



Content Manager User's Guide

Content Manager

User Manual

Scala

User Manual

CONTENT MANAGER

Release 5

Copyright © 1993 to 2009 Scala Inc. All rights reserved.

RELEASE 5


AUGUST 1, 2009

PUBLISHED BY SCALA INCORPORATED, EXTON, PA.

NO PART OF THIS PUBLICATION, NOR ANY PARTS OF THIS PACKAGE MAY BE COPIED OR DISTRIBUTED, TRANSMITTED, TRANSCRIBED, RECORDED, PHOTOCOPIED, STORED IN A RETRIEVAL SYSTEM, OR TRANSLATED INTO ANY HUMAN OR COMPUTER LANGUAGE, IN ANY FORM OR BY ANY MEANS, ELECTRONIC, MECHANICAL, MAGNETIC, MANUAL OR OTHERWISE, OR DISCLOSED TO THIRD PARTIES WITHOUT THE PRIOR WRITTEN PERMISSION OF SCALA INCORPORATED.

TRADEMARKS

THE FOLLOWING ARE TRADEMARKS OR REGISTERED TRADEMARKS OF THE COMPANIES LISTED, IN THE UNITED STATES AND OTHER COUNTRIES.

SCALA, INFOCHANNEL, SCALA DESIGNER AND THE  LOGO: SCALA INCORPORATED.

WARRANTIES AND DISCLAIMERS

THE FOLLOWING PARAGRAPH DOES NOT APPLY TO THE UNITED KINGDOM OR ANY OTHER COUNTRY WHERE SUCH PROVISIONS ARE INCONSISTENT WITH LOCAL LAW.

SCALA INCORPORATED PROVIDES THIS PUBLICATION "AS IS" WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE LIMITED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW DISCLAIMER OR EXPRESS OR IMPLIED WARRANTIES IN CERTAIN TRANSACTIONS, THEREFORE THIS STATEMENT MAY NOT APPLY TO YOU.

THIS PUBLICATION COULD INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE PERIODICALLY MADE TO THE INFORMATION HEREIN: THESE CHANGES WILL BE INCORPORATED IN NEW EDITIONS OF THE PUBLICATION. SCALA MAY MAKE IMPROVEMENTS AND/OR CHANGES IN THE PRODUCT(S) AND/OR THE PROGRAM(S) IN THIS PUBLICATION AT ANY TIME.

IT IS POSSIBLE THAT THIS PUBLICATION MAY CONTAIN REFERENCE TO, OR INFORMATION ABOUT, SCALA PRODUCTS OR SERVICES THAT ARE NOT ANNOUNCED IN YOUR COUNTRY. SUCH REFERENCES OR INFORMATION MUST NOT BE CONSTRUCTED TO MEAN THAT SCALA INTENDS TO ANNOUNCE SUCH SCALA PRODUCTS OR SERVICES IN YOUR COUNTRY.

REQUESTS FOR TECHNICAL INFORMATION ABOUT SCALA PRODUCTS SHOULD BE MADE TO YOUR SCALA AUTHORIZED DISTRIBUTOR, DEALER OR YOUR SCALA MARKETING REPRESENTATIVE.

SCALA MAY HAVE PATENTS OR PENDING PATENT APPLICATIONS COVERING SUBJECT MATTER IN THIS DOCUMENT. THE FURNISHINGS OF THIS DOCUMENT DOES NOT GIVE YOU ANY LICENSE TO THESE PATENTS. SEND LICENSE INQUIRES, IN WRITING TO SCALA INC., 350 EAGLEVIEW BVD, EXTON, PA 19341, USA.

TABLE OF CONTENTS

	1 Introduction	12
1.1	Content Manager Overview	13
1.2	Player Installation and Configuration	14
1.3	Licensing	16
1.4	Hardware Requirements	16
1.5	Installation	17
1.6	Microsystems Sun Java Runtime	23
1.7	DirectX 9.0	23
1.8	Apache Tomcat Server	24
1.9	Logging On To Content Manager	42
1.10	Getting Started	42
	2 System Requirements and Installation	46
2.1	Installing & Configuring Scala Players	47
2.2	Detailed Hardware Requirements	48
2.2.1	Recommended Storage	48
2.2.2	Recommended Operating Systems	51
2.2.3	Recommended Processors	52
2.2.4	Recommended System Memory	52
	3 Overview	54
3.1	Scala Products	55

- 3.2 Corporate Messaging 56
- 3.3 Retail Advertising 57
- 3.4 Public Information 59
- 3.5 User Access and Control 60
- 3.6 Scala Workflow 61
- 3.7 Troubleshooting Tips 62
- ||||| 4 | Getting Started with Content Manager 66
- 4.1 Accessing Content Manager 67
 - 4.1.1 Local Machine Access 67
 - 4.1.2 Logging on to Content Manager 68
 - 4.1.3 Content Manager Dashboard 69
- 4.2 The Settings Menu 72
 - 4.2.1 Personal Settings 73
 - 4.2.2 Roles 74
 - 4.2.3 System Administrator 75
 - 4.2.4 Other Roles 76
 - 4.2.5 Renaming Roles 80
 - 4.2.6 Workgroups 81
 - 4.2.7 Adding Users 82
 - 4.2.8 License Status 87
 - 4.2.9 Hosting Server 88
 - 4.2.10 Adding Licenses 90
 - 4.2.11 Software Updates 90

- 4.2.12 Database Configuration 90
- 4.2.13 Server Settings and Status 92
- 4.2.14 Connectors 92
- 4.2.15 Client Connections 95
- 4.2.16 System Information 96
- 4.2.17 Logging 98
- 4.2.18 Firewalls and Security 98
- 4.3 HTTPS Connections 99
 - 4.3.1 Generate a certificate 99
 - 4.3.2 Generate a Certificate Signing Request 101
 - 4.3.3 Installing the Signed Certificate 102
 - 4.3.4 Creating a HTTPS Connector 103
 - 4.3.5 Configuring HTTPS Client Connections 107
- ||||| 5 | The Content Menu 110
 - 5.1 Using the Content Menu 111
 - 5.1.1 Media Files 111
 - 5.1.2 Configuring Proxy Server Connection 114
 - 5.1.3 Searching Media Files 115
 - 5.1.4 Assigning Properties to Media Files 116
 - 5.1.5 Editing Categories 117
 - 5.1.6 Audio Ducking 120
 - 5.1.7 Deleting Categories 121
 - 5.1.8 Valid Dates 122

- 5.1.9 Volume 122
- 5.1.10 Preview 123
- 5.1.11 Object History 124
- 5.1.12 Adding Metadata to a Media Item 125
- 5.1.13 Advanced Information 129
- 5.2 Using Search 130
 - 5.2.1 Media Categories 131
- 5.3 Templates 133
 - 5.3.1 Viewing Templates 133
 - 5.3.2 Adding Templates 134
 - 5.3.3 Creating New Templates 138
 - 5.3.4 Template Properties 143
 - 5.3.5 Template Administration 144
- 5.4 Messages 146
- ||||| 6 | THE PLANNING MENU 152
- 6.1 Creating Playlists 154
 - 6.1.1 Editing or Adding Workgroups 154
 - 6.1.2 Adding Media Items to Playlist 155
 - 6.1.3 Playlist Properties 157
 - 6.1.4 Creating Smart Playlists 159
 - 6.1.5 Creating Sub-Playlists 162
 - 6.1.6 Searching Playlists 163
- 6.2 Creating Channels 164

