Autodesk®
WiretapCentral™ 2010

Installation Guide

Trademarks

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Contents

Introduction 1

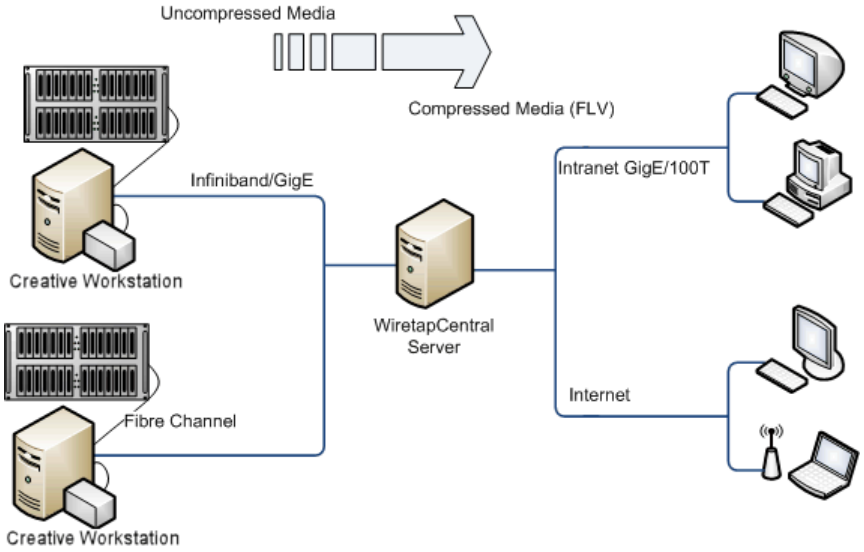
Topics in this chapter:

About WiretapCentral

Autodesk® WiretapCentral™ 2010 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 or standard filesystem.

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.



New in version 2010, WiretapCentral enables you to directly import REDCODE RAW and multi-channel OpenEXR files by leveraging the new Wiretap Gateway.

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

About this Guide

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.	**`install rpm -qa`**
Variable names appear in Courier, enclosed in angle brackets.	`<filename>`
Feedback from the command line or shell appears in Courier.	`limit coredumpsize`
Directory names, filenames, URLs, and command line utilities appear in italics.	*/usr/discreet*

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*.

WiretapCentral Concepts

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Topics in this chapter:

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.

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.

For more information on Autodesk Wire, see the *Autodesk Stone and Wire Filesystem and Networking Guide*.

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.

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.

WiretapCentral can leverage the Wiretap Gateway and the Autodesk Backburner processing network 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 machines in your network are labeled as such in the WiretapCentral network tree. 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 in WiretapCentral, the media is read from the source storage by the Wiretap Gateway, processed by the Media I/O Adapter encoding engines on your processing nodes, and then written to the destination storage through the Wiretap server.

Installing WiretapCentral 3

Topics in this chapter:

Overview

There are two main deployment models for WiretapCentral. 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 automatically installed and configured on a single workstation when you install the Visual Effects and Finishing application. 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, as processing is distributed across several dedicated Backburner Server nodes on your network. This is a scalable deployment model: performance can be maximized by moving as many components as possible onto dedicated machines on your network.

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

Preparing Your Installation

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

1. Decide which deployment model you want to use. Refer to the descriptions in the previous section.
2. Obtain your installation media. All necessary components for a stand-alone or distributed deployment setup are available from the installation directory of the Autodesk Visual Effects and Finishing application. You can get the application installation package on DVD or you can download it as a *tar* file. The download link is provided in the Release Announcement you received from Autodesk.
3. Download the latest version of the *Autodesk Backburner Installation Guide*, *Autodesk Backburner User Guide*, and *Autodesk Visual Effects and Finishing Software Installation Guide* from *www.autodesk.com/me-documentation*.

   Although reading these guides is not required for your installation, the present document occasionally refers to them for additional details or for definitions of important concepts.
4. If you are performing a distributed deployment, make sure the systems you plan to install the various components on meet the following recommended specifications:

Component	Hardware	Operating System	Other Requirements
WiretapCentral	■ 64-bit dual core CPU, such as AMD™Opteron™ or Intel® Xeon® ■ 1 GB of RAM or better ■ GigE or InfiniBand networking ■ 500 GB Hard Drive, or larger.	32-bit or 64-bit Red Hat® Enterprise Linux® Workstation 4 Update 2 or Update 3 It is recommended to disable SELinux on the WiretapCentral machine.	■ Direct access to the Wiretap network. WiretapCentral must reside on the same subnet as the Visual Effects and Finishing workstations. ■ 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	any 64-bit Linux distribution	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	any 64-bit Linux distribution	

NOTE If you have Autodesk® Burn® 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 software. See the *Autodesk Burn Installation and User Guide* for details about Autodesk Burn.

