

**Autodesk®**  
Flare™ 2010

# Installation and Configuration Guide

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# Introduction

# 1

## Topics in this chapter:

- [About This Guide](#) on page 1
- [Notation Conventions](#) on page 1
- [Related Documentation](#) on page 2
- [Contacting Customer Support](#) on page 2

## About This Guide

Welcome to the Autodesk® Flare™ 2010 Installation and Configuration Guide.

This guide provides information about installing and configuring the current release of Autodesk Flare.

## Notation Conventions

A number of style conventions are used throughout your documentation. These conventions and examples of their use are shown as follows.

Convention	Example
Text that you enter in a command line or shell appears in Courier bold. Press the Enter key after each command.	<b>install rpm -qa</b>
Variable names appear in Courier, enclosed in angle brackets.	<filename>
Feedback from the command line or shell appears in Courier.	limit coredumpsize

---

Convention	Example
Directory names, filenames, URLs, and command line utilities appear in italics.	<i>/usr/discreet</i>

---

## Related Documentation

Documentation for this release is installed with the product as PDF files and as an HTML help system, and is also available on the Autodesk web site at <http://www.autodesk.com/me-documentation>. From this page you can access the complete documentation library.

You should also refer to the product release notes for all late-breaking release information.

## Contacting Customer Support

For Autodesk Media and Entertainment Customer Support, visit <http://www.autodesk.com/support>.

Customer support is also available through your Autodesk reseller. To find a reseller near you, consult the reseller look-up database at <http://www.autodesk.com/resellers>.

# Installation and Configuration

# 2

## Topics in this chapter:

- [Preparing Your Installation](#) on page 3
- [Installation Workflow](#) on page 4
- [Connecting Remotely to the Storage of a Flame or Inferno Workstation](#) on page 10
- [Using a Direct Attached Storage or SAN as Media Storage](#) on page 12
- [Adding the Autodesk Kickstart File to the Linux Installation Disc](#) on page 14
- [Installing the Java Runtime Environment](#) on page 15

## Preparing Your Installation

Before you begin your Flare installation, perform the following actions to gather the necessary materials and prepare for the installation.

---

**NOTE** Some of these preliminary steps must be performed from a computer connected to the Internet.

---

- 1 Consult the Autodesk Flare System Requirements Web page at [www.autodesk.com/flare\\_sysrequirements](http://www.autodesk.com/flare_sysrequirements) for information on the minimum hardware requirements, Linux operating system version, and NVIDIA® graphics driver version for the current release of Autodesk Flare.
- 2 Decide which of the two supported Linux distributions to use for your Flare workstation:
  - **Red Hat Enterprise Linux** is a commercial Linux® distribution, which requires a subscription fee. Red Hat® offers several types of enterprise-class support, along with training, documentation and consulting. This distribution is recommended for most users, especially if you need assistance with Linux system administration and configuration. For more information, visit [www.redhat.com](http://www.redhat.com).

- **CentOS** is a free enterprise-class Linux distribution derived from the Red Hat Enterprise Linux sources. It is built and maintained by the online community. Unofficial support and documentation is freely available online, through mailing lists and discussion groups. Use this distribution if you are an experienced Linux user and do not need support with Linux system administration and configuration. For more information on CentOS visit [www.centos.org](http://www.centos.org).

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**NOTE** Autodesk Customer Support does not provide Linux system administration and configuration support.

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- 3 Obtain the required version of Red Hat Enterprise Linux or CentOS through one of the following methods:
  - Register at [www.redhat.com](http://www.redhat.com), and purchase a Subscription for Red Hat Enterprise Linux Desktop (Select one of the “Workstation” subscription options). See the Red Hat Web site for details.
  - Download CentOS for free from [www.centos.org](http://www.centos.org).
- 4 Add the required Autodesk kickstart file to your Linux distribution. This file is necessary for the Linux installer to install some mandatory packages. See [Adding the Autodesk Kickstart File to the Linux Installation Disc](#) on page 14.
- 5 Download the required version of the NVIDIA display driver. See the Autodesk Flare System Requirements Web page for information on the required driver version, and for the download link.
- 6 Download the ALSA driver upgrade. See the Autodesk Flare System Requirements Web page for the download link.
- 7 Download the Wacom® Intuos® tablet driver upgrade. See the Autodesk Flare System Requirements Web page for the download link.
- 8 If necessary, download any other 64-bit Linux drivers for your workstation. Refer to your third party hardware documentation for details.

---

**NOTE** Make sure any drivers you download are compatible with the Linux distribution you are using on the Flare workstation.

---

- 9 If you did not obtain your Autodesk Flare on DVD, download the Flare installation package from Autodesk. The installation package is available as a compressed *tar* file. You can retrieve the download link from the Release Announcement you received from Autodesk.  
Copy the Flare *tar* file to a removable medium, such as a USB thumb drive or a CD.
- 10 Optional: Go to [www.autodesk.com/me-documentation](http://www.autodesk.com/me-documentation), and download the latest versions of the following additional documents:
  - *Autodesk Visual Effects and Finishing Configuration File Reference Guide*
  - *Autodesk Stone and Wire Filesystem and Networking Guide*Although you do not need to read those guides to install Flare, this document occasionally refers to them for additional details, advanced configuration, or for definitions of terms and components specific to Autodesk Visual Effects and Finishing applications.
- 11 Copy all the drivers you downloaded, and the Flare *tar* file if applicable, to a removable medium such as a USB thumb drive or a CD.

