AUTODESK®
LUSTRE®
2008 SP3

A Discreet® Systems product

Release Notes

Autodesk®

Disclaimer

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contents

Contents

1 Release Information

Summary

About These Release Notes

The chapters in this document provide a concise collection of important release information about Autodesk® Lustre® 2008, as well as late-breaking changes that occurred after the user's guide went to print.

Chapter 1, "Release Information," on page 1 - Provides information about related documentation and contacting customer support.

Chapter 2, "System Information," on page 7 - Provides infrastructure and hardware-related information.

Chapter 3, "HP xw8600," on page 31 - Provides information on the new HP xw8600 workstation with the NVIDIA FX 5600 graphics card.

Chapter 4, "User's Guide Addendum," on page 55 - Provides new information that was released after the user's guide went to print.

Chapter 5, "Installation Documentation Workflows," on page 61 - Provides common installation workflows, such as reinstalling from scratch or upgrading your application.

Check the Web site for the most up-to-date version of these documents.

New Information for this Release

The following table lists new information introduced with this release.

Modification	Item	Page	Release
Added	Upgrading to NVIDIA Graphics Card Driver Version 165.46	8	2008 SP3
Added	Upgrading the InfiniBand Driver for the HP xw8400	8	2008 SP3
Added	FastBuffDisable Variable	19	2008 SP3
Added	HP xw8600 with NVIDIA FX 5600	31	2008 SP3

Related Documentation

This release includes documentation that helps you install, configure, and use Lustre 2008, including a *What's New* guide. The following links point to documents on the Autodesk Web site. You can also consult the Autodesk Web site directly at *www.autodesk.com/discreet-documentation*.

User and Reference Guides

Autodesk Lustre 2008 User's Guide

Autodesk Control Surface User's Guide

Autodesk Lustre 2008 What's New

Installation and Configuration Guides

Autodesk Stone Direct 2008 Configuration Guide

Autodesk Lustre 2008 Hardware Setup Guide for HP xw8400 Workstations

Autodesk Lustre 2008 Hardware Setup Guide for IBM Z Pro 6223 Workstations

Autodesk Lustre 2008 Software Installation Guide for Windows Workstations

Other Product and Reference Guides

Autodesk Stone and Wire 2008 Filesystem and Networking Guide

Autodesk Backburner2007 Installation and User's Guide

Autodesk Stone Direct 2008 Configuration Guide

Sparks API Reference Guide

Fixed and Known Bug List for Autodesk Lustre 2008

Accessing Online Help

Autodesk provides complete documentation in an accessible HTML help system that is displayed in a Web browser. The Help is automatically installed unless specified otherwise

during the software installation. Refer to the *Autodesk Lustre Software Installation Guide* for this release.

You can install the Help on another system without installing Lustre. For Windows®, select only Online Help when prompted to select components in the Lustre Installer. For Linux®, you can copy the *Documentation/help* directory from the CD onto another workstation.

To start the help system from Lustre:

➤ Click the Help button, located in the lower-right corner of all menus, or press **SHIFT+F1**.

To start the help system from the desktop:

1. If using the Windows version of Lustre, choose Start | Programs | Autodesk | Lustre<version number> | Online Help from the Windows task bar.

   The Help appears in a browser window.

2. If using the Linux version of Lustre, open a shell and type:

   <browser> **/usr/autodesk/lustre**<version number>**/help/html/_start-helpsystem.html**

   (where <browser> is either 'mozilla' or 'firefox', as required.)

To copy the Help to another system:

1. Copy the *Documentation/help* directory from the software CD-ROM to the new location on another system.
2. To start the Help after you copy the help directory, open the *help/html/_start_helpsystem.html* file.

Accessing PDF Documentation

The complete documentation set is available in PDF (Portable Document Format) for online viewing and printing. On Windows systems, use Adobe® Acrobat® Reader™ to view and print the PDF files. On Linux workstations, it is recommended that you use the Xpdf viewer. You can access the PDF files from the Lustre software CD or from *www.autodesk.com/discreet-documentation*.

NOTE: If you do not have Acrobat Reader, you can download a free copy from the Adobe Web site (*www.adobe.com*). If you do not have Xpdf viewer, you can download a free copy from the Xpdf Web site (*www.foolabs.com/xpdf/*).

From the Lustre Application CD

You can view and print the PDF files from the Lustre CD using Adobe Acrobat Reader. All PDF files are located in a directory called *Documentation* at the top level of the CD.

To view the PDF files on the application CD:

1. Place the Lustre CD in the CD-ROM drive of your system.
2. If using the Windows version of Lustre, in Windows Explorer, go to the *Documentation* folder on the CD.
3. If using the Linux version of Lustre, open a Linux shell and navigate to the online help directory. Type:

   cd /usr/autodesk/lustre<version number>**/documentation**
4. To view a PDF file, do one of the following:

   • If using the Windows version of Lustre, double-click the desired file.

   • If using the Linux version of Lustre, type:

   xpdf <filename>

   The file opens in Acrobat Reader or the Xpdf viewer.

Fixed Bugs

For a list of fixed bugs for this release, see the PDF file *lustre2008_FKBL.pdf NEED TO UPDATE*. This PDF file is available on the Web only, at *www.autodesk.com/discreet-documentation*.

Contacting Customer Support

You can contact Autodesk Media and Entertainment Customer Support at *www.autodesk.com/support* or through one of the following ways.

Location:	Contact Information:
Within the Americas:	Hotline (North America): 1-800-925-6442 Direct dial: 415-507-5256 (Country code = 1) 8 AM to 8 PM EST Monday to Friday, excluding holidays *me.support@autodesk.com*
Within Europe, Middle-East and Africa:	Hotline (from London, UK): +44-207-851-8080 9 AM to 5:30 PM (local time) Monday to Friday, excluding holidays *me.emea.support@autodesk.com*
Within Asia Pacific: (Excluding India, China, Australia, New Zealand and Japan)	Hotline (from Singapore): +65-6555-0399 9 AM to 6 PM (local time) Monday to Friday, excluding holidays *me.support.singapore@autodesk.com*
Within India:	Hotline (from Mumbai): +91-22-6695-2244 9:30 AM to 6:30 PM (local time) Monday to Friday, excluding holidays *me.support.india@autodesk.com*
Within Japan:	Hotline (from Tokyo): 0120-107-290 Direct dial: +81-3-6221-1810 10 AM to 6 PM (local time) Monday to Friday, excluding holidays *me-sys-support@autodesk.jp*
Within China:	Direct dial: +86-10-6505-6848 9 AM to 6 PM (local time) Monday to Friday, excluding holidays *me.support.china@autodesk.com*
Within Australia and New Zealand:	Hotline (from Melbourne): +1-300-36-8355 Direct dial: +61-3-9876-8355 8 AM to 6 PM AEST Monday to Friday, excluding holidays *me.support.anz@autodesk.com*

Customer support is also available through your Autodesk reseller. To find a reseller near you, consult the reseller look-up database on the Autodesk web site at *www.autodesk.com/resellers*.

2 System Information

Summary

Overview

This chapter highlights important hardware and installation-related notes and procedures.

Software Versions and Associated Platforms for Lustre 2008 SP3

This release of Lustre 2008 Service Pack 2 is available for the Windows platform only. You must have Lustre 2008 Service Pack 1 already installed before installing Lustre 2008 Service Pack 2.

Upgrading the NVIDIA Graphics Card Driver for Lustre 2008 SP3

The NVIDIA graphics card driver, version 165.46, is now certified to be used with Lustre 2008. If your workstation is using the FX 5500 graphics card, you need to upgrade your driver to version 165.46.

NOTE: If your workstation uses the FX 4000 graphics card, you cannot upgrade your driver to version 165.46.

To upgrade your NVIDIA graphics card driver:

1. Download the driver upgrade package to a temporary location on your system.

   You can find the appropriate driver package here:

   ftp://ftp.discreet.com/pub1/release/lustre/lustre2008/drivers/Nvidia_<version>.zip

   NOTE: Contact Customer Support if you have any problems downloading the driver package. See "Contacting Customer Support" on page 4.

2. Use a compression utility, like Winzip, to uncompress the driver upgrade package and extract it to a folder on your system.

3. Open the folder that contains the upgrade package you extracted and double-click *setup.exe* to start the driver update.

   The NVIDIA Install Shield Wizard opens.

4. Click Next to continue the upgrade procedure.

   A Hardware Installation warning message appears.

5. Click Continue Anyway.

6. Select Yes, I want to restart my computer now, and click Finish.

   After you reboot, the NVIDIA graphics card driver is installed.

Upgrading the InfiniBand Driver for the HP xw8400

For Lustre 2008 SP3, you need to upgrade your InfiniBand driver to the latest version if you are using the HP xw8400 workstation.

SDP Over InfiniBand Support

To be able to have a high speed IB connection, you need to install the latest Windows IB driver on the Lustre workstation and the latest Linux IB driver on the Editing and Effects workstation. You will need the following:

- Lustre 2008 SP3 or Lustre 2008 SP2
- Smoke/Flame 2008 SP4 or 2009

Lustre 2008 supports a socket direct protocol (SDP) over IB connection in addition to the continued support of the IP over IB connection. The performance advantage of the SDP over IB solution is the ability to transfer up to 2K 10-bit source footage in real-time over Wiretap.

For SDP over IB support, the Editing and Effects application your Lustre workstation connects to must be either Smoke/Flame 2008 SP4 or 2009 with the latest DKU (the latest DKU has the new IB driver). For full details about Smoke/Flame requirements, see the Release Notes for Smoke/Flame 2008 SP4 or 2009.

NOTE: If using an SDP over IB connection and you choose to manually configure specific Wiretap servers in the *init.config* file, make sure you input the Gigabit Ethernet IP addresses of the Wiretap host machines and not the InfiniBand IP addresses.

Driver and Firmware Requirements for the IB Switch and Editing and Effects Workstation

The following lists the required drivers and firmware for the Infiniband Switch and Linux driver on your Editing and Effects application.

Device	Device Requirements
IB switch	Silverstorm 9024 DDR and SDR switch firmware 4.1.1.1.11
Lustre system IB HCA	Silverstorm PCI-X SDR 7000 series firmware 3.5.000
Smoke/Flame system IB HCA	Silverstorm PCI-E DDR 9000 series firmware 4.8.200
Editing and Effects workstation	Silverstorm PCI-E DDR 9000 series Linux driver 4.1.1.3.1
Lustre workstation (Windows)	Silverstorm HCA Windows driver 3.2.0055.14

SDP Over InfiniBand Driver and Firmware Installation

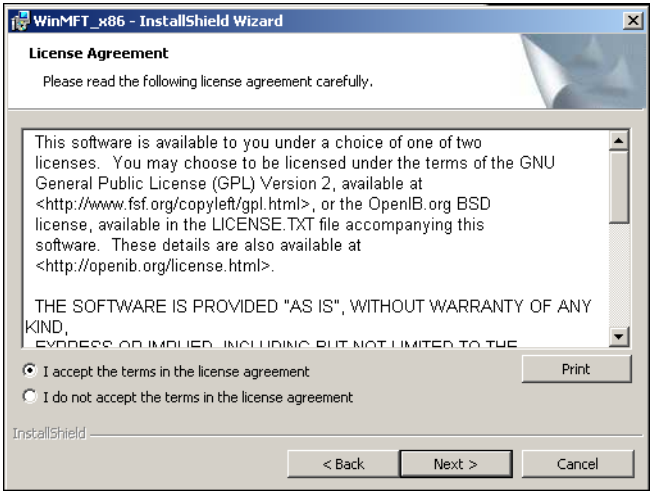
Perform the following workflow to acquire and install the appropriate firmware and drivers for SDP over IB support on your Lustre workstation.

Step	Action
1.	Contact your local Autodesk support office for details on how to: • acquire the correct drivers, firmware, and utilities • upgrade your switch firmware
2.	Perform an update of your Windows HCA firmware (see "To update your Windows HCA firmware:" on page 10). **WARNING:** This update must be done with the previous IPoIB-only driver currently installed on your Lustre workstation.
3.	Uninstall all previous IB drivers (see "To remove an older IB driver:" on page 11).
4.	Install the HCA driver (see "To install the HCA driver:" on page 12).
5.	Install the IP over IB device (see "To install the IP over IB device:" on page 14).
6.	Configure SDP (see "To configure SDP:" on page 15).
7.	Verify SDP services and provider are installed and running (see "To verify SDP services and SDP provider are installed and running:" on page 17).

