MIGRATION / INSTALLATION OF KALEIDO-IP SOFTWARE WITH VERSION 11 OR HIGHER

Kaleido-IP & Kaleido-IP VM Multiviewers

Upgrade Guide

13-00926-010 AC

2021-06-08

Patent Information

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1 Introduction

Document Applicability

This document applies to the following multiviewer models with the following goals.

- Only the following multiviewer models can be migrated from an earlier version of Kaleido Software (version 10.X or lower) to version 11.0.0 or higher. To do so, this one time special migration procedure must be followed. See Migration to Kaleido Software Version 11.0.0 or Higher, on page 5.
  - Kaleido-IP X110
  - Kaleido-IP X310
  - Kaleido-IP X120
  - Kaleido-IP X320
  - Kaleido-IP VM
- Certain procedures in this document are used to make a clean installation of the Kaleido Software on the multiviewer's hard disk. This installs Kaleido Software version 11.0.0 or higher multiviewer ISO image on a Kaleido-IP multiviewer's hard disk. This is a clean install of the multiviewer's software that resets the multiviewer to the state as it left the factory when it was new. This is prescribed for a new hard disk when the multiviewer's hard disk requires replacement. See Multiviewer Clean Installation with Kaleido Software Version 11.0.0 or Higher, on page 6.
  - Kaleido-IP X110
  - Kaleido-IP X310
  - Kaleido-IP X120
  - Kaleido-IP X320
  - Kaleido-IP X130
  - Kaleido-IP X330

Migration to Kaleido Software Version 11.0.0 or Higher

As of Kaleido Software version 11.0.0, a new operating system is required for the server to run this Kaleido Software version.

For migration, there are preparation tasks that can be performed while the multiviewer is in use and then there are migration tasks during which the multiviewer will be unavailable. As a result, plan a maintenance window when the multiviewer is not in use as this procedure will take the Kaleido-IP offline during a certain period of time.

If you are currently running Kaleido Software version 11.0.0 or higher on your multiviewer, then the Ubuntu operating system has been already installed. See the release notes for how to upgrade your multiviewer.

The migration procedure is markedly different between hardware multiviewers (Kaleido-IP X110 / X310 / X120 / X320) and the Kaleido-IP VM multiviewer. As such, separate procedures are available.

- For hardware multiviewers, see Migration to Ubuntu First Steps, on page 9 and Migration procedure for Kaleido-IP X110 / X310 / X120 / X320, on page 29.
- For the Kaleido-IP VM multiviewer, see Migration to Ubuntu First Steps, on page 9 and Migration procedure for Kaleido-IP VM, on page 39.

Multiviewer Clean Installation with Kaleido Software Version 11.0.0 or Higher

Once a multiviewer's hard disk has been replaced, the multiviewer's software must be imaged onto the new disk. This is a clean install of the multiviewer's software that resets the multiviewer to the state as it left the factory when it was new. See ISO Image Installation procedure for Kaleido Software Version 11 or higher, on page 53.

See also the Release Notes for the version of Kaleido Software you are installing. See Related Documentation, on page 6.

If you are restoring Kaleido-IP Software version 11.0.0 or higher to a blank replacement hard drive (or SSD), you must send the following information to Grass Valley Technical Support:

- The Kaleido-IP's license Authorization Code **a/c** serial number (as seen in XAdmin).
- A list of all Kaleido-IP software options that were purchased. See Obtain New License Keys, on page 11 for the available software options.

See Locating the Multiviewer's License Keys, on page 12 for this information. If your disk (or SSD) failure is such that you cannot access XAdmin, the information is also contained within any System SnapShot you may have taken in the past when the multiviewer was running under Kaleido-IP Software version 11.0.0 or higher. If you cannot access XAdmin nor do you have a recent System SnapShot on hand, you will need to proceed with the restoration in order to gain access to XAdmin in order to extract the serial number required by Technical Support, in order to generate a list of licenses you purchased for the multiviewer.

To contact Grass Valley Technical Support, see Grass Valley Technical Support, on page 73.

> WARNING
> Do not attempt the migration before you get the substitute Authorization Code and license keys from Grass Valley, otherwise the licensed features for your Kaleido-IP with Kaleido Software version 11.0.0 or higher will not be available.

To re-install Kaleido-IP Software version 11.0.0 or higher, see ISO Image Installation procedure for Kaleido Software Version 11 or higher, on page 53.

Related Documentation

This document makes reference to certain documents listed in the following table. You can obtain the latest product documentation from the Documentation Library section of Grass Valley's website (www.grassvalley.com/docs/multiviewers).

Document Number	Title
M770-2800	Kaleido Software User's Manual
M770-2103	Kaleido Software Release Notes
M926-9402	Kaleido-IP X110 / X310 Installation & Service Manual
M926-8902	Kaleido-IP X120 / X320 Installation & Service Manual
M926-9005	Kaleido-IP VM Installation & Service Manual
MNL-1678-QRG	Supermicro SuperServer 1028U Series User's Manual for model 1028U-TR4+ (Kaleido-IP X120 / X320)
G24884-003	Intel® Server System R1000GZ/GL Family Service Guide (Kaleido-IP X110 / X310)

Migration to Ubuntu First Steps

To Access XAdmin

The following procedures require you to access the multiviewer's configuration through XAdmin. The Kaleido-IP multiviewer must be operating to access XAdmin. In the *Kaleido-IP Installation & Service Manual,* see *Ways to Access XAdmin*. See Related Documentation, on page 6.

To Access XEdit

The following procedures require you to access the multiviewer's configuration through XEdit. The Kaleido-IP multiviewer must be operating to access XAdmin. In the *Kaleido Software User's Manual,* see *Installing XEdit from your Multiviewer's Home Page*. See Related Documentation, on page 6.

> Note: The XEdit software for Kaleido Software versions 10.XX or lower is not compatible with the XEdit software for Kaleido Software versions 11.0.0 or higher, and vice-versa. You must re-install the Kaleido Software after migration, and again after reverse-migration (if this step is taken).

Pre-migration Tasks

Migration requires system down time

> Note: This migration procedure will take some time.
> - Plan for 2 hours for pre-migration tasks that can be performed while the Kaleido-IP multiviewer is operating in a production environment.
> - A maintenance window must be reserved during off hours when the multiviewer is not in use: plan for 2 hours of down time for the first time you migrate a Kaleido-IP to Kaleido Software to version 11.0.0 or higher.

Prerequisite Checklist

Before start the migration to Kaleido Software version 11.0.0 or higher, you must have taken the following actions.

- A PC with Microsoft Windows and Java runtime installed.
- You must know the multiviewer's current management port IP address. If this is unknown, in the *Kaleido-IP Installation & Service Manual,* see *Verifying the Management Port IP Address and Application Version*. See Related Documentation, on page 6. If the multiviewer is a Kaleido-IP VM, you must know the VM's address.

- You must have remote (through the Kaleido-IP multiviewer's IPMI management interface) or local access to the Kaleido-IP multiviewer.

  If you do not have remote access to the Kaleido-IP multiviewer, you will need to be physically present at the multiviewer to insert a USB drive containing the migration installer and complete the installation process by connecting the following equipment to the Kaleido-IP multiviewer:

  - monitor and necessary cables; see Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20
  - USB mouse
  - USB keyboard

  See Remote or Local Kaleido-IP Multiviewer Access / Reboot, on page 14 for more information.

- For Kaleido-IP X110 / X310 / X120 / X320, one or two USB drives are required (4GB or larger capacity)

  - One USB drive for the migration
  - One USB drive for the reverse-migration to return to Kaleido Software version 10.X or lower should this be neccessary.

- Migration file:

  - An Upgrade package to migrate to the latest version of Kaleido-IP-on-Ubuntu OS (that is, Kaleido Software version 11.0.0 or higher). This is **.iso** file (installs Ubuntu OS plus Kaleido Software version 11.x.x) from a USB drive. Contact Technical Support to obtain the following file.

    - **Kaleido-IP_11.n.n_XXX.iso**

      Where:

      – *n.n* is the major and minor software version.

      – *XXX* is the build number

      For example, **Kaleido-IP_11.2.1.628.iso**

- For Kaleido-IP X110 / X310 / X120 / X320, reverse-migration files: this is necessary in case the migration to Kaleido Software version 11.0.0 or higher does not work.

  - A downgrade package to reverse-migrate to an earlier version of Kaleido-IP-on-Gentoo (that is, Kaleido Software version 10.X or lower). Contact Technical Support to obtain the following files.

    - **install-amd64-minimal-XXXXXXXXXXXXXXXX.iso**
    - **kaleido-ip-initial-10.20_build_7279.run** (this filename changes according to your current Kaleido Software version (pre-migration)
    - **kip_install.sh**

  - For Kaleido-IP VM: restore the VM to an earlier version using a previously taken VM snapshot made before the migration to Kaleido Software version 11.0.0 or higher.

- Download and install an application on your PC that writes an ISO file to a USB drive, thereby making it bootable. See Flashing a USB Drive, on page 27

- You have received new license keys required for the migration. See Obtain New License Keys, on page 11.

- Find any extra fonts that the Kaleido-IP multiviewer is currently using. Ensure you have these fonts available on your PC so they can be installed on the migrated Kaleido-IP multiviewer. See Identifying Installed Fonts, on page 13.

Obtain New License Keys

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	●

The Kaleido-IP's license Authorization Code (**A/C**) along with a list of all Kaleido-IP software options that were purchased (see Locating the Multiviewer's License Keys, on page 12) must be sent to Grass Valley Technical Support, who will provide you with a list of new license keys required for the migration.

> WARNING
> Do not attempt the migration before you get the substitute Authorization Code and license keys from Grass Valley, otherwise the licensed features for your Kaleido-IP with Kaleido Software version 11.0.0 or higher will not be available.

Here are the available software options.

Software Option / License	Description
KIP-VM16	License for 16 video decodes with captions/subtitles on a Kaleido-IP VM.
KIP-VM24	License for 24 video decodes with captions/subtitles on a Kaleido-IP VM.
KIP-VM32	License for 32 video decodes with captions/subtitles on a Kaleido-IP VM.
KIP-VM48	License for 48 video decodes with captions/subtitles on a Kaleido-IP VM.
KIP-VM64	License for 64 video decodes with captions/subtitles on a Kaleido-IP VM.
KIP-OPT-DEC-DD-5.1	Decode option for 32 AC3 programs 5.1 and up — Multiple instances of this license may have been be bought. Ensure that you record all license key instances.
KIP-OPT-DEC-DD-2.0	Decode option for 32 AC3 stereo programs — Multiple instances of this license may have been be bought. Ensure that you record all license key instances.
KIP-OPT-DEC-AAC-5.1	Decode option for 32 AAC programs 5.1 and up — Multiple instances of this license may have been be bought. Ensure that you record all license key instances.
KIP-OPT-DEC-AAC-2.0	Decode option for 32 AAC stereo programs — Multiple instances of this license may have been be bought. Ensure that you record all license key instances.

Software Option / License	Description
KIP-OPT-HD-HEVC	Decode license for H.265/HEVC SD/HD video codec.
KIP-OPT-UHD-HEVC	Decode license for H.265/HEVC UHD video codec.
KIP-OPT-UCIP	License for uncompressed input/output.
KIP-OPT-STREAMING-OUT	Head streaming option.
KIP-OPT-LOUDNESS	Loudness measurement.
KIP-OPT-SCTE-35	SCTE 35 ad insertion monitoring.
KIP-OPT-TS-PROBE	TR 101 210 probing option.
KXS-ROTATOR	Display rotation.

Please contact Grass Valley Technical Support if other options not listed above were purchased.

Locating the Multiviewer's License Keys

Proceed as follows.

1   With a web browser, connect to the multiviewer's IP address.

2   The license key can be found in XAdmin's **Status and option** page (see To Access XAdmin, on page 9). Only license keys that are enabled (shown by a green icon) need to be recorded.
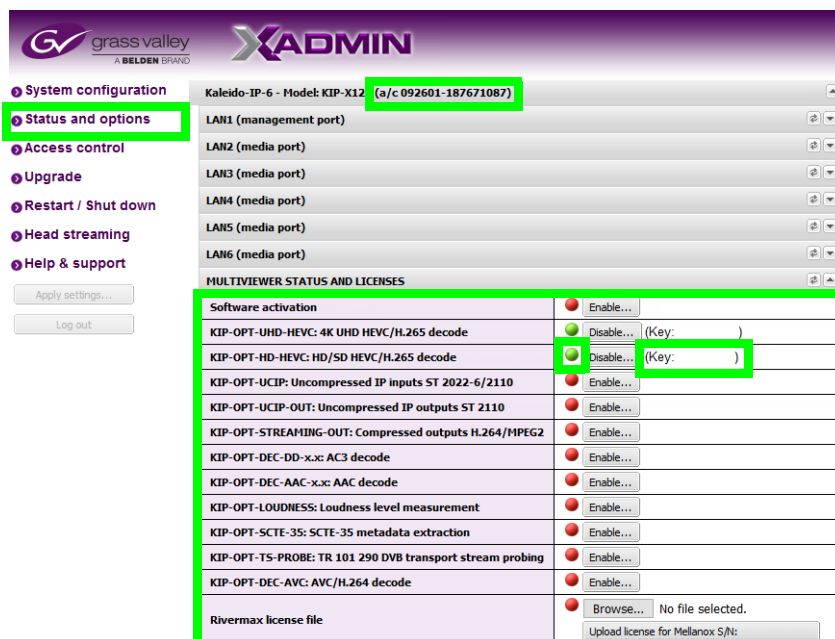
3   Record the Kaleido-IP multiviewer's **a/c** number. This number is used to create a Kaleido Software version 11.x.x activation license.

4 Send the license keys and **a/c** number to Grass Valley Technical Support where they are converted to Kaleido Software version 11.0.0 or higher license keys.

> WARNING
> Do not migrate the multiviewer to Kaleido Software version 11.0.0 or higher until you have received the new license keys.

5 Wait until you have received:
- The new license keys from Grass Valley Technical Support.
- The Kaleido Software version 11.x.x Activation Code.

Identifying Installed Fonts

At installation, the Kaleido-IP multiviewer installs a number of fonts that are used by UMD, closed captions, and so on. You can also add more fonts to the Kaleido-IP multiviewer as needed to support languages and font encodings that the basic installation does not support.

If extra fonts were added to the multiviewer, after migration, you must install these fonts again. To do so, first you must identify the extra fonts that have been added to your installation that are not part of the standard Kaleido-IP multiviewer installation.

The following fonts are part of a standard installation.
- Dialog
- DialogInput
- Lucida Bright
- Lucida Sans
- Lucida Sans Typewriter
- Monospaced
- SansSerif
- Sazanami Gothic
- Sazanami Mincho
- Serif

To find the fonts currently installed on you multiviewer

1 Open XEdit. See To Access XEdit, on page 9.
2 In the **Layouts** tab, select a UMD. If there are no UMDs to be selected, then add one temporarily and select it.
3 Select the **Properties** tab.
4 Under **Appearance**, select the button next to **Text font**.
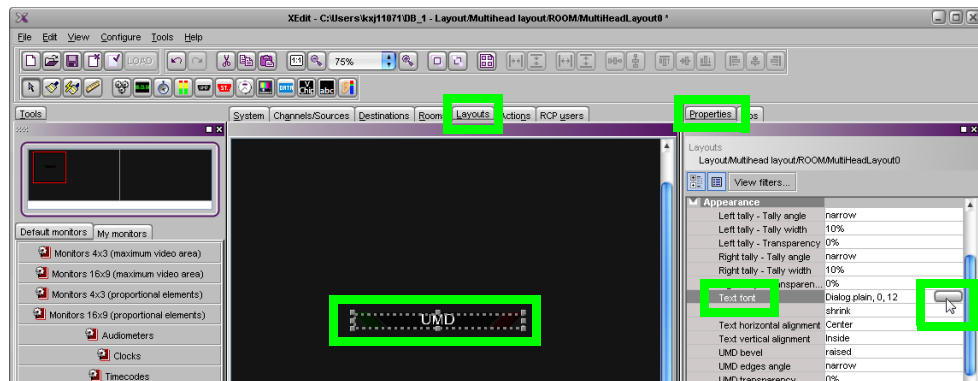
5 Identify any extra fonts that are not listed above. You must find these extra font files and have them available on your PC so you can reinstall them after migration.
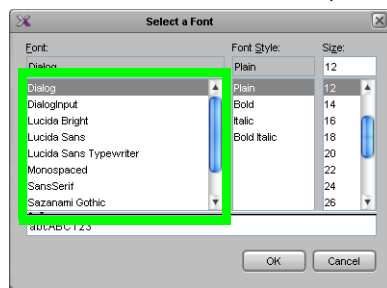
Remote or Local Kaleido-IP Multiviewer Access / Reboot

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	●	

Migration requires access to the Kaleido-IP multiviewer's BIOS settings and to reboot the multiviewer server. You must be able to use one of the following methods to do so.

