GV ORBIT

Version 1.1.0

Release Notes

13-03082-010 AD

2020-04-08

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Title	GV Orbit Version 1.1.0 Release Notes
Part Number	13-03082-010 AD
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Installation and Network Requirements

This section details the requirements that must be met prior to installing or upgrading a system with the current version of GV Orbit.

GV Orbit has the following product options:

- **GV Orbit Lite** - Basic functionality with a client application only (GV Orbit Client) and available as a free-of-charge download from the Grass Valley website.
- **GV Orbit Professional** and **GV Orbit Enterprise** - A client-server configuration, control, monitoring and signal routing solution. This comprises one or more GV Orbit servers (order code GVO-HW) and clients (GV Orbit Client). System functionality is determined by the options you have purchased.

Related Documentation

Use the following related documentation to configure GV Orbit and to better understand the available features. You can obtain the latest product documentation from the Documentation Library section of Grass Valley's website (www.grassvalley.com/docs/gvorbit). For first-time users, GV Orbit documentation should be read according to the Reading Order.

Part Number	Reading Order	Document Title
GVB-2-0860A-EN-DS	1	GV Orbit Datasheet
13-03082-020	2	GV Orbit Welcome
13-03082-010	3	GV Orbit Release Notes (this document)
13-03082-090	4	GV Orbit Admin Guide
13-03082-030	5	GV Orbit Client Quick Start Guide
13-03082-060	6	GV Orbit Services User Guide
13-03082-160	7	GV Orbit Control User Guide
Dell 09K9WX	–	Dell EMC PowerEdge XR2 Getting Started Guide
–	–	Dell EMC PowerEdge XR2 Installation and Service Manual
–	–	Dell Integrated Dell Remote Access Controller 9 User's Guide (iDRAC)

For Dell documentation, use your server's service tag to access the documentation on Dell's website.

Hardware Requirements

System Requirements for GV Orbit Client

Lite	Professional	Enterprise
●	●	●

The client PC platform must meet the following PC system specifications for optimal performance:

Operating system	Microsoft Windows 10, Windows 8.1, Windows 8, or Windows 7, 64 bit.
Processor	Intel Core i5, the minimum required by the operating system, or better.
Memory	8 GB RAM minimum, the minimum required by the operating system, or more.
Available Storage	The minimum required by the operating system plus: • ≥ 1 GB of available storage (GV Orbit **Lite**). • ≥ 2 GB of available storage (GV Orbit **Professional** or **Enterprise**).
Supported Web Browser	Google Chrome only (most recent version).

System Requirements for GV Orbit Client (Advanced, Live Video Wall)

Lite	Professional	Enterprise
●	●	●

If the client PC is being used to display a live video wall from H.264 streams (for example, from MV-8 Series Multiviewers), the PC platform must meet the following advanced PC system specifications for optimal performance to decode up to 48 × H.264 streams:

Operating system	Microsoft Windows 10, Windows 8.1, Windows 8, or Windows 7, 64 bit.
Processor	Intel Core i7 (6 core with hyperthreading) or better.
GPU (recommended)	Nvidia GeForce GTX 1050 Ti or equivalent.
Memory	8 GB RAM minimum, the minimum required by the operating system, or more.
Available Storage	The minimum required by the operating system plus: ≥ 2 GB.
Supported Web Browser	Google Chrome only (most recent version).

Supported Server

Lite	Professional	Enterprise
-	●	●

GV Orbit version 1.1.0 is supported on the following server only: GVO-HW server. A version of the GV Orbit software is factory installed on every GVO-HW server.

For the latest features, bug fixes, and stability enhancements, make sure this product has the latest software version installed before putting it into active service. See Installing GV Orbit, on page 17.

Network Requirements

Lite	Professional	Enterprise
●	●	●

For GV Orbit Lite users

For GV Orbit **Lite** users, the GV Orbit Client application is installed and run on a client PC.

See the equipment's installation guide for the network requirements. Your client PC must have network connectivity with the equipment you intend to configure and use.

For GV Orbit Professional and Enterprise users

For GV Orbit **Professional** and **Enterprise**, there are one or more GV Orbit servers (GVO-HW) and one or more client PCs each running a GV Orbit Client. Users access the GV Orbit server administration setup web page from their client PC.

Client PCs must have network connectivity to the GV Orbit server(s). GV Orbit server(s) must have network connectivity to the production equipment to be used with GV Orbit.

All client PCs and servers must be connected to a network that supports multicast traffic.

For more information about the network material requirements, refer to **Required Materials** in the *GV Orbit Admin Guide*. For more information about the network architecture requirements, refer to **GV Orbit Server Cabling** in the *GV Orbit Admin Guide*. See

TCP/UDP Port Usage

The various communication protocols used in a GV Orbit system require access to specific IP ports. In networks where a firewall is present between device A and device B, the IP ports used to communicate from device A to device B must be open on the incoming (external) side of the firewall.

GV Orbit Client

Lite	Professional	Enterprise
●	●	●

The following network ports must be open on PCs running GV Orbit Client:

Client PC Open Network Port Requirements

IP Port	Open Inbound	Open Outbound	Used by Application/Protocol
80		●	GV Orbit server administration page access. Communication with some devices and services is done via REST (Cisco DCNM, Densité Manager, AMWA NMOS).
2050	●	●	Default RollCall comms port.

Client PC Open Network Port Requirements *(continued)*

IP Port	Open Inbound	Open Outbound	Used by Application/Protocol
5001 to 5010	●	●	GV Orbit Control Client receives updates. GV Orbit Client replication engine. This is needed so that the client can receive updates from the server and other currently open clients connected to the same server.
5951 5953 5955	●	●	Densité REST API
5957	●	●	GSM REST API
9627	●	●	Densité Panel Launcher Application
32768-65535	●		Java RMI Densité Panel Launcher: Dynamic Allocation of ports. Required for communication between client and Application Server. This range can be restricted to match specific security requirements. A minimum of 4000 ports should be allocated. Contact Grass Valley Technical Support, for more information (see Grass Valley Technical Support, on page 44).
49152-65535		●	Java RMI Densité Panel Launcher: Dynamic Allocation of ports. Required for communication between client and Application Server.
Multicast and Unicast	●	●	See Multicast and Unicast Port Usage and Domain ID, on page 9.

Multicast and Unicast Port Usage and Domain ID

The IP ports required for communication between the GV Orbit Client, GV Orbit services running on a GV Orbit server, and other Grass Valley devices that make use of a Domain ID, are derived from the value of the Domain ID and the number of participants on the Domain.
For each Domain there is:

- one multicast port required for each participant to a Domain; and
- two unicast ports are required.

Multicast and Unicast Port Formulas

The following formulas are used to calculate the required multicast and unicast port numbers.

Discovery Multicast Port = 7400 + (250 x Domain ID)

Discovery Unicast Port = 7400 + (250 x Domain ID) + (2 x Participant ID) + 10

Data Unicast Port = 7400 + (250 x Domain ID) + (2 x Participant ID) + 11

Note: Participant IDs are zero-based.

Ports and Default Domain IDs

Default Domain IDs are used by the GV Orbit Client and by the GV Orbit services running on a GV Orbit server. The IP ports used for default Domain IDs are described below; if using user-defined Domain IDs, use the formulas above to calculate the required IP port numbers.

The following network ports must be open inbound and outbound on PCs running the GV Orbit Client; recalculate if a different Domain ID is used, or if multiple projects that use the same Domain ID are open concurrently:

Client PC Multicast and Unicast Ports Used for Default Domain IDs

GV Orbit Item	Default Domain ID	Multicast IP Port	Unicast IP Port	Comment
-	0	7400	7410 7411	Domain 0 used for multiviewer discovery.
Monitoring	100	32400	32410 32411	Used by a Multiviewer project and a C&M project. (Projects may share the same domain.)
IP Endpoint Routing Project	101	32650	32660 32661	
Routing Topology	105	33650	33660 33661	
Note:	These IP ports must be open inbound and outbound on client PCs.			

Note:

When opening multiple projects on the same Domain at the same time, additional IP ports must be opened in accordance with the number of Domain Participants. Whilst the port numbers can be determined from the above formulas, the actual assignment of an IP port number to a Domain Participant is random.

For example,
if a Multiviewer Project and a C&M Project are both open and using Domain ID 100, then the maximum 'Participant ID' becomes 1 (remember, Participant ID is zero-based, i.e. 0,1) because both services have a Domain Participant. The required IP ports would be:

Default Domain ID	Participant ID	Multicast IP Port	Unicast IP Port	Comment
0	0	7400	7410 7411	Domain 0 is a default domain used for multiviewer discovery.
100	1	32400	32410 32411 32412 32413	The assignment of the unicast ports to the Multiviewer and C&M Projects is random.

GV Orbit Server

	Lite	Professional	Enterprise
		●	●

The following network ports must be open inbound and outbound for GV Orbit servers:

GV Orbit Server Network Port Requirements

Port Number	Application / Protocol
20, 21	RollCall-protocol device upgrade via FTP.
80	access the GV Orbit server web administration page.
1098	Densité Docker Java Remote Method Invocation (RMI).
1220	Densité Docker Darwin Streaming Server admin page.
2050	Default RollCall IP share (incoming/outgoing).
2051	Default RollCall IP share Logserver (incoming/outgoing).
2056	Logserver SNMP incoming connections.
2222	Used by GV Orbit Repository Manager service for SSH connections to repositories on the GV Orbit server.
4041	NMOS registry.
4160	Densité Docker lookup.
4444	Ignite DataGrid replication and discovery for GV Orbit Control.
5100	Port used by Densité Manager to control Densité cards and GV Node.
5601	Kibana.
5701 to 5710	GV Orbit Control replication engine. GV Orbit Control client can receive updates from the server and other currently-open clients connected to the same server. Usually only 5701 and 5702 are used.
5955	Densité Manager REST API
5959	GV Orbit Control Densité Manager REST API.
7771	Densité Manager Java Management Extensions (JMX).
7772	GV Orbit Control Densité Manager JMX.
7773	Densité Docker rmid JMX.
7774	Densité Docker lookup JMX.
8090	GV Orbit Control JMX.
8091	GV Orbit Control REST API.
9200	Elastic search REST.
9300	Elastic search replication.
41235	Web Renderer web socket server.