## Installation Workflow

This section describes the main steps involved in installing the operating system on your workstation, installing drivers, configuring storage, and installing Autodesk Flare.

The installation process comprises three main stages:

- Installing the Linux operating system, and any necessary drivers for your hardware.
- Verifying the system before installing Flare.
- Installing and configuring Flare.

**To install Linux and hardware drivers:**

1 Ensure your workstation is in the following state:

- Mouse, keyboard, and graphics monitor are connected and powered on.
- The DVD or CDROM drive is set as the primary boot device in the workstation BIOS.
- There are no floppy disks, CDs, or DVDs in the drives of the workstation.

For more information on configuring your workstation BIOS refer to the documentation for your hardware.

2 Insert the first disc of the Linux distribution. This is the disc that you added the Autodesk kickstart file to in the previous procedure.

3 Restart the system.

The system should boot to the Linux installation disc. If it does not, review your BIOS settings to make sure the DVD / CDROM drive is set as the primary boot device.

4 At the Linux installation prompt type **linux ks=cdrom**

---

**WARNING** You must use this exact command to start the Linux installation. If you use the default options presented by the Linux installation prompt, some important packages required by Flare are not installed.

---

This command launches the Linux installation. The installer guides you through the rest of the procedure.

---

**NOTE** If you experience problems with the graphical Linux installer, reboot your computer and run the installer in low resolution VESA mode by typing **linux ks=cdrom xdriver=vesa**. If you still experience problems, reboot again and start the installer in text-only mode by typing **linux ks=cdrom text** at the Linux installation prompt.

---

5 If installing Red Hat Linux, enter your installation number when the Linux installer prompts you to. The number should be included in the package you received from Red Hat, or in your account profile on the Red Hat Web site.

---

**WARNING** Do not skip entering the installation number at this point. If you do not enter the installation number, some important packages required by Flare will not be installed by the Red Hat installer.

---

6 The installation procedure may ask you to initialize the system disk. Follow the prompts to initialize the disk, if necessary.

---

**NOTE** When partitioning your system disk, Autodesk recommends that you remove all existing partitions, then manually create a */boot* partition of at least 100MB, a Linux swap partition of 2048MB, and use the rest of the drive for the root partition */*. Set the root partition to be a primary partition.

---

7 Insert the remaining Linux distribution discs if prompted.

8 When the Linux installation completes, eject the disc from the drive, and reboot the workstation.

- 9 If you installed Red Hat Enterprise Linux, perform the following steps in the Setup Agent to register with Red Hat. If you do not yet have a network connection, you can complete the registration process online at <http://www.redhat.com/register/>.

- Create a Red Hat login (or sign in with your existing one).
- Connect your workstation to the Red Hat Network.

For more information on activating your Red Hat subscription, refer to the *Red Hat Enterprise Linux 5 Installation Guide* available at <http://www.redhat.com>.

- 10 Perform the following post-installation tasks:

- Change the default root password to secure the system. By default, the Autodesk kickstart file sets the password for the root account to *password*.
- Configure the network settings for your workstation to match the ones used in your facility. The Autodesk kickstart file automatically sets the workstation IP address to 192.168.0.100, and the gateway to 192.168.0.1.
- Configure the time zone for your geographic location.

---

**NOTE** Consult the Red Hat or CentOS documentation to configure these settings.

---

- 11 Switch to text mode to install the drivers. Open a terminal and type:

```
init 3
```

The graphical environment shuts down, and Linux runs in text-only mode.

- 12 If you downloaded the required drivers to a removable medium as suggested in the previous section, insert and mount this medium onto the workstation now.

Refer to your Linux documentation for information on mounting a DVD/CD or a USB thumb drive.

- 13 Install the NVIDIA graphics driver:

- Access the medium or directory where the driver installer was downloaded, and run the installer by typing:

```
sh <installer_file>
```

Where *<installer\_file>* is the *.run* driver installer file you downloaded from NVIDIA.

- Accept the license agreement.
- Give the default answers to ALL the other questions asked by the installation script.

- 14 Update the ALSA driver:

Access the medium or directory where the driver installer was downloaded, and type the following commands:

```
rpm -e --allmatches --nodeps alsa-lib-1.0.14-1.rc4.e15
```

```
rpm -ivh alsa-lib-1.0.17-1.e15.x86_64.rpm
```

- 15 Update the Wacom tablet driver:

Access the medium or directory where the driver installer was downloaded, and run the installer by typing:

```
rpm -Uhv --force linuxwacom-0.7.8.3-5.e15.x86_64.rpm
```

- 16 Optional: Install the 32-bit Java™ Runtime Environment (JRE). Java is required for Autodesk Customer Support to be able to connect to your workstation when necessary. See [Installing the Java Runtime Environment](#) on page 15.

- 17 Install any other third party drivers required by your hardware. Consult your third party hardware documentation for details.
- 18 Restart your workstation by typing:  
**reboot**

After the system has restarted, before installing Flare, perform the following tests to verify that important drivers and devices work properly in your new Linux installation.