- Use the Kaleido-IP multiviewer's remote IPMI / iDRAC management interface. See Remotely accessing / Rebooting the Kaleido-IP Multiviewer, on page 14.

- You will need physical access to the Kaleido-IP multiviewer to connect equipment to it. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

Remotely accessing / Rebooting the Kaleido-IP Multiviewer

You must know the Kaleido-IP multiviewer's remote IPMI / iDRAC management interface IP address (if configured). Certain Kaleido-IP multiviewer models have a front panel LCD display that can show this IP address. However, this feature may have been disabled in the Kaleido-IP multiviewer BIOS settings. Remote access still requires that you be able to physically access the Kaleido-IP multiviewer to insert the USB drive with the disk image on it.

1 With a web browser, enter the Kaleido-IP multiviewer's remote management interface IP address into the address bar. You must know the management interface login credentials. See:

- Virtual Console / Remotely Rebooting Kaleido-IP X130 / X330 Model Multiviewers, on page 15.
- Virtual Console / Remotely Rebooting Kaleido-IP X120 / X320 Model Multiviewers, on page 18.
- Virtual Console / Remotely Rebooting Kaleido-IP X110 / X310 Model Multiviewers, on page 19.

2 If access is denied, then you will need physical access to the Kaleido-IP multiviewer to connect equipment to it. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

Virtual Console / Remotely Rebooting Kaleido-IP X130 / X330 Model Multiviewers

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●			

Once you have gained remote access to the Kaleido-IP multiviewer, launch the iDRAC remote server management interface to reboot the Kaleido-IP X130 / X330 model multiviewer. If necessary, see the Dell's iDRAC documentation for more information about how to use iDRAC. Proceed as follows.

1 In **Configuration**, point to **Virtual Console**, and then click **Launch Virtual Console**.
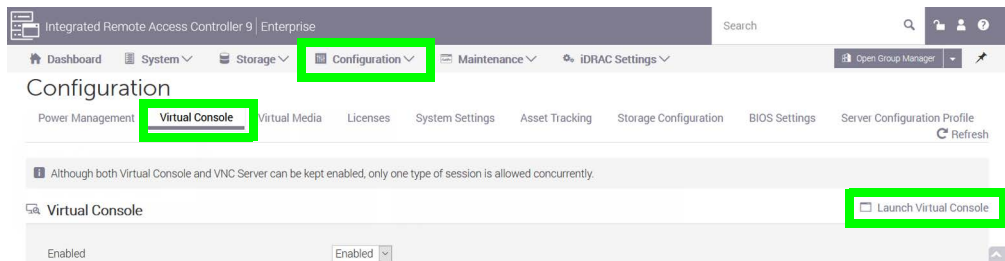
The virtual Console opens.
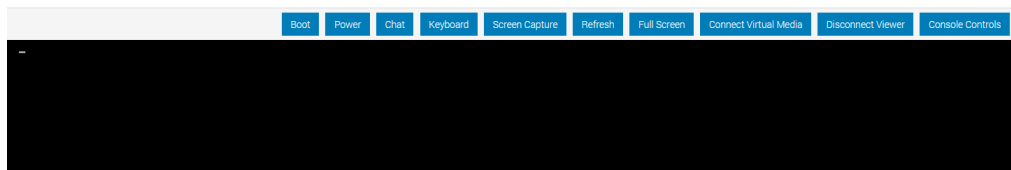
2 If an .iso upgrade package is to be imaged onto the multiviewer's hard disk, then click **Connect Virtual Media**.
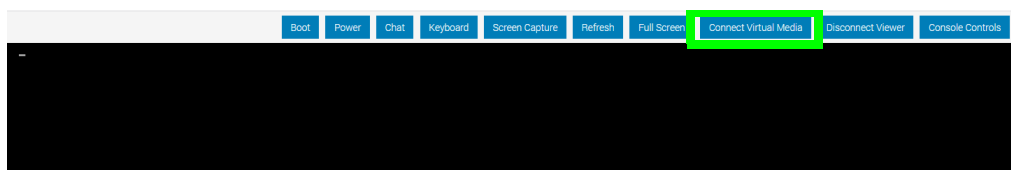
3 Click **Browse** and select the **Kaleido-IP_11.n.n_XXX.iso** file from your PC's file system.
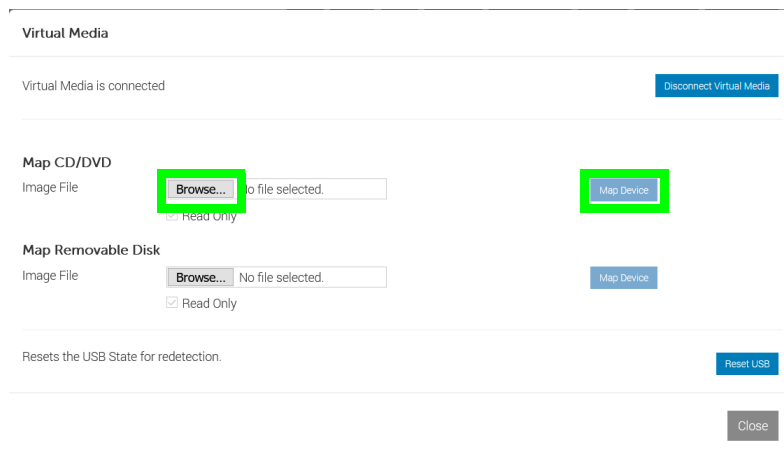
4 Click **Map Device**.

5 A confirmation message appears. Click **Yes**.

6 Click **Power**.
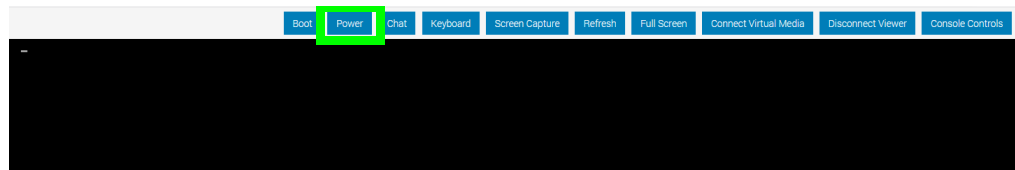
7 Click **Graceful Shutdown** to power down the multiviewer.
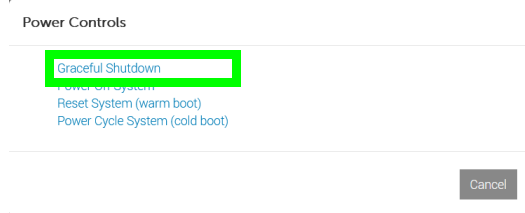
8 A confirmation message appears. Click **Yes** to power down the multiviewer.

9 Once the multiviewer has shut down, click **Boot**.
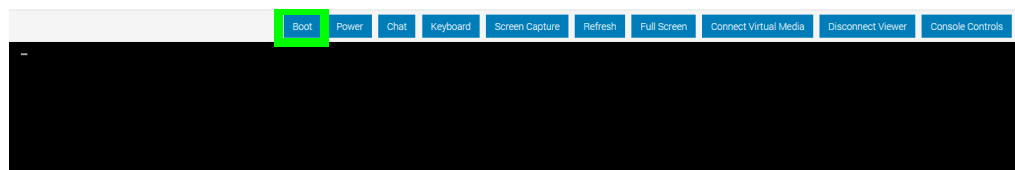
10 Click **Virtual CD/DVD/ISO** so that the connected virtual media will be used to make the server boot into the installation of the multiviewer software.
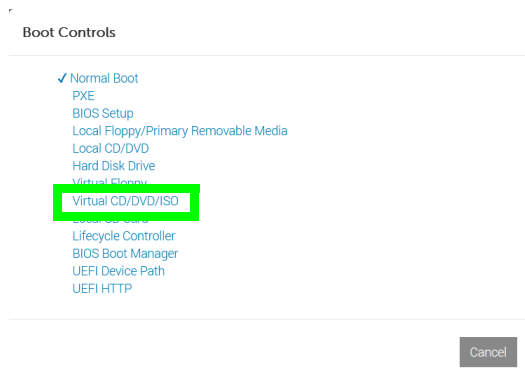
11 A confirmation message appears. Click **Yes**.

12 Click **Power**.
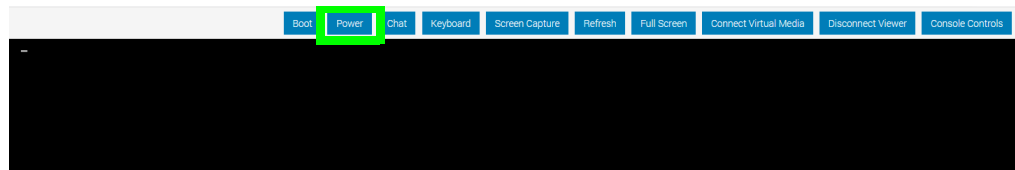
13 Click **Power On System** to power up the multiviewer.
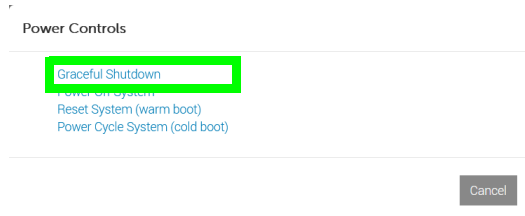
14 A confirmation message appears. Click **Yes** to power up the multiviewer and begin the multiviewer's Kaleido Software installation. See Installing the Kaleido Software on the multiviewer, on page 59 to continue with this.

Post Procedure

Once the software installation is complete and you have finished with the multiviewer, ensure that the server is set to boot normally. Proceed as follows.

1 In the multiviewer's iDRAC virtual console, click **Boot**.
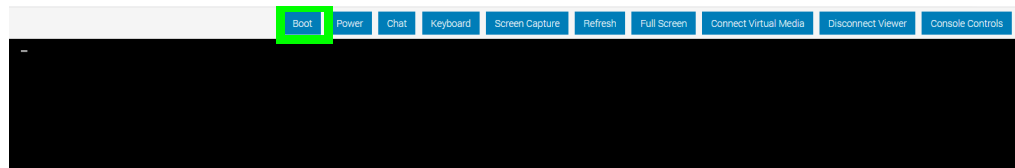
2 Click **Normal Boot** to make the multiview boot normally should it be rebooted in the future.
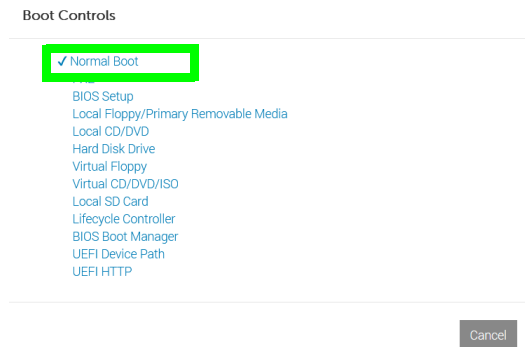
3 A confirmation message appears. Click **Yes**.

4 Reboot the multiviewer to test that the multiviewer boots up normally.

Virtual Console / Remotely Rebooting Kaleido-IP X120 / X320 Model Multiviewers

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●		

Once you have gained remote access to the Kaleido-IP multiviewer, you can launch a virtual console as follows.

Note: Virtual console requires at least Java 8 running on remote PC.

Java security settings on the desktop PC might prevent the virtual console from launching. If the console cannot be launched, the device's physical ports will have to be used to access the console: see Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

Launch a virtual console / reboot a Kaleido-IP X120 / X320 model multiviewer and proceed as follows.

1 In **Remote Control**, point to **Console Redirection**, and then click **Launch Console**.

The virtual Console opens.
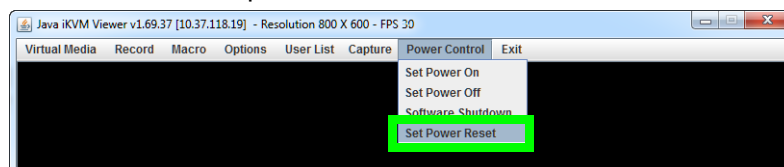
2 In **Power Control**, click **Set Power Reset** to reboot the multiviewer.

3 When the multiviewer is booting up, you can access the boot up options for example: at the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F11> repeatedly.

4 In the **Please select boot device:** table, use the up (↑) / down (↓) arrows as shown on the screen to make the USB drive the boot device.

Virtual Console / Remotely Rebooting Kaleido-IP X110 / X310 Model Multiviewers

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
		●	

Once you have gained remote access to the Kaleido-IP multiviewer, you can launch a virtual console as follows.

Java security settings on the desktop PC might prevent the virtual console from launching. If the console cannot be launched, the device's physical ports will have to be used to access the console: see Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

Launch a virtual console / reboot a Kaleido-IP X110 / X310 model multiviewer and proceed as follows.

1 In **Remote Control**, point to **Server Power Control**, and then click **Power OFF Server**.

2 Click **Perform Action**.

3 When the multiviewer is booting up, you can access the boot up options for example: at the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F6> repeatedly.

4 In the **Please select boot device:** table, use the up (↑) / down (↓) arrows as shown on the screen to make the USB drive the boot device.

Locally accessing / Rebooting the Kaleido-IP Multiviewer

You will need physical access to the Kaleido-IP multiviewer to insert a USB drive containing the installer and complete the installation process by directly connecting a monitor, mouse, and keyboard to the Kaleido-IP multiviewer. To:

- Reboot the multiviewer, see Local Rebooting Kaleido-IP Multiviewer, on page 20.

- Locally access the multiviewer, see Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports, on page 22.

Local Rebooting Kaleido-IP Multiviewer

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	●	

You will need physical access to the Kaleido-IP multiviewer to access its power button.

Identifying the Multiviewer's Power Button

When the front cover is removed, the following controls and indicators are available.

Kaleido-IP X110 or X310 Control Panel

Kaleido-IP X110 or X310 front panel power button

Kaleido-IP X120 or X320 Control Panel

Kaleido-IP X120 or X320 front panel power button
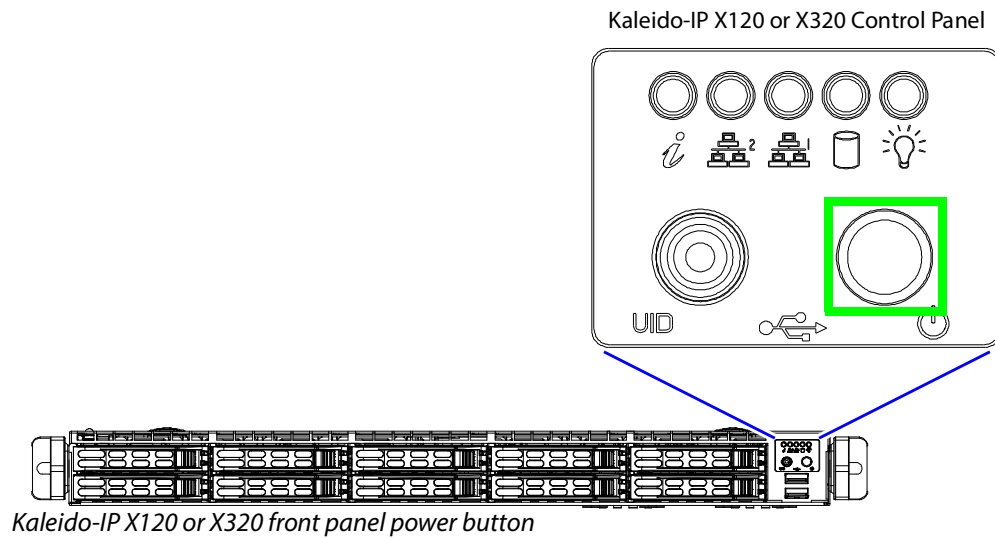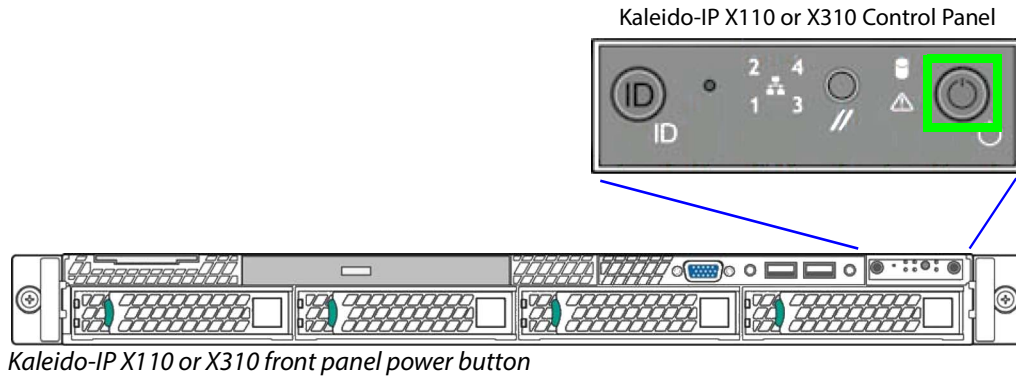
Kaleido-IP X130 or X330 Control Panels

Kaleido-IP X130 or X330 front panel power button

To locally reboot a Kaleido-IP X110 / X310 / X120 / X320 / X130 / X330 Model Multiviewer

Proceed as follows.