- 6.2.1 Channel Properties 165
- 6.2.2 Audiovisuals 165
- 6.2.3 Channel Warning Notices 168
- 6.2.4 Channel Variables 168
- 6.3 Creating Schedules 171
 - 6.3.1 Channels That Contain More Than One Frame 176
- 6.4 Triggers 177
 - 6.4.1 Channel Variables 178
 - 6.3.2 Event Triggers 179
 - 6.3.3 Setting up a Trigger 180
 - 6.3.4 Triggering on Boolean and Integer Variables 181
 - 6.3.5 Time Triggers 184
 - 6.3.6 Non-Scheduled Content 185
 - 6.3.7 Preloading Content on Players 188
- ||||| 7 | The Network Menu 190
- 7.1 Players 191
 - 7.1.1 Adding New Players 192
 - 7.1.2 Last Heartbeat 199
 - 7.1.3 Creating Multiple Players 199
 - 7.1.4 Configuring Players for a Broadcast Server 200
 - 7.1.5 Synchronizing Players 200
 - 7.1.6 Inspecting Point to Point Transmissions 201
 - 7.1.7 Inspecting Broadcast Transmissions 202

- 7.1.8 Broadcast Priorities 204
- 7.1.9 Deleting Players 204
- 7.2 Player Health 205
 - 7.2.1 Uncleared Problems 206
 - 7.2.2 Problem Details 207
 - 7.2.3 Cleared Problems 208
 - 7.2.4 Searching for Problems 208
 - 7.2.5 Network Activity 209
- 7.3 IAdea Bridge Server Setup and Installation 210
 - 7.3.1 Introduction 210
 - 7.3.2 Installing Content Manager 5 with Bridge Server 211
- 7.4 Configuring IAdea Bridge Server 213
 - 7.4.1 Centralized Mode 213
 - 7.4.2 Distributed Mode 213
 - 7.4.3 Configuring Content Manager 214
- 7.5 Configuring IAdea Players 215
 - 7.5.1 Adding IAdea Player to Content Manager 215
 - 7.5.2 Configuring the IAdea Player Device 215
 - 7.5.3 Troubleshooting 216
 - 7.5.4 Looking for a Heartbeat from IAdea Player 217
 - 7.5.5 IAdea Bridge Server Performance Tuning 218
- 7.6 Maintenance Jobs 219
 - 7.6.1 Creating a New Maintenance Job 220

- 7.6.2 Adding Tasks for Scala Players 221
- 7.6.3 Setting the Schedule 224
- 7.6.4 Selecting Players 225
- 7.6.5 Adding Task Properties for IAdea Players 225
- 7.7 Publish Locations 226
- 7.8 Distribution 229
 - 7.8.1 Creating a Broadcast Server 230
 - 7.8.2 Defining Broadcast Server Properties 232
 - 7.8.3 IP Multicast 233
 - 7.8.4 Broadcast Confirmation Options 235
 - 7.8.5 File Delivery 235
 - 7.8.6 HughesNet 236
 - 7.8.7 Media Distribution Monitor 237
 - 7.8.8 Sync History 238
 - 7.8.9 Editing Pending Broadcast Jobs 238
- 7.9 Network Settings 239
 - 7.9.1 Approval Settings 239
 - 7.9.2 Miscellaneous Settings 240
 - 7.9.3 Player Authentication 241
 - 7.9.4 Mail Server Settings 241
 - 7.9.5 Web Services 242
- 7.10 User Activity 243
- ||||| 8 Advanced Topics 246

- 8.1 Backing Up Content Manager's Data 247
 - 8.1.1 Backup Instructions 247
 - 8.1.2 PostgreSQL 250
 - 8.1.3 MySQL 253
 - 8.1.4 Microsoft SQL Server 2000 257
 - 8.1.5 Microsoft SQL Server 2005 260
- 8.2 Restoring Content Manager's Data 263
 - 8.2.1 Restore Instructions 264
 - 8.2.2 PostgreSQL 266
 - 8.2.3 MySQL 271
 - 8.2.4 Microsoft SQL Server 2000 275
 - 8.2.5 Microsoft SQL Server 2005 278
- 8.3 Reporting 283
 - 8.3.1 DB Configuration and Parser Installation 284
 - 8.3.2 Accessing Reports 290
 - 8.3.3 Reports List 291
 - 8.3.4 Report Format 293
 - 8.3.5 Sample Reports 293
- 8.4 Web Services 297
 - 8.4.1 Introduction 297
 - 8.4.2 Standards 297
 - 8.4.3 Developer Community 298
 - 8.4.4 Ideas 298

- 8.5 Scalability 300
 - 8.5.1 Before You Start 300
 - 8.5.2 Configuration and Setup Tips 300
 - 8.5.3 Large Network Deployment 302
- 8.6 Microsoft SQL Server 2005 Recommendations 303
 - 8.6.1 Backups 303
 - 8.6.2 Database Consistency 305
 - 8.6.3 Index Maintenance 306
 - 8.6.4 Summary 309
- 8.7 Script Toolkits 309
- |||| 9 | Scala End User License Agreement 312
- |||| 10 | Index 320

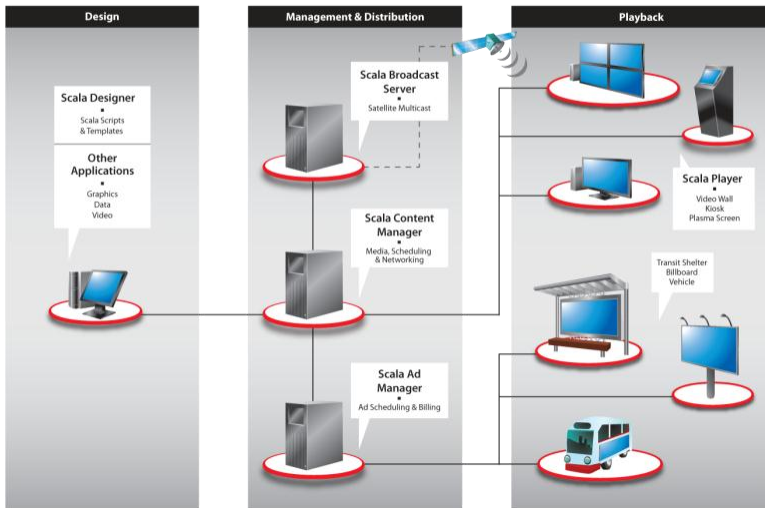


Introduction

1.1 Content Manager Overview

Scala Content Manager is a breakthrough in media broadcast distribution, scheduling and management technology. The product set allows the user to create content (Designer), manage the content (Content Manager) and publish or play the content (Player).