**To verify your Linux system before installing Flare:**

- 1 Confirm that you can use Linux in graphical mode at a resolution of 1900 by 1200 pixels.
- 2 Open a terminal and log in as root.
- 3 If you installed Red Hat linux, confirm that the proper version has been installed. Type:  
**cat /etc/redhat-release**  
The output of the command should be exactly the following:  
Red Hat Enterprise Linux Client release 5.2 (Tikanga)
- 4 Test that the workstation has network access by pinging another machine in your network, for example:  
**ping 192.168.0.1**  
If the network works properly, the command should output multiple lines similar to the following:  
64 bytes from 192.186.0.1: icmp\_seq=0 ttl=64 time=0.100 ms  
64 bytes from 192.186.0.1: icmp\_seq=1 ttl=64 time=0.080 ms
- 5 Test that the Wacom tablet driver works properly, by typing:  
**wacdump /dev/input/wacom**  
The command should display a number of parameters for the Wacom tablet. As you move the stylus on the tablet, various parameters, such as POS\_X and POS\_Y should change.
- 6 Test that the ALSA sound driver works properly:
  - Connect a pair of speakers or headphones to the audio output connector of your sound card.
  - Type **alsamixer**, unmute all sound channels, and set their volume to maximum.
  - Type the following command to list the available sound devices:  
**aplay -l**  
The command should output the sound cards and devices it detects on your system. For example:  
\*\*\*\* List of PLAYBACK Hardware Devices \*\*\*\*  
card 1: Intel [HDA Intel], device 0: AD198x Analog [AD198x Analog]  
Subdevices: 1/1  
Subdevice #0: subdevice #0  
card 1: Intel [HDA Intel], device 1: AD198x Digital [AD198x Digital]  
Subdevices: 1/1  
Subdevice #0: subdevice #0
  - Type the following command to test the sound on one of the sound cards listed by the previous command:  
**speaker-test -D"plughw:<card>,<device>" -c2 -twav**  
Where <card> is represents the sound card number, and <device> represents the device number, as listed in the output of the previous command. For example:  
**speaker-test -D"plughw:1,0" -c2 -twav**

---

**NOTE** If your workstation has several sound cards, make sure you test the one you have plugged your speakers into.

---

If the sound system works properly, you hear a voice in the speakers or headphones, and the command output contains several lines similar to the following:

```
0 - Front Left
1 - Front Right
Time per period = 2.730375
0 - Front Left
1 - Front Right
Time per period = 2.986758
```

- 7 If any of the above tests fail, contact your hardware vendor, or your Linux vendor for assistance.

---

**NOTE** Autodesk Customer Support does not provide support with Linux administration and configuration.

---

- 8 If all tests are successful, you are ready to install Autodesk Flare.

#### To install Flare:

- 1 Access your Flare installation media:
  - If installing from an application DVD, insert the disc, and mount it.
  - If installing from a downloaded *tar* file, unpack the file to a temporary directory by typing:  
**tar -zxvf <filename.tar.gz>**  
The file is uncompressed and an installation directory is created on your system.

- 2 Go to the Flare installation directory, for example *Flare2010\_LINUX64\_RHEL4*.

- 3 Run the Flare pre-installation script by typing:

```
./INSTALL_FIRST
```

---

**NOTE** If you are installing from the application DVD, start the pre-installation script by typing:  
**/usr/bin/perl <DVD\_mount\_point>/Flare2010\_LINUX64\_RHEL4/INSTALL\_FIRST**

---

This script configures some required system settings for the application.

- 4 Start the Flare installation script by typing:

```
./INSTALL_FLARE
```

The installation script verifies the installation packages and checks your system for previously installed versions of the application. This process may take a few minutes.

- When you are asked if you want to start Backburner Manager automatically, click Yes if Backburner Manager is not installed on any other workstation in your network. Otherwise, click No.
- Click Yes when you are asked if you want to start Backburner Server automatically. This component is required for background tasks such as background Wire transfers and background proxy generation.
- Click Yes when you are asked if you want to enter the manager for the Backburner server. The *manager.host* file appears. If you know the hostname or IP address of your Backburner Manager, enter it here. Otherwise, close the file without saving it. You can edit this setting later.
- When the installation script asks if you want to create an application user, answer Yes if you want to create a new user just for Flare (such as *flare2010*), or No if you want to run the application with an existing user account.

- If you answered No to the previous question, a list of all existing users is displayed. Select the user accounts you plan to use the application with.

---

**TIP** You can use **CTRL+click** to select multiple entries.

---

The application icon is placed on the Linux Desktop of the selected users.

- When prompted to configure the software initialisation file (*init.cfg*), click OK. The default keyword values in this file are appropriate in most cases. If you need to change some of the settings, scroll through the file and modify keyword values as necessary. Consult the *Autodesk Visual Effects and Finishing Configuration File Reference Guide* for details on each keyword.
  - If any changes are detected in the */etc/X11/xorg.conf* file, you are prompted to configure this file. When the file appears in the *xxdiff* editor, in the Global menu, choose Select Right, and then, in the File menu, choose Save as Right. If prompted to overwrite, click OK.
  - If you modified the *xorg.conf* file, you receive a message to restart the X server. When the installation scripts completes, log out and then log in again as root to restart the X server.
  - When the installer asks which documentation set to install, select either Flame or Inferno.
- 5 After the application has installed, configure your storage. You can use Flare with the following storage configurations:
    - Remote connection to the existing Stone FS or standard filesystem storage of an Autodesk Inferno or Autodesk Flame workstation in your facility. See [Connecting Remotely to the Storage of a Flame or Inferno Workstation](#) on page 10 for important guidelines on preparing your Flame or Inferno storage for remote connections.
    - A standard UNIX filesystem on a centralised SAN in your facility. See [Using a Direct Attached Storage or SAN as Media Storage](#) on page 12.
    - A standard UNIX filesystem on a direct attached storage (DAS) device. See [Using a Direct Attached Storage or SAN as Media Storage](#) on page 12.
  - 6 License your application. See [Licensing Flare](#) on page 17.
  - 7 After you enter the license code, you are ready to start the application for the first time.

