

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

Kaleido-IP & Kaleido-IP VM Multiviewers

Upgrade Guide

13-00926-010 AB

2020-07-06

www.grassvalley.com

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Introduction

Document Applicability

This document applies to the following multiviewer models. Only these models can be migrated to and can run Kaleido Software version 11.0.0 or higher:

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

This document has the following goals:

- To migrate a Kaleido-IP from an earlier version of Kaleido Software (version 10.X or lower) to version 11.0.0 or higher, a one time special migration procedure must be followed. See Migration to Kaleido Software Version 11.0.0 or Higher, on page 5.
- To install 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 the 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.

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 7 and Migration procedure for Kaleido-IP X110 / X310 / X120 / X320, on page 23.
- For the Kaleido-IP VM multiviewer, see Migration to Ubuntu First Steps, on page 7 and Migration procedure for Kaleido-IP VM, on page 33.

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-IP X110 / X310 / X120 / X320, on page 47.

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

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.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 11.0.0 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 15
- USB mouse
- USB keyboard

See Remote or Local Kaleido-IP Multiviewer Access / Reboot, on page 12 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 11.0.0 or higher). This is **.iso** file (installs Ubuntu OS plus Kaleido Software version 11.0.0) from a USB drive. Contact Technical Support to obtain the following file.
 - Kaleido-IP_11.00.263.iso
 - A more recent file may be available.
- Reverse-migration file: this is necessary in case the migration to Kaleido Software version 11.0.0 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.

 - **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 21
- You have received new license keys required for the migration. See Obtain New License Keys, on page 9.
- 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 11.

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 10) 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.
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.

Software Option / License	Description
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 7). Only license keys that are enabled (shown by a green icon) need to be recorded.

grass valley A BELDEN BRAND							
System configuration	Kaleido-IP-6 - Model: KIP-X12 (a/c 092601-187671087)						
Status and options	LAN1 (management port)						\$.
Access control	LAN2 (media port)						*
O Upgrade	LAN3 (media port)						*
Restart / Shut down	LAN4 (media port)						*
Head streaming	LAN5 (media port)						\$.
Help & support	LAN6 (media port)						\$.
	MULTIVIEWER STATUS AND LICENSES						¢.
Apply settings	Software activation	•	Enable				
Log out	KIP-OPT-UHD-HEVC: 4K UHD HEVC/H.265 decode	9	Disable	(Key:)		
	KIP-OPT-HD-HEVC: HD/SD HEVC/H.265 decode	۲	Disable	(Key:)		
	KIP-OPT-UCIP: Uncompressed IP inputs ST 2022-6/2110	•	Enable			•	
	KIP-OPT-UCIP-OUT: Uncompressed IP outputs ST 2110	•	Enable				
	KIP-OPT-STREAMING-OUT: Compressed outputs H.264/MPEG2	•	Enable				
	KIP-OPT-DEC-DD-x.x: AC3 decode	•	Enable				
	KIP-OPT-DEC-AAC-x.x: AAC decode	•	Enable				
	KIP-OPT-LOUDNESS: Loudness level measurement	•	Enable				
	KIP-OPT-SCTE-35: SCTE-35 metadata extraction	•	Enable				
	KIP-OPT-TS-PROBE: TR 101 290 DVB transport stream probing	•	Enable				
	KIP-OPT-DEC-AVC: AVC/H.264 decode	•	Enable				
	Rivermax license file		Browse. Upload lice	No file : nse for Mellar	selected. nox S/N:		

- 3 Record the Kaleido-IP multiviewer's **a/c** number. This number is used to create a Kaleido Software version 11.0.0 activation license.
- 4 Send the license keys and **a/c** number to Grass Valley Technical Support where they are converted to Kaleido Software version 11.0.0 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 11.0.0 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.

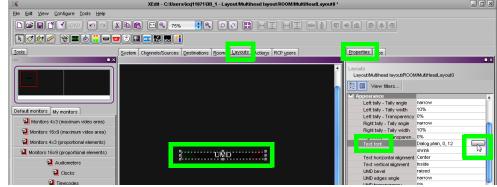
If extra fonts were added to the multiviewer, after migration, you must install these fonts again. To do so, first you must identify the extra fonts that have been added to your installation that are not part of the standard Kaleido-IP multiviewer installation.

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 7.
- 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.

Eont:	Font Style:	Size:
Dialog	Plain	12
Dialog	A Plain	12
DialogInput	Bold	14
Lucida Bright	Italic	16 👖
Lucida Sans	Bold Italic	18
Lucida Sans Typewriter		20
Monospaced	U.	22
SansSerif		24
Sazanami Gothic	T.	26
apcabut 23		

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 12.
- 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 15.

