Autodesk®
WiretapCentral™ 2012
and
Wiretap™ Gateway 2012

Installation Guide

Autodesk®

Autodesk® Flame® 2012, Autodesk® Flame® Premium 2012, Autodesk® Flare™ 2012, Autodesk® Lustre® 2012, Autodesk® Smoke® 2012, Autodesk® Smoke® for Mac OS® X 2012 software

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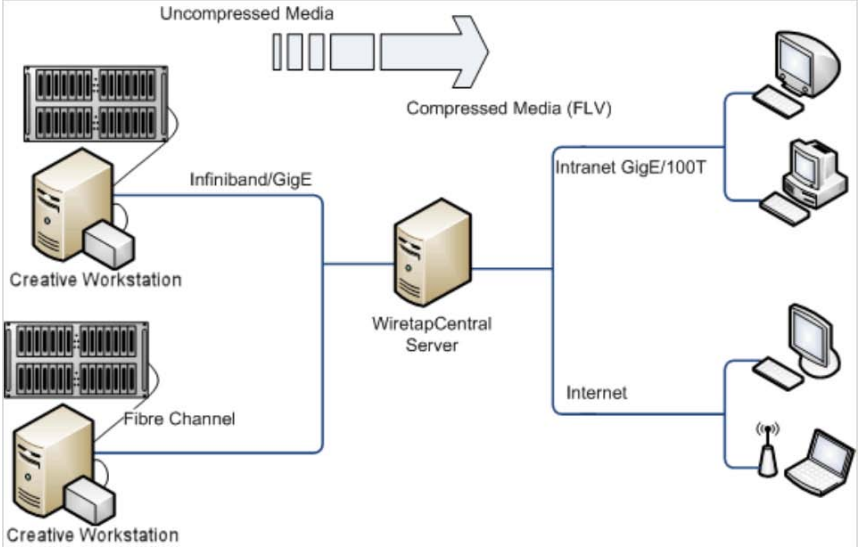
Introduction

Overview

Autodesk®WiretapCentral™ is a fully integrated Web application that provides interactive access to all media assets in your facility network. It presents editorial, visual effects, and grading assets stored on any network-accessible Stone® filesystem or standard filesystem framestore.

The intuitive Web interface eliminates the need to be at an Autodesk creative workstation to import, play, encode media, or to submit and monitor background jobs. This allows the artist to offload media management and transcoding, and stay focused on creative tasks.

WiretapCentral straddles several different technologies, including Autodesk Visual Effects, Finishing and Colour Grading workstations, low-bandwidth Web video, and several different networking and collaboration protocols and tools.



WiretapCentral enables you to directly import REDCODE RAW and multi-channel OpenEXR files by leveraging the Autodesk® Wiretap® Gateway.

When importing media, WiretapCentral can use Autodesk® Backburner™ distributed background processing to maximize efficiency.

About this Guide

This guide provides information on using WiretapCentral and the related components.

Intended Audience

This guide assumes you have knowledge of the Linux® operating system, preferably a distribution from Red Hat® Linux. It also assumes familiarity with Linux networking terms, tools, and procedures.

If you plan to reconfigure your workstation or your storage, knowledge of computer hardware, storage and networking in a professional video/film production environment is recommended.

Do not attempt to carry out the procedures in this guide if you are not familiar with the concepts they present. Contact Autodesk Media and Entertainment Customer Support if you require further assistance.

If you are upgrading an existing workstation without reinstalling the operating system, this document assumes you have *root* access to your system. If you do not have *root* access, contact your system administrator. The default root account password on an Autodesk workstation is *password*.

Concepts 2

Wiretap

WiretapCentral communicates with media and metadata databases through their Wiretap® server, typically an Autodesk Visual Effects, Finishing, and Colour Grading workstation.

The Visual Effects and Finishing Wiretap server (*ifffsWiretapServer*) is installed automatically with Visual Effects and Finishing applications, and requires no modification for WiretapCentral. The server runs automatically and independently of the Visual Effects and Finishing application.

Each workstation is listed in the WiretapCentral network tree as a member of the Wiretap network.

WiretapCentral

The WiretapCentral Web server receives requests from the WiretapCentral UI, and routes them to the appropriate Wiretap server.

Media is transferred from the media storage through a GigE or InfiniBand® network to WiretapCentral where it is converted to an .FLV thumbnail and/or preview, as required.

WiretapCentral also performs media encoding, and stores the exported clips and export packages.

The WiretapCentral UI is an Adobe® Flash® Player compatible rich Internet application (RIA) that runs in a standard Web browser. It communicates solely with the WiretapCentral Web server. Once WiretapCentral has converted the high-bandwidth media from the framestore into a light-weight .FLV clip, the

only media transaction that occurs between the WiretapCentral Web server and UI is a progressive download.

Wiretap Gateway

The Wiretap Gateway is a Wiretap server that exposes any mounted standard filesystem as a Wiretap hierarchy of directories, files, and clip nodes, which it automatically detects.

The Wiretap Gateway reads image media in any format from any storage device, and streams it live as raw RGB to local or remote Wiretap clients, such as WiretapCentral. Any Wiretap-enabled application can use the Wiretap Gateway to move media.

Visual Effects and Finishing applications leverage Wiretap Gateway though gateway libraries or indirectly through WiretapCentral to decode various media formats, including RED RAW and OpenEXR, or to move media from an Autodesk Visual Effects and Finishing application Stone® storage to Autodesk® Lustre® direct attached storage.

Wiretap Gateway is used by the Lustre file browser to browse files and decode/transcode media. You use Wiretap Gateway to expose the contents of a file system, for example RED (.r3d), QuickTime® (.mov), and MXF (.mxf) media. Since decompressing compressed media is a CPU intensive task, performance may vary based on your system configuration.

If Wiretap Gateway is installed on a Mac® equipped with a RED ROCKET™ card, it can use the card to improve the speed of decoding and debayering R3D files.

Wiretap Gateway machines in your network are labeled as such in the WiretapCentral network tree, or in the Lustre file browser. They act as gateways to the storage devices where the media to import resides.

When you select a Wiretap Gateway machine, and initiate a media import operation, the media is read from the source storage by the Wiretap Gateway, processed by the Media I/O Adapter encoding engines on the processing nodes, and then written to the destination storage through the Wiretap server.

Autodesk Wire

The Autodesk® Wire® service enables high-speed transfer of uncompressed timelines, clips, and libraries between Autodesk workstations, on industry-standard TCP/IP and InfiniBand® networks, preserving all metadata.

Autodesk Backburner

Autodesk Backburner is the Autodesk queue manager for background processing and distributed network processing. It provides the means to submit, monitor, and control processing and media I/O jobs.

The Backburner architecture consists of the following components:

- **Backburner Manager** Coordinates jobs submitted by Wiretap clients, and delegates them to the Wiretap servers on the Wiretap network.
- **Backburner Monitor** Front-end interfaces for management and control of the Backburner Manager.
- **Backburner Server** The job-processing component of Backburner that invokes the processing engine.
- **Backburner Processing Engine** The server-side process responsible for processing frames. Processing engines integrate themselves in Backburner Server as plug-ins or adapters.
- **Backburner Processing Node** Processing nodes are dedicated machines on the Backburner network that consist of a Backburner Server, plug-ins/adapters, and processing engines. The Backburner Server receives job assignments from the Backburner Manager, and passes them on to the correct processing engine through the plug-in/adapter.

For detailed information about Backburner components, see the *Autodesk Backburner Installation Guide*.

Media I/O Adapter

The Media I/O Adapter is a Backburner processing engine that reads media from a storage device or Wiretap server, processes it, and then writes it to a storage device or Wiretap server.

Installing WiretapCentral and Wiretap Gateway

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Choosing a Deployment Model

There are two main deployment models for WiretapCentral and Wiretap Gateway. Both models allow you to browse, encode, and decode media, but the ease of installation and level of performance differ.

- **Stand-alone installation** This is the easiest installation model, as all components are installed and configured on a single Autodesk Visual Effects and Finishing Linux® workstation, an Autodesk® Smoke® for Mac OS® X workstation, or an Autodesk Lustre Linux workstation. This deployment model is suitable for media browsing with occasional media encoding and decoding, as it offers the lowest level of performance.
- **Distributed deployment** This advanced deployment model offers increased performance by distributing processing tasks across several dedicated Backburner Server and Media I/O nodes on your network, running Linux or Mac OS X. This is a scalable deployment model: performance can be maximized by moving as many components as possible onto dedicated machines on your network. This is the only supported deployment model for Lustre Windows® workstations, or for an Incinerator® network.

The following sections provide information and installation instructions for each deployment option. Choose the configuration that best suits your needs.

System Requirements

If you are performing a distributed deployment, make sure the dedicated Mac® or Linux systems where you plan to install the various components meet the following recommended specifications.

Component	Hardware	Operating System	Other Requirements
WiretapCentral	■ 64-bit, dual-core CPU ■ 1 GB of RAM or better. ■ GigE or InfiniBand networking ■ 500 GB Hard Drive, or larger	Mac OS X version 10.6.6 (64-bit); Red Hat® Enterprise Linux® Desktop 5.3 (64-bit) or Red Hat® Enterprise Linux Workstation 4 Update 3 (64-bit) **NOTE** It is recommended to disable SELinux on Linux WiretapCentral machines.	■ Direct access to the Autodesk Wiretap network. WiretapCentral must reside on the same subnet as the Visual Effects, Finishing and Grading workstations using it. ■ Apache Web Server version 2.0.52 or later.
Wiretap Gateway	■ 64-bit dual core CPU ■ 1 GB of RAM or better ■ GigE or InfiniBand	Mac OS X version 10.6.6 (64-bit) or Any 64-bit Linux distribution that can install *rpm* packages.	Direct connection to the SAN/NAS/DAS media storage in your facility.
Backburner Server and Media I/O Adapter	■ 64-bit dual core CPU ■ 1 GB of RAM or better ■ GigE or InfiniBand	Mac OS X version 10.6.6 (64-bit) or Any 64-bit Linux distribution that can install *rpm* packages.	