#### To start the application for the first time:

- 1 Double-click the Flare icon on your Desktop.
- 2 The Autodesk Master Systems Software License Agreement appears.
- 3 Read the text of the License Agreement carefully, and click I Accept if you agree to all the terms in the License Agreement.  
The Project Management menu appears.
- 4 Use the Project Management menu to open a remote project from the storage of a Flame or Inferno workstation, or to create a project and a user on the local storage.  
Refer to the *Flare Workflow* chapter in the application help for information on how to remotely open or create a project on the storage of an Inferno or Flame workstation.

---

**NOTE** If you cannot see the framestores of other workstations when starting Flare, make sure that self-discovery is enabled in the */usr/discreet/sw/cfg/sw\_probed.cfg* file, and that the value of the `PORT` keyword in that file matches the value used by other workstations in your network. See the *Autodesk Stone and Wire Filesystem and Networking Guide* for details.

---

- 5 Click Start or press **Enter**.

After a few moments, the following message appears:

```
Startup complete.
```

You are ready to start working in the application. If you see a splash screen rather than the application interface, click anywhere on the screen.

## Connecting Remotely to the Storage of a Flame or Inferno Workstation

The XR-series Stone Direct storage arrays of Flame and Inferno workstations are tuned for the high performance I/O needs of a local creative application. Stone Direct storage can also provide a basic level of interactivity for remote Flare workstations when performing light to medium I/O tasks, such as creating Batch setups, or rotoscoping.

When correctly configured, remote Flare workstations can effectively leverage any unused bandwidth without impairing the Flame or Inferno creative workflow.

Stone FS and standard filesystems connected to a Flame or Inferno workstation perform differently in shared workflows. Both will perform adequately for remote Flare activity with light I/O requirements.

The Stone FS filesystem incorporates a bandwidth reservation service that protects the Flame and Inferno Player and Input/Output clip module from losing bandwidth, but is not capable of providing protection for general interactivity when the storage is stressed by high-bandwidth remote operations, such as playback, Wire transfers, or import/export.

It is therefore recommended to use a standard filesystem for the Flame or Inferno workstation to which Flare remotely connects. The advanced standard filesystem Bandwidth Manager (automatically installed with Visual Effects and Finishing applications) manages I/O requests to your storage, and provides greater protection in all Flame or Inferno workflows.

Note that even when the standard filesystem Bandwidth Manager is managing I/O requests, factors such as I/O operations from third-party applications, filesystem fragmentation, partition fill rate, concurrent reading/writing, and mixed I/O sizes can still decrease the performance of your storage. Periodic filesystem maintenance and workflow changes may be required to achieve optimal performance. See the “Standard Filesystem Maintenance” chapter in the *Autodesk Stone and Wire Filesystem and Networking Guide*.

Moreover, if you expect to use Flare for very I/O-intensive tasks, it is recommended to design a storage and networking solution accordingly. Regardless of the effectiveness of the Bandwidth Manager, the direct attached storage of Visual Effects and Finishing applications (running either Stone FS or a standard filesystem) was not designed to provide the functionality and performance of a high-end SAN storage device.

## Configuring Bandwidth Management for Standard Filesystems

This section provides guidelines for configuring the standard filesystem Bandwidth Manager on the Flame or Inferno workstation to have storage bandwidth adequately distributed between the local application and the remote Flare workstations.

