grass valley
A BELDEN BRAND

ORBIT

Version: 3.1.12

Release Notes

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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 Orbit.

Hardware Requirements

System Requirements for running Orbit Client

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

Operating System	Microsoft Windows 10, Windows 7, Server 2016 or Server 2012r2
Processor	Intel Core i5, the minimum required by the operating system, or better
Memory	8GB RAM minimum, the minimum required by the operating system, or more
Disk Space	The minimum required by the operating system plus one GB, or more

System Requirements for running Orbit Services

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

Operating System	Microsoft Server 2016 or Server 2012r2
Processor	Intel Xeon, the minimum required by the operating system, or better
Memory	16GB RAM minimum, the minimum required by the operating system, or more
Disk Space	The minimum required by the operating system plus one GB, or more. If using the Recording Service to store alarm state minimum requirement is 240GB, or more
Supported Web Browser	Google Chrome only (most recent version) Used to open Orbit Service configuration pages outside of the Orbit Client. The Orbit Service configuration pages can be opened in the Orbit Client without needing a browser to be installed
Java Runtime	Java Runtime Environment version 8u121. Required to open Densité Service Panels only

Network Requirements

It is recommended that the desktop/servers running the Orbit Client and Orbit Services (as well as the associated equipment being configured and monitored) be installed on a dedicated LAN, using the existing security infrastructure. A qualified system administrator should verify that the setup follows the security standards of your organization.

TCP/UDP Port Usage

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

The ports required for communication between the Orbit Client, Orbit Services 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. Note that participant IDs are 0 based.

For each Domain there is one multicast port required, for each participant to a Domain a further two unicast ports are required. A formula is 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

Default Domain IDs are used by the Orbit Client and Orbit Services, the ports used described below relate to the default Domain ID. If using user defined Domain IDs use the formulas above to calculate the required port numbers

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

Description	Default Domain ID	Max Participant ID	Multicast Port	Unicast Ports	Comment
Multiviewer Project	0	0	7400	7410 7411	Domain 0 is a default domain used for Multiviewer discovery. Domain 100 can be user configured.
	100	0	32400	32410 32411	
IP Routing Project	101	0	32650	32660 32661	
	105	0	33650	33660 33661	
C&M Project	100	0	32400	32410 32411	Multiviewer and C&M Projects can share a domain

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

For example if a Multiviewer Project and C&M Project are both open and using Domain ID 100 then the Max Participant ID becomes 1 as both services have a Domain Participant. The required ports would be:

Default Domain ID	Max Participant ID	Multicast Port	Unicast Ports	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

The following ports must be open inbound and outbound on PC's running the Orbit Client:

Port Number	Application / Protocol
2050	Default RollCall communication port, open other ports for RollCall communication as described in relevant product documentation
9627	Densité Panel Launcher Application
5951 5953 5955	Densité REST API
5957	GSM REST API

The following network ports must be open inbound and outbound on Servers running the Orbit Services, recalculate if a different Domain ID is used:

Description	Default Domain ID	Max Participant ID	Multicast Port	Unicast Ports	Comment
Client Domain	100	4	32400	32410 32411 32412 32413 32414 32415 32416 32417 32418 32419	Ports used by Orbit Services on the client domain: Monitoring MapView Routing Recording Email
Log Server Domain	110	1	34900	34910 34911 34912 34913	Ports used by Orbit Services on the Log Server Domain: Monitoring Densité Control
IP Routing Domain	101	0	32650	32660 32661	Densité Control Service

The following ports must be open inbound and outbound on servers running the Orbit Services:

Port Number	Application / Protocol
5951 5953 5955	Densité REST API
9193 + GV Convergent Area External ID	NP0017 protocol communication port with GV Convergent. The Area External ID can be looked up in the GV Convergent client Area Configurator by selecting the area that needs to be controlled and looking at the External ID Property
2000	Probel SW-P-08 protocol, or as defined in Router Controller
Mail Server Port	The Email Service requires connection to an email server. Refer to documentation for email server for the required connection parameters

Software Component Compatibility

Grass Valley recommends you use the following software components and the stated versions for optimal performance and compatibility with Orbit version 3.1.12:

Product	Requirement for Orbit Compatibility
GV Convergent	Software Version 2.1
iControl	Software Version 8.1 (With Densité and GSM REST API licenses)
IP Edge Routing Controller	Software Version 9.10.15
MV-8 Series Multiviewer	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/IQUCP IP Gateways	Version 11.73D
IQAMD	Version 8.60.18
Router Protocols	NP0017 SW-P-08

Installing Orbit Client on a PC

To install the Orbit Client version 3.1.12 on a PC run the installer.