NOTE If you have Autodesk® Burn™ or Burn for Lustre render nodes in your facility, you can use them as Backburner Servers and Media I/O Adapters. These components are automatically installed with the latest version of the Burn or Burn for Linux software.

Preparing Your Installation

Before you begin installing WiretapCentral and Wiretap Gateway, perform the following steps to prepare for the installation. Some of these tasks must be performed from a computer connected to the Internet.

2. Decide which deployment model you want to use. Refer to the descriptions in the previous section.
3. Get the software installation package. The software installation package is distributed by USB key or by download file. See Mounting the USB Key (page 11) or Preparing a TAR Package for Installation (page 13).
4. Download the latest version of the *Autodesk Backburner Installation Guide*, *Autodesk Backburner User Guide*, and your application installation and configuration guide from *www.autodesk.com/me-documentation*.

Mounting the Product USB Key

For major releases, all your product software is distributed on a USB key.

You must mount the USB key before you can install the product software.

NOTE If Red Hat is newly installed (or re-installed), automount is enabled. When the USB key is connected to the system, the USB device is mounted automatically. However, you cannot install the DKU because the Red Hat installation does not allow for the execution of commands from a USB device. Before you install the software, you must unmount the USB key and then follow the instructions below for mounting this USB device. To unmount the USB key, type **eject /<mountpoint> or eject /dev/<device id>** .

To mount the product USB key:

2. Plug in the USB key to your workstation.
3. Log in to your workstation as root and open a terminal.
4. List the disk devices attached to your system by typing:

   fdisk -l | grep "/dev/sd"

   In the output of the command, identify the SCSI device name that was assigned to the USB device. It should look similar to */dev/sds* , */dev/sde* , etc.

   For example:

```
Disk /dev/sda: 250.0 GB, 250059350016 bytes
/dev/sda1 * 63 208844 104391 83 Linux
/dev/sda2 208845 4401809 2096482+ 82 Linux swap / Solaris
/dev/sda3 4401810 488392064 241995127+ 83 Linux
…
…
Disk /dev/sdf: 8011 MB, 8011120640 bytes
/dev/sdf1 62 12128687 6064313 c W95 FAT32 (LBA)
```

5 Alternatively, you can use the *dmesg* command right after you have connected the USB drive. This will list the most recent USB device connected. For example:

```
usb-storage: device found at 30
usb-storage: waiting for device to settle before scanning
Vendor: TOSHIBA Model: TOSHIBA USB DRV Rev: PMAP
Type: Direct-Access ANSI SCSI revision: 00
SCSI device sdf: 31277056 512-byte hdwr sectors (16014
MB)
sdf: Write Protect is on
sdf: Mode Sense: 03 41 80 00
sdf: assuming drive cache: write through
SCSI device sdf: 31277056 512-byte hdwr sectors (16014
MB)
sdf: Write Protect is on
sdf: Mode Sense: 03 41 80 00
sdf: assuming drive cache: write through
sdf: sdf1
```

6 In the example above, the sdf device was the last device to be connected.

7 Create a mount point directory for the disk. Type:
mkdir /mnt/usbdisk

8 Mount the disk on the new directory:
mount -o shortname=winnt /dev/<device>1 /mnt/usbdisk
where <device>1 is the usb device name. For example:
mount -o shortname=winnt /dev/sdf1 /mnt/usbdisk

NOTE You can also mount the disk using the GUI. Double-click the Home icon on the desktop, go to the root folder, expand the 'dev' folder, right-click the USB device and select 'Mount' from the context menu.

Extracting an Installer from a TAR Package

At extensions and service packs, your product software packages are distributed as TAR files. Links to the TAR files for your product are supplied in the Release Announcement.

You must extract an installer from the TAR package before you can install your software.

2. Log in to your workstation as root and open a terminal.
3. Download the *tar* file from Autodesk.
4. After downloading the *tar* file, verify its integrity using the Linux md5 checksum. In the directory where you saved the *tar* file and the checksum file, type **md5sum** `<filename.tar.gz>`, and make sure the checksum displayed matches the Linux md5sum listed in the checksum file.
5. Unpack the downloaded application *tar* file to a temporary directory:

   tar -zxvf`<filename.tar.gz>`

   The file is uncompressed and an installation directory is created on your system.

Stand-alone Installation

In a stand-alone installation, Wiretap Gateway, WiretapCentral, and all background processing components (Backburner Server, Backburner Manager, and the Media I/O Adapter) are installed on the same workstation as the Visual Effects, Finishing and Grading application.

A stand-alone installation is the easiest deployment model, as all necessary components are automatically installed and configured with your application. However, all media processing is performed locally, which can have a significant impact on system performance if you are using several components at the same time.

NOTE

This deployment model is not applicable for Lustre Windows workstations or for Incinerator.

To set up a stand-alone configuration:

2. Perform a regular installation of your Visual Effects, Finishing and Grading application, as documented in the *Autodesk Creative Finishing Installation and Configuration Guide* or *Autodesk Smoke for Mac OS X Installation and Configuration Guide*.

   Wiretap Gateway, WiretapCentral, and all background processing components are automatically installed and turned on. You do not need to install any additional packages.
3. Optional: Configure WiretapGateway. SeeConfiguring Wiretap Gateway (page 37).
4. Optional: Configure WiretapCentral. See Configuring WiretapCentral (page 41).
5. Verify that all components have been properly installed. See Verifying Installed Components (page 45).

Distributed Deployment

To avoid competition for workstation resources and to increase productivity, consider relocating some or all of the Wiretap components to dedicated machines on your network.

Although more complex to set up, a distributed deployment offers the highest level of flexibility and performance for media decoding, as it allows the CPU-intensive background processing to be off-loaded from the Visual Effects, Finishing and Grading workstation and distributed across a Backburner processing network for increased productivity.

Depending on your performance needs, you can scale your configuration as much as necessary. Here are some examples of typical deployment scenarios.

Example #1: Processing is Performed by Dedicated Backburner Server Nodes

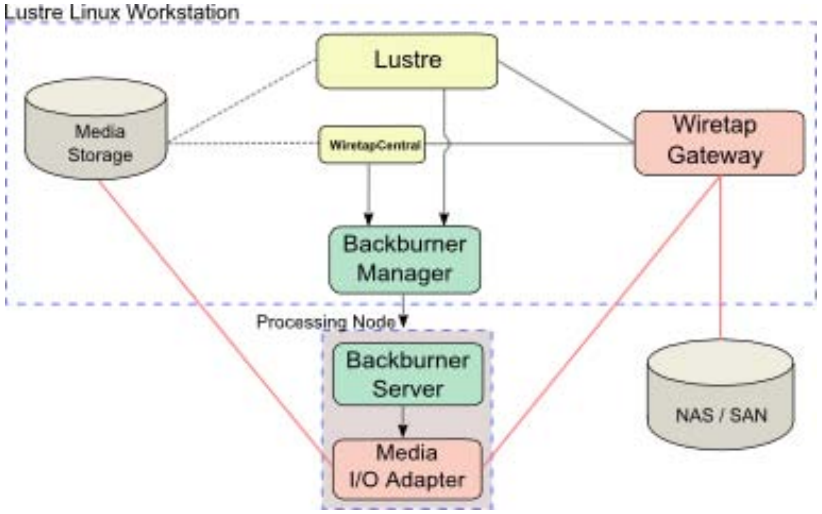
In this scenario, WiretapCentral, Backburner Manager, and Wiretap Gateway run on the Visual Effects, Finishing and Grading workstation, while processing

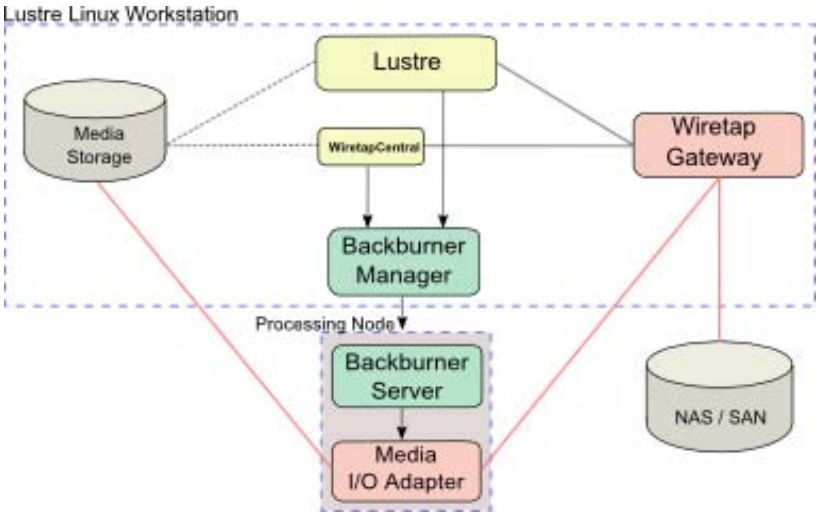
is performed by several dedicated nodes in a render farm. Each processing node comprises a Backburner Server and a Media I/O Adapter.

NOTE

This deployment model is not applicable to Lustre Windows or an Incinerator setup.

The following diagrams depict this deployment model for a Visual Effects and Finishing workstation, and for a Lustre Linux (non-Incinerator) workstation. Remember that the applications can also leverage the Wiretap Gateway natively, without needing WiretapCentral. The following diagram includes WiretapCentral as an alternative for using the Wiretap Gateway and the render farm to import media.





TIP

Since processing components (Backburner Server and the Media I/O Adapter) are automatically installed on Visual Effects, Finishing and Grading workstations, the workstations themselves can be used as processing nodes during off-peak hours.

Perform the following tasks to set up your components according to this scenario.

2 Perform a regular installation of your Visual Effects, Finishing and Grading application, as documented in the *Autodesk Creative Finishing Installation and Configuration Guide* or *Autodesk Smoke for Mac OS X Installation and Configuration Guide*.

   WiretapCentral, Wiretap Gateway, Backburner Manager, and Backburner Monitor are automatically installed on the workstation.

3 Install and configure Backburner Server and the Media I/O Adapter on each Linux or Mac OS X processing node. See Installing and Configuring Backburner Server and the Media I/O Adapter on a Dedicated System (page 24).