GV Orbit Server Network Port Requirements *(continued)*

Port Number	Application / Protocol
Mail Server Port	The GV Orbit Email service requires connection to an email server. Refer to documentation for email server for the required connection parameters.
Northbound Communications:	
12345	GVG Native protocol northbound communication port.
5193+Area External ID	NP0016 protocol northbound communication port. The Area External ID can be looked up in the GV Orbit client Area Configurator by selecting the area that needs to be controlled and looking at the External ID property.
9193+Area External ID	NP0017 protocol northbound communication port. The Area External ID can be looked up in the GV Orbit client Area Configurator by selecting the area that needs to be controlled and looking at the External ID property.
Southbound Communications:	
User configurable Default: 5194	NP0016 protocol southbound communication port.
User configurable Default: 9193	NP0017 protocol southbound communication port.
User configurable Default: 14000	SW-P-08 protocol southbound communication port.
User configurable Default: 37800	Sony NS-BUS protocol southbound communication port.

Additionally, the following multicast and unicast network ports must be open inbound and outbound on GV Orbit servers running the GV Orbit services. Recalculate these if different Domain IDs are used.

GV Orbit Server Multicast and Unicast Ports for Default Domain IDs

Domain Description	Default Domain ID	Max Participant ID	Multicast IP Port	Unicast IP Port	Comment
Client Domain	100	4	32400	32410 32411 32412 32413 32414 32415 32416 32417 32418 32419	Ports used by GV Orbit services on the Client Domain: Monitoring, MapView, Routing, Recording, Email
IP Endpoint Routing Domain	101	0	32650	32410 32411	Multiviewer and C&M projects can share a domain

GV Orbit Server Multicast and Unicast Ports for Default Domain IDs *(continued)*

Domain Description	Default Domain ID	Max Participant ID	Multicast IP Port	Unicast IP Port	Comment
Log Server Domain	110	1	34900	33660 33661	
Note:	These IP ports must be open inbound and outbound on client PCs.				

Default Domain Numbers

Lite	Professional	Enterprise
●	●	●

A GV Orbit system communicates with various parts of its system and employs 'domains' to segregate its communications. Domains are specified with a Domain ID number (1 to 252; 0 is used for discovery). Domain numbers may be configured by the user as required as this may be necessary when you have more than one GV Orbit Server on the same network.

A new GV Orbit system uses default Domain IDs, described in the table below:

Default GV Orbit System Domain IDs

GV Orbit Domain	Default Domain ID	Comment
System	0	Used for system auto-discovery.
Engineering	1 to 99	Reserved for engineering use.
Monitoring	100	Monitoring traffic, also known as the 'Client Domain'.
IP Endpoint Routing	101	Control of IP Endpoints for signal routing.
Routing Topology	105	For future GV Orbit releases.
Log Server	110	Used by the LogServer service for RollCall-protocol devices.
Biometrics	201	For future GV Orbit releases.

Software Component Compatibility

Lite	Professional	Enterprise
●	●	●

Grass Valley recommends you use the following software components and the stated versions for optimal performance and compatibility with GV Orbit Control version 1.1.0. These devices are supported in the Device Library of GV Orbit Control's Topology Configurator.

GV Orbit Control Inter-Operation System Component Compatibility

Product	Requirement for GV Orbit Control Compatibility
GV Node	Software Versions 1.3.1, 2.2.7, 2.3.0, 3.0.0, 3.1.0
IPG-3901 (Densité 3 Frame IP Gateway)	Software Versions 1.3.4, 2.2.x, v9.0, 2.4.0.BUNDLE-3, 2.5.0
IPG-4901 (GV Node Frame IP Gateway)	Software Versions 1.1.0, 1.2.0
IQMix (IQEDGE Frame)	Software Version 11.30.62
External Control Interface Protocols (Northbound)	NP0016 NP0017 SW-P-08 GVG Native Protocol (names-based for K-frame switcher)
Router protocols (Southbound)	NP0016 Compact Router NP0016 Enterprise Router NS-BUS (Sony LSM) NV9000 TCP/IP Ex-SAM SW-P-08 TCP/IP Subset of CPL to interface with K-Frame Production Switcher running software version 14.3.0 or higher
Panel protocols	NV96XX Panel Control
MV-8 Series Multiviewers	Software version 3.0.14 FPGA V280 **Note:** To support NP0017 Tallies, version 3.1 is required.
Audio Live	Version 1.5.0.14
IQMIX or IQUCP IP Gateways	Version 11.73D
IQAMD	Version 8.60.18
Densité CPU-ETH2	Software versions 2.0.4 or later
EdgeVision	Software versions 1.21 or later
NV9000	Software versions 6.3.0 build 1873 or later

GV Orbit Control Inter-Operation System Component Compatibility *(continued)*

Product	Requirement for GV Orbit Control Compatibility
Cisco DCNM Network Switch	DCNM build 11.1(1) Switch's firmware: NX-OS 9.2(3)

iControl	GV Orbit Lite:
	    Software Version 7.50 and higher (With Densité and GSM REST API licenses)
	
	GV Orbit Professional and Enterprise:
	    Not applicable. The iControl service is integrated into the GV Orbit Server.

Equipment Interoperability Incompatibility

While GV Orbit can control a wide range of equipment, this does not guarantee interoperability between controlled equipment. Always consult product datasheets to ensure that common signal types and protocols are supported by both pieces of equipment for interoperability.

Native Densité Card Support

For GV Orbit's Densité Manager Service, GV Orbit Client is integrated with card bundles which allows the GV Orbit Client to automatically recognize the following cards to make Densité card integration easier.

- IPG-3901 v2.5.1
- IPG-3901 v9.0.0
- IPG-4901 v1.2.3
- KMX-3921 v10.2.1
- KMX-4911 v.10.2.2
- UHD-3901 v.1.2.1
- HDA-3961 v.1.0.3
- XIO-4901 v.2.3.0
- XIO-4901 v.3.1.1
- XIP-3901-DC v.1.3.3
- XIP-3901-FS v.1.2.0
- XIP-3901-UC v.1.2.0
- XIP-3901-UDC-S1 v.2.0.2

More recent software packages may be available. GV Orbit fully supports Densité cards that are not listed above. See the card's documentation for how to obtain the card's software package. The card's software package is installed through the Densité Update Manager (DUM). This is accessed through the GV Orbit Client; refer to *Upgrade Densité-protocol Devices* in the **GV Orbit Client Quick Start Guide** for more information. See Related Documentation, on page 5. See also Ref. #UCCM-980 on page 28.

Installing GV Orbit

Installing GV Orbit Server Software

Lite	Professional	Enterprise
	●	●

IMPORTANT

• Before you install version 1.1.0 onto a GV Orbit server that has an older version of GV Orbit, make sure to review the latest hardware requirements (see Hardware Requirements, on page 6).

To upgrade the GV Orbit Server, refer to Upgrade Stage in the *GV Orbit Admin Guide*. See Related Documentation, on page 5.

For the latest features, bug fixes, and stability enhancements, make sure this product has the latest software version installed before putting it into active service.

REQUIREMENTS

Make sure you meet the following conditions before beginning this procedure:

• This software can only be installed on a GV Orbit server, order code GVO-HW.

• When you upgrade a GV Orbit Server, Grass Valley strongly recommends that you upgrade all other GV Orbit Servers on your network to the same version, as well.

• You have made a backup of your GV Orbit Server's configuration data. See **Global Backup** in the *GV Orbit Admin Guide*. See Related Documentation, on page 5.

• You have the GV Orbit software version 1.1.0 upgrade package (see Grass Valley Technical Support, on page 44).

• You are able to log in to the GV Orbit Server Admin interface as an administrator. See the *GV Orbit Admin Guide*. See Related Documentation, on page 5.

Note: For GV Orbit Professional and Enterprise products, after the GV Orbit Server has been upgraded, download the GV Orbit Client installers from the GV Orbit server onto client PCs for installation. Obtaining the GV Orbit Client installer from the GV Orbit server ensures software version compatibility between clients and server.


Installing GV Orbit Client Software

Lite	Professional	Enterprise
●		

The GV Orbit Client can be downloaded as follows:

- From the Grass Valley website. If your installation does not have a GV Orbit Server, this is the only way to obtain the GV Orbit Client.
- If your installation has a GV Orbit Server, you should download the GV Orbit Client from the GV Orbit Server. This ensures that the GV Orbit Client version will be compatible with the current software version installed on the GV Orbit Server. See **GV Orbit Client Application Downloads** in the *GV Orbit Admin Guide*. See Related Documentation, on page 5.

2 GV Orbit Release Notes
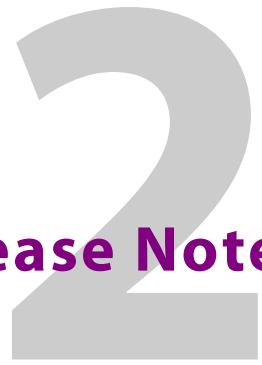
The *GV Orbit Release Notes* includes lists of new features and enhancements, bugs fixed, as well as known issues and limitations associated with the latest version of the GV Orbit software.

Overview

GV Orbit version 1.1.0 is a major release that adds many new features to GV Orbit. This release also contains new bug fixes (see New Features, Enhancements, and Bug Fixes, on page 19). See also Known Issues and Limitations, on page 28.

Before Upgrading GV Orbit

Backup the GV Orbit configuration to your local PC before you perform a GV Orbit software upgrade so that you can return to the previous GV Orbit software version if necessary. See **Global Backup** in the *GV Orbit Admin Guide*. See Related Documentation, on page 5.

