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Commend Intercom integration for C•CURE 9000 User Guide

Version 2.90

Access Control and Event Management

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Johnson Controls

Table of Contents

Preface

The *C•CURE 9000 Commend Intercom Integration User 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 **CCURE\Manuals** folder.

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

Online Help

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

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.

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- 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.

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1

Overview

This chapter introduces Commend Intercom Systems and lists the components that are supported by Software House for use with the C•CURE 9000 security system.

In this chapter

Understanding Commend Intercom Systems

An intercommunication device (intercom) is an electronic communications system that provides dedicated voice communications, such as private dialog or announcements, throughout a facility. Such a facility could encompass a single building, a campus, or a collection of offices located across the globe.

Intercoms that are installed within a facility include a fixed microphone and speaker unit that are hard-wired to a central control panel. Larger systems might connect all of the rooms in a school or hospital to a central office. Intercoms in larger buildings often function as public address systems, capable of broadcasting announcements.

Within each facility, an intercom system comprises stations and substations connected by an intercom server. Intercom stations can be portable or installed at doors or wall locations in buildings, on desktops or in vehicles. Intercoms can also be connected with hard-wired and mobile telephones or handheld communications devices or to other intercom systems over voice or data lines. Stations are analogous to telephones with dial-keypads, also called control desks. Substations are often flat, single or dual button intercoms mounted on a wall.

Commend Intercom Systems and C•CURE 9000

Commend manufactures a diverse array of intercom products. The C•CURE 9000 application can be integrated with three Commend Intercom servers that share a common protocol. These servers are: GE100, GE200, GE300, GE700, and GE800.

Each Commend GE class server has a limit to the number of stations that it can administer, so the number of servers deployed throughout a facility is dependent on the number of stations required. Commend servers can be connected together to form an intercom network. The C•CURE 9000 application can be connected to a Commend GE class server with a terminal device server such as a Lantronix UDS-10. The intercom network or stand-alone server issues commands delineated by a dedicated protocol. The C•CURE 9000 application connects to this server and monitors and sends commands that identify calls placed among all the stations tied to this server's intercom network.

C•CURE 9000 monitors those substations and groups of substations identified and configured with C•CURE 9000 Commend Intercom editors by displaying their state, sending calls, receiving calls, etc. The state changes of intercom stations and substations are also monitored in the C•CURE 9000 maps, activity viewer and journal. In the maps, each station is represented by an icon that identifies a particular state. These states are identified more thoroughly in Chapter 3, Configuration . The activity journal is discussed in Chapter 4, Activity Journal.

A Commend Intercom system can remotely direct an event management framework to control electronic or electromechanical devices such as cameras, door latches, vehicle barriers, alarms, or signal lights. The C•CURE 9000 interface can also be used to transmit intercom-only commands over the IP network for synergistic operation with existing Commend Intercom systems.

Example:

> In many schools, tones signaling the change of classes are often sounded over an intercom, replacing electromechanical bells used in older schools. Additionally, many schools now use audio intercoms that interface with a video system to identify visitors attempting to gain access to a locked school building.

Intercom Over IP

Commend Intercom systems can interconnect with C•CURE 9000 access control systems via a digital connection over the internet. Digital intercom stations are connected using Cat5 cable and can use existing computer networks for remote communication.

Data networks allow transmission of diverse data. Voice over IP (VoIP) is the transmission of speech using Internet Protocol (IP), particularly in telephony. For professional security and communication solutions, Commend provides the Intercom over IP (IoIP®).

Benefits of IoIP

Historically, only telephones used the IP network to transmit speech as a VoIP solution. Today intercom systems can use the IP network not only to transmit speech, but also to take on increasingly complex control and reporting tasks. The principle of IoIP is that new IP enabled-servers can be connected together in a network so that complex solutions can be used both locally and remotely.

Integration of Commend Intercom systems with C•CURE 9000 allows the processes to be triggered and controlled by creating and enabling
C•CURE 9000 events. These events can be reported on the C•CURE 9000 Monitoring Station and in the Journal, while video cameras provide a visual record of the event.

Example:

An event can be configured so that when a wall-mounted substation is activated at a door, the Commend Intercom/C•CURE 9000 interface reports a visitor requesting entry at a door, while simultaneously activating a camera that provides a live video feed to the Monitoring Station. Once the visitor is recognized, the corresponding door latching mechanism can be activated, allowing entry.

Intercom Over Internet Protocol Technology

When networking via IP is required to monitor various site locations, the sites need to be linked together. Intercom terminals with digital 2-wire or analog 4-wire technology can be IP-enabled by connecting to an IP Intercom Server. Commend has developed networking solutions for IP, ISDN, E1, and HDSL platforms. Networking intercom servers allows the local intercom system to act as one large system across different sites. All specified functions are available across the entire Intercom network and programming is conducted centrally from a single C•CURE 9000 administration location.

Commend Intercom Components

Connection of the C•CURE 9000 application to an existing Commend Intercom facility can be accomplished through a network router to a switch/hub and then via a terminal server connected to a Commend Intercom Server.

Supported Terminal Server

A **terminal server** is a device that aggregates multiple communication channels. Because these channels are bi-directional, two models emerge:

- Multiple entities connecting to a single resource — the C•CURE 9000 interface
- Single entity connecting to multiple resources — the Commend IoIP facility

The C•CURE 9000 application supports the Lantronix UDS-10 terminal server. The USD-10 is connected to the network hub with an RJ-45 CAT-5 cable from the 10BASE-T connector. To connect a terminal server to a WAN, ensure that gateways, routers, level 3 switches, and firewalls do not affect TCP/IP communications. The Port entry and the IP address that are configured in the Commend Central editor (see Configuring Commend Central on Page 36) correspond directly to the terminal server. Only one terminal server is required per Commend network.

Commend Intercom Servers

The C•CURE 9000 application can be integrated with three Commend Intercom servers that share a common protocol. These servers are:

- GE 100
- GE 200
- GE 300
- GE 700
- GE 800

GE 100 Server

The Commend GE 100 is a microprocessor-controlled intercom server for up to 32 subscribers at one location. The Commend GE 100 allows connection of analog 4-wire stations. It also provides slots for subscriber cards and various interface cards. The Commend GE 100 has a compact plastic housing designed for wall mounting.

The Commend GE 100 allows the following number of simultaneous conversations: 2 Duplex/6 Full Duplex/12 Simplex. The Commend GE 100 is designed to be used for intercom systems limited to one location. The Commend GE 100 also provides the means to forward calls to the public telephone network.

GE 200 Servers

The Commend GE 200 server is a microprocessor-controlled intercom server for up to 32 subscribers at one location. The Commend GE 200 allows connection of digital 2-wire stations and analog 4-wire stations and IP-terminals for IoIP, within one housing. The Commend GE 200 also provides slots for subscriber cards and various interface cards. The Commend GE 200's compact plastic housing is designed for wall mounting.

The number of simultaneous conversations that the Commend GE 200 allows depends on the link cards used. The Commend GE 200 is designed for small intercom systems that are designed as local units for large communication and security systems. The Commend GE 200 also provides the means to forward calls to the public telephone network.

GE 300 Servers

The Commend GE 300 server is a microprocessor controlled intercom server for up to 80 IP-subscribers per housing. This intercom server suits small or medium-sized intercom applications or operates as a network node in larger intercom networks. The GE 300 provides connection of digital 2-wire stations, analog 4-wire, SIP stations, and SIP/VoIP telephones. The Commend GE 300 is designed for wall mounting.

Providing security and communication systems with up to 14,280 networked Intercom Servers. The GE 300 has built-in functions, such as door and gate control, alarms, CCTV integration, and control desks.

GE 700 Servers

Commend's GE 700 is a microprocessor controlled, System Intercom Server designed for rack-mounted 19 inch technology for up to 5,760 subscribers. The Commend GE 700 allows connection of digital 2-wire stations and analog 4-wire stations and IP-terminals for IoIP within one housing. The Commend GE 700 allows 14 free slots for subscriber cards and various interface cards. The Commend GE 700 has a plastic housing of 3 height units for 19 inch racks.

The number of simultaneous analog conversations that the Commend GE 700 provides depends on the link cards used. The Commend GE 700 is designed to be used for medium and large intercom and/or IoIP-systems. The Commend GE 700 allows communication/security systems for up to 120 network-connected intercom servers—analogous to 5,760 stations. The Commend GE 700 also provides the means to forward calls to the public telephone network.

GE 800 Servers

The GE 800 IP-Intercom server allows connection of IP, 2-wire, 4-wire, and SIP-stations as well as additional SIP/VoIP telephones. Designed with 3 rack units for mounting, the integrated functions of the GE 800 servers include, but are not limited to: door and gate control, alarm, video integration, and control desk operations.

The GE 800 server allows security and communication systems with up to 14,280 networked Intercom Servers and 896 IP-Subscribers per housing. It is also possible to forward calls to the public telephone network via VoIP through this server.

IP Intercom Stations

Commend manufactures a variety of intercom stations that are suitable for use with the Commend GE class servers. Typically, wall-mounted stations would be found near doors, pedestrian entries, parking entrances, in elevators, and at emergency call points. One or two button substations can also be used for simple call requests to a central station. Desk-mounted stations are often used for manned security posts such as the Commend Central post, where the C•CURE 9000 application interfaces with a facility's Commend GE class server. Handheld intercom devices and cellular telephones can also be tied into the Commend Intercom system with call forwarding to standard mobile and hard-wired telephone systems. For more information concerning the correct implementation of stations with existing or proposed Commend GE class servers, contact your Commend integrator.

2

Installation

This chapter provides instructions for installing the Commend Intercom Integration software on a C•CURE 9000 server or client system. It also describes how to uninstall the Commend integration.

In this chapter

Overview

C•CURE 9000 must be installed before you install the Commend Intercom Integration. For information on how to install C•CURE 9000, see the *C•CURE 9000 Installation and Upgrade Guide*.

The Commend Intercom Integration must be installed on every C•CURE 9000 server and client system.

The Commend Intercom Integration has the same hardware, software, and disk space requirements as C•CURE 9000. If the target computer can install C•CURE 9000, then it satisfies the Commend Intercom Integration requirements.

You need to perform the basic installation process described in the following pages on each computer in your C•CURE 9000 system.

NOTE Please be advised that the Commend Intercom integration installation will temporarily shut down and restart the C•CURE 9000 Services. Therefore, the Commend Intercom installation should be planned accordingly.

Table 1: Standard Installation Tasks

Task	See...
1. Install C•CURE 9000.	*C•CURE 9000 Installation and Upgrade Guide*
2. Close all open applications and disable antivirus software. 3. Perform the pre-installation steps.	Before You Begin on Page 16.
4. Start the C•CURE 9000 Commend Intercom integration installation program.	Installation on Page 17
5. Verify the license for Commend Intercom Integration by running the C•CURE 9000 Licensing utility on C•CURE 9000 server. 6. If you did not select to restart the C•CURE 9000 server services during the installation procedure, you must manually restart the C•CURE 9000 server services.	*C•CURE 9000 Installation and Upgrade Guide* Starting the Server Application Services on Page 21.

Before You Begin

You should perform the pre-installation steps described below.

Pre-installation Steps

1. If you are installing the Commend Intercom Integration on a corporate network, be sure to coordinate with your corporate network administrator.
2. To perform the Commend Intercom Integration Installation, you must have the appropriate Windows permissions. You must be in the local Administrator group, or have equivalent privileges. See the Microsoft Operating System documentation or your system administrator for more information.

Installation

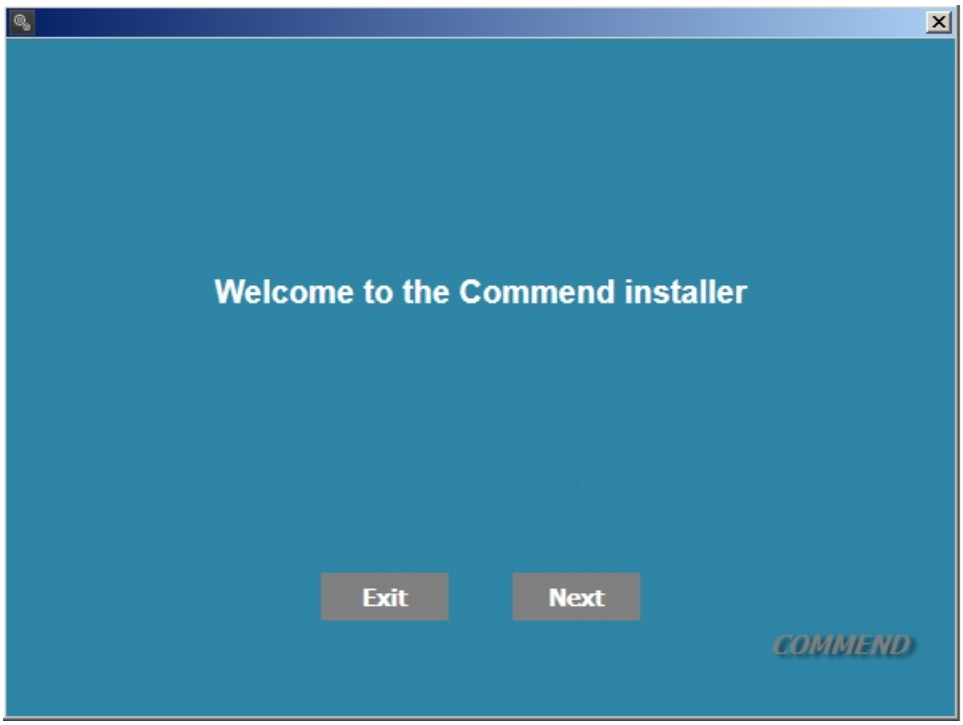
The Commend Intercom integration installation temporarily shuts down and restarts the C•CURE 9000 services. Therefore, the Commend Intercom integration should be planned accordingly.

To Install the Commend Integration:

1. Open the folder and double-click on **setup.exe**.

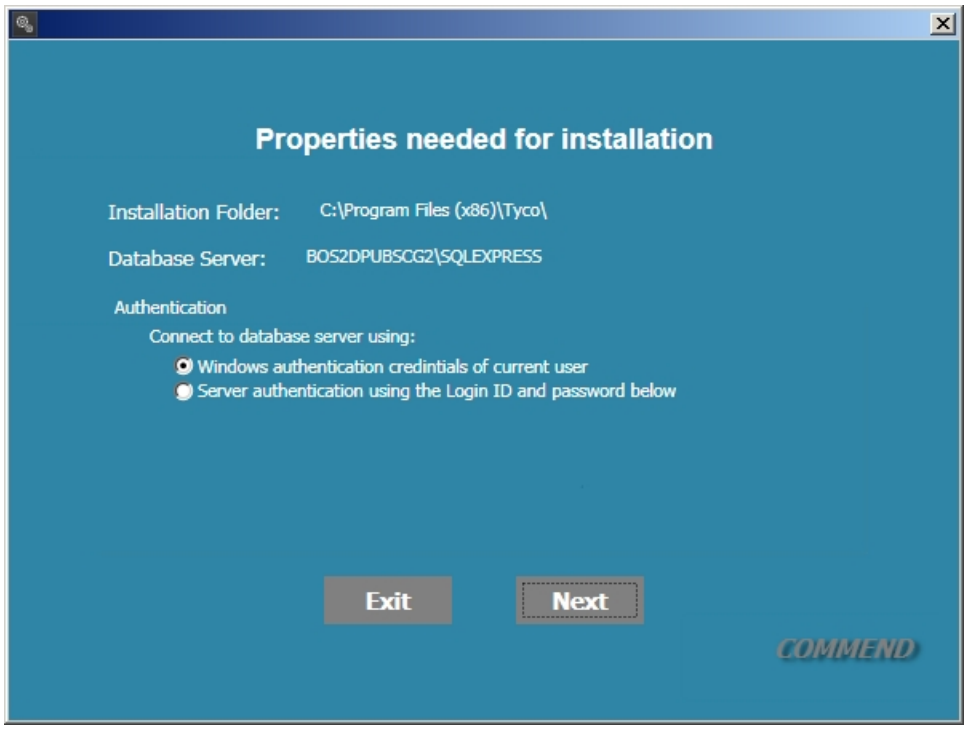
   The Welcome dialog box, Figure 1 on Page 17 opens.