Note: This release installs into C:\Program Files\Grass Valley\Orbit. It can be installed alongside Orbit v2.5. To preserve settings from Orbit 2.5 install version 3.1.12 first, then uninstall Orbit v2.5

Installing Orbit Services on a Server

To install the Orbit Services version 3.1.12 on a server run the installer, ensure to select the Install Services option during installation. Note the client application is also installed on the server.

Documentation

You can obtain the latest version of the Release Notes and all manuals from the Documentation Library section of Grass Valley's website.

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Release Notes

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

Overview

Orbit version 3.1.12 is a patch release that contains bug fixes. See also Known Issues and Limitations.

New Features, Enhancements, and Bugs Fixed in Orbit

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

Orbit Version 3.1.12

This release corrects the following issue(s).

Bugs Fixed
* ∗ [OR-2461] - General, Corrected display bug when launching a screen into full screen mode at start up
* ∗ [OR-2457] - Multiviewer, Corrected issue which caused a crash if there is an invalid Wall file in the Project
* ∗ [OR-2454] - Multiviewer, Corrected issue which caused a when changing Multiviewer domains
* ∗ [OR-2441] - General, Corrected issue which caused a crash when interacting with a Combo Box on a RollCall Template
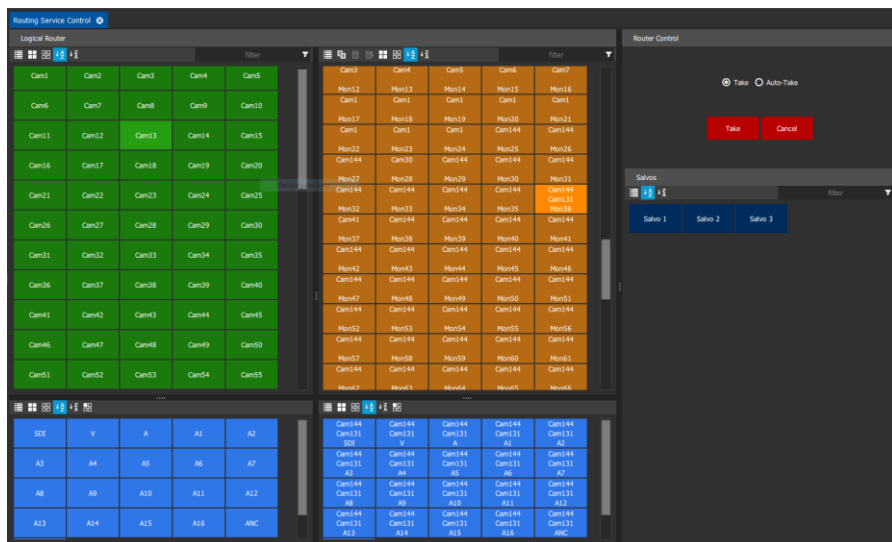
* [OR-2455] - Multiviewer, Corrected issue which caused a crash when toggling quickly between edit and run mode
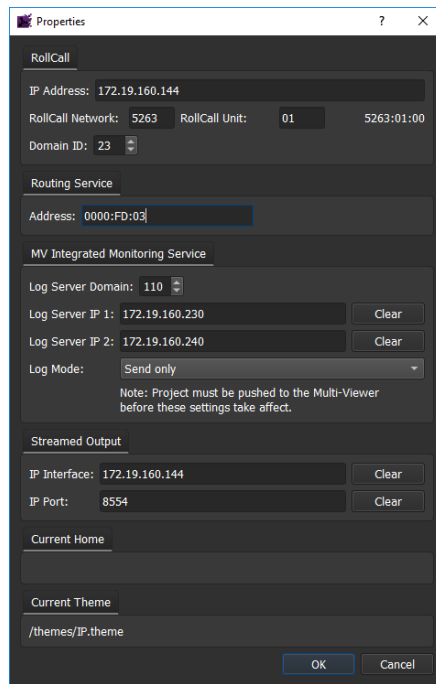
Orbit Version 3.1.11