New Features, Enhancements, and Bug Fixes

The following is a list of GV Orbit features and enhancements. The most recent items are marked with a star (★) symbol.

GV Orbit Version 1.1.0

As shown in each application's *About* screen, GV Orbit version 1.1.0 is composed of:
- GV Orbit Client version 4.1.0.
- GV Orbit Control Client version 2.3.0.

This release adds the following enhancement(s) and corrects the following issue(s) that are separated out as follows.
- GV Orbit Client v1.1.0 New Features and Enhancements, on page 20
- GV Orbit Control Client v1.1.0 New Features and Enhancements, on page 23
- GV Orbit Client v1.1.0 Bugs Fixed, on page 25
- GV Orbit Control Client v1.1.0 Bugs Fixed, on page 26

GV Orbit Client v1.1.0 New Features and Enhancements

★ [Ref. #UCCM-258] G**V Fabric control port and dynamic interface changes:** GV Orbit has now a new control port for GV Fabric switches.

You will need to add the control port on a network switch, and enter the IP address of the switch with the appropriate credentials.

Once the control port is started and the connection established, GGV Orbit will display the status of the network switch as Online and will update the name and the description of the generic network switch with the GV Fabric ones.

With some compatible devices such as the XIP that provides proper LLDP data, GV Orbit is able to show the name of the network interface where the device is connected. This information is displayed in the link between the device and the GV Fabric as well as in the GV Fabric input/output ports, both from the Topology Configurator. Path Manager also publishes the appropriate GV Fabric interface.

If the same device is plugged to a different GV Fabric network interface, GV Orbit automatically updates this information in the Topology Configurator and in the Path Manager.

★ [Ref. #UCCM-1174] **Bulk Routing Panel Restyle:** The Bulk Routing panel has been restyled with a different layout, a single splitter is now used to alter the division between source/destination buttons and source/destination levels. The button and level buttons have been restyled with a rounded style and altered colors.
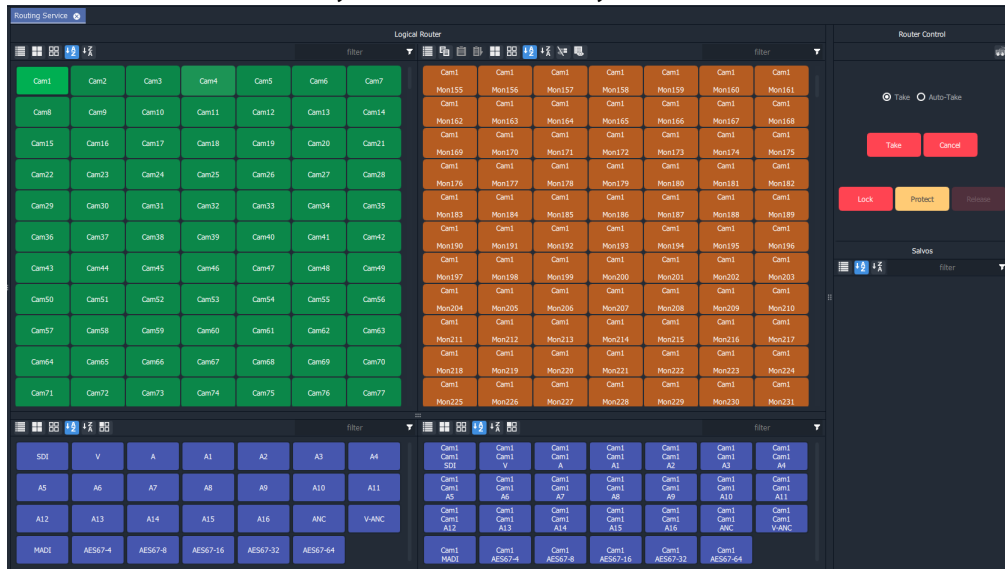
★ [Ref. #UCCM-1118] **Lock and Protect destinations support in the Bulk Routing:** Added support to Lock and Protect destinations. *Lock* and *Protect* applies to all levels associated with the destination. Protected destinations and their levels are indicated in yellow. Locked destination and their levels are indicated in red.

The *Release* button un-locks/un-protects a locked or protected destination.
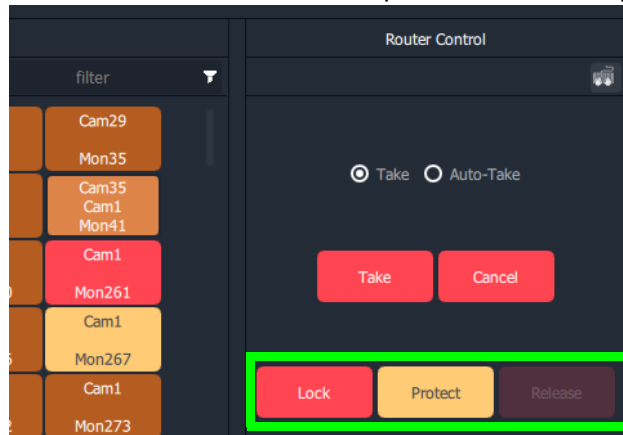
★ [Ref. #UCCM-1041] **The source filter popup window now moves so it does not obscure the selected destination:** The source filter popup window now moves so it does not obscure the selected destination. It is now displayed (if it fits) directly below the selected destination as shown below:
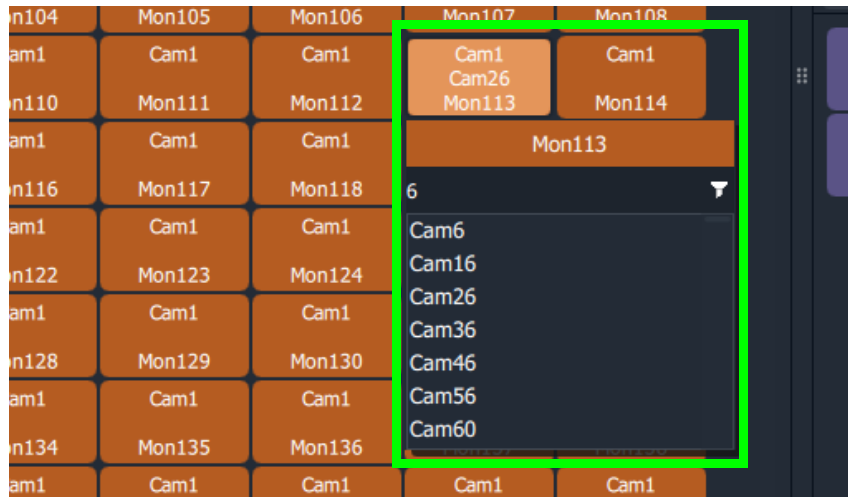
★ [Ref. #UCCM-1019] **Updates to the bulk routing context menu:** There have been some minor changes to the context menu and tool bar buttons displayed when the bulk routing panel is open.

The toolbar now displays the *lock*, *undock* and *full screen* icons together:

The context menu options now have slightly different text and the *Show Sources* option has been moved to the toolbar as *Hide Sources*.

★ [Ref. #UCCM-1275, Ref. #UCCM-1016, & Ref. #UCCM-1042] **Bulk Routing Keyboard Shortcut Keys Help:** Display Bulk Routing help using the keyboard help icon , the help menu shows an explanation of the shortcut keys that can be used to operate the Bulk Routing screen.

Shortcut key	Description
Cursor keys	Navigate between source/destinations/levels of the the active panel
Ctrl + cursor keys	Navigate between source, destination, level and salvo panels
Space bar	Select
Enter	Take
Shift + cursor keys	From a previously selected source/destination/level seleact a series of sources/destinations/levels
Ctrl + space bar	Select multiple distinct sources/destinations/levels
Escape	Cancel, deselects all sources/destinations/levels
Tab	On a destination level shows a source level selector, arrow up/down to select, enter to take
Text input	On a destination shows a source selector, arrow up/down to select, enter to take
Home	Select first source/destination/level on the active panel
End	Select last source/destination/level on the active panel
Page up	Scroll up sources/destinations/levels on the active panel
Page down	Scroll down sources/destinations/levels on the active panel
Ctrl + A	Select all sources/destinations/levels on the active panel
Ctrl + D	De-select all soruces/destinations/levels on the active panel
Ctrl + C	Copy the routed srouce for the selected destination
Ctrl + V	Paste the copied source to the selected destination(s)
Shift + V	Paste a series of sources incrementing from the copied source to the selected destinations
Ctrl + F	Go to the filter box of the active panel

★ [Ref. #UCCM-1261] **The slider widget has been updated with additional styling properties:** The slider widget has been updated with various new properties to allow much greater flexibility when styling a widget.

★ [Ref. #UCCM-1264] **Changes to the network view toolbar:** The toolbar now contains the following new items:

- List view: This provides a flat view of all the leaf nodes in the network tree.
- Filter string:
  - Enabled when in list view mode.
  - Shows only those items that contain the filter text string.
- Filter menu:
  - Enabled when in list view mode.
  - Provides filtering by item type and by item state.

★ [Ref. #UCCM-1112] **State *No State* changed to *Unknown*:** The state shown as *No State* has been changed to *Unknown*.

★ [Ref. #UCCM-1096] **Tally Property Shape Changed to Represent State:** The Tally Widget property Shape has been changed to State. In additional to the two tally lamp modes, circle and rectangle that show state by changing the color of the widget, additional state modes have been added that match the alarm shapes.

★ [Ref. #UCCM-1076] **Reworked the Orbit masking menus:** The GV Orbit masking options have been slightly re-worked to make names and such more consistent across ranges of products. Unit mask has been changed to device mask, timed mask to snooze mask, until green has been changed to until normal.

Additionally the alarm list details box now allows filtering on multiple states and latched states rather than on a single option.

★ [Ref. #UCCM-1072] **Alarm Masking Menu Changes:**
  • The terminology has been updated for alarm masking menus.
  • Snooze and Tag alarms are selected from the context menu instead of a popup window.

