields | State images

Location

Controller: iSTAR Edge #1

Reader: COM1iSTAR Reader3-iSTAR Edge #1 [Defa

Floor Selection Mode

○ No Input

● Single Input

○ Multiple Inputs

Button Activation Time

Button Activation Time (minutes:seconds): 0:05

Name Selection

Object Selection

Select Type: iSTAR Input

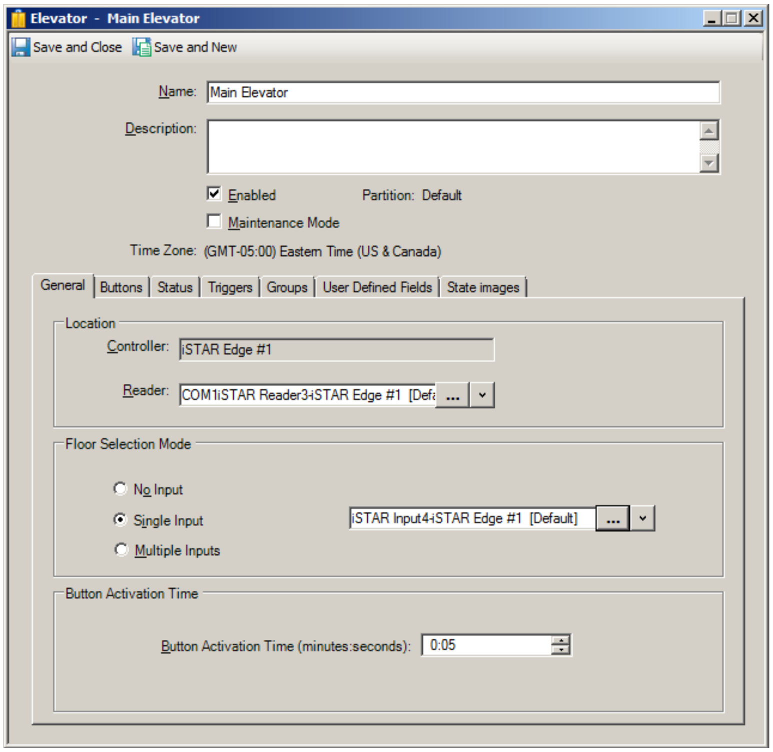
Name starts with: Search

Drag columns to Group by here

Name	Partition Name	Description
Click here to filter data		
DSM_A-Side	Default	
iSTAR Input1-iSTAR	Default	

8. Enter a **Button Activation Time** in seconds.

Figure 165: iSTAR Elevator General Tab - Completed



Elevator - Main Elevator

Save and Close | Save and New

Name: Main Elevator

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

General | Buttons | Status | Triggers | Groups | User Defined Fields | State images

Location

Controller: iSTAR Edge #1

Reader: COM1iSTAR Reader3-iSTAR Edge #1 [Defa

Floor Selection Mode

○ No Input

● Single Input   iSTAR Input4-iSTAR Edge #1 [Default]

○ Multiple Inputs

Button Activation Time

Button Activation Time (minutes:seconds): 0:05

9. Navigate to the **Buttons** tab or click **Save and Close**.

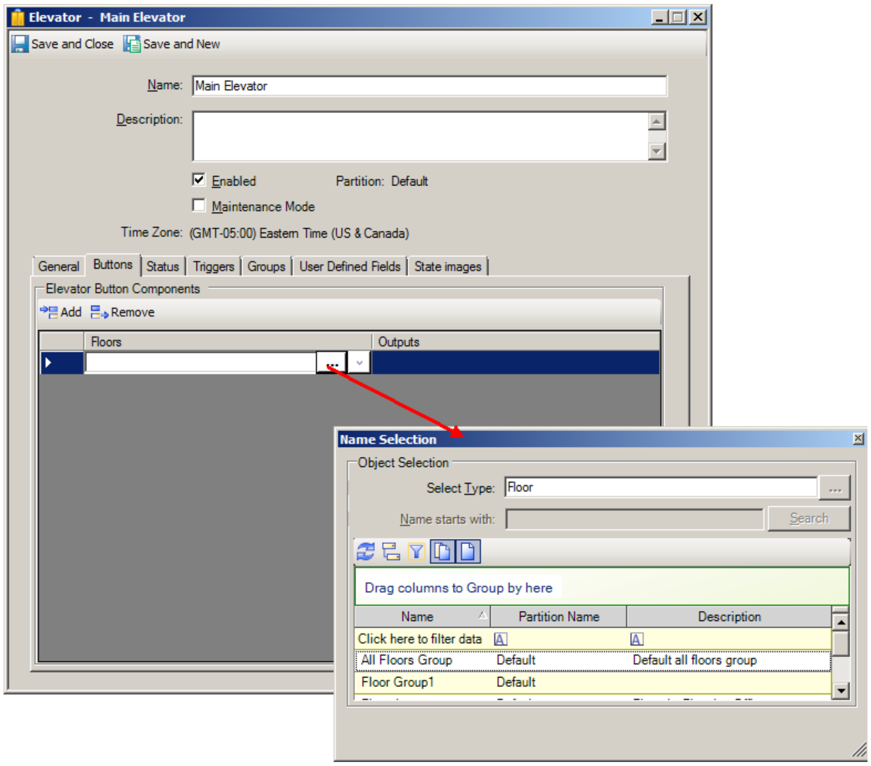
iSTAR Elevator Buttons Tab

Elevator Buttonscan be created in the Elevator Buttons tab to specify which floors, inputs, and outputs are connected to elevator buttons. See iSTAR Elevator Buttons Tab Definitions on Page 529 for more definitions of the Buttons tab.

To Configure Elevator Buttons for Floor Access

1. From the **Elevator** dialog box, click the **Buttons** tab. The **Elevator** dialog box - **Buttons** tab opens, shown in Figure 166 on Page 524.
2. Click **Add** to create a row under the **Floors** and **Outputs** columns.
3. Click within the **Floors** column to display the browse ... button and select a **Floor** from the Floor browser, shown in Figure 166 on Page 524, that you want to associate with the iSTAR Elevator.

