



grass valley

A **BELDEN** BRAND

# **ORBIT INTRODUCTION**

AN INTRODUCTION TO THE ORBIT SOFTWARE APPLICATION

## **User Manual**

Issue 1 Revision 4

2018-September-13

[www.grassvalley.com](http://www.grassvalley.com)

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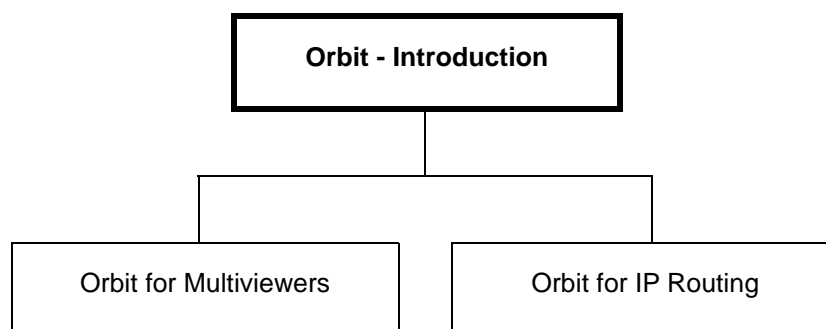
## About this Manual

This Orbit Introduction User Manual introduces the Orbit software and describes common features of Orbit and how to install it. Other related manuals fully describe how to use Orbit for different applications (for example, for multiviewers, or for IP routing).

## Related Documents

The following Orbit manuals are related documents:

	Document Title	Description
This manual:	User Manual: <b>Orbit Introduction</b>	A general introduction to Orbit.
	User Manual: Orbit for Multiviewers	Describes multiviewer-specific details.
	User Manual: Orbit for IP Routing	Describes IP Routing details.





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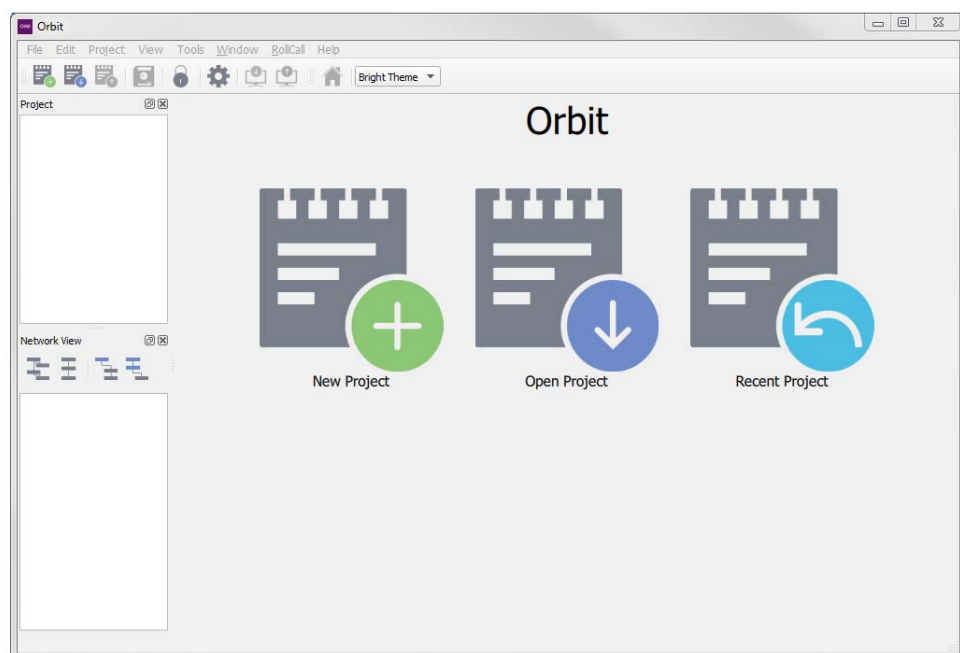


# 1 Product Overview

Orbit from Grass Valley, a Belden brand, is a suite of software packages and plug-ins that delivers comprehensive configuration, control and monitoring to any media installation. This manual introduces the Orbit application and covers aspects of Orbit operation that are common across different application areas. It also covers software installation. All specialized information is given in separate, related manuals (see [Related Documents](#), on page iii).

Orbit uses a project-based work-flow and offers control over user access. Orbit functionality includes:

- Graphical editors for designing on-screen items such as multiviewer video walls.
- Viewing and editing of Grass Valley device RollCall templates.
- Configuring and monitoring of IP network systems for IP routing system applications.



*Fig. 1-1: Orbit Initial Screen*

## Order Codes

Table 1-1 Orbit Order Codes

Order Code	Description
<b>Orbit</b>	Orbit Application.
<b>Licenses:</b>	(For license installation instructions, see Appendix B <a href="#">Orbit License Installation</a> , on page 175.)
<b>IPNETMGR</b>	License for using Orbit for IP Routing application. (Prepares an IP network system for Grass Valley IP routing operation.)
<b>MV-800-DT</b>	License for using Orbit to view a live video wall on a PC, with live streaming from MV-8 series multiviewer devices. (See the MV-800 User Manual for information about MV-800-DT.) <b>Note:</b> <i>Designing</i> multiviewer video walls does not require this license.
<b>MV-800-DTAMC</b>	Annual maintenance charge for MV-800-DT

# 2 Introduction to Orbit for Multiviewers

## Summary

### Introduction to Orbit for Multiviewers

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This chapter introduces the Orbit approach to multiviewer applications. See the 'Orbit for Multiviewers User Manual' for full information about each Orbit screen that is specific to multiviewers.

## Introduction

An Orbit multiviewer plug-in enables the Orbit multiviewer functionality. Grass Valley's MV-8 series of multiviewers are supported (for example, the MV-820 Standalone Multiviewer and the MV-800 Integrated Multiviewer).



Fig. 2-1: Video Wall Layout Design to Deployment

Multiviewer video walls can be designed, configured and controlled. They are pushed to a multiviewer for deployment. Different video wall designs can be pushed to a multiviewer for differing applications - particularly useful where the same outside broadcast truck might need to cover different events on a regular basis. Additionally, live multiviewer video walls can be viewed.

Device configuration and graphical, on-screen, multiviewer video wall design with Orbit is all unlicensed and free to use.

Some features of Orbit maybe chargeable licensed options. For example, an operational live video wall on a PC is done with the Orbit license MV-800-DT (i.e. live video pictures and status information displayed on a PC monitor).

## Features

- Project-based work-flow.
- Control over user-access.
- Graphical video wall design.
- Alternate wall layouts, selectable on-the-fly.
- Flexible video tile layout on a video wall.
- User-defined styles and themes for graphical widgets and walls.
- Support for:
  - Grass Valley SWP-08 protocol, RollCall and RollCall+.
  - TSL Protocol.
  - Plura® Timer Request Protocol.  
(3rd party equipment control of one or more on-screen timers.)

There are two operating modes for the Orbit software:

- **Design Mode:** Orbit is free to use in 'Design Mode', enabling wall designs to be generated and pushed to each device.
- **Run Mode:** In this mode, for example, video wall component tiles and on-screen widgets can be exercised with live data.

Licensable option MV-800-DT is available from Grass Valley. The license enables operational video walls to be shown on a PC monitor with live data.

## Supported Multiviewers

Grass Valley multiviewers, which Orbit supports, include the MV-8 series:

- MV-800 Integrated Multiviewer.
- MV-820 Stand-alone Multiviewer.
- MV-830/840/850 Integrated Multiviewers.
- MV-805 IP Multiviewer.

Please refer to Grass Valley for a complete and up to date list.

## Multiviewer Plug-in and Licenses

Different Orbit plug-ins enable different Orbit functionality and are installed during Orbit installation.

### Multiviewer Plug-in

A multiviewer plug-in enables multiviewer video wall design functionality in Orbit. Grass Valley's MV-8 series of multiviewers can be configured and controlled (for example, MV-820 Standalone Multiviewer or MV-800 Integrated Multiviewer products).

Orbit for Multiviewers comprises a graphical PC-based software application for designing video walls for Grass Valley products on a PC and viewing live video walls.

For example, for the MV-820 Multiviewer:

- Video wall layouts can be designed for and pushed to the MV-820.
- A live video wall can be displayed on a monitor connected to the MV-820.
- Live information may be streamed from the multiviewer and viewed on a PC monitor via Orbit with licensed option MV-800-DT.

## MV-800-DT License Option for Orbit

Video wall design is carried out with Orbit in 'design mode'.

A live video wall display on a PC monitor is possible with Orbit in 'run mode' and with a chargeable license option (Grass Valley product code: MV-800-DT).

The license enables Orbit to display certain H.264 streamed video inputs from a hardware multiviewer and see live information displayed in a multiviewer video wall on a PC window or full-screen on a PC monitor. Live information includes video streams, audio meters and alarms notifications.

**Note:** See the Grass Valley MV-800 User Manual for more information about MV-800-DT.

*Table 2-1: Order Code for MV-800-DT License*

Order Code	Description
MV-800-DT	<p>License for live video wall operation in Orbit and live streaming on a PC in Orbit.</p> <p>See the MV-800 User Manual for information about MV-800-DT.</p> <p>For license installation instructions, see Appendix B <a href="#">Orbit License Installation</a>, on page 169.</p> <p><b>Note:</b> <i>Designing</i> multiviewer video walls does <i>not</i> require a license.</p>

## Terminology

This section describes terminology used when discussing multiviewers and video walls. Read Table 2-2 alongside the example dual-screen video wall illustration of Figure 2-2.

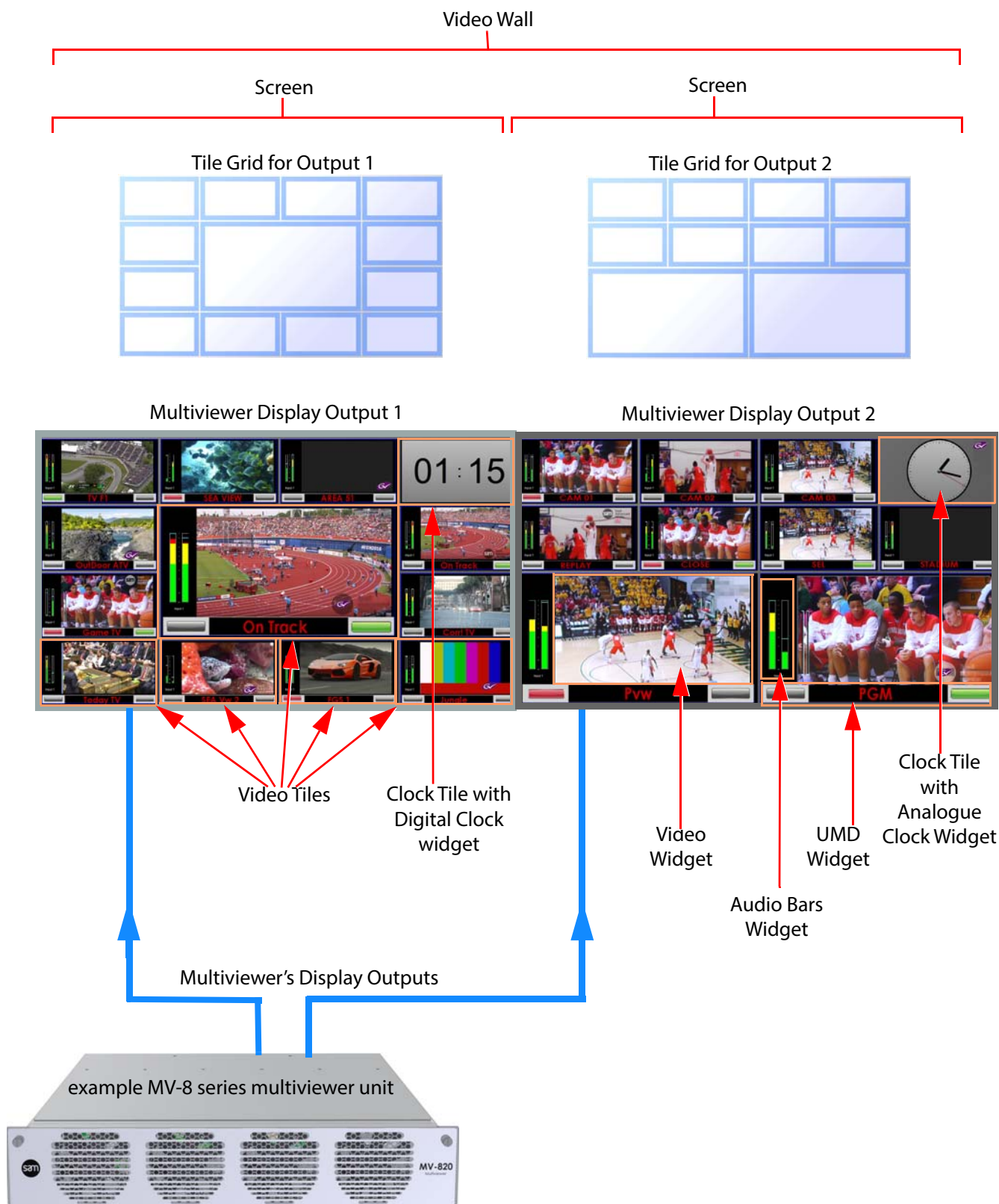


Fig. 2-2: Example Video Wall - Made up of Two Monitor Display Screens

Table 2-2: Definition of Terms

Term	Definition
<b>Wall, Video Wall</b>	One or more monitor display screens configured to form one large screen area.
<b>Screen</b>	Display area of one individual monitor/display device.
<b>Tile Grid</b>	A wall/screen is divided up into rectangular grid areas; various sizes and arrangements are possible. Information is displayed in each rectangular area. Used for quick-positioning of tiles onto a wall.
<b>Fine Grid</b>	A fine grid is used for the fine-positioning of graphical elements in Orbit; for example, for tiles on a wall or widgets on a tile.
<b>Tile</b>	A rectangular area on a screen, usually displaying video inputs and other supporting information.  For example, a tile may display a video picture with audio bars and other related status information.  Other information may be displayed in tiles, for example, time, images, labels or text.
<b>Widget</b>	Widgets are graphical on-screen elements which populate tiles. There can be one or more widgets per tile. Widgets display information, for example, audio sound level, time, video picture, text labels, tally information. Widgets include: Audio bars, Clocks, Images, Labels, Tally Lamps, Timers, UMD's and Video.
<b>Widget Style</b>	Widgets can have differently-styled versions, providing a different look and feel. A widget style modifies the on-screen appearance of a widget but does not change a widget's function.  For example, the Audio Bars widget may be defined with left-handed and right-handed styles.
<b>Theme</b>	A set of widget styles which can be applied to a project. Each widget may have more than one style.
<b>Multiviewer Input</b>	A Multiviewer has many video inputs. For example, a MV-820 Multiviewer has up to 48 multiviewer inputs.  These multiviewer inputs are processed by the Multiviewer and appear in video wall tiles.
<b>Display Output</b>	An output signal from a multiviewer carrying all or part of a video wall image. The output can be SDI (Coax or Fiber) or HDMI or a Video IP stream, depending on the multiviewer model.  For example, a 1080P SDI output from a MV-820 Multiviewer. Each display output is connected to a monitor display that forms all or part of a multiviewer video wall.
<b>Streamed Out Video Inputs</b>	On some multiviewer models (for example, MV-8 series), multiviewer inputs are streamed out as scaled-down, H.264-compressed IP streams. These are outputs from the multiviewer. These IP streams are available for viewing on a PC desktop (via H.264 stream viewing software, for example, Orbit with a MV-800-DT license option).  <b>Note:</b> These are compressed H.264 IP streams. These are <i>not</i> uncompressed video IP streams nor VC-2 video IP streams.



## Basics of Building a Multiviewer Video Wall

It is helpful to understand how Orbit builds up a video wall. The sequence is:

- 1 Monitors are connected up to multiviewer outputs.
- 2 Video tile arrangements are selected (adds tile grids).
- 3 Tiles themselves added etc.

This sequence is depicted in Figure 2-3a,b,c and in Figure 2-4c,d.

### a) Multiviewer Unit and Video Wall Monitors:

Initially,  
Multiviewer display outputs are  
*not* associated with any of the  
monitors making up a video wall.

Multiviewer Unit



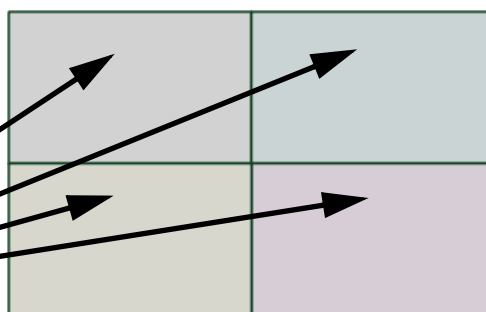
Monitor Wall



Four  
Monitors

### b) Assign Multiviewer Display Outputs:

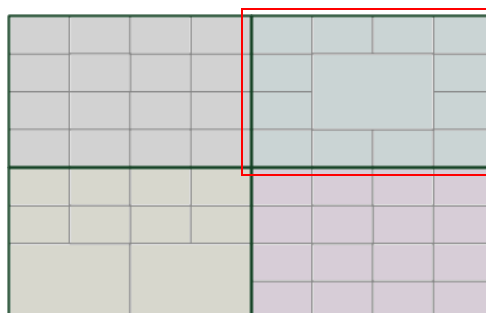
Assigning display outputs  
to each monitor is done in the  
**Wall Editor** in **Assign Outputs** mode.



Monitors connected up to multiviewer outputs

### c) Add Tile Grids to Wall:

To specify the arrangement of tiles on a wall,  
**Tile Grids** are placed on each display output  
(**Wall Editor** in **Tile Grid** mode).  
Some grids are pre-defined and users can define  
others.



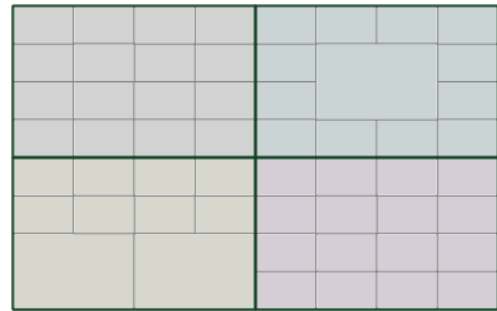
A Tile Grid

Monitor Wall with Tile Grids added

Fig. 2-3: Building a Video Wall:

- a) Multiviewer Unit and Video Wall Monitors.
- b) Assign Multiviewer Display Outputs.
- c) Add Tile Grids to Wall.

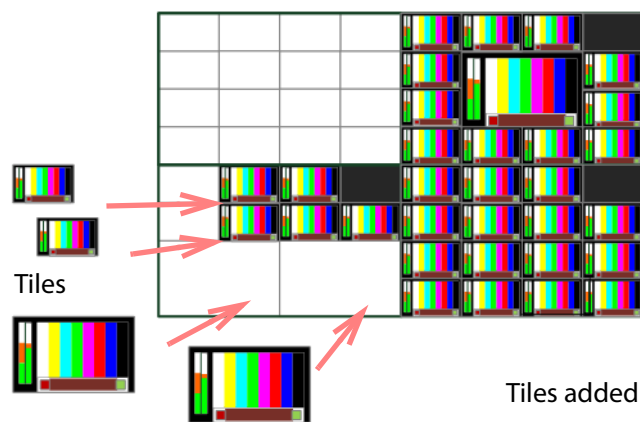
Monitor Wall with Tile Grids added



#### d) Add Tiles to Wall

Populate outputs with automatically-generated tiles (**Auto-Tiles**) and/or drag **Custom Tiles** onto the wall tile in the **Wall Editor**:

- **Auto-Tiles**: Pre-defined tiles, automatically generated and defined within Orbit,
- **Custom Tiles**: Built by the user, either from scratch or modified versions of other tiles.



#### e) Widgets Added to make Custom Tiles

Widgets are placed onto tiles in the **Tile Editor**. The user can build **Custom Tiles**. Widget styles can be defined. A widget on a tile can have a different appearance each time it is used on a tile by selecting the widget style to use.

Forming tiles:

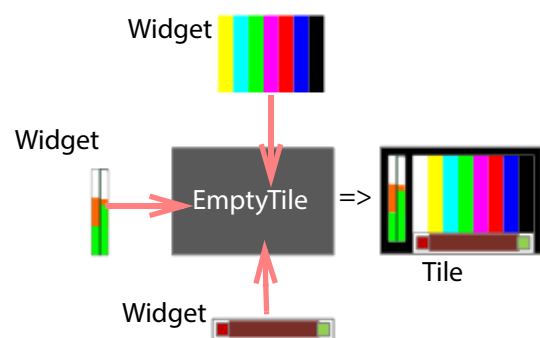


Fig. 2-4: Building a Video Wall:  
d) Add Tiles to Wall.  
e) Widgets Added to Create Custom Tiles.

## Multiviewer Projects

Orbit uses a project-based work-flow. Specific multiviewer projects are used for multiviewer applications.

Aspects of an Orbit multiviewer project include:

- User Management.
- Video Walls.
- Graphical Tiles.
- Graphical Widgets.
- On-screen appearance styling.
- Deploying a project.

## Walls and Tiles

Each individual multiviewer display output is assigned to make up a video wall. For example, four display outputs are required for a 2x2 monitor wall.

Tile layout template grids are applied to each display output in order to define the arrangement of tiles. For example, '3x3 tiles', '3x4 tiles' or '4x4 with one larger center tile'. These tile grids can be edited.

The tile grid is then populated with various tiles. For example, video tiles or clock tiles. Orbit provides the following tile types:

- **Auto-Tiles:** These are intended to meet most user needs. They contain graphical elements which can be user-configured.
- **Custom Tiles:** These allow a user to copy and modify **Auto-Tiles**, or to create new tiles from scratch.

Different wall layouts can be applied to a display output on the fly.

In addition to the standard automatically-generated tiles (**Auto-Tiles**) that are supplied in Orbit, the user can design **Custom Tiles** for use on walls.

## Tiles and Widgets

Tiles contain various graphical widgets which present on-screen information. For example, a video tile may contain a video widget, an audio bars widget and an Under Monitor Display (UMD) widget.

## Widget Styles and Themes

The appearance of widgets can be tailored. Different on-screen widget colorings and appearances may be defined to provide alternative widget styles; these alternative widget versions can be used in tiles. Functionally, all the tile versions do the same, they just differ in their stylistic properties.

For example:

- background or border colors;
- text font, color and size;
- clock faces; and
- right-handed or left-handed audio bars etc.

Widget styles are grouped together under "themes" and applied to a project. This enables a widget type to be used with different on-screen appearances.

## Deploying a Video Wall

A completed Orbit video wall layout design is held in an Orbit project.

Click **File > Save Project** to save the project to PC storage (for example, to hard disc).

To deploy a project, push the project to a connected multiviewer from Orbit.

The multiviewer then adopts the new video wall layout.

More than one wall layout may be within a single Orbit multiviewer project. A wall layout may be changed on the fly remotely by sending a command to the multiviewer, for example, with RollCall Control Panel.

## Orbit Multiviewer Project Main Screens

### Operations from the Project Screen

Figure 2-5 lists the operations that may be carried out within each Orbit multiviewer project.

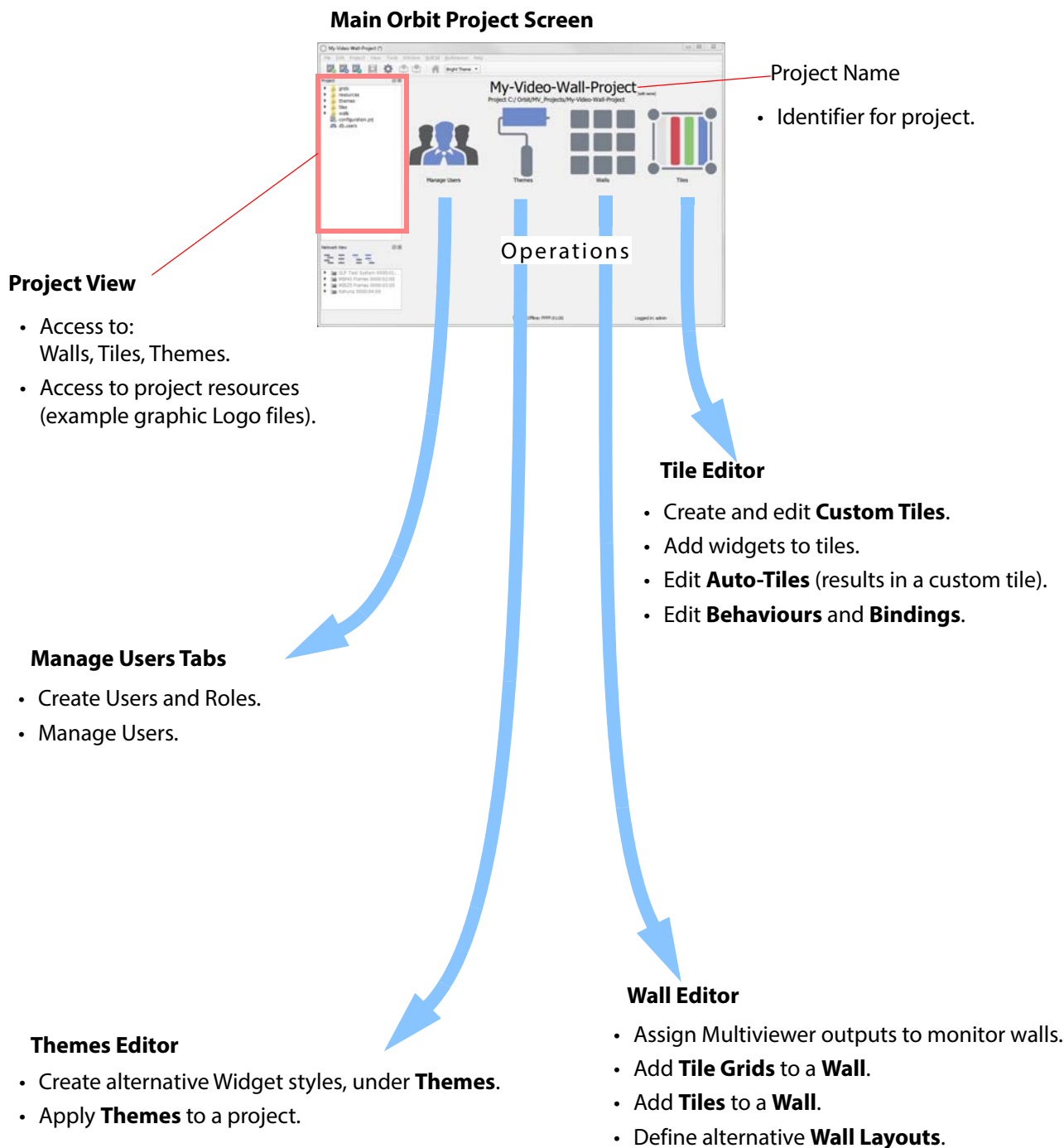


Fig. 2-5: Multiviewer Project Operations

## The Orbit Screens

The main Orbit screens and how they are related is shown in Figure 2-6.

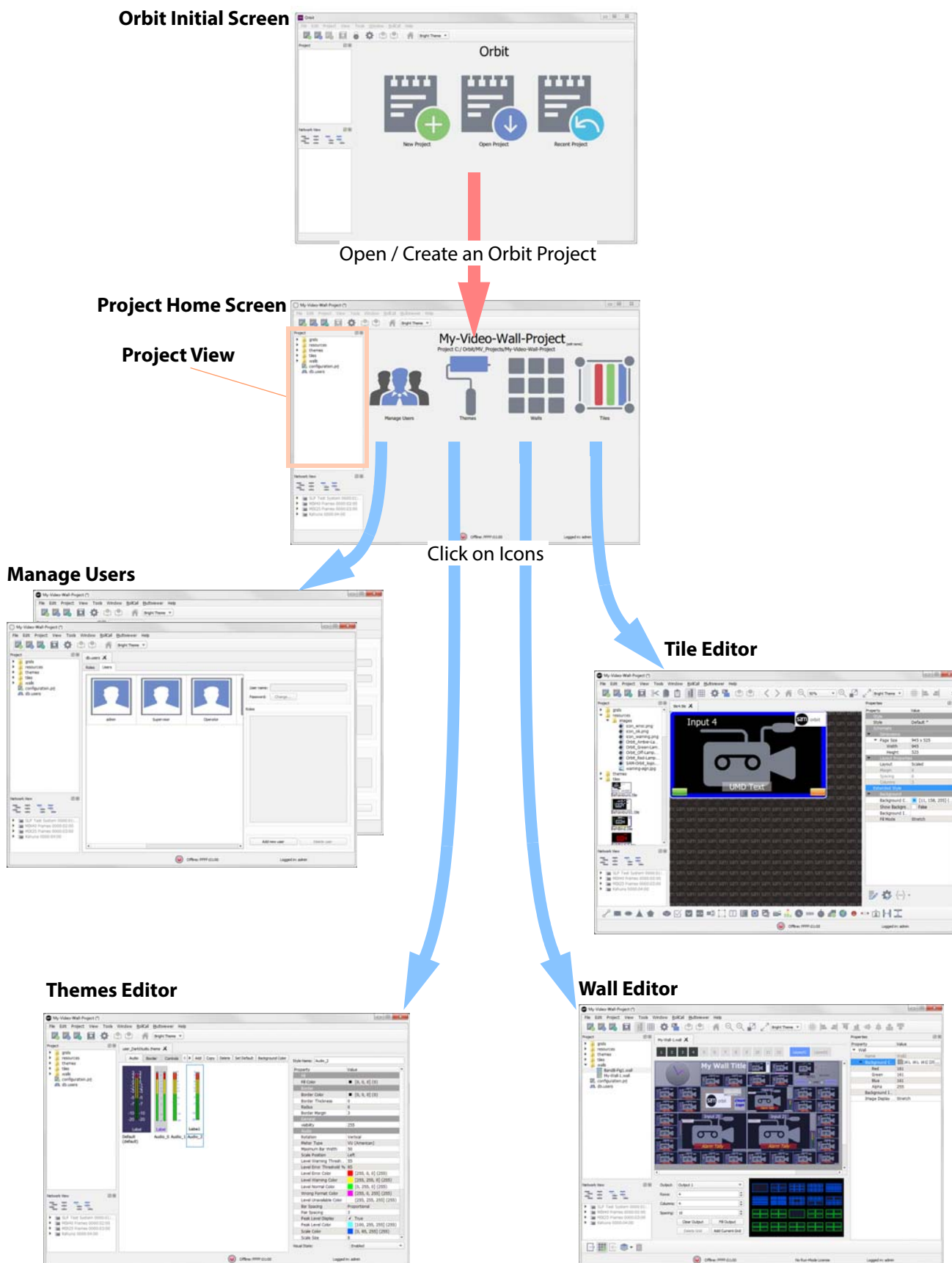


Fig. 2-6: Orbit Main Screens

## Initial Screen

The Orbit **Initial Screen** (see Figure 2-7) has icons and menu options for opening or creating projects.

- **New Project** - Opens a New Project dialog box. A new project can be created from scratch or can be pulled off a Multiviewer that the Orbit is connected to.
- **Open Project** - Opens an Open Project dialog box. The user can open an existing Orbit project - i.e. one previously saved to storage on a PC or server.
- **Recent Project** - Reveals a drop-down list of projects that have been recently accessed by your Orbit application. Project names are listed.

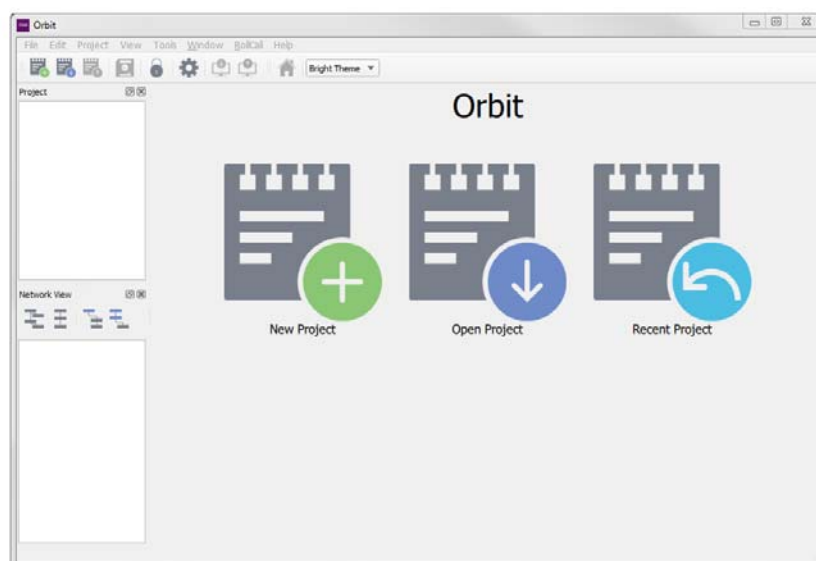


Fig. 2-7: Orbit Initial Screen

## Project Home Screen

The Orbit project home screen shows the Orbit project name and four main icons.

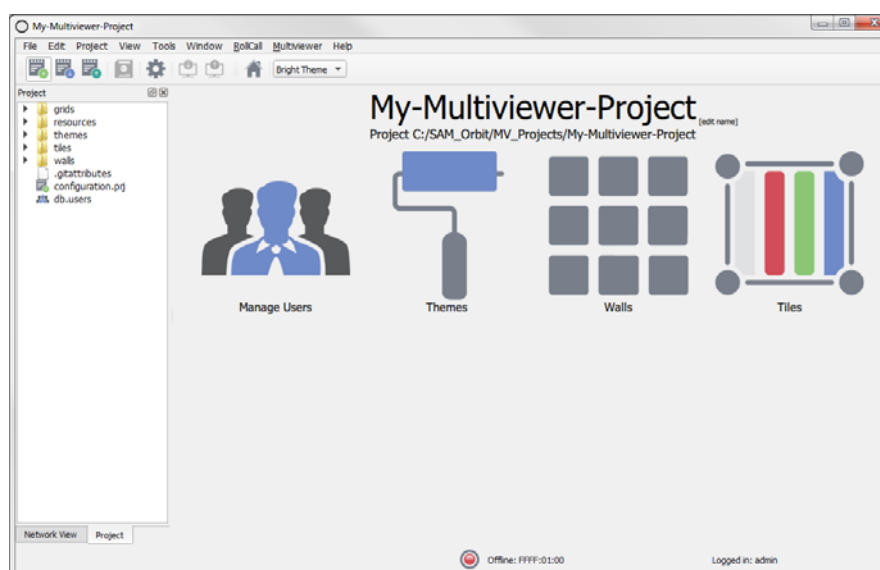
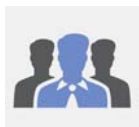


Fig. 2-8: Orbit Project Home Screen

The icons are for **Managing Users** and for editing aspects of video walls and control screens (**Walls, Tiles** and **Themes**). Additionally, there is a **Project View** pane, which is used for browsing and accessing various elements of the Orbit project and a **Network View** pane for browsing devices, such as multiviewers.

The project name may be edited on this screen.

## Manager Users Tabs



Orbit provides user access control to Orbit projects via a user log in.

A user is prompted for a user name and a password when accessing any Orbit project.

Orbit projects provide different levels of access to aspects of the project for different users, depending on the user's role.

User management is done in the **Manage Users** screen, where project users and roles are set up and managed. When creating a project, the following should be set up by a nominated **project administrator**:

- users;
- user roles;
- permissions; and
- passwords.

### Admin User

By default, only an 'admin' user is initially configured in a new project.

**Note:**

A new Orbit project automatically creates an administrator user with:

- User name 'admin'.
- Password 'admin'.

**Note:**

The 'admin' user has administrator role privileges. This enable all operations within Orbit to be carried out.

A project's administration password should be changed from the default as soon as you log on for the first time.

## Wall Editor



When a new project is set up, no multiviewer display outputs are yet assigned to any monitor wall positions. Each multiviewer display output is then assigned to a video monitor forming a video wall, for example, to make a 2x2 monitor wall from four displays.

Tile layout grids are applied, edited and populated with tiles, including video tiles.

Alternate wall Layouts can be designed and Wall properties modified.

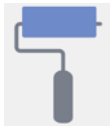
## Tile Editor



In addition to the standard automatically-generated tiles that are supplied, custom tiles can be designed with widgets and used on walls.



## Theme Editor



Style properties of a widget may be changed to create alternative version (styles) of a widget. Different on-screen colorings and appearance may be applied to a wall layout design; background colors, text font colors and sizes, transparencies, text position etc. can be changed.

For example:

- An Audio Bars widget can be made to have left-handed and right-handed versions.
- An Analog Clock widget can have two analogue clock-face styles.



# 3 Introduction to Orbit for IP Routing

## Summary

### Introduction to Orbit for IP Routing

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<a href="#">Features</a> .....	page 21
<a href="#">Order Codes</a> .....	page 21
<a href="#">IP Network System</a> .....	page 22
<a href="#">Example Real-Time Media IP Routing System</a> .....	page 22
<a href="#">Preparing an IP Network System for Orbit</a> .....	page 23
<a href="#">Configuring IP Network System for IP Routing</a> .....	page 24
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## Introduction

'Orbit for IP Routing' comprises the Orbit application installed on a client PC with an IP Routing plug-in and this requires an Orbit network manager license.

The Orbit for IP Routing application is a project-based software tool; it prepares an IP network system for Grass Valley IP routing operation. Orbit does the IP routing configuration and monitors the resulting IP routing system. After configuration by Orbit, the 'Orbit for IP Routing' application is not integral to the subsequent operation of the IP network system as an IP routing system.

Each Orbit IP routing project contains IP routing settings for all edge devices in the network. These settings permit the control and coordination of edge devices (for example, for video IP routing operation). Status reporting on all IP flows to/from edge devices is provided as well as full routing system logging.

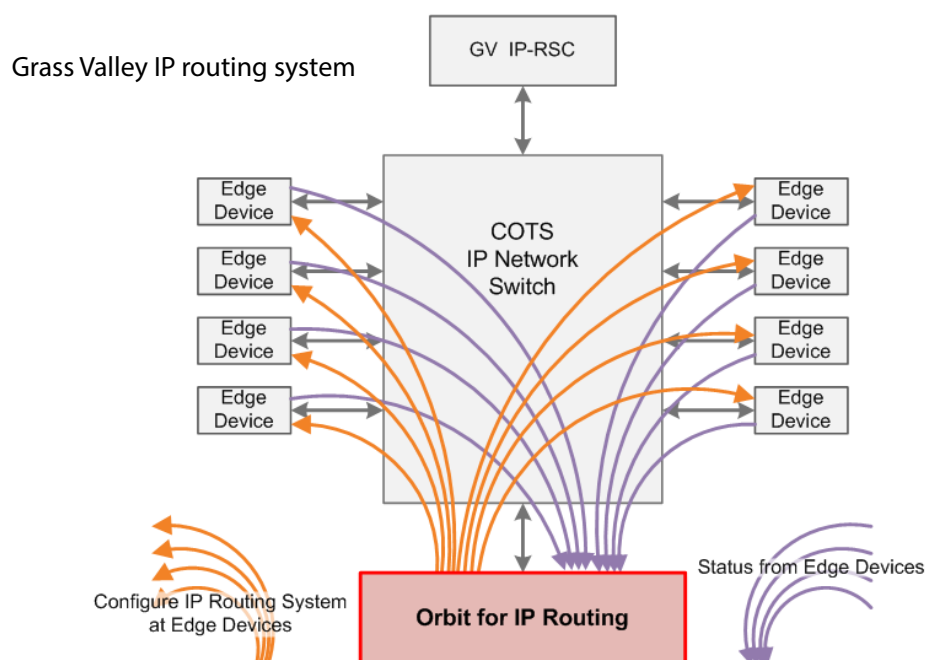


Fig. 3-1: Orbit for IP Routing in a IP Routing System using a Grass Valley IP-RSC unit

## Grass Valley IP routing system

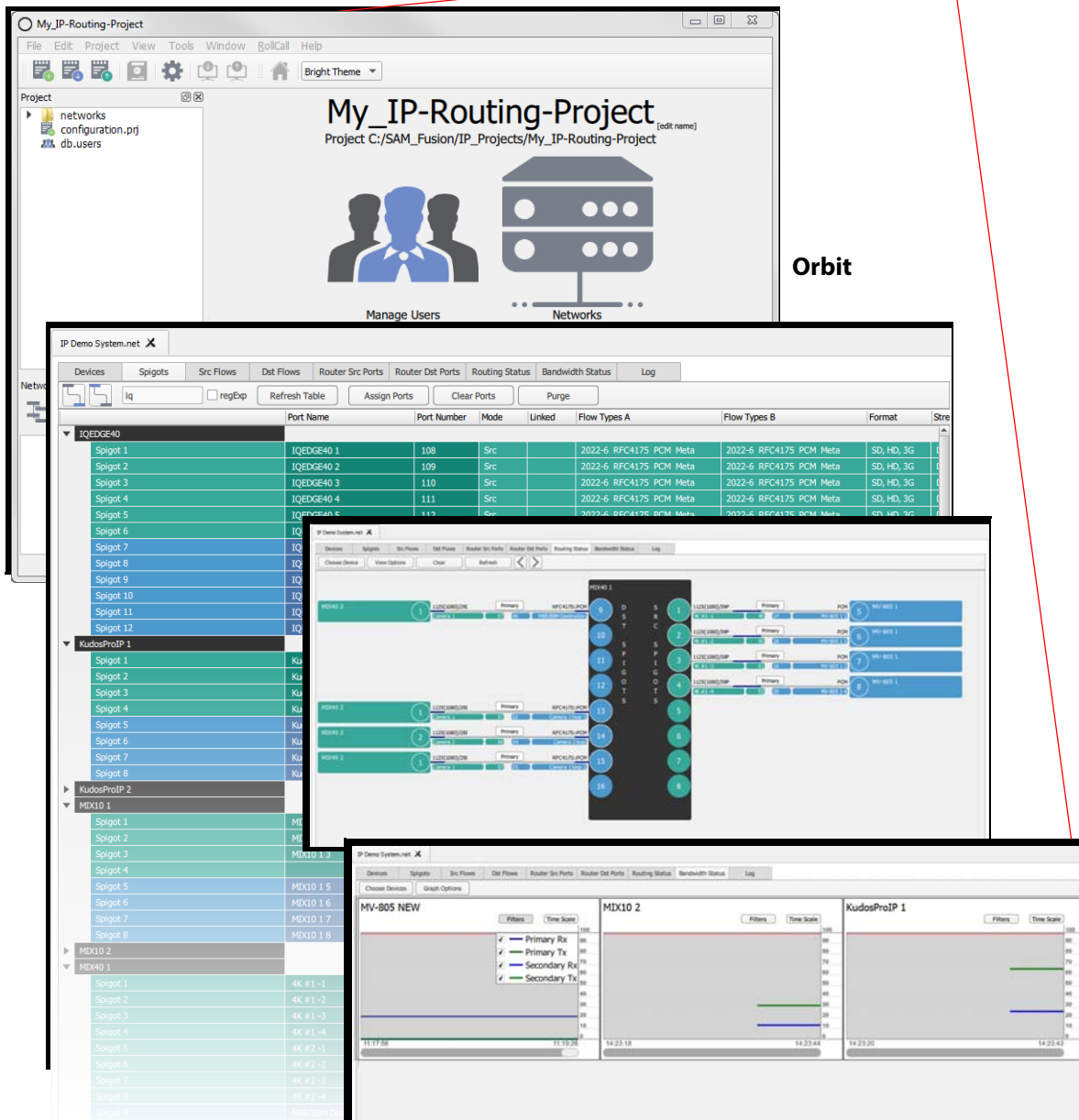
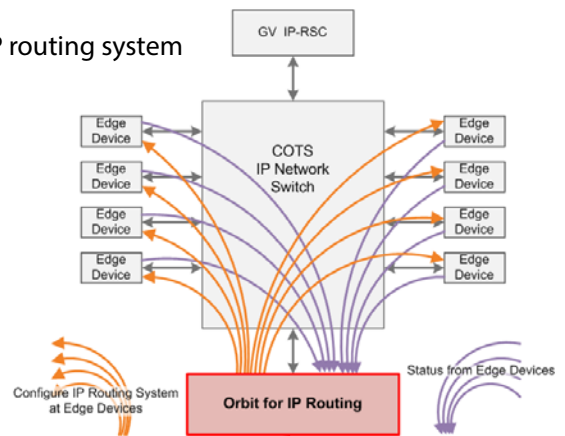


Fig. 3-2: Orbit for IP Routing - Configuring and Status Reporting Screens

## Features

- Configuration of IP streams and flows for a Grass Valley IP routing system.
- Supports SMPTE 2110.
  - For example, a video or an audio IP routing system can be formed.
- Supports SMPTE 2022-7 network redundancy.
- Compatible with Grass Valley's IP Routing System Controller (IP-RSC) unit.
- Self-discovery of edge devices.
- Automatic communication with router controller device.
- Supports in-band and out-of-band control.
- IP routing monitoring.
- IP routing log messages.
- Work-flow:
  - Project-based.
  - One or more IP routing network configurations per project (.net file).
  - Control over user-access.
- Orbit plug-ins automatically installed at Orbit software installation.

## Order Codes

Table 3-1 Order Code for Grass Valley Orbit IP Routing License

Order Code	Description
IPNETMGR	License for IP Routing. (For license installation instructions, see Appendix B <a href="#">Orbit License Installation</a> , on page 169.)

## IP Network System

The Orbit for IP Routing application is used in the final stage of forming an IP routing system from an IP network system.

An IP network system may comprise:

- a single IP network for media and control traffic;
- or separate IP networks for media and control;
- or two media IP networks for network redundancy;
- or some other combination of IP networks.

To be a Grass Valley IP routing system, a network system also needs a Grass Valley IP routing controller (for example, an IP Routing System Controller unit, IP-RSC). Traditional hard or soft Grass Valley router control panels then connect to the IP-RSC to be able to control routing (for example, video routing).

### Example Real-Time Media IP Routing System

The network system is configured by Orbit for IP Routing to be transformed into a real-time media IP routing system. For example, a video IP routing system, or an audio IP routing system could be formed.

Figure 3-3 shows this transformation for a Grass Valley video IP routing system.

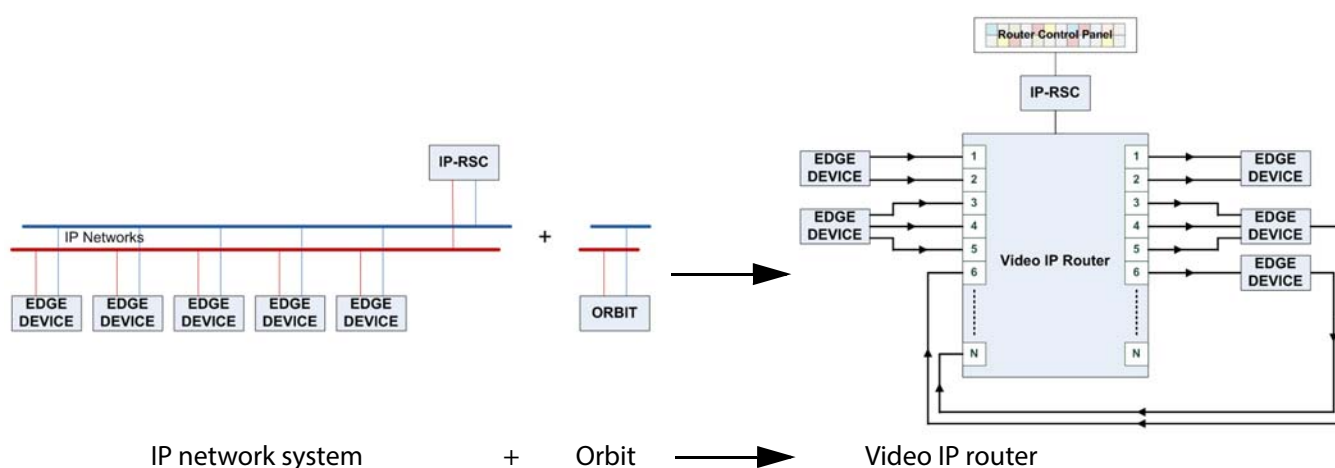


Fig. 3-3: Example: IP Network System configured for Grass Valley Video IP Routing Operation

## Preparing an IP Network System for Orbit

An overview of the procedure for setting up a Grass Valley IP routing system with an IP Routing System Controller (IP-RSC) is:

- 1 Configure the IP network switch(es). Including:
  - All connections on a single VLAN.
  - IGMPv3.
  - Fast Leave "on".

**Note:**

**Fabrics A and B, and sub-nets:**

For Fabrics A and B, use different network sub-nets.

- 2 Do the initial set up of all edge devices and IP Routing System Controller unit(s), including:
  - All device network interface IP addresses, including the control and media interfaces.
  - RollCall+ domains.

**Note:**

**RollCall+ Domain:**

Devices of the same IP routing network must have the same RollCall+ domain number.

- 3 Connect up all devices to the IP network switch(es), if not already connected.
- 4 Carry out any remaining edge device configuration.

**Note:**

**Spigots:**

Do not set up spigots on edge devices yet, because this will be done in Orbit.

- 5 Set up the IP-RSC unit to be the router controller using the Grass Valley WorkBench tool (sets up the 'IPRC' function within the IP-RSC unit).
  - Use S800 Router type.
  - Set router size, e.g. 288x288. (Can be changed later.)

**Note:**

**Port Names and Assignments:**

Do not set up router port Names nor port Assignments, because this will be set up in Orbit. (They are then obtained automatically by the IP-RSC unit.)

The network system is now ready to be configured by 'Orbit for IP Routing' - for example - to form a video IP routing system.

## Configuring IP Network System for IP Routing

'Orbit for IP Routing' is described in the 'Orbit for IP Routing User Manual'.

The overview of the procedure is:

- 1 Run Orbit and create an IP Routing project.
  - Select host PC network interfaces for the IP Routing project to use.
  - Set the RollCall+ Domain number to be the same as the edge devices.
- 2 The edge devices are discovered by Orbit and listed.
- 3 Use Orbit to configure:
  - Multicast IP addresses and flows on edge device spigots.
  - Router port assignments

When complete:

- 4 Remember to save the project on the PC.

The IP network system is now configured ready for IP routing operation under the control of the IP-RSC unit and any attached hard/soft Grass Valley router control panels.

## Operating the IP Router

To operate this resulting IP router system, make routes via Grass Valley hard or soft Grass Valley router control panels in the usual way for controlling a traditional video router (for example, a Grass Valley Sirius 800 video router).

While the IP router is operating, Orbit is not integral to router *operation*. So:

- Orbit can be still run on the PC, with the IP routing project open.
- The Orbit IP routing project can be closed.
- The Orbit application can be closed.
- And the PC may be shut down and disconnected from the network, only if the PC hosting the Orbit software is running no other Grass Valley applications.

If Orbit is re-started and the IP routing project is re-opened, then Orbit will auto-discover the edge devices and automatically gather all the information it needs. Orbit will then present all of the IP Routing project screens as usual.

With Orbit, IP stream routing and IP connection bandwidths can be monitored, and any required IP routing configuration changes made.



# 4

## 4 Orbit Main Menu Bar

### Summary

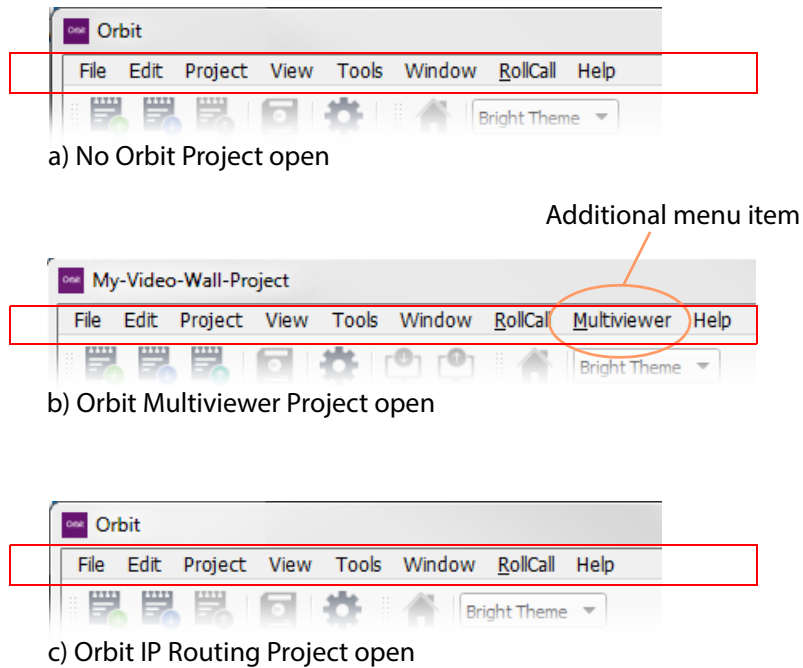
#### Orbit Main Menu Bar

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This chapter describes all main menu bar items within the Orbit application.

## Main Menu Bar

The Orbit main screen Menu Bar's appearance varies slightly depending upon what type of Orbit project open. Figure 4-1 shows the menu bars.



*Fig. 4-1: Menu Bars:*

- a) with no Orbit project open;*
- b) with an Orbit multiviewer project open in Orbit;*
- c) with an IP Routing project open.*

## Menu Bar - File Menu

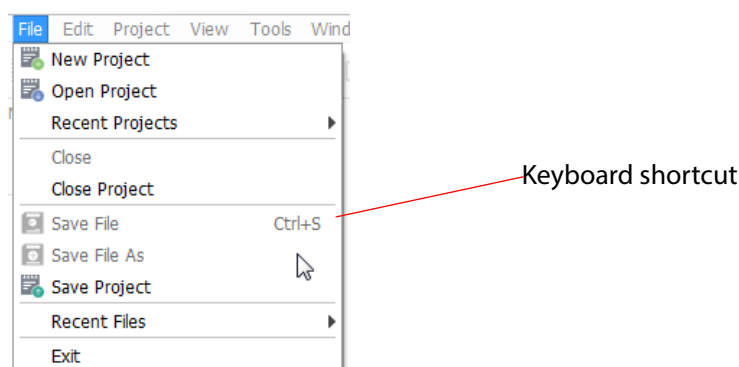


Fig. 4-2: File Menu

**Note:**

### Keyboard short-cuts:

Where there is a keyboard short-cut for a menu item, it is listed with the menu item, on the right-hand side.

**Note:**

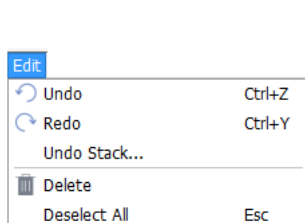
Some **File Menu** options may be grayed out if no project is open or no project has been opened in the Orbit application.

Table 4-1 File Menu Options

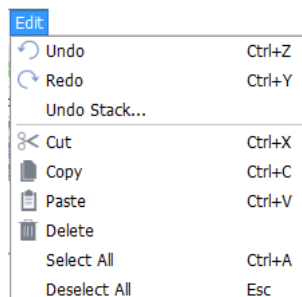
Menu Option	Description
<b>New Project</b>	Create a new Orbit project.
<b>Open Project</b>	Open an existing Orbit project.
<b>Recent Projects</b>	Displays a list of Orbit projects recently-opened by your Orbit. Click on an item to open it.
<b>Close</b>	Closes the currently displayed screen or tab. The user is prompted to save any changes.
<b>Close Project</b>	Closes the whole current Orbit project. The user is prompted to save any changes.
<b>Save File</b>	Saves the currently-displayed screen or tab. The file name is shown in the tab.
<b>Save File As</b>	Saves the currently-displayed text or graphical screen or tab to a file with a new name.
<b>Save Project</b>	Saves the whole current Orbit project.
<b>Recent Files</b>	Displays a list of recently-opened screens or tabs. For example, Video wall design, Tile design, Themes or project Users tabs. (File names are shown, with extensions '.wall', '.tile', '.theme' etc.) Click on a file name item to open it.
<b>Exit</b>	Exits the Orbit application. Save any changes if prompted.