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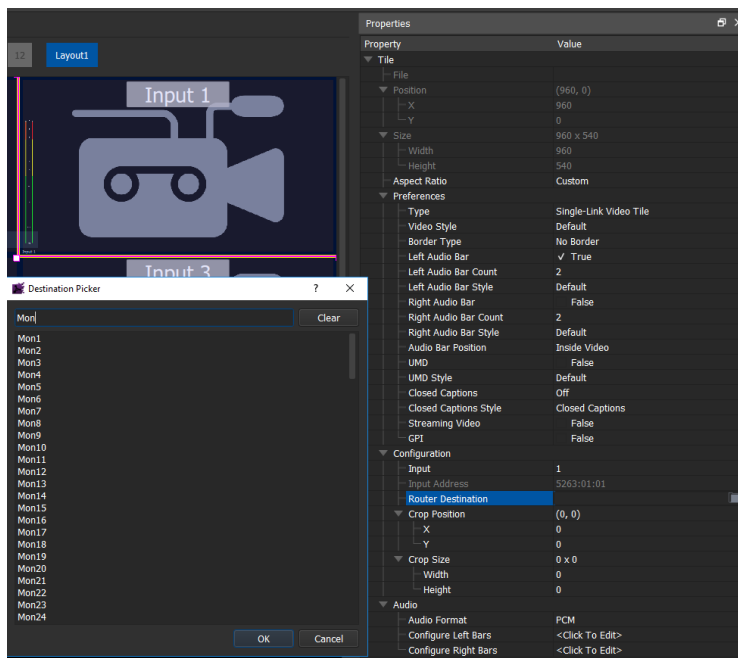
New Features and Enhancements

- [FUS-2122] - **General, Added support for NP0017 Protocol to Routing Service:** The Orbit Routing Service now supports the NP0017 protocol. This enables soft routing panels in the Orbit client to control GV Convergent. Instructions on how to configure the Routing Service can be found in the Orbit Services User Manual

- [FUS-2347] - **General, Added Routing Panel for breakaway, audio shuffle and bulk routing:** The Orbit Client now supports a soft routing panel that can be used to make fast routing operations such as route one to many, route with breakaway and route with audio shuffle. The soft routing panels connects to the Orbit Routing Service and therefore is compatible with Router Controllers that support either NP0017 or SW-P-08 router control protocols Instruction on how to operate the Bulk Routing screen can be found in the Orbit Bulk Routing User Manual
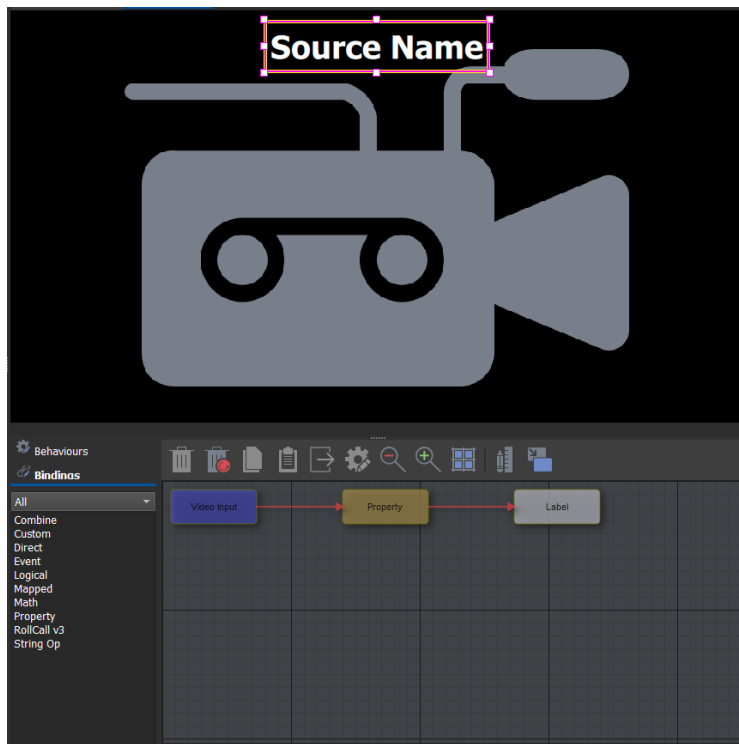