Scala Network



Additionally, using Content Manager your networks and players can be fully managed and monitored, thereby easily keeping your players up and running.

This user guide has been coupled with the Quick Start Guide.

It will be important for users to read through the quick start guide **BEFORE** you install the software. This will make sure you have a thorough understanding of the options which can be selected, and the settings and configurations you can choose as you install Content Manager.

1.2 Player Installation and Configuration

This section provides three different types of physical Player configurations to Content Manager.

- Content Manager Direct – The plan file is retrieved from the Content Manager’s web folder. This is the most common combination of networks and players currently used by most customers
- Player-Direct FTP – The plan file is retrieved from the player’s built in FTP server.
- Push to Player – The plan file is retrieved from a shared folder. This shared folder can reside directly on the player, or be located on a shared server from which the Content Manager and the Player have access.

The most basic network configuration is:

- Scala Content Manager is configured to store the player plans in the web folder (Content Manager Direct option).
- Scala Player(s) retrieves its plans using the “Content Manager Direct” option.

- Scala Designer publishes directly to Scala Content Manager using the “Content Manager Direct” option.

In this above example, Scala Designer, Scala Content Manager, and Scala Player are on separate computers:

Within these basic configurations, you can use different configuration options:

For example: Instead of publishing from Designer directly to Scala Content Manager, you can publish to a shared folder or FTP site (from which both Designer and Content Manager have access). You could then setup a Publish location in Content Manager which would reference that location.

Content Manager would then poll the location for changes based on the interval which has been configured. Instead of Players retrieving the plan file directly from Content Manager, Content Manager could deliver the plan file directly to the player (using the Player Direct FTP option).

To do this, in Content Manager change the delivery type to Player-Direct FTP, and enter a password. Then on the player, change the delivery type to Player-Direct FTP and enter the same password you used in Content Manager. Note: The FTP password must match in both configurations.

1.3 Licensing

All Scala Players receive their license directly from Scala Content Manager⁵. Players must be able to contact Scala Content Manager every so often to obtain an updated license. Without a valid license, your content will not play back.

1.4 Hardware Requirements

Carefully follow the recommendation for all hardware requirements to insure the maximum performance of you Content Manager system.

NETWORK SIZE	SMALL	MEDIUM	LARGE	ENTERPRISE
	1-10 Players, less than 100MB/hour of content	<50 Players, less than 500MB/hour of content.	<200 Players, less than 2000MB/hour of content.	<2000 Players, less than 10GB/hour of content.
Recommended Minimum Storage	40GB or larger, but less than 750GB, HDD. RAID-1 encouraged	Two 60GB or larger, but less than 750GB, HDD's in a RAID-1 configuration.	Four HDD's of 36GB or larger size in a RAID-1+0 or RAID-6 configuration. OS+Apps, Temp_Swap, Database, Media; is encouraged	Two HDD's of 36GB or larger, but less than 80GB, size as a RAID-1 boot volume. Four HDD's or 36GB or larger size, but less than 750GB, in a RAID-1+0 or RAID-6 configuration for data.
Recommended Operating Systems	Windows XP Professional Service Pack 3 or Windows Server 2003SP2, Web Edition	Windows Server 2003SP2, Web Edition	Windows Server 2003SP2, Web Edition or Windows Server 2003SP2 32-bit Standard or Enterprise Edition	Windows Server 2003SP2 32-bit Standard or Enterprise Edition
Minimum Processor Speed and Type	Intel PentiumDualCore 2180 or better. Core2Duo E6300 or better suggested. AMD AM2 Athlon-X2 BE4350 or faster	Intel PentiumDualCore 2180 or better. Core2Duo E6300 or better suggested. AMD AM2 Athlon-X2 BE4350 or faster	Intel Core2Duo E6400 or better suggested. AMD AM2 Athlon-X2 5000+, Phenom, or Opteron	Intel Core2Quad Q6600, XEON E5405, or better suggested. AMD Quad-Core Phenom or Opteron
System Memory	Dual-bank, DDR2-5300 or better, 2 GB total	Dual-bank, DDR2-5300 or better, 2 GB total	Dual-bank, DDR2-5300 or better, 2 GB total. [4 GB (2.8 to 3.25GB available) with Standard or Enterprise Windows Server 2003, 32-bit, in PAE mode	Dual-bank/Triple-bank/Quad-bank/Hex-bank, DDR2-5300 or better, 2 GB total. [4 GB (2.8 to 3.25GB available) with Standard or Enterprise Windows Server 2003, 32-bit, in PAE mode
Minimum RAM Size	512 MB	512 MB	1024 MB	2048 MB

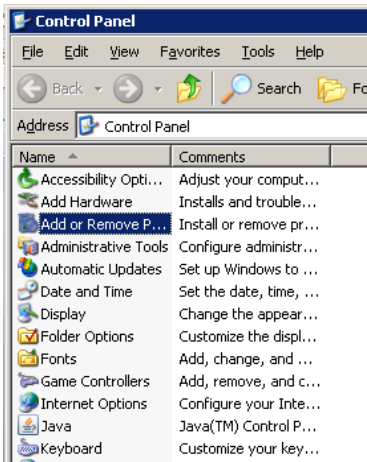
1.5 Installation

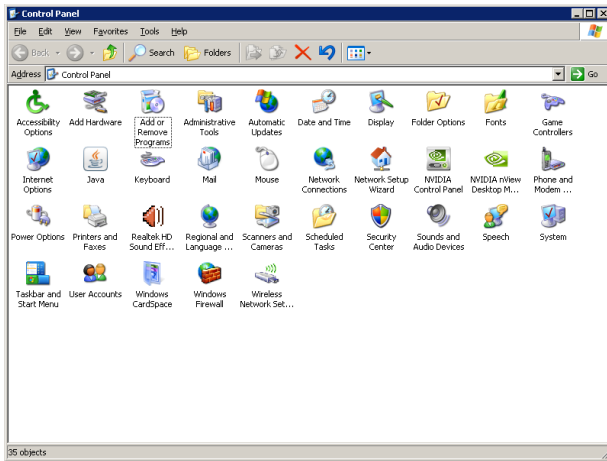
Installing Scala Content Manager is a relatively simple process when followed closely. The install wizard will allow the user to quickly install the product.

Insert the Content Manager disk into your computer. The installer should run automatically.

The Content Manager DVD now opens a setup-chooser letting you easily pick which of the products or extensions you wish to install.

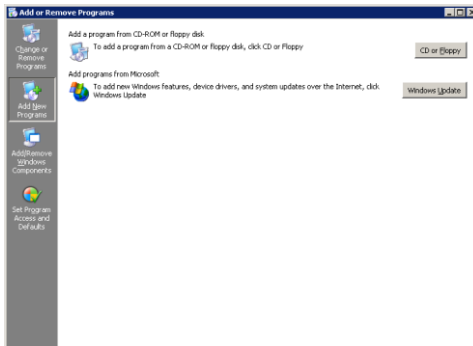
However if the installer does not start, Select on Start /Control Panel/Add or Remove Programs.