Figure 1: Welcome Dialog Box



The **Properties needed for installation** dialog box, Figure 2 on Page 18, opens if you are installing the Commend Intercom integration on a C•CURE 9000 server computer.

Figure 2: Properties needed for Installation Dialog Box



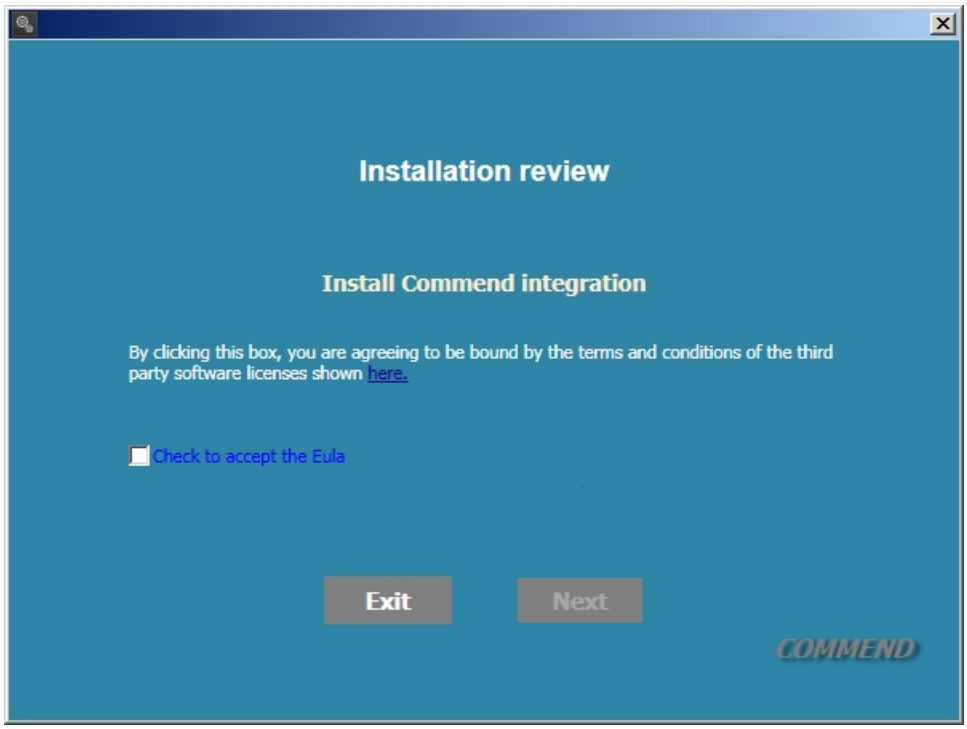
This dialog box allows you to choose the authentication method.

- **Windows authentication credentials of current user** – the default.
- **Server authentication using the Login ID and password below** – if you have previously configured an SQL Server, you can create a Login ID and Password to act as authentication credentials for the SQL Database Server.

2. Click **Next** to continue.

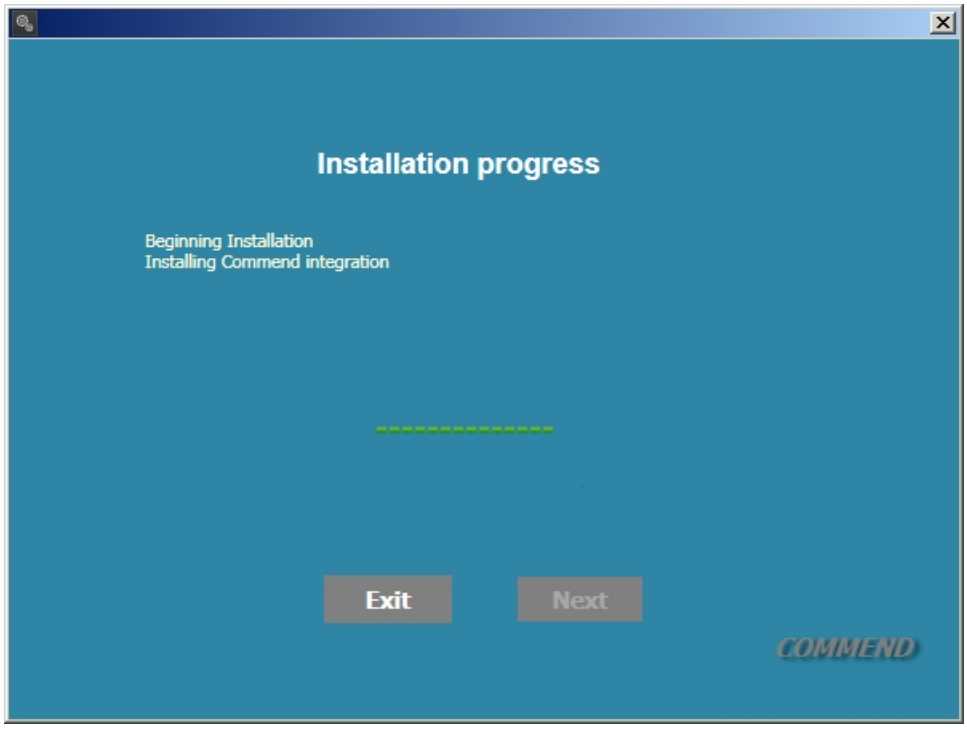
   The Installation review dialog box, Figure 3 on Page 19, opens.

Figure 3: Installation Review Dialog Box



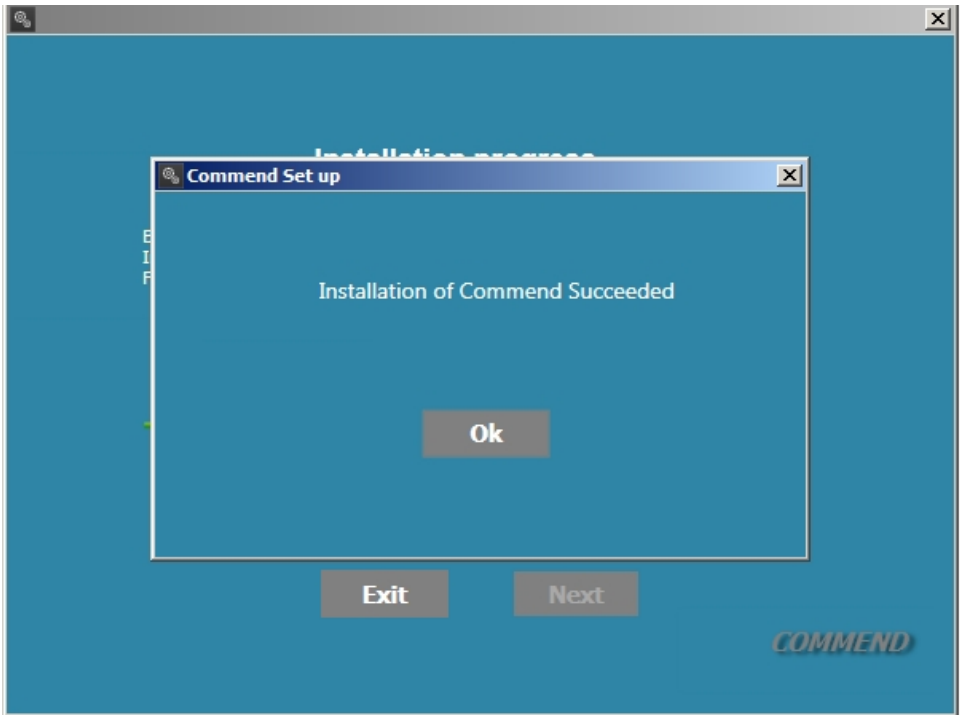
3. Select the **Check to accept the Eula** check box and click **Next.** The Installation progress dialog box, Figure 4 on Page 19, opens.

Figure 4: Installation progress Dialog Box



When the installation is successful, the Commend Set up dialog box, Figure 5 on Page 20, opens.

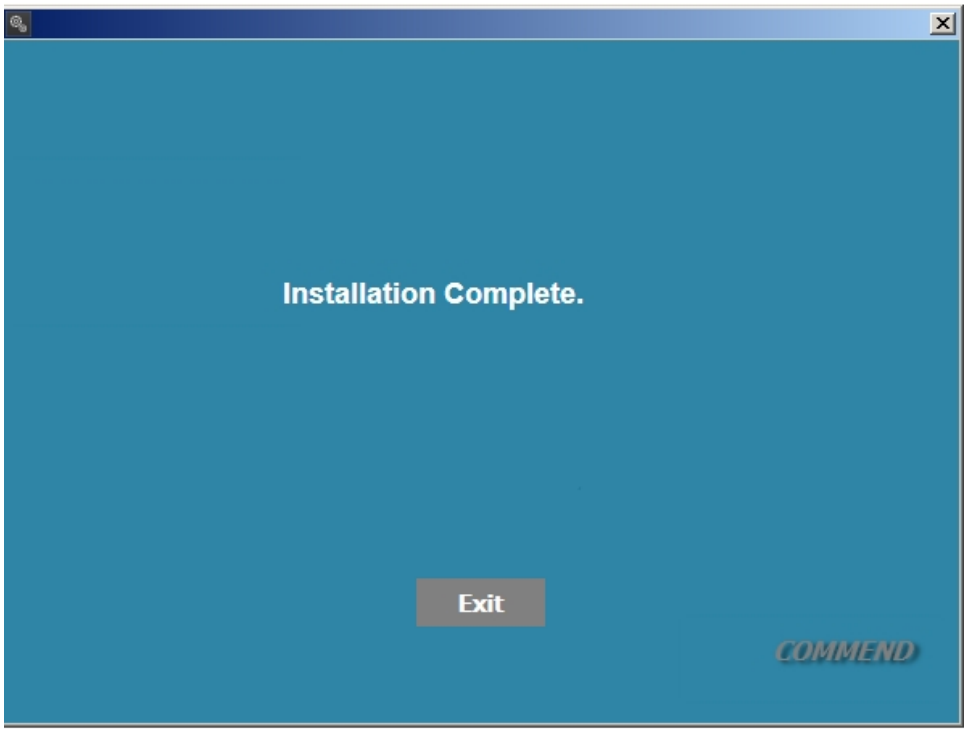
Figure 5: Commend Set up Dialog Box



4. Click **OK**.

   The Installation Complete dialog box, Figure 6 on Page 20, opens.

Figure 6: Installation Complete



5. Click **Exit** to complete the installation.

Starting the Server Application Services

After you install the Commend integration, you must restart the CrossFire Framework Service and the CrossFire Server Component Framework Service before you can configure a Commend Intercom integration object.

To Start the Server Services:

1. From the Start Menu, select **Start > All Programs > Tyco >Server Configuration**. The Server Configuration Application opens.
2. Click the **Services** tab.
3. If the framework services are stopped, start them. Alternatively, if the Framework services are already running, restart them. Select one of the following options:

NOTE You must start the Crossfire Server Component Framework Service before you start the Crossfire Framework Service. The Crossfire Framework Service cannot start until the Crossfire Server Component Framework Service is running.

- To start crossfire framework services, complete the following steps:
  a. Click **Start** beside the **Crossfire Server Component Framework Service**.
  b. Wait for the status of the CrossFire Server Component Framework Service to change to **Running**.
  c. Click **Start** beside the **CrossFire Framework Service**.
  d. Wait for the status of the CrossFire Framework Service to change to **Running**.
- To restart crossfire framework services, complete the following steps:
  a. Click **Stop** beside the **Crossfire Server Component Framework Service** and beside the **CrossFire Framework Service**.
  b. Click **Start** beside the **Crossfire Server Component Framework Service**.
  c. Wait for the status of the CrossFire Server Component Framework Service to change to **Running**.
  d. Click **Start** beside the **CrossFire Framework Service**.
  e. Wait for the status of the CrossFire Framework Service to change to **Running**.

4. Select the **Enabled** check box beside the **Commend Driver Service**, and then click **Start**.

   When the status of the Commend Driver Service changes to **Running**, you can configure Commend Intercom objects in the C•CURE 9000.

Uninstalling the Integration

This section describes how to uninstall the Commend Intercom integration from the Server computer and Client computers in your security system.

The uninstall removes all software components that were installed on the computer by the Commend Intercom integration installation Once the uninstall process completes, the computer will be in a “clean” state.

Uninstalling this integration does not automatically remove objects that were configured in the C•CURE 9000. Before you proceed with this uninstall, you **MUST** manually remove the objects from C•CURE 9000 to avoid potential issues with functions, such as partition deletion.

Unless you intend to reinstall the integration and continue using it, ensure that the objects are deleted before removing the integration.

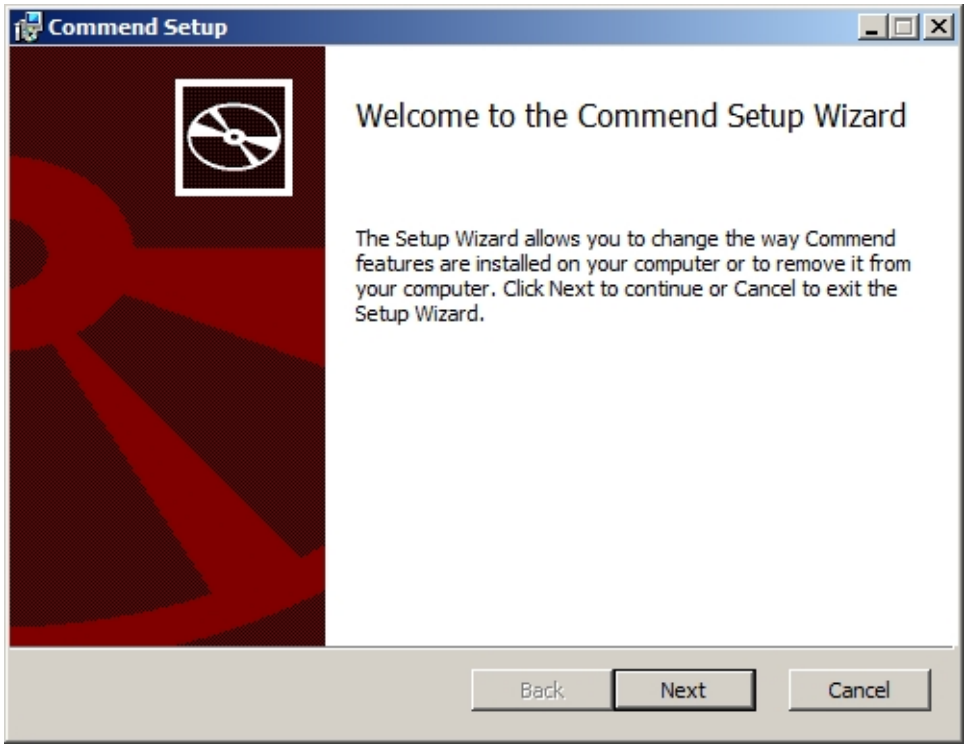
The Commend Intercom integration uninstall procedure shuts down and restarts the C•CURE 9000 services. Therefore, the Commend Intercom integration uninstall should be planned accordingly.

To Uninstall the Commend Intercom Integration:

1. Close all open applications.
2. From the Windows **Start** menu, select **Control Panel>Programs and Features**.
3. In the list, right-click on **Commend** and click **Change**.
4. Click **OK** to continue the uninstall.

