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KALEIDO-IP MIGRATION TO VERSION 11 OR HIGHER

Kaleido-IP & Kaleido-IP VM Multiviewers

Upgrade Guide

13-00926-010 AA

2019-10-24

www.grassvalley.com

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2 Migration to Ubuntu First Steps

As of Kaleido Software version 11.0, a new operating system is required for the server to run this Kaleido Software version.

Only the following multiviewer models can be migrated to Kaleido Software version 11.0 or higher:

- Kaleido-IP X110
- Kaleido-IP X310
- Kaleido-IP X120
- Kaleido-IP X320
- Kaleido-IP VM

To migrate a Kaleido-IP from an earlier version of Kaleido Software (version 10.X or lower) to version 11.0 or higher, a one time special migration procedure must be followed.

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 11.00 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 procedure for Kaleido-IP X110 / X310 / X120 / X320, on page 21.
- For the Kaleido-IP VM multiviewer, see Migration procedure for Kaleido-IP VM, on page 31.

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

Document Number	Title
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)

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 5.

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 5.

Note: The XEdit software for Kaleido Software versions 10.XX or lower is not compatible with the XEdit software for Kaleido Software versions 11.XX 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 or higher.

Prerequisite Checklist

Before start the upgrade to Kaleido Software version 11.0 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 5. 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 14
  - USB mouse
  - USB keyboard

  See Remote or Local Kaleido-IP Multiviewer Access / Reboot, on page 11 for more information.
- For Kaleido-IPs other than Kaleido-IP VM, one or two USB drives are required (4GB or larger capacity)
  - One USB drive for the migration
  - One USB drive for the reverse-migration
- Migration file:
  - An Upgrade package to migrate to the latest version of Kaleido-IP-on-Ubuntu OS (that is, Kaleido Software version 11.0 or higher). This is **.iso** file (installs Ubuntu OS plus Kaleido Software version 11.0) from a USB drive. Contact Technical Support to obtain the following file.
    - **Kaleido-IP_11.00.263.iso**
- Reverse-migration file: this is necessary in case the migration to Kaleido Software version 11.00 or higher does not work.
  - For Kaleido-IP X110 / X310 / X120 / X320: 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 or higher.
- Download and install on your PC the latest version of Win32DiskImager freeware application.
- You have received new license keys required for the migration. See Obtain New License Keys, on page 8.

- 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 10.

Obtain New License Keys

This procedure applies to:

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 9) 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 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.

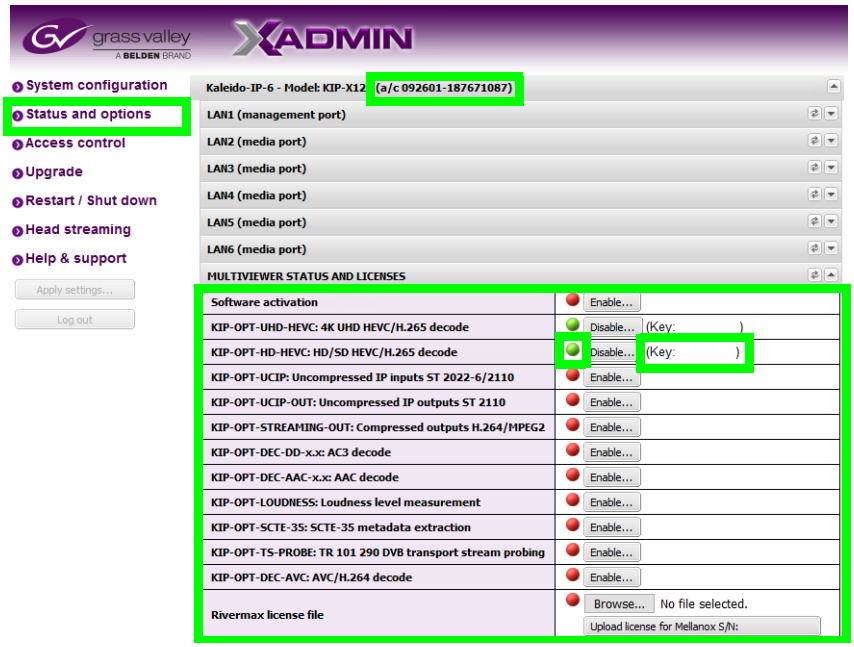
Please contact Grass Valley Technical Support if other options not listed above were purchased.

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 6). 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 11.0 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 or higher license keys.

> WARNING
> Do not migrate the multiviewer to Kaleido Software version 11.0 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 11.0 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.

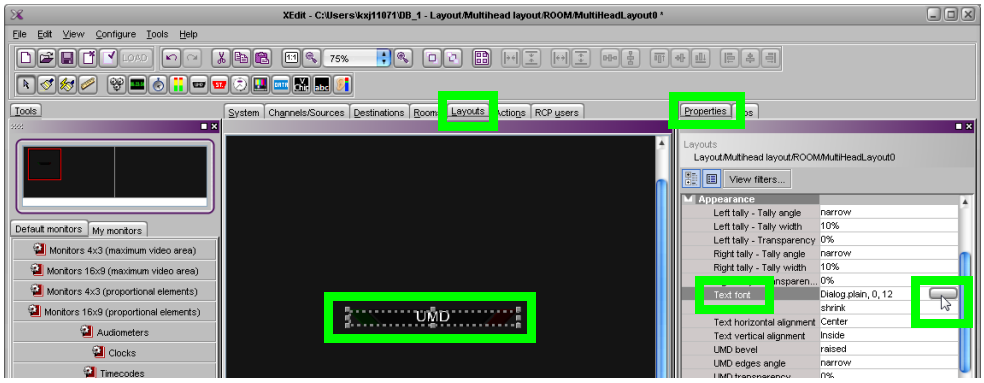
If extra fonts were added to the multiviewer, after migration, you must install these fonts again. To do so, first you must identify the extra fonts that have been added to your installation that are not part of the standard Kaleido-IP multiviewer installation.

The following fonts are part of a standard installation.

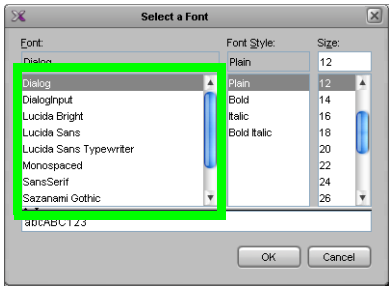
- Dialog
- DialogInput
- Lucida Bright
- Lucida Sans
- Lucida Sans Typewriter
- Monospaced
- SansSerif
- Sazanami Gothic
- Sazanami Mincho
- Serif

To find the fonts currently installed on you multiviewer

1 Open XEdit. See To Access XEdit, on page 6.
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 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 management interface. See Remotely accessing / Rebooting the Kaleido-IP Multiviewer, on page 11.
- 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 14.

Remotely accessing / Rebooting the Kaleido-IP Multiviewer

You must know the Kaleido-IP multiviewer's remote IPMI 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 X120 / X320 Model Multiviewers, on page 12

- Virtual Console / Remotely Rebooting Kaleido-IP X110 / X310 Model Multiviewers, on page 13

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 14.

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

This procedure applies to:

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

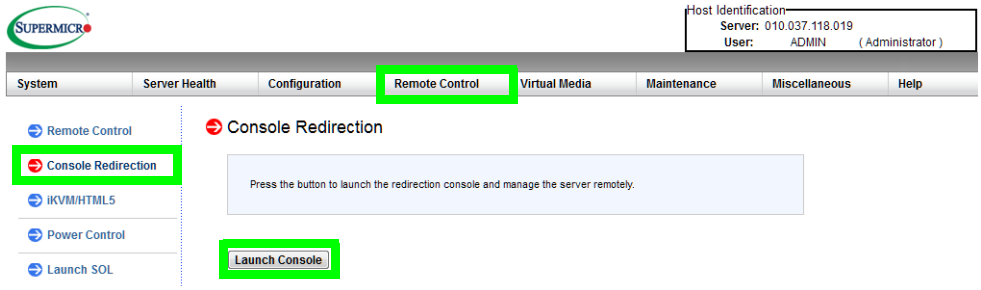
Once you have gained remote access to the Kaleido-IP multiviewer, you can launch a virtual console as follows.