Figure 166: iSTAR Elevator Buttons Tab - Floor Selection



Name: Main Elevator

Description:

☑ Enabled Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

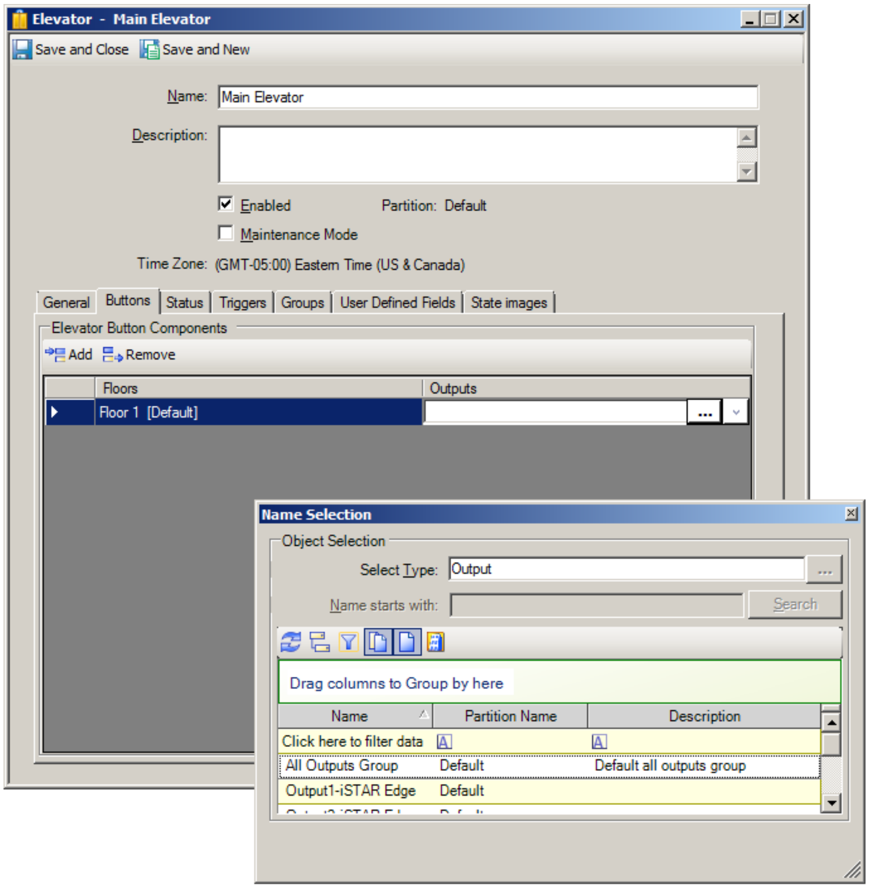
Select Type: Floor

Name starts with:

Name	Partition Name	Description
Click here to filter data		
All Floors Group	Default	Default all floors group
Floor Group1	Default	

4. Click within the **Outputs** column to display ... and select an **Output** from the Outputs browser, shown in Figure 167 on Page 525, that you want to associate with the iSTAR Elevator.

Figure 167: iSTAR Elevator Buttons Tab - Output Selection



Elevator - Main Elevator

Save and Close | Save and New

Name: Main Elevator

Description:

☑ Enabled Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

General | Buttons | Status | Triggers | Groups | User Defined Fields | State images

Elevator Button Components

Add | Remove

	Floors	Outputs
▶	Floor 1 [Default]	

Name Selection

Object Selection

Select Type: Output

Name starts with:

Search

Drag columns to Group by here

Name	Partition Name	Description
Click here to filter data		
All Outputs Group	Default	Default all outputs group
Output1-iSTAR Edge	Default	

5. Continue to add **Floors** and **Outputs** until you have finished creating Elevator Buttons for each floor that you want to manage with the iSTAR Elevator.

6. Navigate to the **Status** tab or click **Save and Close**.

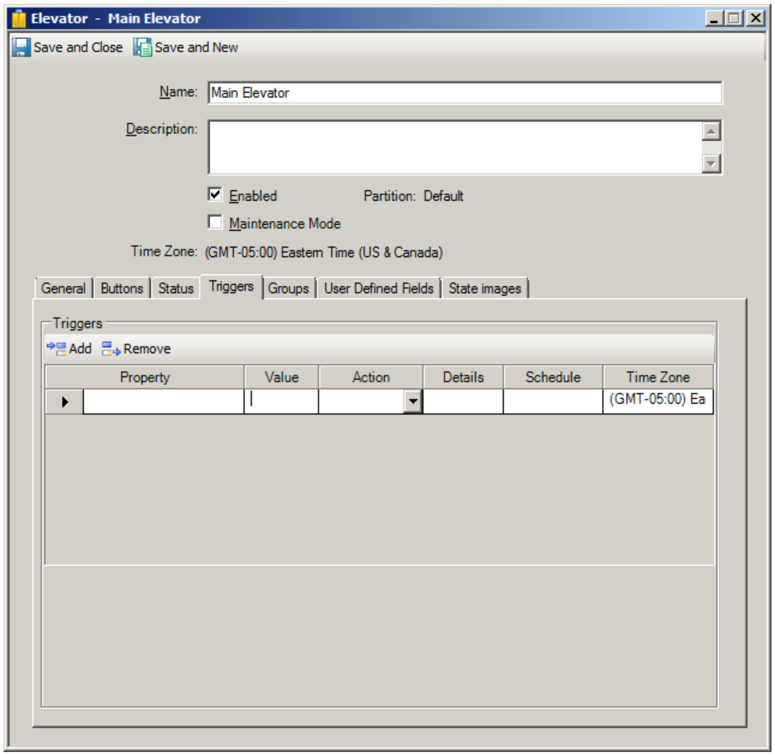
iSTAR Elevator Status Tab

The Elevator Status tab (see Figure 168 on Page 526) provides a read-only listing of critical information about the operational status of the selected Elevator including:

- **Communication Status** - displays the values Normal or Comm Fail.
- **Tamper Status** - displays the values True or False.
- **Admit Status** - displays the values Admit or Reject.

See iSTAR Elevator Status Tab Definitions on Page 530 for descriptions of the fields on this tab.

Figure 168: iSTAR Elevator Status Tab



Name: Main Elevator

Description:

☑ Enabled   Partition: Default

□ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Property	Value	Action	Details	Schedule	Time Zone
					(GMT-05:00) Ea

Navigate to the **Triggers** tab or click **Save and Close**.