1 Quick press the power button.

2 Wait for the multiviewer server to shutdown. The multiviewer is shutdown when all front panel lights are extinguished.

3 Wait 10 seconds.

4 Quick press the power button.

5 Wait 5 minutes for the multiviewer server to boot up.

Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports

This procedure applies to:

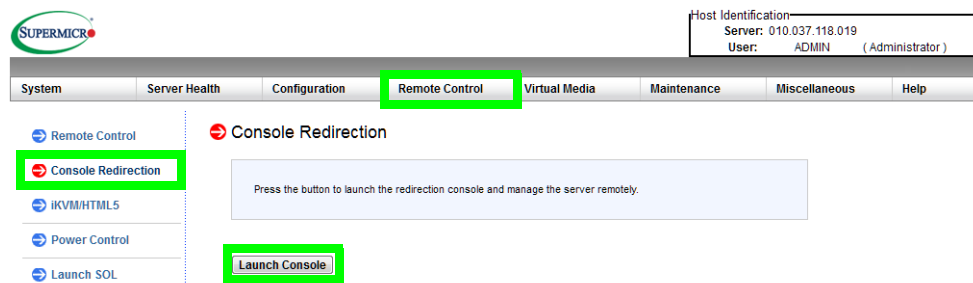| Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	●	

Cabling Diagram for Kaleido-IP X110 / X310 Models

1 Connect a monitor to the multiviewer's DVI port. Adapters may be necessary.

2 Connect a mouse and keyboard to the Kaleido-IP multiviewer's USB ports.
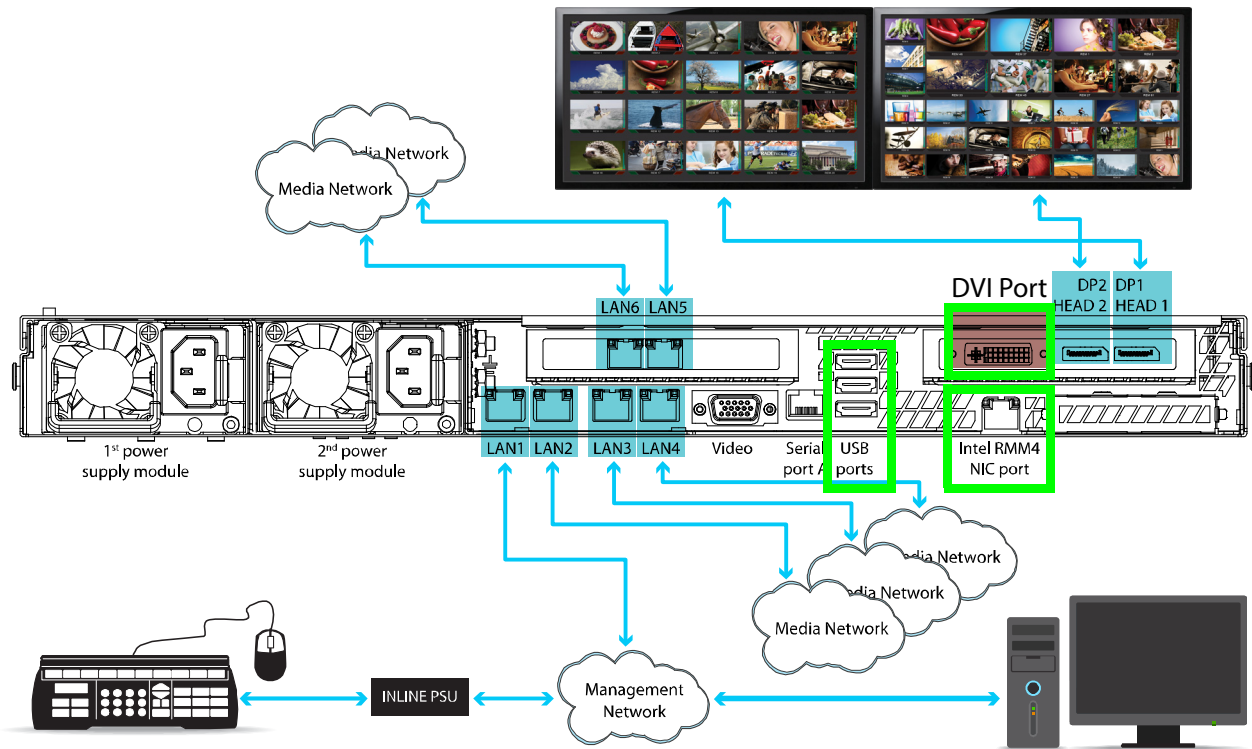
Cabling Diagram for Kaleido-IPX120 / X320 Models

1 Connect a monitor to the VGA port on the Kaleido-IP multiviewer
2 Connect a mouse and keyboard to the Kaleido-IP multiviewer's USB ports.
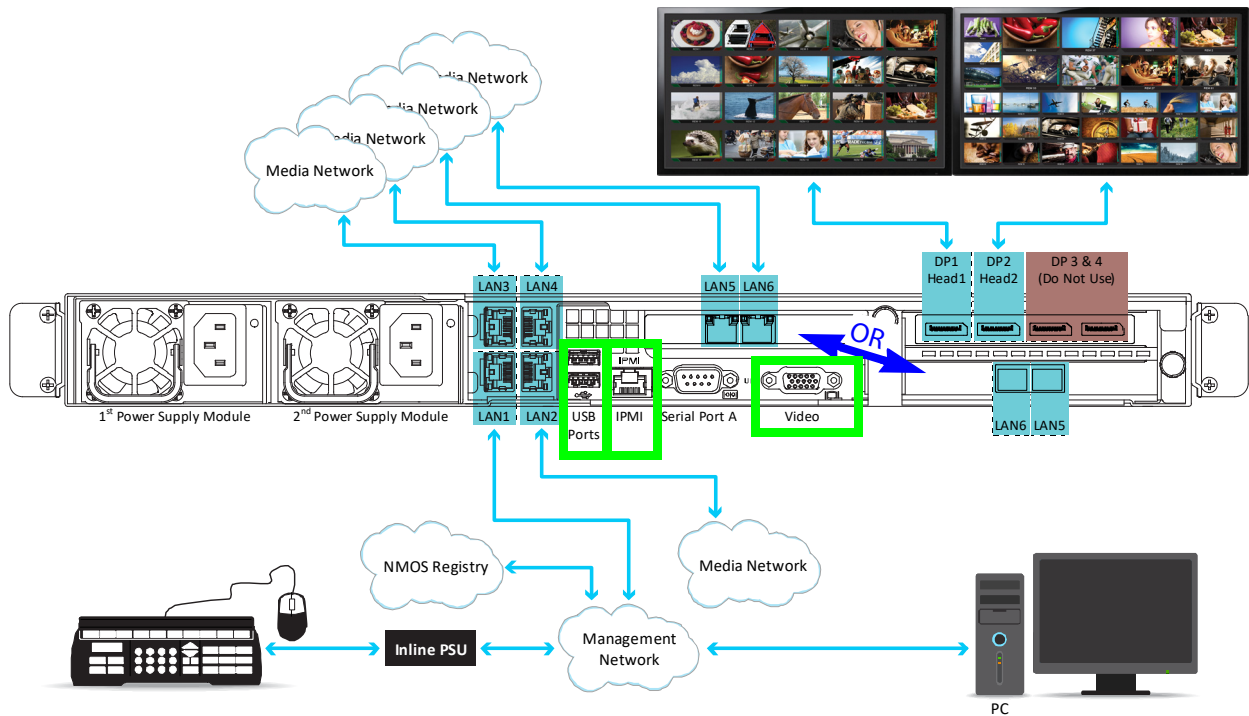
Cabling Diagram for Kaleido-IPX130 / X330 Models

1   Connect a monitor to the VGA port on the Kaleido-IP multiviewer
2   Connect a mouse and keyboard to the Kaleido-IP multiviewer's USB ports.
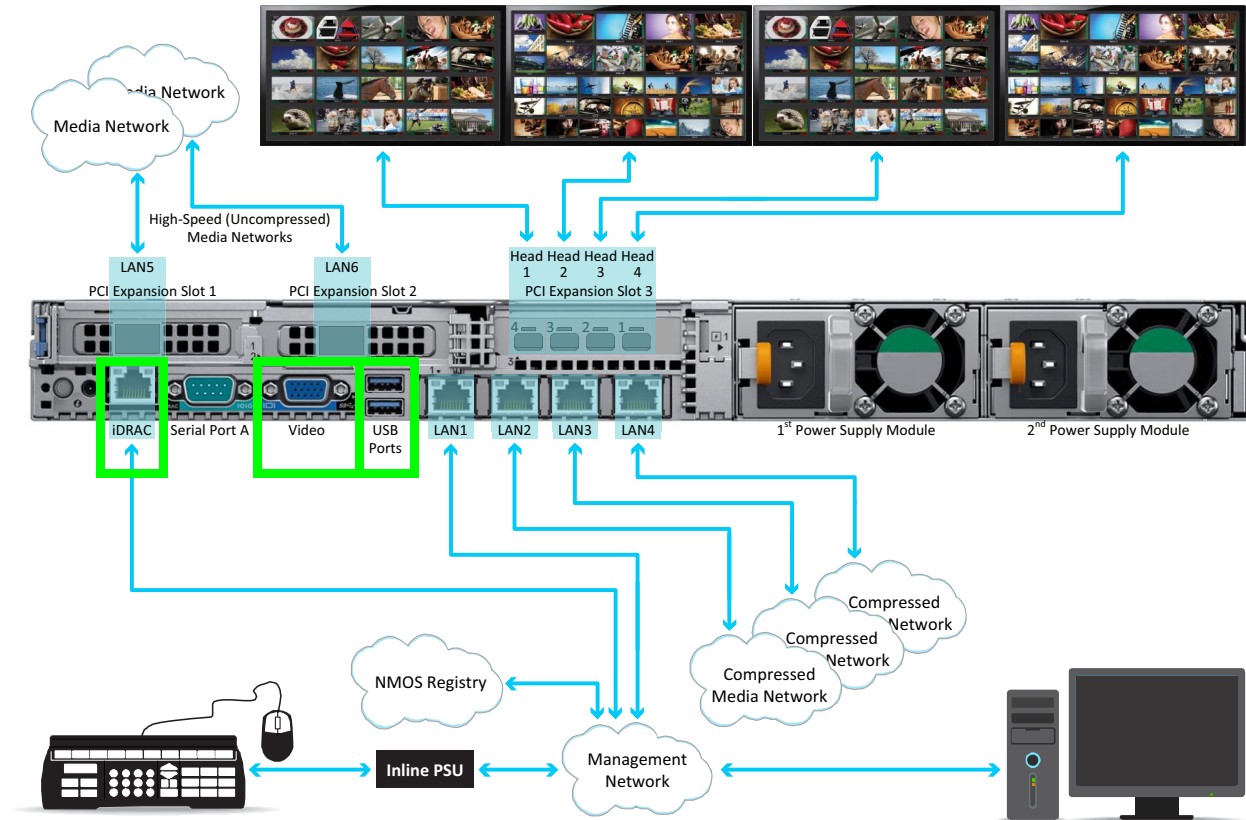
Does Your Network Support DHCP?

Kaleido Software version 11.0.0 or higher starts-up using DHCP by default to obtain an IP address for its management port. Check whether or not DHCP services are available on the Kaleido-IP's management network. See **System configuration** in XAdmin to see if DHCP has been set, or contact you network administrator.
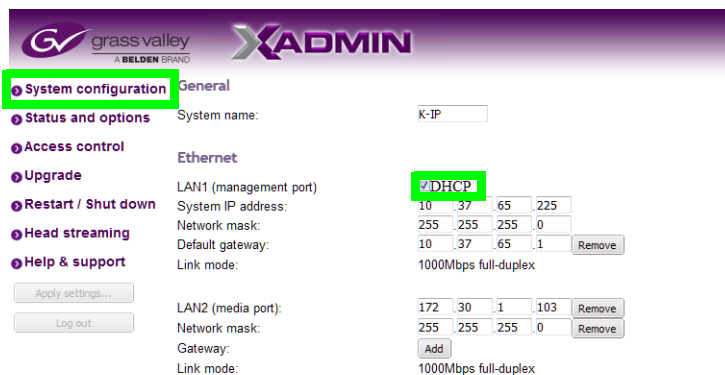
If your network does not have a DHCP server for the multiviewer to obtain a valid IP address, you will need to set the Kaleido-IP multiviewer's management IP address through the multiviewer's Monitor Wall. See If the DHCP Service is Unavailable on your Network, on page 34 (for Kaleido-IP) or If the DHCP Service is Unavailable on your Network, on page 44 (for Kaleido-IP VM).

Pre-migration Preparation Tasks

These tasks can be performed while the multiviewer is currently in use.

Back up the Current Database in XEdit

In the event that the migration to Kaleido Software version 11.x.x does not successfully proceed for whatever reason, you must take the following actions to prepare for a reverse-migration; to go back to the currently installed version of Kaleido Software.

As a result, you must back up the multiviewer's current installation.

1 Launch XEdit in online mode and import the Kaleido-IP database: on the **Configure** menu, point to **Database**, and then click **Import**. To access XEdit, see To Access XEdit, on page 9.
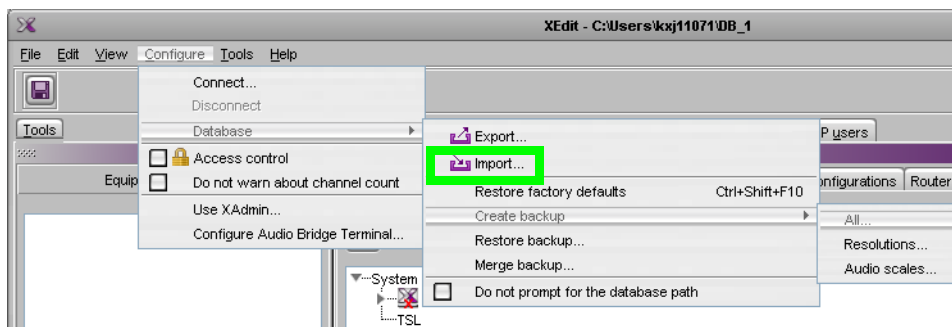
2 Create a local backup of this database: on the **Configure** menu, point to **Database**, then to **Create backup** and click **All**.
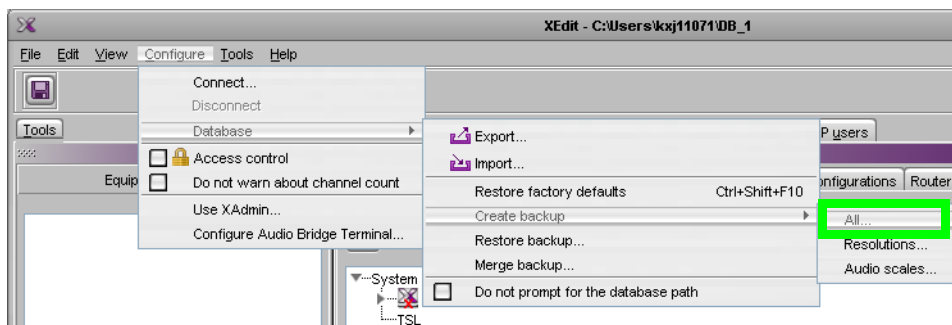
3 Save the database backup to your local PC.

4 Close XEdit.

Record the Current XAdmin Configuration Parameters

You will need to record the Kaleido-IP's configuration parameters as you will have to apply these values to the new Kaleido Software version 11.0.0 or higher installation.

1　Launch XAdmin. To access XAdmin, see To Access XAdmin, on page 9.

2　From **XAdmin** - **System configuration**, take note of all system configuration fields: **System name** and all **LAN** port parameters for ports **LAN1** to **LAN6**.

3　From **XAdmin** - **System configuration**, take note of the **Virtual LAN configuration** parameters.
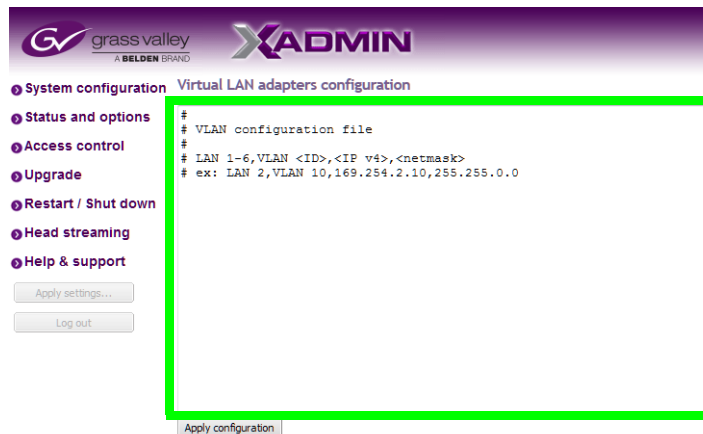
4　From **XAdmin** - **System configuration**, take note of the **DNS and proxy configuration** parameters.