Stand-alone Installation

In a stand-alone installation, WiretapCentral, the Wiretap Gateway, 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 and Finishing application.

A stand-alone installation is the easiest deployment model, as all necessary components are automatically set up by the Visual Effects and Finishing application installer. 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.

To set up a stand-alone WiretapCentral configuration on a Visual Effects and Finishing workstation:

1. As root, open a terminal and browse to the Visual Effects and Finishing application installation directory, for example *Smoke_2010_LINUX_64_RHEL4*.
2. Run the application installation script by typing:

   ./INSTALL_<APPLICATION_NAME>
3. Click Yes when the installation scripts asks if you want to automatically run Backburner Manager and Backburner Server on the local machine.
4. Click Yes when the installation script asks if you want to enter a Backburner Manager for the Server. The manager configuration file opens in a text editor. Make sure the local manager address, *localhost*, is set in the file.
5. Perform the remaining steps of a regular application installation, as guided by the application installer. Refer to the latest *Autodesk Visual Effects and Finishing Software Installation Guide* for details.

   WiretapCentral, the Wiretap Gateway, and all background processing components are automatically installed and configured on the workstation.
6. License the Wiretap Gateway. See Licensing the Wiretap Gateway on page 15.
7. Make sure the Web browsers on the computers you plan to access WiretapCentral from are properly configured. See Web Browser Configuration on page 16.
8. Verify that all components have been properly installed. See Verifying Installed Components on page 16.

As mentioned earlier, in a stand-alone deployment all media processing takes place locally, and system resources are shared between such background tasks and the Visual Effects and Finishing application running in the foreground.

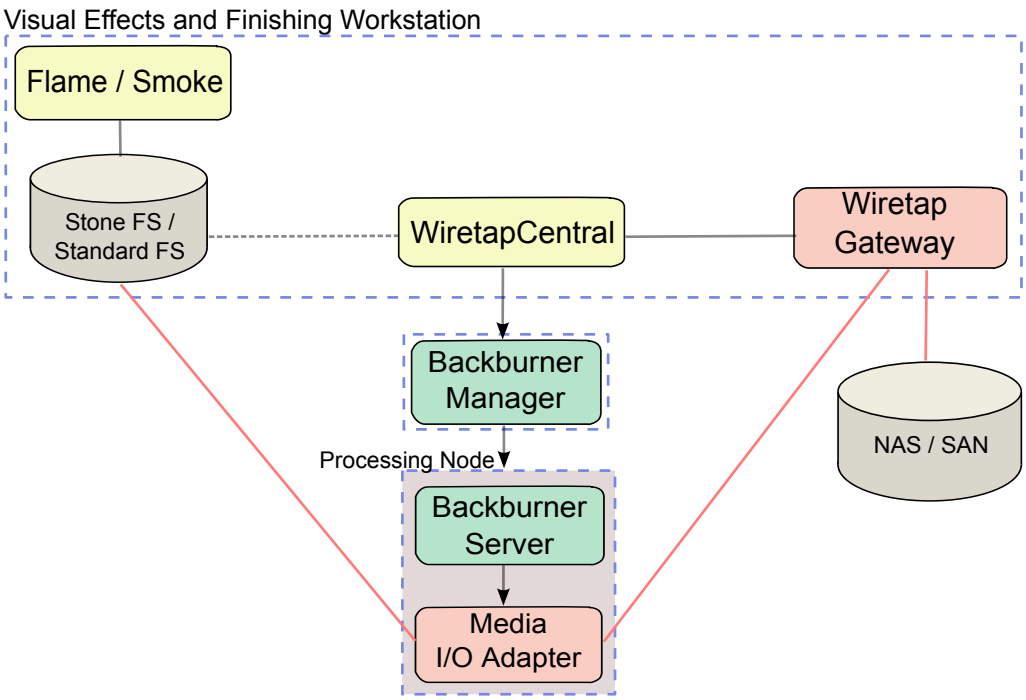
To avoid competition for workstation resources and to increase productivity, it is recommended that you relocate some or all the components to dedicated machines on your network. The following section describes the levels of scalability a distributed deployment offers.

Distributed Deployment

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 and Finishing workstation and distributed across a Backburner processing network for increased productivity.

