C•CURE 9000

PRODUCT MANUAL

ENGLISH

Tyco Software House C•CURE 9000 Integration with COMMEND

MANUAL VERSION 1.5/0721

This product manual refers to software version 5 of the integration driver.

Contents

1. Introduction

The interface between Commend ICX and Tyco Software House C•CURE 9000 from Johnson Controls is based on a special integration module which is available from Tyco Software House. This article assumes that the reader is familiar with setup and operation of C•CURE 9000. Only points which are specific to Commend ICX and connected intercom stations are described.

2. Requirements

C•CURE 9000 Software

Each version requires its own version of the Commend driver. However, there are no functional differences in the integration from version to version.

- C•CURE 9000, v2.70
- C•CURE 9000, v2.80
- C•CURE 9000, v2.90

License: **Commend Intercom System**

.NET Framework 4.8 from Microsoft.

TIP: The latest .NET 4.8 version can be downloaded here: https://dotnet.microsoft.com/download/dotnet-framework/net48

VirtuoSIS Intercom Server

The integration is compatible with any VirtuoSIS based Intercom Server. VirtuoSIS must be licensed to a PRO9 or higher base level. Firmware 9.0 or newer must also be present.

- S3
- S6
- VirtuoSIS

Licenses: **L-SIS-ICX, L-CCURE, PRO9** (or higher)

NOTE: GE300, GE800, and IS300 Intercom Servers are not supported! For older installations consider adding or migrating to a VirtuoSIS based Intercom Server.

Connectivity

There must be an IP based connection between the Intercom Server and C•CURE Server. Serial (RS-232) connectivity is not supported.

NOTE: Unlike a previous version of the Commend/C•CURE integration **no** Serial-to-IP converters are required. It is a purely IP-to-IP connection.

3. Functionality Scope

- **COMMEND Servers**
  - Connect Commend Intercom Server and C•CURE Server via an IP connection
  - Manually and Auto-populate Intercoms!
  - Create triggerable actions and events
  - Create triggers on Server Status (offline / online)

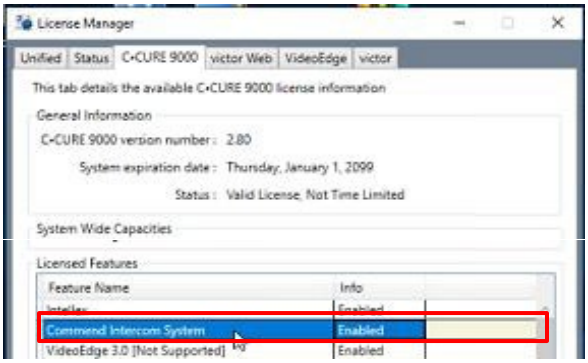
- **COMMEND Intercoms**
  - Assign an intercom to a Monitoring Station user
  - Place / End call between two intercoms
  - Play pre-recorded audio with priority
  - Send free-form ICX messages for additional flexibility
  - Answer a pending call to a monitored intercom
  - Press keypad buttons on any connected intercom
  - Right-click place / end call functionality when user is assigned an intercom
  - Line Monitor Intercom Devices
  - Differentiate on Specific Line Fault types
  - Request Intercom Status

- **COMMEND Outputs**
  - Automatic and Manual adding of outputs
  - Activate / Deactivate outputs

4. Licensing

NOTE: The integration is licensed on both sides.

The **Tyco Software House license** is available from Software House under product code "**Commend**". Specifically, the **Commend Intercom System** license.



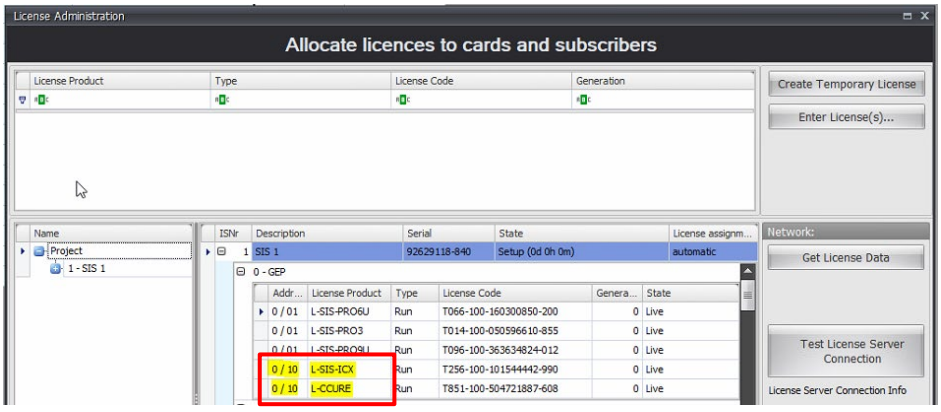
Alternatively, you can check for the presence of this license in the following way:

C:\Program Files (x86)\Tyco\CrossFire\License\CCURE9000.LIC

```
412  FEATURE b53dbd85f248flacc64cc28f283fle TYCOESS 2.89 permanent 1000 \
413      HOSTID=TYCOHOSTID=[redacted] user_info="Commend Intercom \
414      System" SIGN="[redacted] \
415      [redacted] \
416      [redacted]"
```

The **Commend Intercom Server** requires two licenses to be installed: **L-SIS-ICX** and **L-CCURE**. Additionally, a minimum of PRO9 base license level or higher is also required.

Install both licenses in the Slot and Port where the interface connection will be made. Typically, this is Slot 0 / Port 10 although in some systems this might be an SIS-IF card in a dedicated slot. Therefore, the license address in this example would be "0/10". See below:



NOTE: Licenses are not available for use until the State 'LIVE' is reached.
NOTE: The above license codes are for demonstration only and cannot be used in live systems!

5. Installation

This description assumes that C•CURE 9000 has been installed and is running. It is also assumed that C•CURE 9000 software and Commend Intercom Server are licensed appropriately.

Connectivity between C•CURE 9000 and VirtuoSIS is purely IP and requires no Serial Interfaces!

5.1 Server

- Stop all CrossFire services. To do this, start 'Server Configuration' (Run as administrator), which is available under 'Start Menu/Tyco'. Work your way up from the bottom of the list in the TAB 'Services' and wait for each service to have stopped before stopping the next.
- Once all services have been stopped, exit/close 'Server Configuration'
- Install the C•CURE 9000-Commend ICX integration module by running **CCURE9000v2.x_VS- Commend_Integration.msi** and follow the instructions which appear on screen.

NOTE: The name of the file will vary slightly depending on the version of the integration that it is built for.

- Start all CrossFire services. To do this, start 'Server Configuration' (Run as administrator), which is available under 'Start menu/Tyco'. Work your way down from the top of the list in the tab 'Services' and wait for each service to have started before starting the next. There will be a new service available: 'Commend Integrated Communication Driver Service'. As this is the first time this service is used, it needs to be enabled before it can be started. Check the checkbox 'Enabled'.
- Once all services for which a license is present have been started, exit 'Server Configuration'

5.2 Client

For PC's which only have C•CURE 9000 clients there is a separate 'Client only' installation file.

- Install the C•CURE 9000-Commend ICX client integration module by running **CCURE9000v2.x_VS- Commend_Integration_ClientOnly.msi** and follow the instructions which appear on screen.

NOTE: The name of the file will vary slightly depending on the version of the integration that it is built for.

5.3 Upgrade

For installations, which already have the Commend C•CURE 9000 drivers follow the following upgrade steps:

Updating from v2.7/v2.8 to v2.9:

1) Install C•CURE 9000 v2.9 following the instructions provided by Software House
2) Reboot the computer after installing C•CURE 9000 v2.9
3) Ensure the CrossFire Framework Service is stopped by running the "Server Configuration Application" and clicking "Stop" next to it
4) Install CCURE9000v2.9_VS-COMMEND_Integration.msi on the C•CURE 9000 v2.9 Server machine
5) On each C•CURE 9000 client, upgrade to v2.9 then install CCURE9000v2.9_VS-COMMEND_Integration_ClientOnly.msi
6) Start the services from the "Server Configuration Application"

6. Commend Setup

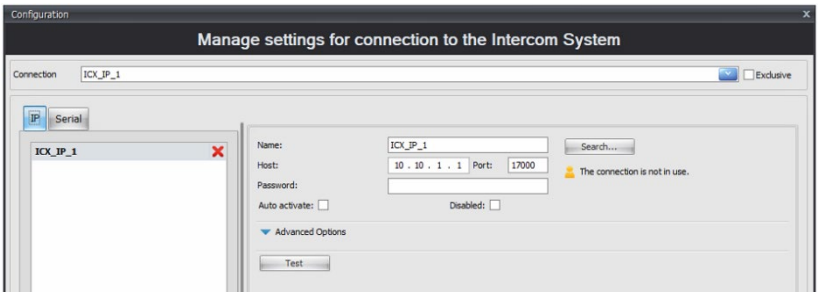
Setup of the Commend Intercom Server is done with the CCT800 software.

TIP: The CCT800 version must be the same or higher than the firmware version that is installed in the Intercom Server. It is backwards (not forwards) compatible.

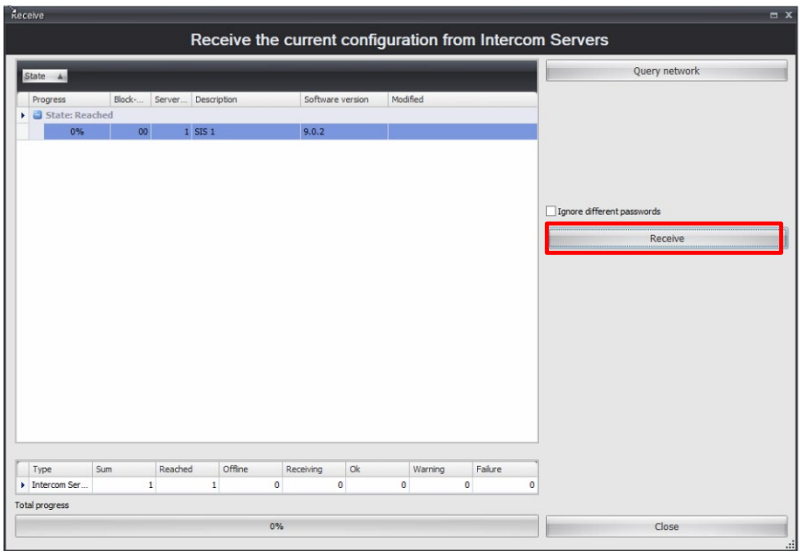
- Launch CCT800

- Click on 'Intercom Server' (menu) / Connection Settings. The windows illustrated below will appear. Enter the IP Address and Port to connect to the Intercom Server. Click 'Test', 'Save Changes', and then Close the window.

