

coolsign

CoolSign Digital Media Network Installation Manual

HVS-ID-INS-CS-5.0, Issue 05

Haivision

Edition Notices

This edition notice provides important information regarding the documentation for version 5.0 of the CoolSign Digital Media Network product. Later releases are intended to be backwards-compatible, but may introduce new functionality not addressed in this content. Likewise, other product documentation may describe functionality not addressed here that will become available in later releases. Please consult with Haivision Systems, Inc. or its authorized representatives to ensure compatibility.

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Patents

CoolSign is covered by U.S. Patent Number 7,136,906 “System for Electronically Distributing, Displaying and Controlling the Play Scheduling of Advertising and Other Communicative Media” and Patent Number 7,228,341 “Method and System for Electronically Distributing, Displaying and Controlling Advertising and Other Communicative Media.” CoolSign may also be covered by one or more pending United States patent applications.

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NOTE

A login is required to access the Haivision Download-Center.

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About This Content

Welcome to the CoolSign Digital Media Network 5.0 Installation Manual. This documentation describes how to install, configure, and troubleshoot the CoolSign software.

Topics Discussed

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About Haivision™

Haivision is a global leader in delivering advanced video networking, digital signage, and IP video distribution solutions. Haivision offers complete end-to-end technology for video, graphics, and metadata to help customers build, manage and distribute their media content to users throughout an organization or across the Internet. Haivision has specific expertise in the enterprise, education, medical/healthcare, and federal/military markets.

Haivision acquired the assets of CS Software Holdings, LLC, including the CoolSign product technology, in November, 2010. This acquisition brought together Haivision's IP video streaming capabilities and CoolSign's feature-rich signage solution, with its sophisticated technology to control, schedule, distribute, display, and monitor digital media.

Haivision is based in Montreal and Chicago, with technical centers in Beaverton, Oregon; Austin, Texas; and Hamburg, Germany.

Audience

This installation manual is focused towards an end-user, such as a content creator or network system administrator, who has a basic knowledge of telecommunications equipment, and IP/LAN networking concepts and terminology.

Related Topics...

[Reliability of Information](#) on page 10

Reliability of Information

The information contained in this installation manual has been carefully checked and is believed to be entirely reliable. However, as Haivision improves the reliability, function, and design of its products, the possibility exists that this installation manual may not remain current.

If you require updated information, or any other Haivision product information, contact:

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Or visit our website at: <http://www.haivision.com>.

Related Topics...

[Obtaining Documentation](#) on page 10

Obtaining Documentation

You can download product documentation through the Haivision Download Center at <http://www.haivision.com/support/download-center/>.



NOTE

A login is required to access the Haivision Download Center.

- CoolSign Network Server Quick Start Guide
- CoolSign Stand-Alone Player Quick Start Guide
- CoolSign Personal Demo Server Quick Start Guide
- CoolSign Player Quick Start Guide
- CoolSign Installation Manual
- CoolSign Network Manager User's Guide
- CoolSign Content Creator User's Guide
- CoolSign Release Notes
- CoolSign Datasheet (contains hardware specifications)

Related Topics...

[Service Support](#) on page 11

Service Support

For more information regarding service programs, training courses, or for assistance with your support requirements; contact Haivision Technical Support using our Support Portal at: <http://www.haivision.com/support-portal-home/>.

Related Topics...

[Reliability of Information](#) on page 10

Document Conventions

The following conventions are used throughout this document.

Typographic Conventions and Elements

| | |
|------------------------|--|
| <i>Italics</i> | Used for the introduction of new terminology or for words being used in a different context, and for placeholder or variable text. |
| Bold | Used for strong emphasis. |
| Monospaced | Used for code examples, command names, options, responses, error messages, and to indicate text that you enter. |
| Button | Indicates a button or some object that you click. |
| > | In addition to a math symbol, it is used to indicate a submenu. For instance, File > New where you would select the New option from the File menu. |
| ... | Indicates that text is being omitted for brevity. |

Admonition Elements

The following admonition elements are used to advise and counsel that special actions should be taken.



TIP

Indicates highlights, suggestions, or helpful hints.



NOTE

Indicates a note containing special instructions or information that may apply only in special cases.



IMPORTANT

Indicates an emphasized note. It provides information that you should be particularly aware of in order to complete a task and that should not be disregarded. IMPORTANT is typically used to prevent loss of data.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in damage to data or equipment, or minor to moderate injury. It may also be used to alert against unsafe practices.

1. Introduction

Thank you for choosing CoolSign, the expert's choice in digital signage software. Before installing, configuring, and using the CoolSign software; please read and understand the information provided in this installation manual. This manual:

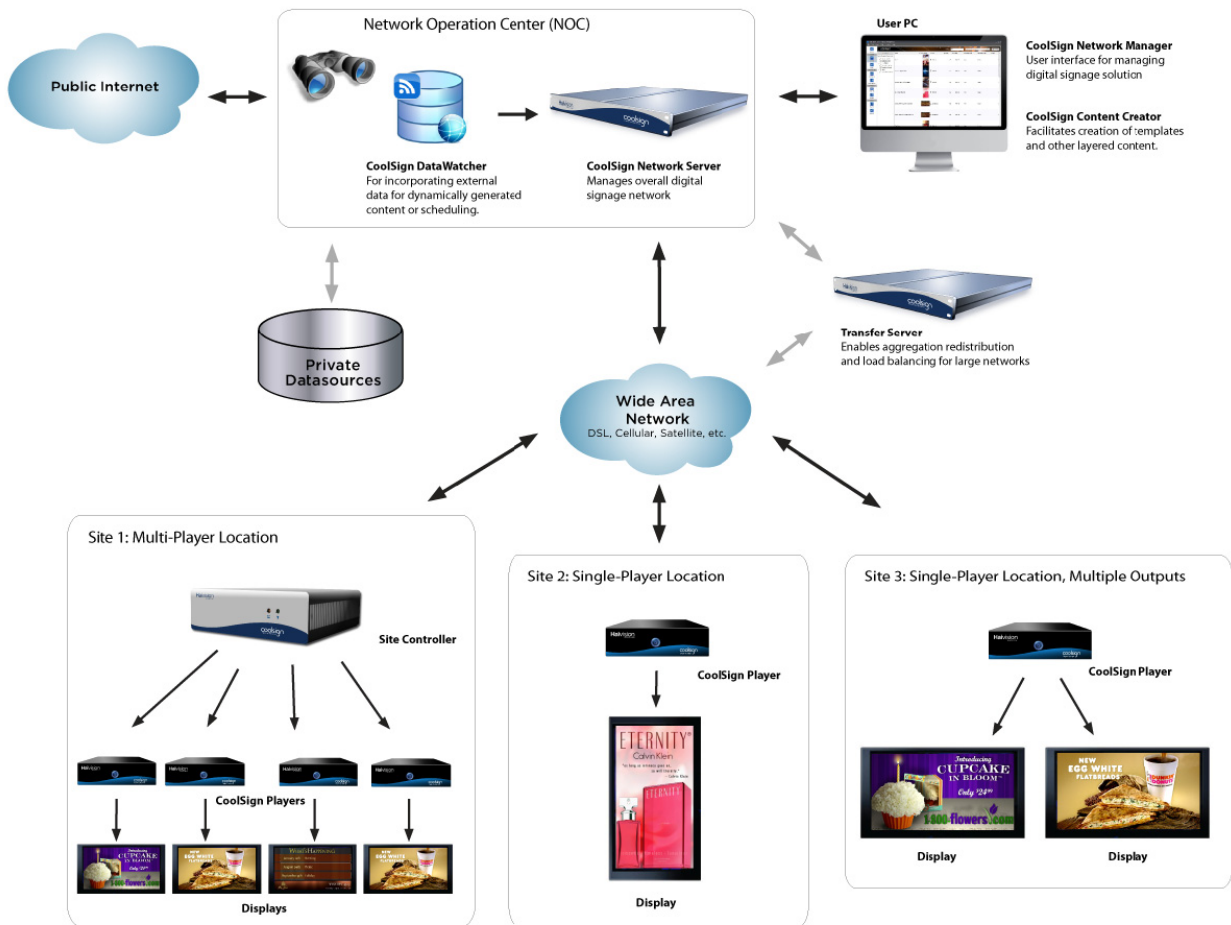
- Provides basic definitions for the various software components that constitute a CoolSign digital signage network.
- Provides insight into best practices in designing your CoolSign network.
- Prepares you for the actual installation of the CoolSign software.

Planning your Installation

When designing your CoolSign network, you will want to consider the network components (hardware and software) and the user roles, All of these can play a factor in determining your network topology.

CoolSign Network Components

The CoolSign platform includes the following set of network devices and software programs, each of which plays a distinct role in managing and playing back content on your digital signage network.



Hardware

The hardware makes up your physical network and can consist of the following components:

Network Controller

A CoolSign Network Controller serves as the central repository for all data related to a CoolSign network. All content, schedules, logs, and other data are stored on the network controller.

Any CoolSign application that needs to display or modify information about the network must first connect to the network controller. All transfer nodes and players also connect to the network controller to receive their content and scheduling instructions as well as to send status and log information.



NOTE

Every CoolSign network must have a single network controller.

Transfer Node

CoolSign Transfer Nodes act as intermediate data hubs in a CoolSign network. These nodes allow the aggregation of both data and network connections to provide scalability and load balancing in a large network. A transfer node automatically caches the content and objects sent to its child nodes, and aggregates log and status information sent from the child nodes.

A Transfer node connects to the Network Controller or to another Transfer node. For locations with multiple CoolSign players, you can use a transfer node to provide a single WAN access point. Networked Player

A CoolSign Player (CP) is a network service that displays scheduled CoolSign content on one or more connected display devices. Players must connect to the network controller either directly or through a transfer node to download content and receive schedules for playback.

Standalone Player

A CoolSign Standalone Player (SAP) is a special configuration of the CoolSign player that has a built-in CoolSign network controller. You can still import content and create channels over the network on a standalone player, but you can only monitor and manage one standalone player at a time.

Software

Software is the logistic structure of your CoolSign network and can consist of the following applications and tools.

CoolSign Network Manager

CoolSign Network Manager (CNM) acts as a window into the CoolSign network controller, and provides a Graphical User Interface (GUI) to manage the overall CoolSign network. You use the CNM to configure the signage network, handle content insertion and deletions, and access reports and status notifications.

CoolSign Network Manager Lite

The CoolSign Network Manager (CNM) includes an easy-to-use, web-based interface, or *CNM Lite*, that allows:

- Designated users a limited set of CoolSign functionality via their browsers.
- Network Administrators sophisticated management of CNM Lite users.

Designed to access the CoolSign network from any PC platform, mobile device, or tablet; users can simply open their browser and perform basic content insertion/deletion and scheduling tasks. Limited to 25 Players and 50 channels per CNM Lite account.

Data Watcher

CoolSign Data Watcher module enables you to import external data sources to populate data tables. The imported data can be central or local and is used to display dynamic content or to trigger specific content schedules. Examples of external data sources are URLs, RSS feeds, text files, and so forth.

The Data Watcher requires that the Network Controller has been installed. The Data Watcher is a separate installation:

- **Data Watcher Service** — installs on a player node, transfer node, or network controller where the CoolSign Agent is running.
- **Data Watcher Editor** — installs on a system running the CoolSign Network Manager (CNM).

Content Wizard

CoolSign Content Wizard enables you to prepare standard media for insertion into the CoolSign network. Content elements, such as video and still images, are processed in the content wizard to provide user-maintained metadata (such as transition types, orientation and thumbnails) before being published into the CoolSign network.

Content Creator

CoolSign Content Creator is a design tool that enables you to create *dynamic content*, or content that changes based upon user-defined parameters, that can pull data from data tables within the CoolSign network controller.

Users (Roles)

In general, there are three types of users who access a CoolSign network:

- CoolSign Administrator
- Content Administrator

- Content Designer

**NOTE**

Individuals who are serving in multiple roles should install all packages required for each role.

CoolSign Administrator

A CoolSign Administrator can perform a number of different operations, including but not limited to scheduling content for playback, running reports to monitor playback, configuring CoolSign network nodes, or administering user rights for other administrators on the network. For users in this role, the following packages should be installed:

- **CoolSign Network Manager (CNM)**—Required for full access into the CoolSign network.
- **Content Wizard**—Required if content from a content designer is not provided in the CoolSign format (in other words, not prepared using Content Creator).

Content Administrator

A Content Administrator can perform a limited set of tasks. Once a CoolSign Administrator has established permissions and assigned channels, the Content Administrator can manage the channels, upload and place content on the channels, and perform basic scheduling (such as, in-order and random). The Content Administrator role is usually performed by an office administrator, charge nurse, or entry-level user who accesses the network using the web-based interface, CNM Lite, from a browser on their computer, tablet, or mobile device.

Content Designer

A content designer is someone who prepares content for distribution on the CoolSign network, usually a graphic/video artist. For users that perform this role, the following packages should be installed:

- **Content Wizard**—Required for anyone who prepares any content that is not developed in Content Creator for use on the CoolSign network.
- **Content Creator**—Optional, for those developing dynamic content for the CoolSign network.

CoolSign Components and Configuration

The previous section introduced the components of a CoolSign network (hardware and software) and the typical user roles. This section discusses where each of those components resides in the network. There are two main classes of CoolSign software components:

- User-Controlled Software
- Back-End Services and Playback

User-Controlled Software

The supported user control software and tools include: CoolSign Network Manager, Content Creator, Offline Updater, and DataWatcher. Install these user control software and tools on a computer that can connect via your network to the network controller using one of the following 32-bit or 64-bit operating systems: Microsoft Windows[®] 8, Microsoft Windows Vista[™], Microsoft Windows 7, or Microsoft Windows Server[®] 2008 R2.

Back-End Services and Playback

In addition to the content-related roles previously discussed, the CoolSign network also includes PC nodes that perform back-end services and manage playback such as content distribution, external data collection, and content playback.

Content Distribution

In a CoolSign network, two types of nodes are dedicated to content distribution: the network controller and the transfer node(s). These nodes act in a dual role, serving as repositories for content and content rules within the CoolSign network, and also as distributors of the content and content rules to the individual end-points on the network.

- **Network Controller**—The network controller is the main server on a CoolSign network. It stores all content and content rules and then distributes it to the appropriate child nodes on its network.
- **Transfer Node**—Transfer nodes act as intermediary data hubs, distributing content and content rules from the network controller to the individual player nodes on the network. A transfer node is installed as a separate machine between player nodes and the CoolSign network controller.

External Data Collection

If you're importing external data to populate dynamic content pieces, or using external data points to trigger playback of content, you can create instances of the Data Watcher to collect the necessary data and distribute it accordingly. There are two types of Data Watcher modules:

- **Central Data Watcher**—The central data watcher service can run either on the same machine as the network controller or on a separate machine on the network. Data collected from a central data watcher instance is collected by the network controller and then distributed to the appropriate child nodes on the network.
- **Local Data Watcher**—To provide immediate data transfers, you can install localized data watcher services on transfer nodes or player nodes. Data from a local data watcher instance is collected by the transfer node or player node and then distributed to the appropriate child nodes on the network. When a local data watcher instance runs on a player node, only that node is aware of the collected data.

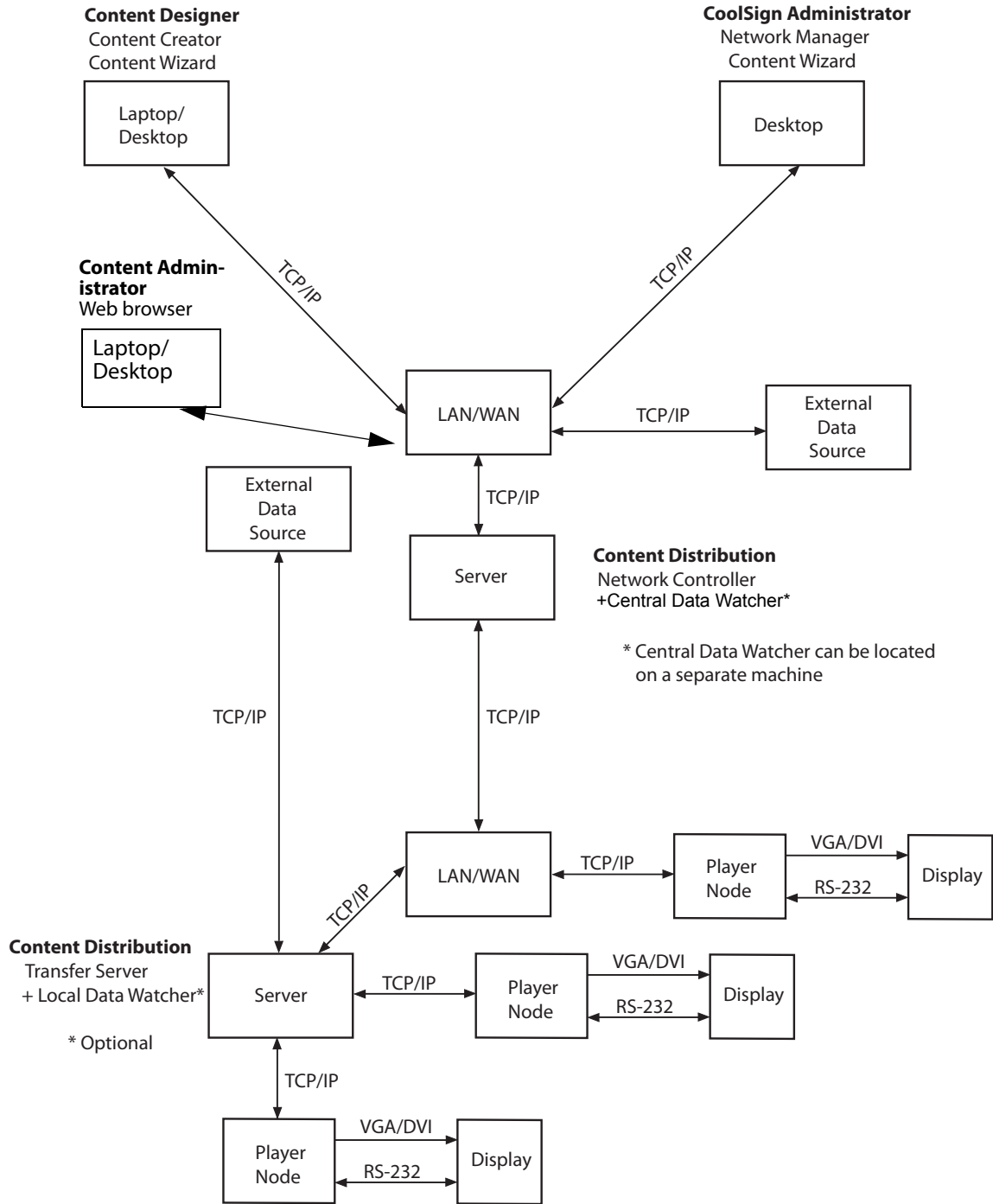
Content Playback

Player nodes perform content playback. A player node normally has only the player node software and, if required, the local data watcher software running on its system.

CoolSign Distributed Network Architecture

The following diagram illustrates an example of a recommended topology for a distributed CoolSign network.

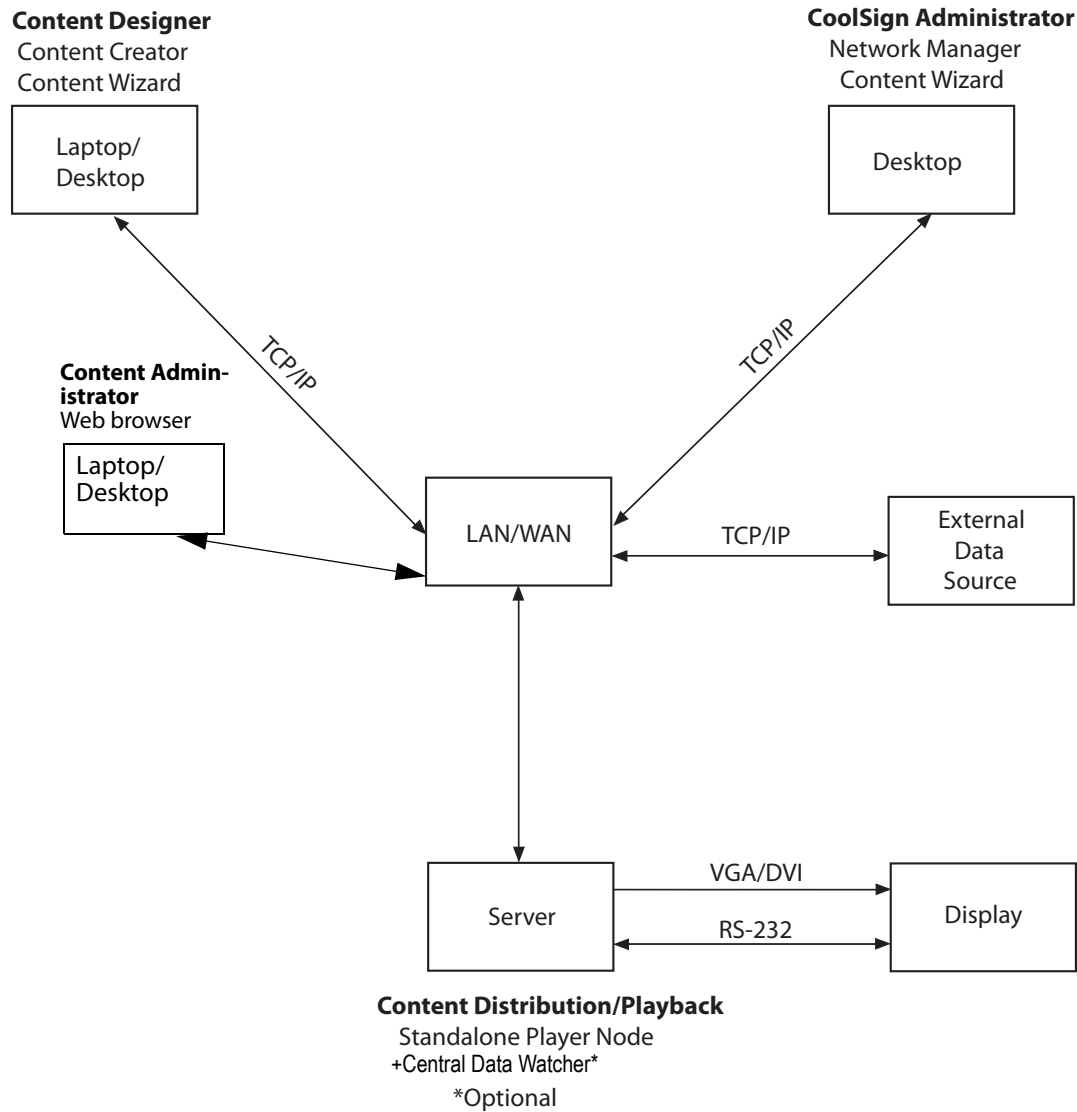
Figure 2 Sample Topology for a CoolSign Distributed Network



CoolSign Standalone Network Architecture by Roles

The following diagram illustrates an example of a recommended topology for a standalone CoolSign installation.

Figure 3 Sample CoolSign Stand-Alone Installation



Preparing to Install CoolSign

Once you've determined the correct network topology for your specific CoolSign installation, you should ensure that you have the appropriate hardware and product licenses to run each of the individual components.

Hardware Requirements

Table 3-1 General Hardware Specifications

| Specification | CoolSign Server | | | CoolSign Display Engine |
|------------------|------------------------------|-------------------------------|--------------------------------|---|
| | Base | Mid-Range | Premium | |
| Operating System | Windows Server 2003/2008 R2 | Windows Server 2008 R2 64-Bit | Windows Server 2008 R2 64-Bit | Windows 7 Embedded |
| Processor | Intel Dual Core Xeon 3 GHz | Intel Quad Core Xeon 3 GHz | 3 x Intel Quad Core Xeon 3 GHz | i3 NUC 1.8 GHz |
| RAM | 4 GB + | 8 GB + | 12 GB + | 4 GB |
| Hard Drive | SATA RAID 5, 4x80 GB, 10KRPM | SATA RAID 5, 4x80 GB, 10KRPM | SATA RAID 5, 4x160 GB, 10KRPM | 60 GB mSATA SSD |
| Graphics | — | — | — | Intel HD Graphics 4000 with 128 MB of onboard RAM — 2x HDMI ports |
| LAN | — | — | — | 10/100 Mbps or Gigabit Ethernet |



NOTE

The latest hardware and software recommendations for CoolSign network controllers, transfer nodes, and players are provided on the CoolSign datasheet, available at: <http://www.haivision.com/products/digital-signage/coolsign>.



IMPORTANT

Hexadecimal RS-232 control commands are not supported in CoolSign.

Software Requirements

The following software requirements are the prerequisites for a CoolSign installation:

- An appropriate operating system (32-bit or 64-bit operating systems: Microsoft Windows® 8¹, Microsoft Windows Vista™, Microsoft Windows 7, or Microsoft Windows Server® 2008 R2).
- Microsoft .NET Framework (available from the Haivision download center).
- Microsoft Silverlight
- Microsoft DirectX
- Adobe Flash
- Microsoft Internet Explorer v7 or later²
- Microsoft Windows Media Player (CoolSign uses the application's WM9 Codecs)²

The latest hardware and software recommendations for CoolSign network controllers, transfer nodes, and players are provided on the CoolSign datasheet, available at:

<http://www.haivision.com/products/digital-signage/coolsign>

Licensing Requirements

You need to fill out the CoolSign License Request Form to request the appropriate licenses. For more details, see “[Requesting CoolSign Licenses](#)” on page 24. The following product licenses are available from Haivision:

- **Network Controller (NC):**
 - **Enterprise Class Server**—Has no built-in limits on player or CNM/client counts.
 - **Multi-tenant Server**—Enables the use of domains and sub-domains to support multi-tenancy.
- **Transfer Node** (No license required)
- **CS Players (CP):**
 - **Stand-alone Player**—Enterprise-class server plus one player.
 - **Networked Players**—Player access licenses.

The CoolSign licensing model requires MAC addresses to create unique license keys for each installation. The number of MAC addresses needed is determined by the version of CoolSign, and by the software components needed.

-
1. CoolSign only supports installing the CoolSign Network Manager, Content Creator, Offline Updater, DataWatcher, and Content Wizard. CoolSign installations of the Network Controller, Transfer Node, and Networked Players on Windows 8 are not currently supported.
 2. Typically included in the installation of the operating system. If you customized your operating system, you may need to install this application.

Acquiring MAC Addresses

For CoolSign software release v5.0 and higher, the following software components require you to submit MAC addresses:

- Network Controller
- Standalone Player Nodes

To determine the MAC address of Windows PC, do the following:

1. Click the START MENU.
2. Type cmd into the Search box, then click Enter.
3. At the prompt, enter:
ipconfig /all | more
4. Once the command executes, locate the line under your specific Network card that reads something similar to the following:
Physical Address. : 00-CC-44-79-C3-AA
This is the MAC address.

Requesting CoolSign Licenses

Once you've collected the appropriate MAC addresses, you need to complete the CoolSign License Request form. You can access this request form at:

<http://www.haivision.com/eform/submit/licence-request>



NOTE

If this is your first visit to this site, you must register and setup an account to get access to the request form.

The form requires the following information:

- Reseller Company Information (if applicable)
 - End-User Company and Contact Information
 - Purchase Order Number (if applicable)
 - Version of CoolSign Software
 - Total number of Player Nodes
 - MAC addresses as required
-



IMPORTANT

When upgrading an existing CoolSign network, please be sure to reference the most recent previous order for the CoolSign network to be upgraded, and include the total number of CoolSign player nodes to be licensed post-upgrade.

For example, if you are adding five player nodes to an existing network controller that is currently servicing 30 player nodes, you would enter 35 player nodes in the appropriate field. If this information is not readily available, contact Haivision technical support for assistance.



NOTE

As of September 2012, all CoolSign players and servers are shipped with a label identifying the version of the software installed at factory. This information will help you with the installation and/or upgrade of software on your CoolSign network.

Once you've completed the CoolSign License Request form, submit it to the parties listed on the form.

Downloading CoolSign Software

To download CoolSign software requires a Haivision account with a valid user name and password. If you do not have an account, you can request one when you access the site.

Once the request is submitted and processed, you'll receive your account credentials via e-mail.

To download CoolSign software, do the following:

1. Open your web browser and enter the following URL:
<http://www.haivision.com/support/download-center>
2. Login with your CoolSign account credentials (e-mail address and password).
3. Under KULABYTE AND COOLSIGN SOFTWARE, download the minimum required software packages:
 - CoolSign Node Installer
 - Content Wizard Installer
 - Network Manager Installer
 - Microsoft .NET4 Framework Update Package
4. Download additional packages as needed. For example, if you want to create and update dynamic content, download the following:
 - Content Creator Installer
 - DataWatcher Service Setup
 - DataWatcher Editor Installer
5. Once the software packages are downloaded please refer to the rest of this installation document and the *CoolSign Network Manager User's Guide* for more detailed information.