5 From **XAdmin - Head streaming**, take note of the streaming configuration for all heads.

6 The multiviewer's Access Control password is set in XAdmin. Ensure that you have the Access Control password for the multiviewer, if it has been set.

Flashing a USB Drive

Certain procedures require that you flash a USB drive with multiviewer software. To do so, you must download and install an application on your PC that writes an ISO file to a USB drive, thereby making it bootable. Proceed as follows.

1 Download and install the following applications Win32DiskImagerfreeware application.

If this application does not work with your PC, use another one. Note that any utility that creates a bootable USB drive can be used for this purpose. The above application is shown in this procedure as an example.

2 In Microsoft Windows Explorer, navigate to the folder on your PC where the upgrade **.ISO** file is found. Hold down <Shift> and right-click the file and select **Copy as path**.

3 Paste the path into the **Image File** dialog. Remove the quotation marks ("") from the filename.

4 Select the USB drive's letter under **Device**.
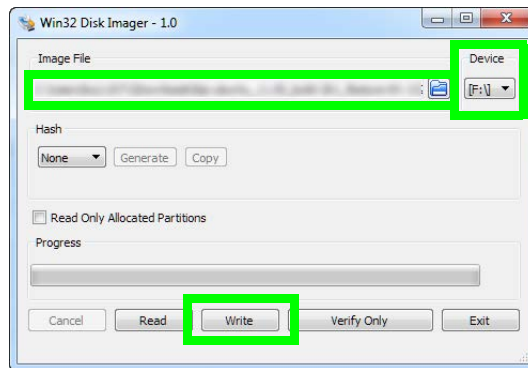
5 Click **Write** / **Start** and wait for the USB drive to be created. This will format and install the live boot image on the USB drive.

Migration procedure for Kaleido-IP X110 / X310 / X120 / X320

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

Note: For Kaleido-IP VM, follow the procedure Migration procedure for Kaleido-IP VM, on page 39.

For migration, there are pre-migration tasks that can be performed while the multiviewer is in use and then there are migration tasks during which the multiviewer will be unavailable. As a result, plan a maintenance window when the multiviewer is not in use as the migration procedure will take the Kaleido-IP offline during a certain period of time.

Pre-migration Preparation Tasks

These tasks can be performed while the multiviewer is currently in use.

Prepare a USB drive for Migration

A 4GB (or larger capacity) USB drive is required. This procedure makes the USB drive bootable with an upgrade package installer to migrate the multiviewer to the latest version of Kaleido-IP-on-Ubuntu OS. This procedure requires that you have already downloaded the following image file:

- **Kaleido-IP_11.n.n_XXX.iso**

  Where:

  - *n.n* is the major and minor software version.

  - *XXX* is the build number

  For example, **Kaleido-IP_11.2.1.628.iso**

If this is not the case, contact Technical Support to obtain this **.iso** file. Proceed as follows.

1 Plug the USB drive to into your PC.

2 Create a bootable USB drive using the above .iso file. See Flashing a USB Drive, on page 27.

3 Remove the USB drive from the PC and plug it into the Kaleido-IP's USB port.

Prepare a USB drive for Reverse-Migration

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

> Note: This step can be skipped when replacing a hard drive (or SSD) for a Kaleido-IP that was already running Kaleido-IP Software version 11.0.0 or higher.

A second 4GB (or larger capacity) USB drive is required. This procedure makes the USB drive bootable with reverse-migration package installer that reinstalls Kaleido Software version 10.X on your multiviewer in case the migration to Kaleido Software version 11.0.0 or higher does not work. This procedure requires that you have already downloaded the following image files:

- **install-amd64-minimal-XXXXXXXXXXXXXXX.iso**
- **kaleido-ip-initial-10.20_build_7279.run**
- **kip_install.sh**

If this is not the case, contact Technical Support to obtain these files.

If you need an earlier version of Kaleido Software on your multiviewer, see the Release Notes for the version of Kaleido Software you want to downgrade to. See Related Documentation, on page 6.

Proceed as follows.

1 Plug the USB drive to into your PC.

2 Create a bootable USB drive using the above .iso file only. See Flashing a USB Drive, on page 27.

3 In Microsoft Windows Explorer, navigate to the root folder of the USB drive, and create new folder called **kip**.

4 Copy the following file into the **kip** folder:

- Kaleido-IP image: **kaleido-ip-initial-10.20_build_7279.run** (this filename changes according to your current Kaleido Software version (pre-migration).
- migration script: **kip_install.sh**

5 Safely disconnect (eject) USB drive from your PC.

6 Set the USB drive aside. Use this USB drive if required by the Reverse-migration, on page 35 procedure.

Migration Tasks

These migration tasks will make the multiviewer unavailable. As a result, plan a maintenance window when the multiviewer is not in use as this procedure will take the Kaleido-IP offline during a certain period of time.

Multiviewer service will be restored only once the migration is complete and the multiviewer's configuration has been restored (see Restoring the Multiviewer's Configuration, on page 47).

Set the Kaleido-IP X120 / X320 Multiviewer's BIOS to use the DUAL or UEFI Boot Mode

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	● [a]		

a. For Kaleido IP multiviewers being migrated to Kaleido Software versions 11.0.0, 11.0.1, and 11.1.0 only.

The Kaleido-IP multiviewer's boot mode must be set in the unit's BIOS settings according to the Kaleido Software version the multiviewer is being migrated to, before starting the migration procedure.

Migrating to Kaleido Software Version	Required Boot Mode Setting
11.0.0	DUAL
11.0.1	UEFI
11.1.0	UEFI
11.2.0 or higher	UEFI, when this setting is available.

1 Access the Kaleido-IP multiviewer's console. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer. See Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports, on page 22.

2 At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F11> repeatedly.

3 Select **Enter Setup**.

4 Go to the **Boot** tab.

5 Change **Boot Mode Select** according to this table.

Migrating to Kaleido Software Version	Required Boot Mode Setting
11.0.0	DUAL
11.0.1	UEFI
11.1.0	UEFI
11.2.0 or higher	UEFI, when this setting is available.

6 Save and Exit the BIOS settings.

Start Migration to Kaleido Software Version 11.0.0 or Higher

This procedure can be carried out through any of the following methods that provide access to the Kaleido-IP multiviewer's BIOS settings and console.

- Remotely accessing / Rebooting the Kaleido-IP Multiviewer, on page 14.
- Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20. As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer.

Proceed as follows.

1 Plug the USB drive you imaged with the Kaleido Software version 11.x.x (as prepared in Prepare a USB drive for Migration, on page 29) into a USB port on the Kaleido-IP multiviewer.

> Note: Our testing has shown that remotely mounting the USB drive media through the Kaleido-IP multiviewer's remote IPMI management interface does not work.

2 During off hours when the multiviewer is not in use, reboot the unit:
Launch XAdmin (to access XAdmin, see To Access XAdmin, on page 9) and under **XAdmin - Reset / Shut down**, click **Restart unit**.
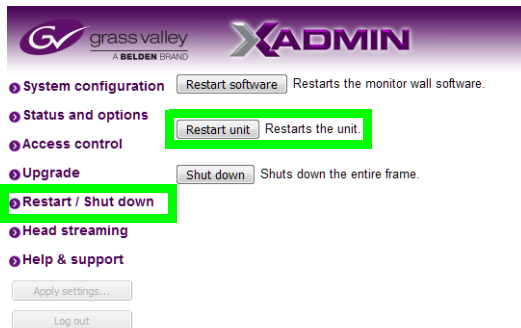
3 At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing repeatedly:

- <F11> for X120 and X320
- <F6> for X110 and X310

4 In the **Please select boot device:** table, use the up (↑) / down (↓) arrows as shown on the screen to make the USB drive the boot device (General UDisk 5.00).

5 Select **English** if prompted to select a language.

6   Press **<Enter>** to select the default option **Install Grass Valley Kaleido-IP**.

7   Wait until the installation has completed. This may take several minutes.

Once the update has finished the unit will power down.

8   Power up the multiviewer:

- Using IPMI, select the *Set Power On* option.

- If you have physical access to the multiviewer, then press the front top left power button once.

The unit will then finish the install and reboot twice. Allow at least 15 minutes for the unit to finish the upgrade.

Note that after the first reboot the OS is creating the file system. It is imperative that the unit is not rebooted or powered down during this time.

9   Once the Kaleido-IP has rebooted, a console with an underscore appears.
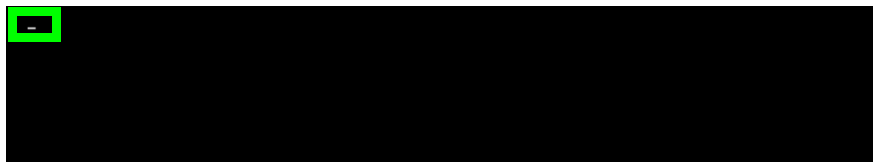
10   Click the console (if using remote management to bring focus to the window) and press <Ctrl> + <Alt> + <F1> to enter the console.
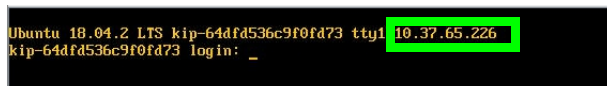
11   Record the IP address in the welcome message for **tty1**: this is the Kaleido-IP multiviewer's management IP address through which you can access XEdit and XAdmin. If your network does not have a DHCP server, then see If the DHCP Service is Unavailable on your Network, on page 34.

12   Go to XAdmin: Enter the **eno1** port IP address into your web browser's address bar on your PC.

13   Restore the multiviewer's configuration. See Restoring the Multiviewer's Configuration, on page 47.

If the upgrade fails for a Kaleido-IP X120 or X320, see Restoring the BIOS Settings, on page 63.

If the DHCP Service is Unavailable on your Network

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

If DHCP is not available on your network, you will need to set an IP address through the Monitor Wall. Your setup must allow you to use a keyboard and mouse at the Kaleido-IP multiviewer while being able to view the Monitor Wall.

1   Connect a keyboard and a mouse to the Kaleido-IP multiviewer to change the network settings using the multiviewer's screen. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

2   In the *Kaleido-IP Installation & Service Manual,* see *Changing the Management Network IP Address from the Monitor Wall*. See Related Documentation, on page 6.

3   Open XAdmin with the IP address that you found. See To Access XAdmin, on page 9.

Reverse-migration

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

Reverse-migration is necessary in case the migration to Kaleido Software version 11.0.0 or higher does not work.

This procedure assumes you have already completed (prior to migration) the pre-migration tasks (see Pre-migration Tasks, on page 9) and the pre-migration preparation tasks (see Pre-migration Preparation Tasks, on page 29).

This procedure will wipe everything on the Kaleido-IP multiviewer's hard disk.

This procedure can only be carried out while you are physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer. See Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports, on page 22.

Multiviewer service will be restored only once the reverse-migration is complete and the multiviewer's configuration has been restored (see Restoring the Multiviewer's Configuration, on page 47).

Reverse-migration Procedure

Set the Kaleido-IP X120 / X320 Multiviewer's BIOS to use the LEGACY Boot Mode

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

The Kaleido-IP X120 / X320 multiviewer's boot mode must be set to LEGACY in the unit's BIOS settings. The Kaleido-IP X110 / X310 / X120 / X320 multiviewer's first boot device order must be set to USB. Proceed as follows.

1   Reboot the multiviewer: see Remote or Local Kaleido-IP Multiviewer Access / Reboot, on page 14.

2   At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F11> repeatedly.
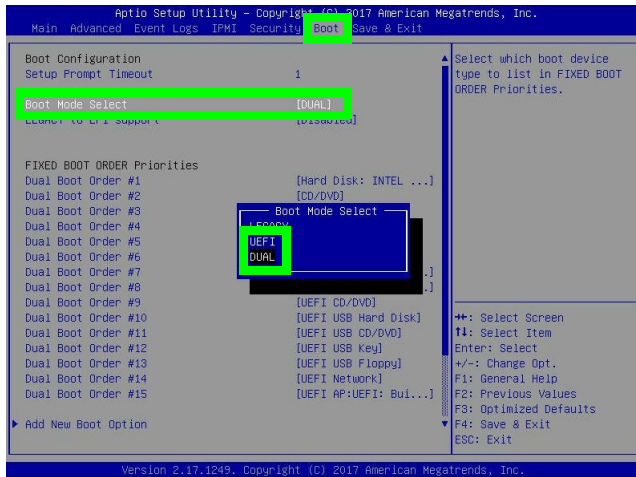
3   In the **Please select boot device:** table, use the up (↑) / down (↓) arrows as shown on the screen to select **Enter Setup**.
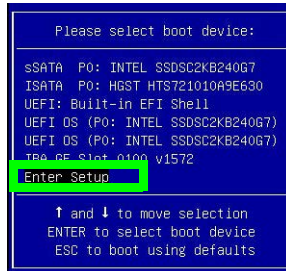
4   For Kaleido-IP X120 / X320 only: Go to the **Boot** tab.
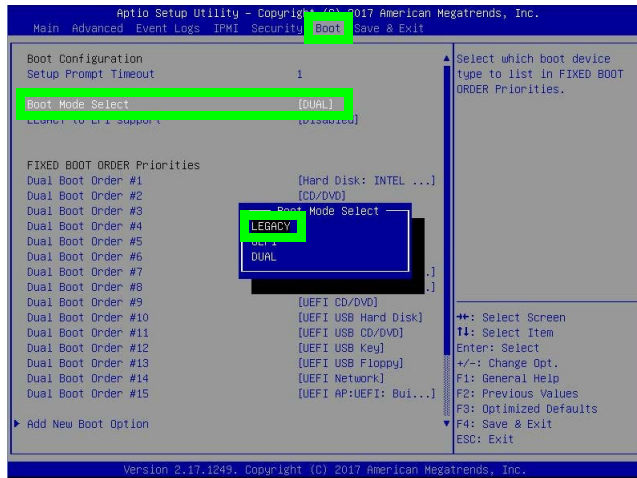
5   For Kaleido-IP X120 / X320 only: Change **Boot Mode Select** to **Legacy**.

```
                Aptio Setup Utility - Copyright (C) 2017 American Megatrends, Inc.
          Main  Advanced  Event Logs  IPMI  Security  Boot  Save & Exit

        Boot Configuration                                      Sets the system boot order
        Setup Prompt Timeout                  1

        Boot Mode Select                      [LEGACY]
        LEGACY to EFI support                 [Disabled]

        FIXED BOOT ORDER Priorities       ┌──── Legacy Boot Order #1 ────┐
        Legacy Boot Order #1              │ Hard Disk: INTEL SSDSC2KB240G7│
        Legacy Boot Order #2              │ CD/DVD                        │
        Legacy Boot Order #3              │ USB Hard Disk                 │
        Legacy Boot Order #4              │ USB CD/DVD                    │
        Legacy Boot Order #5              │ USB Key                       │
        Legacy Boot Order #6              │ USB Floppy                    │
        Legacy Boot Order #7              │ Network:IBA GE Slot 0100 v1572│
                                          │ Disabled                      │
                                          └───────────────────────────────┘
        ▶ Hard Disk Drive BBS Priorities                        ↔: Select Screen
        ▶ NETWORK Drive BBS Priorities                          ↑↓: Select Item
                                                                Enter: Select
                                                                +/-: Change Opt.
                                                                F1: General Help
                                                                F2: Previous Values
                                                                F3: Optimized Defaults
                                                                F4: Save & Exit
                                                                ESC: Exit

                Version 2.17.1249. Copyright (C) 2017 American Megatrends, Inc.
```

6 For Kaleido-IP X110 / X310 / X120 / X320 models: Change the **Legacy Boot Order #1** to **USB Key**.

7 Save and Exit the BIOS settings.

Installing the Kaleido Software version 10.X on the multiviewer

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

1 Plug the USB drive you imaged with the Kaleido Software version 10.X (as prepared in Prepare a USB drive for Reverse-Migration, on page 30) into a USB port on the Kaleido-IP multiviewer.

> Note: Our testing has shown that remotely mounting the USB drive media through the Kaleido-IP multiviewer's remote IPMI management interface does not work.

2 You must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer. See Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports, on page 22.

3 Reboot the multiviewer: see Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

4 For Kaleido-IP X120 and X320 models only, once the system is started and you have a prompt, enter the following command:
```
gentoo-nofb
```

5 Once the system is started and you get access to **livecd** prompt, enter the following command:
```
/mnt/cdrom/kip/kip_install.sh
```
To all **Proceed anyway?** questions, answer YES.