To update your Windows HCA firmware:

1. Double click the file called *WinMFT_x86-1_0_1.msi*.
   The WinMFT_x86 - InstallShield wizard is launched.

2. Read and accept the license agreement and input the required installation information in the wizard.



   NOTE: Accept the default installation path.

3. Unzip the firmware and copy *fw-23108-3_5_000-MHXL-CF128-T.bin* to *C:\Program Files\Mellanox\MFT\bin*.

4. In a Windows command shell, type:

   cd C:\Program Files\Mellanox\MFT\bin

   flint -d mt23108_pciconf0 -skip_is -i fw-23108-3_5_000-MHXL-CF128-T.bin burn

   The following confirmation message appears:

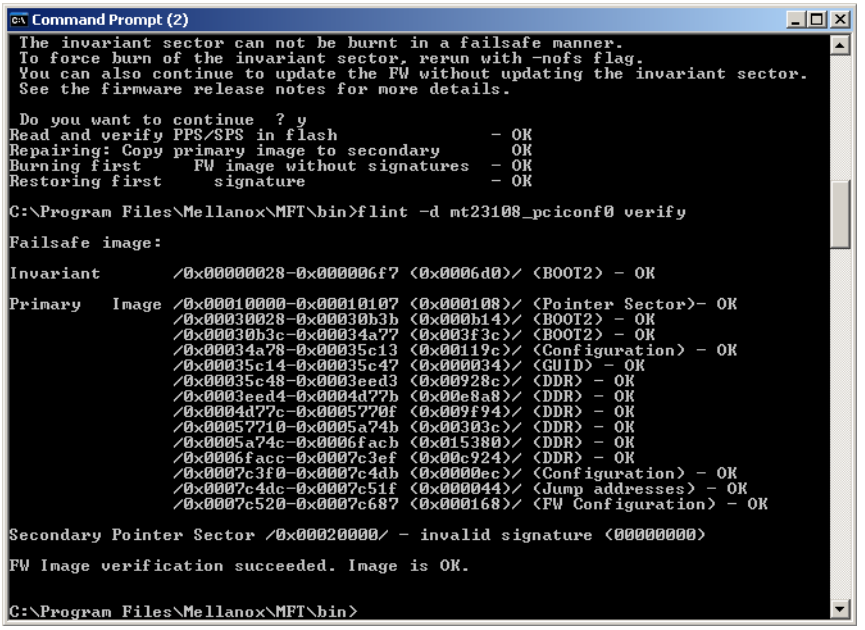
   You are about to replace current PSID in flash - " with a different PSID - "MT_0030000001". Is it OK? <y/n> [n]:

   Type **y** to confirm the action, then hit **ENTER**.

5. To confirm the card has been flashed, in the command shell, type:

   flint -d mt23108_pciconf0 verify

   A successful flash results in the following system response:



To remove an older IB driver:

1. Stop all I/O traffic.
2. Exit the Lustre application.

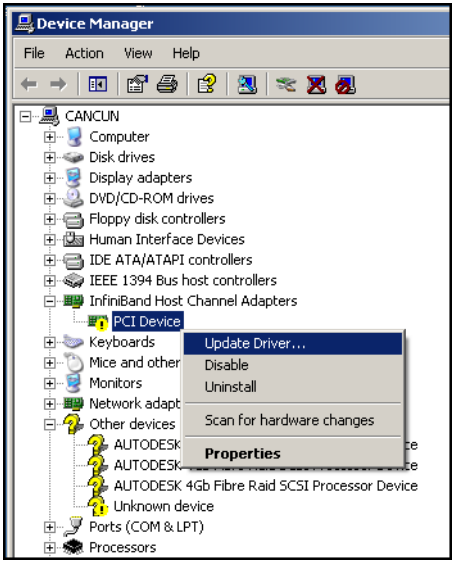
3. From the Device Manager, uninstall the following:
   - all IPoIB adapter instances
   - InfiniBand Fabric device (under the System Device category)
   - all InfiniBand Host Channel adapters
4. In the Control Panel, select Add/Remove Programs.
5. Remove *SilverStorm HCA*.
6. Reboot.

To install the HCA driver:

1. Double-click the *SilverStorm 3.2.0055.14* driver package on your target system to install the HCA driver.

   NOTE: Accept the default settings.

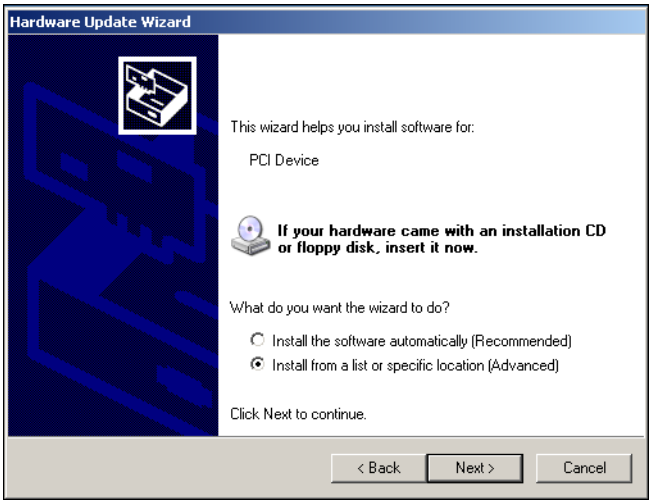
2. In the Device Manager, under Infiniband Host Channel Adapters, right-click PCI Device and select Update Driver.



The Hardware Update Wizard appears.

3. Select No, not this time for Windows Update and click Next

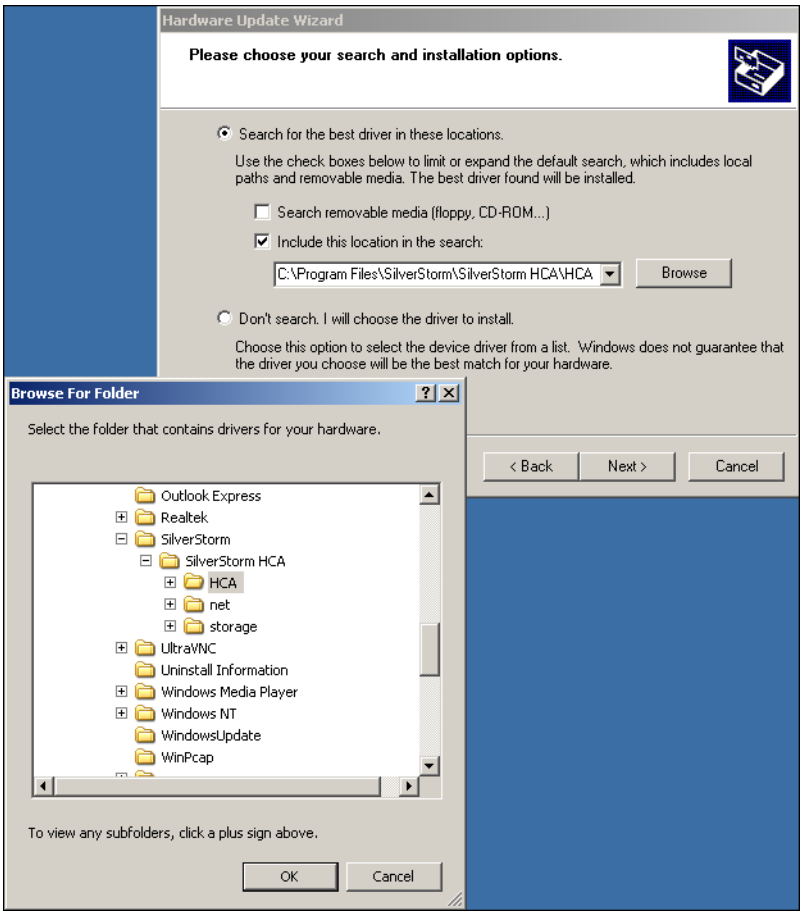
4. Select Install from a list or specific location (Advanced) and click Next.



5. Uncheck Search removable media.

6. Check Include this location in the search.

7. Browse to *C:\Program Files\SilverStorm\SilverStorm HCA\HCA* and click Next.



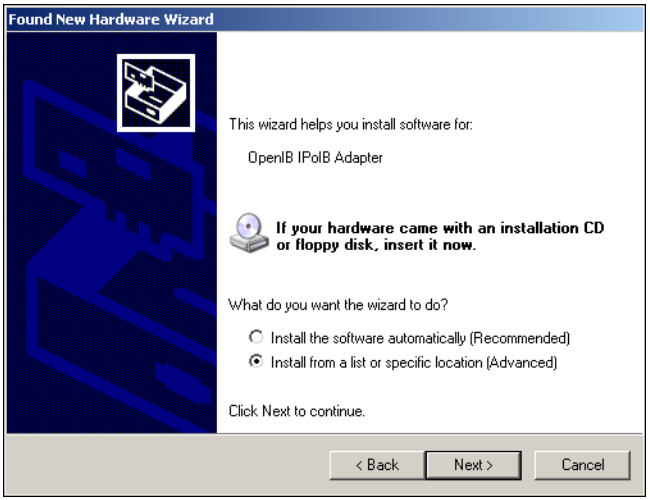
Your Infinihost MT23108 installation HCA installation is now complete.

Two new IPoIB adapters are automatically detected.

To install the IP over IB device:

1. The New Hardware wizard discovers two IPoIB devices, one per HCA port, and begins installation.
2. Select No for Windows Update and click Next.

3. Select Install from a list or specific location (Advanced).



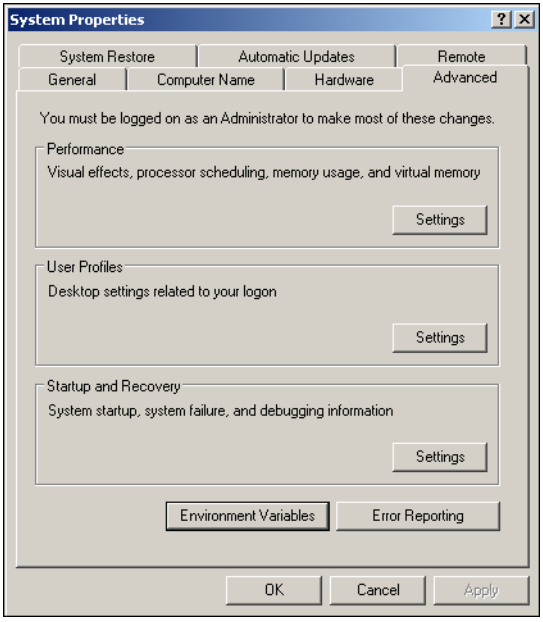
4. Browse to *C:\Program Files\SilverStorm\SilverStorm HCA\net*and click Next.
5. Complete the New Hardware wizard to complete the IPoIB device installation.
6. Open Windows Explorer and browse to *C:\Program Files\SilverStorm\SilverStorm HCA\net*.
7. Locate and right-click *netipoib.inf*.
8. Select Install.
9. Reboot your workstation.

To configure SDP:

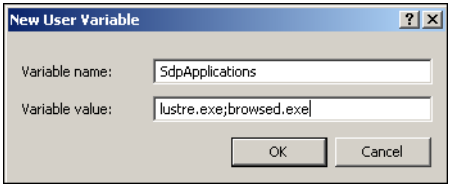
1. Open Windows Explorer and browse to *C:\Program Files\SilverStorm\SilverStorm HCA\net*.
2. Locate and right-click *instsdp.inf*.
3. Select Install.
4. Browse to *C:\Program Files\SilverStorm\SilverStorm HCA*.
5. Double-click *Autodesk-SDP-Config.bat*.
   A confirmation dialog box is displayed.
6. Confirm the action by clicking Yes.

An event dialog box is displayed confirming *Autodesk-SDP-Reg.reg* has been entered into the registry.

7. Click OK.
8. On the desktop, right-click My Computer and select Properties.
9. Select the Advanced tab and click Environment Variables.



10. Click New under User Variables and add:
    - *SdpApplications=lustre.exe;browsed.exe*
    - *SdpAddresses*=<`wiretap-server IB address` > (for example, SdpAddresses=10.10.11.203)



NOTE: Any additional Lustre-related processes over IB SDP should also be added, separated by a semi-colon.

Socket applications will now use the SDP Provider.

