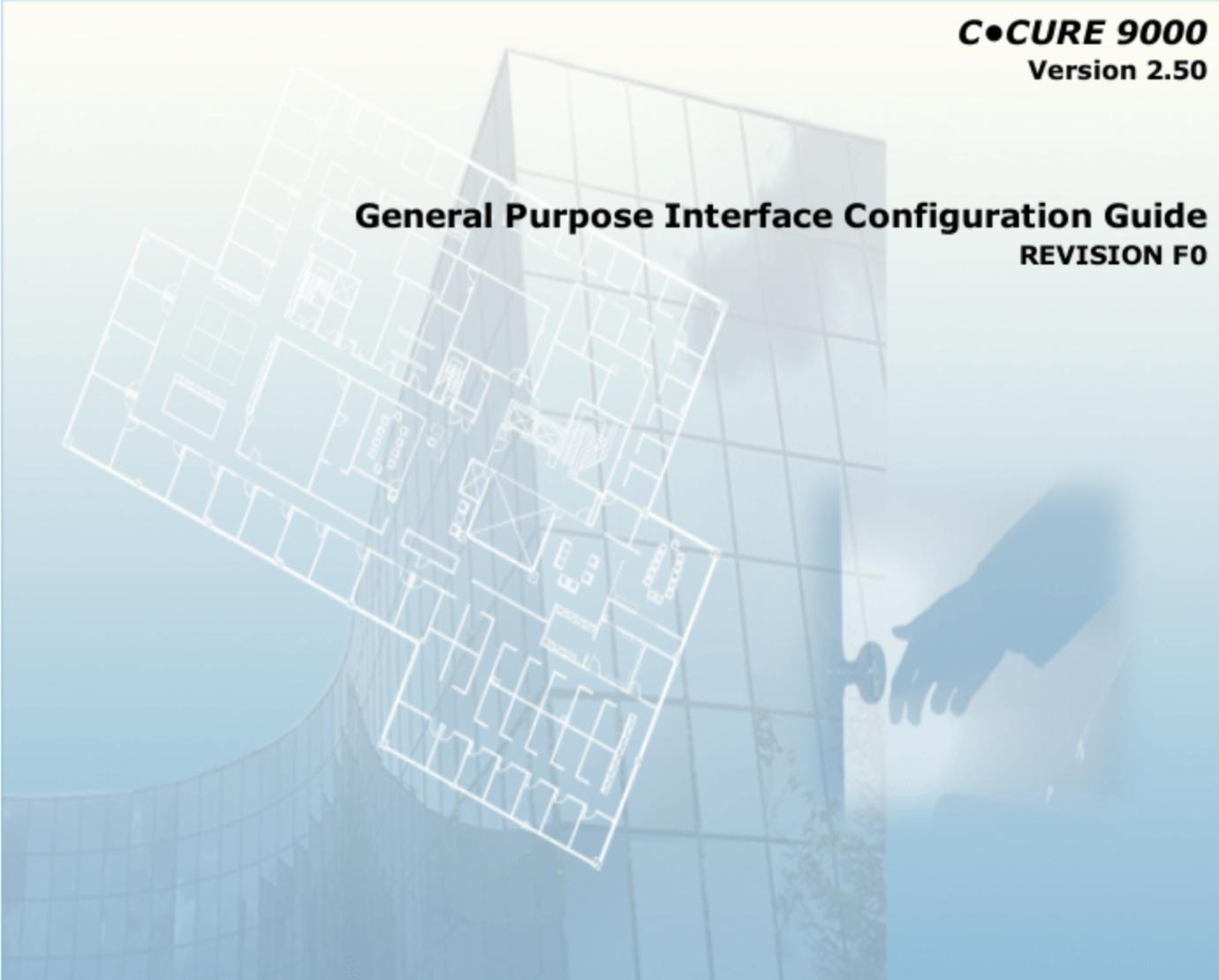# SOFTWARE HOUSE

From Tyco Security Products

C•CURE 9000
Version 2.50

General Purpose Interface Configuration Guide
REVISION F0

SOFTWARE HOUSE

Software version: 2.50
Document Number: UM-238
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Preface

The *C•CURE 9000 General Pupose Interface Configuration Guide* is for new and experienced security system users who want to learn to use this product for the C•CURE 9000 Security Management System.

In this preface

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 DVD.

You can access the manuals if you copy the appropriate PDF files from the C•CURE 9000 Installation DVD English\Manuals folder.

The available C•CURE 9000 and Software House manuals are listed in the *C•CURE 9000 Installation and Upgrade Guide,* and appear as hyperlinks in the online.pdf file on the C•CURE 9000 DVD English\Manuals folder.

These manuals are also available from the Software House Member Center website ( ).

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

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 ▮. to 8:00 ▮., 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 ▮▮▮ support.aspx.	

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1

Overview

This chapter introduces the General Purpose Interface (GPI) Integration for C•CURE 9000.

In this chapter:

Introduction

The General Purpose Interface provides a general way for C•CURE 9000 to talk to a third-party device. The General Purpose Interface does the following:

■ Initializes communication between a C•CURE 9000 system and a third-party device.

■ Maintains a communication channel by polling a third-party device.

■ Defines General Purpose Actions that send messages to third-party devices using C•CURE 9000 event activation and then support acknowledgement messages from these third-party devices.

■ Defines General Purpose Monitoring Points that represent monitoring points in third-party devices.

   • Supports five *Activated Status* properties for these General Purpose Monitoring Points.

■ Defines General Purpose incoming message protocols that interpret incoming messages from third-party devices and support acknowledgement for incoming messages.

The General Purpose Interface can work with any device that uses ASCII code for communications protocol for event monitoring, such as the following:

■ Intercom

■ Burglar/Intrusion

■ Dome control

■ EAS

■ Elevators

■ Environmental

■ HVAC

■ Process Control Equipment

■ Programmable Liner Controllers (PLCs)

■ Lighting

■ Refrigeration

■ Wireless communication

■ To support secondary alarm annunciation for fire/burglar panels

■ As multiple device interfacing (unlimited)

General Purpose Interface

The General Purpose Interface is a programmable bi-directional communication protocol that provides a general mode of communication between the General Purpose Interface driver and the third-party device.

A third-party device sends pure ASCII messages via a a serial port (RS-232) or remotely via a TCP/IP port (Lantronix or Systech) into the General Purpose Interface driver.

C•CURE 9000 interprets messages in two ways:

- As journal messages recorded into the historical journal.
- As any of five Monitoring Point status changes configured to trigger a C•CURE 9000 event.

The General Purpose Interface supports the following functionality:

- **Input**: where the input strings are sent from the device through the Serial/Network port to C•CURE 9000. The General Purpose Message Protocol object is used to define and parse the information.
- **Output**: where the output is an Action and requests a response from the device.
- **Poll**: where the poll is an action that requires a response from the device.

Figure 1: General Purpose Interface Functionality

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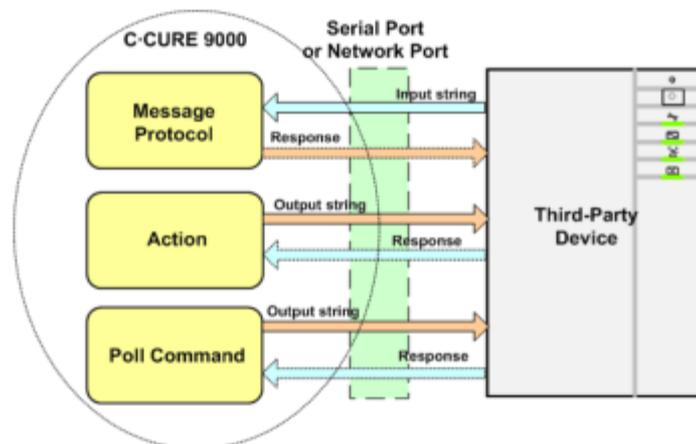
Figure 2: Links within C•CURE 9000
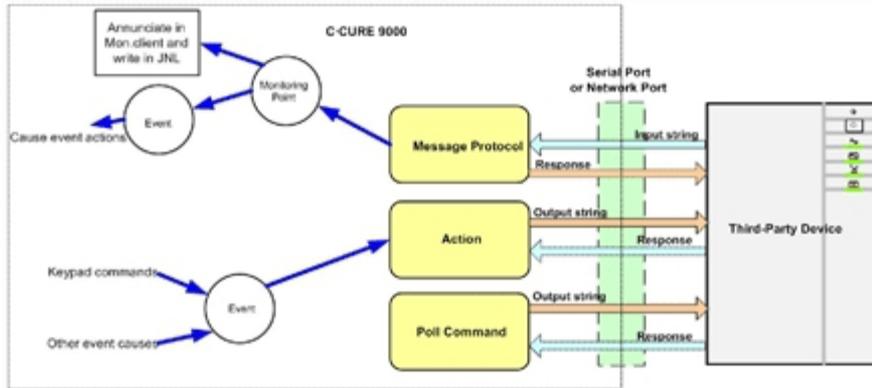
Monitoring Point

Monitoring Points can activate events directly.

- You can design events to activate any of the various event actions.

- Monitoring Points can also be enunciated at the Monitoring Station and written to the historical journal.

You should configure a message protocol that then parses the received Monitoring Point string. You can also define a header or trailer character in the **General Purpose Device Communications Protocol** tab, if they are required.

Figure 3: Monitoring Point
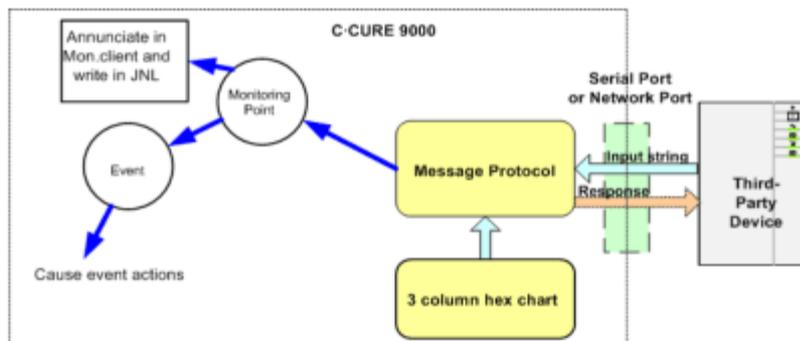
Monitoring Point Message Processing

When the General Purpose driver receives the message from the device, it does the following:

- Parses the message and looks for poll or action responses.
  - If it finds a poll or an action response, it processes the response.
  - If it does **not** find a poll or an action response, it continues to parse.
- Looks for a message protocol.
  - If it finds a message protocol, it processes the protocol.
  - If it does **not** find a message protocol, it forwards an unknown message signal.

NOTE   The device can either delimit the message with a header and a trailer or discard the header and a trailer.

Figure 4: Monitoring Point Message Processing
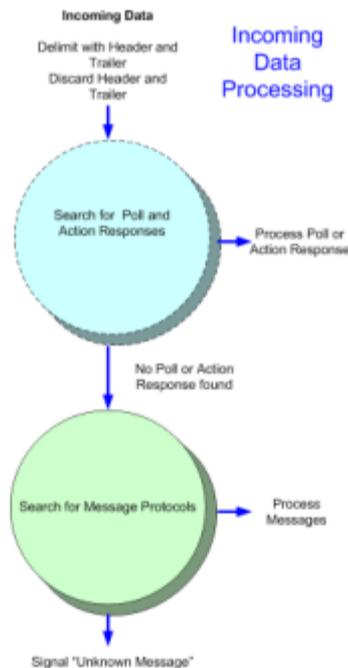
Poll Command

The Poll Command, the frequency of polling (Poll Period), and the expected response (Poll Command Acknowledgment) are all defined as part of the configuration of a specific General Purpose Device.

Figure 5: Poll Command
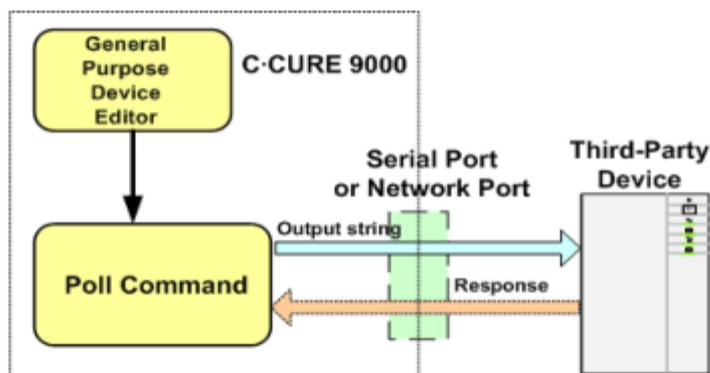
Output

Output is performed using an **Action** that is activated by an event and sends a string of characters to the General Purpose Device through the Serial/Network port. The optional expected response (Acknowledgement Message) is also configured as part of the Action.

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Figure 6: Output

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General Purpose Interface

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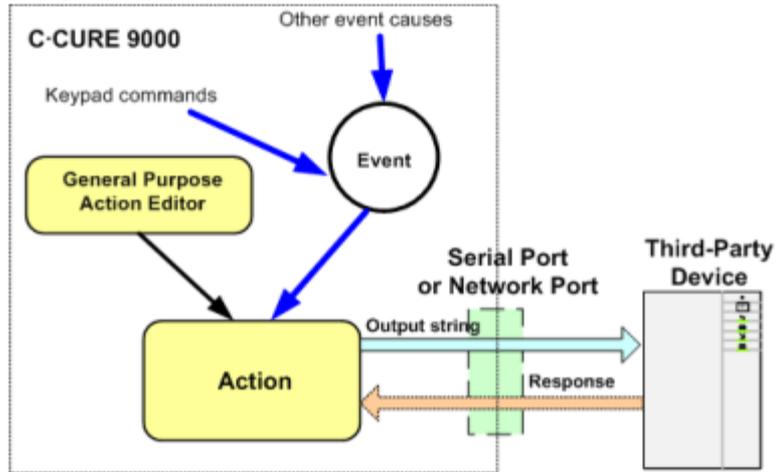
Using the Pane and Folders

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

In this chapter

Using the General Purpose Interface Pane

The General Purpose Interface pane displays a tree structure that shows how the General Purpose Interface configuration on the C•CURE 9000 system.

Example:

> The General Purpose Interface tree shows you General Purpose Actions, General Purpose Message Protocols, General Purpose Devices and General Purpose Monitoring Points configurations.

You can use the General Purpose Interface Tree to navigate to General Purpose Interface components you want to view or edit, or to create new General Purpose Interface components, such as a Monitoring Point you want to add to a General Purpose Device.

The **Company Name** folder is the default container for your General Purpose Devices and under the device, your General Purpose Monitoring Points. This folder is re-namable so you can customize the C•CURE 9000 General Purpose Interface Tree to your site's needs.

> **NOTE** General Purpose Actions and General Purpose Message Protocols are the only General Purpose Interface objects you create at the root level, and these objects cannot be partitioned.

You can do the following with the tree:

- Create additional General Purpose Interface Folders as needed.
- Click ▸ to the left of a folder or object to expand the tree.
- Select a folder or object in the tree and right-click to display a context menu that shows the actions you can perform on the selected folder/object and the other objects you can create under the selected folder/object.