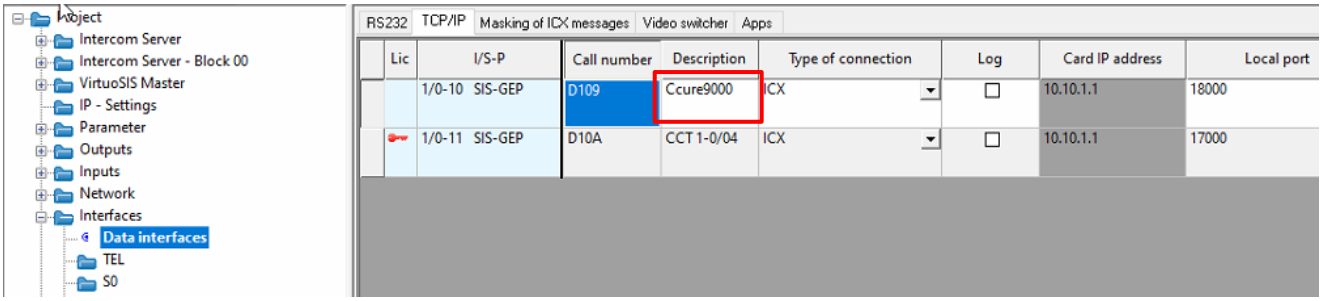
NOTE: The IP Address/Port combination will be different than what is used by C•CURE 9000!



- Click again on 'Intercom Server' (menu) / Receive to bring up the Receive Window. Now click the 'Receive' button. After the configuration is downloaded close this window.



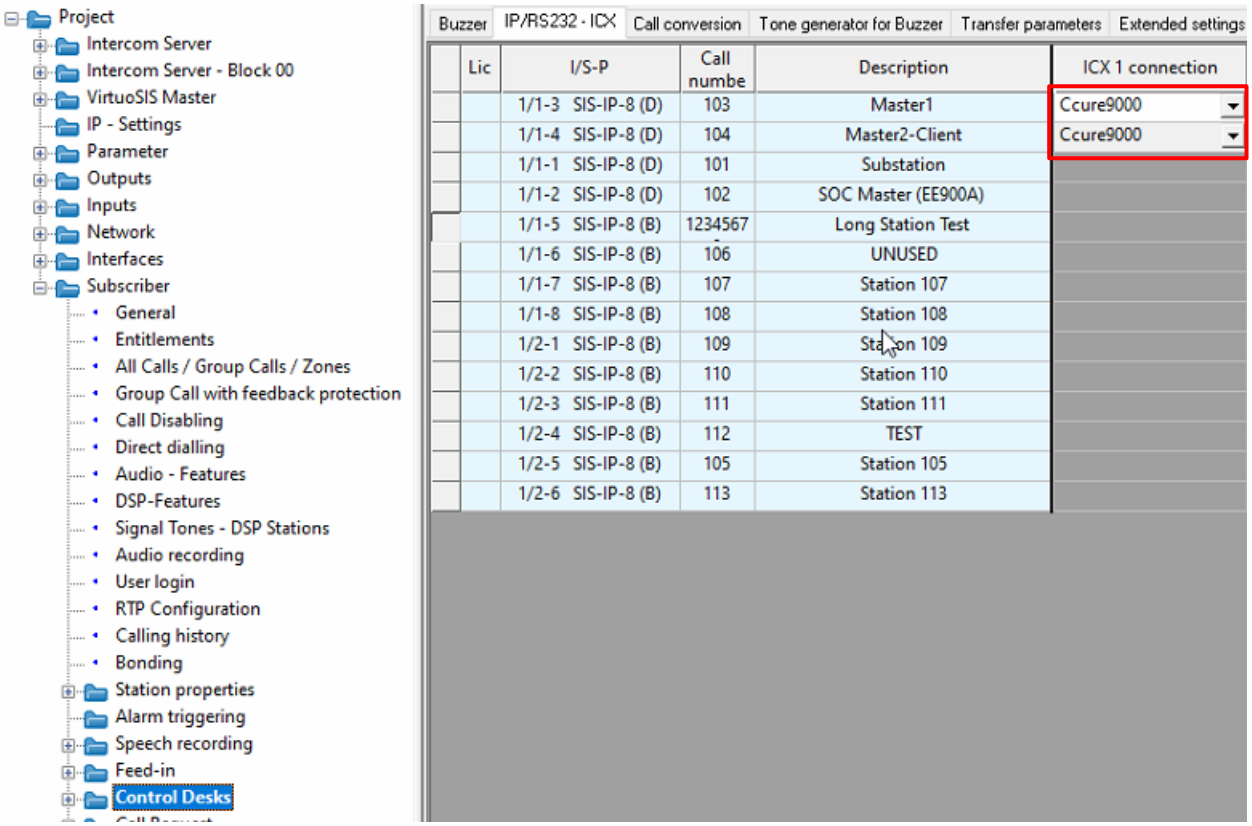
- In the Configuration Tree choose Project / Interfaces / Data Interfaces / TCP-IP (tab). Here you can change the description of the interface where the C•CURE 9000 connection will be made. Take note of the Card IP Address and Local Port as you will need to enter these into C•CURE 9000 later.



NOTE: The Red Key symbol indicates that no **L-SIS-ICX** license is currently present at the interface port. In the example above this is the case for address 1/0-11. There would be no indication in CCT800 if the **L-CCURE** license were missing.

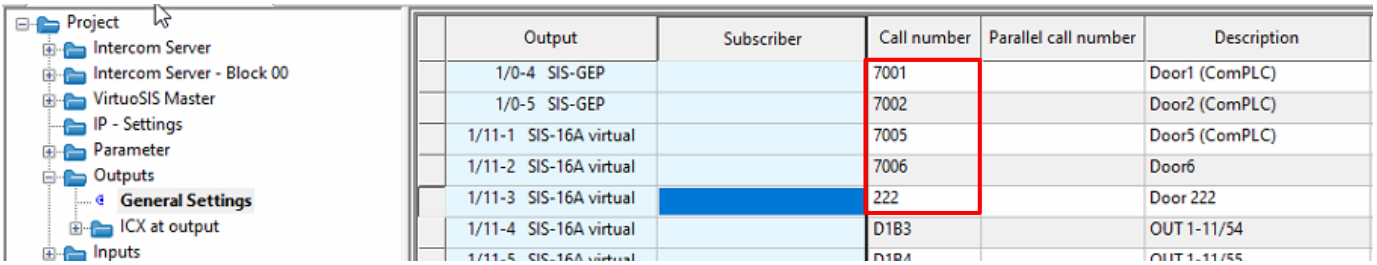
TIP: Take note of the Card IP address and Local port number here as you will need to enter it later into CCURE.

- In the Configuration Tree now choose Project / Subscriber / Control Desks / IP,RS232 - ICX (tab). Here you need to assign the ICX output to the C•CURE 9000 interface so that events can be seen there. Choose all Control Desks for which events should be sent.



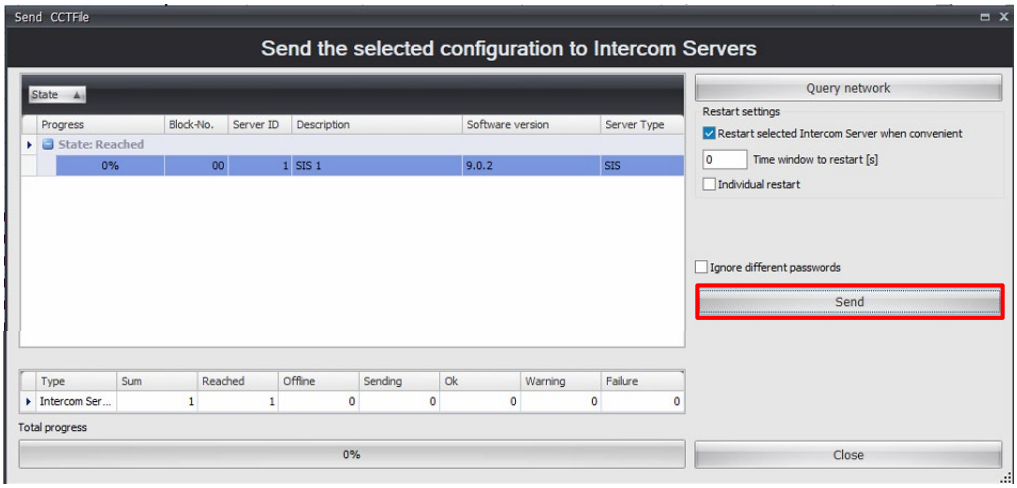
NOTE: If you don't see any Control Desks in your system yet (all rows are grayed out) then you would need to right-click and add the function for the master(s). You may only do this for 'D' level ports. Please consult the Commend Intercom Server manual.

- In the Configuration Tree go to Outputs / General Settings. Change the Call Number of all outputs to be used by C•CURE 9000 to contain only decimal digits. For example, change "C110" to "7110".



TIP: All call numbers for outputs and stations must be globally unique. Also, the range cannot overlap. For example, you cannot have a call number '123' and also have another call number '1234' as they both start with '123'.

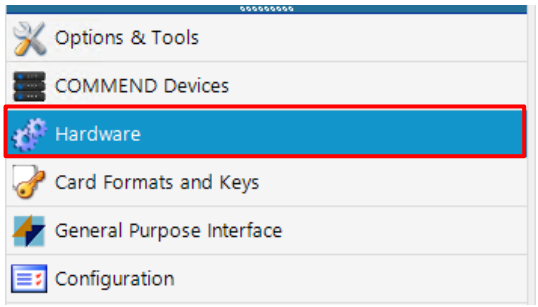
- From the top menu in CCT800 choose Intercom Sever / Send. Now click 'Send'. This will push the changes back to the Intercom Server. The Commend Intercom Server must restart before the changes will be live!



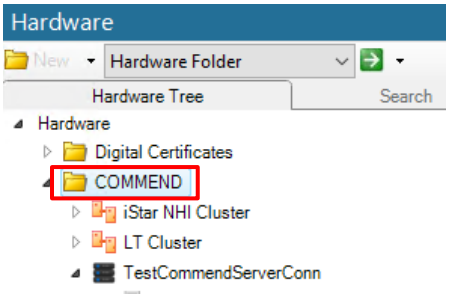
7. Setup C•CURE 9000

Setup of the Commend IP connection in C•CURE 9000 is done in the C•CURE 9000 Administration Workstation. Note that some of the descriptions in the text below are dependent on choices which are made during setup, it may, therefore, be that the actual system being used operates slightly differently.