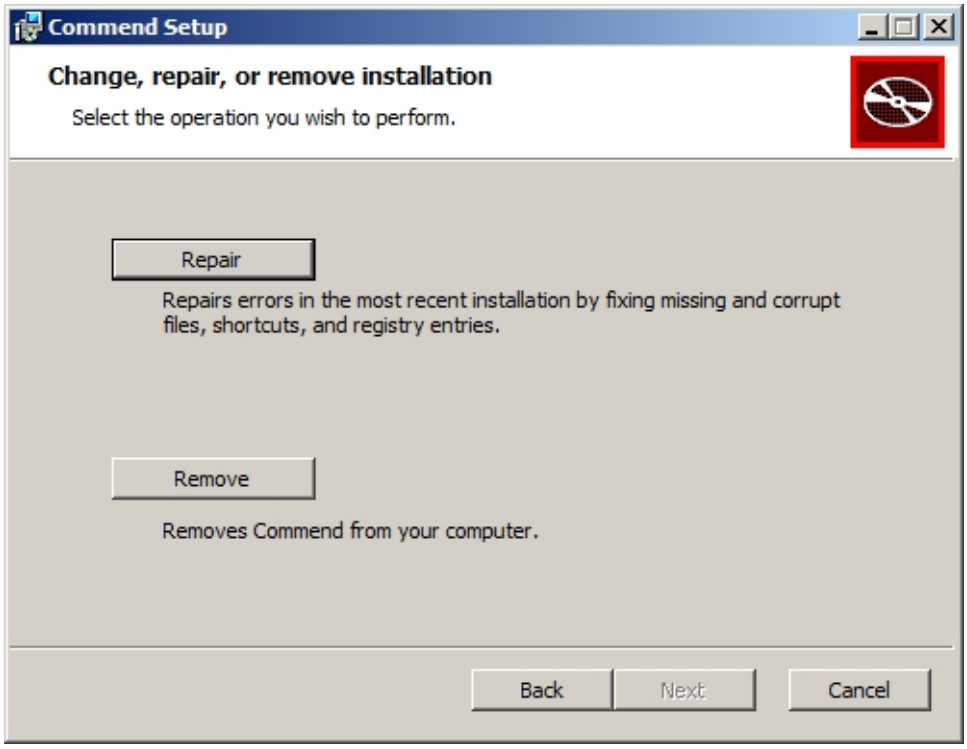
   The Welcome dialog box, Figure 7 on Page 22 opens.

Figure 7: Welcome Dialog Box



5. Click **Next**. The Change, repair, or remove installation dialog box, Figure 8 on Page 23, opens.

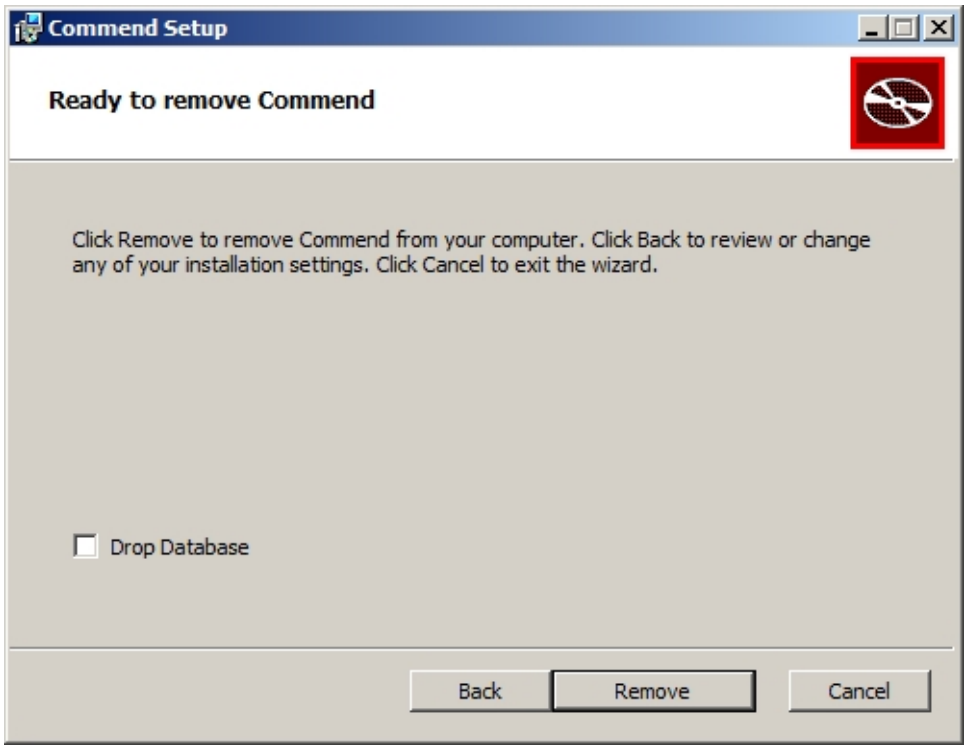
Figure 8: Change, Repair, or Remove Installation



6. Click **Remove**.

   The Ready Remove Commend dialog box, Figure 9 on Page 23, opens.

Figure 9: Ready to Remove Commend Dialog Box



7. Select from the following:

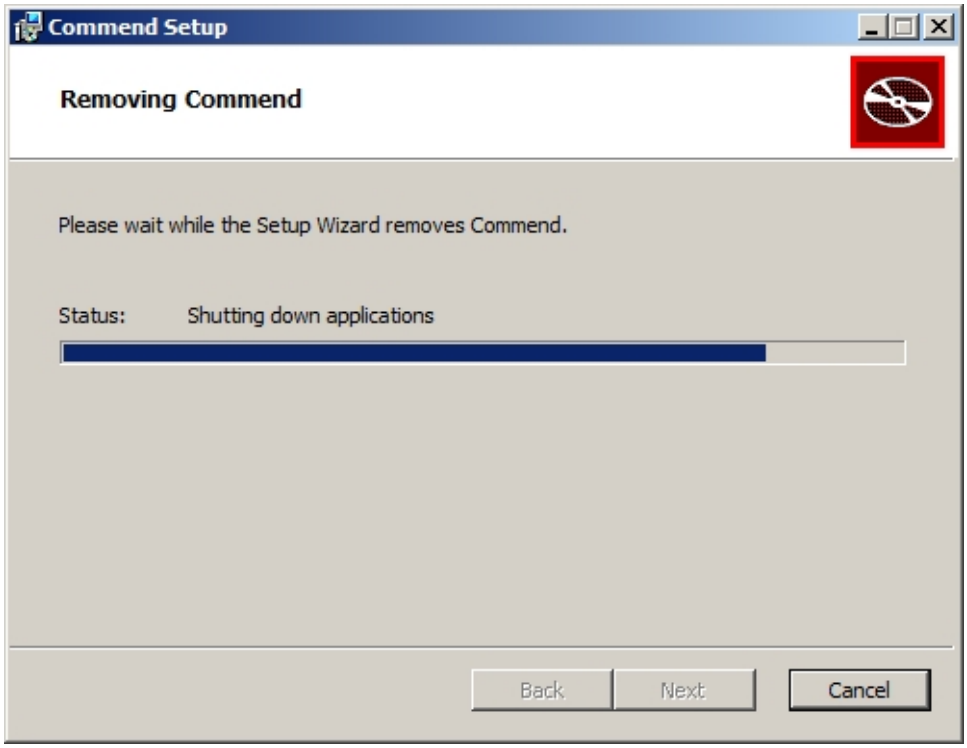
- Leave the **Drop database tables** check box unchecked and the databases used in the Commend Intercom integration configurations will be kept. Select this option to keep the existing configurations if you plan to reinstall the Commend Intercom integration at a later date.
- Click in the **Drop database tables** check box to select it, and the databases used in the Commend Intercom integration configurations will be deleted.

8. Click **Remove**.

   The Removing Commend dialog box, Figure 10 on Page 24, opens displaying a status bar for shutting down the applications.

If there are files in use that need to be updated by the uninstall, the **Files in Use** dialog box opens. You will need to close the applications listed, and then go back and click **Retry** to continue with the uninstall.

Figure 10: Removing Commend Dialog Box



   The dialog box automatically closes when the uninstall is complete.

9. Click **View** and select **Refresh** to verify that Commend is removed from the list of programs.

3

Configuration

This chapter explains how to configure the Commend Intercom servers and stations and other components to work with C•CURE 9000.

In this chapter

Commend C•CURE 9000 Interface Overview

Three objects are found on the C•CURE 9000 Hardware pane that are designed to manage the intercom call states within the Commend Intercom system.

- Commend Central
- Commend Station
- Intercom Protocol

The **Commend Central** object is analogous to a Commend Intercom server. There are three servers currently offered by Commend— the GE 100, GE 200 and the GE 700, that process the Commend **Intercom Protocols** within the C•CURE 9000 interface. Each Commend Intercom server has linked to it **Commend Station** objects that are analogous to intercoms and sub-categorized as either a **Substation** or **Group** of intercoms. As you configure them in C•CURE 9000, Commend Stations are identified by unique **ID Numbers**. Every Commend Central that you configure is also given a unique server **Name** saved in the C•CURE 9000 database. Each Commend Central sends commands to the Commend Stations, either within a single facility over a LAN, or across the globe as an Intercom over IP WAN transmission. To process these commands, an Intercom Protocol object is linked to the Commend Central server and to a designated C•CURE 9000 server. The protocol object lists the commands that are processed by the intercom server and transmitted to the stations, substations, and station groups.

Commend Server Component Communication

The Commend Intercom Interface driver communicates with the Commend GE100, GE200, GE300, GE700, and GE800 class intercom servers.

The Commend driver is responsible for establishing a connection with Commend Central server through a Lantronix (or equivalent) terminal server. Two-way communication is supported; that is, the driver sends commands to the Commend Central server and receive commands from the server. The commands sent and received depend upon the protocol commands configured in the Intercom Protocol object. By default there are nine receive commands and three send commands.

Receive Commands:

- Call Request 1 [Normal call]
- Call Request 1 [Emergency call]
- Loud speaking [Dialed call]
- Terminate call
- Park [Hold]
- Poll response
- Line fault occurred [Station failure]
- Line fault removed [Station restored]
- Call request deleted [Call end]

Send Commands:

- Poll
- Button sequence [Dial]
- Check station

In the Server Configuration Application Database tab, the Connection String for the Commend Objects should read:

```
Server=localhost\SQLEXPRESS;Initial Catalog=ACVSCore;Integrated
Security=True
```

Using the Hardware Pane

Creating a New Hardware Folder

To create a new C•CURE 9000 hardware folder to establish a company or facility and associate it with Commend Intercom objects and other hardware objects such as controllers and boards, right-click the **Hardware** (**Company Name**) **Folder** in the Hardware pane and select **New Folder**. The Hardware Folder dialog box opens for you to type a **Name** and **Description**. After you have created the new folder by clicking **Save and Close**, two objects are automatically created under the folder within the Hardware tree:

- apC Comm Ports
- C•CURE 9000 Mobile

When you open a Hardware Folder with a Commend Intercom license these two objects will also appear:

- Intercom Systems
- Intercom Protocol

You can right-click each of these objects to create **New** or **New Template** for the object.

Dependent Objects

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

Licensed Connected Program objects also create similar dependencies, Commend Central objects manage Commend Stations, Substations, and Groups of Commend Stations.

The following sections provide instructions to create, delete, modify, view, add to group and use set property options for Commend Central servers, Commend Stations, and Commend Intercom Protocols.

Creating Commend Intercom Objects

You can create new Commend Central servers, Commend Stations, or Intercom Protocol objects.

To Create Commend Intercom Objects:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Right-click on the folder in the **Hardware** pane tree. You can also create a new hardware folder to create a new directory for a facility, as described in Creating a New Hardware Folder on Page 28.
3. Select **Commend Central** or **Intercom Protocol** and click **New**. The Commend Central or Intercom Protocol dialog box opens allowing you to configure it.
4. Enter an identification for the Commend Central or Intercom Protocol in the **Name** and **Description** entry fields.
5. To save the new Commend Central server or Intercom Protocol, click **Save and Close**.

   Alternatively, if you want to save the Commend Central server or Intercom Protocol and then create a new one, click **Save and New**. The current Commend Central, Commend Station, or Intercom Protocol objects are saved and closed, but the Commend Central, Commend Station, or Intercom Protocol editor remains open to allow you to create a new object.

Creating Commend Intercom Object Templates

You can create a new template for a Commend Central server, Commend Station, or Intercom Protocol. A Commend Central or Commend Intercom Protocol Template saves you time as it allows you to reuse the same configuration repeatedly.

To Create a Commend Intercom Object Template:

1. In the Navigation pane of the **Administration Workstation**, click the **Hardware** pane.
2. Right-click the Hardware folder in the Hardware pane tree.
3. Select **Commend Central**, **Commend Station**, or **Commend Intercom Protocol** and click **New Template**.
4. The template opens allowing you to configure it.
5. To save the new Commend Central server, Commend Station, or Commend Intercom Protocol Template, click **Save and Close**.

The new Commend Central server, Commend Station, or Commend Intercom Protocol template appears under Templates in the Template drop-down list.

To Select a Commend Central, Station, or Commend Intercom Protocol Template

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Right-click the company name directory in the **Hardware** pane tree.
3. Select **Commend Central**, **Commend Station**, or **Commend Intercom Protocol** and click the templateto select the existing template that you wish to use.

Deleting Commend Intercom Objects

You can delete a Commend Central server, Commend Station, or Commend Intercom Protocol.

To Delete Commend Intercom Objects:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the Hardware pane.
2. Select the Commend Central server, Commend Station, or Commend Intercom Protocol that you want to delete from the **Hardware** pane drop-down list. Click  to open a **Dynamic View** showing all Commend Central, Commend Station, or Commend Intercom Protocol objects.
3. Right-click the Commend Central server, Commend Station, or Commend Intercom Protocol in the list that you want to delete and select **Delete** from the context menu.
4. Click **Yes** in the "**Are you sure you want to delete the selected Commend** (object)**?**" message box.

Modifying Commend Intercom Objects

You can edit Commend Central servers, Stations, or Commend Intercom Protocols.

- For more information about editing the Commend Central server see Configuring Commend Central on Page 36.
- For more information about editing the Commend Stations see Configuring Commend Station on Page 46.
- For more information about editing the Commend Intercom Protocol see Commend Intercom Protocol on Page 33.

To Edit Commend Intercom Objects:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select the type (**Commend Central** server, **Commend Station**, or **Commend Intercom Protocol**) that you want to edit from the **Hardware** pane drop-down list.
3. Click  to open a **Dynamic View** showing all Commend Central server, Station, or Commend Intercom Protocol objects.
4. Double-click the Commend Central server, Station, or Commend Intercom Protocol in the list that you want to modify and select **Edit** from the context menu. The Commend Intercom object editor opens.

Viewing a List of Commend Objects

You can view a list of Commend Central server, Commend Stations, or Commend Intercom Protocol objects.

To View a List of Commend Intercom Objects:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select the type (**Commend Central** server, **Commend Station**, or **Commend Intercom Protocol**) that you want to list from the **Hardware** pane drop-down list.
3. Click  to open a **Dynamic View** showing all the Commend objects of the type that you have selected.

Using Set Property for Commend Intercom Objects

You can use Set Property to quickly set a property for a Commend Intercom object without opening it. Set Property allows you to select multiple Commend Intercom objects in the dynamic list and right-click to use Set Property to set a specific property for all of them.

Example:

If you wanted to change a setting for 20 Commend Stations, you could select all of them and do it in one step.

It is also possible to set properties for Intercom Protocols, Commend Central servers, Substations, or Station Groups using the same procedure.

To Set a Property for Commend Intercom Objects:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select a **Commend Central** server, **Commend Station** or **Commend Intercom Protocol** from the Hardware pane drop-down list.
3. Click  to open a **Dynamic View** showing all Commend Intercom objects.
4. Right-click the Commend Intercom object(s) in the list for which you want to set a property and select **Set Property** from the context menu.
5. Specify the property for the Commend Intercom object(s). Click the drop-down button to see a list of properties.
6. Enter the value for the property and click **OK**.
7. Click **OK** in the **Setting Properties of** Commend Central server, Commend Station, or Commend Intercom Protocol message box.

Adding Commend Intercom Objects to a Group

You can use the Add To Group context menu option to add Commend Intercom objects to a group.

- For more information about grouping Commend Central servers see Commend Central Groups Tab on Page 43.
- For more information about grouping the Commend Stations, see Commend Station Groups Tab on Page 51.

To Add Commend Intercom Objects to a Group:

1. In the **Navigation Pane** of the **Administration Workstation**, click **Hardware** to open the **Hardware** pane.
2. Select Commend Intercom object(s) from the **Hardware** pane drop-down list.
3. Click  to open a **Dynamic View** showing all Commend Intercom objects.
4. Right-click the Commend Intercom object(s) in the list that you want to add to a group and select **Add To Group** from the context menu.

NOTE

- Before you configure Commend Central servers, Intercom Protocols, and Commend Stations, the Commend Server Component interface must be started using the Server Management application - Server Components tab. Right-click the Commend Interface and click **Start Server Component**.
- Use the Refresh button  often as you use C•CURE 9000 to ensure that configuration information is updated properly.