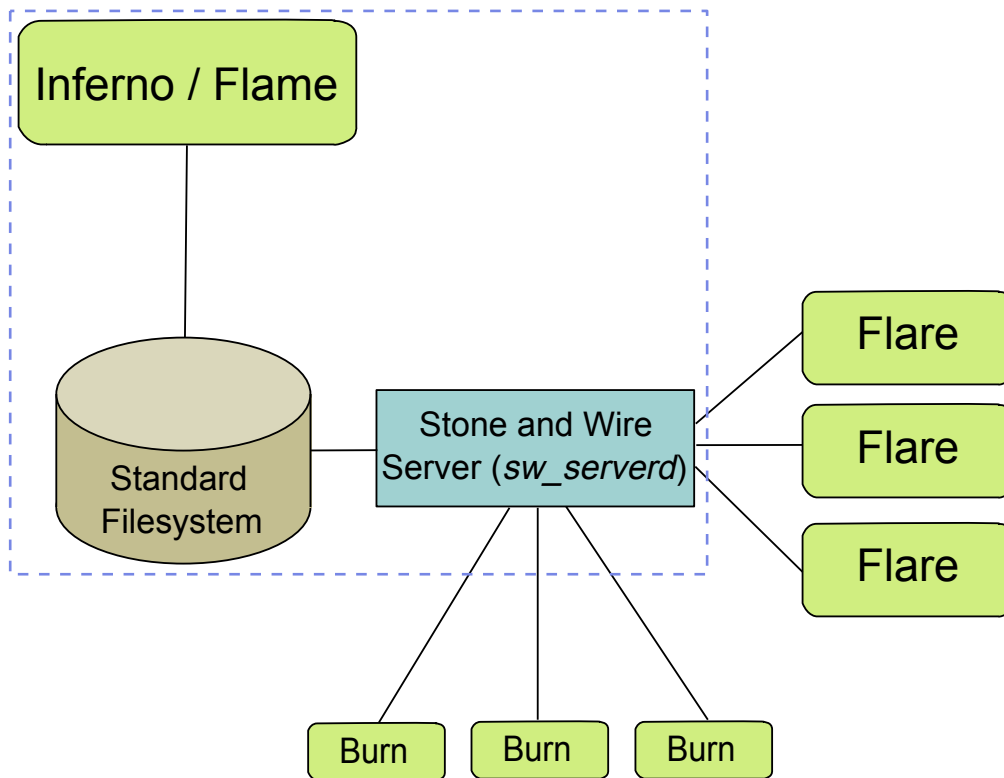
The Stone and Wire Bandwidth Manager reserves storage bandwidth for Visual Effects and Finishing applications, daemons and tools that use a standard filesystem as their media storage. This ensures that the bandwidth available to the local Flame or Inferno application is not jeopardized by requests from remote hosts, such as Flare workstations.

---

**NOTE** See the *Autodesk Stone and Wire Filesystem and Networking Guide* for more details about how the Bandwidth Manager handles reservations.

---

When Flare connects remotely to an Inferno or Flame storage, all its I/O operations are performed through the Stone and Wire server daemon.



Since there is only one bandwidth reservation setting for the Stone and Wire daemon, Flare workstations share the reserved bandwidth with Atuodesk Burn® render nodes, background Wire, proxy generation, and other processes that access the storage through Wire. To make sure Flare performance is not severely affected, limit the number of other processes accessing the storage at the same time.

Perform the steps in the procedure below to set up an optimal bandwidth reservation for the local application, as well as for remote Flare workstations.

**To configure bandwidth reservation:**

- 1 Log in as root to the Flame or Inferno workstation and open the Bandwidth Manager configuration file `/usr/discreet/sw/cfg/sw_bwmgr.cfg` in a text editor.
- 2 Locate the [Device] section that corresponds to the standard filesystem partition (by default [Device0]), and uncomment it if it is commented out.
- 3 Uncomment the Path0 line, and set the path to the mount point of your standard filesystem.
- 4 Uncomment the TotalAvailableReadBandwidth line, and set its value to the total estimated reading bandwidth of your storage device, in megabytes per second. For example:  
`TotalAvailableReadBandwidth= 500`
- 5 Add a Reservation line for the local application (Flame or Inferno), as follows (use the exact values specified below):

---

**NOTE** These values have been found to provide optimal performance when Flare workstations connect to the 2-loop, 4GB/s XR-series storage with 15,000 RPM drives of a Flame or Inferno workstation.

---

- For Flame add the following line:

```
Reservation1=flame 290
```

- For Inferno add the following line:  
Reservation1=inferno 290

- 6 Add a `Reservation` line for the Stone and Wire server, as follows (use the exact values specified below):

```
Reservation2="S+W Server" 40
```

---

**NOTE** Do not uncomment any of the example `Reservation` lines that are already in the file.

---

- 7 Save and close the configuration file, and restart Stone and Wire by typing:

```
/etc/init.d/stone+wire restart
```

The Bandwidth Manager now reserves bandwidth for the local application and for remote Flare applications.

---

**NOTE** If the current storage throughput is higher or lower than the sum of the reservation settings, the Bandwidth Manager dynamically distributes bandwidth between the active clients based on the ratio between each client's reservation value.

---

## Using a Direct Attached Storage or SAN as Media Storage

This section provides an overview of the steps involved in defining a standard UNIX<sup>®</sup>-compatible filesystem as media storage for Flare.

---

**NOTE** For definitions of the terms used in this section, as well as details on the configuration process, see the *Autodesk Stone and Wire Filesystem and Networking Guide*.

---

Media can be stored on any of the following hardware, *as long as it is not the system drive*:

- A direct-attached storage device (DAS).
- A storage area network (SAN).

**To set up a DAS or SAN filesystem as media storage:**

- 1 Connect and power up the storage volume. Refer to your vendor-supplied documentation.
- 2 Make sure a UNIX-compatible standard filesystem is created on the disk array. For information, consult the documentation of the filesystem you intend to use.

---

**NOTE** For best performance, it is recommended to use a filesystem known for high-performance media playback, such as XFS<sup>™</sup> or SNFS. Consult your Linux or filesystem vendor for driver and configuration information.

---

- 3 Stop Stone and Wire with the command:

```
/etc/init.d/stone+wire stop
```

Messages appear in the terminal indicating that Stone and Wire is stopped.