Preparing a PC for CoolSign Installation



IMPORTANT

In most cases, you should dedicate a PC to running only the CoolSign software. Running non-CoolSign software on a CoolSign node (especially a player) can result in poor performance or other issues and is not recommended or supported.



NOTE

This installation guide assumes that you are working with a freshly installed Microsoft Windows Vista, Microsoft Windows 8, or Microsoft Windows 7 operating system.

Before running the CoolSign Node installer, you should follow these steps as necessary:

1. Install required 3rd-party software which includes:
 - Microsoft DirectX 9.0C, July 2007 or later (for player nodes only, available from our download center)
 - Microsoft WMP9 Codecs (for player nodes only, available from Microsoft)
 - Microsoft .NET Framework 4 (make sure you see both “Client Profile” and “Extended” in the program list)
 - Latest Microsoft Windows Operating System updates.
2. Install the latest video drivers for the video card make and model (see the manufacturer’s web site for details).
3. Install the latest audio drivers for the audio card make and model (see the manufacturer’s web site for details).
4. Disable the Windows firewall.
5. Disable the Windows Automatic Update application.
6. Disable any antivirus software.
7. Ensure the Windows user account has FULL system administrator rights. Specifically, the Windows account in use must belong ONLY to the Administrators Group.
8. Download the latest release version of ALL necessary CoolSign installers and applications (see [“Downloading CoolSign Software”](#) on page 25).
9. Install Microsoft .NET 2.0 (ONLY required when installing the Network Controller (NC) on Windows XP).
10. Install Microsoft Internet Explorer version 7 or higher.

About the Installation Process

CoolSign software components should be installed in a specific order that depends on the type of installation. The remaining of this manual describes the procedures for installing each of the software components.



NOTE

Although you can install a complete CoolSign environment on just one computer, it is recommended that you use two computers to better understand the separate components and their functions.

Installing a Distributed CoolSign Network

To install a distributed CoolSign network:

1. Install a CoolSign Network Controller on the computer that will be used to manage/administer the CoolSign network.



IMPORTANT

If you're connecting to a Microsoft SQL server, you **MUST** install the database before you install the network controller.



NOTE

If there is an existing Microsoft SQL Server Express 2005 installed, the node Installer tries to create a CoolSign database using integrated security. If the database cannot be accessed, it prompts you for valid credentials.

2. Install CoolSign Network Manager on the same computer as the CoolSign Network Controller.
3. Connect to the network controller by starting Network Manager and then import the appropriate license keys.
4. Install the Microsoft .NET4 Framework Update Package on the Network Controller.



NOTE

All CoolSign nodes require this package and should receive it via the software inheritance mechanism.

5. Before installing a transfer node or networked player, turn off Windows time synchronization on *each* player as follows:
 - Double-click on the time in the Taskbar.

- When the Date and Time Properties dialog appears, select the [Internet Time](#) tab and then uncheck the box labeled “Automatically synchronize with an Internet time server.”
 - Click [OK](#).
6. Install a CoolSign Transfer Node on a separate computer (no license required).
 7. Install a CoolSign Networked Player on a separate computer.

 **NOTE**

If you are installing new CoolSign nodes on an existing network with nodes that are at different versions, please see the *CoolSign 4.7 Upgrade Procedure* for additional information.

8. Install the CoolSign Content Wizard.
9. Install CoolSign Local or Central Data Watcher (if necessary). For more information, see [“Installing the CoolSign Data Watcher”](#) on page 50.

Performing a Standalone CoolSign Installation

To perform a CoolSign installation:

1. Install a CoolSign Standalone Player.
2. Install the CoolSign Network Manager on a separate computer.
3. Connect to the network controller and install the appropriate license key.
4. Install CoolSign Central Data Watcher (*if necessary*). For more information, see [“Installing the Data Watcher service”](#) on page 51.

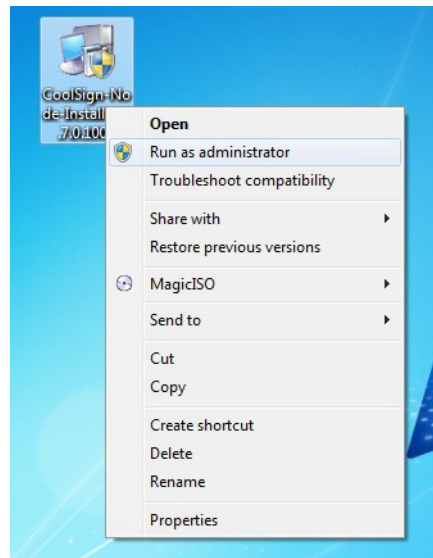
2. Installing CoolSign Software

The CoolSign software you downloaded (See [“Downloading CoolSign Software”](#) on page 25.) comes in the form of a self-extracting archive, containing the software components and an installation wizard called the CoolSign Node Installer. This wizard enables you to install one or more CoolSign software components on the PCs in your network.

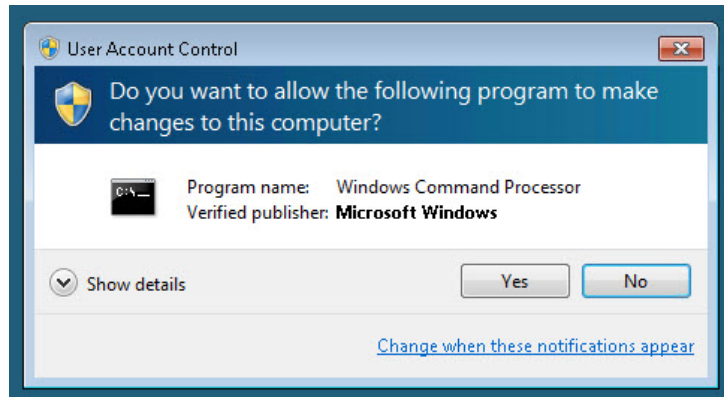
Installation with the CoolSign Node Installer

To run the CoolSign Node Installer:

1. Double-click the archive to extract its contents to your PC's hard disk.
2. To launch the CoolSign Node Installer, right-click the file CoolSign_Node_Installer.exe and select RUN AS ADMINISTRATOR from the popup menu.
3. If the option is unavailable or grayed out (User Access Control is disabled), double-click the installer to run it.



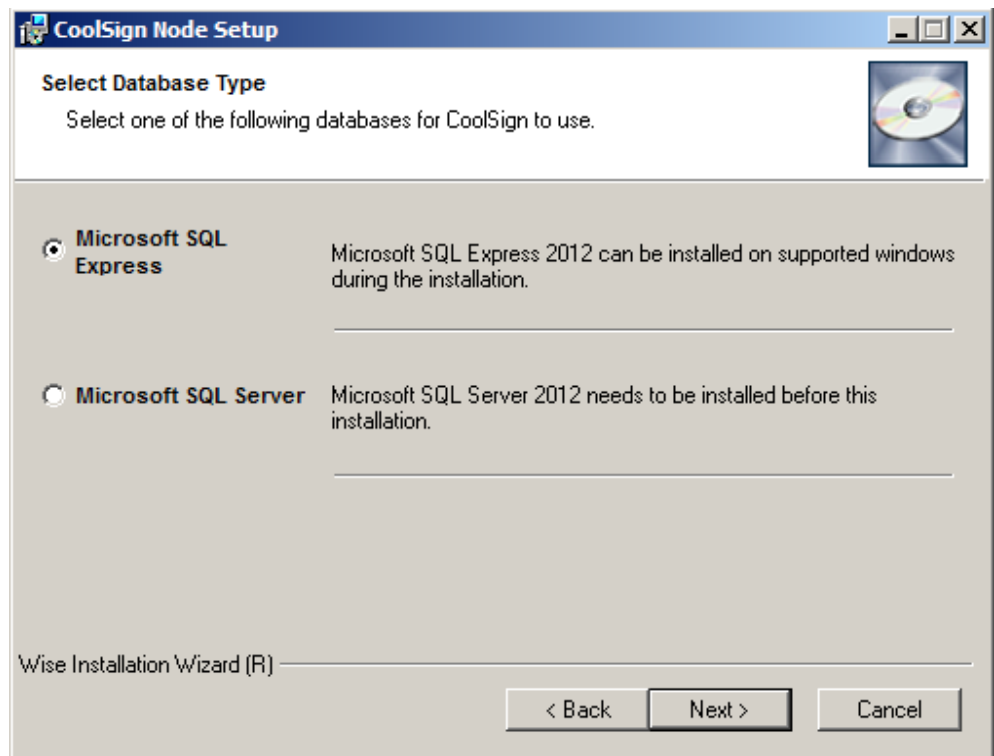
4. Click **Yes** when the User Account Control Screen appears.



5. Follow the CoolSign Node Installation Wizard instructions.

CoolSign Node Installation Wizard Instructions — Step by Step

Step 1: Select the Destination Folder



When prompted, select the folder where you want your CoolSign software installed. The default location is `C:\Program Files (x86)\CoolSign\`.

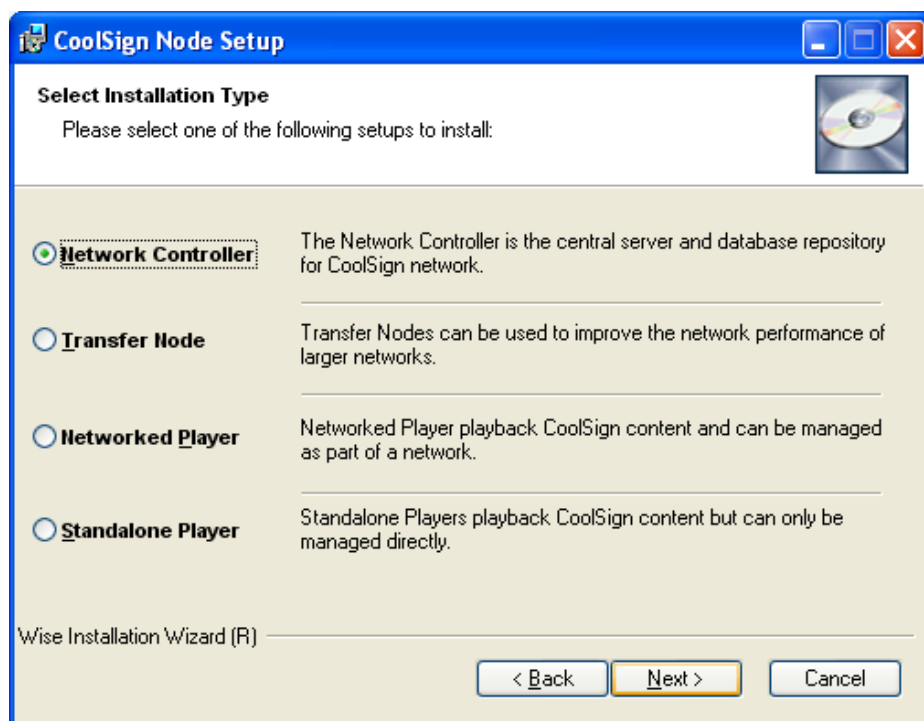
To change the installation folder:

1. Click [Browse](#).
2. Select the desired folder location.
3. Click [Next](#) to continue.

i NOTE

If you want to install other CoolSign software on this PC, you should use the same installation folder.

Step 2: Select the Installation Type



To select your installation type:

1. Choose the installation type you want to install.
 - **Network Controller**—is the central server and database repository for a CoolSign network and should be installed first.

- **Transfer Node**—can be used to improve the network performance over larger networks.

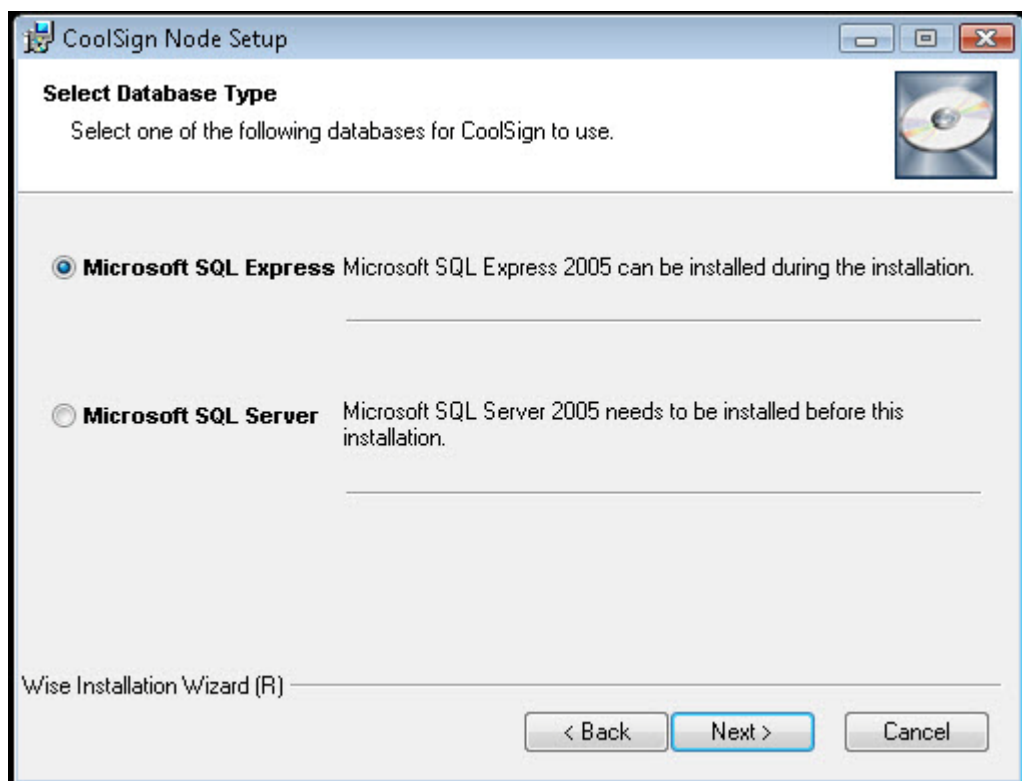
i NOTE

If installing a transfer node or networked player, the installer immediately copies the necessary installation files onto your PC.

- **Networked Player**—plays back CoolSign content and can be managed as part of a network.
- **Standalone Player**—plays back CoolSign content but can only be managed directly.

2. Click [Next](#) to continue.

Step 3: Select Database Type



To select the database type:

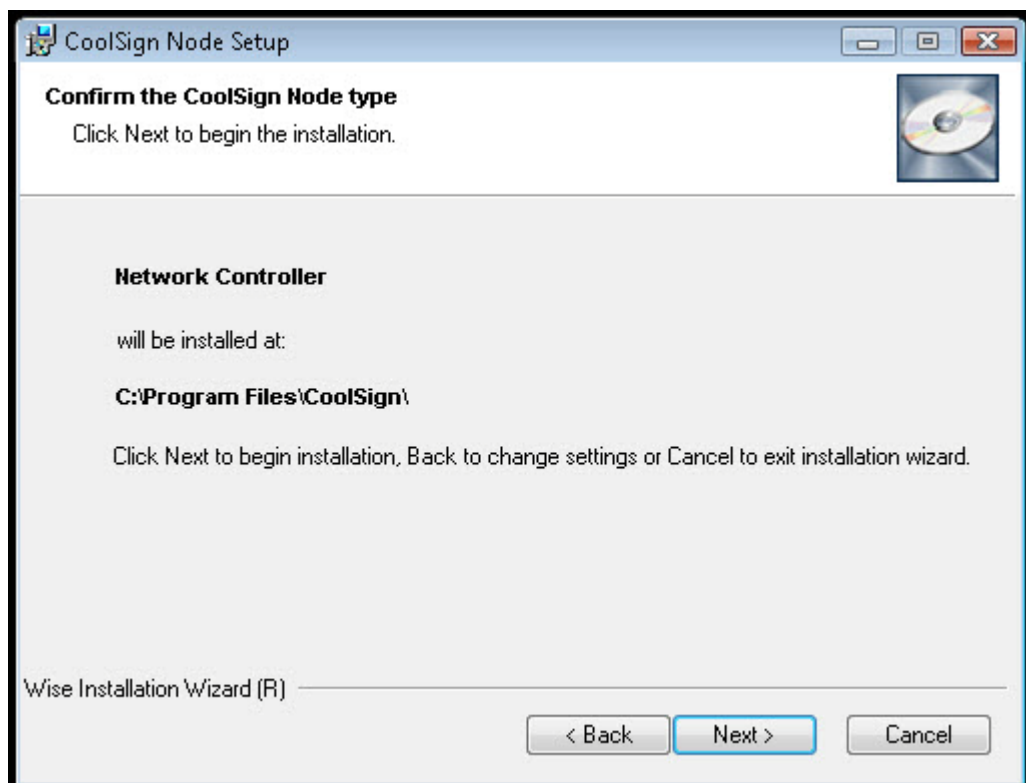
1. Select one of the following databases for CoolSign to use.
 - Microsoft SQL Express—ideal for small to moderate systems, you can install the network controller on the same machine where the database was installed.

- Microsoft SQL Server—recommended for large systems where you run the database and network controller on separate machines. In this instance, the Microsoft SQLServer needs to already be installed before performing this installation.

i NOTE

For information on configuring the database connection, see [10. "Connecting a Network Controller to an SQL Server"](#), on page 111.

2. Click [Next](#) to continue.
3. Click [Next](#) to begin the installation.



4. You can select various options for the CoolSign software being installed or you can accept the defaults and then change them later to fit your specific needs. For details about setting these options, see ["Step 7: Set Installation Options"](#) on page 35.

Step 4: Finish Installation

To finish the installation:

1. Verify that all install settings and configuration options are set correctly.
2. When you are ready to install the software, click [Finish](#).

The computer automatically reboots to a new Windows user called CoolSign.

 **NOTE**

This might take a few minutes to complete, including installing SQL Server Express.

Step 5: Run CoolSign Network Manager

Run CoolSign Network Manager to connect to a CoolSign network. See [“Connecting to a CoolSign Network”](#) on page 73.

To complete this installation you'll need to:

1. Run Network Manager.
 2. Supply the connection information for your network.
 3. Accept the license agreement.
 4. Import the Network Controller product key (product license).
-

 **NOTE**

The CoolSign Network Manager Lite, or Web Interface, is bundled with the CoolSign software. Once the Network Controller is installed and running, enter the URL:
<IPAddress:NCLISTENPORT>/web/index.html
to access the web interface. For example: <http://50.34.128.10:4444/web/index.html>.

Step 6: Install a Networked Player

 **NOTE**

During installation, you might see the networked player's status change from *initializing* to *stopping* and then to *starting*. This is normal behavior as it takes a little time for the initializing and configuring process to complete. Once complete, the networked player's status turns green and is labeled "OK." Afterwards, a default image (the CoolSign logo) appears on the Network Player.

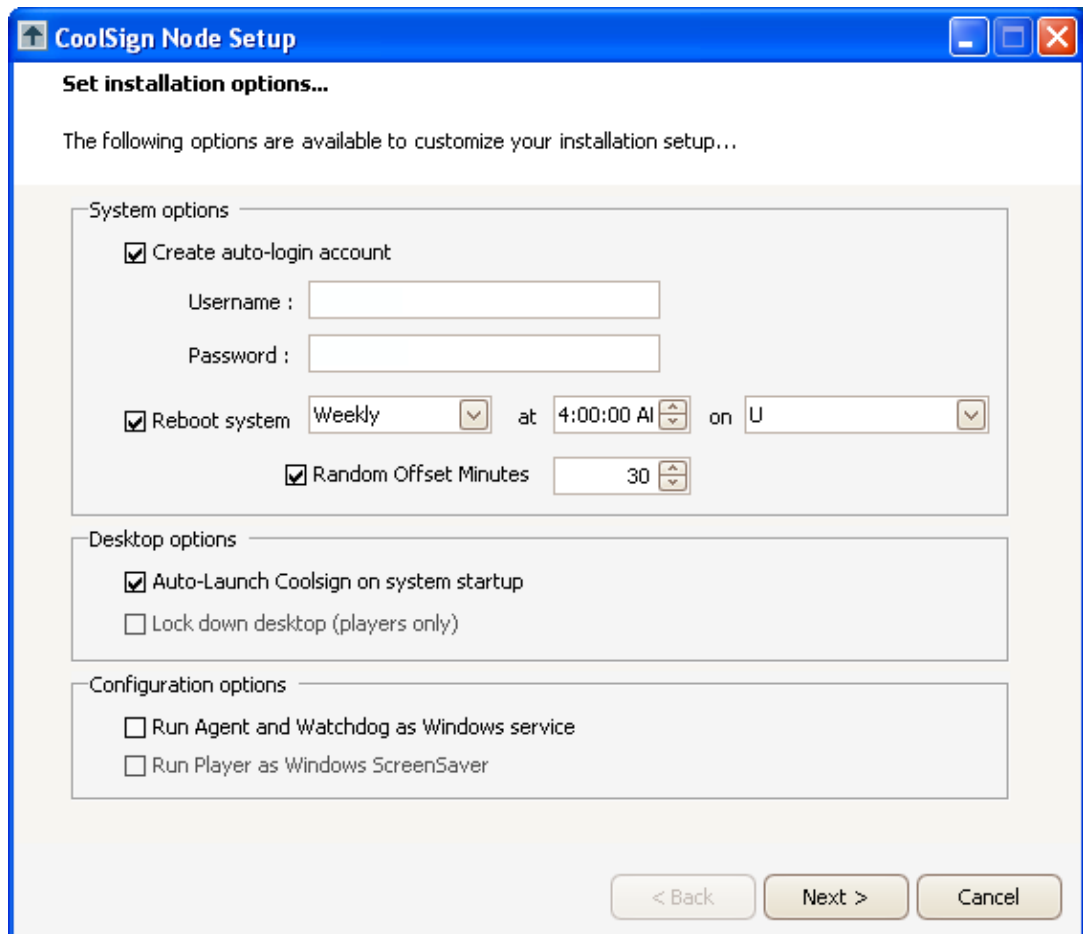
To install a Networked Player:

1. Double-click CoolSign_Node_Installer.exe and from the popup menu select NETWORKED PLAYER.
2. Accept the default settings as they appear until you get to the Configure CoolSign software screen.
3. Enter the IP address/URL of the computer where you installed the Network Controller and Network Manager, or click on [“Find Available Networks”](#) and choose a network.

4. When the installation is complete, the Player computer reboots and configures itself with the settings you specified, and attempts to connect to the Network Controller (or Transfer Node). When the connection is made, the new player appears in the CNM application (under NETWORK MANAGER > PLAYERS). A default CoolSign channel is downloaded to the Player once it has joined the network.

Step 7: Set Installation Options

In this step, you can select various options for the CoolSign software being installed.



The screenshot shows the 'CoolSign Node Setup' window with the title 'Set installation options...'. Below the title, it says 'The following options are available to customize your installation setup...'. The window is divided into three sections: 'System options', 'Desktop options', and 'Configuration options'. In the 'System options' section, there are three checked options: 'Create auto-login account' (with fields for Username and Password), 'Reboot system' (set to Weekly at 4:00:00 AM on U), and 'Random Offset Minutes' (set to 30). In the 'Desktop options' section, 'Auto-Launch Coolsign on system startup' is checked, and 'Lock down desktop (players only)' is unchecked. In the 'Configuration options' section, both 'Run Agent and Watchdog as Windows service' and 'Run Player as Windows ScreenSaver' are unchecked. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.



NOTE

The Run Player as Windows ScreenSaver is only available with Windows XP and Server 2003.

Create Auto-Login Account—Creates a new local administrator login account using the supplied login credentials and sets it to automatically log in during startup. We recommend that you check this box; otherwise, the CoolSign node requires you to manually log in after each restart.

Reboot System—Determines how often the CoolSign PC should automatically be rebooted.

- Network Controller—we recommend that you reboot the server once a week.
- Players and transfer nodes—we recommend that you reboot on a daily basis.

Random Offset Minutes—When checked, offsets the reboot schedule time randomly so that all of your nodes don't reboot at exactly the same time. You can set a maximum number of minutes before or after the scheduled reboot time, during which nodes can be rebooted randomly.

Auto-Launch CoolSign on system startup—When checked, the CoolSign application is launched automatically every time the system starts up. You should only uncheck this option when installing a demo system, or when installing on a shared PC where you want to manually start up CoolSign.

Lock down desktop (players only)—When checked, sets the desktop to black and hides any icons. We recommend that you keep this setting checked so that the Windows desktop is not visible during startup or software update.

Run Agent as Windows Service—When checked, the CoolSign agent is installed as Window service processes. This enables you to remotely manage the agent software and doesn't require auto-login for this network controller or transfer node. Note that this option is disabled for player nodes because some organizations require this for security reasons.

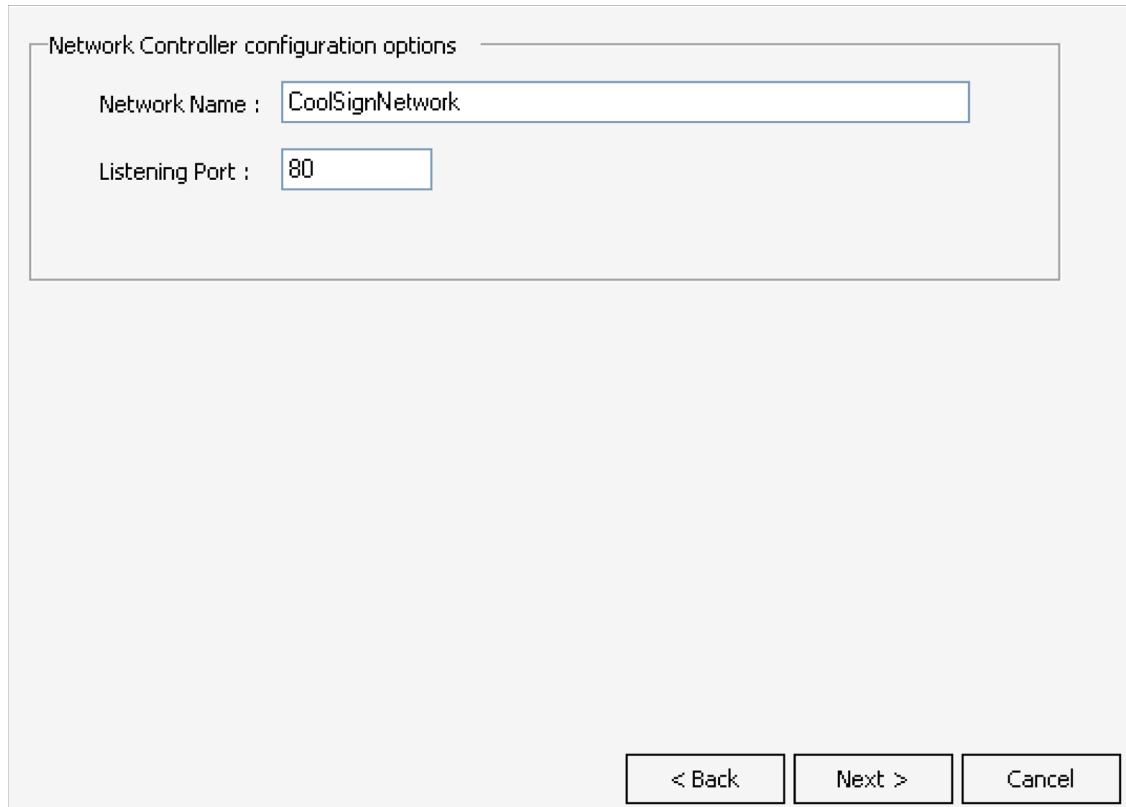
When you're done setting these options, click [Next](#) to define the configuration options that apply to the type of node being installed.

- If you're installing the network controller, continue to [“Configure the Network Controller”](#) on page 37.
- If you're installing a transfer node, continue to [“Configure a Transfer Node”](#) on page 38.
- If you're installing a player node, continue to [“Configure a Player Node”](#) on page 39.

Run Player as a Windows ScreenSaver (Windows XP and Server 2003 only)—When checked, installs the CoolSign screensaver module in addition to the regular player install. The screensaver is installed with a default timeout of 120 seconds. The CoolSign screensaver behaves like any other Windows screensaver and launches itself if the system is left untouched for 120 seconds. You can subsequently change the screensaver timeout setting by right-clicking on the desktop and modifying the timeout settings.

Step 8: Configure Nodes

Configure the Network Controller



The screenshot shows a dialog box titled "Network Controller configuration options". Inside the dialog, there are two input fields: "Network Name" with the value "CoolSignNetwork" and "Listening Port" with the value "80". At the bottom right of the dialog, there are three buttons: "< Back", "Next >", and "Cancel".