11. Install the SDP provider in a Window command shell. Type:

```
cd C:\Program Files\Silverstorm\SilverStorm HCA\net\x86

InstallSdpProvider -i
```

12. Reboot your system.

To verify SDP services and SDP provider are installed and running:

1. In a Windows command shell, type:

```
net start sdp
```

   If SDP services are running, the system response will be:

   The requested service has already been started.

2. In the command shell, type:

```
cd C:\Program Files\SilverStorm\SilverStorm HCA\net\x86

InstallSdpProvider -i
```

   If the SDP Provider is properly installed, the system response will be:

   Provider already installed, <doing nothing>

Related Infiniband Procedures

In addition to the workflow procedures, listed above, there are several procedures that are relevant to SDP over IB or IP over IB. They are as follows:

- performing a clean driver uninstall of the IP over IB driver (outside the context of the above workflow) (see "To perform a clean IP over IB driver uninstall:" on page 17)
- stopping the SDP service manually (see "To stop the SDP service manually:" on page 18)
- removing SDP (see "To remove the SDP Provider:" on page 18)

To perform a clean IP over IB driver uninstall:

1. Stop all I/O traffic.
2. Exit the Lustre application.
3. In a Windows command shell, type:

```
net stop sdp
```

4. From the Device Manager, uninstall the following:
   - all IPoIB adapter instances
   - InfiniBand Fabric device (under the System Device category)

• all InfiniBand Host Channel adapters

5. In the command shell, type:

   cd C:\Program Files\SilverStorm\SilverStorm HCA

   CleanUninstall-Batch.bat x86

   A confirmation dialog box is displayed.

   NOTE: This batch file uninstall removes the SDP Provider, IB related keys in the registry, device drivers, and dynamic link libraries.

6. Click Yes to confirm the action.

   An event dialog box is displayed confirming that information in *Delete-IB-Reg.reg* has been deleted.

7. Click OK.

8. In the Control Panel, select Add/Remove Programs.

9. Remove *SilverStorm HCA*.

10. Reboot.

To stop the SDP service manually:

➤ In a Windows command shell, type:

net stop sdp

The system returns the following message:

The QLogic SDP Driver service was stopped successfully.

To remove the SDP Provider:

➤ In a Windows command shell, type:

cd C:\Program Files\SilverStorm\SilverStorm HCA\net\x86

InstallSdpProvider -r

The system returns the following message:

Removing Installed Layered Providers.

Removing layered provider protocol chains.

FastBuffDisable Variable

The FastBuffDisable variable needs to be entered into the *lustre.config* file if your workstation is using the NVIDIA FX 5500 graphics card.

NOTE: You can also add the variable to the *init.config* file in order to make sure it will be added to the *lustre.config* file when you create a new project.

To enter the FastBuffDisable variable into the *lustre.config* file:

1. Open the *lustre.config* file (of the current project) in a text editor software.
2. Enter FastBuffDisable at the end of the keywords list.
3. Save the file.

   Now you can start the application.

XR Configuration Utility Error for Lustre 2008 SP1

XR storage arrays shipped after the Lustre 2008 release have exhibited errors while being configured using the XR configuration utility. This utility is available on the Storage V5 CD, which is included with each XR shipment. If the utility has problems configuring, it automatically closes the shell.

If you encounter this error, you need to upgrade the XR configuration utility.

To upgrade the XR configuration utility:

1. Download the utility upgrade package to a temporary location on your system.

   You can find the appropriate utility package here:

   ftp://ftp2.discreet.com/support/ESCALATION/XR_configuratorWindows_v1.1.zip

   NOTE: Contact Customer Support if you have any problems downloading the utility package. See "Contacting Customer Support" on page 4.
2. Use a compression utility like Winzip to uncompress the utility upgrade package and double-click *XR_Config_ver1.1.exe* to start the utility upgrade.
3. If a LUN configuration already exists on the storage, you are prompted for confirmation to overwrite that configuration.

WARNING: LUN configuration is destructive. Make sure you want to overwrite an existing configuration before you confirm.

4. After the script detects the number of enclosures and drives, it prompts you to indicate the filesystem your storage configuration uses. Use the following table to determine the number to enter.

Enter:	To select:
0	Clear Configuration
1	Stone FS for an Effects or Finishing Workstation
2	Stone FS for an Effects or Finishing Workstation with CXFS SAN Access
3	XFS for an Incinerator Lustre Media Server
4	XFS for Lustre Linux Workstation
5	NTFS for Windows
6	Exit Configuration Utility

NOTE: If you choose a filesystem that is incompatible with your storage configuration, the script cautions you that this is the case and prompts for confirmation to continue.

For more information on the XR configuration utility, refer to " XR-Series LUN Creation Using the XR Configuration Utility" section in the *Autodesk Stone Direct 2008 Configuration Guide*.

Changes to Lustre 2008

The following are the changes to Lustre 2008.

- List of items that are no longer supported as of Lustre 2008.
- Software version and associated platforms for Lustre 2008
- Hardware system requirements.
- Upgrading the memory and compatibility.
- Required drivers for the release.
- Upgrading the DVS firmware and driver.
- Upgrading the NVIDIA graphics card driver.
- Installing the Autodesk Control Surface Tablet driver.
- Different feature availability based on the graphics card and the resolution of the footage.

Items No Longer Supported as of Lustre 2008

In this release, the following items are no longer supported in Lustre configurations:

- IBM Z Pro 6221 Workstation hardware platform
- RedHat Linux ®8.0 for background rendering
- Red Hat Linux Enterprise 3.0 32-bit for background rendering
- IBM X335 32-bit server nodes
- Lustre Burn background renderer for 32-bit operating systems

Hardware System Requirements

The following platforms are supported for this release:

- HP xw8400 workstation with NVIDIA® Quadro® FX5500
- IBM® IntelliStation® ZPro 6223 with NVIDIA Quadro FX5500

Upgrading the Memory

To make sure your system is operating at its potential, you need to complete the following:

- Increase the user-mode processes (e.g., applications) virtual address space by using a /3GB startup switch.

NOTE: This is necessary for both the IBM IntelliStation ZPro 6223 and HP xw8400 workstation.

- Increase the RAM to 4GB.

NOTE: This is only necessary for the IBM IntelliStation ZPro 6223.

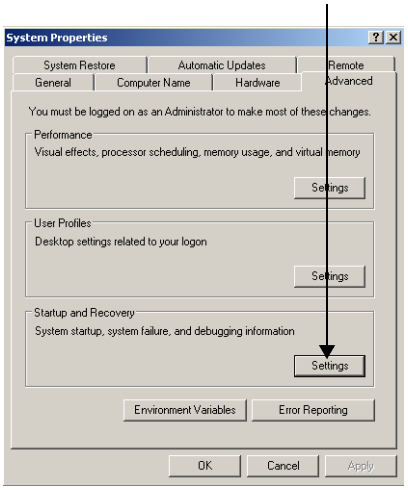
Using the /3GB Startup Switch to Increase Virtual Address Space

Windows uses 4GB of virtual address space. 2GB is allocated to user-mode processes (e.g., applications), while the other 2GB is allocated to kernel-mode processes (e.g., the operating system). The /3GB startup switch allows the memory for the applications to increase to 3GB while reducing the memory for the operating system to 1GB. This increases the speed of your application.

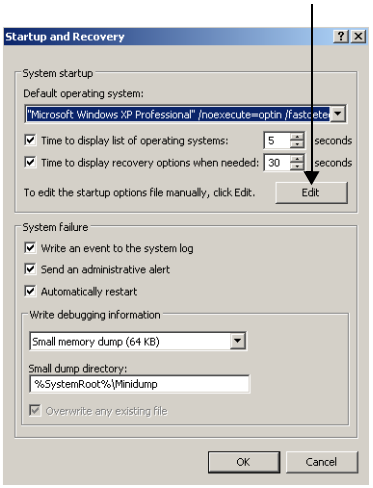
NOTE: In order to complete this upgrade, your system must be running Windows XP Professional Service Pack 2.

To set up the /3GB switch:

1. Click Start>Settings>Control Panel.
2. In the Control Panel window, double-click on Systems.
3. In the Advanced tab, click the Settings button in the Startup and Recovery group.



4. Click Edit.



The *boot.ini* file opens in Notepad.

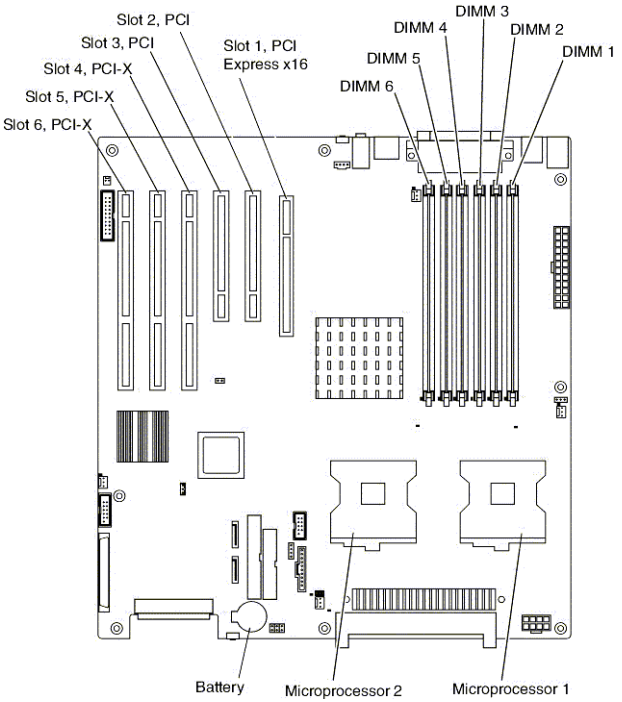
5. Copy the operating systems line and paste it on the next line. E.g.,
   `multi(0)disk(0)rdisk(0)partition(1)/WINDOWS="Microsoft Windows XP Professional" /noexecute=optin /fastdetect`
6. Make the following changes to the first line of text:
   - Modify the name of the operating system to "Microsoft Windows XP Professional 3GB".
   - Add "/3GB".
   - Add "/userva=2432".

   E.g., `multi(0)disk(0)rdisk(0)partition(1)/WINDOWS="Microsoft Windows XP Professional 3GB" /noexecute=optin /fastdetect /3GB /userva=2432`
7. Save the file and restart your computer.

   The /3GB switch should now be the default configuration.

Adding 1GB RAM to the IBM 6223

The minimum requirement for running Lustre 2008 on the IBM IntelliStation ZPro 6223 is 4 GB of RAM. Currently, users have 1GB in DIMM 1 and DIMM 2 and 512MB in DIMM 3 and DIMM 4. The memory needs to be installed in pairs.



To make sure your system has 4GB, complete one of the following:

- Purchase and install two 512MB DDR2 SDRAM DIMM.
- Purchase and install two 1GB DDR2 SDRAM DIMM.

NOTE: Make sure you do not exceed 4GB of RAM.

To install two 512MB of RAM:

1. Insert the two 512MB DDR2 SDRAM DIMM into DIMM 5 and DIMM 6. You now have 4GB of RAM.
2. Restart your system for the change to take effect.

To install two 1GB of RAM:

1. Remove the two 512MB DDR2 SDRAM DIMM from DIMM 3 and DIMM 4.
2. Insert the two 1GB DDR2 SDRAM DIMM into DIMM 3 and DIMM 4. You now have 4GB of RAM.
3. Restart your system for the change to take effect.

Upgrade Compatibility

To ensure compatibility with users, projects, configuration files, and other setups from Lustre, you must copy several files and directories from the release directory of the previous version installed on your system to the Lustre 2008 directory.

To copy the required files from the release directory to the Lustre 2008 directory:

1. On the Master Station, copy the following files and directories from the *C:\ProgramFiles\discreet\lustre<version>* directory to the *C:\ProgramFiles\Autodesk\Lustre2008* directory.

Item Type	Item Name
File	*browsed.config*
File	*filmtype.config*
File	*wt.config*
File	*init.config*
Directory	*user*
Directory	*lut*
Directory	*project*

2. On the Slave Renderer, copy the following files and directory from the *C:\ProgramFiles\discreet\lustre<version>* directory to the *C:\ProgramFiles\Autodesk\Lustre2008* directory

Item Type	Item Name
File	*browsed.config*
File	*wt.config*
Directory	*lut*

3. On the Render Nodes, copy the following file and directory from the *C:\ProgramFiles\discreet\lustre<version>* directory to the *C:ProgramFiles\Autodesk\Lustre2008* directory.