- 4 Perform the following steps to create the Managed Media Cache directory:

- Create a local directory to mount the filesystem to. For example:  

```
mkdir -p /mnt/SAN_vol
```

- Mount the filesystem to the directory created in the previous step. See your Linux documentation for details.
  - Create the Managed Media Cache directory on the mounted filesystem, in a directory named after the workstation hostname. The Managed Media Cache directory should be named after the partition name (by default partition 7, or *p7*).  
For example, if the filesystem mount point is */mnt/SAN\_vol*, your workstation hostname is *flare1*, and the partition name is *p7*, type:  
**mkdir -p /mnt/SAN\_vol/flare1/p7**
  - Set the ownership for the directory created in the previous step to the root user. For example:  
**chown -R root:users /mnt/SAN\_vol/flare1/p7**
  - Set permissions for the directory to be readable, writable, and searchable by the owner and its group, and readable and searchable by all. For example:  
**chmod -R 775 /mnt/SAN\_vol/flare1/p7**
- 5 To make Flare aware of the standard filesystem volume, define the Managed Media Cache as a partition in the Stone and Wire configuration file, and set its preferences:
- Open the file */usr/discreet/sw/cfg/stone+wire.cfg* in a text editor.  
The settings for the partition are defined in the [Partition<partition\_number>] section of the file.
  - Uncomment the Name keyword and enter a meaningful name for the volume. For example:  
Name=SAN1
  - Uncomment the Path keyword, and specify the path to the Managed Media Cache directory on the mounted volume. For example:  
Path=/mnt/SAN\_vol/flare1/p7
  - Optional: Flag the partition as shared by uncommenting the Shared keyword and setting it to True.
- 
- NOTE** Set the Shared keyword to True in a SAN environment.
- 
- Enter the media preferences for the platform by uncommenting the desired bit depth and setting the file format to one of the supported formats. These are set in the [DefaultFileFormats] section. See the *Autodesk Stone and Wire Filesystem and Networking Guide* for details.
  - Optional: Enter the audio preferences for the platform by uncommenting the AudioFileFormat keyword and setting it to WAV or AIFF.
  - Optional: If using the *JPG* file format, uncomment the JpegCompressionFactor keyword and set JPEG compression to a value between 0 and 100.
  - Optional: To prevent the use of symbolic links across filesystems, uncomment the SymlinkAcrossFilesystems=False keyword.
  - Save and close the *stone+wire.cfg* file.
- 6 Optional: If this is the first filesystem you are configuring for this workstation, set the framestore ID in the */usr/discreet/sw/cfg/sw\_storage.cfg* file:
- If the file */usr/discreet/sw/cfg/sw\_storage.cfg* does not exist, create it by typing:  
**touch /usr/discreet/sw/cfg/sw\_storage.cfg**
  - Open the */usr/discreet/sw/cfg/sw\_framestore\_map* file in a text editor and locate the framestore ID in the [FRAMESTORES] section. It contains a line similar to the following:  
FRAMESTORE=kamloops HADDR=172.16.129.152 ID=152

- Write down the value of the ID field.
  - Open `/usr/discreet/sw/cfg/sw_storage.cfg` in a text editor and write the ID value from `sw_framestore_map` as the ID value in `sw_storage.cfg`. The `sw_storage.cfg` file should now look like this:
 

```
[Framestore]
ID=152
```
  - Save and close `sw_storage.cfg`.
- 7 Restart Stone and Wire by typing:
 

```
/etc/init.d/stone+wire restart
```

 A message appears indicating Stone and Wire has restarted.
  - 8 Make sure the filesystem is mounted. Type
 

```
/usr/discreet/sw/sw_df
```

 A report appears providing information about the total, free, and used disk space and inodes in the partition.
  - 9 To verify that the standard filesystem is correctly configured, start Flare.

Any project created in Flare after this point has a standard filesystem partition as its primary partition. Existing projects are unaffected by this setting and remain associated to their respective partitions.

## Adding the Autodesk Kickstart File to the Linux Installation Disc

This section describes how to create a new CD1 or DVD for your Red Hat Enterprise Linux or CentOS distribution so that it contains the required Autodesk kickstart file.

**To copy the Autodesk kickstart file to the first CD/DVD of your Linux distribution:**

- 1 On a computer running Linux and with a CD or DVD burner, log in as root.
- 2 Insert the CD1 or DVD of your Linux distribution into the drive. You do not need to mount it at this time.

---

**NOTE** If you downloaded your Linux distribution as an iso image, skip to step 5.

---

- 3 In a terminal, extract an ISO image of the disc by typing:
 

```
dd if=/dev/<CD/DVD device> of=/<destination path for the extracted ISO image>
```

 For example:
 

```
dd if=/dev/cdrom of=/tmp/Redhat5.iso
```
- 4 Eject the disc.
- 5 Access the `dist/kickstart` subdirectory of your Flare installation package.
 The directory contains a kickstart file, `RHEL50_CentOS5_kickstart.cfg`, as well as a script that adds the kickstart file to an ISO image.
- 6 Run the `build_kickstart_cd` script to add the kickstart file to the ISO image of your CentOS distribution CD1 or DVD:
 

```
./build_kickstart_cd ks_centos5_rh5.cfg <original ISO image name> <new ISO image name>
```

 For example:

```
./build_kickstart_cd ks_centos5_rh5.cfg /tmp/Redhat5.iso  
/tmp/Redhat5_KS.iso
```

- 7 Burn the new ISO image to a blank disc using a tool such as **cdrecord**. For example:  
**cdrecord -v speed=2 dev=0,4,0 /tmp/Redhat5\_KS.iso**

---

**NOTE** The `dev` value depends on your hardware configuration. Type **cdrecord -scanbus** to determine the address of your CD or DVD writer.