   NOTE Backburner Server and the Media I/O Adapter are automatically installed on Burn render nodes with the latest version of Autodesk Burn or Autodesk Burn for Lustre. See the Autodesk Burn Installation and User Guide or the Burn for Lustre sections of the *Autodesk Creative Finishing Installation and Configuration Guide*.

4 Make sure the media storage mount points on all the systems involved in the setup are identical. Failure to perform this step might prevent your processing network from processing jobs.

5 Configure Wiretap Gateway. See Configuring Wiretap Gateway (page 37).

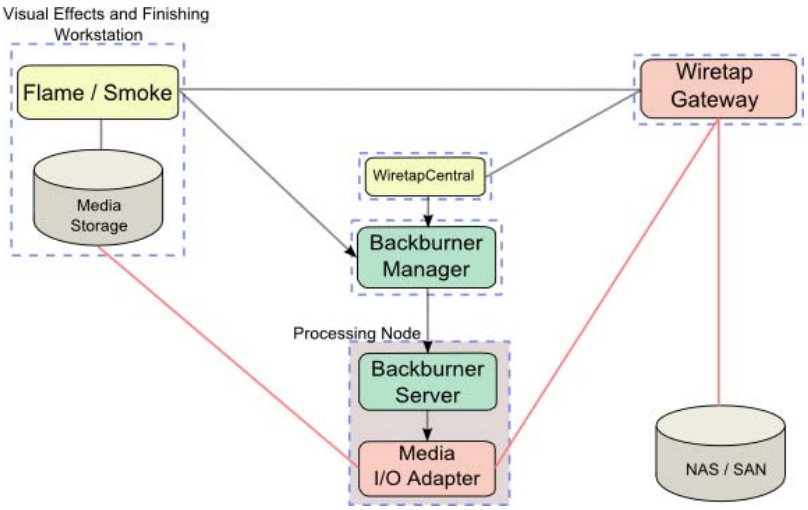
6 Verify that all components have been properly installed. See Verifying Installed Components (page 45).

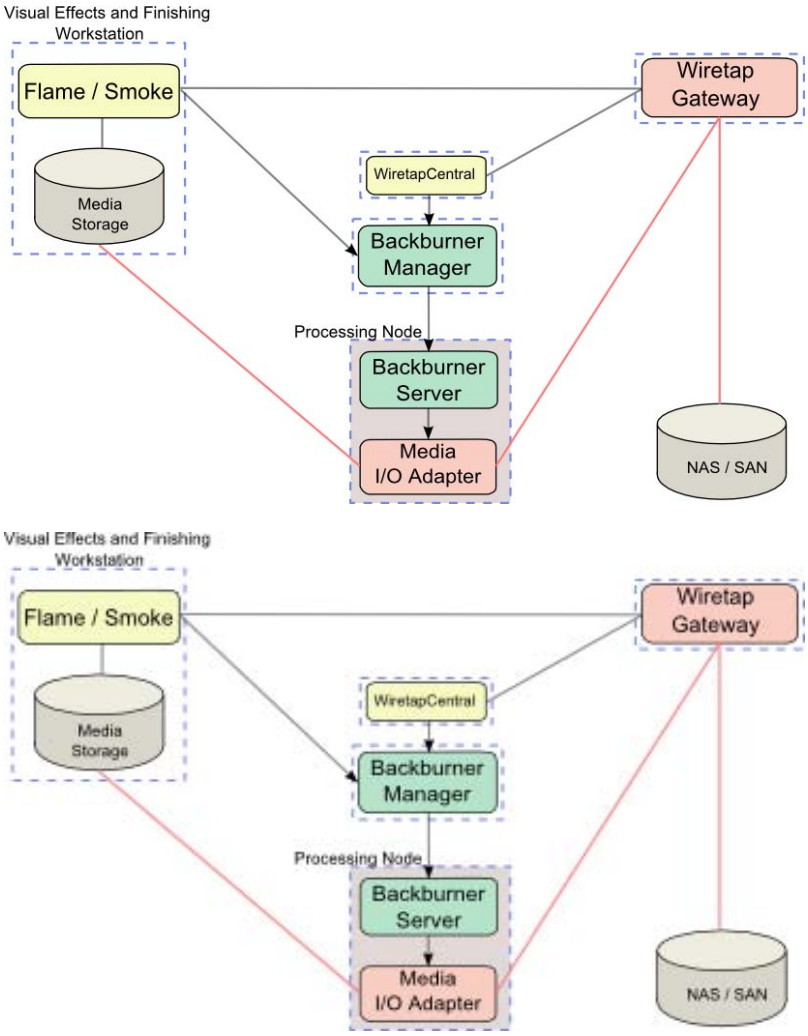
Example #2: All Components Reside on Dedicated Machines

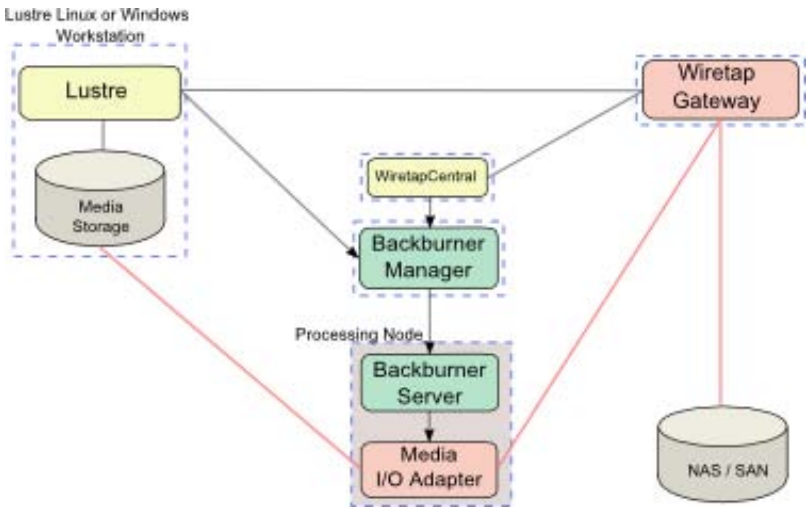
In this scenario, each component resides on a dedicated machine on the network. Media processing is performed by processing nodes bundled in node groups in a render farm.

This deployment model can also be used with Lustre Windows, as Wiretap Gateway is installed on a separate Linux machine.

The following diagrams depict this deployment model for a Visual Effects and Finishing workstation, and for a Lustre Linux (non-Incinerator) or Windows workstation. Remember that the applications can leverage the Wiretap Gateway natively, without going through WiretapCentral. The following diagram includes WiretapCentral as an alternative for using the Wiretap Gateway and the render farm to import media.




Visual Effects and Finishing Workstation
Flame / Smoke
Media Storage
Wiretap Gateway
WiretapCentral
Backburner Manager
Processing Node
Backburner Server
Media I/O Adapter
NAS / SAN
Visual Effects and Finishing Workstation
Flame / Smoke
Media Storage
Wiretap Gateway
WiretapCentral
Backburner Manager
Processing Node
Backburner Server
Media I/O Adapter
NAS / SAN



NOTE

The performance of your Wiretap Gateway system is directly impacted by the number of applications using it at the same time (Visual Effects and Finishing applications, Lustre, WiretapCentral). To insure optimal performance, limit the number of remote clients accessing Wiretap Gateway concurrently.

Perform the following tasks to set up your components according to this scenario.

2. Perform a regular installation of your Visual Effects, Finishing and Grading application, as documented in the *Autodesk Creative Finishing Installation and Configuration Guide* or *Autodesk Smoke for Mac OS X Installation and Configuration Guide*.
3. Install Backburner Manager on a dedicated system, and configure the Visual Effects, Finishing and Grading application with the new location of Backburner Manager. See Installing Backburner Manager on a Dedicated System (page 21).
4. Install and license Wiretap Gateway on a dedicated system. See Installing Wiretap Gateway on a Dedicated System (page 30).
5. Configure Wiretap Gateway. See and Configuring Wiretap Gateway (page 37).
6. Install WiretapCentral on a dedicated system. See Installing WiretapCentral on a Dedicated System (page 40).

7 Install and configure Backburner Server and the Media I/O Adapter on each Linux or Mac OS X processing node. See Installing and Configuring Backburner Server and the Media I/O Adapter on a Dedicated System (page 24).

NOTE Backburner Server and the Media I/O Adapter are automatically installed on Burn render nodes with the latest version of Autodesk Burn or Autodesk Burn for Lustre. See the Autodesk Burn Installation and User Guide or the Burn for Lustre sections of the *Autodesk Creative Finishing Installation and Configuration Guide*.

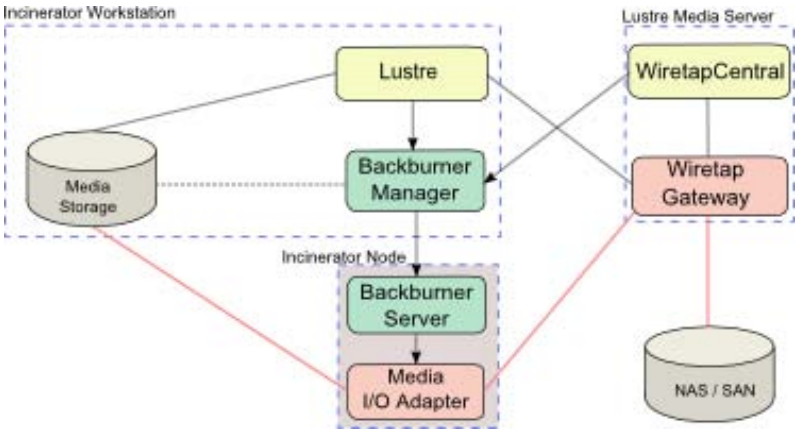
8 Make sure the media storage mount points on all the machines involved in the setup are identical. Failure to perform this step might prevent your processing network from processing jobs.

9 Verify that all components have been properly installed. See Verifying Installed Components (page 45).

Example #3: Incinerator With Wiretap Gateway

In this deployment model, Lustre is installed on an Incinerator system, WiretapCentral and the Wiretap Gateway are installed on the Lustre Media Server, and the processing nodes are on a render farm.