★ [Ref. #UCCM-1062] **New List View Filtering:** The Network View supports filtering when in List View. The list of devices can be filtered by the following options.
  • RollCall/Densite Devices
  • Alarm State
  • Text entry for Device Name

GV Orbit Control Client v1.1.0 New Features and Enhancements

★ [Ref. #PEG-11008] **Support of disconnecting NMOS flows via an IS-05 command:** The IS-05 connection management request sent by the control system will set the *master_enable* flag to false if the source IP address is 0.0.0.0.

★ [Ref. #PEG-11007] **Display the status of NMOS devices that are not available for control via IS-05:** A new property has been added to NMOS control ports called *IS-05 Controllable*. This field indicates whether the corresponding node in the NMOS registry has devices that support being controlled via IS-05.

★ [Ref. #PEG-10993] **DNS-SD NMOS registry redundancy support:** GV Orbit Control now supports NMOS registries redundancy with DNS-SD. If GV Orbit Control discovered a registry via DNS-SD, and that registry becomes unavailable, GV Orbit Control will automatically fail over to the next available registry listed in the DNS.

★ [Ref. #PEG-10971] **Tielines refresh via the control system client:** The user has now the ability to refresh tielines via the Path Manager using the *Refresh Tielines* button available on the upper banner.

This functionality allows the user to recompute the tielines usage given the crosspoints in each device, in case the tieline status in the control system has become out-of-sync with what's actually routed.

★ [Ref. #PEG-10946] **Exposed streams setting management in the Stream Configurator:** Allow the user, using the Stream Configurator, to filter displayed streams by *exposed stream* property and also the ability to expose or unexpose streams via selection.

This is useful when the user would like to expose only certain streams in a system (for instance, only the Audio streams of a specific device).

★ [Ref. #PEG-10906] **GV Orbit Control System Status Page now displays Densité Manager memory usage:** In the GV Orbit Control Client application, the System Status Page now displays the memory usage of the local Densité Manager. The percentage reflects the memory used out of its allocated heap size of 8GB.

★ [Ref. #PEG-10899] **New option for wide widgets in Router Control UI:** The Router Control UI has a new option for making the source and destination double their width to accommodate longer labels.

The option is available independently for sources and destinations and is persisted for the currently logged in user, meaning that re-launching the Router Control UI or GV Orbit Control Client will remember the previously set value.

Note that this preference is also saved on a per user basis in Windows, meaning the setting has to be set on every PC and user where the GV Orbit Control Client runs.

★ [Ref. #PEG-10806] **NDAC NP0017: Lock and Protect destinations support:** The control system now provides support for *Lock* and *Protect* destinations.

The user has the ability to lock/unlock and protect destinations via the *Router Control* using the *Lock*, *Release* and *Protect* available options.

The control system stores the locks in its database and they are preserved after a restart/reboot. Destinations will remain locked/protected.

In practice, the control system does not read a lock from a router and does not control it.

If a configured panel in the control system is used, a user must be assigned and that prevents other users from removing the protect. An admin user can override other users.

In the NP0017 protocol, Lock/Protect commands require a user ID. Currently, the control system northbound implementation does not take into account the user ID and simply considers all commands executed as the admin user. Lock for various users is not supported yet.

Lock and protect currently affects all levels of the destination and does not consider individual levels. Locking one level locks all destination levels and the control system does not yet support specific lock levels.

★ [Ref. #PEG-10733] **Warn user when GV Orbit Control client version and the connected server version do not match:** A warning is displayed to the user if the GV Orbit Control client version is different from the version of the connected server. If both versions are matching, no warning will be displayed.

A confirmation is prompted. If the user selects *OK*, the client will continue to load as per normal. If *Cancel* is selected, the application will go back to the login screen.

★ [Ref. #PEG-10588] **Unique custom level names on a panel:** On a panel, we are limited to 8 characters for a Tally: 3 lines of 8 characters.

In the Logical Level Editor, a short name must have 8 characters or less. A custom level is built (by duplicating the factory ones) with the first 3 letters of the resulting short label and ".." and the last 3 letters from the resulting short label.

The resulting short label is the concatenation of the a prefix given by the user, the short label of the copied logical level and a suffix given by the user (prefix and suffix can be empty).

For example,

if the Short Label Prefix is **Test** and the Factory level is **AES67-64**, the short name will be **Tes..-64**

if the Short Label Suffix is **Test** and the Factory level is **AES67-64**, the short name will be **AES..est**

★ [Ref. #PEG-10342] **DNS-SD Support for the NMOS registry discovery:** GV Orbit Control can now automatically discover an NMOS registry via DNS-SD given the DNS server and search domain. The DNS server and search domain are automatically retrieved via the OS (if available), but can be overridden by the user in the Area Configurator. If the DNS information is changed in the OS, GV Orbit Control must be restarted to retrieve the new values from the OS. As before, the user still has the option to set a static NMOS registry URL if desired.

★ [Ref. #PEG-10150] **Control port added to a device by importing a spreadsheet:** The feature Spread Sheet Import/Export now supports ControlPorts in a specific sheet.

GV Orbit Client v1.1.0 Bugs Fixed

★ [Ref. #UCCM-1283] **Improved the combo box and the list box widgets so that they can better configure the value they return:** The Combo Box and List Box widgets were limited in the value that they could change, making custom screens complex to configure. These have been fixed so there are a few new ways they can be used.

- The Data property can now be set to a string which contains specific values for each option using the following syntax: [3]Channel 1;[4]Channel 2. In this example the List/Combo boxes would display Channel 1/Channel 2 as options, but when adjusted its value would change between 3 and 4. This makes it fair bit easier to bind this to a remote value such as RollCall or Densite.

- There is a further option *Use label/value* which when selected makes the List/Combo boxes use the [value] or label if no value defined as the value of the List/Combo box. When this us unchecked, it will use the zero based index of the items in the Data property as its value.

★ [Ref. #UCCM-1282] **Corrected Issues with GV Live Workers not Available in Network View:** An issue with GV Live and Audio Live workers not being visible in the Network View of GV Orbit Client has been resolved. The Network View can now be expanded to browse to and open the Worker control screens. Providing the Workers have been added to the Log Server polling list, the Worker alarm state is also visible in the Network View.

★ [Ref. #UCCM-1253] **Web Renderer Project wasn't Reloading Project:** A correction made to the Web Renderer so all elements of a project are reloaded when a new project is selected.

★ [Ref. #UCCM-1125] **Cannot see take buttons when bulk routing is opened:** When the bulk routing tool was opened and a pane (network or project) is open at the left (default opening of the tool), the router control area was not visible.

★ [Ref. #UCCM-1098] **Updates to how GV Orbit opens screens in different tabs:** Prior to this fix, GV Orbit would open some screens in existing tabs when in run mode. For example opening a component would replace an existing screen tab. This occurred until you had opened a completely different type, for example a network screen, in which can a new tab would then be created. So it was all a bit random.

GV Orbit now only opens screens in an existing tab when in run mode. All other files will be opened in their own tabs. The application now is automatically put into edit mode when opening a component, or creating a new screen to allow immediate editing.

GV Orbit Control Client v1.1.0 Bugs Fixed

★ [Ref. #PEG-11010] **Random issue with GVC failover mechanism:** An issue related to the failover mechanism was noticed where you could end-up with an active server or loss of the topology. This issue is fixed.

★ [Ref. #PEG-10945] **Unable to reuse a discovered device if it was deleted from a device group instead of deleting the entire device group:** If there are multiple discovered devices in a single device group, and any individual device is deleted from the group, the discovered device does not become available in the discovered device library to be dropped on the topology again. This issue is now fixed.

★ [Ref. #PEG-10927] **IS-05 bulk stage requests to NMOS receivers don't include transport_params anymore:** IS-05 sent by the control system won't include *transport_params* anymore, as allowed by NMOS specs to accommodate receivers that don't support *transport_params* with an empty list.

★ [Ref. #PEG-10922] **GV Convergent database migration issue if upgraded from an old GV Convergent version to 2.1.2:** The issue was encountered while upgrading from an old GV Convergent version to GV Convergent version 2.1.2. The issue affects the migration module.
Workaround: The fix is to upgrade to a more recent version.

★ [Ref. #PEG-10890] **DCNM control port can be disabled on an active topology:** We added a feature to allow the user to disable/enable the DCNM driver on an active topology. This feature is a tool to help support teams to solve potential configuration issues on a live system without impacting the routing functionality or other control port devices. Some other useful troubleshooting data is also added to system snapshots.

★ [Ref. #PEG-10855] **Routing requests done in parallel can lead to GV Orbit Control not being able to process routes anymore:** Prior to GV Convergent 2.1.3, if multiple routing requests were made (like issuing routes via Northbound API while a large Salvo is executing), it is possible the system could stop processing routes until a failover or restart of GV Orbit Control was done.

★ [Ref. #PEG-10851] **Additional port/interface created for new added NMOS device to a device Group if all devices already connected:** If a device group does exist in GV Orbit Control topology, with few NMOS devices AND those devices are connected to/from network switch, then the user decides to add a new NMOS device to this existing device group, GV Orbit Control will add the new device but this device will have an extra port/interface (factory generated). This issue is now fixed.

★ [Ref. #PEG-10618] **Sometimes Audit logs viewed from the web admin page in GV Orbit Control will not load and reports errors:** The web browser was unable to display the audit.log file if its size is too big. Now, the user has the option to download the audit.log file if its size is bigger than 10MB, otherwise the content will be shown in the web browser.

★ [Ref. #PEG-10617] **All level takes failing from an IQMV (V, A) source to an IQUCP (V, A, ANC) destination:** If a take was requested from an IQMV output which has only Video and Audio (No ancillary) to an IQUCP destination which has Video, Audio and Ancillary, GV Orbit Control was failing the take with an error mentioning that the ancillary level is missing.

With this new fix, GV Orbit Control will succeed the take with a warning message mentioning that only Video and Audio were taken.

As long as Video (the highest ranking level) is carried successfully, the take will succeed.