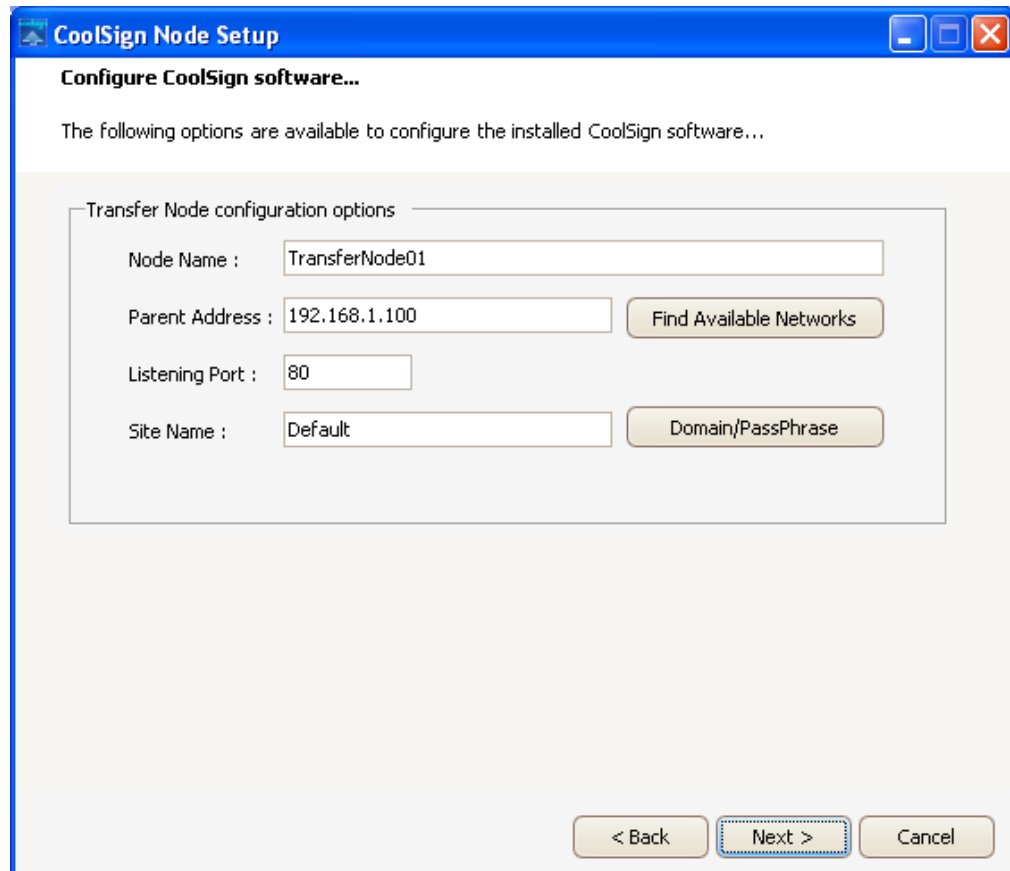
Network Name—Sets the name of your network as it appears when connecting with CoolSign Manager and other applications.

Listening Port—Defines the port number that the node should use to receive incoming requests from other nodes. The default listening port is 80. You can change the listening port if your networking infrastructure requires it or another application is already using the default port.

After selecting your configuration options:

1. Click **Next** to continue the installation process.
2. Click **Save Settings**. The node installer verifies your connection information again before saving the settings.
3. Click **Close** to continue the installation process.

Configure a Transfer Node



Node Name—Sets the name of this transfer node. The node name is used within CoolSign Manager and to reference the node.

Parent Address—Sets the IP address of the node to which this transfer node should connect. The parent address can be the DNS name (Machine01, AcmeJewelry01, etc.) or an IP address (for example, 192.168.50.01 or 127.10.2.4) of either the network controller or another transfer node. If the parent node is listening on a non-default port, you must include the port number in the address, preceded by a colon, for example: 192.168.1.100:555.

Listening Port—Defines the port number that the node should use to receive incoming requests from other nodes. The default listening port is 80. You can change the listening port if your networking infrastructure requires it or another application is already using the default port.

Site Name—If you enter the site name during installation, the node appears as a member of that site when you view it within CoolSign Manager. Alternatively, you can subsequently use CoolSign Manager to assign the node to a new site. For more information, see Chapter 13, *Managing Sites*, of the *CoolSign Network Manager User's Guide*.

Domain/Passphrase—Defines the domain/passphrase associated with the transfer node.

When you've finished specifying these configuration options, click [Next](#) to continue the installation process.

Configure a Player Node

CoolSign Node Setup

Configure CoolSign software...

The following options are available to configure the installed CoolSign software...

Player configuration options

Player Name : MyPlayer

IP Address/URL of parent : 192.168.1.100 Find Available Networks

Listening Port : 80 Initial Mode : Active

Site Name : Default Domain/PassPhrase Staging

Display configuration options

Video resolution : 1024x768 @ 60 hz Orientation : Landscape (0°)

Displays :

| Name | Type | Model | COMPort |
|------|------|-------|---------|
| | | | |

Add... Edit... Remove

< Back Next > Cancel

Player Name—Sets the name of this player node. The node name is used within CoolSign Manager and to reference the node.

IP Address/URL of Parent—Sets the IP address of the network controller or transfer node to which this node should connect. The parent address can be the DNS name (Machine01, AcmeJewelry01, etc.) or an IP address (for example, 192.168.50.01 or 127.10.2.4). If the parent node is listening on a non-default port, you must include the port number in the address, preceded by a colon, for example: 192.168.1.100:555.

Find Available Networks—Displays any available CoolSign Networks that are currently running (available Network Controllers and /or Transfer nodes).

Listening Port—Defines the port number that the node should use to receive incoming requests from other nodes. The default listening port is 80. You can change the listening port if your networking infrastructure requires it or another application is already using the default port.

Site Name—If you enter the site name during installation, the node appears as a member of that site when you view it within CoolSign Manager. Alternatively, you can subsequently use CoolSign Manager to assign the node to a new site. For more information, see the “Managing Sites” chapter of the *CoolSign Network Manager User’s Guide*.

⊙ **Domain/Passphrase**—Defines the domain/passphrase associated with the player node.

⊙ **Initial Mode (Active/Staging)**—Choose Active mode for immediate, on-line use of the player. Choose Staging mode for off-line pre-production or testing purposes.

Display Configuration Options

For both networked and standalone players, you can configure the video output resolution and orientation and add any displays which you intend to remotely control and monitor via a serial interface.

Display configuration options

Video resolution : 1280x1024 @ 60 hz Orientation : Landscape (0°)

Displays :

| Name | Type | Model | COMPort |
|------|------|-------|---------|
| | | | |

Add... Edit... Remove

You can define the following display configuration options:

Video Resolution—Sets the video card resolution and refresh rate at which the player should run. You can use CoolSign Manager to modify these settings after installation if desired.

Orientation—Sets the orientation to match the physical orientation of the display device connected to the player. The options are:

- LANDSCAPE (0°)—The display is in its normal TV orientation where the top of the screen is the top.
- PORTRAIT (-90°)—The display is rotated 90 degrees counter-clockwise so that the right-side of the screen is now the bottom.
- PORTRAITCW (+90°)—The display is rotated 90 degrees clockwise so that the right-side of the screen is now the top.
- UPSIDEDOWN (180°)—The display is rotated so that it is upside down.

The orientation setting also defines the format of your player. Landscape and UpsideDown orientations install a landscape-format player. Portrait and PortraitCW orientations install a portrait-format player.

If required, you can use CoolSign Manager to modify the orientation and format of a player after installation.

Displays—The CoolSign player can control supported display devices via a serial cable. With serial control of a display, you can use CoolSign Manager to remotely turn on or off the display, set the display to an alternate input, and monitor status for the device.

You can add as many displays as you have available COM ports. Most PCs only include one available serial port. You can purchase a serial port extender to add additional COM ports to your player PC.

The following procedures explain how to add, edit, and remove displays during node configuration. When you're done, click [Next](#) to continue the installation process.

To Add a New Display:



IMPORTANT

Before adding a display through this dialog, you should first connect the display physically to the player PC with a serial cable. Adding a display before establishing the physical connection causes a display status error.

1. In the Display Configuration Options area, click [Add](#). The Display Properties dialog appears:

| Inputs Available | Name |
|------------------|----------|
| Analog | CoolSign |
| Component | |
| DVI | |
| Composite | |
| S-Video | |

2. Enter a name for the new display.
3. Select the brand and model of the display you have connected.



IMPORTANT

The brand and model must exactly match the display connected to the player. Otherwise, the display control will most likely not work and report an error status.

4. Set the COM port to the player that the PC will use to communicate with the display.

5. Set the Display ID (if your display device supports daisy-chaining multiple devices).
6. Enter a name for each available input that you intend to use. You must keep one input labeled as CoolSign. For example, Component = DVD player, DVI = Satellite, and so forth.
7. If the display supports disabling the control buttons, you can check [Disable panel buttons](#).
8. If the display supports auto-calibration, you can set the auto-calibration properties.
9. Click [OK](#) to close the Display Properties dialog.

To Edit a Display:

1. Select the display in the DISPLAY CONFIGURATION OPTIONS area.
2. Click [Edit](#) to open a Display Properties dialog.
3. Change any of the display's properties as appropriate.
4. Click [OK](#) to close the Display Properties dialog.

To Remove a Display:

1. Select the display in the Display Configuration Options area.
2. Click [Delete](#).

CoolSign Null Displays

For players that are connected to a display device that cannot be controlled via a serial interface, or for which CoolSign does not provide serial control support, you can add the CoolSign null display. The CoolSign null display acts as a placeholder for an actual physical display device. This enables you to use the display control to schedule when the player should turn on and off even without a serial-controlled display.



NOTE

The CoolSign null display does not cause any status conditions or provide any feedback to determine if the actual display is working or not.

To Add a CoolSign Null Display:

1. In the Display Configuration Options area, click [Add](#).
2. When the Display Properties dialog appears, select the following values:
 - Brand = CoolSign
 - Model = Null
3. Click [OK](#) to continue.

After Installation

When the installation process completes, click [Finish](#) to exit the installer.

- If this the first time that you've installed the CoolSign software, Microsoft SQL Express automatically loads after the system reboots.
- For the network controller or transfer nodes, if your installation created an auto-login account (see [“Step 7: Set Installation Options”](#) on page 35), or if you are running the Agent and Watchdog as network services (see [“Step 7: Set Installation Options”](#) on page 35), the PC reboot does not require you to login.
- For player nodes, if you did not create an auto-login account on the node, you'll need to log in after the reboot, using the same account under which you installed CoolSign.



IMPORTANT

If you are installing a CoolSign player on a Windows Vista system with User Account Control (UAC) enabled, a confirmation dialog appears after the first reboot. **You must click the dialog within two minutes after it appears; otherwise, you'll need to manually reboot the system to complete the installation process.**

- Player nodes automatically reboot a second time after installation. After the second reboot, the CoolSign player software launches and connects to the network.

Using a Configuration File During Installation

Throughout this chapter, the installation procedure describes how to enter CoolSign configuration settings interactively during installation. You can also install CoolSign using an external configuration file.


When you install a CoolSign node, the installer creates a configuration file named `installSettings.xml` in the CoolSign folder. That file includes information about the type of CoolSign node along with all other information necessary to create an identical node.



WARNING

You can only reuse the `installSettings.xml` file between like operating systems. For example, the `installSettings` for Windows XP does not work on Windows 7.

To use an installation configuration file:

1. Copy the CoolSign installation file (`CoolSign_Node_Installer.exe`) and configuration file (`installSettings.xml`) onto your PC where you want to install the new node.
2. From the  Start menu, select RUN, then type `cmd` to open a DOS command window.

3. In the command window, navigate to the folder that contains the CoolSign installation file.
4. To run the installer, issue the following command:

```
CoolSign_Node_Installer.exe /qb /quiet  
CONFIGFILE="<full_path\installSettings.xml">
```

For example, if your installSettings.xml file is in the directory c:\temp, you would issue the following command:

```
CoolSign_Node_Installer.exe /qb /quiet  
CONFIGFILE="c:\temp\installSettings.xml"
```
5. After the installation process completes, your node reboots with the new CoolSign software installed.

CoolSign Commands on the Start Menu

After you have installed CoolSign, the following commands are present on your Windows Start menu:

START ADPLAYER—Not used under normal circumstances. For details, contact Customer Support.

START AGENT—Not used under normal circumstances. For details, contact Customer Support.

START WATCHDOG—Restart CoolSign after you've issued the Stop All command.

STOP ALL—Stop the CoolSign network controller and all related processes.

STOP WATCHDOG—Not used under normal circumstances. For details, contact Customer Support.

COOLSIGN CONFIGURATOR—Launch the CoolSign Node Configurator so that you can reconfigure your installed nodes as needed. For details, see [9. "Configuring Installed Nodes"](#), on page 96.

Data Watcher Configurator—Use the Data Watcher Configurator to configure the Data Watcher.

3. Installing CoolSign Content Wizard

The CoolSign® Content Wizard enables you to quickly convert existing digital media assets into content that you can use in a CoolSign network. This tool is intended for simpler content creation needs where you only want to use one media asset in each CoolSign content. Content created with this wizard can also be used on any CoolSign Network using version 5.0 of the CoolSign software.

Hardware/Software Recommendations

You can download the hardware and software recommendations for CoolSign Content Wizard from Haivision's website at: <http://www.haivision.com/products/digital-signage/coolsign>.

Installation

To install the Content Wizard:

1. If you have not already done so, download the Content Wizard Installer onto the PC where you wish to install it. See “[Downloading CoolSign Software](#)” on page 25.
2. Open the Content Wizard folder.
3. Double-click on SContent-Wizard-xxxx.msi to launch the installer application.
4. In the Welcome to Content Wizard Setup Wizard window, click the [Next](#) button.
5. In the Select Installation Folder window, verify that the destination folder is correct, then click [Next](#).
6. In the Confirm Installation window, click [Next](#) to begin the installation process.
7. In the Installation Complete window, click the [Close](#) button.

About Digital Video Codecs

By default, the CoolSign Content Wizard only provides support for MPEG-2, MPEG-1, and AVI digital video files. If you plan to use MPEG-4 and Windows MediaPlayer 9 files, you must install the appropriate software to play back those file formats.

Windows MediaPlayer 9—To use WMV files with Content Wizard, you must install Windows Media Player 9 or higher on your system. Windows Media Player 9 is available for download from www.microsoft.com.

Related Topics

- “About Content” on page 69 of the *CoolSign Network Manager User’s Guide*
- “Managing Content” on page 106 of the *CoolSign Network Manager User’s Guide*
- “Content Creation Basics” on page 25 of the *CoolSign Content Creator User’s Guide*
- “Advanced Content Creation” on page 41 of the *CoolSign Content Creator User’s Guide*

4. Installing CoolSign Content Creator

The CoolSign® Content Creator is a full-featured application for creating content for a Digital Media Network. It is specially designed to aid in the design and creation of content that uses dynamic data, but can be used as a general-purpose content animation tool as well.

Hardware/Software Recommendations

CoolSign Content Creator has the following requirements:

- Pentium 4 1.8 GHz or better
- DirectX 9.0-compatible video card set to 1280 x 1024 (32-bit color) or higher
- DirectX 9.0c or higher
- 256 MB RAM
- 20 GB hard disk
- Microsoft .NET Framework 2.0 SP1

You can download the latest hardware and software recommendations for CoolSign Content Wizard from Haivision's website at: <http://www.haivision.com/products/digital-signage/coolsign>.

Supported Media Formats

| Audio | Image | Video | |
|-------|----------------------------------|----------------------------------|--|
| MP3 | bmp gif jpeg png psd | WMV Flash MPEG-1 MPEG-4 | AVI M2V MOV MP4 (H.264 only) H.264 |

Installation

To install the Content Creator:

1. If you have not already done so, download the Content CreatorInstaller onto the PC where you wish to install it. See "[Downloading CoolSign Software](#)" on page 25.

2. Open the Content Creator folder.
3. Double-click on Content-Creator-xxxx.msi to launch the installer application.
4. In the Welcome to the CoolSign Content Creator Setup Wizard window, click the [Next](#) button.
5. In the Select Installation Folder window, verify that the destination folder is correct, then click [Next](#).
6. In the Confirm Installation window, click [Next](#) to begin the installation process.
7. In the Installation Complete window, click the [Close](#) button.

5. Installing the Data Watcher

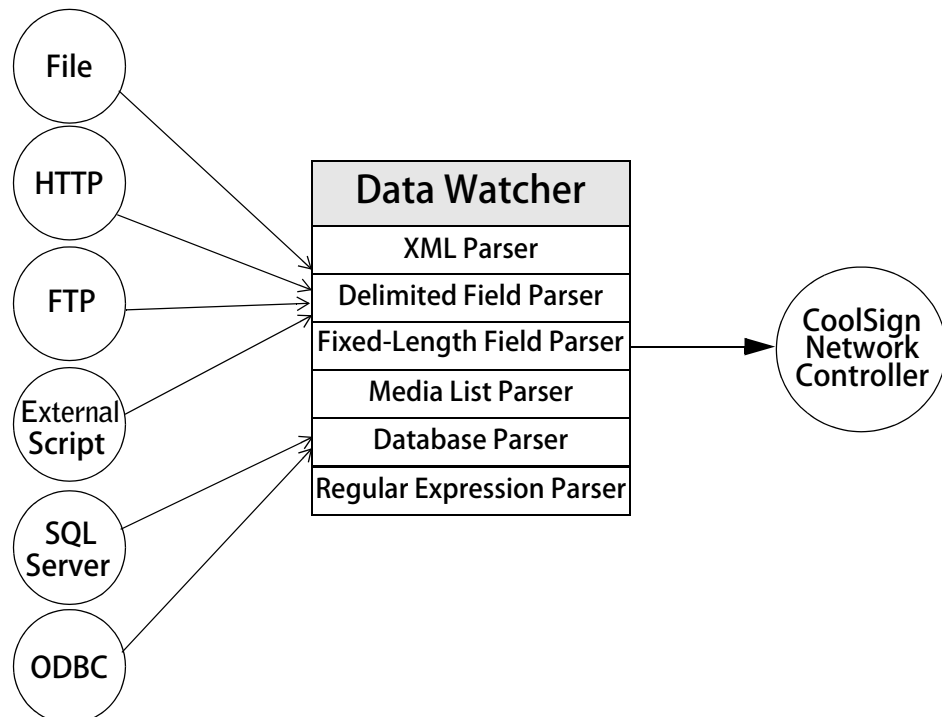
The CoolSign Data Watcher allows you to bring dynamic data from external data sources into your CoolSign network.



NOTE

The Data Watcher Manager is not initially installed with CNM. You must install it separately.

Installing the CoolSign Data Watcher



Installing the Data Watcher Manager is a two-step process:

- Installing the Data Watcher service (see [“Installing the Data Watcher service”](#) on page 51).

- Installing the Data Watcher Editor—the tool that you’ll use to configure Data Watchers to serve as a bridge between the data source and the CoolSign network (see [“Installing the Data Watcher Editor”](#) on page 56).

Installing the Data Watcher service

The Data Watcher service can be installed on a Player node, Transfer node, or the Network Controller where the CoolSign agent is running.

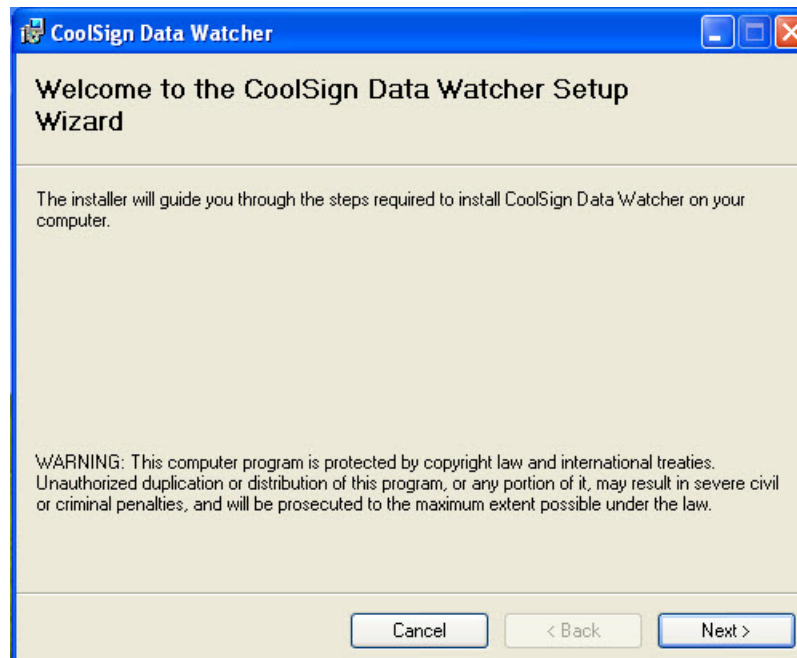


NOTE

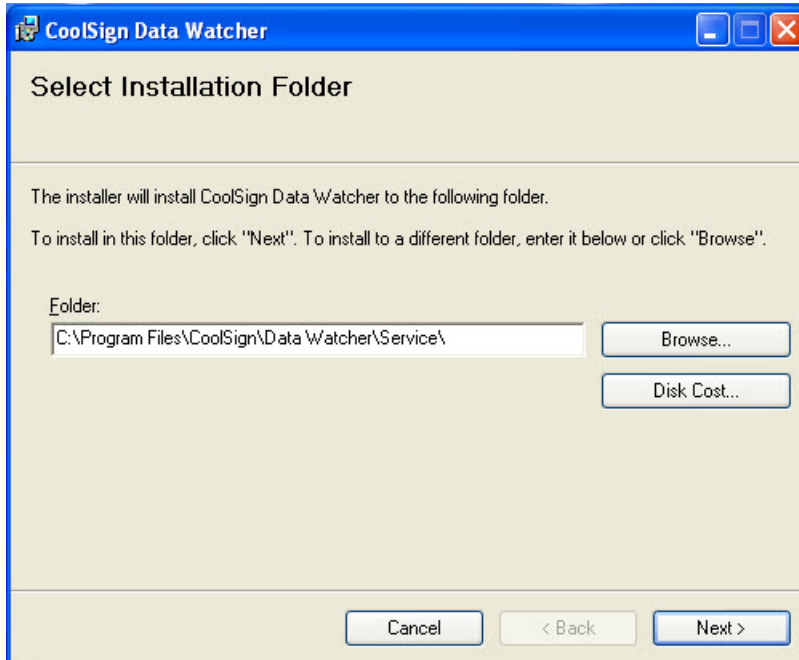
Connectivity to the CoolSign Network Controller is necessary to establish the initial Data Watcher account with appropriate privileges.

To install the Data Watcher service, perform the following steps:

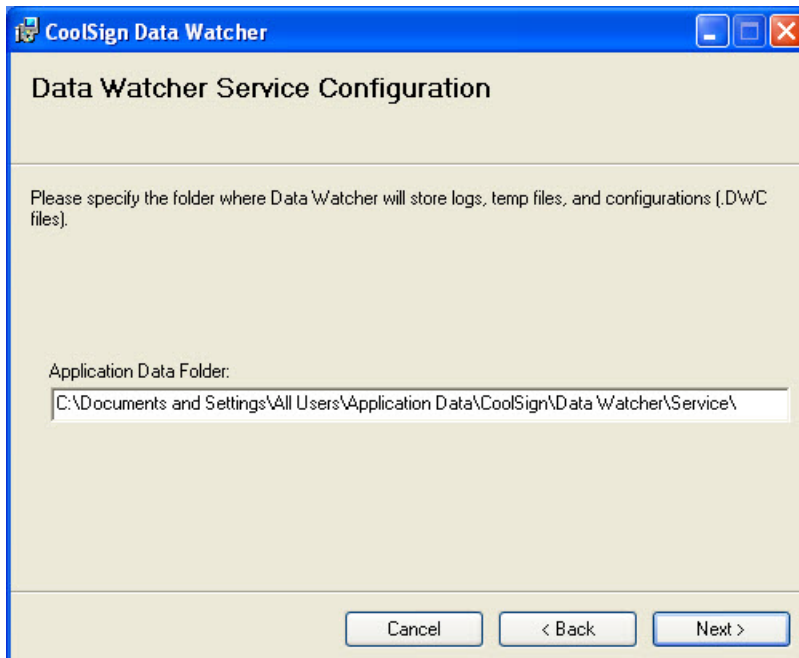
1. On the machine where you are installing the Data Watcher service, open the file ServiceInstaller.msi.
2. When the CoolSign Data Watcher Setup Wizard appears, click [Next](#) to continue.



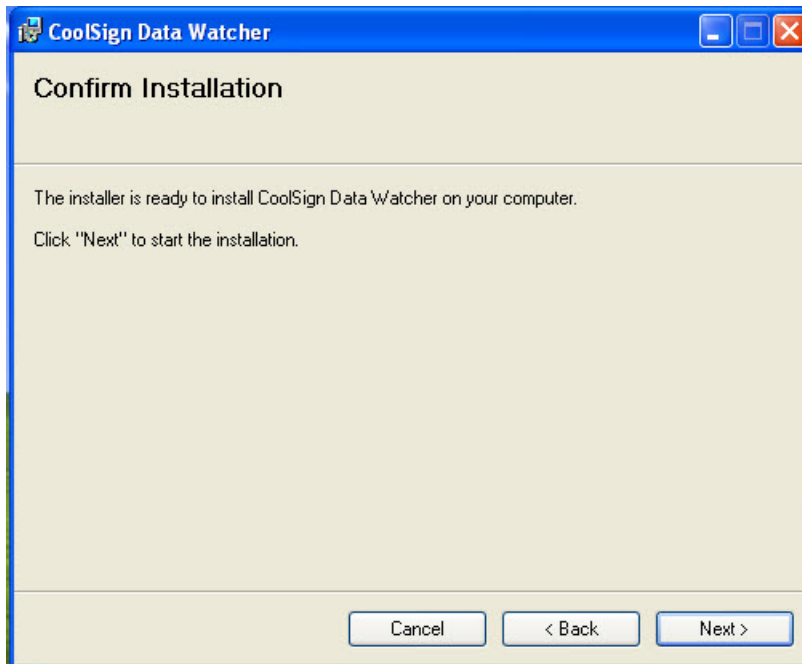
3. Select the folder where you want to install the Data Watcher service. The default location is C:\Program Files\CoolSign\DataWatcher\Service. Click [Next](#) to continue.



4. Specify the folder where Data Watcher will store logs, temp files, and configurations (.DWC files). Click [Next](#) to continue.



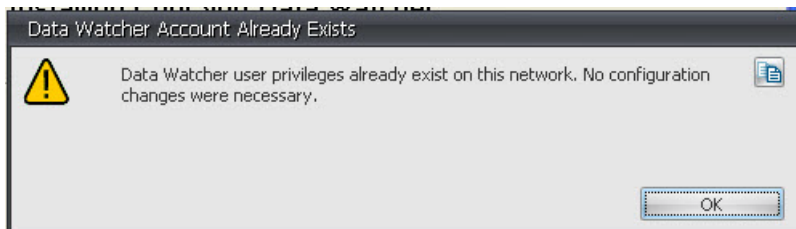
5. Confirm your installation details. Click [Next](#) to continue.



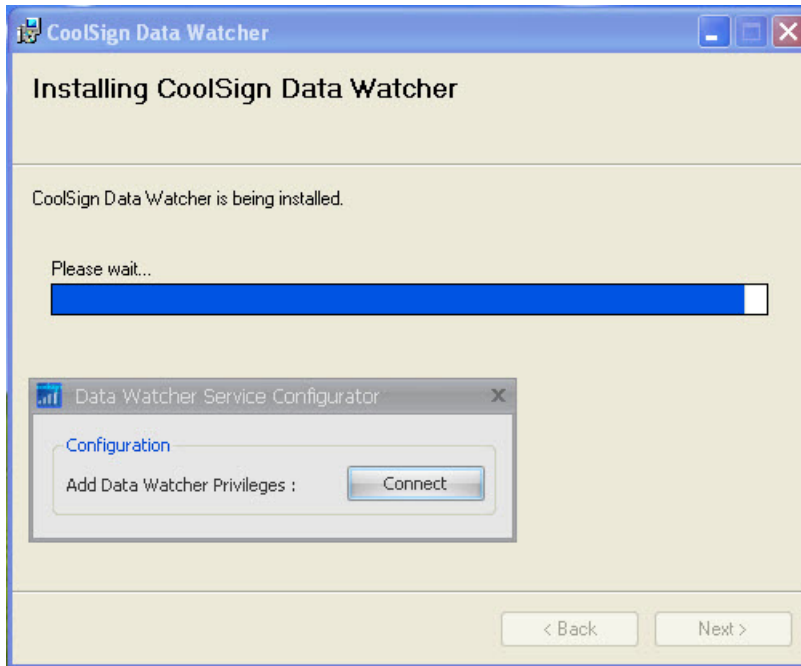
The CoolSign Data Watcher installation begins.