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 14
- 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 15.

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 15.

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.

					Host Identifi	cation	
SUPERMICR					Server User:	: 010.037.118.019 ADMIN (Ad	ministrator)
					User.	ADMIN (Ad	(Innistrator
System	Server Health	Configuration	Remote Control	Virtual Media	Maintenance	Miscellaneous	Help
Remote Con	trol 🗢 Co	onsole Redirection	ו				
Console Red	lirection						
ikvm/html5	5	Press the button to launch t	he redirection console and m	anage the server remotely.			
Power Contr	rol						
Launch SOL	La	unch Console					
The virtua	l Console o	oens.					
💰 Java iKVM Viewe	er v1.69.37 [10.37.118.19]	- Resolution 800 X 600 - F	PS 30			×	
Virtual Media R	Record Macro Ontio	ns liserlist Cantu	e Power Control Exi	t			

🍰 Java iKVM Vie	ewer v1.69.	37 [10.37.1	18.19] - Re	solution 800	X 600 - FPS	30		
Virtual Media	Record	Масго	Options	User List	Capture	Power Control	Exit	
						Set Power On		
						Set Power Off		
					_	Software Shutdo	own	
						Set Power Rese	t	

- 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 (\uparrow) / down (\downarrow) 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 15.

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.

(intel) Int	egrated BMC Web Console
System Information	Server Health Configuration Remote Control
	Remote Control This section allows you to remotely monitor and control the server .
	Power Control and Status
Console Redirection	The current server power status is shown below. To perform a power control operation, select one of the options below and press Perform Action.
Server Power Control Virtual Front Panel	Host is currently OFF
	Reset Server
	Force-enter BIOS Setup
	Power OFF Server
	Graceful Shutdown
	Power ON Server
	Power Cycle Server
	Perform Action

- 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 (\uparrow) / down (\downarrow) arrows as shown on the screen to make the USB drive the boot device.

P1	ease select boot device:	
SSATA	PO: INTEL SSDSC2KB240G7	
ISATA	P0: HGST HTS721010A9E630	
UEFI:	Built-in EFI Shell	
UEFI 0	S (PO: INTEL SSDSC2KB2400	37)
UEFI 0	S (PO: INTEL SSDSC2KB2400	37)
IBA GE	Slot 0100 v1572	
Enter	Setup	
ENT	and ↓ to move selection ER to select boot device C to boot using defaults	

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 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:

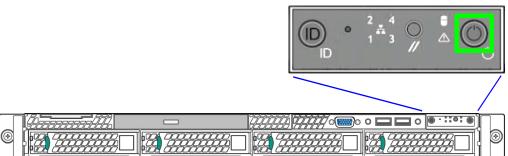
Kaleido-IP X120 / X320	Kaleido-IP X110 / X310	Kaleido-IP VM
•	•	

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

Identifying the Multiviewer's Power Button

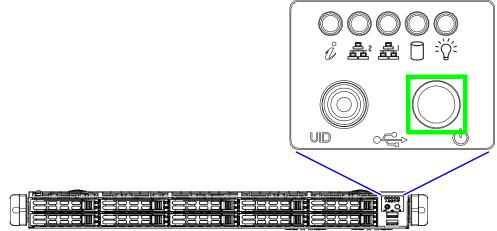
When the front cover is removed, the following controls and indicators are available.

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.

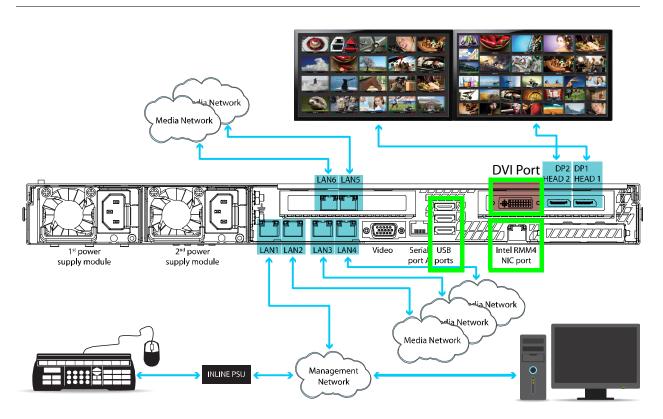
- 1 Quick press the power button.
- 2 Wait for the multiviewer server to shutdown. The multiviewer is shutdown when all front panel lights are extinguished.
- 3 Wait 10 seconds.
- 4 Quick press the power button.
- 5 Wait 5 minutes for the multiviewer server to boot up.