  Example:

  > If you right-click the **Company Name** folder, the context menu shows that you can create a new General Purpose Device object in this folder or a new General Purpose Device template, as shown in Figure 7 on Page 21.

Figure 7: General Purpose Interface Tree Context Menu
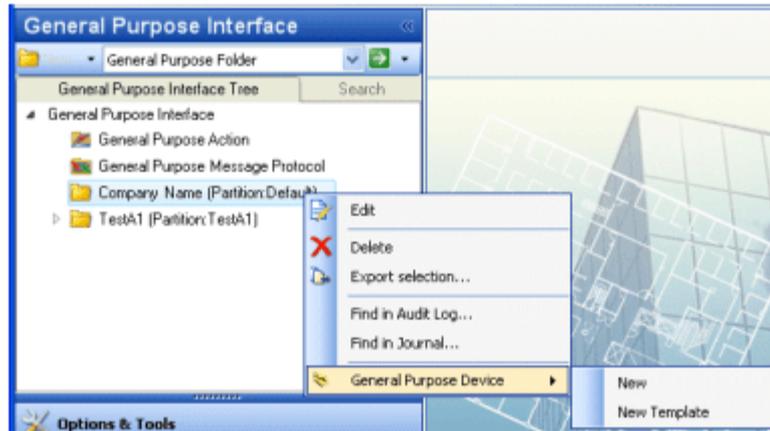
Partitions

If you partition your C•CURE 9000, a new General Purpose folder is created for each Partition you create, and give the same name as the Partition, as shown in Figure 7 on Page 21.

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

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

The **New Object Partition** setting in the Administration Workstation determines the Partition in which an Operator can create objects, in addition to General Purpose Interface Tree objects such as Actions and Message Protocols that reside at the root of the General Purpose Interface 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.

Example

> You could create a privilege that has no access to the Partition (and General Purpose 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.

For more information about Partitioning and Privileges, see the *C•CURE 9000 Software Configuration Guide*.

You can also drag and drop objects to move them in the General Purpose Interface Tree.

Example

You can move a General Purpose Device from one General Purpose folder to another. See Using Drag and Drop in the General Purpose Interface Tree on Page 25 for more information.

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General Purpose Interface Tasks

Creating a New Object in the General Purpose Interface Tree

Most objects in the General Purpose Interface 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.

To Create a New Object in the General Purpose Interface Tree

1. Select the Folder or Object that will contain the object you want to create.

   Example:

   If you want to create a General Purpose Device, select the specific Company folder the device is for.

2. Right-click the Folder/Object, then select the object you wish to create from the Context menu, and click **New** on the sub-menu, as shown in the example in Figure 7 on Page 21.

   The Editor for the object opens where you can configure the object. (For detailed information, see Configuration Sequence Overview on Page 34.)

Deleting an Object in the General Purpose Interface Tree

You can delete objects from the General Purpose Interface Tree if they are no longer needed. If you delete an object that has a child object below it (such as a Monitor Point on a General Purpose Device), that object is also deleted.

To Delete an Object in the General Purpose Interface Tree

1. Select the Folder or Object that you wish to delete.

2. Right-click the object and select **Delete**.

   A confirmation dialog box opens to confirm that you want to delete the object.

3. Click **Yes** to confirm deleting the object or **No** to cancel the deletion.

   The object is deleted if you confirm by clicking **Yes**. A **Deleting General Purpose objects** dialog box also opens, shown in Figure 8 on Page 24, with one line per deleted object, showing the results of the deletion operation.

Figure 8: Deleting General Purpose Objects Dialog Box
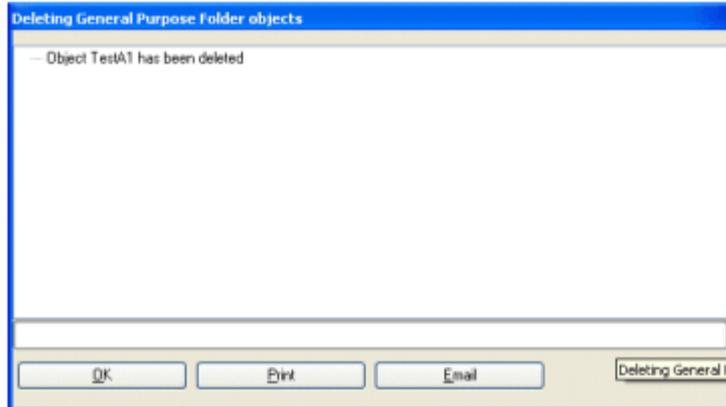
4. Click:

   • **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 General Purpose Interface Tree Objects

You can view a list of any type of General Purpose Interface Tree object.

To View a List of General Purpose Interface Tree Objects

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Use the drop-down list in the General Purpose Interface pane to select the object type that you want to list.

3. Click and a Dynamic View listing the object type opens in the content area.

4. You can filter, sort, group, and add columns to the list. (For more information, see the Dynamic Views chapter in the *C•CURE 9000 Data Views Guide*.)

Using Drag and Drop in the General Purpose Interface Tree

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

- You cannot move Root level objects such as Folders and General Purpose Action and General Purpose Message Protocol.

- You cannot move objects in General Purpose Interface Folders to the Root level.

- You **cannot** move child objects of one General Purpose Device to another General Purpose Device.

NOTE You **cannot** move a non-partitioned object like a General Purpose Action or a General Purpose Message Protocol.

To determine if you can drag and drop an object, click on the object and then drag to the right with your mouse. If the cursor opens, you can drag and drop the object. If you try to drop the object in an invalid location, the object remains in its original location instead.

Example:

If you tried to drop a General Purpose Device in a General Purpose Action, the object is not moved, and an error message "General Purpose Folder is not found" opens.

To Drag and Drop an Object in the General Purpose Interface Tree

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Click an object to select it. The object will be highlighted ![GPDeviceTestCompany3].
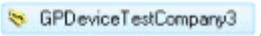
3. Drag to the right with your mouse. The drag and drop cursor appears. If it does **not** appear, you **cannot** drag and drop the object.

4. Drag the object to the location you want and release the mouse button. If the location is valid for the object, the object displays in the new location.

   Example:

   If you drag a General Purpose Device to a different General Purpose Folder, the Device and all its child objects, Monitoring Points, are moved to that General Purpose Folder.

Refreshing the General Purpose Interface Tree

To make sure that all your folders and objects in the General Purpose Interface Tree are accurately displayed on the screen, you can *refresh* the General Purpose Interface Tree.

To Refresh the General Purpose Interface Tree

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click **General Purpose Interface** and select **Refresh Tree** from the context menu.

Figure 9: General Purpose Interface Context Menu - Refresh Tree
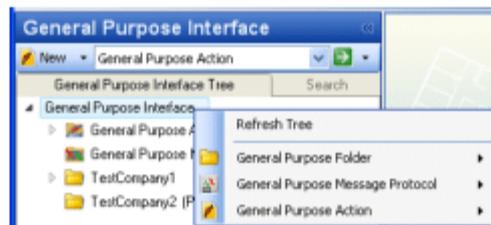
The General Purpose Interface Tree is updated.

General Purpose Interface Folders

You can create additional General Purpose Folders if you need to organize your General Purpose Devices into separate folders.

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

The tree structure in the General Purpose Interface Folder pane shows how you have configured the General Purpose Interface on the C•CURE 9000 system.

Example:

> The General Purpose Interface tree shows you which General Purpose Devices and Monitor Points are configured for each company folder.

You can use the General Purpose Interface Tree to navigate to General Purpose Interface components you want to view or edit, or to create a new General Purpose Interface component, such as a Monitor Point you want to add to a Device.

Creating a New General Purpose Folder

Perform the following steps to create a new General Purpose Folder.

To Create a New General Purpose Folder

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click **General Purpose Interface** at the top of the tree and select **General Purpose Folder>New** from the context menu, as shown in Figure 10 on Page 28.

Figure 10: General Purpose Interface Context Menu-General Purpose Folder

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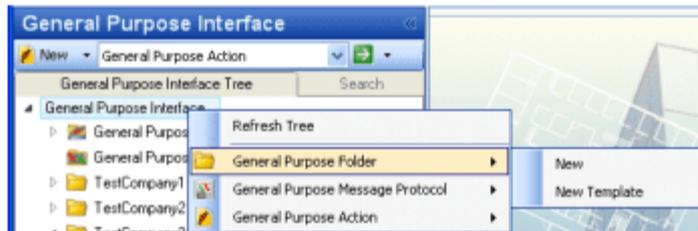
The **General Purpose Folder** dialog box opens, as shown in Figure 11 on Page 29.

Figure 11: General Purpose Folder Dialog Box

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.

   - or -

   Alternatively, if you want to save the folder and then create a new one, click **Save and New**. The current folder is saved and closed, but the **General Purpose Folder** dialog box remains open to allow you to create a new folder.

   The General Purpose Interface Tree automatically updates to display your new folder. If the tree does not display the folder, right-click on **General Purpose Interface** and select **Refresh Tree** from the context menu, as described in Refreshing the General Purpose Interface Tree on Page 26.

Renaming a General Purpose Folder

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

To Rename a General Purpose Folder

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the folder that you want to rename, and select **Edit** from the context menu. The **General Purpose Folder** dialog box opens, as shown in Figure 11 on Page 29.

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.

   - or -

   Alternatively, if you want to save the folder and then create a new one, click **Save and New**. The current folder is saved with your edits and closed, but the **General Purpose Folder** dialog box remains open to allow you to create a new folder.

Creating and Using a New General Purpose Folder Template

You can create a General Purpose Folder Template that you can use as a basis for creating additional General Purpose Folders. The field values you enter in the template are then applied when you use that template to create new General Purpose Folders. This allows all your General Purpose Folders to have the same values and simplifies the process of creating new folders.

To Create a New General Purpose Folder Template

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click **General Purpose Interface** in the tree and select **General Purpose Folder>New Template** from the context menu, as shown in Figure 10 on Page 28.

   The **General Purpose Folder (Template)** dialog box opens, as shown in Figure 12 on Page 30.

Figure 12: General Purpose Folder (Template) Dialog Box
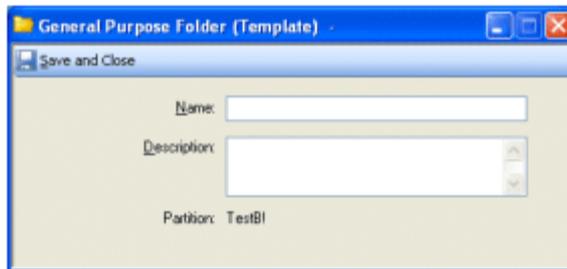
3. Type the name for the new folder template into the **Name** field.

4. Optionally, type a description for the new folder template into the **Description** field.

5. Click **Save and Close** to save the new folder template.

To Use a General Purpose Folder Template to Create New General Purpose Folders
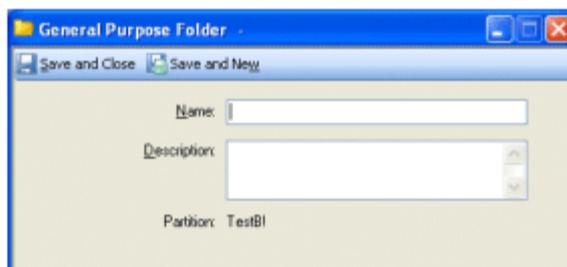
1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click **General Purpose Interface** in the tree and select **General Purpose Folder** from the context menu. The next level menu appears listing the General Purpose Interface Folder Templates you have previously created—under the ---- *Templates* category, as shown in Figure 13 on Page 31.

Figure 13: General Purpose Interface Context Menu - General Purpose Interface Folder
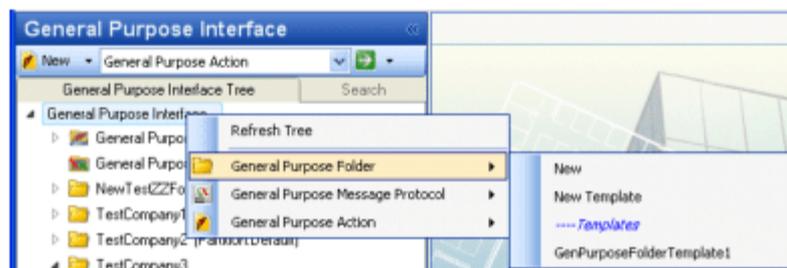
3. Click the specific General Purpose Folder Template you wish to use as the basis for your new General Purpose Folder.

   A **General Purpose Folder** dialog box, similar to that shown in Figure 10 on Page 28 opens with the values you entered in the template.

4. As necessary, depending on the values from the template already entered in the **Name** and **Description** fields, type or edit:

   a. The name for the new folder.

   b. An optional description for the new folder

5. Click **Save and Close** to save the new folder.

   - or -

   Alternatively, if you want to save the folder and then create a new one, click **Save and New.** The current folder is saved and closed, but the **General Purpose Folder** dialog box remains open (with the same template values) to allow you to create a new folder.

The General Purpose Interface Tree automatically updates to display your new folder. If the tree does not display the folder, right-click on **General Purpose Interface** and select **Refresh Tree** from the context menu, as described in Refreshing the General Purpose Interface Tree on Page 26.

3

Configuration

This chapter explains how to configure the General Purpose Interface in C•CURE 9000.

In this chapter

Configuration Sequence Overview

The C•CURE 9000 **General Purpose Interface** pane and tree provide options that you can use to configure the General Purpose objects. Configure objects in the following general order:

Table 1: GPI Basic Configuration Sequence

Order of Tasks	See...
1. Create a General Purpose Interface device and configure the connection parameters. Enable the device and configure the connection type.	• Creating a General Purpose Device on Page 44 • Configuring/Modifying a General Purpose Device on Page 44
2. Create a General Purpose Action to allow the sending of a message to C•CURE 9000 when an event occurs.	• Creating a General Purpose Action on Page 71 • Configuring/Modifying a General Purpose Action on Page 72
3. Create an Event that triggers the sending of the C•CURE 9000 message.	• Creating Events on Page 90

■ Configure a message

■ Trigger the message

■ Test through the hardware configuration

 - or -

■ Monitoring point

■ Event to be linked to a General Purpose device and a General Purpose action. You configure the Event object on the **Event Editor** accessed from the C•CURE 9000 **Configuration** pane.

Table 2 on Page 35 shows the tasks and related C•CURE 9000 Editors you use to create General Purpose Interface Objects.