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

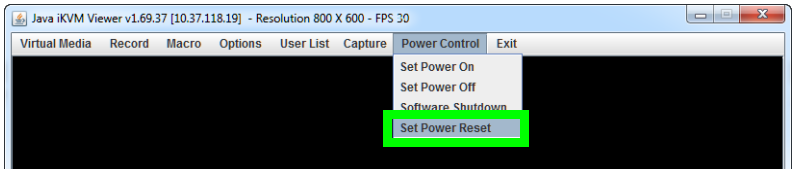
Java security settings on the desktop PC might prevent the virtual console from launching. If the console cannot be launched, the device's physical ports will have to be used to access the console: see Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 14.

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**.



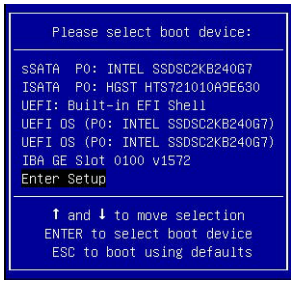
The virtual Console opens.



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:

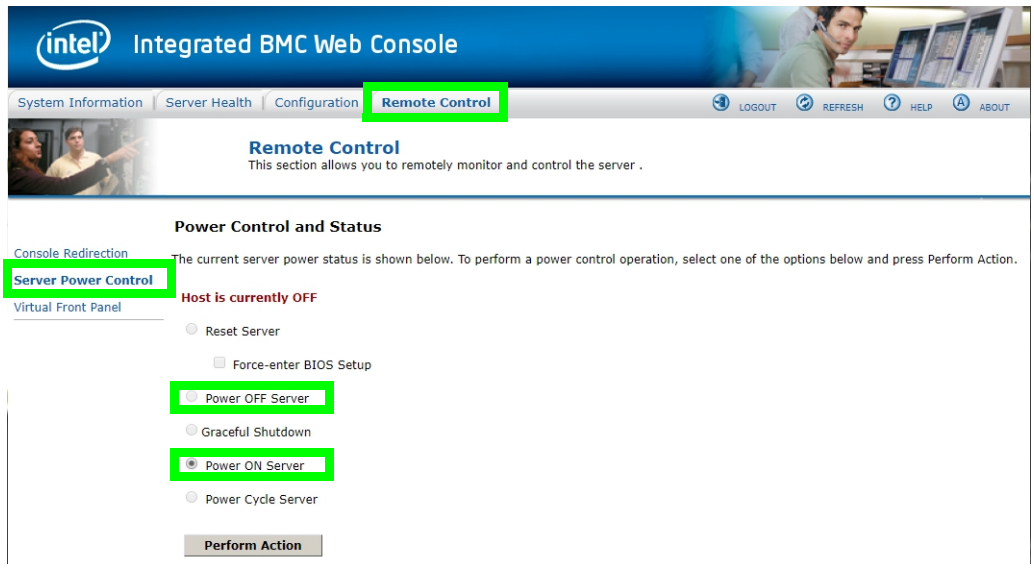
Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
	●	

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 14.

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 migration 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 X110 / X310 / X120 / X320 Model Multiviewers, on page 15.
- Locally access the multiviewer, see Connecting a Monitor, Mouse, and Keyboard to Multiviewer's USB Ports, on page 16.

Local Rebooting Kaleido-IP X110 / X310 / X120 / X320 Model Multiviewers

This procedure applies to:

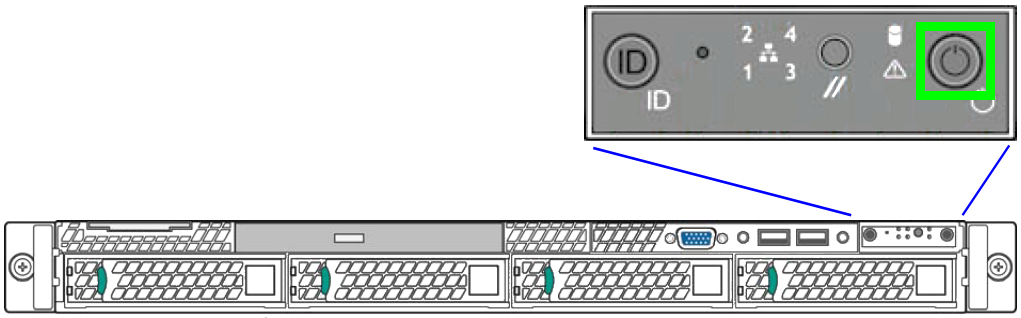
Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	

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

Identifying the Multiviewer's Power Button

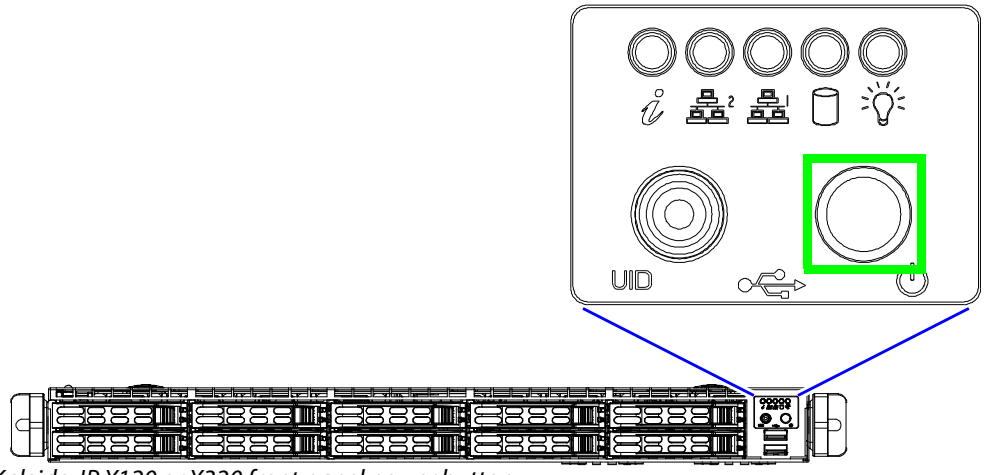
When the front cover is removed, the following controls and indicators are available.

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

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

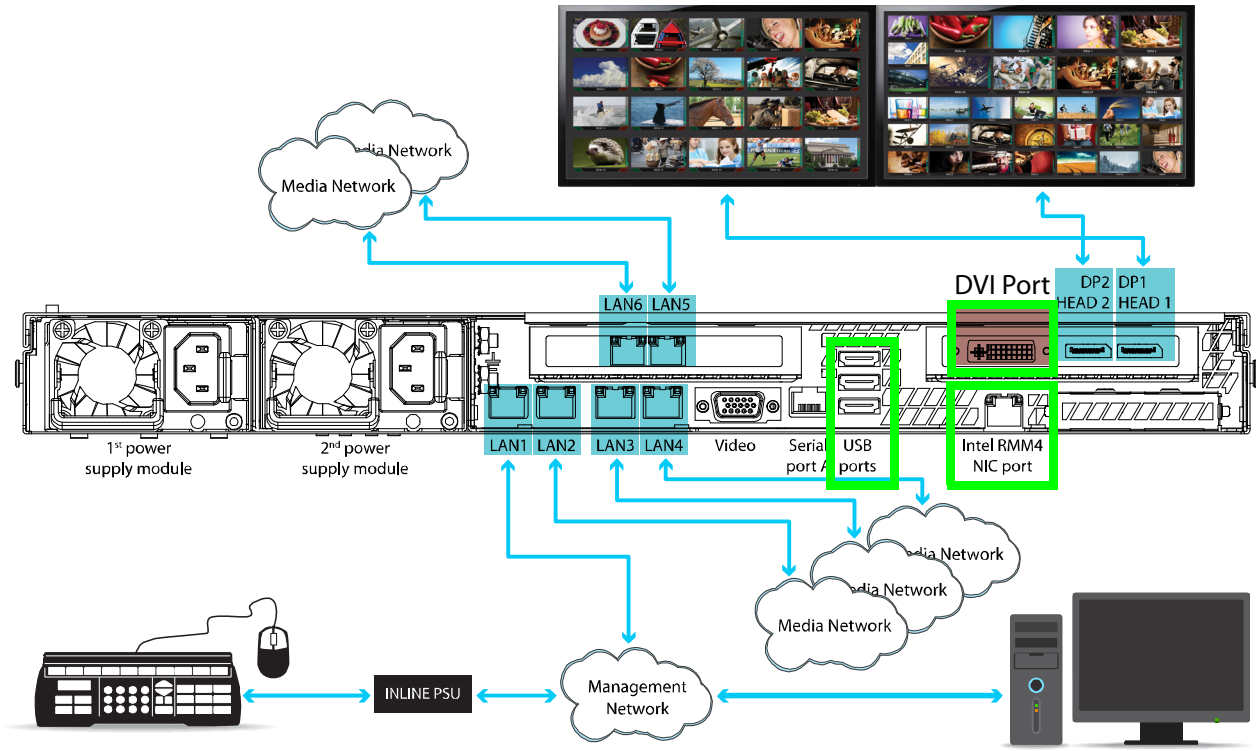
Proceed as follows.