6. Before finishing, the installer verifies that a Data Watcher account exists with the necessary permissions to access files on the network share.

If the account already exists, a confirmation window appears, click [OK](#) to dismiss. Skip to Step 9.



7. If the account does not exist, you are prompted to connect to an existing Network Controller. Click [Connect](#).



8. When prompted, supply your user name and password and select the network to which the Data Watcher service will connect. Then, click [Login](#).



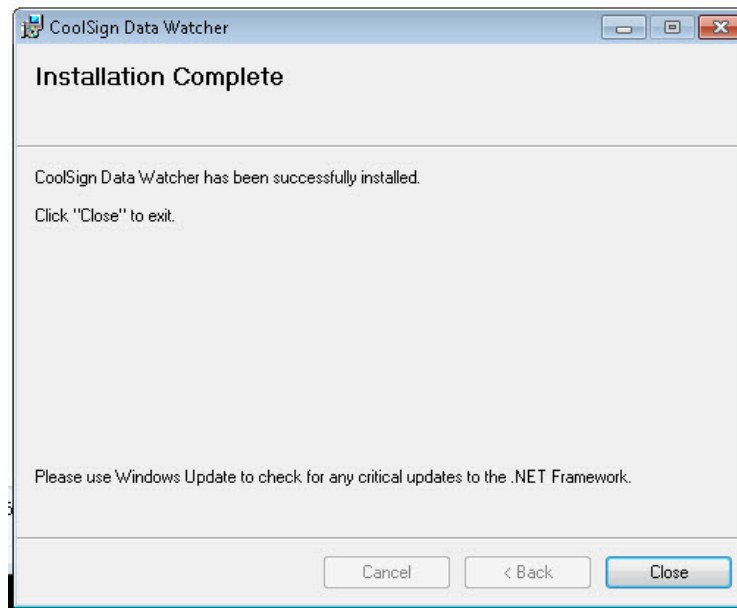
i NOTE

Because the Data Watcher is a service, you must run it from an account that has the necessary permissions to access files on the network share. Once the Data Watcher service is connected to the network, it creates a special user with the name *DataWatcher3*. This special user has limited capabilities and is used by the Data Watcher for all subsequent logins to the network.

! CAUTION

If you modify or delete the *DataWatcher3* user via CNM or any other means, the Data Watcher service may become unable to connect to the network. In this case, you must either reinstall the Data Watcher service to re-create the *DataWatcher3* user, or else edit the Data Watcher service configuration (“Editing the Data Watcher Service Configuration” on page 247 of the *CoolSign Network Manager User’s Guide*) and log into the network again.

9. When the installation process completes, click **Close** to exit the setup wizard.



The Data Watcher service is now running. For more information on the Data Watcher, refer to your user's guide.

Installing the Data Watcher Editor

The Data Watcher Editor is installed on an end-user machine where the Network Manager is also installed.

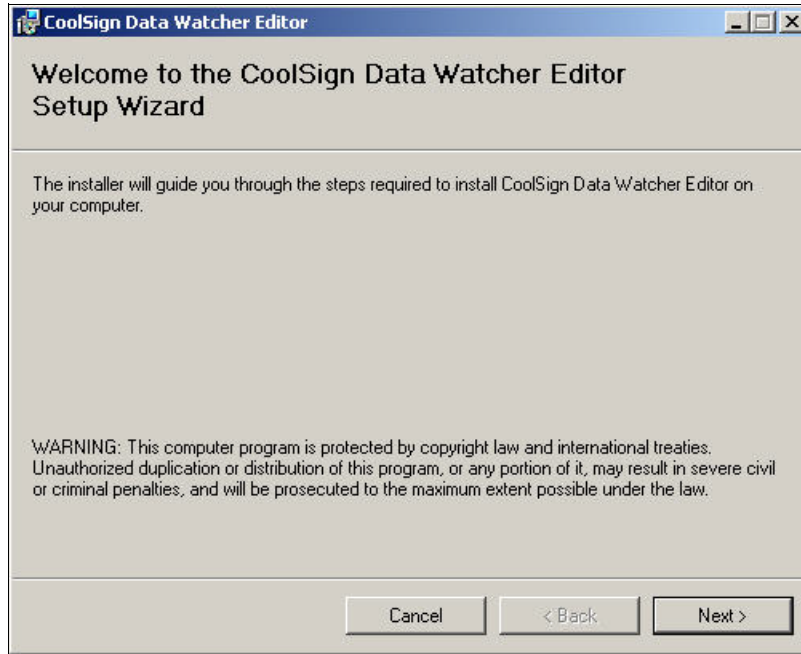


NOTE

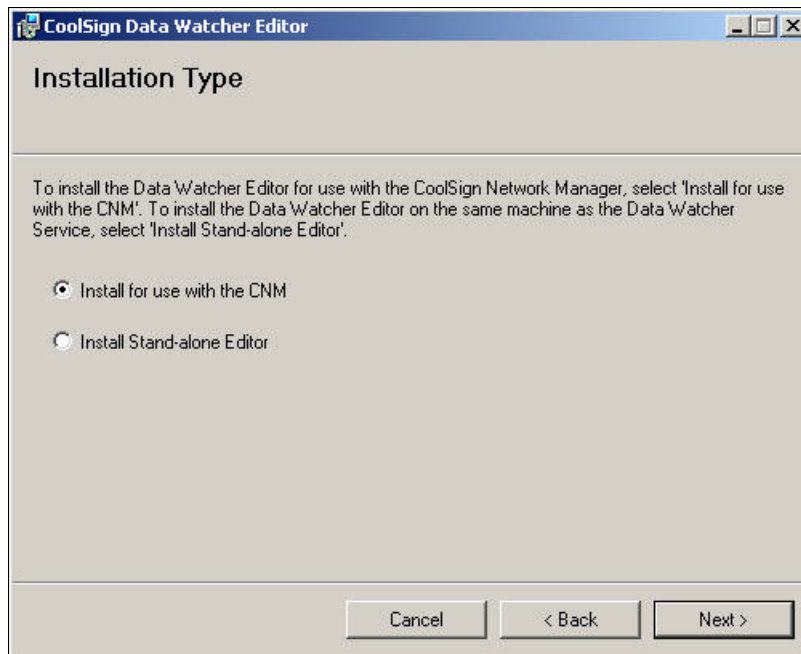
Before installing the Data Watcher Editor, be sure that you have already installed CNM version 5.0 or later.

To install the Data Watcher Editor, perform the following steps:

1. On the machine where CNM is installed, open the file DWEditorInstaller.msi.
2. When the CoolSign Data Watcher Editor Setup Wizard opens, click **Next** to continue.



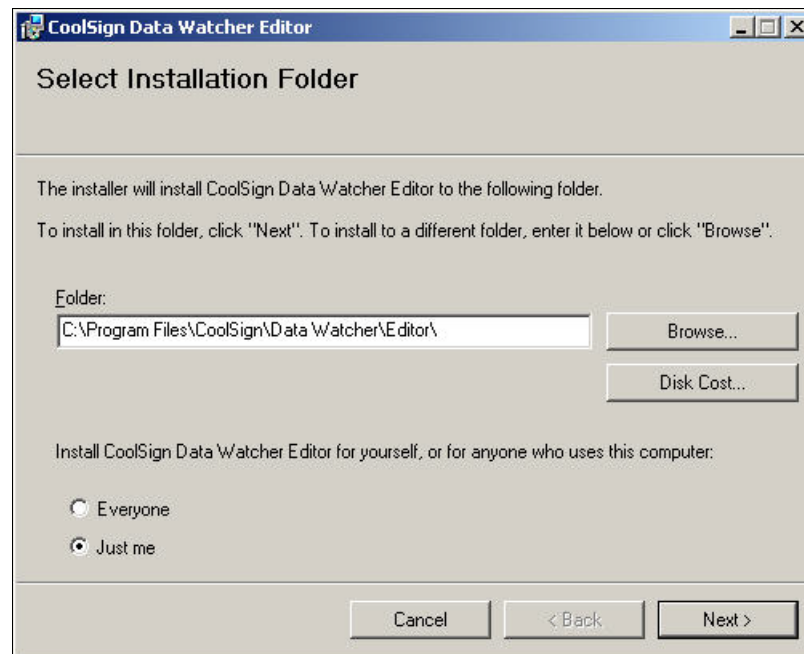
3. When prompted to do so, indicate whether you are installing the Data Watcher Editor for use with CNM, or as a standalone editor.



Some users prefer to install a standalone version of the Data Watcher Editor on the

transfer node or player where the Data Watcher service is running. With the standalone version, the Editor is not integrated with CNM, but can be used to edit and save Data Watcher configuration (DWC) files locally. As noted throughout this chapter, there are minor variations between the two versions of the Editor.

4. Select the folder in which you will install the Data Watcher Editor and click [Next](#). (The default location is C:\Program Files\CoolSign\DataWatcher\Editor.)



5. Confirm your installation details, then click [Next](#).

After installation is complete, start the Data Watcher service, then restart CNM. Once you've done that, you can use the Data Watcher Manager to perform dynamic data management in CNM.

Related Topics

- “Using the Data Watcher Manager” on page 219 of the *CoolSign Network Manager User's Guide*
- “About Dynamic Data” on page 213 of the *CoolSign Network Manager User's Guide*
- “Managing Data Tables” on page 279 of the *CoolSign Network Manager User's Guide*

6. Installing the Offline Update Imager

The CoolSign System allows you to manage a network of digital signs from a central location. Sometimes the sites or Player nodes needing changes to their schedules are not connected to the network. The Offline Update Imager application allows you to make these changes, to save them to media (such as a CD, DVD or USB thumb drive), and then to easily update the offline systems.

The Offline Update Imager application allows you to make schedule or content changes to an offline site or Player node. Some of the changes you can make with this application are:

- Adding/ deleting/ updating content.
- Assigning a new channel to a Player.
- Changing the duration of content.
- Changing the frequency setting for content.



IMPORTANT

Any changes made to content, including adding content or changes to content settings in the CoolSign Content Manager, will require that the content be included when the update image is created.

System Requirements

To create the update image, you will need to have Agent version 5.0.0.841 or later on the network controller on which the content and schedule reside. This version of the Agent is not needed to update offline nodes.


Installing the Offline Update Imager

To install the Offline Update Imager application, follow these steps:

1. Download the Offline-Updater from the Haivision Download Center.
2. Double-click the *Offline-Updater-5.0.0.123.msi* to start the installation.
3. Click **Next** to continue with the *Offline Update Imager Setup Wizard*.
4. Specify the where the Offline Update Imager will be installed, and then click **Next**.

In the lower part of this dialog, you have the option to install this application for *Everyone* or *Just me* (the recommended setting is selected by default).

5. Click [Next](#) to begin the installation. You can follow the progress of the installation in this window.
6. When the installation is finished, the message *Installation Complete* appears. Click the [Close](#) button.

After the installation is completed, you will notice that the Offline Update Imager application is available in the  START menu.

Related Topics

- “Using the Offline Update Imager” on page 347 of the *CoolSign Network Manager User’s Guide*

7. Upgrades

This section describes the procedures for upgrading a:

- CoolSign network from version 4.5.x (or higher) to version 5.0
- CoolSign Standalone Player from version 4.5.x (or higher) to version 5.0 (see [“Upgrading a CoolSign Standalone Player”](#) on page 69)



IMPORTANT

If you are upgrading from a version of CoolSign prior to 4.5, or if your network nodes are not all at the same version level, please contact Haivision Technical Support before attempting to upgrade.

Upgrading a CoolSign Network

Prerequisites

The following software requirements are the prerequisites for a CoolSign v5.0 installation:

- Windows Server 2008 R2, Windows 7, or Windows Vista (32-bit or 64-bit) with all applicable service packs applied.
- Microsoft .NET Framework v4.0 (available from the [Haivision Download Center](#)).
- Microsoft DirectX (available from the [Haivision Download Center](#)).
- Adobe Flash (available from the [Haivision Download Center](#)).
- Microsoft Windows Media Player¹ (CoolSign uses the application’s WM9 codecs).
- Microsoft Internet Explorer¹ v7 or later [**Network Manager Only**]

Preparing for the Upgrade

The tasks in this procedure focus on ensuring that the software is current and that all data is properly backed up.

1. Typically included in the installation of the Windows operating system. However, if you customized your operating system, you may need to install this application.


1. Ensure that the operating system on your devices is up-to-date:
 - Windows Server 2008 (64-bit or 32-bit) — SP2
 - Windows Server 2008 R2 (64-bit or 32-bit) — SP1
 - Windows Server 7 (64-bit or 32-bit) — SP1
 - Windows Vista (64-bit or 32-bit) — SP2

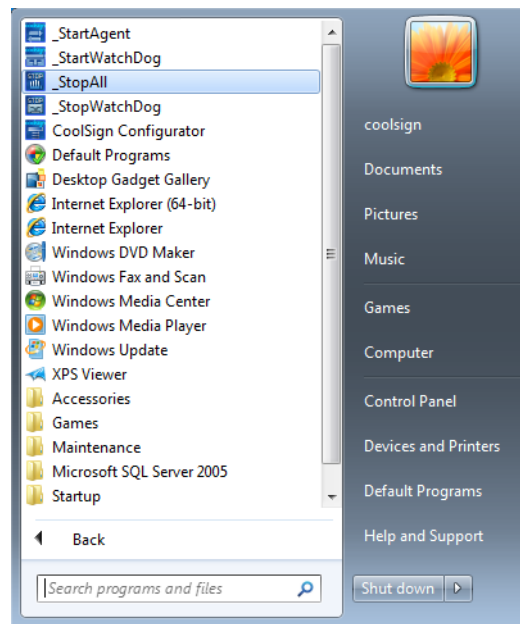


IMPORTANT

Due to [2012 SQL Server Express prerequisites](#), installing the CoolSign Network Controller on either a Windows Server 2003 or Windows XP server is not supported without an external SQL database.

Workaround: Install a SQL server database on a supported OS and use the SQL Database Connection Setup utility to specify this database during installation.

2. Run the “STOPALL” script from the Windows  START menu to stop the Network Controller’s CoolSign components.



3. Create a backup of the CoolSign SQL database using SQL Server Management Studio.
 - **MSSMSE 2005 Express Edition**
<http://www.microsoft.com/en-us/download/details.aspx?id=8961>
 - **MSSMSE 2008 Express Edition**
<http://www.microsoft.com/en-us/download/details.aspx?id=7593>
4. Login to the SQL database instance using SQL SERVER MANAGEMENT STUDIO > DATABASES.

5. Right-click on the CoolSign database and from the popup menu select TASKS > BACK UP.
6. Select Backup type as “Full”, set the destination path, and click OK.

For detailed steps on creating the backup, please refer to the following Microsoft article:

- **Create a Full Database Backup (SQL Server)**
<http://msdn.microsoft.com/en-us/library/ms187510.aspx>

7. Create a backup of the entire CoolSign directory.
 - For devices running Windows Server 2008 R2 or Windows 7, backup all files in:
C:\ProgramData\CoolSign
 - For devices running Windows Server 2003 or Windows XP, backup all files in:
C:\Program Files\CoolSign
 - For devices running Windows Vista, backup all files in:
C:\ProgramData\CoolSign



NOTE

Both the CoolSign database and directory backups must be in sync.

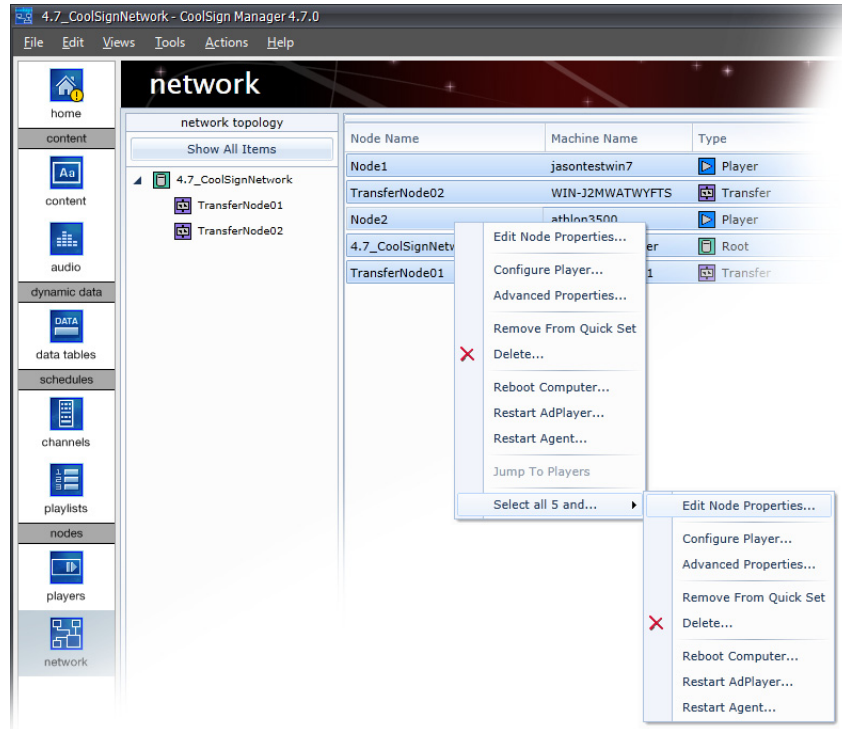
8. Once the backups are completed, you can restart the Network Controller’s CoolSign components.
9. Schedule a downtime period for your CoolSign network, during which you will perform the upgrade. There should not be any changes made to the network during this period.

Upgrading your CoolSign Network

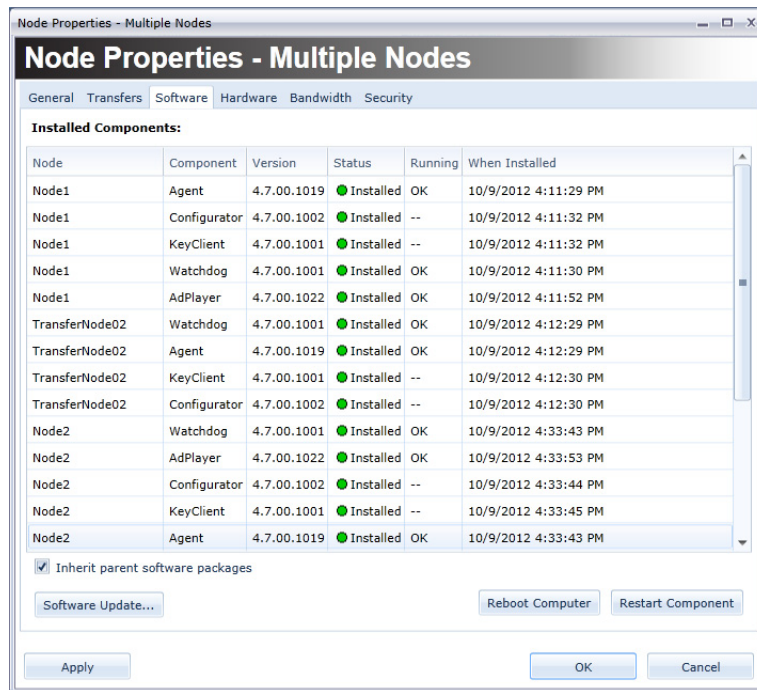
Before you begin:

1. In the CoolSign Network Manager v4.7, in the Network window, select all nodes.

2. Right click on any of the selected nodes and choose EDIT NODE PROPERTIES.



3. When the Node Properties window appears, click on the Software tab.
4. Check the Inherit parent software packages checkbox, and click OK.



5. If the Microsoft .NET4 Framework Update Package has not already been installed, download it from the Haivision Download Center, and install it:

<http://www.haivision.com/support/download-center> (login required)

 **NOTE**

All CoolSign nodes require this package and should receive it via the software inheritance mechanism.

6. Acquire a new CoolSign 5.0 License Key by completing and submitting the form “CoolSign License Key Request - SOFTWARE UPGRADE” (for existing installations), available from this page:

<http://www.haivision.com/eform/submit/licence-request> (login required)

7. Obtain a copy of the CoolSign 5.0 upgrade packages, including the CoolSign Network Manager (CNM) installer, from the [Haivision Download Center](#) (login required):

- CoolSign Network Manager (NetworkManager-5.n.n.msi)
- Content Creator (Content-Creator-5.n.n.msi)
- Content Wizard (SContent-Wizard-5.n.n.msi)
- Data Watcher Editor (Data-Watcher-5.n.n.msi)

Upgrading the Network Controller

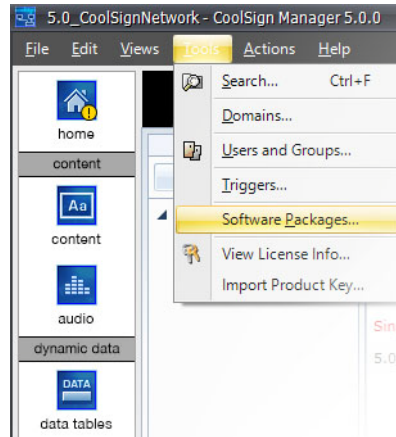
To upgrade the Network Controller, you will need to import and apply a series of software packages, in a specific order.

 **NOTE**

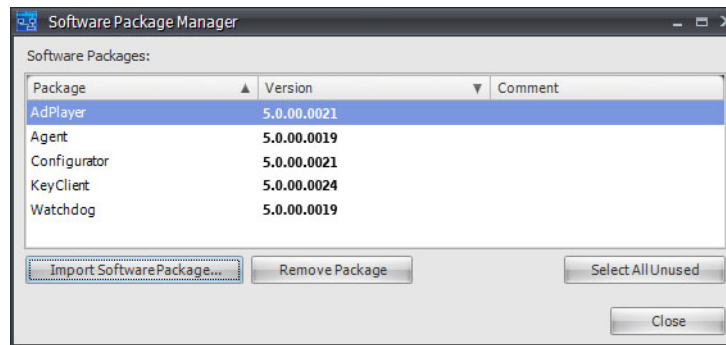
Please allow all child nodes to download a software package from the Network Controller (NC) before applying the next package.

In each case, to import the software package do the following:

1. Choose TOOLS > SOFTWARE PACKAGES.



2. In the Software Package Manager window, click “IMPORT SOFTWARE PACKAGE.”



3. In the Open dialog, select the “Package.xml” file from the folder containing the software packages you had previously downloaded ([“Downloading CoolSign Software”](#) on page 25).
4. Click OK.

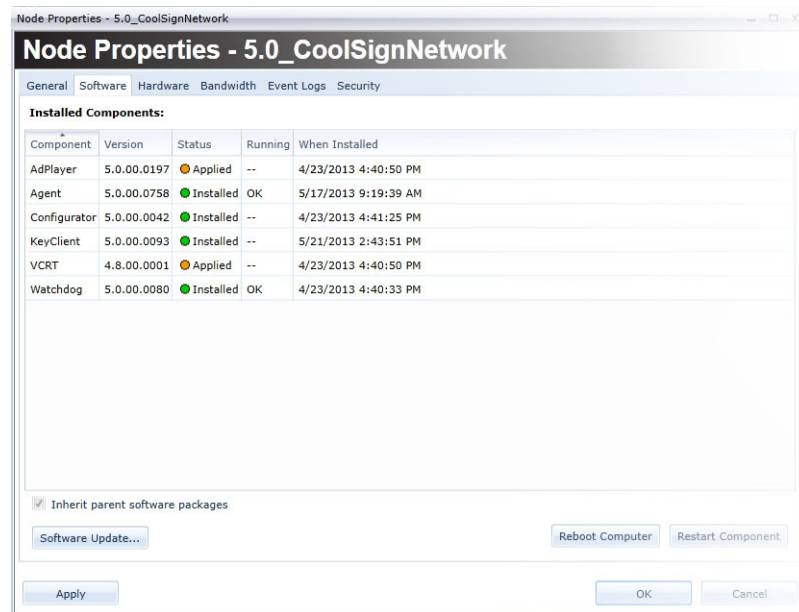
In each case, to apply the software package, do the following:



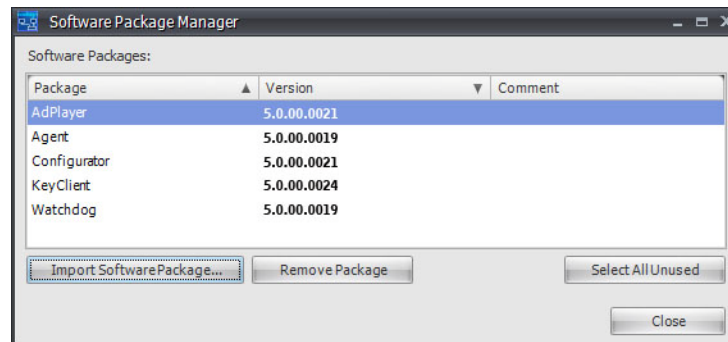
NOTE

Please allow all child nodes to download a software package from the Network Controller (NC) before applying the next package.

1. In the Node Properties window, click the **Software** tab, and then click the **Software Update...** button.



2. Select the package you want and click the **Apply** button.



To upgrade your Network Controller (NC), do the following:



IMPORTANT

You must import and apply the packages **in the order specified** below to ensure a successful upgrade. Be sure to allow all child nodes to download a software package from the Network Controller (NC) before applying the next package.

1. Using the CoolSign Network Manager (CNM), import and apply the following version 5.0 packages to the NC (main server):
 - Microsoft .NET4 Framework Update package

- KeyClient package
- WatchDog package
- AdPlayer package
- Configurator package
- Agent package
- Data Watcher package (if appropriate)

For information about the DataWatcher, see “Installing the Data Watcher service” on page 51 of the *CoolSign Network Manager Installation Manual*.

2. Uninstall the existing CoolSign Network Manager using the Windows “[ADD/REMOVE PROGRAMS](#)” control panel.
3. Double click the Network Manager-5.n.n.msi to install the CoolSign 5.0 Network Manager and follow the installation wizard’s instructions.
4. Using the CoolSign Network Manager (CNM), import and apply the DataWatcher (if appropriate), see “Installing the Data Watcher service” on page 51 of the *CoolSign Network Manager Installation Manual*.
5. Launch the CoolSign 5.0 Network Manager, connect to the Network Controller, and apply the 5.0 license key when prompted. See “[Requesting CoolSign Licenses](#)” on page 23.

Upgrading Transfer Nodes

Transfer Nodes update automatically via the software inheritance mechanism.



NOTE

If you are installing on nodes that are using different versions of CoolSign software, please verify that they have been updated with the Microsoft .NET 4 Framework Update Package.

Upgrading Player Nodes

Player Nodes update automatically via the software inheritance mechanism.



NOTE

If you are installing on nodes that are using different versions of CoolSign software, please verify that they have been updated with the Microsoft .NET 4 Framework Update Package.

Updating the CoolSign Network Manager (CNM)

To update the CoolSign Network Manager:

1. Remove the existing CoolSign Network Manager using the Windows “[ADD/REMOVE PROGRAMS](#)” control panel *prior* to installing the 5.0 version.
2. Double-click the Network Manager-5.n.n.msi installation package to open the setup wizard.
3. Follow the instructions for the install.
4. When finished, launch the CoolSign Network Manager.
5. At the logon window, connect to the appropriate network and supply the license product key when prompted.

Upgrading CoolSign Applications

To upgrade the CoolSign applications:

1. If the Microsoft .NET4 Framework Update Package has not already been installed, download it from the Haivision Download Center, and install it on the machine(s) hosting the CoolSign application(s):
<http://www.haivision.com/support/download-center> (login required)
2. For each of the CoolSign applications below, you must uninstall the existing version(s) via the Windows “[ADD/REMOVE PROGRAMS](#)” control panel *prior* to installing the 5.0 version.
3. Obtain the installation packages from the [Haivision Download Center](#) (login required):
 - CoolSign Network Manager (Network Manager-5.n.n.msi)
 - Content Creator (Content-Creator-5.n.n.msi)
 - Content Wizard (Content-Wizard-5.n.n.msi)
 - Data Watcher Editor (Data-Watcher-5.n.n.msi)
4. Double-click the installation package (*.msi), to open the setup wizard and follow the instructions.

Upgrading a CoolSign Standalone Player

This section applies only to upgrades of CoolSign Standalone Players (in other words, nodes with both the Network Controller and Player software installed on the same box). If you are upgrading an entire CoolSign network, consisting of one or more Network Controller, Transfer, and/or Player nodes, please see “[Upgrading a CoolSign Network](#)” on page 61.