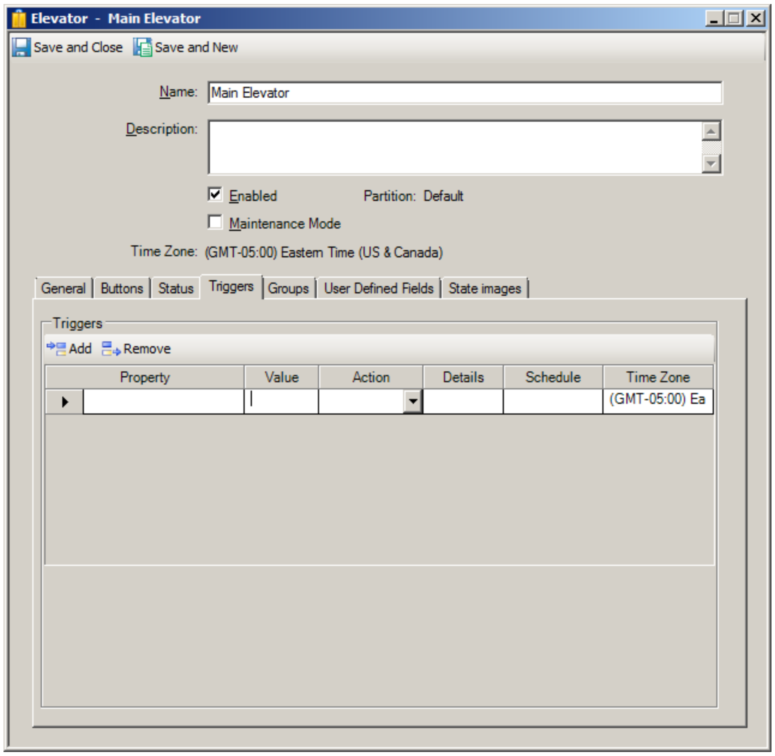
iSTAR Elevator Triggers Tab

You can create Triggers for iSTAR Elevators using the iSTAR Elevators Triggers tab. A Trigger executes a specified **Action** when a particular predefined condition occurs. When a Trigger is defined, the Actions available depend on the property selected (see Figure 169 on Page 527).

See Triggers Tab for iSTAR Devices on Page 264 for information on creating Triggers for an iSTAR device.

See iSTAR Elevator Triggers Tab Definitions on Page 530 for descriptions of the fields on this tab.

Figure 169: iSTAR Elevator Triggers Tab - Completed



Name: Main Elevator

Description:

☑ Enabled   Partition: Default

☐ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

Property	Value	Action	Details	Schedule	Time Zone
					(GMT-05:00) Ea

iSTAR Elevator State Images Tab

The iSTAR Elevator **State Images** tab provides a means to change the default images used to indicate controller states (see Figure 170 on Page 528). These images appear on the Monitoring Station and change according to the state of the object that they represent.

To Change an Elevator State Image

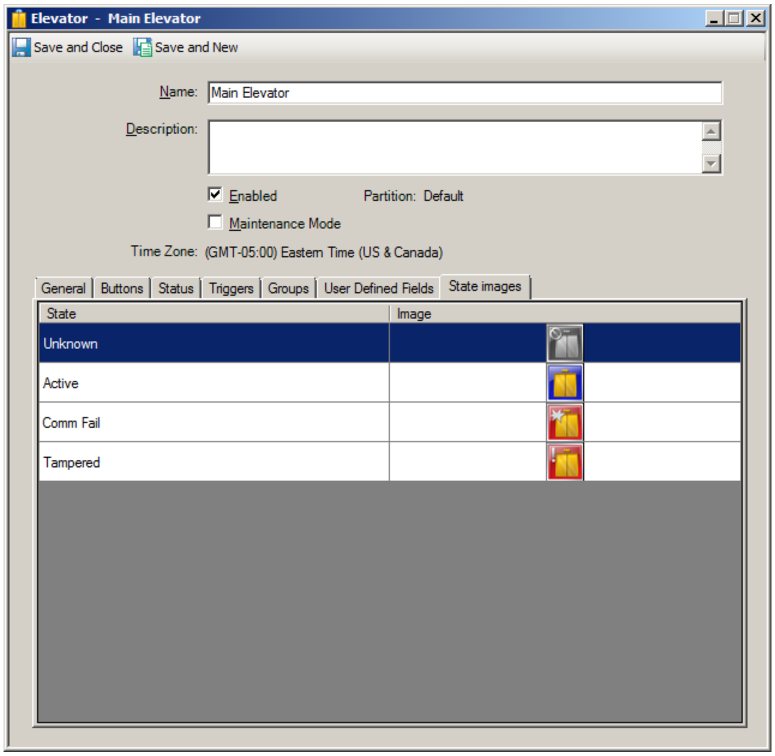
1. Double-click the existing image.

   A **Windows Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.

2. When you locate the replacement image, select it to add it to the image listing.

3. To restore the default image, right-click on the new image and select **Restore Default**.

Figure 170: iSTARElevator State Images Tab



Name: Main Elevator

Description:

☑ Enabled Partition: Default

☐ Maintenance Mode

Time Zone: (GMT-05:00) Eastern Time (US & Canada)

State	Image
Unknown	
Active	
Comm Fail	
Tampered	

4. Click **Save and Close** to finish the **iSTAR Elevator** configuration and return to the **Hardware Pane.**

iSTAR Elevator Definitions

The tables in the following sections provide definitions for the iSTAR Elevator editor tabs.