Commend Intercom Configuration Tasks

Table 2 on Page 31 lists basic Commend Intercom configuration tasks in the order in which you should proceed to set up a Commend Intercom system integrated with C•CURE 9000. Each step also includes a troubleshooting suggestion.

Table 2: Commend Configuration Tasks

Task	Task Description	Troubleshooting
1	Energize the Commend Central and connect it to the Lantronix unit. Ensure hardware settings on the Lantronix match expected settings on Commend Central and note Lantronix IP address.	If the hardware settings or Lantronix IP address are unknown, consult your IT department.
2	From the Hardware pane, create a new Commend Protocol object based on the Commend Protocol Template.	Without Administrator rights, you will not be able to configure the object.
3	From the Hardware pane, create a new Commend Central object and associate the protocol configured in Step 2 with it.	If the IP address or port number is incorrect, communication will fail; consult your IT department.
4	From the Hardware pane, right-click the Commend Central object that you created in Step 3 to create new Commend Station objects of the type Substation. It is essential that you use the actual station number for each station object.	If station numbers are incorrect, protocol commands recognized by C•CURE 9000 are not processed and the station's call state will not be accurate. You should follow up with the integration specialist assigned to the Commend system.

Commend Configuration Tasks (continued)

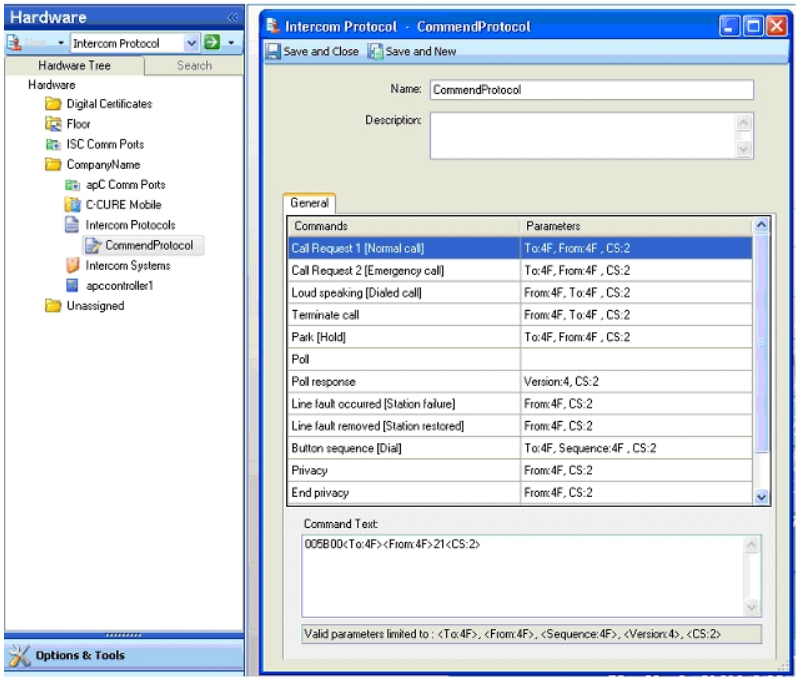
Task	Task Description	Troubleshooting
5	Repeat Step 4 for each station required within C•CURE 9000.	
6	If station groups are configured on the Commend Intercom system (there is always one group called the All Call Group, with group number 00), then within the C•CURE 9000, create a new group object of type Commend Station and add all members required for that group.	Failure to create groups means that protocol commands issued from the Commend system will be ignored if they include group identifications. You should consult the integration specialist assigned to the Commend system.
7	As in Step 4, create a new station object but this time of the type Group. Then link this new station object to the associated C•CURE 9000 group.	Create the groups in Step 6, otherwise there will be no C•CURE 9000 groups with which to associate.

Commend Intercom Protocol

To open the Commend Intercom Protocol dialog box, open the Hardware pane in C•CURE 9000 and click the arrow to the left of the Hardware folder to open it. The **Intercom Protocol** icon appears within the Hardware tree, when you install C•CURE 9000 with a Commend license. Right-click the icon and select **New Template** to open the Intercom Protocol template editor. For general instructions about the Hardware pane, see Using the Hardware Pane on Page 28.

The **Intercom Protocol** object represents the command set that C•CURE 9000 processes as commands received from each Commend Central server. A variety of commands can be transmitted to the C•CURE 9000 Administration station over the RS-232 connection from the Commend Central server. Only the commands configured in the Intercom Protocol object are processed by C•CURE 9000. These commands are displayed in Figure 11 on Page 33.

Figure 11: Commend Intercom Protocol - General Tab



To Configure Commend Intercom Protocols:

1. From the C•CURE 9000 Administration application, choose the Hardware pane, select a Hardware folder, and click the down arrow ()
2. Right-click **Intercom Protocols** and click **New Template**. The **Intercom Protocol** dialog box - **General** tab appears. See Creating Commend Intercom Object Templates on Page 29 for more information. Also, see Creating a New Hardware Folder on Page 28 for further information about the Hardware pane.
   - To edit an existing Intercom Protocol, right-click an existing Intercom Protocol and click **Edit**.

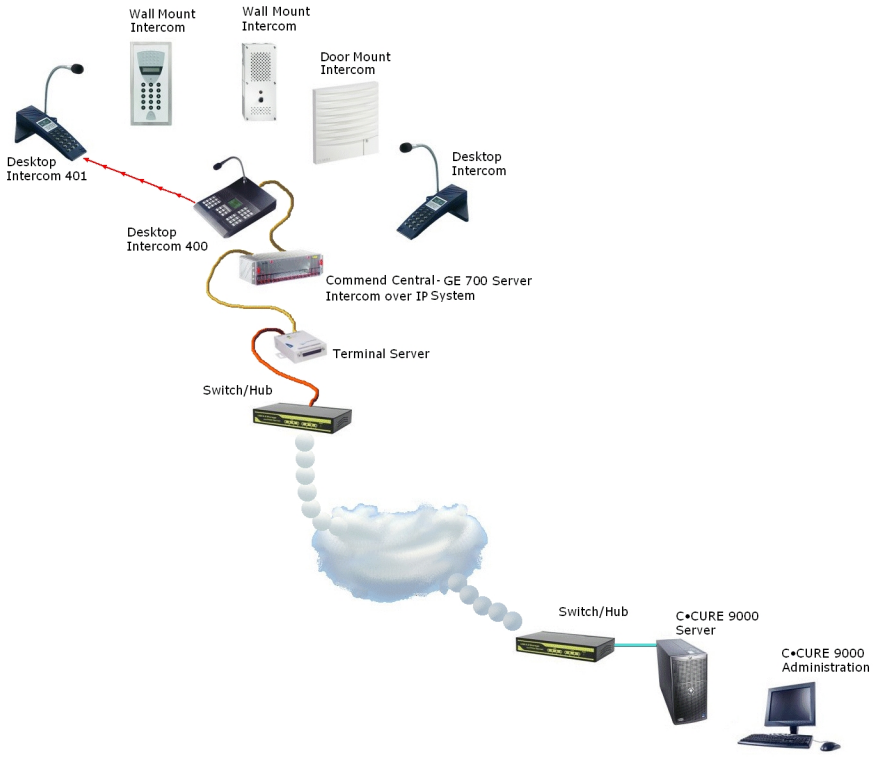
     -or-
   - To create a new **Intercom Protocol**, click the **New** button at the top of the Hardware pane to select.
3. Type a unique protocol **Name** (required) and **Description** (optional) in the identification fields at the top of the Intercom Protocol dialog box.

NOTE It is possible to select a command, as shown in Commend Intercom Protocol - General Tab on Page 33, and modify it in the **Command Text** box, at the bottom of the Intercom Protocol dialog box. Since the valid parameters for Intercom Protocols that the C•CURE 9000 processes are restricted to those listed below the Command Text box, Software House recommends that you not make changes to commands without carefully considering the consequences of your revisions.

Each command is composed of a sequence of ASCII characters. In addition, all commands (with the exception of **Poll**) include parameters. The valid parameter list is restricted to the following:

- **To:4F** [the station receiving the call—401]
- **From:4F** [the station sending the call—400]
- **Sequence:4F** [the number dialing sequence]
- **Version:4F** [the firmware version resident on the Commend Central server]
- **CS:2** [checksum]

Figure 12: Commend Intercom Send Call Schematic



If parameters are included in the command body, they must pattern-match from this collection. Otherwise, an error message appears when you try to **Save**. Figure 12 shows a normal call command from Station 400 to 401. The normal call can trigger an event that is processed through the C•CURE 9000, either on-site or in another location (see Configuring Commend Central on Page 36 and Configuring Commend Station on Page 46).

The number following the keyword and a colon (**:**) identify the length of the parameter within the body of the command. The digit **4** signifies that the parameter will occupy 4 characters. The letter following the number, in this case **F**, signifies that the parameter space should be filled with F in the event that the number occupies less than the full character slot.

Example:

See Figure 11 on Page 33 for the normal intercom call **Command** and **Parameters** and also to the schematic shown in Figure 12 on Page 34.

- Real stream from commend central unit = 005B00F401F4002191
- Matches this text pattern in the protocol command set = 005B00<To:4F><From:4F>21<CS:2> [this is the “Call Request 1 [Normal call]” command]
- To = F401; after internal processing by C•CURE 9000 the F is dropped leaving 401.
- From = F400; after internal processing by the C•CURE 9000 the F is dropped leaving 400.
- CS = 91; this is verified in the C•CURE 9000 interface software resulting in an ACK (acknowledged) returned to the Commend Central GE 700 server.

Intercom Protocol Commands

The twelve commands of the C•CURE 9000/Commend interface include the basic state management commands for intercom systems and have been modeled after American Dynamics CCTV protocols.

- **Call Request 1** – This command indicates a Normal Call sent from a station to another station or group of stations.
- **Call Request 2** – This command indicates an Emergency Call sent from a station to another station or group of stations.
- **Loud Speaking** – This command indicates a Dialed Call sent from a station with a dial keypad to another station or group of stations.
- **Terminate Call** – This command indicates that a Normal Call, Emergency Call, or Dialed Call has been completed.
- **Park** – This command indicates that a Normal Call, Emergency Call, or Dialed Call has been put on Hold.
- **Poll** – Each Commend Central GE class server is polled. Polling refers to actively sampling the status of an external device, such as a server, by a client program—as a synchronous activity. The Poll Period refers to the frequency of polling to the Commend Intercom Central servers.
- **Poll Response** – The Poll command is returned with a server firmware version number response.
- **Line Fault Occurred** – indicates a Commend Station failure.
- **Line Fault Removed** – indicates a Commend Station restoration, and usually occurs only after the Line Fault Occurred has been received from a station.
- **Button Sequence** – indicates a sequence of dialed numbers.
- **Call Request Deleted** – indicates the end of a station to station call.
- **Check Station** – This command is used when the Commend Intercom driver is started or when new stations are added to C•CURE 9000.

Configuring Commend Central

Commend calls their GE class intercom servers “Centrals.” The three servers that process the Intercom Protocols with the C•CURE 9000 interface are the GE 100, GE 200, GE300, GE 700, and GE800.

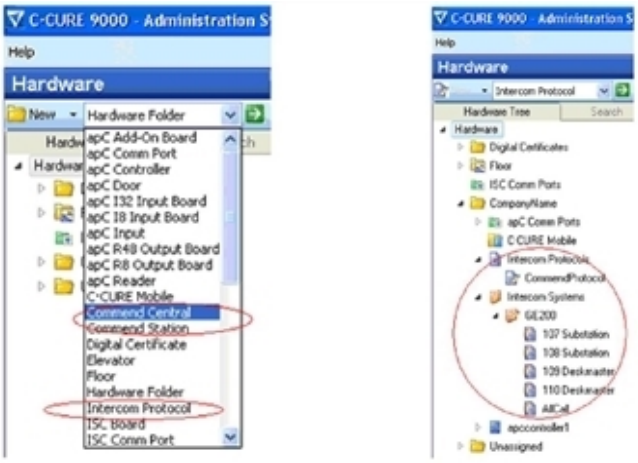
Commend Central General Tab

The **Commend Central** dialog box allows configuration of the Commend Central intercom servers. For general instructions about the Hardware pane, see Using the Hardware Pane on Page 28. The Commend Central General tab fields are described in Table 3 on Page 38.

To Configure Commend Central Servers:

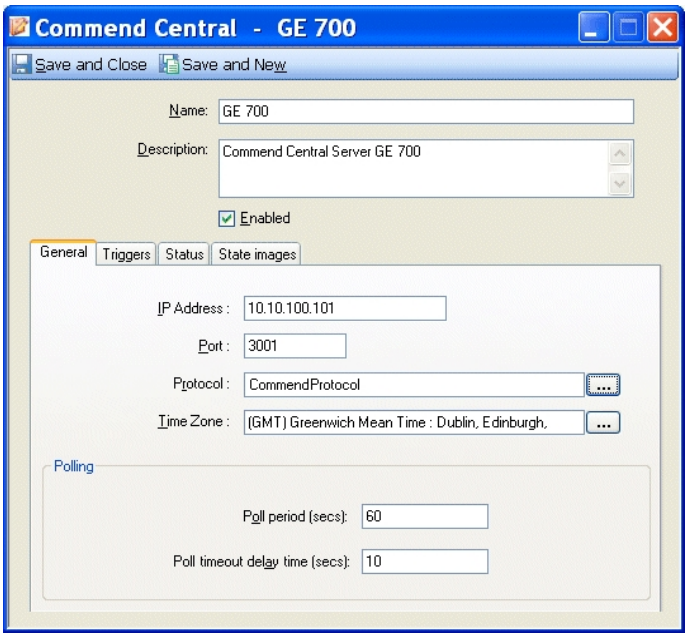
1. From the C•CURE 9000 Administration application, click the **Hardware** pane, select a Hardware folder, and click the down arrow (see Figure 13 on Page 36). Right-click **Commend Central** and click **New**. The **Commend Central** dialog box - **General** tab appears, as shown in Figure 14 on Page 37.

Figure 13: Commend Objects Selection



- To create a new controller template click **New Template**.
- To edit an existing Commend Central server, right-click the existing server and click **Edit**.
- Click the **New** button at the top of the Hardware pane to select to create a new **Commend Central** object.

Figure 14: Commend Central - General Tab



2. Type a unique controller **Name** (required) and **Description** (optional) in the identification fields at the top of the **Commend Central** dialog box.
3. Click the **Enabled** check box to put the server online once you are finished configuring the Commend Central server.
4. Type a unique **IP Address** in the **IP Address** field. This is the IP Address of the terminal device server (such as a Lantronix UDS-10) that the intercom server uses to communicate with the C•CURE 9000 system.
5. Select a **Port** number, the address of the terminal server from which the intercom server will communicate with the C•CURE 9000 system. The values range from 0 through 65535. The default port is 3001.
6. Select a **Protocol** for the intercom server, by clicking ... in the **Protocol** field to display the **Intercom Protocol** browser, from which you can select the **CommendProtocol** option. You may use an existing protocol or create a new one (see Commend Intercom Protocol on Page 33).
7. Use the **Time Zone** entry field to synchronize the system. Click ... to display a time zone selection browser. Greenwich Mean Time is equivalent to Zulu or Universal Time (Commend Central servers do not require a Time Zone entry).
8. Under the Polling box, type a **Poll period**. This is the frequency (in seconds) of polling to the Commend Central server. The default entry is 60 seconds and the range is from 30-600 seconds.
9. Type a **Poll timeout delay**, the amount of time (in seconds) allocated for the Commend Central server to respond to the **Poll** command. The default entry is 10 seconds and the range is from 1-60 seconds.
10. Navigate to the **Commend Central Triggers** tab to configure events triggered by intercom events.

    - or -

    Click **Save and Close** to return to the **Hardware Pane** and finish the **Commend Central** configuration later.

Table 3 on Page 38 includes further information for fields in the **Controller** dialog box - **General** tab.

NOTE Use the Refresh button often as you use C•CURE 9000 to ensure that configuration information is updated properly.