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

Cabling Diagram for Kaleido-IP X110 / X310 Models

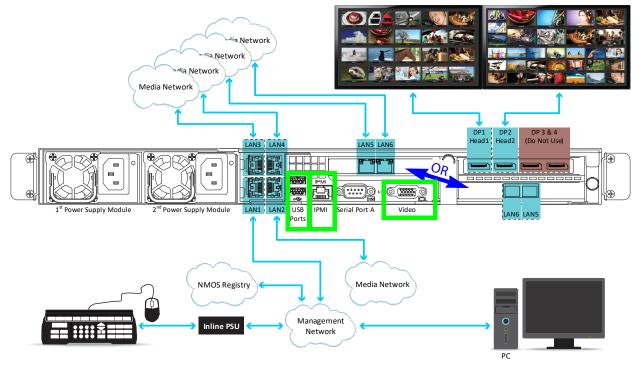
- 1 Connect a monitor to the multiviewer's DVI port. Adapters may be necessary.
- 2 Connect a mouse and keyboard to the Kaleido-IP multiviewer's USB ports.

Migration / Installation of Kaleido-IP Software with Version 11 or Higher Upgrade Guide



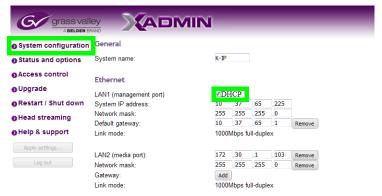
Cabling Diagram for Kaleido-IPX120 / X320 Models

- 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 11.0.0 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 28 (for Kaleido-IP) or If the DHCP Service is Unavailable on your Network, on page 38 (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 11.0.0 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 7.

36		XEdit - C:\Users\kxj11071\DB_1	
<u>File E</u> dit <u>V</u> iew	Configure Tools Help		
	Connect Disconnect		
Tools	Database •	🗳 Export	P <u>u</u> sers
2001	Access control	🚵 Import	
Equip	Do not warn about channel count	Restore factory defaults Ctrl+Shift+F10	onfigurations Router
	Use XAdmin	Create backup	All
	Configure Audio Bridge Terminal	Restore backup	Resolutions
	▼System	Merge backup	Audio scales
		Do not prompt for the database path	
	LTSL		_

2 Create a local backup of this database: on the **Configure** menu, point to **Database**, then to **Create backup** and click **All**.

26				XEdit - C:\Users\kx	ij11071\DB_1	
<u>Eile E</u> dit	⊻iew	Configure Tools Help				
		Connect Disconnect				
Tools		Database	+	🗳 Export		P <u>u</u> sers
9995		Access control		Import		
	Equip	Do not warn about channel count	_	Restore factory defaults	Ctrl+Shift+F10	onfigurations Router
_		Use XAdmin	_	Create backup	•	All
		Configure Audio Bridge Terminal		Restore backup		Resolutions
				Merge backup		Audio scales
		▼Syste	x 🗆	Do not prompt for the database	path	
			SL			-

- 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 7.
- 2 From XAdmin System configuration, take note of all system configuration fields: System name and all LAN port parameters for ports LAN1 to LAN6.

grass val		N				
System configuration	General					
Status and options	System name:	K-IP				
Access control	Ethernet					
Upgrade	LAN1 (management port)	☑DI	ICP			
Restart / Shut down	System IP address:	10	.37	.65	.225	
Head streaming	Network mask:	255	255	255	.0	
o neau streaming	Default gateway:	10	.37	.65	.1	Remove
• Help & support	Link mode:		Mbps fu			
	LAN2 (media port):	172	.30	.1	.103	Remove
Log out	Network mask:	255	.255	255	.0	Remove
	Gateway:	Add	J			
	Link mode:	1000	Mbps fu	ill-duple	•	
	Virtual LAN configuration					
	Configure					
	DNS and proxy configuration					
	Configure					

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

grass val						
System configuration	Virtual LAN adapters configuration					
Status and options	# # VLAN configuration file					
Access control	+					
Upgrade	<pre># LAN 1-6,VLAN <id>,<ip v4="">,<netmask> # ex: LAN 2,VLAN 10,169.254.2.10,255.255.0.0</netmask></ip></id></pre>					
Restart / Shut down						
Head streaming						
Help & support						
Apply settings						
Log out						
	Apply configuration					

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

grass val		X A	D	M	IN
System configuration	DNS configu	ration			
Status and options	domain:				
Access control	search: primary:	127	.0	.0	.1
● Upgrade	secondary:	127	.0	.0	.1
Restart / Shut down	Proxy config	guratio	n		
Head streaming	Enable pro	xv			
Help & support	proxy (URL to):		
Apply settings	Apply configura	tion			
Log out	Apply comigura	luon			