- iSTAR Elevator General Tab Definitions on Page 528
- iSTAR Elevator Buttons Tab Definitions on Page 529
- iSTAR Elevator Status Tab Definitions on Page 530
- iSTAR Elevator Triggers Tab Definitions on Page 530
- iSTAR Elevator Triggers Properties on Page 531
- iSTAR Elevator Triggers Actions on Page 531
- iSTAR Elevator State Images Definitions on Page 531

iSTAR Elevator General Tab Definitions

iSTAR Elevator General Tab Definitions

Field/Button	Description
Identification	
Elevator Name	Enter a unique name for this elevator.
Description	Enter a brief description for this elevator.

iSTAR Elevator General Tab Definitions (continued)

Field/Button	Description
Maintenance Mode	Click to put the elevator into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Enabled	Select this check box to put the elevator online. For an elevator to be put online, it must selected.
Location	
Controller	The parent controller is displayed in this read-only field.
Reader	Click ... to select a Reader from the Reader browser.
Floor Selection Mode	
No Input	Click on No Input to indicate that no inputs are connected to the elevator buttons. However, the system cannot tell if a person presses a floor button after being granted access.
Single Input	Click on Single Input to indicate that one input is connected to all buttons on this elevator. Click ... and select an Input from the Input list that displays. When a person presses an elevator button, the system detects an elevator button has been pressed, but cannot determine which button.
Multiple Inputs	Click on Multiple Inputs to indicate that multiple inputs are associated with this elevator. Each elevator button will be connected to a different input. Select the inputs by clicking Elevator Buttons to open the Elevator Buttons dialog box. When a person presses an elevator button, the system determines which button the person pressed.
Button Activation Time	
Button Activation Time (seconds)	Enter the interval at which the Elevator button activates.

iSTAR Elevator Buttons Tab Definitions

Table 181: iSTAR Elevator Buttons Tab Definitions

Field	Description
Elevator Button Components	
Add	Fields are added to Elevator Button Components by clicking **Add**, which adds an empty row to the grid.
Remove	Click the row selector ▶, then click **Remove** to delete a trigger.
Floors	This displays a list of available floors for the elevator. Use **Add** to add a floor to the list and click ... to display the Floor selection browser.
Outputs	This displays a list of available Outputs for the elevator. Click ... to select an Output from the Output selection browser.

iSTAR Elevator Status Tab Definitions

Table 182: iSTAR Elevator Status Tab Definitions

Field/Button	Description
Communication Status	Unknown, Normal, Comm Fail
Tamper Status	True, False
Admit Status	Unknown, Admit, Reject

iSTAR Elevator Triggers Tab Definitions

Table 183: iSTAR Elevator Triggers Tab Definitions

Field	Description
Add	Fields are added to Elevator Button Components by clicking **Add**, which adds an empty row to the grid.
Remove	Click the row selector ▶, then click **Remove** to delete a trigger.
Property	Click within the Property column to display browse ... button. When you click this button, the Property browser opens, presenting properties available for the controller. Click a Property to select it and add it to the column.
Value	Click within the Value column to display a drop-down list of Values associated with the Property that you have selected. Click on a Value that you want to include as a parameter for the trigger to add it to the column.
Action	Click within the Action column to display a drop-down list of valid actions. Click on an Action that you want to include as a parameter for the trigger to add it to the column. When a Trigger is added, an Action must be configured in the Action column. This is the Action that will occur when the object's selected Property receives the selected Value. As the Action is selected, the lower pane in the Triggers box will show a corresponding entry field, or group of entry fields, specific to the selected Action. Click the browse ... button to select entries for these fields. Once the field (or group of fields) is completed, the Details column will show information about how the Action was configured.
Details	The Details column displays information about how the Action was configured. This field is read-only.
Schedule	Click within the Schedule column, then click ... to select a Schedule that you want to associate with the trigger. Schedules are created in the Configuration Pane.

iSTAR Elevator Triggers Properties

Table 184: iSTAR Elevator Triggers Properties

Property	Description
Admit Status Values are: - Admit - Reject - Duress - Noticed Admit - Noticed Reject	For any one of the Admit Status values (see the Value column drop-down list) you can choose one of the following Actions to create a Trigger: **Activate Event** – When this status occurs and the Schedule is Active (you can choose any Schedule). **Activate Event Outside Schedule** – An event is activated when this status occurs while the Schedule is Inactive (choose any Schedule). **Activate Output** – When this status occurs (only works with the Always Schedule). Only these three Actions are supported for Admit Status.
Comm Status Values are: - Normal - Comm Fail	1. Choose a value for the Property from the Value column. 2. Select an Action from the Action drop-down list: See Table 185 on Page 531. For example, if you chose Comm Fail as a Comm State Status for which you want to define an action, you could then select **Activate Event** if you wanted to send a command to a CCTV Switch, then in Details, select the Event that you wanted to activate when a **Comm Fail** status occurs.
Tamper Status Values are: ☑ □	

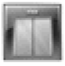
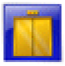
iSTAR Elevator Triggers Actions

Table 185: iSTAR Elevators Triggers Actions

Action	Description
Activate Event	Select an Event to activate when this status occurs.
Activate Event Outside Schedule	Select an Event to activate when this status occurs while the Schedule is inactive.
Activate Output	Select an Output to activate when this status occurs. Must use the Always Schedule.

iSTAR Elevator State Images Definitions

iSTAR Elevator State Images Tab Definitions

Field/Button	Description
Unknown	
Active	

iSTAR Elevator State Images Tab Definitions (continued)

Field/Button	Description
Comm Fail	🛗
Tampered	🛗

apC Elevators

This section illustrates the configuration process for the apC - controlled elevator. The **advanced processing Controller** (apC), apC/8X, and apC/L are access control field panels that coordinate communication between the C•CURE 9000 server and the system security hardware.

> **NOTE** Elevator controls have not been evaluated by UL.
>
> The apC and apC/L Controllers have not been evaluated by UL.

The apC Elevator editor includes the following tabs:

- General
- Buttons
- Groups (this tab appears once you have created an Elevator Group)
- State Images

The function of these tabs is covered in the description of configuring the apC Elevator in the following sections. To configure an elevator controlled by a reader on an apC panel, you must first create and configure the following objects:

1. Floor (for more information see Floors Overview on Page 345)
2. apC panel(s) (for more information see apC Panel Overview on Page 288)
3. Readers, Inputs, Outputs

Once these parent and dependent objects are created, you can continue the elevator configuration process:

1. Elevator name (for more information see apC Elevator General Tab on Page 534)
2. Elevator Buttons (for more information see apC Elevator Buttons Tab on Page 536)
3. Personnel Clearance for cardholders who will use the Elevator (for more information see the *C•CURE 9000 Personnel Configuration Guide*).
4. Groups tab (see Groups Tab for Hardware Devices on Page 36).