Before you begin:

1. If the Microsoft .NET4 Framework Update Package has not already been installed, download it from the Haivision Download Center, and install it on the Standalone Player:

<http://www.haivision.com/support/download-center> (login required)

**NOTE**

All CoolSign nodes require this package.

2. Obtain a new CoolSign 5.0 License Key by completing and submitting the form “CoolSign License Key Request - SOFTWARE UPGRADE” (for existing installations), available from this page:

<http://www.haivision.com/eform/submit/licence-request>

3. Obtain copies of the CoolSign 5.0 upgrade packages from:

<http://www.haivision.com/support/download-center> (login required)

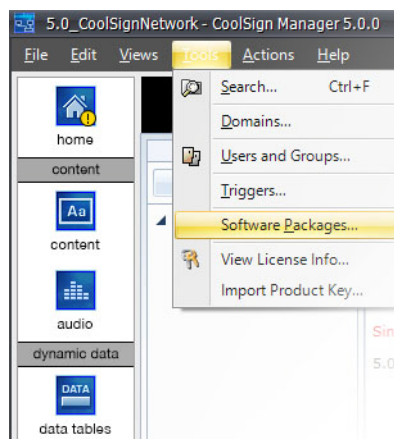
NOTE Make sure you request the Standalone Agent, *not* the CS Agent.

Performing the Upgrade

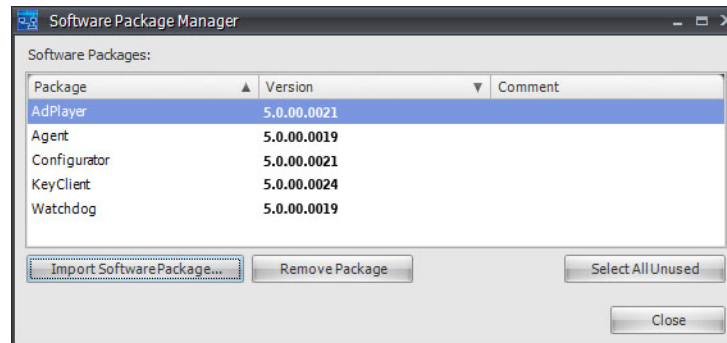
To upgrade the Standalone Player, you will need to import and apply a series of software packages, in a specific order.

In each case, to import the software package do the following:

1. Choose **TOOLS > SOFTWARE PACKAGES**.



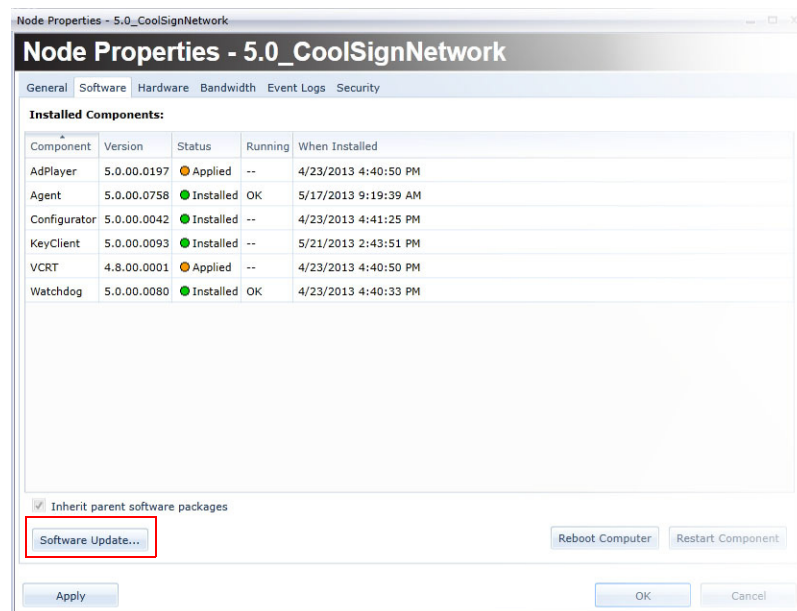
2. In the Software Package Manager window, click “IMPORT SOFTWARE PACKAGE”.



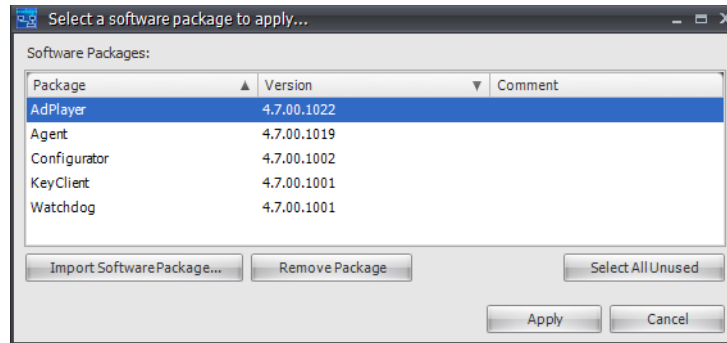
3. In the Open dialog, select the “Package.xml” file from the folder containing the software packages you had previously downloaded and click **OK**.

In each case, to apply the software package, do the following:

1. In the Node Properties window, click the **Software** tab, and then click the **Software Update** button.



2. Select the package you want and click **Apply**.



To upgrade your Standalone Player, do the following:

1. Using the CoolSign Network Manager (CNM), import and apply the following version 5.0 packages to the Standalone Player:



IMPORTANT

You must import and apply the packages **in the order specified** below to ensure a successful upgrade.

- Microsoft .NET4 Framework Update package
- KeyClient package
- WatchDog package
- AdPlayer package
- Configurator package
- Standalone Agent package
- Data Watcher package (if necessary)

For information about the DataWatcher, see the *CoolSign Network Manager User's Guide*.

2. Uninstall the existing CoolSign Network Manager using the Windows "ADD/REMOVE PROGRAMS" control panel.
3. Install the CoolSign Network Manager v5.0.
4. Launch the CoolSign Network Manager v5.0, connect to the Network Controller and apply the 5.0 license product key when prompted.

8. Getting Started

CoolSign Network Manager (CNM) is your primary tool for controlling, managing, and monitoring the activities of your CoolSign digital media network. You can use CNM to:

- Import and manage CoolSign content.
- Create channels and playlists to schedule content for playback.
- Configure and manage CoolSign players connected to your network.
- Create and populate dynamic data tables to provide rich data sources for dynamic content.
- Remotely configure and monitor many aspects of your network including status, play history, bandwidth usage, and security settings.
- Connect to your network directly from your desktop PC over a local or wide-area network connection. Or use your browser to access the web-based interface.

Topics Discussed

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| Auto-Discovering Available CoolSign Networks | 76 |
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| Keying your Network Controller | 79 |
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Prerequisites

If you haven't installed the necessary CoolSign software or set up your CoolSign network controller or players, you'll need to do this before using CNM. For detailed installation and setup instructions, download the *CoolSign Digital Media Network Installation Manual*, from: <http://support.haivision.com>.



NOTE

All current CoolSign software requires Microsoft's .NET Framework 4.0 or later.

Connecting to a CoolSign Network

When you launch CNM, a login dialog prompts you to enter your user name and password and enables you to select the available CoolSign network that you wish to connect to.

- If this is your first time running CNM, you'll be prompted to accept the CNM EULA agreement as well as enter the connection information for your network. For details, see [“Managing your Available Networks”](#) on page 75.
- If you want to allow users to log into the CoolSign network from an existing Windows domain account, you can streamline the user logon process ONLY if the Windows domain accounts are in the same domain as the CoolSign Network Controller node. For details, see [“Using Windows Domain Security to Connect to CoolSign”](#) on page 322.



TIP

If you're set up to connect to the CNM using your Windows credentials and instead you want to use CoolSign account credentials, you can hold down the left CTRL key while starting the CNM. Note that the following login window appears even if you are using domain security.



To connect to a CoolSign network:



IMPORTANT

When your CoolSign Network is initially installed, it comes with one user account already created. The name for this account is `admin`, and the password is `password`. When you first log in to your network, you should immediately create new user accounts and change the password for the `admin` account. For more information see “About Security” on page 322 of the *CoolSign Network Manager User’s Guide*.

1. Enter your user name.
2. Enter your password.



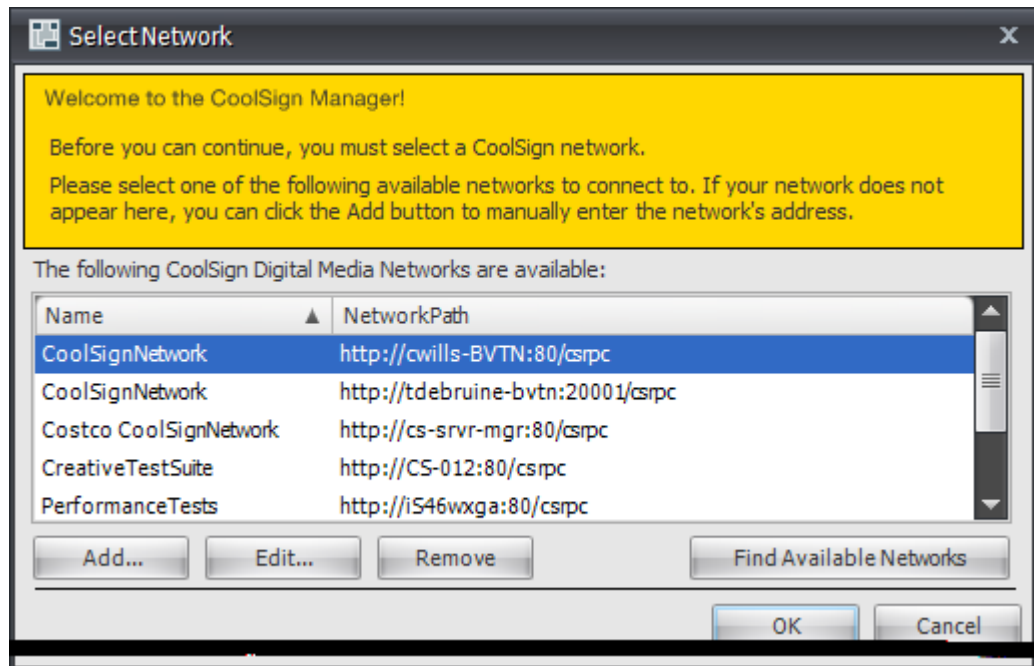
NOTE

Passwords are case-sensitive. Make sure you don’t accidentally have the [Caps Lock](#) key depressed when entering your password.

3. Select a network to which to connect.
4. Click the [Login](#) button.

Managing your Available Networks

The first time you launch CNM, or if you have more than one network that you want to manage, you’ll need to use the Select Network dialog to add to your list of available CoolSign digital media networks. You can use this dialog to manually add, edit, or remove CoolSign networks from your list of available networks or you can attempt to auto-discover any networks.



To open the Select Network dialog:

- From the Login dialog, click the [Edit Networks](#) button.

Auto-Discovering Available CoolSign Networks

CNM can check to see if any CoolSign digital media networks are available on your local network. When auto-discovering available networks, any new networks are automatically added to your list of available networks. In addition, if any of the networks already listed are no longer available, they appear red to indicate that they currently aren't available.



NOTE

A CoolSign network can only be auto-discovered if its Network Controller is located within the same network domain as your PC.

To auto-discover available CoolSign networks:

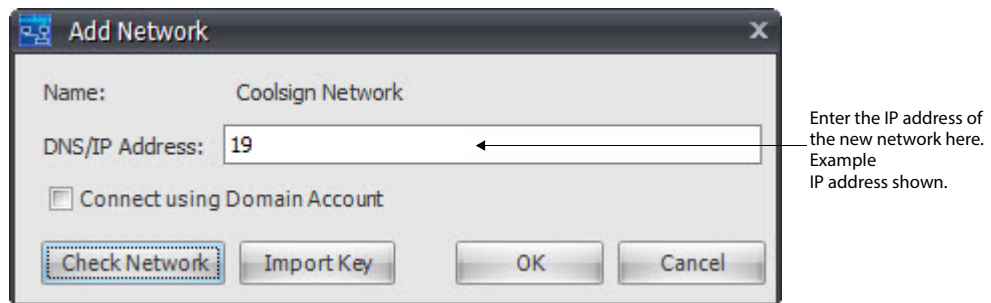
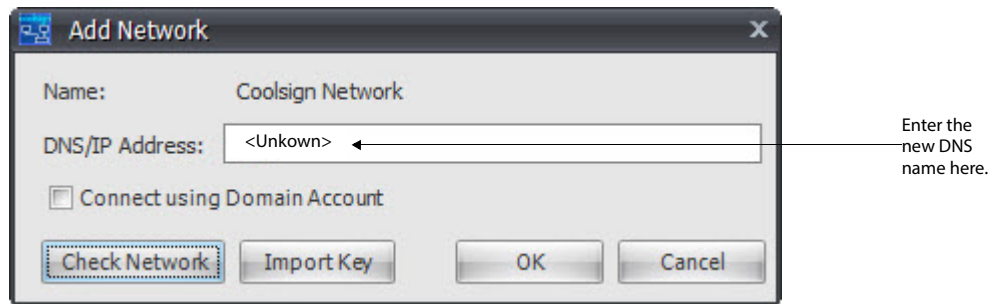
- Click the [Find Available Networks](#) button.

Manually Managing Available CoolSign Networks

If CNM cannot discover a Network Controller on the CoolSign network to which you wish to connect, you must manually add the network to the list of available networks.

To add a new network:

1. From the Select Network dialog, click the [Add](#) button. The Add Network dialog appears.



2. Enter the IP address or DNS name of the Network Controller. For example, 192.168.1.10.
3. Click the [Check Network](#) button. If a network is online and available at the specified address, its name automatically appears.

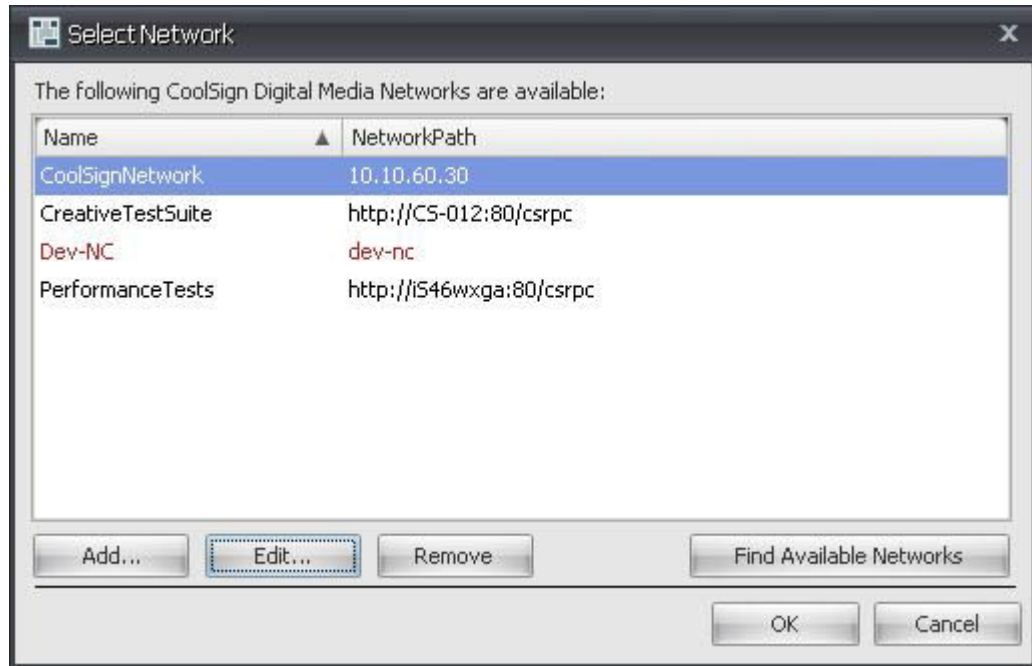
i NOTE

You cannot add a network that is not currently online. If you are having trouble connecting to a valid address, make sure that the Network Controller agent is running.

4. To connect using Domain Accounts, check the [Connect using Domain Account](#) box. This option causes CNM to use the Windows Domain account to log into the CoolSign network without displaying the Login dialog.
 - For more information on using domain accounts, see [“Linking CoolSign Users/groups to Active Directory Groups”](#) on page 328 and [“To assign group capabilities to a user:”](#) on page 328 of the *CoolSign Network Manager User’s Guide*.
5. To import your license key from a valid product key file, click [Import Key](#). For details, see [“About Product Keys”](#) on page 78.
6. Click [OK](#).

To edit the properties of an existing available network:

1. In the Select Network dialog, select the network in the list of available networks.



2. Click the **Edit** button.
3. Enter a new IP address or modify any properties.
4. Click **OK**.

To remove an available network:

1. In the Select Network dialog, select the network in the list of available networks.
2. Click the **Remove** button.

About Product Keys

CoolSignCoolSign uses a product key system to license the functionality and features of the CoolSign Network Controller. If you are trying to connect to a CoolSign Network Controller that does not have a valid CoolSign product key, you must obtain one from either your authorized CoolSign reseller or from CoolSign Technical Support. The product key is provided as a small text file. Visit <http://haivision.com/license> for more details.

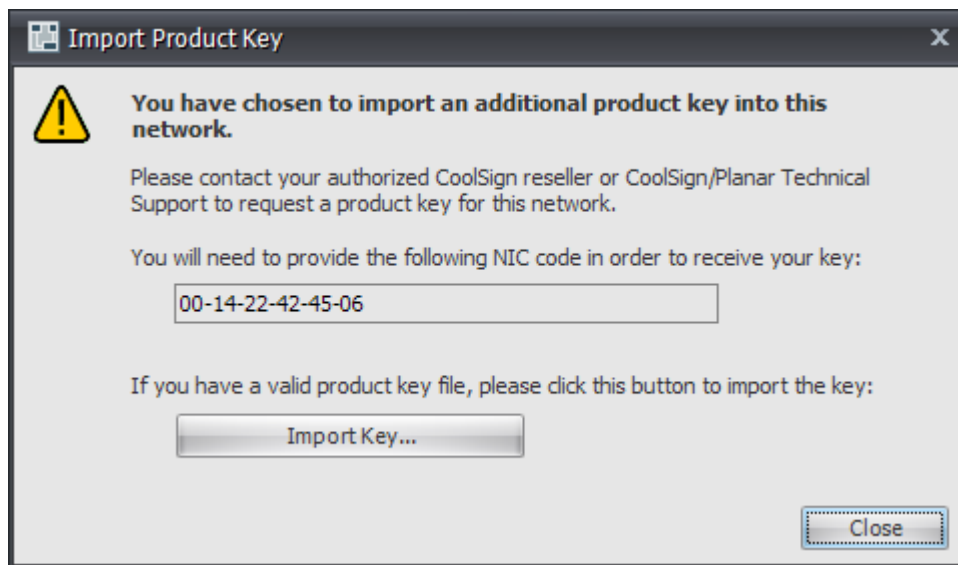
CoolSign product keys are tied to the Network Interface Controller (NIC) address of the Network Controller's networking hardware. You'll need to provide the NIC address of the PC in order to have a product key generated.

**NOTE**

The NIC address is sometimes referred to as a MAC address or as the physical address of your NIC.

Keying your Network Controller

When CNM connects to an unkeyed network, it displays this warning dialog:



The dialog provides the NIC address that you must provide when requesting a key for your Network Controller.

If you already have a product key for your Network Controller, you can import the key through this dialog.

To import a network product key:

1. Click the **Import Key** button.
2. Select the Product Key file provided to you using the Select File dialog.
3. Click **OK**. You should be able to connect to your network after a few moments.

To view license info for your network:

- Choose **TOOLS > VIEW LICENSE INFO**. See [“Product Licenses”](#) on page 80.

Importing Product Keys

You can import the product keys provided by CoolSign Technical Support directly into CNM to remotely key your nodes.

To import a product key:

1. Choose **TOOLS > IMPORT PRODUCT KEY**.
2. Select the product key text file provided to you by CoolSign Technical Support.
3. Click **OK**. The import tool lets you know how many valid keys were imported.

Product Licenses

This section describes how to view current product license information and import product licenses. Product licenses can only be imported using product keys that are available from CoolSign Technical Support.

The following product licenses are now available from CoolSign.



NOTE

Only the network controller and the player require licenses.

- Network controller:
 - Enterprise Class Server—has no built-in limits on player or CNM/client counts
 - Multi-tenant Server—Enables the use of domains and sub-domains to support multi-tenancy
- Transfer nodes: No license required
- Stand-alone Player—Enterprise class server and one player
- Networked Players—Player access licenses

For more details on transfer nodes, see 17. "Managing Nodes", on page 290.

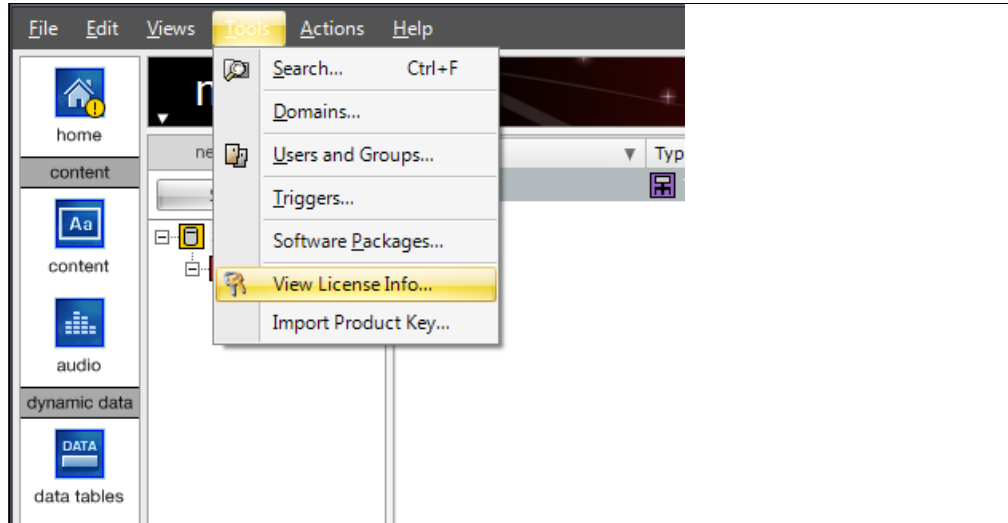


NOTE

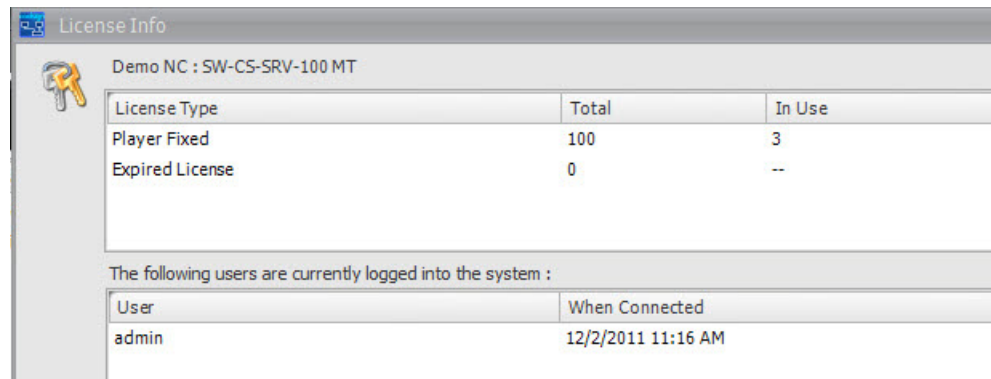
See *"CoolSign Distributed Network Architecture"* for the recommended topology for a distributed CoolSign network and *"CoolSign Standalone Network Architecture"* for the recommended topology for a standalone CoolSign installation. This information can be found in the *CoolSign Network Installation Guide*.

To view license information on your network:

1. Click **TOOLS** and then click **VIEW LICENSE INFO...**



This screen lists all the fixed Client Access Licenses (CALs) as well as any expired licenses. For details, see [“Managing Domains”](#) on page 85.



i NOTE

For details about Fixed licenses, see [“Managing Domains”](#) on page 85.

2. If necessary, purchase your product licenses and import your product key(s). For details, see [“Importing Product Keys”](#) on page 80.

Multi-Tenancy

This section describes how to log in as a CNM administrator and set up domains for tenant users. If a Multi-Tenancy product license was purchased, a CNM administrator can assign the necessary security settings to limit access among domains so customers can each have a CoolSign network that looks as though they are the sole client on the server. In other

words, users can “share” a single CoolSign network in a secure way so that each one can safely think of the network as “their network.”



NOTE

A domain is a sub-network made up of a group of clients and servers under the control of one central security database. Within a domain, users authenticate once to a centralized server (known as a domain control) rather than repeatedly authenticating to individual servers and services. Individual servers and services accept this user-based control on the approval of the domain controller.

Initial Account and Password

When your CoolSign Network is initially installed, it comes with one user account already created. The name for this account is **Admin**, and the password is **password** (note that passwords are case sensitive). When you first log in to your network, you should immediately create new user accounts and change the password for the Admin account because being a member of the Master domain automatically makes you a member of the Everyone group in all other domains. Being a member of the Administrators group in the Master domain gives you full administrative (super user) access to all domains. For details about how to control who has access to your CoolSign Network, see “Security Strategies” on page 334 of the *CoolSign Network Manager User’s Guide*.

About Domains

Keep the following in mind when setting up domains:

- When reading a list of users or roles, only users and roles from the user's domain are visible, unless the user is a member of the Master domain, in which case all users and roles in all domains are visible.
- Only members of the Master domain can read a list of domains.
- Only members of the Administrators group in the Master domain can create, update, and delete domains.

About Sub-Domains

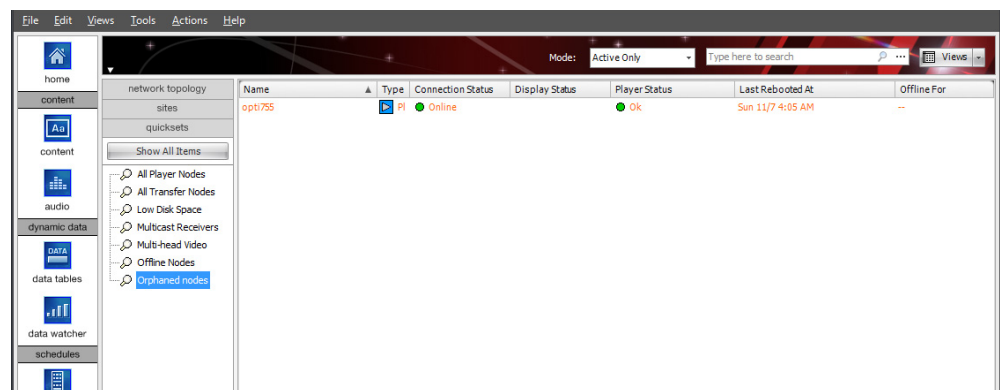
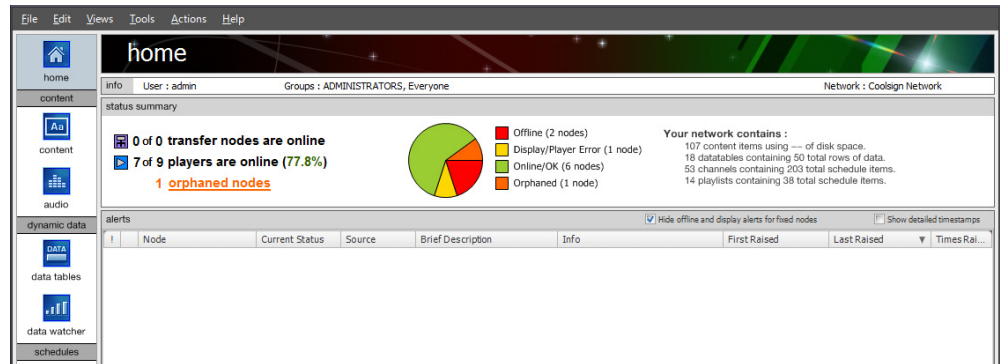
Keep the following in mind when setting up sub-domains (for tenants):

- The master administrator is the only one who can assign licenses and distribute, create sub-domains and pass phrases, and assign permissions.
- Tenants must get access to their respective sub-domains and pass-phrases from the master administrator.
- If a tenant mis-types a sub-domain pass phrase or a node pass phrase while attempting to join a sub-domain, that sub-domain is not accessible and instead joins a special domain that only the master administrator can see and have access to.