Table 3: Commend Central - General Tab Fields

Box	Field	Description
Identification	Name	Enter a unique name up to 100 characters long for the controller. If you enter the name of an existing object, the system returns an error message indicating there is a conflict.
	Description	Enter a general comment about the controller. This text is for information only.
	Enabled	Select the Enabled check box to set the intercom server online.
General Tab		
	IP Address	This is the IP Address of the terminal server (such as a Lantronix UDS-10) that the intercom server uses to communicate with C•CURE 9000. Enter the unique IP address for the Commend Central server as up to 4 integers between 0 and 255, separated by periods, such as 100.10.10.1. A unique IP address is required for all servers on TCP/IP networks.
	Port	Select a Port for the terminal server (such as a Lantronix UDS-10) that the intercom server uses to communicate with C•CURE 9000. The values range from 0 through 65535. The default entry is 3001.
	Protocol	To select a **Protocol** for the intercom server, click ... in the **Protocol** field to display the **Intercom Protocol** browser, from which you can select the **Commend Protocol** option.
	Time Zone	If you are managing Commend Central servers in different time zones, specify a time zone for the controller. Click ... to display a time zone selection browser. Greenwich Mean Time is equivalent to Zulu or Universal Time.
Polling	Poll period	The **Poll period** is the frequency, in seconds, of polling to the Commend Central server. The default entry is 60 seconds and the range is from 30-600 seconds.
	Poll timeout delay	The **Poll timeout delay** is the number of seconds allocated for the Commend Central server to respond to the **Poll** command. The default entry is 10 seconds and the range is from 1-60 seconds.

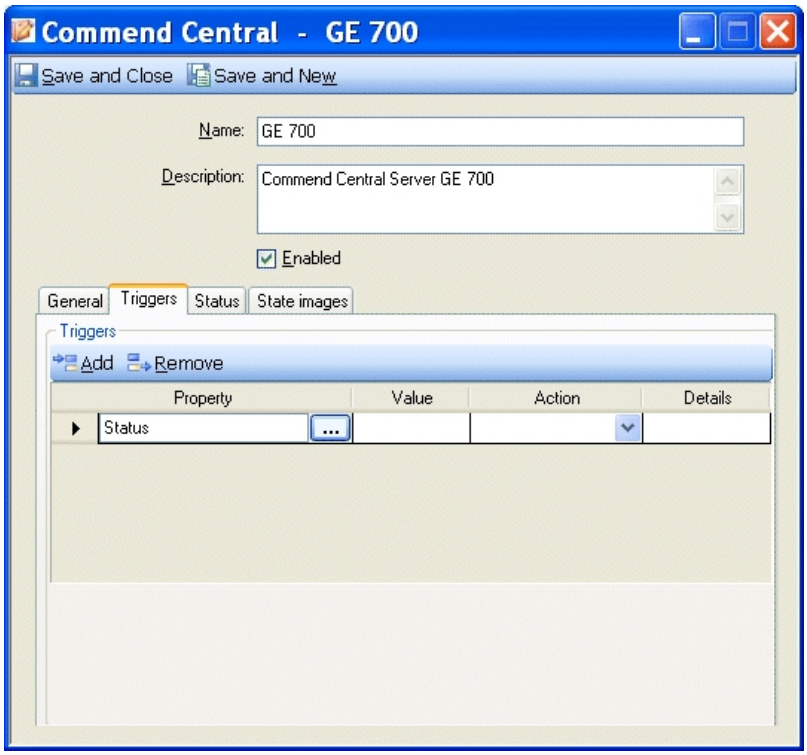
Commend Central Triggers Tab

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

To Configure the Triggers for Commend Central

1. Navigate to the **Triggers** tab, shown in Figure 15 on Page 39.

Figure 15: Commend Central - Triggers Tab



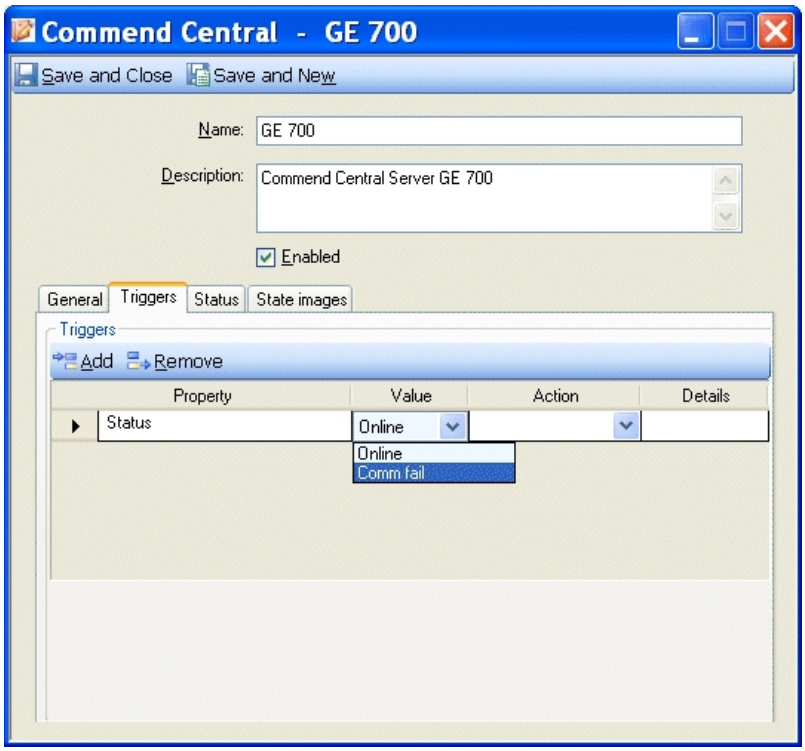
You can define the status value of Online, Comm fail, or Disabled. Triggers can be used to launch events, inputs, outputs, camera actions, door status changes, etc. Triggers can also be used to launch imports and exports, email and reports, viewer and message displays, personnel ID number state changes, controller downloads, sound activation, communication notifications, etc.

2. Click **Add** in the **Triggers** tab to create a new trigger.
   a. Click within the **Property** column to display [...].

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

   b. Click a **Property** to select it and add it to the column.

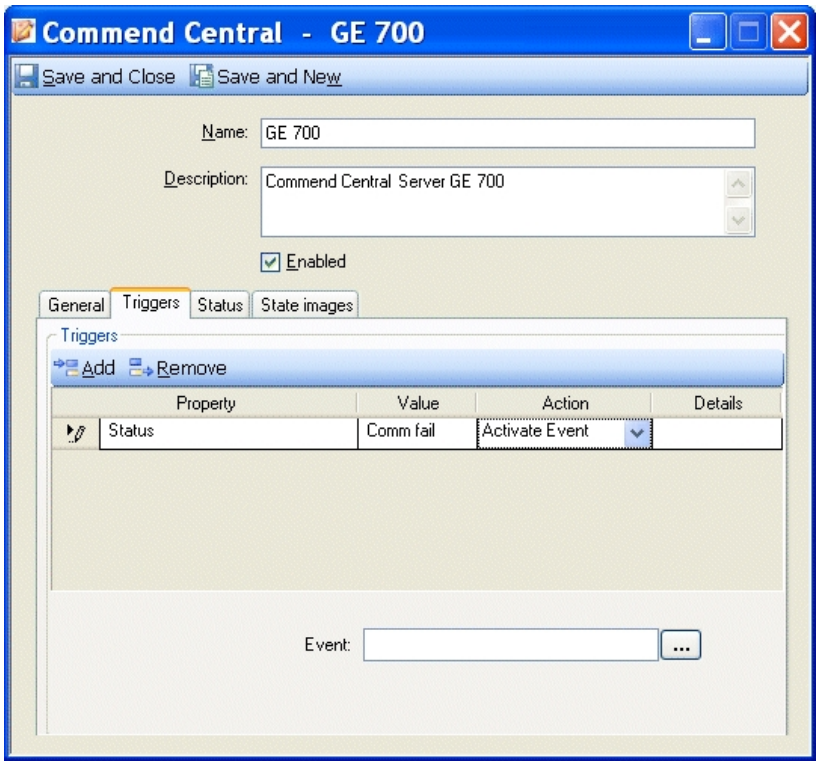
Figure 16: Commend Central - Triggers Tab - Value



c. Click the **Value** column to show a list of possible values in a drop-down list. Select the **Value** for the **Property** displayedin column from the drop-down list of values shown, (Online or Communications failure.

d. Click within the **Action** column to display a drop-down list of valid actions. Click the **Action** that you want to include as a parameter for the trigger to add it to the column.

Figure 17: Commend Central - Triggers Tab - Action

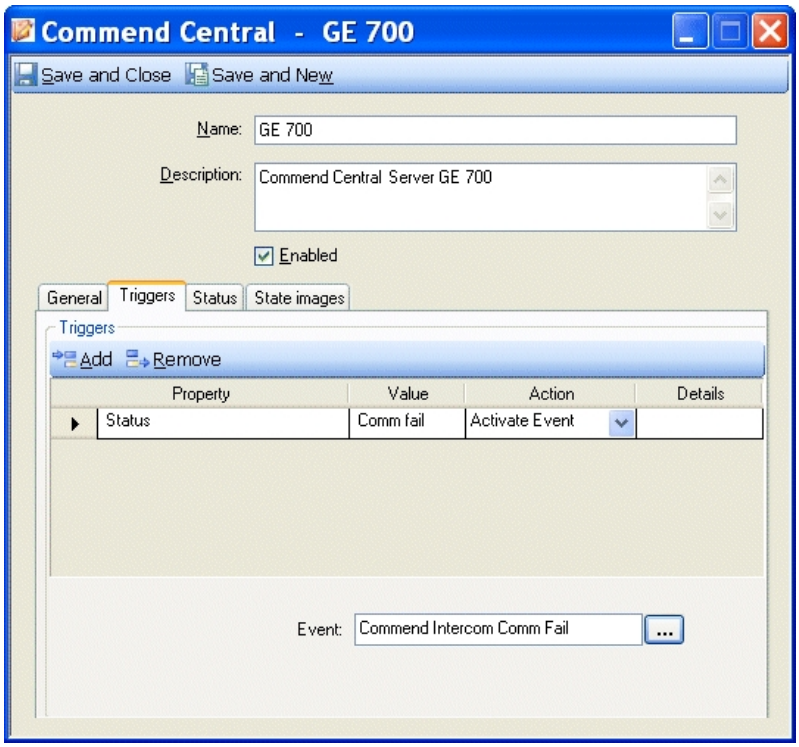


When a **Trigger** is added, an **Action** must be configured in the Action column. This is the Action that will occur when the object's selected **Property** receives the selected **Value**. Once you select the Action, the lower pane in the Triggers dialog box displays a corresponding entry field, or group of entry fields, specific to the selected Action.

e. Click ... to select entries for these fields. Once the field (or group of fields) is completed, the **Details** column will show information about how the Action has been configured.

3. A completed Trigger, set to display a message on the Monitoring Station notifying you of communications failure on a Commend Central server. For information about creating Events see the *C•CURE 9000 Software Configuration Guide.*

Figure 18: Commend Central - Triggers Tab - Actions



To Remove a Trigger

1. Select a row using the button and click **Remove**.
2. Click **Save and Close.**

   -or-

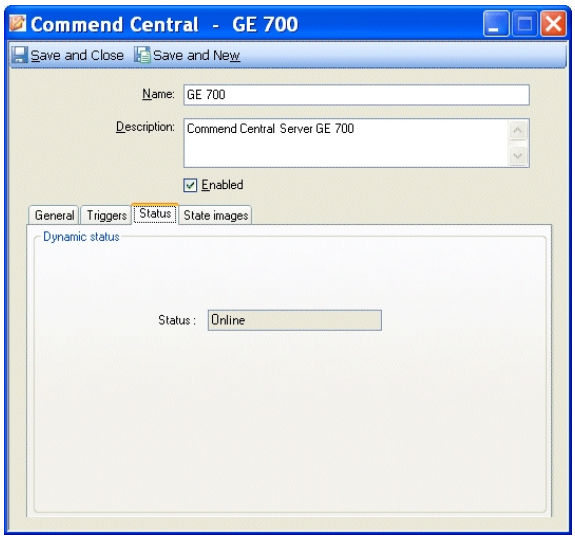
   Navigate to the **Status** tab.

Commend Central Status Tab

The Status tab, shown in Figure 19 on Page 43, displays a read-only listing of critical information about the operational status of the selected Commend Central server, including:

- **Unknown – for future use**
- **Online** – indicates whether the Commend Intercom server is online and communicating with the system.
- **Comm Fail** – indicates Commend Intercom server in communications failure.

Figure 19: Commend Central - Status Tab



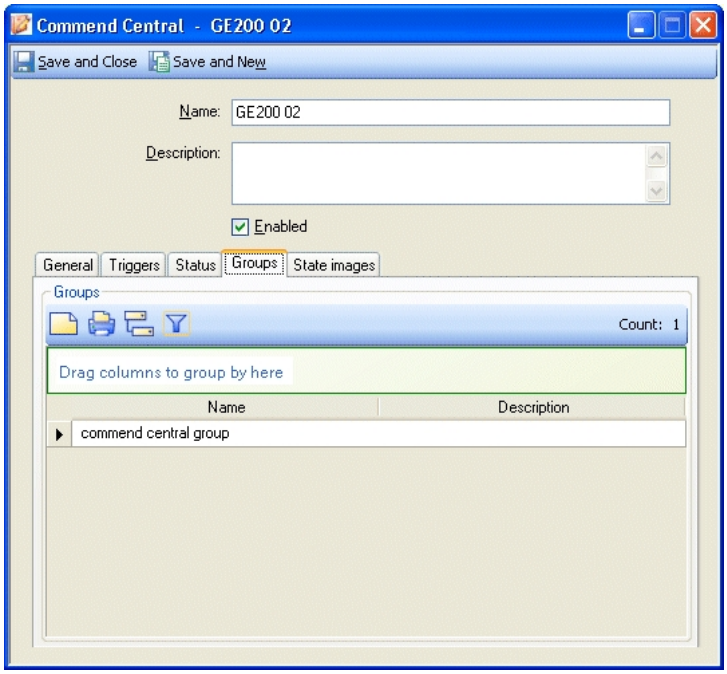
Click **Save and Close** or navigate to the **Groups** tab.

Any state change in the Commend Central objects can trigger events. These are configured in the **Triggers** tab of the object editor (see Commend Station Triggers Tab on Page 48).

Commend Central Groups Tab

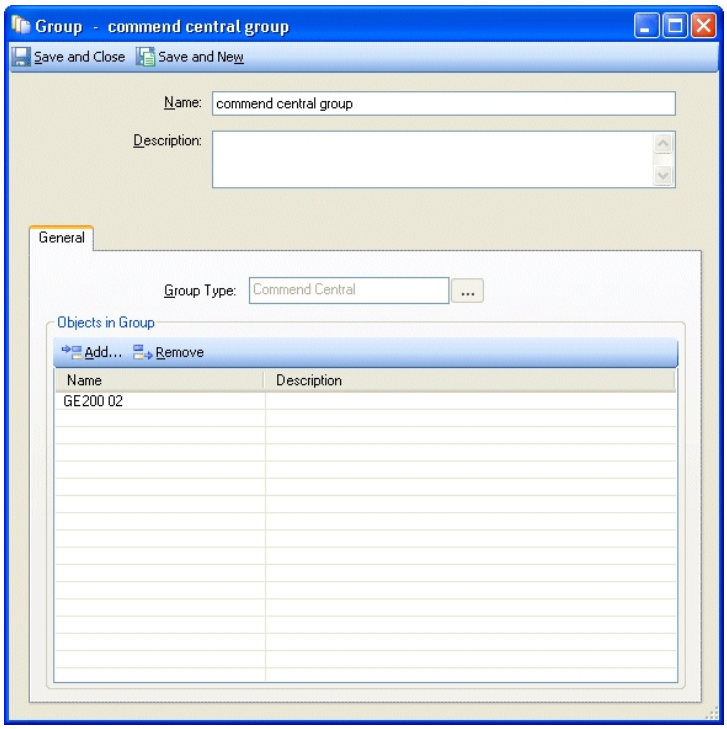
Groups are used for organizing C•CURE 9000 objects and are created in the Configuration pane. You can configure groups of Commend Central server objects. Figure 20 on Page 43 shows an example of a group of Commend Central servers.

Figure 20: Commend Central - Groups Tab



You can double-click the **Group** to open the **Group** editor, shown in Figure 21 on Page 44, to modify the selected group.