## Menu Bar - Edit Menu

The menu items differ and/or menu items are grayed out according to whether an edit is being carried out in Orbit. All menu items are covered in this section.



a) Edit Menu, no project open.



b) Edit Menu, when the multiviewer **Tile Editor** is open on-screen.

Fig. 4-3: Edit Menu:

a) No Project Open.

b) When the multiviewer Tile Editor is open on-screen.

**Note:**

### Keyboard short-cuts:

Where there is a keyboard short-cut for a menu item, it is listed with the menu item, on the right-hand side.

**Note:**

Menu items may be grayed out unless an Orbit project is open and being edited.

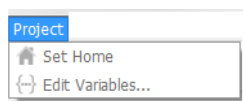
Table 4-2 Edit Menu Items

Menu Option	Description
<b>Undo</b>	Undoes the last edit operation carried out. For example: * Reverting a property value change. or * Undoing a movement of a graphical element in the Wall Editor.
<b>Redo</b>	Re-does the last edit operation carried out. Also, reverts the last "undo".
<b>Undo Stack</b>	Displays a list of the most recent edit operations carried out. Most recent operations are lower in the list. The user can undo or redo several operations at once by clicking on an item.
<b>Cut</b>	In an Orbit editor screen, cuts selected object and places it into the paste-buffer.
<b>Copy</b>	In an Orbit editor screen, copies selected object to the paste-buffer.
<b>Paste</b>	In an Orbit editor screen, places object from the paste-buffer.
<b>Delete</b>	Deletes the currently selected item.
<b>Select All</b>	In an Orbit editor screen, selects all objects on screen in the Orbit editor.
<b>Deselect All</b>	Deselects any selected items.

## Menu Bar - Project Menu

The menu items differ and/or items may be grayed out according to whether an Orbit project is open and whether an edit is being carried out in Orbit. See Figure 4-4 for the different appearances of the menu. All menu items are covered in this section.

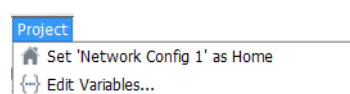
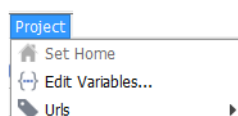
a) No project opened in Orbit



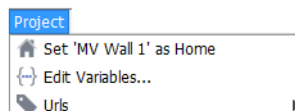
b) Project opened in Orbit

Multiviewer project

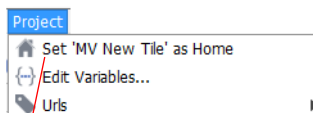
IP Routing project



c) Multiviewer **Wall Editor** open on-screen.



d) Multiviewer **Tile Editor** open on-screen.



Click "Set..."  
to set a **Tile** as "Home screen",  
then the menu item changes to:



e) "Home screen" set.

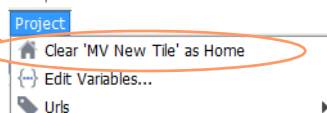

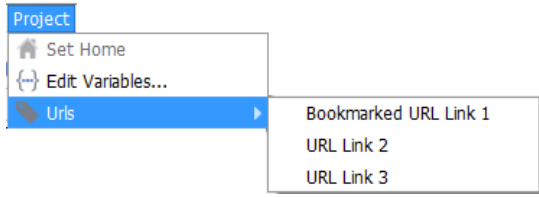


Fig. 4-4: Project Menu - different menu appearances when:

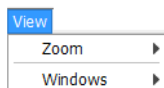
- a) No Orbit project opened in Orbit.
- b) Orbit Project open (Multiviewer project and IP Routing project shown).
- c) Wall Editor is open on-screen.
- d) Tile Editor is open on-screen.
- e) A "Home screen" is set.

Table 4-3 Project Menu Items

Menu Option	Description
<b>Set Home</b>	<p>Click to <i>create</i> an association between the <b>Home</b> tool bar icon (  ) and an Orbit project file.</p> <p>This may be done when a tile or a wall or schematic or network is open in an Orbit editor screen.</p> <p><b>Note:</b> Home:</p> <ul style="list-style-type: none"> <li>• When a <b>Home</b> association is made an Orbit design file is associated with the <b>Home</b> tool bar icon. An association may be made to: <ul style="list-style-type: none"> <li>• a multiviewer tile (.tile) or wall (.wall) design file;</li> <li>• or a schematic file (.sch);</li> <li>• or an IP network Orbit IP routing configuration file (.net).</li> </ul> </li> <li>• To open the home file, click on the <b>Home</b> icon in the Orbit main tool bar.</li> </ul>
<b>Set xxx as Home</b>	Click to make an association between the <b>Home</b> tool bar icon, and an Orbit project file (i.e. a tile or a wall or a schematic).
<b>Clear xxx as Home</b>	Click to <i>undo</i> an association between the <b>Home</b> tool bar icon, and an Orbit project file (i.e. a tile or a wall or a schematic).
<b>Edit Variables...</b>	<p>Enables Orbit project variables to be viewed, added and deleted.</p> <p>A user may add their own project variables here.</p> <p>See the 'Orbit for Multiviewers User Manual' for information about Orbit project variables.</p>
<b>URLs</b>	<p>Sub-menu.</p> <p>Click to see a drop-down list of book-marked URLs that have been set up in the Orbit project.</p> <div data-bbox="678 1160 1220 1355" data-label="Image">  </div> <p><b>Note:</b> The book-marked URL links are set up via the main menu, in the 'Tools &gt; Options &gt; Links' dialog. See <a href="#">Tools &gt; Options - Links</a>, on page 42.</p>

## Menu Bar - View Menu

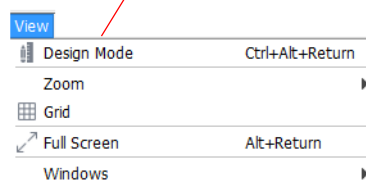
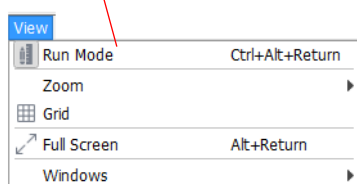
Menu items differ and/or some items may be grayed out according to whether an Orbit project is open and which editor screen is open in Orbit. Figure 4-4 shows the different menus that can appear. All menu items are described in this section.



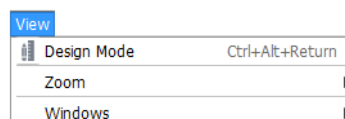
a) Orbit View Menu

When Orbit is in **Design Mode**,  
Click to enter '**Run Mode**'.

When Orbit is in **Run Mode**,  
Click to enter '**Design Mode**'.



b) **Wall Editor** or **Tile Editor** open (Multiviewer project)



c) **Network Editor** open (IP routing project)

Fig. 4-5: View Menu,

a) View Menu, Orbit.

b) with Wall or Tile Editor open (Multiviewer project).

c) with Network Editor open (IP routing project).

Table 4-4 View Menu Items

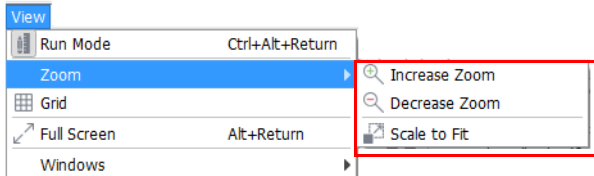
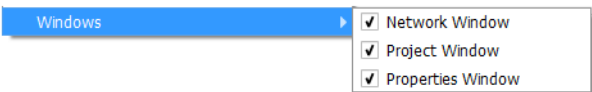
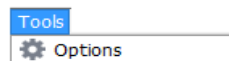
Menu Item	Description						
<b>Design Mode</b>	<p>Button. Click to enter Orbit Design Mode. Orbit then changes from <b>Run Mode</b> into <b>Design Mode</b>.</p> <p>Items such as graphical tiles, walls and schematics can be edited in <b>Design Mode</b>.</p> <p>Available when <b>Wall</b>, <b>Tile</b> or <b>Schematic Editor</b> is open and Orbit is in <b>Run Mode</b>.</p>						
<b>Run Mode</b>	<p>Button. Click to enter Orbit <b>Run Mode</b>. Orbit changes from <b>Design Mode</b> into <b>Run Mode</b>.</p> <p><b>Note:</b> Orbit may enter <b>Run Mode</b> when opening a <b>Wall</b> or <b>Tile</b> for editing.</p> <p>Available when:</p> <ul style="list-style-type: none"> <li>• A <b>Tile</b> or <b>Schematic Editor</b> is open and the Orbit is in <b>Design Mode</b>. This is used to exercise graphical widget behavior.</li> <li>• A <b>Wall Editor</b> is open and the Orbit is in <b>Design Mode</b>. The MV-800-DT license must be available for the wall to 'go live'. (Grass Valley license product code: MV-800-DT). This shows a live wall as it will look when deployed on a product unit and producing a video wall.</li> </ul>						
<b>Zoom</b>	<p>Click <b>Zoom</b> and a sub-menu appears:</p>  <p>This normally appears, but is only available and functional when a graphical editor is open (i.e. a <b>Wall</b> or <b>Tile</b> or <b>Schematic Editor</b>).</p> <p>Sub-menu options:</p> <table> <tr> <td><b>(+) Increase Zoom</b></td><td> <p>Zoom In. For example, zooming in to edit fine detail on a video tile design.</p> </td></tr> <tr> <td><b>(-) Decrease Zoom</b></td><td> <p>Zoom Out. For example, zooming out to view an entire large video wall.</p> </td></tr> <tr> <td><b>Scale to Fit</b></td><td> <p>Click to toggle on or off the scaling of a graphical item to fit the schematic editor window area.</p> </td></tr> </table>	<b>(+) Increase Zoom</b>	<p>Zoom In. For example, zooming in to edit fine detail on a video tile design.</p>	<b>(-) Decrease Zoom</b>	<p>Zoom Out. For example, zooming out to view an entire large video wall.</p>	<b>Scale to Fit</b>	<p>Click to toggle on or off the scaling of a graphical item to fit the schematic editor window area.</p>
<b>(+) Increase Zoom</b>	<p>Zoom In. For example, zooming in to edit fine detail on a video tile design.</p>						
<b>(-) Decrease Zoom</b>	<p>Zoom Out. For example, zooming out to view an entire large video wall.</p>						
<b>Scale to Fit</b>	<p>Click to toggle on or off the scaling of a graphical item to fit the schematic editor window area.</p>						
<b>Grid</b>	<p>Available when a <b>Wall Editor</b> or <b>Tile Editor</b> is open.</p> <p>Click to toggle viewing a fine grid in the background of a wall or tile graphical editor.</p>						
<b>Full Screen</b>	<p>Available when a <b>Wall</b> or <b>Tile</b> or <b>Schematic Editor</b> is open.</p> <p>Click to view the current graphical object full-screen.</p> <p>To return from full-screen mode, press <b>[Alt]+[Return]</b>, i.e. the "Alt" key and "Return" key together.</p>						



Table 4-4 View Menu Items (continued)

Menu Item	Description
<b>Windows</b>	<p>Click <b>Window</b> and two check boxes appear:</p>  <ul style="list-style-type: none"><li>• <b>Network Window</b> - Select to display <b>Network View</b> pane.</li><li>• <b>Project Window</b> - Select to display the <b>Project View</b> pane.</li><li>• <b>Properties Window</b> - Select to display an editor's <b>Properties Box</b> (visible when an editor is open).</li></ul>

## Menu Bar - Tools Menu



The tools menu contains the following menu item:

- Options

To use the menu:

- 1 Click on **Options** to view the **Options Window**, see Figure 4-6.  
Several option items are listed.
- 2 Click each option item to show the corresponding options dialog:

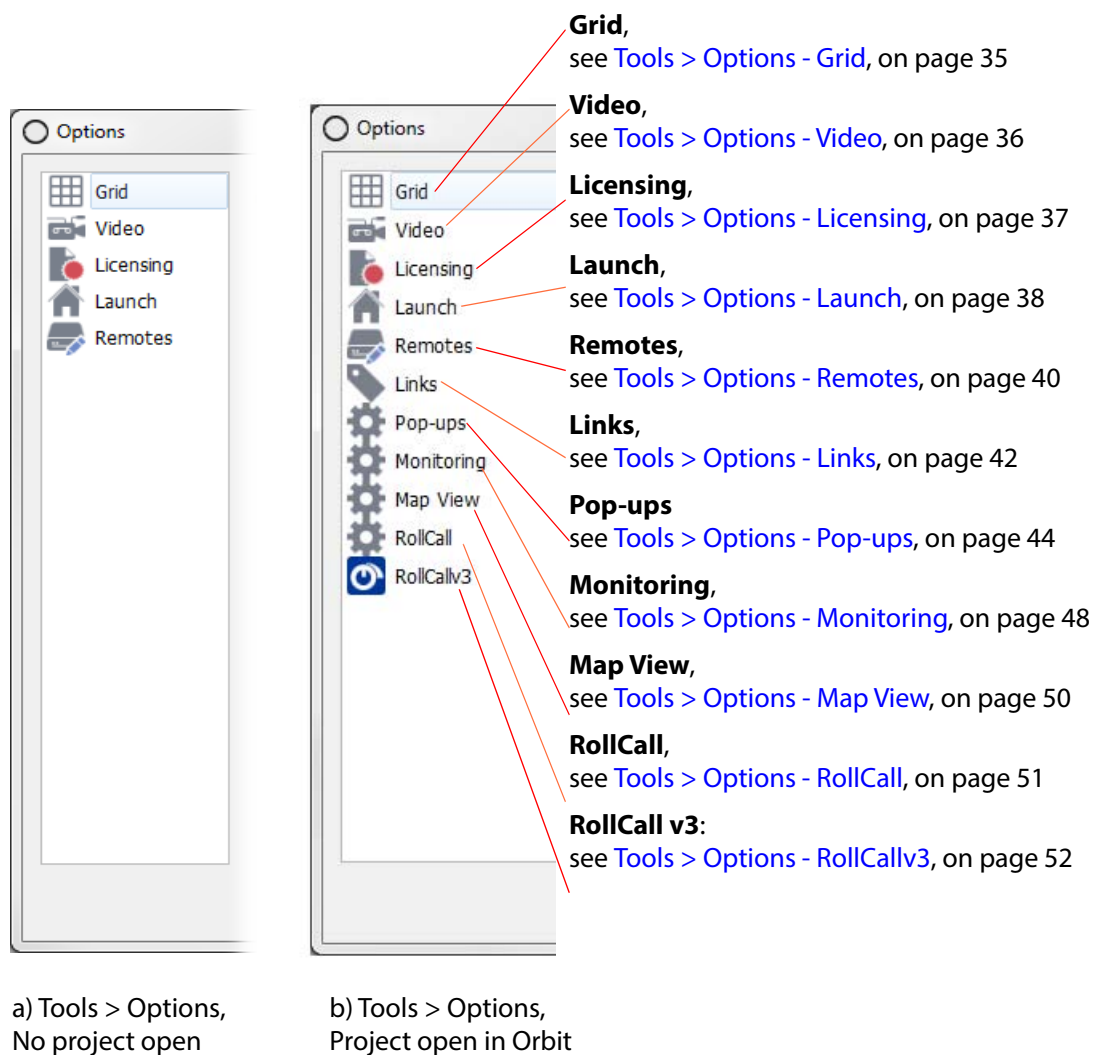


Fig. 4-6: Options Window (Tools > Options Menu):

a) No project open in Orbit

b) Project open in Orbit.

**Note:**

Menu items may be present, absent or grayed-out depending upon whether an Orbit project is open and being edited. All menu options are described in this sub-section.

## Tools > Options - Grid

The **Grid** settings window defines fine grid settings for graphical editors in Orbit (e.g. the wall, tile and schematic editors). See Figure 4-7 and Table 4-5 for the settings presented.

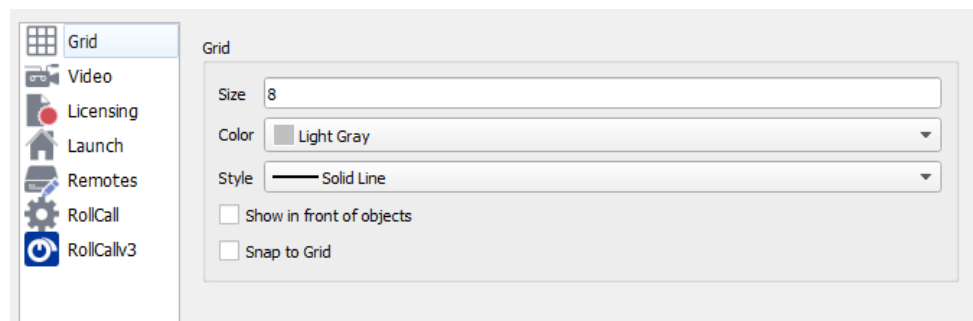


Fig. 4-7: Orbit Tools > Options - Grid Settings

Table 4-5 Tools > Options - Grid

Setting	Description
<b>Size</b>	Text box. Enter the desired grid size, in pixels. The default setting is 8 pixels.
<b>Color</b>	Drop-down selection box. Set the color of the grid lines.
<b>Style</b>	Drop-down selection box. Set the style of the grid lines: For example, Solid line, Dashed line, Dotted line etc.
<b>Show in front of objects</b>	Check box. Select to bring grid lines to the foreground, in front of on-screen schematic objects.
<b>Snap to Grid</b>	Check box. Select to snap screen objects to the grid.

## Tools > Options - Video

The Video window settings are related to viewing smooth video images on a video wall generated by an Orbit application itself.  
This is only relevant in the case of the Multiviewer plug-in for the case of H.264-encoded video inputs streaming from a Multiviewer to be viewed via Orbit with a MV-800-DT license. See Figure 4-8 and Table 4-6.

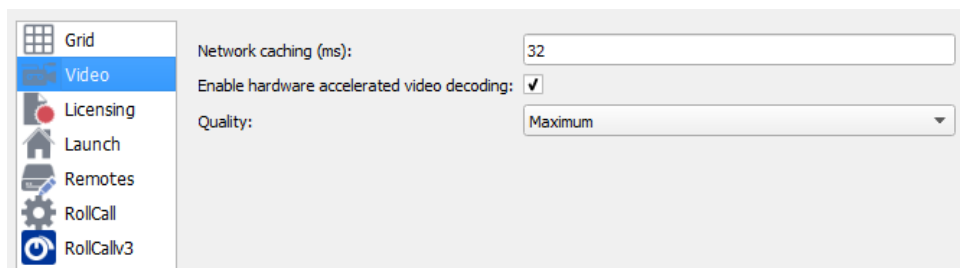


Fig. 4-8: Video Settings window (Tools > Options - Video)

Table 4-6 Video Settings

Setting	Description
<b>Network caching (ms)</b>	<p>Enables smooth playback of encoded video from a (MV-8 series) multiviewer by Orbit. This is applicable when Orbit is in Run-Mode using the MV-800-DT licensed option.</p> <p>The setting adjusts the amount of data buffering between the computer's network interface and Orbit's H.264 decoder function. Increasing the amount of data buffering increases the decoder robustness, but also increases latency.</p> <p>Typical range of settings: 32ms to 1000ms.</p> <p>See <b>Note 1</b>.</p>
<b>Enable hardware accelerated video decoding</b>	<p>Check box.</p> <p>Enables Orbit to take advantage of any PC hardware video decoding facilities, for example, a PC graphics card.</p> <p>Check the computer's hardware capability. For example, 'Device Manager &gt; Display Adapters' on a Windows PC.</p>
<b>Quality</b>	<p>Drop-down box.</p> <p>Changes the amount of processing performed on a decoded image. For example, reducing the amount of filtering.</p> <p>Settings: <b>Maximum</b> (recommended); <b>High</b>; <b>Low</b> - Reduced picture quality.</p>
<b>Note 1:</b>	<p><b>Network Caching:</b></p> <p>When Orbit is decoding H.264 streams (over a network from a MV-8 series multiviewer), buffering is required between the arrival of H.264 data packets and the processing of them by Orbit's H.264 decoder.</p> <p>Data buffering adds delay and the amount of data buffering needed depends on how matched the decoder data arrival rates and data processing rates are. This, in turn, depends on various factors, including:</p> <ul style="list-style-type: none"> <li>• Latency of the network.</li> <li>• Network congestion.</li> <li>• Decoder hardware acceleration and PC specification.</li> <li>• Number of video streams being decoded and, thus, how many video tiles are being rendered.</li> </ul>

## Tools > Options - Licensing

The Licensing settings relate to any licenses used by Orbit. Click the **Licensing** item for the Orbit **Licensing Options** window. See Figure 4-9 and Table 4-7.

**Note:**

These licenses are for Orbit. They are not licenses for any separate hardware multiviewer unit.

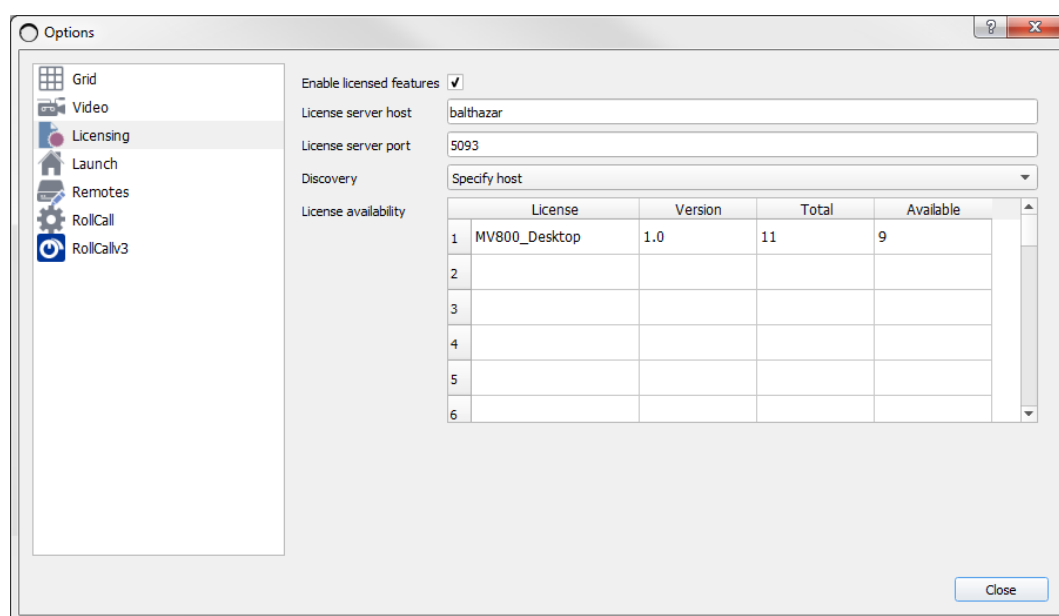


Fig. 4-9: Tools > Options Window - Licensing Settings

Table 4-7 Orbit Licensing Options

Setting	Description
<b>Enable licensed features</b>	Check box. Enables licensed features of Orbit. Select when licensed Orbit features have been purchased.  When not selected, the <b>License server host</b> , <b>License server port</b> and <b>Discovery</b> settings are grayed out.
<b>License server host</b>	Text box. Enter the license server host name or IP address.  This is where Orbit should go to look for any license(s) on the network. By default, this is set to 'localhost', which is the PC that the Orbit is installed on.
<b>License server port</b>	Text box. Enter the License server IP port number. By default this is set to 5093.
<b>Discovery</b>	Drop-down list: <ul style="list-style-type: none"> <li>• <b>Specify Host</b> - uses the specified host name and port number.</li> <li>• <b>Broadcast discovery</b> - attempts to discover the license server.</li> </ul>
<b>License availability</b>	Displays all licenses available on the license server. These will not necessarily be specific to a particular multiviewer product or Orbit.

## Tools > Options - Launch

The **Launch** settings relate to the starting up (launching) of Orbit. See Figure 4-10 and Table 4-8.

Fig. 4-10: Tools > Options - Launch Settings

Table 4-8 Launch Options

Setting	Description
<b>Project:</b>	
<b>Load project when starting Orbit</b>	Check box. Enables the loading of an Orbit project at Orbit start-up. When not selected, the settings in this window are grayed out.
<b>Project</b>	Text box. Enter a path to an Orbit project. For example: C:/Orbit/MV_Projects/My-Video-Wall-Project
<b>Set Current</b>	Button. Click to set the <b>Project</b> setting to be the current open project in Orbit.
<b>Username</b>	Text box. Enter the <b>Username</b> for Orbit to use at start up when opening a specified Orbit <b>Project</b> at launch
<b>Password</b>	Text box. Enter the <b>Password</b> for Orbit to use at start up when opening a specified Orbit <b>Project</b> at launch
<b>Launch options:</b>	
<b>Target</b>	Drop-down box. Selects where any Orbit-generated video wall will appear: <ul style="list-style-type: none"> <li>• <b>Application Window</b> - The Orbit window.</li> <li>• <b>Screen 1</b> - PC monitor screen 1.</li> <li>• <b>Screen 2</b> - PC monitor screen 2.</li> </ul>

Table 4-8 Launch Options (continued)

Setting	Description
Radio buttons: <b>Disabled</b> <b>Launch the current home</b> <b>Launch a specific file</b>	Do not launch a project file. Select this to use the project's <b>Home</b> file at launch. Select this to use a specified project file at launch. Text box. Enter the specific Orbit project file to launch at start up is specified here. For example, /walls/wall1.wall Click <b>Select</b> to select a file from the current project.
<b>Launch full screen</b>	Check box. Select to launch the video wall full-screen.

## Tools > Options - Remotes

The **Remotes** options window contains settings used for connecting the Orbit application to a device (for example, to a multiviewer unit). The **Remotes** options window contains a tab per project that has been opened by the Orbit application.

The settings must be correct for the pushing and pulling of Orbit projects to/from a device.

The settings should normally be left unchanged from the factory default.

**Note:**

*Do not change these remote settings - Leave them as default.*

The settings should normally be left unchanged from the factory default

If these settings are incorrect,  
then the pushing and pulling of Orbit projects to devices will fail.

**Remotes** settings must be correct before pushing and pulling Orbit projects.

If unexpected connection problems are being experienced, please contact Grass Valley Support.

See Figure 4-11 for a screen shot and Table 4-9 for a description of the settings.

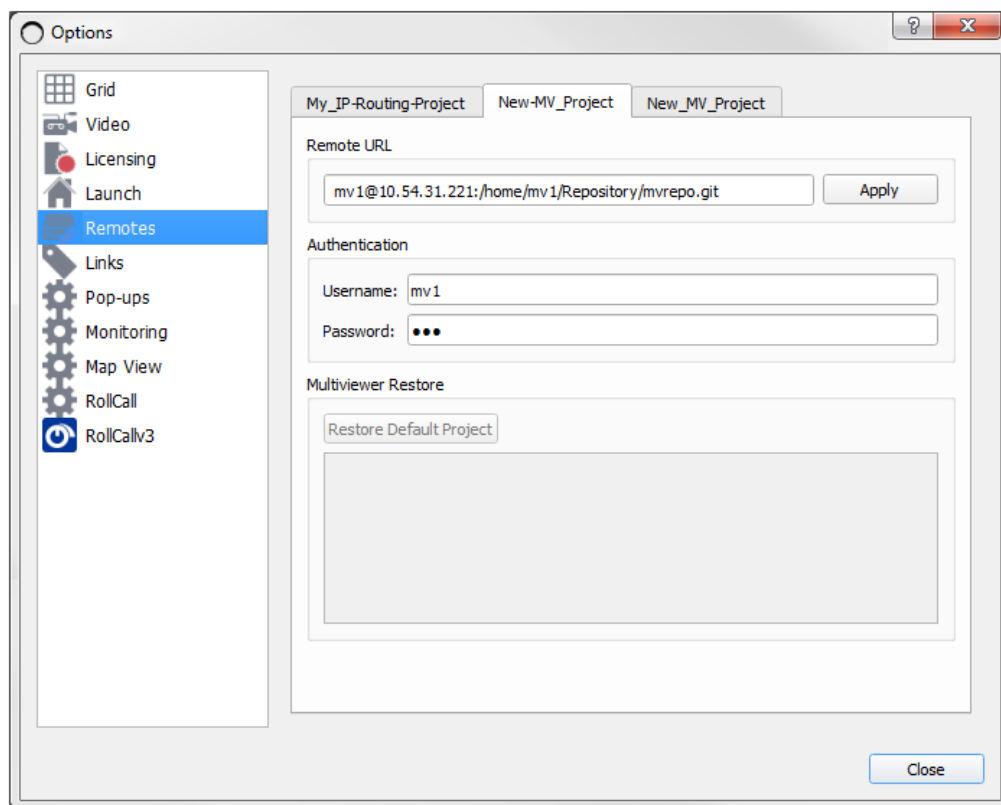


Fig. 4-11: Tools > Options - Remotes Settings

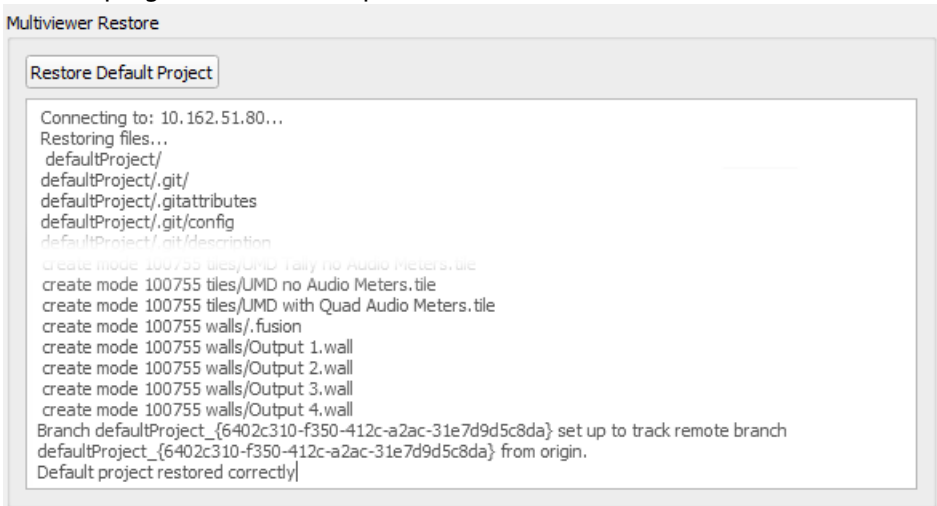
**Note:**

**Remotes Settings - User Name and Password:**

These **Remotes** settings use a user name and a password.  
These are *not* the same user name and password for logging into an Orbit project.  
Do not use the **Remotes** user name and a password to log into an Orbit project.



Table 4-9 Tools &gt; Options - Remotes Settings

Setting	Description
<b>Remote URL:</b>	Text box. This is normally already filled out for your target device. Example: For a multiviewer device, mv1@172.10.51.131:/home/mv1/Repository/mvrepo.git
<b>Apply</b>	Button. Click to apply the URL setting.
<b>Authentication:</b>	(Note: These settings are <i>not</i> for logging into an Orbit project.)
<b>Username</b>	Text box. Leave as default, "mv1". This setting is required for secure connection to a device, for example, to a multiviewer unit. Do not change this setting.
<b>Password</b>	A 'discreet' text box. The required password is already set up. Do not change this setting. <b>Note:</b> If connections to a device had been successful using an early version of Orbit (called Fusion) but connections fail using Orbit, then contact Grass Valley Support.
<b>Multiviewer Restore:</b>	( <b>Note:</b> For multiviewer projects only)
<b>Restore Default Project</b>	Button. Click to restore the target device's current Orbit Project back to the project that the device was shipped with, from Grass Valley. <b>Caution:</b> This overwrites any project on the target device. <b>Note:</b> Before restoring the default project, ensure any current project settings on a target device are pulled from the device and are properly stored away.
<b>Console area</b>	Shows the progress of a restore operation.  The screenshot shows a terminal window titled 'Multiviewer Restore'. Inside, there is a button labeled 'Restore Default Project'. Below the button, the terminal output shows the process of connecting to a device at 10.162.51.80... and restoring files. The files being restored are defaultProject/.git/, defaultProject/.gitattributes, defaultProject/.git/config, and defaultProject/.git/description. The output also shows the creation of several directories and files, including 100755 tiles/UMD no Audio Meters.tile, 100755 tiles/UMD with Quad Audio Meters.tile, 100755 walls/.fusion, 100755 walls/Output 1.wall, 100755 walls/Output 2.wall, 100755 walls/Output 3.wall, and 100755 walls/Output 4.wall. Finally, it shows the branch defaultProject_{6402c310-f350-412c-a2ac-31e7d9d5c8da} being set up to track the remote branch defaultProject_{6402c310-f350-412c-a2ac-31e7d9d5c8da} from origin, and the default project being restored correctly.

## Tools > Options - Links

The **Links** options dialog contains a list of book-marked URLs that have been set up in the project. These can be used within the project. See Figure 4-12 for a screenshot.

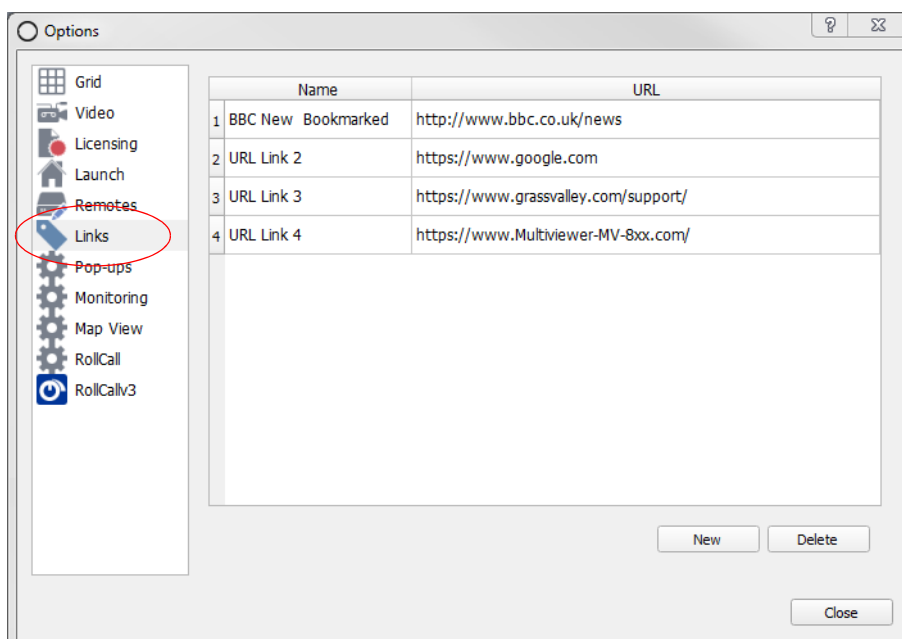


Fig. 4-12: Tools > Options - Links Settings

### To Add a New Link

To set up a link in a project:

- 1 Open the 'Tools > Options - Links' dialog.
- 2 Click **New**.  
A new blank row appears in the dialog.
- 3 Click in the new blank row in the **Name** column. This selects the cell.  
Double-click in the cell to edit the cell.
- 4 Enter a name to use for the new URL link. (See Figure 4-13.)

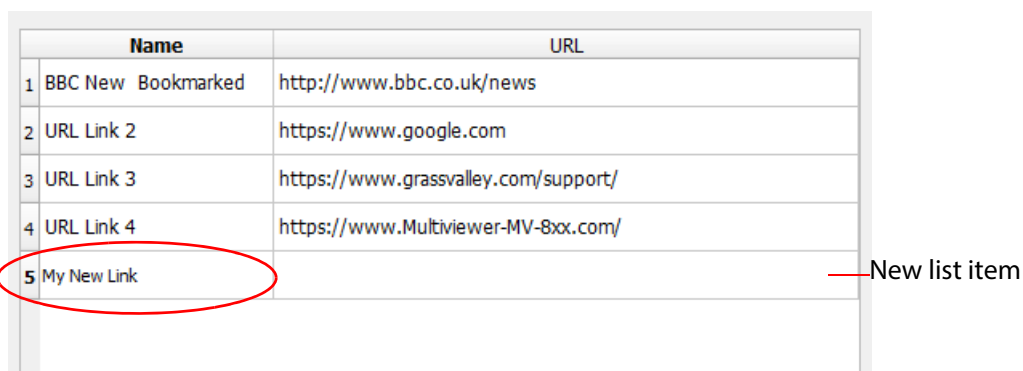


Fig. 4-13: Enter a New URL Link Name

- 5 Click in the new blank row in the **URL** column. This selects the cell.  
Double-click in the cell to edit the cell.  
Enter the new URL link. (See Figure 4-14.)
- 6 Click **Close**.

	Name	URL
1	BBC New Bookmarked	http://www.bbc.co.uk/news
2	URL Link 2	https://www.google.com
3	URL Link 3	https://www.grassvalley.com/support/
4	URL Link 4	https://www.Multiviewer-MV-8xx.com/
5	My New Link	http://MY-URL-LINK.com

Fig. 4-14: Enter a New URL Link

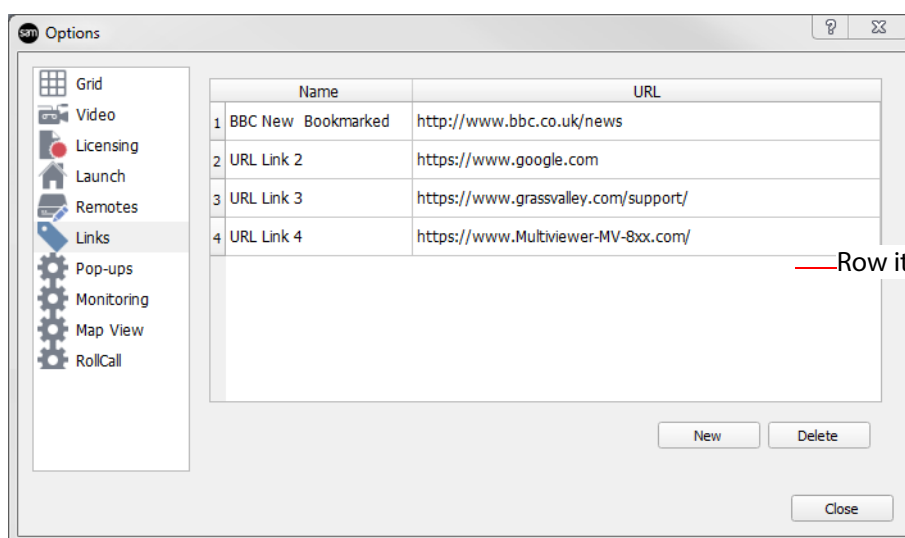
### To Delete a Link in a Project

To delete a URL link in a project:

- 1 Open the 'Tools > Options - Links' dialog.
- 2 Click at the *start* of a row.  
The entire row is selected. See Figure 4-15a.
- 3 Click **Delete**.  
The selected row is deleted. See Figure 4-15b.
- 4 Click **Close**.

	Name	URL
1	BBC New Bookmarked	http://www.bbc.co.uk/news
2	URL Link 2	https://www.google.com
3	URL Link 3	https://www.grassvalley.com/support/
4	URL Link 4	https://www.Multiviewer-MV-8xx.com/
5	My New Link	http://MY-URL-LINK.com

a) Click at the *start* of a row to select the entire row.



b) Delete URL link row item.

Fig. 4-15: Delete a URL Link: a) Select entire row, b) Click Delete.

## Tools > Options - Pop-ups

The **Pop-ups** options window contains a list of pop-up windows that have been set up in the project. Pop-up windows are typically used in Orbit 'Map View' projects: When a link to another Orbit graphical schematic is used, the linked-to schematic is displayed on the client computer in a pop-up window or on one of its monitor screens. See Figure 4-16 for a screenshot.

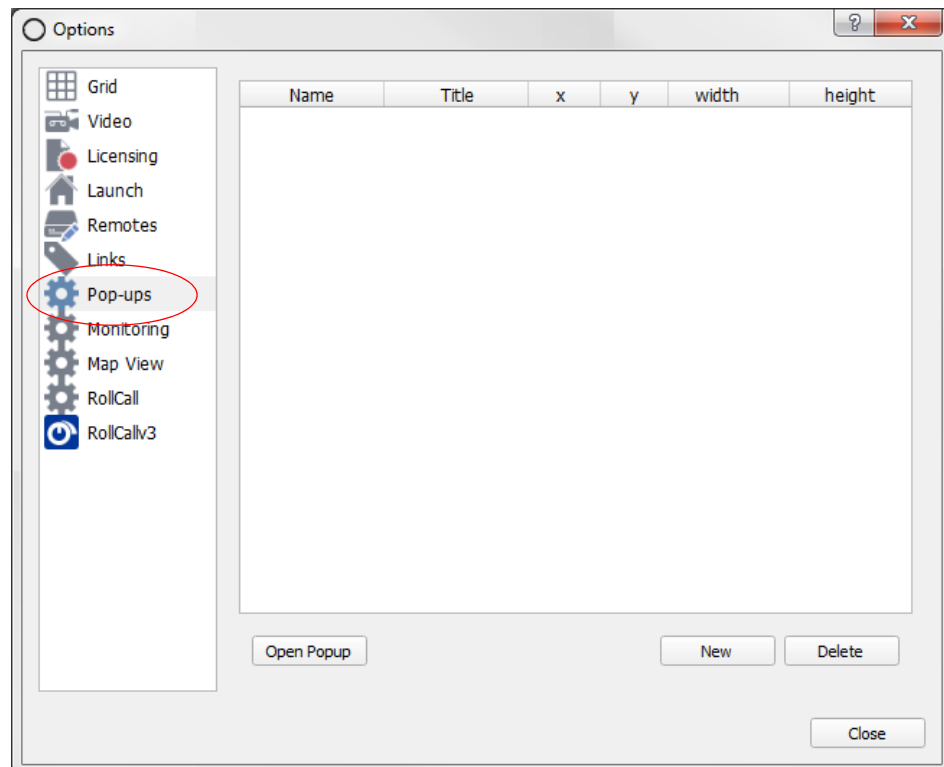


Fig. 4-16: Tools > Options - Links Settings

### To Add a New Pop-Up Window

To add a new pop-up window in a project:

- 1 Open the 'Tools > Options - Pop-Ups' dialog.
- 2 Click **New**.  
A new row appears in the dialog. See Figure 4-17a.

In the new row:

- 3 Click in the **Name** column. This selects the cell.  
Double-click in the cell to edit the cell.  
Enter a name to use for the new pop-up window.
- 4 Click in the **Title** column.  
Double-click in the cell to edit the cell.  
Enter a title for the pop-up window. See Figure 4-17b.

	Name	Title	x	y	width	height
1	Home Window	Home schematic pop-up window	40	642	605	344
2	Status Window	Overall status	403	72	805	560
3	New Popup	Details	0	0	400	200

New row

a) New row

	Name	Title	x	y	width	height
1	Home Window	Home schematic pop-up window	40	642	605	344
2	Status Window	Overall status window	403	72	805	560
3	MY NEW POP-UP	Example pop-up window in Orbit	0	0	400	200

Open Popup

New Delete

b) Entering URL

Fig. 4-17: Create New Pop-Up in a Project:

- a) New Row.  
b) Entering URL.

5 Click **Open Pop-Up**.

A gray pop-up window appears on the computer screen (i.e. on the computer running Orbit). See Figure 4-19.

The size and position of this pop-up are given in the **X, Y, Width** and **Height** columns of the **Pop-Ups** dialog.

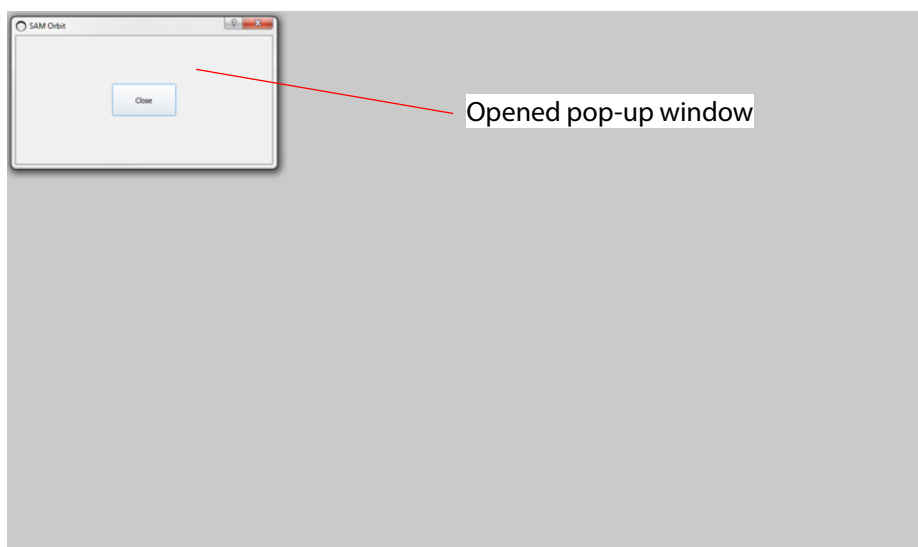


Fig. 4-18: New Pop-Up Window Opened On-Screen

- 6 Re-position and re-size the pop-up window, to the location required when the pop-up is deployed by dragging the window and the window edges. See Figure 4-19, for example.

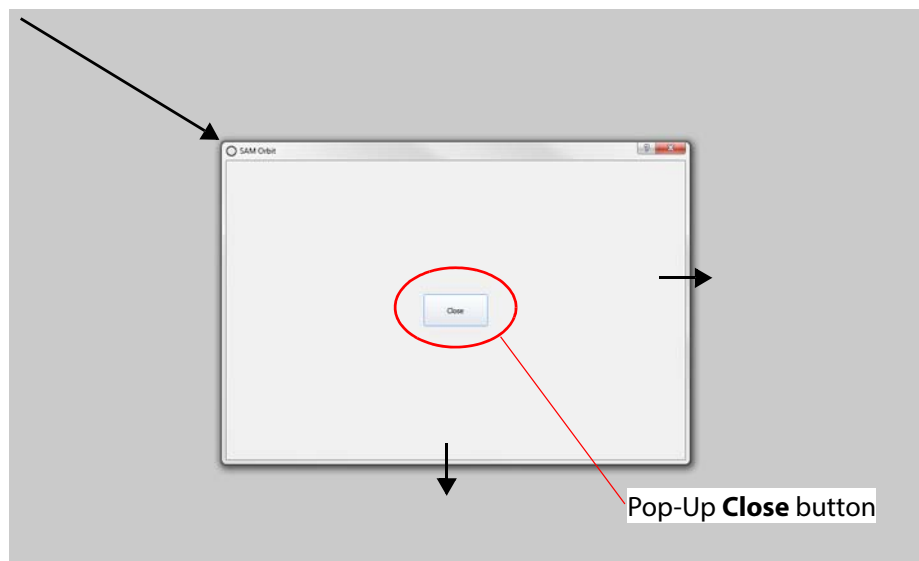


Fig. 4-19: Pop-up Re-positioned and Re-Sized

- 7 Click **Close** on the gray pop-up window.

A new pop-up window has been defined for the project and is listed in the Tools > Options - Pop-Ups dialog, see Figure 4-20. The pop-up window will now appear in a list of target display areas when setting up a schematic link in Orbit.

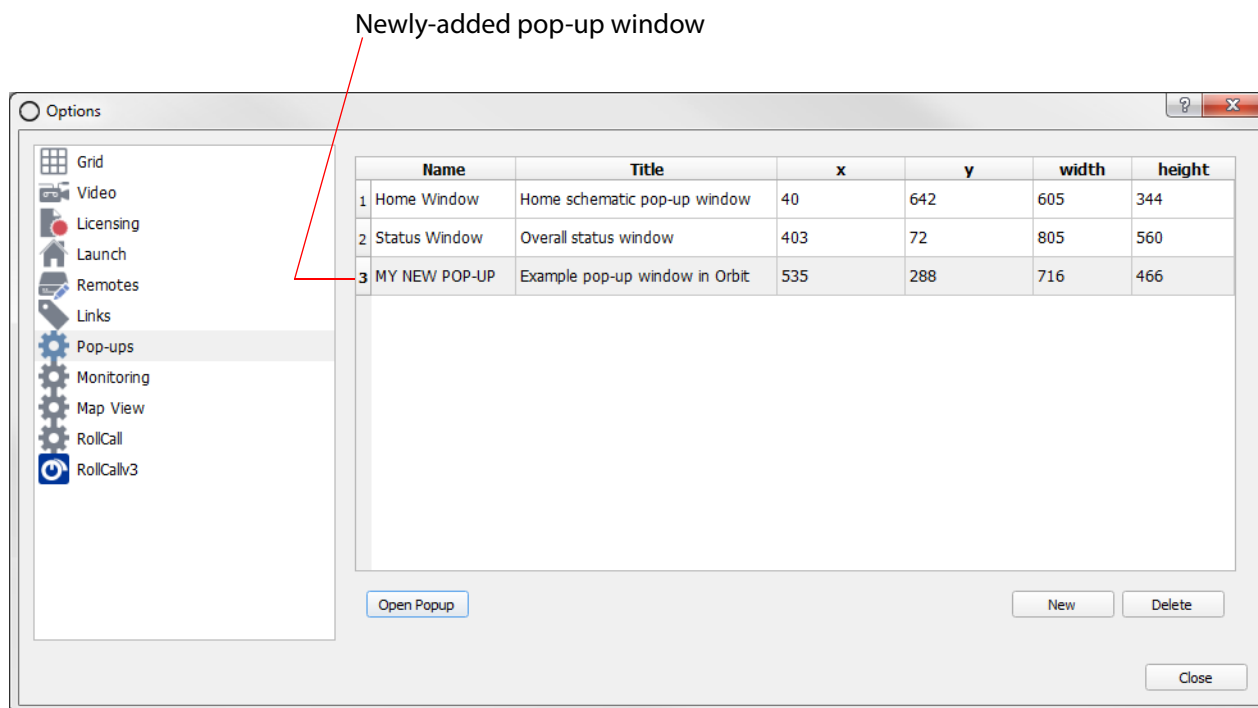
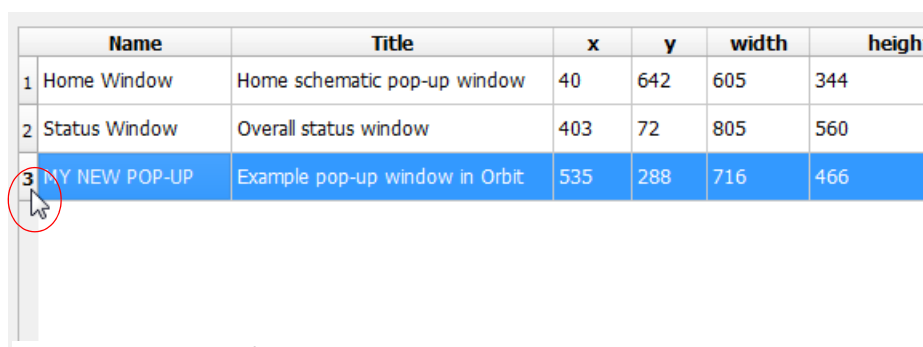


Fig. 4-20: New Pop-Up Shown

## To Delete a Pop-Up Definition in a Project

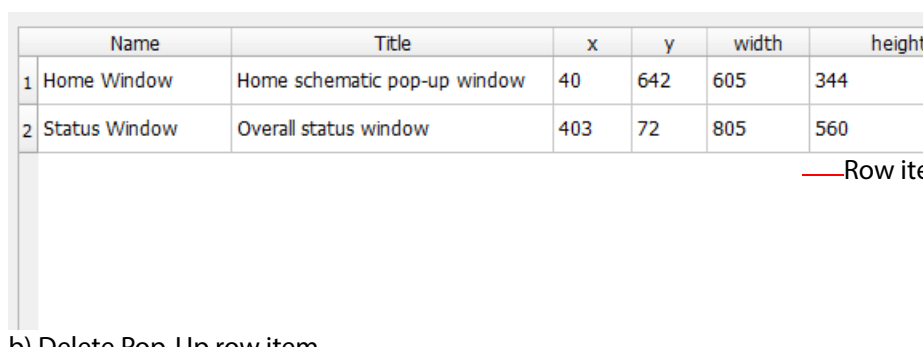
To delete a **Pop-Up** definition in a project:

- 1 Open the 'Tools > Options - Links' dialog.
- 2 Click at the *start* of a row.  
The entire row is selected. See Figure 4-21a.
- 3 Click **Delete**.  
The selected row is deleted. See Figure 4-21b.
- 4 Click **Close**.



	Name	Title	x	y	width	height
1	Home Window	Home schematic pop-up window	40	642	605	344
2	Status Window	Overall status window	403	72	805	560
3	MY NEW POP-UP	Example pop-up window in Orbit	535	288	716	466

a) Click at the *start* of a row to select the entire row.



	Name	Title	x	y	width	height
1	Home Window	Home schematic pop-up window	40	642	605	344
2	Status Window	Overall status window	403	72	805	560

— Row item deleted

b) Delete Pop-Up row item.

Fig. 4-21: Delete a Pop-up Definition

## Tools > Options - Monitoring

**Note:** The Monitoring option tab is only available when an Orbit project is open.

The **Monitoring** settings are related to log field messages which carry status information. There is one tab:

- Masking.

### Masking

Masking suppresses an alarm or status value in log fields from a selected device. Messages from the device will then not contribute towards any higher level alarm. Masking is applied by the RollCall+ Monitoring service that the device is publishing log messages to.

Masking is applied to a unit in the **Network View** pane of the Orbit screen.

For example,

a device's log field may be used by Orbit to normally show a red, green or amber tally lamp; if the device is masked, then Orbit's lamp color will be gray.

Masks can also be applied programmatically with Orbit 'Behaviours'.

For example,

an Orbit alarm 'Behaviour' can be configured to mask a set of devices on an Orbit button press; This is used to mask devices while maintenance is underway.

A mask can be applied to:

- a single alarm/status value,
- a range of alarms/status values,
- or entire devices.

The **Masking** tab configures the various log field masking modes. See Figure 4-22 and Table 4-10.