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

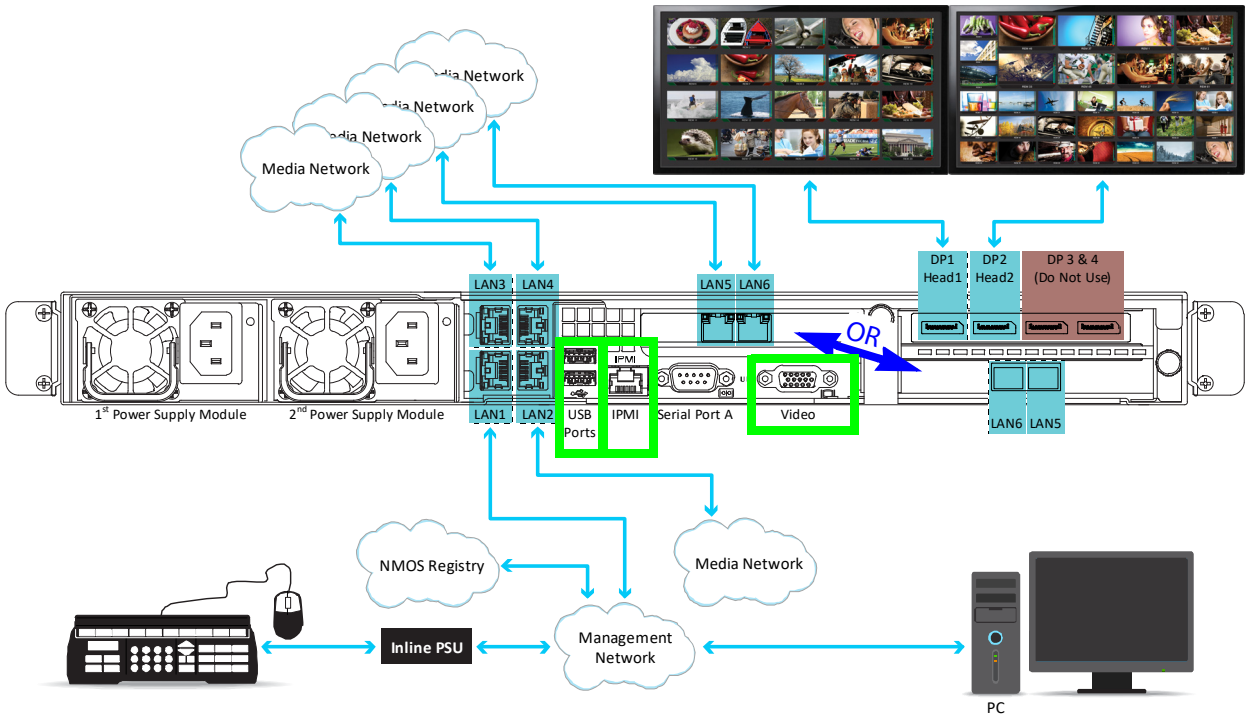
Cabling Diagram for Kaleido-IP X110 / X310 Models

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.



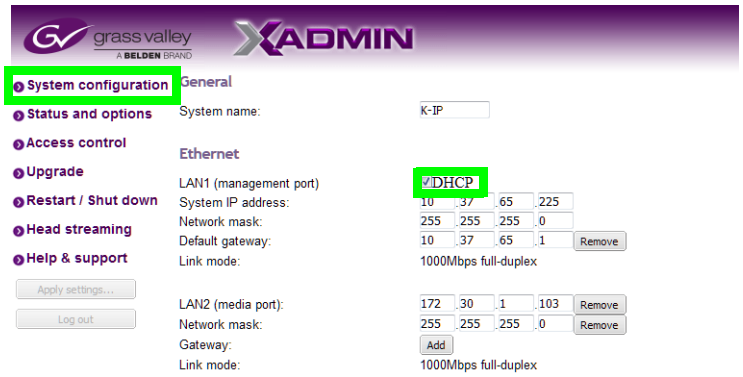
Cabling Diagram for Kaleido-IPX120 / X320 Models

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.



Does Your Network Support DHCP?

Kaleido Software version 11.0 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 26 (for Kaleido-IP) or If the DHCP Service is Unavailable on your Network, on page 36 (for Kaleido-IP VM).

Pre-migration Preparation Tasks

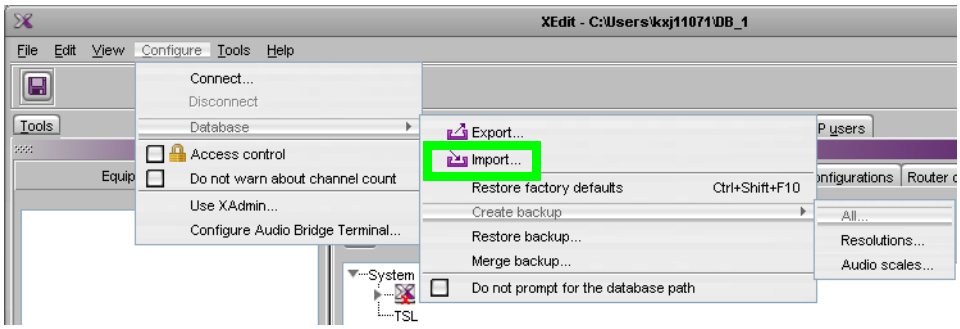
These tasks can be performed while the multiviewer is currently in use.

Back up the Current Database in XEdit

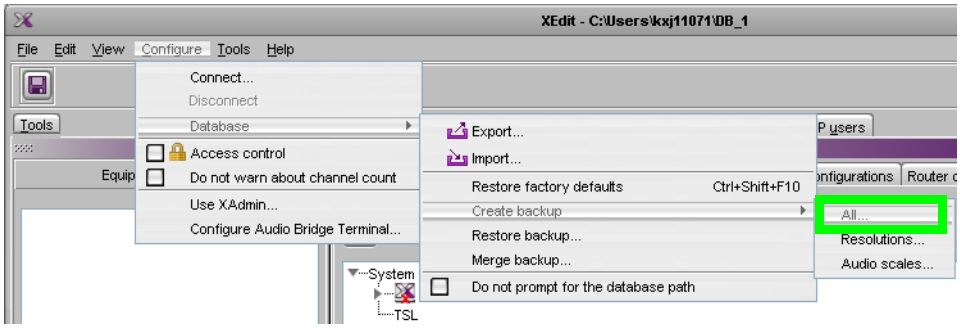
In the event that the migration to Kaleido Software version 11.0 does not successfully proceed for whatever reason, you must take the following actions to prepare for a reverse-migration; to go back to the currently installed version of Kaleido Software.

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 6.



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.

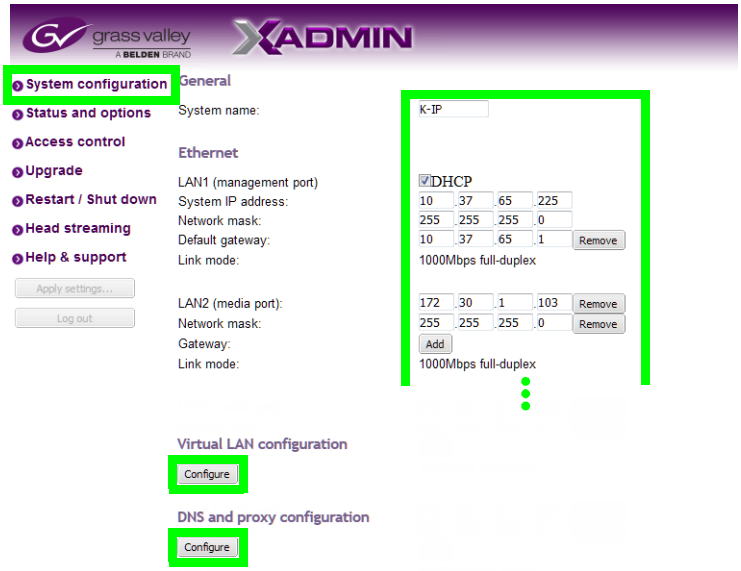
4 Close XEdit.