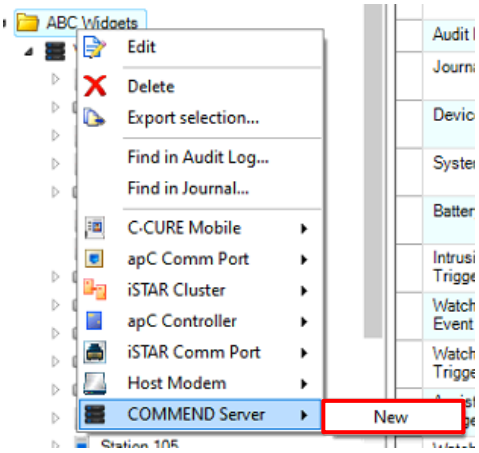
- Click on 'Hardware' to view the hardware tree



- If no appropriate hardware folder exists yet, right click on the top of the tree structure 'Hardware' and create a new hardware folder. Rename it, for instance 'COMMEND'. If an appropriate hardware folder already exists, skip this step.



- Right-click on the Hardware folder and select 'COMMEND Server/New'.



7.1 Connection Settings

- In the new dialog, enter a name, description, the address and port number of the ICX endpoint to which C•CURE 9000 should connect.

TIP: In many cases the default settings are correct.

Intercom Server TCP Socket

- Address: 10.10.1.1
- Port: 18000

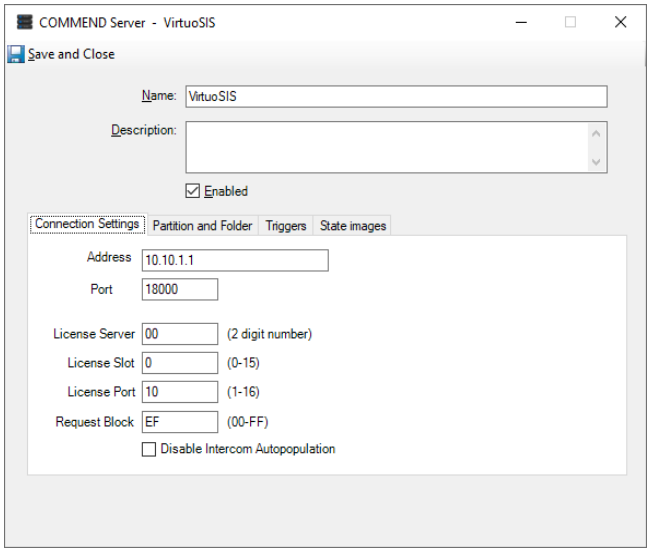
TIP: See Section 6 above.

Location of ICX/CCURE License

- Intercom Server ID: 00
- License Slot: 0
- License Port: 10

Auto-Polling / Station Population

- Configuration Block: EF
  (EF = "Own" Intercom Server)
- Disable Intercom Auto-population

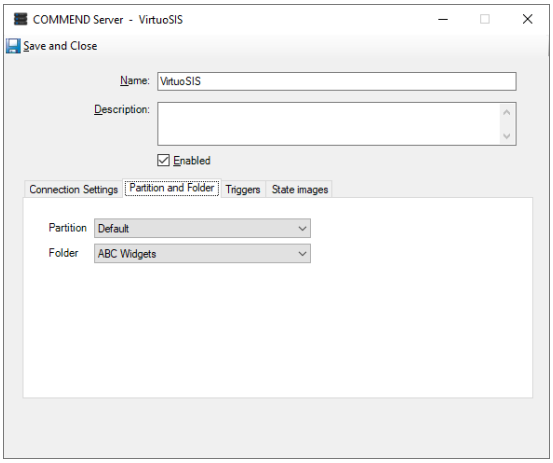


NOTE: Enabled functionality is only implemented by C•CURE 9000. The behavior of Commend services (connecting to server, requesting device status, performing call functions, etc.) are NOT impacted by the Enabled status of any Commend device.)

- Click 'Save and Close' when done finished.

7.2 Partition and Folder

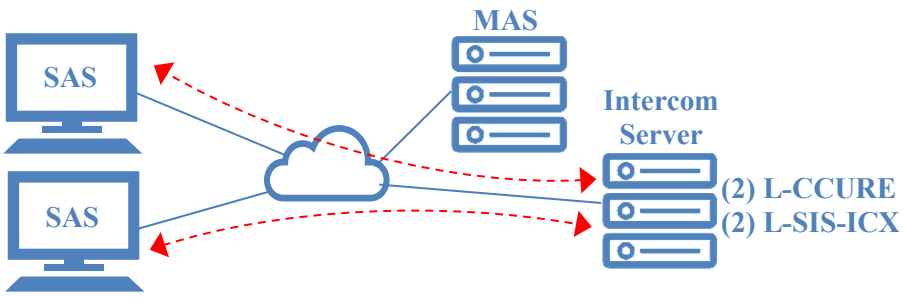
In a partitioned system, it is possible to select which partition and hardware folder within that partition the Commend connection shall be assigned to. It is possible to at a later stage move the Commend connection to another partition and hardware folder by simply selecting the appropriate settings from the drop-down lists under the TAB 'Partition and Folder'.



NOTE: In some situations, this may not take effect until the next time the connection is established. Reset the ICX connection or stop/start the Commend C•CURE 9000 service.

7.3 C•CURE 9000 Enterprise

A C•CURE 9000 Enterprise system consists of a MAS (Master Application Server) and 1 or more SAS's (Satellite Application Server). Each SAS must have its own connection to a COMMEND Server via IP with matching License. The MAS will collect all device information from all to it connected SAS's.

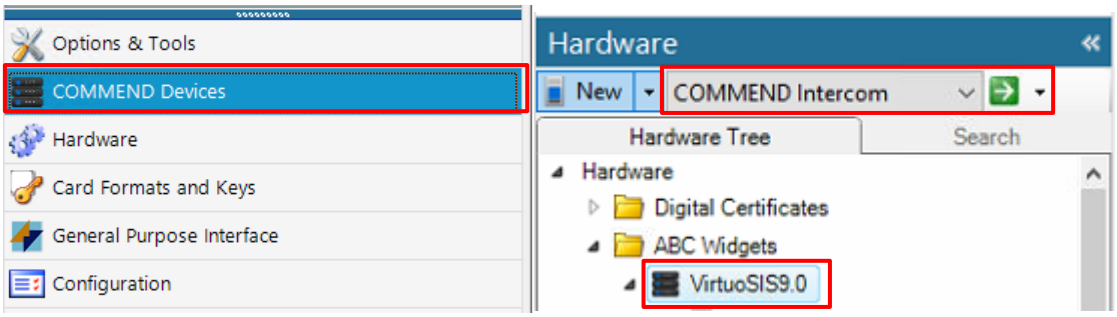


8. Intercom properties

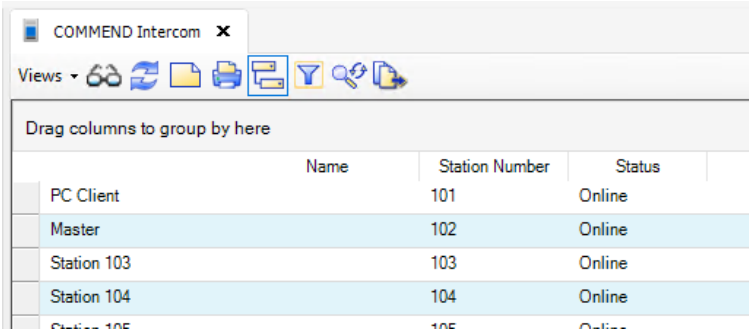
By default, Intercom devices are auto-populated via the COMMEND Server connection. Intercom properties can be changed.

8.1 Assign an operator to an intercom

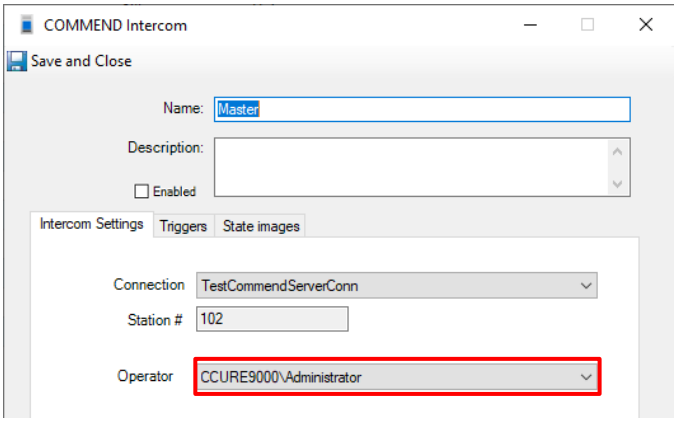
- Click on COMMEND Devices. Click on the Green Right-Facing arrow next to 'COMMEND Intercom'. A new TAB listing all discovered intercom stations will be opened.



- Right-click on an intercom, select Edit



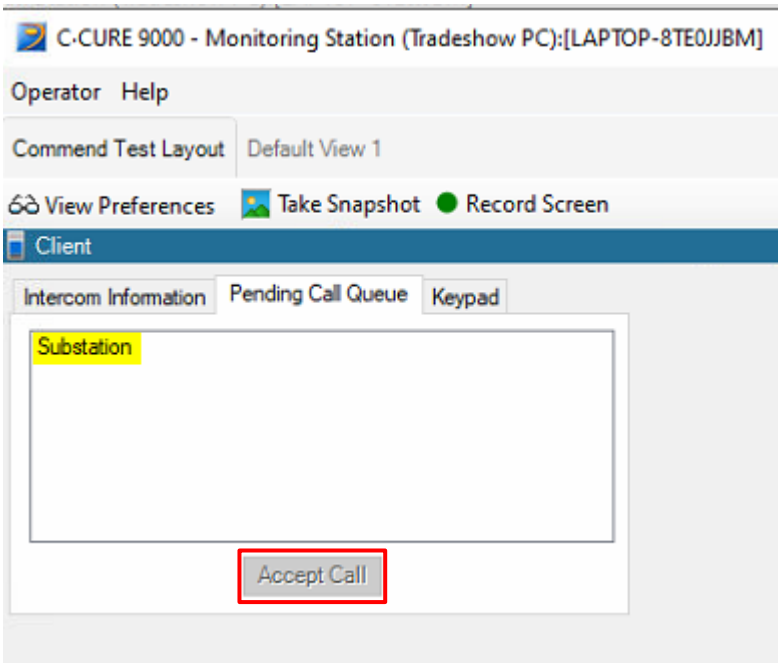
- Under the Operator field choose the drop-down list and select the C•CURE 9000 logins appropriate for the operator. This will be the operator who will use the Monitoring Station application. Now, click "Save and Close".



NOTE: Be careful to **NEVER** give more than one Station the same Operator!

The selected operator will receive Call Requests to their intercom on the screen of the Monitoring Station application.