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

Grass valley A Belden BRAND	ADN	IIN
• System configuration Head	d Streaming Configurat	ion
Status and options	Head 1 streaming option	•
Access control	Compressed Output	
⊙ Upgrade	🗷 Enable	
Restart / Shut down	Output resolution:	1920 × 1080 -
Head streaming	o alpar recondition.	
Help & support	Encoding format:	
Apply settings	Encoding mode:	●VBR ◎CBR
Log out	Streaming mode:	®RTP ©UDP
	Bit rate:	3000 kbps (range: 500-15000)
	Enable multicast Destination IP address: Port: Data interface:	127 0 0 1 5000 (range: 1024-65535)
	RTSP link:	rtsp://10.37.65.222:7001/head1

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**.

👒 Win32 Disk Imager - 1.0	
/ Image File	Device
Hash None Generate Copy	
Read Only Allocated Partitions Progress	
Cancel Read Write Verify Only	Exit

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 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 33.

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.nn_build-XXX.iso

Where *nn* is the major and minor software version.

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 21.
- 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

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:

- 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 21.
- 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 28 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 41).

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 12.
- Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 15. 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 11.0.0 (as prepared in Prepare a USB drive for Migration, on page 23) 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 7) 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 (\uparrow) / down (\downarrow) 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 7 8

	GNU GRUB version 2.02	
⊭Install Grass Valley Kaleido-IP check uisc for derects Rescue a broken system		
Use the ↑ and ↓ keys to select whic Press enter to boot the selected OS return previous menu.	ch entry is highlighted. S, `e' to edlt the commands before booting or `c' for a command-line. ESC to	
Press < Enter> to select the o	default option Install Grass Valley Kaleido-IP.	
Wait until the installation ha	s completed. This may take several minutes.	
Once the Kaleido-IP has rebo	ooted, 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.

Ubuntu 18.04.2 LTS kip-64dfd536c9f0fd73 tty1 10.37.65.226 kip-64dfd536c9f0fd73 login: _

- 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 28.
- 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 41.

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

This procedure applies to:

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.

Migrating to Kaleido Software Version	Required Boot Mode Setting
11.0.0	DUAL
11.0.1	UEFI

Migrating to Kaleido Software Version	Required Boot Mode Setting
11.1.0	UEFI
11.2.0 or higher	None: The Boot Mode BIOS setting has been removed (this software version flashes the BIOS with the setting fixed to UEFI).

1 Access the Kaleido-IP multiviewer's console. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 15.

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 16.

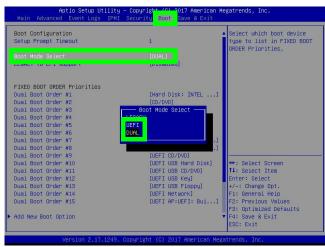
2 At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F11> repeatedly.



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	This setting is unavailable.

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 15.
- 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 7.

Reverse-migration

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 7) and the pre-migration preparation tasks (see Pre-migration Preparation Tasks, on page 23).

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 41).

Reverse-migration Procedure

This procedure applies to:

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

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

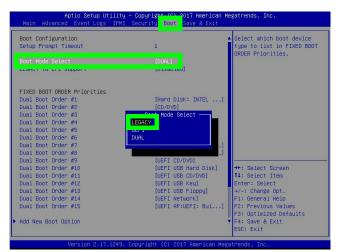
- 1 Reboot the multiviewer: see Remote or Local Kaleido-IP Multiviewer Access / Reboot, on page 12.
- 2 At the bootup splash screen, enter Kaleido-IP multiviewer's boot menu by pressing <F11> repeatedly.



3 In the **Please select boot device:** table, use the up (\uparrow) / down (\downarrow) 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.

Boot Configuration Setup Prompt Timeout	1	Sets the system boot order
Boot Mode Select LEGACY to EFI support	[LEGACY] [Disabled]	
ETVEN SHOT ABDER Princities Legacy Boot Onder #1 Legacy Boot Onder #3 Legacy Boot Onder #4 Legacy Boot Onder #4 Legacy Boot Onder #5 Legacy Boot Onder #7	Legacy Boot Order #1 Hard Disk: INTEL SIDSC2KB24067 CD/DVD USB Hard Disk USB Key USB Key Nature: IEA GE Slot 0100 v1572 Disabled	
Hard Disk Drive BBS Priorit NETWORK Drive BBS Prioritic		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESD: Exit

- 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 23) 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 15.
- 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.