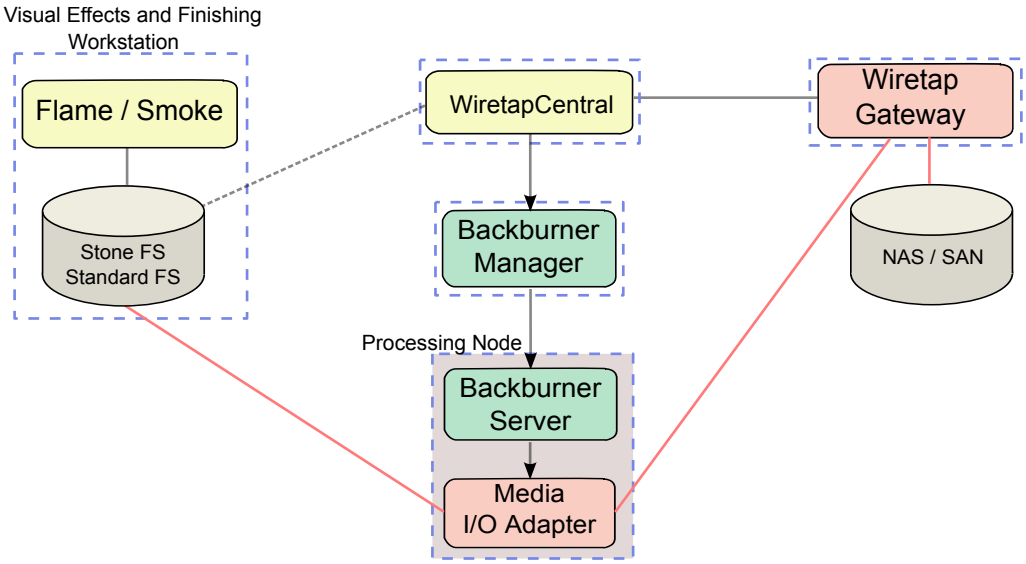
Depending on your performance needs, you can scale your configuration as much as necessary. Here are two examples of typical deployment scenarios.

- In this scenario, WiretapCentral and the Wiretap Gateway still run on the Visual Effects and Finishing 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 Since processing components (Backburner Server and the Media I/O Adapter) are automatically installed on Visual Effects and Finishing workstations, the workstations themselves can be used as processing nodes during off-peak hours.

- In this scenario, all components, including WiretapCentral, and the Wiretap Gateway reside on dedicated machines on the network. Media processing is performed by processing nodes bundled in node groups in a render farm.



To set up a distributed configuration:

1. Before starting the setup process, determine a location for the Backburner Manager.
   - If your Visual Effects and Finishing workstation is the only one serviced by the render farm, you can run Backburner Manager on the workstation itself.

- If the render farm is shared by multiple workstations, you will need to install and run Backburner Manager on a dedicated machine.

NOTE Consult the *Autodesk Backburner Installation Guide* for detailed descriptions of Backburner components, and for instructions on designing a render farm that suits your needs.

2 Install the Visual Effects and Finishing application:

- As root, open a terminal and browse to the application installation directory, for example *Smoke_2010_LINUX_64_RHEL4*.
- Run the application installation script by typing:
  ./INSTALL_<APPLICATION_NAME>
- If you do not plan to install Backburner Manager on a dedicated machine, click Yes when the installation scripts asks if you want to automatically run it on the local workstation.
- Click Yes when the installation scripts asks if you want to automatically run Backburner Server on the local machine.
- Click Yes when the installation script asks if you want to enter a Backburner Manager for the Server. The manager configuration file opens in a text editor. Enter the hostname of the machine where Backburner Manager will be installed. By default, this value is set to *localhost*.
- Perform the remaining steps of a regular application installation, as guided by the application installer. Refer to the *Autodesk Visual Effects and Finishing Software Installation Guide* for details. WiretapCentral, and the Wiretap Gateway are automatically installed and configured on the workstation. To further increase performance, you can install these components on dedicated machines as well. Installation instructions are provided towards the end of this procedure.

3 If you did not set up Backburner Manager to run on the Visual Effects and Finishing workstation, install it on a dedicated machine.

- As root, go to the *dist* subdirectory of the Visual Effects and Finishing application installation directory, and type:
  rpm -Uhv backburner_libs.sw.base-<version>**.i386.rpm**
  rpm -Uhv backburner.sw.base-<version>**.rpm**
- Click Yes when the installer asks if you want to automatically run Backburner Manager on this machine.
- Click No when the installer asks if you want to automatically run Backburner Server on this machine.