NOTE: If you get a warning about **postgresql**, this is normal.

6 When the installation has completed, type `reboot` and press <Enter>.

7 Once the system is restarting remove the USB drive from the Kaleido-IP multiviewer.

Setting the Kaleido-IP's IP Address after reverse-migration

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

Note: The multiviewer's default IP address is **10.0.3.70**.

1 Wait for Kaleido-IP to boot with default monitor wall display.

2 Once the wall is started, use the mouse and right-click **System configuration...**

3 Right-click anywhere on the monitor wall, point to **Monitor Wall** (if you clicked a monitor), and then click **System configuration**.
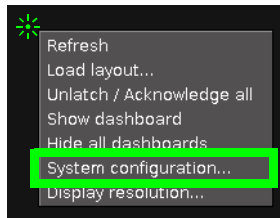
The **System Configuration** window appears.

4 Set system name under **General** tab.

5 Click the **Ethernet** tab.
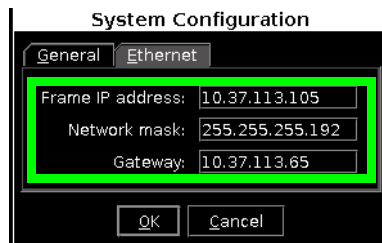
6 Set a fixed IP address: type the required **Frame IP address** (for the *Management Network*), **Network mask**, and **Gateway** address in the appropriate boxes.

7 Click **OK**.

8 When prompted to restart the system to apply your changes, click **Yes**.

9 Go to XAdmin: Enter the above IP address into your web browser's address bar on your PC.

10 Restore the multiviewer's configuration. See Restoring the Multiviewer's Configuration, on page 47.

Migration procedure for Kaleido-IP VM

This chapter applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
			●

> Note: For Kaleido-IP X110, X120, X310, and X320, follow the procedure
> Migration procedure for Kaleido-IP X110 / X310 / X120 / X320, on page 29.

For migration, there are pre-migration tasks that can be performed while the multiviewer is in use and then there are migration tasks during which the multiviewer will be unavailable. As a result, plan a maintenance window when the multiviewer is not in use as the migration procedure will take the Kaleido-IP offline during a certain period of time.

Pre-migration Preparation Tasks

These tasks can be performed while the multiviewer is currently in use.

Prepare for the reverse-migration

Take a snapshot of the VM. You'll need it in case you want to revert to the old version if something doesn't work as expected after the migration.

1   Access the virtual machine. In your browser, enter the IP address
2   Click **Virtual Machines**.
3   Right-click the multiviewer's virtual machine in the list under **Virtual machine**.
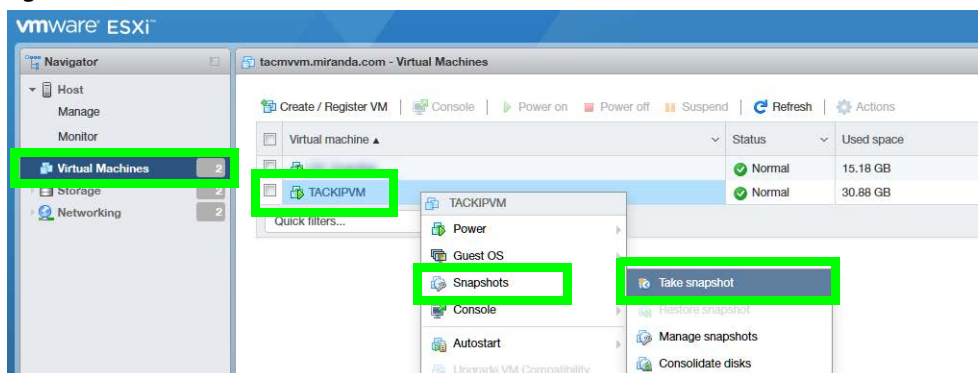
4   Point to **Snapshots** and select **Take snapshot**.
5   Set the name and description for the snapshot.

6 Click **Take snapshot**.

Prepare the artifacts

This procedure uploads the ISO image of the Kaleido-IP VM into the VMware server. This procedure requires that you have already downloaded the following image file:

- **Kaleido-IP_11.n.n_XXX.iso**

  Where:

  - *n.n* is the major and minor software version.
  - *XXX* is the build number

  For example, **Kaleido-IP_11.2.1.628.iso**

If this is not the case, contact Technical Support to obtain this **.iso** file. Proceed as follows.

1 Import the ISO file in VMware's datastore:

  a Select **Datastore1**.

  b Click **Datastore browser**.
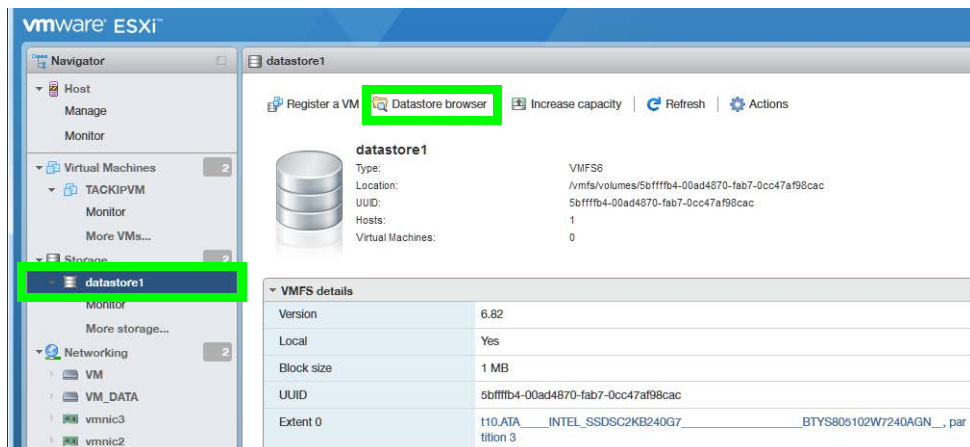
  c Click **Upload**.
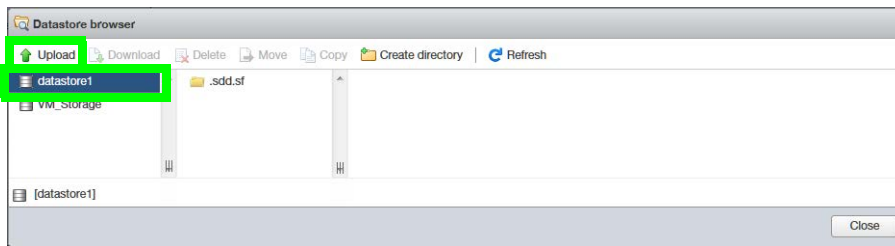
d Find and select the **Kaleido-IP_11.n.n_XXX.iso** file.

   Where:

   • *n.n* is the major and minor software version.

   • where *XXX* is the build number

   For example, **Kaleido-IP_11.2.1.628.iso**

e Click **OK**. Click **Close**.

2 Under **Virtual Machines**, select the Kaleido-IP VM.

3 Shut down the VM: click **Power off**.

4 Click **Edit**.

5 In the **VM Options** tab, expand **Boot options** > **Firmwa**re and select EFI in the drop down menu.

6 In **Force BIOS Setup**, check the box for the option **The next time the virtual machine boots, force entry into the BIOS setup screen**.
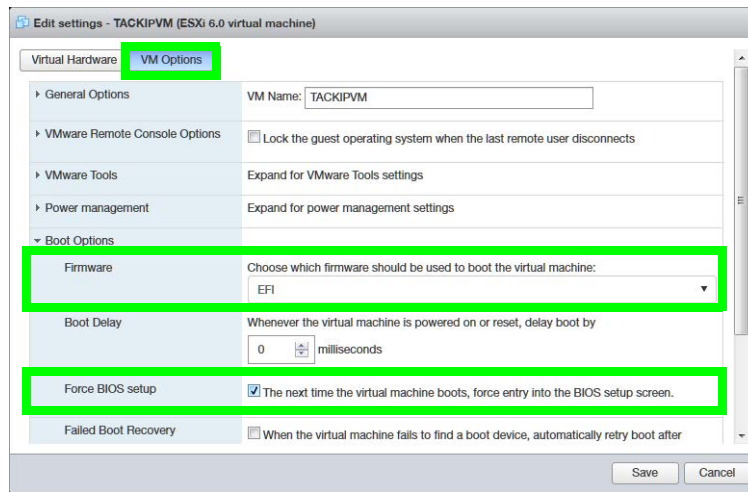
7 In **General Options**, set the **Guest OS Version** to **Ubuntu Linux (64-bit)**.

8 In the **Virtual Hardware** tab, expand **CD/DVD Drive 1** and select **Datastore ISO file** in drop down menu.
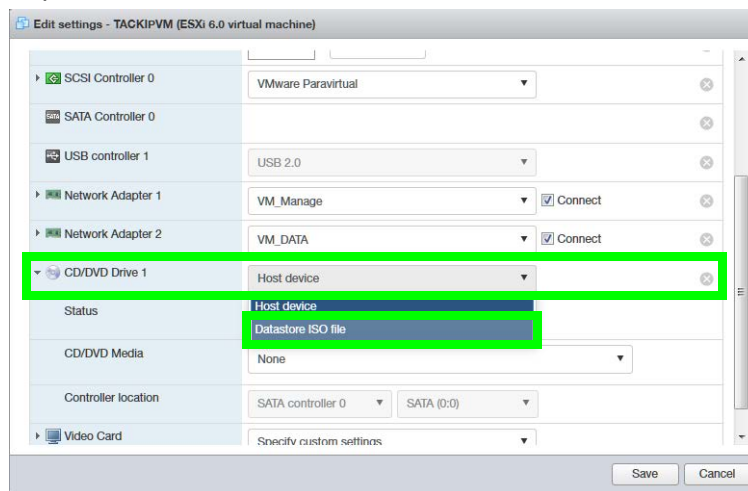
9 Select the ISO file you uploaded into the VMware's datastore.
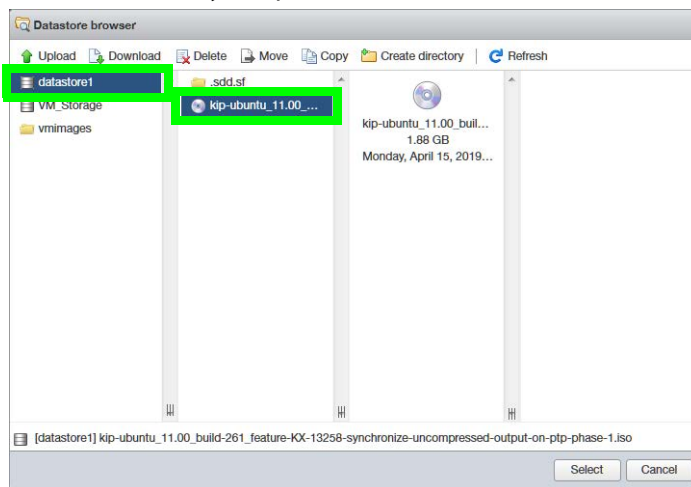
10 Make sure to set the **Status** check-box **Connect at power on** next to the CD/DVD Drive is enabled.
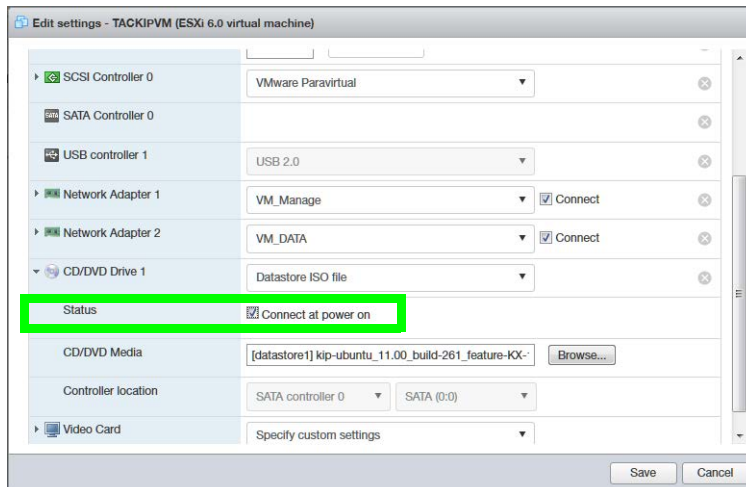
11 Click **Save**.

12 In the **Hardware Configuration** area, verify that the ISO file for the CD/DVD Drive is shown correctly.
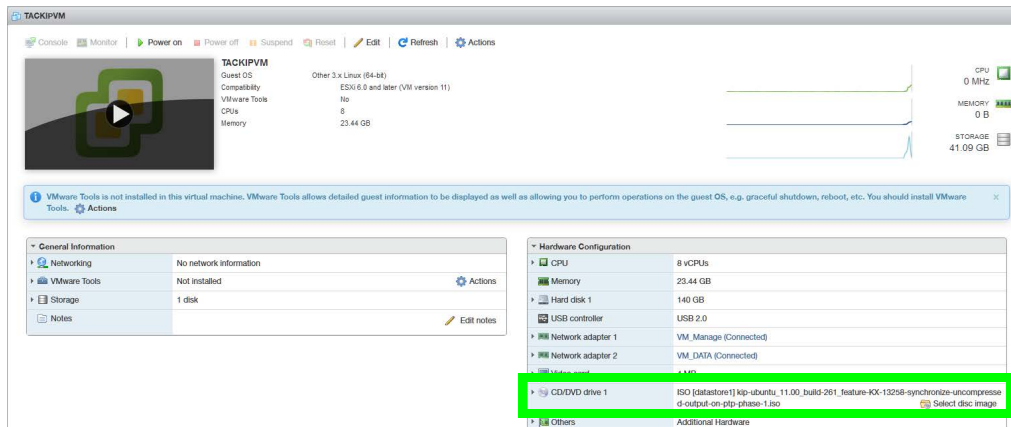
Migration

These migration will make the multiviewer unavailable. As a result, plan a maintenance window when the multiviewer is not in use as this procedure will take the Kaleido-IP offline during a certain period of time.

Multiviewer service will be restored only once the migration is complete and the multiviewer's configuration has been restored (see Restoring the Multiviewer's Configuration, on page 47).

You should already have an **.iso** image file of your current Kaleido Software version that uses GenToo OS. If this is not the case, contact Technical Support to obtain this **.iso** file.

Proceed as follows.

1 Under **Virtual Machines**, select the Kaleido-IP VM.

2 Open the virtual console.
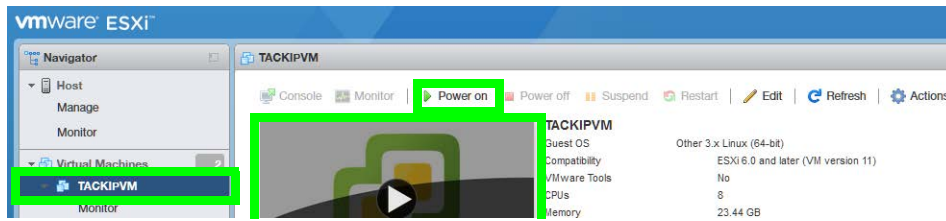
3 Power on the VM: click **Power on**.

4 Select **EFI VMWare Virtual IDE (SATA) CDROM Drive**.

5 Select **English** if prompted to select a language.

6 Press <**Enter**> to select the default option **Install Grass Valley Kaleido-IP**.

7 Wait until the installation has completed. This may take several minutes.

8 If DHCP is available, find the Kaleido-IP administration IP address in **IP addresses** in the VM's **General Information**, under **Networking**. Click the IP address to access XAdmin and XEdit.

If the DHCP server is not available, then the IP address must be manually set in XAdmin. See If the DHCP Service is Unavailable on your Network, on page 44.

9 Restore the multiviewer's configuration. See Restoring the Multiviewer's Configuration, on page 47.

If the DHCP Service is Unavailable on your Network

If DHCP is not available on your network, you will need to set an IP address through the Monitor Wall. Your setup must allow you to use a keyboard and mouse at the Kaleido-IP multiviewer while being able to view the Monitor Wall.

1 Connect a keyboard and a mouse to the Kaleido-IP multiviewer to change the network settings using the multiviewer's screen. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

2 In the *Kaleido-IP Installation & Service Manual,* see *Verifying the Management Port IP Address and Application Version.* See Related Documentation, on page 6.

3 Open XAdmin with the IP address that you found. See To Access XAdmin, on page 9.

Reverse-migration procedure

Reverse-migration is necessary in case the migration to Kaleido Software version 11.0.0 or higher does not work.