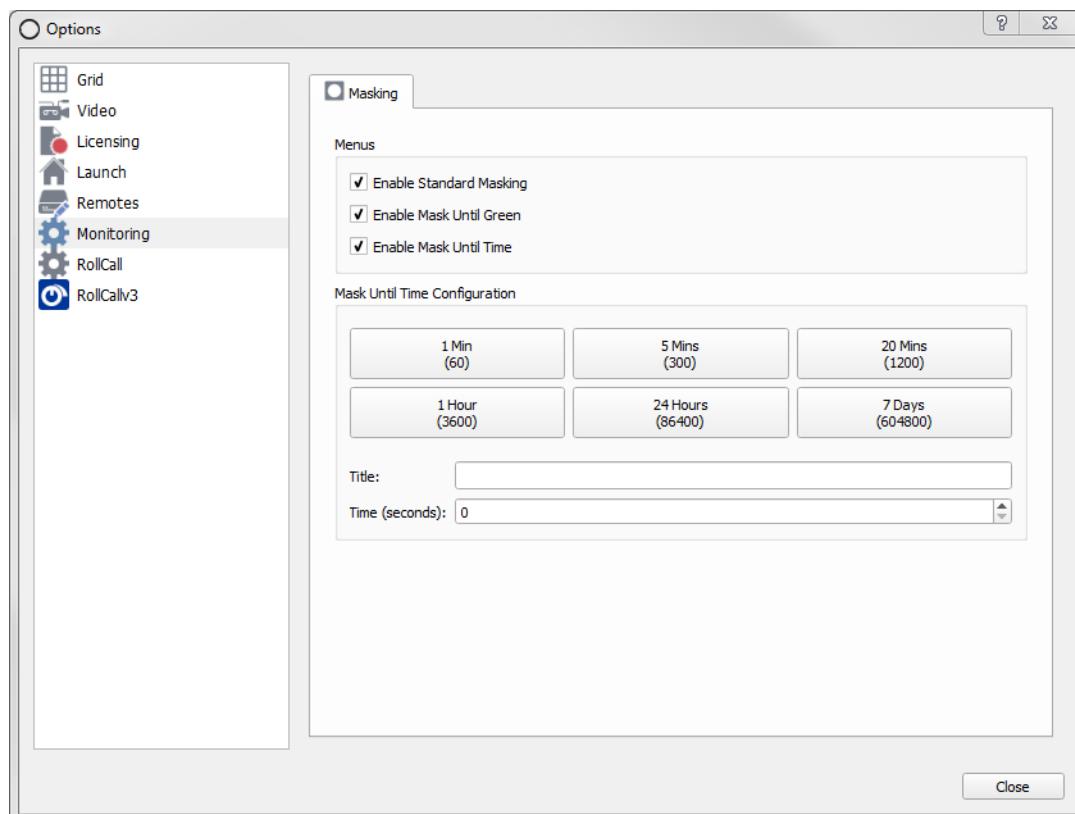

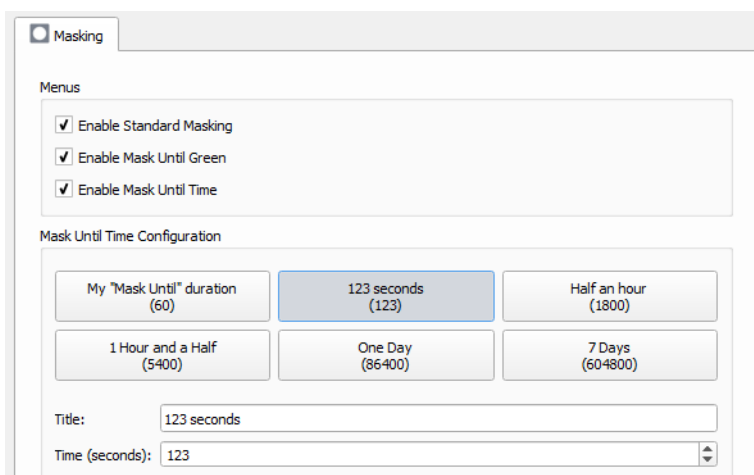


Fig. 4-22: Tools > Options - Monitoring, Masking



Table 4-10 Monitoring Options - Masking Tab

Setting	Description
<b>Menus:</b>	
<b>Enable Standard Masking</b>	Check box. Select to enable the standard unit and log field masking mode. The masking is applied until it is removed by the user.
<b>Enable Mask Until Green</b>	Check box. Select to enable the "Mask Until Green" masking mode. Alarm/status value(s) from a selected unit will be suppressed until the unit's status is "Green", i.e. "OK". After this, an error condition will be raised by the alarm/status value(s).
<b>Enable Mask Until Time</b>	Check box. Select to enable the "Mask Until Time" masking mode. Alarm/status value(s) from a selected unit will be suppressed for a period of time. After this, an error condition will be raised by the alarm/status value(s). There are six configurable <b>Mask Until Time</b> rules which can be set up on buttons in the dialog. See Figure 4-23 for an example rule.
<b>Mask Until Time Configuration</b>	Six <b>Mask Until Time</b> rule buttons.
<b>1 Min (60)</b> <b>5 Mins (300)</b> <b>20 Mins (1200)</b> <b>1 Hour (3600)</b> <b>24 Hours (86400)</b> <b>7 days (604800)</b>	Button. Click to configure a <b>Mask Until Time</b> rule button: <ul style="list-style-type: none"> <li>• a <b>Title</b> (below)</li> <li>• and a <b>Time (seconds)</b> (below).</li> </ul>
<b>Title</b>	Text box. Enter a <b>Title</b> for the selected <b>Mask Until Time</b> rule button.
<b>Time (seconds)</b>	Time value (seconds). Adjust this time value as required for the selected <b>Mask Until Time</b> rule button., using the <b>up</b> and <b>down</b> arrow controls. 



**Masking**

Menus

- ☒ Enable Standard Masking
- ☒ Enable Mask Until Green
- ☒ Enable Mask Until Time

Mask Until Time Configuration

My "Mask Until" duration (60)    123 seconds (123)    Half an hour (1800)

1 Hour and a Half (5400)    One Day (86400)    7 Days (604800)

Title: 123 seconds

Time (seconds): 123

Fig. 4-23: Example Mask Until Time Rules

Tools > Options - Map View

The **Map View** options dialog contains settings used in an Orbit Map View project. See Figure 4-24 and Table 4-11.

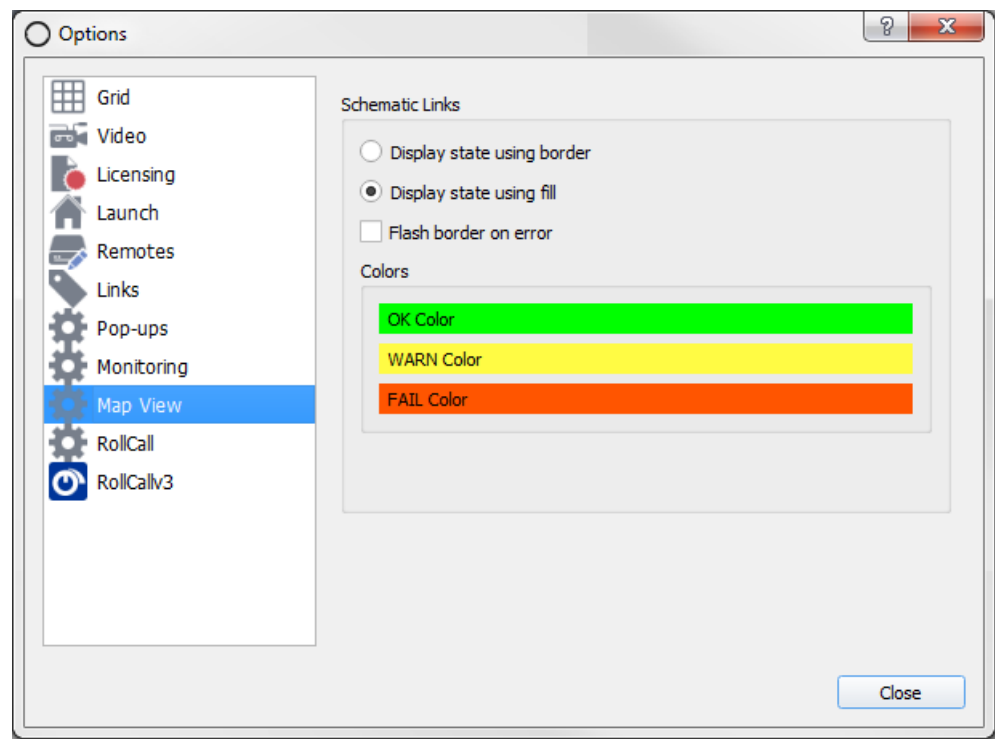


Fig. 4-24: Tools > Options - Map View

Table 4-11 Tools > Options - Map View Settings

Setting	Description
<b>Schematic links:</b>	Settings related to the display of overall state on a widget linked to other schematics n a Map View project.
<b>Display state using border</b>	Radio button. Select to show overall state with the border of a widget.
<b>Display state using fill</b>	Radio button. Select to show overall state with the fill of a widget.
<b>Flash border on error</b>	Check box. Select to flash the border when an error state occurs.
<b>Color</b>	Color selector. Click to set colors for "OK", "Warning" and "Fail" conditions.
<b>OK Color</b>	"OK" status color.
<b>WARN Color</b>	"Warning" status color.
<b>FAIL Color</b>	"Fail" status color.

## Tools > Options - RollCall

**Note:** The 'Tools > Options' RollCall tab is only available when an Orbit project is open.

The **RollCall** settings are related to discovering the RollCall+ network. (For full details on using the RollCall Control Panel, see the RollCall Control Panel Operation manual.)

Click the **RollCall** icon to view and edit RollCall settings. See Figure 4-25 and Table 4-12.

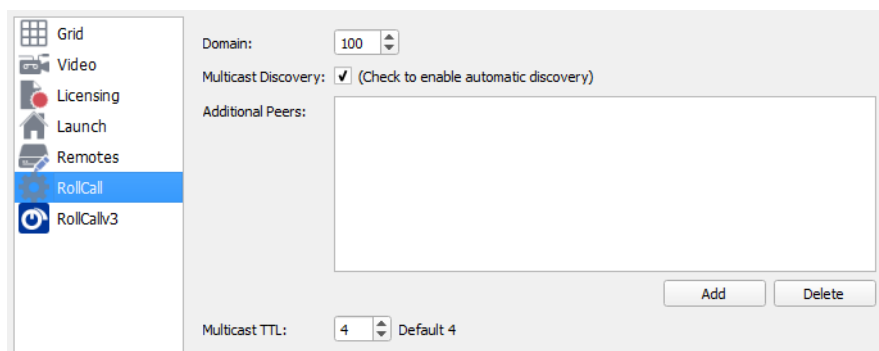


Fig. 4-25: Tools > Options - RollCall Options

Table 4-12 RollCall Options

Setting	Description
<b>Domain</b>	Drop-down box. Select RollCall+ Domain number.  RollCall-enabled product units are located on numbered RollCall+ domains. For example, a multiviewer might be in RollCall+ domain 101.
<b>Multicast Discovery</b>	Check box: <ul style="list-style-type: none"> <li>Select to enable automatic discovery of product units on the specified RollCall+ domain.</li> <li>De-select to enable uni-cast discovery. (Uni-cast discovery is required if a network does not support multicast.)</li> </ul>
<b>Additional Peers</b>	Lists manually-added IP addresses of known specific units. Allows a user to explicitly identify product units to connect to.
<b>Add</b>	Add the IP address of a specific unit to the <b>Additional Peers</b> list.
<b>Delete</b>	Delete a selected item from the <b>Additional Peers</b> list.
<b>Multicast TTL</b>	Set the Multicast message "Time To Live" value (TTL, see <b>Note 1</b> ). Default is 4.
<b>Note 1: Time To Live (TTL):</b>  The Time To Live (TTL) value defines the number of "hops" that a network multicast message is allowed to do between IP network routers. Changing the TTL value will limit the distance these multicast messages are allowed to travel within a user's network.	

## Tools > Options - RollCallv3

The purpose of the RollCallv3 menu item is to allow Orbit to connect to devices and display their RollCall templates.

The **RollCallv3** settings screen, see Figure 4-26, contains the following tabs:

- **Connections Tab** - These settings are the same as in the main menu bar **RollCall** item, see [RollCall > Network Map](#), on page 56.
- **Cache Tab** - Allows the user to manage cached RollCall templates.

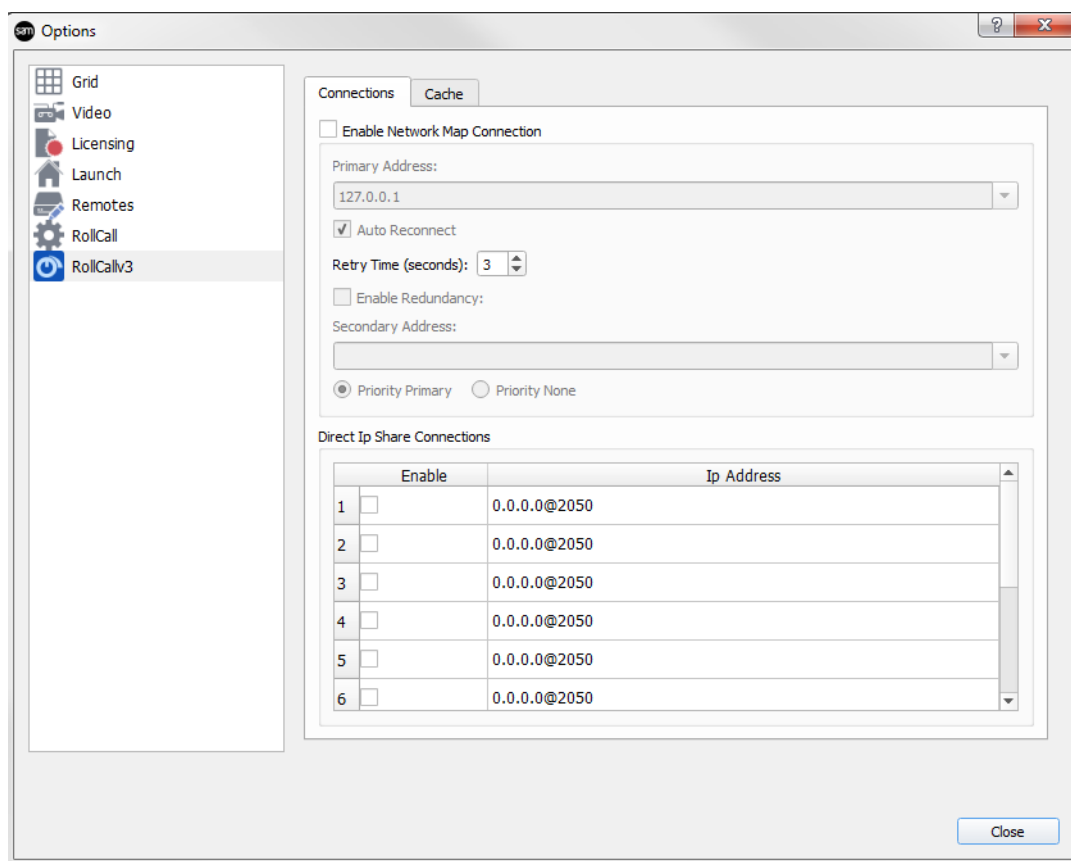


Fig. 4-26: Tools > Options - RollCallv3 Settings, Connections Tab

### Cache Tab

RollCall templates read from RollCall-enabled devices are cached by Orbit to speed up subsequent opening of the template.

If the layout of a device's RollCall template changes, its version number is changed, which forces Orbit to reload the full template from the device.

This tab allows manual control over Orbit's caching and reloading.

The **Cache Tab** is shown in Figure 4-27.

The caching has two parts:

- **Templates Cache** - This caches the layout of the template, the 'look and feel' of it.
- **Menus Cache** - This caches the data content of the template.

These are described in Table 4-13.

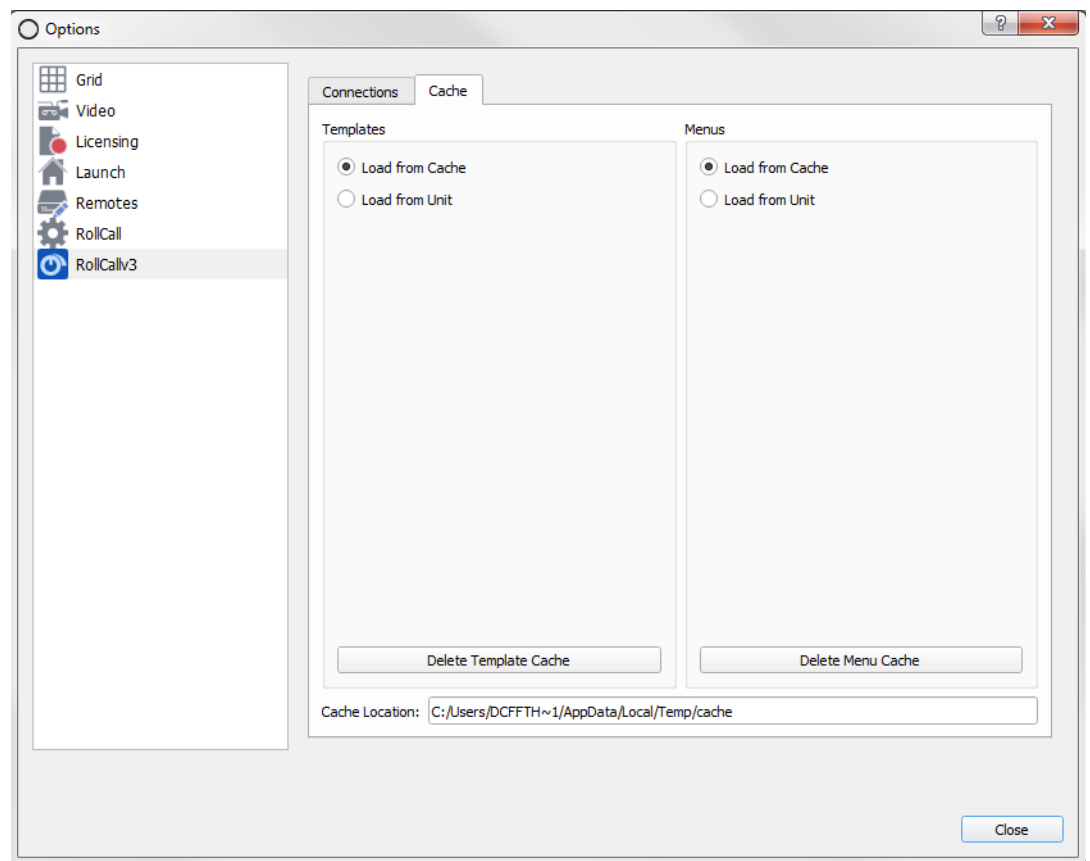
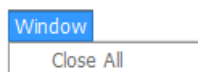


Fig. 4-27: Tools > Options - RollCallv3, Cache Tab

Table 4-13 RollCallv3, Cache Tab Settings

Setting	Description
<b>Templates</b>	
<b>Load from Cache</b>	Radio button. Select for Orbit to retrieve the template layout from its cache.
<b>Load from Unit</b>	Radio button. Select for Orbit to retrieve the template layout from the device.
<b>Delete Template Cache</b>	Button. Click to empty Orbit's template cache.
<b>Menus</b>	
<b>Load from Cache</b>	Radio button. Select for Orbit to retrieve data values from its cache.
<b>Load from Unit</b>	Radio button. Select for Orbit to retrieve data values from the device.
<b>Delete Template Cache</b>	Button. Click to empty Orbit's menu cache.
<b>Cache Location</b>	Folder location of Orbit's caches.

## Menu Bar - Window Menu



*Fig. 4-28: Window Menu*

The Window Menu (see Figure 4-28) is used to close Orbit tabs when editing a project.

- **Close All** - Closes all of the currently displayed Orbit editor tabs. Save any changes if prompted.

## Menu Bar - RollCall Menu

The RollCall menu bar item (See Figure 4-29) contains Orbit settings to enable the Orbit application to connect to RollCall-enabled devices. This facilitates acquiring device status information for use in Orbit. Additionally, RollCall device templates can be viewed and edited via Orbit.

Any RollCall-enabled device may be connected to, either directly, through an IP share connection, or indirectly, through a Grass Valley RollCall Gateway card or Roll Proxy service.

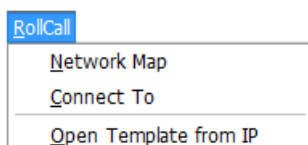
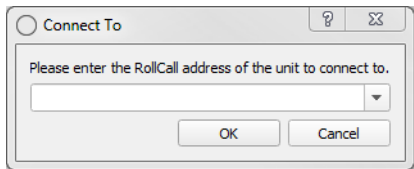
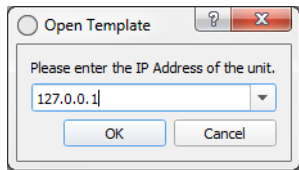


Fig. 4-29: RollCall Menu

Table 4-14 RollCall Menu items

Menu Item	Description
<b>Network Map</b>	<p>Provides a connection to RollCall-enabled devices which are visible through the RollCall Roll Proxy service or through a Grass Valley IQ Gateway Map.</p> <p>Click to display the <b>Open Network</b> dialog. See <a href="#">RollCall &gt; Network Map</a>, on page 56.</p>
<b>Connect To</b>	<p>Open a RollCall template for a device.</p> <ul style="list-style-type: none"> <li>Enter the RollCall address of a device. RollCall address format: FFFF:01:00</li> </ul>  <ul style="list-style-type: none"> <li>Click <b>OK</b> to open a RollCall template for the device.</li> </ul>
<b>Open Template from IP</b>	<p>Open a RollCall template for a device and display it in Orbit.</p> <ul style="list-style-type: none"> <li>Enter the IP address of a device.</li> </ul>  <ul style="list-style-type: none"> <li>Click <b>OK</b> to open a RollCall template for the device.</li> </ul> <p>Device configurations settings can be changed in Orbit in a similar way to in RollCall Control Panel.</p>

## RollCall > Network Map

This displays the Open Network dialog, see Figure 4-30.

Fig. 4-30: RollCall > Open Network Dialog

Table 4-15 RollCall > Network Map Dialog Properties

Setting	Description
<b>Enable Network Map Connection</b>	Check box: Select to enable a connection to the Roll Proxy service.
<b>Primary Address</b>	Text box: Enter IP Address of Roll Proxy or IQ Gateway Map.
<b>Auto Reconnect</b>	Check box: Select to automatically reconnect if the connection is lost.
<b>Retry Time</b>	Check box: Select waiting time (in seconds) before retrying to reconnect.
<b>Enable Redundancy</b>	Check box: Select to enable a connection to a second Roll Proxy service or IQ Gateway Map.
<b>Secondary Address</b>	Text box: Enter IP Address of second Roll Proxy or IQ Gateway Map.
<b>IP Address Priority:</b>	Radio buttons.
<b>Priority Primary</b>	Click for Orbit to prefer connections to the primary IP address. Connection is remade to the primary device when it becomes available.
<b>Priority None</b>	No preference between primary or secondary IP address.



Table 4-15 RollCall &gt; Network Map Dialog Properties (continued)

Setting	Description
<b>Direct IP Share Connections</b>	
	Used to connect to a device that supports IP Share directly, without going through Roll Proxy. A maximum of 10 IP share connections can be made. Typically, this is used in small installations where only a few cards need to be monitored without configuring Roll Proxy.
<b>IP Address</b>	Enter device IP Address and port (format: 0.0.0.0.@2050).
<b>Enable</b>	Select to enable connections to device. The direct IP Share may also be selected with a RollCallv3 command and the 'RollCall' Orbit <b>Behaviour</b> in Orbit. See the 'Orbit for Multiviewers User Manual' for more details about Orbit <b>Behaviours</b> .

## Menu Bar - Multiviewer Menu (Orbit Multiviewer Projects)

The Multiviewer menu item is visible when an Orbit multiviewer project is open.  
The Multiviewer options are specific to multiviewer applications and product units.

Multiviewer options are set up here, including: alarm configuration, display output audio, monitored and logged units, and downloading of logs.

See Figure 4-31 and Table 4-16.

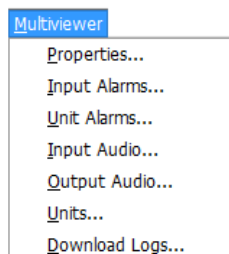


Fig. 4-31: Multiviewer menu

Table 4-16 Multiviewer Menu items

Menu Item	Description
<b>Properties</b>	Enter RollCall and monitoring service details associated with a multiviewer. See <a href="#">Multiviewer &gt; Properties Dialog</a> , on page 59.
<b>Input Alarms</b>	Enable and configure alarms on multiviewer inputs. See: <a href="#">Multiviewer &gt; Input Alarms</a> , on page 62 <a href="#">Multiviewer &gt; Input Alarms - Input Tab</a> , on page 64 <a href="#">Multiviewer &gt; Input Alarms - Alarm Tab</a> , on page 66 <a href="#">Additional Properties of Video Input Alarms</a> , on page 69 <a href="#">Multiviewer &gt; Input Alarms - Levels Tab</a> , on page 73 <a href="#">Multiviewer &gt; Input Alarms - Audio 1-16 &amp; Audio 17-32 Tab</a> , on page 74
<b>Unit Alarms</b>	Enable and configure alarms on the multiviewer unit. See <a href="#">Menu Bar - Multiviewer Menu - Unit Alarms Dialog</a> , on page 79.
<b>Input Audio</b>	Configure the audio meter scale type and ballistics used for audio meters on a multiviewer video wall. See <a href="#">Multiviewer &gt; Input Audio</a> , on page 80.
<b>Output Audio</b>	Configure which input audio channels are to be embedded on the multiviewer display outputs. These are available for external monitoring. See <a href="#">Multiviewer &gt; Output Audio</a> , on page 81.
<b>Units</b>	Configures which video inputs are to be monitored by and logged by Orbit or by Grass Valley RollCall. See <a href="#">Multiviewer &gt; Units</a> , on page 83.
<b>Download Logs</b>	Allows unit logs to be obtained (downloaded) from a Multiviewer unit. See <a href="#">Multiviewer &gt; Download Logs</a> , on page 84.

## Multiviewer &gt; Properties Dialog

Fig. 4-32: Multiviewer &gt; Properties dialog

**Note:**

Changes made in this dialog will cause any open video wall in Orbit's **Wall Editor** to be closed.

Save any open video wall in Orbit before closing this dialog.

Table 4-17 Multiviewer Properties

Setting	Description
<b>RollCall:</b>	Some information for these Multiviewer settings may be found with the RollCall Control Panel tool.
<b>IP Address</b>	<p><b>Note :</b> Values entered here must agree with the Multiviewer's settings.</p> <p>Text box. IP address of the connected multiviewer device.</p> <p>The text box shows the IP address of the multiviewer associated with the Orbit multiviewer.</p> <p>If no multiviewer has been associated, then the text box is empty; enter the IP address of the multiviewer device to be configured.</p>

Table 4-17 Multiviewer Properties (continued)

Setting	Description
<b>Apply</b>	<p>Button.</p> <p>Click <b>Apply</b> to connect the multiviewer unit with the specified IP address.</p> <p>The user is then given the option to automatically apply the following multiviewer settings to the Orbit multiviewer project:</p> <ul style="list-style-type: none"> <li>• <b>RollCall Network.</b></li> <li>• <b>RollCall Unit.</b></li> <li>• <b>Domain ID.</b></li> </ul>
<b>RollCall Network</b>	Enter the Multiviewer RollCall network number part of the RollCall address.
<b>RollCall Unit</b>	Enter the Multiviewer RollCall unit number part of the RollCall address.
<b>Domain ID</b>	Enter the Multiviewer RollCall+ domain ID number.
<b>MV Integrated Monitoring Service:</b>	Changes made to <b>Monitoring Service</b> settings take effect when the Orbit project is pushed to the multiviewer.
<b>Log Server Domain</b>	Enter the RollCall log server domain number.
<b>Log Server IP 1</b>	<p>Text box.</p> <p>Enter the RollCall log server IP address.</p>
<b>Clear</b>	<p>Button.</p> <p>Click to clear <b>Log Server IP 1</b> setting.</p>
<b>Log Server IP 2</b>	<p>Text box.</p> <p>Enter the second RollCall log server IP address.</p>
<b>Clear</b>	<p>Button.</p> <p>Click to clear <b>Log Server IP 2</b> setting.</p>
<b>Log Mode</b>	<p>Drop-down box.</p> <p>This option controls the flow of log messages between the multiviewer and a RollCall Log Server.</p> <p>Select the log mode:</p> <ul style="list-style-type: none"> <li>• <b>Send and Receive</b> - Multiviewer publishes to the Log Server and the Log Server publishes log messages from all devices back to the multiviewer.</li> <li>• <b>Send only</b> - Multiviewer publishes log messages to the Log Server.</li> <li>• <b>Receive only</b> - Log Server publishes log messages from all devices back to the multiviewer.</li> </ul>
<b>Streamed Output:</b>	
<b>IP Interface</b>	<p>Text box.</p> <p>Enter the IP address of the multiviewer's IP streaming port.</p> <p>This is the IP address of the IP port for video IP streams, input or output.</p>
<b>Clear</b>	<p>Button.</p> <p>Click to clear <b>Multiviewer IP</b> setting.</p>
<b>IP Port</b>	<p>Text box.</p> <p>Enter the port number of the multiviewer's IP streaming port.</p>
<b>Clear</b>	<p>Button.</p> <p>Click to clear <b>Multiviewer Port</b> setting.</p>

*Table 4-17 Multiviewer Properties (continued)*

Setting	Description
<b>Current Home</b>	Displays the name of the wall or tile associated with the <b>Home</b> tool bar icon.
<b>Current Theme</b>	Displays the name of the current theme in the project.

## Menu Bar - Multiviewer Menu - Alarms Dialog

All the alarms for each multiviewer input need to be configured. This is done in these menus:

- **Multiviewer > Input Alarms:** Alarms for Multiviewer Inputs:
  - [Multiviewer > Input Alarms](#), on page 62.
  - [Multiviewer > Input Alarms - Input Tab](#), on page 64.
  - [Multiviewer > Input Alarms - Alarm Tab](#), on page 66.
  - [Additional Properties of Video Input Alarms](#), on page 69.
  - [Multiviewer > Input Alarms - Levels Tab](#), on page 73.
  - [Multiviewer > Input Alarms - Audio 1-16 & Audio 17-32 Tab](#), on page 74.
- **Multiviewer > Unit Alarms:** Alarms for the Multiviewer unit itself:
  - [Menu Bar - Multiviewer Menu - Unit Alarms Dialog](#), on page 79.

Once alarms on one multiviewer input are configured, the alarm settings can be copied to other multiviewer inputs.

After configuring all the alarms in the Multiviewer menu, alarms can then be monitored on a multiviewer video wall when the project is pushed to a multiviewer.

For saved alarm changes in a project to take effect on a unit, the Orbit project must be pushed to the product unit.

### Multiviewer > Input Alarms

The **Input Alarms** dialog window is used to enable and configure alarms on multiviewer inputs. There are several tabs within the dialog: **Input**, **Alarm**, **Levels**, **Audio1-16** and **Audio 17-32**. See Figure 4-33.

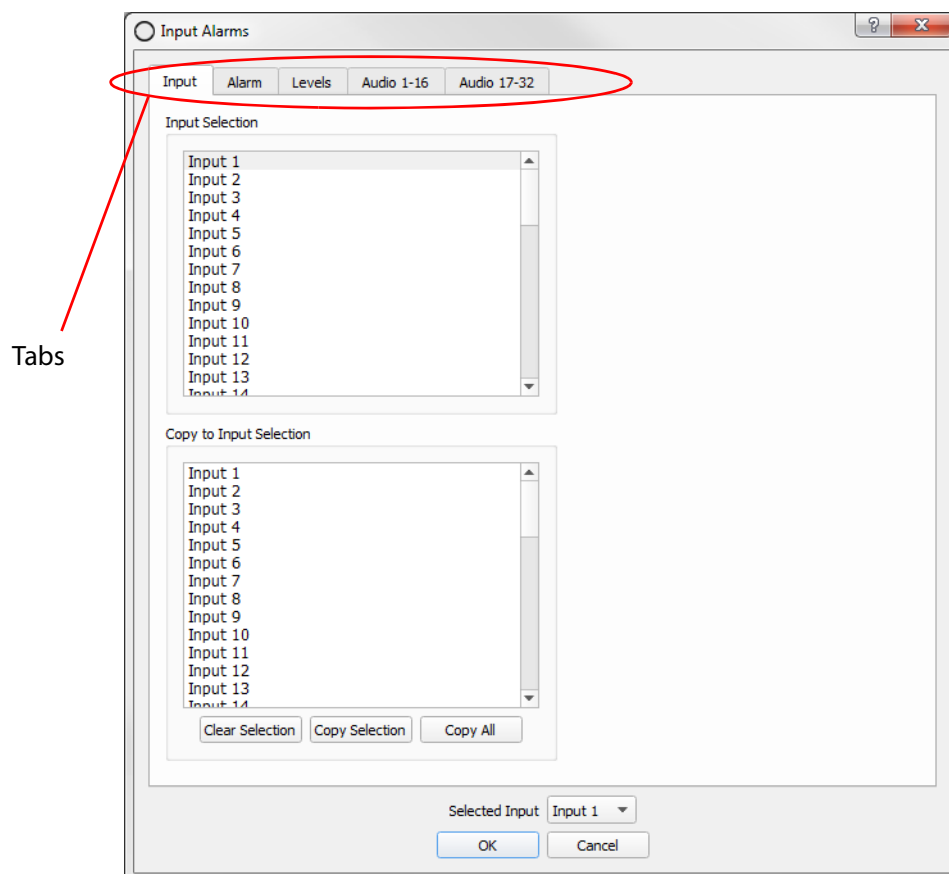


Fig. 4-33: Multiviewer > Input Alarms Dialog

All the alarms for each multiviewer input need to be configured and alarm settings for all of the multiviewer inputs are configured from this dialog. Once one input is configured, the alarm settings can be copied to other inputs.

## Configuring Input Alarms

Overview of configuring input alarms:

- 1 Select a multiviewer input in the **Input Tab**.
- 2 Configure the selected input's alarms (for video presence, audio levels etc.); this is done using the various other tabs.
- 3 Then set up alarms for all other multiviewer inputs.

**Note:**

Alarm settings for one input can be copied to other inputs; this is useful if the same settings are needed for several inputs.

- 4 For saved alarm changes to take effect on a unit, the Orbit project must be pushed to the multiviewer unit.

Each alarm is configured across a number of tabs in the **Input Alarms** dialog, see Table 4-18.

Table 4-18 Input Alarms Dialog Tabs

Input Alarms Dialog Tab	Description
<b>Input</b>	Enables a user to: <ul style="list-style-type: none"><li>• Select the multiviewer video input to be configured for alarms.</li><li>• Copy input alarms settings from one input to one or more other inputs.</li></ul> See <a href="#">Multiviewer &gt; Input Alarms - Input Tab</a> , on page 64.
<b>Alarms</b>	Enable and configure alarms on video inputs and for the multiviewer unit. See <a href="#">Multiviewer &gt; Input Alarms - Alarm Tab</a> , on page 66.
<b>Levels</b>	Separate tab for configuring some audio alarm properties. See <a href="#">Multiviewer &gt; Input Alarms - Levels Tab</a> , on page 73.
<b>Audio 1-16</b>	Separate tab for configuring some audio alarm properties. See <a href="#">Multiviewer &gt; Input Alarms - Audio 1-16 &amp; Audio 17-32 Tab</a> , on page 74.
<b>Audio 17-32</b>	Separate tab for configuring some audio alarm properties. See also <a href="#">Multiviewer &gt; Input Alarms - Audio 1-16 &amp; Audio 17-32 Tab</a> , on page 74.

## Multiviewer > Input Alarms - Input Tab

The Input tab has two functions:

- Selecting the multiviewer video input to be configured for alarms, see Figure 4-34.  
(See [Selecting the Multiviewer Input to Configure](#), on page 64.)
- Copying of input alarms from one input to one or more other inputs, see Figure 4-35.  
(See [Copying Input Alarm Settings to One or More Other Inputs](#), on page 65.)

### Selecting the Multiviewer Input to Configure

**Input Selection** list box:

The list box is used to select the multiviewer input to be configured for alarms:

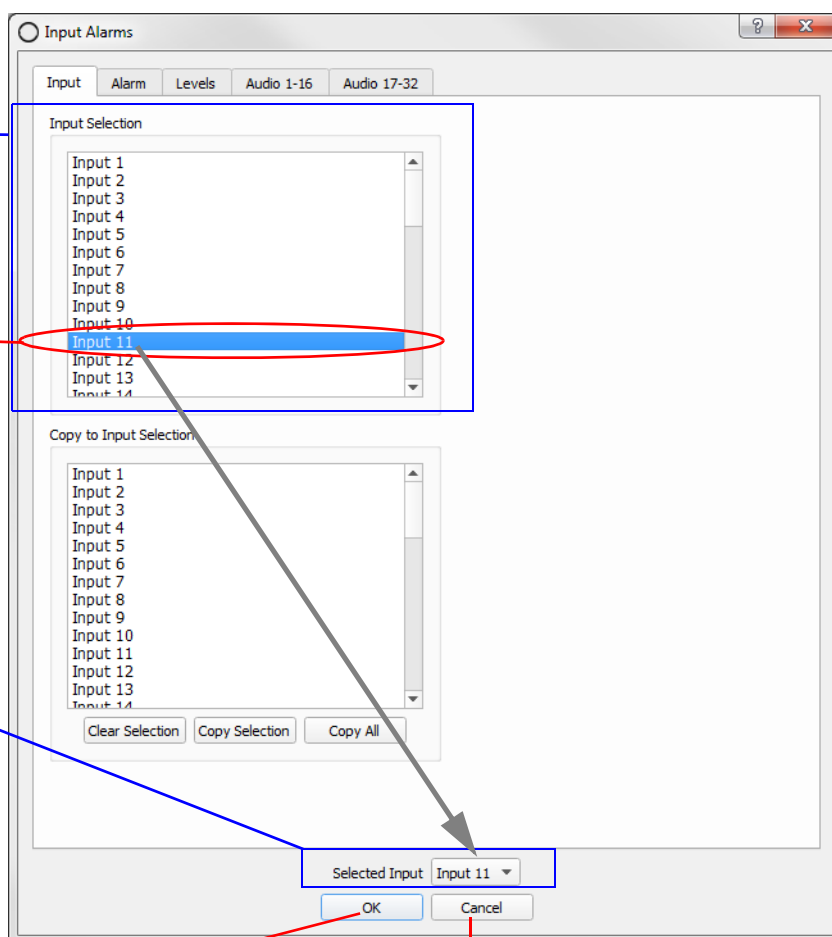
- 1) Click on an input name to select an input.

**Selected Input** drop-down box:

- 2) The selected input is displayed at bottom of each tab in this drop-down box.

- 3) The **Selected Input** can also be changed in this drop-down box.

**Note:** The **Selected Input** drop box is common to other tabs and the selected input may be changed in any tab.



**OK**

Click **OK** to save any changes made to the input alarm configuration.

**Cancel**

Click **Cancel** to abort any changes made to the input alarm configuration.

Fig. 4-34: Selecting an Input

- 4) Once an input is selected, all alarm settings for the selected input can be configured using the remaining tabs. And the **Selected Input** drop-down box appears in each tab.

(See [Multiviewer > Input Alarms - Alarm Tab](#), on page 66 onwards for a description of each dialog item.)



## Copying Input Alarm Settings to One or More Other Inputs

This sub-section describes copying input alarm settings from one input to one or more other input(s). Once one input has had all its alarm settings fully configured (i.e. all tabs have been configured for that input), its alarm settings can be copied to one or more other inputs, see Figure 4-35.

**Note:**

Copying alarm settings from an input to one or more other input(s) will overwrite all the alarm settings for those input(s).

The **Selected Input** to copy *from* is shown here.

**Note:** The selected input may also be changed here at any time.

**Caution:** Always check that the correct input is selected before copying alarm settings.

### Copy to Input Selection list box

To select which inputs to copy to:

1) Click on an input item in the list box.  
Select multiple inputs by clicking on each an item in turn.

- To remove an item from your selection, (re-)click on the item.
- To clear the selection, click **Clear Selection**.

**Note:** Selected inputs in the **Copy to Input Selection** box will have their alarm settings overwritten.  
Check the **Selected Input** is correct.

To copy alarm settings to the selection:

2) Click **Copy Selection**.

The inputs selected in the **Copy to Input Selection** list box will have all alarm settings overwritten.

To Copy to *All Inputs*:

3) Click **Copy All**.

This copies alarm settings from the **Selected Input** to *all* of the inputs.

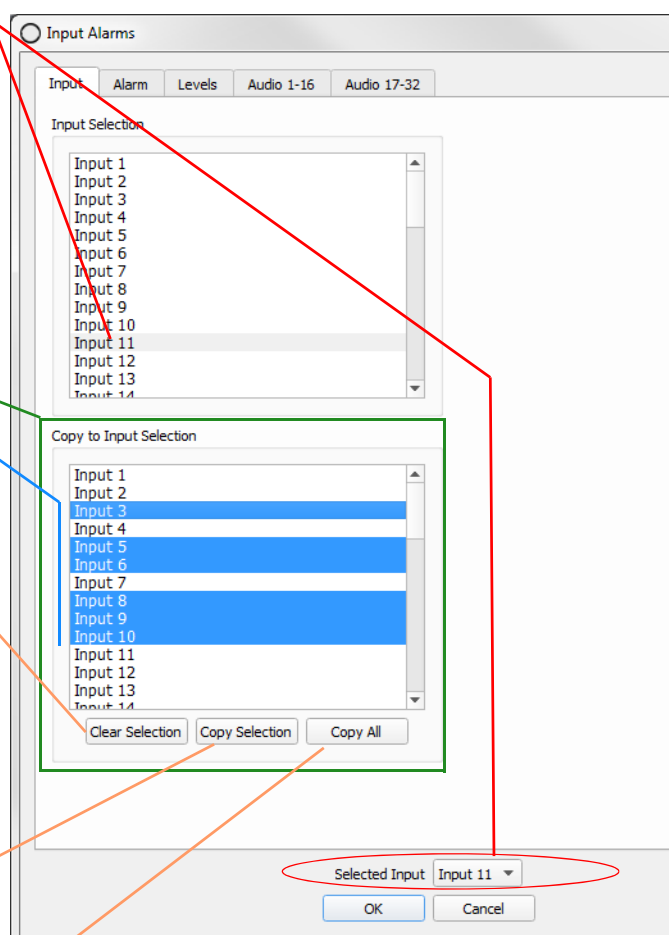


Fig. 4-35: Copying Alarm Settings.

## Multiviewer > Input Alarms - Alarm Tab

The **Alarm** tab allows one or more audio and video alarms to be enabled and set up for the **Selected Input** (shown in the drop-down box at the bottom of the screen). Alarm properties can be viewed and settings changed. See Figure 4-36.

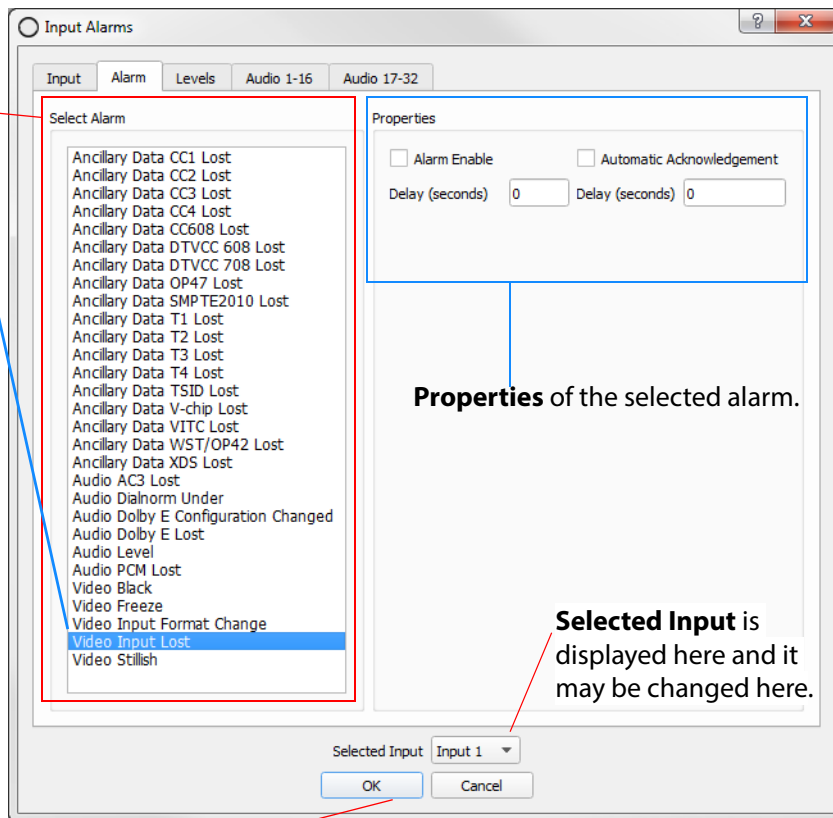
**Select Alarm** list box.

Setting up alarms for one input:

1) Click on one alarm item in the list box to select it.

The selected alarm is **highlighted** and its alarm properties are shown on the right, in the **Properties** box.

2) To set up the alarm's **Properties**, see Table 4-19.



Click **OK** when all input alarm property changes have been set up.

The changes are then applied and the **Multiviewer > Input Alarms** window is closed.

*Fig. 4-36: Selecting an Alarm.*

The **Select Alarm** list box is shown in Figure 4-37.

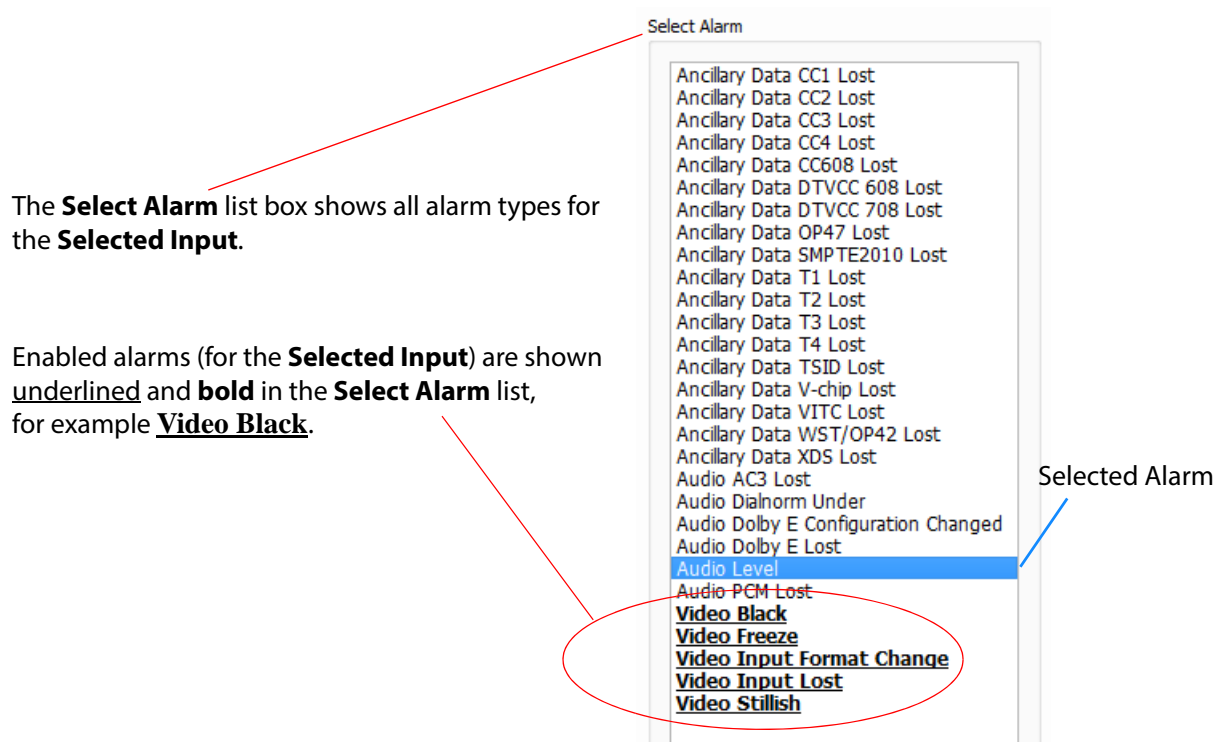
Fig. 4-37: **Select Alarm** List Box

Table 4-19 Alarm Properties

Property	Description
<b>Alarm Enable</b>	<p>Check box.</p> <p>Select to enable the selected alarm for the <b>Selected Input</b>.</p> <p><b>Note:</b> Once an alarm is enabled, it is shown <b><u>underlined and in bold</u></b> in the <b>Select Alarm</b> list.</p> <p>Enabling/disabling applies per <b>Selected Input</b>.</p> <p><b>Note:</b> <b>Alarm Enable</b> enables or disables an alarm type on a <i>per input</i> basis.</p> <p>For example,</p> <ul style="list-style-type: none"> <li>disabling the <b>Audio PCM Lost</b> alarm for input 2</li> <li>disables checking for the presence of PCM audio on <i>all</i> audio channels of that input only.</li> </ul>
<b>Delay (Seconds)</b>	<p>Text box (located below <b>Alarm Enable</b> check box).</p> <p>The time in seconds from when a fault is detected to when the alarm is displayed on the multiviewer video wall. This sets up a small delay to prevent transient alarms being displayed - filtering out transient alarms.</p>
<b>Automatic Acknowledgment</b>	<p>Check box.</p> <p>Select to enable the selected alarm to be automatically acknowledged by the multiviewer system.</p> <p>De-select to manually acknowledge alarms.</p> <p>Alarms will have to be acknowledged by the user, to stop an alarm flashing.</p>
<b>Delay (Seconds)</b>	<p>Text box (located below <b>Automatic Acknowledgment</b> check box).</p> <p>The time in seconds from when the alarm occurs to when it is automatically acknowledged by the multiviewer system.</p> <p>Set up a delay to allow an alarm to flash and be displayed for a short time before being automatically acknowledged.</p>

## Alarm Properties

Many input alarms have the same set of property types and their property boxes are similar to that shown in Figure 4-37. But there are some types of input alarms that have additional properties and these are presented in one of two ways:

- 1 Additional properties shown in the property box itself.

For example,

**Video Black, Video Freeze, Video Stillish**  
and **Video Input Format Change** alarms.

See [Additional Properties of Video Input Alarms](#), on page 69

or

- 2 Additional properties shown and configured in separate tabs of this **Multiviewer > Input Alarms** window. Where this is the case, a message is displayed in the alarm's properties box itself (see Figure 4-38 for an example).

These separate tabs are covered in separate sub-sections in this manual:

- [Multiviewer > Input Alarms - Levels Tab](#), on page 73
- [Multiviewer > Input Alarms - Audio 1-16 & Audio 17-32 Tab](#), on page 74.

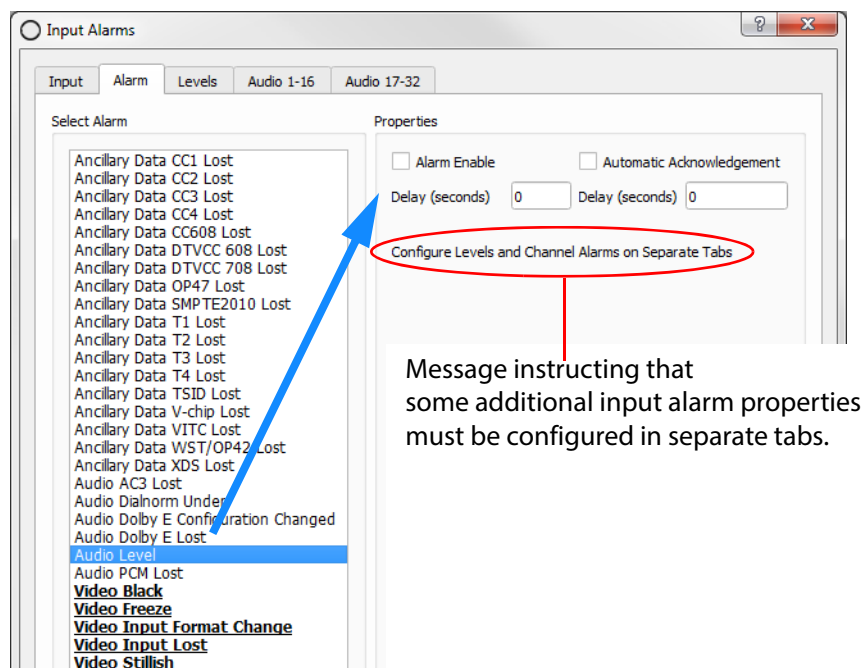


Fig. 4-38: Audio Level Properties box

## Additional Properties of Video Input Alarms

Some video input alarms have specific additional properties. These are covered here and include:

- Video Black.
- Video Freeze.
- Video Stillish.
- Video Input Format Change.

### Additional Video Black, Video Freeze, Video Stillish Alarm Properties

See Figure 4-39, Figure 4-40 and Figure 4-41 for the respective alarm properties box. See [Table 4-20](#) on page 71 for a description of the additional alarm properties.

The screenshot shows the 'Select Alarm' list on the left and the 'Properties' dialog box on the right. The 'Properties' dialog box is highlighted with a red border. It contains the following settings:

- ☒ Alarm Enable
- ☐ Automatic Acknowledgement
- Delay (seconds) 0
- Dark slider (0 to 100)
- Light slider (0 to 100)
- Detector Window:
  - X Position slider (0 to 5 %)
  - Width slider (0 to 90 %)
  - Y Position slider (0 to 5 %)
  - Height slider (0 to 90 %)
  - Full Screen button
- Window Mode:
  - ☒ Detect Inside Window
  - ☐ Detect Outside Window
- Common to Black, Freeze and Stillish Alarms

Fig. 4-39: Video Black - Alarm Properties

The screenshot shows the 'Select Alarm' list on the left and the 'Properties' dialog box on the right. The 'Properties' dialog box is highlighted with a red border. It contains the following settings:

- ☒ Alarm Enable
- ☐ Automatic Acknowledgement
- Delay (seconds) 0
- Low slider (0 to High)
- High slider (0 to High)
- Detector Window:
  - X Position slider (0 to 0 %)
  - Width slider (0 to 100 %)
  - Y Position slider (0 to 0 %)
  - Height slider (0 to 100 %)
  - Full Screen button
- Window Mode:
  - ☒ Detect Inside Window
  - ☐ Detect Outside Window
- Common to Black, Freeze and Stillish Alarms

Fig. 4-40: Video Freeze - Alarm Properties

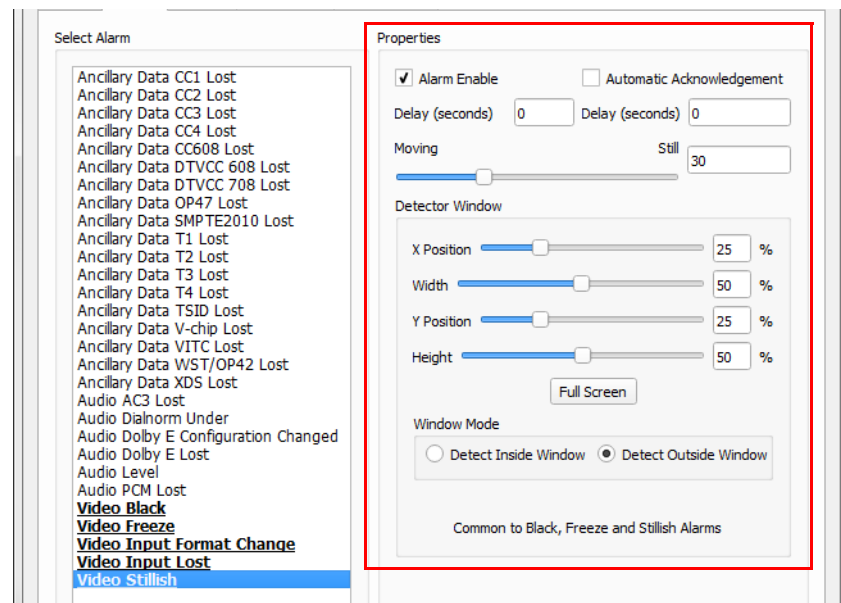


Fig. 4-41: Video Stillish - Alarm Properties

Table 4-20 Video Black, Freeze and Stillish - Alarm Properties

Property	Description
<b>Alarm Enable</b>	Check box. Select to enable the selected alarm for the <b>Selected Input</b> . (Also see <a href="#">Table 4-19 "Alarm Properties"</a> on page 67.)
<b>Delay (Seconds)</b>	The time in seconds from when a fault is detected to when the alarm is displayed on the multiviewer video wall. (Also see <a href="#">Table 4-19 "Alarm Properties"</a> on page 67.)
<b>Automatic Acknowledgment</b>	Check box. Select to enable the selected alarm to be automatically acknowledged. De-select to manually acknowledge alarms. (Also see <a href="#">Table 4-19 "Alarm Properties"</a> on page 67.)
<b>Delay (Seconds)</b>	Enter the time in seconds from when the alarm occurs to when it is automatically acknowledged by the multiviewer system. (Also see <a href="#">Table 4-19 "Alarm Properties"</a> on page 67.)
<b>Dark.....Light</b>	Slider bar. Sets the on-screen dark level, below which the <b>Video Black</b> alarm is triggered.
<b>Low.....High</b>	Slider bar. Sets the on-screen movement level deemed to be a "frozen picture" for the <b>Video Freeze</b> alarm.
<b>Moving.....Still</b>	Slider bar. Sets the on-screen movement level for the <b>Video Stillish</b> alarm to be triggered.
Detector Window	An on-screen area where an alarm detector operates. <b>Note:</b> Some property names may be shown truncated on-screen, for example, "X Positio".
<b>X Position</b>	Slider bar. Defines horizontal start position of left-hand edge of a rectangular on-screen area.
<b>Width</b>	Slider bar. Defines horizontal size of a rectangular on-screen area.
<b>Y Position</b>	Slider bar. Defines vertical start position of top edge of a rectangular on-screen area.
<b>Height</b>	Slider bar. Defines vertical size of a rectangular on-screen area.
<b>Full Screen</b>	Button. Click to set rectangular area to be full screen.
Window Mode	Radio buttons: Defines in which region on-screen to detect in, i.e. within or outside a rectangular on-screen area defined above. Used for video image-related alarms. For example, video black.
<b>Detect Inside Window</b>	Select to detect <i>inside</i> the rectangular on-screen area.
<b>Detect Outside Window</b>	Select to detect <i>outside</i> the rectangular on-screen area.