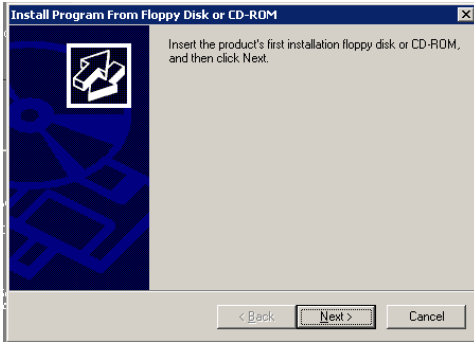




The list will either be by detailed view or by icon view. Select Add or Remove Programs.

The dialog box will instruct the user to select either: Add a program from CD-ROM or Add programs from Microsoft.

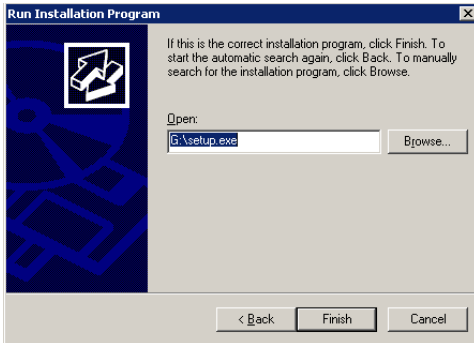


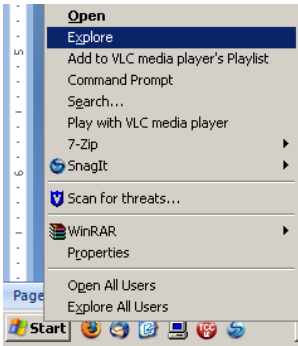


Select the button that says CD or Floppy.

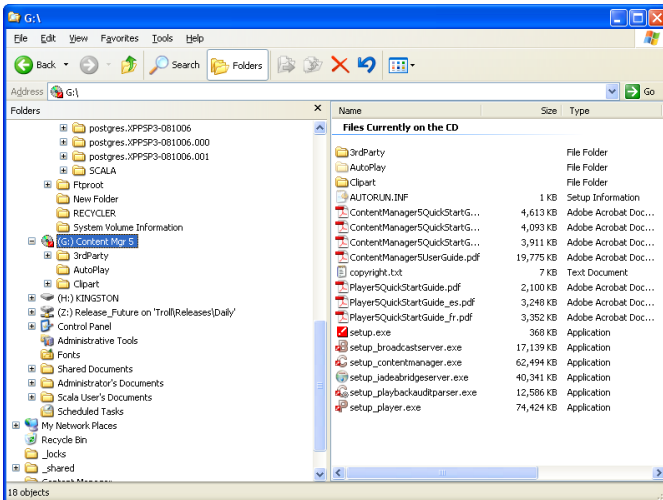
Your Content Manager software also comes with a USB key that you must insert into a USB slot on your computer in order to use Scala Content Manager.

The dialog box will appear allowing you to begin the installation from the DVD. Select Next.





Another option is to right click on Start and select Explore.

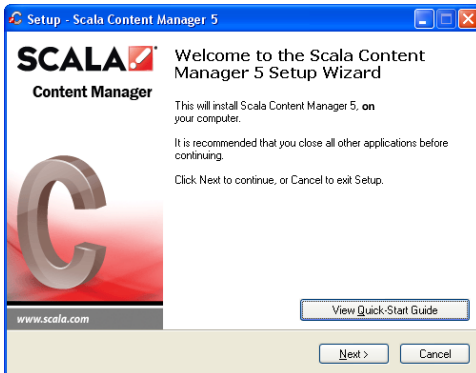


Identify the drive for the DVD. Select it from the menu options. The list of items on the DVD includes everything you will need to install Content Manager.

Select the setup.exe by double clicking on the icon.

Name	Size	Type
Files Currently on the CD		
3rdParty		File Folder
AutoPlay		File Folder
Clipart		File Folder
AUTORUN.INF	1 KB	Setup Information
ContentManager5QuickStartG...	4,613 KB	Adobe Acrobat Doc...
ContentManager5QuickStartG...	4,093 KB	Adobe Acrobat Doc...
ContentManager5QuickStartG...	3,911 KB	Adobe Acrobat Doc...
ContentManager5UserGuide.pdf	19,775 KB	Adobe Acrobat Doc...
copyright.txt	7 KB	Text Document
Player5QuickStartGuide.pdf	2,100 KB	Adobe Acrobat Doc...
Player5QuickStartGuide_es.pdf	3,248 KB	Adobe Acrobat Doc...
Player5QuickStartGuide_fr.pdf	3,352 KB	Adobe Acrobat Doc...
<input checked="" type="checkbox"/> setup.exe	368 KB	Application
setup_broadcastserver.exe	17,139 KB	Application
setup_contentmanager.exe	62,494 KB	Application
setup_jadeabridgeserver.exe	40,341 KB	Application
setup_playbackauditparser.exe	12,586 KB	Application
setup_player.exe	74,424 KB	Application

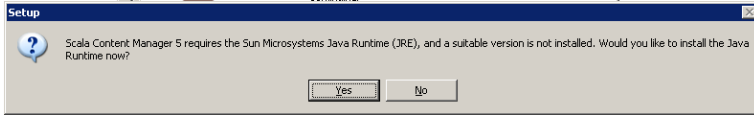
The first option you will have is to view this Quick Start Guide as a .pdf.



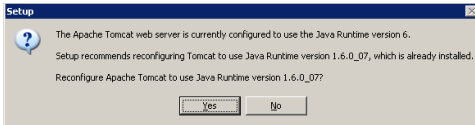
Once you are ready to install select Next.

1.6 Microsystems Sun Java Runtime

If you do not have a version of Microsystems Sun Java Runtime installed on your computer, the Content Manager installer will require that you install this now.



Select Yes to continue. The Content Manager software will recommend the version of Runtime to install.



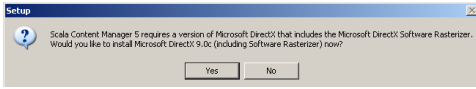
Select Yes to continue.

The installer will install Sun Java Runtime. The installer dialog box will provide information about the progress of the install.

Note: The Java Runtime Environment (JRE), also known as Java Runtime is part of the set of programming tools for developing Java applications.

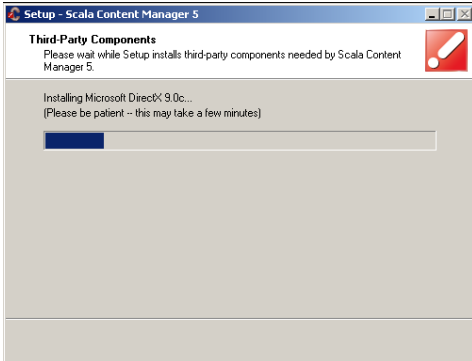
1.7 DirectX 9.0

Scala Content Manager requires that the user have Microsoft DirectX 9.0c (with Software Rasterizer).



If the installer cannot identify that your machine has this program installed, a dialog box will ask that you install it.

Select Yes to continue.



The installer dialog box will provide information about the progress of the install.

Once DirectX 9.0c installs the dialog box will close automatically.