Item Type	Item Name
File	*browsed.config*
Directory	*lut*

Upgrading the DVS Firmware

Lustre 2008 requires a DVS firmware upgrade. If your DVS is a Centaurus 1, see "To upgrade your Centaurus 1 DVS firmware:" on page 26. If your DVS is a Centaurus 2, see "To upgrade your Centaurus 2 DVS firmware:" on page 26.

NOTE: The DVS firmware update is not required for users previously running Lustre 2007 Extension SP2.

To upgrade your Centaurus 1 DVS firmware:

1. Copy the new DVS Centaurus 1 firmware (*irisup_2.1.50b_36.exe*) from the release package to the local drive of the Lustre station. The DVS firmware (*irisup_2.1.50b_36.exe*) is located in the *DVS\firmware\centaurus I* directory within the package.
2. Double-click the *irisup_2.1.50b36.exe* file.

   A DOS shell will be opened and the DVS firmware procedure will be launched.
3. When the 'Are you sure that you want to continue?' message is displayed, type 'y' and then hit the **ENTER** key in the DOS shell.
4. Once the upgrading operation is complete, reboot the computer.

To upgrade your Centaurus 2 DVS firmware:

1. Copy the new DVS Centaurus 2 firmware (*lucyup_3.2.68.3_7_1.exe*) from the release package to the local drive of the Lustre station. The DVS firmware (*lucyup_3.2.68.3_7_1.exe*) is located in the *DVS\firmware\centaurus II* directory within the package.
2. Double-click the *lucyup_3.2.68.3_7_1.exe* file.
3. When the 'Are you sure that you want to continue?' message is displayed, type 'y' and then hit the **ENTER** key in the DOS shell.
4. Once the upgrading operation is complete, reboot the computer.

Upgrading the DVS Driver

You might be required to upgrade the DVS driver on all Lustre workstations that have a DVS board for video input/output. See "Required Drivers for this Release" on page HIDDEN to see if you have the supported DVS driver version. If your driver is an older version, please upgrade your DVS driver.

NOTE: You can upgrade your DVS driver before, or after, you upgrade Lustre.

To verify the version of the DVS driver running on your system:

1. Open the Device Manager. Right-click My Computer and select Manage, and then click Device Manager.
2. In the Sound, video, and game controllers folder, right-click your DVS device and select Properties. Your DVS device may appear as Centaurus or HD Station.

   The Properties dialog box opens.
3. Click the Driver tab and verify that you have the correct driver version.
4. If you are using another version of the driver, you must upgrade it to the one supported for this release.

To upgrade the DVS driver:

1. In Windows Explorer, open the Bin folder for the current DVS driver. For example: *C:\Drivers\dvs\sdk2.7p28\win32\bin*.
2. Double-click *dvsconf.exe*.
3. Click Unload in the DVSconf properties window.
4. Close the *dvsconf.exe* application.
5. Open the *DVS\driver* folder from the package.
6. Copy the *sdk2.7p57.zip* file to a temporary location on your computer.
7. Use a compression utility like Winzip® to decompress the driver upgrade package and extract it into the DVS driver folder on the computer. For example: *C:\Drivers\dvs*.
8. In Windows Explorer, open the Bin folder of the new DVS driver. For example: *C:\Drivers\dvs\sdk2.7p57\win32\bin*.
9. Double-click *dvsconf.exe*.
10. Click Browse.
11. In the browser window, go to the DVS *sdk2.7p57* driver folder. For example: *C:\Drivers\dvs\sdk2.7p57\win32\driver*.
12. Select the *dvswin2k.sys* file and click Open.
13. Click Load.
14. Close the *dvsconf.exe* application.

    The sdk2.7p57 DVS driver is now installed on the Lustre workstation.

Installing the Autodesk Control Surface Tablet Driver

You must install the tablet driver on your Lustre workstations to enable the pen and tablet functions of the Autodesk Control Surface.

Install the tablet driver after you install Lustre 2008.

To install the Autodesk Control Surface tablet driver:

1. Download the driver upgrade package to a temporary location on your system. You can find the driver package here:
   ftp://ftp.discreet.com/pub1/release/lustre/lustre2008/drivers/cons4.94-3a_int.exe

   NOTE: Contact Customer Support if you have any problems downloading the driver package. See "Contacting Customer Support" on page 4.

2. Double-click *cons4.94-3a_int.exe*.
3. In the Self-Extractor window, click Setup.
4. In the Pen Tablet – License Agreement window, click Accept.
5. In the Install Pen Tablet window, click OK.

   The cons4.94-3a driver is now installed on the Lustre workstation.

Product Characteristics

This section explains differences in feature availability based on your graphics card and the resolution of your footage.

The table below provides a quick reference to feature availability.

Feature	FX5500	FX4000 (HD/2K)	FX4000 (SD)
GPU preview processing	Yes	Yes, but only with GFX SDI disabled	Yes
Direct playout to tape from GPU preview processing	Yes	No	No
Video-based projects	Yes	Yes	Yes
Dissolves	Yes	Yes	Yes
Repositioning	Yes	Yes	Yes
Resizing	Yes	Yes	Yes
Hardware LUTs	Yes	Yes	Yes

GPU preview processing — Allows for higher performance for up to 2K resolution, while previewing and real-time playback (24 fps) for HD resolution under certain scenarios. Refer to "GPU Preview Processing" in the *Autodesk Lustre 2008 User's Guide*.

Direct playout to tape from GPU preview processing — Used for playing out directly to tape.

Video-based projects — Supports the Interlaced scan type mode. Refer to "Saving the Grade for a Cut" in the *Autodesk Lustre 2008 User's Guide*.

Dissolves — Allows you to create a gradual blend between two shots. Refer to "Creating Dissolves" in the *Autodesk Lustre 2008 User's Guide*.

Repositioning — Allows you to reframe your shots within a specified, usually smaller, viewing area. Letterboxing is an example of repositioning. Refer to "Repositioning Images" in the *Autodesk Lustre 2008 User's Guide*.

Resizing — Allows you to resize your shots prior to rendering them in order to have them conform to a different destination output format. Refer to "Resizing Shots" in the *Autodesk Lustre 2008 User's Guide*.

Hardware LUTs — Allow you to achieve advanced film simulation in Lustre. 3D hardware LUTs are processed directly on the video card in order to ensure better system performance. Refer to "3D Mesh LUTs" in the *Autodesk Lustre 2008 User's Guide*.

3 HP xw8600

Summary

Overview

This chapter describes how to set up the HP xw8600 workstation and the other hardware components of your Lustre 2008 SP3 workgroup. To install and configure the hardware and software components, use this chapter in conjunction with the *Autodesk Lustre Software Installation Guide for Windows Workstations* and the *Stone Direct Configuration Guide* for this release.

Connecting the Peripherals

You must connect peripherals (monitor, keyboard, mouse, storage, and network) to each Lustre workstation before you connect the workstations to video I/O, a control surface, or to other components in the workgroup.

Connect all hardware peripherals before you boot your workstation.

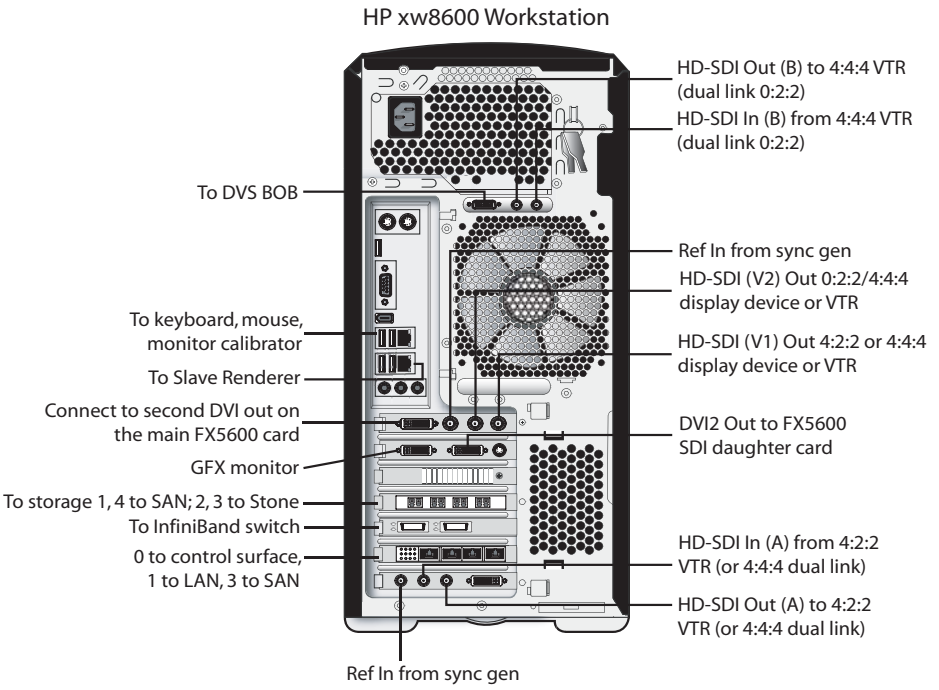
See the following table for a summary of the steps necessary to connect peripherals to your Lustre workstation.

Step:	Refer to:
1. Review the connection diagram for your workstation.	"Connection Diagram for the HP xw8600" on page 32.
2. Connect a monitor to the workstation.	"Connecting the Monitor" on page 33.
3. Connect a keyboard, mouse, and calibration device to your workstation.	"Connecting the Keyboard, Mouse, and Monitor Calibration Device" on page 34.
4. Connect the workstation to storage.	"Connecting Storage" on page 34.
5. Connect the workstation to your network.	"Network Connections" on page 35.
6. After you connect all the peripherals to your Lustre workstations, you can connect the workgroup components together.	"Connecting System Components" on page 44.

Connection Diagram for the HP xw8600

The following diagrams show the connections for the HP xw8600 workstation.

NOTE: These diagrams provide an overview of video I/O connections. For more details, see "Connecting Video I/O to a Master or HD Station" on page 52.



NOTE: The Slave Renderer option is not available for Lustre with Incinerator.

Connecting the Monitor

Connect the monitor to the DVI connection on the Lustre workstation's graphics card. You can use the DVI extender cable (DL.CAB-HDTV-FO-82-MM) to extend the cable to a machine room.

To connect the monitor:

➤ Use the DVI cable to connect the DVI OUT1 port of the NVIDIA® Quadro® FX 5600 graphics card to the DVI-D IN port of the monitor.

NOTE: Although the DVI fiber cable connectors are identical, their functions are different. Ensure that the connector labeled Send is connected to the Lustre workstation, and that the connector labeled Receive is connected to the monitor.

Connecting the Keyboard, Mouse, and Monitor Calibration Device

Connect the mouse, keyboard, and monitor calibration device to the workstation via the 4-port USB extender (TP.USB-EXT-400).

To connect the keyboard and mouse:

1. Connect the USB keyboard to port 2 on the remote unit of the USB extender.
2. Connect the USB mouse to port 3 on the remote unit of the USB extender.
3. Connect the monitor calibration device (TP.MON-CAL-LCDCRT) to port 4 on the remote unit of the USB extender.
4. Use an RJ-45 cable to connect the remote unit of the USB extender to the local unit of the USB extender.
5. Connect the local unit of the USB extender to USB1 port on the workstation.

To enable the Eye-One calibration utility driver:

➤ Do one of the following:

- For Windows-based workstations, if the driver is not already installed, you will be prompted to install the monitor calibration device driver when you restart the workstation. The driver is available from the *C:\Program Files\discreet\<version>\Utils\Calibration\Eye-One USB Driver* directory.
- For Linux workstations, once the software installation has been completed, start the *eyeone27* daemon on the workstation. Type: **`/etc/init.d/eyeone27 start`**

Connecting Storage

The following storage connections information is for Lustre running on the Windows operating system.

Storage for Windows-Based Workstations

Your workstation is configured with a 4-port ATTO Celerity FC-44ES fibre channel adapter. See "Connection Diagram for the HP xw8600" on page 32 for the fibre channel adapter location and connections.

You can connect your workstation to two types of storage:

- One or more Stone Direct disk arrays that provide storage to individual workstations. Refer to the *Stone Direct 2008 Configuration Guide* for information on connecting disk arrays to your workstation.
- A Storage Area Network (SAN) that provides shared storage for multiple workstations. Refer to the *Autodesk Stone Shared Installation and Configuration Guide* for information on connecting your workstation to a SAN.

Network Connections

Your workstation is configured with a 4-port Broadcom network card, and an integrated network port.