System Configuration					
<u>G</u> eneral <u>E</u> therne	General Ethernet				
Frame IP address:	10.37.113.105				
Network mask:	255.255.255.192				
Gateway:	10.37.113.65				
<u></u> K	<u>C</u> ancel				

- 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 41.

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 X110, X120, X310, and X320, follow the procedure Migration procedure for Kaleido-IP X110 / X310 / X120 / X320, on page 23.

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
		•

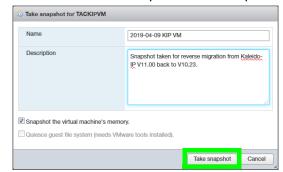
Take a snapshot of the VM. You'll need it in case you want to revert to the old version if something doesn't work as expected after the migration.

- 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.

Navigator		🔁 tacmvvm.miranda.com - Virtual Machines			
Host Manage		1 Create / Register VM 🛛 📑 Console 📄 Power on 🗧 Pow	wer off	C Refresh	🔅 Actions
Monitor		Virtual machine 🔺	~	Status ~	Used space
🖆 Virtual Machines	2			Normal	15.18 GB
E Storage Q Networking	2	Cuick tilters	•	Normal	30.88 GB
		Guest OS Snapshots Console	to Take snapsho		
		 Autostart Upgrade VM Compatibility 	Manage snap:	shots	

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.nn_build-XXX.iso

Where *nn* is the major and minor software version.

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.

Navigator		datastore1	
✓ I Host Manage Monitor		라 Register a VM C Datastore brow	
🕶 🖆 Virtual Machines	2	Type:	VMFS6
TACKIPVM		Location:	/vmfs/volumes/5bffffb4-00ad4870-fab7-0cc47af98cac
Monitor		UUID: Hosts:	5bffffb4-00ad4870-fab7-0cc47af98cac
More VMs		Virtual Machines:	0
▼ El Storage	2		
- 🔳 datastore1		▼ VMFS details	
Monitor		Version	6.82
More storage • 🔮 Networking	2	Local	Yes
VM	- 4	Block size	1 MB
VM_DATA		UUID	5bffffb4-00ad4870-fab7-0cc47af98cac
 vmnic3 vmnic2 		Extent 0	t10.ATAINTEL_SSDSC2KB240G7BTYS805102W7240AGN_, pa tition 3



d Find and select the **kip-ubuntu_11**.*nn*_**build-XXX**.iso file.

Where *nn* is the major and minor software version.

e Click OK. Click Close.

4

- 🗗 TACKIPVM

More VMs..

- 2 Under Virtual Machines, select the Kaleido-IP VM.
- 3 Shut down the VM: click Power off.

vmware [®] ESXi [®]			
Navigator			
Host Manage Monitor More VMs Ick Edit.	Console Monitor Poweron Console	Power off TACKIPVM Guest OS Compatibility VMware Tools CPUs Memory	Reset / Edit C Refresh Actions Other 3.x Linux (64-bit) ESXi 6.0 and later (Vill version 11) No 8 23.44 GB
vmware esxi			
Navigator			
▼ ☐ Host Manage Monitor	Console Monitor Power on No to Excite Advance (Law 40.44 4 Lill general 3 of 0.3 Participation and the second of the second advance (Law 40.44 4 Lill general 3 of 0.3) Participation and the second of the se	Power off Suspend	Reset Edit C Refresh Action: Other 3.x Linux (64-bit) ESXI 8.0 and later (VM version 11)

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

VMware Tools

CPUs

Memory

No

23.44 GB

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.

/irtual Hardware VM Options	
General Options	VM Name: TACKIPVM
VMware Remote Console Options	$\hfill\square$ Lock the guest operating system when the last remote user disconnects
VMware Tools	Expand for VMware Tools settings
Power management	Expand for power management settings
- Boot Options	
Firmware	Choose which firmware should be used to boot the virtual machine:
Boot Delay	Whenever the virtual machine is powered on or reset, delay boot by 0 a milliseconds a
Force BIOS setup	The next time the virtual machine boots, force entry into the BIOS setup screen.
Failed Boot Recovery	When the virtual machine fails to find a boot device, automatically retry boot after

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.