- [FUS-2382] - **General, Added support for opening Densité Service Panels from the Network Tree:** The service panels for Densité devices can be opened from the context menu on Densité devices in the Network View. Refer to the Orbit MapView User Manual for configuration details

- [FUS-2426] - **Multiviewer, Added ability to set the router destination on a Tile one a Multiviewer Wall:** The Multiviewer Wall Editor has been enhanced to enable the destination associated with a Multiviewer Tile to be set. The Tile can then automatically show the name of the source routed to the Multiviewer Tile. The Multiviewer Properties should be set with the RollCall address of the Routing Service

The destination associated with a Multiviewer Tile can then be selected from the Property View

- [FUS-2423] - **Multiviewer, Added Destination Behaviour to obtain source tally name for a given destination:** The Video Input Behaviour has been enhanced such that if a Routing Service is defined in the Multiviewer Properties then the Video Input Behaviour will retrieve the name the of the source routed to the Multiviewer Tile. The Video Input Behaviour can be connected to a Label Widget via a Property Binding to display the source name

- [FUS-2417] - **General, Text to speech synthesizer:** A new Speech Behaviour has been added that allows a text string to be vocalised using the Client PC sound card

- [FUS-2398] - **General, Added double click on network tree item to open control screen:** Double click a device in the Network View to open the card service panel

- [FUS-2413] - **General, Added ability to set the services in the iControl config dialog box to use different IP addresses for GSM Rest, Densite and Lookup Service:** Extended the configuration dialog box for iControl to enable different iControl servers to be configured for the REST APIs and Lookup Service

- [FUS-2456] - **General, Added additional Log Messages to Orbit Services:** The Orbit Services have been enhanced to log additional information such as the server name and IP address they are running on

- [FUS-2448] - **Multiviewer, Simplified video tile type definitions:** Renamed the 3G/HD tile type to Single Link as SD, HD, 3G and 12G are supported

- [FUS-2502] - **Multiviewer, Added Copy to the context menu for all file types except Wall:** Enables existing files to be copied from within the Project View. Copy of Walls is not supported. Walls or Layouts can be imported instead

- [FUS-2501] - **Multiviewer, Added Save File As to editor types that were missing this functionality:** Users can select Save File As from the File menu to save the current file with a different name

Bugs Fixed

- [LUCY-1371] - Multiviewer, Corrected issue where renaming a Wall caused Orbit to report all outputs are in use

- [FUS-2505] - Multiviewer, Corrected issue where Move to Front/Back icons were not enabled when multiple widgets are selected

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- [FUS-2366] - General, Corrected issue where Routing plugin was not writing logging messages
- [FUS-2372] - MapView, Corrected issue where Link states were not working when path and variables are configured by variables
- [FUS-2388] - General, Corrected issue where launching project full screen was not working
- [FUS-2402] - General, Corrected issue where re-installing Orbit overwrote port for service configuration back to 8080
- [FUS-2405] - General, Corrected issue where GSM text alarm sometimes did not display the correct value
- [FUS-2410] - General, Corrected issue where iControl Password was shown in the clear while editing
- [FUS-2414] - General, Corrected issue where Video Widget did not respond to Property Binding on Source Path
- [FUS-2416] - IP Configuration, Corrected issue where SDP Files generated by Orbit fail conformance tests
- [FUS-2280] - General, Corrected issue where Recording service with two fixed addresses in the filter was not working
- [FUS-2288] - General, Corrected issue with Polygon Widget not drawing correctly
- [FUS-2432] - IP Configuration, Corrected issue where IP Configurator text was truncated at 150% windows scale
- [FUS-2437] - Multiviewer, Corrected issue where Analog Clock in Auto Wall Editor Mode shows Digital Clock Style
- [FUS-2441] - Multiviewer, Fixed crash when Wall File was deleted
- [FUS-2447] - General, Fixed crash when changing tabs if a property is selected
- [FUS-2267] - General, Corrected issue where a Combo Box copied from a Control Screen did
- not update correctly
- [FUS-2450] - Multiviewer, Corrected issue where a new Multiviewer Project has no Theme
- [FUS-2460] - General, Corrected issue where GSM Text Alarm does not Display Text Value in User Folder
- [FUS-2461] - General, Corrected issue where the Monitoring Service caused the Network Tree to disappear if a device had a RollCall Address 0000:00:00
- [FUS-2462] - General, Corrected issue where incorrect timestamp caused Recording Service Log Viewer not to display alarms from last 30 minutes
- [FUS-2464] - General, Corrected issue where Monitoring Service could set device to Unit Lost rather than deleting it
- [FUS-2465] - General, Corrected issue where Densité Control Service connected to only a single Densité Manager
- [FUS-2389] - General, Removed the RollCall Multi-Matrix protocol from the Routing Service, only SW-P-08 and NP0017 protocols supported
- [FUS-2466] – General, Corrected issue where combo box displayed the wrong value
- [FUS-2469] – General, Fixed crash when loading IQAMD template after deleting cache
- FUS-2470] – General, Fixed issue where empty Combo Box was not hidden