---

- 8 Use the new disc as the first CD or DVD of the Red Hat Linux or CentOS distribution you plan to install on the Flare workstation.

## Installing the Java Runtime Environment

Perform the following procedure to download and install the 32-bit version of the Java Runtime Environment on your workstation, including the Java plug-in for Firefox. The Java plug-in is required for Autodesk Customer Support to be able to remotely log into your workstation if necessary.

### To install the Java Runtime Environment:

- 1 Open a terminal and log in as root.
- 2 Download the Java Runtime Environment package to a temporary directory. Type:  
**wget http://javadl.sun.com/webapps/download/AutoDL?BundleId=29210 -O jre-6u13-linux-i586-rpm.bin**
- 3 Install the Java Runtime Environment:  
**sh jre-6u13-linux-i586-rpm.bin**
- 4 Install the Java plug-in for the Firefox browser:  
**ln -s /usr/java/jre1.6.0\_13/lib/i386/libnpjp2.so /usr/lib/mozilla/plugins/**
- 5 Back up the Firefox start script:  
**cp /usr/bin/firefox /usr/bin/firefox.x86\_64**
- 6 Rename the Firefox start script as follows:  
**mv /usr/bin/firefox /usr/bin/firefox.i386**
- 7 Open the Firefox start script `/usr/bin/firefox` `/usr/bin/firefox.i386` in a text editor and change the line `MOZ_ARCH=$(uname -m)` to `MOZ_ARCH="i686"`
- 8 Save the edited Firefox start script.
- 9 Set the 32-bit and 64-bit Firefox start scripts as alternatives. This operation will make it easy to choose which version of Firefox to start. Type:  
**alternatives --install /usr/bin/firefox firefox /usr/bin/firefox.i386 1**  
**alternatives --install /usr/bin/firefox firefox /usr/bin/firefox.x86\_64 2**
- 10 Configure the default version of Firefox. Type:  
**alternatives --config firefox**
- 11 Type **1**, then press **Enter**.
- 12 Change permissions on the Firefox symbolic link. Type:  
**chmod 777 /usr/bin/firefox**

- 13 Test the Java plugin by pointing Firefox to <http://java.com/en/download/help/testvm.xml>. The Web page informs you that JRE is installed and running correctly on your system.

# Licensing Flare

# 3

## Topics in this chapter:

- [Licensing Workflow Overview](#) on page 17

## Licensing Workflow Overview

To be able to use Flare you must enter a license code.

To license Flare, you use “floating” licenses that are distributed by a License Server to Flare workstations on your network as needed.

You must use a License Server even if you only have one Flare workstation in your facility. The License Server can be set up on the Flare workstation itself.

The following workflow outlines how to set up Flare floating licenses on your network.

### To license a Flare network:

- 1 Install the License Server. See [Installing the License Server](#) on page 18.

---

**NOTE** If you already have an Autodesk Burn License Server in your network, skip this step and use the existing Burn License Server to distribute licenses to Flare workstations as well.

---

- 2 Obtain a license code for the License Server. See [Obtaining License Codes](#) on page 18
- 3 Add the Flare license code to the License Server, and configure the server to distribute licenses to Flare workstations. See [Adding the Flare Licenses to the License Server](#) on page 19.
- 4 Configure each Flare workstation to retrieve a license from the License Server. See [Configuring Flare Workstations to Retrieve Licenses](#) on page 19.

- 5 Optional: to avoid conflicts with other applications or license servers in your facility, you may need to change the default port setting used by the Flare License Server. See [Changing the Default Port Used by the License Server](#) on page 20.

## Installing the License Server

The License Server is a Linux daemon that provides concurrent licenses to Flare workstations on the network, as needed.

You can install the License Server on a Flare workstation in your network, or on any 64-bit system running one of the required versions of Red Hat Enterprise Linux or CentOS.

Perform the following procedure to install the License Server on a workstation designated as the License Server on your network.

### To install the License Server:

- 1 Log in to the workstation designated as the License Server as root.
- 2 If you are installing from the application DVD, mount the disc, and open the Flare installation directory, for example:

```
cd /media/cdrom/Flare_2010_LINUX64_RHEL4
```

---

**NOTE** The same Flare installation package is used for Red Hat Enterprise Linux and CentOS.

---

- 3 If you are installing from a downloaded *tar* file, unpack the file to a temporary directory.
- 4 Launch the License Server installation script by typing:

```
./INSTALL_LICSERV
```

The License Server is installed.

## Obtaining License Codes

You can obtain license codes for Flare by registering the application with the Autodesk Media and Entertainment Licensing Department by e-mail or telephone.

All license codes obtained by e-mail or telephone are temporary 30-day licenses that you use until your permanent license is confirmed and delivered.

To obtain license codes for Flare, you must generate a unique host ID for the License Server. This ID is used to confirm your Flare license and issue license codes.