The following diagram includes WiretapCentral as an alternative to Lustre for using the Wiretap Gateway and the render farm to import media. Remember that Lustre can leverage the Wiretap Gateway natively in the Lustre file browser, without needing WiretapCentral.



To set up Wiretap Gateway with an Incinerator system:

2 Perform a regular Incinerator installation, as documented in the latest *Autodesk Incinerator Installation and Configuration Guide*.

Backburner Manager and Backburner Monitor are installed on the Incinerator workstation, WiretapCentral and Wiretap Gateway are installed on the Lustre Media Server, and Backburner Server and the Media I/O Adapter are installed on each Incinerator node.

Perform the remaining steps in this procedure to configure these components.

3 Install and license WiretapGateway on the Lustre Media Server. See Installing Wiretap Gateway Software for Linux Products (page 31).

4 Configure Wiretap Gateway. See Configuring Wiretap Gateway (page 37).

5 Verify that all components have been properly installed. See Verifying Installed Components (page 45).

Installing Backburner Manager on a Dedicated System

Perform the following tasks to install Backburner Manager on a dedicated Linux, Windows, or Mac OS X system on your network.

To install Backburner Manager on a dedicated Linux system:

2 Open a terminal and log in as root.

3 Download the Backburner *.tar* file from the link provided in the Release Announcement you received from Autodesk.

4 Unpack the *.tar* file by typing:

tar -zxvf `<file_name>`**.tar.gz**

The installation files are unpacked into a new directory.

5 Go to the newly-created directory, and run the installer by typing:

./INSTALL

6 Answer Yes to the question about automatically running Backburner Manager, and No to the question about automatically running Backburner Server.

Backburner Manager and Backburner Monitor are installed and ready to use. See the latest *Autodesk Backburner User Guide* for instructions on using these components.

To install Backburner Manager on a dedicated Windows system:

2. Download the Backburner *.zip* installation package from the links provided in the Release Announcement you received from Autodesk.
3. Unpack the *zip* file using a utility such as WinZip®.
4. Double-click *backburner.exe* to start the installation.
5. Follow the on-screen instructions to complete the installation.

   Backburner Manager and Backburner Windows Monitor are installed and ready to use. See the latest *Autodesk Backburner User Guide* for instructions on using these components.

To install Backburner Manager on a dedicated Mac system:

2. If you are installing from the Smoke DVD, insert the disc and double-click the DVD icon on the desktop.
3. If you are installing from the Smoke *dmg* file, double-click the *dmg* to see its contents.
4. Go to the *Standalone Installers* folder and run the *Backburner* installer.
5. Follow the on-screen instructions to complete the installation.

   Backburner Manager, Backburner Monitor, and Backburner Server are installed on the Mac. You can ignore Backburner Server; as long as you do not use it, it will not consume any system resources.

   See the latest *Autodesk Backburner User Guide* for instructions on using these components.

Configuring Visual Effects, Finishing and Grading Applications to Access Backburner Manager

After installing Backburner Manager on a dedicated system, perform the following tasks to configure the Visual Effects, Finishing and Grading applications with the hostname of the Backburner Manager system.

To configure Linux Visual Effects and Finishing Applications to connect to remote Backburner Manager:

2. If your Visual Effects and Finishing application is running, exit it.
3. Open a terminal and log in as root.
4. Open the application configuration file, *init.cfg*, in a text editor. Type:

   vi /usr/discreet`<application_directory>`**/cfg/init.cfg**
5. Locate the `BackburnerManagerHostname` keyword.
6. Change the value of the keyword to the hostname of the system where you installed Backburner Manager.
7. Save and close the file.
8. Type the following commands to disable the local Backburner Manager that was installed automatically with the Visual Effects and Finishing application.

   chkconfig backburner_manager off

   /etc/init.d/backburner_manager stop
9. Open the file */usr/discreet/backburner/cfg/manager.host* in a text editor.
10. Enter the hostname of the system where you installed Backburner Manager.

    This setting is used by the local Backburner Server installed on the Visual Effects and Finishing workstation.
11. Save and close the file.

To configure Lustre to connect to Backburner Manager:

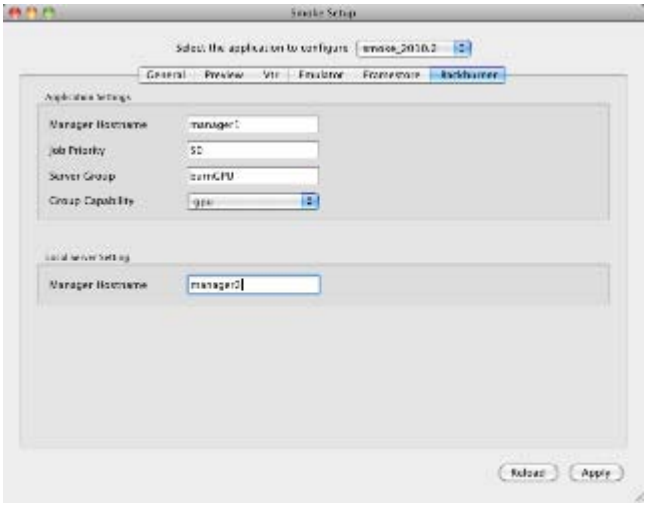
2. If Lustre is running, exit it.
3. Open the application configuration file, *init.config*, in a text editor.
   - On Linux workstations, open a terminal, log in as root, and type:

     vi /usr/autodesk/lustre`<version>`**/init.config**
   - On Windows workstations, browse to the *C:\Program files\Autodesk\Lustre*`<version>\` folder, and open the *init.config* file in Notepad.
4. Locate the `<Backburner>` section.
5. Change the value of the `<Hostname>`parameter to the hostname of the system where you installed Backburner Manager.
6. Save and close the *init.config* file.

   You can now use Lustre with Backburner Manager.

To configure Smoke for Mac OS X to connect to Backburner Manager:

2. If Smoke is running, exit it.
3. Run the Smoke Setup application from the *Applications / Autodesk / Smoke <version> / Smoke Utilities* folder.
4. Click the Backburner tab.



5. Enter the hostname of the system where you installed Backburner Manager in the Manager Hostname field of the Application Settings section.
6. Click Apply to save the new settings, and then close the Smoke Setup utility.

   You can now use Smoke with Backburner Manager.

Installing and Configuring Backburner Server and the Media I/O Adapter on a Dedicated System

Perform one of the following procedures to install Backburner Server on non-Burn systems that you want to use as processing nodes. The first procedure applies to Linux systems, and the second one applies to Mac OS X systems.

NOTE For more detailed Backburner installation information, see the latest *Autodesk Backburner Installation Guide*.

To install Backburner Server and the Media I/O Adapter on a dedicated Linux system:

2. Open a terminal and log in as root.
3. Download the Backburner and the Media I/O Adapter *.tar* files from the links provided in the Release Announcement you received from Autodesk.
4. Unpack each *.tar* file by typing:

   tar -zxvf `<file_name>`**.tar.gz**

   The installation packages are unpacked into new directories.
5. Go to the newly-created directory for the Backburner package, and run the installer by typing:

   ./INSTALL
6. Answer No when the installer asks if you want to automatically run Backburner Manager on this machine.
7. Answer Yes when the installer asks if you want to automatically run Backburner Server on this machine.
8. Answer Yes when the installation script asks if you want to enter a Backburner Manager for the Server. The manager configuration file opens. Enter the hostname of the system running Backburner Manager.

   NOTE You can also configure this setting later. See .
9. Go to the directory where you unpacked the Media I/O Adapter *tar* file, and run the installer by typing:

   ./INSTALL

   The Media I/O Adapter is installed, and ready to use.
10. Refer to the following sections for information on configuring Backburner Server.

To install Backburner Server and the Media I/O Adapter on a dedicated Mac system:

2. If you are installing from the Smoke DVD, insert the disc and double-click the DVD icon on the desktop.
3. If you are installing from the Smoke *dmg* file, double-click the *dmg* to see its contents.
4. Go to the *Standalone Installers* folder and run the Backburner installer.

5 Follow the on-screen instructions to complete the installation.

Both Backburner Manager and Backburner Server are installed on the Mac.

6 Run the Media I/O Adapter installer from the *Standalone Installers* folder on the Smoke DVD or *.dmg*.

7 Follow the on-screen instructions to complete the installation.

The Media I/O Adapter is installed and ready to use.

8 Refer to the following sections for information on configuring Backburner Server.

Configuring Backburner Server to Access Backburner Manager

Configure each Backburner Server node with the hostname of the Backburner Manager system that the nodes should receive processing tasks from.

The first procedure applies to Linux nodes, and the second one to Mac OS X nodes.

NOTE

You do not need to perform these tasks on Linux nodes if you already entered the correct Backburner Manager hostname when installing Backburner Server.

To configure Linux nodes to access Backburner Manager:

2 Open a terminal on the Backburner Server node, and log in as root.

3 Open the */usr/discreet/backburner/cfg/manager.host* file in a text editor, such as *vi*.

4 Enter the host name of the Backburner Manager system in the *manager.host* file.

5 Save and close the configuration file.

6 Restart Backburner Server by typing:

/etc/init.d/backburner restart

To configure Mac OS X nodes to access Backburner Manager:

2 Open Finder and press `COMMAND+SHIFT+G`.

3 In the dialog box that opens, type */usr/discreet/backburner/cfg/*.

The *cfg* folder opens.

4. Locate the *manager.host* file, and open it in TextEdit.
5. Enter the host name of the Backburner Manager system in the *manager.host* file.
6. Save and close the file.
7. Restart Backburner Server by typing:

   sudo /usr/discreet/backburner/backburner_server restart

Setting up Backburner Server Nodes to Access Project Metadata

Each Backburner Server node on your network needs to be able to access the project and library metadata directories exported by the Visual Effect and Finishing workstations that submit background processing jobs.

These directories are located under */usr/discreet* on the workstations and are automatically configured to be exported.