- [FUS-241] – General, Fixed issue where webpage was not always displayed in Orbit Client until the editor was resized

Orbit Version 3.0.10

- [FUS-2176] – General, Fixed issue with empty target literal value in event binding
- [FUS-2167] – Multiviewer, Fixed issue where network interruption to Multiviewer caused Orbit to show connection fault
- [FUS-2135] – General, Fixed issue with copied Behaviours and Bindings not showing as linked
- [FUS-2130] – IP Configuration, Improved clearing and assigning multiple flow parameters for the IFM-2T
- [FUS-2096] – Multiviewer, Add support for Connected IQIMV project
- [FUS-2081] – MapView, Improved MapView link state display when stopping/starting the MapView service
- [FUS-2066] – General, Improved stability of RollCallv3 plugin
- [FUS-2059] – General, Fixed issue with undo/redo not working in the Global Logic editor
- [FUS-1843] – General, Added support for mouse over color on widgets such as Label
- [FUS-1972] – MapView, Added Globalx components, logic components executed server side
- [FUS-1989] – MapView, Added state change on Rate of Change of values
- [FUS-2041] – Multiviewer, Added support for Ancillary Time Code as a Digital Clock Type
- [FUS-2058] – MapView, Added User Configurable Network View Panel (Logical View)
- [FUS-2073] – MapView, Added Edge widget, widget interconnection lines
- [FUS-2105] – MapView, Added ability to add router panels like components
- [FUS-2112] – MapView, Added Playback Behaviour, Play Audio Alarm on Client Workstation
- [FUS-2173] – MapView, Added the ability to invert alarms
- [FUS-2182] – MapView, Added latched state
- [FUS-2248] – MapView, Added Email service and send Email Behaviour
- [FUS-2089] – MapView, Added support for SW-P-08 to the Routing service
- [FUS-2090] – MapView, Added Cancel button to Router panel
- [FUS-2091] - MapView, Added ability to display port numbers on the router panel buttons
- [FUS-1335] – General, Enable Direct Binding GUI to allow another Behaviour to be targeted
- [FUS-1575] – General, Enable property bind to the Disabled property of a widget
- [FUS-1809] – General, Added ability to browse images in the property binding rules editor
- [FUS-2072] – General, Groupbox supports group functionality, shift + drag drops widget into
- group, layout can be assigned to the widgets in the Groupbox
- [FUS-2076] – MapView, Renamed Schematic to Screen
- [FUS-2079] – MapView, Added Align options relative to Screen
- [FUS-2095] – MapView, Added an Alarm List widget that provides a Filtered Alarm List & Log File