SCSI Controller 0	VMware Paravirtual	¥	8
SATA Controller 0			\otimes
USB controller 1	USB 2.0	¥	8
Network Adapter 1	VM_Manage	▼ I Connect	8
Network Adapter 2	VM_DATA	▼ Connect	8
▼ ⁽ⁱ⁾ CD/DVD Drive 1 ⁽ⁱ⁾	Host device	•	\otimes
Status	Host device		
	Datastore ISO file		
CD/DVD Media	None	•	
Controller location	SATA controller 0 SATA (0:0)	v	
Video Card	Specify custom settings		

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

C Datastore browser	
🛉 Upload 📑 Download	🖳 Delete 🕒 Move 👔 Copy 🎦 Create directory 🧲 Refresh
datastore1	🚈 .sdd.sf 🤺
 VM_Storage vmimages 	kip-ubuntu_11.00 kip-ubuntu_11.00_buil 18 GB Monday, April 15, 2019
	H H 11.00_build-261_feature-KX-13258-synchronize-uncompressed-output-on-ptp-phase-1.iso
	Select Cancel

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

🔁 Edit settings - TACKIPVM (ESXi 6.0 vir	tual machine)		
			-
SCSI Controller 0	VMware Paravirtual	•	\otimes
SATA Controller 0			\otimes
USB controller 1	USB 2.0	•	8
Network Adapter 1	VM_Manage	▼	۲
Network Adapter 2	VM_DATA	▼ Connect	•
▼ (i) CD/DVD Drive 1	Datastore ISO file	•	© _
Status	Connect at power on		
CD/DVD Media	[datastore1] kip-ubuntu_11.00_build-2	261_feature-KX Browse	
Controller location	SATA controller 0 SATA (0	:0) 🔻	
Video Card	Specify custom settings	•	-
		Save	Cancel

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

ACKIPVM				
🖗 Console 🛛 Monitor 📔 🕨 I	Power on Power off 🔢 Suspend	🗐 Reset 📔 🥒 Edit 📔 🙋 Refresh 📔 🌼 Actions		
2	Guest 05 Compatibility Whate Thota CRUs Memory	Other 3 x Linux (64-84) ESD(8 2 and latter (VM version 11) No 8 23.44 08		сли 0 ММгг 0 В 8 8100лов 41.09 GB
Tools. 🏠 Actions	ed in this virtual machine. VMware Tools	s allows detailed guest information to be displayed as we		tions on the guest OS, e.g. graceful shutdown, reboot, etc. You should install Wilware
 General Information 			* Hardware Configuration	
Networking	No network information		D CPU	8 vCPUs
WWware Tools	Not installed	🔅 Actions	Memory	23.44 GB
Storage	1 disk		Hard disk 1	140 GB
Notes		/ Edit notes	USB controller	USB 2.0
			Network adapter 1	VM_Manage (Connected)
			INN Network adapter 2	VM_DATA (Connected)
			a III address over	(110
			> is CD/DVD drive 1	ISO [datastore1] kip-ubuntu_11.00_build-261_feature-KX-13258-synchronize-uncompress d-output-on-ptp-phase-1.iso 👸 Select disc image
			Others	Additional Hardware

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 41).

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.

vmware" ESXi"				
Navigator				
▼ 🖥 Host		📝 Console 🛛 🔣 Mor	itor Dowor on Bower off III St	uspend 🔄 Restart 🥒 Edit 🕻 Refresh 🏠 Action
Manage		Console Mo	Power on Power on St	uspenu 😋 nestan 🧳 Euit 🧲 neiresn 💱 Action
Monitor			TACKIPVM	
			Guest OS	Other 3.x Linux (64-bit)
▼ I Virtual Machines	2		Compatibility	ESXi 6.0 and later (VM version 11)
- 👼 TACKIPVM			/Mware Tools	No
			CPUs	8
Monitor			lemory	23.44 GB

- 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.

	GNU GRUB version 2.02
∗Install Grass Valley Kaleido-IP	
Rescue a broken system	
Use the ↑ and ↓ keys to select which Press enter to boot the selected OS, return previous menu.	n entry is highlighted. , `e' to edit the commands before booting or `c' for a command-line. ESC to

- 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.

▼ General Information	
 Metworking 	
Host name	K-IP
IP addresses	1. (680-20-29)H (68)-1161 2. 10.37.118.250 3. (690-20-29)H (660-110.3
VMware Tools	Installed and running
▶	1 disk
Notes	🥒 Edit notes

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 38.

9 Restore the multiviewer's configuration. See Restoring the Multiviewer's Configuration, on page 41.

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 15.
- 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 7.

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.

vmware [®] ESXi [®]	
Navigator	🔂 tacmvvm.miranda.com - Virtual Machines
✓ ☐ Host Manage	1 Create / Register VM 🛒 Console 🕨 Power on 🔳 Power off 🔢 Suspend 🧭 Refresh 🔅 Actions
Monitor	☑ Virtual machine ▲
🗿 Virtual Machines 🛛 2	💭 💀 📀 Normal 15.18 GB
Storage 2	□ D TACKIPVM ON TACKIPVM ON Normal 30.88 GB
> 😥 Networking 🛛 2	Quick filters
	Guest OS
	🐼 Snapshots 🔹 Nake snapshot
	💕 Console 🔊 🗞 Restore snapshot
	🙀 Autostart 🐼 Manage snapshots
	Upgrade VM Compatibility Consolidate disks

- 4 Point to Snapshots and select Manage snapshot.
- 5 Select the snapshot that you took prior to migration.