Record the Current XAdmin Configuration Parameters

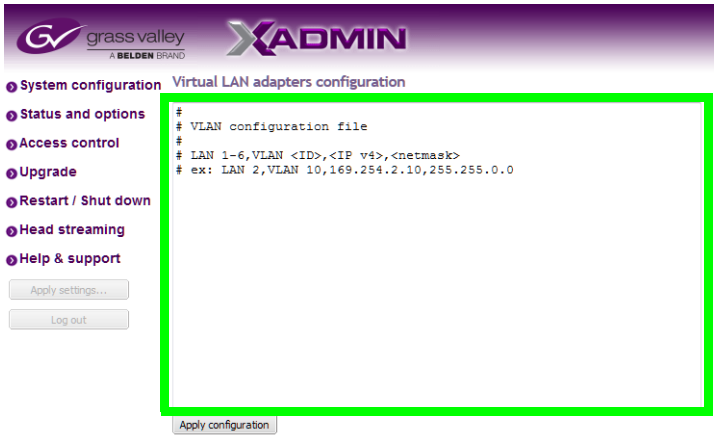
You will need to record the Kaleido-IP's configuration parameters as you will have to apply these values to the new Kaleido Software version 11.00 or higher installation.

1 Launch XAdmin. To access XAdmin, see To Access XAdmin, on page 6.

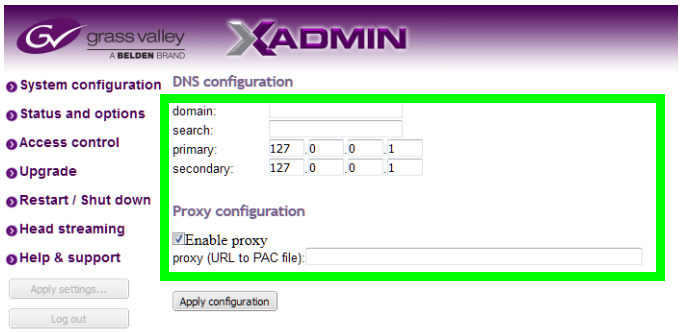
2 From **XAdmin - System configuration**, take note of all system configuration fields: **System name** and all **LAN** port parameters for ports **LAN1** to **LAN6**.



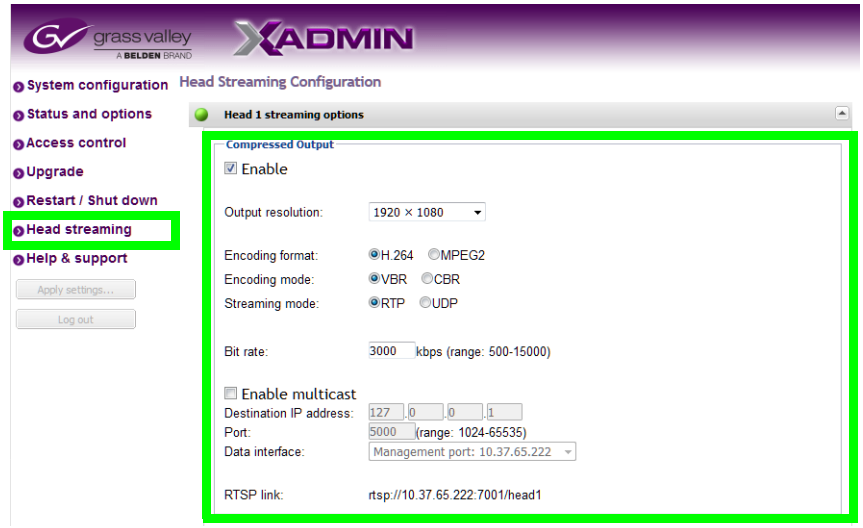
3 From **XAdmin - System configuration**, take note of the **Virtual LAN configuration** parameters.



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.

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

This procedure applies to:

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 31.

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

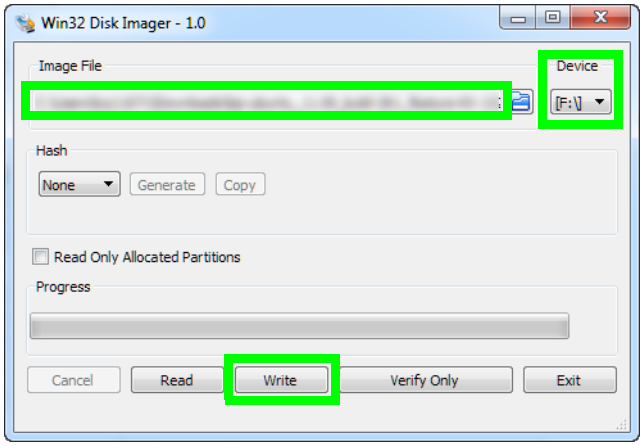
A 4GB (or larger capacity) USB drive is required. This procedure makes the USB drive bootable with an upgrade package installer to migrate the multiviewer to the latest version of Kaleido-IP-on-Ubuntu OS. This procedure requires that you have already downloaded the following image file:

- **kip-ubuntu_11.00_build-XXX.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. Download and run the latest version of Win32DiskImager software.
3. 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**.
4. Paste the path into the **Image File** dialog. Remove the quotation marks (“”) from the filename.

5 Select the USB drive's letter under **Device**.



6 Click **Write** and wait for the USB drive to be created. This will format and install the live boot image on the USB drive.

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

Prepare a USB drive for Reverse-Migration

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 11.00 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 5.

Proceed as follows.

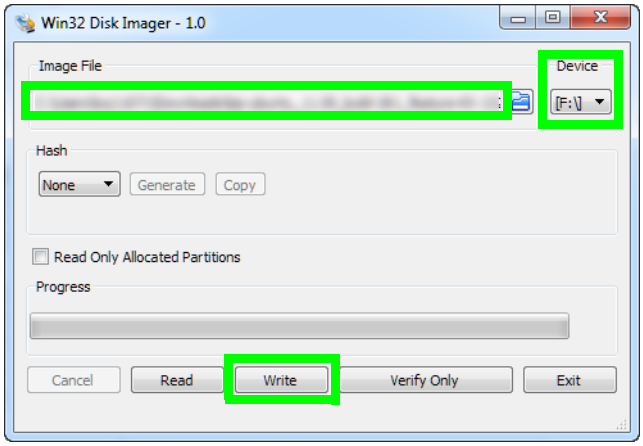
1 Plug the USB drive to into your PC.

2 Download and run the latest version of Win32DiskImager software.

3 In Microsoft Windows Explorer, navigate to the folder on your PC where the reverse migration **install-amd64-minimal-XXXXXXXXXXXXXXX.iso** file is found. Hold down <Shift> and right-click the file and select **Copy as path**.

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

5 Select the USB drive's letter under **Device**.



6 Click **Write** and wait for the USB drive to be created. This will format and install the live boot image on the USB drive.

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

8 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**

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

10 Set the USB drive aside. Use this USB drive if required by the Reverse-migration, on page 27 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 39).

Start Migration to Kaleido Software Version 11.0 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.

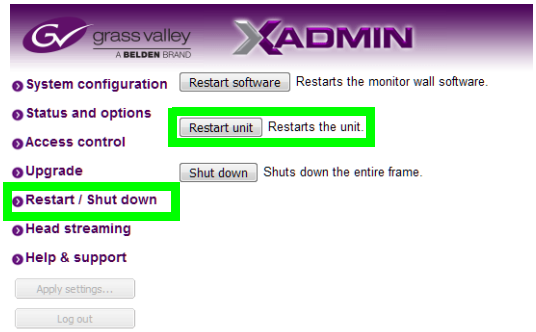
- Remotely accessing / Rebooting the Kaleido-IP Multiviewer, on page 11.
- Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 14. As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer.

Proceed as follows.

1 Plug the USB drive you imaged with the Kaleido Software version 11.0 (as prepared in Prepare a USB drive for Migration, on page 21) 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 6) 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).

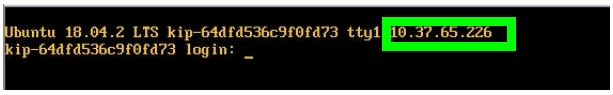
5 Select **English** if prompted to select a language.

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.

8 Once the Kaleido-IP has rebooted, a console with an underscore appears.

9 Click the console (if using remote management to bring focus to the window) and press <Ctrl> + <Alt> + <F1> to enter the console.



10 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 26.

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

12 Restore the multiviewer's configuration. See Restoring the Multiviewer's Configuration, on page 39.

Set the Kaleido-IP X120 / X320 Multiviewer's BIOS to use the DUAL boot mode

This procedure applies to:

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

The Kaleido-IP multiviewer's boot mode must be set to DUAL in the unit's BIOS settings.