- [FUS-2097] – MapView, Improved the XY Soft Panel Editor
- [FUS-2102] – General, Added Grass Valley, A Belden Brand License Agreement
- [FUS-2115] – MapView, Enhanced Control screens to support variable addressing
- [FUS-2137] – General, Added ability to set Binding Order. Right click on Binding and edit the execution order
- [FUS-2148] – MapView, Added ability purge stale data from the Monitoring Service, useful to remove stale data about devices that have been removed the system
- [FUS-2150] – MapView, Added ability to open an Orbit soft panel by right clicking on a routing node in the network tree
- [FUS-2111] – General, Added horizontally/vertically locked dragging, hold down L before starting to drag
- [FUS-2153] – General, Restyle of the application, removed the bright theme
- [FUS-2160] – General, Removed IP Multiviewer as Project Type
- [FUS-2164] – General, Sorting Behaviours and Bindings Alphabetically
- [FUS-2197] – General, Improved User Experience when Deleting Permissions
- [FUS-2199] – General, Sorting Permissions Alphabetically
- [FUS-2200] – General, Added ability to change Date to different formats
- [FUS-2245] – MapView, Changed Link Behaviour to use Screen and Monitor instead of Schematic and Screen
- [FUS-1807] – General, Added ability to name 'Virtual Node' in the network tree
- [FUS-1987] – MapView, Added a Combine Behaviour to stitch together the output from several Behaviours
- [FUS-2001] – General, Fixed issue where network tree was not refreshing and showing new devices added to IP Proxy
- [FUS-2005] – MapView, Fixed memory issues with MapView plugin on large systems
- [FUS-2007] – MapView, Fixed memory leak in MapView service
- [FUS-2008] – General, Fixed issue with expanding/collapsing the Property Grid
- [FUS-2009] – MapView, Fixed issue with MapView service not auto-updating correctly when a project is modified
- [FUS-2053] – MapView, Fixed issue with Monitoring service not handling wildcards at the end of a header
- [FUS-2055] – MapView, Fixed crash in the GSM plugin
- [FUS-2062] – General, Fixed issue with Orbit services not stopping/starting via web config screens
- [FUS-2084] – General, Fixed issue where variable overrides of type Address disappear when set
- [FUS-2094] – Multiviewer, Fixed issue where changing tile properties were not getting reflected on the wall
- [FUS-2098] – General, Fixed issue with Mapped Binding greater then/less than not working with strings with a numerical value
- [FUS-2107] – MapView, Improved using Alt + click to cycle through selected widgets
- [FUS-2109] – IP Configuration, Fixed crash when checking routed flow status