Before installing the InfiniBand driver, complete the following procedure.

To install the InfiniBand driver:

1. Open the Device Manager. Right-click My Computer and select Manage, and then click Device Manager.
2. Select Display adapters, right-click on the NVIDIA FX 5600 card and select Disable.
3. Reboot your system.
4. Install the InfiniBand driver. See "SDP Over InfiniBand Support" on page 35.
5. Return to the Device Manager.
6. Select Display adapters, right-click on the NVIDIA FX 5600 card and select Enable.
7. Reboot your system.

SDP Over InfiniBand Support

To be able to have a high speed IB connection, you need to install the latest Windows IB driver on the Lustre workstation and the latest Linux IB driver on the Editing and Effects workstation. You will need the following:

- Lustre 2008 SP3 or Lustre 2008 SP2
- Smoke/Flame 2008 SP4 or 2009

Lustre 2008 supports a socket direct protocol (SDP) over IB connection in addition to the continued support of the IP over IB connection. The performance advantage of the SDP over IB solution is the ability to transfer up to 2K 10-bit source footage in real-time over Wiretap.

For SDP over IB support, the Editing and Effects application your Lustre workstation connects to must be either Smoke/Flame 2008 SP4 or 2009 with the latest DKU (the latest DKU has the new IB driver). For full details about Smoke/Flame requirements, see the Release Notes for Smoke/Flame 2008 SP4 or 2009.

NOTE: If using an SDP over IB connection and you choose to manually configure specific Wiretap servers in the *init.config* file, make sure you input the Gigabit Ethernet IP addresses of the Wiretap host machines and not the InfiniBand IP addresses.

Driver and Firmware Requirements for the IB Switch and Editing and Effects Workstation

The following lists the required drivers and firmware for the Infiniband Switch and Linux driver on your Editing and Effects application.

Device	• Device Requirements
IB switch	Silverstorm 9024 DDR and SDR switch firmware 4.1.1.1.11
Lustre system IB HCA	Silverstorm PCI-E DDR 9000 series firmware 4.8.200
Smoke/Flame system IB HCA	Silverstorm PCI-E DDR 9000 series firmware 4.8.200
Editing and Effects workstation	Silverstorm PCI-E DDR 9000 series Linux driver 4.1.1.3.1
Lustre workstation (Windows)	Silverstorm HCA Windows driver 3.2.0055.14

SDP Over InfiniBand Driver Installation

Perform the following workflow to acquire and install the appropriate drivers for SDP over IB support on your Lustre workstation.

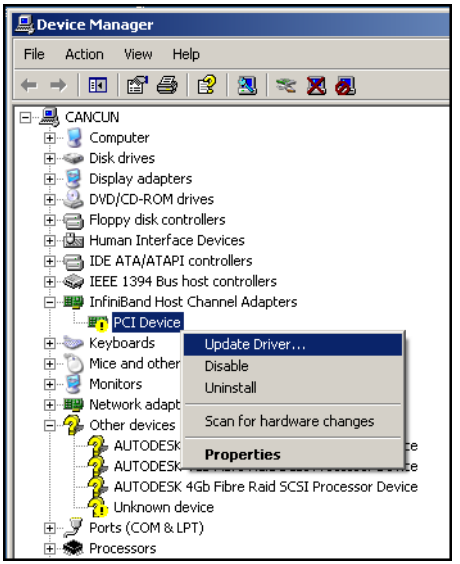
Step	**Action**
1.	Contact your local Autodesk support office for details on how to: • acquire the correct drivers, firmware, and utilities • upgrade your switch firmware
2.	Install the HCA driver (see "To install the HCA driver:" on page 36).
3.	Install the IP over IB device (see "To install the IP over IB device:" on page 39).
4.	Configure SDP (see "To configure SDP:" on page 40).
5.	Verify SDP services and provider are installed and running (see "To verify SDP services and SDP provider are installed and running:" on page 42).

To install the HCA driver:

1. Double-click the *SilverStorm 3.2.0055.14* driver package on your target system to install the HCA driver.

   NOTE: Accept the default settings.

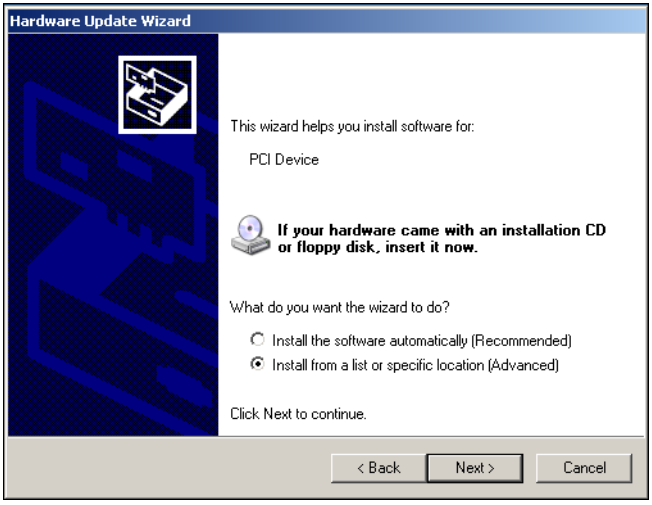
2. In the Device Manager, under Infiniband Host Channel Adapters, right-click PCI Device and select Update Driver.



The Hardware Update Wizard appears.

3. Select No, not this time for Windows Update and click Next

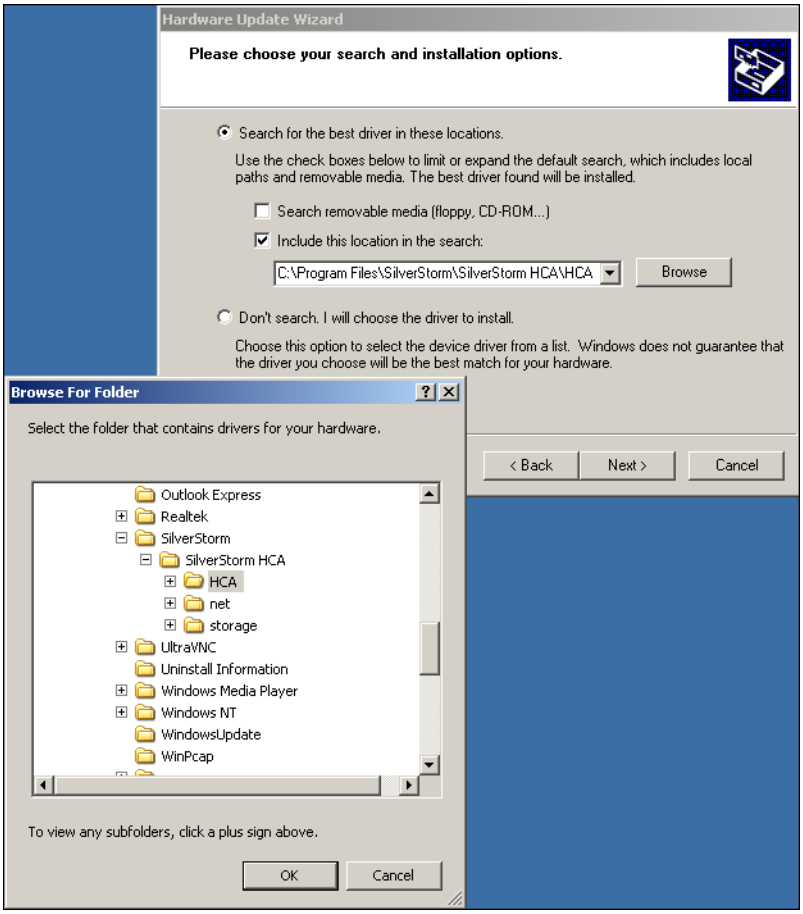
4. Select Install from a list or specific location (Advanced) and click Next.



5. Uncheck Search removable media.

6. Check Include this location in the search.

7. Browse to *C:\Program Files\SilverStorm\SilverStorm HCA\HCA* and click Next.



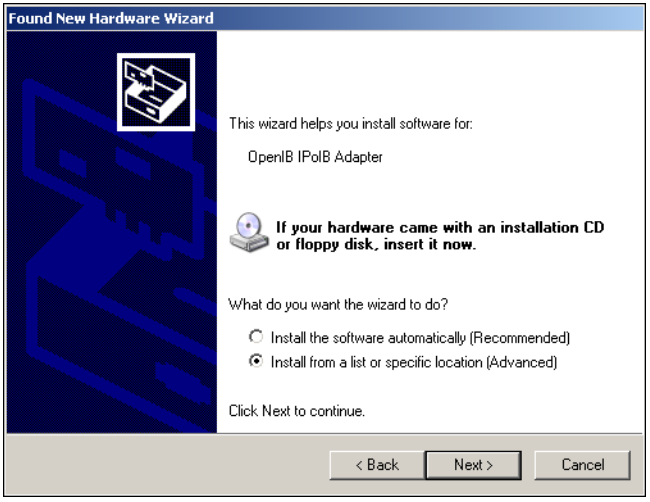
Your Infinihost MT23108 installation HCA installation is now complete.

Two new IPoIB adapters are automatically detected.

To install the IP over IB device:

1. The New Hardware wizard discovers two IPoIB devices, one per HCA port, and begins installation.
2. Select No for Windows Update and click Next.

3. Select Install from a list or specific location (Advanced).



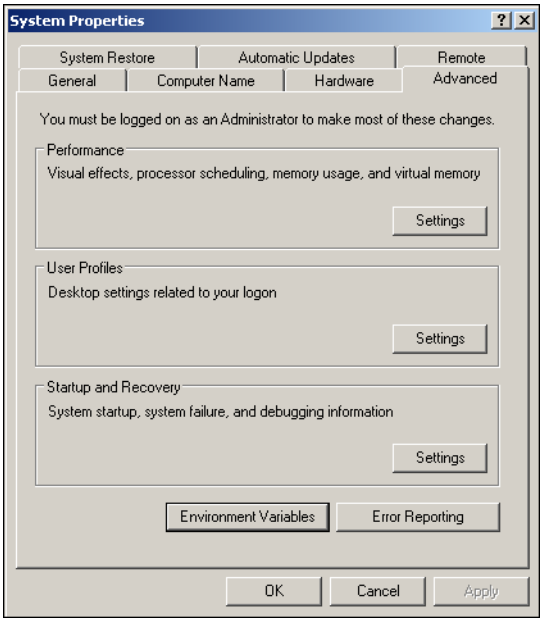
4. Browse to *C:\Program Files\SilverStorm\SilverStorm HCA\net*and click Next.
5. Complete the New Hardware wizard to complete the IPoIB device installation.
6. Open Windows Explorer and browse to *C:\Program Files\SilverStorm\SilverStorm HCA\net*.
7. Locate and right-click *netipoib.inf*.
8. Select Install.
9. Reboot your workstation.

To configure SDP:

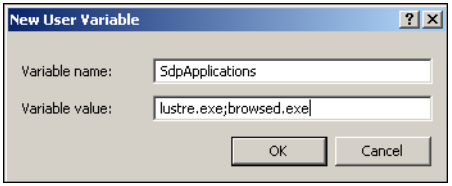
1. Open Windows Explorer and browse to *C:\Program Files\SilverStorm\SilverStorm HCA\net*.
2. Locate and right-click *instsdp.inf*.
3. Select Install.
4. Browse to *C:\Program Files\SilverStorm\SilverStorm HCA*.
5. Double-click *Autodesk-SDP-Config.bat*.
   A confirmation dialog box is displayed.
6. Confirm the action by clicking Yes.

An event dialog box is displayed confirming *Autodesk-SDP-Reg.reg* has been entered into the registry.

7. Click OK.
8. On the desktop, right-click My Computer and select Properties.
9. Select the Advanced tab and click Environment Variables.



10. Click New under User Variables and add:
    - *SdpApplications=lustre.exe;browsed.exe*
    - *SdpAddresses*=<`wiretap-server IB address` > (for example, SdpAddresses=10.10.11.203)



NOTE: Any additional Lustre-related processes over IB SDP should also be added, separated by a semi-colon.

Socket applications will now use the SDP Provider.

11. Install the SDP provider in a Window command shell. Type:

```
cd C:\Program Files\Silverstorm\SilverStorm HCA\net\x86

InstallSdpProvider -i
```

12. Reboot your system.

To verify SDP services and SDP provider are installed and running:

1. In a Windows command shell, type:

```
net start sdp
```

   If SDP services are running, the system response will be:

   The requested service has already been started.