Table 2: Creating General Purpose Interface Objects

Task	C•CURE 9000 Editor	Configuration Notes	Additional Information
Configure the General Purpose Device	General Purpose Interface>General Purpose Interface Tree>Company Folder>General Purpose Device>New>General Purpose Device Editor and General tab	Creates a General Purpose Device and specifies: • Vendor • Poll information	• General Purpose Device General Tab on Page 40General Purpose Device General Tab on Page 40 • General Purpose Device Editor Tasks on Page 43 • Using the Virtual Keyboard on Page 85
Configure General Purpose Device Port	General Purpose Interface>General Purpose Interface Tree>Company Folder>General Purpose Device>New>General Purpose Device Editor>Port tab	Specifies: • Port type (Serial/Network) • Port numbers	• General Purpose Device Port Tab on Page 50
Configure General Purpose Device Communication Protocol Information	General Purpose Interface>General Purpose Interface Tree>Company Folder>General Purpose Device>New>General Purpose Device Editor>Communication Protocol tab	Specifies • Delay times • Header/Trailer characters in General Purpose message • Retry attempt number • Buffer size	• General Purpose Device Communication Protocol Tab on Page 52

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Creating General Purpose Interface Objects (continued)

Task	C•CURE 9000 Editor	Configuration Notes	Additional Information
Configure General Purpose Device Triggers	General Purpose Interface>General Purpose Interface Tree>Company Folder>General Purpose Device>New>General Purpose Device Editor>Triggers tab	Specifies Event Actions to be activated for General Purpose Device online status.	• General Purpose Device Triggers Tab on Page 53 • General Purpose Device Triggers Tab Tasks on Page 55 • Creating Events on Page 90
Change General Purpose Device State Images	General Purpose Interface>General Purpose Interface Tree>Company Folder>General Purpose Device>New>General Purpose Device Editor>State Images tab	Modifies Images that indicate General Purpose Device states on the Monitoring Station.	• General Purpose Device State Images Tab on Page 59 • State Images Tab Tasks on Page 60
Configure the General Purpose Message Protocol	General Purpose Interface>General Purpose Interface Tree> General Purpose Message Protocol Folder>New>General Purpose Message Protocol Editor and General tab	Creates a General Purpose Message Protocol that interprets incoming messages from third party devices and supports acknowledgment for these messages. Specifies: • Match criteria • Key Words • Position	• General Purpose Message Protocol Editor on Page 61 • General Purpose Message Protocol Tasks on Page 64 • Using the Virtual Keyboard on Page 85

Creating General Purpose Interface Objects (continued)

Task	C•CURE 9000 Editor	Configuration Notes	Additional Information
Configure the General Purpose Action	General Purpose Interface>General Purpose Interface Tree>General Purpose Action Folder>New>General Purpose Action Editor and General tab	Creates a General Purpose Action and specifies: • Outgoing messages • Acknowledgment messages	• General Purpose Action Editor on Page 68 • General Purpose Action Tasks on Page 71Using the Virtual Keyboard on Page 85 • Using the Virtual Keyboard on Page 85
Configure Monitoring Points for the General Purpose Device	General Purpose Interface>General Purpose Interface Tree>Company Folder>Existing General Purpose Device>General Purpose Monitoring Point>New>General Purpose Monitoring Point Editor and General tab	Creates a Monitoring Point for a General Purpose Device that activates Events.	• General Purpose Monitoring Point Editor on Page 74 • General Purpose Monitoring Point General Tab on Page 77 • General Purpose Monitoring Point Tasks on Page 79 • Using the Virtual Keyboard on Page 85
Configure General Purpose Monitoring Point Triggers	General Purpose Interface>General Purpose Interface Tree>Company Folder>Existing General Purpose Device>General Purpose Monitoring Point>New>General Purpose Monitoring Point Editor>Triggers tab	Specifies Event Actions to be activated for General Purpose Monitoring Point Activation status.	• General Purpose Monitoring Point Triggers Tab on Page 82 • Creating Events on Page 90

Creating General Purpose Interface Objects (continued)

Task	C•CURE 9000 Editor	Configuration Notes	Additional Information
Change General Purpose Monitoring Point State Images	General Purpose Interface>General Purpose Interface Tree>Company Folder>Existing General Purpose Device>General Purpose Monitoring Point>New>General Purpose Monitoring Point Editor>State Images tab	Modifies Images that indicate General Purpose Monitoring Point states on the Monitoring Station.	• General Purpose Monitoring Point State Images Tab on Page 83 • State Images Tab Tasks on Page 60
Create Events to link to General Purpose Devices and General Purpose Actions	Configuration >Event>New>Event Editor - or - Edit an existing Event		• Creating Events on Page 90 • The Events chapter in the C•CURE 9000 Software Configuration Guide.

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General Purpose Device Editor

The **General Purpose Device Editor** in C•CURE 9000 lets you create and modify General Purpose Device Objects.

The **General Purpose Device Editor** displays six configuration tabs. Click on the following tabs for more information:

- General Purpose Device General Tab on Page 40
- General Purpose Device Port Tab on Page 50
- General Purpose Device Communication Protocol Tab on Page 52
- General Purpose Device Triggers Tab on Page 53
- General Purpose Device Status Tab on Page 58
- General Purpose Device State Images Tab on Page 59

See General Purpose Device Editor Tasks on Page 43.

Accessing the General Purpose Device Editor

You can access the **General Purpose Device Editor** from the General Purpose Interface pane.

To Access the General Purpose Device Editor

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the Company Folder for which you want to create the device to open the context menu, click **General Purpose Device**, and then click **New** on the sub-menu that appears, as shown in Figure 14 on Page 40.

Figure 14: General Purpose Interface Context Menu - General Purpose Device
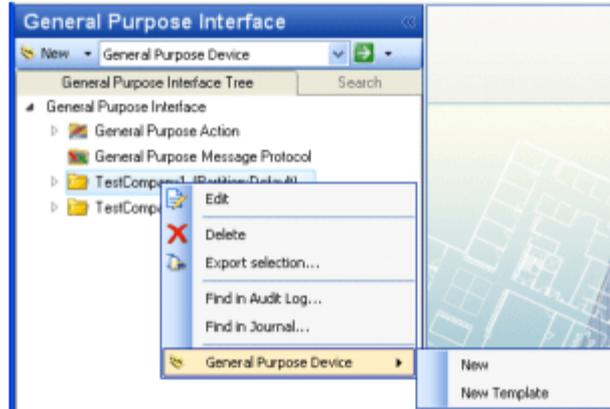
Or, click the **General Purpose Interface** drop-down list and select **General Purpose Device**.
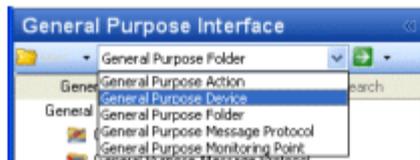
Click to open a Dynamic View showing a list of all existing General Purpose Devices, right-click the General Purpose Device you want to change, and click **Edit** from the context menu that appears.

The **General Purpose Device Editor** opens with the **General** tab displayed.

General Purpose Device General Tab

The **General Purpose Device General** tab, shown in Figure 15 on Page 41, lets you define the vendor and the polling specifics for the General Purpose Device.

See the following:

- General Purpose Device Editor - General Tab Fields/Buttons on Page 41
- General Purpose Device Editor Tasks on Page 43

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Figure 15: General Purpose Device Editor General Tab
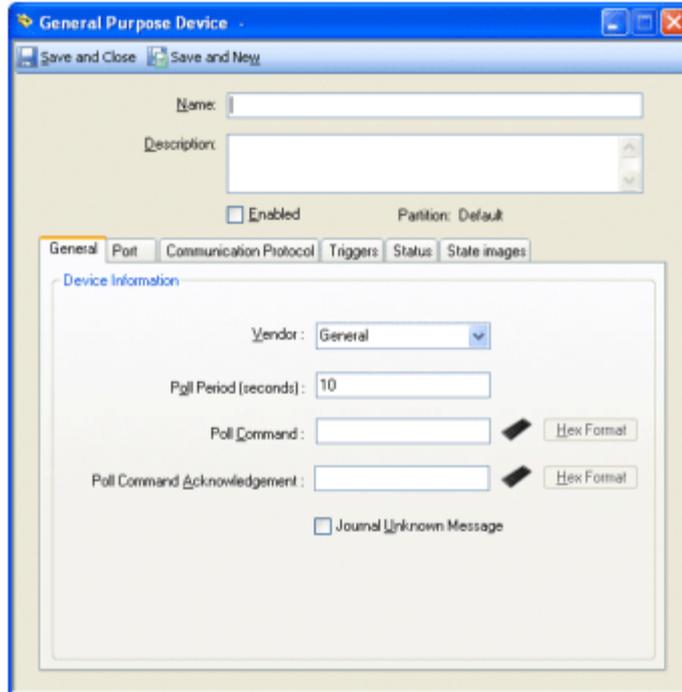
General Purpose Device General Tab Definitions

The **General Purpose Device General** tab buttons and fields are described in Table 3 on Page 41

Table 3: General Purpose Device Editor - General Tab Fields/Buttons

Field/Button	Description
Save and Close	Click this button when you have completed changes to the General Purpose Device and wish to save those changes. The **General Purpose Device Editor** closes.

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General Purpose Device Editor - General Tab Fields/Buttons (continued)

Field/Button	Description
Save and New	Click this button when you have completed any changes to the General Purpose Device and wish to save those changes and also create a new General Purpose Device. The General Purpose Device you were editing is saved, and a new General Purpose Device opens (either blank or including template information if you were using a template to create the new General Purpose Device).
Name	Enter a unique name, up to 100 characters, to identify the General Purpose Device.
Description	Enter a description of the General Purpose Device, up to 255 characters.
Enabled	Select this check box to put the General Purpose Device online. NOTE: You **cannot** edit any fields on either the **General**, **Port**, or **Communication Protocol** tabs when the General Purpose Device is **enabled**.
Partition	A read-only field displaying the name of the Partition to which this General Purpose Device belongs. (This field is visible only if the C•CURE 9000 system is partitioned.) NOTE: The General Purpose Device derives its Partition from the Company Folder it was created in. If the folder's Partition is changed, then the General Purpose Device's Partition changes accordingly.
Hex Format	NOTE: This button becomes available for either the **Poll Command** or **Poll Command acknowledgement** field **only** after you enter the command string for the field. Click this button to display the **Hex Format** dialog box showing the Hex format of the string entered in the **Poll Command** or **Poll Command Acknowledgement** field.
Device Information NOTE: **None** of the fields on this tab can be edited if the General Purpose Device is **enabled**.	
Vendor	Ignore. Not applicable
Poll Period (seconds)	Enter the period in seconds that C•CURE 9000 attempts to poll this General Purpose Device. The default value is 10 seconds.

General Purpose Device Editor - General Tab Fields/Buttons (continued)

Field/Button	Description
Poll Command	Enter a poll command (the command string) that C·CURE 9000 sends to the General Purpose Device as the poll message. Double-click ✎, the Keyboard button, to open the Virtual Keyboard that allows you to create and edit text strings for a General Purpose Device. For procedural information, see Using the Virtual Keyboard on Page 85.
Poll Command Acknowledgement	Enter a poll command acknowledgment (the command string) that the General Purpose Device sends back to C·CURE 9000 as an acknowledgment of the poll message. Double-click ✎, the Keyboard button, to open the Virtual Keyboard that allows you to create and edit text strings for a General Purpose Device. For procedural information, see Using the Virtual Keyboard on Page 85.
Hex Format	Click this button to display the **Hex Format** dialog box showing the Hex format of the string entered in the Poll Command on Page 43 or Poll Command Acknowledgement on Page 43 field. NOTE: This button becomes available for either the **Poll Command** or **Poll Command Acknowledgement** only after you enter the command string for the field.
Journal Unknown Message	Select this option if you want unknown messages received by C·CURE 9000 recorded in the historical journal. For information about the Journal, see the "Historical Tracking of System Activity" chapter in the *C·CURE 9000 System Maintenance Guide*.

General Purpose Device Editor Tasks

The C·CURE 9000 **General Purpose Device Editor** allow you to accomplish the following tasks:

- Creating a General Purpose Device on Page 44
- Creating a General Purpose Device Template on Page 45
- Configuring/Modifying a General Purpose Device on Page 44
- Viewing a List of General Purpose Devices on Page 47
- Deleting a General Purpose Device on Page 49
- Using Set Property for General Purpose Devices on Page 46

Creating a General Purpose Device

You can create a new General Purpose Device using the **General Purpose Device Editor**.

To Create a General Purpose Device

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the Company Folder for which you want to create the device to open the context menu, click **General Purpose Device**, and then click **New** on the sub-menu that appears, as shown in Figure 14 on Page 40.

   The **General Purpose Device Editor** opens. (For examples of this Editor and its tabs, see Figure 15 on Page 41, and , Figure 19 on Page 52, Figure 22 on Page 59, and Figure 23 on Page 61.)

3. You can now configure the new General Purpose Device.

4. To save your new General Purpose Device, click **Save and Close.**

   - or -

   Alternatively, if you want to save the General Purpose Device and then create a new one, click **Save and New**. The current General Purpose Device is saved and closed, but the **General Purpose Device Editor** remains open ready for a new General Purpose Device.

Configuring/Modifying a General Purpose Device

You can configure a new General Purpose Device or modify an existing one using the **General Purpose Device Editor**.

To Configure a General Purpose Device

1. Create a new General Purpose Device or modify an existing General Purpose Device.

   The **General Purpose Device Editor** opens (see Figure 15 on Page 41) for you to edit the General Purpose Device making changes as you wish in the fields on the top of the editor, and on any of the tabs with the following exception:

   You **cannot** change any fields on either the **General**, **Port**, or **Communication Protocol** tabs when the General Purpose Device is **enabled**. So enable the Device **after** you have finished configuring/editing it.

2. Type a **Name** and **Description** for the General Purpose Device that sufficiently identifies this Device and its purpose.

3. Select a Vendor for the General Purpose Device from the drop-down list on the **General** tab. See Figure 15 on Page 41.)

4. Use the **General** tab to configure the options that affect the polling of the General Purpose Device and whether or not unknown messages are journaled. For information about creating the Poll text strings, see Using the Virtual Keyboard To Enter Text into General Purpose Interface Fields on Page 87.

5. Use the **Port** tab (see Figure 17 on Page 50) to set up the port to which the General Purpose Device is connected, selecting the Port type and then the identifying the specific port.

6. Use the **Communication Protocol** tab (see Figure 19 on Page 52) to configure the communication options for the Device—delay times, header and trailer message characters, the number of message retry attempts, and the message buffer size.

7. Use the **Triggers** tab (see Figure 20 on Page 54) to configure triggers that can activate Event Actions when the General Purpose Device's online state has a certain value (is either online or offline).

8. Use the **State Images** tab (see Figure 22 on Page 59) to change the default images used to indicate states for the General Purpose Device on the Monitoring Station, or to return to the default images.

9. When you have finished configuring/modifying the General Purpose Device, make sure that you select the **Enabled** check box on the top of the editor to put the Device online.

10. To save the General Purpose Device, click **Save and Close**.

    - or -

    Alternatively, if you want to save the General Purpose Device and then create a new one, click **Save and New**. The current General Purpose Device is saved and closed, but the **General Purpose Device Editor** remains open ready for a new General Purpose Device.

Creating a General Purpose Device Template

You can create a new template for a General Purpose Device. A General Purpose Device template saves you time because you do not have to re-enter the same Device information again.

To Create a General Purpose Device Template

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the Company Folder for which you want to create the device to open the context menu, click **General Purpose Device**, and then click **New Template** on the sub-menu that appears, as shown in Figure 14 on Page 40.

   The **General Purpose Device Editor** where you can configure the General Purpose Device template opens (see Figure 15 on Page 41).

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 General Purpose Device 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:

   GenPurposeTemplate1

5. To save the template, click **Save and Close**.

   The template will be available as an option on the pull-down Template menu.

Using Set Property for General Purpose Devices

You can use **Set Property** to quickly set a property for one or more General Purpose Devices without opening the **General Purpose Device Editor**, thus making it useful for mass updates. See Table 4 on Page 48 for the properties that can be changed.