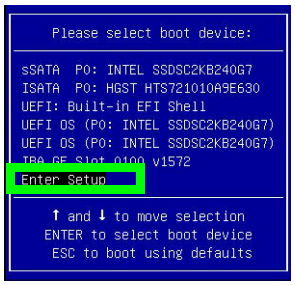
1 Access the Kaleido-IP multiviewer's console. See:

- Virtual Console / Remotely Rebooting Kaleido-IP X120 / X320 Model Multiviewers, on page 12.
- Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 14.

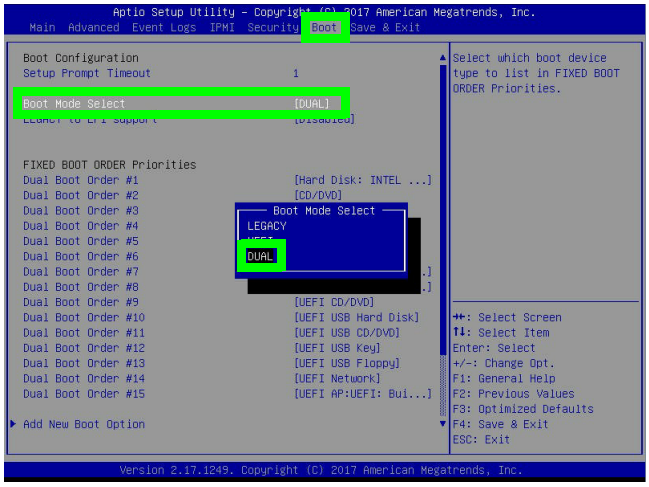
As the Kaleido-IP multiviewer is about to reboot, you must be physically present with access to the monitor, mouse, and keyboard that are directly connected to the multiviewer.

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** to **DUAL**.

6 Save and Exit the BIOS settings.

If the DHCP Service is Unavailable on your Network

This procedure applies to:

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 14.

2 In the *Kaleido-IP Installation & Service Manual,* see *Changing the Management Network IP Address from the Monitor Wall*. See Related Documentation, on page 5.

3 Open XAdmin with the IP address that you found. See To Access XAdmin, on page 6.

Reverse-migration

Reverse-migration is necessary in case the migration to Kaleido Software version 11.00 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 6) and the pre-migration preparation tasks (see Pre-migration Preparation Tasks, on page 21).

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 16.

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 39).

Reverse-migration Procedure

This procedure applies to:

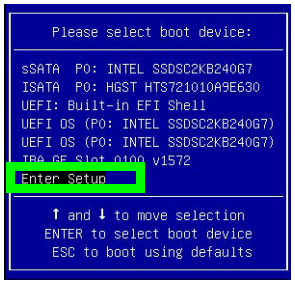
Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	

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

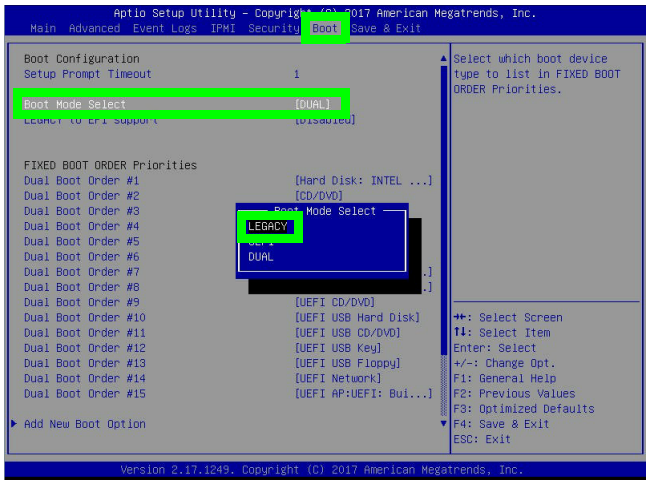
1 Reboot the multiviewer: see Remote or Local Kaleido-IP Multiviewer Access / Reboot, on page 11.

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

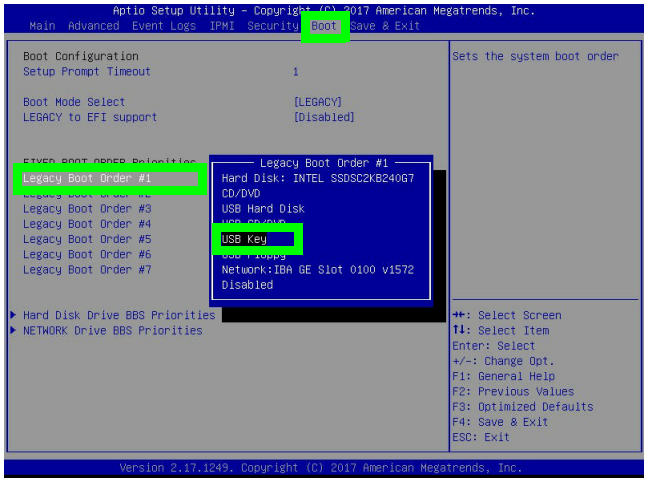
3 In the **Please select boot device:** table, use the up (↑) / down (↓) arrows as shown on the screen to select **Enter Setup**.



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**.



6 Change the **Legacy Boot Order #1** to **USB Key**.

7 Save and Exit the BIOS settings.

8 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 22) 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.

9 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 16.

10 Reboot the multiviewer: see Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 14.

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

```
gentoo-nofb
```

12 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.

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

14 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:

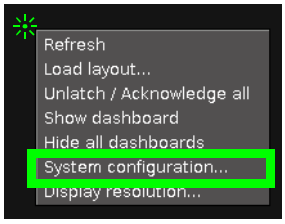
Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
●	●	

> 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...**

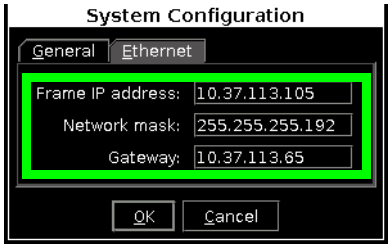
3 Right-click anywhere on the monitor wall, point to **Monitor Wall** (if you clicked a monitor), and then click **System configuration**.



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 39.

4 Migration procedure for Kaleido-IP VM

This procedure applies to:

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

> Note: For Kaleido-IP VM, follow the procedure Migration procedure for Kaleido-IP X110 / X310 / X120 / X320, on page 21.

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.

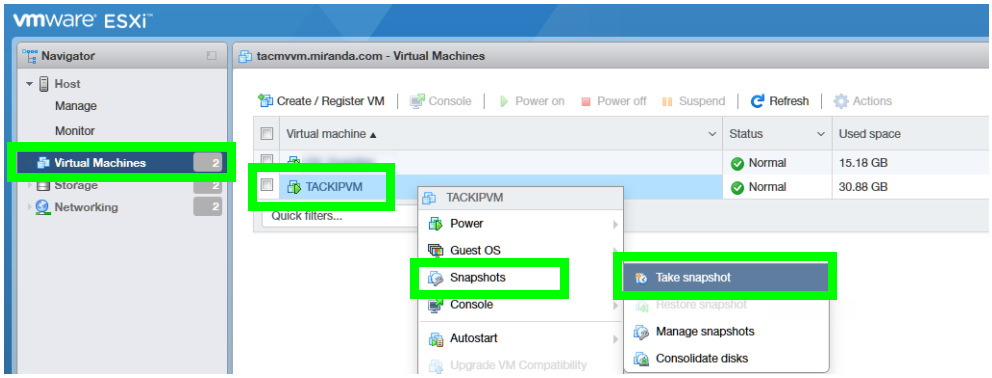
Prepare for the reverse-migration

This procedure applies to:

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

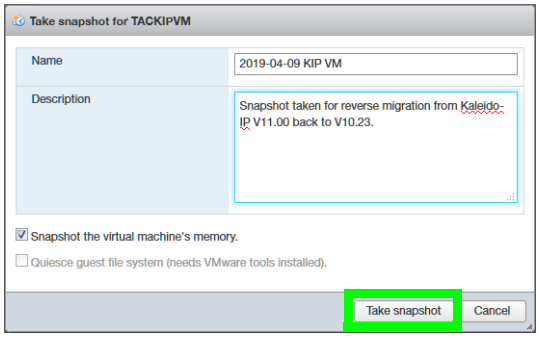
Take a snapshot of the VM. You'll need it in case you want to revert to the old version if something doesn't work as expected after the migration.