1.8 Apache Tomcat Server

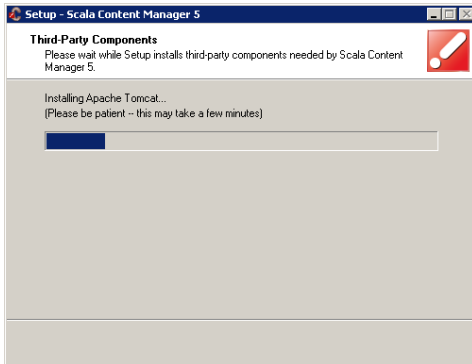
Scala Content Manager requires that the user have Apache Tomcat web application server.

If the installer cannot identify that your machine has this program, a dialog box will ask that you install it.

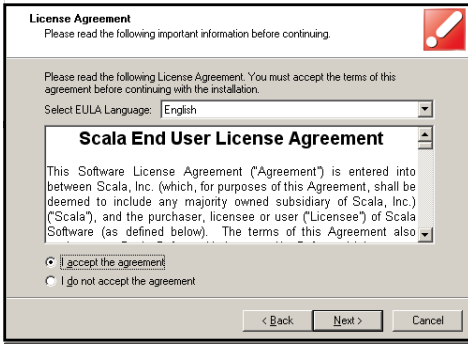
Select Yes to continue.



Note: Apache Tomcat implements the Java Servlet and the Java Server Pages (JSP) specifications from Sun Microsystems, and provides a "pure Java" HTTP web server environment for Java code to run.



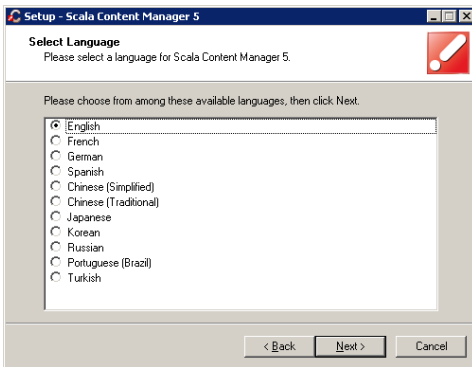
The installer dialog box will provide information about the progress of the install.



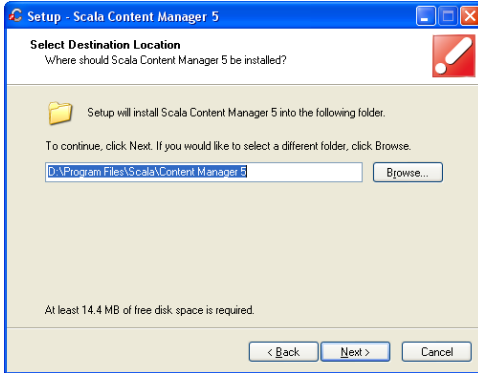
When the Welcome to Scala Content Manager Setup Wizard dialog box opens, you must select the “I accept the agreement” button in the Scala End User License Agreement box.

The full EULA can be read here or is also available at the end of this document.

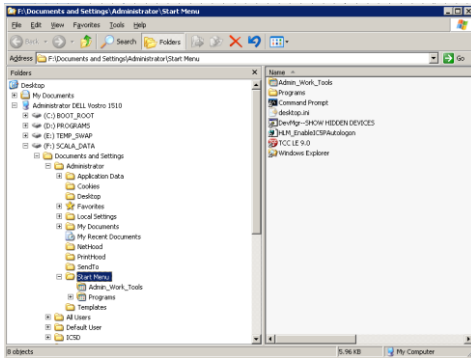
Select the language for Content Manager. The list of the available languages appears in the dialog box. Choose the appropriate radio button and then select Next.



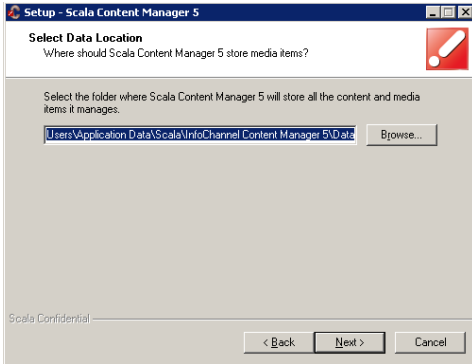
The destination location dialog box will default to the typical C:\Program Files location.



You can choose a different location by choosing the browse button in the dialog box.

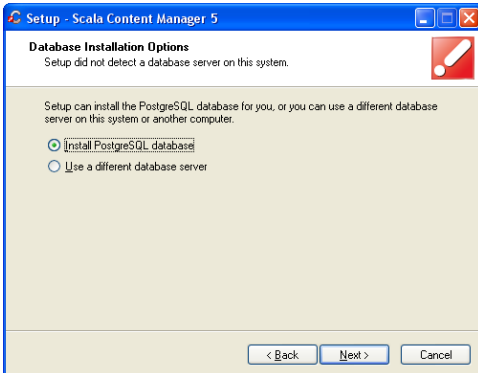


Select the appropriate Data Location. This will default to store media items in a specific location.



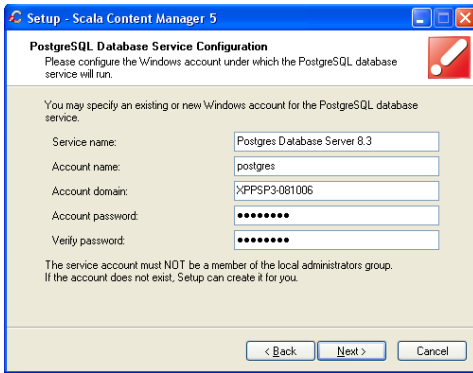
If the default location is acceptable, select Next to continue.

Choose the appropriate radio button for the Database Installation option.



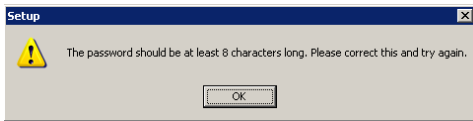
Select Next to continue.

The PostgreSQL Database Service defaults to the Service that occurs as part of the database installation process.

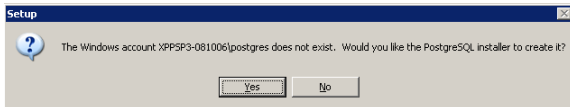


You must choose an account password, verify the account password and Select Next to continue.

You must choose a password that is a minimum of eight characters.

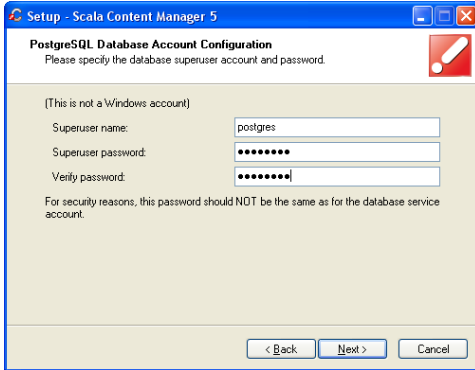


Because there are different passwords needed for parts of the installation, be sure to record your passwords in a secure place where they can be accessed at a later time.