Backburner Server nodes must mount these shared directories under */hosts/*`<hostname>`, where `<hostname>` is the name of each workstation submitting background processing jobs.

On Burn nodes, these settings are configured automatically by the DKU, so you do not need to perform any of the tasks in this section.

On other Linux nodes, you must configure the *amd* (automount daemon) and *NFS* services.

On Mac OS X nodes, you must configure the */etc/auto_master* file.

Configuring the Automount Service on Mac OS X Nodes

Perform the following tasks to configure each Mac OS X Backburner Server node to automatically mount the directories shared by Visual Effect and Finishing workstations on your network.

To automatically mount shared directories:

2. Open Finder and press `COMMAND+SHIFT+G`.

3 In the dialog box that opens, type */etc*.
   The */etc* folder opens.
4 Double-click the *auto_master* file.
   The file opens in TextEdit.
5 Add the following line at the end of the file:
   `/hosts  -hosts  -nobrowse,hidefromfinder,nosuid`
6 Save and close the file.
7 Restart the system.

Configuring the amd and NFS Services on Linux Nodes

If the *amd* and *NFS* services are not running or are not properly configured on a Backburner Server node, you get an error similar to the following when you try to submit a background processing job to the node:

```
Notice : NoticeDescription: Creating clips on parent node
'/stonefs/Project_name/Library_name' on host
'192.168.1.72:7549'.

Notice : ErrorDescription: Can't create clip in parent node
'/stonefs/Project_name/Library_name' on host
'192.168.1.72:7549'
```

Perform the following procedure on each node to configure the *amd* and *NFS* services.

To configure the *amd* and *NFS* services:

2 Log in as root to the Backburner Server node.
3 Stop the *amd* automounter daemon by typing:
   /etc/init.d/amd stop
4 Open the */etc/amd.conf* configuration file in a text editor.
5 Locate the following lines:
   ```
   #DEFINE AN AMD MOUNT POINT
   [ /net ]
   ```
6 Change `/net` to `/hosts`.
   The lines should now be the following:

```
#DEFINE AN AMD MOUNT POINT
[ /hosts ]
```

7 Configure the *NFS* and *amd* services to start automatically, by typing the following commands:

chkconfig nfs on

chkconfig amd on

8 Confirm that the *NFS* and *amd* services are configured to start at run-levels 2 to 5, by typing:

chkconfig --list | egrep 'nfs|amd'

The output of the command should contain the following lines:

```
nfs             0:off 1:off 2:on 3:on 4:on 5:on 6:off
amd           0:off 1:off 2:on 3:on 4:on 5:on 6:off
```

9 Reboot the node to ensure all network settings take effect. Type:

reboot

Grouping Backburner Server Nodes

Use Backburner Monitor to group your Backburner Server nodes into server groups. This task is optional, but highly recommended.

To create Backburner Server groups:

2 Open a Web browser and enter the URL of the system where you installed Backburner Manager.

The Autodesk Tools page opens.

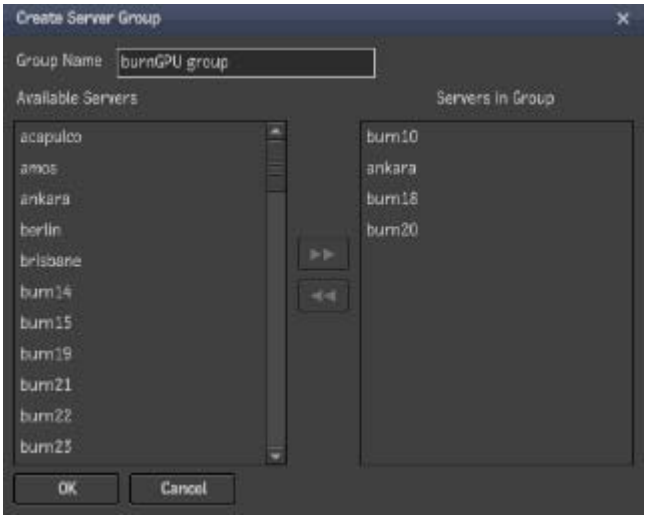
3 Click Backburner to open Backburner Monitor.

You are prompted to log in. The default user name and password are *backburner / backburner*.

4 Select the Backburner Manager from the Manager drop-down list, and then click the Server Groups tab.

5 In the Server Groups tab, click Create.

The following window appears.



6 Give a meaningful name to your group, and then use the arrow buttons to add or remove servers from the group.

NOTE

You can include your Visual Effects, Finishing and Grading workstations in a server group as well, if you wish to use them as processing nodes during off-peak hours.

7 Click OK to save the new group.

See the latest *Autodesk Backburner User Guide* for more detailed information about Backburner Server groups.

Installing Wiretap Gateway on a Dedicated System

Follow these procedures if you have decided to install Wiretap Gateway on other machines on your network to distribute processing and improve performance.

There are three editions of Wiretap Gateway. Install the edition appropriate for your setup:

- Linux edition: install this edition on a Linux machine, to serve Linux products.

- Mac OS X edition: install this edition on a Mac OS X machine to serve Linux products. This edition provides Apple ProRes support to Linux products.
- Smoke for Mac OS X edition that is included with Smoke for Mac and serves only Smoke for Mac OS X.

NOTE If you are setting up Wiretap Gateway on a Mac workstation to work with both Linux and Mac workstations, you must install and license both editions of Wiretap Gateway. See the *Release Notes* for the Wiretap Gateway version that will work with your installation.

Installing Wiretap Gateway Software for Linux Products

Perform the following tasks to install Wiretap Gateway on a dedicated workstation on your network.

- If you have only Linux machines serving your Linux products, install Wiretap Gateway on a Linux workstation.
- If you want Apple ProRes support for your Linux products, you must install the Wiretap Gateway software for Linux on a Mac workstation.

To install Wiretap Gateway on a Linux workstation:

2. Log in to the system as root.
3. Get the Wiretap Gateway installation package. The installation package is distributed by USB key or by download file. See Mounting the USB Key (page 11) or Preparing a TAR Package for Installation (page 13).
   - On the USB key, the Wiretap Gateway installer is located in the *StandaloneInstallers/WiretapGateway_2012_Linux* folder.
   - A link to a *tar* file is also provided in the Release Announcement. Download the *WiretapGateway_2012_Linux.tar.gz*.
4. Open the WiretapGateway_2012_Linux directory and type:

   ```
   ./INSTALL
   ```

   Wiretap Gateway is installed. Refer to the following sections for information on licensing and configuring it.

To install the Linux edition of Wiretap Gateway on a Mac workstation:

2 Get the Linux edition of the Wiretap Gateway installation package for Mac.
   - If you are installing from the USB key, insert the key and double-click the Autodesk icon on the desktop. Browse to the *StandaloneInstallers/WiretapGateway_2012_Mac* folder.
   - Download the *WiretapGateway_2012_Mac_Use_With_Linux_Products.dmg* from the Release Announcement.

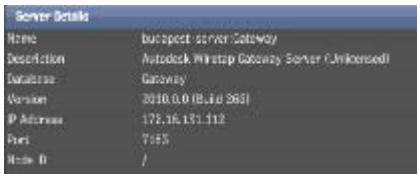
3 Double-click the *WiretapGateway_2012_Mac_Use_With_Linux_Products.dmg*.

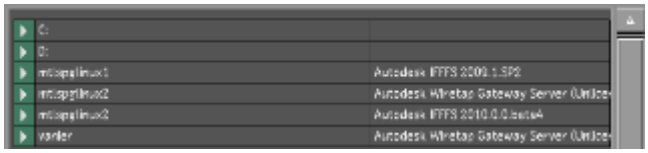
   Wiretap Gateway is installed. Refer to the following sections for information on licensing and configuring it.

Licensing Dedicated Wiretap Gateway Software for Linux Products

You cannot use a Wiretap Gateway, installed on a dedicted system, until it is licensed. A Wiretap Gateway installed with your product receives its license from the product.

Unlicensed Wiretap Gateway machines are labeled as such in WiretapCentral and in the Visual Effects, Finishing and Grading applications.





Although they still appear in the network tree, unlicensed Wiretap Gateways block all media I/O. When you attempt to play or import media through an unlicensed Wiretap Gateway, the operation fails and an “Unlicensed” error message is returned.

To license Wiretap Gateway through a remote (network) license server (Linux or Mach machine):

2 Create the file */usr/local/flexlm/licenses/DL_licenseNetwork.dat* on the machine running Wiretap Gateway.

3 Put the following information in the file:

```
SERVER <license_server_machine_name> 0
VENDOR discreet_l
USE_SERVER
```

To license (node locked) Wiretap Gateway (Linux or Mac machine):

2 Open a terminal on the Wiretap Gateway system.

3 Obtain the Discreet host ID of the system. Type:

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

A line similar to the following is output:

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

4 Send the Discreet host ID line (including the *DLHOST01*= part) to the Autodesk Media and Entertainment Licensing Department, at *me.licensing@autodesk.com*.

NOTE For emergencies, you can acquire an immediate temporary emergency license using the emergency license generator at *http://melicensing.autodesk.com/templicensing/*. A 4-day license code is e-mailed to the address you provide. To speak to a licensing representative call 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.

5 When you receive the license code, open the file */usr/local/flexlm/licenses/DL_license.dat* in a text editor, and enter the license code.

NOTE Edit this file with care; an incorrect character or missing space may prevent Wiretap Gateway from recognizing the license.

6 Save and close the *DL_license.dat* file, and then restart Wiretap Gateway by typing:

```
/etc/init.d/wiretapgateway restart
```

Installing and and Licensing the Wiretap Gateway Software Included with Smoke for Mac OS X

This Smoke for Mac OS X edition of Wiretap Gateway serves Smoke for Mac only.

Install the Smoke for Mac OS X edition of Wiretap Gateway on a dedicated Mac machine to distribute processing across your network.

Install, configure and license Smoke for Mac OS X before you install and license the Wiretap Gateway.

For information on installing Smoke for Mac OS X, see the *Autodesk Smoke for Mac Installation and Licensing Guide*.