If not all levels are carried, GV Orbit Control will display a warning that not all levels were taken.

★ [Ref. #PEG-10344] **Cannot select some MADI streams in the Logical Device Table:** The issue where we were not able to select / drag some streams of the Stream Browser of the Logical Device Table in a logical source level column, is now fixed.

GV Orbit Version 1.0.1

This release adds the following enhancement(s) and corrects the following issue(s).

New Features and Enhancements

- [Ref. #PEG-11008] **Support of disconnecting NMOS flows through an IS-05 command:** The IS-05 connection management request sent by the control system will set the *master_enable* flag to false if the source IP address is *0.0.0.0*.

- [Ref. #PEG-11007] **Display the status of NMOS devices that are not available for control through IS-05:** A new property has been added to NMOS control ports called *IS-05 Controllable*. This field indicates whether the corresponding node in the NMOS registry has devices that support being controlled via IS-05.

- [Ref. #PEG-10342] **DNS-SD Support for the NMOS registry discovery:** GV Orbit Control can now automatically discover an NMOS registry via DNS-SD given the DNS server and search domain. The DNS server and search domain are automatically retrieved through the operating system (if available), but can be overridden by the user in the *Area Configurator*. If the DNS information is changed in the operating system, GV Orbit Control must be restarted to retrieve the new values from the operating system. As before, the user still has the option to set a static NMOS registry URL if desired.

- [Ref. #PEG-10993] **DNS-SD NMOS registry redundancy support:** GV Orbit now supports NMOS registries redundancy with DNS-SD. If GV Orbit discovers a registry via DNS-SD, and that registry becomes unavailable, GV Orbit will automatically fail over to the next available registry listed in the DNS.

Bugs Fixed

- [Ref. #PEG-10927] **IS-05 requests do not include transport_params anymore:** IS-05 sent by the control system will not include *transport_params* anymore, as allowed by NMOS specifications to accommodate receivers that do not support *transport_params* with an empty list.

GV Orbit Version 1.0.0

This is the first release.

Known Issues and Limitations

The following is a list of known issues and limitations associated with GV Orbit. The star (★) symbol indicates a new issue in GV Orbit version 1.1.0.

GV Orbit Client Known Issues and Limitations

- [Ref. #UCCM-758] **The GVNodeManager panels are not available from the GV Orbit client.** Even though the panel launcher can open the GV Node manager panel using the `http://{IP}:{PORT}/panel-launcher-service/api/v1/services/gvnodemangers` supplied list, the GV Orbit client does not support the listing and the opening of the GV Node manager panels.

- [Ref. #UCCM-930] **Elastic persisted data size is too large to be downloaded:** Elastic data can take a significant amount of disk space preventing the download of the compressed archive due to its size. The splitting of the archive in small chunks suitable for download would require manual operations that are not available to the end user although it could still be possible for an authorized engineer to do this and recover the data.

- [Ref. #UCCM-952] **Containers are not notified if: IP addresses, the group they belong to, or the hostname has changed:** Containers are given the configured IP addresses and the group they belong to (for example, MANAGEMENT, MEDIA, and CORPORATE) and their hostname on startup. If you change the IP address configuration, the group they belong to, or the hostname, containers are not notified of this change. Containers use the new values only when they are restarted or when the host is rebooted.

- [Ref. #UCCM-980] **Densité does not report cards for which their services are not started:** Cards for which the service bundles are not present or the card's service is not started properly are not listed in the Densité web page or the cards list in the GV Orbit Client.

  Traditionally, in iNavigator, the list of all the cards in a Densité frame were displayed and the cards for which the service was not started was displayed using a grayed out font. At the moment, there is no way to report the physical cards found through the Densité REST API.
  Workaround: Open the upgrade manager panel from the GV Orbit client (in the Densité cards list in the GV Orbit Client, right-click the frame's controller card and select *Open Upgrade Screen*) and install the service bundles for any unresolved cards.

- [Ref. #UCCM-981] **Opened Densité card Control Panels become unresponsive with remote lookup disconnection:** When a Densité frame is set to standby or a fail-over happens while the card's Control Panel is opened, there is no mechanism though which the Control Panel knows that the back-end service has disconnected. Therefore, any operation executed on the opened Control Panel will not work until the Control Panel is closed and re-opened again.
  Workaround: Close the card's Control Panel GV Orbit Client and reopen it if it is available in the GV Orbit Client. If this still does not work, restart the GV Orbit Client.

- [Ref. #UCCM-982] **Upgrade manager cannot be opened if no services are started for a Densité frame:** The Densité frame's service must be started before the upgrade manager panel can be opened. If at least one service is started for a Densité frame (this is normally the controller card), then the Densité REST API reports the frame and it is added to the GV Orbit client list of detected Densité frames. At this point, you can open an upgrade manager panel.

  However, if the controller service is not started, then the frame is not reported by the Densité REST API and it is not displayed by the GV Orbit client.
  Workaround: Install a service bundle so that the Densité frame reports at least one card through the REST API.

- [Ref. #UCCM-1101] **Third party devices/controllers cannot subscribe to GV Orbit's NMOS registry websocket notifications when it is using "localhost" as its hostname:**
  Third party devices/controllers cannot connect to GV Orbit's NMOS registry and create websocket subscriptions when GV Orbit server is using "localhost" as its hostname in its configuration file, instead of having configured a unique server host name.
  Workaround: In the `/etc/hosts` file, re-order some lines so that *127.0.0.1* is mapped to the host's name before being mapped to *localhost*.
  For example:

  ```
  127.0.0.1 gvos-server1 #AUTO
  127.0.0.1 localhost localhost.localdomain
  ::1 localhost localhost.localdomain
  ```

  With this change, the registry determines *hostname* to be the name of the host server and then inserts this into the `nmos_is04_registry_config.json` file. Any third party process connecting to the registry via a websocket (for example, GV Orbit Control, or Riedel NMOS Explorer) will see the expected host name.

  Caution: If the host name of GV Orbit server is changed, then the NMOS registry will fail to start because it will continue to use the previous host name which was written in the configuration file. The workaround for this is to delete the NMOS registry application and re-install it.

- [Ref. #UCCM-1124] **A backup's friendly name is renamed to its original name once imported:** If a user decides to export a backup, then re-names it, and tries to import it again, the backup may be flagged as already existing on the GV Orbit server, as GV Orbit uses a metadata file to distinguish between backup files.

  When a backup file is imported, the name assigned to it is generated based on information contained in the metadata file, including the date and time when the backup was originally created.

- [Ref. #UCCM-1146] **Setting an interface, already configured, to *Not Configured* will not disable it:** If you set an interface, under *Interfaces Configuration*, that is already been configured, to *not configured*, save and restart, it will not disable the interface. The *Expert Mode* will no longer show the interface but the interface status and ifconfig will show the newly disabled interface as always *Up* when it's supposed to be *Down*.
  Workaround: Reboot the server.

- [Ref. #UCCM-1361] **Open Workflow button missing after closing an undocked bulk routing screen:** Expand the themes folder under the Project windows on the left and double click on the Default.theme file then click the opened layout.

# GV Orbit Control Client Known Issues and Limitations

- [Ref. #PEG-3498] **A refresh of the Router UI may be needed to reflect changes in the Alias table:** For GV Orbit Control, if you update the Aliases while the Router Control UI stage is open in the GV Orbit Control Client, you may need to reopen the Router Control UI to reflect those changes.

- [Ref. #PEG-4269] **Adding logical devices while GV Orbit Control Panel Configurator is open may not display the devices sorted correctly:** For GV Orbit Control, when adding sources and destinations in a Topology while the Panel Configurator is open and the Sources or Destinations view is exposed, the created sources or destinations adds them into an unsorted order in the Panel Configurator view. Also applies to salvos and other items.
  Workaround: Closing and reopening the stage in GV Orbit Control will address the sorting issue.

- [Ref. #PEG-6457] **"ERROR - GUI panel not found" is displayed when launching client:** For GV Orbit Control, if this message is displayed, close and reopen the GV Orbit Control client.

- [Ref. #PEG-6646] **No keystroke duplicate warning is displayed when setting the same keystroke more than once:** For GV Orbit Control, within the Category Configurator Stage, if you set the keystrokes of more than one device to the same keystroke assignment, they can create an issue where the desired device may not be selected from a panel whilst using the keystroke selection option from a category button.
  Workaround: Take care to provide unique keystroke selection for each device.

- [Ref. #PEG-6749] **GV Orbit Control Client does not automatically reconnect when changing the management IP address.**
  Workaround: If this occurs, close and relaunch the client. Then, log in with the new IP address.

- [Ref. #PEG-6958] **Physical Connections Builder may not reflect disconnected ports:** In GV Orbit Control Client, if you disconnect physical connections for the Connected tab in the physical connections editor, on the topology configurator stage, the now disconnected ports, may not display in the builder section. If this occurs, you may need to click off the physical connection and then back onto it to see the ports available for connection.

- [Ref. #PEG-7159] **Phantom buttons on hardware panels can be cleared by changing pages:** For GV Orbit Control, changing the location of a level button on an active panel can create a button with text, but no color. The label of the old button may remain. Changing the page, or opening a list page, to re-legend this button will refresh the button. This only affects the panels with the LED buttons.

- [Ref. #PEG-7283] **The keystroke does not work when the suffix is composed of both a letter and a number.** For GV Orbit Control.
  Workaround: If this occurs, either use only numbers or use only a single letter for the suffix/keystroke to select devices within a category.

- [Ref. #PEG-7815] *Takes* **may fail on redundant IP sources with inverted connections:** For GV Orbit Control, when using a redundant (2022-7) network, if you connect the first output port to the B network and the redundant port to the A network (invert the connection), you might see a take failure if the connection on the other side of the network fabric is not inverted.

  Similarly, having a non redundant IP device connected only to A network will allow us to do a take, but having it connected only to B network will not.

  Connect first port to the A network and redundant port to B network to resolve this.