Configuring a Floor for an apC Elevator

You may create new floors or configure existing floors using the Floor folder displayed in the hardware tree. After you create the apC panel, you can configure outputs, readers, elevators, and buttons and associate the these objects with specific floors or elevators for access by authorized cardholders. When you create a Floor group, a Group tab will appear with the Floor General tab. For more information see Floors Overview on Page 345.

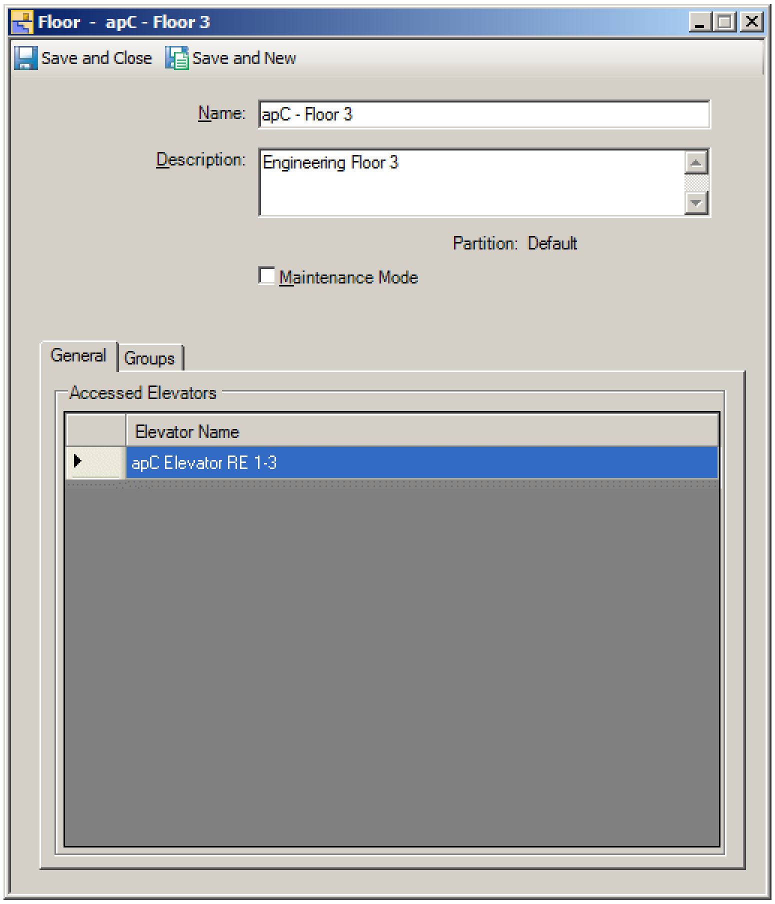
Configuring a Floor for an apC Elevator

1. From the default **Floor** directory of the **Hardware** tree, create a new floor, or edit the name or description of an existing floor.

   a. Highlight the **Floor** folder, right-click and select **New**. A Floor dialog box opens.

   b. Enter a **Name** and **Description** for the new floor and click the **Enabled** box if you want to set the floor online.

Figure 171: Floor Editor General Tab



Floor - apC - Floor 3

Name: apC - Floor 3

Description: Engineering Floor 3

Partition: Default

□ Maintenance Mode

Elevator Name
apC Elevator RE 1-3

2. Click **Save and Close**. The new floor name displays below the Floors folder in the Hardware tree.

   Continue this creation process until your facility's floors, which you want to access via an elevator, have been assigned to a C•CURE 9000 Floor object.

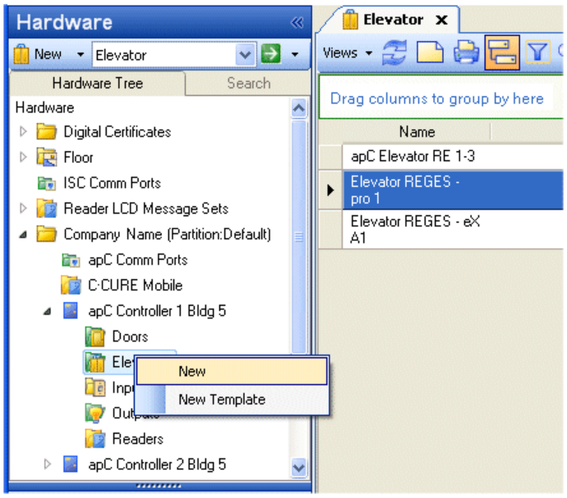
apC Elevator General Tab

You can access the Elevator editor from a configured apC Elevator object in the C•CURE 9000 Hardware pane.

To Access the apC Elevator Editor

1. In the C•CURE 9000 **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Click the apC Controller drop-down list and select **Elevator**.
3. Right-click the Elevator listing and click **New** or **New Template**.
4. If you have configured Elevators, double-click the Elevator listing for the selected controller to open a **Dynamic View** showing all existing **Elevator** objects (see Figure 172 on Page 535).
5. Double-click the **Elevator** in the list that you want to edit, and the **Elevator General** tab opens, shown in Figure 173 on Page 535.