For the Kaleido-IP VM, no reversing procedure is necessary. Restore the VM to an earlier version using a previously taken VM snapshot made before the migration to Kaleido Software version 11.0.0 or higher.
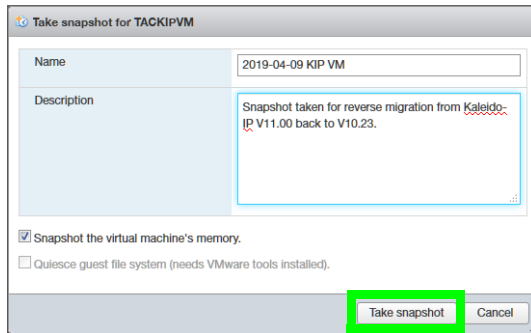
1 Access the virtual machine. In your browser, enter the IP address

2 Click **Virtual Machines**.

3 Right-click the multiviewer's virtual machine in the list under **Virtual machine**.
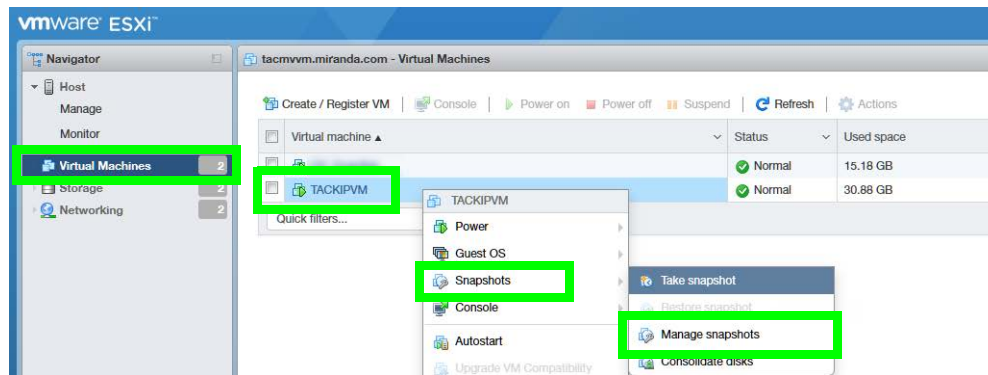
4 Point to **Snapshots** and select **Manage snapshot**.

5 Select the snapshot that you took prior to migration.
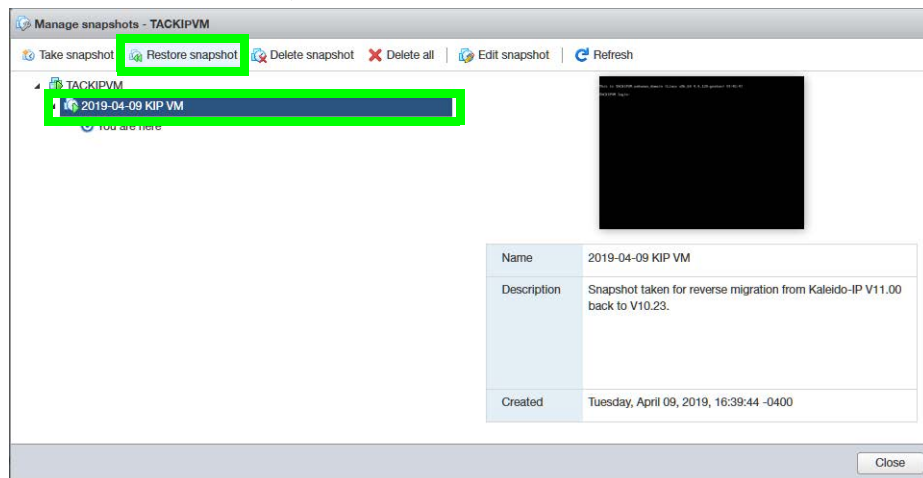
6 Click **Restore snapshot**.
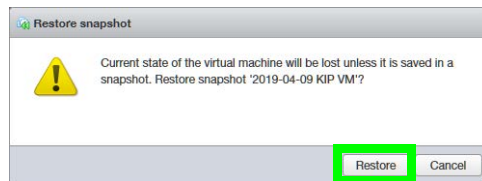
7 Click **Restore**.

Post Migration Tasks

Restoring the Multiviewer's Configuration

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	●	●

Note: For Kaleido-IP VM, follow the procedure Migration procedure for Kaleido-IP VM, on page 39.

You have to restore the multiviewer's configuration parameters under the following conditions:

- once you have migrated from Kaleido Software V10.XX or lower to Kaleido Software 11.0.0 or higher.
- once you have reverse-migrated from Kaleido Software V11.0.0 or higher to Kaleido Software 10.xx or lower.
- Once a multiviewer's hard disk has been replaced, the multiviewer's software must be imaged onto the new disk. This is a clean install of the multiviewer's software that resets the multiviewer to the state as it left the factory when it was new. See ISO Image Installation procedure for Kaleido Software Version 11 or higher, on page 53.

Until the following tasks are complete, the multiviewer will be unavailable.

Restoring the XAdmin Configuration Parameters

Migration will make the multiviewer unavailable. As a result, plan a maintenance window when the multiviewer is not in use as this procedure will take the Kaleido-IP offline during a certain period of time.

1 Set the Kaleido-IP's license keys in the XAdmin's **Status and option** page.
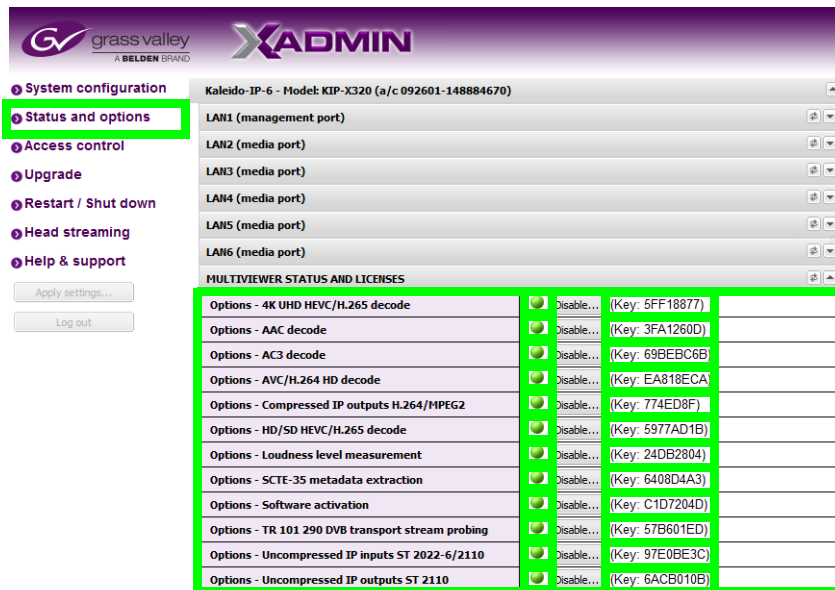
The status indicator for the license becomes green. The name of certain licenses have changed, see the following table:

License Name	Description in Xadmin	X110	X310	X120	X320	VM
KIP-OPT-HD-HEVC	HD/SD HEVC/H.265 decode		●	●	●	●
KIP-OPT-UHD-HEVC	4K UHD HEVC/H.265 decode		●	●	●	●
KIP-OPT-UCIP	Uncompressed IP inputs SMPTE ST 2022-6 / 2110			●	●	
KIP-OPT-STREAMING-OUT	Compressed IP outputs	●	●	●	●	Free
KIP-OPT-UCIP-OUT	Uncompressed IP outputs SMPTE ST 2110			●	●	
KIP-OPT-DEC-DD-2.0 and KIP-OPT-DEC-DD-5.1	AC3 decode	●	●	●	●	●
KIP-OPT-DEC-AAC-2.0 and KIP-OPT-DEC-AAC-5.1	AAC decode	●	●	●	●	●
KIP-OPT-LOUDNESS	Loudness level measurement	●	●	●	●	●
KIP-OPT-SCTE-35	SCTE-35 metadata extraction	●	●	●	●	●
KIP-OPT-TS-PROBE	TR 101 290 DVB transport stream probing	●	●	●	●	●
KIP-OPT-DEC-AVC	AVC/H.264 HD decode	●	●	●	●	●
KIP-OPT-ACTIVATION	Software Activation	●	●	●	●	●
Rivermax license File	Stream SMPTE ST 2110 uncompressed redundant video output.			●	●	

2 In **XAdmin - System configuration**, configure all system configuration fields (**System name** and all **LAN** port parameters), **Virtual LAN configuration**, and **DNS and proxy configuration** with the parameters you recorded in Record the Current XAdmin Configuration Parameters, on page 26.

3 Click **Save**.

4 If extra fonts were added to the multiviewer prior to migration, you must install these fonts again. In **XAdmin - System configuration**, click **Font configuration** and upload the necessary fonts from your PC to the multiviewer. See Identifying Installed Fonts, on page 13.

5 Set the multiviewer's date and time. In the *Kaleido-IP Installation & Service Manual,* see *Configuring a Multiviewer's IP, Date, and Time Settings with XAdmin*. See Related Documentation, on page 6.

6 Click **Save**.

7   If access control was used before migration, then configure access control in **XAdmin -
Access control**. In the *Kaleido-IP Installation & Service Manual,* see *Enabling XAdmin
Access Control*. See Related Documentation, on page 6.

8   Click **Save**.

9   If you have a head streaming license, in **XAdmin - Head streaming**, configure the
streaming configuration for all heads with the settings you recorded in Record the
Current XAdmin Configuration Parameters, on page 26.
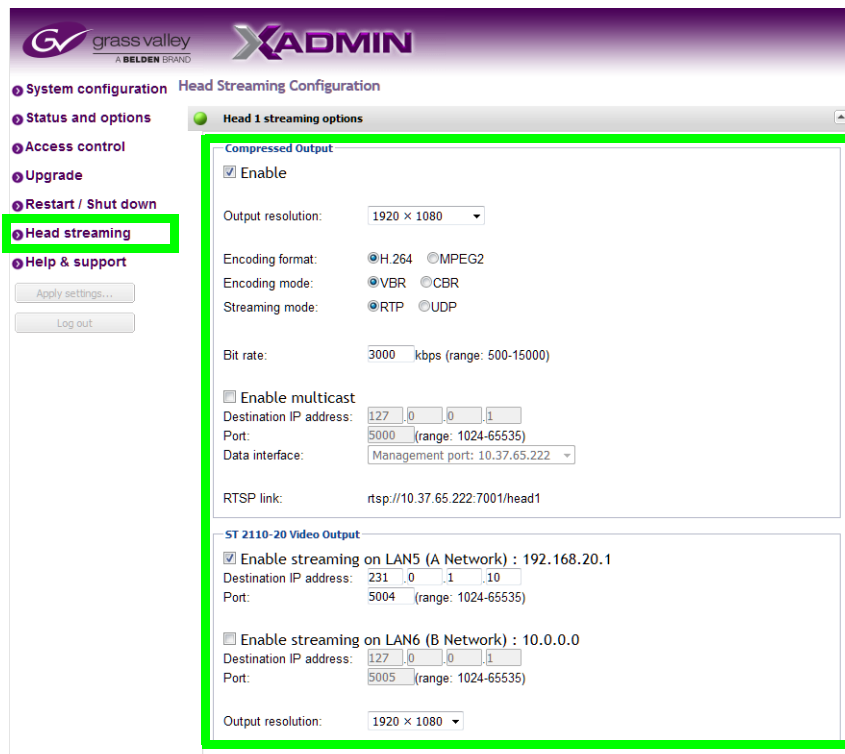
10 Click **Apply settings**.

11 Wait until the Kaleido-IP has rebooted with the new network settings.

Restore the Database in XEdit

According to the Kaleido Software version installed on the Multiviewer, you will need to re-
install XEdit on your PC from the Multiviewer. This is required when:

- you have migrated from Kaleido Software version 10.xx or lower to Kaleido Software
version 11.0.0 or higher.

- you have reverse-migrated from Kaleido Software version 11.0.0 or higher to Kaleido
Software version 10.xx or lower.

Proceed as follows.

1   Download the latest XEdit from the Kaleido-IP's XAdmin page and launch it. In the
Kaleido-IP Installation & Service Manual, see *Installing XEdit from your Multiviewer's Home
Page*. See Related Documentation, on page 6.

2 From XEdit, import the database from the backup.
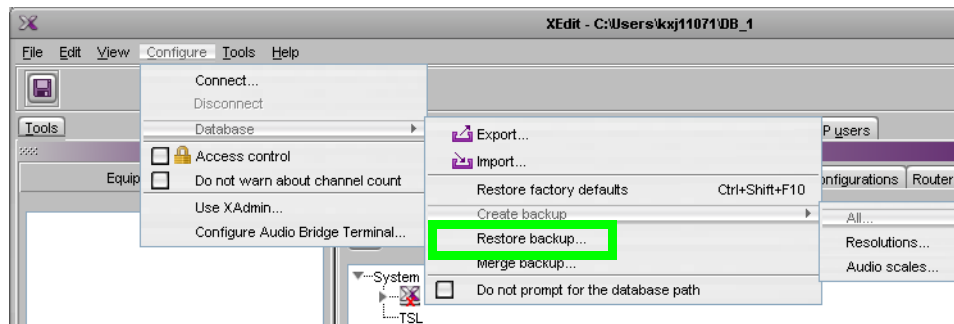
3 Load the required layout(s). In the *Kaleido-IP Installation & Service Manual,* see *Testing the Monitor Wall Operation*. See Related Documentation, on page 6.

ISO Image Installation procedure for Kaleido Software Version 11 or higher

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	●	

> Note: To install the Kaleido-IP VM software on a virtual machine, refer to the *Kaleido-IP VM Installation and Service Manual*. See Related Documentation, on page 6.

This chapter explains how to install Kaleido Software version 11.0.0 or higher on a multiviewer's hard disk (or SSD).

Once a multiviewer's hard disk has been replaced, the multiviewer's software must be imaged onto the new disk. This is a clean install of the multiviewer's software that resets the multiviewer to the state as it left the factory when it was new.

If you have a copy of the multiviewer's database, you can quickly restore the multiviewer's operation. Otherwise, you might have to configure the multiviewer.

See also the Release Notes for the version of Kaleido Software you are installing. See Related Documentation, on page 6.

Record the Current XAdmin Configuration Parameters

If the multiviewr's current operating state allows: you need to record the Kaleido-IP's configuration parameters as you will have to apply these values to the new Kaleido Software installation. If this is not possible, you will need to recreate these settings as if the multiviewer is new from the factory.

1　Launch XAdmin. To access XAdmin, see To Access XAdmin, on page 9.

2　From **XAdmin - System configuration**, take note of all system configuration fields: **System name** and all **LAN** port parameters for ports **LAN1** to **LAN6**.

3 From **XAdmin - System configuration**, take note of the **Virtual LAN configuration** parameters.

4 From **XAdmin - System configuration**, take note of the **DNS and proxy configuration** parameters.

5 From **XAdmin - Head streaming**, take note of the streaming configuration for all heads.

6 The multiviewer's Access Control password is set in XAdmin. Ensure that you have the Access Control password for the multiviewer, if it has been set.

Find a Copy of the Multiviewer's Current Database

If you can still access XAdmin, try to make a database backup. See Back up the Current Database in XEdit, on page 25.

If you cannot access XAdmin, all the following information will have to be extracted from configuration documentation you may have, or recreated if you are missing a piece of information.

Try to get a copy of the multiviewer's database to be used to restore the multiviewer's configuration, once the new hard drive and Kaleido Software are installed. You have the following options:

- Use a previous backup of the database:
  - This will require re-adding any modifications done to the database since the backup was made.
  - **NOTE:** databases in System Snapshot are only complete if the system is NOT part of a cluster.
- See if the multiviewer's web engine can still respond to a System Snapshot request even if it cannot display XAdmin:
  - From another Linux system, try the following command:
    ```
    wget --no-check-certificate -O /tmp/<file name> address of
    Kaleido>/XAdmin/system
    ```
    - Replacing `<file name>` with the name of the generated System SnapShot file.
    - Replacing `<ip address of Kaleido>` with the multiviewer's IP address.
  - This queries the web server of the unit to extract a System Snapshot, if the web server is still responding. Results will vary depending on the gravity of your hard drive (or SSD) failure.
  - **NOTE:** databases in System Snapshot are only complete if the system is NOT part of a cluster.

- If you have no backups of the unit's database, check your local/offline XEdit database; there may be a previous version of this unit's database which may make a better starting point than to completely re-create it.

- If you have no database backups whatsoever, there is no other option than re-create the database from scratch.

Prepare a USB drive with the ISO Image

A 4GB (or larger capacity) USB drive is required. This procedure makes the USB drive bootable with an installation package that installs the multiviewer software. This procedure requires that you have already downloaded the following image file:

- **Kaleido-IP_11.n.n_XXX.iso**

    Where:

    - *n.n* is the major and minor software version.

    - where *XXX* is the build number

    For example, **Kaleido-IP_11.2.1.628.iso**

If this is not the case, contact Technical Support to obtain this **.iso** file. See Grass Valley Technical Support, on page 73. Proceed as follows.