During the installation of Smoke for Mac OS X, you install and configure the network license server. Use the same license server configuration information while you install the Wiretap Gateway server software included with Smoke for Mac OS X.

To install the Wiretap Gateway software included with Smoke for Mac OS X:

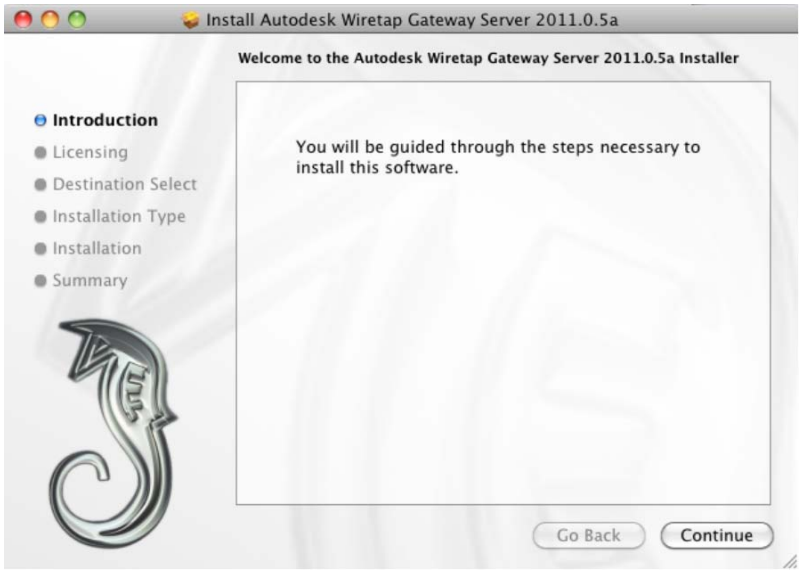
2 Locate the Smoke installer. Do one of the following:
- If you are installing Smoke from a DVD, insert the DVD, and then double-click the DVD icon that appears on your desktop.
- If you are installing Smoke from a downloaded *.dmg* disk image file, double-click the file.

  The contents of the DVD or *.dmg* disk image are displayed.

3 Open the Standalone Installers folder.

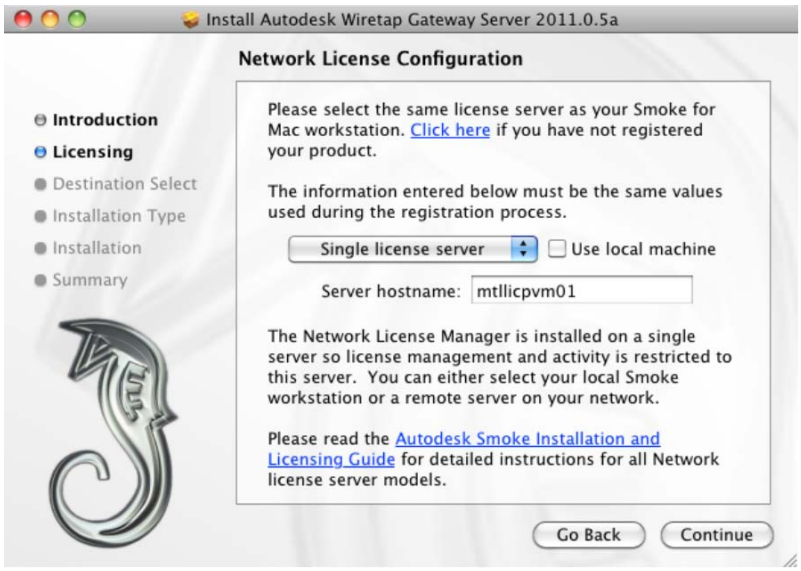
4 Double-click *Install Wiretap Gateway Server*.

The installer starts.



5 Click Continue.

The Network License Configuration window opens.



NOTE You should register and set up the network license server for Smoke for Mac OS X before you install Wiretap Gateway. See the *Autodesk Smoke for Mac Installation and Licensing Guide*.

6 Enter the license server hostname in the Server hostname field.

7 Depending on your OS configuration, the Select a Destination window may appear.

Click "Install for all users of this computer", and then click Continue.

8 Click Install to begin the installation process.

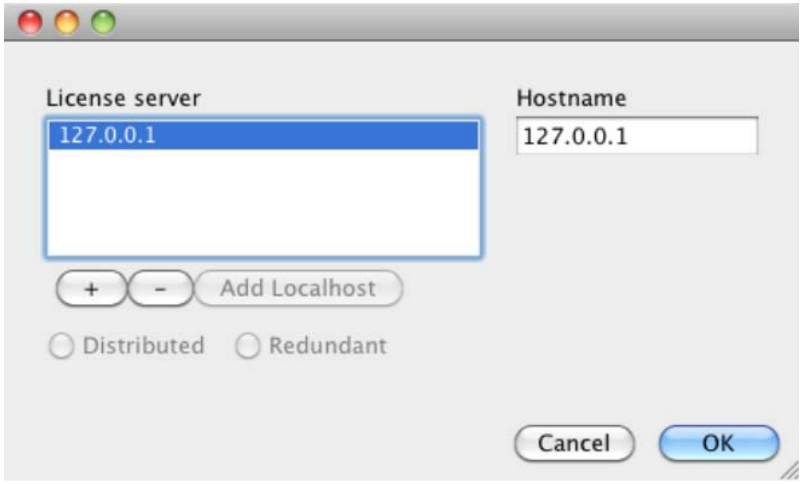
Updating the License Server for the Smoke for Mac OS X Edition of Wiretap Gateway

Perform the following if you must change the license server after you install the Smoke for Mac OS X edition of Wiretap Gateway.

To update the license server for the Smoke for Mac OS X edition of Wiretap Gateway:

2 Open the License Server Selector. You can find the License Server Configurator in one of the following places:

- If Smoke is installed on the same workstation: */Applications/ Smoke 2012/Utilities*
- If Smoke is not installed on the workstation: */Applications/Autodesk/Adlm*



3 Enter the name of the license server in the Hostname field and click OK.

For detailed information on licensing Smoke for Mac, see *Autodesk Smoke for Mac Installation and Licensing Guide*.

Configuring Wiretap Gateway

The Wiretap Gateway configuration file, */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg* contains a number of settings for Wiretap Gateway.

This section covers some of the most important settings you may want to adjust in the configuration file. For details on each parameter, refer to the comments inside the configuration file.

NOTE Remember to restart Wiretap Gateway after changing any of its settings. On Mac OS X, use the Service Monitor application from the *Applications / Autodesk / Smoke Common Utilties* folder. On Linux, open a terminal, log in as root, and type:

/etc/init.d/wiretapgateway restart

Defining an Additional IP Address

By default, the primary network interface of Wiretap Gateway is the GigE network adapter. If you are using an additional network, such as an InfiniBand network, uncomment the `IP0` parameter in the */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg* configuration file, and set its value to the InfiniBand IP address of the host. For example:

```
IP0=10.10.11.10
```

If you need to define more network interfaces, use the `IP1`, `IP2`, parameters, and so on.

Excluding Directories and File Types

By default, Wiretap Gateway exposes all directories and files on the machine where it is installed. You can change this behavior by defining lists of directories and file types that should not be exposed by Wiretap Gateway.

To exclude certain directories from being exposed by Wiretap Gateway, uncomment the `ExcludeDirs` parameter in the */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg* configuration file, and set its value to a comma-separated list of directories. For example:

```
ExcludeDirs=/dev,/lib,/usr/lib,/bin,/usr/bin,/sbin
```

To exclude certain file types from being exposed by Wiretap Gateway, uncomment the `ExcludeExts` parameter in the configuration and set its value to a comma-separated list of file extensions. For example:

```
ExcludeExts=jpg,tiff,mov
```

If there are just a few directories that you want to expose through Wiretap Gateway, it is more efficient to use the `LimitDirs` parameter to specify just the directories that should be exposed, rather than using `ExcludeDirs` to exclude all the other directories in the system. For example:

```
LimitDirs=/mnt
```

NOTE `LimitDirs` overrides `ExcludeDirs` in the event of a conflict.

Configuring Proxy Quality for RED Footage

When viewing proxies of RED (R3D) media, you may want to change the proxy quality level, for smoother playback. Use the `LowresDebayerMode` keyword in the */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg* configuration file to change the quality level.

The keyword can take one of the following values:

- Full
- Half Premium
- Half Good
- Quarter
- Eighth

NOTE The default value is *Quarter*.

Setting up Wiretap Gateway Slave Processes

To improve real-time playback of RED media, Wiretap Gateway can spawn multiple slave processes that increase performance without requiring additional licenses.

To configure Wiretap Gateway to start slave processes, open the configuration file */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg* in a text editor, uncomment the `NumLocalSlaves` keyword, and set its value to the number of slave processes you want to run on the machine. The default setting is 4.

NOTE If you are configuring a Mac system equipped with a RED ROCKET™ card, set the number of slaves to zero. WiretapGateway slave processes cannot be used with a RED ROCKET card.

If you are running Wiretap Gateway on a dedicated system, enable as many slave processes as the number of CPU cores on the system. If you are running

Wiretap Gateway on a Visual Effects, Finishing and Grading workstation, make sure you set aside at least 4 CPU cores for a Visual Effects and Finishing application, or 2 cores for Lustre.

If you plan to also run other applications and processes on the Wiretap Gateway system, reduce the number of slaves accordingly.

For example, on a 16-core HP® Z800 workstation running Autodesk® Lustre®, enable 12 Wiretap Gateway slave processes, so that 2 CPU cores remain available for the Lustre application, and 2 other CPU cores are available for background processes, such as Backburner.

Configuring Read-ahead Threads

If your Mac OS X Wiretap Gateway system is equipped with a RED ROCKET card, configure the following additional keywords in the Wiretap Gateway configuration file.

To configure Wiretap Gateway for a RED ROCKET card:

2. Open the */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg* file in a text editor.
3. Locate the `NumReadAheadThreads` keyword.

   NOTE If you cannot find this keyword in the configuration file, open the */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg.sample* file in another text editor and copy the keyword from there into the configuration file.