- [Ref. #PEG-7830] **Black screen appears when you open the Panel Configurator stage.** For GV Orbit Control.
  Workaround: if you receive the black screen when opening or selecting the Topology Configurator stage, close and reopen the stage.

- [Ref. #PEG-7922] **Software panel configuration may not reflect panel behavior change when the topology is not active:** If the GV Orbit Control topology is not active, and you switch the panel behavior to a different panel, and then activate it, the changes will not be reflected on soft panels.

  However, if the topology is active, you can switch the panel behavior and it will do the switch on the fly as expected.

- [Ref. #PEG-8009] **Tie lines view is not updated dynamically when a short name is changed:** For GV Orbit Control, when you change the short name of a device, the Path Management (Tie lines view) is not dynamically updated.
  Workaround: Click the Refresh button.

- [Ref. #PEG-8018] **Ports appearing in "Other" physical connections table are not updated dynamically after changes are made to the device:** For GV Orbit Control, when changing the device short name or device count for the corresponding ports appearing in the *Other* table, the table is not dynamically updated.
  Workaround: If this occurs, deselect/select the link.

- [Ref. #PEG-8096] **Category Configurator is very slow to assign and delete large numbers of sources and destinations:** For GV Orbit Control, if you are experiencing a delay, then as soon as you see the sources are deleted from the screen, close GV Orbit Control Client and reopen it. This way you skip the unnecessary delays.

  As for the creation of the category, you can do the same thing. Close GV Orbit Control Client after a while and reopen it.

- [Ref. #PEG-8097] **Logs fill with stack traces when an external controller is configured with an incorrect matrix ID.** For GV Orbit Control.
  Workaround: if this occurs, fix the matrix ID or stop the external control system from accessing NDAC, or change log level for this module. This may well hide other important errors in this same module.

- [Ref. #PEG-8235] **Deleting devices by decreasing the device count is faster when all other** GV Orbit Control **Client stage tasks are closed**: For GV Orbit Control, if the device count is changed when only the Topology Configurator stage task is open, the deletion is much faster. As soon as you open the Router Control or Path Manager stage task, it starts to slow down.

- [Ref. #PEG-8251] **Google Chrome is the supported browser for operating the GV Orbit Control Admin Web Stage:** For GV Orbit Control, issues have been found with Internet Explorer 11 and the upgrade feature from the GV Orbit Control Admin page. We recommend using the Google Chrome web browser.

- [Ref. #PEG-8255] **System Status page displaying routers that have been deleted:** For GV Orbit Control, after deleting dummy routers on the loaded topology, the System Status UI was still showing the statuses of the deleted routers without their labels. *Workaround:* Close/reopen the System Status UI.

- [Ref. #PEG-8284] **The Alias Editor are not updated dynamically when physical connections are deleted in the topology:** For GV Orbit Control, if the Alias Editor stage task is open and you sever physical connections in the Topology Configurator task, switching back to the Alias Editor may not reflect the deletion. *Workaround:* If this occurs, click on the refresh button on the Alias Editor.

- [Ref. #PEG-8317] **The GV Orbit Control Admin Backup and Restore does not display the correct host name when the host name has a hyphen in it:** For GV Orbit, it is not recommended to use a hyphen in the host name.

- [Ref. #PEG-8328] **Take should fail with an incorrect physical level configured on a router:** For GV Orbit Control, if you have configured a router, but has the incorrect physical level value, GV Orbit Control attempts to perform the take. If the physical level does not exist on the router, no actual XPTs are switched.

- [Ref. #PEG-8332] **Router Control UI not updated after multi-select take on NV9654 hardware panel.** This relates to GV Orbit Control. *Workaround:* If this occurs, then close and reopen the GV Orbit Control Client.

- [Ref. #PEG-8449] **Changing the standby server IP without breaking the cluster is not possible.** *Workaround:* If you have to change the IP address of the standby server in a redundant cluster, then it is necessary to break the cluster. To do so, in GV Orbit Control, set the number of controllers in the Area Configurator to 1 and press enter. Then, change the number of controllers back to 2 and enter a new IP address for Controller 2 in the Properties Editor.

- [Ref. #PEG-8469] **The virtual IP address cannot be the same as the IP address of either the active or standby controller:** For GV Orbit Control, also, you cannot use the same IP for both the active and standby controllers. If this is the case, then you will need to edit one, or both controller IP addresses in the area configurator. *Workaround:* If the virtual IP address is the same as the IP address of a controller, or if the both controllers have the same IP address, open the GV Orbit Control > Area Configurator > Property Editor and edit the IP address of one controller or both controllers.

- [Ref. #PEG-8520] **Hosts/flow policies are not being re-created in DCNM after a DCNM HA failover**. For GV Orbit Control, if the active DCNM in a HA availability DCNM configuration goes offline, DCNM will fail over to the standby DCNM, but it will not have the hosts/flow policies that were currently available on the previously active DCNM. To fix this issue we have to deactivate and activate the topology one more time.

- [Ref. # PEG-8542] **A Bad Device Graph Is Loaded After A Switch Of Area:** For GV Orbit Control, the original area may be displayed when you create a new topology, make it active, and then create a new area. If this occurs, then click on the new area to display it.

- [Ref. #PEG-8585] **Ethernet NIC ports on GV Orbit Admin > Network Settings are listed in reverse order:** currently, only the em1 interface is enabled on startup of GV Orbit Control Client. When you edit the configuration of the interfaces in the web stage, it is important to note that, from the rear, the right most network port actually relates to p6p1. These interfaces also need to be manually enabled using the command, *ifconfig [interface] up* (for example, *ifconfig em2 up*) through SSH to GV Orbit Control, or on the Linux command line interface.

- [Ref. #PEG-8602] **The last take operation added to a salvo can appear incorrectly at the beginning:** For GV Orbit Control, when you add take operations to a salvo, the last take operation added should appear at the bottom of the list. However, it appears at the beginning of the list. If this occurs, then delete the unsorted operation and add it again.

- [Ref. #PEG-8708] **Underscores are ignored in topology naming:** For GV Orbit Control, it is recommended that you replace underscores with another character when naming the GV Orbit Control topology.

- [Ref. # PEG-8782] **Refresh issue in the logical device table while exposing stream:** For GV Orbit Control, while exposing streams and having the logical device table opened, the logical device table can become out of sync when you navigate between the Source and Destination tab of the table. Sometimes the stream will not appear immediately, or sometimes they will not update after changes in the topology. *Workaround:* Refreshing, or reopening the table, can fix this issue.

- [Ref. #PEG-8820]**The Web stage login button is not enabled when using remembered login and password:** the web-stage login button is not enabled when you select the remembered user and password.
Workaround: If this occurs, press the enter key in one of the two fields, or press the tab key in the user field.

- [Ref. #PEG-8834] **Checking Automatic Sources on Outputs does not assign the streams on some Logical Sources:** For GV Orbit Control, if the logical device table is open when editing the device properties on the topology, and you choose to automatically create sources on Outputs, then you may need to press the refresh (recycle) icon to refresh the devices.

- [Ref. #PEG-8840] **Logical Device Table streams are still shown after deleting a physical connection link:** deleting a physical connection link on the active topology should remove the logical devices that may have been created for a device. However, if the devices are still seen on the logical device table, then pressing the refresh (recycle) icon on the logical device table, will refresh the table.

- [Ref. #PEG-8859] **Redundant port device property displayed with improper format:** For GV Orbit Control, after editing the device property # Output connectors to 2 and setting the Redundant port on Out 1, the redundant port was shown as follows. The workaround is to deselect/re-select the Out 1 port tab.
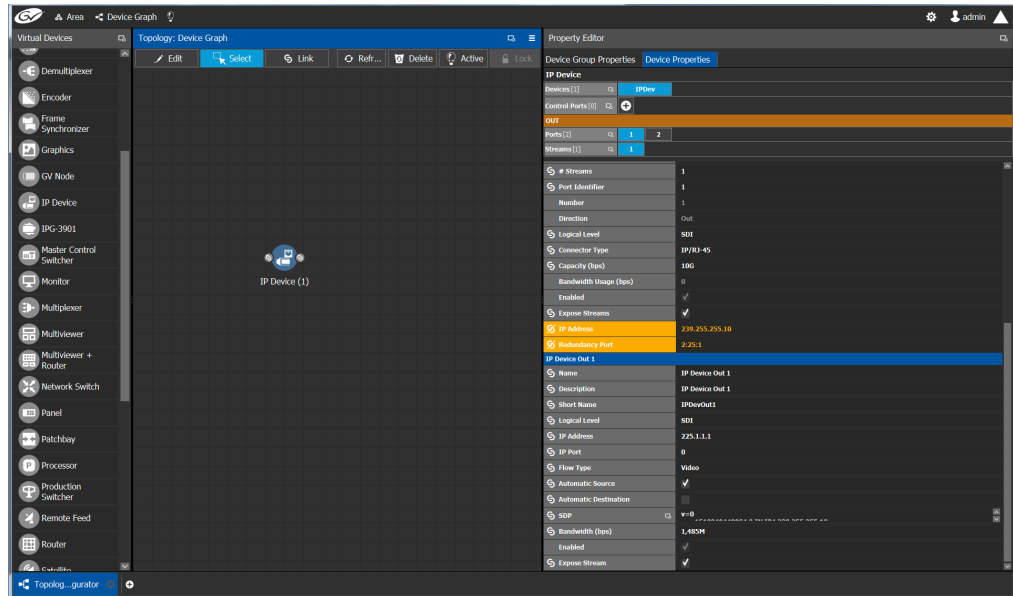
- [Ref. #PEG-8860] **Takes to an exposed destination will fail due to missing logical level assignment:** For GV Orbit Control, if you expose streams at a port of a router, but that port does not have a defined logical level, then placing that stream in a logical device and performing a take on/to that device will fail. You must manually configure the logical level on the device properties in the topology.