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 applies to:

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

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:

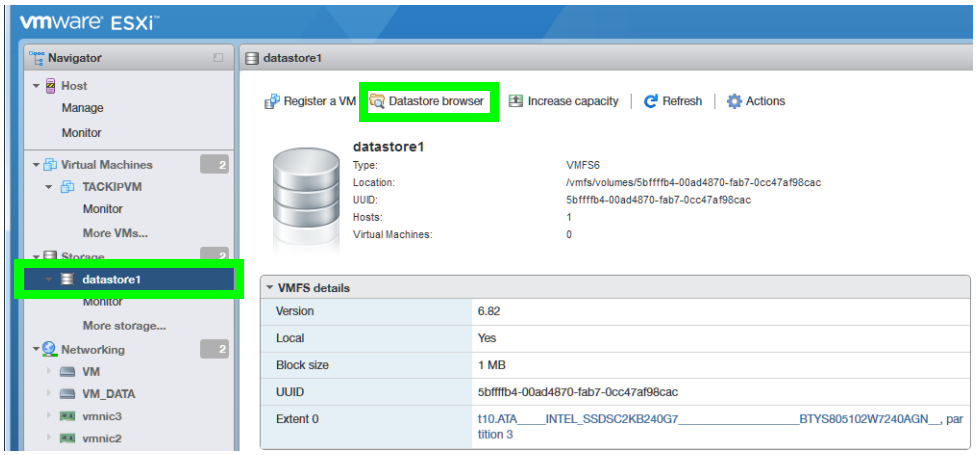
- **kip-ubuntu_11.00_build-XXX.iso**

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

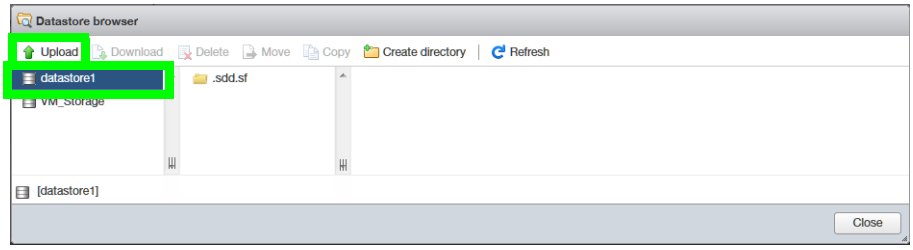
1 Import the ISO file in VMware's datastore:

a Select **Datastore1**.

b Click **Datastore browser**.



c Click **Upload**.

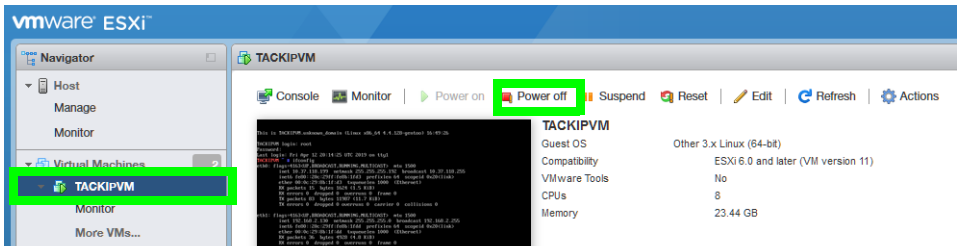


d Find and select the **kip-ubuntu_11.00_build-XXX.iso** file.

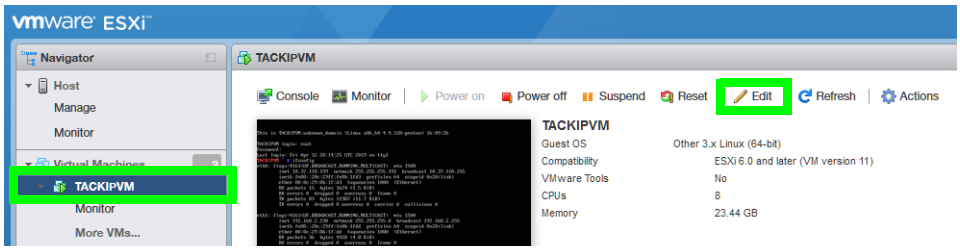
e Click **OK**. Click **Close**.

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

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

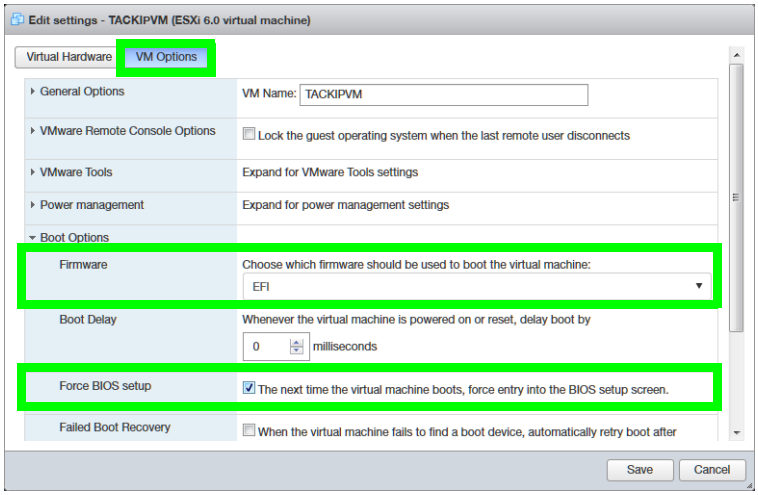


4 Click **Edit**.



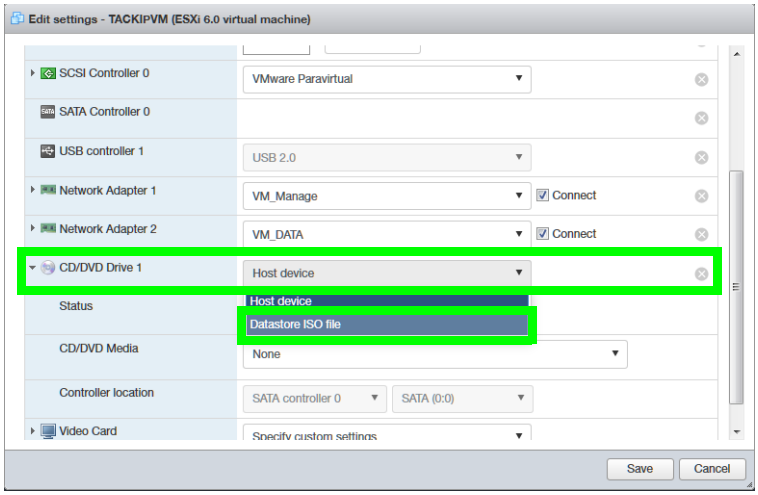
5 In the **VM Options** tab, expand **Boot options** > **Firmware** and select **EFI** in drop down menu.

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.**

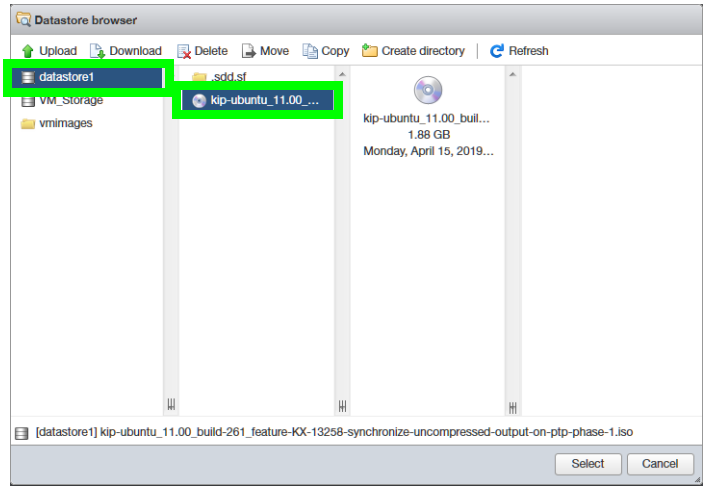


7 In **General Options**, set the **Guest OS Version** to **Ubuntu Linux (64-bit)**.

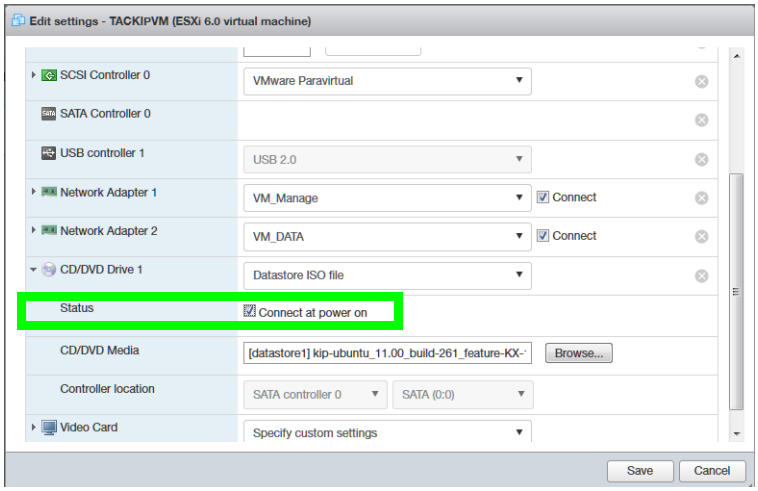
8 In the **Virtual Hardware** tab, expand **CD/DVD Drive 1** and select **Datastore ISO file** in drop down menu.