Figure 172: Hardware Pane apC Elevator Selection

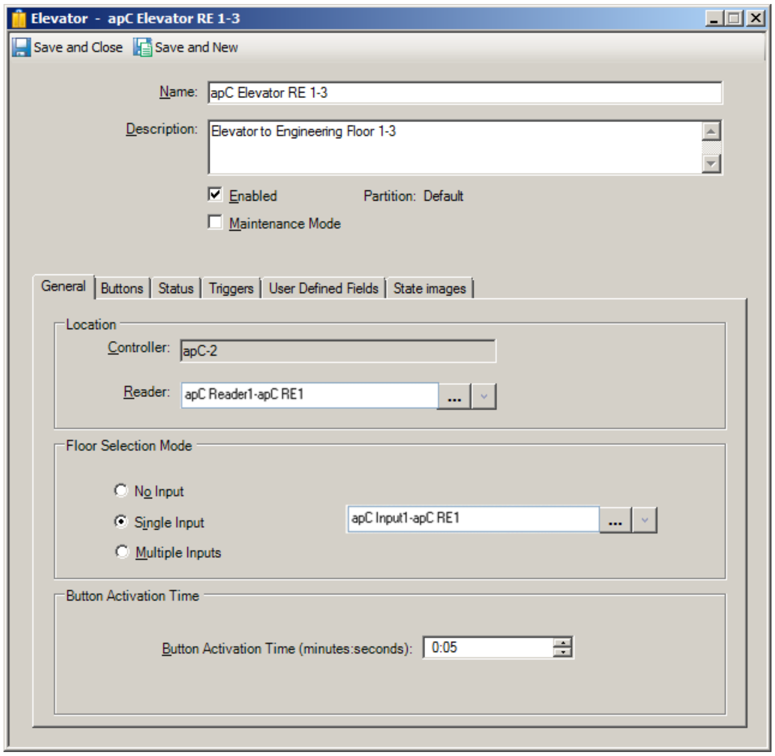


To Configure Elevators

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Right-click the **Elevators** folder in the **Hardware** tree and select **New** to create a new **Elevator**. The **Elevator - General** tab, shown in Figure 173 on Page 535 opens.
3. Enter a **Name** and description (for example, its location or function) for the elevator.
4. Select **Enabled** to put the **Elevator** online once you click **Save and Close**.

   The apC panel name is displayed within the Location box.

Figure 173: apC Elevator General Tab



Name: apC Elevator RE 1-3

Description: Elevator to Engineering Floor 1-3

☑ Enabled   Partition: Default

☐ Maintenance Mode

Location

Controller: apC-2

Reader: apC Reader1-apC RE1

Floor Selection Mode

○ No Input

● Single Input   apC Input1-apC RE1

○ Multiple Inputs

Button Activation Time

Button Activation Time (minutes:seconds): 0:05

5. Click ... to select a **Reader** in the **Location** area. The Reader list shown in the Reader browser is restricted to unassigned readers on the parent Controller.

6. Choose an Elevator **Floor Selection Mode** for the elevator from the listed options. The possible choices include:
   - **No Input**
   - **Single Input**
   - **Multiple Inputs**

7. If you choose the **Single Input** option, click the browse ... button to select an Input from the Input browser.

8. Enter a **Button Activation Time** in seconds.

9. Navigate to the **Buttons** tab or click **Save and Close**.

apC Elevator Buttons Tab

Elevator Buttons can be created in the Elevator Buttons tab to specify which floors, inputs, and outputs are connected to elevator buttons.

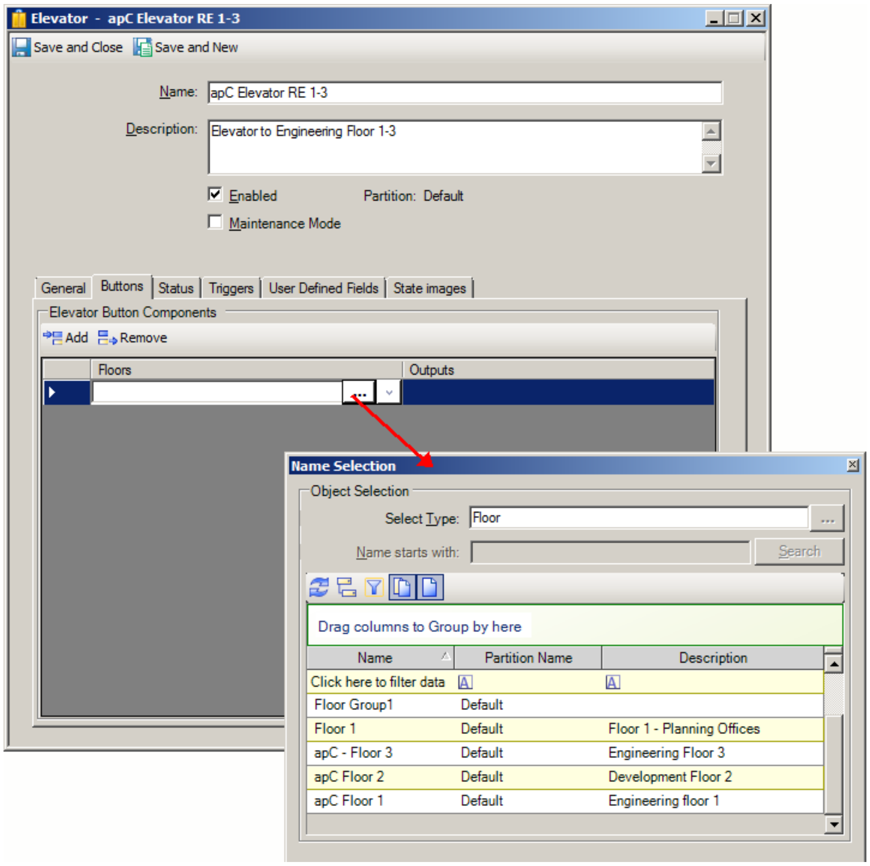
To Configure Elevator Buttons for Floor Access

1. From the **Elevator** editor, click the **Buttons** tab. The **Elevator Buttons** tab opens, shown in Figure 174 on Page 536.

2. Click the **Add** button to create a row under the **Floors** and **Outputs** columns.

3. Click within the **Floors** column to display ... and select a **Floor** from the Floor browser, shown in Figure 174 on Page 536, that you want to associate with the apC Elevator.

Figure 174: apC Elevator Buttons Tab Floor Selection



Name: apC Elevator RE 1-3

Description: Elevator to Engineering Floor 1-3

☑ Enabled Partition: Default

□ Maintenance Mode

Floors	Outputs
...	