To Set a Property for General Purpose Devices

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Pane.

2. Click the **General Purpose Interface** drop-down list, select **General Purpose Device**, and click
   to open a Dynamic View showing a list of all existing General Purpose Device objects.

3. Right-click the General Purpose Device(s) in the list for which you want to set the property and select **Set Property** from the context menu.

4. Specify the property for the General Purpose Device(s). Click the drop-down button to see a list of properties.

5. Enter the value for the property, click **OK**, and then click **OK** again on the **Setting Properties of General Purpose Device** message box.

Viewing a List of General Purpose Devices

You can display a list of the General Purpose Devices you have created by opening a Dynamic View of General Purpose Devices.

To View a List of General Purpose Devices

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Pane.

2. Click the **General Purpose Interface** drop-down list, select **General Purpose Device**, and click

   to open a Dynamic View showing a list of all existing General Purpose Devices, as shown in Figure 16 on Page 47. (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 16: General Purpose Device List
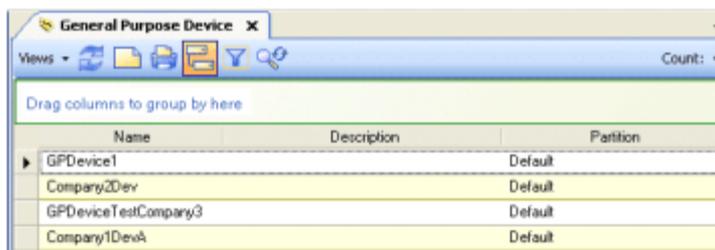
- You can sort, filter, and group items in the list.

- You can right-click a General Purpose Device in the list to open the General Purpose Device Context menu (see Table 4 on Page 48) and perform any of the functions on that menu.

- You can right-click any column heading to open a context menu of all possible General Purpose Device 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.*

General Purpose Device List Context Menu

The context menu that opens when you right-click a General Purpose Device in the General Purpose Device Dynamic View includes the selections described in Table 4 on Page 48.

Table 4: General Purpose Device List Right-Click Context Menu Options

Menu Selection	Description
Edit	Click this menu selection to edit the selected General Purpose Device. The General Purpose Device **Editor** opens. You can rename the device and change the description and any other attributes **except** the fields on the **General, Port,** and **Communication Protocol** tabs if the device is **enabled**.
Delete	Click this menu selection to delete the selected General Purpose Device. A prompt appears asking you to confirm that you want to delete the General Purpose Device. Click **Yes** to delete the General Purpose Device or **No** to cancel the deletion.
Set property	Click this menu selection to change the value of the selected properties in the selected General Purpose Device(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 properties: • **Description** – You can change the textual description of the iSTAR Intrusion Zone(s) by selecting this property and typing in a new value. • **Enabled** – You can determine whether or not the General Purpose Device(s) are online on the system by selecting this property and selecting/clearing the **Value** check box. • **Template** – You can determine whether or not the General Purpose Device(s) can be used as templates by selecting this property and selecting/clearing the **Value** check box.
Add to Group	This option is **not** supported for General Purpose Devices.

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General Purpose Device List Right-Click Context Menu Options (continued)

Menu Selection	Description
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 General Purpose Device 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 General Purpose Device. 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 General Purpose Device. When found the results display in a separate Dynamic View.

Deleting a General Purpose Device

You can delete a General Purpose Device.

To Delete a General Purpose Device

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Pane.

2. Click the **General Purpose Interface** drop-down list, select **General Purpose Device**, and click ▣ ▾ to open a Dynamic View showing a list of all existing General Purpose Device objects.

3. Right-click the General Purpose Device in the list that you want to delete and select **Delete** from the context menu that appears.

4. Click **Yes** on the "Are you sure that you want to delete the selected General Purpose Device object?" message box.

General Purpose Device Port Tab

The **General Purpose Device Port** tab, shown in Figure 17 and Figure 18, lets you define information to set up the port to which this General Purpose Device connects. The fields on the tab change depending on whether you are setting up a Serial Port (the default) or a Network Port.

Figure 17: General Purpose Device Editor Port Tab-Serial Port

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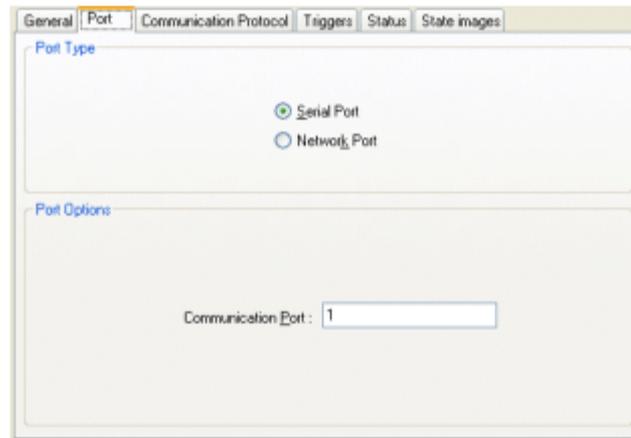
Figure 18: General Purpose Device Editor Port Tab – Networking Port
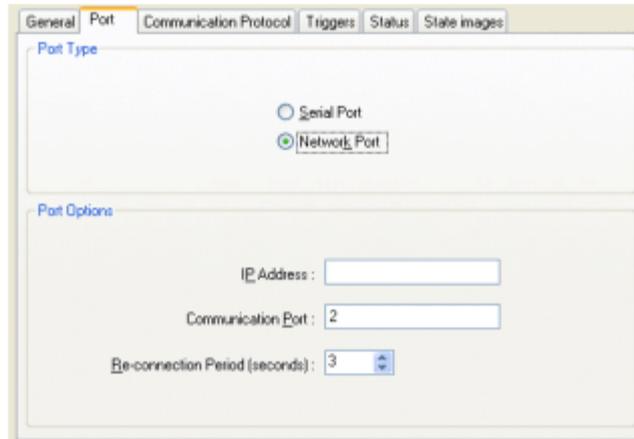
The **General Purpose Device Port** tab has the fields shown in Table 5 on Page 51.

Table 5: General Purpose Device Editor - Port Tab Fields

Fields/Buttons	Description
None of the fields on this tab can be edited if the General Purpose Device is **Enabled**.	
Port Type	
Serial Port Network Port	Select a port type for connecting this General Purpose Device: • **Serial** if you are using a serial connection . This is the default. • **Network** if you are using a terminal server for the connection.
Port Options	
Communication Port	Enter the number of the port: • For **Serial Port** – enter a port number such as COM1, COM2, etc. • For **Network Port** - enter the TCP/IP port number from which the terminal server communicates with C•CURE 9000. The values range from 0 through 9999. The default is 3001.

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General Purpose Device Editor - Port Tab Fields (continued)

Fields/Buttons	Description
IP Address	NOTE: This field is available only if you select the **Network** Port option. Enter the TCP/IP address of the Network Port.
Re-connection Period (Seconds)	NOTE: This field is available only if you select the **Network** Port option. Enter the duration time in seconds that C•CURE 9000 waits before trying to re-connect an unresponsive network device. The default is 3 seconds.

General Purpose Device Communication Protocol Tab

The **General Purpose Device Communication Protocol** tab, shown in Figure 19 on Page 52, lets you define communication details for the General Purpose Device, such as delay times, header and trailer message characters, retry attempt numbers, and message buffer size.

Figure 19: General Purpose Device Editor Communication Protocol Tab
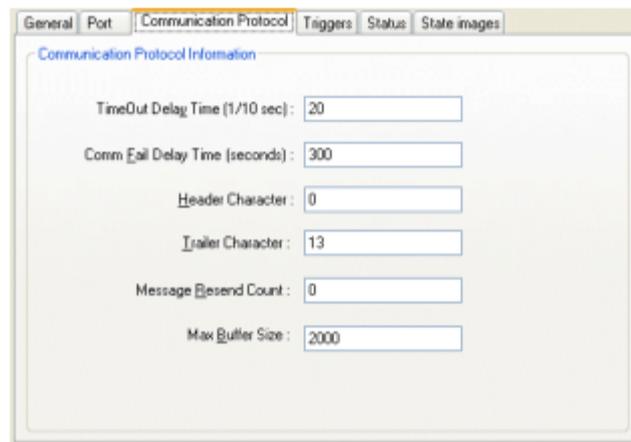
The **General Purpose Device Communication Protocol** tab has the fields shown in Table 6 on Page 53.

Table 6: General Purpose Device Editor - Communication Protocol Tab Fields

Fields/Buttons	Description
Communication Protocol Information None of the fields on this tab can be edited if the General Purpose Device is enabled.	
TimeOut Delay Time (1/10 sec)	Enter the extra interval (in 1/10th seconds) that C•CURE 9000 waits for a response from this device after sending a message to the switcher. If a response is not received in the specified time, C•CURE 9000 re-transmits the message or declares a communications failure. The default value is 20 (2 seconds).
Comm Fail Delay Time (seconds)	Enter the time period (n seconds) after the **Timeout Delay Time** expires that C•CURE 9000 waits to declare an unresponsive General Purpose Device to be in failure. When this occurs, a message appears in the General Activity Monitor. The default value is 300 seconds.
Header Character	Enter a value (in decimal) to define the first character in a message from the General Purpose Device. Zero (0) indicates that any character can be the first message character. (The default value is zero.) See ASCII Character Codes Chart on Page 88 for more information.
Trailer Character	Enter a value (in decimal) to define the last character in a message from the General Purpose Device. The value cannot be zero (()). (The default value is 13.) See ASCII Character Codes Chart on Page 88 for more information.
Message Resend Count	Enter the number of times C•CURE 9000 should attempt to re-send a message that the General Purpose Device has **not** acknowledged receiving. The default is zero.
Max Buffer Size	Enter the maximum size of the C•CURE 9000 buffer that stores the message from this General Purpose Device. The default is 2000.

General Purpose Device Triggers Tab
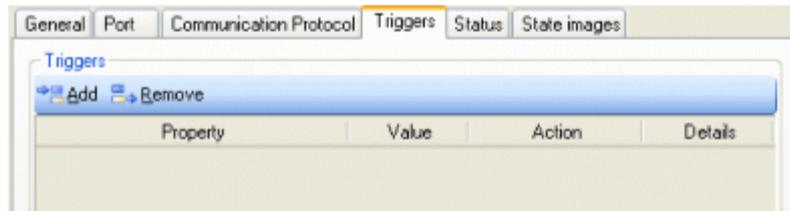
The **General Purpose Device Triggers** tab, shown in Figure 20 on Page 54, allows you to set up **Triggers**, configured procedures used by C•CURE 9000 to activate specific actions when a particular pre-defined condition occurs.

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The tab contains one Action, **Activate Event**, that can be linked to a specific value of a General Purpose Device-related online state and to any host Event configured in the system. Once the General Purpose Device's state matches one of these values, the linked **Activate Event** action is triggered and the user-specified Event is set to an active state (if allowed by the Event, which should be armed at the time).

Typically you could use the activated Event to send an email message, arm a zone, or activate an alarm if the device's state is offline, for example.

By creating new rows and selecting different values for each row, each value of the **Property** field can trigger its own Event. It is also possible to trigger two different Events for the same General Purpose Device state value by creating two rows with the same value and then linking each row to its own Event.

Figure 20: General Purpose Device Editor Triggers Tab

See the following for configuration information:

- General Purpose Device Triggers Tab Definitions on Page 54
- General Purpose Device Triggers Tab Tasks on Page 55

General Purpose Device Triggers Tab Definitions

The **General Purpose Device Triggers** tab has the buttons shown in Table 7 on Page 55 and the fields shown in Table 8 on Page 55.

Table 7: General Purpose Device Editor Triggers Tab Buttons

Button	Name	Description
Add	Add	Click this button create a new row in the **Triggers** table. You have to configure all the fields in the row and select an Event to complete the Add operation. To add a new row after a specific existing row, click the row selector to select a row and then click Add.
Remove	Remove	Click this button to remove a selected row from the **Triggers** table. You have to click the row selector ▸ to select a row to remove. If **no** row is selected, this button is **not** available.

Table 8: General Purpose Device Editor - Triggers Tab Fields

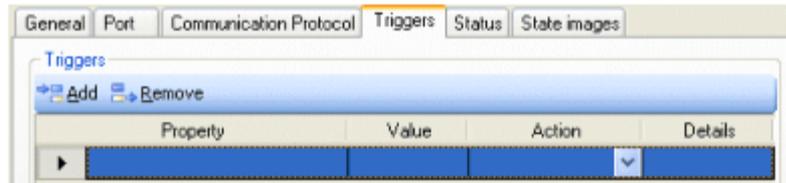| Field	Description
Property	Click in the **Property** field to display ⟨...⟩ and then click this button to display a dialog box with the only available General Purpose Device property, **OnlineStatus**. Double-click this Property to select it.
Value	Click the down-arrow to select a value from the drop-down list. When the General Purpose Device's **State** property matches this value, the event you specify in the **Event** field is activated.
Action	Click the down-arrow to select **Activate Event** (the only type available) from the drop-down list. This action will be executed when the value of the General Purpose Device's online **state** matches that selected in the **Value** field.
Details	The name of the event configured for this row (read-only) is entered by the system once you make a selection in the **Event** field.
Event	Click ⟨...⟩ in this field to select the event to be activated if the State for the current row on the grid has the specified value. NOTE: Switching rows in the grid updates this field with the user-selected event so that each row can have its own event to activate.

General Purpose Device Triggers Tab Tasks

You use the Triggers tab to accomplish the tasks listed below, needed to configure a General Purpose Device. The procedural steps for each task are detailed in the following subsections.

■ To Configure General Purpose Device Triggers on Page 56
  (You can create as many triggers as you wish for any General Purpose Device.)

■ To Delete a General Purpose Device Trigger on Page 58

To Configure General Purpose Device Triggers

1. Create or modify a General Purpose Device. See Creating a General Purpose Device on Page 44
   or Configuring/Modifying a General Purpose Device on Page 44.

2. On the **General Purpose Device Editor**, click the **Triggers** tab to open.

3. Click **Add** to create a new trigger row, as shown in the following figure.

a. Click in the **Property** field to display [...] and click this button.

   A selection list opens with the only property available for General Purpose Devices.

b. Click **Online Status** property to add it to the row.

c. Click the down-arrow in the **Value** field to display a drop-down list of values for the selected
   property.
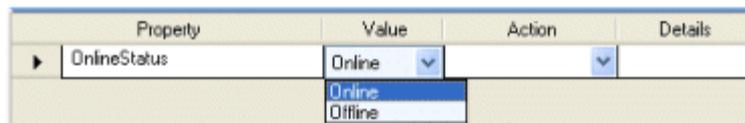
d. Click the **Value** you want to activate the event for this trigger to add it to the row.

Example:

Online

e. Click the down-arrow in the **Action** field to display a drop-down list containing **Activate Event** as the only available action. Click **Activate Event** to add it to the row as the action that will be executed when the General Purpose Device's Online state matches that selected in the **Value** field.