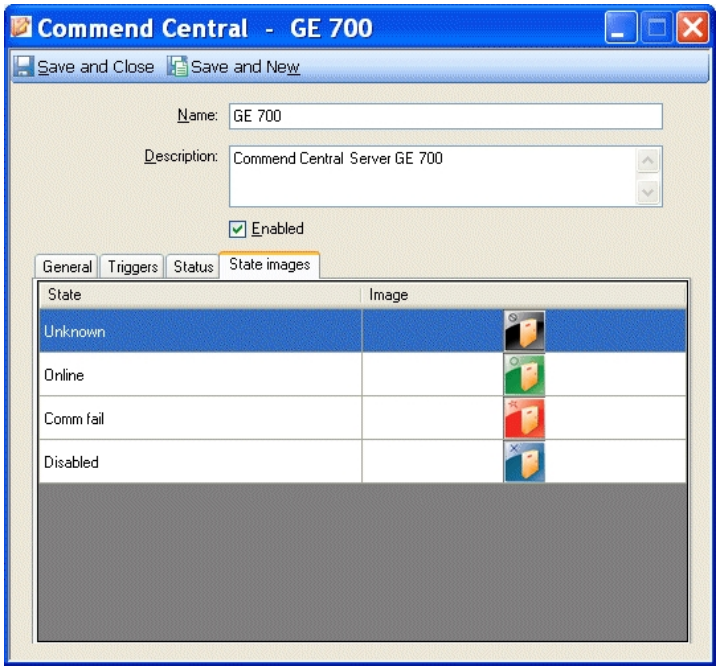
Figure 21: Configuration Pane - Groups - General Tab



Commend Central State Images Tab

The **State Images** tab, shown in Figure 22 on Page 44, provides a means to change the default images used to indicate Commend Central states on the Monitoring Station and Application Layouts. The status of the Commend Central object is identified by the state as seen in the State Images tab.

Figure 22: Commend Central - State Images Tab



To Change an Image

1. Double-click the existing image.

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

2. Locate the replacement image and select it to add it to the image listing.
3. To restore the default image, right-click the new image and select **Restore Default**.
4. Click **Save and Close**.

Any state change in the Commend Central objects can trigger events. These are configured in the Triggers tab of the object editor (see Commend Station Triggers Tab on Page 48).

Default Commend Central state images are shown in Table 4 on Page 45.

Table 4: Commend Central State Images Icons

State	Image
Disabled	
Comm fail	
Online	
Unknown	

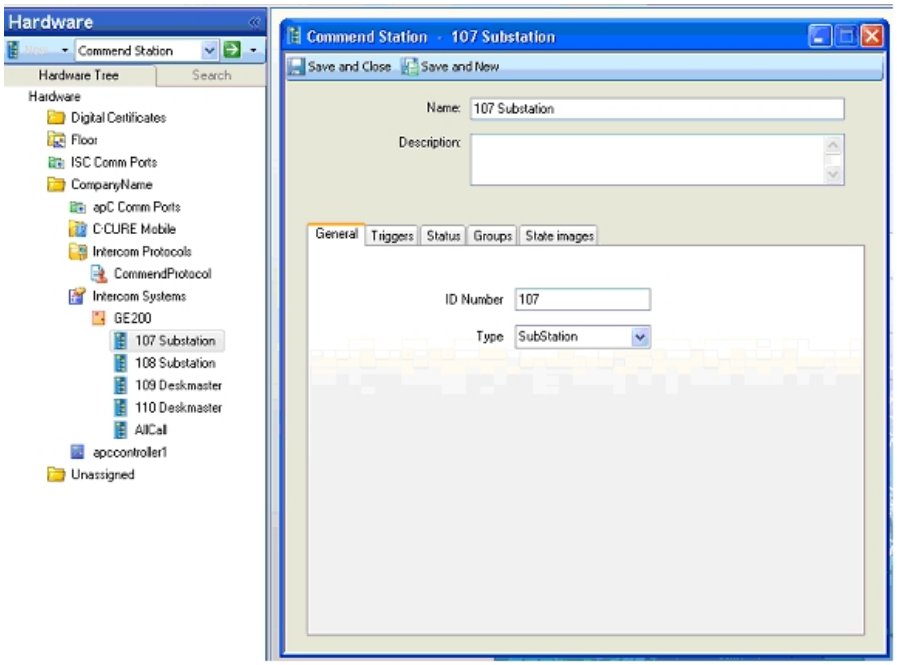
Configuring Commend Station

The Commend Stations represent the actual Commend system intercommunication devices.

Commend Station General Tab

The Commend Station General tab, shown in Figure 23 on Page 46, allows you to configure Commend Stations.

Figure 23: Commend Station - General Tab



The General tab displays four to five identification fields, depending on your selections. The unique Commend Station name is entered in the **Name** field with an optional description entered in the **Description** field. The fields are also described in Table 5 on Page 47.

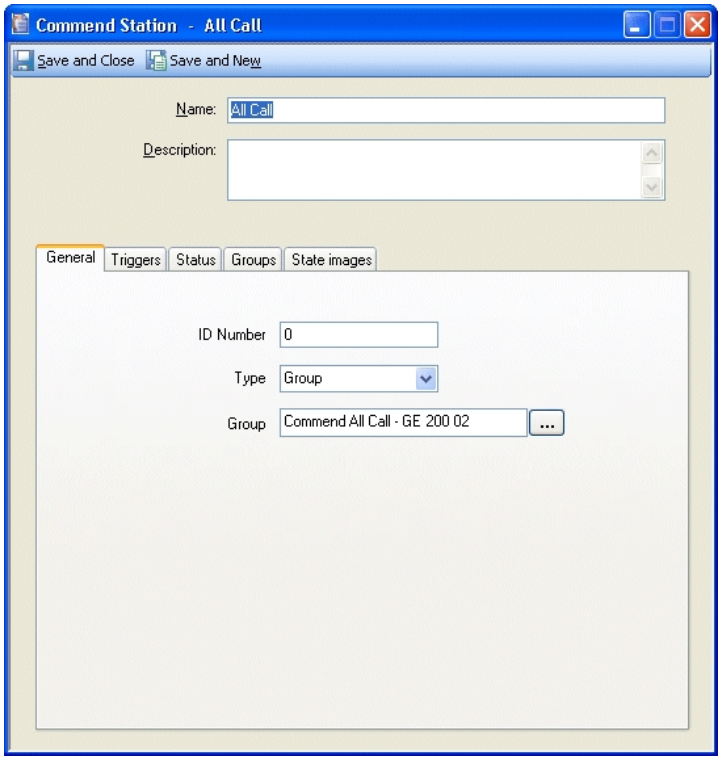
When you create Commend Stations, you have a choice to create a Substation or a Station Group (see Figure 24 on Page 47). Either station type is identified by a unique station number. The number of connected stations and the station number depends on the Commend Central system (GE100, GE200, or GE700). When stations are representing groups, the numbers must range from 01-89. Group 00 is intrinsic within Commend systems and all stations are included in this group.

To Create a Commend Station

1. Type a unique **Name** (required) and **Description** (optional).
2. Enter a unique Commend Station **ID Number**. This is the actual station number as it has been assigned within the Commend Intercom network.
3. Select a Commend Station **Type** from the two station types:
   - **Substation** signifies an individual station.
   - **Group** can be used when you create a group object within the C•CURE 9000 database.
4. If the Commend Station **Type** is set to **Group**, the Group object viewer is displayed allowing you to select a C•CURE 9000 group using the browse [...] button. Select a Group using the Group browser.

See the *C•CURE 9000 Software Configuration Guide* and Commend Station Groups Tab on Page 51 for more information about Groups.

Figure 24: Commend Station - General Tab - Group Type



NOTE Commend Stations configured as groups have an association with a C•CURE 9000 group. The Commend Station members added to the C•CURE 9000 Commend Station group must be of the type SubStation. Any commend station members of type Group will be ignored when processing occurs during run time activity.

Table 5: Commend Station - General Tab Fields

Box	Field	Description
Identification	Name	Enter a unique name up to 100 characters long for the Commend Station. If you enter the name of an existing object, the system returns an error message indicating there is a conflict.
	Description	Enter a characterization of the Commend Station. This text is optional and for information only.
General Tab		
	ID Number	The actual station number as it has been assigned on the Commend Intercom network.
	Type	There are two Commend Station types: - **Substation** signifies an individual station - **Group** can be used when you create a group object within C•CURE 9000.
	Group	When Commend Station Type is set to **Group**, the Group object viewer displays allowing you to select a C•CURE 9000 group using the browse ... button.

Commend Station Triggers Tab

C•CURE 9000 uses **Triggers**, configured procedures for activating security actions. A Trigger automatically executes a specified **Action** when a particular predefined condition occurs. When a Trigger is defined, the Actions available depend on the property selected. This section illustrates the use of Triggers to monitor the status of a Commend Station or station group.

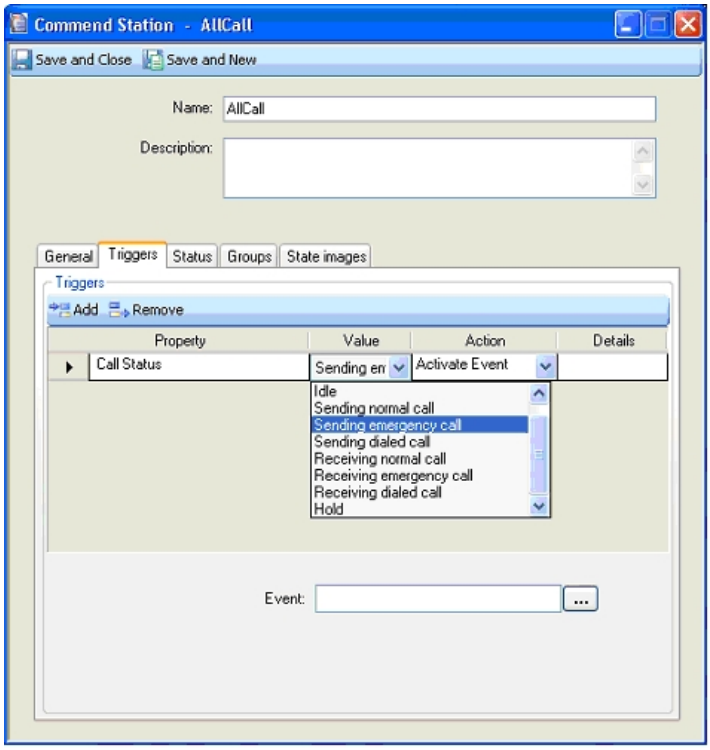
The Call Status state of the commend station is used as the basis of the trigger. When the state transitions, it triggers the associated event. The states include:

- Station line fault
- Idle
- Sending normal call
- Sending emergency call
- Sending dialed call
- Receiving normal call
- Receiving emergency call
- Receiving dialed call
- Hold

To Configure the Triggers for the Commend Station

1. Navigate to the **Triggers** tab, as shown in Figure 25 on Page 48.

Figure 25: Commend Station - Triggers Tab



This tab is configured as described previously in Commend Central Triggers Tab on Page 38.

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

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

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

b. Click a **Property** to select it and add it to the column.

c. Click the **Value** column to show a list of possible values in a drop-down list. Select the **Value** for the **Property** from the drop-down list of values shown. The Values for Commend Station Call Status are described in Commend Station Status Tab on Page 49.

d. Click within the **Action** column to display a drop-down list of valid actions. Click the **Action** that you want to include as a parameter for the trigger to add it to the column.

   When a **Trigger** is added, an **Action** must be configured in the Action column. This is the Action that will occur when the object's selected **Property** receives the selected **Value**. Once you select the Action, the lower pane in the Triggers box will show a corresponding entry field, or group of entry fields, specific to the selected Action.

e. Click [...] to select entries for the field that is displayed. In the example shown in Figure 25 on Page 48, an Event is the Action chosen for the Call Status Property. Once the field (or group of fields) is completed, the **Details** column will show information about how the Action has been configured.

   For more information on configuring events, see the *C•CURE 9000 Software Configuration Guide*.

NOTE The only **Intercom Action** supported is an automatic dialing command that targets a specific station. A typical event configured to trigger an intercom action would include the dial command, called **Button sequence**. The parameters for this command are **To** (the station number) and **Sequence** (the number to dial on that station).

To Remove a Trigger

1. Select the row using the [▸] button and click **Remove**.
2. Click **Save and Close**.

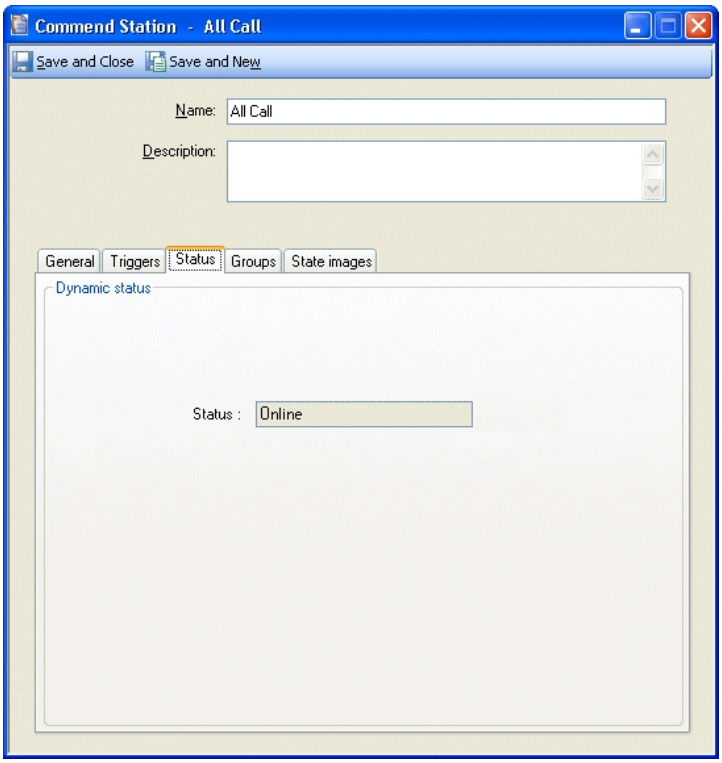
   -or-

3. Navigate to the **Status** tab.

Commend Station Status Tab

The Status tab, shown in Figure 26 on Page 50, provides a read-only listing of critical information about the operational status of the Commend Station.

Figure 26: Commend Station - Status Tab



The Commend Station Status tab indicates the status of the commend station as follows:

- **Station line fault** – Commend Station is offline and not communicating with the system.
- **Idle** – Commend Station is online and ready to communicate with the system.
- **Sending normal call – Commend Station is transmitting a call to another Station or Station Group within the system.**
- **Sending emergency call – Commend Station is transmitting an emergency call to another Station or Station Group within the system.**
- **Sending dialed call – Commend Station is transmitting a dialed call to another Station or Station Group within the system.**
- **Receiving normal call – Commend Station is receiving a call from another Station or Station Group within the system.**
- **Receiving emergency call – Commend Station is receiving an emergency call from another Station or Station Group within the system.**
- **Receiving dialed call** – Commend Station is receiving a dialed call from another Station or Station Group within the system
- **Hold** – Commend Station is transmitting to or receiving from another Station or Station Group within the system and has been put on Hold.

Any state change in the Commend Station objects can trigger events. These are configured in the Triggers tab of the object editor (see Commend Station Triggers Tab on Page 48).

Commend Station Groups Tab

Groups are used for organizing C•CURE 9000 objects and are created in the Configuration pane. You can configure groups of intercom servers and other hardware security objects.

Commend Stations can be grouped together within C•CURE 9000 to allow group communication. All commend stations are members of group 00, the All Call group. Additional groups can be created, occupying a numerical range from 01 – 89.