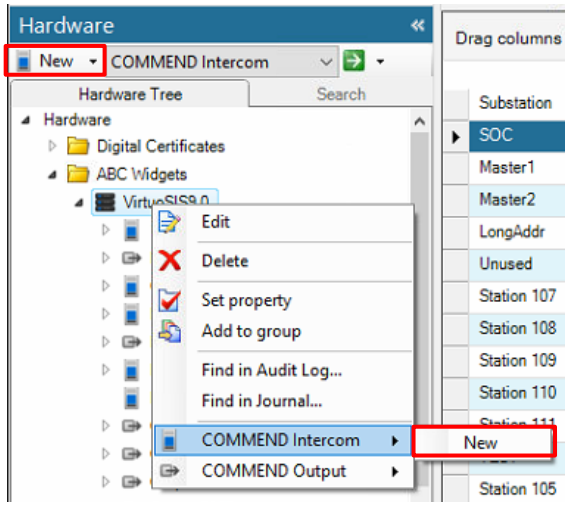
Call requests can be answered directly from the call request list. The operator can also select other intercom stations to call at will.



8.2 Manual Station Addition

As of Version 004 of the integration driver it is possible to manually add stations.

Under COMMEND Devices choose 'COMMEND Intercom' from the drop-down menu and then click the 'New' button. Alternatively, you may right-click on the Intercom Server and choose 'COMMEND Intercom > New'.

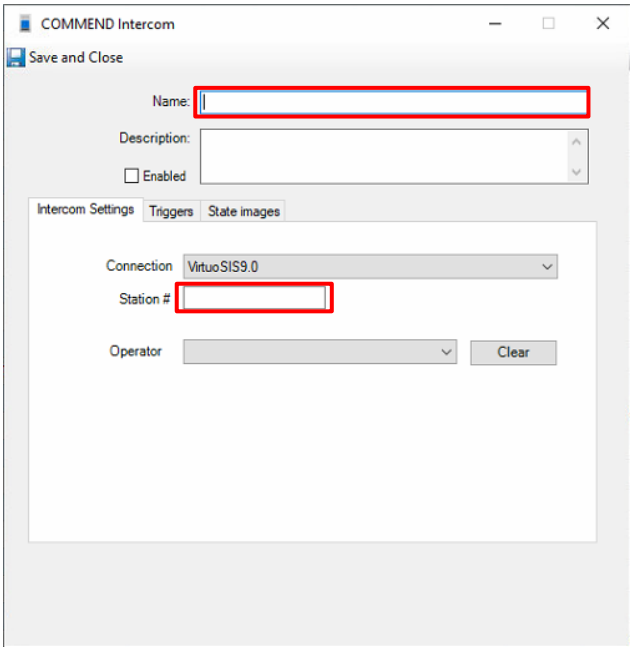


Enter a Name and the Station Call Number. The Call Number must match a valid extension or direct dial code in the Intercom Server's programming.

The Description field is optional, but it is recommended as good programming to fill out.

The Operator fields should only be entered when linking the station to the C•CURE 9000 operator.

Click 'Save and Close' when finished.



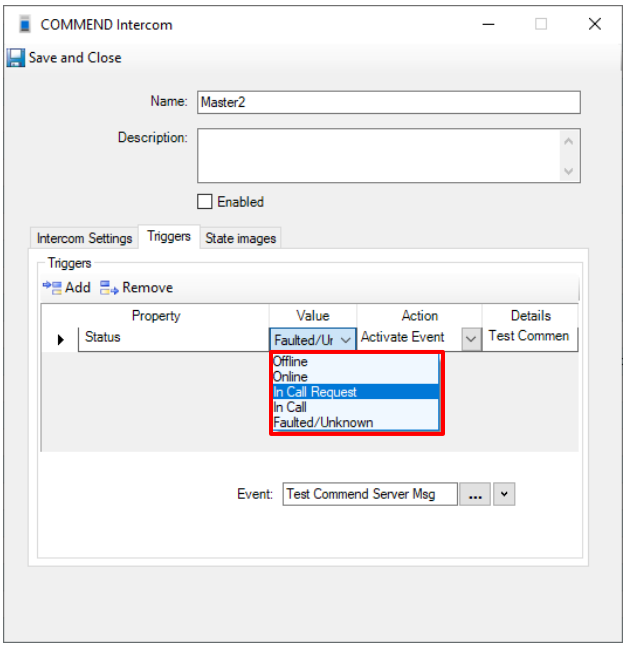
TIP: The call number might reference a Function Code. For example, Call Number 00 is by default the All Call function (One-Way call to all Intercoms). There is no status for a Function Code, but it is possible to trigger it.

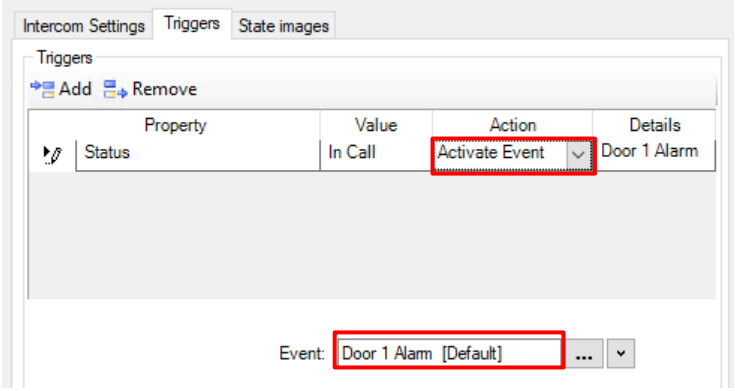
8.3 Triggers

In the 'Triggers' TAB of the intercom station property editor it is possible to assign actions on intercom station state changes:

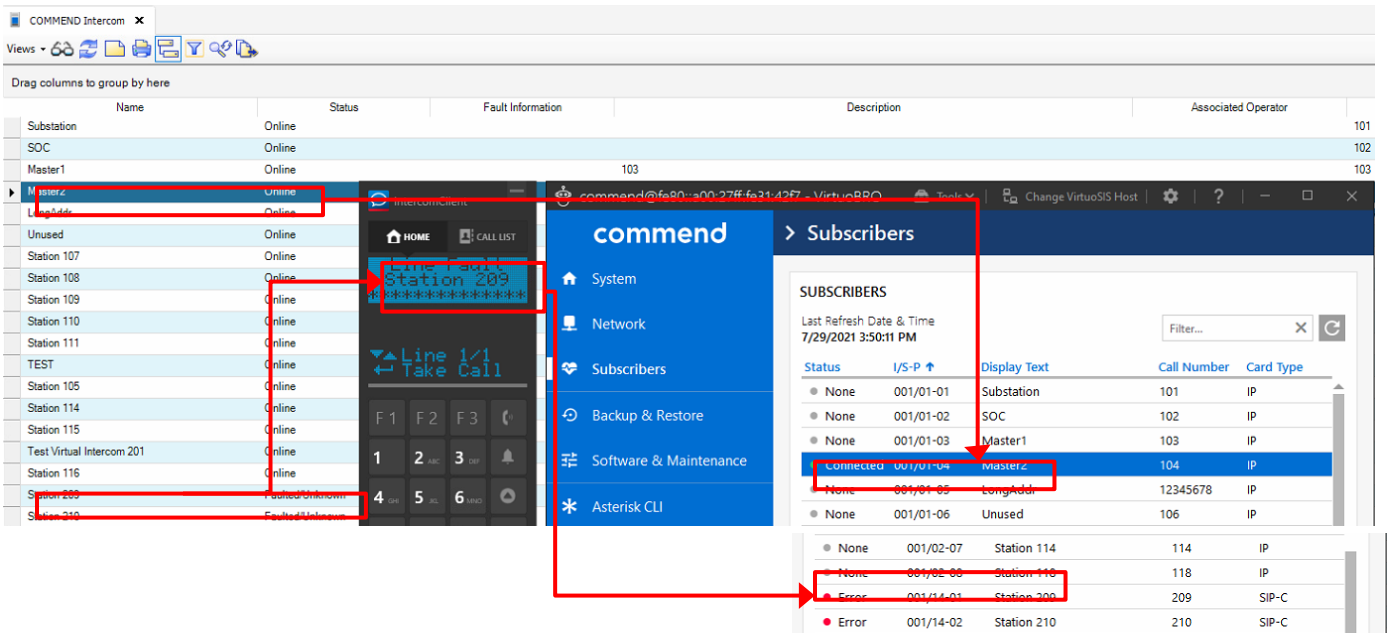
- Offline
- Online
- In Call Request
- In Call
- Faulted/Unknown

It is possible to attach one or multiple actions to a state, for example showing a camera view when there is a Call or Call Request.



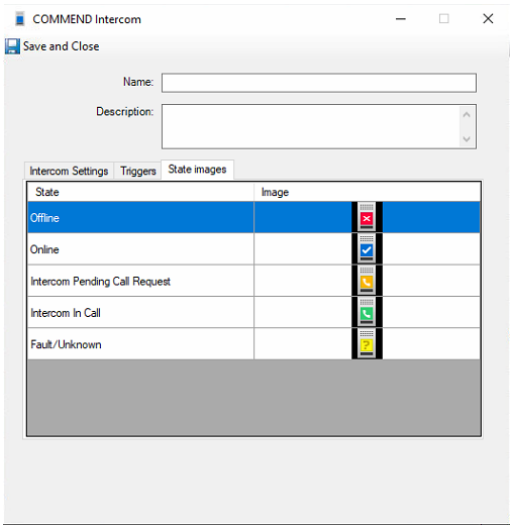


Here is an example comparison of the Status of an Intercom Device as it appears in C•CURE 9000, Intercom Client application, and VirtuoBRO tool. Master2 is connected and ONLINE with the Intercom Server. Station 209 is OFFLINE and in a Line Fault.



8.4 State images

The intercom icon has default images for each state. In the TAB 'State images' it is possible to assign a new image to a state. Double-click on an existing image and browse to the new image file.



8.5 Enabled

As of Version 005 of the integration driver it is possible to Enable / Disable Intercom Devices.

NOTE: Enabled functionality is only implemented by C•CURE 9000. The behavior of Commend services (connecting to server, requesting device status, performing call functions, etc.) are NOT impacted by the Enabled status of any Commend device.)