The **Event** field displays on the bottom of the tab.
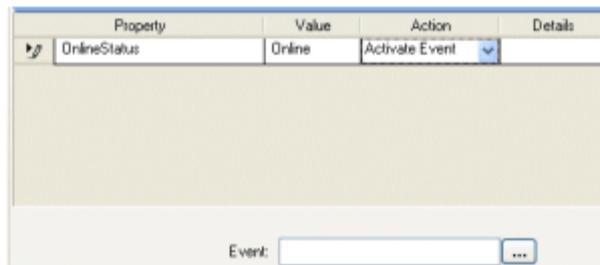
f. Click in the **Event** field to display a selection list of the host events currently configured in the C•CURE 9000 system, and then click an Event to select it.

The system enters the name of the Event you select in the **Details** field for the row when you click anywhere outside the **Event** field. This event will be activated whenever the **State** for the current row on the grid matches the value specified in that row.

The tab now appears as shown in the following example.
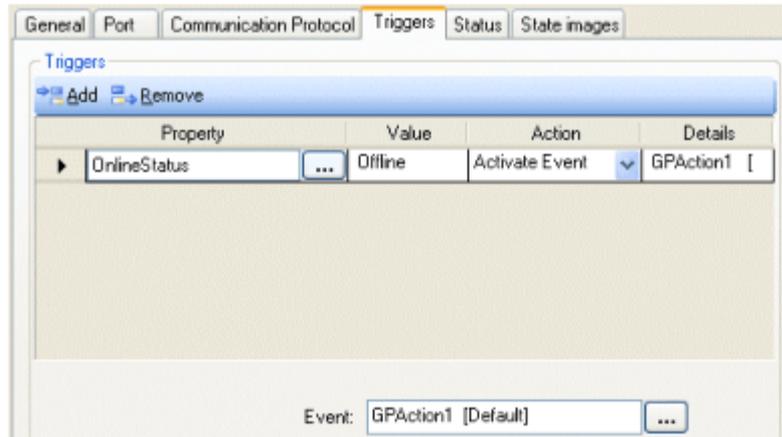
4. To create more triggers for this General Purpose Device, repeat Steps 3 through 3f for each trigger you want.

    Switching rows in the grid updates the **Event** field with the user-selected event so that each row can have its own event to activate.

To Delete a General Purpose Device Trigger

1. On the **Triggers** tab, click a row to select it.
2. Click **Delete** to delete the trigger row.

General Purpose Device Status Tab

The **General Purpose Device Status** tab, shown in Figure 21 on Page 59, provides a read-only listing of critical information about the operational status of this General Purpose Device:

Status – displays the values: Online, Offline, or Unknown

Figure 21: General purpose Device Editor Status Tab
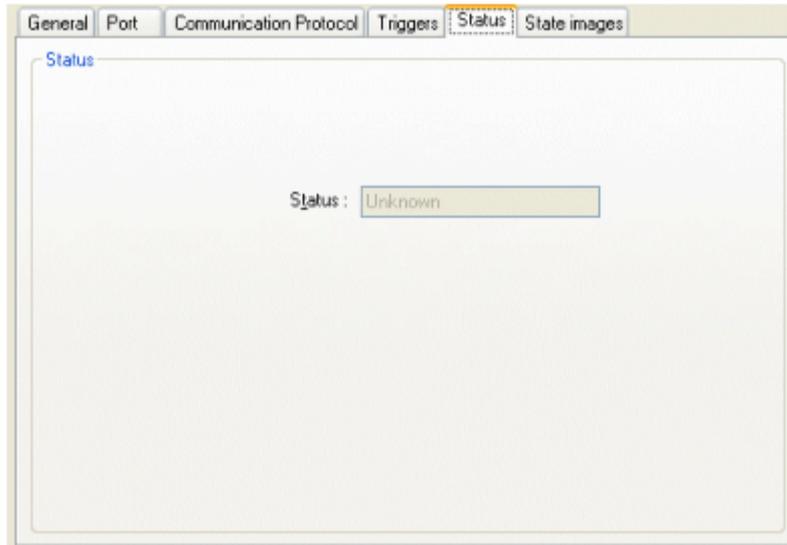
General Purpose Device State Images Tab

The **General Purpose Device State Images** tab, shown in Figure 22 on Page 59, provides a means to change the default images used to indicate states for the General Purpose Device on the Monitoring Station. You can select other images to display for this General Purpose Device or return to the default images, as described in State Images Tab Tasks on Page 60.

Figure 22: General Purpose Device Editor State Images Tab
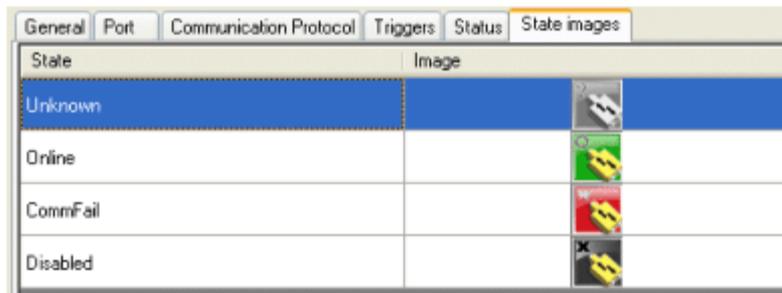
State Images Tab Tasks

To Change an Image

1. Double-click the default image in the tab to open a Windows file selection dialog box.

2. If necessary, navigate to find the new image.

3. Select the desired replacement image and click **Open**.

   The new image replaces the default image and displays in the **State Images** tab.

To Restore the Default Image

- Right-click the replacement image in the General Purpose Device **State Images** tab and select **Restore Default**.

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General Purpose Message Protocol Editor

The **General Purpose Message Protocol Editor** in C•CURE 9000 lets you create/modify Message Protocols that interpret incoming messages from third party devices and support acknowledgment for these messages—activating and deactivating General Purpose Device Monitoring Points. The **General Purpose Message Protocol Editor**, shown in Figure 23 on Page 61, has only one tab—the General tab.

Figure 23: General Purpose Message Protocol Editor
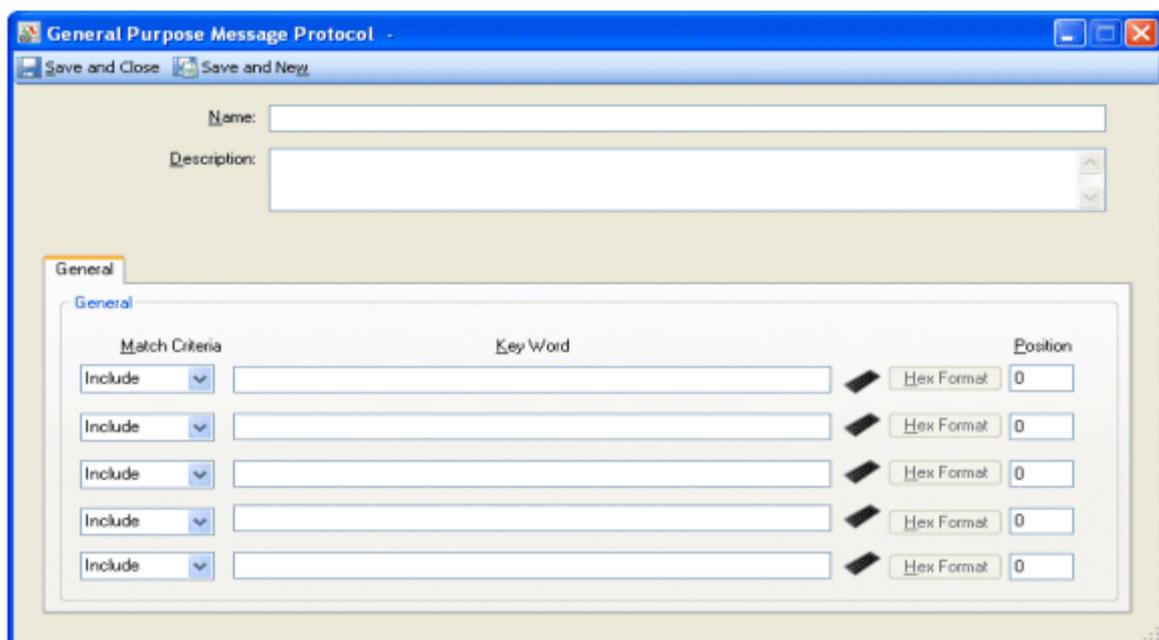
See the following for more information:

- General Purpose Message Protocol Editor Definitions on Page 62

- General Purpose Message Protocol Tasks on Page 64

Accessing the General Purpose Message Protocol Editor

You can access the **General Purpose Message Protocol Editor** from the General Purpose Interface pane.

To Access the General Purpose Message Protocol Editor

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the **General Purpose Message Protocol** Folder and click **New** on the sub-menu that appears.

- or -

Click the **General Purpose Interface** drop-down list and select **General Purpose Message Protocol**.

Click 🡒 ▾ to open a Dynamic View showing a list of all existing General Purpose Message Protocols, right-click the General Purpose Message Protocol you want to change, and click **Edit** from the context menu that appears.

The **General Purpose Message Protocol Editor** opens with the **General** tab displayed, as shown in Figure 23 on Page 61.

General Purpose Message Protocol Editor Definitions

The **General Purpose Message Protocol Editor** has the the buttons described in Table 9 on Page 63 and the fields shown in Table 10 on Page 63, while the **General** tab has the buttons shown in Table 11 on Page 63 and the fields shown in Table 12 on Page 64.

General Purpose Message Protocol Editor

Table 9: General Purpose Message Protocol Editor Buttons

Button	Description
Save and Close	Click this button when you have completed changes to the General Purpose Message Protocol and wish to save those changes. The **General Purpose Message Protocol Editor** closes.
Save and New	Click this button when you have completed any changes to the General Purpose Message Protocol and wish to save those changes and also create a new General Purpose Message Protocol. The General Purpose Message Protocol you were editing is saved, and a new General Purpose Message Protocol opens (either blank or including template information if you were using a template to create the new General Purpose Message Protocol).
❌	Click this button when you want to close the **General Purpose Message Protocol Editor** without saving your changes. A warning appears asking whether or not you want to save your changes before closing the editor. Click **Yes** to exit and save and **No** to exit and cancel your changes.

Table 10: General Purpose Message Protocol Editor Fields

Fields/Buttons	Description
Name	Enter a unique name, up to 100 characters, to identify the General Purpose Message Protocol.
Description	Enter a description of the General Purpose Message Protocol, up to 255 characters.

Table 11: General Purpose Message Protocol Editor - General Tab Buttons

Button	Name	Description
	Keyboard Button	Click this button to open the Virtual Keyboard. For information, see Using the Virtual Keyboard on Page 85.
Hex Format	Hex Format Button	NOTE: This button becomes available only after you make an entry in the **Key Word** field. Click this button to display the **Hex Format** dialog box showing the Hex format of the string entered as the **Key Word**.

Table 12: General Purpose Message Protocol Editor - General Tab Fields

Fields/Buttons	Description
Match Criteria (1-5)	Click to select the match criteria for the key word from the drop-down list: • **Include** — indicates that the system will expect the key word you enter in the next field in a message from the General Purpose Device. This is the default. • **Exclude** —indicates that the system will **not** expect the key word you enter in the next field in a message from the General Purpose Device.
Key Word (1-5)	Enter a key word up to 50 characters long for this message protocol, by clicking to open the Virtual Keyboard. For information, see Using the Virtual Keyboard on Page 85. NOTE: You cannot use the ASCII Hex 00 (zero zero) in a keyword.
Position (1-5)	Enter a position for this key word: • Value > 0 (zero) — indicates that the 'software device receiver' searches for the key word only at this position when mapping a message. • Value = 0 (zero) — indicates that the key word can be at any position in the message. This is the default. NOTE: The **position** is measured in character spaces. **Example:** To find "CDE" in the string "ABCDEFG", you would enter "3" in the Position field and "CDE" in the Keyword field. NOTE: You must also count any spaces or unprintable characters that appear in the message. **Example:** A carriage return <CR> or a line feed <LF>

General Purpose Message Protocol Tasks

The C•CURE 9000 **General Purpose Message Protocol Editor** allows you to accomplish the following tasks:

- Creating a General Purpose Message Protocol on Page 65

- Creating a General Purpose Message Protocol Template on Page 65

- Configuring/Modifying a General Purpose Message Protocol on Page 66

Because the following General Purpose Message Protocol tasks are generic in C•CURE 9000—viewing, deleting, and setting a property for, see the following for information:

- Viewing a List of General Purpose Devices on Page 47

- Deleting a General Purpose Device on Page 49

- Using Set Property for General Purpose Devices on Page 46 – the only properties available for General Purpose Message Protocols are **Description** and **template**.

Creating a General Purpose Message Protocol

You can create a new General Purpose Message Protocol using the **General Purpose Message Protocol Editor**.

To Create a General Purpose Message Protocol

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the **General Purpose Message Protocol** Folder and click **New** on the sub-menu that appears, as shown in Accessing the General Purpose Message Protocol Editor on Page 61.

   The **General Purpose Message Protocol Editor** opens, as shown in Figure 23 on Page 61.

3. You can now configure the new General Purpose Message Protocol.

Creating a General Purpose Message Protocol Template

You can create a new template for a General Purpose Message Protocol. A General Purpose Message Protocol template saves you time because you do not have to re-enter the same Message Protocol information again.

To Create a General Purpose Message Protocol Template

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the **General Purpose Message Protocol** Folder and click **New Template** on the sub-menu that appears, as shown in Accessing the General Purpose Message Protocol Editor on Page 61.

   The **General Purpose Message Protocol Editor** where you can configure the General Purpose Message Protocol template opens (see Figure 23 on Page 61).

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 General Purpose Message Protocol 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:

   GenPurpose Message Protocol 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/Modifying a General Purpose Message Protocol

You can configure a new General Purpose Message Protocol or modify an existing one using the **General Purpose Message Protocol Editor**.

To Configure a General Purpose Message Protocol

1. Create a new General Purpose Message Protocol or modify an existing General Purpose Message Protocol.

   The **General Purpose Message Protocol Editor** opens (see Figure 23 on Page 61) for you to edit the General Purpose Message Protocol making changes as you wish in the fields on the editor.

2. Type a **Name** and **Description** for the General Purpose Message Protocol that sufficiently identifies this Message Protocol and its purpose.

3. You can enter up to five Key Words for a Message Protocol as follows:

   a. Select a **Match Criteria** for the **Key Word**, either **Include** or **Exclude**, from the drop-down list.

   b. Enter a text string for the Message Protocol Key Word. (For information about creating the text string, see Using the Virtual Keyboard on Page 85.)

   c. Enter a Position for the Key Word.

   The Key Words you define for the Message Protocol are ANDED together.

4. To save the General Purpose Message Protocol, click **Save and Close.**

   - or -

Alternatively, if you want to save the General Purpose Message Protocol and then create a new one, click **Save and New.** The current General Purpose Message Protocol is saved and closed, but the **General Purpose Message Protocol Editor** remains open ready for a new General Purpose Message Protocol.

General Purpose Action Editor

The **General Purpose Action Editor**, shown in Figure 24 on Page 68, in C•CURE 9000 lets you create and modify Actions—the outgoing and acknowledgment messages. The **General Purpose Action Editor** has only one tab—the **General** tab.