- [FUS-2149] – IP Configurator, Fixed default Audio RTP Port, was 5004, now is 50104
- [FUS-2151] – General, Fixed minor issue with the logical binding GUI
- [FUS-2161] – MapView, Fixed issue with masking unit/cells created by the Log Field Behaviour
- [FUS-2165] – General, Fixed issue with RollTrak Behaviour being unable to Read or Write value
- [FUS-2169] – MapView, Fixed issue with MbyE showing incorrect state when using link state and the states are within a component
- [FUS-2174] – General, Changed Install Point to Grass Valley
- [FUS-2177] – General, Changed Webpage Links to point to Grass Valley
- [FUS-2178] – Multiviewer, Fixed issue with Multiviewer Download Logs is not working
- [FUS-2179] – IP Configuration, Fixed issue with assign multicast to an individual flow not working
- [FUS-2180] – IP Configuration, Updated Styling
- [FUS-2183] – Fixed issue with property bound component path not working when the screen is opened in run mode
- [FUS-2184] – MapView, Fixed issue with Get/Set SNMP Behaviour crashing if invalid IP address used
- [FUS-2186] – General, Fixed issues with configuring new permissions
- [FUS-2187] – General, Fixed issue where non-admin role can add and delete permissions
- [FUS-2191] – General, Fixed issue where user without Edit Schematic permissions could modify the Theme
- [FUS-2201] – General, Fixed crash when changing tools options links
- [FUS-2203] – MapView, Added default Theme file to Control and Monitoring project
- [FUS-2204] – MapView, Fixed issue where Image Button mouse over was not working when placed behind a Label
- [FUS-2205] – General, Fixed double prompt for save when closing Orbit and the project has been modified
- [FUS-2207] – MapView, Correct issue where background color was lost if the mouse over color is transparent
- [FUS-2208] – MapView, Fixed issue where after updating a Component the background turns black on screen
- [FUS-2241] – MapView, Fixed issue with Monitoring Service not handling log fields on the client domain from a remote pc
- [FUS-2242] – MapView, Fixed issue with incorrect timestamps for monitoring service data
- [FUS-2243] – General, Fixed issue where renaming an open file caused subsequent changed to the file to be lost
- [FUS-2244] – General, Fixed issue with clean shutdown of Orbit Config service
- [FUS-2245] – General, Changed naming of schematic to screen in the Link Behaviour
- [FUS-2246] – MapView, Fixed issue where adding a Lock Behaviour to Button creates unnamed Behaviour
- [FUS-2247] – MapView, Fixed issue where cannot unlock Screen as Button containing a Lock Behaviour is not excluded from lock
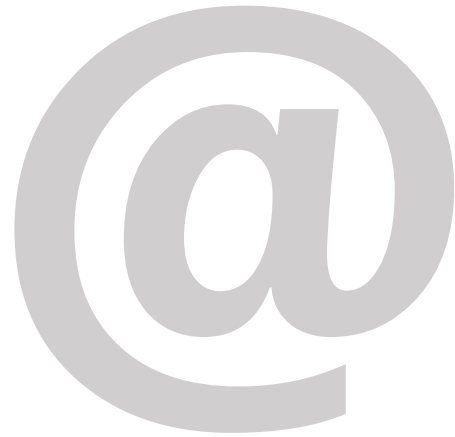
- [FUS-2251] – MapView, Fixed issue where it is not possible to copy a Widget out of a Group
- [FUS-2252] – General, Added ability to select network interface in Orbit Services to limit traffic to desired interfaces
- [FUS-2256] – General, Corrected filtering in project file select dialog
- [FUS-2262] – General, Corrected bug causing horizontal or vertical lines to lose their edge thickness
- [FUS-2263] – Multiviewer, Fixed issue where Load Control screen was added multiple time to context menu
- [FUS-2266] – General, Control screen styling improvements
- [FUS-2269] – General, Fixed issue where a lost RollCall connection was not restored
- [FUS-2272] – MapView, Enabled GSM and Densité plugins to dynamically handle iControl server re-configuration
- [FUS-2278] – General, Fixed incorrect message when cancelling a project pull
- [FUS-2284] – MapView, Fixed a bug where ctrl+s when in run mode causes link states to go grey
- [FUS-2288] – General, Fixed issues with Polygon Widget not drawing correctly
- [FUS-2291] – General, Fixed issue with Service status not showing correctly in Internet Explorer
- [FUS-2292] – General, Updated license files for Open Source software
- [FUS-2294] – General, Added maximise and minimize buttons to the pop-up windows
- [FUS-2295] – General, Removed iControl settings from the Monitoring Service, Densité and GSM Behaviours should be used instead
- [FUS-2297] – MapView, Fixed crash when double clicking binding in the Global Logic editor whilst in run mode
- [FUS-2301] – Multiviewer, Fixed issue where refreshing log data caused the Multiviewer on line indicator to turn yellow
- [FUS-2307] – MapView, Fixed issue where the link state was not correct when including Behaviours on a Component using variables
- [FUS-2308] – MapView, Fixed crash when deleting iControl settings a closing a running screen containing GSM alarms
- [FUS-2313] – Multiviewer, Fixed issue with selecting layouts in the Wall editor
- [FUS-2322] – MapView, Allow Variable dialog boxes to import/export values to a file
- [FUS-2324] – MapView, Revert selected colors on cancel when selecting colors for link status
- [FUS-2323] – MapView, Corrected case where variable overrides on Logic files inside a GlobalX file were lost on save
- [FUS-2329] – Multiviewer, Corrected issue where an IQIMV Connect Project sometimes pulls from the wrong Multiviewer
- [FUS-2327] – MapView, Fixed a crash when loading logic files that contain themselves
- [FUS-2337] – MapView, Fixed issue with Custom Bindings to loading when inside GlobalX files
- [FUS-2338] – IP Configuration, Corrected issue where source flow is shown as not assigned when RTP source port is empty
- [FUS-2240] – MapView, Allow variable values to be shown during run mode

- [FUS-2341] – MapView, Fix issue where reloading a component does not reset variable overrides
- [FUS-2250] – General, Set default RollCall addresses for services

Known Issues and Limitations

The following is a list of known issues and limitations associated with Orbit. The star (∗) symbol indicated a new issue in Orbit Version 3.1.12.

- [OR-2471] - Infrequent Orbit Crash when using Combo Boxes on Screens: This crash occurs occasionally when interacting with a Combo Box widget that has been placed on a MapView screen

- [UCCM-251] - Audio Shuffle Icon not Displayed in Bulk Routing Panel: This issue occurs when connecting to the GV Convergent Router Controller and an audio shuffle is made on composite levels. This issue requires version GV Convergent version 2.2 to shuffle correctly with composite levels

Contact US

Grass Valley Technical Support

For technical assistance, contact our international support center, at1-800-547-8949 (US and Canada) or +1-530-478-4148.

To obtain a local phone number for the support center nearest you, consult the Contact Us section of Grass Valley's website (www.grassvalley.com).

An online form for e-mail contact is also available from the website.

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