9. Server properties

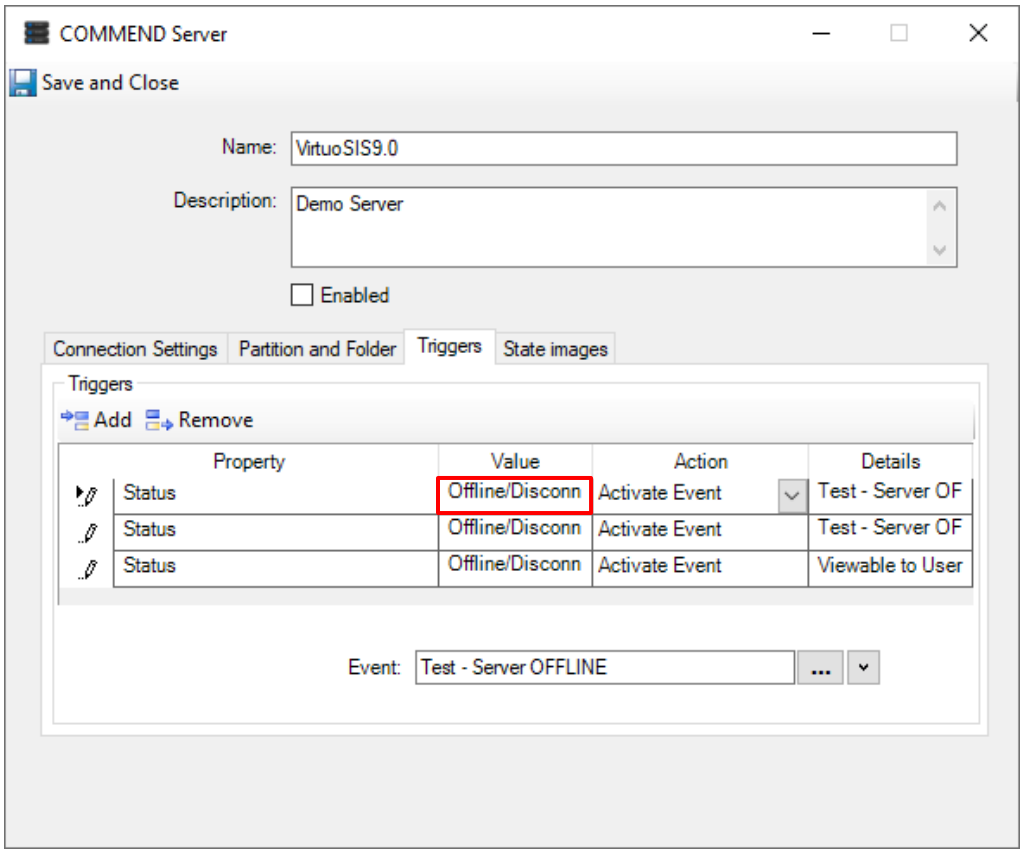
Intercom Servers can be added by clicking COMMEND Devices section and then ‘New’ button. See Section 7 for more information on server creation settings.

9.1 Triggers

In the 'Triggers' TAB of the intercom server property editor it is possible to assign actions on intercom server state changes:

- Offline / Disconnection
- Online / Connected

It is possible to attach one or multiple actions to a state. For example, triggering on connectivity issues between Commend Server and C•CURE 9000 Server.



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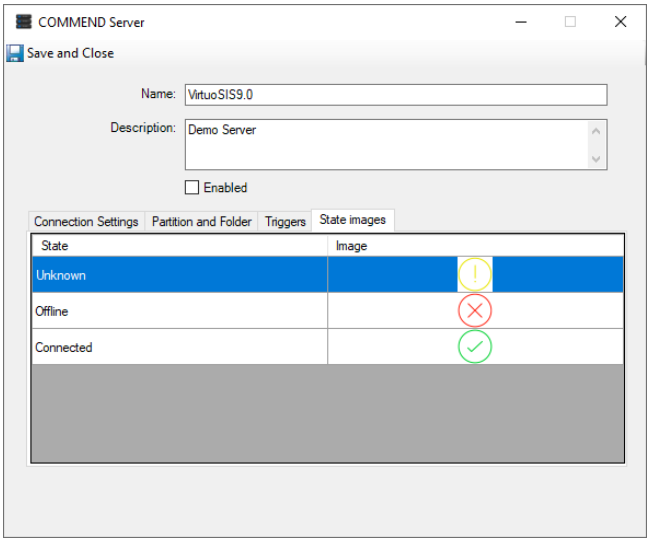
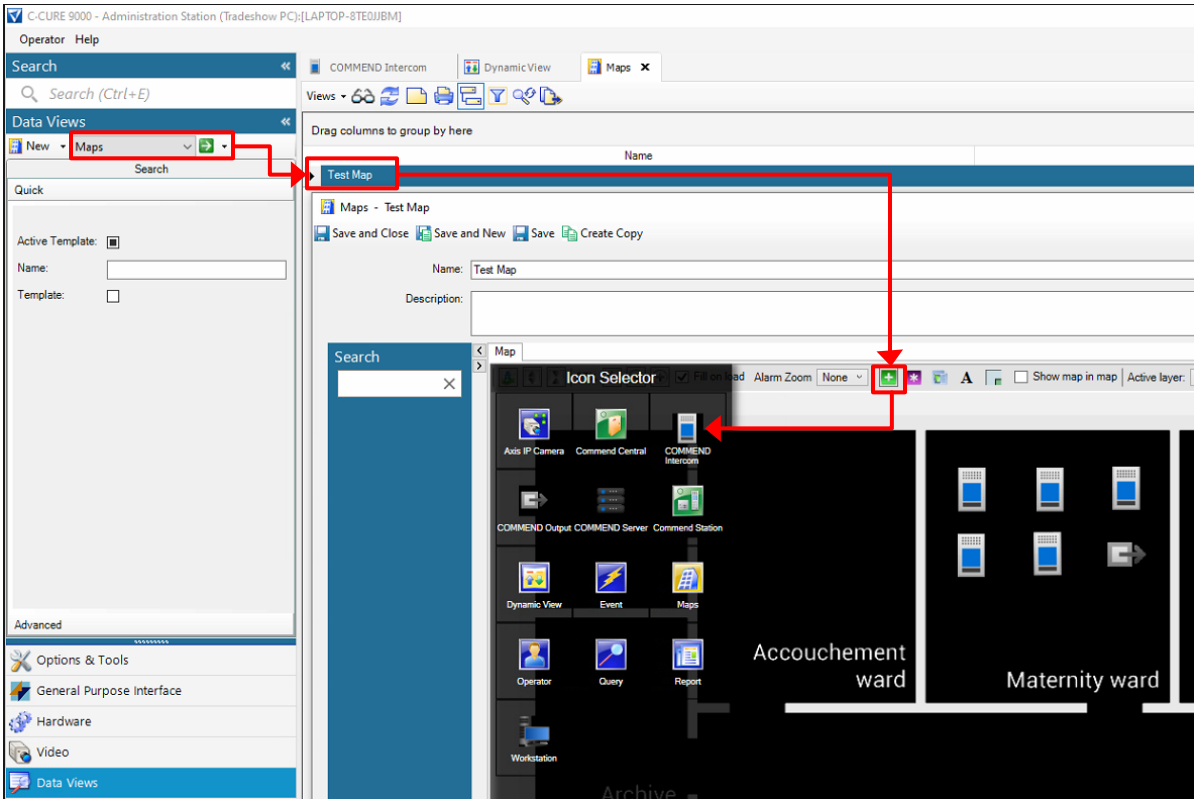


10. Maps

Intercom icons can be placed in a map.

- Follow the normal procedure to define a map and place an icon on a map
- Select Type: COMMEND Intercom
- Select Object: Select the actual intercom to be placed on the map



11. Events and actions

Just as it is possible to link an intercom state change to an action in another to C•CURE 9000 connected subsystems, is it also possible to trigger an action on COMMEND Servers.

NOTE: The "Activate Event" condition STAYS in the "Active Causes" unless a manual "Deactivate Event" is fired, or unless you use a "Pulse" event. A Pulse does not leave an event in the Event's Active Causes queue.

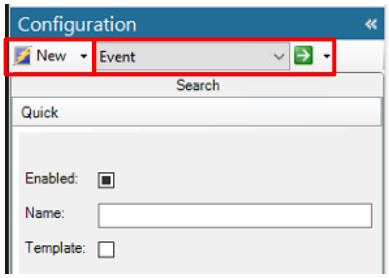
NOTE: If the "Activate Event" stays at the top of the queue. When the Arm / Disarm cycle occurs again (putting it back into Arm) then it will fire the event when the "Arm" occurs, because all conditions are met.

NOTE: ***Our recommendation is to only use "Pulse" on the event when using the COMMEND events***. If for some reason this cannot occur, then create two separate events and have both use the same trigger. Make it so these events only Pulse and not Activate. Unless something triggers to Deactivate the event, it will sit in the queue for some period of time and cause future Arm/Disarm cycles to fire the event again.

11.1 Defining an action for COMMEND Servers

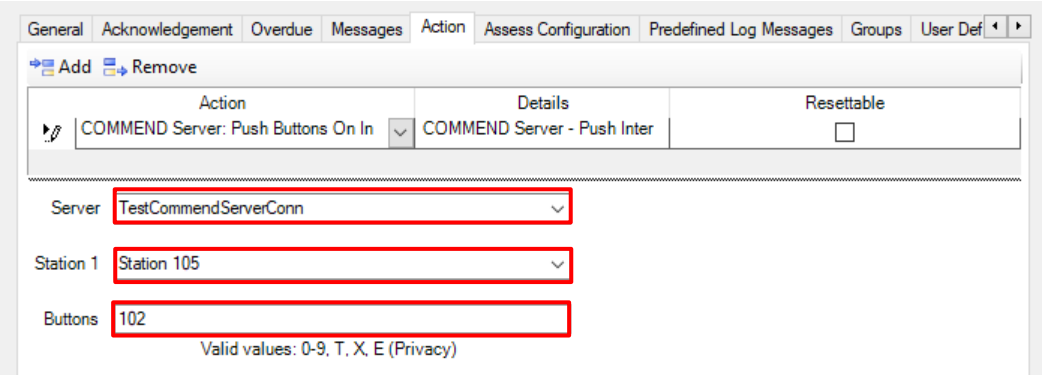
Define an event in a connected subsystem to which a COMMEND Server action must be linked.

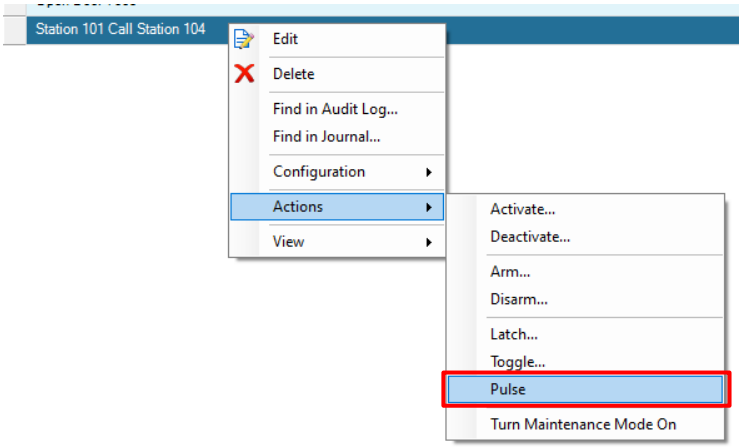
- Under 'Configuration' choose 'Events' the drop-down menu.
- To list the existing events, click on the Green Arrow Button. All existing events are listed.
- To create a new event, click the 'New' button.