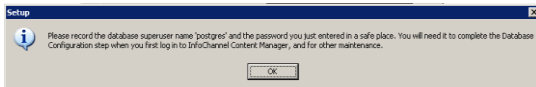
Since this account does not exist, select Yes to create the account.

Next you must select a password for the database account configuration. There are no limits on the length of the password.

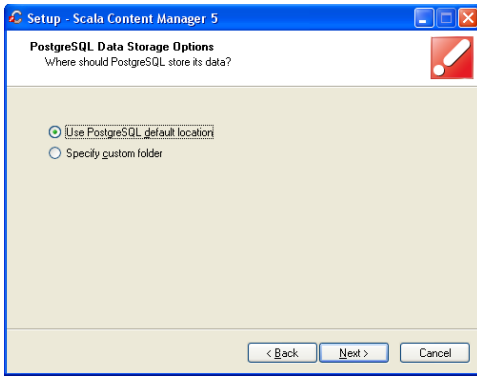


Select a strong password and again record your passwords in a secure place where they can be accessed at a later time.

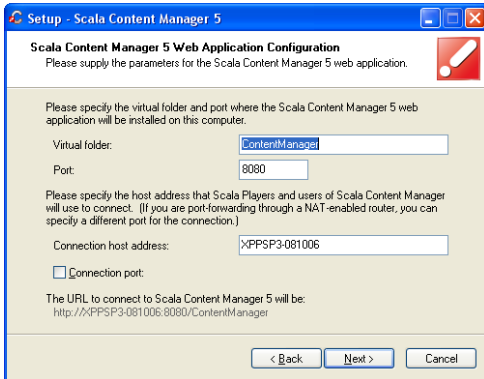
You can also change the Superuser name. The Superuser name should also be recorded in a secure place where it can be accessed at a later time.



Select Next to continue.

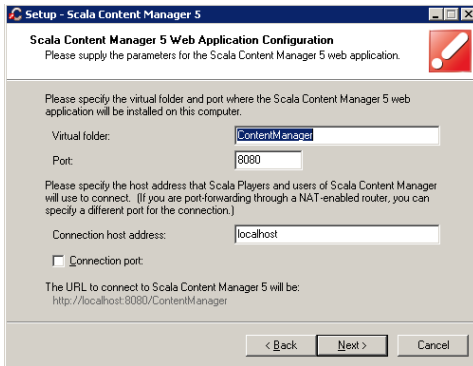


The installer will use PostgreSQL default location. Select Next to continue or specify a custom folder and then continue.



You can identify the parameters for Content Manager’s web application including the virtual folder, port and connection host address.

Select Next to continue.



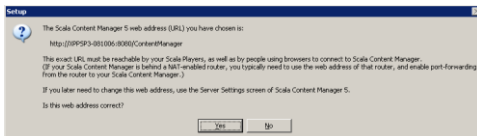
If you choose use localhost as your Connection Host Address, then only a Scala Player installed on the computer on which you are installing Content Manager will be able to communicate with Content Manger.

A dialog box will appear to warn you of this option.

Correct the target Connection Host Address or Select Next to continue.

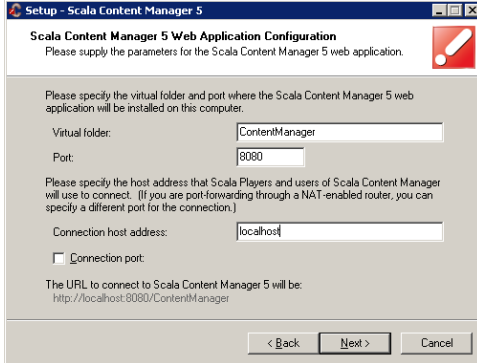


The web address must be the exact URL that is reachable by your player.



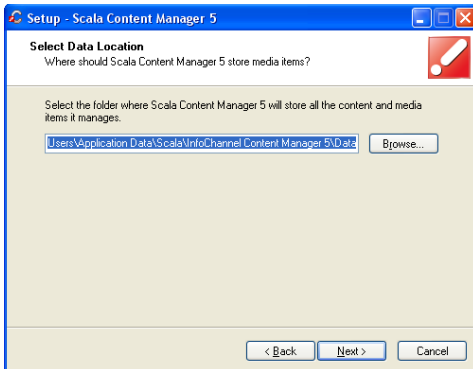
Select Yes to continue.

The installer will specify the virtual folder and port where Content Manager web application will be installed.

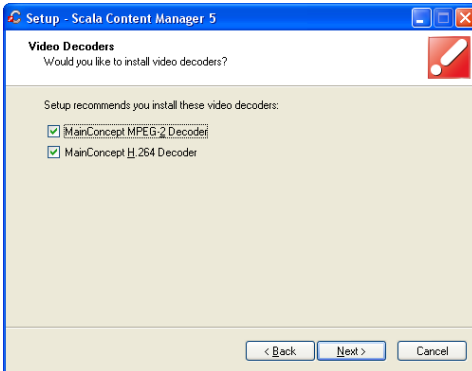
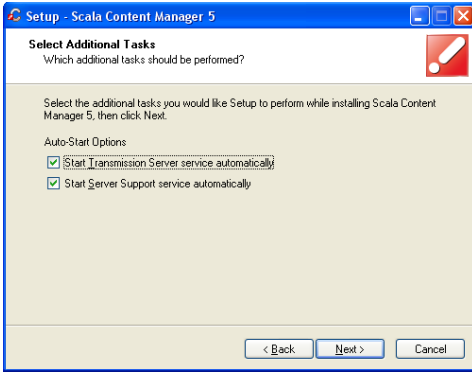


Select Next to continue.

The installation will choose a data location.



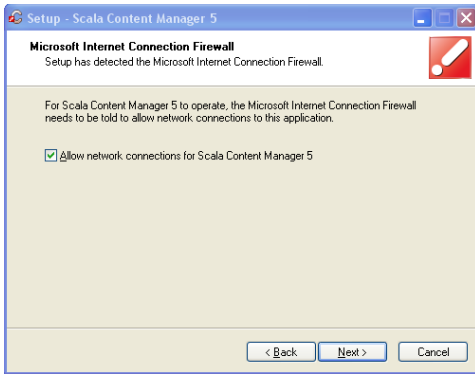
If this is the accurate location, select Yes or change the location using the Browse button and then Select Yes to continue.



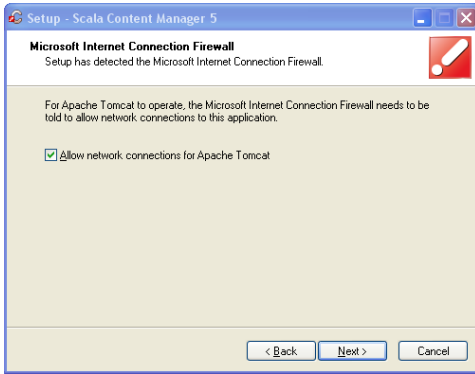
Select any additional tasks that should be performed. The system defaults to select both services automatically.

Select Next to continue.