Manage snapsh	ots - TACKIPVM				
) Take snapshot	🙀 Restore snapshot	🙀 Delete snapshot	🗙 Delete all 🧞	Edit snapshot	C Refresh
	1				Nito 16: 2002/09 Automotional distance of the AA 329 generation 33: 451-45 INVERSE System
1 🌆 2019-04	1-09 KIP VM				
0 100 1	are nere				
				Name	2019-04-09 KIP VM
				Description	Snapshot taken for reverse migration from Kaleido-IP V11.0
					back to V10.23.
				Created	Tuesday, April 09, 2019, 16:39:44 -0400
					Clos
					Cites

6 Click Restore snapshot.



7 Click Restore.

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 33.

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.

grass valley A Belden Bran			-	-	
System configuration	Kaleido-IP-6 - Model: KIP-X320 (a/c 092601-148884670))			
Status and options	LAN1 (management port)			*	
Access control	LAN2 (media port)			\$ •	
O Upgrade	LAN3 (media port)			\$ •	
Restart / Shut down	LAN4 (media port)			\$ •	
Head streaming	LAN5 (media port)			\$ •	
Help & support	LAN6 (media port)				
	MULTIVIEWER STATUS AND LICENSES				
Apply settings	Options - 4K UHD HEVC/H.265 decode	Disable	(Key: 5FF18877)		
Log out	Options - AAC decode	Disable	(Key: 3FA1260D)		
	Options - AC3 decode	Disable	(Key: 69BEBC6B)		
	Options - AVC/H.264 HD decode	Disable	(Key: EA818ECA)		
	Options - Compressed IP outputs H.264/MPEG2	Disable	(Key: 774ED8F)		
	Options - HD/SD HEVC/H.265 decode	Disable	(Key: 5977AD1B)		
	Options - Loudness level measurement	Disable	(Key: 24DB2804)		
	Options - SCTE-35 metadata extraction	Disable	(Key: 6408D4A3)		
	Options - Software activation	Disable	(Key: C1D7204D)		
	Options - TR 101 290 DVB transport stream probing	Disable	(Key: 57B601ED)		
	Options - Uncompressed IP inputs ST 2022-6/2110	Disable	(Key: 97E0BE3C)		
	Options - Uncompressed IP outputs ST 2110	Disable	(Key: 6ACB010B)		

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	•	٠	•	•	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	•	•	•	٠	•
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	•	•	•	٠	•
KIP-OPT-ACTIVATION	Software Activation	•	•	•	•	•
Rivermax license File	nse 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 19.

Grass val		1	٠			-
System configuration	General					
Status and options	System name:	K-IP]		
Access control	Ethernet					
Upgrade	LAN1 (management port)	☑ DH	ICD			
Restart / Shut down	System IP address:	10	.37	.65	.225	
Head streaming	Network mask:	255	.255	.255	.0	
Help & support	Default gateway:	10	.37	.65	.1	Remove
	Link mode:	1000	Mbps fu	III-duple	ex	
Apply settings	LAN2 (media port):	172	30	1	103	Remove
Log out	Network mask:	255	255	255	.0	Remove
	Gateway:	Add	1			
	Link mode:	1000Mbps full-duplex				
	Virtual LAN configuration Configure DNS and proxy configuration Configure					
	Font configuration					
	Date and Time					
	Current date and time: Date and time format: Time zone: NTP synchronization: New date:	Engli Afric ©En	sh (Uni a/Abidj abled@	ted Sta an Disat	tes)	11:56:32 AM UTC-4
	New time:	· · · ·	10, 201 56		AM 👻	

Click Save to save your settings and continue. Save

- 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 11.



- 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 19.