1 Plug the USB drive to into your PC.

2 Create a bootable USB drive using the above .iso file. See Flashing a USB Drive, on page 27.

3 Remove the USB drive from the PC and prepare to plug it into the Kaleido-IP's USB port.

Replace the Multiviewer's Defective Hard Disk

Refer to the server manufacturer's installation and service manual for detailed information. Proceed as follows.

1 Obtain a replacement hard disk from Technical Support. See Grass Valley Technical Support, on page 73.

2 Remove power from the multiviewer.

3 Open the multiviewer and replace the hard disk. Take a picture of the connections to the hard disk beforehand to use as a reference for when connecting the new hard disk.

4 Reassemble the multiviewer and replace the cover.

5 Apply power to the multiviewer.

Set the Kaleido-IP X120 / X320 Multiviewer's BIOS to use the DUAL or UEFI Boot Mode

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	● a		

a. For Kaleido IP multiviewers being migrated to Kaleido Software versions 11.0.0 and 11.0.1 only.

The Kaleido-IP multiviewer's boot mode must be set in the unit's BIOS settings according to the Kaleido Software version the multiviewer is being installed.

Migrating to Kaleido Software Version	Required Boot Mode Setting
11.0.0	DUAL
11.0.1	UEFI
11.1.0	UEFI, when this setting is available.
11.2.0 or higher	UEFI, when this setting is available.

1 Access the Kaleido-IP multiviewer's console. See

As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer. See

2 At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F11> repeatedly.

3 Select **Enter Setup**.

4 Go to the **Boot** tab.

5 Change **Boot Mode Select** according to this table.

Migrating to Kaleido Software Version	Required Boot Mode Setting
11.0.0	DUAL
11.0.1	UEFI
11.1.0	UEFI
11.2.0 or higher	UEFI, when this setting is available.

6 Save and Exit the BIOS settings.

Kaleido Software Installation Tasks

Preparing the multiviewer to boot from the USB drive

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	●	

For a Kaleido-IP X130 / X330, this procedure is carried out here: Virtual Console / Remotely Rebooting Kaleido-IP X130 / X330 Model Multiviewers, on page 15.

This procedure can be carried out through any of the following methods that provide access to the Kaleido-IP multiviewer's BIOS settings and console.

- Remotely accessing / Rebooting the Kaleido-IP Multiviewer, on page 14.
- Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20. As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer.

Proceed as follows.

1 Plug the USB drive you imaged with the Kaleido Software version 11.x.x (as prepared in Prepare a USB drive with the ISO Image, on page 56) into a USB port on the Kaleido-IP multiviewer.

Note: Our testing has shown that remotely mounting the USB drive media through the Kaleido-IP multiviewer's remote IPMI management interface does not work.

---

2 Reboot the multiviewer. See Remote or Local Kaleido-IP Multiviewer Access / Reboot, on page 14.

3 At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing repeatedly:

   • <F11> for X120 and X320

   • <F6> for X110 and X310

4 In the **Please select boot device:** table, use the up ($\uparrow$) / down ($\downarrow$) arrows as shown on the screen to make the USB drive the boot device (General UDisk 5.00).
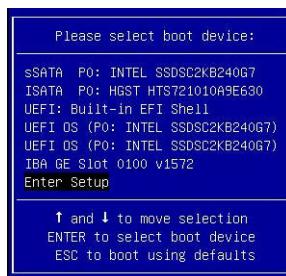
Installing the Kaleido Software on the multiviewer

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	●	

For a:

   • Kaleido-IP X130 / X330, the prerequisite procedure is carried out here: Virtual Console / Remotely Rebooting Kaleido-IP X130 / X330 Model Multiviewers, on page 15.

   • Kaleido-IP X110 / X310 / X120 / X320, the prerequisite procedure is carried out here: Preparing the multiviewer to boot from the USB drive, on page 58.

Once the multiviewer is rebooting with Kaleido Software image, proceed as follows.

1 Select **English** if prompted to select a language.

```
                                    GNU GRUB  version 2.02

 *Install Grass Valley Kaleido-IP
  Check disc for defects
  Rescue a broken system




     Use the ↑ and ↓ keys to select which entry is highlighted.
     Press enter to boot the selected OS, `e' to edit the commands before booting or `c' for a command-line. ESC to
     return previous menu.
```
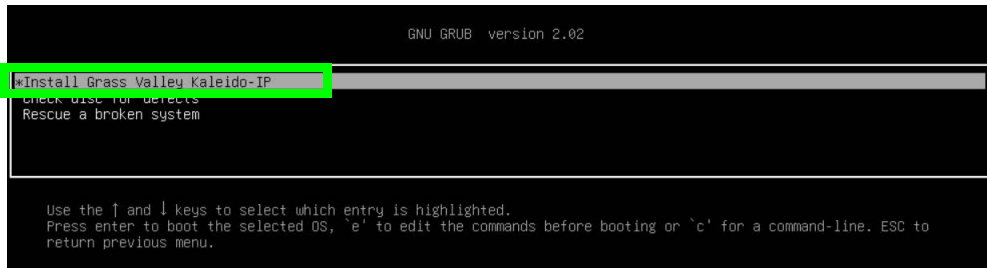
2 Press **<Enter>** to select the default option **Install Grass Valley Kaleido-IP**.

3 Wait until the installation has completed. This may take several minutes.

4 Once the Kaleido-IP has rebooted, a console with an underscore appears.
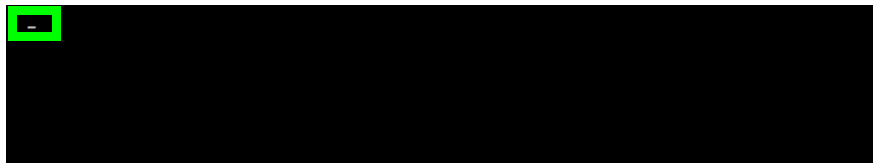
5 Click the console and press <Ctrl> + <Alt> + <F1> to enter the console.

```
Ubuntu 18.04.2 LTS kip-64dfd536c9f0fd73 tty1 10.37.65.226
kip-64dfd536c9f0fd73 login: _
```
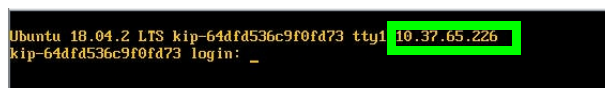
6 Record the IP address in the welcome message for **tty1**: this is the Kaleido-IP multiviewer's management IP address through which you can access XEdit and XAdmin. If your network does not have a DHCP server, then see If the DHCP Service is Unavailable on your Network, on page 61.

7 Remove the USB drive from the multiviewer or disconnect the virtual media from the multiviewer through iDRAC.

8 Go to XAdmin: Enter the **eno1** port IP address into your web browser's address bar on your PC.

9 Restore the multiviewer's configuration. See Restoring the Multiviewer's Configuration, on page 47.

Set the BIOS Boot Order to Hard Disk

Once the hard disk has been imaged with the multiviewer software, the server's boot order should be set to boot first from the primary hard disk drive.

For a:

- Kaleido-IP X130 / X330, see Post Procedure, on page 17.
- Kaleido-IP X110 / X310 / X120 / X320, follow the procedure below.

Setting the boot order to the primary hard disk drive

1 Access the Kaleido-IP multiviewer's console. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer. See Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports, on page 22.

2   Reboot The Kaleido-IP multiviewer.

3   At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing repeatedly:

- <F11> for X120 and X320
- <F6> for X110 and X310

4   In the **Please select boot device:** table, use the up (↑) / down (↓) arrows as shown on the screen to make the primary hard disk drive the boot device.

5   Reboot the multiviewer to test that the multiviewer boots up normally.

If the DHCP Service is Unavailable on your Network

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	●	

If DHCP is not available on your network, you will need to set an IP address through the Monitor Wall. Your setup must allow you to use a keyboard and mouse at the Kaleido-IP multiviewer while being able to view the Monitor Wall.

1   Connect a keyboard and a mouse to the Kaleido-IP multiviewer to change the network settings using the multiviewer's screen. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

2   In the *Kaleido-IP Installation & Service Manual,* see *Changing the Management Network IP Address from the Monitor Wall*. See Related Documentation, on page 6.

3   Open XAdmin with the IP address that you found. See To Access XAdmin, on page 9.

Restoring the BIOS Settings

Restoring the Multiviewer's BIOS Settings

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●		

The BIOS setting for the Kaleido-IP X120 and X320 must be restored under the following conditions:

- The multiviewer is unpowered and the coin cell battery on the motherboard is dead.
- The coin cell battery on the motherboard has been replaced.

When migrating to Kaleido Software Version 11.0.0 or Higher and the installation process hangs at 14%, this is a symptom that the multiviewer's:

1 Coin cell battery on the motherboard has to be replaced. See **Onboard Battery** in the *SUPERSERVER 1028U Series User's Manual* for more information.

2 BIOS settings need to be restored.
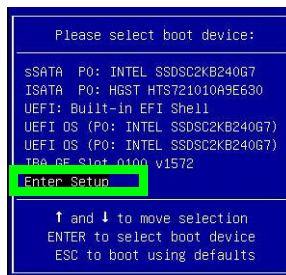
To restore the multiviewer's BIOS settings

1 Access the Kaleido-IP multiviewer's console. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 20.

As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer. See Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports, on page 22.

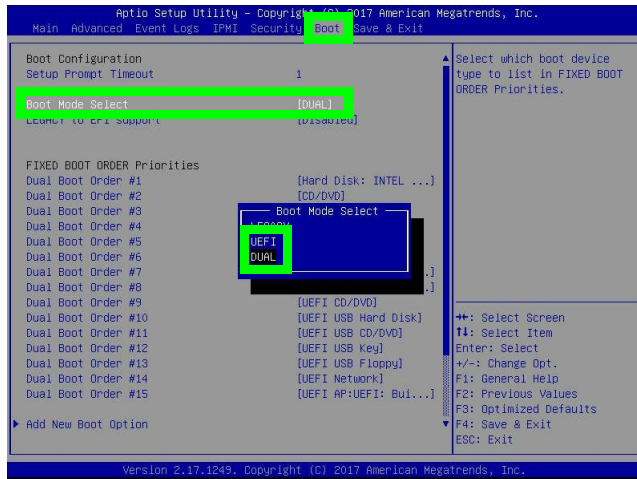2 At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F11> repeatedly.

3 Select **Enter Setup**.

4 Go to the **Boot** tab.

5 Change **Boot Mode Select** according to this table.

Migrating to Kaleido Software Version	Required Boot Mode Setting
11.0.0	DUAL
11.0.1	UEFI
11.1.0	UEFI
11.2.0 or higher	UEFI, when this setting is available.

6 Go to the **IPMI** tab.
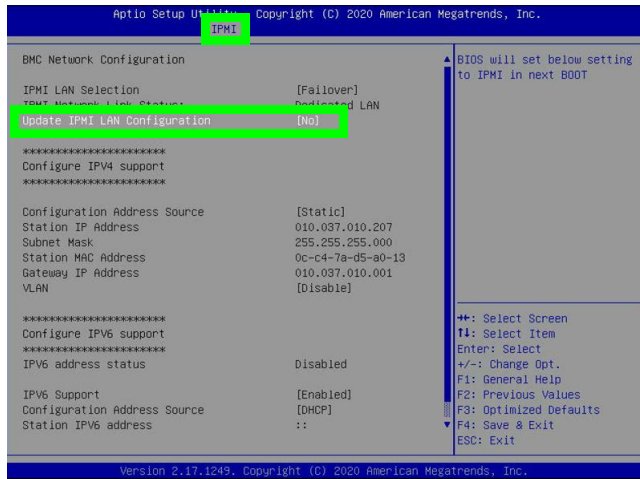
7 If you need to set the IP Addresses, subnet mask, ipv6 enable, and so on, the change the **Update IPMI LAN Configuration** to **Yes** and set these parameters. Otherwise, set **Update IPMI LAN Configuration** to **No**.

8 On the **IPMI** tab, change **When SEL is Full** to **Do Nothing**.
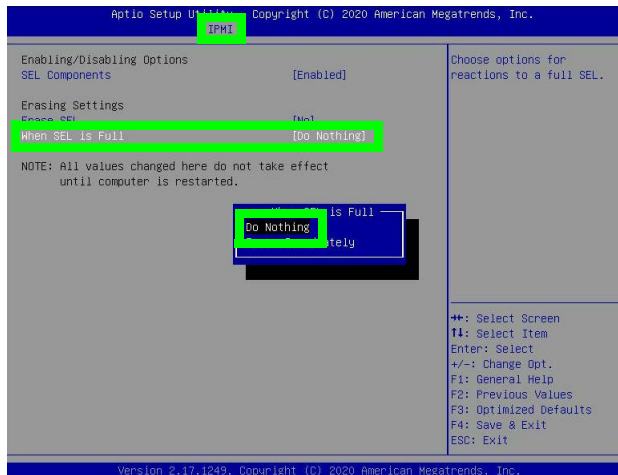
9 Go to the **Advanced** tab.
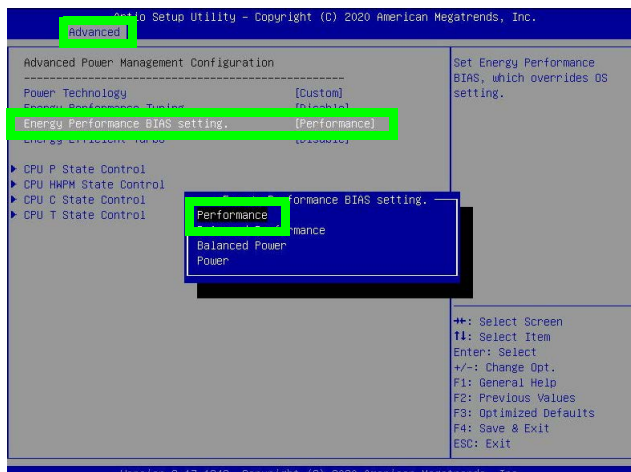
10 Change **Energy Performance BIAS Setting** to **Performance**.

11 Save and Exit the BIOS settings.

Kaleido-IP Multiviewer BIOS Reference

This procedure applies to:

Kaleido-IP X130 / X330	Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●		

The following screenshots can be used as a reference when setting the BIOS configuration for the multiviewer before migrating the software.

```
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        Advanced

        PCI Bus Driver Version                    A5.01.05             ▲ Enable/Disable the runtime
                                                                         event for PCI errors
        PCI Devices Common Settings:
        PCI PERR/SERR Support                     [Disabled]
        Above 4G Decoding                         [Disabled]
        SR-IOV Support                            [Disabled]
        Maximum Payload                           [Auto]
        Maximum Read Request                      [Auto]
        ASPM Support                              [Disabled]
        MMIOHBase                                 [56 TB]
        MMIO High Size                            [256 GB]
        MMCFG BASE                                [Auto]

        AOC-UR-i4G SLOT1 PCI-E 3.0 X8 OPROM       [Legacy]
        RSC-R1UW-E8R SLOT1 PCI-E X8 OPROM         [Legacy]
        RSC-R1UW-2E16 SLOT1 PCI-E X16 OPROM       [Legacy]
        RSC-R1UW-2E16 SLOT2 PCI-E X16 OPROM       [Legacy]
                                                                       ──────────────────────────
        Onboard LAN OPROM Type                    [Legacy]             →←: Select Screen
        Onboard LAN1 OPROM                        [PXE]                ↑↓: Select Item
        Onboard LAN2 OPROM                        [Disabled]           Enter: Select
        Onboard LAN3 OPROM                        [Disabled]           +/-: Change Opt.
        Onboard LAN4 OPROM                        [Disabled]           F1: General Help
        Onboard Video OPROM                       [Legacy]          ▒  F2: Previous Values
        VGA Priority                              [Onboard]          ▼ F3: Optimized Defaults
                                                                       F4: Save & Exit
                                                                       ESC: Exit

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```

```
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        Advanced

                                                                       Console Redirection Enable
                                                                       or Disable.
        COM1
        COM1 Console Redirection                  [Disabled]
      ▶ COM1 Console Redirection Settings

        COM2/SOL
        COM2/SOL Console Redirection              [Enabled]
      ▶ COM2/SOL Console Redirection Settings

        Serial Port for Out-of-Band Management/
        Windows Emergency Management Services (EMS)
        EMS Console Redirection                   [Disabled]
      ▶ EMS Console Redirection Settings
                                                                       ──────────────────────────
                                                                       →←: Select Screen
                                                                       ↑↓: Select Item
                                                                       Enter: Select
                                                                       +/-: Change Opt.
                                                                       F1: General Help
                                                                       F2: Previous Values
                                                                       F3: Optimized Defaults
                                                                       F4: Save & Exit
                                                                       ESC: Exit

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```

```
                    Aptio Setup Utility – Copyright (C) 2019 American Megatrends, Inc.
            Advanced

    ACPI Settings                                              Enabled/Disabled Windows
                                                               Hardware Error
    WHEA Support                        [Enabled]              Architecture, that is able
    High Precision Event Timer          [Enabled]             to determine the root cause
    NUMA                                [Enabled]              of hardware errors.




                                                               →←: Select Screen
                                                               ↑↓: Select Item
                                                               Enter: Select
                                                               +/−: Change Opt.
                                                               F1: General Help
                                                               F2: Previous Values
                                                               F3: Optimized Defaults
                                                               F4: Save & Exit
                                                               ESC: Exit

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```

```
                    Aptio Setup Utility – Copyright (C) 2019 American Megatrends, Inc.
            Event Logs

    Enabling/Disabling Options                                 Change this to enable or
    SMBIOS Event Log                    [Enabled]             disable all features of
    Runtime Error Logging Support       [Enable]              SMBIOS Event Logging during
    Turn off Memory Error LED           [Do Nothing]          boot.