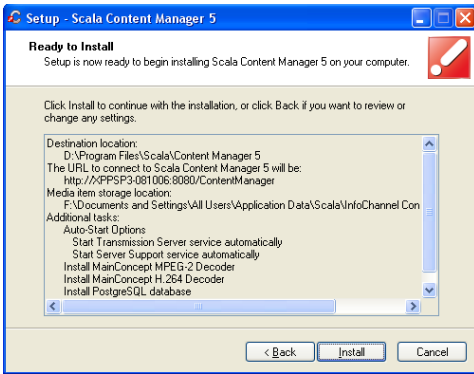
The setup will identify the connection firewall using Microsoft Internet Connection Firewall.



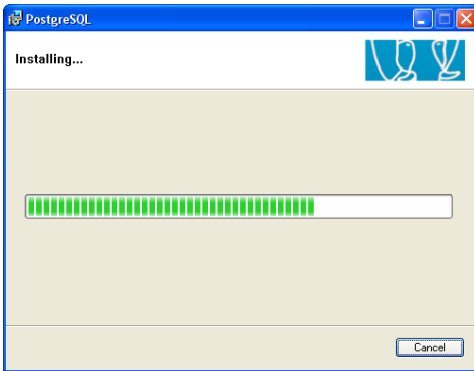
Select Next to Continue to allow network connections for Content Manager.



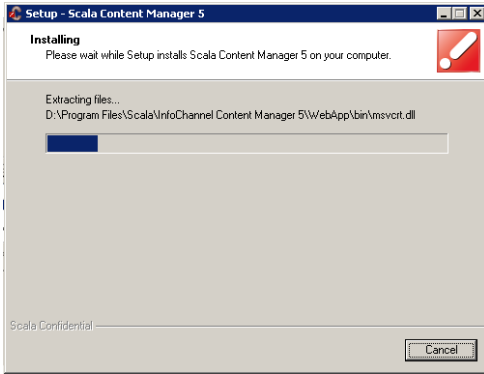
Select Next to continue to allow network connections for Apache Tomcat.



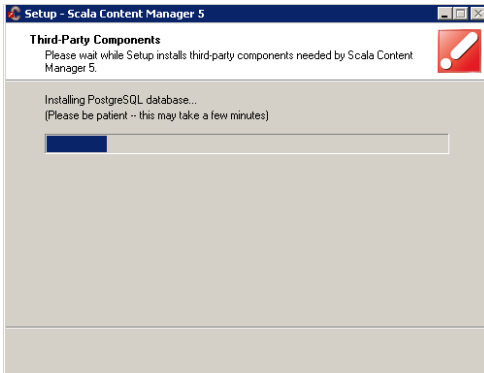
You are now ready to install. Select Install to continue.



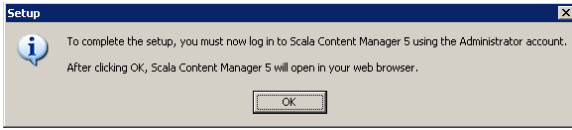
At this point, the system is ready to copy files for the PostgreSQL database. The installer dialog box will provide information about the progress of the install.



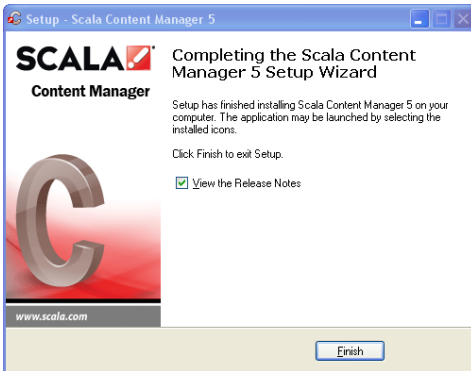
Content Manager will automatically begin extracting files. The installer dialog box will provide information about the progress of the install.



And automatically install any third party components. Content Manager will be installed on your system. The file extraction can be monitored with the progress bar.



Once the install is complete, an information dialog box will note that the setup must be completed by the software Administrator.



Select Finish, which completes the installation.

If you select View the Release Notes you can view and read them during the installation process.

You can now proceed with the set up Wizard. Select Next to continue.



Enter the Administrator password. Select Next to continue.

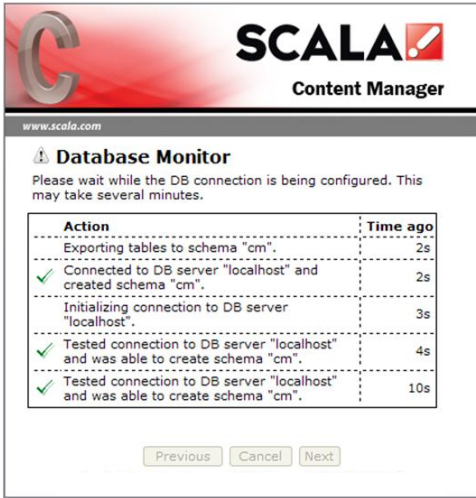
The screenshot shows the 'Administrator Password' screen of the SCALA Content Manager. At the top, there is a logo with a large 'C' and the text 'SCALA Content Manager'. Below the logo, the URL 'www.scala.com' is visible. The main heading is 'Administrator Password'. A paragraph of instructions reads: 'Please enter a password for the system administrator below. This is the password for the "administrator" user, and you'll have to use this when logging in to Scala Content Manager with this user. Press "Next" to continue the setup wizard.' There are two password input fields: 'New password:' and 'Confirm password:', both with masked characters (dots). At the bottom, there are three buttons: 'Previous' (disabled), 'Cancel', and 'Next'.

Select the "Type" of database configuration. The typical install uses PostgreSQL.

The screenshot shows the 'Database Configuration' screen of the SCALA Content Manager. At the top, there is a logo with a large 'C' and the text 'SCALA Content Manager'. Below the logo, the URL 'www.scala.com' is visible. The main heading is 'Database Configuration'. A paragraph of instructions reads: 'Enter the properties for your DB connection below. To test the configuration press "Test". For tooltips on the properties move your mouse over each label'. There are several input fields: 'Type:' is a dropdown menu with 'PostgreSQL 8.3.x' selected; 'Hostname:' is a text box with 'localhost'; 'Port:' is a text box with '5432'; 'Schema:' is a text box with 'cm'; 'Username:' is a text box with 'postgres'; 'Password:' is a masked text box with four dots. There is also an 'Advanced options:' section with a '+' icon. At the bottom, there are three buttons: 'Previous' (disabled), 'Test', and 'Next'.

Choose that from the drop down, enter your database password and select Next to continue.

(You can Test the connection by selecting Test.)



The Database Monitor will show your successful connections. The database monitor will establish the connection and create the database schema. Once created, Select the Next button.