9 Select the ISO file you uploaded into the VMware's datastore.

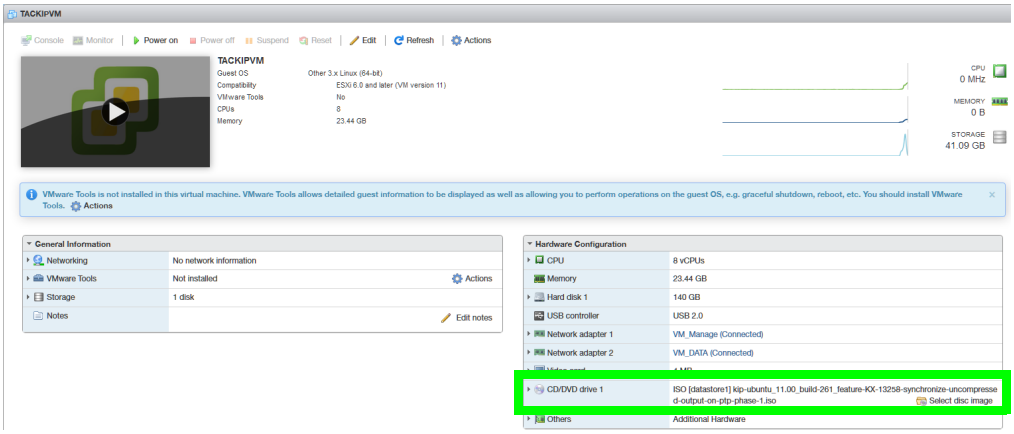


10 Make sure to set the **Status** check-box **Connect at power on** next to the CD/DVD Drive is enabled.



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.

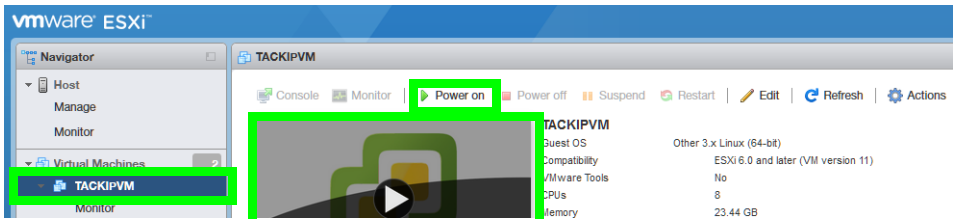
Multiviewer service will be restored only once the migration is complete and the multiviewer's configuration has been restored (see Restoring the Multiviewer's Configuration, on page 39).

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**.

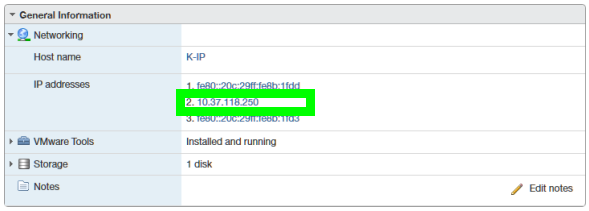
4 Select **EFI VMWare Virtual IDE (SATA) CDROM Drive**.

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 36.

9 Restore the multiviewer's configuration. See Restoring the Multiviewer's Configuration, on page 39.

If the DHCP Service is Unavailable on your Network

This procedure applies to:

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 14.

2 In the *Kaleido-IP Installation & Service Manual,* see *Verifying the Management Port IP Address and Application Version*. See Related Documentation, on page 5.

3 Open XAdmin with the IP address that you found. See To Access XAdmin, on page 6.

Reverse-migration procedure

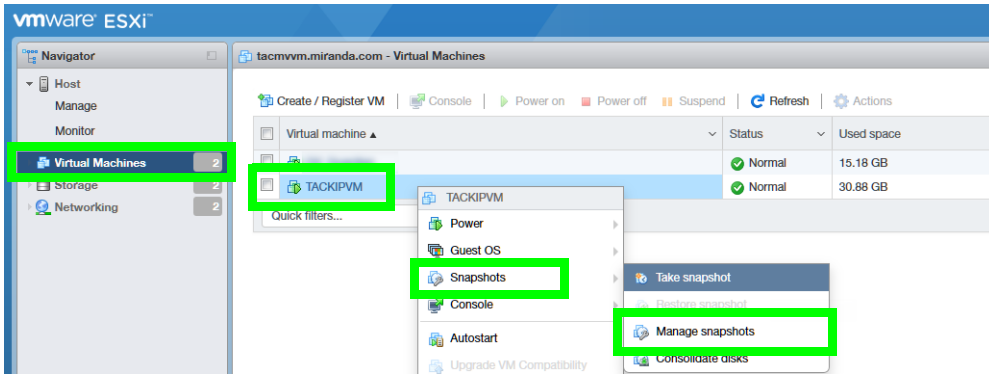
Reverse-migration is necessary in case the migration to Kaleido Software version 11.00 or higher does not work.

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 or higher.

1 Access the virtual machine. In your browser, enter the IP address

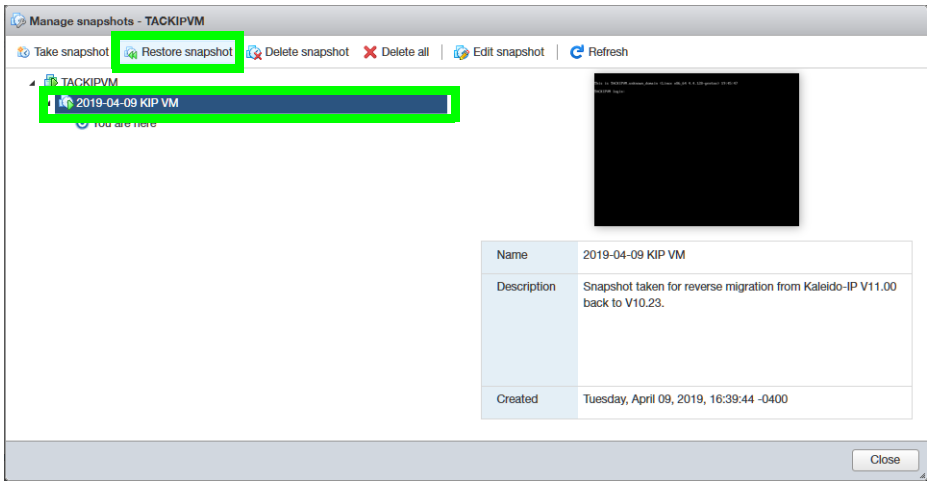
2 Click **Virtual Machines**.

3 Right-click the multiviewer's virtual machine in the list under **Virtual machine**.

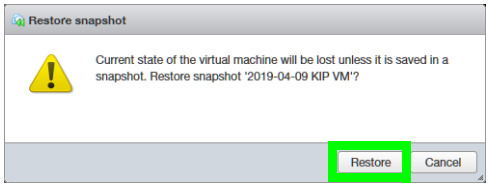


4 Point to **Snapshots** and select **Manage snapshot**.

5 Select the snapshot that you took prior to migration.



6 Click **Restore snapshot**.



7 Click **Restore**.

5 Post Migration Tasks

Restoring the Multiviewer's Configuration

This procedure applies to:

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 31.