4. Uncomment the keyword (by removing the pound sign at the beginning of the line), and set its value to **12**.
5. Scroll down to the `NumReadThreads` keyword.
6. Uncomment the keyword and set its value to **6**.
7. Save and close the configuration file.

Installing WiretapCentral on a Dedicated System

If you prefer not to access WiretapCentral on your Visual Effects, Finishing and Grading workstation, perform the following tasks to install WiretapCentral on a dedicated system on your network.

The first procedure applies to Linux systems, and the second one to Mac systems.

To install WiretapCentral on a dedicated Linux system:

2. Log in to the system as root.
3. Download the WiretapCentral*tar* file to a temporary directory. The download link is provided in the release announcement you received from Autodesk.
4. Unpack the file by typing:

   tar zxvf`<file_name>`**.tar.gz**

   The installation files are unpacked into a new directory.
5. Access the new directory, and start the installer by typing:

   ./INSTALL

   WiretapCentral is installed. Refer to the following section for information on configuring it.

To install WiretapCentral on a dedicated Mac system:

2. If you are installing from the Smoke DVD, insert the disc and double-click the DVD icon on the desktop.
3. If you are installing from the Smoke *dmg* file, double-click the *dmg* to see its contents.
4. Go to the *Standalone Installers* folder and run the *WiretapCentral* installer.
5. Follow the on-screen instructions to complete the installation.

   WiretapCentral is installed. Refer to the following section for information on configuring it.

Configuring WiretapCentral

Setting Up User Access Control for WiretapCentral

By default, no user name or password is needed to use WiretapCentral, and all jobs submitted from WiretapCentral to Backburner are owned by the generic user “apache”. As a result, all users can perform operations on any

WiretapCentral job on the Backburner network, including suspending, activating, and deleting jobs submitted by other users.

For greater control, you can password-protect the WiretapCentral root directory using the Apache server's basic authentication mechanism. Once password-protection is in place, users are required to submit a user name and password to access WiretapCentral. With password-protection enabled, WiretapCentral jobs on the Backburner network then have specific user names associated with them. Only the owner of a job can perform operations upon it. Optionally, you can give administrator privileges to specific users so they can control Backburner jobs other than their own.

NOTE

If you decide not to implement user access control, you might still want to assign the generic user "apache" administrator privileges for Backburner. This will allow all WiretapCentral users to manage and control all jobs on the Backburner network, including Burn jobs, for example.

Step 1: Password-Protecting the WiretapCentral Directory

The first step in setting up user authentication is to password-protect the directory (and subdirectories) from which the WiretapCentral Web page is served. This is done by adding standard server directives to the main Apache configuration file.

2. Open the main Apache configuration file, */etc/httpd/conf/httpd.conf* on Linux or */etc/apache2/httpd.conf* on Mac OS X, in a text editor.
3. Scroll to the bottom of the file and add the following lines, then save and close the file:

```
#
# WiretapCentral User Authentication Section
#
<Directory /var/www/html/wiretapcentral>
AuthType Basic
AuthName WireTapCentral
AuthUserFile /etc/httpd/auth/wiretapcentral.auth
<Limit GET POST>
require valid-user
</Limit>
</Directory>
```

4 Restart the Apache server for the changes to take effect.

- On Linux, open a terminal, log in as root, and type:

  /etc/init.d/httpd restart

- On Mac OS X, run the Terminal application from Applications / Utilities, and type:

  sudo /usr/sbin/apachectl restart

5 Verify that password protected was successful by opening a browser and attempting to use WiretapCentral:

http://<hostname>/WiretapCentral

A pop-up dialog should appear, indicating WiretapCentral requires a valid user name and password.

Step 2: Populating the User/Password File

With the WiretapCentral directory password-protected, you can now create a password file containing user names and passwords.

2 Check if the *wiretapcentral.auth* file exists by typing one of the following commands:

- On Linux:

  ls /etc/httpd/auth

- On Mac OS X:

  ls /etc/apache2/auth

If the file is listed in the command output, the correct file is already in place, and you do not need to create it.

3 Use the Apache *htpasswd* command to add users to the *wiretapcentral.auth* file:

- On Linux:

  htpasswd -c /etc/httpd/auth/wiretapcentral.auth `<username> <password>`

- On Mac OS X:

  htpasswd -c /etc/apache2/auth/wiretapcentral.auth `<username> <password>`

WARNING The **-c** option replaces any existing password file. Use this option for the first password only, if *wiretapcentral.auth* is not already in place.

4 Optional: To delete an account type one of the following commands:

- On Linux:

htpasswd -D /etc/httpd/auth/backburner.auth `<username>`

- On Mac OS X:

  htpasswd -D /etc/apache2/auth/backburner.auth `<username>`

Step 3 (Optional): Giving Specific Users Administrator Privileges

Users without administrators privileges can perform operations on the jobs they themselves submit, but can only monitor other jobs on the Backburner network. Users with administrator privileges can actively manage all jobs and render nodes. Administrator privileges are assigned in the Backburner configuration file, */usr/discreet/backburner/cfg/wiretap.cfg*.

2. On the workstation where the Backburner Manager is installed, open the */usr/discreet/backburner/cfg/wiretap.cfg* file in a text editor.
3. Locate the `[SECURITY]` section. This section contains the `BackburnerAdministrators` keyword, which specifies the user accounts with administrator privileges.

   For example, the following line assigns administrator privileges to the user account *backburner*:

   ```
   BackburnerAdministrators=backburner
   ```

4. Edit the `BackburnerAdministrators` keyword, separating account names with a comma. For example, the following assigns administrator privileges to the user accounts *backburner*, *apache*, *wiretapcentral*, and *admin*:

   ```
   BackburnerAdministrators=backburner, apache,
   wiretapcentral, admin
   ```

5. Save and exit the file.
6. To verify that administrator privileges have been successfully applied to the user account, first, on the workstation where the Backburner Manager is installed, restart the Backburner Manager so it picks up the new settings:
   - On Linux, type:

     /etc/init.d/backburner restart

   - On Mac OS X type:

     /usr/discreet/backburner/backburner_manager restart

7. Next, log in to WiretapCentral as the administrator account, and attempt to suspend a job that belongs to a different user.

If the suspension operation is successful, the administrator privileges have been applied. If you receive a “permission denied” error message, the account does not have administrator privileges.

Web Browser Configuration

The WiretapCentral graphical user interface runs in any Web browser that supports the Adobe Flash Player plug-in, version 9 or later. This includes Mozilla® Firefox® 1.x or later (32-bit), Apple® Safari™ 1.x or later, and Microsoft® Internet Explorer 6 or later.

If you already have the Adobe Flash Player plug-in installed for your browser, you do not have to perform any additional configuration to use WiretapCentral. Just open a Web browser, and point it to `http://<hostname>/WiretapCentral`.

If your browser does not have the Adobe Flash Player plug-in, you can download it for free from the Adobe Web site.

NOTE

Currently, the Adobe Flash Player for 64-bit Linux systems is still in alpha stage. On Visual Effects and Finishing workstations, the Autodesk DKU (Discreet Kernel Utilities) automatically installs a 32-bit version of the Adobe Flash Player. This does not apply to Flare workstations, as the DKU is not installed for Flare. You can get Adobe Flash Player from the Adobe Web site.

Verifying Installed Components

After installing and configuring WiretapCentral, and all related components, perform the following procedures to verify that installation was successful.

Verifying Wiretap Gateway

To verify the Wiretap Gateway installation on a machine:

2 Access the file browser in Lustre, the Network panel in a Visual Effects and Finishing application, or open WiretapCentral in a Web browser:

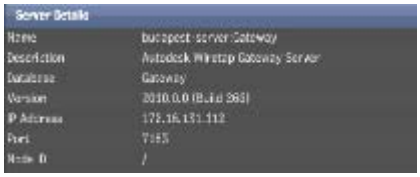
`http://<hostname>/WiretapCentral`

3 Locate the Wiretap Gateway system in the list, and make sure the label "Gateway" or "Autodesk Wiretap Gateway Server" appears next to the system name.

4 In WiretapCentral, locate the Wiretap Gateway system you want to verify in the Servers panel on the left-hand side, and make sure the label "Gateway" appears next to the system name.

5 Click the Wiretap Gateway system name, and verify that Wiretap Gateway was successfully licensed:

- In WiretapCentral, the Description row in the Server Details panel should no longer contain the mention "Unlicensed".



- In Visual Effects, Finishing and Grading applications, Wiretap Gateway should no longer contain the mention "Unlicensed".

6 Make sure you are able to browse the storage device connected to the Wiretap Gateway system.

Verifying your Render Farm

To verify your Render Farm from WiretapCentral:

2 Open WiretapCentral in a Web browser:

`http://<hostname>/WiretapCentral`

3 Select Backburner Monitor from the Tools menu.

Backburner Monitor opens in a new window.

TIP You can also open Backburner Monitor directly by pointing your Web browser to `http://<hostname>/WiretapCentral/bbmon.html`.

4 Make sure the machine where you set up Backburner Manager appears in the Backburner Manager drop-down list.

5 Select the manager for your render farm and then click the Servers tab.

   A list of all the Backburner Servers assigned to the selected manager appears.

6 Make sure the servers you set up are in the list, and that "mio" is listed in the Adapters column for each of them.

7 Click the Server Groups tab, and make sure the node groups you set up are listed.

To verify your Render Farm from the Windows Backburner Monitor:

2 Open Backburner Monitor.

3 From the Manager menu, select Connect.

4 Enter the IP or hostname of the machine where you installed Backburner Manager, and verify that you can connect to the Manager.

5 Once you are connected to the Manager, expand the "Plugins" branch in the lower-left panel of the Monitor window, and select "MIO File Import".

   The Servers panel should list all the Backburner Servers where you installed the Media I/O Adapter.

6 Expand the "Global Groups" branch in the lower-left panel of the Monitor window, and verify that the server groups you defined are listed there, and that the correct servers are listed under each group.

Appendix: Wiretap Gateway Supported Ingest File Formats

4

Overview

This appendix lists the image and audio file formats supported by the Wiretap Gateway server, for ingest. Use the tables in this appendix to determine if a particular digital image sequence or container format can be recognized by the Wiretap Gateway.