2. In the command shell, type:

```
cd C:\Program Files\SilverStorm\SilverStorm HCA\net\x86

InstallSdpProvider -i
```

   If the SDP Provider is properly installed, the system response will be:

   Provider already installed, <doing nothing>

Related Infiniband Procedures

In addition to the workflow procedures, listed above, there are several procedures that are relevant to SDP over IB or IP over IB. They are as follows:

- performing a clean driver uninstall of the IP over IB driver (outside the context of the above workflow) (see "To perform a clean IP over IB driver uninstall:" on page 42)
- stopping the SDP service manually (see "To stop the SDP service manually:" on page 43)
- removing SDP (see "To remove the SDP Provider:" on page 43)

To perform a clean IP over IB driver uninstall:

1. Stop all I/O traffic.
2. Exit the Lustre application.
3. In a Windows command shell, type:

```
net stop sdp
```

4. From the Device Manager, uninstall the following:
   - all IPoIB adapter instances
   - InfiniBand Fabric device (under the System Device category)

• all InfiniBand Host Channel adapters

5. In the command shell, type:

   cd C:\Program Files\SilverStorm\SilverStorm HCA

   CleanUninstall-Batch.bat x86

   A confirmation dialog box is displayed.

   NOTE: This batch file uninstall removes the SDP Provider, IB related keys in the registry, device drivers, and dynamic link libraries.

6. Click Yes to confirm the action.

   An event dialog box is displayed confirming that information in *Delete-IB-Reg.reg* has been deleted.

7. Click OK.

8. In the Control Panel, select Add/Remove Programs.

9. Remove *SilverStorm HCA*.

10. Reboot.

To stop the SDP service manually:

➤ In a Windows command shell, type:

net stop sdp

The system returns the following message:

The QLogic SDP Driver service was stopped successfully.

To remove the SDP Provider:

➤ In a Windows command shell, type:

cd C:\Program Files\SilverStorm\SilverStorm HCA\net\x86

InstallSdpProvider -r

The system returns the following message:

Removing Installed Layered Providers.

Removing layered provider protocol chains.

4-Port Broadcom Adapter

Connect the workstation to your facility's network to access background rendering nodes, other Lustre Stations, and the facility's NAS or SAN centralized storage (if applicable). You connect the ports on the Broadcom card as follows:

- Connect Port 0 to the Autodesk control surface hub or the control surface itself.
- Connect Port 1 to your house network.
- Connect Port 2 to a SAN private network (optional).

For more details about configuring the Autodesk control surface, see "Connecting the Autodesk Control Surface" on page 28.

Integrated Network Adapter

For Windows-based workstations, connect the integrated network port to the Slave Renderer. For more details about configuring the Autodesk control surface, see "Connecting the Slave Renderer to a Lustre Workstation" on page 38.

For Linux-based workstations, connect the integrated network port to the Incinerator private port. Refer to the *Incinerator Installation and User's Guide* for information on how to connect your workstation to the Incinerator private network.

Connecting System Components

After you have connected peripherals to your workstation, you are ready to connect it to the Autodesk control surface, to video I/O hardware, and to a Slave Renderer.

See the following table for a summary of the steps necessary to connect components in your workgroup.

Step:	Refer to:
1. Connect the control surface to your workstation.	For the Autodesk control surface: "Connecting the Autodesk Control Surface" on page 45, "Assigning an IP Address to the Autodesk Control Surface" on page 48, and "Configuring Lustre to Connect to the Autodesk Control Surface" on page 49.
2. If necessary, connect a tablet to your workstation.	"Connecting a Stand-Alone Tablet" on page 50.
3. Connect a Slave Renderer to the Lustre workstation (Windows only).	"Connecting the Slave Renderer to a Lustre Workstation" on page 50.

Step:	Refer to:
4. Connect the workstation to video I/O components.	"Connecting Video I/O to a Master or HD Station" on page 52.
5. Connect the workstation to a high-speed data link device.	"Connecting to a High-Speed Data Link Device (HSDL)" on page 53.

Connecting the Autodesk Control Surface

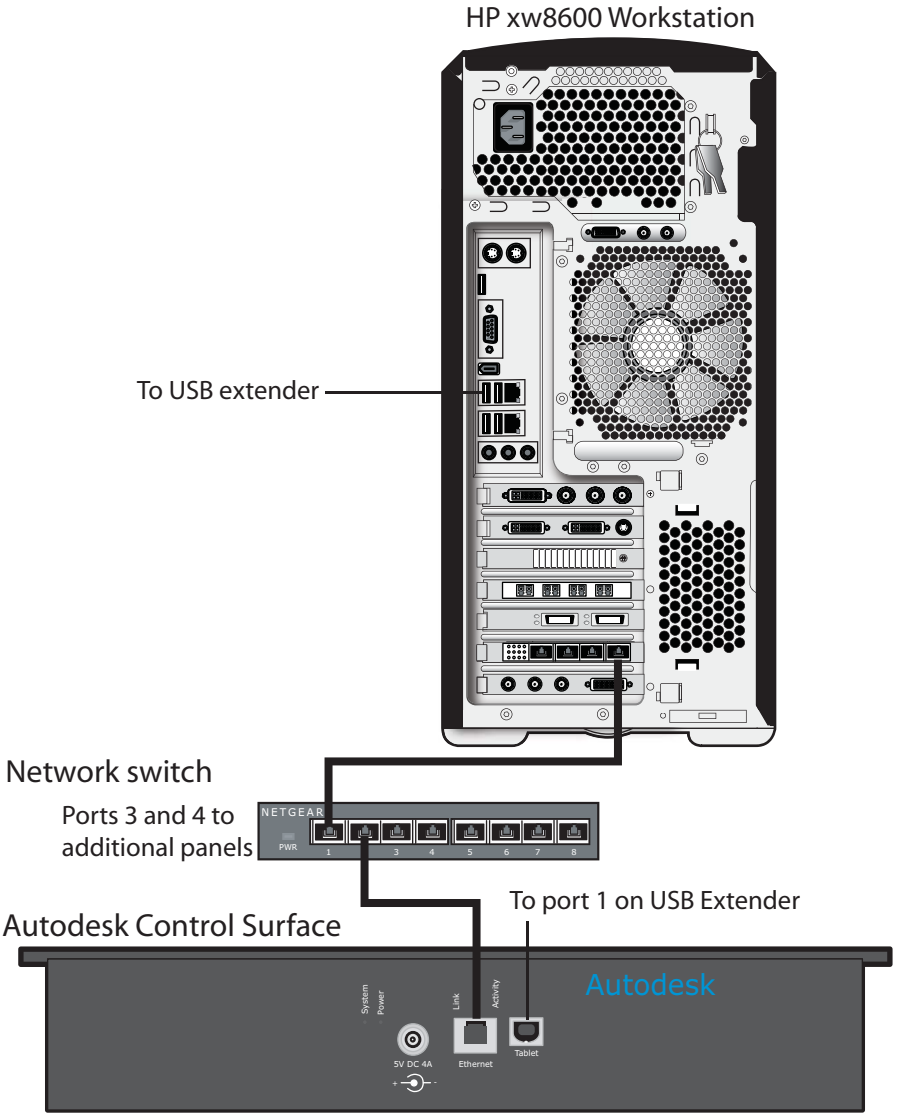
The Autodesk control surface consists of three panels. You can use any combination of them. If you are using more than one panel, you must use the network switch included with your shipment to cross-connect them.

Refer to the *Autodesk Control Surface User's Guide* for information on how to use the control surface with Lustre.

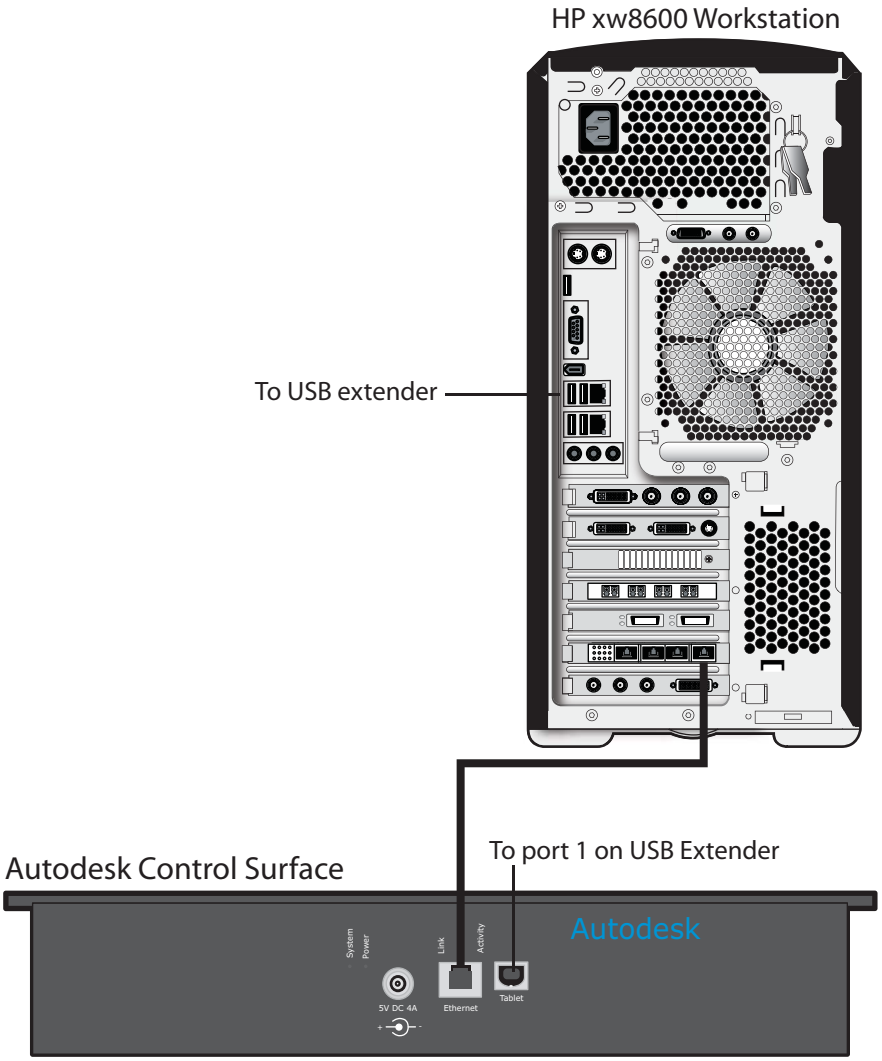
NOTE: The illustrations in the following procedure only show the central module, i.e. the colour grading panel. This is the only panel that has a USB connection for the integrated tablet, and a network port. The other two panels only have a network port, which you connect to the network switch.

To connect the Autodesk control surface:

1. Use the AC power adapter cables to connect each panel to a power supply.
2. Use a network cable to connect port 0 (the far right port) of the Broadcom network card on your workstation to port 1 on the Netgear ProSafe FS108 network switch.



If you are using only one panel, you can connect that panel directly to the workstation, instead of using the switch.



3. If you are using more than one panel, use network cables to connect each of the panels to the network switch.

4. If you are using the panel that includes the tablet, use a USB cable to connect the panel to a USB port on the back of your workstation.

Assigning an IP Address to the Autodesk Control Surface

After you have connected the Autodesk control surface, you must assign it an IP address.

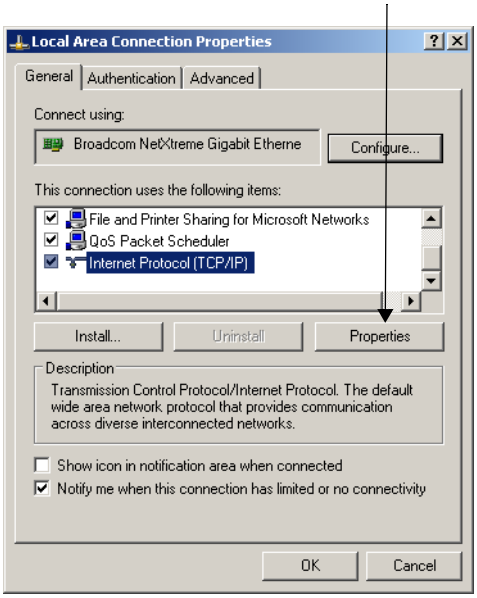
To configure the Autodesk control surface on Windows-based workstations:

1. Click Start | Settings | Network Connections.

   NOTE: You can also access Network Connections from the Control Panel.