### To obtain license codes for Flare:

- 1 Log in as root on the License Server workstation.
- 2 Obtain the unique Discreet host ID for the system. Open a terminal and type:

```
/usr/local/bin/dlhostid
```

The following line should be part of the output:

```
The Discreet host ID of this machine is  
"DLHOST01=25231AEF83AD9D5E9B2FA270DF4F20B1"
```

- 3 Send the Discreet host ID (including the *DLHOST01=* part) to the Autodesk Media and Entertainment Licensing Department using one of the following methods to register Flare and obtain license codes.
  - **Registering by E-mail** To acquire a license code by e-mail submit a request with the host ID of the workstation to *me.support@autodesk.com*.
  - **Registering by Telephone** You can speak to a licensing representative by calling the Licensing Department toll-free in North America at 1-800-925-6442 between 8 AM and 8 PM EST. Outside of North America, call 1-514-954-7199.
- 4 Once you receive your license codes from the Licensing Department, you need to add the licenses to the License Server.

## Adding the Flare Licenses to the License Server

Configure the License Server with the Flare license code you received using the following procedure.

**To configure the License Server for your network:**

- 1 Log in as root to the License Server system.
- 2 Go to the */usr/discreet/licserv/licenses* directory.
- 3 In a text editor, create a file called *DL\_license.dat*.

---

**NOTE** If you are setting up Flare licensing on an existing License Server (for example a Burn License Server), the *DL\_license.dat* file already exists. Open the existing file in a text editor.

---

- 4 Enter the information provided by the Licensing Department in this file. It should be similar to the following:

```
SERVER server001 DLHOST01=886C2B75E8E57E4B03D784C3A2100AC0
DAEMON discreet_1 discreet_1
USE_SERVER
FEATURE flare_x86_64_2010 discreet_1 2010.999 18-mar-2009 8 \
        6D7AE3402ECB46174B70 ck=47
```

---

**NOTE** If you are working in an existing *DL\_license.dat* file, make sure you do not accidentally alter any of the existing text in the file when entering the Flare license information.

---

- 5 Save and close the file.

This file sets up the floating licenses available for distribution by the License Server to the Flare workstations on your network.
- 6 Start the License Server by typing:  
**`/etc/init.d/license_server start`**

---

**NOTE** The License Server cannot start unless the license is entered correctly in *DL\_license.dat*. Check the *boot.log* file to make sure the License Server is started and working properly.

---

## Configuring Flare Workstations to Retrieve Licenses

Configure the Flare workstations to retrieve licenses from the License Server using the following procedure. You must repeat this procedure for each Flare workstation on the network.

---

**NOTE** If the License Server for your network is running on a Flare workstation, make sure you perform the following procedure on this workstation as well. Otherwise, this workstation is able to distribute Flare licenses to other workstations, but is unable to retrieve a license for itself.

---

**To configure a Flare workstation with a license:**

- 1 Log in as root to the workstation.
- 2 Go to the `/usr/local/flexlm/licenses` directory.

---

**NOTE** If the directory does not exist, create it by typing `mkdir -p /usr/local/flexlm/licenses`

---

- 3 In a text editor, create a file called `DL_license.dat`.
- 4 Configure the workstation to contact the License Server for a license by copying the first three lines of the information provided by the Licensing Department to the `DL_license.dat` file.

This information is similar to the following example:

```
SERVER server001 DLHOST01=886C2B75E8E57E4B03D784C3A2100AC0
DAEMON discreet_1 discreet_1
USE_SERVER
```

- 5 Save and close the file.  
You are ready to run Flare.

## Changing the Default Port Used by the License Server

In order to avoid conflicts with other applications or license servers in your facility, you may need to change the default port setting used by the Flare License Server. This requires a minor change to the `DL_license.dat` file on the License Server machine, as well as on every Flare workstation on the network.

**To change the default port used by the License Server:**

- 1 Log in as root to the system where the License Server is installed.
- 2 Open the `/usr/discreet/licserv/licenses/DL_license.dat` file in a text editor.
- 3 Find the `SERVER` line.

The line should look similar to the following example:

```
SERVER server001 DLHOST01=886C2B75E8E57E4B03D784C3A2100AC0
```

This gives the system a default port number in the range of 27000-27009.

- 4 Enter a different port at the end of the `SERVER` line.  
For example, to use port 62222, add 62222 to the end of the line:
- 5 For the vendor daemon, `discreet_1`, a different port number is assigned by the operating system at each runtime. You have the option of fixing this port number. Insert the following `VENDOR` line just before the existing `DAEMON` line. In this example, the `discreet_1` daemon is set to use port 12344.

```
VENDOR discreet_1 discreet_1 port=12344 DAEMON discreet_1 discreet_1
```

- 6 Save and close the file.
- 7 Verify that the new port settings are correct. Type the following commands:  
`/etc/init.d/license_server stop`

```
/etc/init.d/license_server start
```

```
cat /usr/discreet/licserv/log/license_server.log
```

- 8 Look for messages similar to the following examples in the output, and verify that the port numbers are what you requested.

```
15:08:49 (lmgrd) lmgrd tcp-port 62222 15:08:49 (lmgrd) Starting vendor  
daemons ... 15:08:49 (lmgrd) Using vendor daemon port 12344 specified in  
license file 15:08:49 (lmgrd) Started discreet_1 (internet tcp_port 12344  
pid 5013)
```

- 9 Log in as root to each workstation on the network, open the file `/usr/local/flexlm/licenses/DL_license.dat` in a text editor, and repeat steps 3 and 4 in this procedure, using the same port as the one you set for the License Server.



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