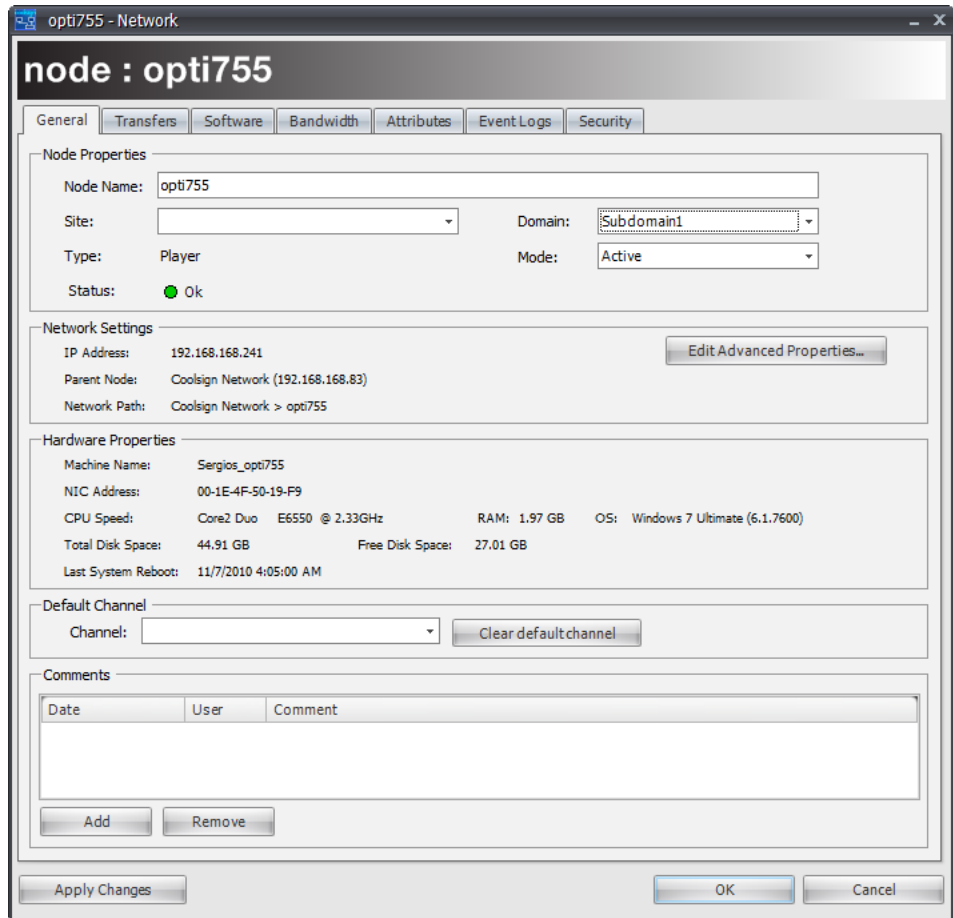
In order for the node to join the assigned tenant sub-domain, the master administrator

must move it from the special domain into the assigned tenant domain.

To do this, the master administrator either clicks the Orphaned Nodes link on the home window or selects the Orphaned Nodes pre-defined quickset from the CNM.

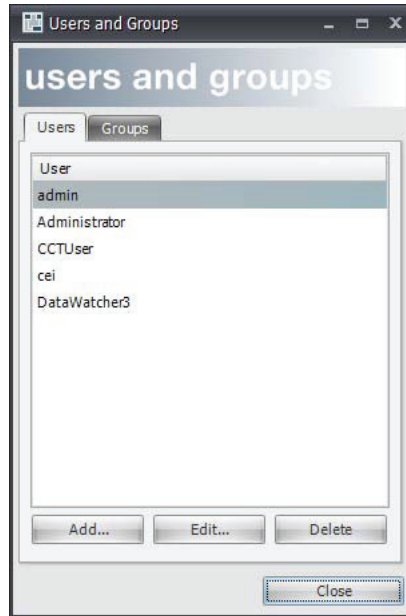


- The master administrator must edit the orphaned node properties and set the domain field to the correct sub-domain.



Managing Domains

Following is a simplified domain structure based on the displayed groups and users. For details on how to add, edit, or update users and groups see “Managing Users and Groups” on page 325 of the *CoolSign Network Manager User’s Guide*.

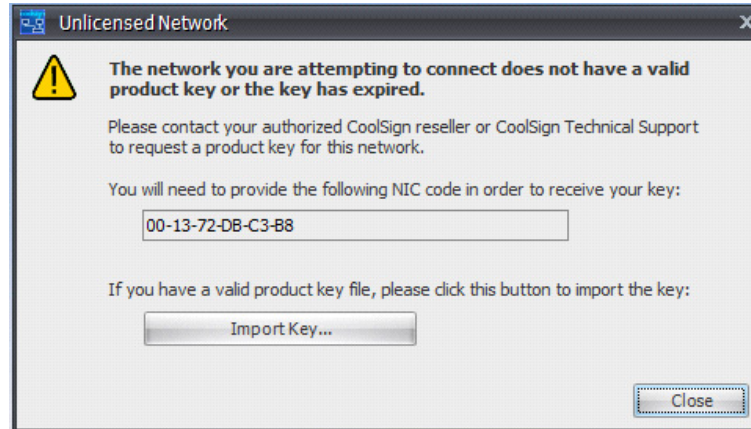


To add domains:

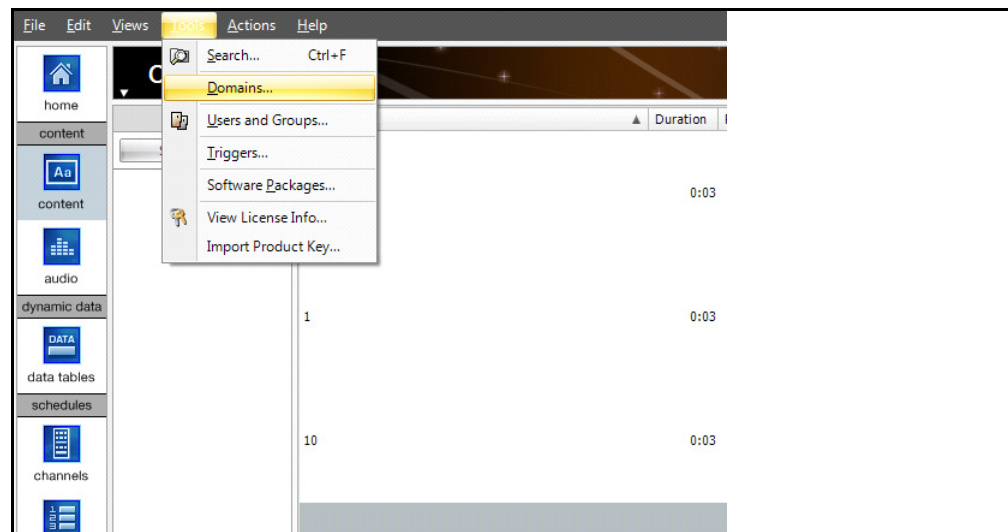
1. Login to the CNM. For details, see [“Connecting to a CoolSign Network”](#) on page 74 “.



2. If you haven't purchased and imported your product licenses, the following screen appears. For details see [“About Product Keys”](#) on page 78 and [“Product Licenses”](#) on page 80.

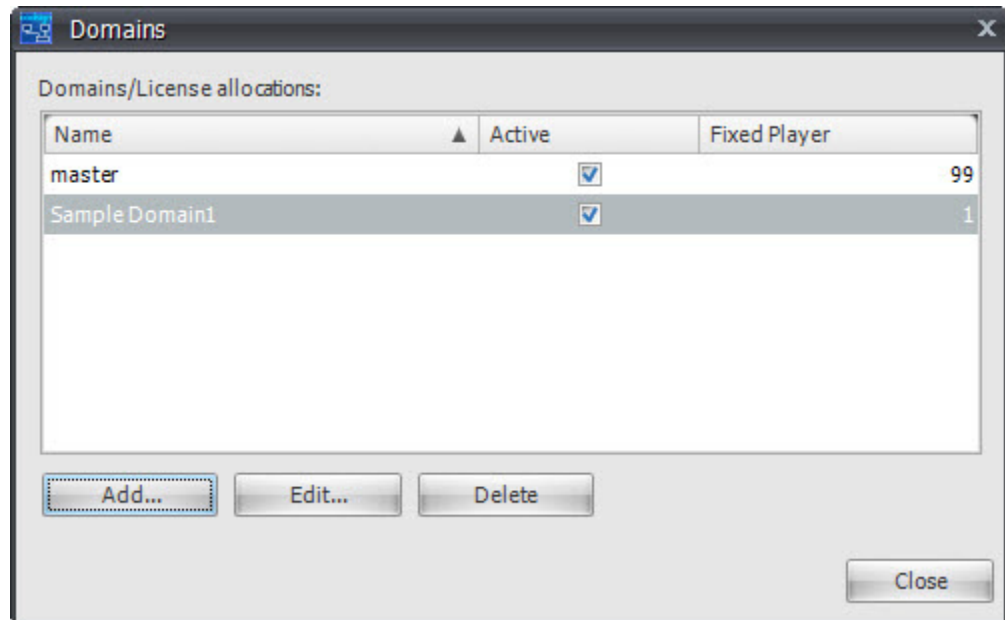


3. Click **Tools** and then click **DOMAINS**.



A current list of Domains and License Allocations appears. Note that if this is the first time accessing this screen only the “master” domain appears. In this example, master

appears, it is active, and has a player license assigned.



- **Active**—Displays whether or not a domain is active.
- **Fixed Client Access Licenses**—The number of client licenses that the server has available for assigning to network nodes. These licenses are consumed and assigned to nodes as they network. These licenses can be re-assigned a certain number of times (in the current implementation of the server, they can be re-assigned five times).

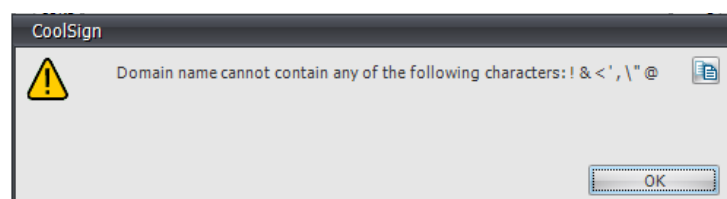
i NOTE

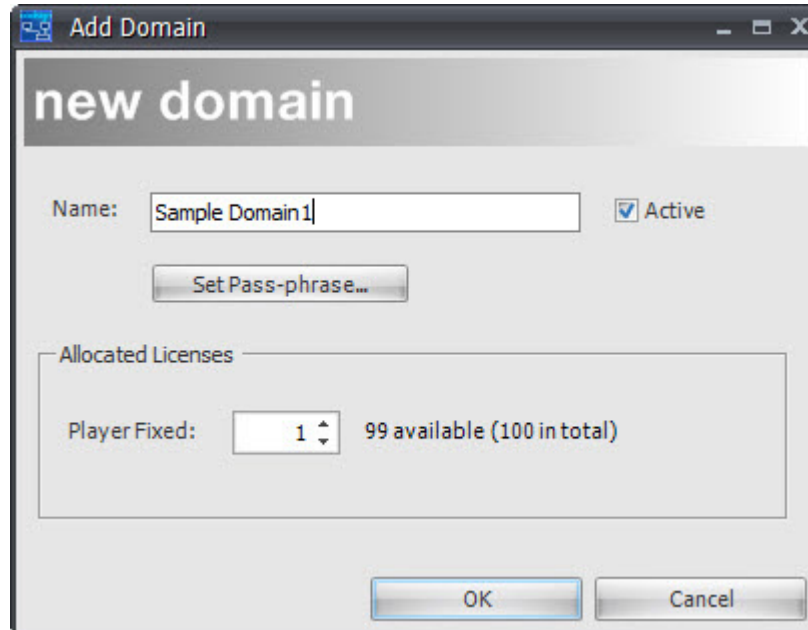
If a node is deleted from the server's database but then subsequently reconnects, the node re-acquires the same client access license that it had previously been assigned (if any), provided that this license has not already been reassigned to another node. The server attempts to assign all previously unassigned client access licenses before it reassigns previously used client access licenses.

4. Click [Add](#) and enter a domain name.

i NOTE

Domain names are limited to a maximum of 32 characters and cannot contain the characters !, &, <, \, ", or @.

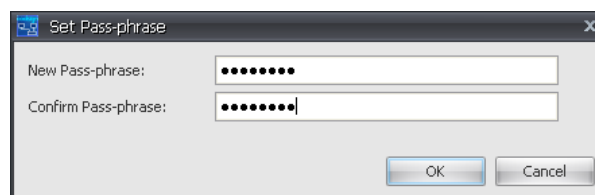




5. Click [Set Pass-phrase...](#) to enter and confirm a new pass-phrase.

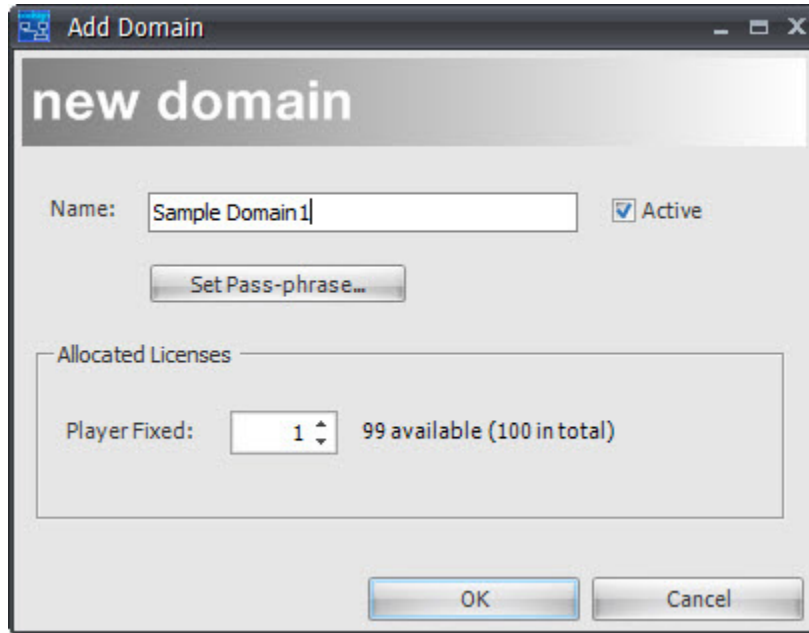
i NOTE

A domain must have a specific pass phrase associated with it. This prevents tenants from accessing domains other than their own. Pass phrases should be unique enough so they can't be easily guessed or mistakenly entered. Also note that a pass phrase is not the same as a password when setting up your CNM network.

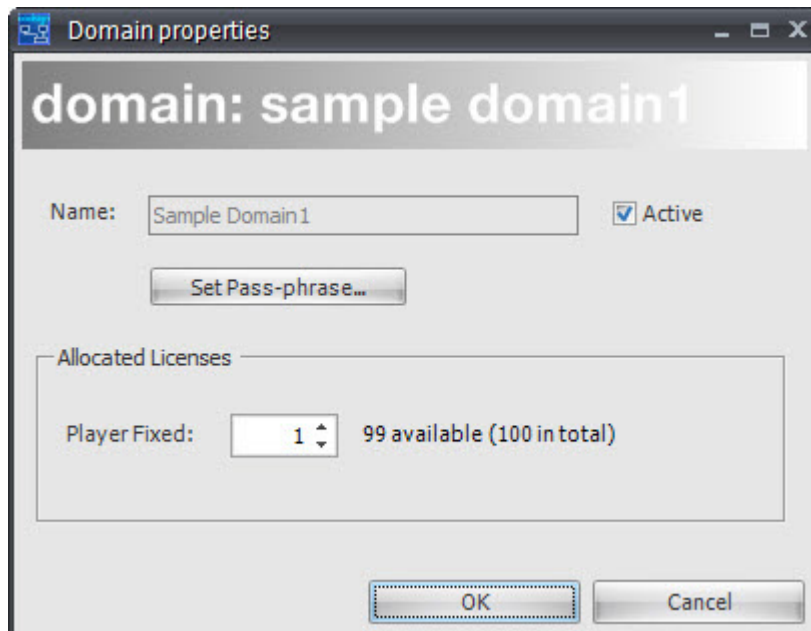


To edit domains:

1. Click [Edit](#) from the Domains screen.



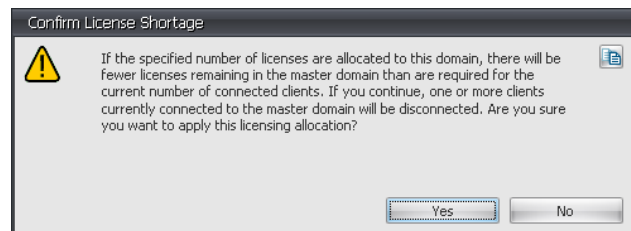
2. From the Edit Domain screen, de-activate a domain and/or modify any allocated licenses.



- Press **OK** to apply your changes.

NOTE

If you attempt to allocate more licenses than there are available, the following screen appears explaining that the specified number of domain licenses exceeds the number of players that are connected to your network.



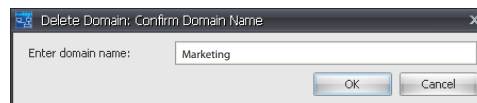
To delete domains:



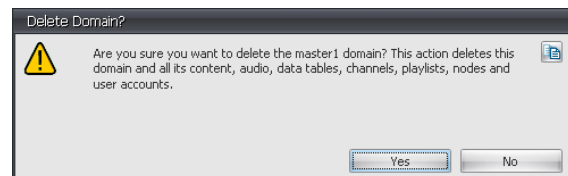
WARNING

When you delete a domain everything associated with that domain (content, audio, data tables, channels, playlists, players, user accounts, capabilities, and security) will be lost. So to make sure that you really want to delete the domain, you have to enter the name as shown.

- If you're sure you want to delete the domain, Click **Delete**, enter the domain name, and then click **OK**.



- Click **Yes** to finish.



Users and Groups

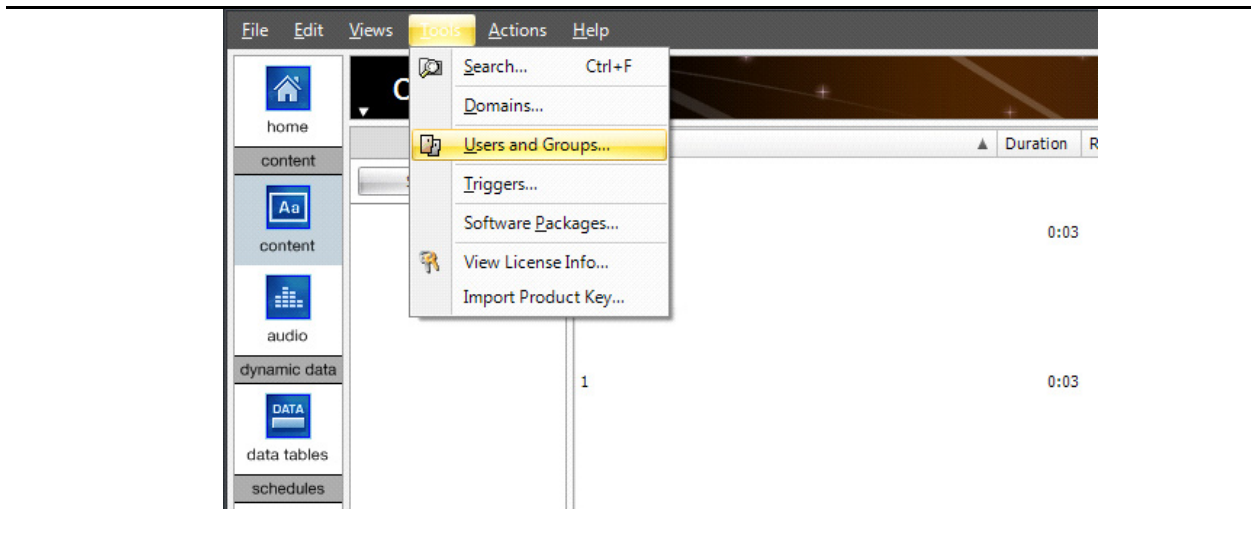
You can manage the users and groups that are allowed access to domains and sub-domains from the User and Groups dialog.

For more details, see “Managing Users and Groups” on page 325 of the *CoolSign Network Manager User's Guide*. This section explains how to manage users, groups, and special groups including how to assign capabilities to control access as well as password manage-

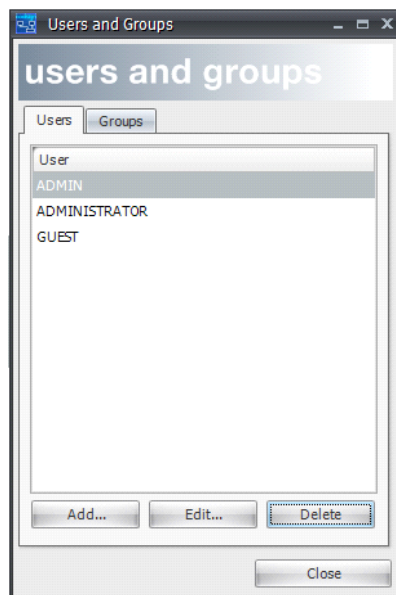
ment. This section also explains security strategies to help you manage the security access to your CoolSign network.

To add a new user:

1. Click **Tools** and then click **USERS AND GROUPS**.



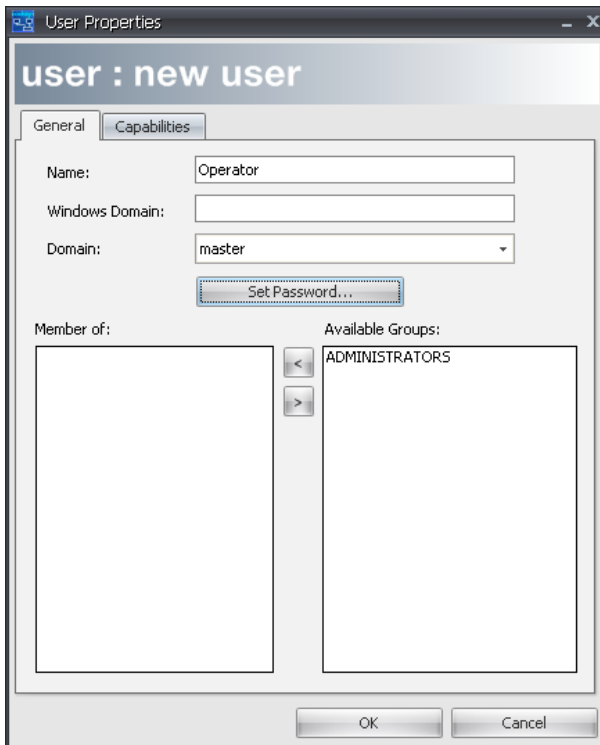
A current list of Users and Groups appears. Note that if this is the first time accessing this screen only “User”, “ADMINISTRATOR”, “ADMIN”, and “GUEST” appear.



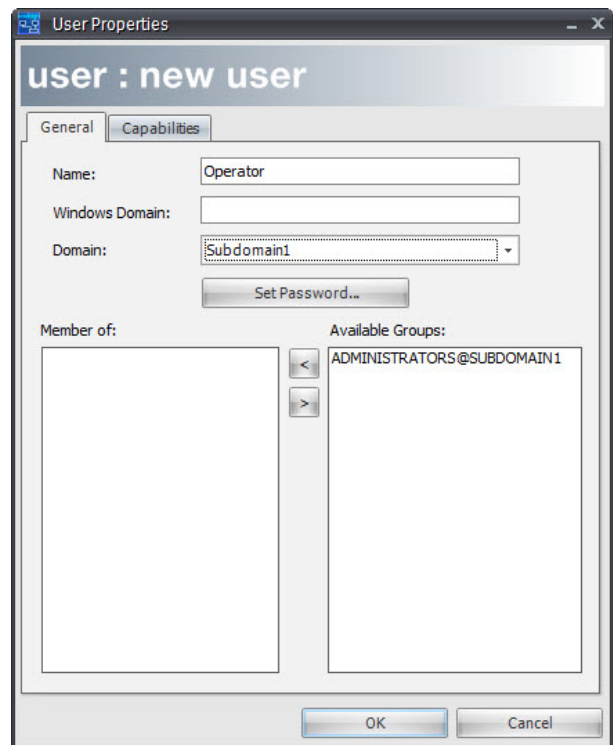
2. Click **Add**.

i NOTE

Only tenant users with “Administrator” rights can create users and groups within their own sub-domains.



Master Domain

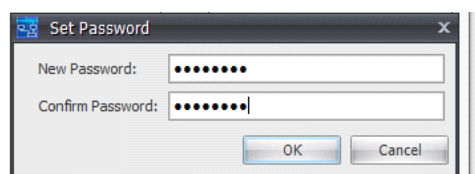


Tenant Domain

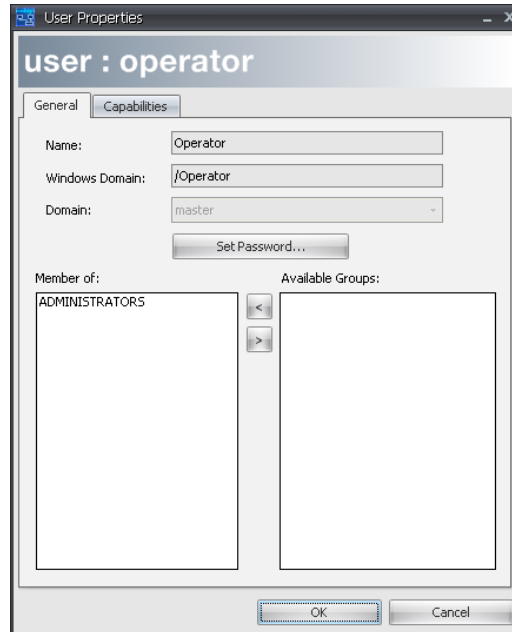
When creating a tenant user, the tenant user name becomes [UserName]@[SubDomainName]. If it is a master domain user, then it's just the user name.

For example, if the Name input here is Operator and the domain is the master, then the user name is Operator; however, if the domain is a tenant domain (Subdomain1), then the user name becomes Operator@Subdomain1

3. Select a domain from the “Domain” drop-down menu.
4. Set a password and then click **OK**.



5. Select an available group (or groups) and then click the right-arrow to move it (or them) to the “Member of:” column.
6. Click **OK**.



Once the tenant’s credentials are created, the tenant can use them to log into the appropriate sub-domain network via CNM:

user: user_name@domain_name

password: user_password



NOTE

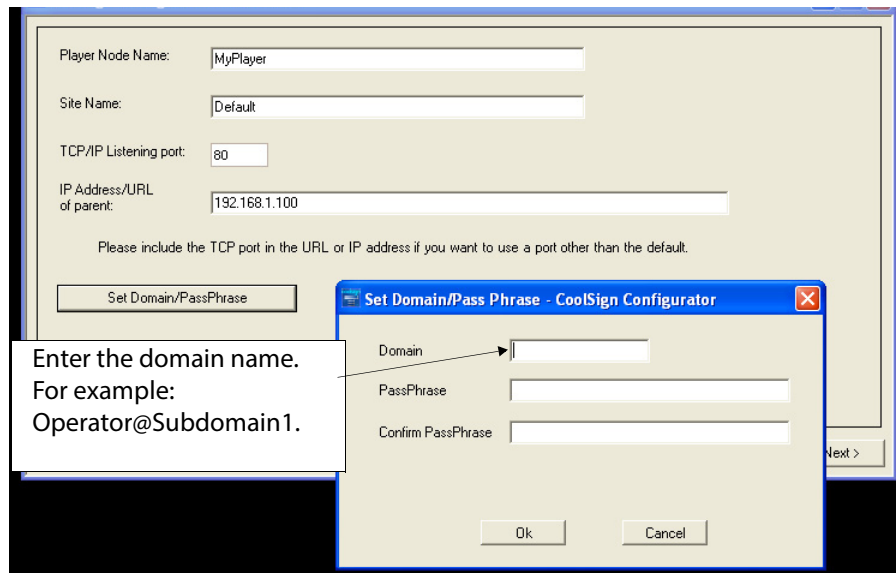
Users in the master domain don’t need to specify the @domain_name.

To Edit or Delete Users and Groups:

For details, see “Managing Users and Groups” on page 325 of the *CoolSign Network Manager User’s Guide*.

CoolSign Configurator

CoolSign Configurator is used to join player nodes to domains during configuration. Player nodes must be configured with the name of the Domain and a specific pass phrase associated with that domain. They should be made simple so technicians are able to easily enter them but unique enough so they can’t be easily guessed or mistakenly entered. For example, you wouldn’t want tenant A to be able to configure a player to connect to the network in such a way that it shows up as one of tenant B’s players.