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

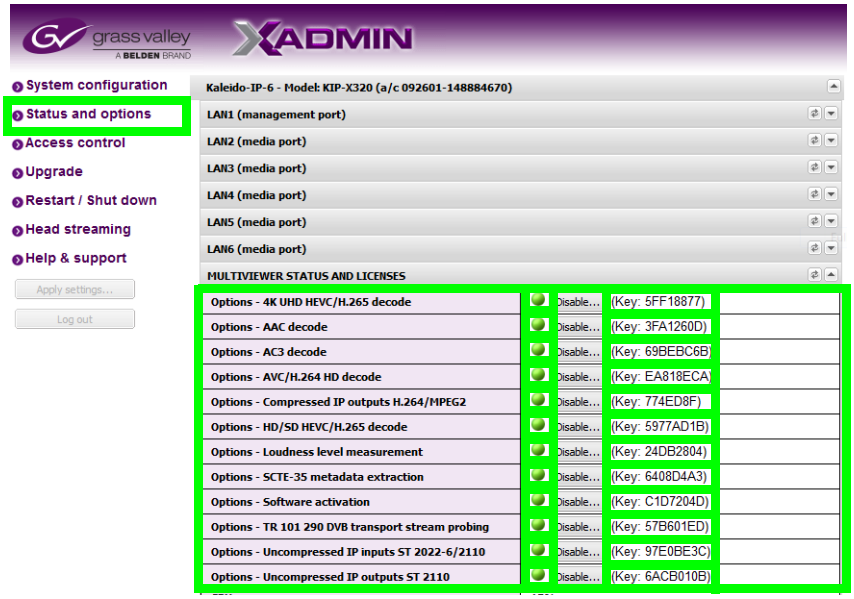
- once you have migrated from Kaleido Software V10.XX or lower to Kaleido Software 11.XX or higher.
- once you have reverse-migrated from Kaleido Software V11.XX or higher to Kaleido Software 10.XX or lower.

Until these 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.

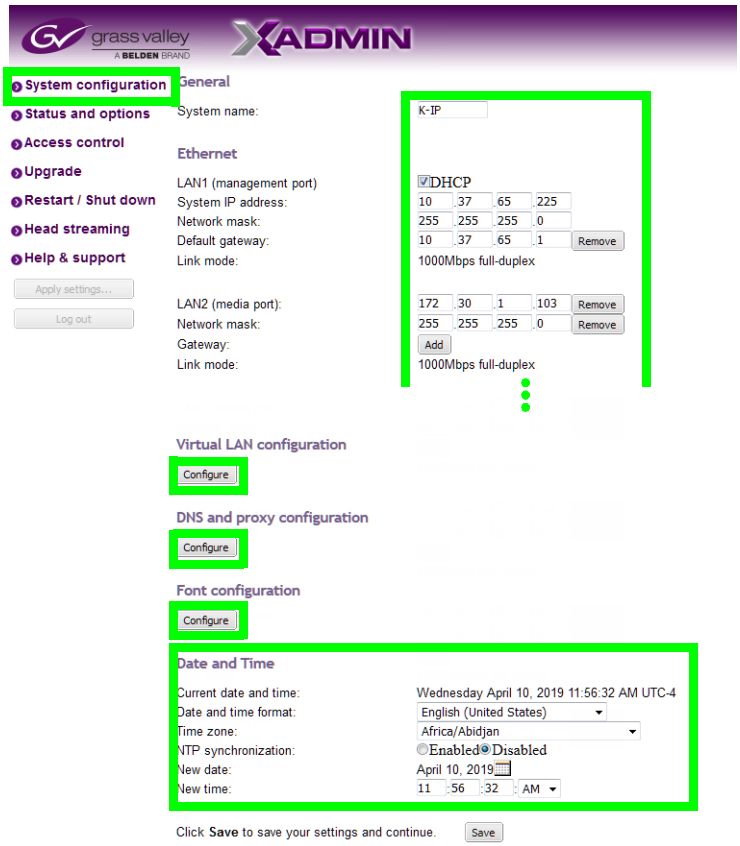
1 Set the Kaleido-IP's license keys in the XAdmin's **Status and option** page.



The status indicator for the license becomes green. The name of certain licenses have changed, see the following table:

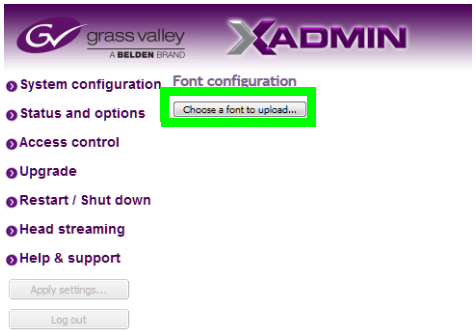
License Name	Description in Xadmin	X110	X310	X120	X320	VM
KIP-OPT-HD-HEVC	HD/SD HEVC/H.265 decode		●	●	●	●
KIP-OPT-UHD-HEVC	4K UHD HEVC/H.265 decode		●	●	●	●
KIP-OPT-UCIP	Uncompressed IP inputs SMPTE ST 2022-6 / 2110			●	●	
KIP-OPT-STREAMING-OUT	Compressed IP outputs	●	●	●	●	Free
KIP-OPT-UCIP-OUT	Uncompressed 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 18.



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 10.



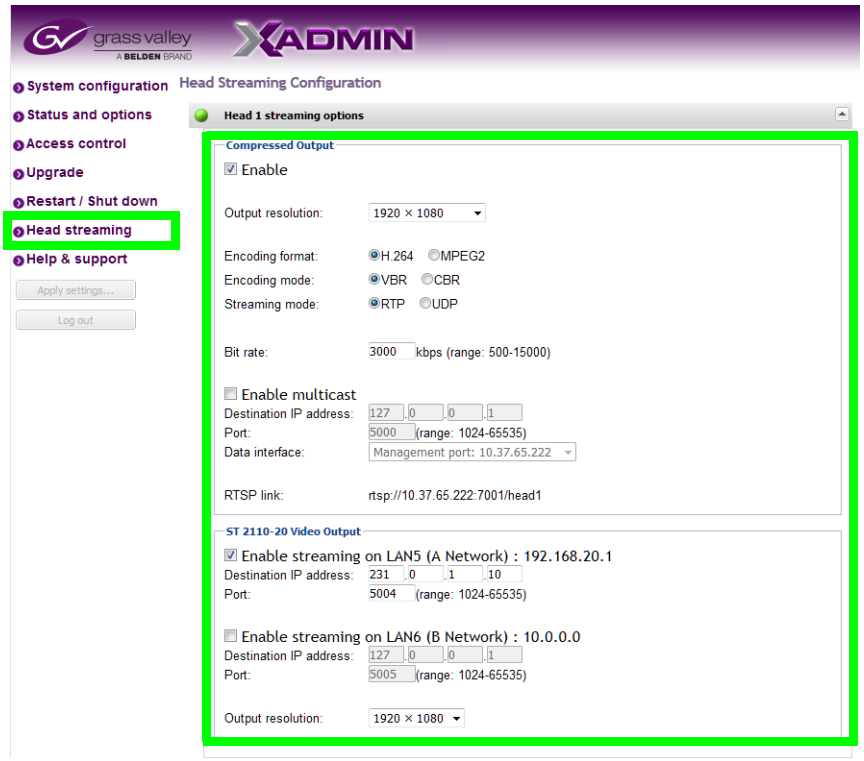
5 Set the multiviewer's date and time. In the *Kaleido-IP Installation & Service Manual,* see *Configuring a Multiviewer's IP, Date, and Time Settings with XAdmin*. See Related Documentation, on page 5.

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 5.

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 18.



10 Click **Apply settings**.

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

Restore the Database in XEdit

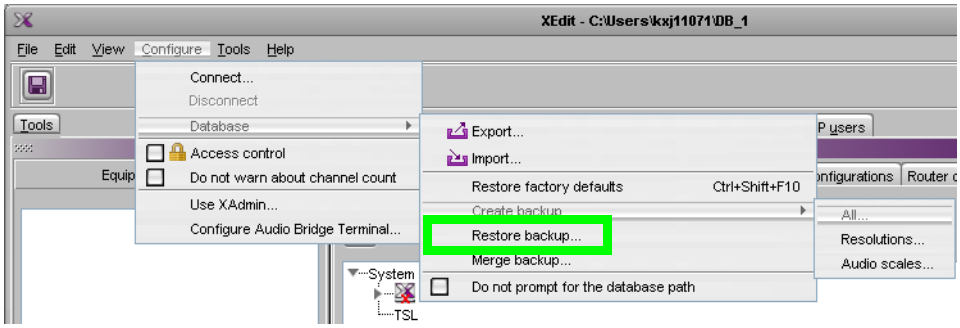
According to the Kaleido Software version installed on the Multiviewer, you will need to re-install XEdit on your PC from the Multiviewer. This is required when:

- you have migrated from Kaleido Software version 10.XX or lower to Kaleido Software version 11.XX or higher.
- you have reverse-migrated from Kaleido Software version 11.XX 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 5.

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 5.

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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