## Additional Video Input Format Change Alarm Properties

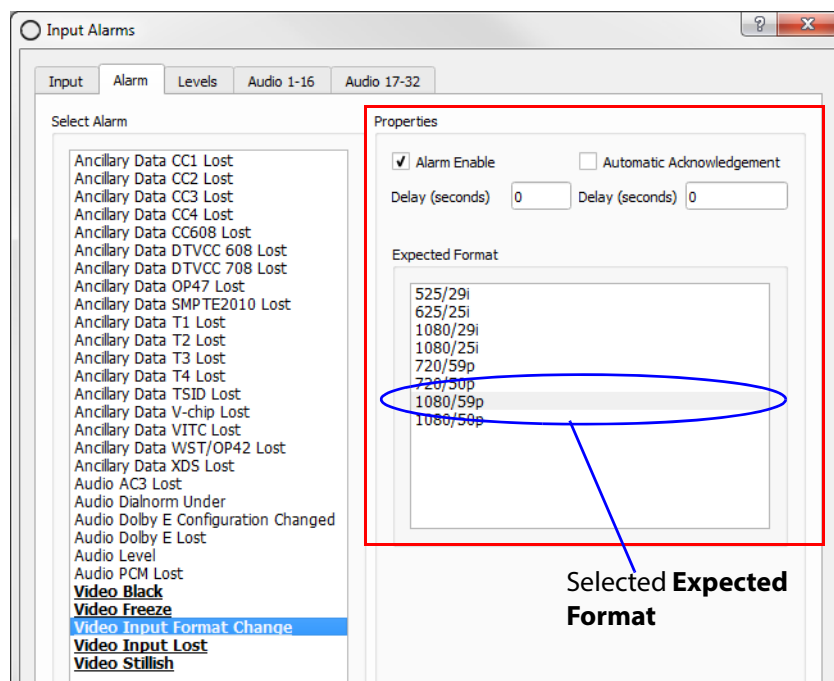


Fig. 4-42: Video Input Format Change - Alarm Properties

Table 4-21 Video Input Format Change - Alarm Properties.

Property	Description
<b>Alarm Enable</b>	Select to enable the selected alarm for the <b>Selected Input</b> . (Also see <a href="#">Table 4-19</a> on page 67.)
<b>Delay (Seconds)</b>	The time in seconds from when a fault is detected to when the alarm is displayed on the multiviewer video wall. (Also see <a href="#">Table 4-19</a> on page 67.)
<b>Automatic Acknowledgment</b>	Select to enable the selected alarm to be automatically acknowledged. De-select to manually acknowledge alarms. (Also see <a href="#">Table 4-19</a> on page 67.)
<b>Delay (Seconds)</b>	Enter the time in seconds from when the alarm occurs to when it is automatically acknowledged by the multiviewer system. (Also see <a href="#">Table 4-19</a> on page 67.)
<b>Expected Format</b>	List box. Click on one video format in the list to select the expect video input format.



## Multiviewer > Input Alarms - Levels Tab

This tab presents extra properties associated with some audio alarms.

The **Levels** tab sets audio trigger levels for input alarms associated with the **Selected Input**. The same trigger levels are used for *all* audio channels *in the Selected Input*. (The **Selected Input** is shown at the bottom of the tab.)

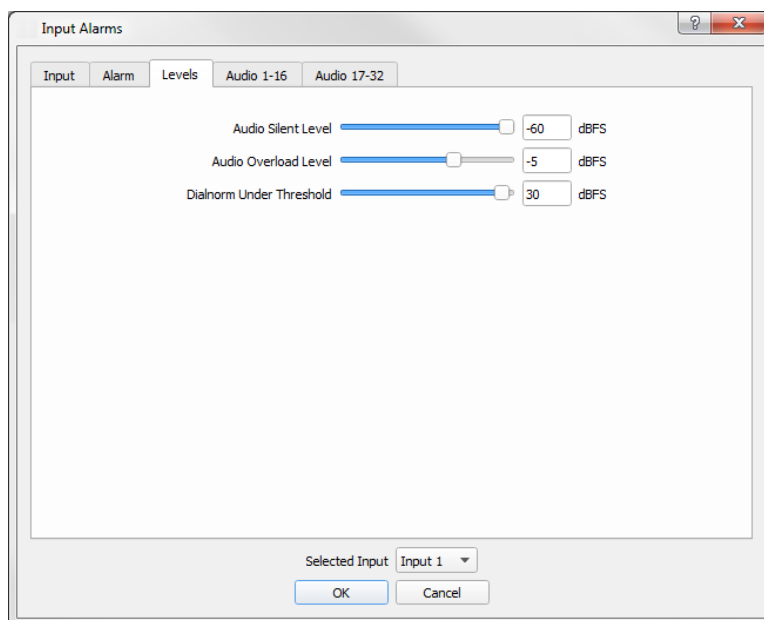


Fig. 4-43: Levels Tab

Table 4-22 Levels Tab Properties

Property	Description
<b>Audio Silent Level</b>	Slider bar. Sets the audio level below which the audio silence alarm triggers. Range -99 to -60 dBFS
<b>Audio Overload Level</b>	Slider bar. Sets the audio level above which the audio overload alarm triggers. Range -15 to 0 dBFS
<b>Dialnorm Under Threshold</b>	Slider bar. Sets the Dialnorm (Dialog Normalization) threshold audio level below which the <b>Dialnorm Under Alarm</b> is triggered. Range 1 to 31 dBFS
<b>Selected Input</b>	Text box. Displays the selected input, repeated on each tab. The <b>Selected Input</b> may also be changed here.
<b>OK</b>	Click to save any changes made to the alarm configuration and to close the window.
<b>Cancel</b>	Click to abort any changes made to the alarm configuration.

**Note:**

The same audio level settings are used for *all* audio channels on the **Selected Input**.

## Multiviewer > Input Alarms - Audio 1-16 & Audio 17-32 Tab

These tabs present further additional properties associated with some audio alarms. There are two similar tabs:

- **Audio 1-16** - sets up audio mono channels 1 to 16.
- **Audio 17-32** - sets up audio mono channels 17 to 32.

The **Audio 1-16** and **Audio 17-32** tabs are similar and allow various embedded audio channel alarms to be set up for the **Selected Input** (shown at the bottom of the tab).

Audio alarms are set up on a per mono channel basis and per multiviewer input.

The audio alarms covered by the **Audio 1-16** and **Audio 17-32** tabs are shown in Figure 4-44. There is a column for each alarm.

**Note:**

Columns are grayed out unless the alarm has been first enabled on the **Alarms** tab.

Alarms covered by the tab.

Input Alarms

Input Alarm Levels Audio 1-16 Audio 17-32

Enable Embedded Audio Channel Alarms

	Audio Level	AC3 Lost	PCM Lost	Dolby E Lost	Dolby E Config. Changed	Expected Dolby E Config.	DialNorm Under
Ch. 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>

(Enable an alarm in the **Alarm** tab to 'ungray' its column.)

All All All All All All

Selected Input Input 1

OK Cancel

Fig. 4-44: Audio 1-16 - Audio Alarms Tab

Each audio alarm must first be enabled in the **Alarm** tab (see Figure 4-45) before **Audio 1-16** tab and **Audio 17-32** tab properties can be modified. Enable alarms on each selected multiviewer input.

To set up **Audio 1-16** tab and **Audio 17-32** tab properties for a multiviewer input:

- 1 Select the video input being set up either in the **Input Tab**, or in the **Selected Input** drop-down box.

Then:

- 2 Select an audio alarm (e.g. 'Audio Level') in the **Alarm Tab**.
- 3 Enable the audio alarm.

For each alarm required, repeat the select/enable step.

The corresponding columns in the **Audio 1-16** and **Audio 17-32** tabs will then be enabled (not grayed out).

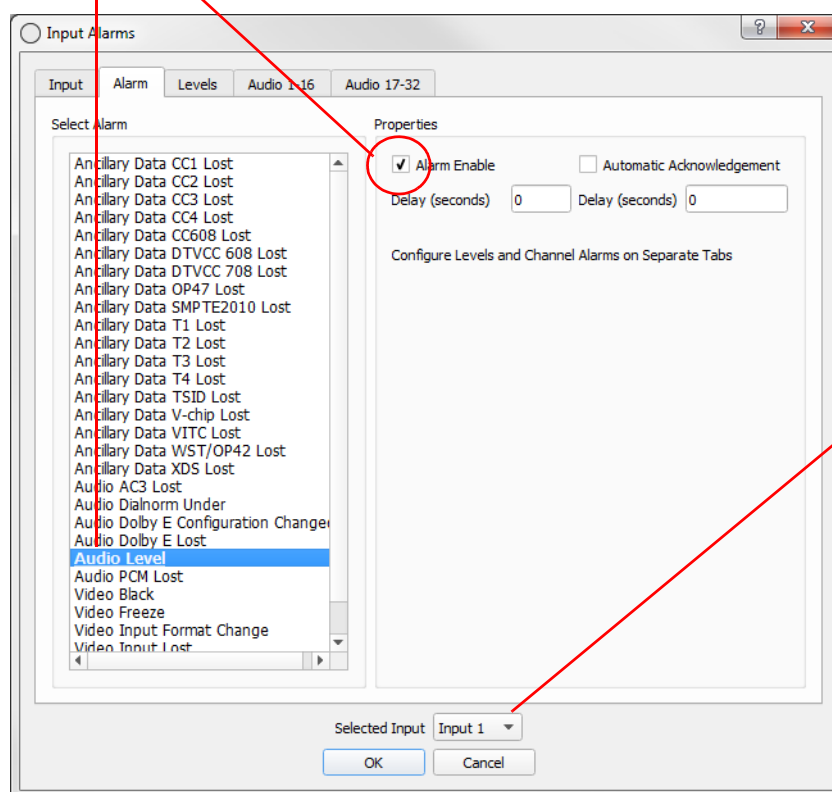


Fig. 4-45: Enabling Audio Alarms in the Alarm Tab

With the respective audio alarms enabled, the **Audio 1-16** and **Audio 17-32** tabs can now be selected for configuring the additional audio alarm properties. This is done on a channel basis for the selected input.

The **Audio 1-16** and **Audio 17-32** tabs are similar and are shown in Figure 4-46 and the alarm properties are described in Table 4-23.

**Audio Level** column is active, not grayed out, indicating **Audio Level** alarm is enabled.

**AC3 Lost** column is inactive, grayed out, indicating **AC3 Lost** alarm is not enabled.

Audio alarm properties set up for audio channels Ch.1 and Ch.2 of the **Selected Input**

**Audio 1-16** tab

**Audio 17-32** tab

One column per audio alarm type.

One row per audio channel.

**All** button for selecting *all* the column

**None** button for de-selecting *all* the column

The figure consists of two screenshots of the 'Input Alarms' dialog box, showing the 'Audio 1-16' and 'Audio 17-32' tabs. The dialog box has a title bar with a question mark and a close button. Below the title bar are tabs for 'Input', 'Alarm', 'Levels', 'Audio 1-16', and 'Audio 17-32'. The 'Audio 1-16' tab is selected in the top screenshot, and the 'Audio 17-32' tab is selected in the bottom screenshot. The main area of the dialog box is titled 'Enable Embedded Audio Channel Alarms' and contains a table with columns for 'Audio Level', 'AC3 Lost', 'PCM Lost', 'Dolby E Lost', 'Dolby E Config. Changed', 'Expected Dolby E Config.', and 'DialNorm Under'. The 'Audio Level' column is highlighted with a green box in both screenshots, indicating it is active. The 'AC3 Lost' column is highlighted with a blue box in the top screenshot, indicating it is inactive. The 'All' button is highlighted with a red box in the bottom screenshot, indicating it is used for selecting all columns. The 'None' button is highlighted with a red box in the bottom screenshot, indicating it is used for de-selecting all columns. The 'Selected Input' dropdown menu is set to 'Input 1' in the bottom screenshot.

Channel	Audio Level	AC3 Lost	PCM Lost	Dolby E Lost	Dolby E Config. Changed	Expected Dolby E Config.	DialNorm Under
Ch. 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5.1 + 2	<input checked="" type="checkbox"/>
Ch. 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5.1 + 2	<input checked="" type="checkbox"/>
Ch. 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>

Channel	Audio Level	AC3 Lost	PCM Lost	Dolby E Lost	Dolby E Config. Changed	Expected Dolby E Config.	DialNorm Under
Ch. 17	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 18	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 19	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 20	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 21	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 22	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 23	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 24	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 25	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 26	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 27	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 28	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 29	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 30	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 31	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>
Ch. 32	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.1 + 2	<input type="checkbox"/>

Buttons: All, All, None, All, All, All

Selected Input: Input 1

Buttons: OK, Cancel

Fig. 4-46: Audio 1-16 and Audio 17-32 Tabs

**Note:**

Enable an audio alarm in the **Alarm** tab:

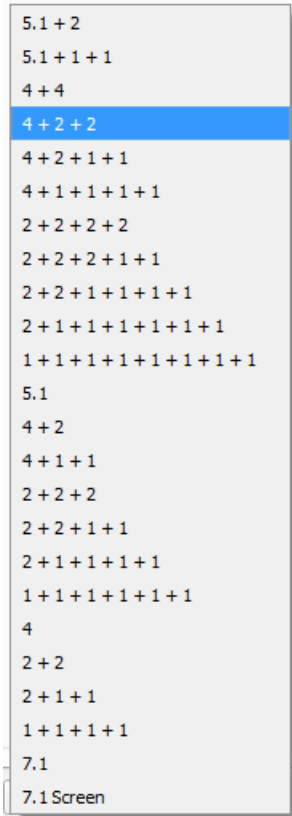
Individual audio alarms need to be enabled in the **Alarm** tab (see Figure 4-45) *for each* input, otherwise corresponding columns in the **Audio 1-16** or **Audio 17-32** tabs are grayed out and disabled (see Figure 4-46).

Select the **Alarm Enable** in the **Alarm** tab for an input's audio alarm, this then enables corresponding columns in the **Audio 1-16** and/or **Audio 17-32** tabs.

Table 4-23 Audio 1-16 and Audio 17-32 Tab Properties

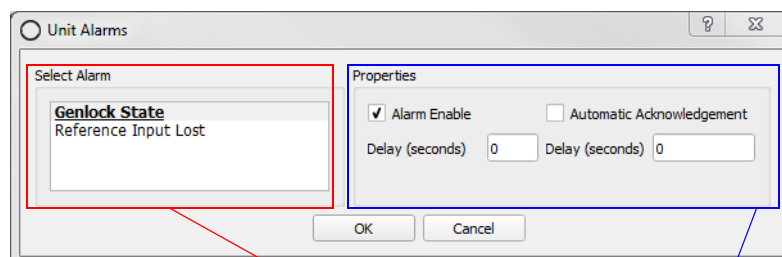
Property	Description
<b>Audio Level</b>	<p>Check box, per embedded audio channel. Select to enable the audio level alarm for the channel.</p> <p>(Column only available if input's <b>Audio Level</b> alarm is enabled in the <b>Alarms</b> tab.)</p> <p>Audio channels may be selected individually or all channels can be selected/deselected by clicking the <b>All / None</b> button at the base of the column.</p>
<b>AC3 Lost</b>	<p>Check box, for audio channels in <i>pairs</i>. Select to enable the <b>AC3 Lost</b> alarm for the channel pair.</p> <p>(Column only available if the input's <b>Audio AC3 Lost</b> alarm is enabled in the <b>Alarms</b> tab.)</p> <p>Audio channels are selected in <i>pairs</i> or all channels can be selected by clicking the <b>All / None</b> button at the base of the column.</p>
<b>PCM Lost</b>	<p>Check box, for audio channels in <i>pairs</i>. Select to enable the <b>PCM Lost</b> alarm for the channel.</p> <p>(Column only available if the input's <b>PCM Lost</b> alarm is enabled in the <b>Alarms</b> tab.)</p> <p>Channels are selected in <i>pairs</i> or all of the channels can be selected by clicking on the <b>All / None</b> button at the base of the column.</p>
<b>Dolby E Lost</b>	<p>Check box, for audio channels in <i>pairs</i>. Select to enable the <b>Dolby E Lost</b> alarm for the channel.</p> <p>Only available if the input's <b>Dolby E Lost</b> alarm is enabled in the <b>Alarms</b> tab.</p> <p>Channels are selected in <i>pairs</i> or all of the channels can be selected by clicking on the <b>All / None</b> button at the base of the column.</p>
<b>Dolby E Config Changed</b>	<p>Check box, for audio channels in <i>pairs</i>. Select to enable the <b>Dolby E Config Changed</b> alarm for the channel.</p> <p>(Column only available if the input's <b>Dolby E Config Changed</b> alarm is enabled in the <b>Alarms</b> tab.)</p> <p>Alarm alerts the user to a change in Dolby E audio channel configuration expected on an audio channel pair, for example "5.1 + 1 + 1" changing to "5.1 + 2".</p> <p>The expected Dolby E Configuration is set up in the adjacent <b>Expected Dolby E Config</b> drop-down box.</p> <p>Channels are selected in <i>pairs</i> or all of the channels can be selected by clicking on the <b>All / None</b> button at the base of the column.</p>

Table 4-23 Audio 1-16 and Audio 17-32 Tab Properties (continued)

Property	Description
<b>Expected Dolby E Config</b>	<p>Drop-down list.</p> <p>Select the Dolby E configuration to be expected on the audio channel pair.</p> <p>The Dolby E configurations selectable are shown below:</p> 
<b>DialNorm Under</b>	<p>Check box.</p> <p>Select to enable the <b>DialNorm Under</b> alarm for the audio channel.</p> <p>Alarm checks if the dialog normalization value, described in metadata, is below the level set up in the alarm properties.</p> <p>(Column only available if the input's <b>DialNorm Under</b> alarm is enabled in the <b>Alarms</b> tab.)</p> <p>Channels are selected in <i>pairs</i> or all of the channels can be selected by clicking on the <b>All / None</b> button at the base of the column.</p>
<b>All/None</b>	<p>Toggle buttons. Located at the bottom of each alarm type column.</p> <p>Click on the <b>All</b> button to select all entries in that column.</p> <p>Click on the <b>None</b> button to deselect all items in that column.</p>
<b>Selected Input text box</b>	<p>Displays the selected input, repeated on each tab.</p> <p>The <b>Selected Input</b> may also be changed here.</p>

## Menu Bar - Multiviewer Menu - Unit Alarms Dialog

The **Unit Alarms** dialog window is used to enable and configure unit-specific alarms related to a multiviewer unit. The **Unit Alarm** dialog is shown in Figure 4-47.



- 1 Select an alarm in the list in the **Select Alarm** box.
- 2 Configure the alarm's properties in the **Properties** box.

Fig. 4-47: Unit Alarms Dialog

Table 4-24 Unit Alarms

Alarm	Description
<b>Genlock State</b>	Detects unlocked multiviewer genlock.
<b>Reference Input Lost</b>	Detects a lost reference signal.

Table 4-25 Unit Alarm Properties

Alarm Property	Description
<b>Alarm Enable</b>	Check box. Select to enable the alarm.
<b>Delay (seconds)</b>	The time in seconds from when a fault is detected to when the alarm is displayed on the multiviewer video wall.  Setting a small delay will prevent transient alarms being displayed, filtering out transient alarms.
<b>Automatic Acknowledgment</b>	Check box. Select to enable automatic acknowledgment by the multiviewer system.  De-select to manually acknowledge the alarm. Alarms will have to be acknowledged by the user, to stop an alarm flashing.
<b>Delay (seconds)</b>	The time in seconds from when the alarm occurs to when it is automatically acknowledged by the multiviewer system.  Setting a delay here allows an alarm to flash and be displayed for a short time before being automatically acknowledged.

## Menu Bar - Multiviewer Menu - Input and Output Audio Dialogs

### Multiviewer > Input Audio

The **Input Audio** dialog window, see Figure 4-48, allows a default audio meter scale type and ballistics properties to be set up for the **Audio Bars** widgets used on a multiviewer video wall. All **Audio Bars'** meters will adopt the same default audio meter type (scale type, ballistics).

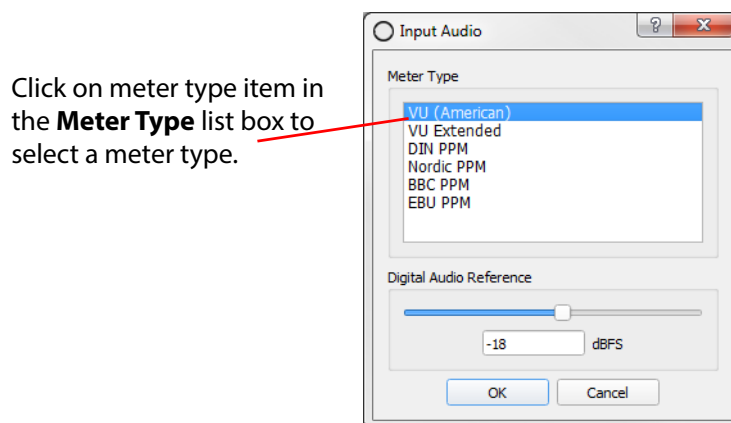


Fig. 4-48: Multiviewer > Input Audio Dialog

**Note:**

#### Audio Meter Ballistics:

Audio meter *ballistics* apply globally per multiviewer.

A project user may change an audio meter type locally on a tile/schematic, which locally changes the meter *scale* on the tile/schematic.

However,  
all audio meter data from the same multiviewer will have the same ballistics type, i.e. that of the Meter Type set up in the **Multiviewer > Input Audio** dialog.

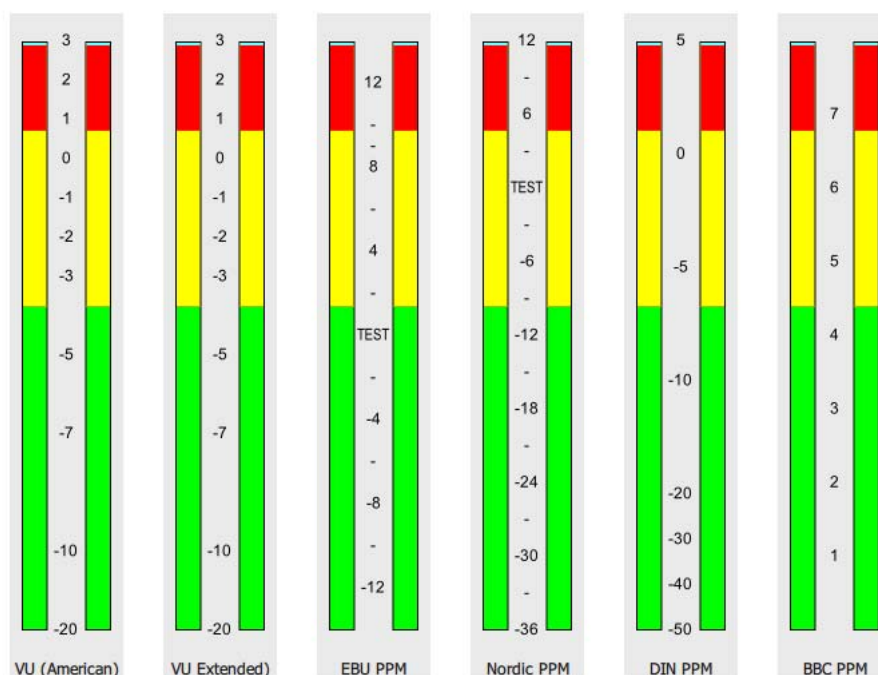


Fig. 4-49: Audio Level Meter Types



All colors used in each audio meter type can be customized to satisfy any in-house monitoring style by changing the Audio Bars widget properties or creating a specific Audio widget style. (See the 'Orbit for Multiviewers User Manual' for more information about the Tile Editor, Themes and Widgets.)

Table 4-26 describes the properties in the **Input Audio** dialog.

Table 4-26 Input Audio Properties

Property	Description
<b>Meter Type</b>	List box. Select the default audio meter scale type.  Any audio meter widgets used on the video wall will use the selected audio meter scale type as default.
<b>Digital Audio Reference</b>	Slider bar. Set the digital audio reference level. Range -50 to 10 dBFS
<b>OK</b>	Click to save any changes made to the configuration.
<b>Cancel</b>	Click to abort any changes made to the configuration.

## Multiviewer > Output Audio

The **Output Audio** dialog is used to set up the audio sources for each of the audio channels in each of the multiviewer display outputs. Up to eight stereo channels are embedded in each multiviewer display output.

**Note:**

Dolby E audio on multiviewer inputs cannot be decoded for embedding onto the display output for monitoring.

### Select Output list box:

- 1 Click on an Output item in the **Select Output** box.  
This selects the multiviewer display output to configure.

For the selected multiviewer display output:

- 2 Configure audio sources for each output stereo audio pair.  
The selected audio sources are embedded in each multiviewer video display output.  
They can be monitored via a suitable display or audio de-multiplexer.

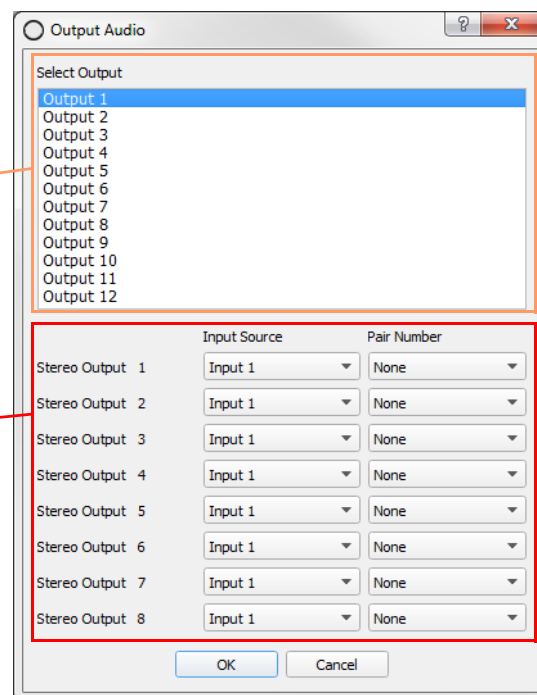


Fig. 4-50: Multiviewer > Output Audio Dialog

Table 4-27 Multiviewer > Output Audio Dialog Properties

Properties	Description
<b>Select Output</b>	List box. Select the multiviewer video display output to be configured.
Select an audio source:  <b>Stereo Output 1</b> <b>Stereo Output 2</b> <b>Stereo Output 3</b> ... <b>Stereo Output 8</b>	A row per stereo output pair. Use the drop-down boxes in each column to select the video input source and audio channel pair number for each embedded stereo output.
<b>Input Source</b>	Drop-down box. Select the multiviewer input for the embedded audio pair source ( <b>Input 1, Input 2, ... Input 48</b> ).
<b>Pair Number</b>	Drop-down list. Select the audio pair to be embedded on the multiviewer display output ( <b>Pair 1 and 2; Pair 3 and 4; ...; Pair 31 and 32</b> ). Select <b>None</b> if the audio output is not required.
<b>OK</b>	Click to save any changes made to the output audio configuration.
<b>Cancel</b>	Click to abort any changes made to the output audio configuration.

## Menu Bar - Multiviewer Menu - Other Items

### Multiviewer > Units

The **Monitor Units** dialog is used to select the units published by a Grass Valley Log Server that a multiviewer can view.

**Note:** The Log Server IP address must be configured in 'Multiviewer > Properties', in order for a multiviewer to receive log fields from the units selected in this dialog.

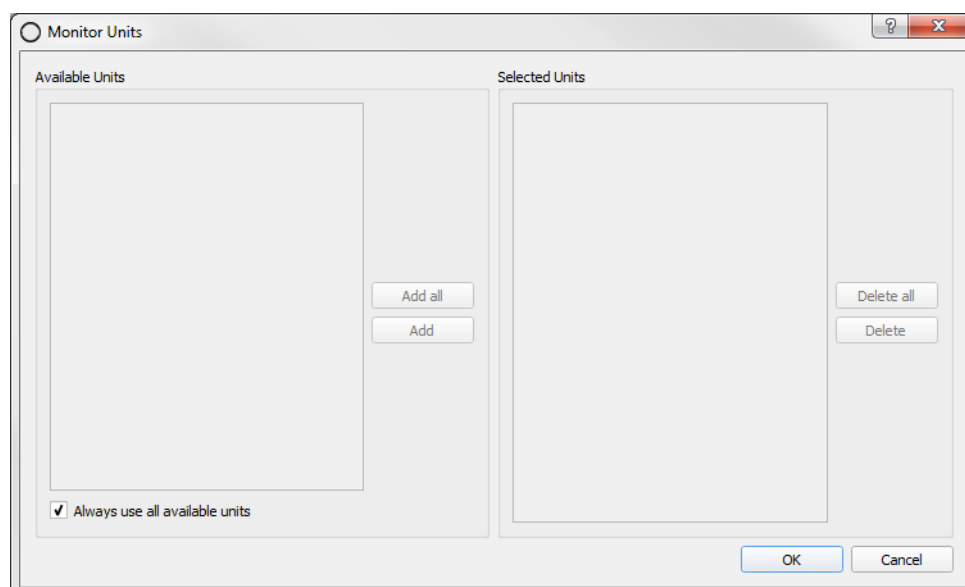


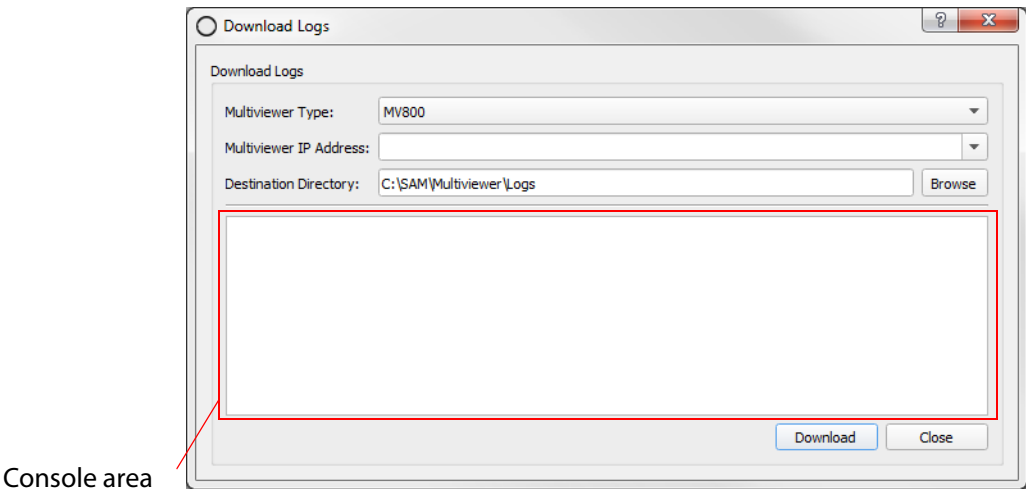
Fig. 4-51: Monitor Units Dialog

Table 4-28 Monitor Units Settings

Setting	Description
<b>Always use all available units</b>	Check box. Select to automatically use log fields from all of the available units. This is selected by default.  This should remain selected for typical use, every unit and input is automatically selected. De-select to manually select units (for example, for future, larger system deployments).
<b>Available Units</b>	List box. Lists the units published by Log Server.
<b>Add all</b>	Button. Click to add all of the items in the <b>Available Units</b> list to the <b>Selected Units</b> list.
<b>Add</b>	Button. Click to add the selected <b>Available Units</b> items to the <b>Selected Units</b> list.
<b>Selected Units</b>	List box. Lists all the selected units.
<b>Delete all</b>	Button. Click to delete all items from the <b>Selected Units</b> list.
<b>Delete</b>	Button. Click to delete the selected item(s) from the <b>Selected Units</b> list.
<b>OK</b>	Click to save any changes made to the configuration.
<b>Cancel</b>	Click to abort any changes made to the configuration.

## Multiviewer > Download Logs

The **Download Logs** window is used to obtain logs from a multiviewer unit.



Console area

Fig. 4-52: Download Logs Window

Table 4-29 Download Logs Settings

Setting	Description
<b>Multiviewer Type</b>	Drop-down box. Select type of multiviewer. For example, MV800.
<b>Multiviewer IP Address</b>	Text box. Enter Multiviewer’s IP Address.
<b>Destination Directory</b>	Select folder for multiviewer’s log file(s).
<b>Browse</b>	Button. Click to browse to target folder.
<b>Download</b>	Button. Click to download logs from multiviewer unit.  The downloaded logs are stored in the destination directory and the downloading progress is displayed in the console area.
<b>Close</b>	Button. Click to close Download Logs window.

## Menu Bar - Help Menu

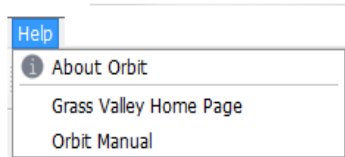


Fig. 4-53: Help menu

Table 4-30 Help Menu Items

Menu Item	Description
<b>About Orbit</b>	Displays information about the Orbit application, including version details. See Figure 4-54.
<b>Grass Valley Home Page</b>	Opens the Grass Valley website home page in your default web browser.
<b>Orbit Manual</b>	Opens the manual.



Fig. 4-54: Orbit Help > About window



# 5

## 5 Orbit Main Tool Bar

### Summary

#### Orbit Main Tool Bar

[Introduction](#)..... page 87

[Tool Bar Icons](#)..... page 89



The Orbit screen has a main tool bar located beneath the main menu bar. This tool bar comprises a row of tool icons. This chapter describes the function of the icons, referring back to main menu bar items descriptions of Chapter 4 “[Orbit Main Menu Bar](#)” on page 25, when required.

## Introduction

The set of tool bar icons shown varies according to which Orbit project is open and, in turn, which Orbit editor screen is active. Some tool bar items may be grayed out in some Orbit screens. See Figure 5-1 to Figure 5-5.

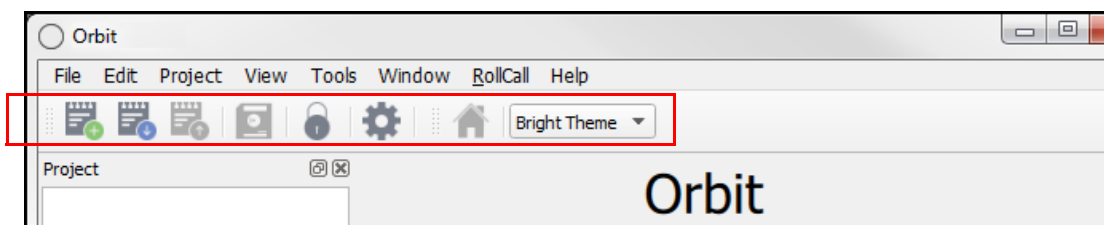


Fig. 5-1: Orbit Main Tool Bar - Initial Screen, No Project Open

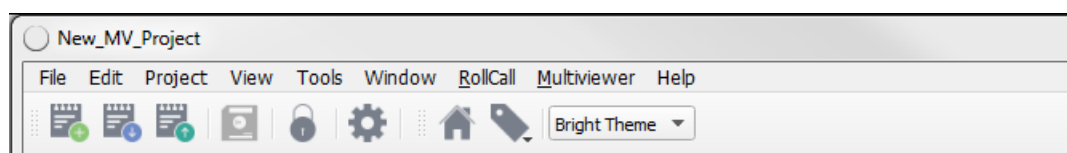


Fig. 5-2: Orbit Main Tool Bar - Multiviewer project

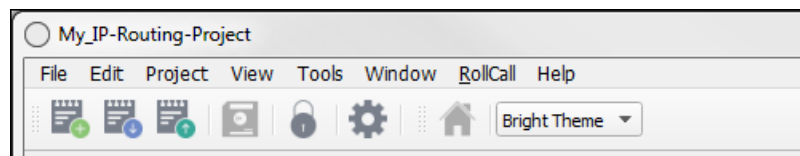


Fig. 5-3: Orbit Main Tool Bar - IP Routing project

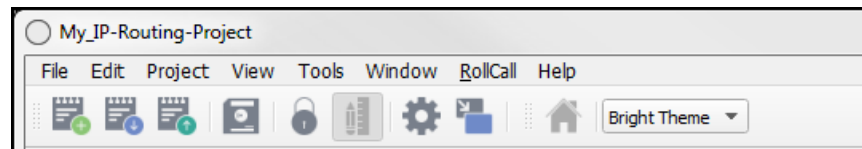


Fig. 5-4: Orbit Main Tool Bar - Network Editor Screen (IP Routing Project)



a) **Manage Users** screen Tool bar



b) **Themes Editor** screen Tool bar (Multiviewer project)



c) **Wall Editor** screen Tool bar (Multiviewer project)



d) **Tile Editor** screen Tool bar (Multiviewer project)

Fig. 5-5: Orbit Main Tool Bar:  
a) Manage Users Screen.  
b) Themes Editor (Multiviewer Project).  
c) Wall Editor (Multiviewer Project).  
d) Tile Editor (Multiviewer Project).



## Tool Bar Icons

All tool icons are covered in this sub-section. Figure 5-6 and Table 5-1 give the names and the function of each tool bar icon.

Tool Bar Icons:

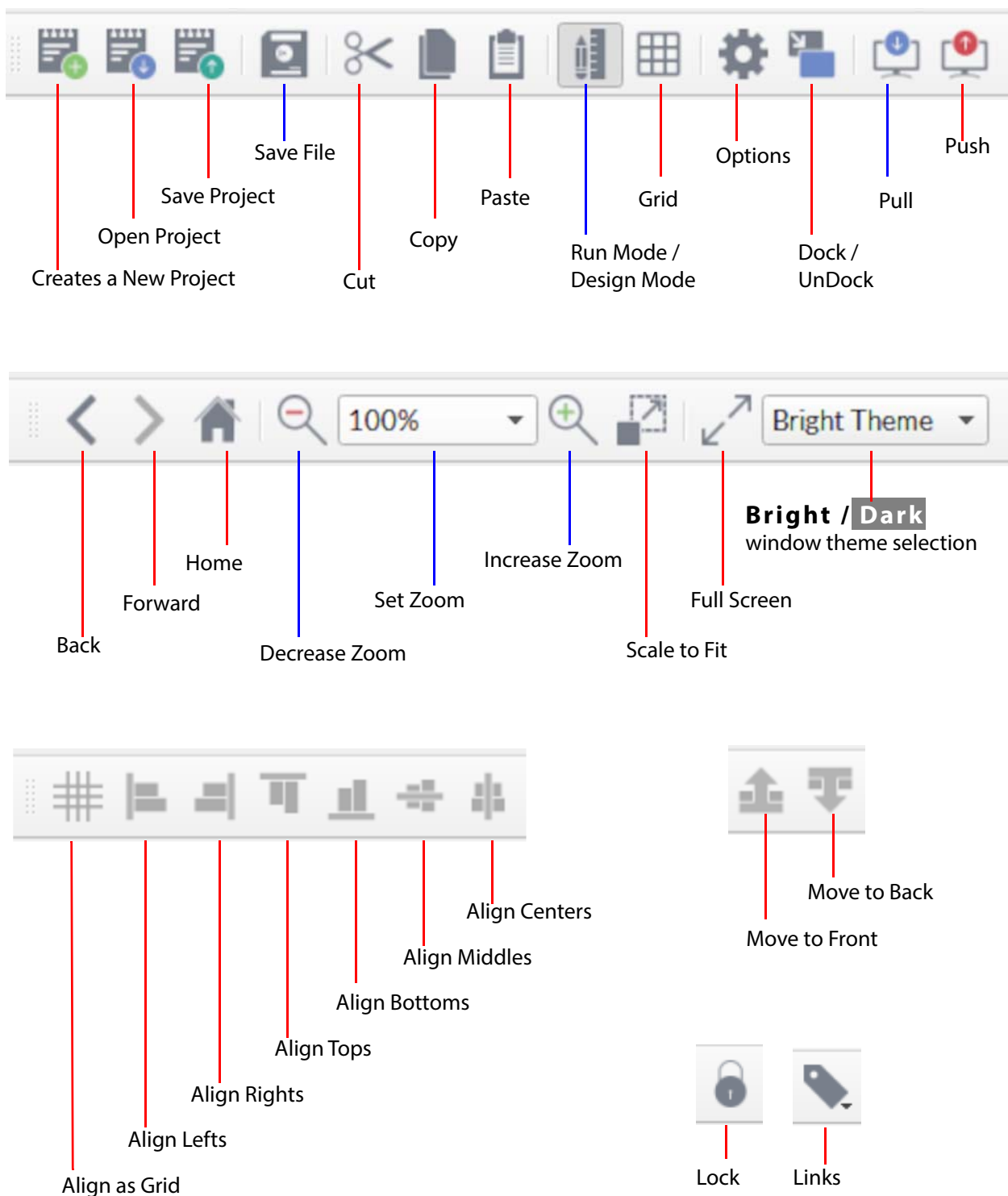
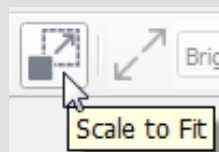


Fig. 5-6: Orbit Screen - all Main Tool Bar Icons

**Note:**

**Tool Tip:**

Hover the cursor over a Main Tool Bar icon and a tool tip is displayed:



Clicking on the main tool bar icons is usually a shortcut to a main menu bar item function. The main menu bar items are all described in Chapter 4 "[Main Menu Bar](#)" on page 26.

Menu bar items:

- Chapter 4 "[Menu Bar - File Menu](#)" on page 27.
- Chapter 4 "[Menu Bar - Edit Menu](#)" on page 28.
- Chapter 4 "[Menu Bar - Project Menu](#)" on page 29.
- Chapter 4 "[Menu Bar - View Menu](#)" on page 31.
- Chapter 4 "[Menu Bar - Tools Menu](#)" on page 34.
- Chapter 4 "[Menu Bar - Window Menu](#)" on page 54.
- Chapter 4 "[Menu Bar - Multiviewer Menu \(Orbit Multiviewer Projects\)](#)" on page 58.  
(Multiviewer projects only)

Table 5-1 describes each main tool bar icon and relates it to the equivalent Menu Bar action.

Table 5-1 Tool bar icons









Tool Bar Icon	Equivalent Menu Bar action	Description (See Chapter in Manual)
<b>Create a new project</b> 	File > New Project	(See Chapter 7 <a href="#">“How to Open New Projects”</a> on page 114.)
<b>Open a project</b> 	File > Open Project	(See Chapter 7 <a href="#">“How to Open an Existing Project”</a> on page 122.)
<b>Save project</b> 	File > Save Project	Save the current Orbit project. (See Chapter 4 <a href="#">“Menu Bar - File Menu”</a> on page 27.)
<b>Save File</b> 	File > Save File	Saves the currently-displayed graphical screen or tab into a file. The file name is shown in the tab. Thus any graphical editing of screen elements is saved. (See Chapter 4 <a href="#">“Menu Bar - File Menu”</a> on page 27.)
<b>Lock</b> 	-	Click to lock Orbit and prevent any changes being made. Click again to unlock.
<b>Cut</b> 	Edit > Cut	Cut selected graphical object(s) from editor screen.
<b>Copy</b> 	Edit > Copy	Copy selected graphical object(s) in editor screen.
<b>Paste</b> 	Edit > Paste	Paste selected graphical object(s) into editor screen.

Table 5-1 Tool bar icons (continued)










Tool Bar Icon	Equivalent Menu Bar action	Description (See Chapter in Manual)
<p><b>Run Mode / Design Mode</b></p>  	<p>View &gt; Run Mode</p> <p>View &gt; Design Mode</p>	<p>Toggle button. (Orbit operates in either 'Design Mode' or in 'Run Mode')</p> <p>Click to put Orbit into <b>'Run Mode'</b>. In this mode, Orbit updates its screen with live data if connected to a multiviewer unit. This can show:</p> <ul style="list-style-type: none"> <li>• Widgets on a tile or schematic with live data/functionality, to show what they will look like when on a multiviewer.</li> <li>• A wall with live video and data etc (requires license MV-800-DT).</li> </ul> <p>In <b>Run Mode</b>, tiles and walls may not be modified.</p> <p>Click to put Orbit into <b>Design Mode</b>. In <b>Design Mode</b>, tiles and walls may be edited and multiviewer video wall layouts may be created.</p>
<p><b>Grid</b></p> 	View > Grid	<p>Toggles the design grid on and off for tiles and walls in graphical editor screens.</p> <p>Option available when a <b>Wall</b> or <b>Tile Editor</b> is open.</p>
<p><b>Options</b></p> 	Tools > Options	<p>Set tool options in this menu.</p> <p>(See Chapter 4 "<a href="#">Menu Bar - Tools Menu</a>" on page 34.)</p>
<p><b>Dock / UnDock</b></p> 	-	<p>Undocks / re-docks an Orbit graphical editor tab from the Orbit window and displays it in a separate window. This allows it to be displayed on a second PC monitor.</p>
<p><b>Pull</b></p> 	Project > Pull	<p>Pulls an Orbit project into the Orbit application from a product unit connected to the application.</p> <p>Not available for Orbit IP routing projects.</p> <p>(See Chapter 8 "<a href="#">How to Pull an Orbit Project from a Device (Unit)</a>" on page 141.)</p>
<p><b>Push</b></p> 	Project > Push	<p>Pushes the current Orbit project from the Orbit application onto a product unit connected to the Orbit application.</p> <p>Not available for Orbit IP routing projects.</p> <p>(See Chapter 8 "<a href="#">How to Push an Orbit Project to a Unit</a>" on page 140.)</p>
<p><b>Back</b></p> 	Window > Back	Move between Orbit editor tabs
<p><b>Forward</b></p> 	Window > Forward	Move between Orbit editor tabs

Table 5-1 Tool bar icons (continued)



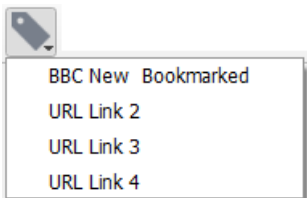

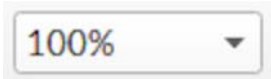



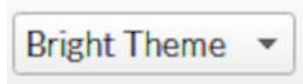









Tool Bar Icon	Equivalent Menu Bar action	Description (See Chapter in Manual)
<b>Home</b> 		Go to a defined screen which is associated with clicking a button in a run-time Orbit video wall.
<b>Links</b> 	Tools > Options - Links	Click to see a list of book-marked URL links in the project. 
<b>Decrease Zoom (-)</b> 	View > Zoom > Decrease Zoom	(-) Zoom Out. For example, zooming out to view an entire large video wall.
<b>Set Zoom</b> 		Set the Zoom level (percentage).
<b>Increase Zoom (+)</b> 	View > Zoom > Increase Zoom	(+) Zoom In. For example, zooming in to edit fine detail on a video tile design.
<b>Scale to Fit</b> 	View > Zoom > Scale to Fit	Resize (scale) a graphical schematic to fit the Orbit graphical schematic editor screen area. Toggles feature on/off.
<b>Full Screen</b> 	View > Full Screen	Click to view a graphical object (for example, a wall or a tile) full-screen. Available when a <b>Wall</b> or <b>Tile Editor</b> is open.  Undocks an Orbit editor tab and displays it full screen. Useful for displaying a tile or video wall design on a second PC monitor screen.  To return from full-screen mode, press <b>[Alt]+[Return]</b> , i.e. the "Alt" key and "Return" key together.
<b>Bright / Dark</b> 		Drop-down box. Select screen viewing theme.  The whole Orbit screen may be set up to be viewed with either a dark or a bright viewing theme, to suit your working environment. (Screen shots in this document mostly use the bright viewing theme.)
<b>Align as Grid</b> 	-	Click to place selected tiles in an array arrangement. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available if two or more objects are selected.

Table 5-1 Tool bar icons (continued)

Tool Bar Icon	Equivalent Menu Bar action	Description (See Chapter in Manual)
<b>Align Lefts</b> 	-	Click to align left-hand sides of selected tiles. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available if two or more objects are selected. Alignment is made to the first tile to have been selected.
<b>Align Rights</b> 	-	Click to align right-hand sides of selected tiles. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available if two or more objects are selected. Alignment is made to the first tile to have been selected.
<b>Align Tops</b> 	-	Click to align top edges of selected tiles. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available if two or more objects are selected. Alignment is made to the first tile to have been selected.
<b>Align Bottoms</b> 	-	Click to align bottom edges of selected tiles. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available if two or more objects are selected. Alignment is made to the first tile to have been selected.
<b>Align Middles</b> 	-	Click to horizontally align middles of selected tiles. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available if two or more objects are selected. Alignment is made to the first tile to have been selected.
<b>Align Centers</b> 	-	Click to vertically align bottom centers of selected tiles. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available if two or more objects are selected. Alignment is made to the first tile to have been selected.
<b>Move to Front</b> 	-	Layer control. Click to move selected tile or widget to the front. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available with one object selected.
<b>Move to Back</b> 	-	Layer control. Click to move selected tile or widget to the back. Used in <b>Wall</b> or <b>Tile Editor</b> screen.  Only available with one object selected.

# 6

## 6 Orbit Initial Screen

Summary

**Orbit Initial Screen**

*Introduction to the Initial Screen*..... page 95

*Managing the Main Tool Bar*..... page 98

*Managing Panes*..... page 100

*Undocking Panes* ..... page 101

*Docking Panes*..... page 102

*Tabbed Panes* ..... page 102

*Using the Network View Pane*..... page 103

*Right-Click in Network View*..... page 104

*Using the Project View*..... page 107

*Using the Project View in a Project*..... page 107

*Orbit Projects*..... page 108

*Project Names* ..... page 108

*Orbit Opening a Project*..... page 108

*Using Tabbed Screens* ..... page 109

This chapter introduces the Orbit initial screen and shows how to re-arrange an Orbit screen. This is common to whichever type of Orbit project is to be used.

### Introduction to the Initial Screen

Run the Orbit application. When Orbit is started, a splash screen is briefly shown (Figure 6-1) before the initial screen is displayed.



Fig. 6-1: Orbit Splash Screen

The overall Orbit screen viewing these may be set up to be viewed to suit your working environment. Choose either a:

- dark viewing theme (see Figure 6-2); or a
- bright viewing theme (see Figure 6-3).

Most of the Orbit screen shots presented in this manual have been captured with the bright viewing theme.

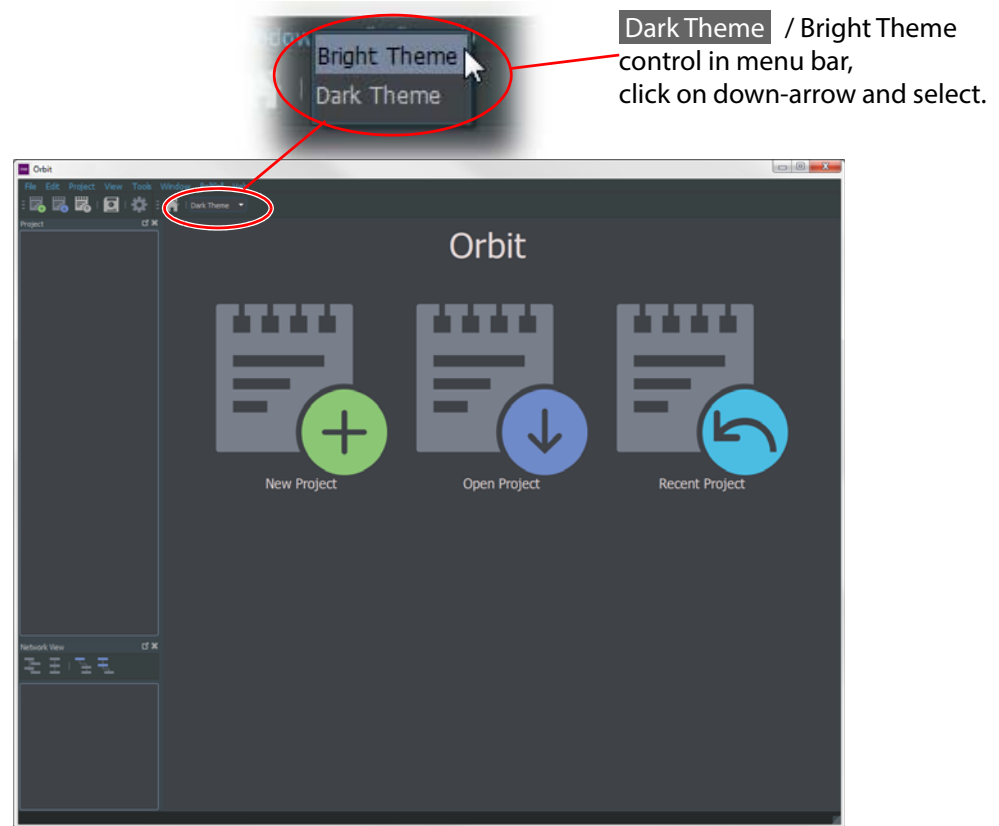


Fig. 6-2: Orbit Initial Screen (Dark viewing theme)

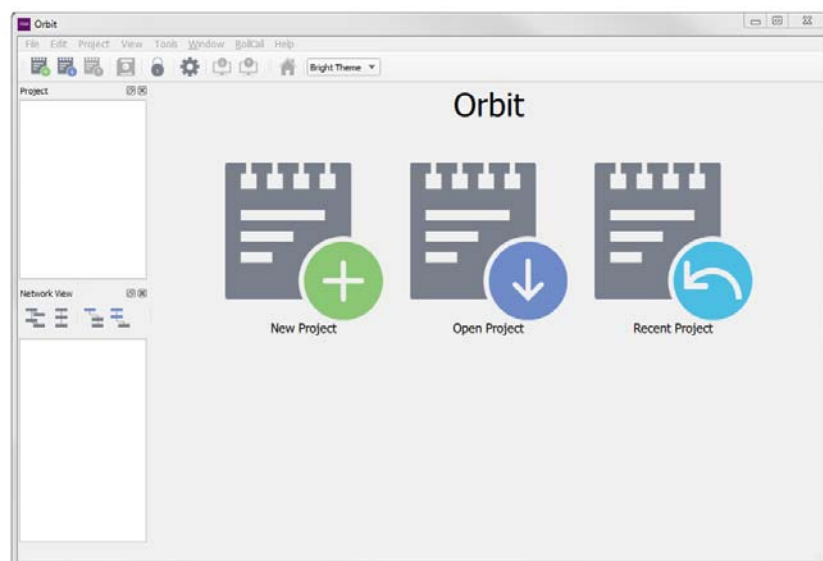


Fig. 6-3: Orbit Initial Screen (Bright viewing theme)



The Orbit **Initial Screen** allows new projects to be created or existing projects to be opened. This chapter describes the **Initial Screen** before any project is opened or created. Some menu options may be grayed out.