**NOTE**

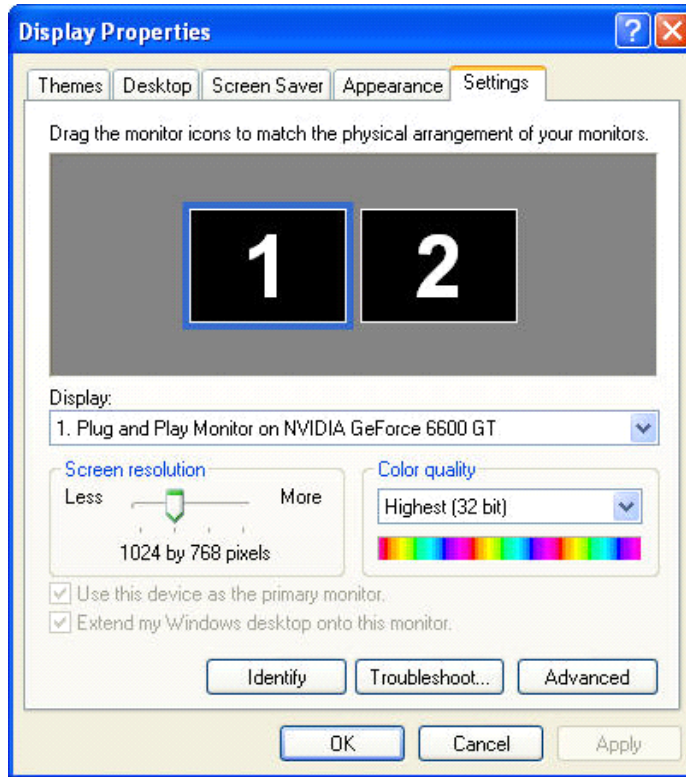
Acceptable domain character names are limited to: a-z, A-Z, 0-9, a dash (-), underscore (_), and period (.). Also note that you cannot use spaces.

Configuring a Multi-Output AdPlayer

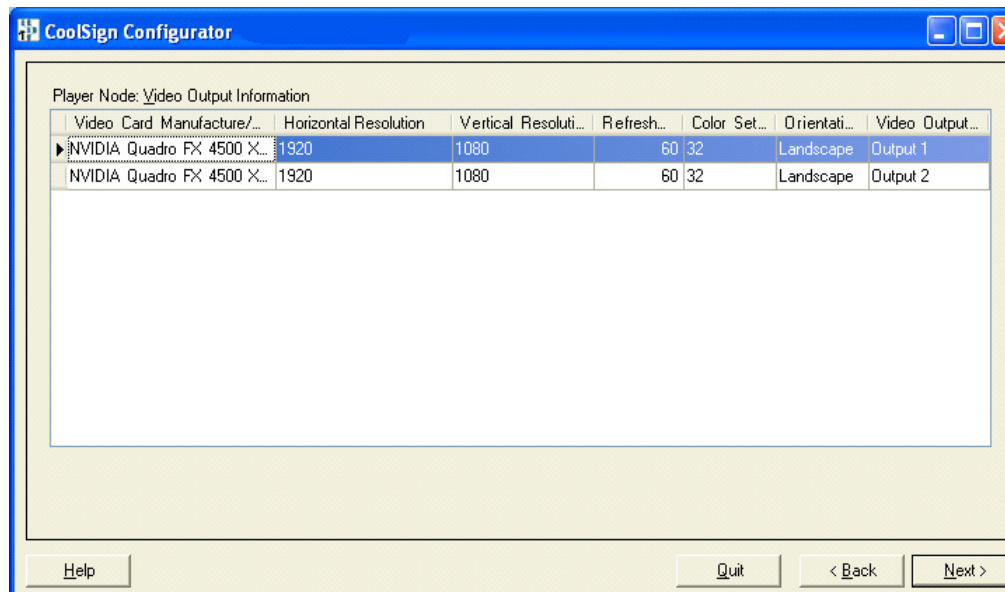
With CoolSign Configurator and software release 5.0, you can take advantage of dual and quad-output video cards with the ability to provide a separate channel to each output (multi-output) or span a single channel across multiple video outputs (spanned). Setting up a multi-output player is accomplished using the CNM only and is independent of the video card in use. Setting up a spanned AdPlayer requires the configuration of the manufacturer-provided software specific to each video card. Instructions are illustrated using a recommended video card from ATI.

To configure a multi-output AdPlayer:

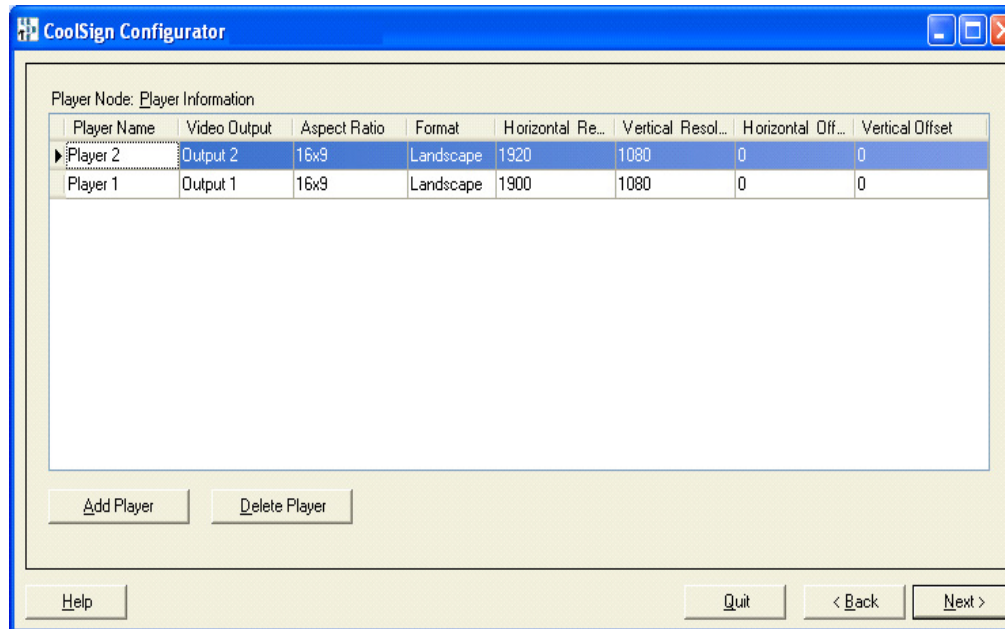
1. Open the Display control panel located in the START > SETTINGS > CONTROL PANEL.
2. From the [Settings](#) tab of the Display Properties window, confirm that all needed outputs are active on the video card. Enable any disabled outputs by selecting the display and checking the box labeled “[Extend my Windows desktop onto this monitor](#)”. Click [OK](#) to save these changes.



3. Open the CoolSign Configurator from the [Start](#) menu. Click [Next](#) to advance to the second window labeled Player Node: Video Output Information. Enter the Horizontal and Vertical Resolution, Refresh, Color Set, Orientation, and Video Output Name for each output.



4. Click **Next** to advance to the third window labeled Player Node: Player Information. Click **Add Player** and select an output to associate with the player. Enter the Aspect Ratio, Format, Horizontal and Vertical Resolution, Horizontal and Vertical Offset.
5. Click **Quit** to exit.



9. Configuring Installed Nodes

After you have installed your CoolSign system, you might want to configure it differently. For example, you might want to connect to a different network controller on a different network.

The following sections explain how to use the CoolSign Configurator to reconfigure your installed nodes as needed.

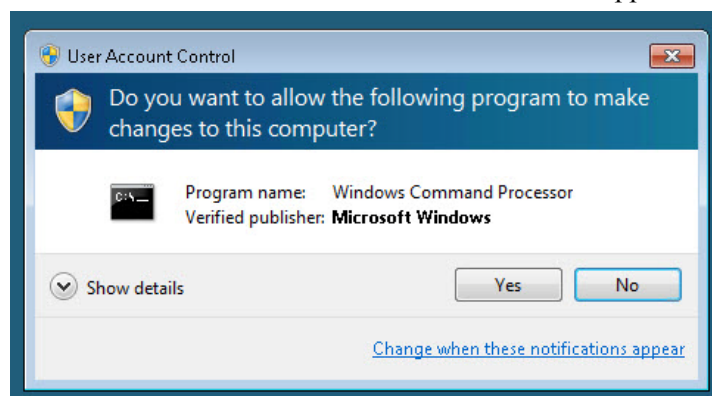
- [“Launch the CoolSign Node Configurator”](#) on page 97
- [“Configuring the Network Controller”](#) on page 98
- [“Configuring a Transfer Node”](#) on page 99
- [“Configuring Player Node”](#) on page 100

You can use CoolSign Manager to change some of the settings in this chapter. For details, Chapter 17, "Managing Nodes" of the *CoolSign Network Manager User's Guide*.

Launch the CoolSign Node Configurator

To launch the CoolSign Node Configurator:

1. Click **Yes** when the User Account Control Screen appears.

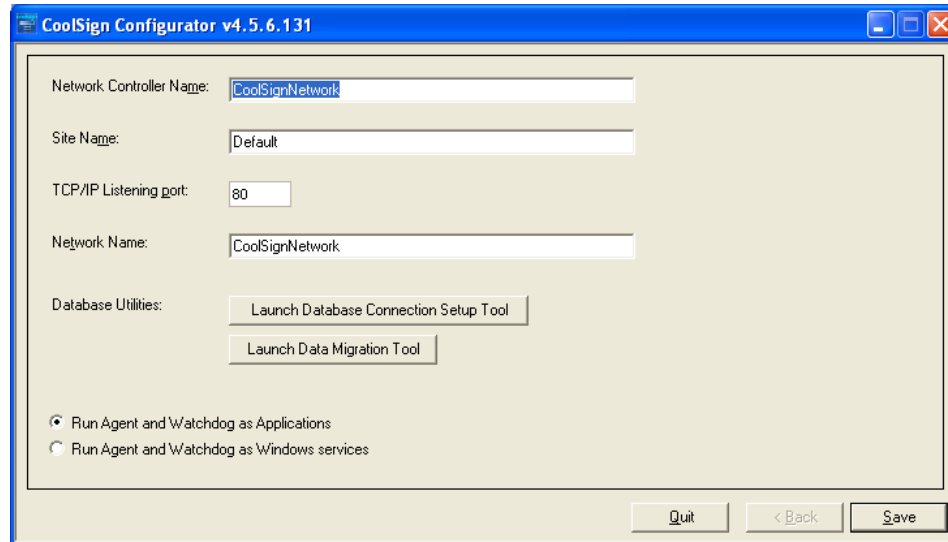


NOTE

This screen only appears with Windows Vista and Windows 7 if the User Access Control (UAC) option is selected. If turned off, proceed to Step 2.

2. Open the Windows Start menu and select COOLSIGN CONFIGURATOR. Note that to use the Configurator, you must have a keyboard attached to the node.

Configuring the Network Controller



You can define the following display network controller configuration options:

Network Controller Name—The name of the network controller node, as displayed in CoolSign Manager. Note that you can use CoolSign Manager to change the network controller name.

Site Name—The name of the site that the network controller node is associated with, and appears in CoolSign Manager. For network controllers, this name might not be necessary, since you'll probably not need to associate it with a site. Note that you can use CoolSign Manager to change the site name. You can also create new site names, as described in Chapter 13, "Managing Sites" of the *CoolSign Network Manager User's Guide*.

TCP/IP Listening Port—The port number that the network controller uses to receive incoming requests from other nodes, as well as any CoolSign Manager applications. The default listening port is 80. You can change the listening port if your networking infrastructure requires it or another application is already using the default port.

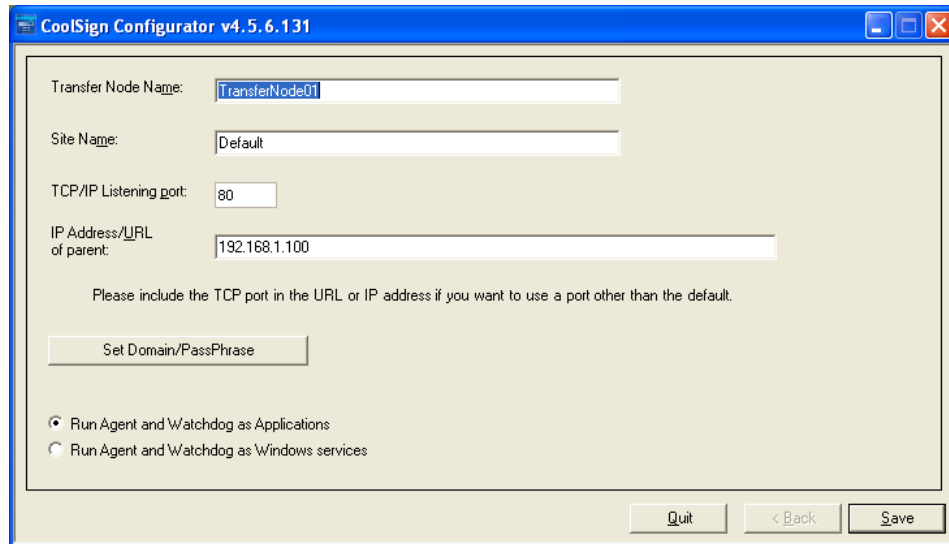
Network Name—The name of your network as it appears when connecting with CoolSign Manager and other applications.

Database Connection Setup—Click this button to connect your CoolSign network controller to a SQL Server database. For details, see [“About the Installation Process”](#) on page 26.

Run Agent and Watchdog as Windows services—If you want to install the CoolSign Agent and Watchdog as Windows service processes, select this radio button. This configuration enables you to remotely manage the Agent software and doesn't require auto-login for this network controller. Note that some organizations require this for security reasons.

To save your changes to the network controller configuration, click [Save](#). The configurator then reboots the network controller node.

Configuring a Transfer Node



The screenshot shows the CoolSign Configurator v4.5.6.131 window. The configuration fields are as follows:

- Transfer Node Name:
- Site Name:
- TCP/IP Listening port:
- IP Address/URL of parent:

Below the fields, there is a button labeled "Set Domain/PassPhrase".

At the bottom, there are two radio buttons:

- Run Agent and Watchdog as Applications
- Run Agent and Watchdog as Windows services

At the bottom right, there are three buttons: "Quit", "< Back", and "Save".

You can define the following display transfer node configuration options:

Transfer Node Name—The name that is displayed for the transfer node in CoolSign Manager. Note that you can use CoolSign Manager to change the node name.

Site Name—The name of the site that the transfer node is associated with. Usually, this is a descriptive term that indicates the site's geographic location, such as "San Francisco, CA". Note that you can use CoolSign Manager to change the site name. You can also create new site names, as described in Chapter 13, "Managing Sites" of the *CoolSign Network Manager User's Guide*.

TCP/IP Listening Port—The port number that the transfer node should use to receive incoming requests from other nodes. The default listening port is 80. You can change the listening port if your networking infrastructure requires it or another application is already using the default port.

IP Address or URL of parent—The IP address or URL of the node to which this transfer node should connect. The parent node is either the network controller or another transfer node, depending on your network configuration. If the parent node is listening on a non-default port, you must include the port number in the address, preceded by a colon, for example: 192.168.1.100:555.

Run Agent and Watchdog as Windows services—If you want to install the CoolSign Agent and Watchdog as Windows service processes, select this radio button. This configuration enables you to remotely manage the Agent software and doesn't require auto-login for this transfer node. Note that some organizations require this for security reasons.

To save your changes to the transfer node configuration, click [Save](#). The configurator then reboots the transfer node.

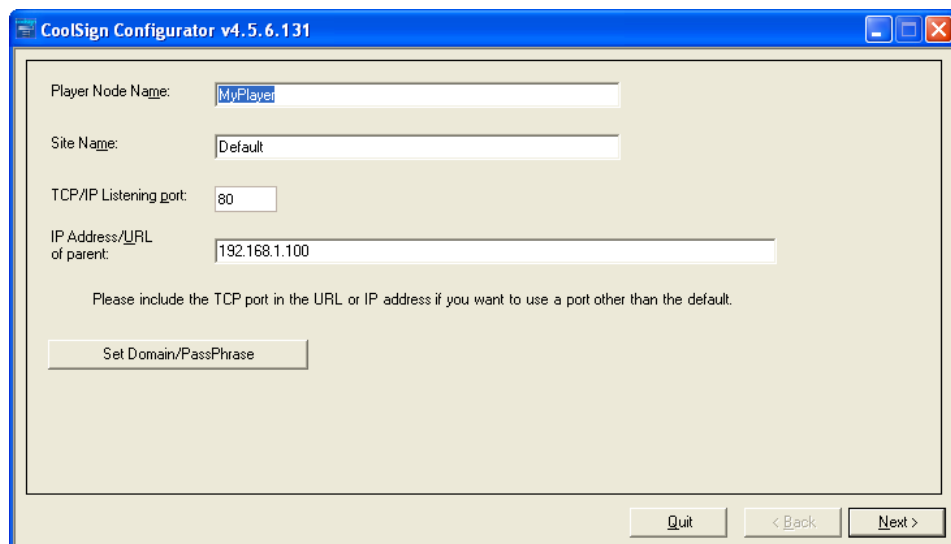
Configuring Player Node

Configuring a player node is a 6-step process:

1. **Node Information** (see [“Node Information”](#) on page 100)—Define the name of the node; the site with which it is associated; the IP address it connects to; and the port that it listens on.
2. **Video Output Information** (see [“Video Output Information”](#) on page 101)—Identify the video card settings and calibration interval, and assign a name to the video output.
3. **Audio Output Information** (see [“Audio Output Information”](#) on page 102)—Set the volume and assign a name to the audio output.
4. **Player Information** (see [“Player Information”](#) on page 103)—Name the player and specify the resolution and location of the image that CoolSign is delivering.
5. **Displays Information** (see [“Displays Information”](#) on page 104)—Specify the configuration of the displays, the display inputs, the COM ports, and the video outputs (only applies if you are using serial control for the displays).

This process applies equally to both networked players and Standalone Players. Differences between the two types of players are noted clearly in this section.

Node Information



CoolSign Configurator v4.5.6.131

Player Node Name:

Site Name:

TCP/IP Listening port:

IP Address/URL of parent:

Please include the TCP port in the URL or IP address if you want to use a port other than the default.

You can define the following configuration options in this screen:

Player Node Name—The name of this player node. The node name is used within CoolSign Manager and to reference the node. Note that you can use CoolSign Manager to change the node name.

Site Name—The name of the site that this node will be associated with. Usually, this is a descriptive term that indicates the site’s geographic location, such as “San Francisco, CA”. Note that you can use CoolSign Manager to change the site name. You can also create new site names, as described in Chapter 13, "Managing Sites" of the *CoolSign Network Manager User’s Guide*.

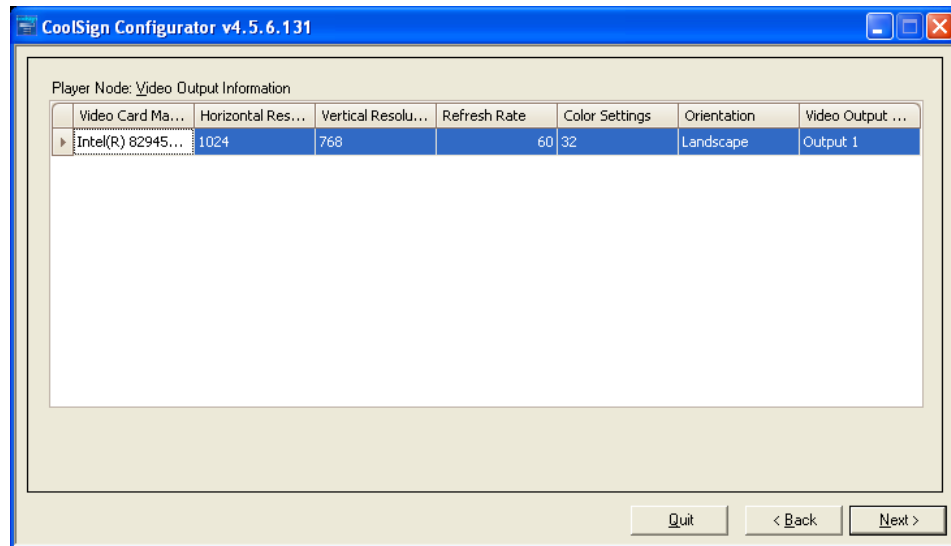
TCP/IP Listening port—**For networked players**, this is the port number that the node should use to receive incoming requests from other nodes. The default listening port is 80. You can change the listening port if your networking infrastructure requires it or another application is already using the default port. **For Standalone Players**, verify that this port is set to 8080.

IP Address or URL of parent—**For networked players**, the parent node is either the network controller or another transfer node, depending on your network configuration. If the parent node is listening on a non-default port, you must include the port number in the address, preceded by a colon, for example: 192.168.1.100:555. **For Standalone Players**, verify that the IP address is set to “localhost”.

When you’re done, click [Next](#) to continue the player node configuration process.

Video Output Information

In this screen, you identify the video card settings and calibration interval, and assign a name to the video output.



You can define the following configuration options in this screen:

Horizontal Resolution and Vertical Resolution—These fields must match the horizontal and vertical resolution settings that are displayed in the Windows Display control panel for the video card.

Refresh Rate—The refresh rate (also called vertical frequency) that has been set for the video card.

Color Settings—Select the bit depth for the video card: 32 or 16.

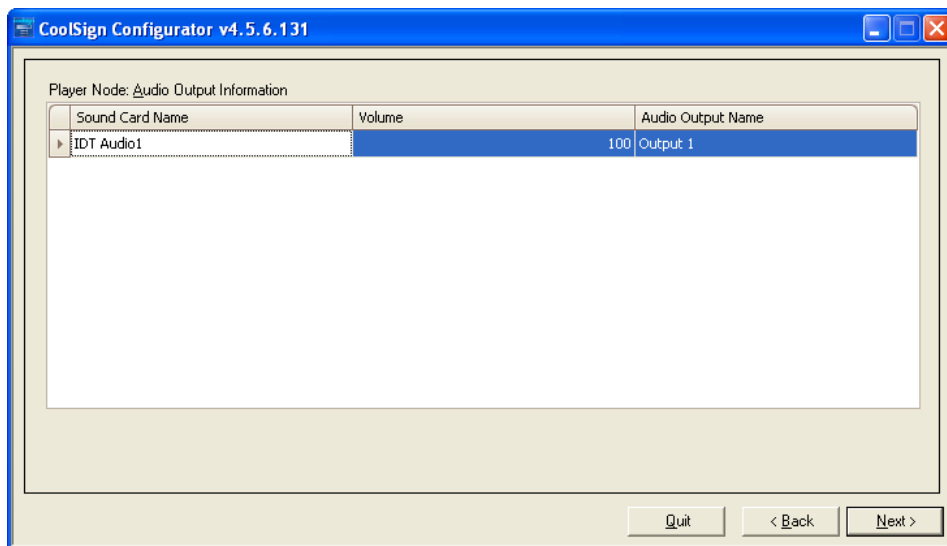
Orientation—The orientation of the displays attached to the player node. All players running on a player node must have the same orientation.

Video Output Name—If the video card has more than one output, assign a name to each output.

When you're done, click [Next](#) to continue the player node configuration process.

Audio Output Information

In this screen, you set the volume and assign a name to the audio output.



You can define the following configuration options in this screen:

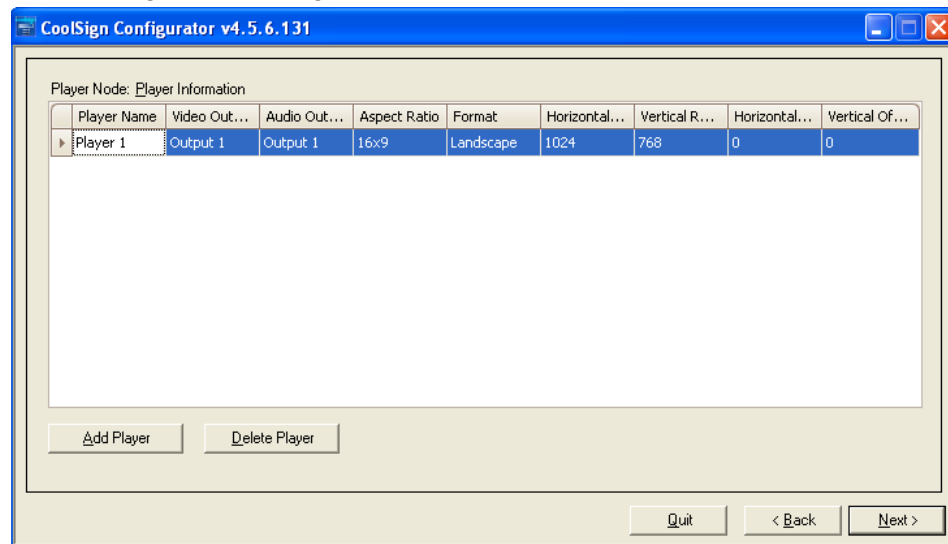
Volume—Click to change the volume for this audio output, with 0 being no audio and 100 being the maximum volume. If your speakers are connected, you can hear the sound as you increment or decrement.

Audio Output Name—If the audio card has more than one output, assign a name to each output.

When you're done, click [Next](#) to continue the player node configuration process.

Player Information

In this screen, you can name the player and specify the resolution and location of the image that CoolSign is delivering.



You can define the following configuration options in this screen:

Player Name—You can use CoolSign Manager to change this setting.

Video Output Name—If the player has only one video output, you can just use the default setting.

Audio Output Name—If the player has only one audio output, you can just use the default setting.

Aspect Ratio—Select the appropriate format for the displays that are attached to this player node.

Format—Landscape, Portrait, or Audio (only allow audio content such as MP3 files to be scheduled on this player node).

Horizontal Resolution and Vertical Resolution—These are the logical resolutions for the player and are dependent on the orientation of the displays attached to this player.

- If the player is driving displays in portrait orientation, the vertical resolution is the larger of the two resolution numbers. For example, for a portrait-oriented display showing content with a 848 x 480 resolution, the horizontal resolution for the player should be 480 and the vertical resolution for the player should be 848.
- If the player is driving displays in landscape orientation, the horizontal resolution is the larger of the two resolution numbers. For example, for a landscape-oriented display

showing content with a 848 x 480 resolution, the horizontal resolution for the player should be 848 and the vertical resolution for the player should be 480.

 **NOTE**

In most cases, there is only one player and one video output for a player node, and the CoolSign content fills the entire screen of the displays attached to the player. In this case, the horizontal and vertical resolutions for the player should be the same as, or the reverse of (depending on the orientation), the resolution settings for the video card.

Horizontal Offset and Vertical Offset—These settings determine where to place the upper left-hand corner of the player window—how many pixels (horizontally and vertical) from the upper left of the display (in landscape mode). These settings are always relative to the orientation that you are using. These offsets are typically used only if the CoolSign content occupies a portion of the screen, or if the display has unusual requirements. If the CoolSign content is expected to fill up the display screen (as is normally the case), these offsets should usually be set to zero.

When you're done, click [Next](#) to continue the player node configuration process.

Displays Information

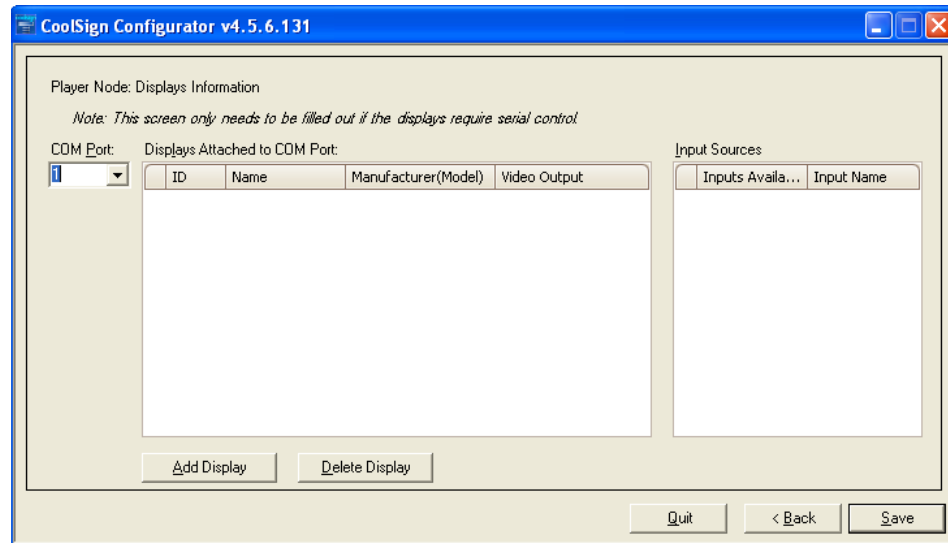
The CoolSign player can control support display devices via a serial cable. With serial control of a display, you can use CoolSign Manager to remotely turn on or off the display, set the display to an alternate input, and monitor status for the device.

You can add as many displays as you have available COM ports. Most PCs only include one available serial port. You can purchase a serial port extender to add additional COM ports to your player PC.