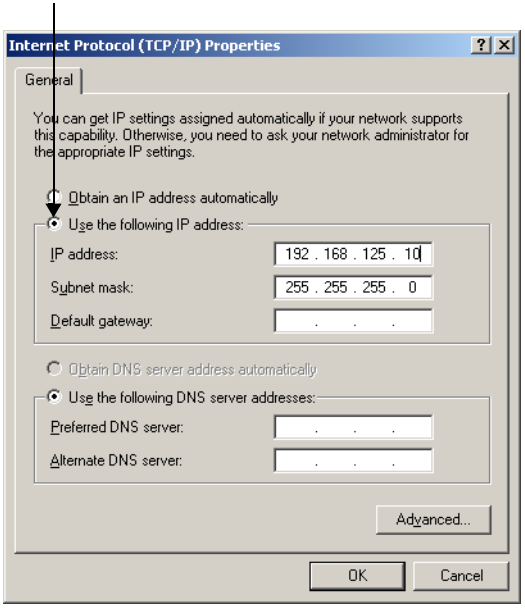
2. Right-click the port that the control surface switch or panel is connected to and choose Properties.

3. In the Local Area Connections Properties dialog box, select Internet Protocol (TCP/IP) and click Properties.



The Internet Protocol (TCP/IP) Properties dialog box opens.

4. Select the Use the following IP address option.



5. Set a static IP and Subnet mask address for the port. Select values that do not conflict with any other machine on your network. Consider using the following values:

   • IP address: 192.168.125.10

   • Subnet mask: 255.255.255.0

⚠ **WARNING:** The last digits of the IP address must not conflict with the panel IDs included in the *lustre.config* file.

6. Click OK twice.

Configuring Lustre to Connect to the Autodesk Control Surface

After you have configured the IP address of the control surface, you must configure Lustre to use the control surface.

To configure Lustre to use the Autodesk control surface on a Windows-based workstation:

1. Turn the power on for each of the modules and look at the top display panel on the module. It should display the panel name and ID.
2. After you install Lustre 2008, you must manually edit the *lustre.config* file for each project and the *init.config* file in the application home directory. See the *Autodesk Lustre 2008 User's Guide*.
3. In the *lustre.config* file of your project, enter the panel ID after each panel keyword.

   The keyword section should look similar to the following example.

   ```
   AutodeskPanels
   Panel-BT 1
   Panel-K 2
   Panel-T 3
   ```

4. Start Lustre. The following message should appear in the Console:

   ```
   Panel #<panel_ID> is detected
   ```

   This confirms that the Autodesk control surface is enabled.

Connecting a Stand-Alone Tablet

If you do not have the modular Autodesk control surface panel that includes the tablet, you can connect a stand-alone tablet.

To connect a stand-alone tablet, connect the tablet to USB Out 1 on the USB extender.

NOTE: On Windows-based workstations, you may need to restart Windows for the tablet to be recognized.

Connecting the Slave Renderer to a Lustre Workstation

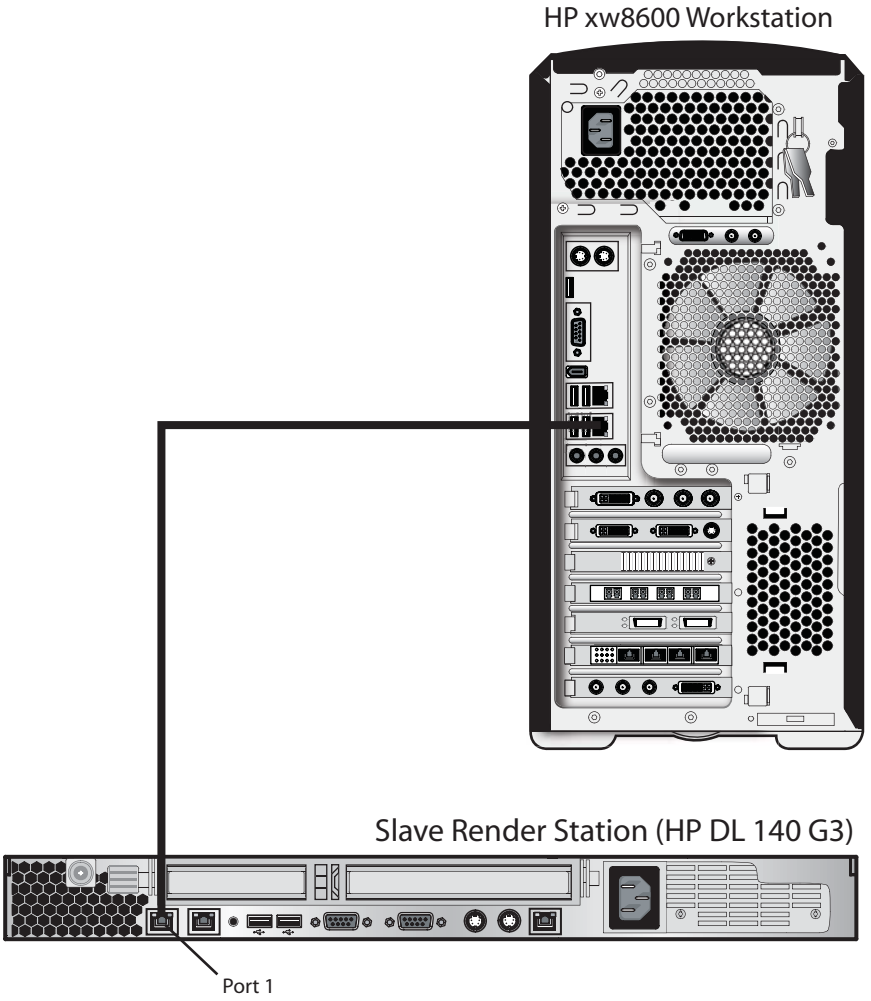
The Slave Renderer is available for the Master Station, the Lustre Station, and the Lustre HD Station, all of which must be running on a Windows-based workstation. The Slave Renderer is not available for the Linux-based version of Lustre, since it uses Incinerator to obtain real-time rendering and playback.

Although the Slave Renderer uses a network connection, a higher Category 6 grade cable is needed to accommodate the data that is transmitted. For information on configuring the IP addresses of the network ports that connect the two workstations, see the *Autodesk Lustre 2008 Software Installation Guide for Windows Workstations*.

To connect the Slave Renderer to a Windows-based workstation:

1. Connect the Category 6 crossover cable to the on-board network port at the back of the Lustre workstation.
2. Connect the other end of the cable to the network port 1 of the Slave Renderer machine.

   The Slave Renderer should be connected as shown in the following diagram.



Connecting Video I/O to a Master or HD Station

You use the video components to set up video I/O and a broadcast monitor. The only video hardware you must provide are: a sync generator, a VTR, and an SD or HD SDI broadcast monitor. The following components are included in your hardware shipment.

DVS Centaurus board and DVS Breakout Box II — The DVS Centaurus board provides video I/O. Use the DVS Breakout Box II for serial control of a VTR or other slave device and LTC output to an audio device.

NVIDIA Quadro FX 5600 graphics board — The NVIDIA Quadro FX graphics board provides output to your computer monitor.

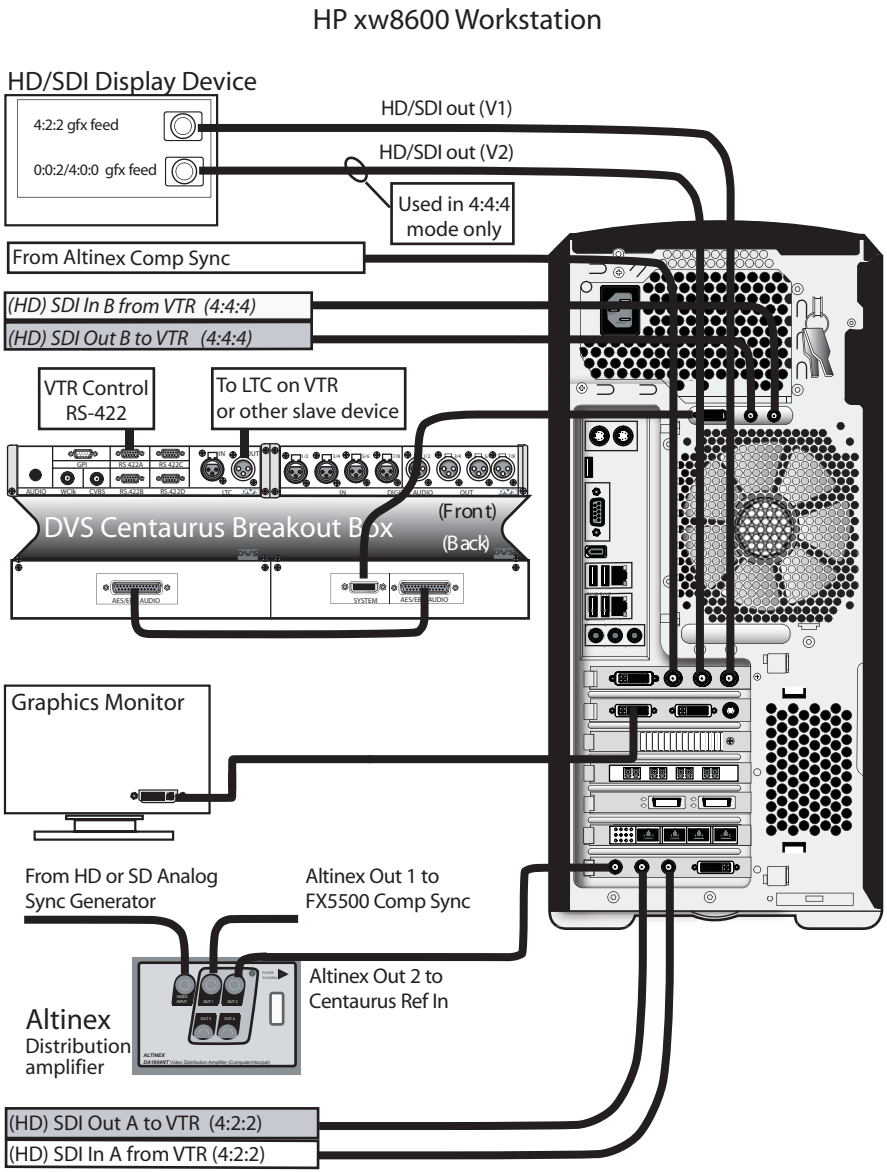
EIZO® 24-inch or Sony™ 21-inch wide screen LCD graphics monitor — The EIZO and Sony LCD graphics monitors provide a 16:9 widescreen aspect ratio for film or HD projects. With these monitors, the application runs at a maximum resolution of 1920x1200. For instructions on connecting the graphics monitor, see "Connecting the Monitor" on page 17.

Altinex® DA1804NT video distribution amplifier — The Altinex video distribution amplifier can serve a bi-level (SD) or tri-level (HD) sync signal to up four video hardware devices from a single sync source/generator. It serves the sync signal to the NVIDIA graphics board and the DVS Centaurus board.

Video I/O for Real-Time Deliverables

The following diagram describes the video I/O wiring for the Real-time deliverables configuration. Real-time deliverables allows Lustre to play out to a VTR directly through the DVS SDI OUT.

NOTE: The backplanes depicted in the following diagram represent a Windows-based configuration, but, it is also accurate for a Linux-based configuration, where the ATTO fibre-channel adapter is replaced by the Infiniband HCA.



Connecting to a High-Speed Data Link Device (HSDL)

If you have purchased an HSDL license, you can connect to and HSDL device through the DVS Centaurus.

Connect both the A and B in/out ports on the DVS main board and daughter card to your HSDL device.

4 User's Guide Addendum

Summary

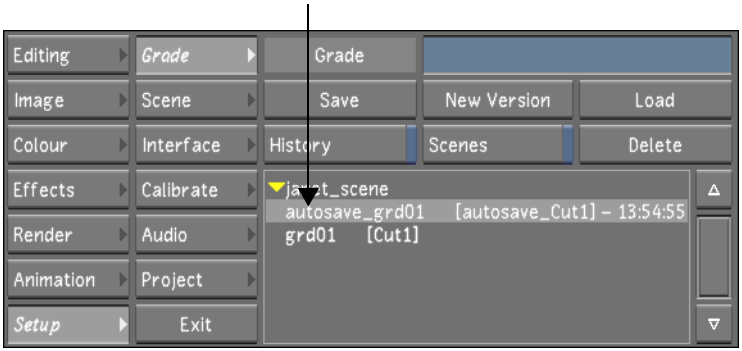
Overview

This chapter details the new features for the Lustre 2008. It also contains corrections to errors and omissions in the user documentation, which includes the *Autodesk Lustre 2008 User's Guide*.