Figure 6-4 highlights features of this **Initial Screen**.

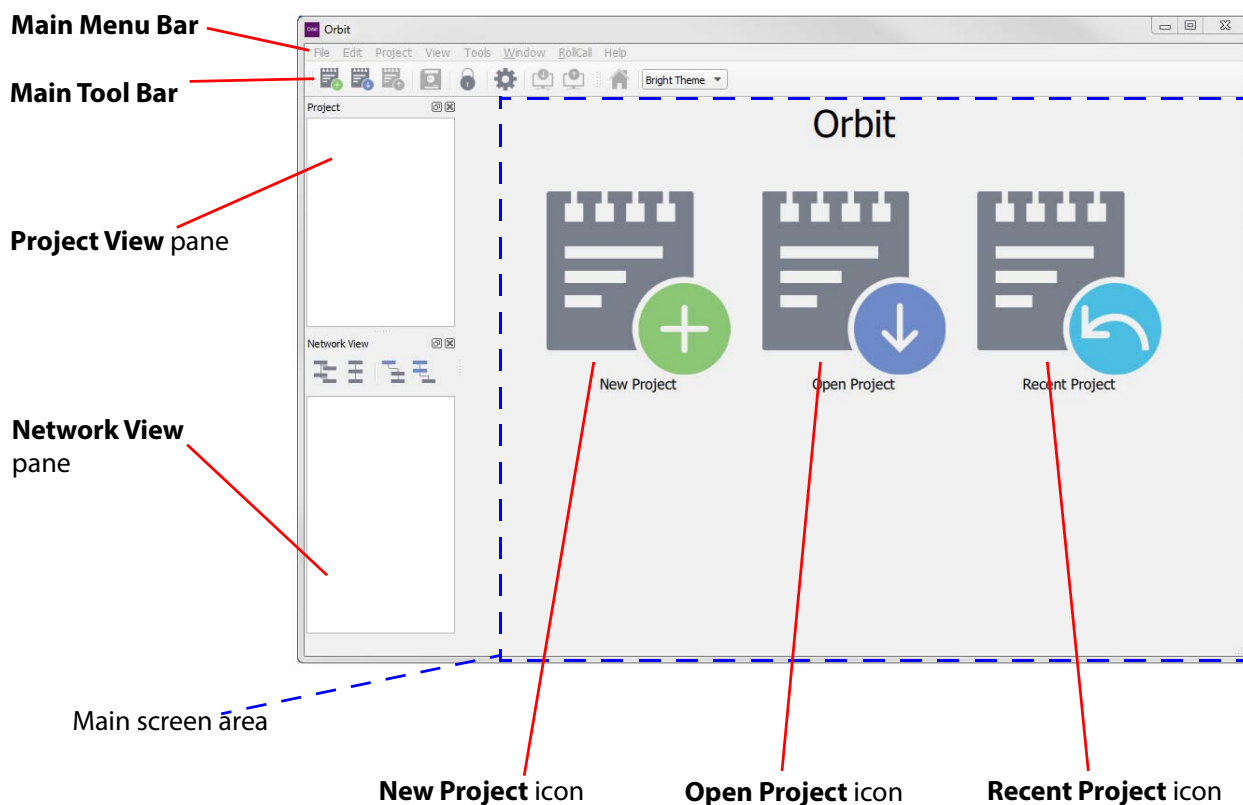


Fig. 6-4: Orbit Initial Screen Features

#### Main Menu Bar:

See Chapter 4 [“Main Menu Bar”](#) on page 26.

#### Main Tool Bar:

See Chapter 5 [“Orbit Main Tool Bar”](#) on page 87.

#### Network View:

See Chapter 6 [“Managing Panes”](#) on page 100.

See Chapter 6 [“Using the Network View Pane”](#) on page 103.

#### Project View:

See Chapter 6 [“Managing Panes”](#) on page 100.

See Chapter 6 [“Using the Project View”](#) on page 107.

#### New Project, Open Project and Recent Project:

See Chapter 7 [“Opening Projects”](#) on page 113.

When a project is opened, the Orbit Project Home Screen is shown. This is described in Chapter 8 [“Project Home Screen”](#) on page 125.

**Note:** The **Recent Project** icon is only displayed if one or more projects have already been created or opened by your Orbit.

**Note:** A project is considered to be “new” in Orbit, if it has not been opened by that Orbit before.

## Managing the Main Tool Bar

The **Main Tool Bar** contents vary depending on which type of Orbit project is opened and on which Orbit screen is being shown. All the functions of each tool bar icon are described in Chapter 5 “Orbit Main Tool Bar” on page 87.

Figure 6-5 shows the entire tool bar, which is visible with an Orbit multiviewer project.

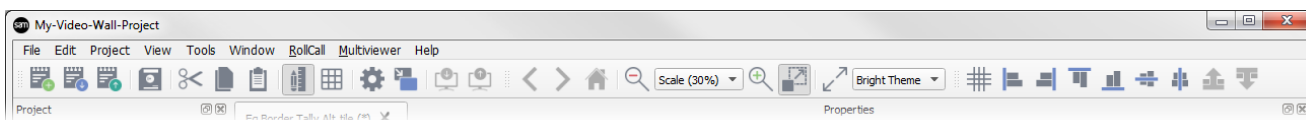
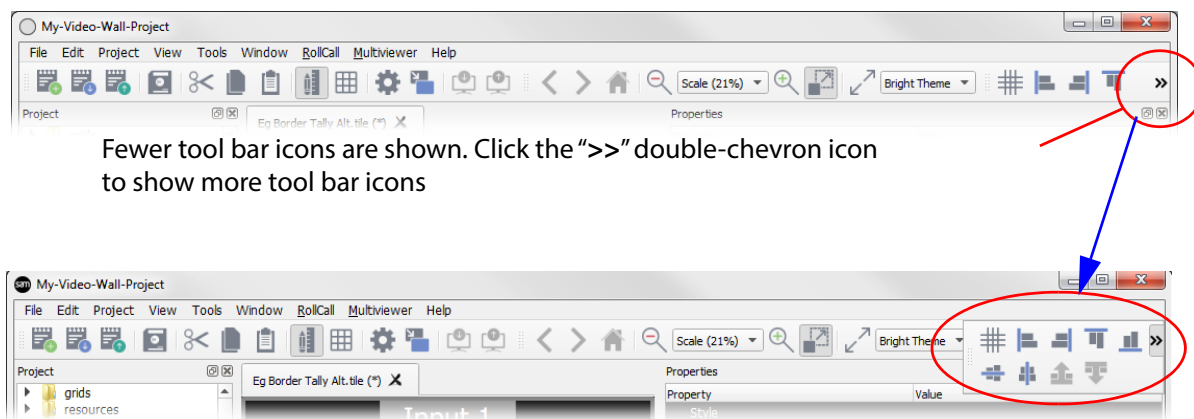


Fig. 6-5: Main Tool Bar Icons

If the Orbit window width is not sufficient to show all the tool bar icons, then fewer tool bars icons are shown and a “>>” double-chevron icon in the tool bar allows the user to access other icons. See Figure 6-6.



Fewer tool bar icons are shown. Click the “>>” double-chevron icon to show more tool bar icons

Fig. 6-6: Accessing more Main Tool Bar icons, “>>” icon

Icons in the tool bar are arranged in sections. See Figure 6-7.

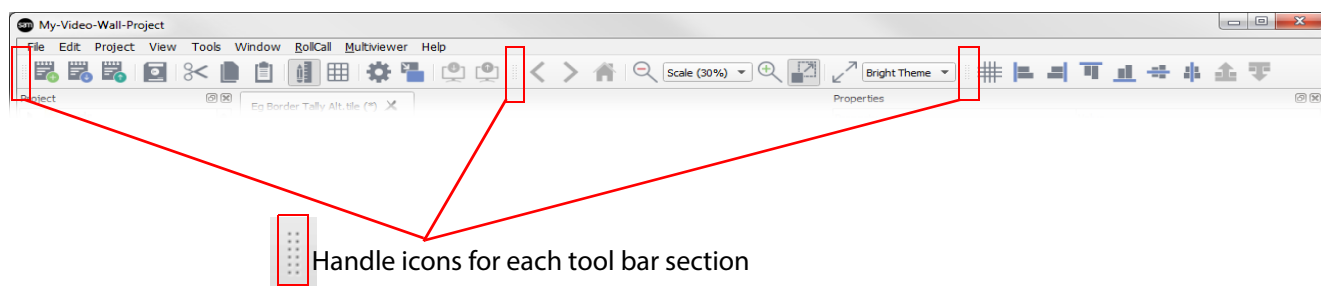


Fig. 6-7: Main Tool Bar sections

Tool bar sections may be moved around on-screen using the handle icons within the tool bar, as shown in Figure 6-8.

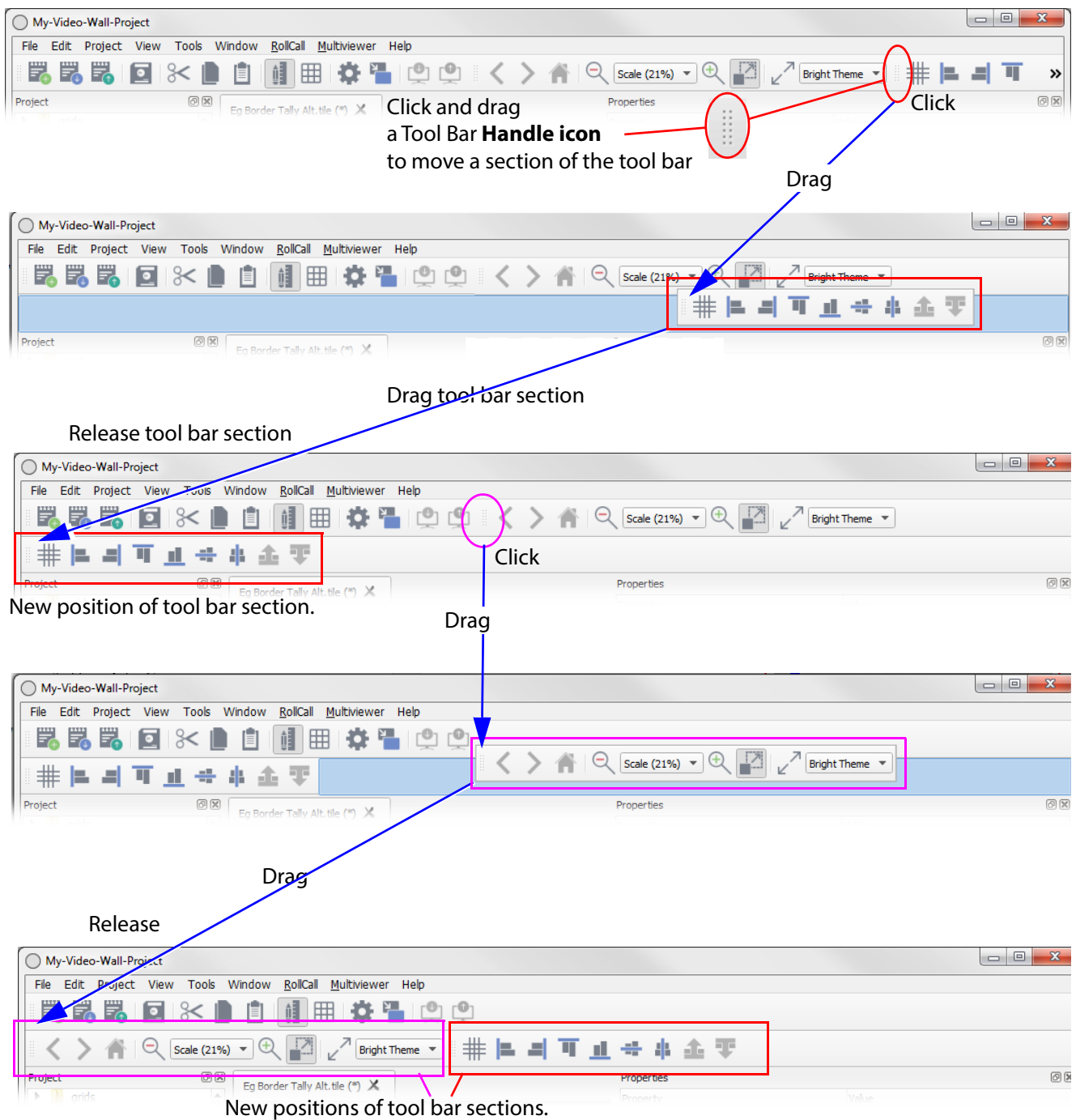
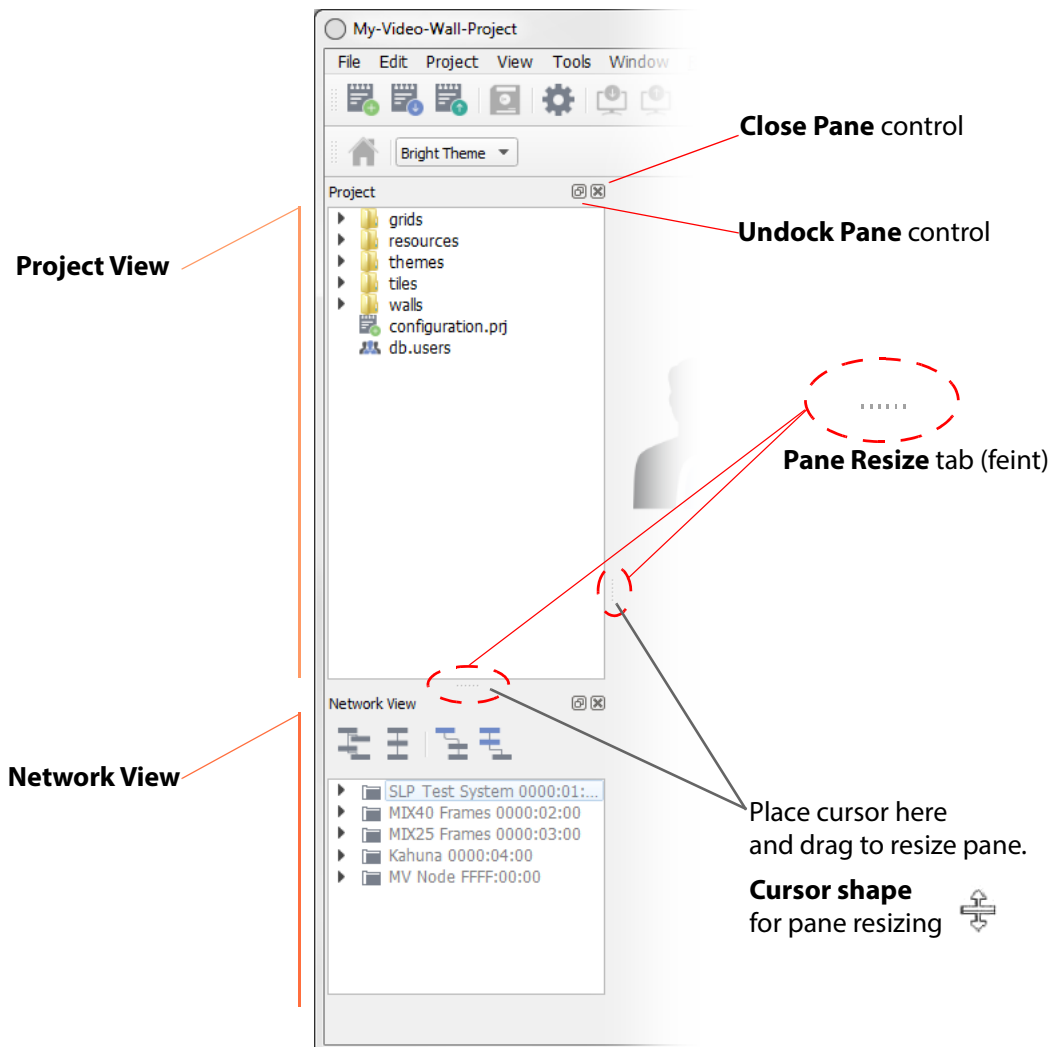


Fig. 6-8: Re-arranging Tool Bar sections

## Managing Panes

The **Network View** and **Project Views** panes appear on the left-hand side of the Orbit screen, by default.



*Fig. 6-9: Orbit Network View and Project View (Multiviewer project shown)*

The pane layout and visibility can be controlled:

- **Size** - Pane size is adjusted by placing your cursor between the two panes at the small, faint **Pane Resize** tab; your cursor should change shape, see Figure 6-9. Then drag the cursor to resize the pane(s).
- **Docking** - Panes can be independently docked and undocked from the Orbit main window.  
See [Undocking Panes](#), on page 101.
- **Tabbed** - Panes can be presented in a tabbed format, with one pane on top of the other.  
See [Tabbed Panes](#), on page 102.
- **Visibility** - Panes can be made visible or closed independently. Use the “x” close window control (top right of pane) and the **View > Window** menu option.

## Undocking Panes

Click on the small **Undock Pane** control icon at the top right of each pane to undock the corresponding pane from the Orbit main window, as shown in Figure 6-10.

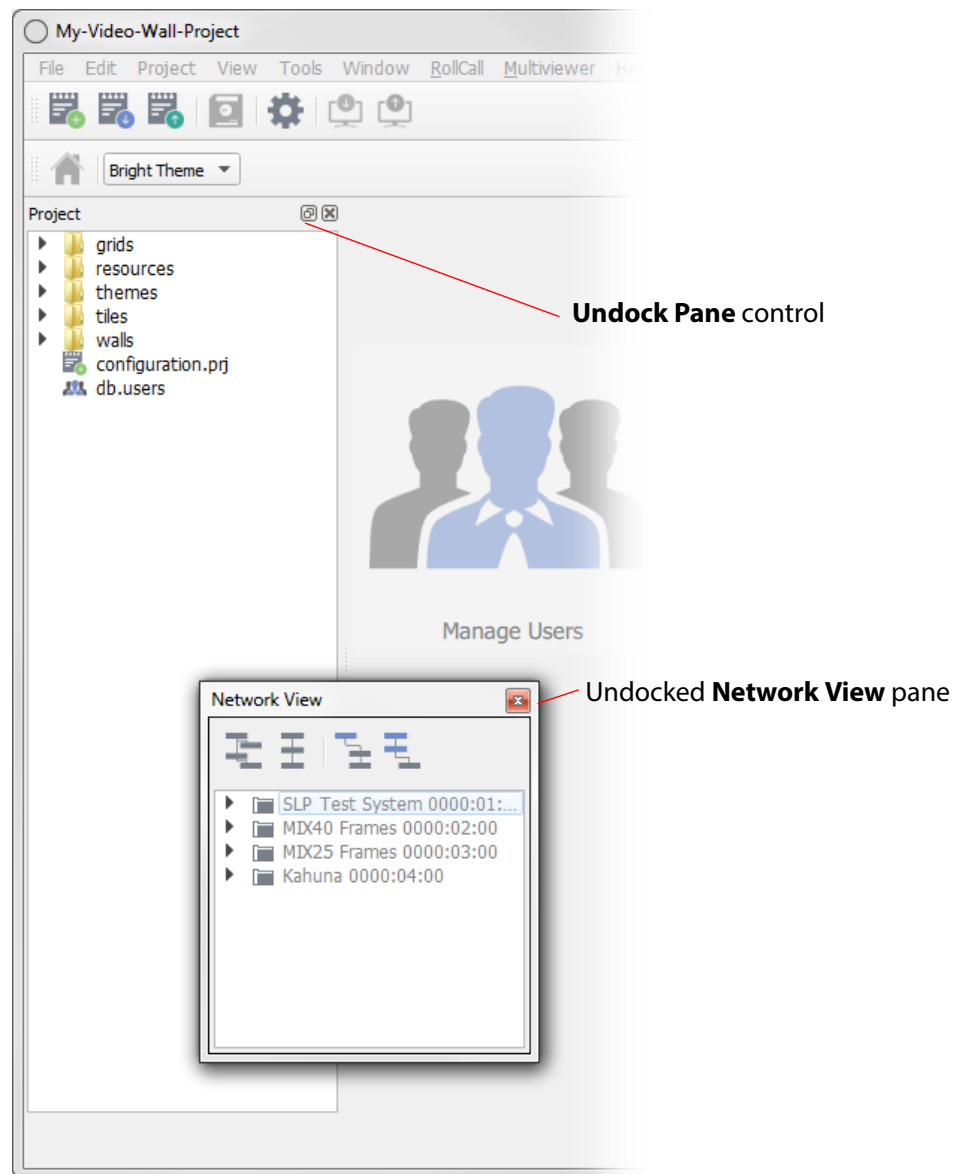


Fig. 6-10: Undocked Network View Pane (Multiviewer project shown)

## Docking Panes

To re-dock a pane, drag the pane into the Orbit main window area and release. Panes may be placed on the left- or right-hand side, or along the top or bottom of the screen.

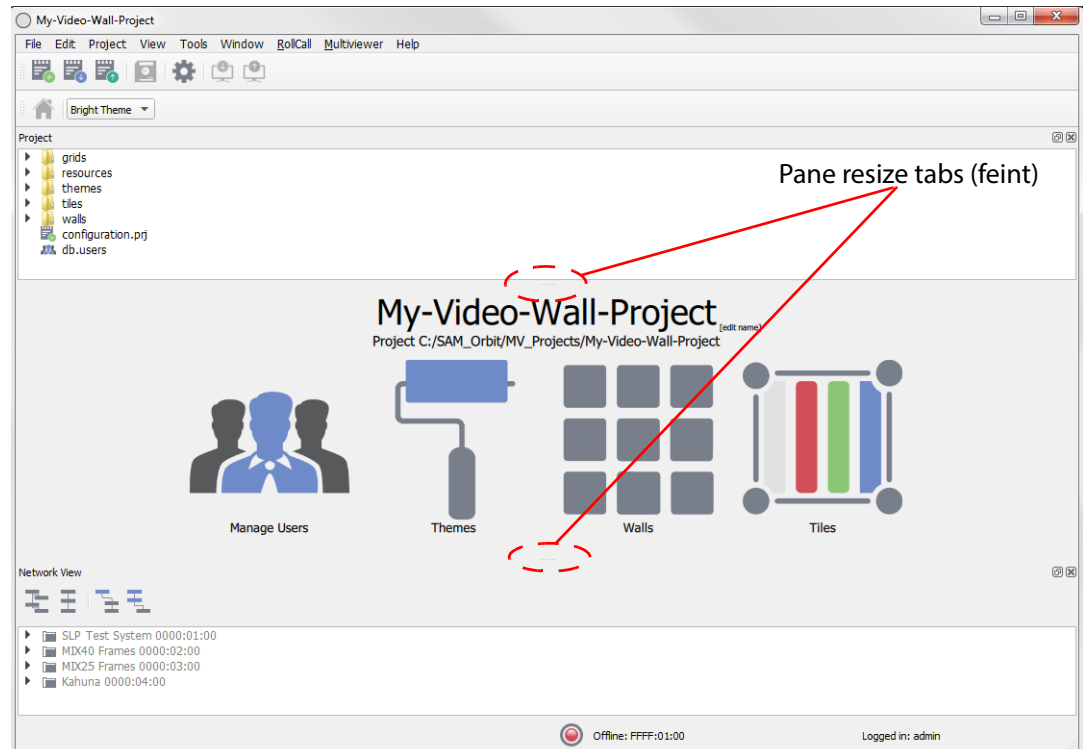


Fig. 6-11: Multiviewer project Example: Panes Docked along Top and Bottom

## Tabbed Panes

Panes can be presented in a tabbed arrangement:

- 1 Undock a pane and drag the pane on top of the other pane and release.
- 2 The tabbed arrangement is shown in Figure 6-12.

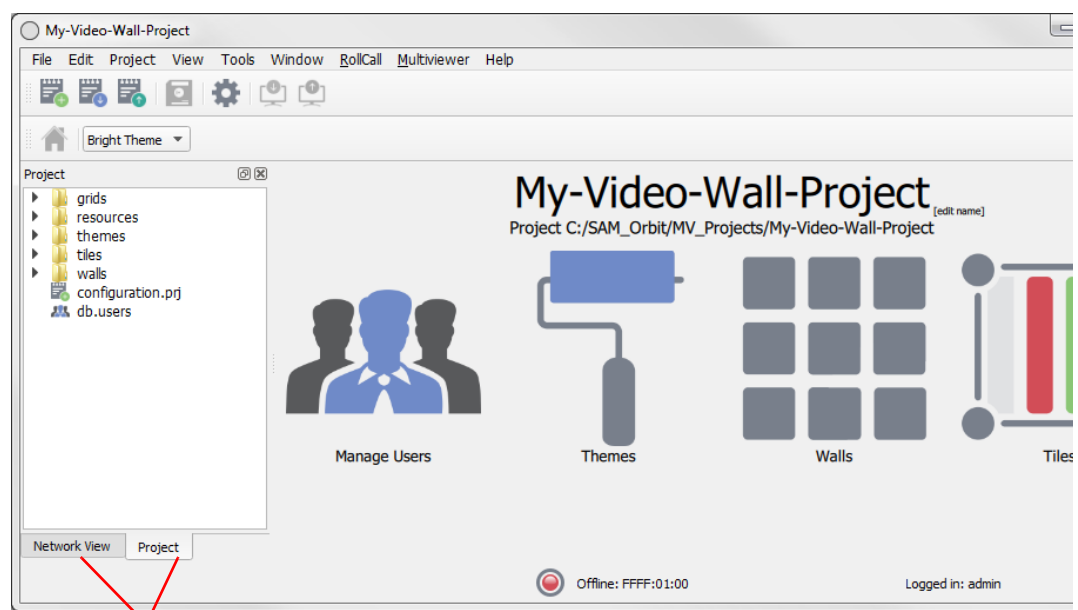


Fig. 6-12: Tabbed Network View and Project View Panes (Multiviewer project shown)

## Using the Network View Pane

The **Network View** pane displays the Grass Valley RollCall-enabled units that the Orbit application can see over the network on the selected RollCall+ domain. By default, the RollCall+ domain number 100 is selected.

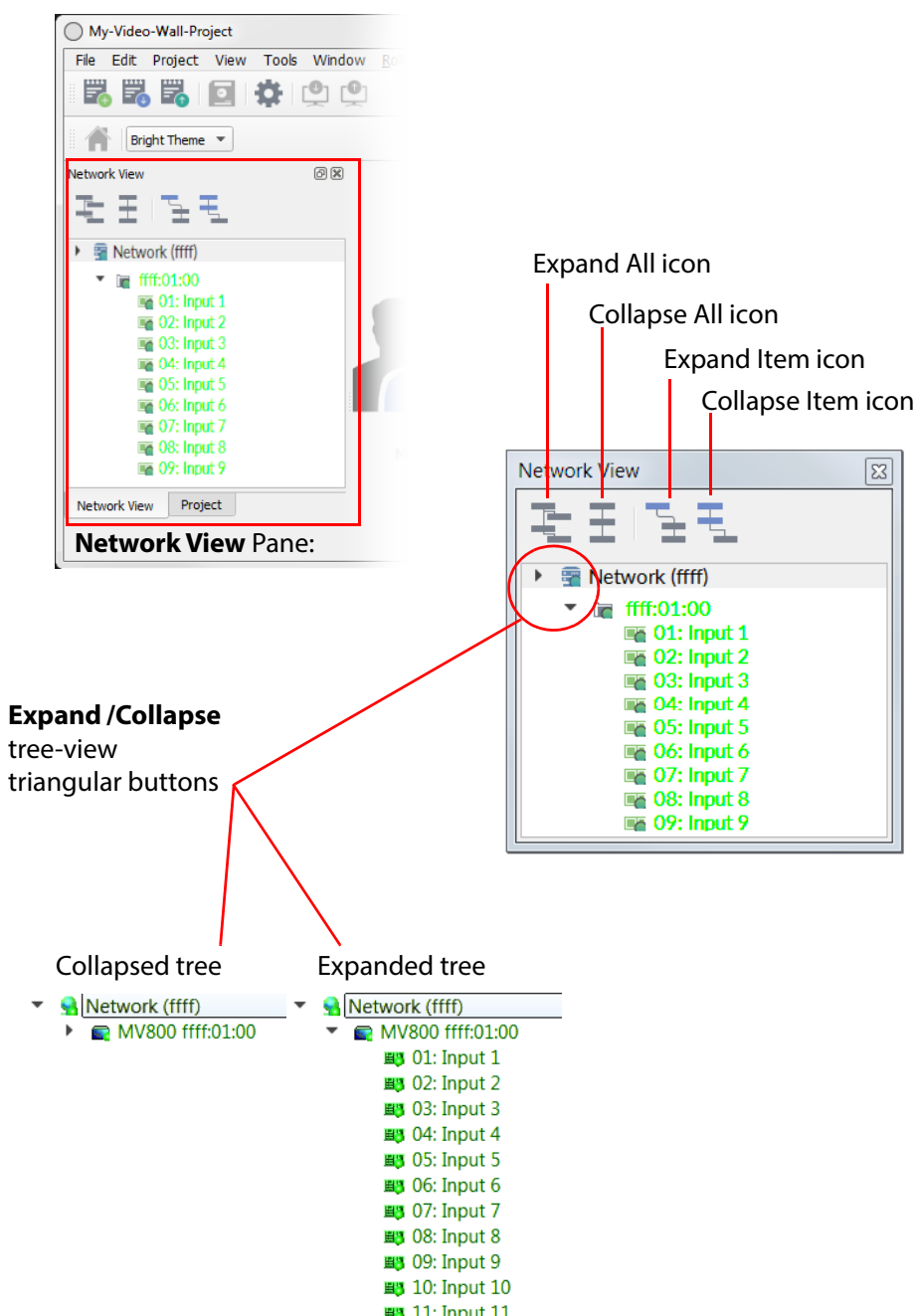


Fig. 6-13: Orbit Network View (Multiviewer project shown)

The **Network View** pane displays a tree view of RollCall-enabled units, which may be expanded or collapsed by clicking on the **Expand** or **Collapse** triangular button icon to the left of each tree view item, or by clicking the **Expand All**, **Collapse All**, **Expand Item** or **Collapse Item** icons located above the tree view area.

Right-Click in Network View

Right-click on a unit name in the **Network View** to carry out some unit-level operations or view information about units listed in the **Network View**:

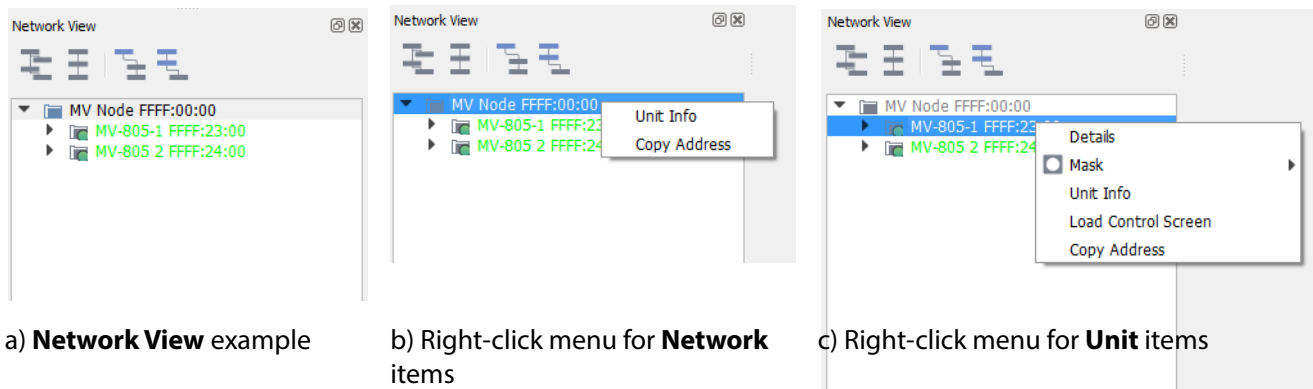


Fig. 6-14: Network View - Right-Click Menus

The unit item names in the **Network View** pane are written in:

- **Green** when all is OK on the unit.
- **Yellow** for a warning condition.
- **Red** for a fail condition.

The right-click menu items are described in Table 6-1.

Table 6-1 Network View - Right-Click Menu Items

Menu Item	Description
Details	Click to show full, live details about the item, including: <ul style="list-style-type: none"><li>• Temperatures.</li><li>• System up time.</li><li>• IP port numbers.</li><li>• IP addresses.</li></ul> See Figure 6-15.
Mask	Click to mask log messages from the unit. Mask options are: <ul style="list-style-type: none"><li>• Mask/Unmask Unit.</li><li>• Mask Unit Until Green.</li><li>• Mask Unit Until Time.</li></ul>
Unit Info	Click to show summary, static information about the item, including: <ul style="list-style-type: none"><li>• Unit Name.</li><li>• RollCall Address.</li><li>• Host IP Address.</li><li>• Available Services.</li></ul> See Figure 6-16.

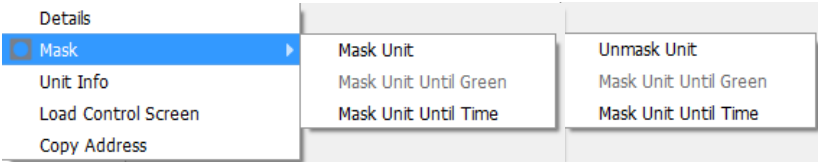




Table 6-1 Network View - Right-Click Menu Items (continued)

Menu Item	Description
<b>Load Control Screen</b>	Click to load the RollCall template for the unit into Orbit. This is displayed in a new tab in the main screen. <b>Note:</b> RollCall template may be opened if the <b>RollCall &gt; Network Map</b> 'Enable Network Map' is set. (See main menu.)
<b>Copy Address</b>	Click to copy item's RollCall address into copy/paste buffer.

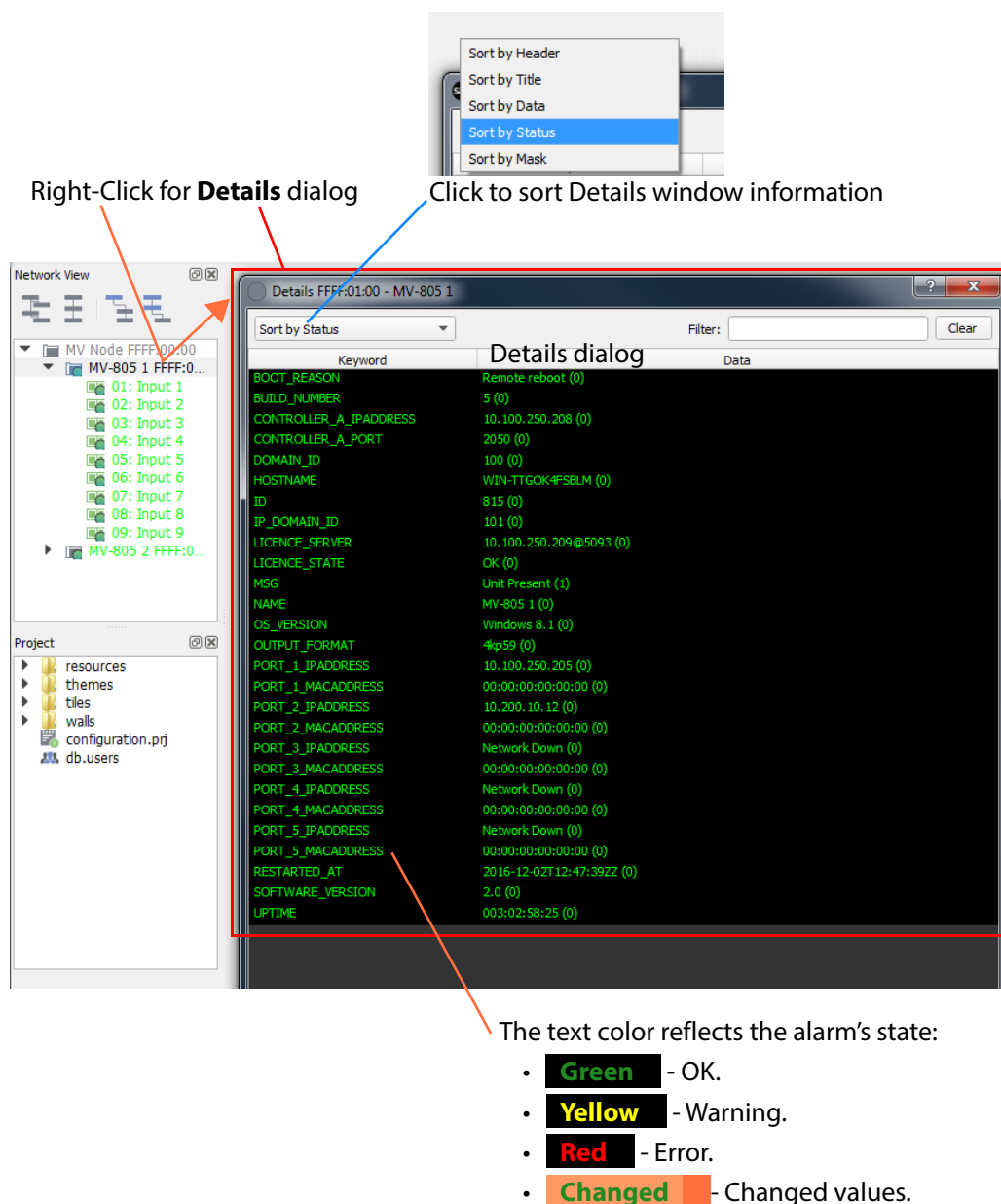
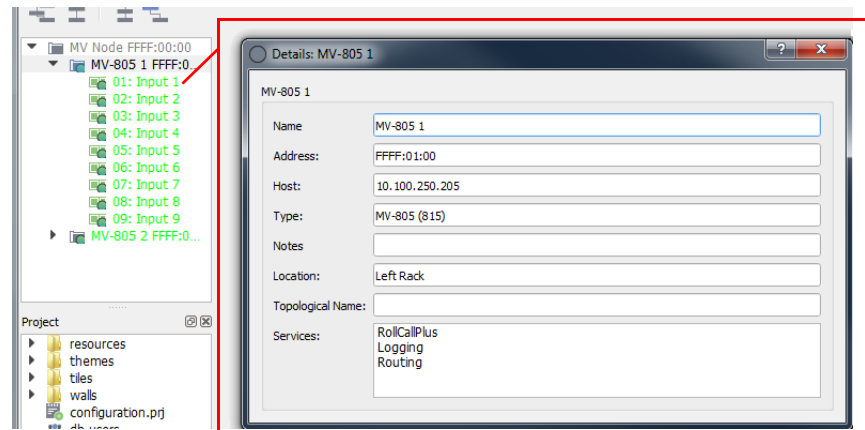


Fig. 6-15: Network View - Right-Click &gt; Details (Multiviewer project shown)



*Fig. 6-16: Network View - Right-Click > Unit Info (Multiviewer project shown)*

## Using the Project View

The **Project View** displays the Orbit projects that have previously been opened by the Orbit application. Projects can be:

- Opened and loaded into Orbit with a right-click.
- Removed from the list with a right-click.

See Figure 6-17.

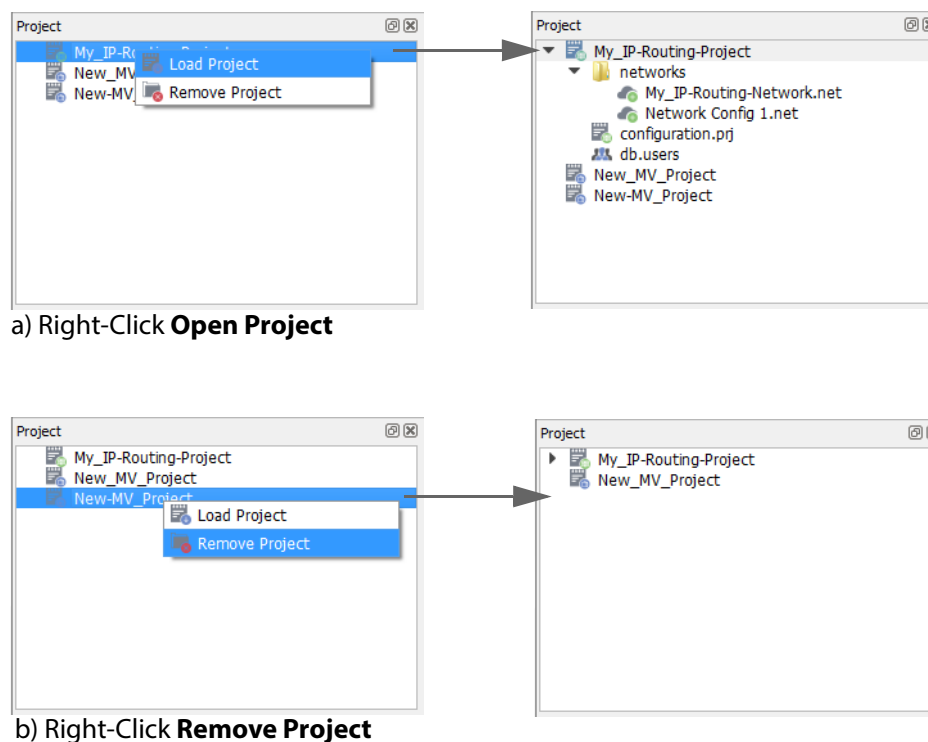


Fig. 6-17: Project View Right-Click Menus:

- a) Open Project.
- b) Remove project.

## Using the Project View in a Project

See Chapter 8 [“Using Project View in a Project”](#) on page 134.

## Orbit Projects

All layout, setting and design information is stored in an Orbit project.

Projects are accessible from the Orbit **Initial Screen**.

This project-based work-flow enables various projects to be pushed to a device.

For example, multiple video wall designs can be stored on a PC and pushed to a multiviewer device for use in different end-applications.

Projects can be created from scratch, opened from PC storage or pulled from a device.

A project may be viewed and edited in Orbit in 'design mode'. When editing is complete, the project can be saved to the local PC storage and pushed to a device that Orbit is connected to.

## Project Names

The **Project Name** is used as an identifier by Orbit. **Project Names** should be meaningful, concise and unique. Use unique project names for each device (for example, for each multiviewer).

Local copies of projects and projects on devices (for example, multiviewer devices) that have the same **Project Name** are treated as being versions of the same project.

If a default project has been pulled from a multiviewer, re-name the project before pushing it back to the multiviewer.

When a project is opened in Orbit, the project name may be edited, if required. This forms a new, separate Orbit project.

**Note:**

### **Project Names:**

Use unique project names for different multiviewers.

If a project has been opened from a multiviewer:

- If it is a default multiviewer project, then re-name the project before pushing it back to any multiviewer.
- If it is a normal multiviewer project, then re-name the project unless it is to be pushed back to the same multiviewer.

A project may be re-named at the **Project Home Screen**.

## Orbit Opening a Project

Orbit aims to keep a project up to date. If there are any differences between a project in Orbit and the same-named project on a connected device (for example, on a multiviewer), the user is required to resolve a difference by choosing between projects before proceeding to edit the project.

When opening a project, Orbit follows a sequence of actions:

- 1 Orbit attempts to connect to the specified unit (For example, to a multiviewer).
- 2 Orbit checks for a project with the same name.
- 3 Orbit checks for any differences between a local project and the unit's project.
- 4 Orbit warns the user if a local project and a project on a connected unit differ.
- 5 Orbit prompts the user to decide which copy of the project is to be edited.

## Using Tabbed Screens

Some Orbit screens are tabbed themselves, for example, the **Manage Users** screen. shown in Figure 6-18.

Main screen area,  
showing the  
**Manage Users**  
screen and tabs

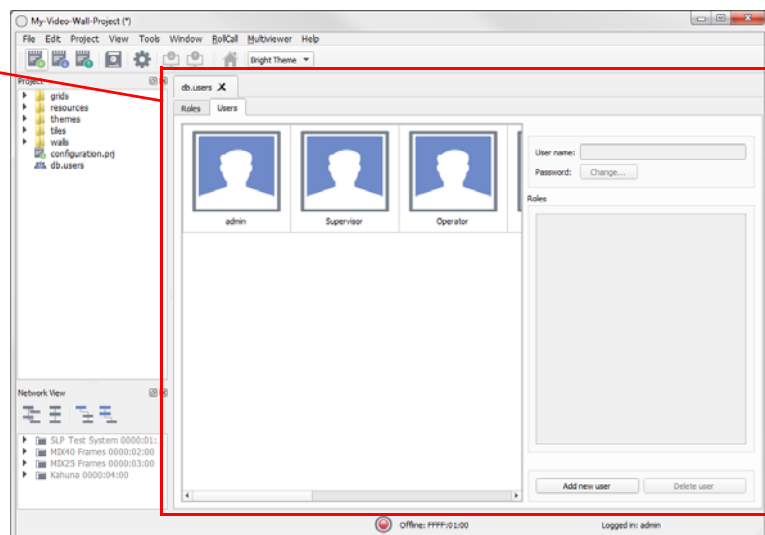


Fig. 6-18: Main Screen Area and a tabbed screen (Manage Users screen shown)

When using Orbit to edit projects, it is common to have more than one project item open the main screen area. In this case, several screen tabs appear, see Figure 6-19. Click on each screen tab to see the corresponding screen.

Screen Tabs

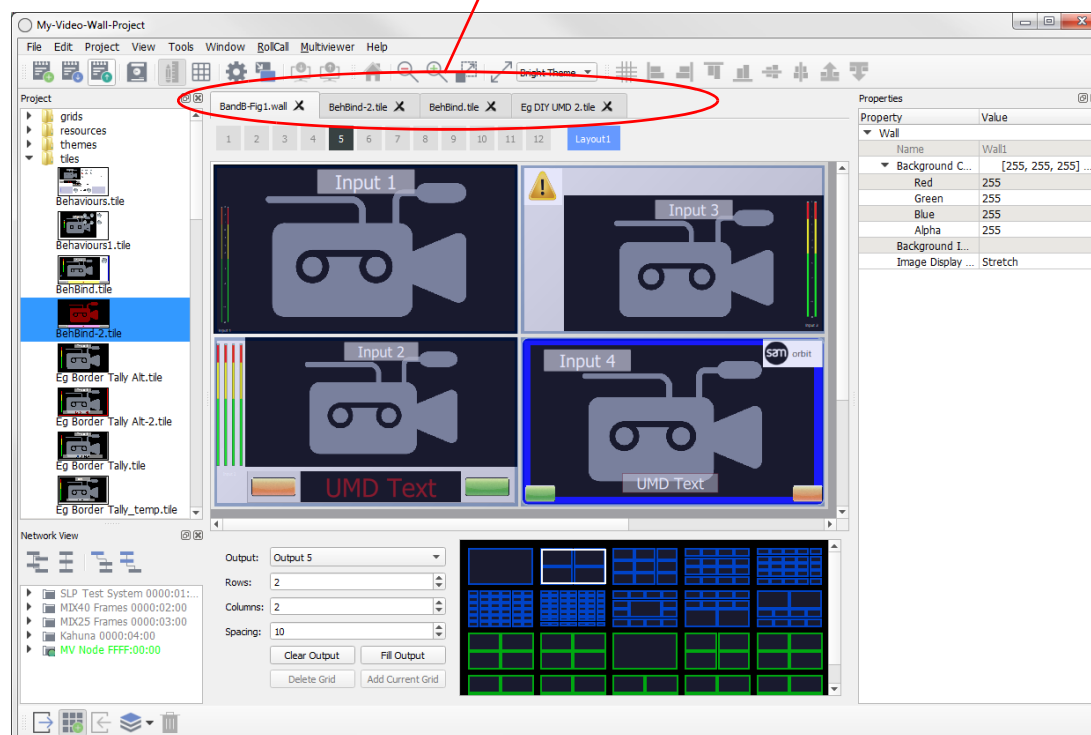


Fig. 6-19: Main Screen Area and Screen Tabs (Multiviewer project shown)

If there is not enough screen space to show all the screen tabs, then fewer tabs are shown and navigating to other screen tabs is achieved with tab left- and right-arrows. See Figure 6-20.

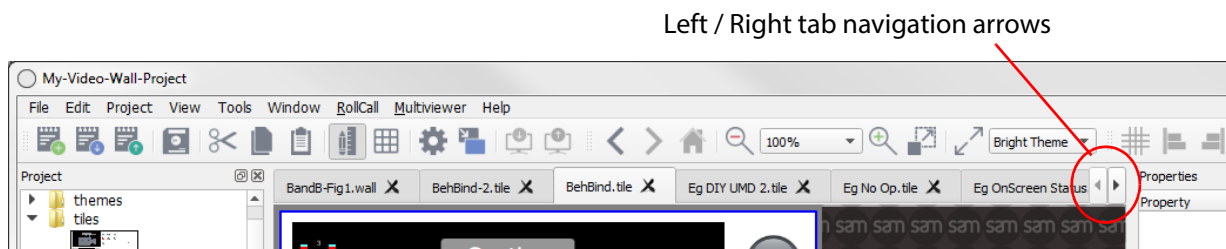


Fig. 6-20: Screen Tabs with Left / Right Tab Navigation Arrows

## Tab Labels

Each screen tab has a label. (For the **Manage Users** tab, the label is “db.users”, see Figure 6-21.)

If a change has been made in a screen, an asterisk (\*) is appended to its screen tab label as a reminder that there are unsaved changes, see Fig. 6-21:.

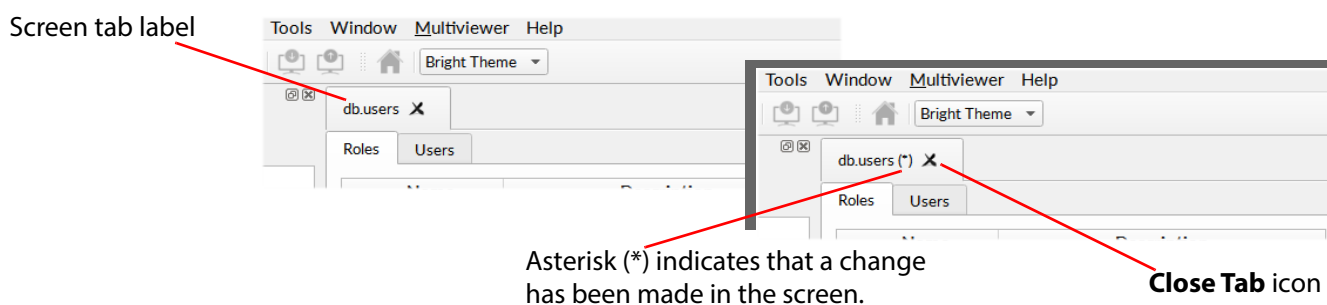


Fig. 6-21: Screen Tab Label, (\*) and Close Tab Icon

## Save Changes (in a Screen)

To save changes in a single screen:

- Click the **Save** icon in the main screen tool bar.

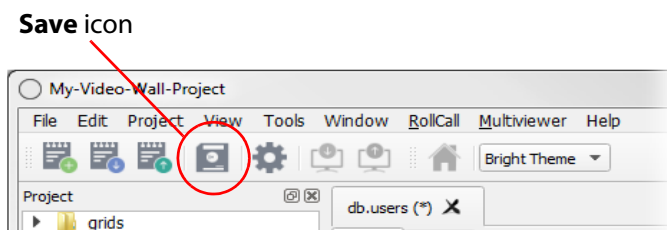


Fig. 6-22: Click the **Save** Icon to Save Changes made in a Screen

**Note:**

Clicking the **Save** icon only saves changes in the screen being shown.

To save all changes in all screens, click the **Save Project** icon in the main menu.

## Save All Changes

To save all changes in all screens:

- Click the **Save Project** icon in the main screen tool bar.

### Save Project icon

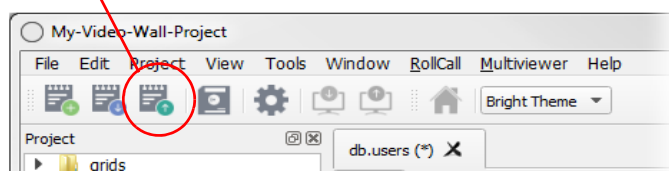


Fig. 6-23: Click the **Save Project** Icon to Save All Changes

## Closing a Tab

Click the **Close Tab** icon on the tab (see Figure 6-21), to close the screen.

If there are any unsaved changes in the tab, a prompt appears, asking to save any changes.

For each screen, there is a corresponding file created in the Orbit project; this file is shown in the **Project View**. This file contains all the information entered at the screen.





# 7 Opening Projects

## Summary

### Opening Projects

<a href="#">Initial Screen's "Project" Icons</a>	page 113
<a href="#">How to Open New Projects</a>	page 114
<a href="#">New Project - Multiviewer Project or IP Multiviewer Project or IP Routing</a>	page 114
<a href="#">New Project - Connected Multiviewer Project</a>	page 118
<a href="#">How to Open an Existing Project</a>	page 122
<a href="#">How to Open a Recent Project</a>	page 124

## Initial Screen's "Project" Icons

Orbit's project-based work-flow stores information in Orbit projects. The "Project" icons of the **Initial Screen** (Figure 7-1) allow the user to access an Orbit project.

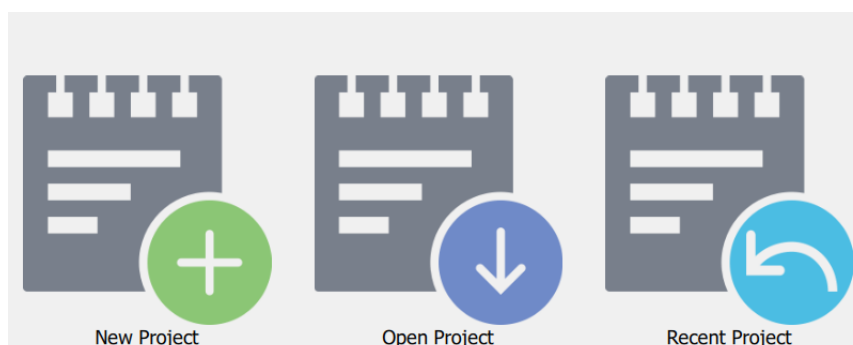


Fig. 7-1: Orbit Initial Screen "Project" Icons

Table 7-1 "Project" icons on the Orbit Initial Screen

Open Project Icon	Description
<b>New Project</b>	<p>Click to open the New Project dialog box.</p> <p>A new project can be created from scratch or, in some cases, a new project can be obtained from a unit that Orbit is connected to. For example, from a multiviewer unit.</p> <p>See <a href="#">How to Open New Projects</a>, on page 114.</p>
<b>Open Project</b>	<p>Click to open the Open Project dialog box.</p> <p>The user can open an existing Orbit project, i.e. one which has been saved to storage on a PC or on a server.</p> <p>See <a href="#">How to Open an Existing Project</a>, on page 122.</p>
<b>Recent Project</b>	<p>Click to reveal a list of projects that have been recently accessed by your Orbit application. Project names are listed. Place the cursor on a name and the full project file path is shown.</p> <p>See <a href="#">How to Open a Recent Project</a>, on page 124.</p>

**Note:** The **Recent Project** icon is only displayed if one or more projects have already been created.

## How to Open New Projects

Click on the **New Project** icon in the **Orbit Initial Screen** and a **New Project** dialog is displayed.