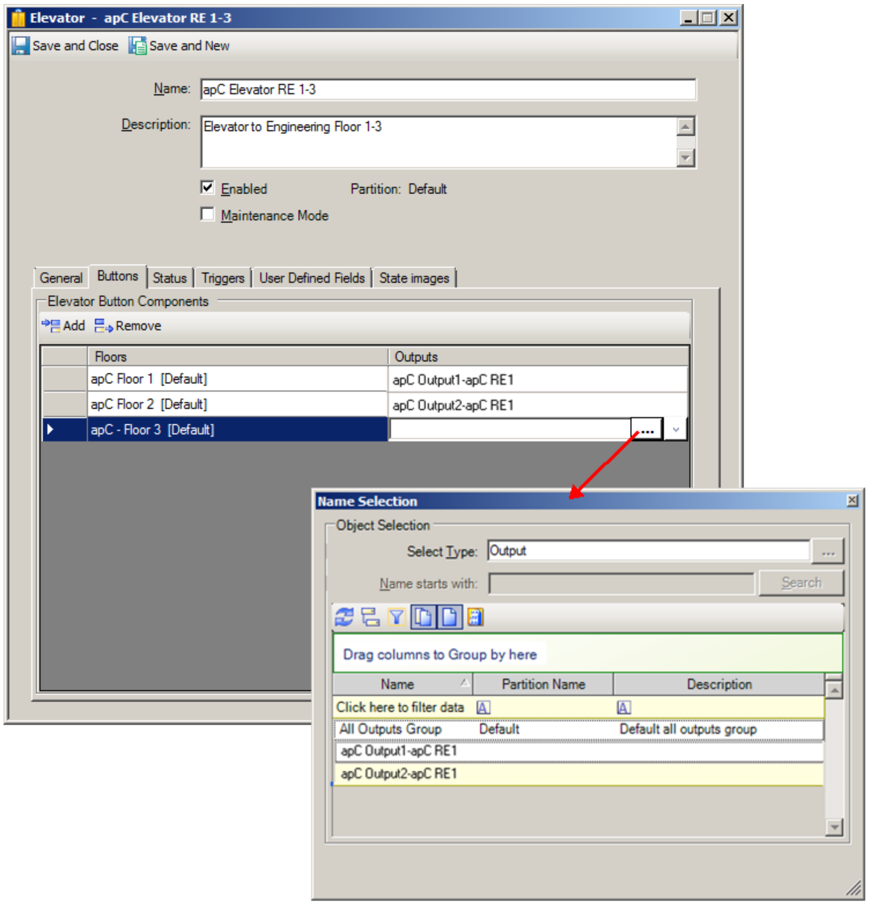
Select Type: Floor

Name starts with:

Name	Partition Name	Description
Click here to filter data		
Floor Group1	Default	
Floor 1	Default	Floor 1 - Planning Offices
apC - Floor 3	Default	Engineering Floor 3
apC Floor 2	Default	Development Floor 2
apC Floor 1	Default	Engineering floor 1

4. Click within the **Outputs** column to display ... and select an **Output** from the Outputs browser, shown in Figure 175 on Page 537, that you want to associate with the apC Elevator.

Figure 175: apC Elevator Buttons Tab Output Selection



Name: apC Elevator RE 1-3

Description: Elevator to Engineering Floor 1-3

☑ Enabled Partition: Default

□ Maintenance Mode

Floors	Outputs
apC Floor 1 [Default]	apC Output1-apC RE1
apC Floor 2 [Default]	apC Output2-apC RE1
apC - Floor 3 [Default]	

Select Type: Output

Name	Partition Name	Description
All Outputs Group	Default	Default all outputs group
apC Output1-apC RE1		
apC Output2-apC RE1		

5. Continue to add **Floors** and **Outputs** until you have finished creating Elevator Buttons for each floor that you want to manage with the apC Elevator.

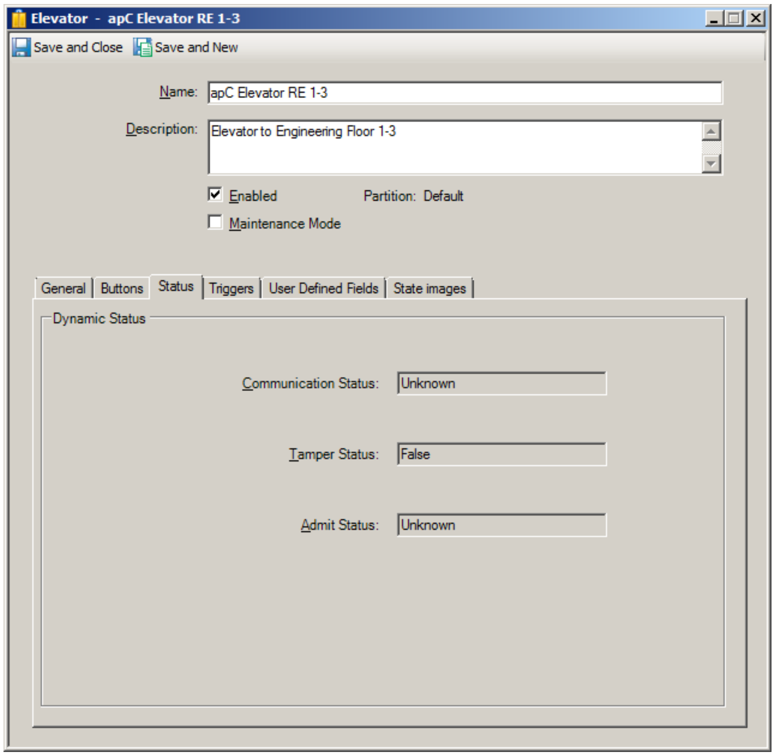
6. Navigate to the **Status** tab or click **Save and Close**.

apC Elevator Status Tab

The Elevator Status tab (see Figure 176 on Page 538) provides a read-only listing of critical information about the operational status of the selected Elevator including:

- **Communication Status** - displays the values Normal or Comm Fail.
- **Tamper Status** - displays the values True or False.
- **Admit Status** - displays the values Admit or Reject.

Figure 176: apC Elevator Status Tab



Name: apC Elevator RE 1-3

Description: Elevator to Engineering Floor 1-3

☑ Enabled   Partition: Default

□ Maintenance Mode

Communication Status: Unknown

Tamper Status: False

Admit Status: Unknown

Navigate to the **Triggers** tab or click **Save and Close**.

apC Elevator Triggers Tab

You can create Triggers for apC Elevators using the apC Elevators Triggers tab. A Trigger executes a specified **Action** when a particular predefined condition occurs. When a Trigger is defined, the Actions available depend on the property selected

See the following for information on apC Triggers:

- Triggers Tab for apC Devices on Page 339.
- Defining a Trigger for an apC Device on Page 339.
- Removing a Trigger on Page 265.

You can click **Save and Close** after configuring apC Elevator triggers, or navigate to the Status tab.

apC Elevator State Images Tab

The apC Elevator **State Images** tab provides a means to change the default images used to indicate controller states (see Figure 177 on Page 539). These images appear on the Monitoring Station and change according to the state of the object that they represent.