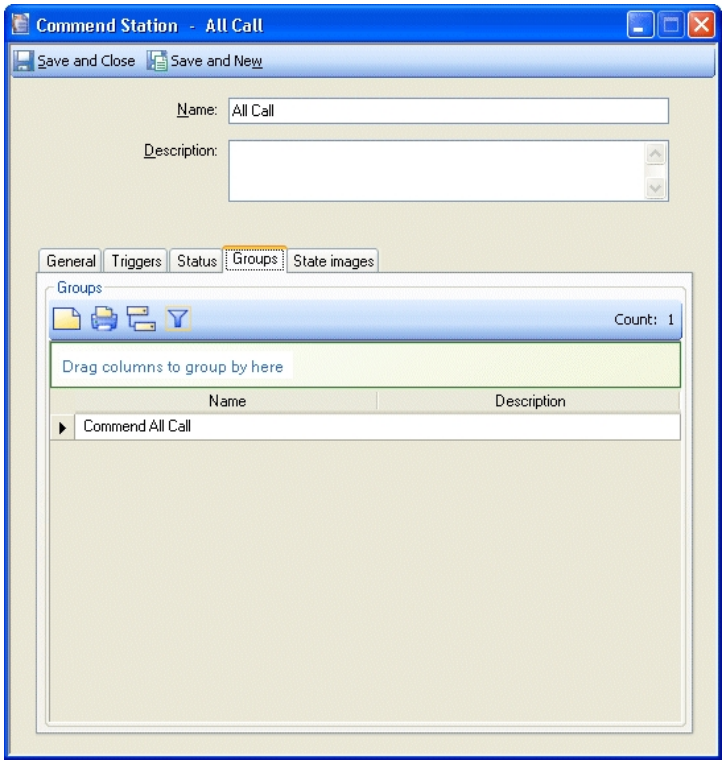
Example:

Three buildings on a campus require three groups, one for each building.

- All stations in building one might be assigned to group 01
- All stations in building two are assigned to group 02
- All stations in building three are assigned to group 03

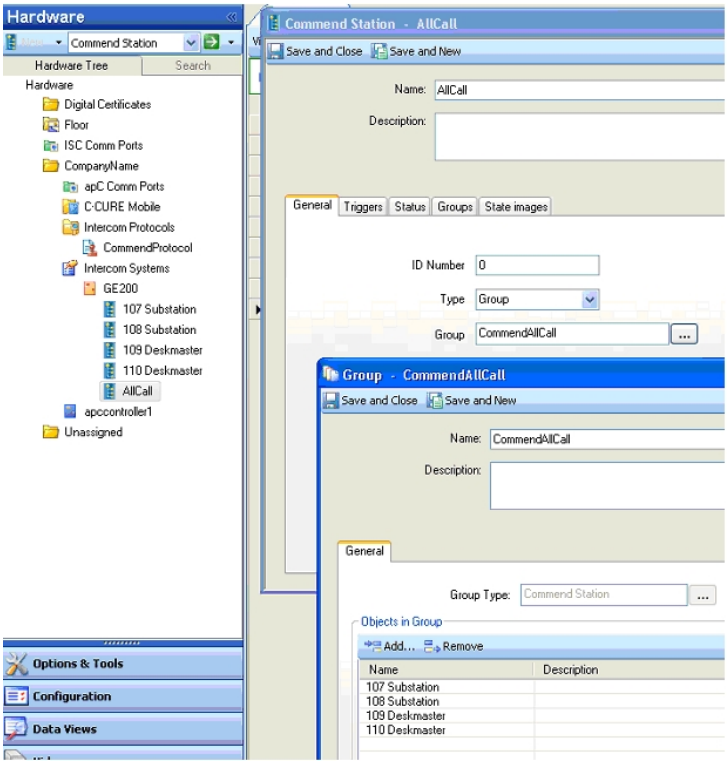
Calls between a single station and a group are revealed through a single message sent to C•CURE 9000 rather than a message for each station. When a substation is configured as a group, it is actually a pre-existing group within C•CURE 9000 — itself made up of a collection of Commend Stations.

Figure 27: Commend Station - Groups Tab



Double-click the **Group** to display the **Configuration Pane** - **Group** option to edit the selected group.

Figure 28: Configuration Pane - Groups - General Tab

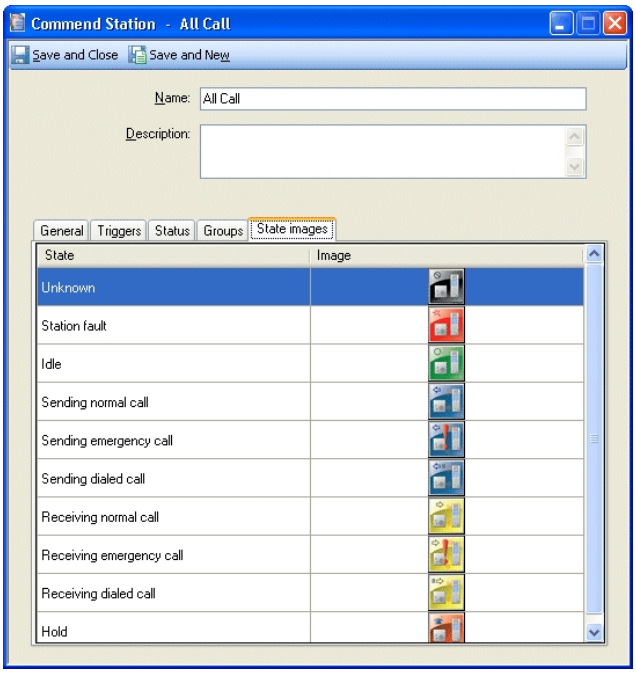


NOTE Commend stations configured as groups have an association with a C•CURE 9000 group. The Commend Station members added to the C•CURE 9000 Commend Station group must be of the type SubStation. Any commend station members of the type Group will be ignored when processing occurs during run time activity.

Commend Station State Images Tab

The **State Images** tab, shown in Figure 29 on Page 53, provides a means to change the default images used to indicate Commend Station states. The status of the Commend Station object is identified by the state as displayed in the Monitoring Station and Map icon displayed in Application Layouts.

Figure 29: Commend Station - State Images Tab



To Change an Image

1. Double-click the existing image.

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

2. Locate the replacement image and select it to add it to the image listing.
3. To restore the default image, right-click the new image and select **Restore Default**.
4. Click **Save and Close**.

Default Commend Station state images are shown in Table 6 on Page 53.

Table 6: Commend Station State Images

Icons

State	Image
Station line fault	
Idle	

Commend Station State Images Icons (continued)

State	Image
Sending normal call	
Sending emergency call	
Sending dialed call	
Receiving normal call	
Receiving emergency call	
Receiving dialed call	
Hold	
Unknown	

4

Activity Journal

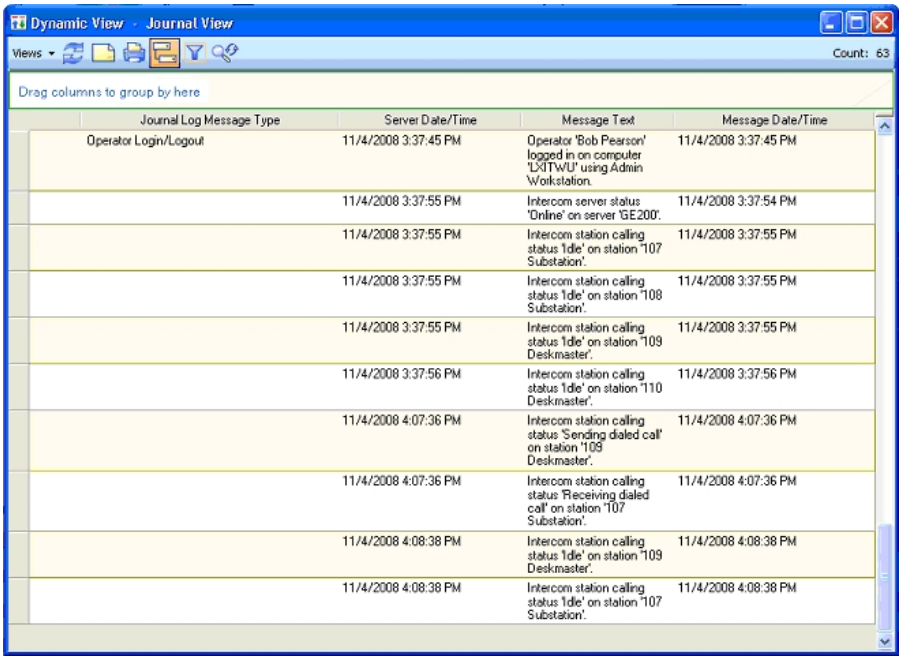
This chapter explains how to configure and access Commend Intercom information compiled by the C•CURE 9000 Activity Journal.

In this chapter

Journal and Monitoring Station Activity Messages

C•CURE 9000 tracks state changes in either Commend Central servers or Commend Stations with a journal entry. Each intercom server or station state change will trigger entries in the Dynamic Journal View. For more information about using the journal, see “Event and Activity History in the Journal” in the *C•CURE 9000 System Maintenance Guide.*

Figure 30: C•CURE 9000 -Journal View



The **Activity Viewer** provides a scrolling display of specified types of activities on the Monitoring Station. For more information about the Activity Log, see the *C•CURE 9000 Monitoring Station Guide.*

Commend Activity Viewer Log Messages

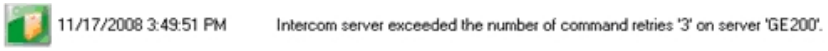
There are three Commend Dynamic Journal View log messages—two for Commend Central and one for Commend Station.

Commend Central Retry Limit Message

Commend Central exceeded command retry limit – The Commend Central server attempts to send a command to a commend server, but is unable to receive an acknowledgment from the server. Consequently, the command is issued again. If the command is issued three times without success, it has exceeded the allowed number of retries, hard-coded to three. Therefore, the following message displays in the journal:

```
"Intercom server exceeded the number of command retries '{0}' on server '{1}'."
```

Example from Activity Viewer:.



NOTE The {0} is replaced with '3' and the {1} is replaced with the Commend Central name.

Commend Central Status Change Message

Commend Central status change – This message displays anytime the Commend Central changes status.

```
"Intercom server status '{0}' on server '{1}'."
```

Example from Activity Viewer:.

NOTE The {0} is replaced with the new status and the {1} is replaced with the Commend Central name.

Commend Station Call Status Change Message

Commend Station call status change – This message displays anytime the Commend Station changes call status.

```
"Intercom station calling status '{0}' on station '{1}'."
```

Example from Activity Viewer:.

NOTE The {0} is replaced with the new call status and the {1} is replaced with the Commend Station name.

Commend Intercom Activity Example

The Table 7 on Page 58 lists the activities created by a typical Commend Intercom **Receiving a call** command with a Commend Intercom system integrated with C•CURE 9000. Each step also includes troubleshooting suggestions.

Preconditions

This intercom activity example assumes four preconditions:

- The C•CURE 9000 system includes the Commend Intercom interface installation.
- The Commend Central unit and Commend stations have been configured.
- Both the control desk master and the intercom substation are in an “idle” (or ready/normal) state.
- An event has been configured that should trigger when the substation initiates a call.

Call Situation

A call is placed from a substation to the control desk master by pressing the single push-button located on the front of the intercom substation. An operator answers the call on the control desk master, then after a brief conversation, terminates the call.

Results

The C•CURE 9000 Map displays the call state changes of each station and a popup video window displays the intercom substation area.

- The call is logged to the Journal.
- The video popup window reveals the visitor’s identity with live video feed.
- The icons on the map display the call states.
- The Activity Viewer in the Monitoring Station lists the call states.

Table 7: Commend Activity Example

Step	Description	Troubleshooting
1	A visitor presses the intercom substation button. The Commend Intercom system routes the call to a specific control desk master.	- If the control desk master does not answer, the call is routed to another control desk master. - If the protocol command for a **Call Request 1** [Normal call] was not configured, the command is ignored. - If the command was corrupt on entry and failed the checksum, C•CURE 9000 will return **Not Acknowledged**.

Commend Activity Example (continued)

Step	Description	Troubleshooting
2	C•CURE 9000 recognizes the protocol command and changes the call state of the intercom substation to **Sending normal call.** The control desk master station receiving the call changes call state to “Receiving normal call.” Call states are enunciated through the Activity Viewer and Journal. The state change of the intercom substation triggers an event to display live video of the floor space outside the intercom substation.	- Activity Viewer required to view call state change; correct Maps page needed to review call state change. - Monitoring station required to see live video.
3	The operator stationed at the control desk master accepts the call by pressing the **Enter** button on the control desk.	If there is no operator available to accept the call, it could be routed to another control desk master.
4	The system recognizes the protocol command and changes the call state of the control desk master station to **Sending dialed call**. The intercom substation receiving the call changes the call state to **Receiving dialed call**. Call states are enunciated through the Activity Viewer and Journal.	Activity Viewer required to view call state change; correct Maps page needed to review call state change.
5	After a conversation with the caller concludes, the operator terminates the call by pressing the **X** button on the control desk master. Call states are enunciated through the Activity Viewer and Journal.	Activity Viewer required to view call state change; correct Maps page needed to review call state change.
6	Call status of both the control desk master and the intercom substation are returned to **Idle**. Call states are enunciated through the Activity Viewer and Journal.	

5

Using Intercom Map Icons and Station Viewers

This chapter explains how to configure and use Commend Intercom Map icons and Station viewers in C•CURE 9000.

In this chapter

Commend Station Viewer Introduction

The three intercom objects that have been introduced to the C•CURE 9000 in order to manage the station call states within the Commend intercom system include the following:

- **CommendCentral** — the intercom server
- **CommendStation** — the intercom or group of intercoms linked to a particular server
- **IntercomProtocol** — is linked to Commend Central servers which transmit commands to process

The Commend Station can be controlled using a popup viewer that places “virtual” calls from one Commend Substation or Group of Substations in run-time. The popup view can be selected when you right-click a Commend Station object in the hardware tree and select **Popup view** from the context menu. You can also access the Commend Station viewer when you click a Commend Map icon. See Displaying Commend Intercom Objects on Maps on Page 62 for basic information.

If you are already familiar with the use of C•CURE 9000 Map icons, see CommendCentral — the intercom server on Page 61 for more information.

Displaying Commend Intercom Objects on Maps

You can create maps of your facility adding icons to represent Commend Central servers and Commend Station in the approximate places where those Commend Intercom objects exist. For more information see the *C•CURE 9000 Data Views Guide*.

Adding an Object Icon to a Map

You can add an icon representing an object in the C•CURE 9000 database to a Map. You can also assign an action to the icon so that a user viewing the map can click the icon to perform certain actions, such as Editing the object, setting a property of the object, or Arming or Disarming the object, depending on the icon type and the action you have assigned to the icon.

You can even configure an icon to launch another map when clicked.

Example:

You could design a Map that represented a multi-building campus with each building represented by an icon that when clicked opened another map showing the building's floor plan. See "Opening a Map from an Icon" in the *C•CURE 9000 Data Views Guide*.

You can also add an icon to the Map from the **Maps Icon Template Library** (a list of icons that you have previously saved). See "Adding an Icon to the Icon Template Library" in the *C•CURE 9000 Data Views Guide* for instructions to add an icon to the library.

To Add an Object Icon to the Map

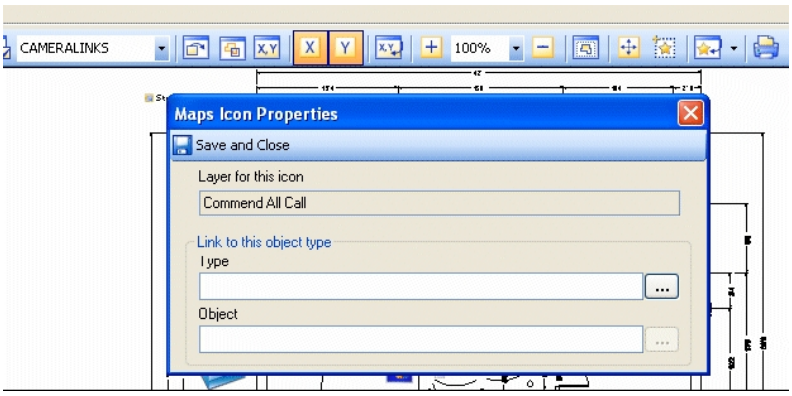
1. Open an existing Map or Map template.
2. Click the arrow on  (the **Add an Icon to the Map** button). The context menu for the button appears.
3. Click **Add an icon**.

   – or –

   Alternatively, click **Add an icon from template**, and then choose an icon from the drop-down list that appears.