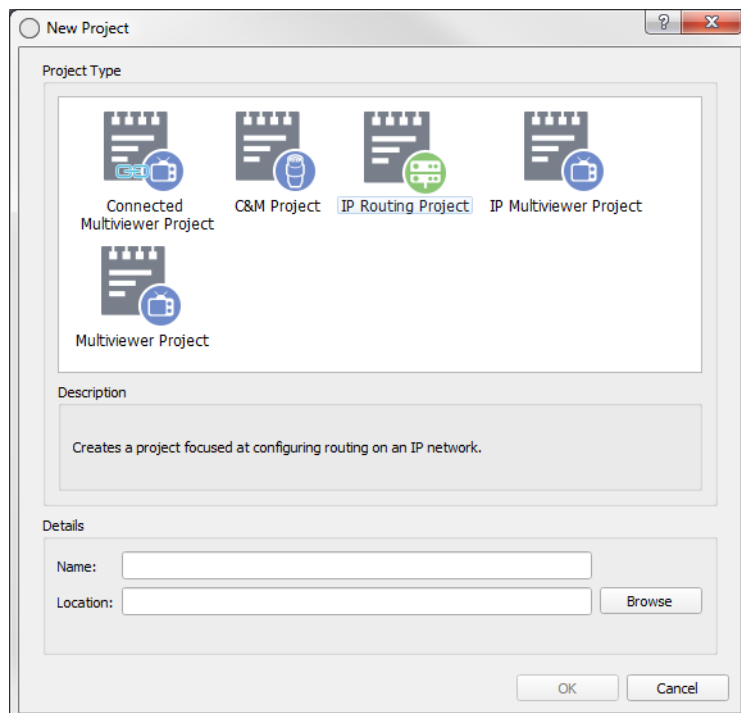


Fig. 7-2: New Project dialog

The types of new multiviewer project that may be created are:

- **Multiviewer Project** - Creates a new Orbit project for a Grass Valley MV-8 series multiviewer on the local PC for editing in Orbit.
- **IP Multiviewer Project** - Creates a new Orbit project for an MV-805 IP Multiviewer on the local PC for editing in Orbit.
- **Connected Multiviewer Project** - This option connects to a multiviewer and pulls the project from the unit onto the local PC for editing in the Orbit application.
- **IP Routing Project** - Creates a new Orbit project for a IP Routing.
- **C&M Project** - Creates a project for general control and monitoring.

**Note:**

**Multiviewer Project and IP Multiviewer Project:**

Multiviewer projects for IP multiviewers (e.g. an MV-805) and for “non-IP” multiviewers (e.g. an MV-820) are similar. They have a few differences (for example, maximum number of inputs). The instructions for opening projects etc are almost identical and the following sections apply to *both* types of project.

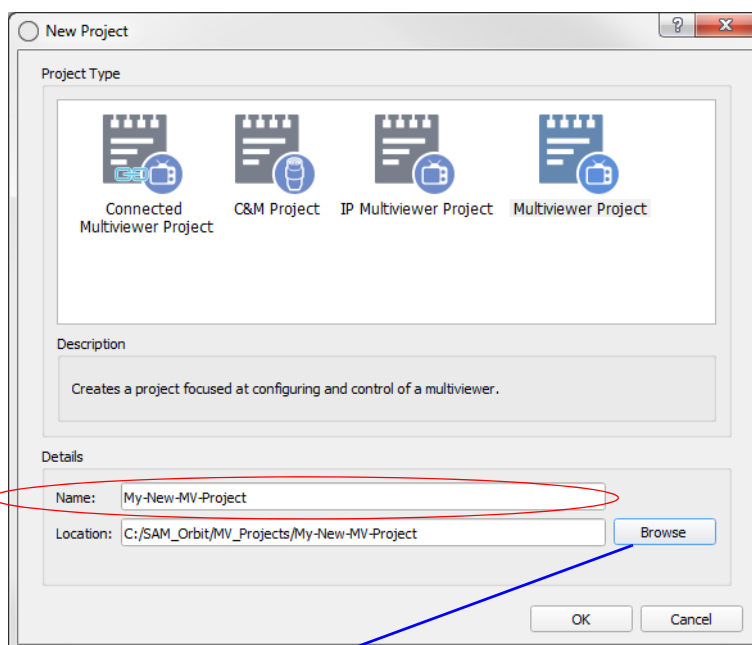
### New Project - Multiviewer Project or IP Multiviewer Project or IP Routing

- 1 Click on the **New Project** icon from the Initial Screen or select **File > New Project** from the menu bar.
- 2 To create a new project:  
Click on the **Multiviewer Project** icon for a MV-8 series multiviewer (non-IP).  
or Click on the **IP Multiviewer Project** icon for an MV-805 IP Multiviewer.  
or Click on the **IP Routing Project** icon for an IP Routing application.  
Then the text boxes below the icon are now no longer grayed-out.
- 3 Enter a name for the project in the **Name** text box, see Figure 7-3.

**Note:** The project name entered in the **Name** text box is used to identify the project and should be a concise, descriptive and unique name.

New project **Name**  
in text box

a) New Project Dialog

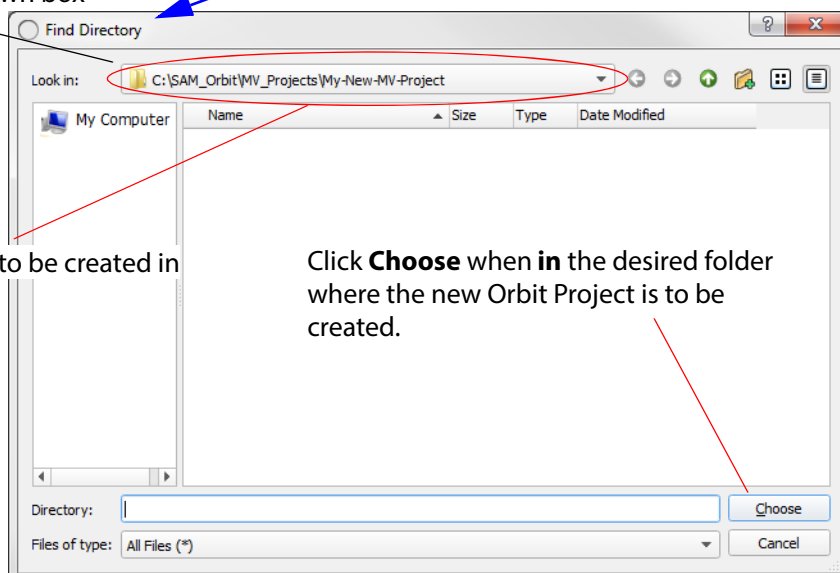


**Look In** drop down box

Folder path  
for new project to be created in

Click **Choose** when **in** the desired folder  
where the new Orbit Project is to be  
created.

b) Find Directory Window



*Fig. 7-3: Creating a Project:*  
a) *New Project Dialog.*  
b) *Find Directory window.*

The new project will be stored in a folder.  
To define where the project is to be stored on the Orbit PC, do the following:

- 4 Click **Browse**.  
The **Find Directory** window appears.

Browse down *into* the folder where the new project is to be stored. See Figure 7-3b.

5 When you are *in* the desired folder, click **Choose**.

**Note:**

When clicking **Choose**, the path to the folder (directory) name should be shown in the **Look In** drop-down box at the top of the **Find Directory** window. See Figure 7-3.

6 After clicking **Choose**, the **New Project** window is shown with the text boxes filled out. See Figure 7-4:

- Project name is shown in the **Name** text box.
- Path to the folder path is shown in the **Location** text box.

Multiviewer project

IP Routing project

Fig. 7-4: Project Creating - After clicking "Choose"

For an IP Routing project:

7 Click **OK**.  
A new project is created.

For a Multiviewer project:

8 Click **Next**.  
An **Output Size** dialog is shown, see Figure 7-5.

Fig. 7-5: Output Size Dialog

9 Select the multiviewer output screen size at the drop-down box.  
**Output Size** options are: 1920x1080 and 1280x720.

10 Click **OK** to create the new project.

A new, blank Orbit project is then created.

**Note:****Output Size** setting:

A display resolution of 1080p or 720p is supported by the multiviewer's display outputs. This setting is project-wide and applies to all 12 display outputs.

## The New Orbit project

The new Orbit project is stored at the location shown in **Location**, in a sub-folder with the project name. Figure 7-6 shows the PC folder structure that results in this example case.

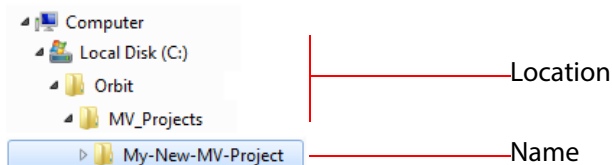


Fig. 7-6: Example Folder structure on PC

A new Orbit project is now open in the Orbit application. By default, you will be automatically logged into the new Orbit project at 'admin' user level.

**Default username** - admin

**Default password** - admin

After logging in, the Orbit **Project Home** screen is displayed and shows four large icons. See Chapter 8 "[Project Home Screen](#)" on page 125 for details.

**Note:**

The 'admin' user has administrator role privileges, which enable all operations within Orbit to be carried out.

**Note:**

Record any user roles, user names and especially user passwords that are used.

The default password should be changed as soon as you log in for the first time, see Chapter 9 "[Manage Users](#)" on page 143.

**Important**

There is no user recovery mechanism for the admin password.  
Keep a careful and secure note of the password used.

## New Project - Connected Multiviewer Project

If a multiviewer contains an existing Orbit project, the project can be pulled from the unit by the Orbit application. This enables the user to store the project in a selected folder on their PC and edit the project:

- 1 Click on the **New Project** icon on the Initial Screen  
or select **File > New Project** on the menu bar.
- 2 Select the **Connected Multiviewer Project** icon to create a new project.

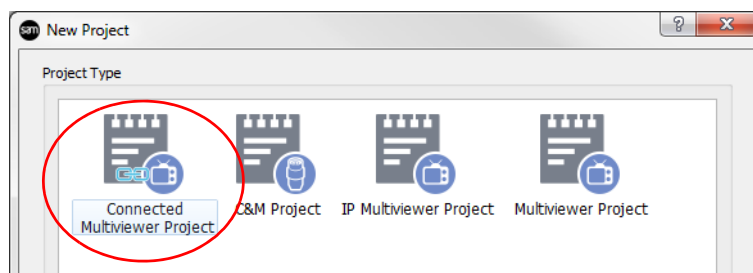


Fig. 7-7: Click on "Connected Multiviewer Project" icon

- 3 Click **Browse** in the "New Project" dialog.  
And browse to an *empty* folder on your PC, where the Orbit project can be placed after it has been pulled from a multiviewer unit.
- 4 When you have browsed *into* the empty folder, click **Choose**. See Figure 7-8.

**Note:**

When choosing a folder for a Connected Multiviewer Project to be pulled into, the folder must be *empty*.

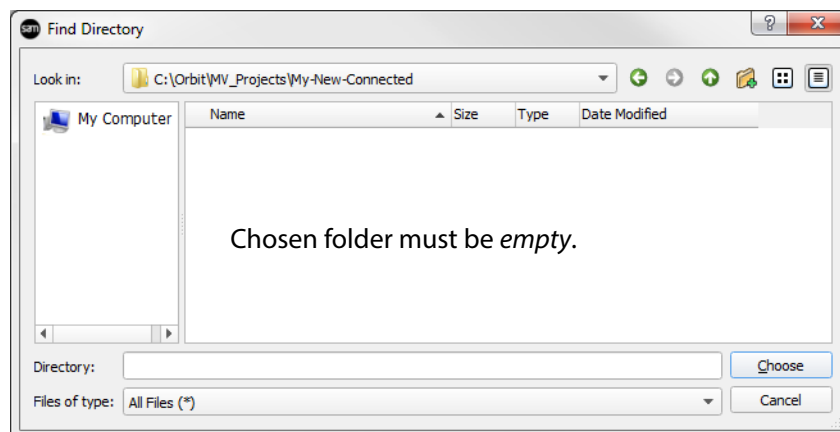


Fig. 7-8: Choose an Empty Folder for a Connected Orbit Project

- 5 After choosing the folder location, click **Next**.

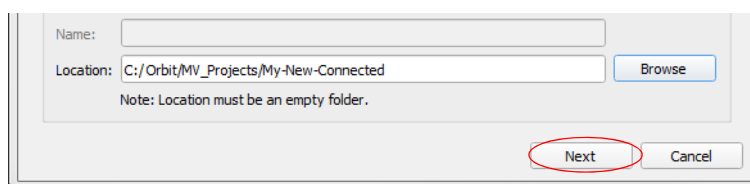


Fig. 7-9: Folder Chosen for Connected Orbit project

Now select the multiviewer unit to connect to:

6 Select your multiviewer unit from the ones listed:

Click on the item in the “Name” column. See Figure 7-10a and Figure 7-10b.

**Note:**

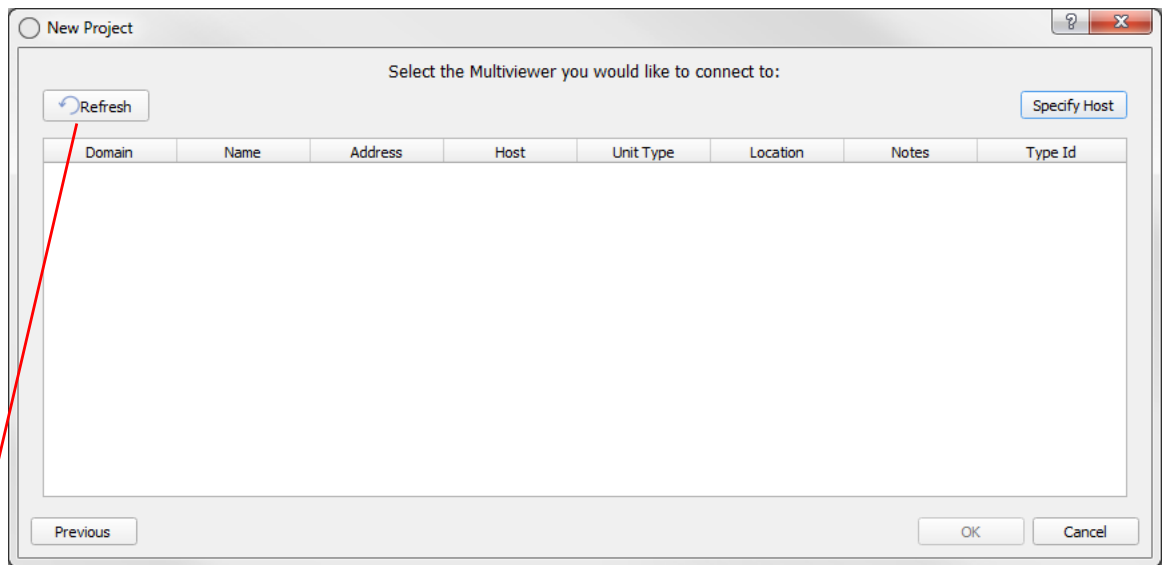
For multiviewer units with multiviewer unit software v2.13.32, or later, advertise their presence on domain 0, for discovery:

- Use Figure 7-10a.

For other units:

- Click **Specify Host** button and use Figure 7-10b;  
specify a domain or unit a host IP address.

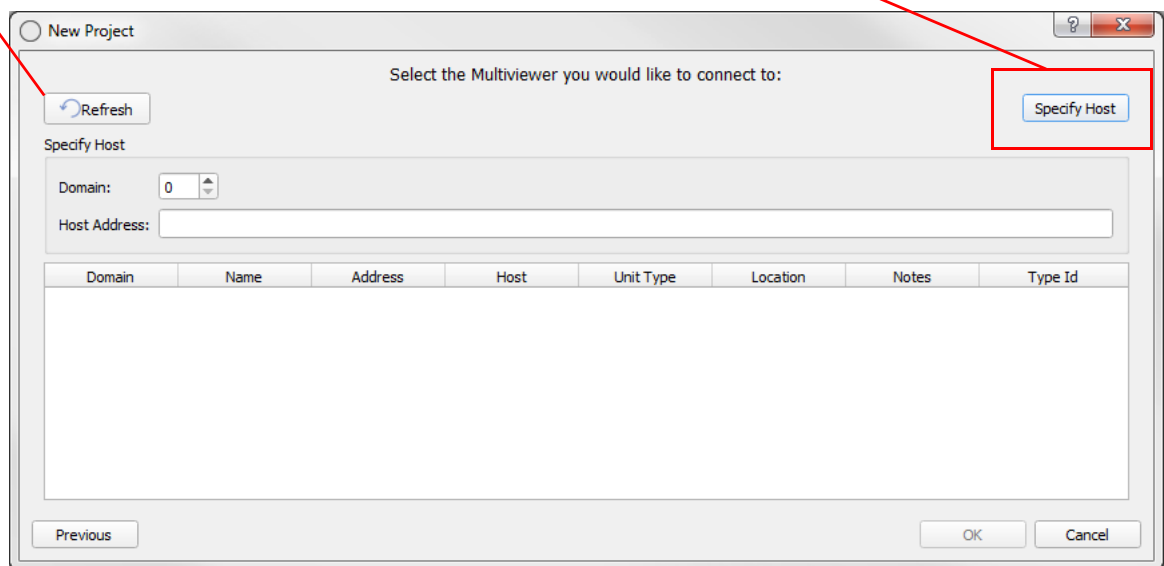
Check that the RollCall+ domain number (**Domain**) is correct for your selected multiviewer unit.



a) Selecting Multiviewer Unit (Multicast discovery)

Click **Refresh** to refresh the display of units.

Click **Specify Host** to specify a domain or a unit IP address.



b) Selecting Multiviewer Unit (Specify Host - Specify a domain or a unit's host IP address)

Fig. 7-10: Selecting Multiviewer unit

7 Click **OK**.

The Orbit project is pulled from the multiviewer and placed in the selected folder. See Figure 7-11.

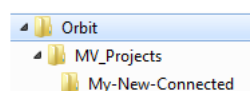


Fig. 7-11: Folder structure for a Connected Project pulled onto a PC

The project is loaded into Orbit.



8 A **Login Dialog** appears.

Log into the connected Orbit project.

A user name and a password are required because users and passwords will have been set up for the connected project at project creation.

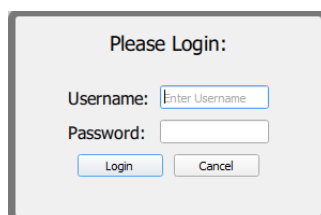
A screenshot of a 'Please Login:' dialog box. It contains two text input fields: 'Username:' with a placeholder 'Enter Username' and 'Password:'. Below the fields are two buttons: 'Login' and 'Cancel'.

Fig. 7-12: Login Dialog

9 To log in:

- Enter your user name in the **Username** text box.
- Enter your password in the **Password** text box.
- Click **Login** to log in, or click **Cancel** to cancel the log in.

When you have logged in, an Orbit project is open in Orbit. The project is deemed “new” by Orbit if that particular Orbit application has not opened the project before.

The Orbit Project Home screen is displayed with four large icons.

See Chapter 8 “[Project Home Screen](#)” on page 125 for details.

**Note:**

**Project Names:**

Use unique project names for different multiviewers.

If a project has been opened from a multiviewer:

- If it is a default multiviewer project,  
then re-name the project before pushing it back to any multiviewer.
- If it is a normal multiviewer project,  
then re-name the project unless it is to be pushed back to the same multiviewer.

A project may be re-named at the **Project Home Screen**.

**Note:**

Generally, when opening a new connected project, you must be a user of that connected project to be able to log in.

**Note:**

Default projects that ship with MV-8 series multiviewer products have default user name and password of ‘admin’.

## How to Open an Existing Project

**Note:** The **Recent Projects** icon is only displayed on the Orbit Initial Screen if one or more projects have already been created or opened by the Orbit.

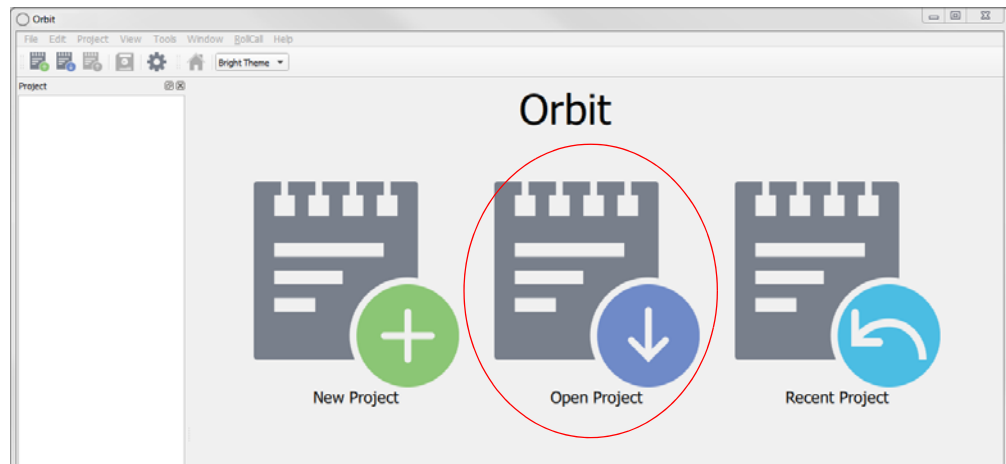


Fig. 7-13: Orbit Initial Screen - Open Project Icon

From the Orbit Initial Screen:

- 1 Click on the **Open Project** icon or select **File > Open Project** on the menu bar.
- 2 Browse *into* the folder containing the Orbit project to be opened.
- 3 Select the (existing) project file (with extension ".prj"), see Figure 7-14, and click on the **Open** button.

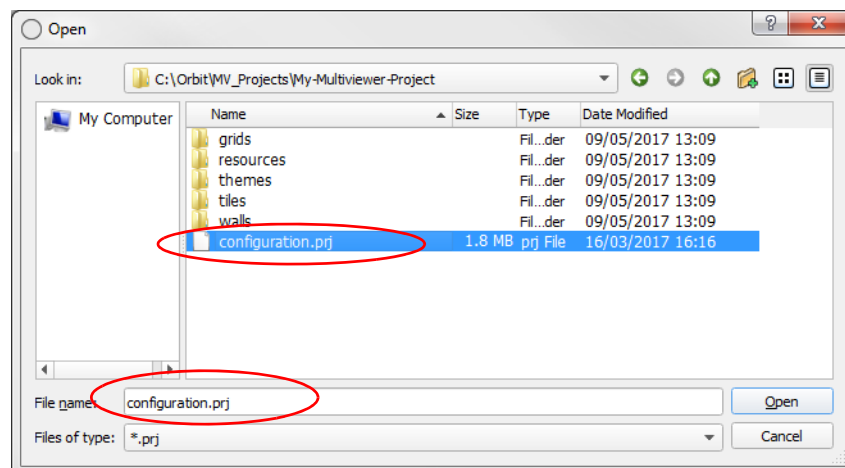
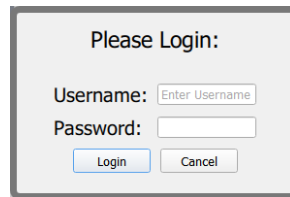


Fig. 7-14: Open Project - Select the project .prj File

- 4 A Login dialog box is presented.  
Enter the user name and password when requested and click **Login**.  
(Project user names etc should have been set up at project creation.  
Default user name = admin ;  
Default password = admin )

A login dialog box with a light gray background and a dark gray border. The title "Please Login:" is centered at the top. Below the title, there are two labels: "Username:" and "Password:". The "Username:" label is followed by a text input field containing the placeholder text "Enter Username". The "Password:" label is followed by an empty text input field. At the bottom of the dialog, there are two buttons: "Login" and "Cancel". The "Login" button is highlighted with a blue border, while the "Cancel" button has a gray border.

*Fig. 7-15: Open Project - Login Dialog*

When you have logged in, a new Orbit project is open in Orbit and the Orbit Project Home screen is displayed with four large icons. See Chapter 8 ["Project Home Screen"](#) on page 125 for details.

## How to Open a Recent Project

**Note:**

The **Recent Projects** icon is only displayed if one or more projects have already been opened by the Orbit that is being run.

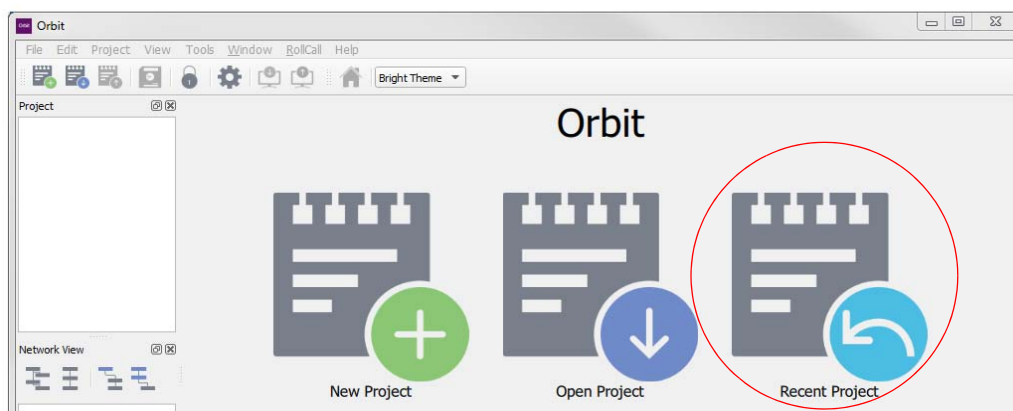


Fig. 7-16: Orbit Home Screen - Recent Project Icon

From the Orbit Home Screen:

- 1 Click the **Recent Project** icon or select **File > Recent Projects** on the menu bar.
- 2 Browse the 'recent projects' drop-down list. Hover your cursor over a name in the list to reveal the path to that project.

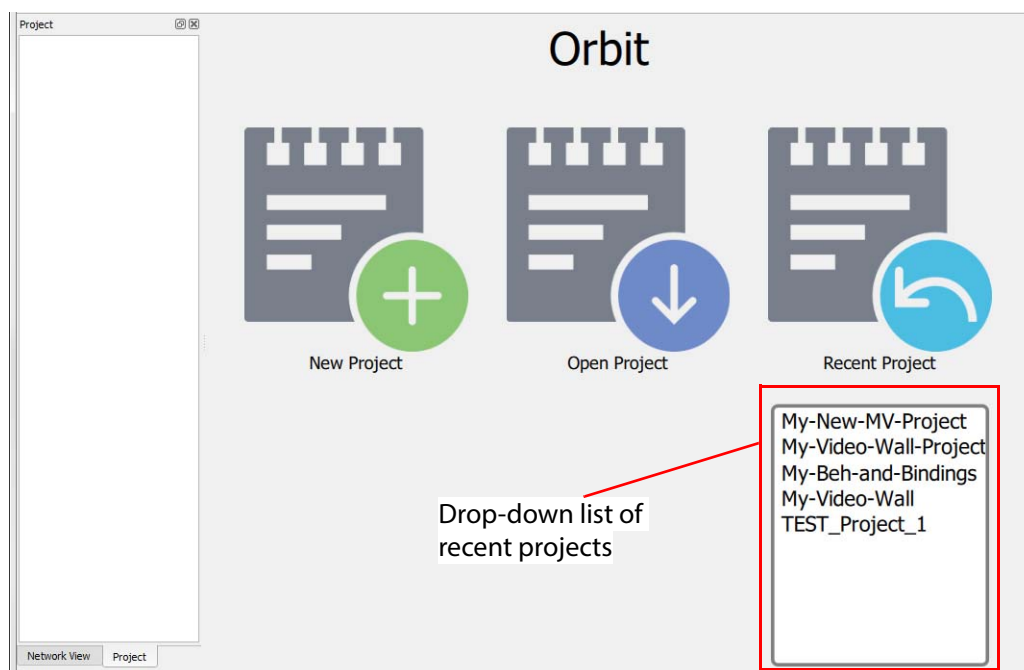


Fig. 7-17: Orbit Recent Projects List

- 3 In the drop-down list, click on the project name to be opened.
- 4 Enter the project's user name and password at the Login dialog box and click **Login**.  
(Project user names etc should have been set up at project creation.  
Default user name = admin ;  
Default password = admin )

When you have logged in, an Orbit project is open in Orbit. The Orbit Project Home screen is displayed with four large icons. See Chapter 8 "[Project Home Screen](#)" on page 125 for details.

# 8 Project Home Screen

## Summary

### Project Home Screen

<i>Orbit Project Home Screen</i> .....	page 126
<i>Status Bar (Multiviewer Project)</i> .....	page 130
<i>Status Bar (IP Routing Project)</i> .....	page 132
<i>Changing Logged in User</i> .....	page 133
<i>Using Project View in a Project</i> .....	page 134
<i>Right-Clicking with a Project Open</i> .....	page 136
<i>Using the Project View Pane</i> .....	page 138
<i>How to Push an Orbit Project to a Unit</i> .....	page 140
<i>Pushing a Project</i> .....	page 140
<i>How to Pull an Orbit Project from a Device (Unit)</i> .....	page 141
<i>Pull a Project</i> .....	page 141
<i>Managing an Orbit Project</i> .....	page 142

This chapter describes the Orbit application **Project Home Screen**. This is displayed upon accessing an Orbit project from the Orbit initial screen, see Chapter 7 “[Initial Screen](#)” on page 102. The **Project Home Screen** appearance varies, depending on the type of Orbit project that is open.

## Orbit Project Home Screen

The Orbit **Project Home Screen** is displayed when a new project has been started or when an existing project is opened. The **Project Home Screen** is the hub that gives access to all areas of the Orbit project design. See Figure 8-1 and Figure 8-2.

The **Project Home Screen** shows the **Project Name** and some menu bar, tool bar and window pane items (similar to the Orbit Initial Screen, see Chapter 6 "[Orbit Initial Screen](#)" on page 95 and see Chapter 4 "[Orbit Main Menu Bar](#)" on page 25.)

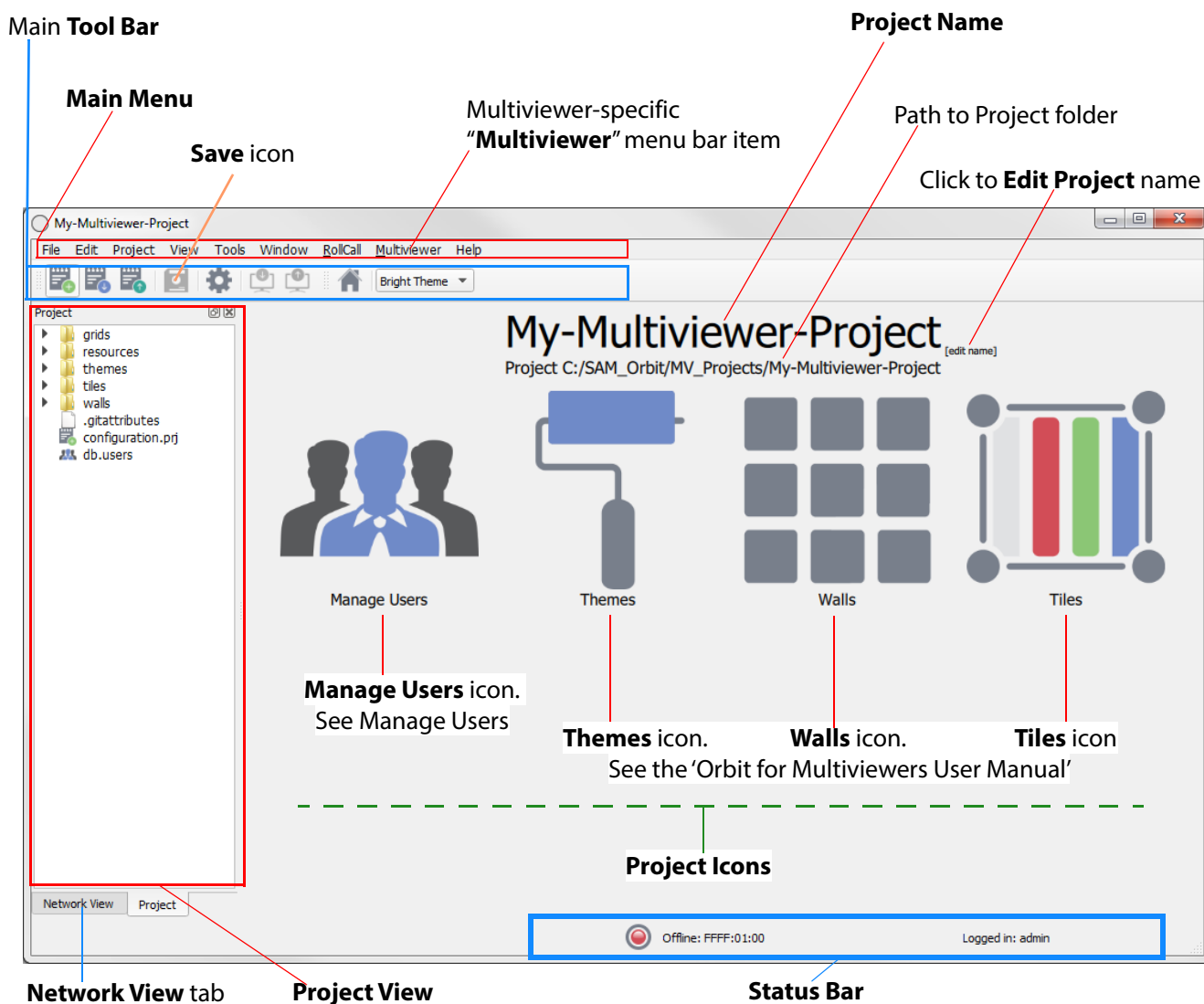


Fig. 8-1: Project Screen Features - Multiviewer Project

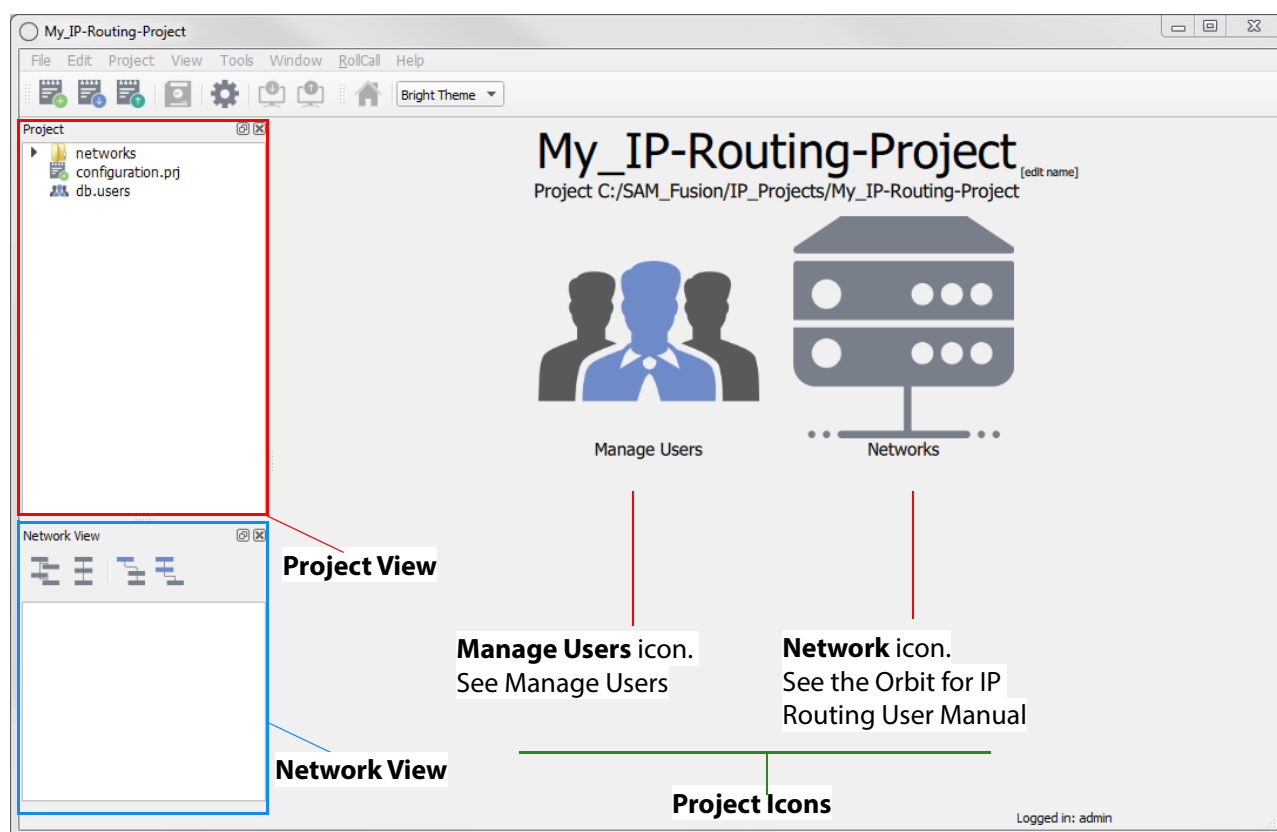


Fig. 8-2: Project Screen Features - IP Routing Project

The **Project Name** is treated as an identifier by Orbit. Projects with the same name are considered to be the same. Any differences between a project in Orbit and the same project on a Multiviewer device must be resolved.

The project icons allow the user to access different aspects of the project:

- Multiviewer project: **Manage Users**, **Themes**, **Walls**, and **Tiles**.
- IP Routing: **Manage Users**, **Networks**.

Some main menu / tool bar items will be active and are no longer grayed-out. These may be specific to Orbit projects and/or specific to a product application (for example, multiviewer-specific).

Table 8-1 describes some Project screen items.

Table 8-1 Project Screen Items

Screen Item	Description
Project name-related items (top of screen):	
<b>Project Name</b>	Read-only text field. Name of the Orbit project. This is used as an identifier.
<b>Path to project folder</b>	Read-only text field. Path to the Orbit project folder on your computer.

Table 8-1 Project Screen Items (continued)

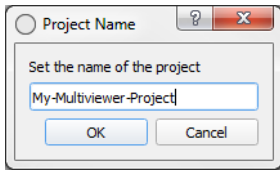
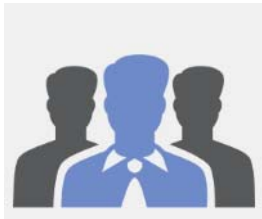

Screen Item	Description
<b>[Edit Name]</b>	<p>Click to edit the name of the Orbit project.</p>  <p><b>Note:</b> The project <i>name</i> is changed. The project <i>folder name</i> is not changed.</p>
Status Bar (bottom of screen):	For more details, see <a href="#">Status Bar (Multiviewer Project)</a> , on page 130.
<b>Connected status</b>	<p>(Multiviewer projects only)</p> <p>Shows Orbit's connection status to a product unit.</p>
<b>Login status</b>	<p>Shows the user name of the logged in user.</p> <p>Click the Login Status text to log out of the project and show the login dialog.</p> <p>See Chapter 8 "<a href="#">Changing Logged in User</a>" on page 133.</p>
Main Menu bar:	For more details, see Chapter 4 " <a href="#">Orbit Main Menu Bar</a> " on page 25.
<b>Project</b>	Menu item applicable when an Orbit project is open.
<b>View</b>	Menu item contains more active entries than in the <b>Orbit Initial Screen</b> .
<b>Multiviewer</b>	<p>(Multiviewer projects only)</p> <p>Menu bar item used for configuring some multiviewer unit settings and alarms.</p>
Main Tool bar:	
<b>Pull icon</b>	<p>Used to get project information <i>from</i> a connected product unit. (Pulling)</p> <p>See <a href="#">How to Pull an Orbit Project from a Device (Unit)</a>, on page 141.</p> <p><b>(Note:</b> Not available for Orbit IP routing projects.)</p>
<b>Push icon</b>	<p>Used to put project information <i>onto</i> a connected product unit. (Pushing)</p> <p>See <a href="#">How to Push an Orbit Project to a Unit</a>, on page 140.</p> <p><b>(Note:</b> Not available for Orbit IP routing projects.)</p>
<b>Project View</b>	<p>Displays Orbit project resources as files in sub-folders in an expandable tree view format. The pane is empty until a project is opened.</p> <p>See <a href="#">Using Project View in a Project</a>, on page 134.</p>
Project Icons:	
<p><b>Manage Users</b></p> 	<p>Click icon to manage various levels of user access to the Orbit project, depending on a user's role.</p> <p>Chapter 9 "<a href="#">Manage Users</a>" on page 143.</p>



Table 8-1 Project Screen Items (continued)

Screen Item	Description
<b>Themes</b> 	<p>(Multiviewer projects only)</p> <p>Click icon to style graphical widgets. Sets of widget styles are defined under a theme which can be applied to a project. This changes widget appearances on tiles and video walls.</p> <p>Supplied default graphical widgets in the Orbit application include: Audio bars, Clocks, Tallies, Under Monitor Displays (UMDs) and Video sources.</p> <p>See the 'Orbit for Multiviewers User Manual' for details on creating and using themes.</p>
<b>Walls</b> 	<p>(Multiviewer projects only)</p> <p>Click icon to create, design and edit a multiviewer video wall.</p> <p>See the 'Orbit for Multiviewers User Manual' for information about Walls and the Wall Editor.</p>
<b>Tiles</b> 	<p>(Multiviewer projects only)</p> <p>Click icon to create graphical tiles and add graphical widgets. Created tiles can then be added to a multiviewer video wall design.</p> <p>See the 'Orbit for Multiviewers User Manual' for information about Tiles, the Tile Editor and Widgets.</p>
<b>Networks</b> 	<p>(IP Routing projects only)</p> <p>Click icon to create and edit one or more sets of configuration settings to apply to an IP network system.</p> <p>See the Orbit for IP Routing User Manual for information about Orbit IP Network projects.</p>

## Status Bar (Multiviewer Project)

Information is shown in the **Status Bar** at the bottom of an Orbit screen when an Orbit project is open. There are up to three status fields shown, see Figure 8-3.

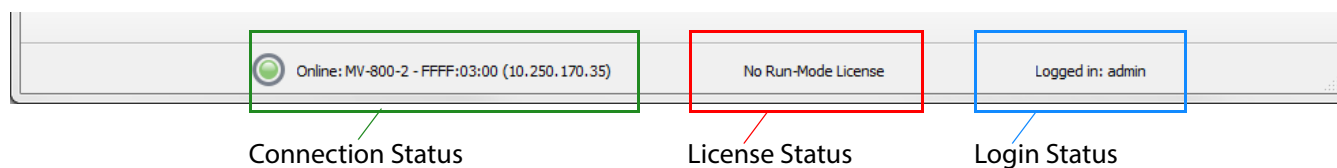


Fig. 8-3: Orbit Status Bar Status Fields (Multiviewer project shown)

Table 8-2 Connection Status Fields (Multiviewer project)

Connection Status Fields	Description
LED:	
<b>Green</b>	Orbit connection to device is OK.
<b>Amber</b>	Device present, but connection is not fully working.
<b>Red</b>	Device is off-line. <b>Note:</b> In an "off-line" situation, it may still be possible to open and view a RollCall template from the device.
Online/Offline:	
<b>Online</b>	Orbit has connection to the following services of the connected device: <ul style="list-style-type: none"> <li>• RollCall+</li> <li>• Logging</li> <li>• Routing</li> </ul>
<b>Offline</b>	No Orbit connection to any services of the connected device. Possible reasons: <ul style="list-style-type: none"> <li>• If a multiviewer shows as "Off-line", check that the unit's <b>RollCall Address</b> and <b>Domain</b> in <b>Multiviewer &gt; Properties</b> match the settings in the unit's RollCall template.</li> </ul>
<unit name>	The connected device's name is displayed.
<b>FFFF:01:00</b>	Connected device's RollCall address.
(<IP Address>)	Connected device's IP address.

Table 8-2 Connection Status Fields (Multiviewer project) (continued)

Connection Status Fields	Description
Supplementary: <b>Services Fault</b>	<p>This sub-field is normally blank.</p> <p>One or more of the device's services are missing.</p> <p>Possible reasons for this:</p> <ul style="list-style-type: none"> <li>• Network settings preventing multiviewer discovery.</li> <li>• Misconfiguration of the connected device.</li> </ul> <p>For example:</p> <ul style="list-style-type: none"> <li>• Network interface for RollCall to use is wrongly set up in a multiviewer's RollCall template.</li> <li>• If an IP address has been specified for a Router Controller in a unit's RollCall template, then there is a Services Fault if there is no contact with the Router Controller.</li> </ul>

Table 8-3 License Status Fields (Multiviewer project)

License Status Fields	Description
<blank field>	<p>Status text field is blank when:</p> <ul style="list-style-type: none"> <li>• A license has been successfully acquired. (Connection to license server is OK.)</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• When no license is needed. (Operations in Orbit may not require a license.)</li> </ul>
<b>No Run-Mode License</b>	Licensing is <b>not</b> enabled in Orbit ('Tools>Options>Licensing'), and user is in an area of Orbit that requires a license.
<b>No Run-Mode License</b>	Licensing <i>is</i> enabled in Orbit ('Tools>Options>Licensing'), and user <i>is</i> in an area of Orbit that requires a license, but <i>no license is available</i> .

Table 8-4 Login Status Fields

Login Status Fields	Description
<b>Logged in:</b>	<p>Logged in user name is shown.</p> <p>Click on the text to:</p> <ul style="list-style-type: none"> <li>• Log out of the project</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>• Log in as a different user.</li> </ul> <p>See <a href="#">Changing Logged in User</a>, on page 133.</p>

## Status Bar (IP Routing Project)

Information is shown in the **Status Bar** at the bottom of an IP routing project Orbit screen. Status fields showing summary information about edge devices, spigots, flows or router ports are shown, see Figure 8-4.

Total number of edge devices in IP Routing project.  
Number Online, Offline.

Total devices: 16	Online: 15	Offline: 1
-------------------	------------	------------

a) Status bar for **Devices** tab

Total number of source spigots.  
Number Online, Offline, Assigned.

Total number of destination spigots.

Source spigots: 82	Online: 82	Offline: 0	Assigned: 81	Dest spigots: 114	Online: 114	Offline: 0	Assigned: 114
--------------------	------------	------------	--------------	-------------------	-------------	------------	---------------

b) Status bar for **Spigots** tab

Total number of source flows. Source flows used. Types.

Source flows: 804	In Use: 412	2022-6: 106	RFC4175: 40	VC-2: 2	PCM: 132	Meta: 132
-------------------	-------------	-------------	-------------	---------	----------	-----------

c) Status bar for **Src Flows** tab

Total number of destination flows. Source flows used. Types.

Destination flows: 700	In Use: 176	2022-6: 24	RFC4175: 62	VC-2: 0	PCM: 66	Meta: 24
------------------------	-------------	------------	-------------	---------	---------	----------

d) Status bar for **Dst Flows** tab

Total number of router source ports. Number of the next free port.

Source ports used: 86	Next free port: 13
-----------------------	--------------------

e) Status bar for **Router Src Ports** tab

Total number of router destination ports. Number of the next free port.

Destination ports used: 119	Next free port: 97
-----------------------------	--------------------

f) Status bar for **Router Dst Ports** tab

Fig. 8-4: Orbit Status Bar Status Fields (IP Routing project)

## Changing Logged in User

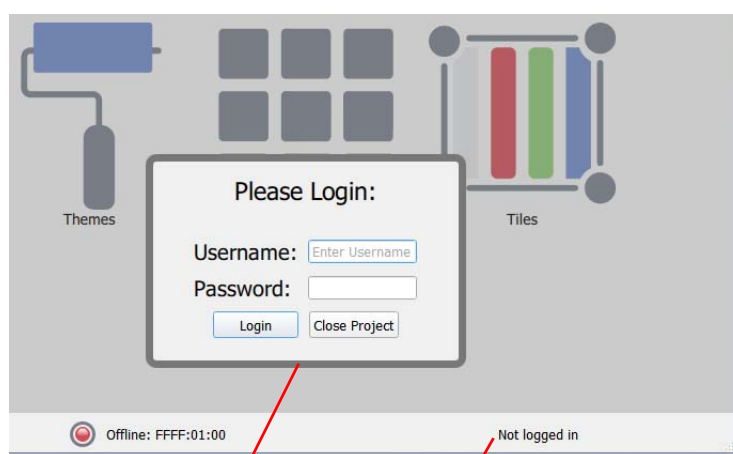
While logged into an Orbit project in Orbit, a different user may temporarily log in without needing to close the project.

For example, while an operator is logged into a project, an administrator can log in to perform some privileged action and then the operator can log back in.

To change the logged in user of an Orbit project in Orbit without closing the Orbit project:

- 1 Begin with a user logged into an Orbit project.
- 2 Click on the **Login Status** text to log out of a project.  
The user has been logged out of the project but the project is not closed.  
The project **Login Dialog** is shown and the **Login Status** indicates that no user is logged in.

See Figure 8-5.



- Project **Login Dialog** is shown.
- **Login Status** shows no user is currently logged in.

*Fig. 8-5: Project Login Dialog re-shown*

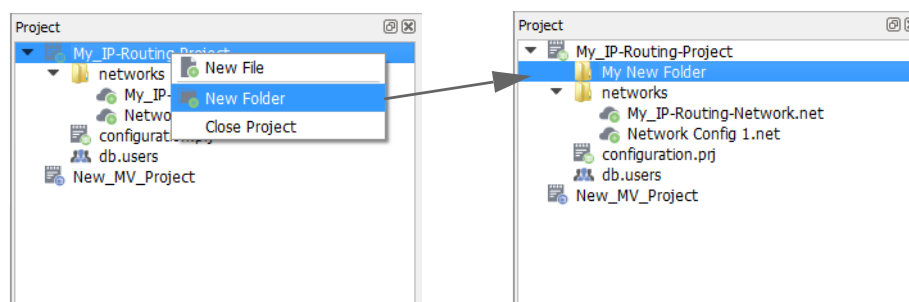
- 3 A second user may now log in with their user name and password.  
Repeat this process to allow the first user to log back in.

## Using Project View in a Project

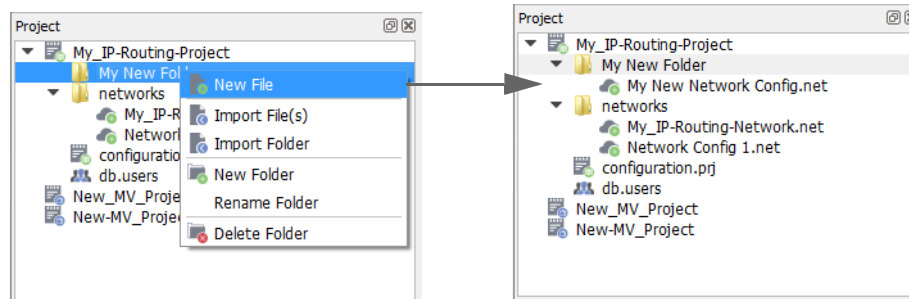
In a loaded (opened) project, the resources of the opened project are shown in the **Project View** as files in sub-folders, in an expandable tree view. Use the **Project View** to:

- Navigate around the Orbit project.
- Add resources to the project.  
For example: Drag and drop image files, or import resources from other projects.
- Delete or rename project files (resources).
- Access project resources.  
For example: Double click on a video wall design to edit it, or drag tiles from the **Project View** into an open video wall design.
- Select project-related items. For example, select the current project theme.

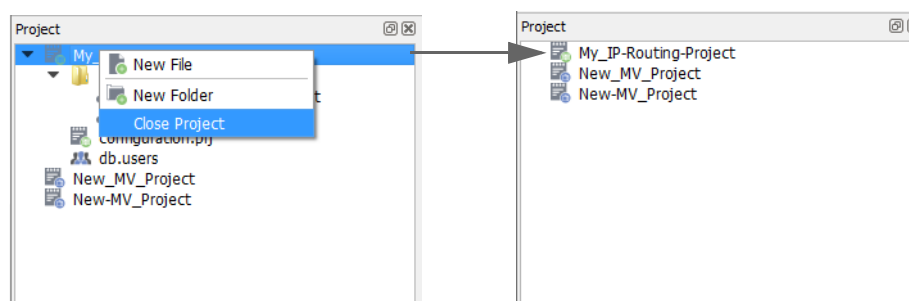
Figure 8-6 shows some right-click examples.



a) Right-Click **New Folder**



b) Right-Click **New File**



c) Right-Click **Close Project**

Fig. 8-6: Project View Right-Click Menus:

- a) New Folder.
- b) New File.
- c) Close Project.

Project resource items can be expanded or collapsed by clicking on the triangular symbol to the left. Figure 8-7 shows a fully-collapsed and a fully-expanded list of items. The expanded list of tiles shows small icons of each custom tile in the project.

## Project View

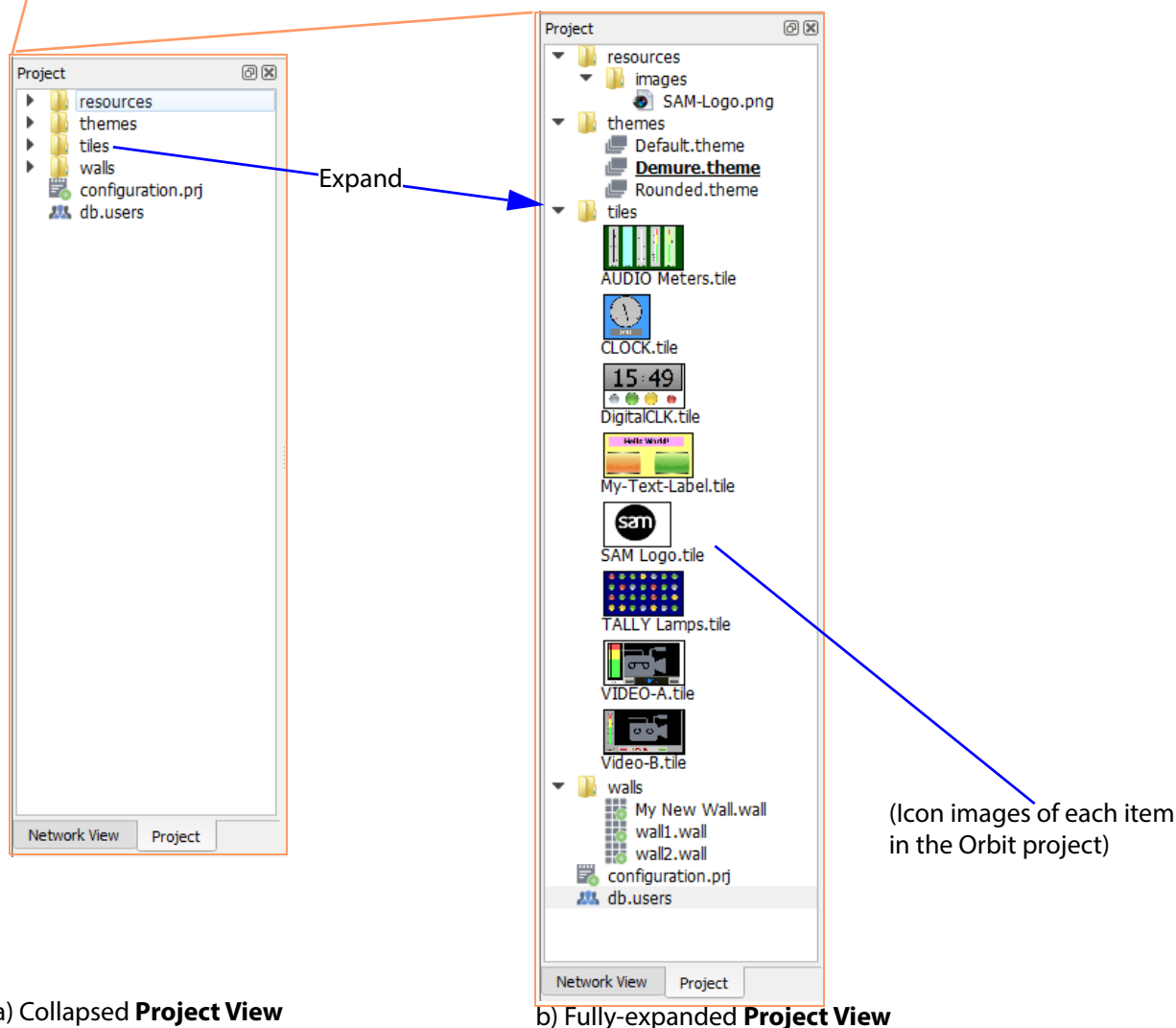
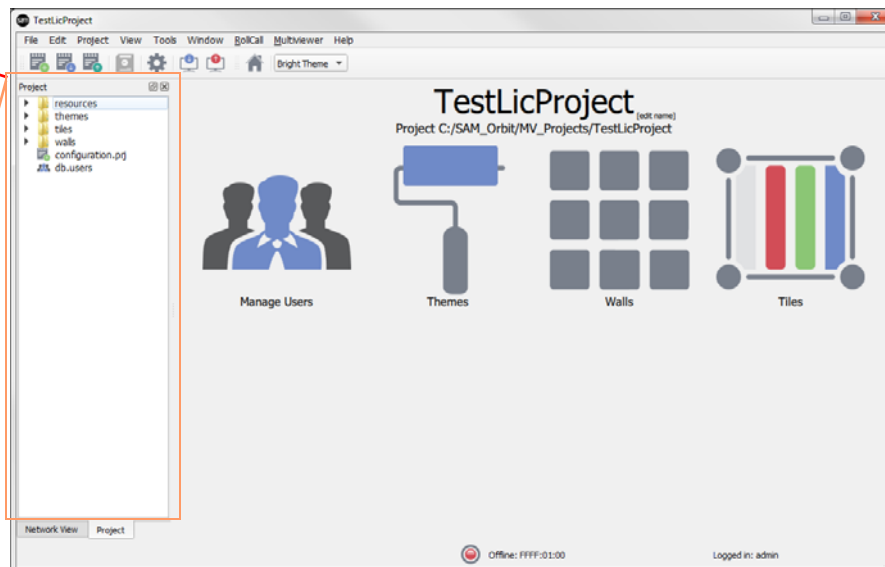


Fig. 8-7: Project View (Multiviewer project shown):  
a) Collapsed.  
b) Fully-expanded.