Autosave Grades and Cuts

The Autosave keyword is an improved feature in Lustre 2008 Service Pack 2. When you enable the keyword, it ensures that the current grade and cut from the scene you are working on are backed up at specified time intervals. Only one grade and one cut per scene can be backed up. To enable the Autosave keyword and to set the save period, refer to the "Software, Project, and Wiretap Configuration Files" appendix in the *Lustre 2008 User's Guide*.

When Autosave is enabled, a snapshot of the current grade and cut appears in the Grade list. The word '*autosave_*' is added to the beginning of the grade and cut name and a time stamp of the autosave is added to the end.



NOTE: The autosave information in the grade list is not updated according to the Autosave time interval, therefore you need to press **CTRL+R** to refresh the information.

A snapshot of the grade, cut, and all their associated files are captured in the *sacc_data* folder.

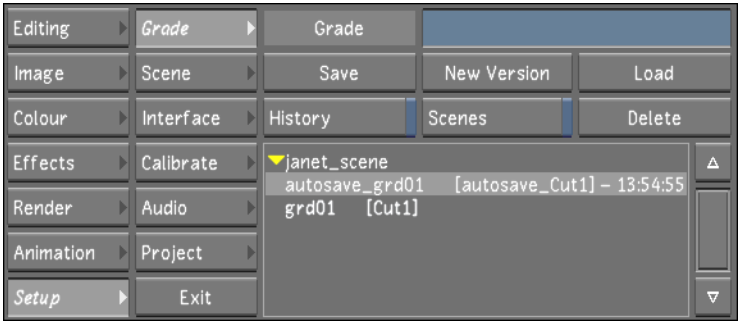
There are certain scenarios where an Autosave is performed before its scheduled time interval. These scenarios include the following:

- After you generate proxies.
- When you create a new grade (after performing a change cut or restoring an Autosaved grade or cut).

Autosave is suspended if you perform a change cut, see "Changing a Cut" in the *Lustre 2008 User's Guide*. If a change cut is performed, you need to load a grade, save a grade, or create a new grade for the Autosave to reactivate.

To restore an autosaved grade and cut:

1. In the Main menu, click Setup and then Grade.



2. Press **CTRL+R** to make sure the most current autosave information is displayed in the grade list.

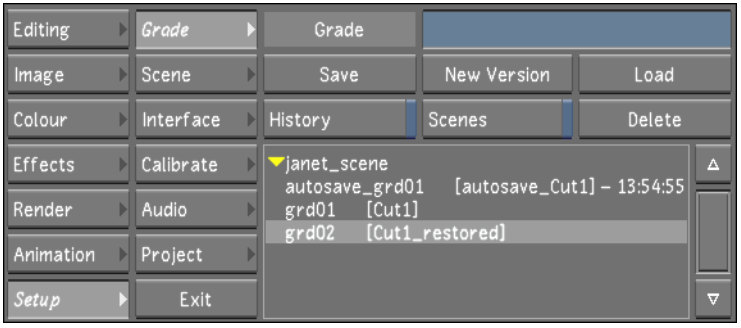
3. Make sure the autosaved grade and cut is selected.
4. Click Load to make sure the autosaved grade and cut are loaded.

   NOTE: The autosaved version of the cut file appears in the cut name list. (E.g., *autosave_Cut1*.)

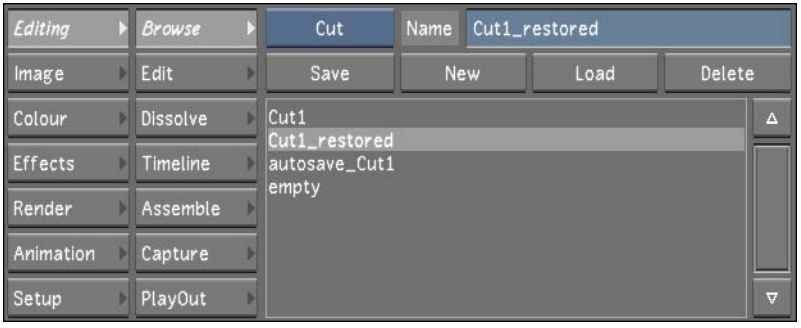
5. Click New Version.

   NOTE: You cannot click Save because you cannot overwrite a loaded Autosave cut and grade.

   A new grade is saved and associated with the restored cut.



For the cut file, the existing cut file name is used and *_restored* is added to the end of the name. This is to differentiate between the original cut and the one that is restored by using Autosave.



NOTE: If you are working with Autosave and multiple grades, you need to use the Grade History list for a list of all the backup grades.

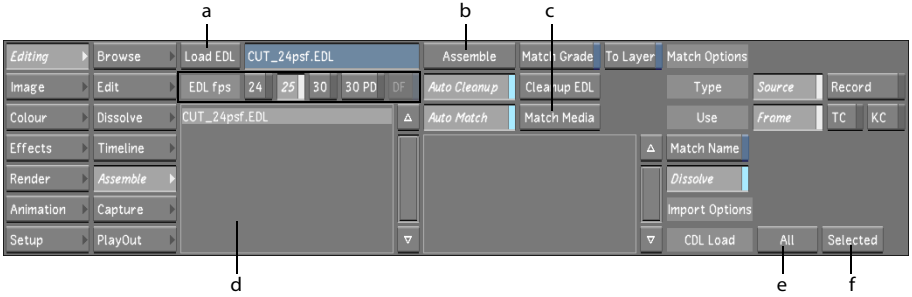
Assembling an EDL with CDL Data

The following procedure is to assemble an EDL with CDL data.

To assemble an EDL with CDL data:

1. Drag the shots that you want to assemble into the Shot bin.
2. Click Editing, and then click Assemble.

   The Assemble menu appears.



a) Load EDL button
b) Assemble button
c) Match Media button
d) EDL list
e) CDL Load All button
f) CDL Load Selected button

3. Select the EDL that contains the CDL data that you want to load from the EDL list.
4. Click Load EDL.

   NOTE: For more information on assembling an EDL, refer to "Assembling an EDL" in the *Autodesk Lustre 2008 User's Guide*.

5. Click Match Media to match the EDL event timecodes to the available shot timecodes in the Shot bin prior to assembling.
6. Click Assemble to conform the EDL and build the cut.

   The EDL events in the Assembly window are cleared.

7. Select the same EDL and click Load EDL.
8. Click CDL Load All or CDL Load Selected.

   The CDL data is now part of the current cut.

Hot Keys

The following changes apply to the hot keys.

Timeline Menu Hot Key

The **SHIFT+SPACEBAR** hot key (switch to Render View mode, switch off the user interface, and start playback) cannot be used in the Editing Timeline menu or in any of the Editing menu.

Colour Grading Hot Key

Press:	To:
CTRL+H	To hide or show the selected geometry.

Capture Menu Hot Key

Press:	To:
BACKSPACE	Delete the last digit of the current timecode value.

Configuration File Supplemental Option

The following change applies to the option that can be added to the configuration file to supplement Lustre functionality.

MatchCustom Option

The MatchCustom option specifies the XML metadata field to be used by the custom match option selected from the Browse menu. Enter the MatchCustom keyword followed by the XML field name (case sensitive) and type. E.g., MatchCustom DPXTimeCodeStart tc.

The following are the different variables used in the 'type' field.

Type	Definition
u	Unsigned integer
f	Float
s	String
tc	Timecode
kk	Keycode
i64	64-bit integer

5 Installation Documentation Workflows

Summary

Overview

Your Autodesk Lustre 2008 system is shipped preconfigured with the appropriate operating system and application already installed. In normal situations, the final configuration procedures are simple and well documented. In certain instances, you may be required to perform partial or complete reinstallation of some system components. Such instances might include a hardware or software upgrade, or an exceptional recovery procedure.

It is always recommended to identify and gather all relevant documentation before you proceed with these more involved configuration procedures.

This chapter highlights four of the more common installation workflows that you may need to perform on your Effects or Editing system. It also lists the documentation relevant to each step in each workflow.

Reinstalling from Scratch

Perform the tasks described in this workflow in cases where you need to rebuild your Lustre system in its entirety, from cross-connecting the hardware peripherals and storage arrays, to installing the operating system, and installing, licensing, and configuring your application.

To reinstall your system from scratch:

1. Prepare for the installation.

   Consult the *Autodesk Lustre 2008 Release Notes* (web version) for your release before you begin any installation. They contain the most current and updated information about requirements, late-breaking features and procedures, as well as a detailed list of all updated related documents and URLs to download the documents directly to your workstation.

2. Connect your workstation's hardware peripherals.

   Consult the *Autodesk Lustre 2008 Hardware Setup Guide* for your workstation.

3. Connect your storage.

   Consult the *Autodesk Stone Direct 2008 Configuration Guide* for your release.

4. Install the operating system.

   For Windows workstations, consult the *Autodesk Lustre 2008 Software Installation Guide for Windows Workstations*.

5. Configure the RAID volumes and mount the storage.

   Consult the *Autodesk Stone Direct 2008 Configuration Guide* for your release.

6. Install and license Lustre.

   Consult the *Autodesk Lustre 2008 Software Installation Guide for Windows Workstations* for your operating system.

7. Get going.

   Read the *Autodesk Lustre 2008 User's Guide* and *Autodesk Lustre 2008 What's New* to get familiar with Lustre's powerful features.

Connecting New or Expanded Stone Direct Storage

Perform the tasks described in this workflow in cases where you need to rebuild your Autodesk workstation's Stone Direct storage array. For instance, this could happen when you purchase supplementary storage enclosures to expand available disk space.

To connect new or expanded Stone Direct storage:

1. Prepare for the installation.

   Consult the *Autodesk Lustre 2008 Release Notes* for your release before you begin any installation. They contain the most current and updated information about requirements, late-breaking features and procedures, as well as a detailed list of all updated related documents and URLs to download the documents directly to your workstation.

2. Connect your storage.

Consult the *Autodesk Stone Direct 2008 Configuration Guide* for your release.

3. Configure the RAID volumes and mount the storage.

   Consult the *Autodesk Stone Direct 2008 Configuration Guide* for your release.

4. Configure your filesystem.

   For Windows workstations, consult the *Autodesk Lustre 2008 Software Installation Guide for Windows Workstations*.

5. Begin working with Lustre.

   Read the *Autodesk Lustre 2008 User's Guide* and *Autodesk Lustre 2008 What's New* to get familiar with your application's powerful features.

Upgrading Lustre

Perform the tasks described in this workflow in cases where you need to install or upgrade your application. Typically, upgrading the application does not require the filesystem to be reformatted or the operating system to be upgraded.

To upgrade your operating system:

1. Prepare for the installation.

   Consult the *Autodesk Lustre 2008 Release Notes* (web version) for your release before you begin any installation. They contain the most current and updated information about requirements, late-breaking features and procedures, as well as a detailed list of all updated related documents and URLs to download the documents directly to your workstation.

2. Install and license your application.

   Consult the *Autodesk Lustre 2008 Software Installation Guide for Windows Workstations* for your operating system.

3. Begin working with Lustre.

   Read the *Autodesk Lustre 2008 User's Guide* and *Autodesk Lustre 2008 What's New* to get familiar with your application's powerful features.

Documentation FAQs

Here are a few examples of common installation enquiries, and the documentation that provides the answers to each.

How Do I Request a License for Lustre?

Consult the *Autodesk Lustre 2008 Software Installation Guide for Windows Workstations* for your operating system for installation procedures and information on obtaining and installing the licenses required to launch your application.

How Do I Learn About the Latest Updates?

Consult the *Autodesk Lustre 2008 Release Notes* (web version). They contain the most current information about requirements and procedures, as well as a complete list of up-to-date related documents and URLs to download the documents directly to your workstation.

How Do I Find Out About All the New Features for This Release?

Read the *Autodesk Lustre 2008 What's New* for your Effects or Editing application for an overview of new features. For complete new feature information, consult the *Autodesk Lustre 2008 User's Guide* for your application.

How Do I Download the Latest Documentation?

Consult the *Autodesk Lustre 2008 Release Notes* for your release for a complete list of up-to-date related documentation and URLs to download the documents directly to your workstation.