Figure 24: General Purpose Action Editor
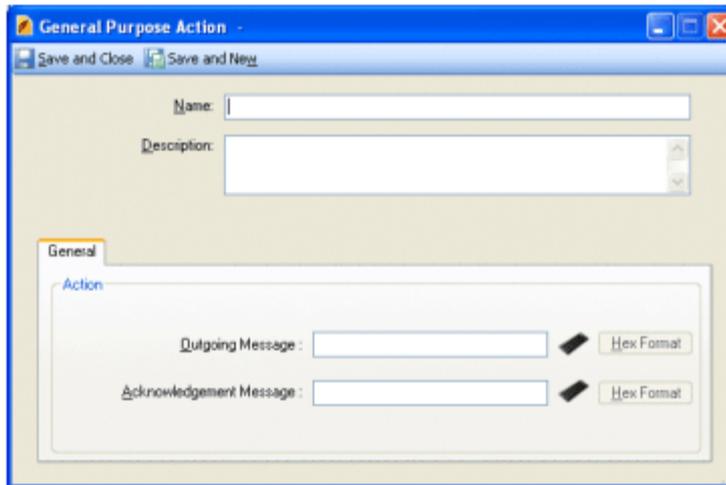
See the following:

- General Purpose Action Editor Definitions on Page 69
- General Purpose Action Tasks on Page 71

Accessing the General Purpose Action Editor

You can access the **General Purpose Action Editor** from the General Purpose Interface pane.

To Access the General Purpose Action Editor

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the **General Purpose Action** Folder and click **New** on the sub-menu that appears, as shown in Figure 25 on Page 69.

Figure 25: General Purpose Interface Context Menu-General Purpose Action
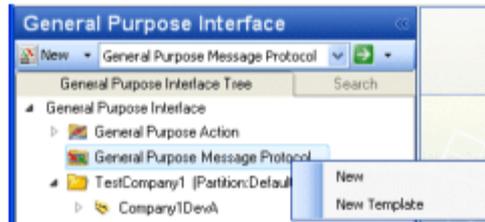
- or -

Click the **General Purpose Interface** drop-down list and select **General Purpose Action**.

Click ![icon] to open a Dynamic View showing a list of all existing General Purpose Actions, right-click the General Purpose Message Action you want to change, and click **Edit** from the context menu that appears.

Figure 26: General Purpose Interface Context Menu – General Purpose Action
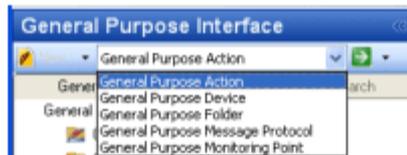
The **General Purpose Action Editor** opens with the **General** tab displayed, as shown in Figure 24 on Page 68.

General Purpose Action Editor Definitions

The **General Purpose Action Editor** has the buttons described in Table 13 on Page 70 and the fields shown in Table 14 on Page 70, while the **General** tab has the buttons shown in Table 15 on Page 70 and the fields shown in Table 16 on Page 71.

Table 13: General Purpose Action Editor Buttons

Button	Description
Save and Close	Click this button when you have completed changes to the General Purpose Action and wish to save those changes. The General Purpose Action Editor closes.
Save and New	Click this button when you have completed any changes to the General Purpose Action and wish to save those changes and also create a new General Purpose Action. The General Purpose Action you were editing is saved, and a new General Purpose Action opens (either blank or including template information if you were using a template to create the new General Purpose Action).
	Click this button when you want to close the General Purpose Action Editor without saving your changes. A warning appears asking whether or not you want to save your changes before closing the editor. Click Yes to exit and save and No to exit and cancel your changes.

Table 14: General Purpose Action Editor Fields

Fields/Buttons	Description
Name	Enter a unique name, up to 100 characters, to identify the General Purpose Action.
Description	Enter a description of the General Purpose Action, up to 255 characters.

Table 15: General Purpose Action Editor - General Tab Buttons

Button	Name	Description
	Keyboard Button	Click this button to open the Virtual Keyboard
Hex Format	Hex Format Button	NOTE: This button becomes available only after you make an entry in the **Outgoing Message or Acknowledgement Message** field. Click this button to display the **Hex Format** dialog box showing the Hex format of the string entered as the **Outgoing Message or Acknowledgement Message**.

Table 16: General Purpose Action Editor - General Tab Fields

Fields/Buttons	Description
Outgoing Message	Define a message for C•CURE 9000 to send to the General Purpose Device.
Acknowledgment Message	Define a message for C•CURE 9000 to receive from the General Purpose Device as an acknowledgment for its outgoing message.

General Purpose Action Tasks

The C•CURE 9000 **General Purpose Action Editor** allow you to accomplish the following tasks:

- Creating a General Purpose Action on Page 71
- Creating a General Purpose Action Template on Page 72
- Configuring/Modifying a General Purpose Action on Page 72

Since the following General Purpose Action tasks are generic in C•CURE 9000 — viewing, deleting, and setting a property for, see the following for information:

- Viewing a List of General Purpose Devices on Page 47
- Using Set Property for General Purpose Devices on Page 46 – the properties available for General Purpose Actions are **Acknowledgement Message**, **Description**, **Outgoing Message**, and **template**.
- Deleting a General Purpose Device on Page 49

Creating a General Purpose Action

You can create a new General Purpose Action using the **General Purpose Action Editor**.

To Create a General Purpose Action

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the **General Purpose Action** Folder and click **New** on the sub-menu that appears, as shown in Accessing the General Purpose Action Editor on Page 68.

   The **General Purpose Action Editor** opens, as shown in Figure 24 on Page 68.

3. You can now configure the new General Purpose Action.

Creating a General Purpose Action Template

You can create a new template for a General Purpose Action. A General Purpose Action template saves you time because you do not have to re-enter the same Action information again.

To Create a General Purpose Action Template

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Right-click the **General Purpose Action** Folder and click **New Template** on the sub-menu that appears, as shown in Figure 26 on Page 69.

    The **General Purpose Action Editor** where you can configure the General Purpose Action template opens (see Figure 28 on Page 77).

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 General Purpose Action 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:

    GenPurpose Action 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/Modifying a General Purpose Action

You can configure a new General Purpose Action or modify an existing one using the **General Purpose Action Editor**.

To Configure a General Purpose Action

1. Create a new General Purpose Action or modify an existing General Purpose Action.

    The **General Purpose Action Editor** opens (see Figure 24 on Page 68) for you to edit the General Purpose Action making changes as you wish

2. Type a **Name** and **Description** for the General Purpose Action that sufficiently identifies this Action and its purpose.

3. Enter text strings for the outgoing and acknowledgement messages for this General Purpose Action. (For information about creating the message text strings, see Using the Virtual Keyboard on Page 85.)

4. To save the General Purpose Action, click **Save and Close**.

   - or -

   Alternatively, if you want to save the General Purpose Action and then create a new one, click **Save and New**. The current General Purpose Action is saved and closed, but the **General Purpose Device Editor** remains open ready for a new General Purpose Device.

General Purpose Monitoring Point Editor

The **General Purpose Monitoring Point Editor** lets you create and modify Monitoring Points that can activate events for a particular General Purpose Device.

The **General Purpose Monitoring Point Editor** has four tabs. Click on the following for more information:

- General Purpose Monitoring Point General Tab on Page 77
- General Purpose Monitoring Point Triggers Tab on Page 82
- General Purpose Monitoring Point Status Tab on Page 83
- General Purpose Monitoring Point State Images Tab on Page 83

See the following for configuration information:

- General Purpose Monitoring Point General Tab Definitions on Page 78
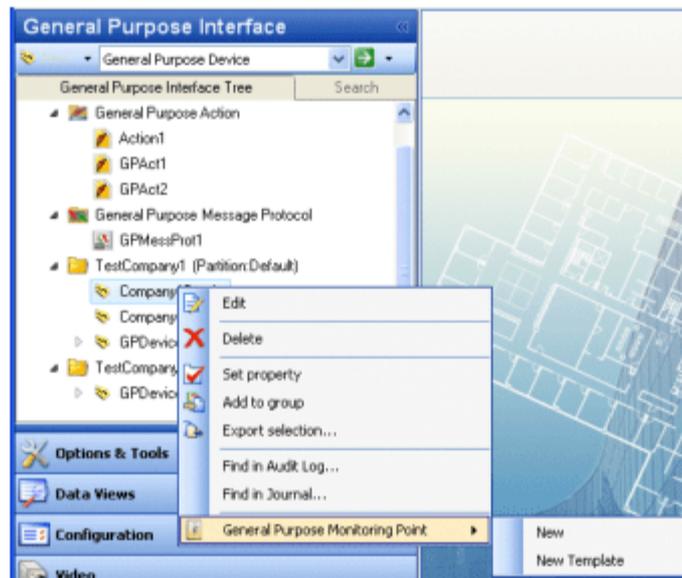- General Purpose Monitoring Point Tasks on Page 79

Accessing the General Purpose Monitoring Point Editor

You can access the **General Purpose Monitoring Point Editor** from the General Purpose Interface pane.

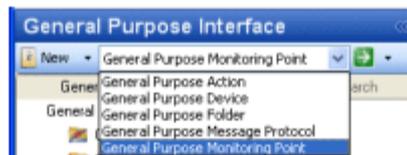### To Access the General Purpose Monitoring Point Editor

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Click ▸ to the left of the Company Folder folder containing the General Purpose Device for which you want to create the Monitoring Point to expand the tree.

3. Right-click the desired General Purpose Device to open the context menu, click **General Purpose Monitoring Point**, and then click **New** on the sub-menu that appears, as shown in Figure 27 on Page 75.

Figure 27: General Purpose Interface Context Menu - General Purpose Monitoring Point

- or -

Click the **General Purpose Interface** drop-down list and select **General Purpose Monitoring Point**.

Click to open a Dynamic View showing a list of all existing General Purpose Monitoring Points, right-click the General Purpose Monitoring Point you want to change, and click **Edit** from the context menu that appears.

The **General Purpose Monitoring Point Editor** opens with the **General** tab displayed, as shown in Figure 28 on Page 77. (For examples of the other tabs, see the cross references to figures in Step 2 on Page 74).

General Purpose Monitoring Point Editor Definitions

The **General Purpose Monitoring Point Editor** has the buttons described in Table 17 on Page 76 and the fields shown in Table 18 on Page 76.

Table 17: General Purpose Monitoring Point Editor Buttons

| Button	Description
Save and Close	Click this button when you have completed changes to the General Purpose Monitoring Point and wish to save those changes. The General Purpose Monitoring Point Editor closes.
Save and New	Click this button when you have completed any changes to the General Purpose Monitoring Point and wish to save those changes and also create a new General Purpose Monitoring Point. The General Purpose Monitoring Point you were editing is saved, and a new General Purpose Monitoring Point opens (either blank or including template information if you were using a template to create the new General Purpose Monitoring Point).
❌	Click this button when you want to close the **General Purpose Monitoring Point Editor** without saving your changes. A warning appears asking whether or not you want to save your changes before closing the editor. Click **Yes** to exit and save and **No** to exit and cancel your changes.

Table 18: General Purpose Monitoring Point Editor Fields

Field/Button	Description
Name	Enter a unique name, up to 100 characters, to identify the General Purpose Monitoring Point.
Description	Enter a description of the General Purpose Monitoring Point, up to 255 characters.
Enabled	Select this check box to put the General Purpose Monitoring Point online.
Partition	A read-only field displaying the name of the Partition to which this General Purpose Monitoring Point belongs. (This field is visible only if the C·CURE 9000 system is partitioned.) NOTE: The General Purpose Monitoring Point derives its Partition from the General Purpose Device it was created for. If the device's Partition is changed, then the Monitoring Point's Partition changes accordingly.

General Purpose Monitoring Point General Tab

The **General Purpose Monitoring Point General** tab, shown in Figure 28 on Page 77, lets you define a variety of different messages for a particular Monitoring Point for the device.

Figure 28: General Purpose Monitoring point Editor General Tab
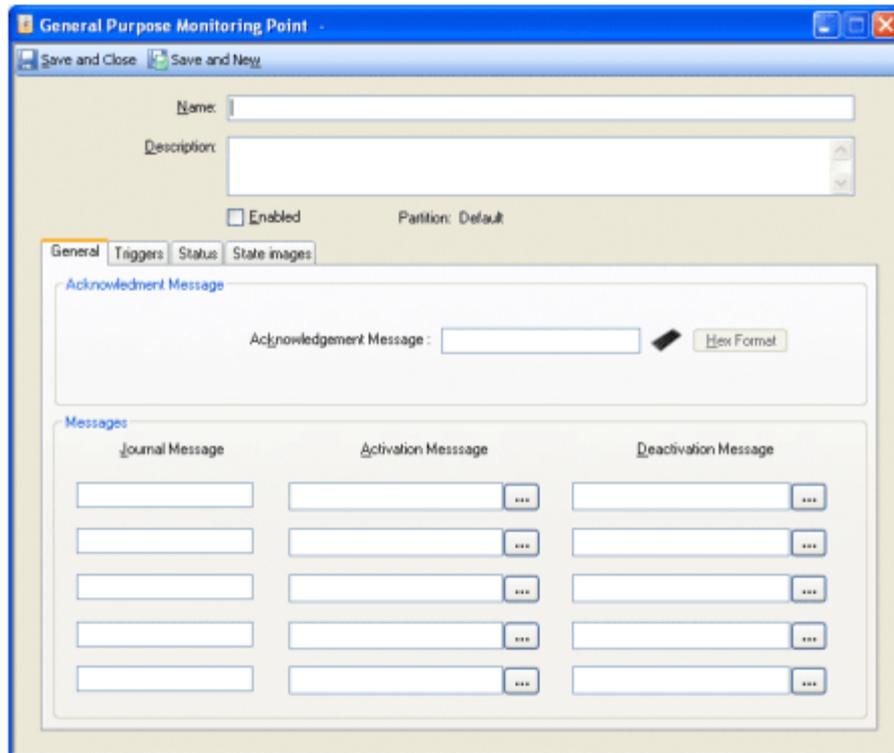
For more information, see:

■ General Purpose Monitoring Point General Tab Definitions on Page 78

■ General Purpose Monitoring Point Tasks on Page 79

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General Purpose Monitoring Point General Tab Definitions

The **General Purpose Monitoring Point General** tab has the buttons shown in Table 19 on Page 78 and the fields shown in Table 20 on Page 78.

Table 19: General Purpose Monitoring Point Editor - General Tab Buttons

Button	Name	Description
	Keyboard Button	Click this button to open the Virtual Keyboard. For information, see Using the Virtual Keyboard on Page 85.
Hex Format	Hex Format Button	NOTE: This button becomes available **only** after you enter the Acknowledgment Message string in the field. Click this button to display the **Hex Format** dialog box showing the Hex format of the string entered in the **Acknowledgment Message** field.

Table 20: General Purpose Monitoring Point Editor - General Tab Fields

Fields/Buttons	Description
Acknowledgment Message	
Acknowledgment Message	Enter the message string that C•CURE 9000 sends to the General Purpose Device as the acknowledgment message after mapping an incoming message from the device. • Double-click , the Keyboard button, to open the Virtual Keyboard that allows you to create and edit text strings for a General Purpose Device. For procedural information, see Using the Virtual Keyboard on Page 85.
Messages	
Journal Message (1 through 5)	Enter a meaningful word to identify the message logged in the Historical Journal for this General Purpose Monitoring Point.
Activation Message (1 through 5)	Click [...] and select a General Purpose incoming Message Protocol from the dialog box that opens to trigger this General Purpose Monitoring Point to be activated.
Deactivation Message (1 through 5)	Click [...] and select a General Purpose incoming Message Protocol from the dialog box that opens to trigger this General Purpose Monitoring Point to be deactivated.