    Erasing Settings
    Erase Event Log                     [No]
    When Log is Full                    [Do Nothing]

    SMBIOS Event Log Standard Settings
    Log System Boot Event               [Disabled]
    MECI                                1
    METW                                60

    NOTE: All values changed here do not take effect
          until computer is restarted.

                                                               →←: Select Screen
                                                               ↑↓: Select Item
                                                               Enter: Select
                                                               +/−: Change Opt.
                                                               F1: General Help
                                                               F2: Previous Values
                                                               F3: Optimized Defaults
                                                               F4: Save & Exit
                                                               ESC: Exit

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```

```
               Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.
                               IPMI

   Enabling/Disabling Options                                   Change this to enable or
   SEL Components                          [Enabled]            disable all features of
                                                                System Event Logging during
   Erasing Settings                                             boot.
   Erase SEL                               [No]
   When SEL is Full                        [Do Nothing]

   NOTE: All values changed here do not take effect
         until computer is restarted.




                                                                →←: Select Screen
                                                                ↑↓: Select Item
                                                                Enter: Select
                                                                +/-: Change Opt.
                                                                F1: General Help
                                                                F2: Previous Values
                                                                F3: Optimized Defaults
                                                                F4: Save & Exit
                                                                ESC: Exit

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```

```
               Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.
                               IPMI

   BMC Network Configuration                              ▲    BIOS will set below setting
                                                               to IPMI in next BOOT
   IPMI LAN Selection                      [Failover]
   IPMI Network Link Status:               Shared LAN
   Update IPMI LAN Configuration           [No]


   ***********************
   Configure IPV4 support
   ***********************

   Configuration Address Source            [Static]
   Station IP Address                      010.037.065.153
   Subnet Mask                             255.255.255.000
   Station MAC Address                     0c-c4-7a-d5-4e-f0
   Gateway IP Address                      010.037.065.001
   VLAN                                    [Disable]


   ***********************                                      →←: Select Screen
   Configure IPV6 support                                      ↑↓: Select Item
   ***********************                                      Enter: Select
   IPV6 address status                     Disabled            +/-: Change Opt.
                                                               F1: General Help
   IPV6 Support                            [Enabled]           F2: Previous Values
   Configuration Address Source            [DHCP]          ▓   F3: Optimized Defaults
   Station IPV6 address                    ::              ▼   F4: Save & Exit
                                                               ESC: Exit

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```

For the **Boot Mode Select** setting, see

```
          Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.
   Main  Advanced  Event Logs  IPMI  Security  Boot  Save & Exit

   Boot Configuration                                    Select which boot device
   Setup Prompt Timeout                    1             type to list in FIXED BOOT
                                                         ORDER Priorities.
   Boot Mode Select
   LEGACY to EFI support                   [Disabled]


   FIXED BOOT ORDER Priorities
   UEFI Boot Order #1                      [UEFI Hard Disk:ub...]
   UEFI Boot Order #2                      [UEFI CD/DVD]
   UEFI Boot Order #3                      [UEFI USB Hard Dis...]
   UEFI Boot Order #4                      [UEFI USB CD/DVD]
   UEFI Boot Order #5                      [UEFI USB Key]
   UEFI Boot Order #6                      [UEFI USB Floppy]
   UEFI Boot Order #7                      [UEFI Network]
   UEFI Boot Order #8                      [UEFI AP:UEFI: Bui...]

 ▶ Add New Boot Option                                   →←: Select Screen
 ▶ Delete Boot Option                                    ↑↓: Select Item
                                                         Enter: Select
 ▶ UEFI Hard Disk Drive BBS Priorities                   +/-: Change Opt.
 ▶ UEFI USB Hard Disk Drive BBS Priorities               F1: General Help
 ▶ UEFI Application Boot Priorities                       F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit

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```
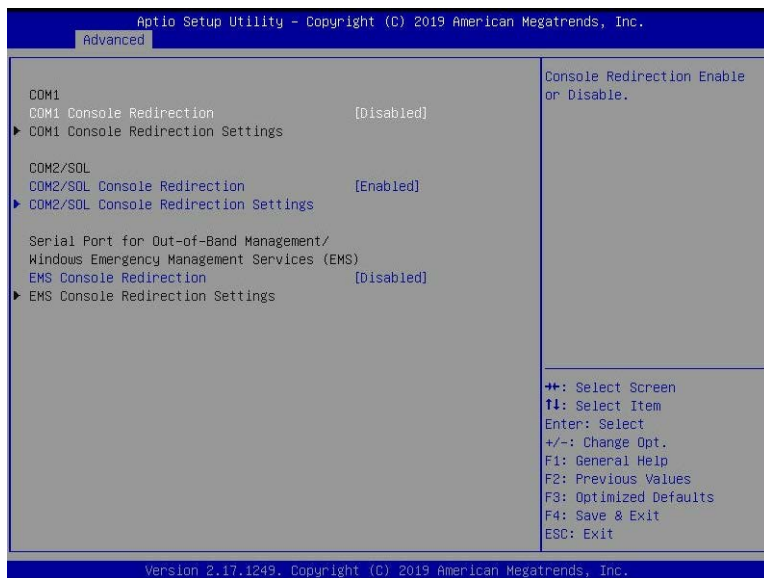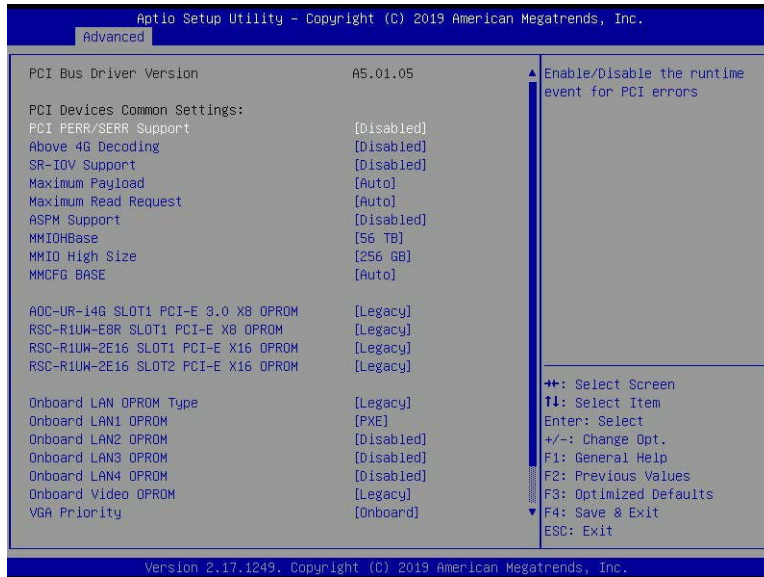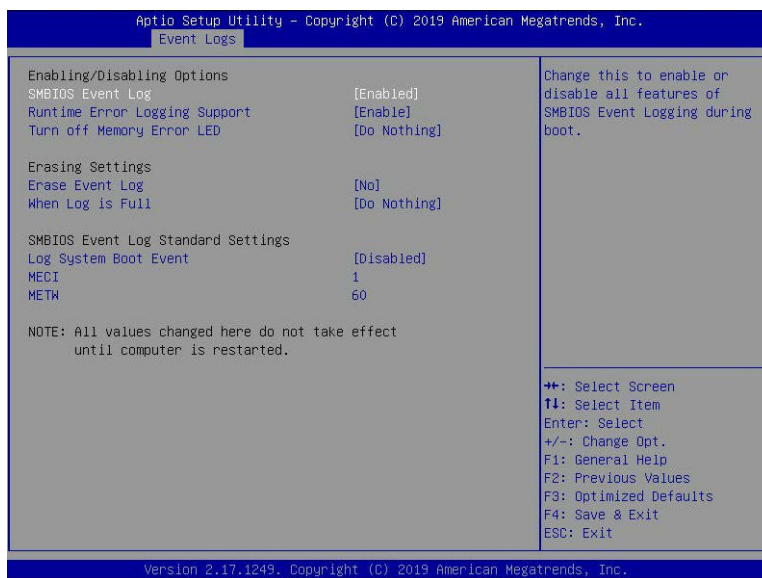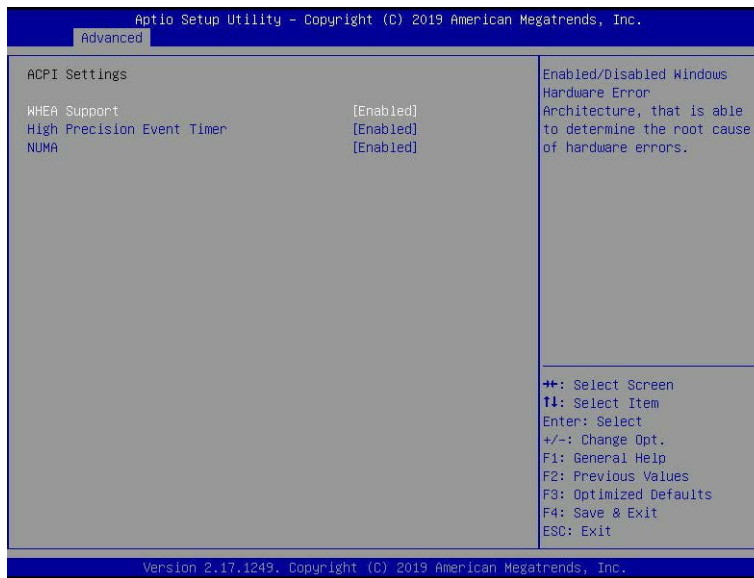
```
          Aptio Setup Utility - Copyright (C) 2019 American Megatrends, Inc.
                                Boot

   UEFI Boot Order #1                      [ubuntu]       Sets the system boot order
   UEFI Boot Order #2                      [ubuntu]
   UEFI Boot Order #3                      [UEFI OS]




                                                         →←: Select Screen
                                                         ↑↓: Select Item
                                                         Enter: Select
                                                         +/-: Change Opt.
                                                         F1: General Help
                                                         F2: Previous Values
                                                         F3: Optimized Defaults
                                                         F4: Save & Exit
                                                         ESC: Exit

          Version 2.17.1249. Copyright (C) 2019 American Megatrends, Inc.
```
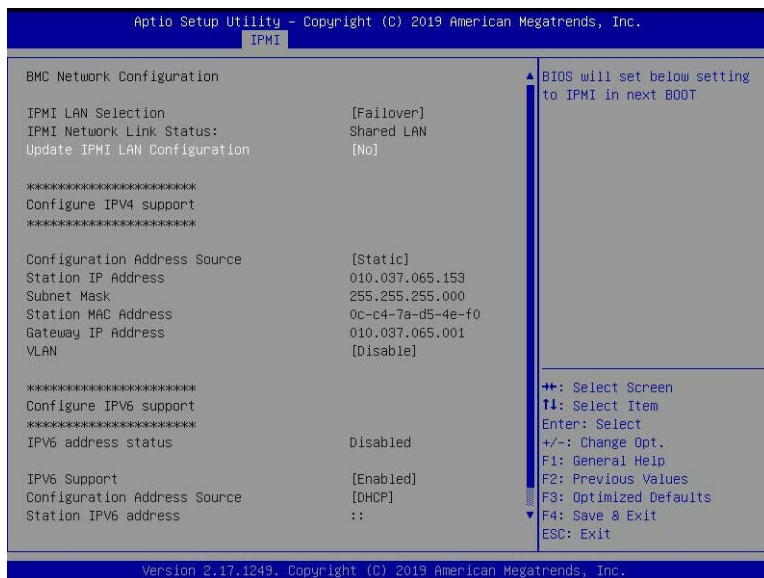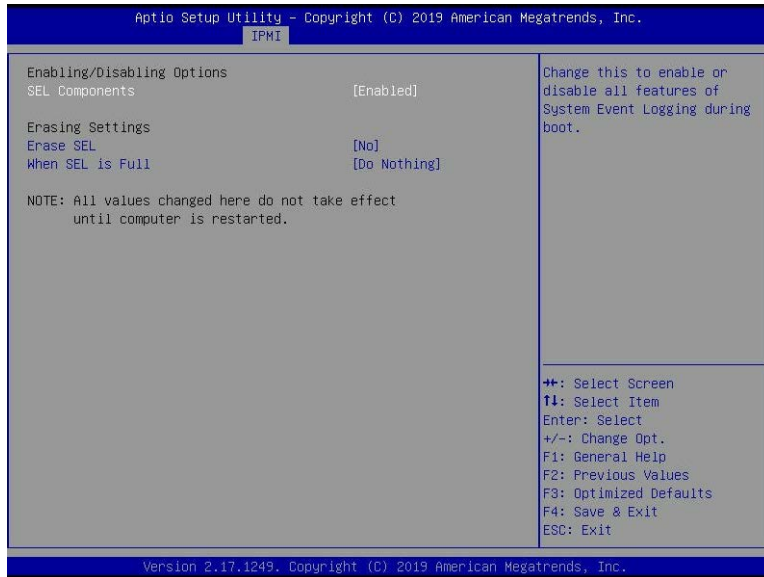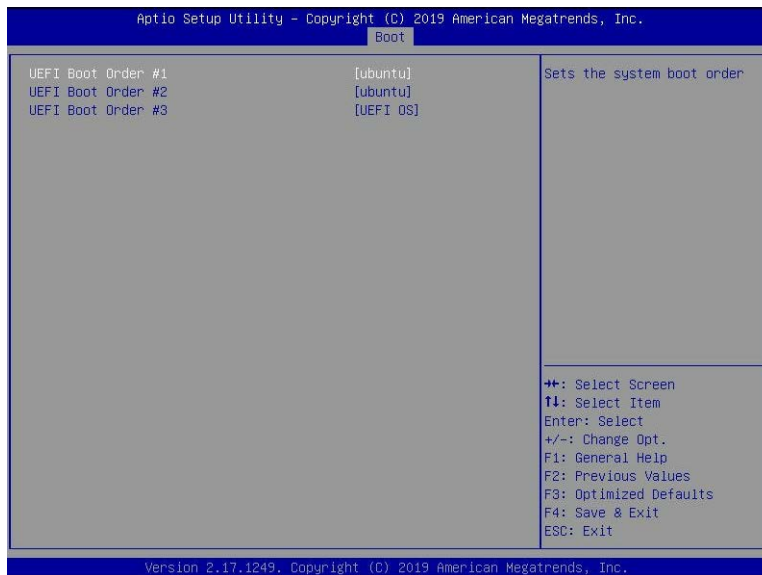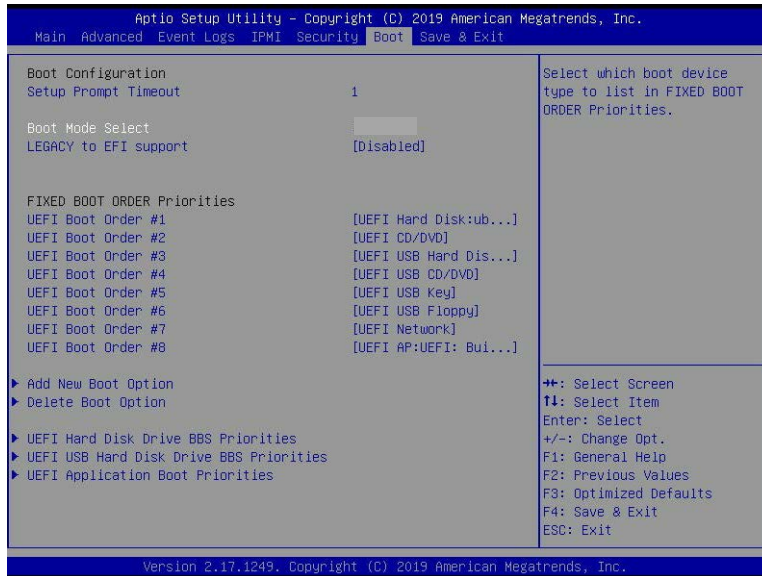
Grass Valley Technical Support

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).

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

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