- A new dialog to define the action will appear', Select the TAB 'Action'.
- Click 'Add'
- From the drop-down list under 'Action' select any action which starts with 'COMMEND Server'.
- Fill in the fields that display based on the action to be taken.
- Enter all fields as appropriate in all other TABs as well.
- Click "Save and Close"

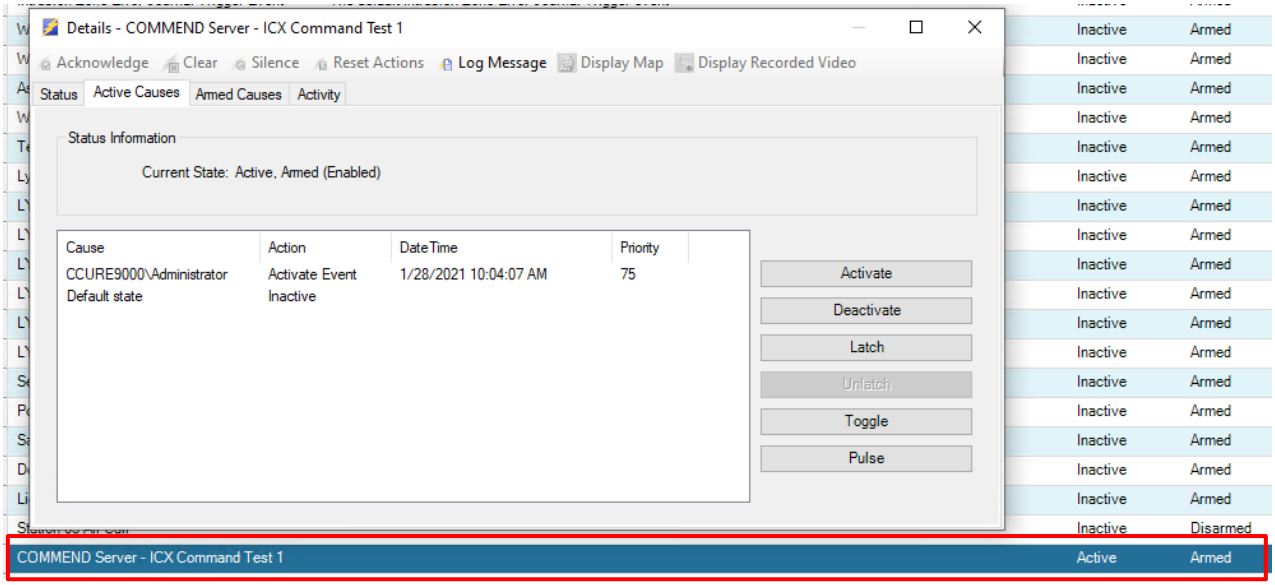
To test an action, ensure the Event is 'Armed', then right-click and select 'Actions'->'Pulse'





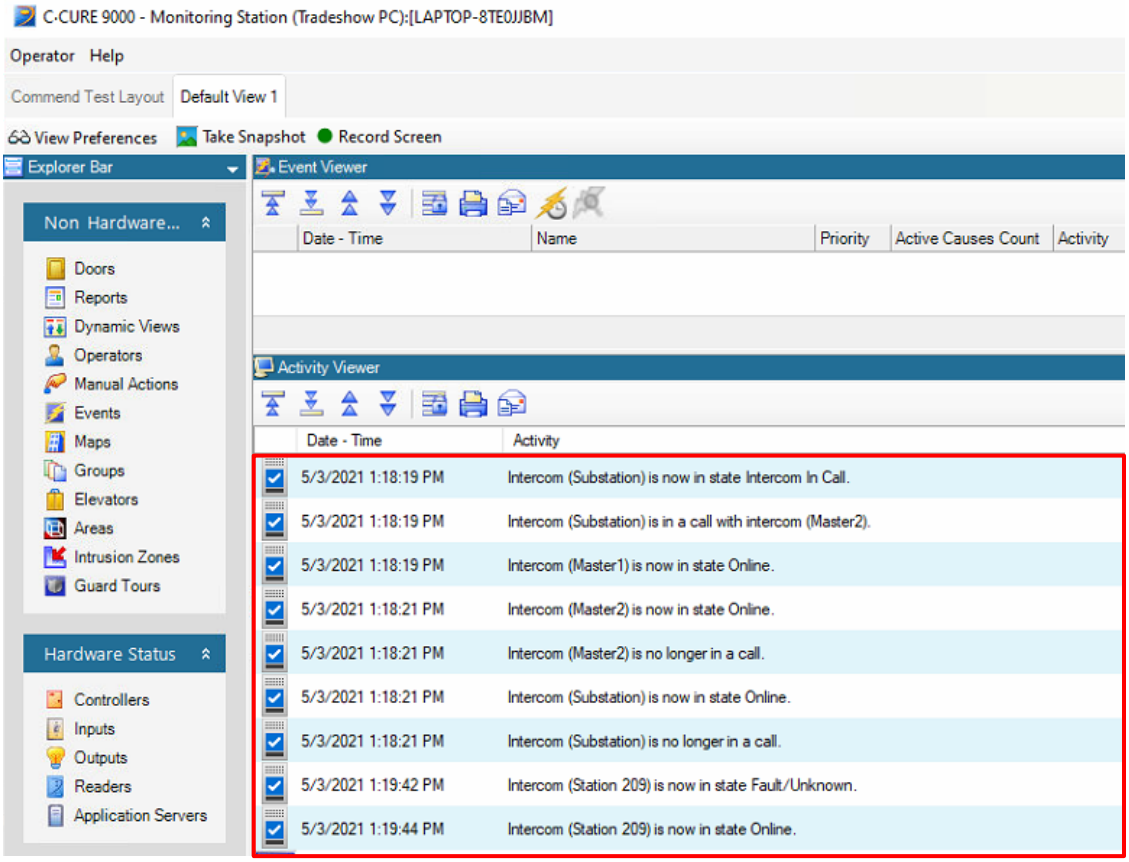
11.2 Action triggering details

- In this example, we have an ICX Commend that is set to the following values:
  - Event Name: ICX Command Test 1
  - Armed Causes (tab): Default state (Disarmed)
  - Active Causes (tab): Default state (Inactive)

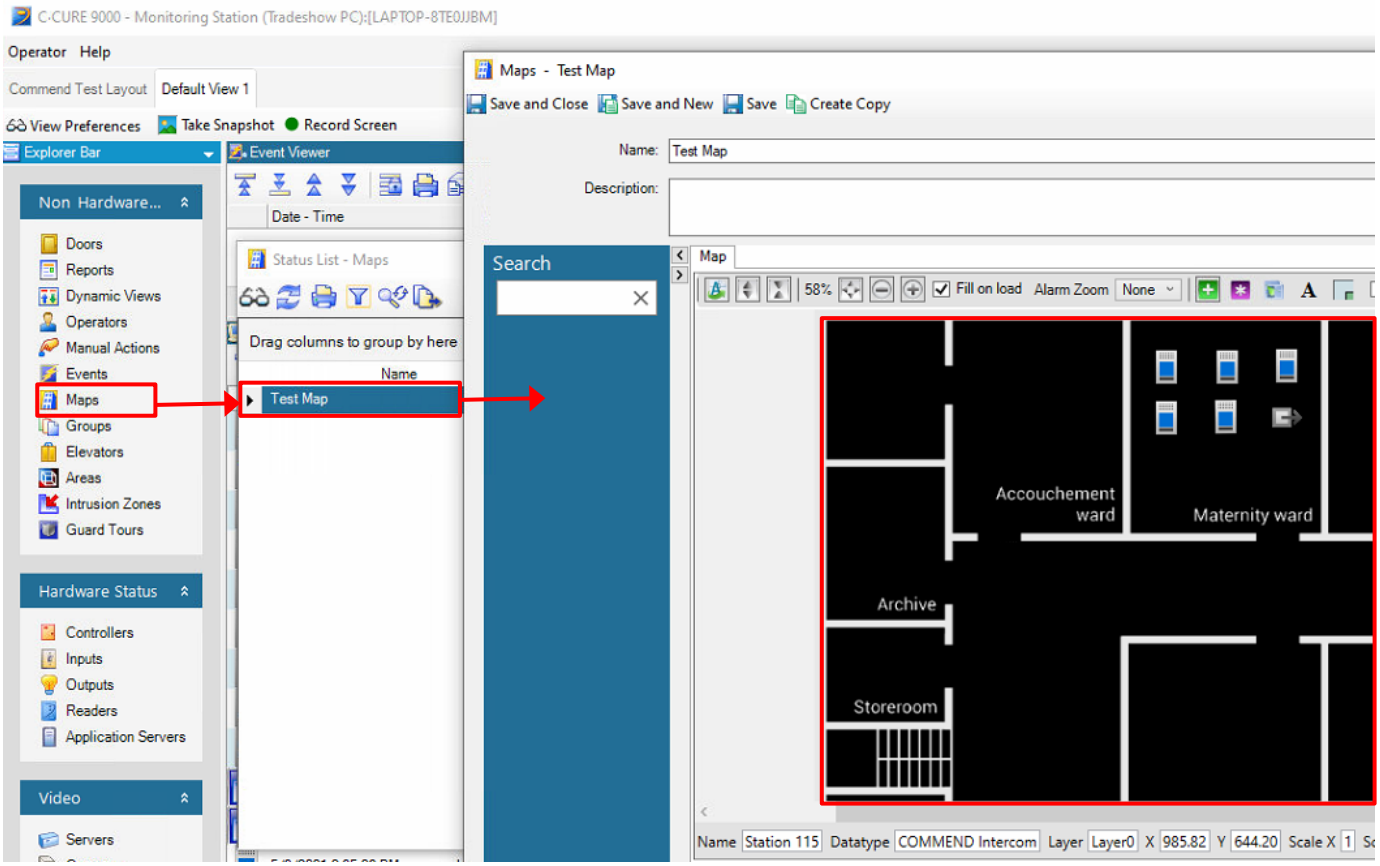


12. Operation

Operation is normally done from the Monitoring Station application. All intercom station status changes are shown in the 'Activity viewer'.