General Purpose Monitoring Point Tasks

The C•CURE 9000 **General Purpose Monitoring Point Editor** allow you to accomplish the following tasks:

- Creating a General Purpose Monitoring Point on Page 79
- Creating a General Purpose Monitoring Point Template on Page 80
- Configuring/Modifying a General Purpose Device on Page 44

Since the following General Purpose Monitoring Point tasks are generic in C•CURE 9000—viewing, deleting, and setting a property for, see the following for information:

- Viewing a List of General Purpose Devices on Page 47
- Deleting a General Purpose Device on Page 49
- Using Set Property for General Purpose Devices on Page 46 – the properties available for General Purpose Actions are **Acknowledgement Message**, **Description**, **Enabled**, and **Template**.

Creating a General Purpose Monitoring Point

You can create a new General Purpose Monitoring Point using the **General Purpose Monitoring Point Editor**.

To Create a General Purpose Monitoring Point

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Click ▷ to the left of the Company Folder folder containing the General Purpose Device for which you want to create the Monitoring Point. to expand the tree.

3. Right-click the desired General Purpose Device to open the context menu, click **General Purpose Monitoring Point**, and then click **New** on the sub-menu that appears, as shown in Figure 27 on Page 75.

   The **General Purpose Monitoring Point Editor** opens. (For examples of this Editor and its tabs, see Figure 28 on Page 77and Figure 31 on Page 84.

4. You can now configure the new General Purpose Monitoring Point.

5. To save your new General Purpose Monitoring Point, click **Save and Close**.

- or -

Alternatively, if you want to save the General Purpose Monitoring Point and then create a new one, click **Save and New.** The current General Purpose Monitoring Point is saved and closed, but the **General Purpose Monitoring Point Editor** remains open ready for a new General Purpose Monitoring Point.

Creating a General Purpose Monitoring Point Template

You can create a new template for a General Purpose Monitoring Point. A General Purpose Monitoring Point template saves you time because you do not have to re-enter the same Monitoring Point information again.

To Create a General Purpose Monitoring Point Template

1. Click the **General Purpose Interface** button in the Navigation Pane to open the General Purpose Interface Tree.

2. Click ▸ to the left of the Company Folder folder containing the General Purpose Device for which you want to create the Monitoring Point. The contents of the folder display.

3. Right-click the desired General Purpose Device to open the context menu, click **General Purpose Monitoring Point**, and then click **New Template** on the sub-menu that appears, as shown in Figure 27 on Page 75.

   The **General Purpose Monitoring Point Editor** opens. (For examples of this Editor and its tabs, see Figure 28 on Page 77 and Figure 31 on Page 84.

4. 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 General Purpose Monitoring Point from that template, these values are already filled in.

5. In the **Name** field, enter the name you wish to use for the template

   Example:

   GenPurposeMonitoring Point Template1

6. To save the template, click **Save and Close**.

   The template will be available as an option on the pull-down Template menu.

## Configuring/Modifying a General Purpose Monitoring Point

You can configure a new General Purpose Monitoring Point or modify an existing one using the **General Purpose Monitoring Point Editor**.

To Configure a General Purpose Monitoring Point

1. Create a new General Purpose Monitoring Point or modify an existing General Purpose Monitoring Point.

   The **General Purpose Monitoring Point Editor** opens (see Figure 28 on Page 77) for you to edit the General Purpose Monitoring Point making changes as you wish in the fields on the top of the editor and on any of the tabs.

2. Type a **Name** and **Description** for the General Purpose Monitoring Point that sufficiently identifies this Monitoring Point and its purpose and click the **Enabled** check box to put the Monitoring Point online.

3. Enter a text string for the Acknowledgement Message for this Monitoring Point on the **General** tab (see Figure 28 on Page 77).
   (For information about creating the message text string, see Using the Virtual Keyboard on Page 85.)

4. Use the **General** tab to configure message types for any of this Monitoring Point's five Activated Statuses.

   a. In the **Journal Message** field enter a term to identify this message when it is logged in the Historical Journal.

   b. Click [...] in the **Activation Message** field to display a selection list of the General Purpose Message Protocols currently configured in the C•CURE 9000 system.
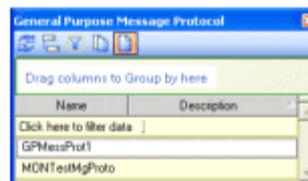
   — Click a Message Protocol to select it as the message that causes this Monitoring Point status to be activated.

   c. Click [...] in the **Deactivation Message** field to display a selection list of the General Purpose Message Protocols currently configured in the C•CURE 9000 system (see the preceding figure), and then click a Message Protocol to select it as the message that causes this Monitoring Point status to be deactivated.

5. Use the **Triggers** tab (see Figure 29 on Page 82) to configure triggers that can activate Event Actions when any of the five General Purpose Monitoring Point's Activated Statuses has a certain value (is either activated or deactivated).

6. Use the **State Images** tab (see Figure 31 on Page 84) to change the default images used to indicate states for the General Purpose Monitoring Point on the Monitoring Station (**unknown**, **activated**, **deactivated**, **disabled**), or to return to the default images.

7. When you have finished configuring/modifying the General Purpose Monitoring Point, make sure that you select the **Enabled** check box on the top of the editor to put the Monitoring Point online.

8. To save the General Purpose Monitoring Point, click **Save and Close**.

- or -

Alternatively, if you want to save the General Purpose Monitoring Point and then create a new one, click **Save and New.** The current General Purpose Monitoring Point is saved and closed, but the **General Purpose Monitoring Point Editor** remains open ready for a new General Purpose Monitoring Point.

General Purpose Monitoring Point Triggers Tab

The **General Purpose Monitoring Point Triggers** tab, shown in Figure 29 on Page 82, allows you to set up **Triggers**, configured procedures used by C•CURE 9000 to activate specific actions when a particular pre-defined condition occurs.

This tab contains one Action, **Activate Event**, that can be linked to a specific value of a General Purpose Monitoring Point-related online state and to any host Event configured in the system.

Figure 29: General Purpose Monitoring Point Triggers Tab

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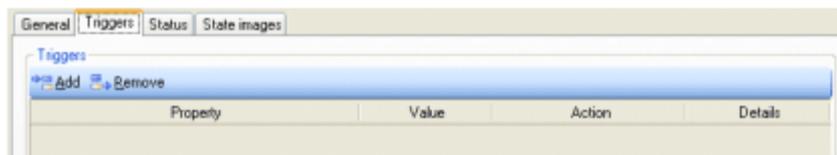
Since the Triggers tab is generic in C•CURE 9000, see the following for information:

- General Purpose Device Triggers Tab on Page 53
- General Purpose Device Triggers Tab Definitions on Page 54
- General Purpose Device Triggers Tab Tasks on Page 55

General Purpose Monitoring Point Status Tab

The **General Purpose Monitoring Point Status** tab, shown in Figure 30 on Page 83, provides a read-only listing of critical information about the operational status of this General Purpose Monitoring Point:

- Status – displays the values: Activated, Deactivated, or Unknown

Figure 30: General Purpose Monitoring Point Editor Status Tab
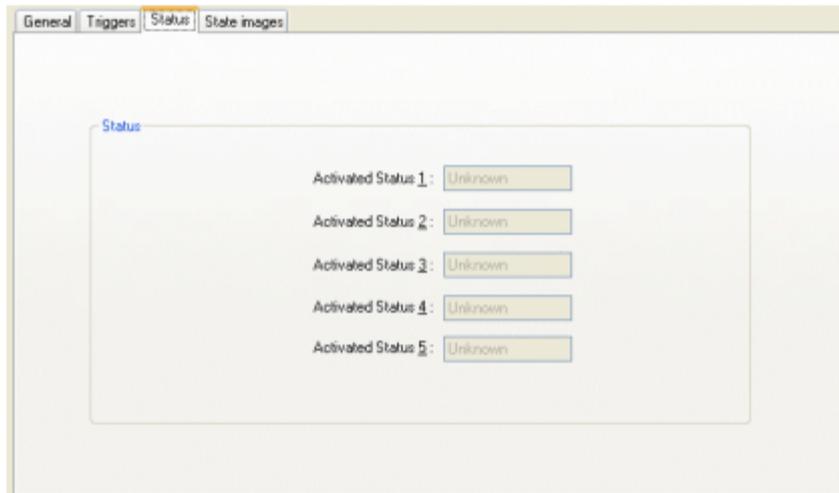
General Purpose Monitoring Point State Images Tab

The **General Purpose Monitoring Point State Images** tab, shown in Figure 31 on Page 84, provides a means to change the default images used to indicate states for the General Purpose Monitoring Point on the Monitoring Station. You can select other images to display for this General Purpose Monitoring Point or return to the default images, as described in the procedures that follow.

Figure 31: General Purpose Monitoring point Editor State Images Tab
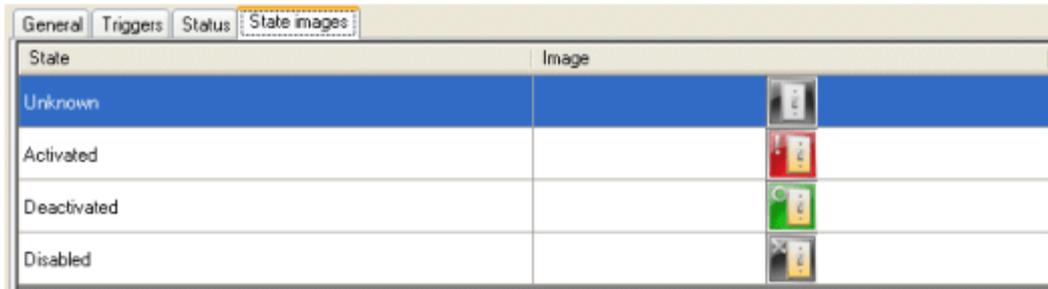
State Images Tab Tasks

To Change an Image

1. Double-click the default image in the tab to open a Windows file selection dialog box.

2. If necessary, navigate to find the new image.

3. Select the desired replacement image and click **Open**.

   The new image replaces the default image and displays in the **State Images** tab.

To Restore the Default Image

- Right-click the replacement image in the General Purpose Monitoring Point **State Images** tab and select **Restore Default**.

Using the Virtual Keyboard

The Virtual Keyboard, shown in Figure 32 on Page 85, appears to enter text into the following General Purpose Interface fields:

- **General Purpose Device General** tab to enter the Poll Command/Poll Command Acknowledgement.

- **General Purpose Message Protocol Editor** to enter a Key Word.

- **General Purpose Action Editor** to enter the Outgoing Message/Acknowledgement Message.

- **General Purpose Monitoring Point General** tab to enter the Acknowledgement Message.

- **C•CURE 9000 Event Editor** Action tab to enter text and use variables.

Figure 32: Virtual Keyboard
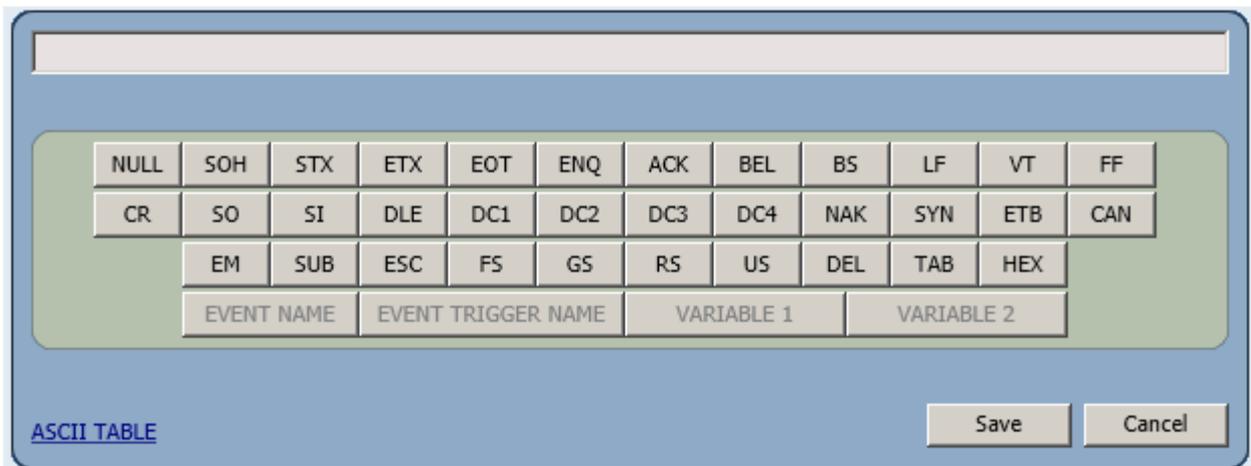
Virtual Keyboard Definitions

The Virtual Keyboard keys, buttons, and fields are described in Table 21 on Page 86.

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Table 21: Virtual Keyboard Keys, Buttons, and Fields

Field/Button	Description
Display Field	The system enters/displays all the keys you click in this field.
EVENT NAME	The name of event that activated the General Purpose Interface Dynamic Action. **Usage Example 1:** Data content in an outgoing message is configured as "This is a test" <EVENT_NAME>in the General Purpose Dynamic Action and this action is assigned to a host Event named "CCURE 9000 Event". When the host Event becomes activated, the GPI driver sends out data as "This is a test CCURE 9000 Event". NOTE: EVENT NAME is a predefined keyword in the driver.
EVENT TRIGGER NAME	The name of the object that triggered the event. **Usage Example (jsmith Triggers Event):** Data content in an outgoing message is configured as "This is a test" <EVENT_NAME> activated by <EVENT TRIGGER NAME>" in the General Purpose Dynamic Action and this action is assigned to a host Event named "CCURE 9000 Event". When the host Event becomes activated, the GPI driver sends out data as "This is a test CCURE 9000 Event activated by jsmith". NOTE: EVENT TRIGGER NAME is a predefined keyword in the driver.
VARIABLE 1 VARIABLE 2	Data 1 and Data 2 configured for the Event. Data length maximum: 128 characters. **Usage Example:** Data content in an outgoing message is configured as "This is another test <Variable 1>+<Variable 2>" in the General Purpose Dynamic Action and this action is assigned to a host Event with "Variable 1" as "ABC" and "Variable 2" as "123". When the host Event is activated, the GPI driver sends out data as "This is another test ABC+123". NOTE: VARIABLE 1 and VARIABLE 2 are predefined keywords in the driver.
ASCII TABLE	Opens the ASCII Character Codes Chart.
Save	Click this button to save the selected text shown in the Display field back into the field from which you clicked ✎ .
Cancel	Click this button to close the Virtual Keyboard without saving the selected text.

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Using the Virtual Keyboard To Enter Text into General Purpose Interface Fields

The following procedure uses the example of entering a poll command on the **General Purpose Device General** tab (see Figure 15 on Page 41).

To Enter Text into General Purpose Interface Fields

1. Go to the field on the General Purpose Interface Editor for which you want to enter text.

   Example

   Poll Command field on **General Purpose Device General** tab.