4 If you want to use existing Burn render nodes as processing nodes for WiretapCentral, upgrade to the latest version of Burn, and skip to step 7.

Backburner Server and the Media I/O Adapter are automatically installed with the latest version of Autodesk Burn. See the *Autodesk Burn Installation and User Guide* for Burn installation instructions.

5 Install Backburner Server on other systems you want to use as processing nodes.

- As root, go to the *dist* subdirectory of the application installation directory, and type:
  rpm -Uhv backburner_libs.sw.base-<version>**.i386.rpm**
  rpm -Uhv backburner.sw.base-<version>**.rpm**
- Click No when the installer asks if you want to automatically run Backburner Manager on this machine.
- Click Yes when the installer asks if you want to automatically run Backburner Server on this machine.

- Click Yes when the installation script asks if you want to enter a Backburner Manager for the Server. The manager configuration file */usr/discreet/backburner/cfg/manager.host* opens. Enter the hostname of the Backburner Manager machine you configured in the previous step.

  NOTE You can also configure this setting later by opening the */usr/discreet/backburner/cfg/manager.host* file in a text editor.

6 Install the Media I/O Adapter on the Backburner Server nodes.

- As root, go to the *dist* subdirectory of the application installation directory, and type:
  `./autodesk.mio.INSTALL`

7 Optional: Group your Backburner Server nodes into server groups.

This is an optional, but highly recommended task. Server groups provide an efficient way of organizing the way your background processing jobs get distributed to the render farm. Consult the *Autodesk Backburner User Guide* for information on creating server groups.

NOTE You can include your Visual Effects and Finishing workstation in a server group as well if you wish to use it as a processing node during off-peak hours.

8 Optional: Relocate WiretapCentral to a dedicated machine to avoid competition for the Visual Effects and Finishing workstation resources, and to maximize performance.

- As root, go to the *dist* subdirectory of the application installation directory and type:
  `./autodesk.wiretapcentral.INSTALL`

  WiretapCentral installs to the default Apache *html* and *cgi-bin* directories, and is ready to use.

NOTE To be able to access WiretapCentral from its new location when clicking the WiretapCentral button in the Visual Effects and Finishing application Import Image menu, open the application initialisation configuration file (*/usr/discreet/*`<application_directory>`*/cfg/init.cfg*) in a text editor, and set the value of the *WiretapCentralUrl* keyword to the new URL of WiretapCentral.

9 Optional: Install the Wiretap Gateway on a machine directly connected to the SAN, NAS or DAS media storage, to avoid using NFS, and to leverage the high bandwidth of the Wire network.

- As root, go to the *dist* subdirectory of the application installation directory and type:
  `./autodesk.wiretapgateway.INSTALL`

  The Wiretap Gateway installs, automatically discovers your processing network, and configures itself.

NOTE You can set up multiple Wiretap Gateway machines to expose several storage devices across different network connections, in order to distribute I/O traffic.

10 Make sure the 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.

NOTE The Wiretap Gateway does not index "blind" mount points. To make "blind" mount points visible to the Wiretap Gateway, create permanent symbolic links to them.

11 If your workstation connects to your processing network through InfiniBand, or through a network interface other than the house network (for example 10 GigE), perform the following steps to ensure that the *ifffsWiretapServer* and Wiretap Gateway self discovery mechanism works properly.

- As root, open the files */usr/discreet/wiretap/cfg/wiretapd.cfg*, and */usr/discreet/wiretapgateway/cfg/wiretapgateway.cfg* in a text editor.

- Locate the *IP* keyword in the *[Server]* section, uncomment it if necessary, and edit its value in both files to match the IP address of your workstation. For example:
  `IP0=10.0.0.1`
- Close the configuration files, and then restart Stone and Wire and the Wiretap Gateway by typing:
  `/etc/init.d/stone+wire restart`
  `/etc/init.d/wiretapgateway restart`

12 License the Wiretap Gateway on each machine where you installed it. See Licensing the Wiretap Gateway.

13 Make sure the Web browsers on the computers you plan to access WiretapCentral from are properly configured. See Web Browser Configuration on page 16.