## Right-Clicking with a Project Open

A context-sensitive menu appears when the user right-clicks on a **Project View** item, as shown in Figure 8-8 and Figure 8-9.

The context-sensitive menus allow a user to:

- Open an item in Orbit.
- Create new, Rename or Delete a file item or a folder.
- Import an item. (A file or folder, settings from another project, or a users database.)
- Copy items. For example, copy themes in a multiviewer project.
- Set some project settings. For example, set a theme as the current theme in a multiviewer project.
- Set a tile to be used as **Home**. (Displayed when clicking the **Home** menu bar icon.)

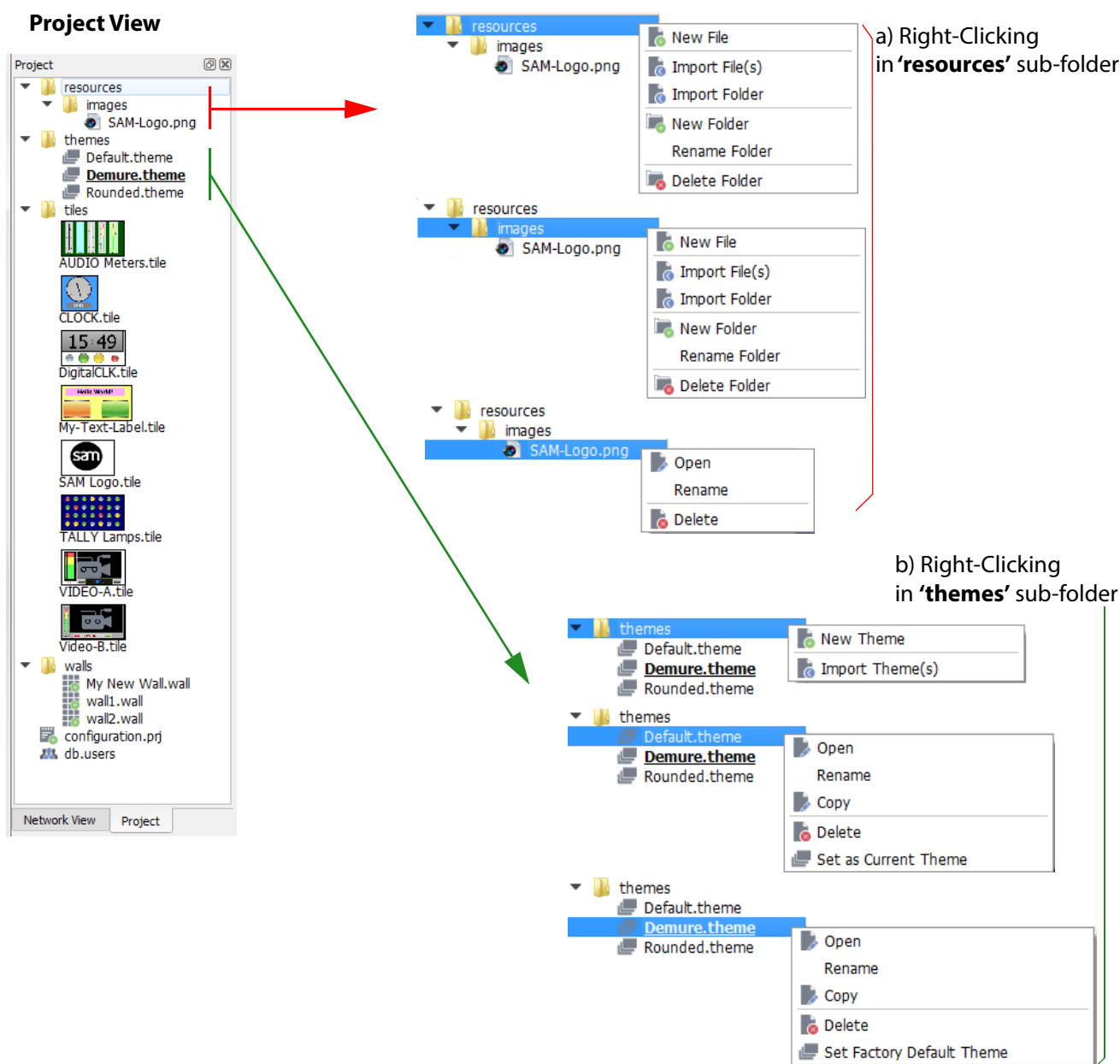


Fig. 8-8: Project View Right-Click Menus (Multiviewer project shown):

- a) Resources.
- b) Themes.



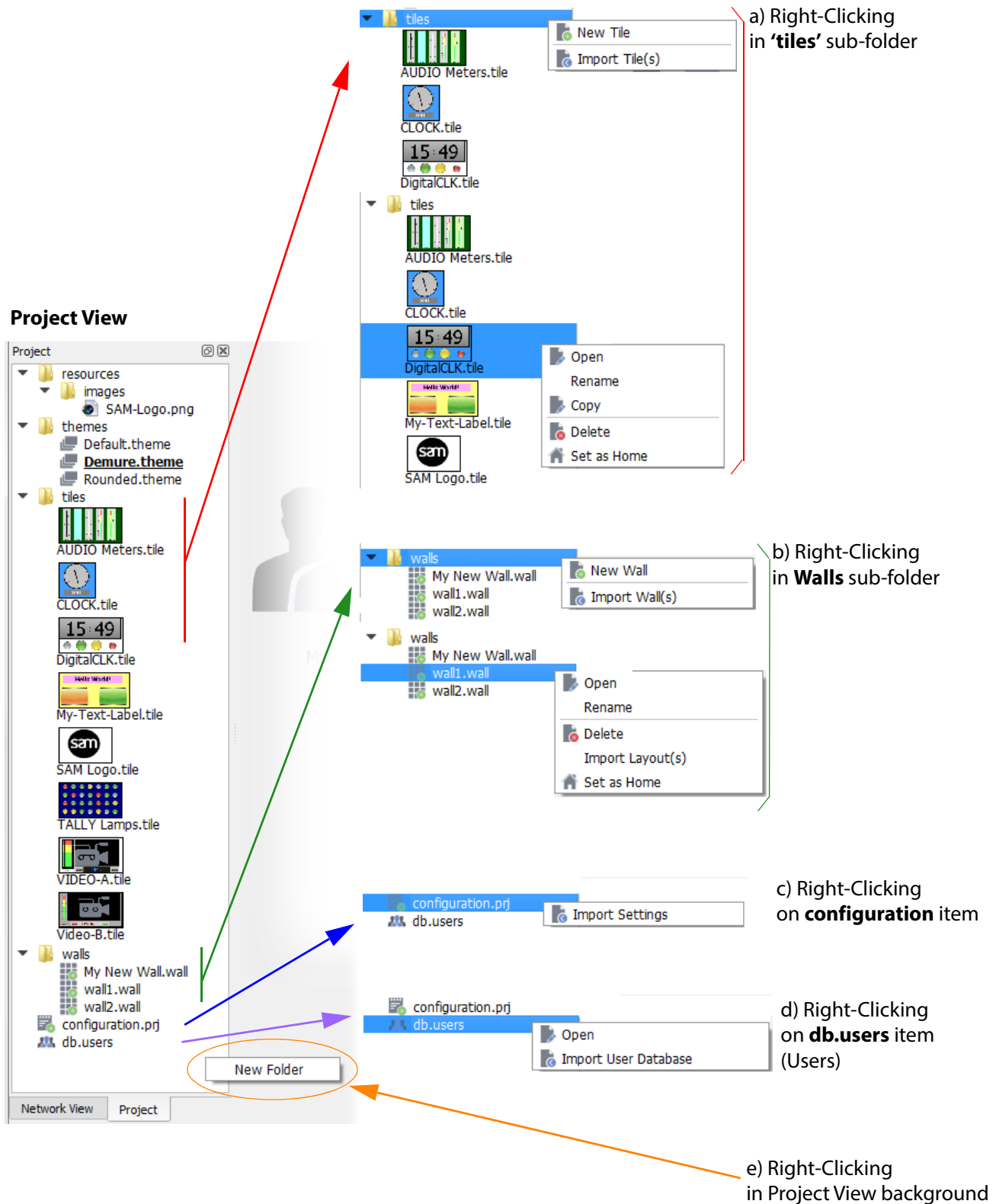


Fig. 8-9: Project View Right-Click menus (Multiviewer project shown):

- a) Tiles.
- b) Walls.
- c) Configuration.
- d) Users.
- e) In background.

## Using the Project View Pane

The **Project View** is available when a project is open.

When an Orbit project is open, the **Project View** pane displays a tree view of the project sub-folders and files. The pane is empty until a project is opened. In a new project, the folders are empty until walls, tiles etc are created. A new project provides some example tiles.

Use the **Project View** to:

- Navigate around the Orbit project.
- Add or import project resources.  
For example:
  - Drag and drop image files.
  - Import resources from other projects.
- Delete or rename project resources.
- Access project resources.  
For example, double-click on a wall design item to open it.
- Select the current project theme.
- Drag tiles from the **Project View** onto an open wall design.

The **Project View**'s tree view may be expanded and collapsed; this allows a user to see folders and files representing elements of the project, including graphical elements. Tree view items can be expanded or collapsed by clicking on the triangular symbol to the left. See Figure 8-10.

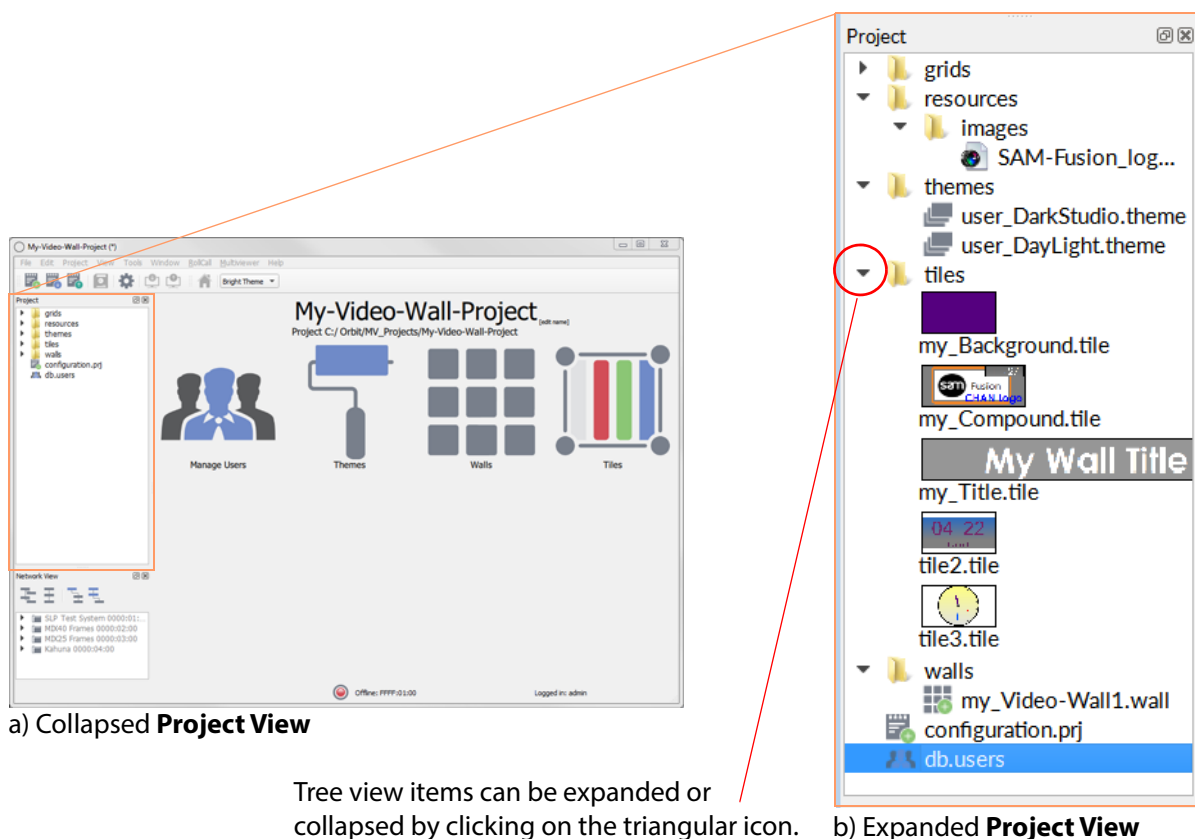


Fig. 8-10: Project View (Multiviewer project shown):  
a) Collapsed.  
b) Expanded.

The **Project View** is a useful and quick way of navigating around the project and carrying out project actions.

A user can:

- **Right-Click** on a tree view project item - to perform various project actions via pop-up menus. For example, create a new wall or tile for a multiviewer.
- **Double-click** on a tree view project item - to open it in an editor screen.

Several editor screens, in the same project, may be open at any one time; these are tabbed across the screen, as illustrated in Figure 8-11.

Double-Click on **Project View** items to open them in tabs

Tabbed screens of several open editors.

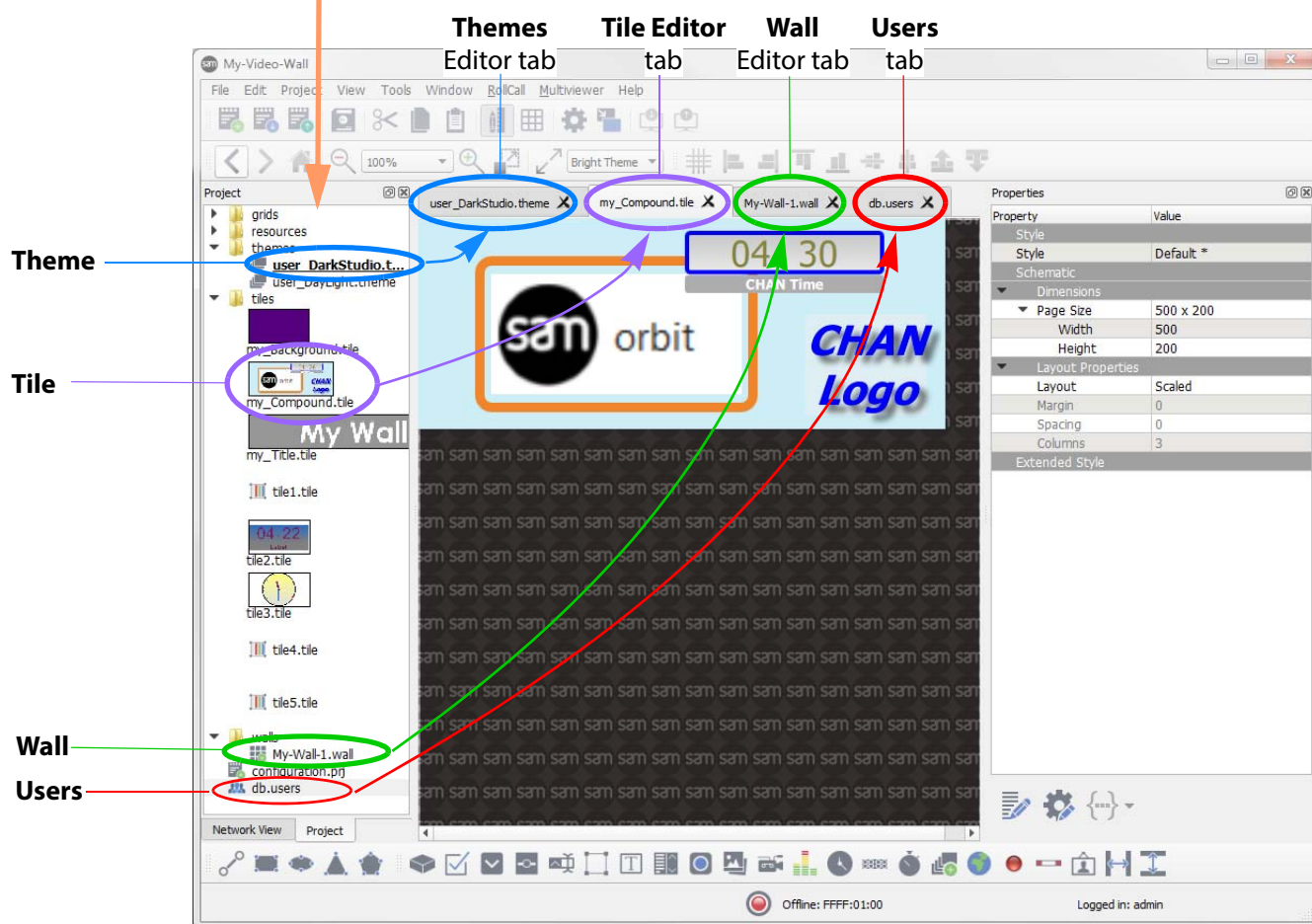


Fig. 8-11: Project View and Tabbed Editor Screens (Multiviewer project shown)

## How to Push an Orbit Project to a Unit

**Note:**

### Push and Pull:

- **Available for certain Orbit project types.**

For projects where there is a central place that holds or uses the project information (for example, a multiviewer device), then a project is pushed to or pulled from these devices.

- **Not available in Orbit IP Routing projects.**

(Because an IP routing project does not involve central devices needing project data.)

**Note:**

You can only push a project to a device, product unit, if the Orbit application is currently connected to the device.

If the multiviewer device is not connected, or there is no project open in Orbit, the **Push** menu item is grayed out and cannot be used.

**Note:**

**Push** or **Pull** are not allowed if **Remote** settings are not set up in Orbit.

See Chapter 4 “[Tools > Options - Remotes](#)” on page 40 for setting up the **Remote** settings.

Once all changes have been made to an Orbit project, then the project needs to be pushed to a device to be deployed.

## Pushing a Project

Pushing an open Orbit project:

- 1 Save the project. This saves the project to storage on the Orbit PC.
- 2 Click on the **Push icon** in the main tool bar or select the **Project > Push** from the main menu bar.  
The project is pushed to the device.
- 3 The device reads the new project and uses it.  
(For example, a new multiviewer output is shown on-screen).  
This may cause some momentary on-screen disruption.  
A “loading” splash screen may appear briefly, see Figure 8-12.



Fig. 8-12: “Loading” Splash Screen (Multiviewer display)

- 4 The pushing may take 1-2 minutes.  
Once the push is complete, a pushed successfully message is shown. See Figure 8-13.  
Click **OK**.

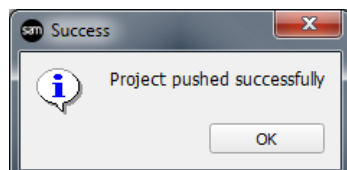


Fig. 8-13: Success

- 5 The new project is shown on-screen.

Pushing is complete.

## How to Pull an Orbit Project from a Device (Unit)

**Note:**

### Push and Pull:

- **Available for certain Orbit project types.**

For projects where there is a central place that holds or uses the project information (for example, a multiviewer device), then a project is pushed to or pulled from these devices.

- **Not available in Orbit IP Routing projects.**

(Because an IP routing project does not involve central devices that need project data.)

**Note:**

You can only pull a project from a unit if the Orbit application is connected to the unit.

If the product unit is not connected, or there is no project open in the Orbit, the **Pull** menu item is grayed out and cannot be used.

## Pull a Project

Pulling an Orbit project from a product unit:

- 1 Save any project changes  
and close any project that is already open in the Orbit.

**Note:**

If there are any unsaved changes in Orbit when a Pull is attempted, a warning message is shown, see Figure 8-14.

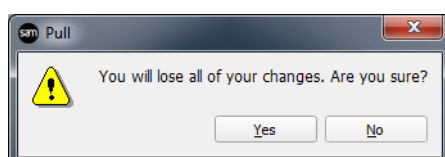


Fig. 8-14: Warning Pull Message

- 2 Click the **Pull** icon on the tool bar  
or select **Project > Pull** menu bar.  
The project is pulled from the unit.

The Orbit project will be pulled from the product unit to the Orbit application.  
This may take 1-2 minutes.

- 3 When the pulling is complete, a success message is displayed. See Figure 8-15.

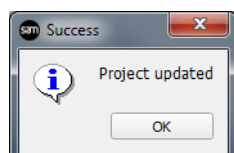


Fig. 8-15: Pull Success Message

- 4 When the project has been pulled,  
select **File > Save Project**  
to save the project to a folder on the Orbit PC.

**Note:**

### Saving a project:

If the project folder name already exists, then it will be overwritten.

**Note:**

Keep separate and up-to-date records and backups of your master Orbit projects.

## Managing an Orbit Project

The Orbit project's name is used as an identifier by Orbit. It is advisable to make the project name concise, meaningful and unique.

Projects of the same name are considered to be versions of the same project. Orbit requires the user to resolve any differences by selecting which project version to use.

For the case of an Orbit project that can be pushed or pulled to a device:

- 1 If Orbit is connected to a unit when a project is opened in Orbit, then Orbit will check to see if the connected unit's Orbit project has the same name.
- 2 If the Orbit project names are the same, then Orbit checks the project's last-changed date.
- 3 If a last-changed date difference is found, then Orbit prompts the user about what action to take to resolve this. See Figure 8-16.

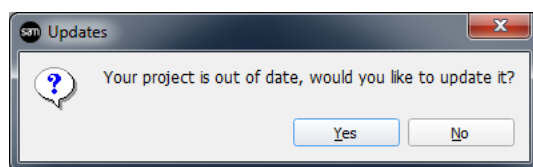


Fig. 8-16: Message Dialog - Asking how to resolve a project difference.

- Click **No** to ignore the project from the unit.  
Click **Yes** to use the project from the unit.

The location of the "master" copy of the Orbit project must be known. Always make project changes to the project "master" copy and then push that to the product unit.

**Note:** If the "master" location is to be the product unit itself, then always pull the project from the unit before editing.

**Note:** Care must be taken to manage projects on product units and across one or more installations of the Orbit application.

**Note:** If Orbit is installed on more than one PC, then care must be taken to manage project changes on product units.  
Always make project changes to the "master" project.

**Note:** It is recommended that projects are not moved nor copied.  
Orbit projects can be copied in their entirety and moved, *but this is not advised*.  
**CAUTION:** Do not *partially* move or copy project items.

# 9

## 9 Manage Users

### Summary

#### Manage Users

<a href="#">Introduction to the Manage Users Screen</a>	page 144
<a href="#">Roles Tab</a>	page 146
<a href="#">Role Permissions</a>	page 146
<a href="#">Pre-defined User Roles</a>	page 150
<a href="#">How to Edit Permissions for Roles (Permissions Pane)</a>	page 151
<a href="#">How to Assign Users to Roles (Membership Pane)</a>	page 152
<a href="#">How to Delete Roles</a>	page 153
<a href="#">How to Add a Role</a>	page 155
<a href="#">Users Tab</a>	page 157
<a href="#">Pre-defined Users</a>	page 157
<a href="#">How to Change a User Password</a>	page 158
<a href="#">How to Add a User</a>	page 159
<a href="#">How to Delete a User</a>	page 161

Orbit provides user access control to Orbit projects. The Orbit **Manage Users** screen enables project user roles and levels of access to be set up and managed. Users of a project will require different access to aspects of a project depending on their role.

A user is prompted for a user name and a password when accessing an Orbit project.

By default, only an 'admin' user is initially configured in a project.

**Default username** - admin

**Default password** - admin

**Note:** The 'admin' user has administrator role permissions which enable all operations within Orbit to be carried out.

The default 'admin' user password should be changed as soon as you log in for the first time, [How to Change a User Password](#), on page 158.

**Note:** Administrator user passwords should be recorded and kept secure.

## Introduction to the Manage Users Screen

The **Manage Users** screen is accessed by clicking on the **Manage Users** icon in the Orbit **Project Home** screen:

- 1 Start an Orbit application.
- 2 Open an Orbit project and log in with administrator permissions.  
See Chapter 6 “[Orbit Initial Screen](#)” on page 95 for guidance.

The Orbit **Project Home** screen is displayed.

The project name and path are at the top of the main screen area.

**Login Status** is shown at the bottom right-hand side of the Orbit window.

See Figure 9-1.

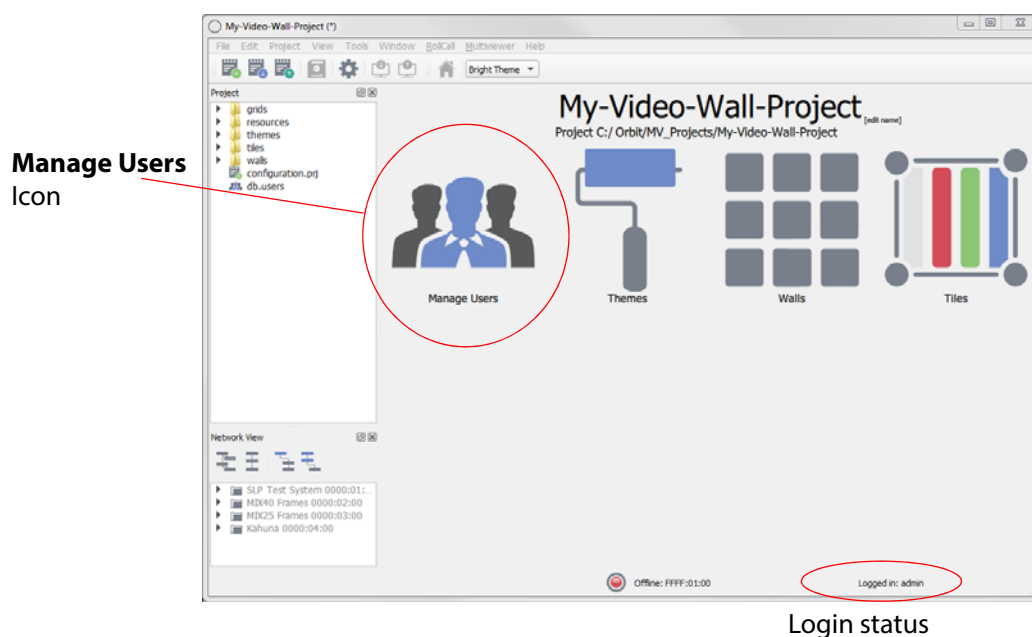


Fig. 9-1: Project Home Screen with Manage Users icon

**Note:**

### Managing users:

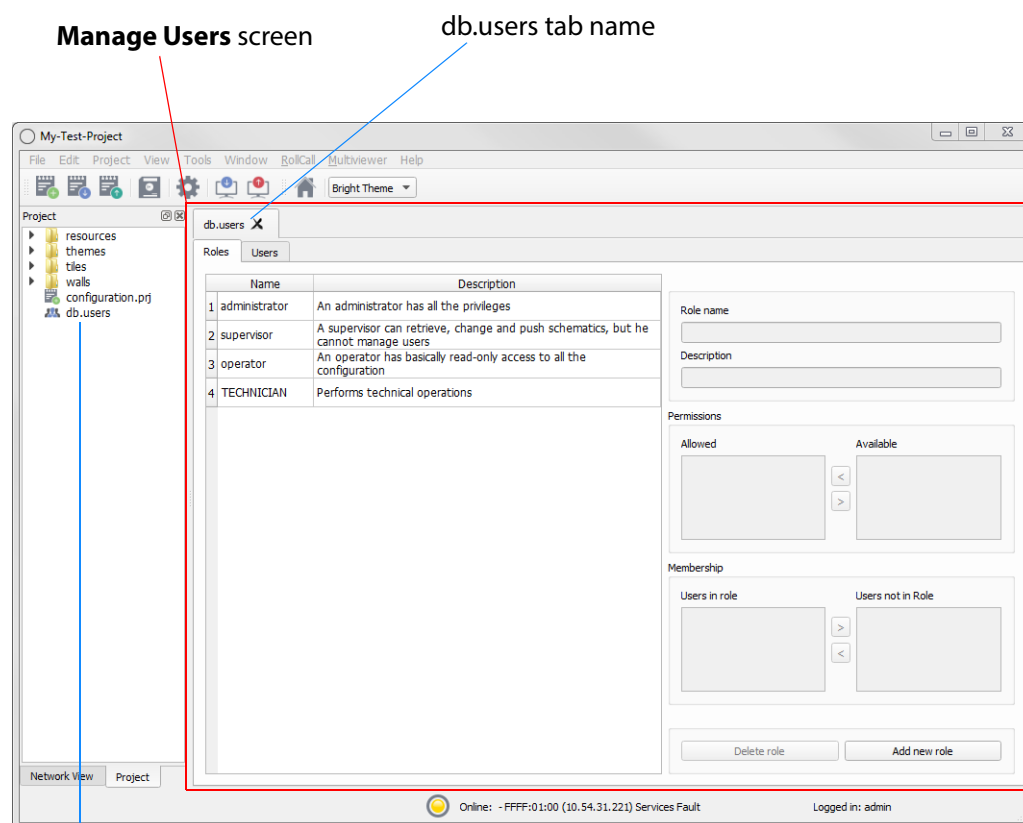
Ensure that you are logged into the Orbit project with administrator permissions when managing users.

**Note:**

Click on **Login Status** to log out the current user and see the project login dialog.

- 3 Click the **Manage Users** icon  
to display the **Manage Users** screen in the main screen area. See Figure 9-2.





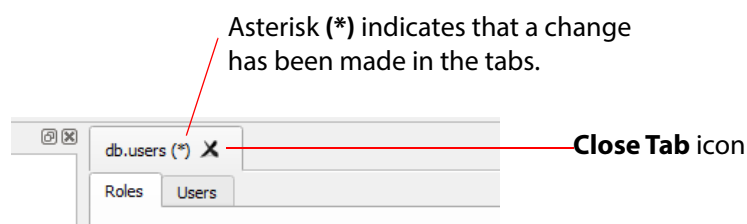
db.users file in  
**Project View**

*Fig. 9-2: Manage Users Screen (Roles Tab shown)*

The **Manage Users** screen tab is labeled “db.users” and contains the following tabs:

- **Roles** tab - see section
- **Users** tab - see section .

If a change has been made to settings in any of the **Manage Users** tabs, an asterisk (\*) is appended to the “db.users” label, see Fig. 9-3:.




*Fig. 9-3: Manage Users tab - Asterisk and Close Tab Icon*

Save changes using the **Save File** icon in the Orbit screen’s main tool bar.

A file with the name “db.users” appears in the **Project View**, see Figure 9-2.

This file contains encrypted project information, including user name and password details.

Click the **Close Tab** icon, , located next to the tab label, to close the **Manage Users** screen. If there are any unsaved changes in the tab, a prompt appears to ask to save any changes.

## Roles Tab

Click on the **Roles** tab to display the Manage Users **Roles Tab** screen: This lists the defined roles for the Orbit project with a brief description of each, see Figure 9-7.

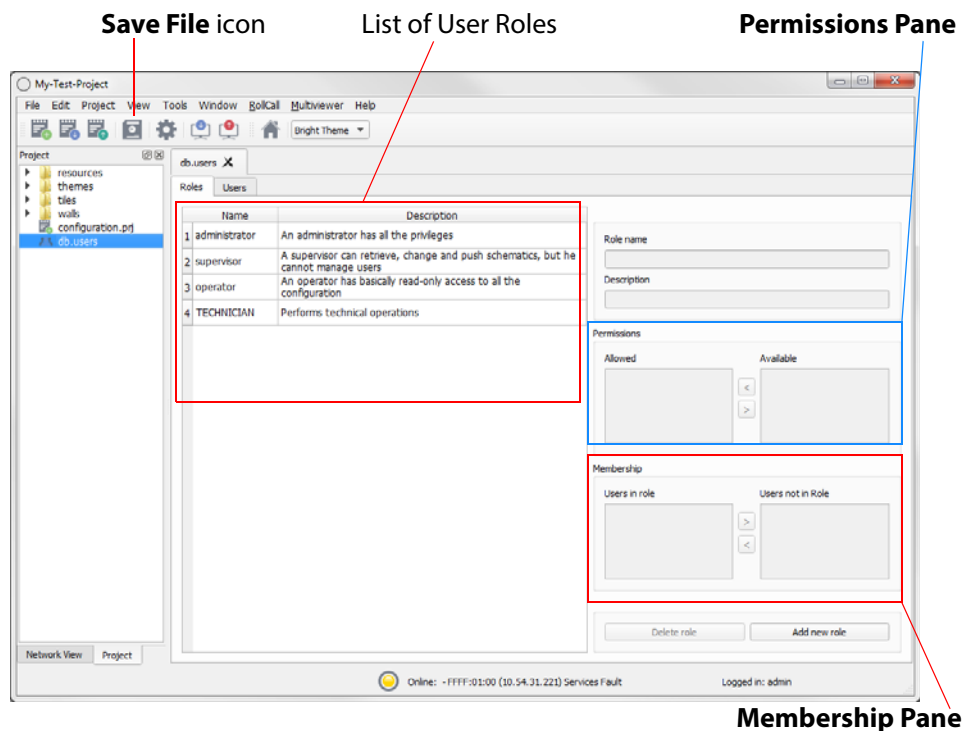


Fig. 9-4: Roles Tab

The **Roles Tab** allows the roles to be viewed, created and edited; it is used to:

- Edit permissions for each role,  
see [How to Edit Permissions for Roles \(Permissions Pane\)](#), on page 151.  
This defines which operations may be carried out in a role. (See **Permissions Pane**.)
- Edit user roles,  
see [Roles Tab](#), on page 146. This assigns a role to each user name.
- Add and delete roles,  
see [Roles Tab](#), on page 146. New roles can be created and roles can also be deleted.

## Role Permissions

The permissions are set up in the **Permissions Pane**.

Permissions are operations that can be carried out on an Orbit project in the Orbit application. When applied to a user, they form the user's privileges, i.e. what each user is allowed to do. Available permissions are listed in Figure 9-5 and Table 9-1.

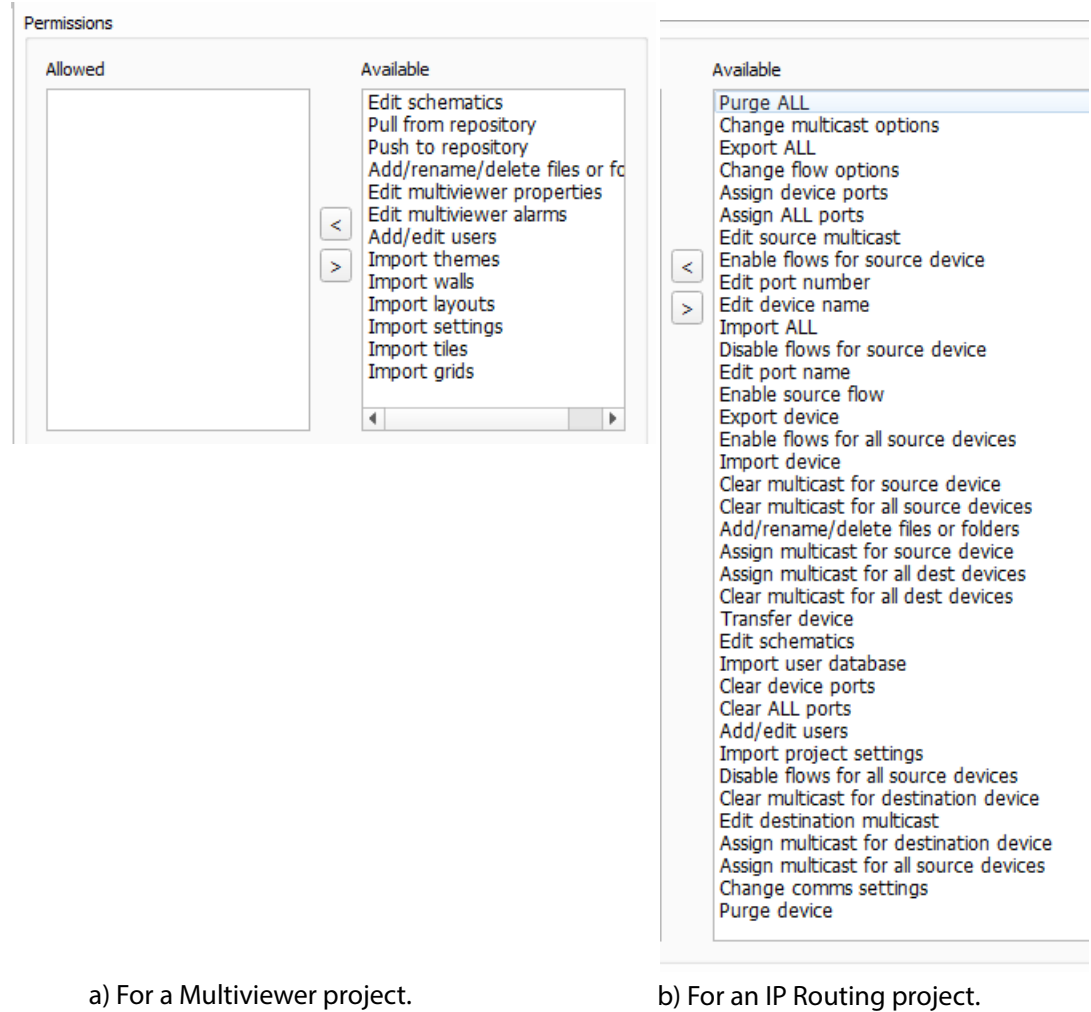


Fig. 9-5: Permissions Pane showing Available Permissions

Table 9-1 Permissions (Orbit project types MV / IP)

Permission	The ability to...	Project Type	
		MV	IP
<b>Purge ALL</b>	Purge all off-line devices.		IP
<b>Change multicast options</b>	Change automatic multicast assignment options.		IP
<b>Export ALL</b>	Export settings for all devices.		IP
<b>Change flow options</b>	Change the options used for automatic flow enabling.		IP
<b>Assign device ports</b>	Assign ports for a device.		IP
<b>Assign ALL ports</b>	Assign ports for all devices.		IP
<b>Edit source multicast</b>	Edit individual multicast settings for a source flow.		IP
<b>Enable flows for source device</b>	Enable flows for a source device.		IP
<b>Edit port number</b>	Edit a port number for a spigot.		IP

Table 9-1 Permissions (Orbit project types MV / IP) (continued)

Permission	The ability to...	Project Type	
		MV	IP
<b>Edit device name</b>	Edit a device name.		IP
<b>Import ALL</b>	Import settings for all devices.		IP
<b>Disable flows for source device</b>	Disable flows for a source device.		IP
<b>Edit port name</b>	Edit a port name for a spigot.		IP
<b>Enable source flow</b>	Enable/disable individual source flows.		IP
<b>Export device</b>	Export settings for a device.		IP
<b>Enable flows for all source devices</b>	Enable flows for all source devices.		IP
<b>Import device</b>	Import settings for a device.		IP
<b>Clear multicast for source device</b>	Clear multicast settings for a device.		IP
<b>Clear multicast for all source devices</b>	Clear multicast settings for all source devices.		IP
<b>Assign multicast for source device</b>	Assign multicast settings for a source device.		IP
<b>Assign multicast for all dest devices</b>	Set 1:1 or 1:All routes for all destination devices.		IP
<b>Clear multicast for all dest devices</b>	Clear multicast settings for all destination devices.		IP
<b>Transfer device</b>	Transfer settings from one device to another.		IP
<b>Edit schematics</b>	Modify video wall and tile designs.	MV	IP
<b>Import user database</b>	Import a user database		IP
<b>Clear device ports</b>	Clear ports for a device.		IP
<b>Disable flows for all source device</b>	Disable flows for all source devices.		IP
<b>Clear multicast for dest device</b>	Clear multicast settings for a destination device.		IP
<b>Edit destination multicast</b>	Edit individual multicast settings for a destination flow.		IP
<b>Assign multicast for dest device</b>	Set 1:1 or 1:All routes for a destination device.		IP
<b>Assign multicast for all source devices</b>	Assign multicast settings for all source devices.		IP
<b>Change comms settings</b>	Change network domain and change IP interfaces.		IP
<b>Purge device</b>	Purge an off-line device.		IP
<b>Pull from repository</b>	Move a project from a product unit to Orbit. For example, pulling a project from a multiviewer.	MV	
<b>Push to repository</b>	Move a project from Orbit to a product unit. For example, pushing a project to a multiviewer.	MV	
<b>Add/rename/delete files or folders</b>	Manage project files and folders.	MV	

Table 9-1 Permissions (Orbit project types MV / IP) (continued)

Permission	The ability to...	Project Type	
		MV	IP
<b>Edit multiviewer properties</b>	Edit properties for video wall themes, tiles and walls.	MV	
<b>Edit multiviewer alarms</b>	Create and delete alarms.	MV	
<b>Add/edit users</b>	Manage users and roles.	MV	
<b>Import themes</b>	Import themes into a project from another Orbit project.	MV	
<b>Import walls</b>	Import walls into a project from another Orbit project.	MV	
<b>Import layouts</b>	Import wall layouts into a project from an Orbit project.	MV	
<b>Import settings</b>	Import project settings from another Orbit project.	MV	
<b>Import tiles</b>	Import tiles into a project from another Orbit project.	MV	
<b>Import grids</b>	Import grids into a project from another Orbit project.	MV	

## Pre-defined User Roles

The following user **Roles** are configured by default in a new Orbit project:

- **Administrator** - role with all default permissions.
- **Supervisor** - role as administrator, but no user management role.
- **Operator** - role limited to read-only access to projects.

The permissions for each of these roles are listed in Fig. 9-6:.

**Administrator**

Role name: administrator

Description: An administrator has all the privileges

Permissions:

Allowed	Available
<ul style="list-style-type: none"><li>Edit schematics</li><li>Pull from repository</li><li>Push to repository</li><li>Add/rename/delete files or folders</li><li>Edit multiviewer properties</li><li>Edit multiviewer alarms</li><li>Add/edit users</li><li>Import walls</li><li>Import layouts</li><li>Import settings</li><li>Import themes</li><li>Import tiles</li><li>Import grids</li></ul>	

a) Administrator

**Supervisor**

Role name: supervisor

Description: A supervisor can retrieve, change and push schematics, but cannot manage users

Permissions:

Allowed	Available
<ul style="list-style-type: none"><li>Edit schematics</li><li>Pull from repository</li><li>Push to repository</li><li>Add/rename/delete files or folders</li><li>Edit multiviewer properties</li><li>Edit multiviewer alarms</li><li>Import walls</li><li>Import layouts</li><li>Import settings</li></ul>	<ul style="list-style-type: none"><li>Import grids</li><li>Import tiles</li><li>Add/edit users</li><li>Import themes</li></ul>

b) Supervisor

**Operator**

Role name: operator

Description: An operator has basically read-only access to all the configuration

Permissions:

Allowed	Available
<ul style="list-style-type: none"><li>Pull from repository</li></ul>	<ul style="list-style-type: none"><li>Add/rename/delete files or folders</li><li>Edit schematics</li><li>Import grids</li><li>Import tiles</li><li>Import settings</li><li>Add/edit users</li><li>Edit multiviewer alarms</li><li>Edit multiviewer properties</li><li>Push to repository</li><li>Import layouts</li><li>Import walls</li><li>Import themes</li></ul>

c) Operator

Fig. 9-6: Predefined User Role Permissions (Multiviewer project shown):  
a) Administrator.  
b) Supervisor.  
c) Operator.

## How to Edit Permissions for Roles (Permissions Pane)

- 1 In the **Roles** tab, click on a role in the list to select it. See Figure 9-7.  
The selected role's name and a brief description are displayed on the right-hand side.

The **Permissions Pane** displays the:

- Selected role's permissions in the **Allowed** list.
- Remaining available permissions in the **Available** list.

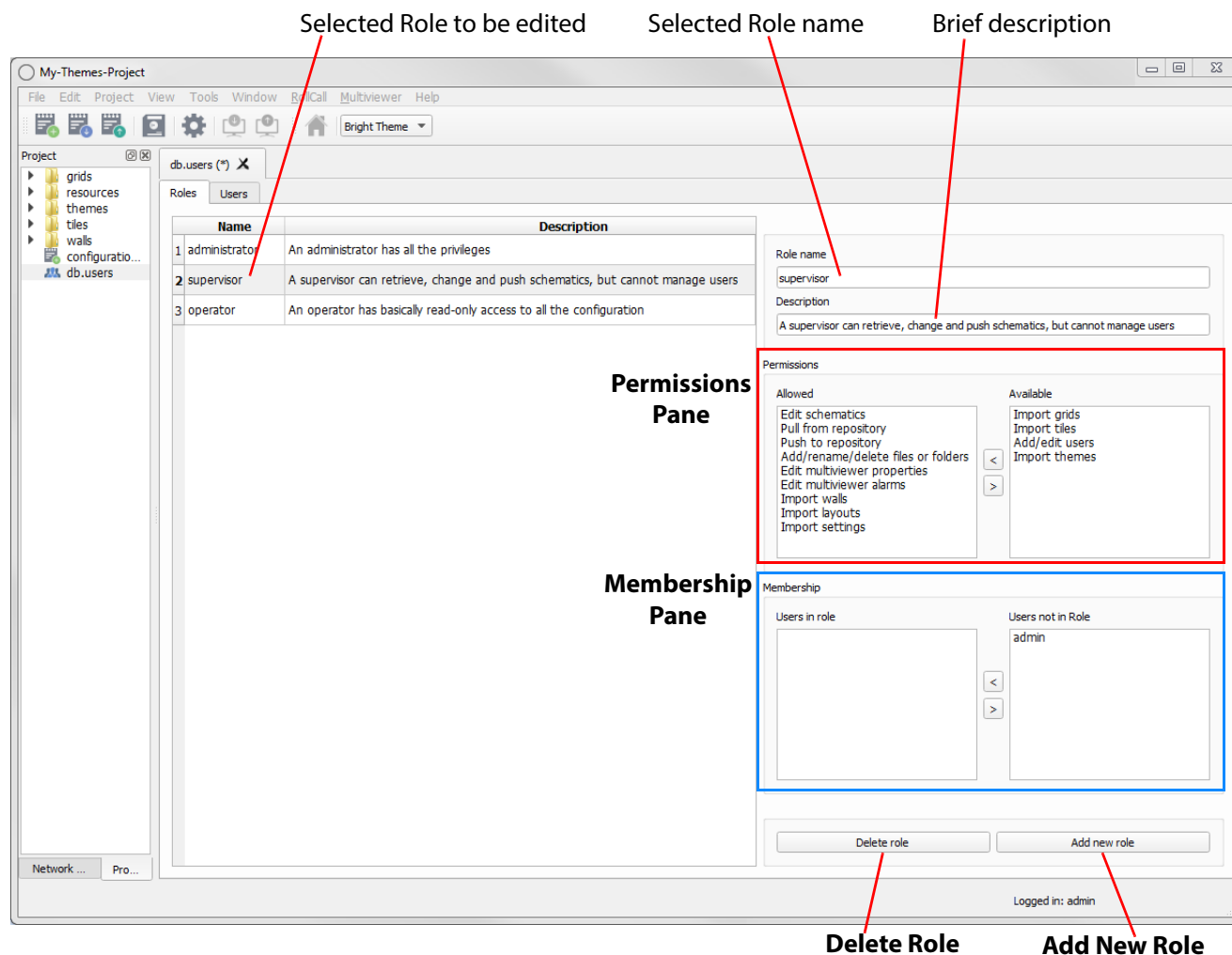


Fig. 9-7: Roles Tab (Multiviewer project shown)

To add a permission to a role:

- 2 Click on the permission in the **Available** list.  
More than one permission may be selected, if required.  
To deselect an item, click on the selected item.
- 3 Click on the < button to add the selected item(s) to the **Allowed** list.  
The selected permission(s) move from the **Available** list to the **Allowed** list.

To remove a permission from a role:

- 4 Select the permission in the **Allowed** list.
- 5 Click on the > button to remove it from the **Allowed** list.  
The selected permission moves to the **Available** list.

Lastly:

- 6 Save any changes by clicking on the **Save File**  button in the main tool bar.

**Note:**

Click the **Save File** icon in the Orbit screen's main tool bar to save changes made in the **Roles** tab.

## How to Assign Users to Roles (Membership Pane)

Refer to Figure 9-7.

- 1 In the **Roles** tab, click on a role in the list, to select the role to be edited.

The **Membership Pane** (see Fig. 9-7:) displays the:

- User names assigned in the role. This is listed in the "**Users in Role**" list.
- User names not assigned in the role, listed in the "**Users not in Role**" list.

To assign a user in a role:

- 2 Click on the user in the "**Users not in Role**" list to select an user.  
(More than one user may be selected.)

To deselect an item, Click on a selected item.

- 3 Click on the < button to add the selected user name(s) to the "**Users in Role**" list. The selected user(s) move from the "**Users not in Role**" list to the "**Users in Role**" list.

To remove a user from a role:

- 4 Select the user name in the "**Users in Role**" list.
- 5 Click on the > button to remove it from the "**Users in Role**" list. The selected user name moves to the "**Users not in Role**" list.

Lastly:

- 6 Save any changes by clicking on the **Save File**  button below the menu bar.

**Note:**

Click the **Save File** icon in the Orbit screen's main tool bar to save changes made in the **Roles** tab.



## How to Delete Roles

**Note:** A user will lose permissions if they are assigned to a role when the role is deleted. Ensure that no users are assigned in any role to be deleted.

- 1 In the **Roles** tab's "list of roles", select the role to be deleted.

The screenshot shows the 'db.users' application interface. At the top, there are tabs for 'Roles' and 'Users'. The 'Roles' tab is active, displaying a table with the following data:

	Name	Description
1	administrator	An administrator has all the privileges
2	supervisor	A supervisor can retrieve, change and push schematics, but he cannot manage users
3	operator	An operator has basically read-only access to all the configuration
4	TECHNICIAN	Performs technical operations
5	Guest operator role	Temporary role for visiting operators to the studio.

The 'Guest operator role' is highlighted in blue. To the right of the table, there is a form for editing the selected role. It includes fields for 'Role name' (containing 'Guest operator role') and 'Description' (containing 'Temporary role for visiting operators to the studio.'). Below these are sections for 'Permissions' and 'Membership'. The 'Permissions' section has two lists: 'Allowed' (containing 'Pull from repository') and 'Available' (containing 'Add/rename/delete files or', 'Edit schematics', 'Import grids', 'Import tiles', and 'Import settings'). The 'Membership' section has two lists: 'Users in role' (containing 'Ian Operator') and 'Users not in Role' (containing 'admin', 'Sue Supervisor', and 'Tony Technician'). At the bottom right, there are two buttons: 'Delete role' and 'Add new role'.

Fig. 9-8: Select a Role for Deletion

- 2 Review the role details in the **Membership Pane**.
- 3 Ensure that no users are assigned to the role to be deleted.
- 4 Remove any users from the role using the **Membership Pane**.
- 5 Click on the **Delete Role** button, located below the **Membership Pane**. A confirmation message box will appear, see Figure 9-9.
- 6 Read the message.  
If you wish to proceed, click "**Yes**" to confirm that the role should be deleted, otherwise, click "**No**". See note below and see Figure 9-9.

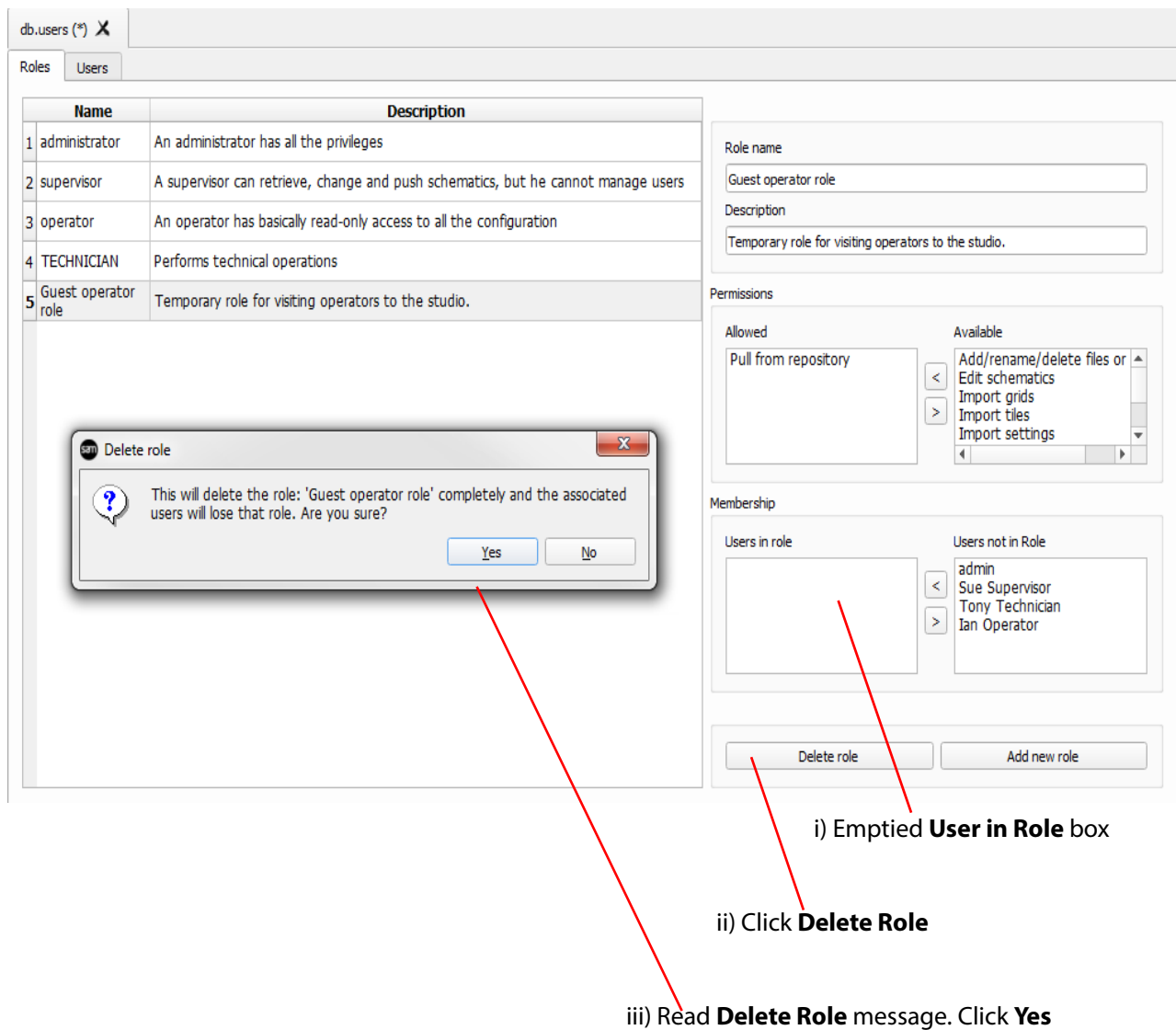


Fig. 9-9: Deleting Roles Message Box

7 Save any changes by clicking on the **Save File**  button below the menu bar.

**Note:** Click the **Save File** icon in the Orbit screen's main tool bar to save changes made in the **Roles** tab.

## How to Add a Role

- 1 In the **Roles** tab,  
click **Add New Role**, located below the **Membership Pane**. See Figure 9-10.  
A new blank role item is added to the bottom of the roles list on the screen.