2. Click ✐ next to the field. The Virtual Keyboard opens.

3. Enter your text using the Character keys. For assistance, click **ASCII TABLE** to open the ASCII Character Codes Chart.

   Example

   Hello on the Character Keyboard
   CR (Carriage Return) on the Control Character Keyboard.

   The keys you entered appear in the Display field as you type, as shown in the completed example shown in Figure 33 on Page 87.

   Figure 33: Character Key Usage Example

   Hello<CR>

4. Click **Save** to save your text.

   The General Purpose Interface editor field for which you were entering text reappears with your entry, and the Hex Format button next to the field becomes available, as shown in Figure 34 on Page 88.

5. Click this button to open the **Hex Format** box with the Hex representation of your text, also shown in Figure 34 on Page 88.

Figure 34: Poll Command Entry with Hex Format Shown
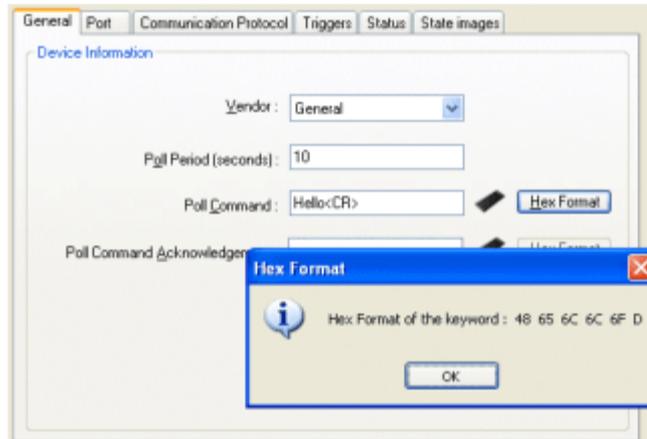
6. Click **OK** to close the box.

   To edit text you entered using the Virtual Keyboard, click [icon] again next to the desired field.

ASCII Character Codes Chart

The ASCII Table opens as a PDF in Adobe Reader when you click **ASCII TABLE** on the Virtual Keyboard.

- The ASCII numbers 0 – 9 correspond to Decimal 48 – 57 and the ASCII capital letters A – Z correspond to Decimal 65 – 90.

- The ASCII Control Characters (which are not printable) are formatted in C•CURE 9000 in standard representation inside an opening angle bracket "<" and a closing angle bracket ">".

Example:

LF, the ASCII code representing a new line, appears as <LF>.

These ASCII Control Characters NUL – SP and DEL correspond to Decimal 0 – 32 and Decimal 127.

- The headers and trailers can be any character, except that the trailer **cannot** be zero. They frequently are carriage returns, nulls, spaces, and no data. Notice that there is a difference between a null, a space, a zero, and no data.

Example:

To enter ASCII CR (a carriage return) in decimal as the header or trailer character, you would enter 13, which would appear in C•CURE 9000 as <CR>.

Creating Events

The **Event Editor** is accessed from the C•CURE 9000 **Configuration** pane.

When you configure such an Event, you have to select both a specific General Purpose Device and a specific Action for the Event. When the Event is activated, C•CURE 9000 sends the outgoing message configured for the selected Action to the selected Device.

NOTE For detailed information about Events, see the Events chapter in the *C•CURE 9000 Software Configuration Guide*.

There are two Actions that you can select:

- General Purpose Interface Action on Page 90 – Used to configure C•CURE 9000 Events with an Action that links to a General Purpose Device.

- General Purpose Interface Dynamic Action on Page 93 – Used to configure C•CURE 9000 Events with an Action using variables that link to a General Purpose Device.

General Purpose Interface Action

To Configure a General Purpose Action

1. Click the **Configuration** pane button , click the **Configuration** drop-down list, and then select **Event**.

2. Click **New** to create a new Event.

   - or -

   Click ▣ to open a **Dynamic View** showing a list of all existing **Event** objects, right-click the Event you want to modify, and click **Edit** from the context menu that appears.

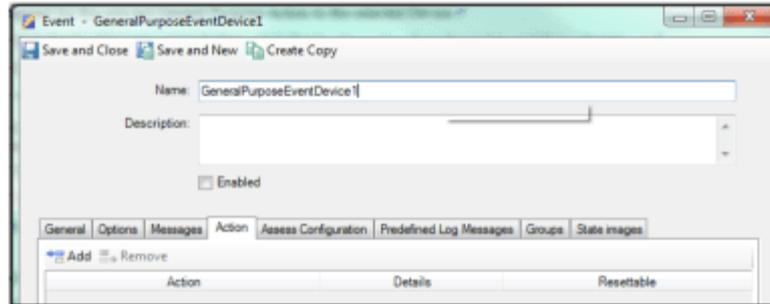   The **Event Editor** opens with the **General** tab displayed.

3. Enter a name for this **Event** in the **Name** field and an optional **Description** in the Description field.
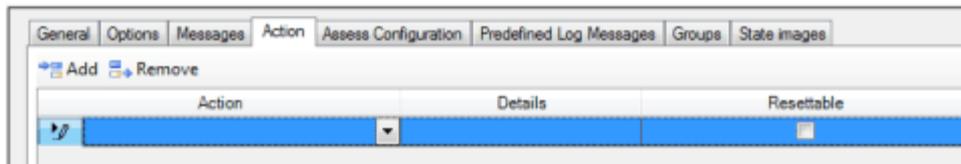
   Example

   GeneralPurposeEventDevice1

4. On the **General** tab, click the **Armed** checkbox.

5. Click the **Action** tab, as shown in Figure 35 on Page 91.

Figure 35: Event Editor Action Tab

6. Click **Add** to create a new Action row, as shown in Figure 36 on Page 91.

Figure 36: Create a New Action

a. Click ⌄ in the **Action** field to display a drop-down list of actions.

b. Scroll down and select **General Purpose Interface Action**.

   General Purpose Interface Action is entered in the row and the **Device** and **Action** fields displayed on the bottom of the tab.

c. Click [...] in the **Device** field to display a selection list of the General Purpose Devices currently configured in the C•CURE 9000 system, and then click a Device to select it.
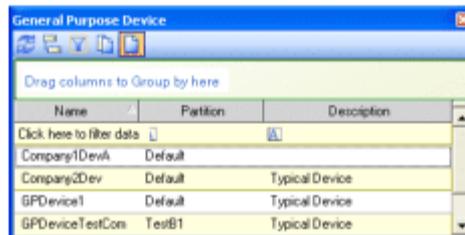

d. Click [...] in the **Action** field to display a selection list of the General Purpose Actions currently configured in the C•CURE 9000 system, and then click an Action to select it.

e. Click the **Resettable** check box if you want an operator responding to this Event to be able to reset this General Purpose Interface Action without acknowledging the Event. (This allows Monitoring Station personnel to manually reset the action caused by the Event. Reset Actions do not require Event acknowledgment.)

The tab now appears as shown in the following example.
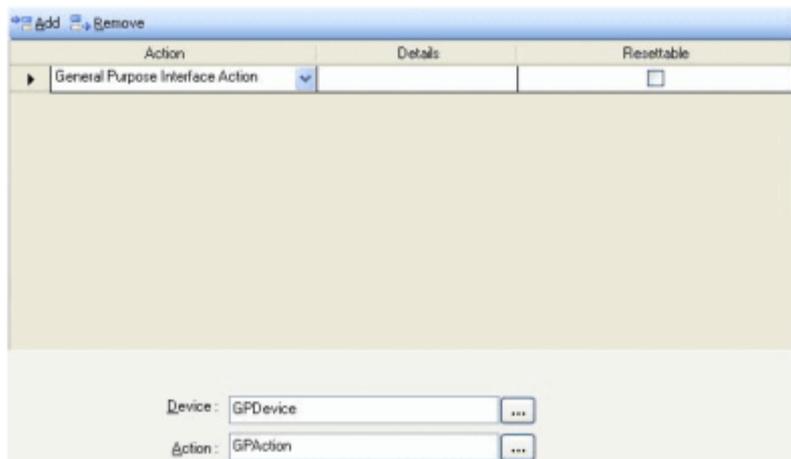
(When you reopen the **Action** tab once you have saved and closed this Event, the **Details** field displays the name of the Action selected in the lower **Action** field.)

7. To create more General Purpose Interface Actions for this Event, repeat Step 6 for each Action you want.

8. Configure other aspects of the Event as desired. Among the parameters that you can configure are the following:

   • Priority of the Event

   • Messages sent when the Event activates the Action

- Acknowledgment requirements
- Messages or secondary Event triggered if this Event is deactivated

9. Make sure that the Event is both **enabled** and **armed**.

10. Click **Save and Close**.

General Purpose Interface Dynamic Action

General Purpose Interface Dynamic Action allows you to define values for Variable 1 and Variable 2 in the Event Editor.

1. Click the **Configuration** pane button , click the **Configuration** drop-down list, and then select **Event**.

2. Click **New** to create a new Event.

   - or -

   Click 🔁 to open a **Dynamic View** showing a list of all existing **Event** objects, right-click the Event you want to modify, and click **Edit** from the context menu that appears.

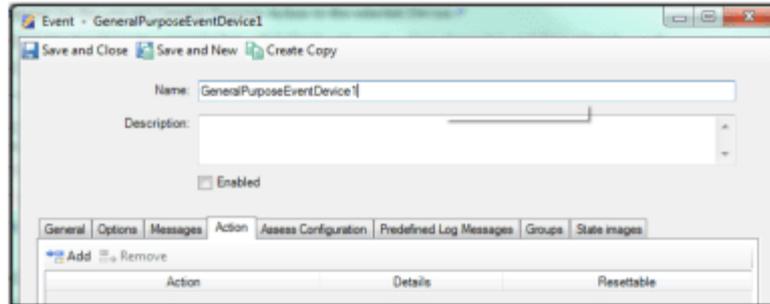   The **Event Editor** opens with the **General** tab displayed.

3. Enter a name for this **Event** in the **Name** field and an optional **Description** in the Description field.
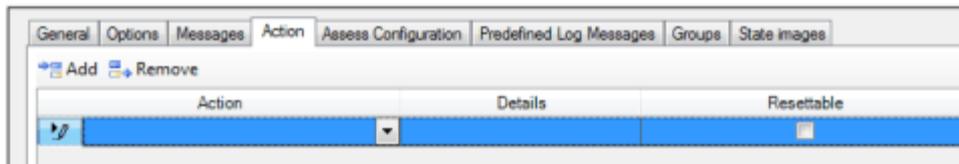
   Example

   GeneralPurposeEventDevice1

4. On the **General** tab, click the **Armed** checkbox.

5. Click the **Action** tab, as shown in Figure 35 on Page 91.

Figure 37: Event Editor Action Tab

6. Click **Add** to create a new Action row, as shown in Figure 36 on Page 91.

Figure 38: Create a New Action

a. Click ⌄ in the **Action** field to display a drop-down list of actions.

b. Scroll down and select **General Purpose Interface Dynamic Action**.

General Purpose Interface Dynamic Action is entered in the row and the **Device**, **Action**, **Variable 1** and **Variable 2** fields displayed on the bottom of the tab.

7. Click […] in the **Device** field to display a selection list of the General Purpose Devices currently configured in the C•CURE 9000 system, and click a Device to select it.
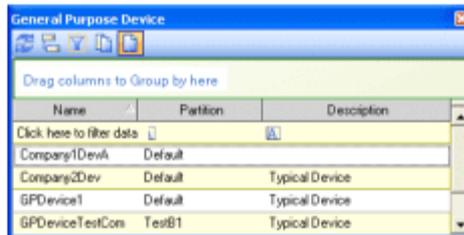
8. Click […] in the **Action** field to display a selection list of the General Purpose Actions currently configured in the C•CURE 9000 system, and click an Action to select it.

Creating Events
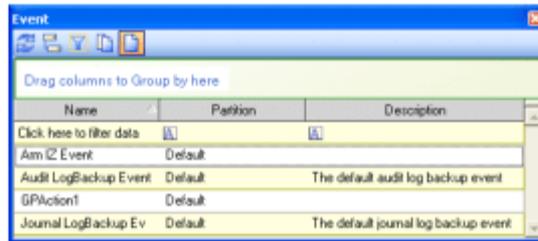
9. Click ![pen] in the **Variable 1** field to open the Virtual Keyboard. See Virtual Keyboard Definitions on Page 85.

Enter text using the Character keys. For assistance, click **ASCII TABLE** to open the ASCII Character Codes Chart.

See Using the Virtual Keyboard on Page 85 for information about using the Virtual Keyboard.

10. Repeat Step 9 in the **Variable 2** field.

11. Click the **Resettable** check box if you want an operator responding to this Event to be able to reset this General Purpose Interface Dynamic Action without acknowledging the Event. (This allows Monitoring Station personnel to manually reset the action caused by the Event. Reset Actions do not require Event acknowledgment.)
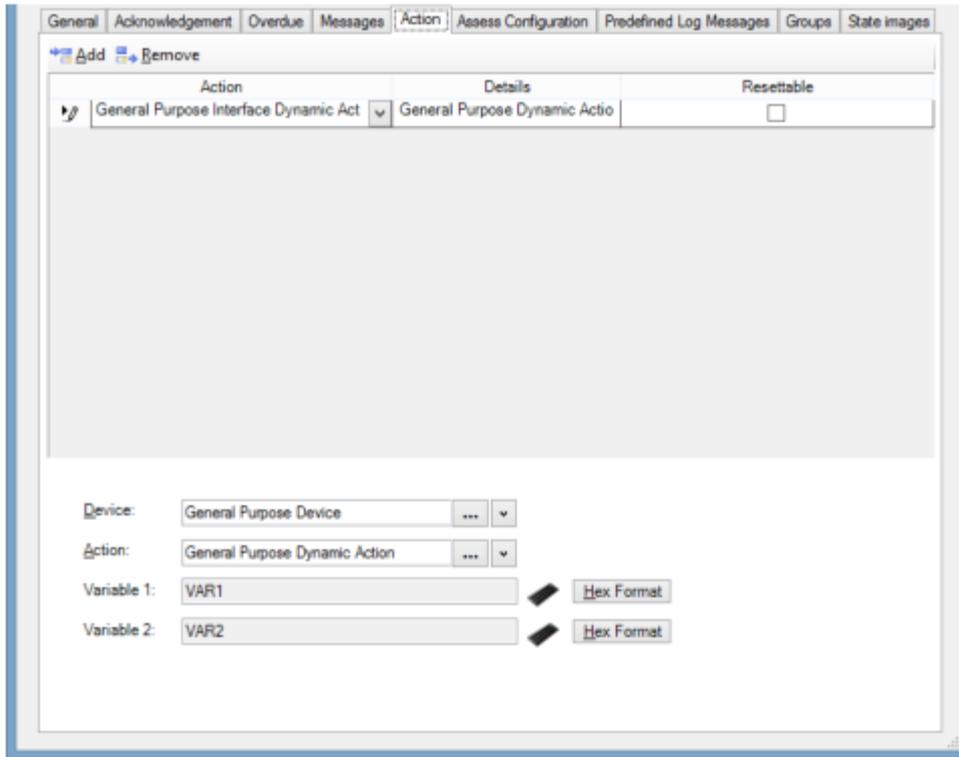
12. To create more General Purpose Interface Dynamic Actions for this Event, repeat Step 6 though Step 11 to add more Actions.