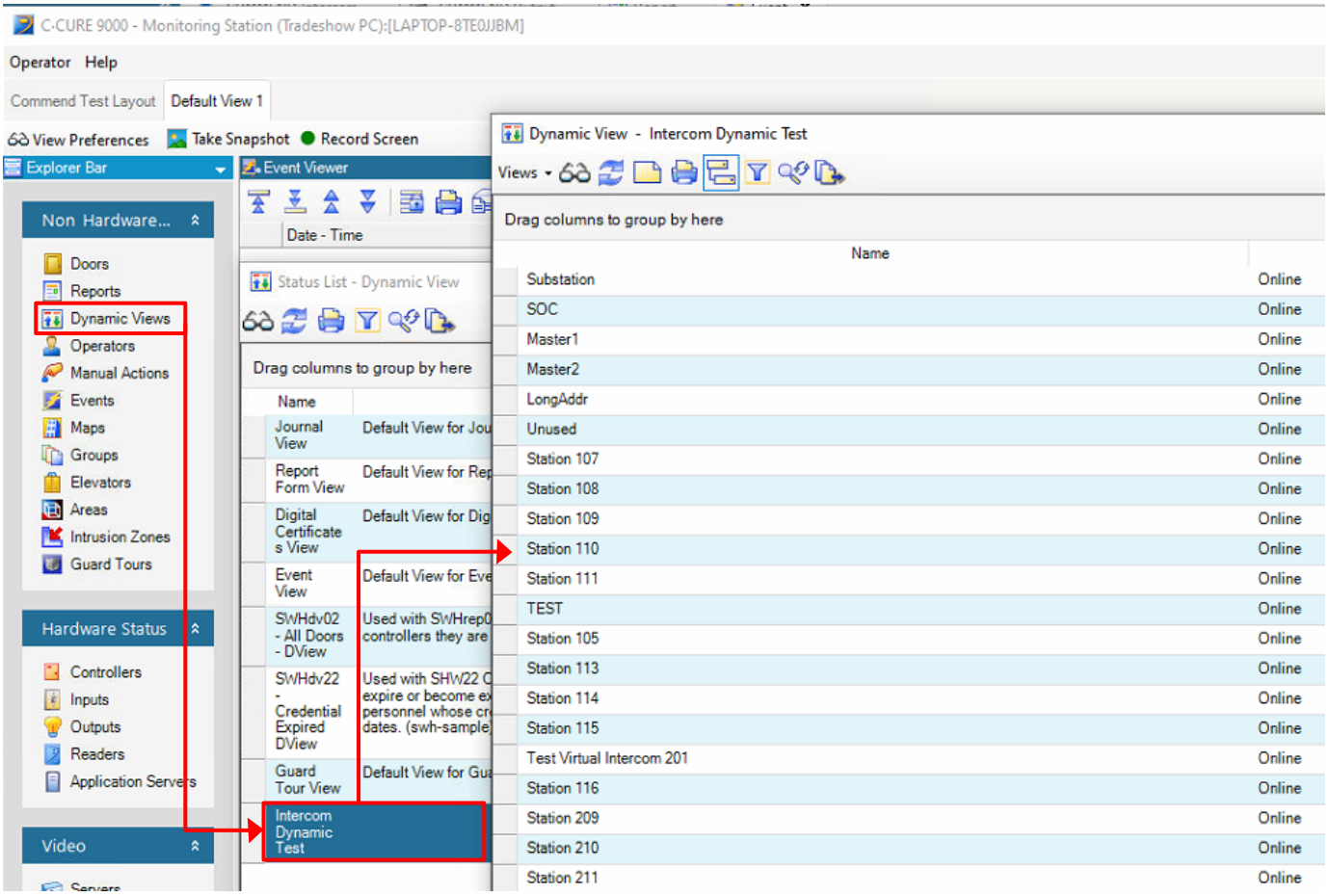


To show a map, select Maps in the Explorer Bar. This will bring up a Status List, containing all defined maps. Select and right click a map, select 'Popup view' to show the map including all in it defined icons in a new window.

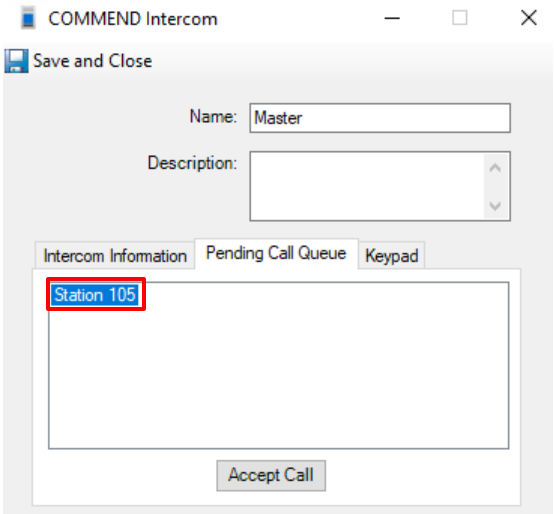


12.1 Working with intercom stations

To show the list of defined intercom stations, select 'Dynamic Views' in the Explorer Bar. If a dynamic view for viewing intercoms has not been created, then do so according to the C•CURE 9000 documentation. In the new dialog select 'Intercom View' (assuming that this view has been defined, see above), right-click it and select 'Popup view'.



In this list, it is now possible to double click on an entry after which a popup view will open. It is possible to open multiple popup views.



The popup view for the intercom station which is associated with the Monitoring Station contains a 'Pending Call Queue'. Call requests can be selected in this view and answered by clicking the 'Accept Call' button.

Popup views of other intercom stations only show general information and the status of the station. When the Monitoring Workstation is associated with an operator intercom there is in addition a button 'Place Call', which changes to 'End Call' in case there is an established connection.

It is also possible to place and end calls by right-clicking and selecting the appropriate command from the bottom of the command list.

12.2 Maps

To show a map, select Maps in the Explorer Bar. This will bring up a Status List, containing all defined maps. Select and right-click a map, select 'Popup view' to show the map including all in it defined icons in a new window. The appearance of the intercom icon is status dependent. Click on the icon to bring up the intercom popup view.

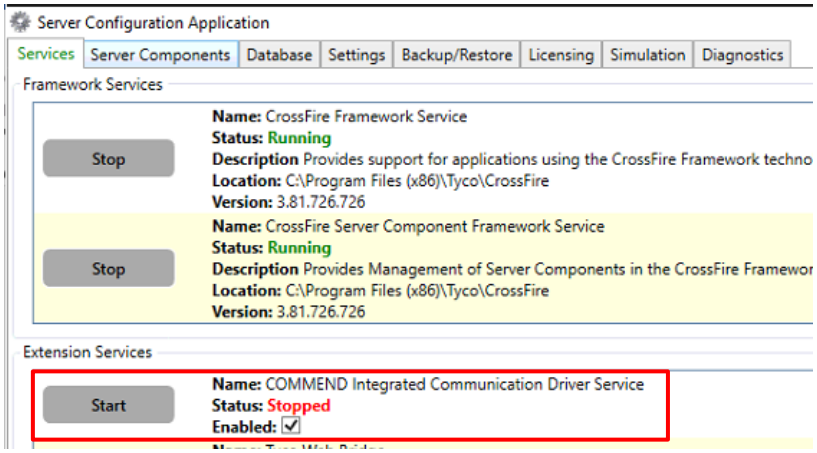
See also an example above at the beginning of the section.

13. Troubleshooting

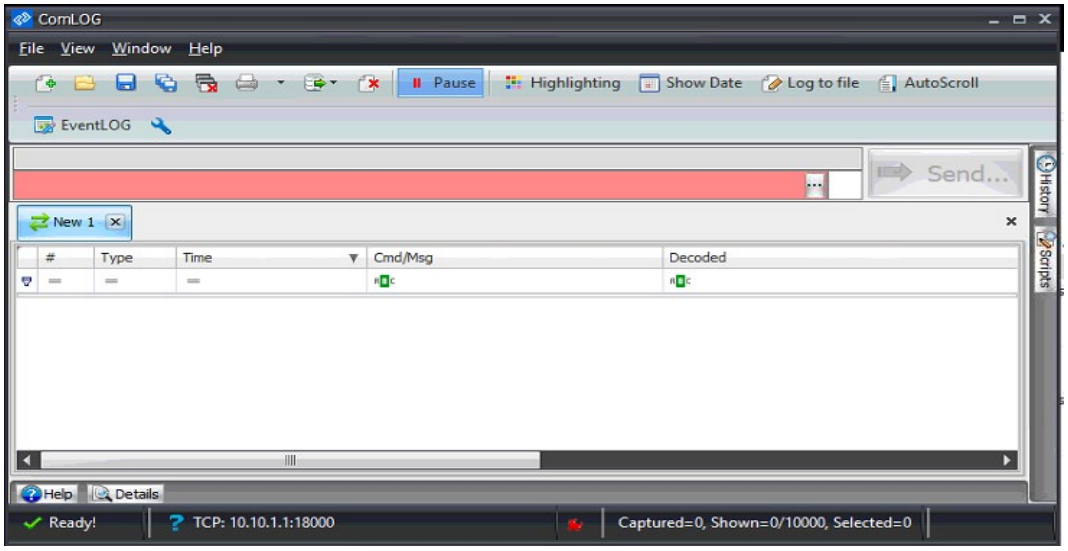
Verify ICX output from the Commend Intercom Server

- Stop the Commend Service in the C•CURE 9000 Service Configuration Application panel.

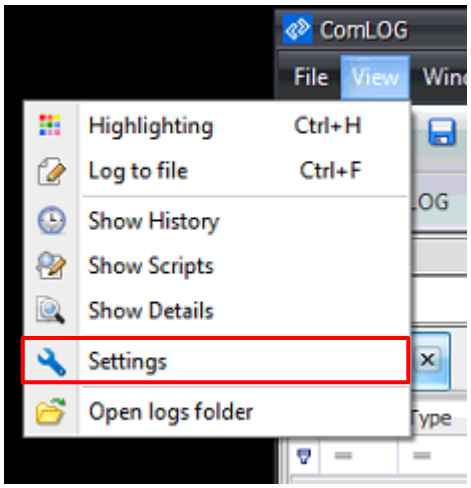
  When the button says "Start" the service is stopped and ready to Start again.



- The CCT800 configuration software also comes with an ICX test tool called ComLOG. Launch ComLOG (usually found under the Start Button / Programs / Commend)

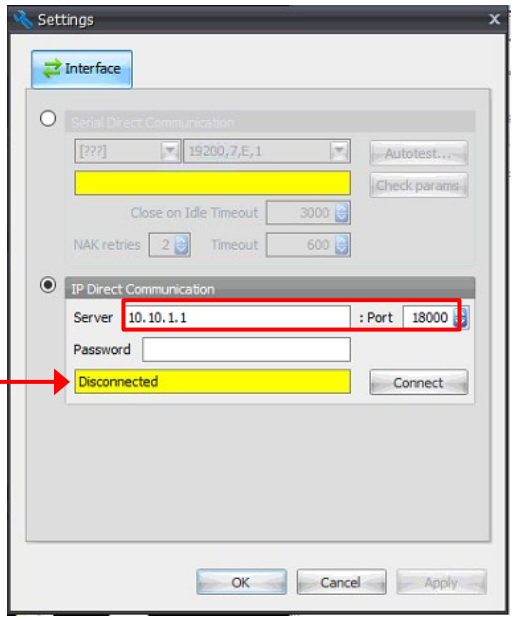


- Under the View menu click on Settings. This will bring up a new Settings window.