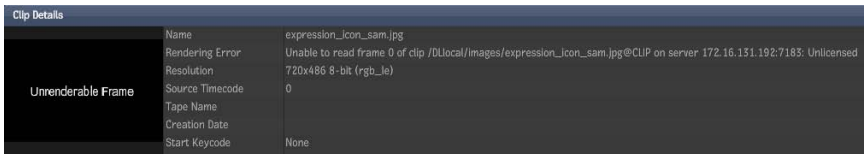
14 Verify that all components have been properly installed. See Verifying Installed Components on page 16

Licensing the Wiretap Gateway

You cannot use the Wiretap Gateway until you enter a license code for it.

Unlicensed Wiretap Gateway machines are labeled as such in the WiretapCentral Server Details panel.

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.



Perform the following procedure on *each* Wiretap Gateway machine to license it.

To license the Wiretap Gateway:

1 Obtain the Discreet host ID of the Wiretap Gateway machine. 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"`

2 Send the Discreet host ID (including the *DLHOST01*= part) to the Autodesk Licensing Department to obtain the Wiretap Gateway license code.
You will receive a license code similar to the following:
`FEATURE wiretapgw_all_2010 discreet_l 2010.999 15-oct-2009 0 \`
`4D7A8424FC43E0F86A65 \`

```
HOSTID=DLHOST01=25231AEF83AD9D5E9B2FA270DF4F20B1 ck=31
```

NOTE The code above is just an example. Actual license codes are unique for each Wiretap Gateway machine.

3 On the Wiretap Gateway machine, open the file */usr/local/flexlm/licenses/DL_license.dat* in a text editor (such as *nano*) and enter the license code.

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

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

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

5 To verify that the Wiretap Gateway was successfully licensed, open WiretapCentral in a Web browser, and select the Gateway machine in the network tree.

The Description row in the Server Details panel should no longer contain the mention “Unlicensed”.

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 latest version of the Autodesk DKU (Discreet Kernel Utilities) automatically installs a 32-bit version of Mozilla Firefox with a 32-bit version of the Flash Player. This does not apply to Flare workstations, as the DKU is not installed for Flare. You can get the alpha version of the 64-bit Linux 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 the Wiretap Gateway

To verify the Wiretap Gateway installation on a machine:

1. Open WiretapCentral in a Web browser.
   `http://<hostname>/WiretapCentral`
2. Locate the machine you want to verify in the Servers panel on the left-hand side, and make sure the label ":Gateway" appears next to the machine name.
3. Click the machine name, and make sure you are able to browse the storage device connected to the machine.

Verifying the Media I/O Adapter

To verify the Media I/O Adapter installation on a Backburner Server node:

1. Open WiretapCentral in a Web browser.
   `http://<hostname>/WiretapCentral`
2. Select Backburner Monitor from the Tools menu.
   Backburner Monitor opens in a new window.

   TIP You can open Backburner Monitor directly by pointing your Web browser to `http://<hostname>/WiretapCentral/bbmon.html`
3. From the Backburner Manager drop-down list, select the manager assigned to the Backburner Server node you want to verify.
4. Click the Servers tab.
   A list of all the Backburner Servers assigned to the selected manager appears.
5. Locate the server you want to verify in the list, and make sure "mio" is listed in the Adapters column.

Verifying your Render Farm

To verify your Render Farm setup:

1. Open WiretapCentral in a Web browser.
   `http://<hostname>/WiretapCentral`
2. 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`
3. Make sure the machine where you set up Backburner Manager appears in the Backburner Manager drop-down list.
4. After selecting the manager machine in the drop-down list, click the Servers tab, and the Server Groups tab, and make sure the processing nodes and node groups you set up are listed.

Appendix: Wiretap Gateway Supported Ingest File Formats

4

Topics in this chapter:

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/streams (essences) and audio compressed using a variety of compression algorithms (codecs) in a single file. Container formats do not impose specific video or audio codecs upon the media they contain. Rather, a container format defines 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.

Using the Tables

To determine if a particular container format is supported, first locate the section in this appendix for its container type: QuickTime®, Panasonic® MXF, Sony® MXF, etc. In the table for the container, look for the codec name or a relevant comment. Associated with a each codec supported by a container format is a short string identifying the specific codec standard used to compress the contents. If you know the codec flag—called a FourCC code for QuickTime—this is the simplest way to determine if the file can be ingested.

For example, suppose you have aime (.mov) file that was encoded using the QuickTime "Component Y'CbCr 4:4:4" video codec (v410 flag), and the IMA audio codec (ima4 flag). First, locate the video codec in the QuickTime Broadcast table (it's the first entry). Next, locate the audio codec in the QuickTime Audio table (also the first entry). Since both the audio and video codecs used to encode the contents of the QuickTime file are present in the tables, the Wiretap Gateway supports ingesting this particular file.