An image sequence is a series of sequentially numbered files, traditionally the result of scanning film stock at high resolution to produce a digital intermediate. Here, each file contains the digital scan of an individual frame. Common image sequence formats include Cineon®, DPX and Tiff. The type of image sequence file on hand is usually revealed by its extension.

In contrast, container formats, also called "wrapper" formats, can contain image sequences (commonly called *streams* or *essences*) and audio, compressed using a variety of compression algorithms (codecs) into a single file. Container formats do not impose specific video or audio codecs upon the media they contain. Rather, a container format defines only how the video, audio and other data is stored within the container itself. Unlike image sequences, it is not possible to tell by looking at the extension what kind of video or audio is inside a container format.

Supported Image Sequence Formats

The Wiretap Gateway server supports ingest of the following image sequence file formats.

File Format	Bit Depth	Default Extension
Alias®	8-bit	als
Cineon®	10-bit	cin
DPX	8-bit, 10-bit, and 12-bit	dpx
Jpeg	8-bit	jpg
Macintosh® Pict	8-bit	pict
OpenEXR	16-bit int, 16-bit float, 32-bit float	exr
Pixar	8-bit	picio
SGI®	8-bit and 16-bit	sgi
Softimage®	8-bit	pic
TARGA®	8-bit	tga
Tdi/Maya®	8-bit and 16-bit	iff
Tiff	8-bit and 16-bit	tif
Wavefront®	8-bit and 16-bit	rla

NOTE Lustre supports ingest of OpenEXR 16-bit RGB float only. Files with other channels, RGBA, for example, cannot be read in Lustre.

Supported Audio File Formats

Wiretap Gateway supports ingest of the following audio file formats.

File Format	Bit Depth	Default Extension
AIFF-C	16-bit, 24-bit, and 32-bit (float)	aifc
AIFF	16-bit and 24-bit	aiff
WAVE	16-bit, 24-bit, and 32-bit (float)	wav
Broadcast Wave	16-bit, 24-bit, and 32-bit (float)	wav

Supported Image Container Formats

Wiretap Gateway supports ingest of the container formats listed in the Related Topics.

Import: Supported QuickTime File Codecs

WiretapCentral supports import of QuickTime® files encoded with any of the following codecs.

NOTE QuickTime files exported from QuickTime Pro in Drop-Frame mode may be improperly truncated. This will result in the video and audio frames not matching when imported into WiretapCentral.

NOTE QuickTime PhotoJPEG files can only be imported. You cannot soft-import QuickTime PhotoJPEG files.

Broadcast CODEC	CODEC Flag	Comment
Component Y'CbCr 10-bit 4:4:4	v410	10-bit Packed

Broadcast CODEC	CODEC Flag	Comment
Component Y'CbCr 10-bit 4:2:2	v210	10-bit Packed Blackmagic or AJA-Kona compatible
Component Y'CbCr 8-bit 4:4:4	v308	8-bit Planar
Component Y'CbCrA 8-bit 4:4:4:4	v408	8-bit Planar
Component Video	yuv2	8-bit Packed 4:2:2 Blackmagic or AJA-Kona compatible
8-bit Packed YUV 4:2:2	2vuy	
DV 25 NTSC	dvc	Although the specifications allow the DV format to be field 1 or 2, the industry standard is "bottom first". Thus, before exporting to Wiretap-Central, ensure that the clip is Field 2. Reformat, if necessary.
DV 25 PAL	dvcp, dvpp	
DVCPRO 50 NTSC	dv5n	
DVCPRO 50 PAL	dv5p	
DVCPRO HD	dvh1	
DNxHD	avdn	8 bits: 36, 145, 220 (and variants) 10 bits: 220x (and variants)

Broadcast CODEC	CODEC Flag	Comment
IMX	mxn3, mxn4, mxn5	30, 40, 50

File CODEC	CODEC Flag	Comment
PhotoJPEG	RTJ0	RT PhotoJPEG compatible
MJPEG	MJPG, mjpg, mjpa, mjpb, JPEG, jpeg, dmb1, AVDJ	JPEG compatible
PNG	png	Portable Network Graphic sequence (alpha support only through Gateway library)
PNGA	pngalpha	Portable Network Graphic sequence (with alpha support)
RGB Uncompressed	raw	No alpha support
RGBA Uncompressed	rawalpha	With alpha support
TGA	tga	TARGA

Web CODEC	CODEC Flag	Comment
MPEG-1	mpg1, MPG1, pim1, PIM1	
MPEG-4	mp4v; DivX®; DIV1; div1; MP4S;M4S2; m4s2; xvid; XVID; XviD; DX50; dx50; DIVX; MP4V	
MSMpeg 4v3 (DivX)	DIV1, div1, MPG4, mpg4, DIV2, div2, MP42, mp42, DIV3, div3, DIV4, div4,	

Web CODEC	CODEC Flag	Comment
	DIV5, div5, DIV6, div6, MPG3, mpg3, MP43, mp43, AP41, ap41, MJPG	
Quicktime Planar RGB	8BPS	
Apple® Video	rpza	
Apple Graphics	smc	
Apple Animation	rle	With alpha support
Cinepak	cvid	
H.264	avc1	

Audio CODEC	CODEC Flag	Comment
IMA 4:1	ima4	
Raw 8-bit audio	rawaudio	
Twos	twos	16-bit PCM (Big Endian)
Ulaw	ulaw	
Sowt	sowt	16-bit PCM (Little Endian)
A-law 2:1	alaw	
16-bit PCM	in16	
Linear PCM (QT 7)	lpcm	

Audio CODEC	CODEC Flag	Comment
Ogg Vorbis (qt4l compatible)	vorbis	
Ogg Vorbis (qtcomponents compatible)	vorbis_qt	
MPEG-2 Layer 2 Audio	mp2	
QDM2 Audio	qdm2	
Apple lossless	alac	
MS ADPCM	adpcm (ms)	
ADPCM ima WAV	ima adpcm (wav)	
Advanced Audio Codec (AAC)		Supported in mp4, m4v, and mov containers.

Supported P2 MXF File Codecs

WiretapCentral supports import of Panasonic P2 MXF files encoded with any of the following codecs.

P2 CODEC	CODEC Flag	Comment
AVC-Intra 50	AVC-I 50	Panasonic P2
AVC-Intra 100	AVC-I 100	Panasonic P2
DV 25	DV 25	
DVCPRO	DVCPRO	

P2 CODEC	CODEC Flag	Comment
DVCPRO 50	DVCPRO50	
DVCPRO HD	DVCPROHD	

Supported XDCAM File Codecs

WiretapCentral supports import of Sony™ XDCAM files encoded with any of the following codecs.

XDCAM CODEC	CODEC Flag	File Type	Comment
MPEG-2 IMX 30	IMX 30	MXF	XDCAM
MPEG-2 IMX 40	IMX 40	MXF	XDCAM
MPEG-2 IMX 50	IMX 50	MXF	XDCAM
MPEG-2 long-GOP	XDCAM HD	MXF	XDCAM HD (4:2:0)
MPEG-2 long-GOP	XDCAM HD422	MXF	XDCAM HD (4:2:2)
MPEG-2 long-GOP	XDCAM EX	MP4	XDCAM EX

Supported DNxHD MXF File Codecs

WiretapCentral supports the import of MXF files encoded with Avid® DNxHD® codec.

NOTE Material at 1080i encoded with the DNxHD 145 codec sometimes uses a thin raster frame format, denoted as 145-TR. It uses an frame size of 1440x1080 (NTSC) or 1280x1080 (PAL). Enable Scale to Full HD to scale the material to the full 1920x1080 frames. Disable Scale to Full HD to use the thin raster frame.

Resolution	Frame Rate	Avid DNxHD CODEC	Bit Depth
1080i	59.94	DNxHD 220x	10
		DNxHD 220	8
		DNxHD 145	8
	50	DNxHD 185x	10
		DNxHD 185	8
		DNxHD 120	8
1080p	29.97	DNxHD 220x	10
		DNxHD 220	8
		DNxHD 145	8
		DNxHD 45	8
	25	DNxHD 185x	10
		DNxHD 185	8
		DNxHD 120	8
		DNxHD 36	8
	23.976 &	DNxHD 175x	10

Resolution	Frame Rate	Avid DNxHD CODEC	Bit Depth
	24		
		DNxHD 175	8
		DNxHD 115	8
		DNxHD 36	8
720p	59.94	DNxHD 220x	10
		DNxHD 220	8
		DNxHD 145	8
	50	DNxHD 175x	10
		DNxHD 175	8
		DNxHD 115	8
	29.97	DNxHD 110x	10
		DNxHD 110	8
		DNxHD 75	8
	23.976 & 25	DNxHD 90x	10
		DNxHD 90	8
		DNxHD 60	8

Support for RED Files

WiretapCentral supports the import of RED® media (R3D files) encoded with codec versions 2 and 3.

Support for ARRI Files

WiretapCentral supports the import of ARRIRAW™ media files produced by D-20, D-21, and ALEXA cameras

ARRIRAW files come in two native resolutions, 2880x2160 or 2880x1620, both at 12-bit depth.

Supported Apple ProRes Files

WiretapCentral supports the import of Apple ProRes files through a Wiretap Gateway running on Mac OS X. Review the installation documentation to learn how to install such a Gateway. You can then connect through the Network panel of a Gateway library to the Mac OS X computer and import the ProRes files.

If you are using Smoke on Mac OS X, you don't need to use a remote Wiretap Gateway. Just use a Gateway library as you usually do.

NOTE ProRes files are imported using a Gateway, either through a Gateway library, or through a Gateway Import node in Batch.

The following Apple ProRes codecs are supported.

Apple ProRes CODEC	CODEC Flag	Comment
ProRes 4444	ProRes4444	12-bit
ProRes 422 (HQ)	ProResHQ	10-bit
ProRes 422	ProResSD	10-bit
ProRes 422 (LT)	ProResLT	10-bit

Apple ProRes CODEC	CODEC Flag	Comment
ProRes 422 (Proxy)	ProResProxy	10-bit