- [Ref. #PEG-8871] **Using Exposed Streams May Create Inaccuracies in Path Manager:** For GV Orbit Control, utilizing the exposed streams functionality in the GV Orbit Control topology, may create instances where the path manager will not show complete status.

- [Ref. #PEG-8882] **Multicast IP group address changes made to XCU are not applied to GV Orbit Control:** For GV Orbit Control, in the case that you edit the multicast group IP address in the XCU for GV Cameras, there is a chance that these changes will not propagate to the GV Orbit Control Topology. The workaround is to deactivate and reactivate the GV Orbit Control Topology.

- [Ref. #PEG-8962] **External ID's less than 1 will not return status to northbound controller:** For GV Orbit Control, when the assigns a duplicate external ID in the Alias Editor, the other device with the duplicate external ID, will receive an external ID of -1 to identify an issue. External ID's less than the value of 1 or greater than the total number of names on the sources or destinations, will not report status to the northbound controller.

- [Ref. #PEG-9163] For GV Orbit Control, entering characters in all caps into the Alias editor requires a workaround:
    1 Click on a cell
    2 Press *Enter* first
    3 Start entering the characters in all caps

- [Ref. #PEG-9174] **Topology name limited to 256 characters:** For GV Orbit Control, creating a topology in GV Orbit Control with a name longer than 256 characters causes UI issues.
  Workaround: You must limit the name to less than 256 characters.

- [Ref. #PEG-9176] **Clicking on another Physical Connections link while making connections on another link will interrupt process:** For GV Orbit Control, while in the process of connecting the physical connections of a link within the topology, if you click on another link, all of the connections may not be processed for the former link. You will need to click on the former link and process the remaining connections.

- [Ref. #PEG-9180] **Keystroke Creator option from separator does not work properly in the Category Configuration Stage:** if the suffixes of your logical device names have less than 2 characters (1, 2, ...), then the automatic keystroke editor may not automatically assign the correct keystroke when using the "From Separator" option.

- [Ref. #PEG-9373] **Router Control UI may not update if one of shared control servers is rebooted during takes:** For GV Orbit Control, when 2 servers are controlling the same router and one of the servers is rebooted while takes are being performed on the client connected to the other server, the Router Control UI of the clients connected to the rebooted server may not refresh Router Control UI when the server comes back.
  Workaround: reopen another Router Control UI task.

- [Ref. #PEG-9389] **Deleting an NMOS device may leave a ghost device in System Status stage:** For GV Orbit Control, when we add an NMOS device to an active topology we show the status of that device in the system status page. When we delete the device the system status page does not refresh properly and we end up with an empty slot showing "Unknown".
  Workaround: Closing and reopening the System Status stage will address this issue.

- [Ref. #PEG-9435] **Discovered Devices control ports may stay on-line when you deactivate a topology:** For GV Orbit Control, if a discovered device is added to an active topology, its control port will come on-line. If you deactivate the topology then the control port remains on-line when it should go off-line. Reactivating and deactivating the topology again gets the control port to go off-line.

- [Ref. #PEG-9439] **You may not be notified when timeout has been reached is a large configuration:** For GV Orbit Control, currently, with the default timeout and polling method for the restoration of the database through the Web Interface, larger configurations may not completely be restored and may revert to their previous database without notifying you.

  The default values must be edited to accommodate larger configurations (>2GB). The current default values from /var/lib/tomcat7/webapps/admin/WEB-INF/classes/admin.properties:

```
#Timeout values for backup and restore.
# serverStatusRetries: Number of retries when checking for server
readiness before giving up.
# serverStatusInterval: Interval in milliseconds between server
readiness check retries.
# Total timeout for service to restart after a backup or restore is
serverStatusRetries * serverStatusInterval
# When restoring a backup from an older version, multiply the timeout
time by the factor migrationMultiplier.
serverStatusRetries=36
```

```
serverStatusInterval=5000
migrationMultiplier=5
```

This currently allows only 3 minutes to restore a configuration, and up to 15 minutes for legacy configurations. Changing the serverStatusRetries to 60 would allow up to 5 minutes and 25 minutes, respectively. The issue is that if there is a problem with the database, GV Orbit Control will wait the total of this timeout prior to giving up and reverting.

- [Ref. #PEG-9456] **Streams may no longer be completely mapped after changing the GV Node Mode:** For GV Orbit Control, when using exposed streams on GV Nodes and changing the card mode from TR03 to TR04 for example, the stream assigned in the ANC cell is not removed. Since TR04 does not have ANC, we should remove the streams in that cell since the stream no longer exists in the system.
  Workaround: manually remove the stream.

- [Ref. #PEG-9508] **Do not use loop-back IP in the controller properties:** For GV Orbit Control, using the loop-back IP address for the system controller in the controller properties of the Area Configurator will cause a loop of restarts, as the controller attempts to create a cluster with itself. Utilize the physical IP of the system controllers.

- [Ref. #PEG-9529] **Adding a destination to a virtual XPT when topology is inactive will not route virtual source to the destination:** For GV Orbit Control, part of the GV Orbit Control implementation of Virtual XPTs is the freedom to not require you to manually create a salvo to initialize the virtual source to real destination path. This is accomplished when a real logical destination is added to a virtual XPT. However, when the GV Orbit Control topology is not active, this will not occur. You would then be required to route the virtual source to that real logical destination once the topology is active.
  Workaround: only add real logical destinations to the virtual XPT when the topology is active.

- [Ref. #PEG-9583] **Creating a duplicate panel configuration may not display that panel in the configurator:** For GV Orbit Control, when creating a panel configuration by duplicating an existing configuration, then it may be necessary to open the newly created panel, as it may not be displayed upon creation.

- [Ref. #PEG-9587] **Discovered Devices properties may be overwritten on reactivation of GV Orbit Control:** For GV Orbit Control, the unaffected attributes are logical level, # input connectors, # output connectors, # Streams per input, # Streams per output, automatic Destinations on Inputs, Automatic Sources on Inputs. All other fields will be overwritten on reactivation of the GV Orbit Control topology.

- [Ref. #PEG-9600] **Clearing a database via ssh while the GV Orbit Control Client is connected may present an issue with editing configuration:** For GV Orbit Control, when the clearing the database while the client is connected, the area and topology will not be editable. You will need to close and reopen the client and create a new topology.

- [Ref. #PEG-9762] **Unchecking exposed streams may affect pathfinding:** For GV Orbit Control, when third party changes are processed, GV Orbit Control figures out the list of sources/destinations which go through each tieline that is affected by the change, and then recomputes the tallies. When finding the sources/destinations, we only look at streams which are exposed. Therefore, if a stream has logical sources/destinations assigned to it, but is not exposed, we'll consider there is no source/destination, and free the tielines when they should be busy.

  This situation can happen in the following scenarios:
  - You add an edge device to the topology (for example, a camera or a monitor) and de-select the "Exposed Streams" property.
  - You select the "Automatic Source/Destination" property, without selecting the "Exposed Streams" property.

  Workaround: always leave the "Exposed Streams" check box checked.

- [Ref. #PEG-9763] **Newly created logical device is not highlighted in the Logical Device Table:** For GV Orbit Control, when you manually create a logical source or destination device in the logical device table, it is currently not highlighted and you may be required to scroll to the device.

- [Ref. #PEG-9765] **Severing many links at once can cause the responsiveness of the user interface to slow down:** For GV Orbit Control, in Topology Configurator, when cutting links with many physical connections, the user interface becomes unresponsive while the task is being executed.
  Workaround: cut fewer links at a time.

- [Ref. #PEG-9893] **Changing the mode of a K-Frame from 2022-6 to 2110 may cause extra ports to display in GV Orbit Control Client:** For GV Orbit Control, changing the K-Frame mode of operation in the Switcher Menu application from 2022-6 to 2110 may cause additional ports to display in the GV Orbit Control Client topology, under the device properties for the Production Switcher. This issue occurred 1 out of 3 times during testing.
  Workaround: close and reopen the Topology Manager stage in the GV Orbit Control Client.

- [Ref. #PEG-9935] **Manually assigned keystrokes in the Category editor may not work on a panel:** For GV Orbit Control, once you have manually added keystrokes to the devices within a category (rather than using the automatically add feature), this may cause these devices to not be selected with keystrokes on a panel. Pressing the category jumps to the keystroke page, but the keystrokes do not light up to indicate what keystrokes are available.
  Workaround: use automatically generated keystrokes.

- [Ref. #PEG-9943] **Taking a backup/snapshot while performing large operations may corrupt database:** For GV Orbit Control, deleting or creating large numbers of devices, physical connections, and then taking a backup while this is still taking place in the background can be hazardous to the health of the database. Monitoring the database activity via the SSH logging, or the resource usage on the System Status page prior to taking the backup/snapshot should allow you to avoid this issue.

- [Ref. #PEG-9950] **You may be unable to add any destinations to a virtual destination once they have attempted to add incompatible destinations:** For GV Orbit Control, as the virtual XPTs take on the characteristic logical levels of the actual destinations that are associated to the virtual XPT, or the virtual source is routed to; attempting to associate a real destination, that does not have logical levels compatible with the other destinations already associated to a virtual XPT, to said virtual XPT may create a situation where you can no longer associate any compatible logical destinations. *Workaround:* You must delete the virtual XPT and then only associate compatible logical destinations after recreating the virtual XPT.

- [Ref. #PEG-9955] **Deleting a salvo when that salvo is assigned to a panel configuration may cause the panel to freeze:** deleting a salvo when the salvo is on a panel configuration may cause the panel to freeze if you attempt to execute said salvo on the panel. *Workaround:* remove the salvo button on the panel in Panel Configurator, or recreate the salvo button on the panel.

- [Ref. #PEG-9965] **Logical Device Table Filter is missing some values:** For GV Orbit Control, if you open the logical device table and have not scrolled through the devices, and then try to use the filter, some of the devices that should be displayed when using the filter may not be shown. If you encounters this, you need to scroll down through all of the devices prior to using the filter.