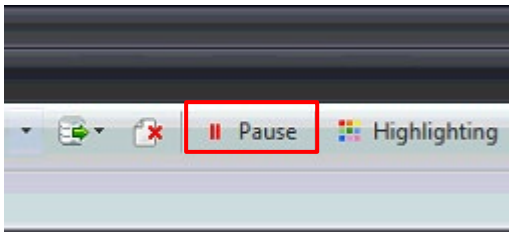


- Enter the same IP Address and Port that C•CURE 9000 would normally use. ComLOG will connect just like it was C•CURE 9000. Click the 'Connect' button. The strip on the left should turn Green in color and indicate Connected.

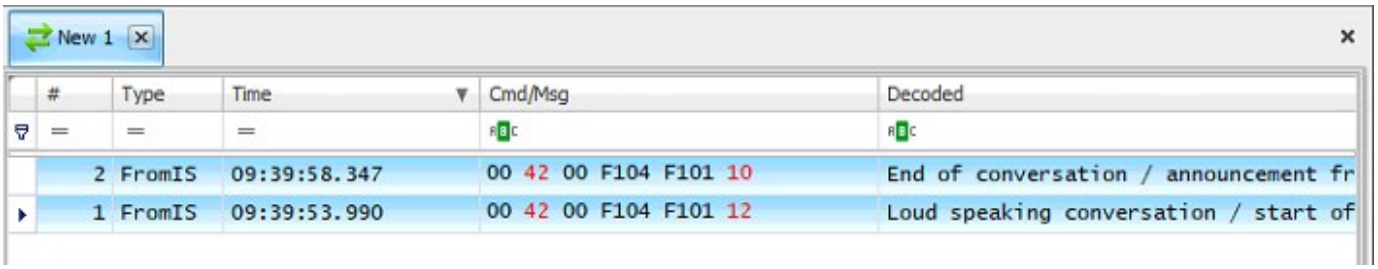
  Then close this window.



- Unpause the program so that live events can be displayed. The icon should not appear pressed down anymore.



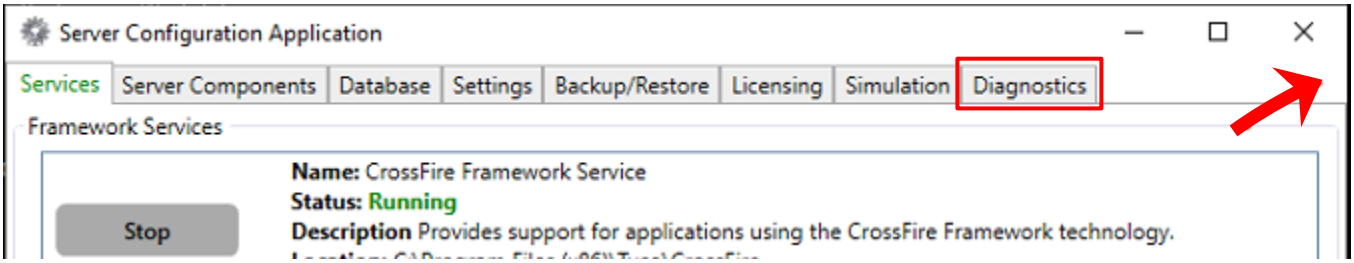
- Create some intercom activity. For example, place a call from a Substation to the Master. You should see the events in the main window like this:



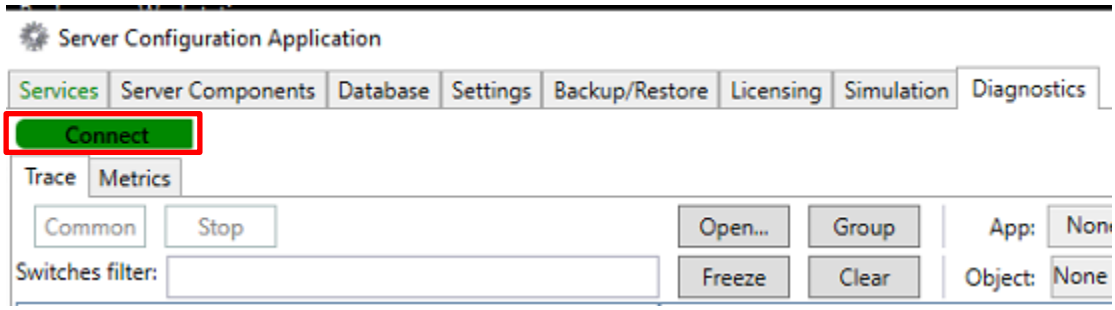
- This confirms that the Commend Intercom Server is licensed for ICX and is outputting events. Further troubleshooting should be done on the C•CURE 9000 Server or in the network.

13.1 Check C•CURE 9000 logs

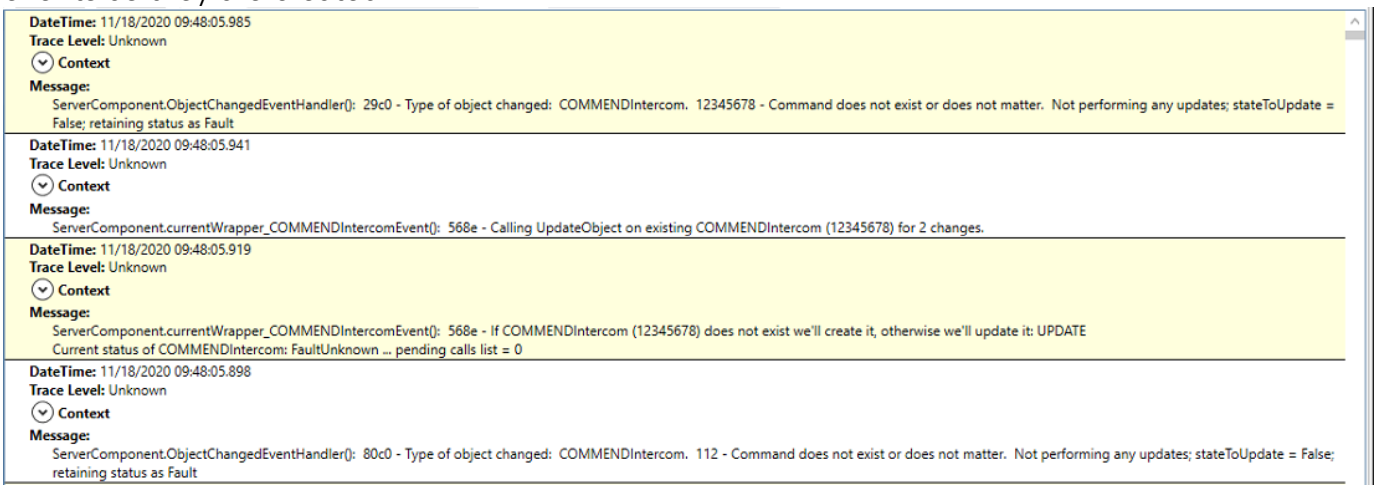
- In the Server Configuration Application click immediately beneath the X (top right corner). There is a secret button there. Since it is hidden it might take a few clicks to find. Once clicked it reveals the Diagnostics tab.



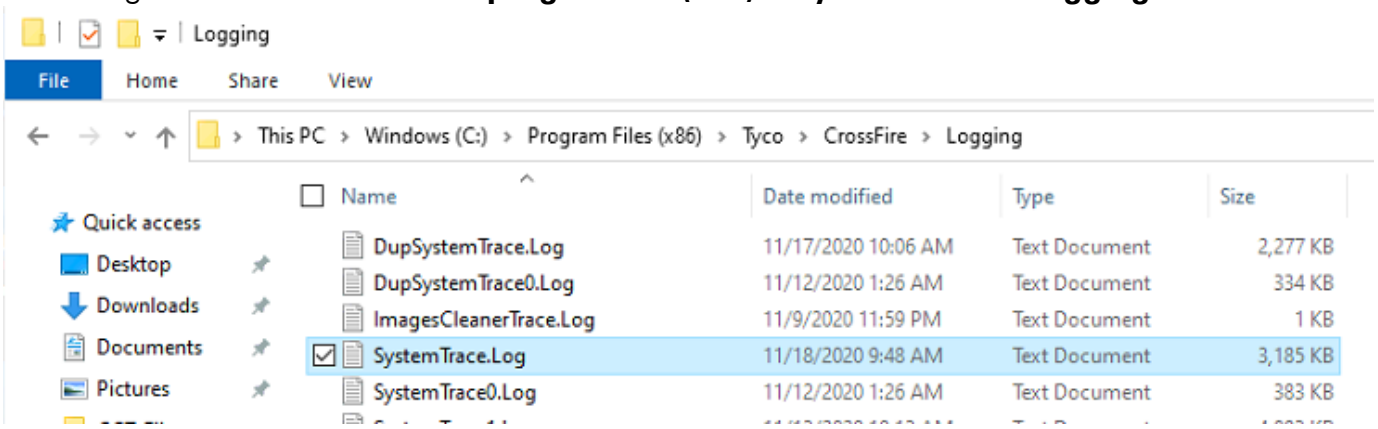
- Connect to the logging by pressing the green 'Connect' button in the upper-left corner.



- Here you can see many logged events like License Issues (no L-CCURE) and intercom events as they are created:



- These logs are also found here: **%programfiles(x86)%\Tyco\CrossFire\Logging**



14. Technical support

More information about our products and services as well as the latest software can be found at:

www.commend.com

15. Appendix

Release notes:

v 001	12/2020	Initial Release for v2.7, v2.8, v2.9
v 002	01/2021	FEATURE: Added right-click menu support for intercoms/outputs. BUG: Fixed typos.
v 003	02/2021	FEATURE: Output Events to C•Cure Journal
v 004	03/2021	FEATURE: Added configurable Intercom Server request block. Default: EF FEATURE: Added possibility to disable intercom auto-population / polling FEATURE: Added manual Commend Intercom creation possibility. Add button under Device section now implemented.
V 005	07/2021	FEATURE: Commend Server – Monitor Online/Offline Status FEATURE: All Commend Devices – Enable Checkbox FEATURE: Commend Server – Add to "Commend Devices" Panel FEATURE: Commend Intercoms – Request Intercom Status (80/52)