Grass valley A BELDEN BRAND		IIN
• System configuration Hea	ad Streaming Configurat	ion
Status and options	Head 1 streaming options	
Access control	Compressed Output	
O Upgrade	🗹 Enable	
Restart / Shut down	Output resolution:	1920 × 1080 👻
Head streaming	output recondition.	110 1 100
Help & support	Encoding format:	
Apply settings	Encoding mode:	●VBR ◎CBR
Log out	Streaming mode:	®RTP ◎UDP
	Bit rate:	3000 kbps (range: 500-15000)
	Enable multicast Destination IP address: Port: Data interface:	127_0_0_1 5000_(range: 1024-65535) Management port: 10.37.65.222 v
	RTSP link:	rtsp://10.37.65.222:7001/head1
	-ST 2110-20 Video Output	
	Enable streaming Destination IP address: Port:	on LAN5 (A Network) : 192.168.20.1 231 0 1 10 5004 (range: 1024-65535)
	Enable streaming Destination IP address: Port:	on LAN6 (B Network) : 10.0.0.0 127 0 0 1 5005 (range: 1024-65635)
	Output resolution:	1920 × 1080 •

- 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 reinstall 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 6.

2 From XEdit, import the database from the backup.

X	XEdit - C:\Users\kxj11071\DB_1			
<u>E</u> ile <u>E</u> dit ⊻iew	Configure Tools Help			
	Connect Disconnect			
Tools	Database 🕨 🕨	🖾 Export		P <u>u</u> sers
2666	Access control	📥 Import		
Equip	Do not warn about channel count	Restore factory defaults	Ctrl+Shift+F10	onfigurations Route
	Use XAdmin	Create backup	•	All
	Configure Audio Bridge Terminal	Restore backup		Resolutions
	T. Curton	Merge backup		Audio scales
	▼System ▶¥	Do not prompt for the database pa	ath	

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-IP X110 / X310 / X120 / X320

This procedure applies to:

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.

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

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:

kip-ubuntu_11.nn_build-XXX.iso

Where *nn* is the major and minor software version.

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 21.
- 3 Remove the USB drive from the PC and plug it into the Kaleido-IP's USB port.

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

This procedure applies to:

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	None: The Boot Mode BIOS setting has been removed	
11.2.0 or higher	(these software versions flashes the BIOS with the setting fixed to UEFI).	

1 Access the Kaleido-IP multiviewer's console. See Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 15.

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 16.

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



3 Select Enter Setup.

SSATA PO: INTEL SSDSC2KB240G7 ISATA PO: HGST HTS721010A9E630 UEFI: Built-in EFI Shell
UEFI: Built-in EFI Shell
UEFI DS (PO: INTEL SSDSC2KB240G7)
UEFI OS (PO: INTEL SSDSC2KB240G7)
TBA GE Slot 0100 v1572
Enter Setup

4 Go to the **Boot** tab.

	Security Boot Save & Exi	
Boot Configuration		Select which boot device
Setup Prompt Timeout	1	type to list in FIXED BOOT ORDER Priorities.
		OKDER TI IOTICIES.
працет со пот забрати	(preasted)	
FIXED BOOT ORDER Priorities		
Dual Boot Order #1	[Hard Disk: INTEL .	
Dual Boot Order #2	[CD/DVD]	
Dual Boot Order #3	Boot Mode Select	
Dual Boot Order #4	LECARY	
Dual Boot Order #5	UEFI	
Dual Boot Order #6	DUAL	20
Dual Boot Order #7		.]
Dual Boot Order #8		.1
Dual Boot Order #9	(UEFI CD/DVD)	
Dual Boot Order #10	[UEFI USB Hard Disk]] ++: Select Screen
Dual Boot Order #11	(UEFI USB CD/DVD)	14: Select Item
Dual Boot Order #12	[UEFI USB Key]	Enter: Select
Dual Boot Order #13	(UEFI USB Floppy)	+/-: Change Opt.
Dual Boot Order #14	[UEFI Network]	F1: General Help
Dual Boot Order #15	[UEFI AP:UEFI: Bui.	
		F3: Optimized Defaults
Add New Boot Option		▼ F4: Save & Exit
		ESC: Exit

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	This setting is unavailable.

6 Save and Exit the BIOS settings.

Kaleido Software Installation Tasks

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 12.
- Locally accessing / Rebooting the Kaleido-IP Multiviewer, on page 15. 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 11.0.0 (as prepared in Prepare a USB drive with the ISO Image, on page 47) 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 12.
- 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).



5 Select English if prompted to select a language.

	GNU GRUB version 2.02
∗Install Grass Valley Kaleido-IP	
Rescue a broken system	
Use the [and] keys to select which Press enter to boot the selected OS, return previous menu.) entry is highlighted. , `e' to edit the commands before booting or `c' for a command-line. ESC to

- 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 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 51.
- 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 41.

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 15.
- 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 7.



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.

Corporate Head Office

Grass Valley 3499 Douglas-B.-Floreani St-Laurent, Quebec H4S 2C6 Canada Telephone: +1 514 333 1772 Fax: +1 514 333 9828 www.grassvalley.com