NOTE

You can skip this section if you are not using serial control for the displays.



You can define the following configuration options in this screen:

COM Port—The number of the COM port that you want to configure. After selecting the COM port, you can click Add Display and configure the displays that are connected to it.

ID—Select the ID number of the display you are configuring. It must match the ID number that you specified when you set up the display. See Chapter 11, "Managing Players" of the *CoolSign Network Manager User's Guide*.

Name—Enter a descriptive name for the display (such as, "South Mall Entrance"). This name makes it easier to identify the location of the display within CoolSign Network Manager.

Manufacturer/Model—Select the display brand and model from the pull-down menu.



NOTE

The manufacture (brand) and model must exactly match the display connected to the player. Otherwise, the display control will most likely not work and will report an error status.

Video Output—If the player node only has one video output, you can skip this step.

Input Name—In the Input Sources panel, enter a name for each available input that you intend to use. You must keep one input labeled as "CoolSign". If you are using CoolSign

to switch between other video sources, enter a descriptive name (such as “TV”) for the input that is connected to the video source(s).

Each input name must be unique, and none of them can be “Off”. These names appear in CoolSign Manager and are used to schedule the displays attached to this player node. If this display uses more than one video source, make sure that the input names are sufficiently descriptive, as this makes it easy to identify the video source that you are scheduling. You only need to name those inputs that you are actually connecting a video source.

- If more than one display is attached to a COM port, click [Add Display](#) again, then configure the next display.
- If you are using more than one COM port, select the next COM port, then click [Add Display](#) again and configure the next display.

 **NOTE**

Only displays that use the same serial commands can use the same COM port. This means that the displays must be from the same manufacturer and usually must also be the same model.

To save your changes to the player configuration, click [Save](#). The configurator reboots the player node twice, then opens the AdPlayer with a blank screen.

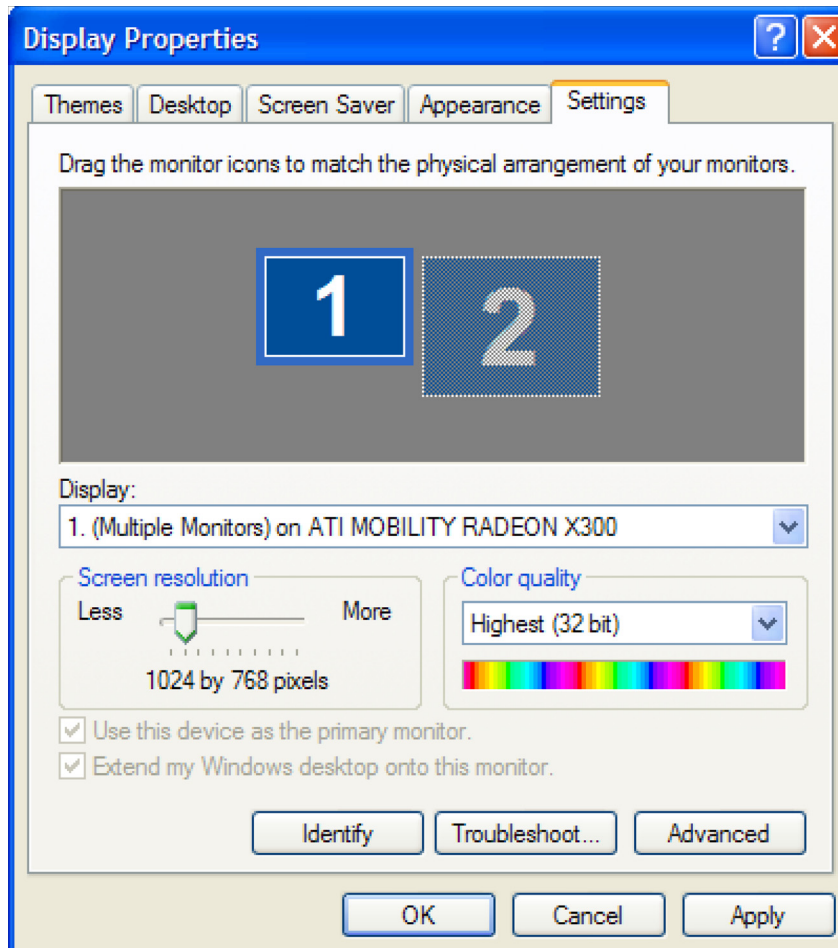
Configuring a Player Node for Multi-Output

CoolSign takes advantage of dual and quad-output video cards with the ability to provide a separate channel to each output (multi-output) or to span a single channel across multiple video outputs (spanned). While setting up a multi-output player is accomplished using the CoolSign Network Manager only and is independent of the video card in use, setting up a spanned player node requires you to configure the manufacturer-provided software specific to each video card. The examples in this section use a recommended video card from ATI.

To configure a player node for multi-output:

1. From the Windows Start menu, open the Control Panel.
2. Open the Display control panel.

3. In the **DISPLAY PROPERTIES** window, select the **Settings** tab:



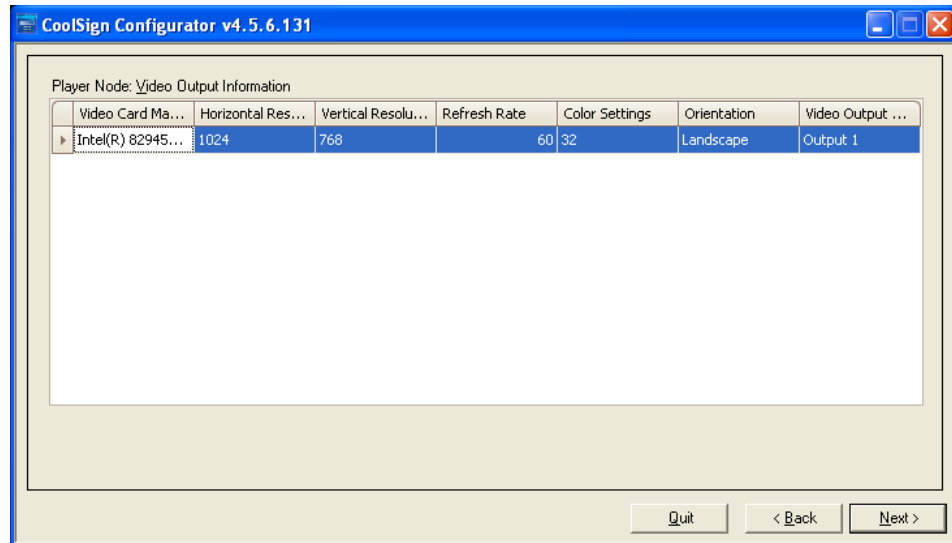
4. Confirm that all needed outputs are active on the video card.

i NOTE

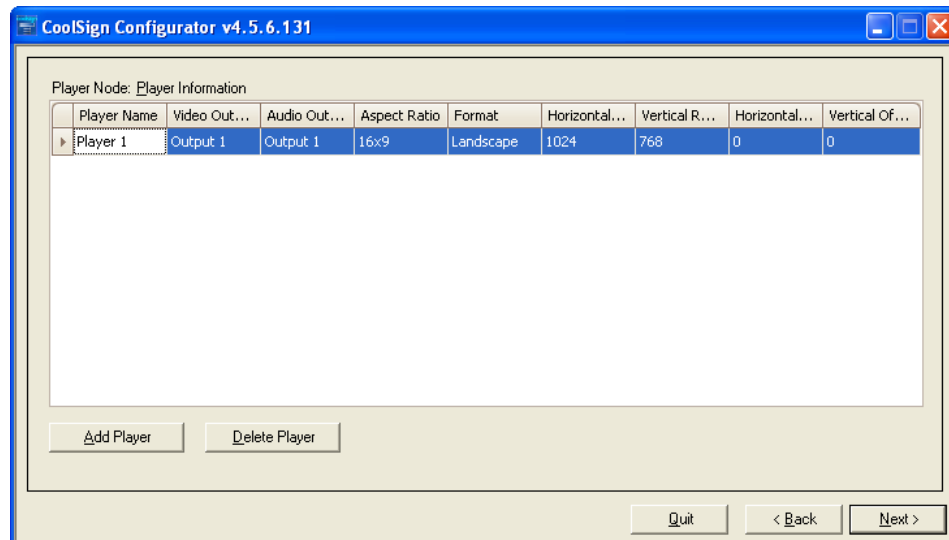
To enable any disabled outputs, select the display and choose “[Extend my Windows desktop onto this monitor](#)”.

5. To save your changes, click **OK**.

6. In the CoolSign Configurator, advance to the Video Output Information screen:



7. For each output, specify the Horizontal and Vertical Resolution, Orientation, and Video Output Name. For details about these settings, see [“Video Output Information”](#) on page 101.
8. When you’re done, click [Next](#). In the Player Information window, add a player. Then specify the following values for the new player: associated Video Output, Aspect Ratio, Format, Horizontal and Vertical Resolution, and Horizontal and Vertical Offset. For details about these settings, see [“Audio Output Information”](#) on page 102.



9. When you’re done, click [Next](#), then click [Save](#) to save your changes.

Keyboard Navigation Tips

While using the CoolSign Configurator, you can perform many tasks from the keyboard. Refer to the following table:

Table 9-1 Configurator Keyboard Shortcuts

| To do this . . . | Press . . . |
|--------------------------------------|--|
| Go to the next field | TAB |
| Open a drop-down menu | ALT-▼ |
| Move through a pull-down menu | Use the arrow keys |
| Select an item from a pull-down menu | ENTER |
| Advance to the next screen | ALT-N |
| Go back to a previous screen | ALT-B |
| Save configuration settings | ALT-S (for player nodes, only available on Displays screen) |
| Add a player node | ALT-A (only available on the Player Node: Player information screen) |
| Delete the selected player node | ALT-D (only available on the Player Node: Player information screen) |
| Add a display | ALT-A (only available on the Player Node: Displays screen) |
| Delete the selected display | ALT-D (only available on the Player Node: Displays screen) |

The following keyboard commands are available when the AdPlayer window is in the front of all other windows on a screen.

Table 9-2 AdPlayer Keyboard Shortcuts

| To do this . . . | Press . . . |
|-------------------------|---|
| Toggle the cursor | V |
| Toggle the taskbar | T |
| Toggle calibration mode | C |
| Toggle FPS display | F (not available on legacy machines while video is running) |

Table 9-2 AdPlayer Keyboard Shortcuts (Cont.)

| To do this . . . | Press . . . |
|--|---|
| Capture the screen image | CTRL-S (the image file is located at AdPlayer\Thumbnail.jpg). Not available on legacy machines while video is running. |
| Capture the screen image, scaled to 1/4 of the original size | CTRL-SHIFT-S (the image file is located at AdPlayer\Thumbnail.jpg). Not available on legacy machines while video is running. |

10. Connecting to an SQL Database

This section explains how to connect your CoolSign Network Controller to an SQL database:

- Connect a CoolSign Network Controller to an SQL Server.
- Migrate existing data from file system-based tables to SQL tables.

Connecting a Network Controller to an SQL Server

Connecting a Network Controller to your SQL database is straightforward. Normally you supply all of the needed connection information when you install the Network Manager. It is also possible to configure the connection for an existing Network Manager, using the Configurator utility.



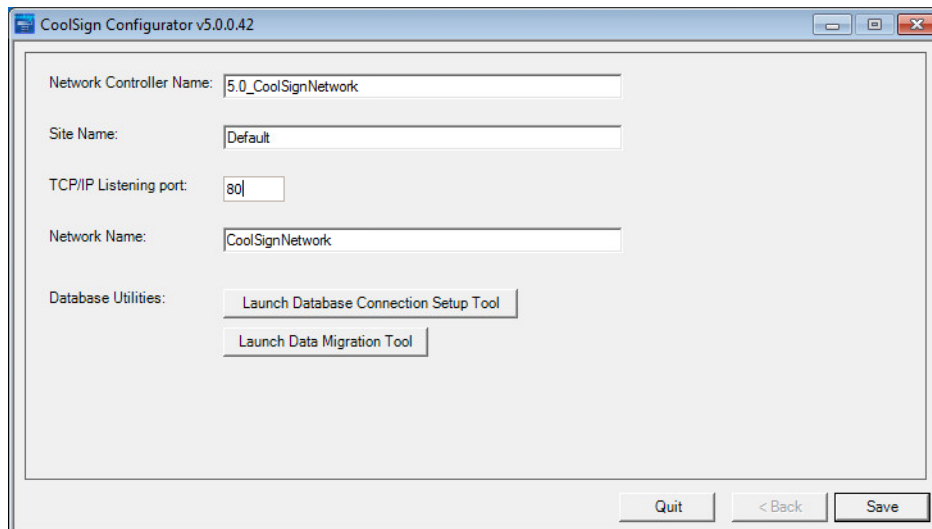
IMPORTANT

If this is a migration process, you must first restart the database before it can accept connections.

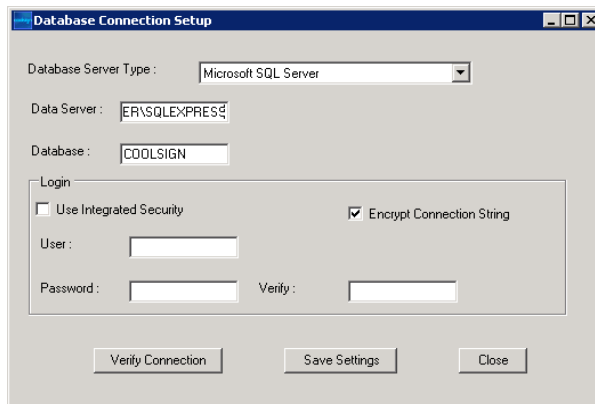
To connect a Network Controller to an SQL Server, do the following:

1. From the Windows  Start menu, open the CoolSign Configurator.

2. When the Configurator starts up, click [Launch Data Connection Setup Tool](#).



3. The Database Connection Setup window appears enter the appropriate data in the fields.:



- In the [Data Server](#) field, enter the location of the database server, in the form machine_name\DB_instance (for example, DEMO_SERVER\SQLEXPRESS).
- In the [Database](#) field, enter the name of the CoolSign database (for example, CoolSign).
- In the [User](#) and [Password](#) fields, enter the credentials needed to access the database.



NOTE

The user MUST have READ/WRITE permissions for the specified database.

4. To check if the connection settings are correct, press the [Verify Connection](#).
5. Once the connection to the database server is verified, click [Save Settings](#), then [Close](#).

This section explains how to repair or uninstall your CoolSign system.

Repair Your Installation

In certain circumstances, you might find it desirable or necessary to repair a CoolSign node—that is, to restore the installation to its initial state.



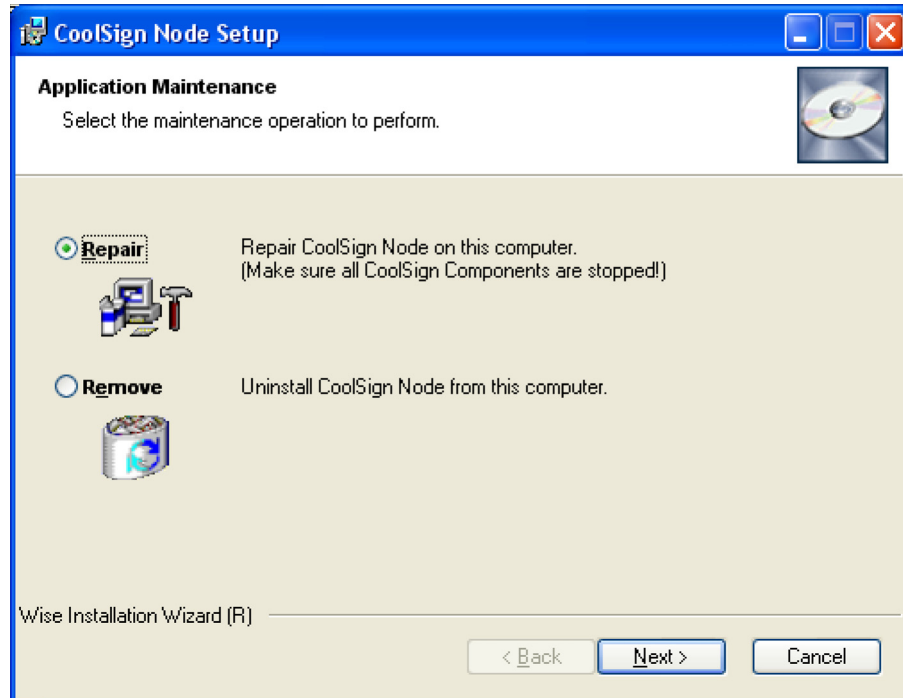
CAUTION

Be aware that this procedure restores CoolSign to the original installation state. All changes to settings since the initial installation are lost.

To repair a CoolSign node:

1. Make sure that all CoolSign components are stopped.
2. In the CoolSign installation directory, double-click `CoolSign_Node_Installer.exe`.

3. When the Application Maintenance screen appears, select **Repair**. Then click **Next**.



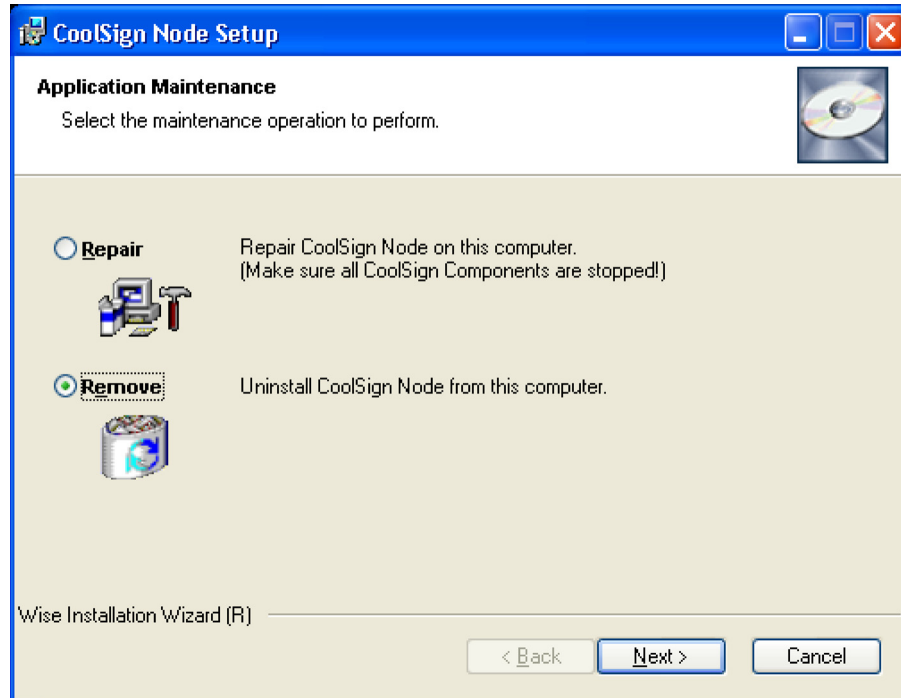
4. Follow the on-screen instructions that guide you through the repair process.
5. When the wizard concludes the repair process, click **Finish**. The CoolSign system reboots.

Uninstalling CoolSign

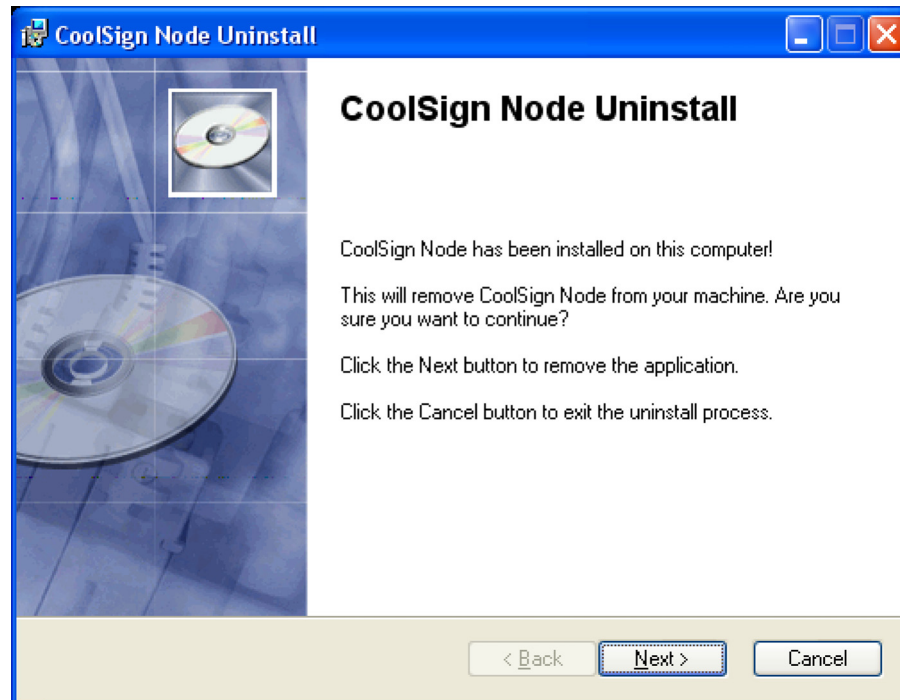
To uninstall CoolSign:

1. Make sure that all CoolSign components are stopped.
2. In the CoolSign installation directory, double-click `CoolSign_Node_Installer.exe`.

3. When the Application Maintenance screen appears, select **Remove**. Then click **Next**.



4. When the following screen appears, click [Next](#) to remove CoolSign from the node.



i NOTE

After the uninstall script finishes, you must uninstall the CoolSign database, as described in [“Uninstalling the CoolSign Database”](#) on page 116.

Uninstalling the CoolSign Database



IMPORTANT

Uninstalling CoolSign does not remove the CoolSign database from the server. It is your responsibility to remove the database.

To remove SQL Express from your PC:

1. Use any SQL client tool to delete the CoolSign database.
2. Remove the database server from the computer:
 - In the Windows Control Panel, select [Add/Remove Programs](#).
 - Remove the database server from the list of programs.

B. Keyboard Shortcuts

CoolSign Configurator

While using the CoolSign Configurator, you can perform many tasks from the keyboard. Refer to the following table:

Table B-1 Configurator Keyboard Shortcuts

| To do this . . . | Press . . . |
|--------------------------------------|--|
| Go to the next field | TAB |
| Open a drop-down menu | ALT-▼ |
| Move through a pull-down menu | Use the arrow keys |
| Select an item from a pull-down menu | ENTER |
| Advance to the next screen | ALT-N |
| Go back to a previous screen | ALT-B |
| Save configuration settings | ALT-S (for player nodes, only available on Displays screen) |
| Add a player node | ALT-A (only available on the Player Node: Player information screen) |
| Delete the selected player node | ALT-D (only available on the Player Node: Player information screen) |
| Add a display | ALT-A (only available on the Player Node: Displays screen) |
| Delete the selected display | ALT-D (only available on the Player Node: Displays screen) |

Ad Player

The following keyboard commands are available when the AdPlayer window is in the front of all other windows on a screen.

Table B-2 AdPlayer Keyboard Shortcuts

| To do this . . . | Press . . . |
|--|--|
| Toggle the cursor | V |
| Toggle the taskbar | T |
| Toggle calibration mode | C |
| Toggle FPS display | F (not available on legacy machines while video is running) |
| Capture the screen image | CTRL-S (the image file is located at AdPlayer\Thumbnail.jpg). Not available on legacy machines while video is running. |
| Capture the screen image, scaled to 1/4 of the original size | CTRL-SHIFT-S (the image file is located at AdPlayer\Thumbnail.jpg). Not available on legacy machines while video is running. |

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5.2 Indemnification by You. You shall indemnify and hold Haivision harmless against any and all Claims directly or indirectly arising out of, or in any manner whatsoever associated or connected with Your performance, purported performance or non-performance of its rights and obligations under this Agreement, and against any and all Claims incurred by or on behalf of any of the foregoing in the investigation or defense of any and all such Claims.

6. OTHER PROVISIONS

6.1 **Export and Other Restrictions.** This Agreement, and all Your rights and Your obligations under this Agreement, are subject to all applicable Canadian and U.S. Government laws and regulations relating to exports including, but not limited to, the U.S. Department of Commerce Export Administration Regulations and all administrative acts of the U.S. Government thereunder. In the event the Licensed Software or the Hardware is exported from the United States or re-exported from a foreign destination, You shall ensure that the distribution and export/re-export of the Licensed Software or the Hardware is in compliance with all laws, regulations, orders, or other restrictions of the U.S. Export Administration Regulations. You agree that neither it nor any of its Affiliates will export/re-export any Licensed Software, Hardware, technical data, process, Products, or service, directly or indirectly, to any country for which the Canadian government or United States government (or any agency thereof) requires an export license, other governmental approval, or letter of assurance, without first obtaining such license, approval or letter.

6.2 **Publicity.** Neither party shall make or authorize or permit any other person to make any announcement or other like statement concerning this Agreement or the subject matter, terms or conditions hereof, without the other party's prior written consent.

6.3 **Transfer and Assignment.** Haivision may assign, sublicense, or transfer this Agreement and/or any or all of its rights or obligations hereunder. You may not assign, transfer or delegate any of its rights or obligations hereunder (whether by operation of law or otherwise) without the prior written consent of Haivision. Any unauthorized assignment, transfer or delegation by You shall be null and void. No other Person shall have or acquire any right under or by virtue of this Agreement.

6.4 **Waiver and Amendment.** No modification, amendment or waiver of any provision of this Agreement shall be effective. No failure or delay by either party in exercising any right, power or remedy under this Agreement, except as specifically provided herein, shall operate as a waiver of any such right, power or remedy. Without limiting the foregoing, any terms and conditions of the Entitlement or similar materials submitted by either party to the other shall be of no force or effect.

6.5 **Enforcement by Third Party.** For any Licensed Software licensed by Haivision from other suppliers, the applicable supplier is a third party beneficiary of this Agreement with the right to enforce directly the obligations set forth in this Agreement against You.

6.6 **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the Province of Québec, Canada and the Laws of Canada applicable therein (excluding any conflict of laws rule or principle, foreign or domestic).

6.7 **Severability.** If any provision of this Agreement is held by a court of competent jurisdiction to be contrary to law, such provision shall be changed and interpreted so as to best accomplish the objectives of the original provision to the fullest extent allowed by law and the remaining provisions of this Agreement shall remain in full force and effect.

6.8 **Force Majeure.** Neither party shall be liable to the other party for any failure or delay in performance to the extent that such delay or failure is caused by fire, flood, explosion, war, terrorism, embargo, government requirement, labor problems, export controls, failure of utilities, civil or military authority, act of God, act or omission of carriers or other similar causes beyond its control. If any such event of force majeure occurs, the party delayed or unable to perform shall give immediate notice to the other party, and the party affected by the other's delay or inability to perform may elect, at its sole discretion, to terminate this Agreement or resume performance once the condition ceases, with an option in the affected party to extend the period of this Agreement up to the length of time the condition endured. Unless written notice is given within 30 calendar days after the affected party is notified of the condition, the latter option shall be deemed selected. During an event of force majeure, the affected party shall exercise reasonable effort to mitigate the effect of the event of force majeure.

If you have questions, please contact Haivision Systems, Inc., 4445 Garand, Montréal, Québec, H4R 2H9 Canada.

The logo features a blue square with a white letter 'D' inside. To the right of the square, the words 'Revision History' are written in a blue, sans-serif font.

| Date and Change | Page |
|---|------|
| 06/13 - Incorporated all the install procedures into this manual. | 13 |
| 06/13 - Added an install procedure for the Content Creator. | 13 |
| 11/13 - Changed Data Watcher statement requiring a Network Controller and at least one Transfer Server to require only the Network Controller. | 16 |
| 06/14 - Clarified that user control software/tools included CNM, Content Creator, Offline Updater, and DataWatcher. | 18 |
| 05/14 - Appended R2 to Windows 2008 Server to alleviate confusion. | 18 |
| 05/14 - Updated the hardware requirements for the CoolSign Display Engine. | 22 |
| 07/13 - Noted that CoolSign does not support hexadecimal RS-232 control commands. | 22 |
| 06/14 - Added footnote caveat regarding supported software on Windows 8. | 23 |
| 05/14 - Appended R2 to Windows 2008 Server to alleviate confusion. | 23 |
| 02/13 - Revised installation procedure to remove note stating that a transfer service was required for operation and edited for clarity. | 51 |
| 11/13 - Corrected requirements to read Windows Server 2008 - SP2 and Windows Server 2008 R2 - SP1. | 62 |
| 05/14 - Appended R2 to Windows 2008 Server to alleviate confusion. | 63 |
| 08/13 - Removed the SQL Server database migration information as it is no longer supported. | 98 |
| 08/13 - Removed SQL Database Migration procedures as they are no longer supported. | 112 |