- [Ref. #PEG-9971] **Exposing streams on a router may not properly reserve the bandwidth:** For GV Orbit Control, whilst using the exposing streams feature on GV Orbit Control, you are essentially removing the exposed streams from the tieline pool to create a source/destination at the port stream. Typically this would utilize bandwidth and that used bandwidth would be displayed on the Path Manager Stage. When exposing streams of the port streams connecting two routers, the bandwidth usage may not be displayed properly in path manager. *Workaround:* reactivate the topology to properly display the bandwidth.

- [Ref. #PEG-10064] **You must not sever the link between the Area and System Controller in Area Configurator:** For GV Orbit Control, severing the existing link between the System Controller and the Default area may create a situation where the configuration does not become active after a restart. If this occurs, you may need to load a backup configuration to restore activity.

- [Ref. #PEG-10218] **Discovered devices may not display secondary device name:** For GV Orbit Control, if the secondary device name is not displayed in the discovered devices pane, then it may be necessary to reopen the Topology Configurator stage.

- [Ref. #PEG-10251] **An alias may not be applied dynamically to GPIO editor:** For GV Orbit Control, in the GPIO editor, if you select an alias for sources and destinations, you can enter the alias or system defined name for the destination and the editor logic can accommodate this. If you type in the system defined name for the source with the alias selected, the logic does not accommodate this. You will need to take the following steps:
    1. In the GPIO stage task, Select None for the Source Alias.
    2. Delete the GPI configuration.
    3. Select Route a source to a destination.
    4. In the source text field, enter the source name, not the alias.
    5. In the destination text field, enter the destination name, not the alias.

6   Validate the rule.

7   In GPIO stage task, Select Alias for Source.

8   Now you will the see alias name for the source.

9   Validate the rule.

- [Ref. #PEG-10388] **DDS discovery devices added to the topology while activated do not appear in the System Status task:** For GV Orbit Control, DDS discovery devices added to the topology while activated do not appear in the System Status Page, unless you de-activate and then activate the topology.
  Workaround: Close and then re-open the System Status task.

- [Ref. #PEG-10466] **GV Orbit Control Cluster cannot be created if a DNS server is configured but is not reachable:** If a DNS server is configured on a pair of GV Orbit Control servers and the DNS server is not reachable (as they cannot be pinged), GV Orbit Control will be unable to create a cluster when creating the cluster configuration via the Area Configurator. The result is both servers to come back as master and kick each other out of the network in a loop.
  Workaround: Remove the bad DNS entries and restart GV Orbit Control on both servers.

- [Ref. #PEG-10492] **Unable to break the link between a router and a monitor:** For GV Orbit Control, sometimes you may encounter an issue where they will not be able to disconnect the link between an SDI router and a monitor, using the cutting tool after disconnecting the physical connection. The link gets stuck.
  Workaround: Close and re-open the Topology Configurator stage.

- [Ref. #PEG-10501] **Failed to find redundant path error when doing breakaway on IQUCP that is not set in redundancy mode:** For GV Orbit Control, when doing audio breakaway or video breakaway using IQUCP cards that is not set in redundancy mode, the logs show "Failed to find redundant path" errors and the panel flashes red even though the breakaway is successful.

- [Ref. #PEG-10589] **Changing source or destination short name is not reflected in the Category Configurator and Panel Configurator:** For GV Orbit Control, changing source or destination short name is not reflected in Category Configurator and Panel Configurator.
  Workaround: Close and then re-open either the Category Configurator or Panel Configurator stages.

- [Ref. #PEG-10590] **Virtual XPTS in Router Control UI is empty when removing a destination from Virtual XPT:** For GV Orbit Control, if you have one Virtual XPT with 4 destinations configured in Logical Device Table, you see 4 destinations in the Virtual XPTS Area in the router control UI. If you remove one of the destinations from the Virtual XPT configured in Logical Device Table, all destinations in the Virtual XPT Area in the router control UI will be removed.
  Workaround: Deselect and select again the Virtual XPT destination in Router Control UI.

- [Ref. #PEG-10593] **Third party equipment doesn't handle source/destination with streams that have no logical level:** For GV Orbit Control, when 3rd party equipment updates tielines and tallies, and the streams that are used for the logical source/destination have no logical level, then tallies and tielines will be cleared.
  Workaround: Set a logical level on the stream.

- [Ref. #PEG-10622] **Deleting a device removes it from the NMOS registry, however the Logical source for the device's NMOS sender in the Logical Device Table are not being removed:** For GV Orbit Control, logical source for NMOS sender are not being removed when the device is deleted. The device itself is no longer in the NMOS registry.
  Workaround: Delete the logical source manually.

- [Ref. #PEG-10624] **Third party notification broken when a GV Orbit Control server controls another GV Orbit Control server using NP17:** Third party notifications may not work when a GV Orbit Control server is controlling another GV Orbit Control server using NP0017.
  Workaround: Deactivate and then activate the GV Orbit Control topology.

- [Ref. #PEG-10642] **Changing connector type does not change stream type anymore:** For GV Orbit Control, tThe stream type (e.g. SDI stream, IP stream) created for a device is based on the connector type (for example, SDI, or IP). However, if we change the connector type, the stream type does not change accordingly.
  Workaround: Set the stream count to 0 and back to it's desired value. The will cause streams to be deleted and recreated, now with the correct type.

- [Ref. #PEG-10737] **Virtual XPTS - Destinations selection not sorted properly:** For GV Orbit Control, in the Virtual XPTS tab, the real destinations as part of the virtual destination are not sorted properly.

- [Ref. #PEG-10769] **Unable to do more than one level breakaway to an IQUCP destination:** For GV Orbit Control, you are unable to do more than one level breakaway to an IQUCP destination at a time. For example, if you do an audio and video breakaway, only the last take will become in effect.

- [Ref. #PEG-10791] **GV Orbit Control does not support the control of IPVU parameters:** For GV Orbit Control, when using an IPVU with GV Orbit Control, GV Orbit Control is able to control the IPVU to make it join streams, but it is unable to control IPVU parameters. The IPVU's output format is set through the IPVU's configuration. As a result, GV Orbit Control is unable to dynamically change the IPVU's output format on the fly. Therefore, the format of any stream sent to the IPVU must correspond to the video format currently set in the IPVU's configuration.

- [Ref. #PEG-10808] **Audio Live path discrimination does not work if there are factory levels on one or more ports:** For GV Orbit Control, the path finding will not use the specific ports with custom levels to convert the signal and instead will use any port that matches the required channel count.

- [Ref. #PEG-10842] **IQUCP cards connection status off-line if the eth2 configuration is blank:** The IQUCP card's connection status is shown off-line if the eth2's configuration is left blank.
  Workaround: Configure eth2 with a valid IP Address and restart the card.

- [Ref. #PEG-10873] **Missing tables in database when creating a cluster with a clean database:** Creating a cluster from a GV Orbit Control server that has a clean GV Orbit Control database could trigger issues with the control port of the devices added in the topology.
  Workaround: Restart the GV Orbit server before building a cluster with another controller OR Failover right after creating the cluster.

- [Ref. #PEG-10874] **GV Orbit Control controllers switched in the System status page (first controller shown on the second column):** For GV Orbit Control, this issue could occur if the user decides to restore a backup from Controller-2 to Controller-1. *Workaround:* With both controllers in a standalone mode, check each server's position in the controller columns. Do this by opening a GV Orbit Control Client to each server and re-creating the cluster from the server with the correct ID.

- [Ref. #PEG-10883] **Discovered device stays on-line the first time the topology is disabled:** For GV Orbit Control, a discovered device stays on-line the first time a topology is disabled. The control port status is accurate whether the GV Orbit Control topology is on-line or off-line. This has no effect on the GV Orbit system.

- [Ref. #PEG-10958] **NDAC: NP0017 port-based commands do not work properly if there are gaps in the external IDs:** For GV Orbit Control, if there are gaps in the external IDs of the logical sources or destinations, the NDAC NP0017 port-based commands do not work properly. If the external Ids are sequential, the commands all work properly.

  There are checks made which expect that the provided port IDs to be lower than the amount of sources/destinations. This is not true when there are gaps in the external id assignments.
  Workaround: Use the NP0017 device-based commands, where gaps are supported properly.

- [Ref. #PEG-10976] **GPIO rules are validated and saved without using the check box if the user switches to another rule:** GPIO rules are validated and saved without using the check box if the user switches to another rule.
  Workaround: Do not change to another rule if the current rule is not already validated.

- [Ref. #PEG-10977] **Adding or updating Aliases is not reflected in an open *Router Control* tab:** Adding or updating Aliases is not reflected in an open *Router Control* tab.
  Workaround: Close and re-open the *Router Control* tab.

- [Ref. #PEG-10981] **GPIO - Takes executed once the GPI rule is activated:** For a new rule, if the rule is not activated and the user switches the GPI input from either On-to-Off or Off-to-On, there will be no take executed. However, if the user activates the rule, then Takes related to the last transition are executed.

- [Ref. #PEG-10983] **Source/Destination short label updates not reflected in open *Category Configurator* and *Panel Configurator* tabs:** When the short label of a device is changed using the Topology Configurator, the labels are not automatically updated in the *Panel Configurator* or *Category Configurator* tabs, if they are already open.
  Workaround: Close and re-open the respective tab to see updated labels.

- [Ref. #PEG-10984] **GPIO - Rule is not executed when it is created during an activated topology with a new database:** GPIO rules are not executed when starting a new topology with a new database.
  Workaround: To execute those GPIO rules, deactivate the topology and then re-activate it.

★ [Ref. #PEG-11074] **Device control port's status may stay at *Unknown* if the topology has a DCNM control port:** This issue was encountered when the topology has network switches with DCNM control port. Other control ports could be affected and may remain at *Unknown* status if the user deactivates and re-activates the topology within a few seconds. This issue does not happen if there is no DCNM control port.
Workaround: Deactivate the topology and wait until the DCNM control port goes offline and then activate the topology.

Contact Us

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