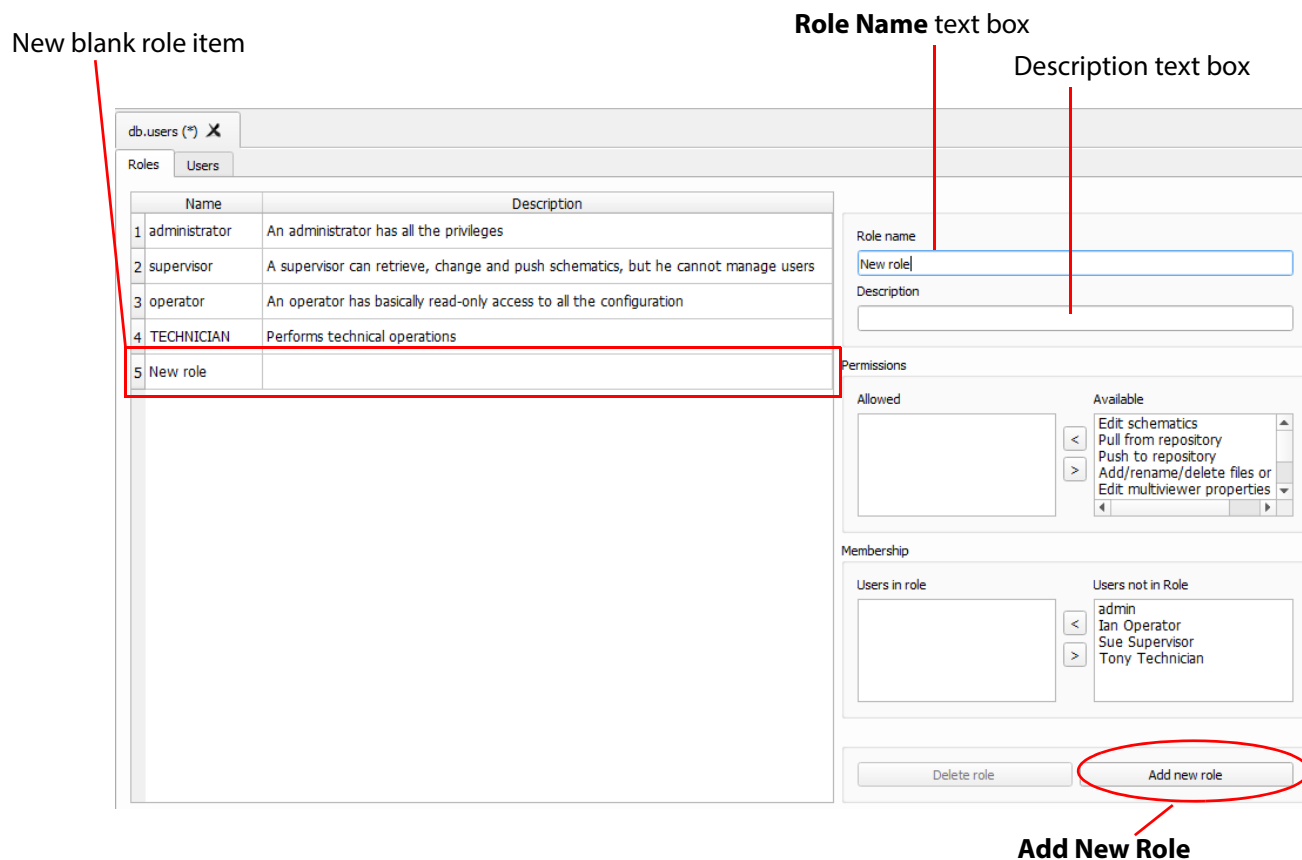



Fig. 9-10: Adding Roles

On the right-hand side of the screen:

- 2 Enter a name for the role in the **Role name** text box. Use a descriptive name.  
(Use characters 'a' to 'z', 'A' to 'Z', 'space' and '0' to '9')
- 3 Enter a brief description of the role in the **Description** text box.

The new role's name and description are shown in the list of roles. See Figure 9-11.

- 4 With the new role highlighted, add the permissions required  
- see Section "How to Edit Permissions for Roles (Permissions Pane)".
- 5 With the new role still highlighted, assign any users  
- see Section "".
- 6 Save any changes by clicking on the **Save File**  button in the main tool bar.

A finished new role screen is shown in Figure 9-11.

db.users (\*) X

Roles Users

	Name	Description
1	administrator	An administrator has all the privileges
2	supervisor	A supervisor can retrieve, change and push schematics, but he cannot manage users
3	operator	An operator has basically read-only access to all the configuration
4	TECHNICIAN	Performs technical operations
5	Guest operator role	Temporary role for visiting operators

Role name

Guest operator role

Description

Temporary role for visiting operators

Permissions

Allowed

Pull from repository

Available

Edit schematics  
Push to repository  
Add/rename/delete files or  
Edit multiviewer properties  
Edit multiviewer alarms

Membership

Users in role

Ian Operator

Users not in Role

admin  
Sue Supervisor  
Tony Technician

Delete role

Add new role

Fig. 9-11: A New Role

## Users Tab

Click on the **Users** tab at the top of the screen to display the **Users Tab** screen, see Figure 9-12. The users of an Orbit project can be viewed, edited and created.

Users are listed in the main screen area in a graphical **Users List** - a list of icons.

The **Users** tab is used to:

- Change the password of an existing user, see section
- Add a new user, see section
- Delete an existing user, see section

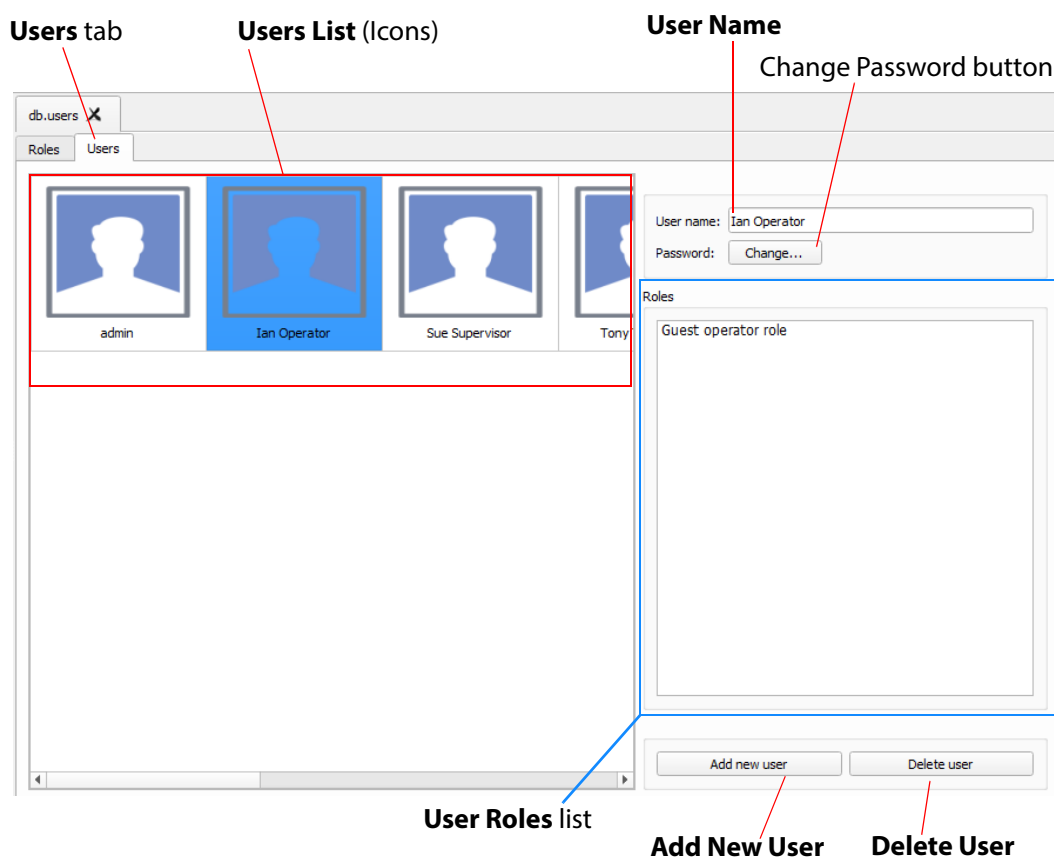


Fig. 9-12: Manage User - Users Tab screen

## Pre-defined Users

Initially, in a new Orbit project, a user named 'admin' is already defined with full administrator role permissions. This enables all operations within Orbit to be carried out.

**Default username** - admin

**Default password** - admin

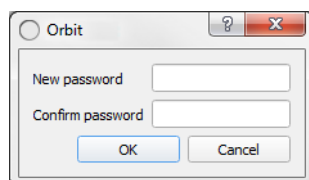
The default password for user 'admin' should be changed as soon as you log into a new project, see section .

Record the user names and passwords somewhere safe and secure.

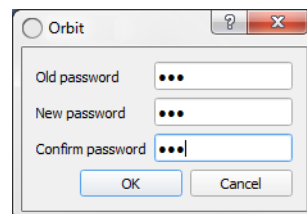
**Note:** Keep a record of the administrator user name and password used.

## How to Change a User Password

- 1 In the **Users** tab, click on a user icon in the **Users List**.  
This selects the user to be edited.
- 2 Click on the **Change** button, located below the **User name** text box.  
The change password dialog is displayed. See Figure 9-13.



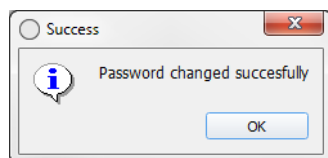
a) Add Password for a new user



b) Change Password for a user

*Fig. 9-13: Change Password Dialogs*

- 3 Enter the original password in the **Old password** text box, if this is shown.  
Enter the new password in both the **New password** text box  
and also in the **Confirm password** text box.
- 4 Click **OK** to change the password or click **Cancel** to abandon the change.  
If a new password has been set, a "Password changed successfully" message is displayed;  
click **OK**. See Figure 9-14



*Fig. 9-14: Password Changed Successfully Message*

- 5 Save any changes by clicking on the **Save File**  icon the Orbit screen's main tool bar.

## How to Add a User

- 1 In the **Users** tab, click **Add New User**, located below the **User Roles** list.  
A new **User Icon** appears in the **Users List**. See Figure 9-15.

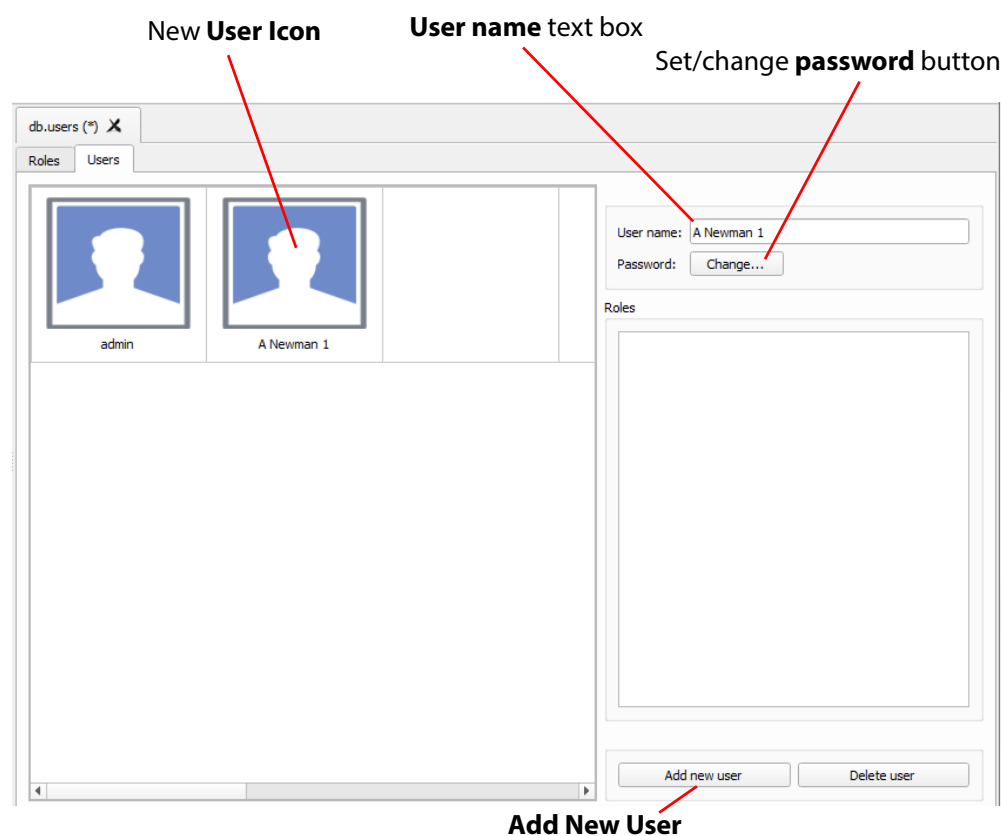


Fig. 9-15: Adding a New User

- 2 Enter a name for the new user in the **User name** text box.  
(Use characters 'a' to 'z', 'A' to 'Z', 'space' and '0' to '9'.)
- 3 Click on the **Change** button below the **User name** text box.  
The **Set New Password** dialog is displayed. See Figure 9-16.

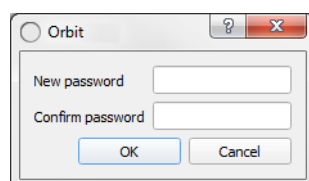
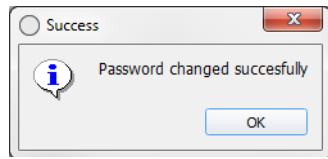


Fig. 9-16: Set New Password Dialog

- 4 Enter a new password in the **New password** text box  
and re-enter it in the **Confirm password** text box.

- 5 Click **OK** to set the password, or click **Cancel** to abandon the change.  
If a new password has been set,  
a "Password changed successfully" message is displayed; click **OK**. See Figure 9-17.



*Fig. 9-17: Password Changed Successfully Message*

- 6 Save any changes by clicking on the **Save File**  icon in the Orbit tool bar.

**Note:**

Click the **Save File** icon in the Orbit screen's main tool bar to save changes made in the **Users** tab.



## How to Delete a User

- 1 In the **Users** tab,  
click on a **User Icon** in the **Users List** to select the user to be deleted. See Figure 9-18.

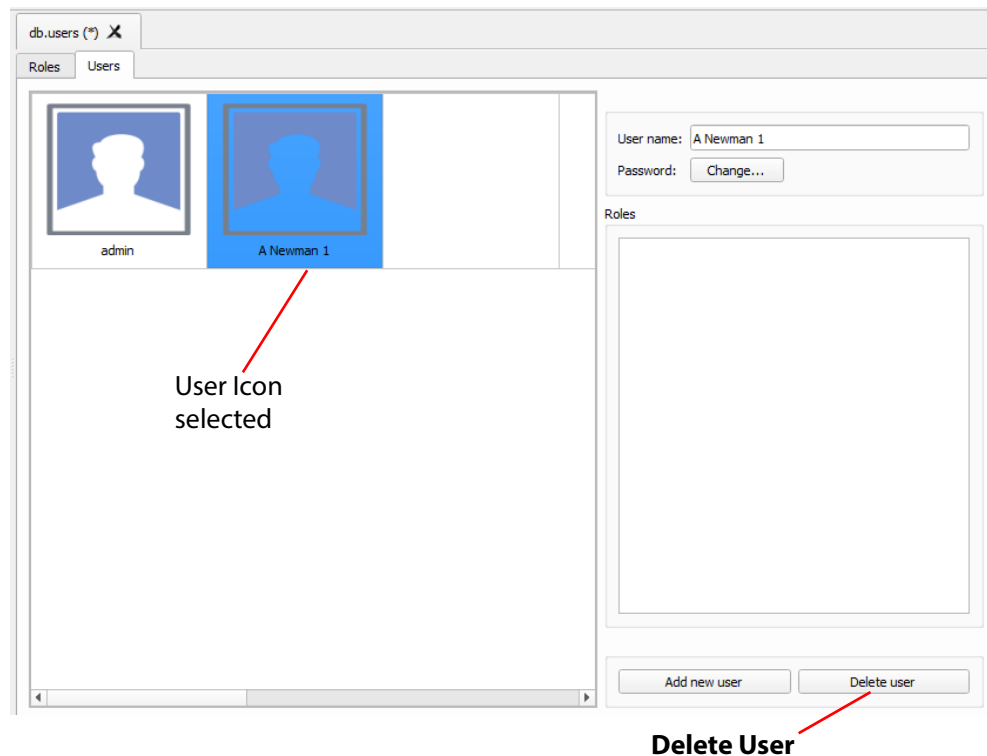


Fig. 9-18: Deleting a User

- 2 Click on the **Delete user** button.  
A confirmation message dialog box appears. See Figure 9-19.

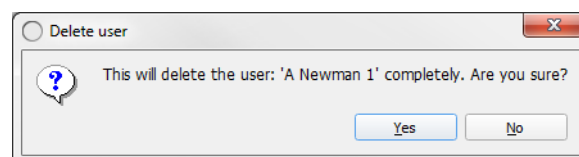



Fig. 9-19: Confirm User Deletion Message

- 3 Click **Yes** to confirm user deletion, or click **No** to abandon deleting the user.  
If the user is deleted, the corresponding user icon disappears from the **Users List**.
- 4 Save any changes by clicking on the **Save File**  icon in the Orbit main tool bar.

**Note:** Click the **Save File** icon in the Orbit screen's main tool bar to save changes made in the **Users** tab.



# A Software Installation

## Summary

### Software Installation

[Supported OS](#) ..... page 163

[Supported Orbit software version](#) ..... page 163

[Installation](#) ..... page 164

The Orbit product is a multi-purpose software tool. This appendix describes installation of Orbit software onto a computer (PC) for multiviewer, IP routing and other applications.

## Supported OS

The Orbit supports Windows operating systems, see Table A-1.

Table A-1 OS support

Operating Systems Supported
Windows 7, 64 bit
Windows 8.1, 64 bit
Windows 10, 64 bit

## Supported Orbit software version

For Grass Valley MV-8 series multiviewer applications and, for Grass Valley IP Routing applications using a Grass Valley IP-RSC unit, use Orbit software version:

- v2.2.9 or later.

### Important

#### Orbit for Multiviewers:

Before carrying out an Orbit software upgrade, please inform Grass Valley support of the software versions you already have for:

- MV-8 series multiviewers.
- Orbit software application.

## Installation

The Orbit installer file is a .exe file, for example, file name Orbit-V2.5.14.exe, file size approximately 100 Mbytes.

- 1 Download the Orbit installer from the Grass Valley web site.
- 2 Run the downloaded Orbit Setup installer.

**Note:**

Your PC may ask if you want to allow the Orbit Setup program to make changes to your computer. Click **Yes**.

(Some versions of the Orbit Setup installer may have their 'verified publisher' set as 'Quantel Limited')

- 3 The installation will begin.  
See the initial screen shown in Fig. A-1:.

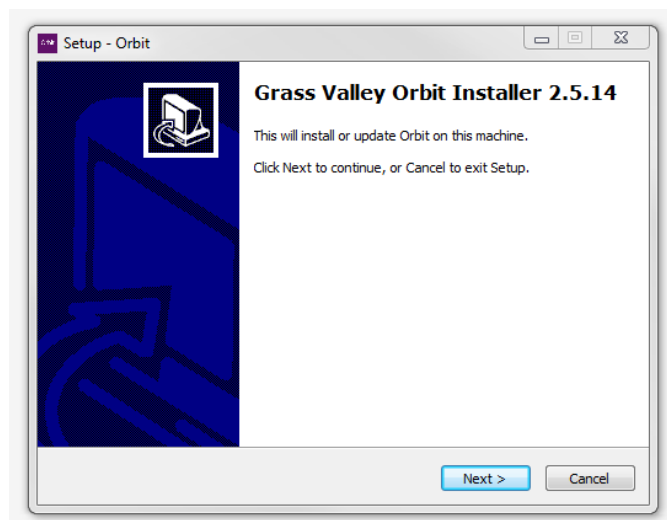


Fig. A-1: Orbit Initial Installation Screen

- 4 Click **Next**.

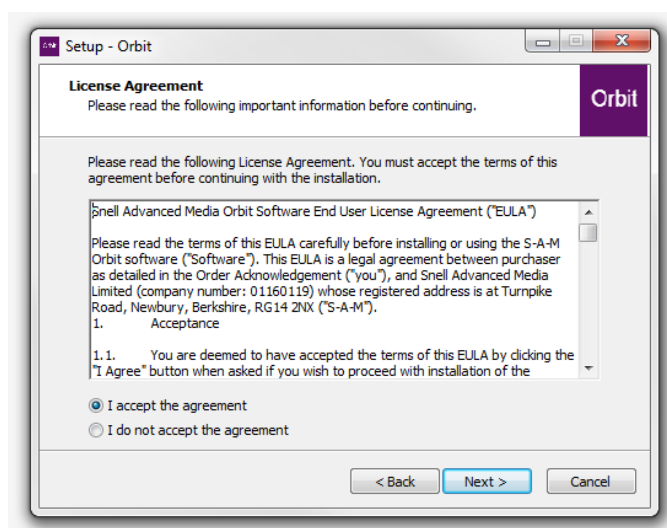


Fig. A-2: Installation Screen

- 5 Read and **Accept** the license agreement.
- 6 Click **Next**.  
The "Orbit Backend Services" screen is shown, see Figure A-3.

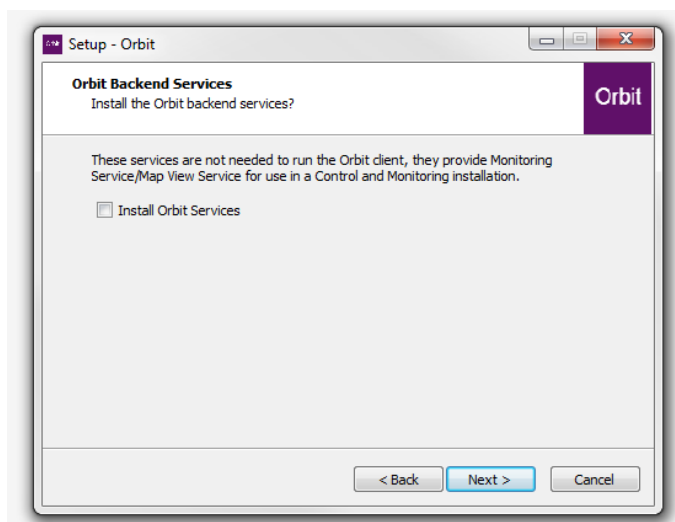
**Note:**

**For older Orbit versions, 2.1.x and earlier:**

A “Select Components” screen is shown. Select the plug-in component for your Orbit application. For example, “IP Routing” or “Multiviewer”.

For Orbit versions v2.2.x onwards:

All plug-ins are installed automatically.



*Fig. A-3: “Backend Services” Screen*

7 In the **Orbit Backend Services** screen, there is an “Install Orbit Services” check box, which is not selected:

- Leave the “Install Orbit Services” check box deselected for:  
Multiviewer applications; or for IP routing applications.
- Select the “Install Orbit Services” check box for:  
Control and Monitoring applications.

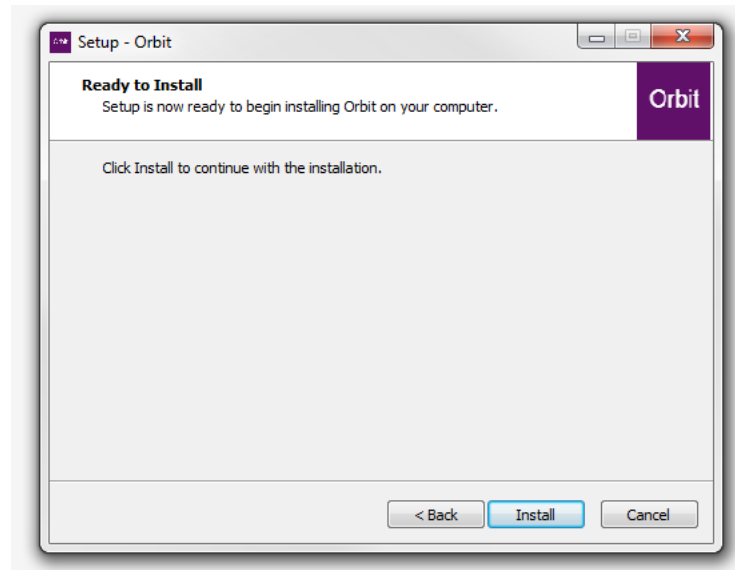
8 Click **Next**.

**Note:**

**Orbit Services:**

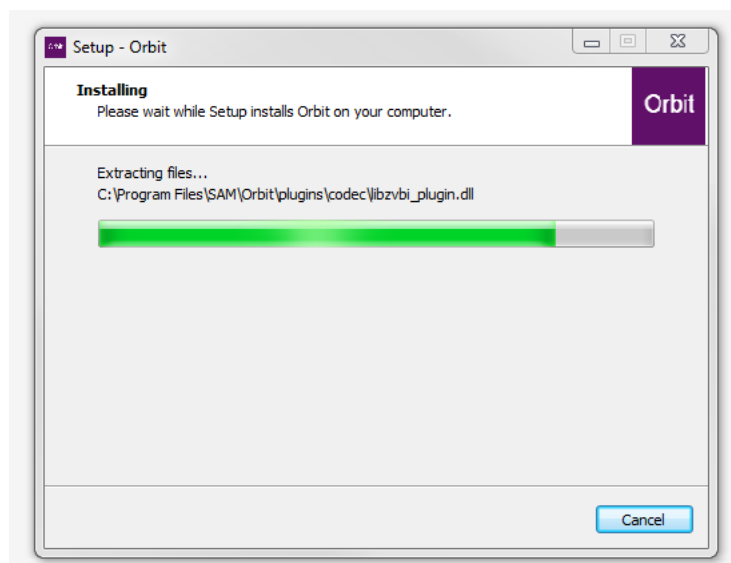
Orbit Services are used in a Control and Monitoring system. The services aggregate multiple log fields and provide a single log field containing the aggregate state of all contributing log fields.

Orbit Services are not needed when installing the normal Orbit ‘client’ application.



*Fig. A-4: "Ready to Install" Screen*

- 9 In the **Ready to Install** screen, click **Install** to continue with the installation. Installation begins and a progress bar is shown. See Figure A-5.



*Fig. A-5: Installing Screen and Progress Bar*

- 10 When installation is complete, the completion screen is shown, see Figure A-6.

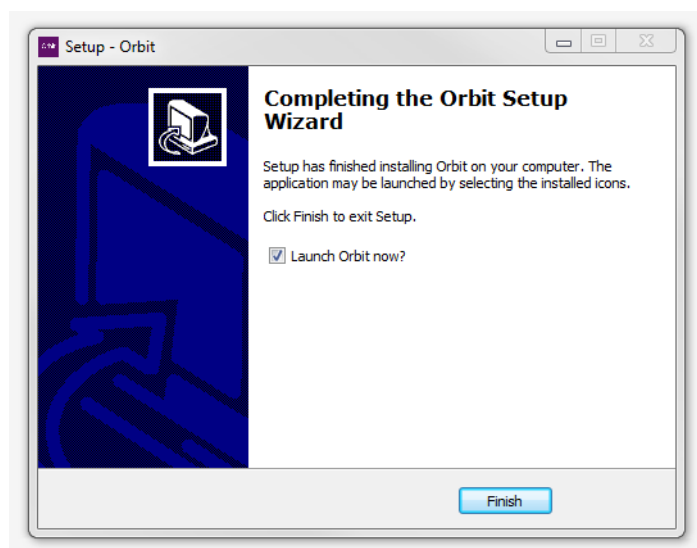



Fig. A-6: Orbit Setup Installation Completion Screen

- 11 Click **Finish** to close the installer and launch the Orbit software application.

The Orbit software starts up.

The Orbit software may be started up after installation:

- 12 To start Orbit:

- Click on the  icon in your Windows Start menu.

Or

- Browse to 'C:\Program Files\SAM\Orbit' on your PC and run 'Orbit.exe'.

- 13 Check that the Orbit application is not blocked by your PC's firewall settings. Orbit.exe should be on a list of allowed programs.

**Note:**

#### Firewall

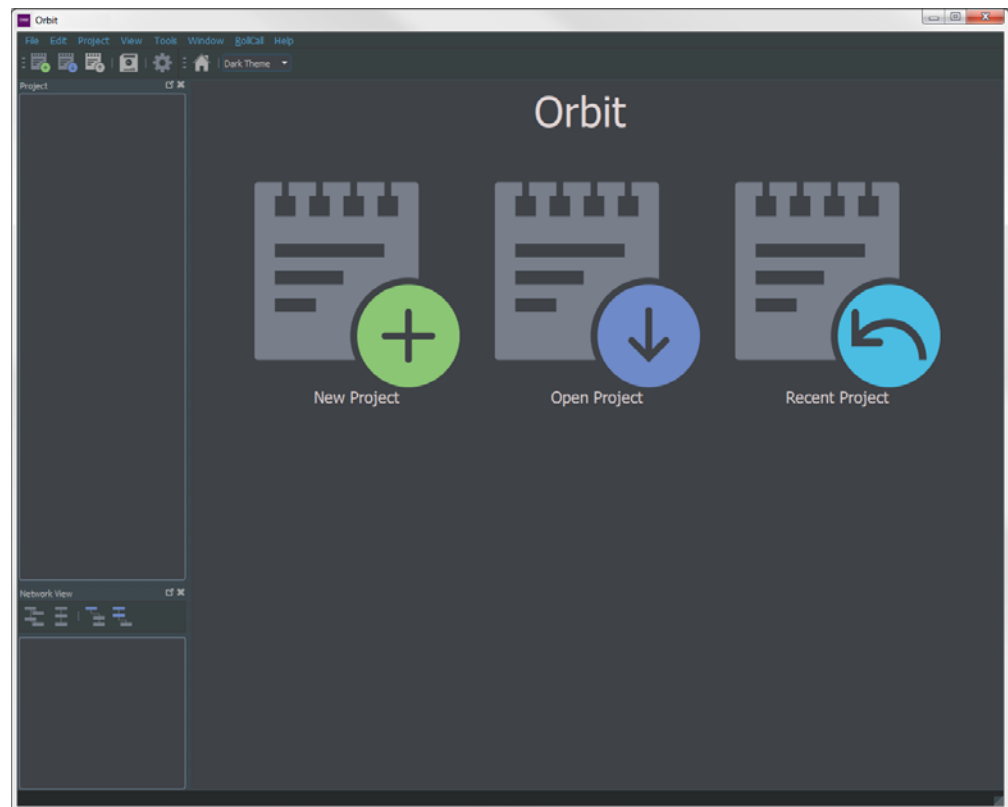
Check that the Orbit application is not blocked by your PC's firewall settings. 'Orbit.exe' should be on a list of allowed programs.

- 14 When the Orbit application starts up, a splash screen appears...



Fig. A-7: Orbit splash screen

...Followed by the Orbit initial screen. Fig. A-8: shows a typical initial screen.



*Fig. A-8: Typical Orbit Initial Screen*

**Note:** In the Orbit screen tool bar, a “Bright Theme/Dark Theme” selection box allows the user to select between a light- or a dark-themed background.

The Orbit application is now installed.



# B Orbit License Installation

## Summary

### Orbit License Installation

<a href="#">Install License Server</a> .....	page 170
<a href="#">Lock Code for License Host PC</a> .....	page 173
<a href="#">Add Orbit License to Server</a> .....	page 175

This appendix describes the installation of some software applications required for getting an Orbit option working. Use the procedure described herein to install Orbit licenses; this includes:

- **IPNETMGR** - License for using the Orbit for IP Routing application.
- **MV-800-DT** - License for live video wall operation in Orbit.

Installations and preparation steps covered:

- License server installation - see [Install License Server](#), on page 170.
- Lock Code generation - see [Lock Code for License Host PC](#), on page 173.
- Addition of license to server - see [Add Orbit License to Server](#), on page 175.

## Install License Server

The license server application should be installed on a license server host PC. The PC must be on the same network as the PC running Orbit.

**Note:** For the MV-800-DT license, Grass Valley MV-8 series Multiviewer unit(s) producing corresponding live H.264 video streams must also be on the same network.

The license server *application* used is the same as that used for some other Grass Valley products, for example, for Grass Valley Alchemist XF.

If such a license server already exists on the network, then:

- The existing license server may be used.  
In this case, proceed to [Lock Code for License Host PC](#), on page 173.

Otherwise:

- A license server application must be installed; follow the steps in this sub-section.

## To Install License Server Application

To install the license server application:

- 1 To get the licensing tool installer files onto the license host PC, either:
  - copy across part of an Orbit installation folder from another PC onto the license host PC, C:\Program Files\SAM\Orbit\LicensingTools;or, alternatively,
  - install Orbit on the license host PC,  
see Appendix A “[Software Installation](#)” on page 163.
- 2 On the license host PC, go to the  
C:\Program Files\SAM\Orbit\LicensingTools\Setup sub-folder.

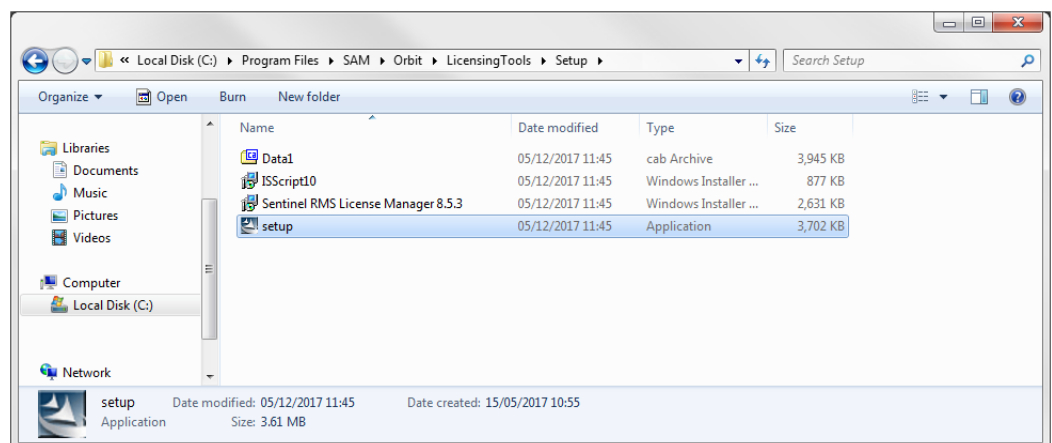


Fig. B-1: Licensing Tools 'setup.exe'

3 Run **setup.exe**.

The licensing tools installation begins and an initial screen is shown.



Fig. B-2: Licensing Tools Setup Initial Screen

4 Click **Next** at the initial screen.

5 Read and accept the License Agreement.

Click **Next**.

6 At the Customer Information screen, enter the information.

Click **Next**.

7 At the Destination Folder screen, select the default installation folder.

Click **Next**.

8 At the Setup type screen, select the **Complete** setup type.

Click **Next**.

9 At the System Firewall Settings screen,

select the text box for "Unblock the system firewall for the Sentinel RMS License Manager".

10 Click **Next**.

The 'Ready to Install the Program' screen appears, see Figure B-3.

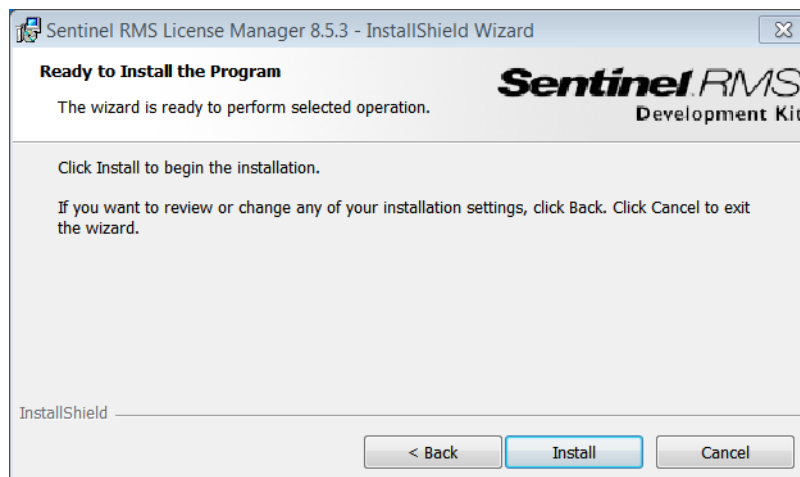


Fig. B-3: Licensing Tools - Ready screen

11 Click **Install**.

Installation begins and a progress bar is shown.

The install complete screen is shown when installation is done.



*Fig. B-4: Licensing Tools - Complete screen*

12 Click **Finish**.

Licensing Tools installation is now finished.

13 Restart the license host PC.

The licensing tools are now installed on the license host PC. The licensing tools are run as a service when the license host PC is restarted.

## Lock Code for License Host PC

A **Lock Code** is required to be generated from your license host PC. This is a kind of fingerprint of your license server PC machine, which ensures your Orbit license will be served by the license server.

The **Lock Code** must be supplied to Grass Valley when ordering an Orbit license.

**Lock Code** generation is described in this sub-section.

**Note:** The **Lock Code** is case-sensitive and must be supplied to Grass Valley exactly as it appears after these **Lock Code** generation steps.

The **Lock Code** generating utility is found in a Grass Valley Orbit installation folder.

### To Generate a Lock Code

To generate a **Lock Code**:

- 1 Get the generating utility onto the license server PC, by either:
  - Installing Orbit on the license host PC.
  - or
  - Copying across the Orbit installation folder from another PC.  
( C:\Program Files\SAM\Orbit... )
- 2 On the license server PC,  
go to C:\Program Files\SAM\Orbit\LicensingTools.
- 3 Run the file 'wechoid.exe'.  
A **Lock Code** generation dialog window appears entitled 'Wechoid'. See Figure B-5.

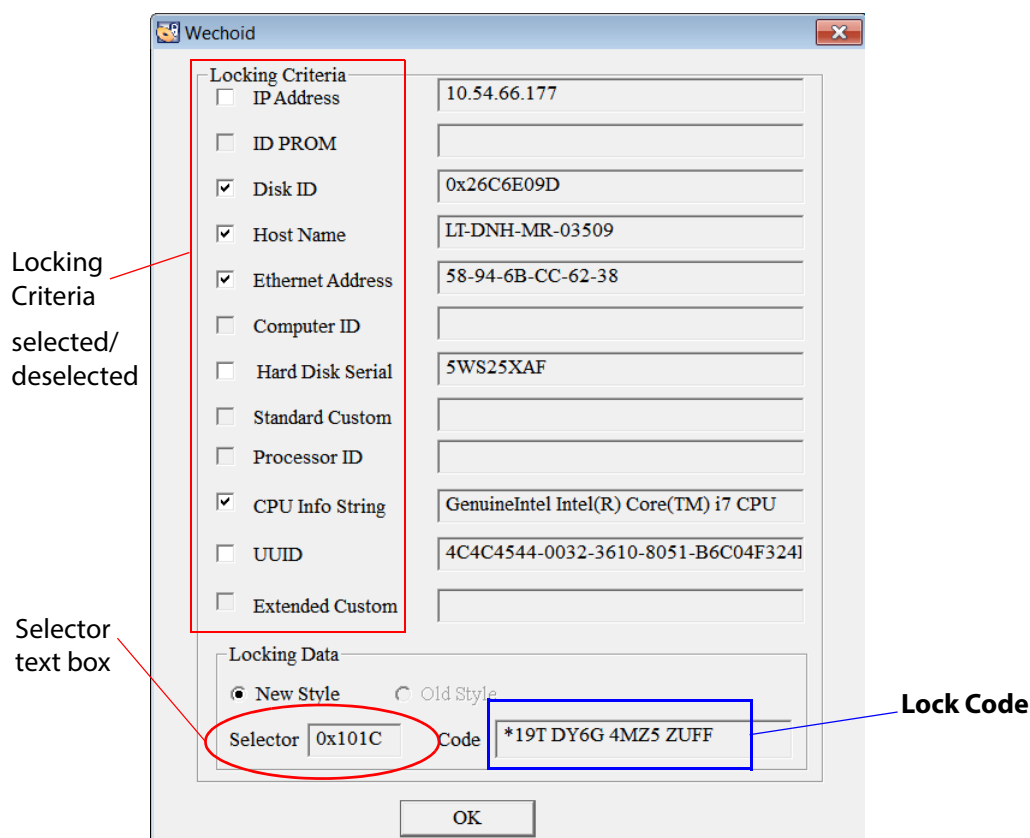


Fig. B-5: Lock Code 'Wechoid' Dialog Window

- 4 Select and deselect the various left-hand side **Locking Criteria** check boxes so that they appear the same as in Figure B-5.
- 5 Check that the value in the **Selector** text box is the same as that in Figure B-5.
- 6 The value in the **Code** text box is the **Lock Code** for your host PC.  
Record the **Lock Code** for sending to Grass Valley.

**Note:**

The **Lock Code** is case-sensitive and must be supplied to Grass Valley *exactly* as it appears in your Wechoid window on the license host PC.

Take a screen shot of your Wechoid window with the Windows Snipping tool or similar.

- 7 Keep the record of your **Lock Code** safe.  
Close the Wechoid window.

Finally:

- 8 Supply the **Lock Code** to Grass Valley with your Orbit license purchase order.

## Add Orbit License to Server

This section deals with adding an Orbit license file to the license server.

On the license host PC:

- 1 Go to C:\Program Files\SAM\Orbit\LicensingTools.

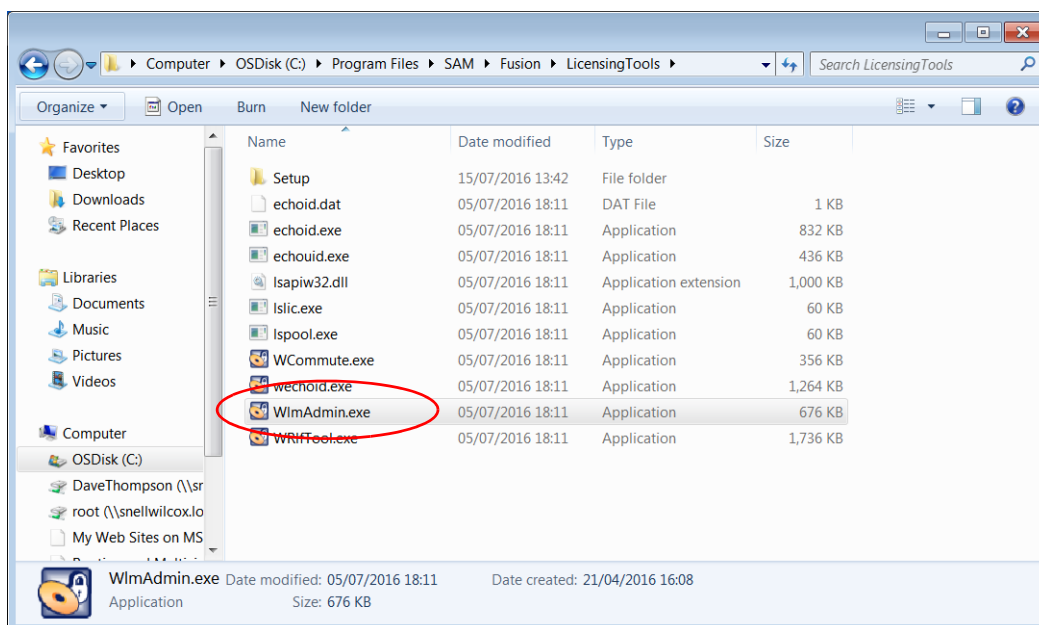


Fig. B-6: Run 'WlmAdmin.exe'

- 2 Run 'WlmAdmin.exe', the license administration tools.  
The WlmAdmin window appears, see Figure B-7.

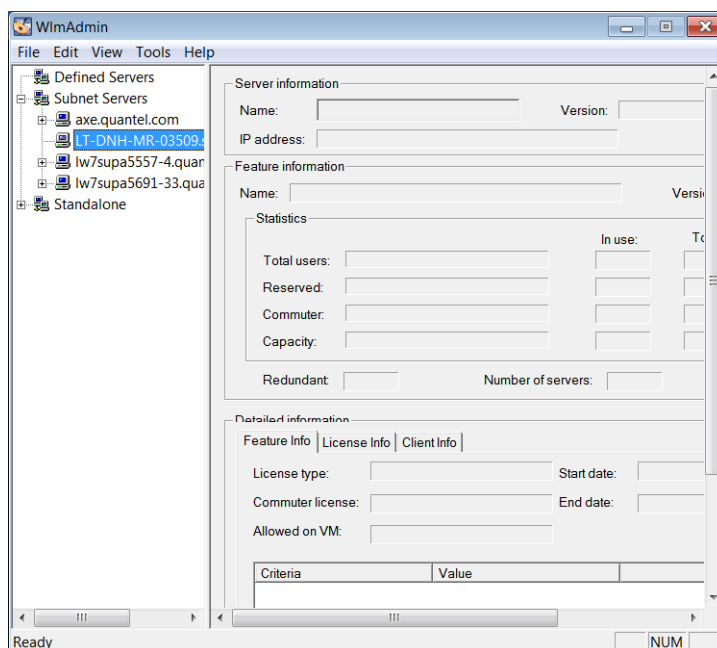


Fig. B-7: WlmAdmin Window

- 3 Expand the 'Subnet Servers' tree view item and locate the license host PC.

- 4 Right-click on the license host PC item and click on **Add Feature > From a File > To Server and its File**, see Figure B-8.

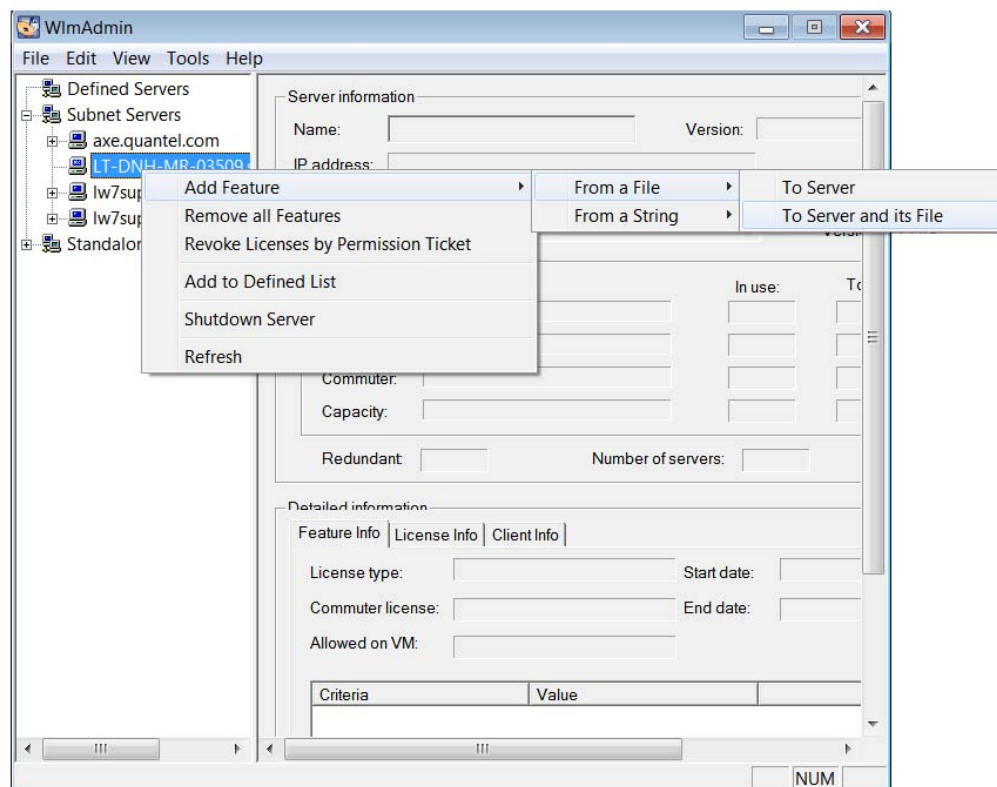


Fig. B-8: Add Feature

- 5 Browse to your license file and click **Open**.  
The license file is read and the licensed feature is added to the license server.  
An acknowledging message is displayed, see Figure B-9.

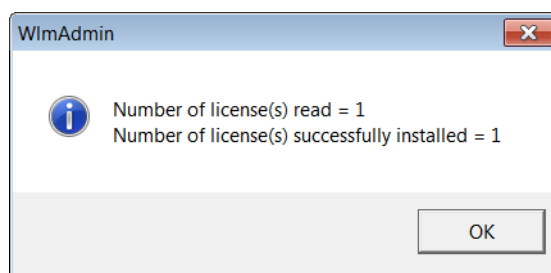


Fig. B-9: WlmAdmin License Read message

- 6 Click **OK**.  
The license file contents have been read and the Orbit license item has been added.  
The Orbit license has now been added to the license server.

In the WlmAdmin window, license feature information may be seen by expanding the license host PC in the tree view. Beneath the license server PC name, the newly-added license name appears; for example, see Figure B-10.

Close the license tools window, WlmAdmin, when done; the license service continues to run and is ready for use.



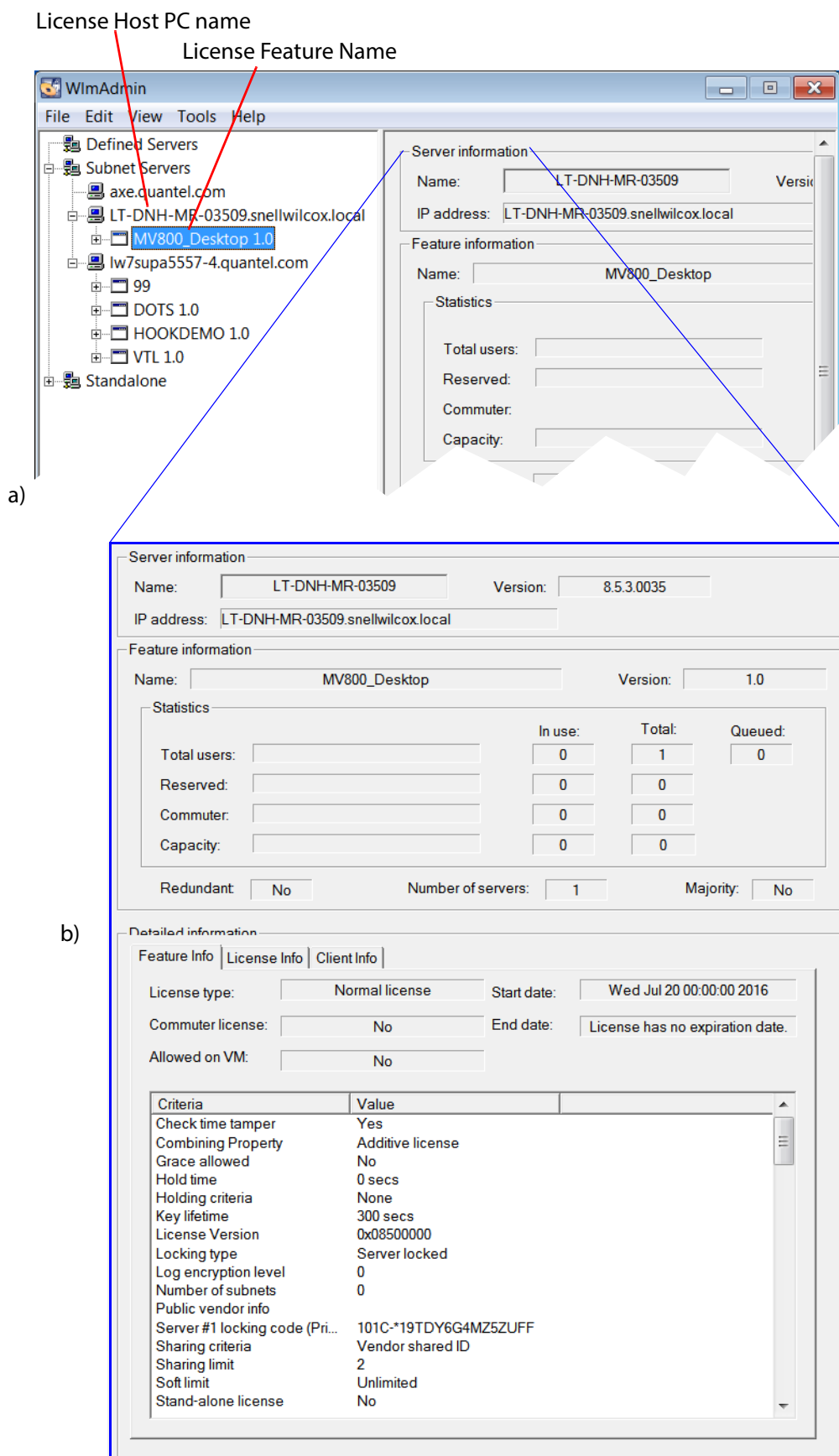


Fig. B-10: WlmAdmin License Information (MV-800-DT example shown)  
a) License Feature Name in expanded tree view.  
b) License Server and Feature Information in right-hand pane.



# C Naming Guidelines

This appendix contains guidelines the for naming of Orbit project names, file names and folder names etc. The following guidelines are provided to avoid any unnecessary problems:

- 1 Assume names are case-sensitive and be consistent with your use of case.
- 2 Use characters listed in Table C-1:

*Table C-1 Recommended Characters*

Recommended Character	
"A" to "Z"	
"a" to "z"	
"0" to "9"	
" "	underscore
"_"	minus

- 3 Do not use characters listed in:

*Table C-2 Characters that should NOT be used.*

Do not use	
/	slash
\	backslash
?	question mark
%	percent
*	asterisk or star
:	colon
;	semi-colon
	vertical bar or pipe
"	quote
'	single quote
<	less than
>	greater than
.	period or full-stop (except between the stem file name and file extension)
	space character





## **Grass Valley Technical Support**

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

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

<http://www.grassvalley.com/contact/>

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

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