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

Supported Image Container Formats

The Wiretap Gateway supports ingest of the following container formats: QuickTime (.mov), Panasonic P2 MXF (.mxf), Sony XDCAM MXF (.mxf) and Red Recode Raw (.r3d). For specific encodings, consult the tables in the sections below.

QuickTime

The Wiretap Gateway supports ingest of QuickTime files that adhere to the codec standards presented in the following tables. For convenience, codecs are loosely grouped by their most common usage: broadcast, file, web and audio. This should not be understood as a limitation on usage.

QuickTime Broadcast

CODEC	Flag	Comment
Component Y'CbCr 10-bit 4:4:4	v410	10-bit Packed YUV 4:4:4
Component Y'CbCr 10-bit 4:2:2	v210	10-bit Packed YUV 4:2:2 Blackmagic or AJA-Kona 10-bit compatible
Component Y'CbCr 8-bit 4:4:4	v308	8-bit Planar YUV 4:4:4
Component Y'CbCrA 8-bit 4:4:4:4	v408	8-bit Planar YUV 4:4:4:4
Component Video	yuv2	8-bit Packed YUV 4:2:2 Blackmagic or AJA-Kona 8-bit compatible
Component Y'CbCr 8-bit 4:2:2	2vuy	8-bit Packed YUV 4:2:2
DV-25 NTSC	dvc	
DV-25 PAL	dvcp, dvpp	
DVCPRO 50 NTSC	dv5n	
DVCPRO 50 PAL	dv5p	
DVCPRO HD	dvh1, dvh2, dvh3, dvh5, dvh6, dvhp, dvhq	1920x1080, 24/30 fps1280x720, 24/30/60 fps1920x1080, 25 fps1280x720 25/50 fps
DNxHD	avdn	10-bit Avid DNxHD 220x (220 Mb/sec):1080p, 10-bit, 220 mbps @ 29.97 fps720p, 10-bit, 220 mbps @ 29.97 fps1080i, 10-bit, 220 mbps @ 59.94 fps8-bit Avid DNxHD 220 (220 Mb/sec):1080p, 8-bit, 220 mbps @ 29.97 fps720p, 8-bit, 220 mbps @ 29.97 fps1080i, 8-bit, 220 mbps @ 59.94 fps8-bit Avid DNxHD 145 (145 Mb/sec):1080p, 8-bit, 145 mbps @ 29.97 fps720p, 8-bit, 145 mbps @ 29.97 fps1080i, 8-bit, 145 mbps @ 59.94 fps1080i, 8-bit, 145 mbps @ 59.94 fps (thin raster - 1440x1080)8-bit Avid DNxHD 36 (36 Mb/sec):1080p, 8-bit, 36 mbps @ 24 fps
IMX	mx3n, mx3p, mx4n, mx4p, mx5n, mx5p	MPEG IMX 30 Mb/sec, 40 Mb/sec, 50 Mb/sec

QuickTime File

CODEC	Flag	Comment
PhotoJPEG	RTJ0	RT PhotoJPEG compatible

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

QuickTime Web

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, 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	

QuickTime Audio

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	

Audio CODEC	CODEC Flag	Comment
16-bit PCM	in16	
Linear PCM (QT 7)	lpcm	
Ogg Vorbis	vorbis	qt4l compatible
Ogg Vorbis	vorbis_qt	qtcomponents compatible
MPEG-2 Layer 2 Audio	mp2	
QDM2 Audio	qdm2	
Apple lossless	alac	
McRowsoft ADPCM	adpcm (ms)	
ADPCM ima WAV	ima adpcm (wav)	

MXF

The Wiretap Gateway supports the ingest of MXF files associated with both the Panasonic DVCPRO P2 and Sony XDCAM implementations of the format.

Panasonic DVCPRO P2 MXF

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	
DVCPRO 50	DVCPRO50	
DVCPRO HD	DVCPROHD	

Sony XDCAM MXF

XDCAM CODEC	CODEC Flag	Comment
MPEG-2 IMX 30	IMX 30	XDCAM
MPEG-2 IMX 40	IMX 40	XDCAM
MPEG-2 IMX 50	IMX 50	XDCAM
MPEG-2 long-GOP	XDCAM HD	XDCAM HD

Red Redcode Raw

All Red Redcode™ Raw (.r3d) file resolutions and qualities encoded by the Redcode codec are supported for ingest by the Wiretap Gateway. Audio is not currently supported.