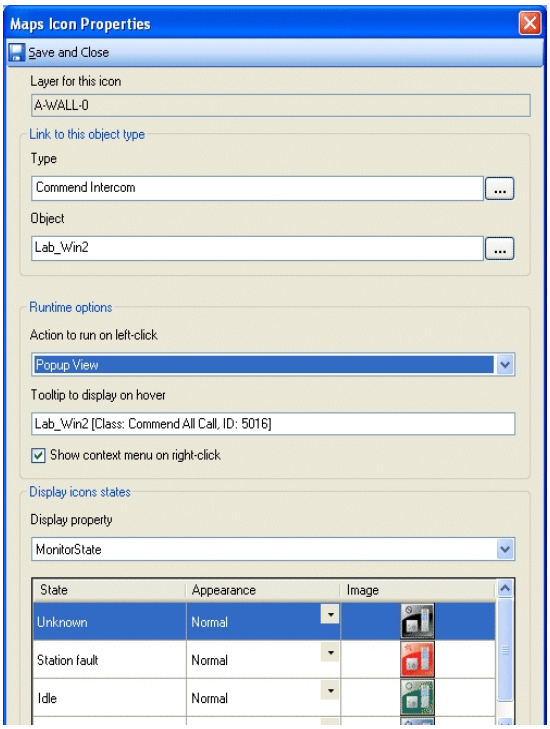
   The **Maps Icon Properties** dialog box, shown in Figure 31 on Page 62, appears.

Figure 31: Map Icon Properties Dialog Box



4. Click  in the **Type** field to open a **Select Type** dialog box and click the icon type you want to choose for the icon.
5. Click  in the **Object** field to open a dialog box for selecting an object of the same type as the icon and click the object you want to choose. The expanded **Maps Icon Properties** dialog box, shown in Figure 32 on Page 63, appears.

Figure 32: Map Icon Properties Dialog Box



6. Click the **Action to run on left-click** drop-down arrow and select an action from the list. The actions available are those that are appropriate to the icon you have chosen.
7. Type a tooltip in the **Tooltip to Display on hover** field if you want to display a tooltip message about the icon.
8. Select **Show context menu on right-click i**f you want the icon to have a context menu enabled for the user to perform additional actions.
9. Click **Save and Close**. The icon that you have configured appears on your Map.
10. Click and drag the icon to the map location that you want.
11. Use the selection handles on the icon to re-size it, if necessary.
12. You can right-click the icon to save it to the Map, or perform any other functions that appear on the context menu. For more information, see the *C•CURE 9000 Data Views Guide*.
13. Click **Save and Close** to save the icon changes you made to the Map.

    Alternatively, if you want to save the **Map** and then create a new one, click **Save and Close**. The current **Map** is saved and closed, but the **Map Editor** remains open to allow you to create a new **Map**.

Selecting an Icon on the Map

To edit or move an icon that you have placed on the Map, you need to select it first.

To Select an Icon on the Map

1. Open an existing Map or Map template see the *C•CURE 9000 Data Views Guide*.
2. Click  (the **Select icon on the map** button). The cursor becomes a cross-hair.

3. Click an icon to select it. Once the icon is selected the cursor changes to ✣ and you can click and drag the icon to a new position on the Map.
4. To select a function from the context menu, right-click the icon.
5. To exit from **Icon selection** mode, click  again.
6. If an icon is still selected, you must right-click the icon to open the context menu and choose **Save Icon** to save any editing you have done, or **Cancel Icon** to discard any changes you have made.

Editing a Map Icon

You can edit an icon that was previously placed on the Map to change its position and its configuration.

To Edit a Map Icon

1. Open an existing Map or Map template (see the *C•CURE 9000 Data Views Guide*).
2. Click  (the **Select icon on the map** button). The cursor becomes a cross-hair.
3. Click an icon to select it.
4. Drag the icon to a new position on the Map, if necessary.
5. Right-click the icon and choose **Edit Icon** from the context menu.
6. The **Maps Icon Properties** dialog box appears. See Figure 32 on Page 63. To make changes, follow steps in Adding an Object Icon to a Map on Page 62 or refer to the *C•CURE 9000 Data Views Guide.*
7. Right-click the icon and choose **Save Icon** from the context menu to save your changes.

Commend Station Viewer Introduction

The three intercom objects that have been introduced to the C•CURE 9000 in order to manage the station call states within the Commend intercom system include the following:

- **CommendCentral** — the intercom server
- **CommendStation** — the intercom or group of intercoms linked to a particular server
- **IntercomProtocol** — is linked to Commend Central servers which transmit commands to process

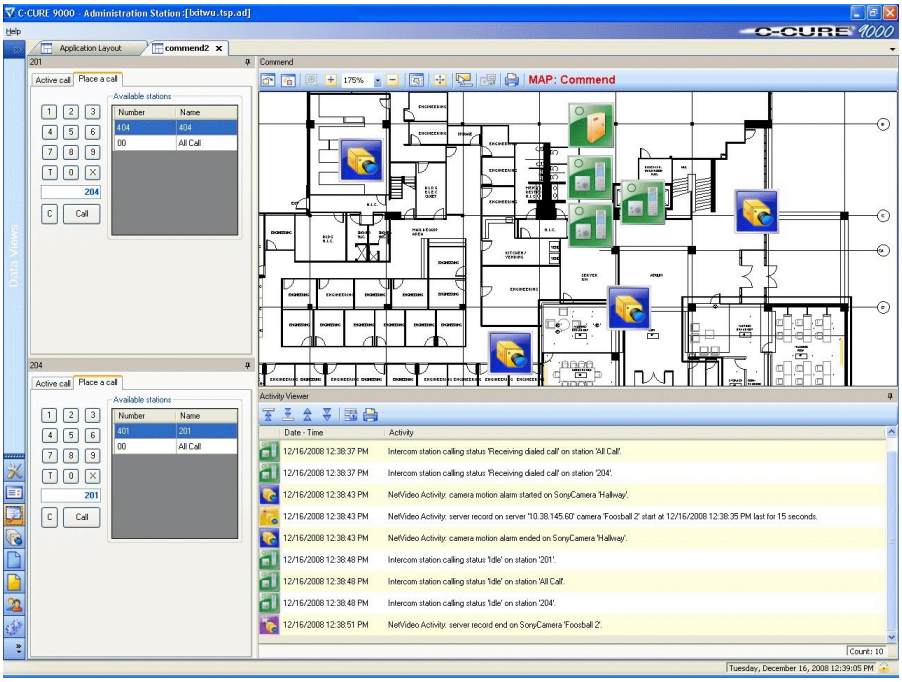
The Commend Station can be controlled using a popup viewer that places “virtual” calls from one Commend Substation or Group of Substations in run-time. The popup view can be selected when you right-click a Commend Station object in the hardware tree and select **Popup view** from the context menu. You can also access the Commend Station viewer when you click a Commend Map icon. See Displaying Commend Intercom Objects on Maps on Page 62 for basic information.

If you are already familiar with the use of C•CURE 9000 Map icons, see CommendCentral — the intercom server on Page 65 for more information.

Commend Intercom Station Viewer

A C•CURE 9000 Application Layout allows you to track activities, view map icon state changes, and click map icons to open intercom popup viewers and make calls. An example of an Application Layout is shown in Figure 33.

Figure 33: Commend Application Layout Example



When you create Commend Stations, you have a choice to create a Substation or a Station Group (see Configuring Commend Station on Page 46). Either station type is identified by a unique station number. The number of connected stations and the station number depend on the Commend Central system (Commend GE100/GE200/GE700). When stations are representing groups, the numbers must range from 01-89.

NOTE Group 00 is intrinsic within commend systems and all stations are included in this group.

Commend Station Viewer

The Commend Station run-time view control includes **Active Call** and **Place a call** tabs and an **Available Stations** listing.

To Use the Commend Station Viewer

1. Right-click a Commend Station object in the hardware tree and select **Popup view** from the context menu.
2. You can also open the viewer when you click on a Commend Station  map icon.

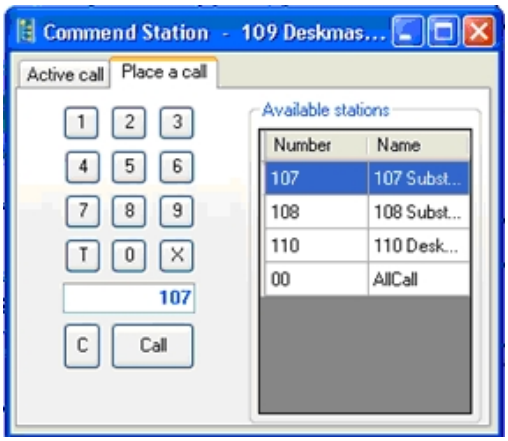
   The Commend Station **Active call** tab displays (see Figure 34 on Page 66).

Figure 34: Commend Station - Active Call Tab

   The **Active call** view summarizes a call made from one Substation or Station Group to another.

3. Click the **Place a call** tab (see Figure 35 on Page 66).

Figure 35: Commend Station - Place a Call Tab and Stations Display



   The **Place a call** view provides a dial-pad for “virtual” dialing from one Substation or Station Group to another.

   The **Available stations** display, showing an expanded list of available stations that can be dialed.

4. Select a station from the **Available stations** list to automatically populate the call window.
5. Click the **Call** button and the intercom selected is dialed.

Any state change in the Commend Central or Commend Station objects can trigger events. These are configured in the Triggers tab of the object editor. For more information, see Commend Central Triggers Tab on Page 38 and/or Commend Station Triggers Tab on Page 48.

Appendix A - Commend hardware configuration

There are three methods that you can use to connect Commend devices to C•CURE 9000:

- Commend Intercom Server >>> Serial >>> C•CURE 9000 (only for older versions)
- Commend Intercom Server >>> Serial >>> Lantronix Serial-to-IP converter >>> IP >>> C•CURE 9000
- Commend Virtual Intercom Server >>> IP >>> Moxa NPort 5110A >>> Serial >>> Lantronix Serial-to-IP converter >>> IP >>> C•CURE 9000

NOTE

- There are two Lantronix Serial-to-IP converters that you can use for the Commend integration with C•CURE 9000:
  - UDS-1100 (has more capabilities than the UDS-10)
  - UDS-10
- To use Commend devices with C•CURE 9000, the devices must have a serial RS-232 connection.
- The default Commend and VirtuoSIS serial port settings are 19200, E, 7, 1.
- To view examples of Moxa setup, refer to the *VirtuoSIS Setup Guide*.

Configuring the Commend server

Complete the following procedure to configure a Commend Intercom Server of a Commend Virtual Intercom Server.

1. Configure an ICX license to load into the Intercom Server's serial port.
2. Start CCT800.
3. Select the **Intercom Server** menu, click **License Administration**, and enter the license.
4. Drag the Lx-ICX license from the **License Pool** to the GEP card (Slot 0).
5. To change the server's address, select one of the following options:
   - For a Commend Intercom Server, change the address from 0/01 to 0/08.
   - For a Commend Virtual Intercom Server, change the address to 14/05.
6. Synchronize changes.
7. To enable the Serial port to output the ICX data, complete the following steps:
   a. Click **Project > Interfaces > Data Interfaces**, select the interface with the address 0/08 or 14/05, and update its description to Ccure9000.
   b. Click **Project > Intercom Server > General Settings > Connection SA101 (Column)** and set to option **Ccure9000**.
   c. Click **Project > Subscriber > Control Desks > IP-RS232-ICX (tab) > ICX 1 connection (column)** and set to option **Ccure9000**.

Physical Setup

- Verify the wiring pinout from the Lantronix UDS1100 DB-25 to the COMMEND DB-9 connector.
- If your configuration uses a gender changer and a null modem adapter, check the device pins.
- Verify that the following pins are connected:
  - Pin 2 on the Lantronix DB-25 connects to pin 2 on the COMMEND DB-9
  - Pin 3 on the Lantronix DB-25 connects to pin 3 on the COMMEND DB-9
  - Pin 7 on my Lantronix DB-25 connects to pin 5 on the COMMEND DB-9

Configuring the Lantronix device

1. Log on to the Lantronix Device Server.
2. Configure Network settings:
   a. Click **Network**.
   b. Select the **Use the following IP configuration** option.
   c. Enter the IP configuration settings in the **IP Address**, **Subnet Mask**, and **Default Gateway** fields.
   d. In the **Ethernet Configuration** area, select the **Auto Negotiate** check box.
   e. Click **OK**.
3. Configure Server settings
   a. Click **Server**.
   b. In the **Advanced** section, configure the following server settings:
      — Set **ARP Cache Timeout (secs)** to **600**.
      — Set **TCP Keepalive (secs)** to **45**.
      — For the **Monitor Mode @ Bootup**, select the **Enable** option.
      — Set **HTTP Server Port** to **80**.
      — Set **MTU Size** to **1400**.
   c. Click **OK**.
4. Configure Serial Settings:
   a. Click **Serial Settings**.
   b. In the **Port Settings** area, configure the following settings:
      — From the **Protocol** list, select **RS232**.
      — From the **Flow Control** list, select **None**.
      — From the **Baud Rate** list, select **19200**.
      — From the **Data Bits** list, select **7**.
      — From the **Parity** list, select **Even**.
      — From the **Stop Bits** list, select **1**.
   c. In the **Pack Control** area, clear the **Enable Packing** check box.
   d. In the **Flush Mode** area, select **No** for all options.

e. Click **OK**.

5. Configure Connection settings.
   a. Click **Connection**.
   b. In the **Connect Protocol** area, configure the following settings:
      — From the **Protocol** list, select **TCP**.
   c. In the **Passive Connection** area, configure the following settings:
      — From the **Accept Incoming** list, select **Yes**.
      — Set **Password Required** to **No**.
      — Set **Modem Escape Sequence Pass Through** to **Yes**.
   d. In the **Active Connection** area, configure the following settings:
      — From the **Active Connect** list, select **Auto Start**.
      — From the **Modem Mode** list, select **None**.
      — Set **Show IP Address After RING** to **Yes**.
   e. In the **Endpoint Configuration** area, configure the following settings:
      — In the **Local Port** field, enter **3001**.
      — In the **Remote Port** field, enter **0**.
      — Clear the **Auto increment for active connect** check box.
      — In the **Remote Host** field, enter **0.0.0.0**.
   f. In the **Common Options** area, configure the following settings:
      — From the **Telnet Com Port Cntrl** list, select **Disable**.
      — From the **Connect Response** list, select **None**.
      — Set **Use Hostlist** to **No**.
      — From the **LED** list, select **Blink**.
   g. In the **Disconnect Mode** area, configure the following settings:
      — Set **On Mdm_Ctrl_In Drop** to **No**.
      — Set **Check EOT(Ctrl-D)** to **No**.
      — Set **Hard Disconnect** to **Yes**.
      — In the **Inactivity Timeout** fields, set the time to **0**.
   h. Click **OK**.

C•CURE 9000 Setup

For information about configuring Commend Central, see Configuring Commend Central.

NOTE

- The following Software House license is required: P/N: CC9000-CMMND
- The IS300 Intercom Server is not compatible, as it does not have an RS-232 interface.
- To review the latest compatibility Matrix, go to http://www.swhouse.com/support/SWH_Connected_Compatibility_Matrix.aspx.

Figure 36: Commend Central - General settings

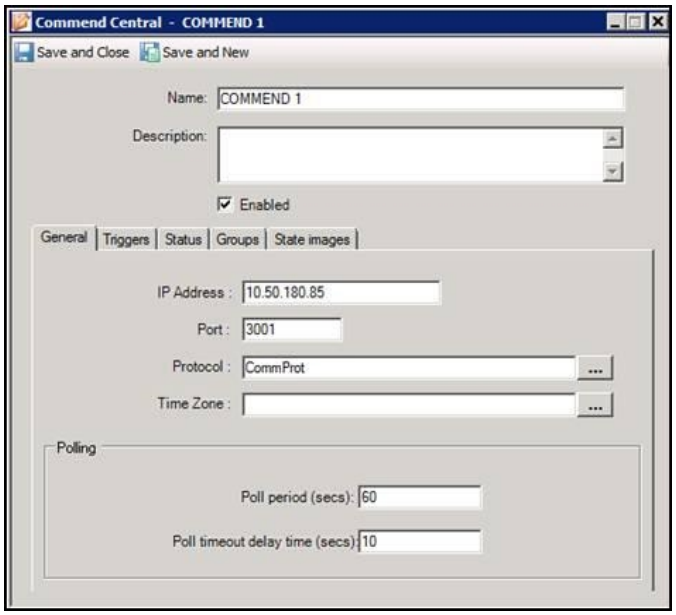


Figure 37: Commend Central - Status