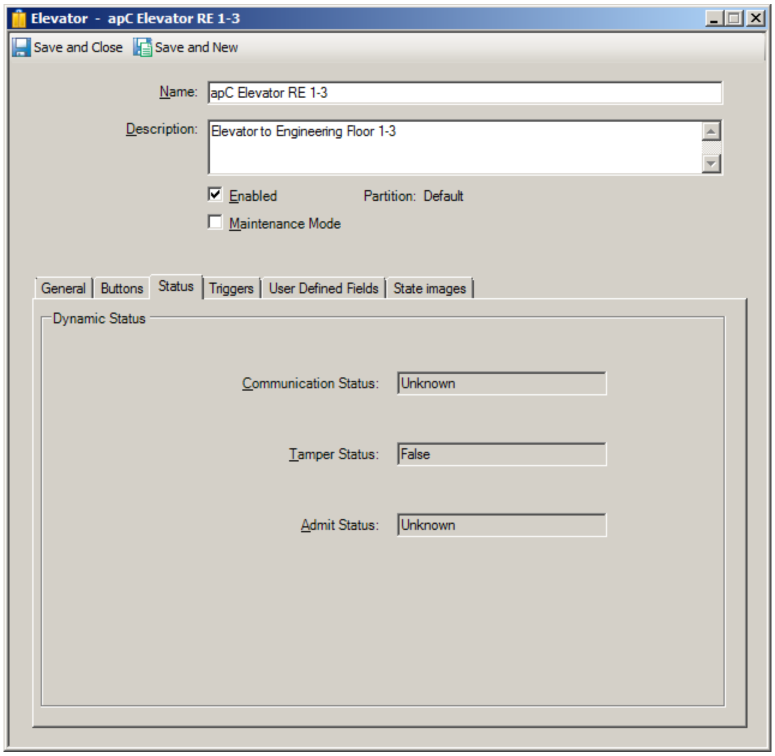
To Change an Image

1. Double-click the existing image.

   A **Windows Open** dialog box appears allowing you to browse for a folder in which you have placed replacement images.

2. When you locate the replacement image, select it to add it to the image listing.
3. To restore the default image, right-click on the new image and select **Restore Default**.

Figure 177: apC Elevator - State Images Tab



Name: apC Elevator RE 1-3

Description: Elevator to Engineering Floor 1-3

☑ Enabled Partition: Default

□ Maintenance Mode

Dynamic Status

Communication Status: Unknown

Tamper Status: False

Admit Status: Unknown

4. Click **Save and Close** to finish the **apC Elevator** configuration and return to the **Hardware Pane**.

apC Elevator Definitions

Table 186 on Page 539 through Table 190 on Page 541 provide details about the fields and buttons on the General tab, Buttons tab, Status tab, Triggers tab, and State Images tab of the apC Elevator dialog box.

apC Elevator General Tab Definitions

Table 186: apC Elevator General Tab Definitions

Field/Button	Description
Identification	
Elevator Name	Enter a unique name for this elevator.
Description	Enter a brief description for this elevator.
Enabled	Select this check box to put the elevator online. For an elevator to be put online, it must selected.
Maintenance Mode	Click to put the apC Elevator into Maintenance Mode. See Chapter 3: Maintenance Mode for more information.
Partition	This read-only label shows what partition the elevator is in. If the system is not partitioned, the label indicates that the elevator is in the “Default” partition.
Location	
Controller	The parent controller is displayed in this read-only field.

apC Elevator General Tab Definitions (continued)

Field/Button	Description
Reader	Click ... to select a Reader from the Reader browser.
Floor Selection Mode	
No Input	Select this option when no inputs are needed for the apC Elevator.
Single Input	Click ... to select an Input from the Input browser.
Multiple Inputs	Select this option when more than one input is needed for the apC Elevator.
Button Activation Time	
Button Activation Time (seconds)	Enter the interval at which the apC Elevator button activates.

apC Elevator Status Tab Definitions

Table 187: apC Elevator Status Tab Definitions

Elevator Status Property	Values
Communication Status	Unknown, Normal, Comm Fail
Tamper Status	True, False
Admit Status	Unknown, Admit, Reject

apC Elevator Triggers Definitions

Table 188: apC Elevator Triggers Tab Definitions

Field	Description
Add	Fields are added to Elevator Button Components by clicking **Add**, which adds an empty row to the grid.
Remove	Click the row selector ▶, then click **Remove** to delete a trigger.
Property	Click within the Property column to display a ... button. When you click this button, the Property browser opens, presenting properties available for the controller. Click a Property to select it and add it to the column.
Value	Click within the Value column to display a drop-down list of Values associated with the Property that you have selected. Click on a Value that you want to include as a parameter for the trigger to add it to the column.
Action	Click within the Action column to display a drop-down list of valid actions. Click on an Action that you want to include as a parameter for the trigger to add it to the column. When a Trigger is added, an Action must be configured in the Action column. This is the Action that will occur when the object's selected Property receives the selected Value. As the Action is selected, the lower pane in the Triggers box will show a corresponding entry field, or group of entry fields, specific to the selected Action. Click ... to select entries for these fields. Once the field (or group of fields) is completed, the Details column will show information about how the Action was configured.
Details	The Details column displays information about how the Action was configured. This field is read-only.

Table 188: apC Elevator Triggers Tab Definitions (continued)

Field	Description
Schedule	Click within the **Schedule** column, then click the browse ... button to select a Schedule that you want to associate with the trigger. Schedules are created in the Configuration Pane.

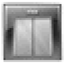
apC Elevator Triggers Properties

Table 189: apC Elevator Triggers Properties

Property	Description
Admit Status Values are: Admit Reject Admit Duress Reject Duress Noticed Admit Noticed Reject	For any one of the Admit Status values (see the Value column drop-down list) you can choose one of the following Actions to create a Trigger: **Activate Event** - When this status occurs and the Schedule is Active (you can choose any Schedule). **Activate Event Outside Schedule** - An event is activated when this status occurs while the Schedule is Inactive (choose any Schedule). **Activate Output -** When this status occurs (only works with the **Always** Schedule). Only these three Actions are supported for Admit Status.

apC Elevator State Images Definitions

Table 190: apC Elevator State Images Tab Definitions

Field/Button	Description
Unknown	
Active	
Comm Fail	
Tampered	