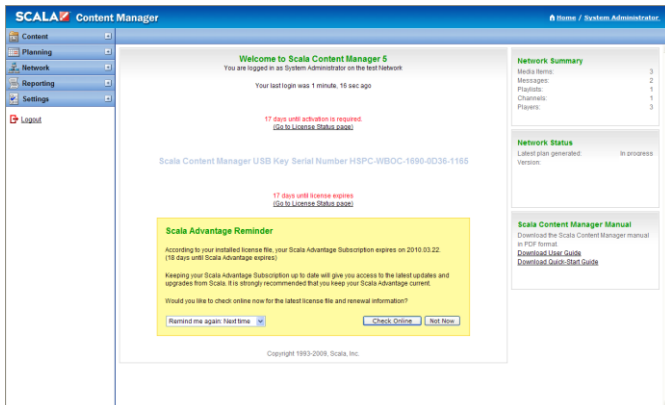


Enter the Username (Administrator) and password (previously chosen) and select Login.



Select a name for your Network. Enter it and choose Create.

The primary screen for the Scala Content Manager is now available to use. This screen is the place where the user can access the entire application and its various components.

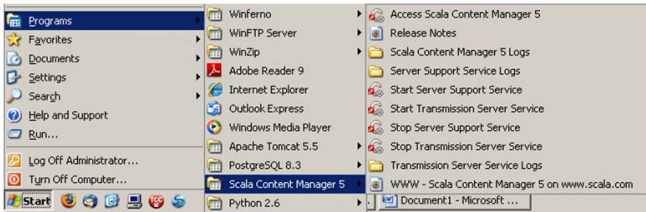


The User Guide and the Quick Start Guide are available for download from these links.

Scala Content Manager Manual
Download the Scala Content Manager manual in PDF format.
[Download User Guide](#)
[Download Quick-Start Guide](#)

1.9 Logging On To Content Manager

To access Content Manager, find the Scala Content Manager program in the list of Programs and select Scala Content Manager.



Start/Programs/Scala Content Manager. This will allow you to logon to Content Manager.

1.10 Getting Started

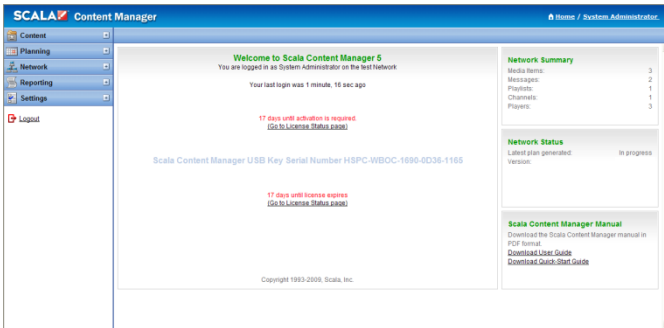
All users will need to enter their Username and Password in order to access the information in Content Manager.

Note: Since much of the content in Content Manager is user driven and user specific and since Content Manager uses workflow for assignments and approvals, it is important that all users have separate Usernames. It is also important that Passwords are set according to the security policies of your company in order to keep content secure.

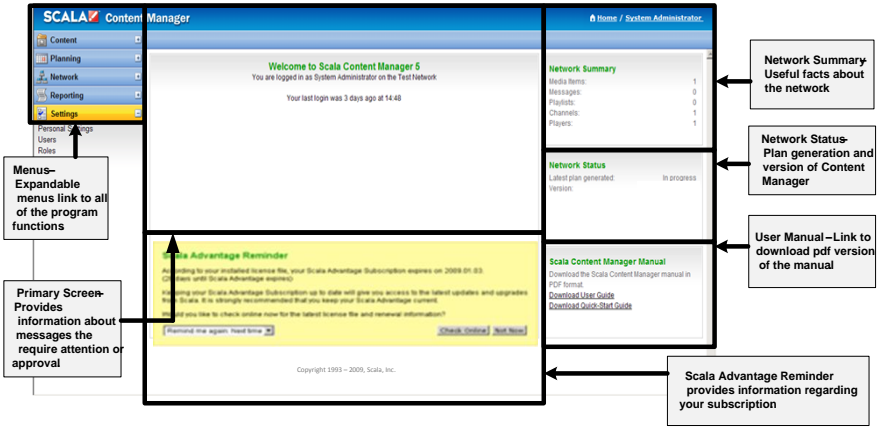
Enter the Administrator username and password and select the Login button.



The Content Manager dashboard provides a full array of operations for every type of user.



The primary screen provides messaging and workflow activities. Users will be able to access approvals and messages and review rejected messages for re-editing.



Prior to adding users, it is important for users to understand the “roles” that they will be assigned to and how to modify roles using the roles tool in Content Manager.

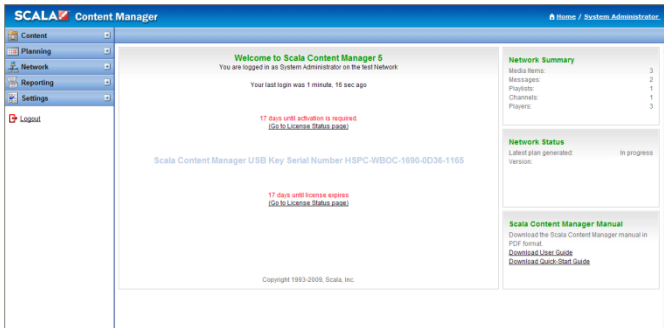
IIII 2 | System Requirements and Installation

2.1 Installing & Configuring Scala Players

The Scala Player is more than just a computer with a display – it is a sophisticated software system.

The Player not only receives information, it also communicates with Content Manager. Additionally, it will automatically report back to Content Manager at regular intervals, with a series of “heartbeats”, to let it know it is still functioning properly.

Furthermore, it will check for media updates in scheduled playlists with newly-generated plans from Content Manager.



To ensure your sophisticated software continues to run efficiently, it is important to start with the right hardware – optimized and configured expressly for your broadcast display requirements.

This section not only addresses the hardware requirements you will need to run the Scala Player, but also the configurations you’ll need to communicate and transfer your media and playlists.

The basic hardware requirements for running the Player software will vary depending on the installation site and the display scenarios involved.

Your particular set-up will undoubtedly be unique to your needs, but the core of the installation is the computer onto which the software is going to be installed. Below are some general hardware system recommendations:

2.2 Detailed Hardware Requirements

To ensure the optimum performance from your configuration, please carefully review the checklist below to make sure your system meets the minimum requirements.

Failure to properly follow the installation and configuration instructions may cause problems with your computer or player configurations.

Note: "#GB/hour of content" means total aggregate traffic. 1000 Players each downloading a 2MB file equals 2000MB/hour of traffic and so 10GB/hour for 2000 Players means each player is getting a maximum of 50MB of files.

2.2.1 Recommended Storage

It is generally assumed that a complete Microsoft Server OS installation with support utilities consumes approximately between 5-15 GB of disk space--including a fixed size paging file of between 2 and 4 GB in size.

Operational Media Repository Storage. It is generally recommended that hard disk space be allocated to be 3x that anticipated media storage need. (If the total size of the media for active scripts for a network of Players is in the order of 10GB-- then at least 30GB of storage should be allocated to this requirement).

Database storage: The Content Manager 5 database for <1000 Players with moderate scheduling should be on the order of 200MB. If there are many, media types, triggers, etc. the database might grow to be on the order of 500MB per 1000 Players in size. It is generally suggested that container files for the database be located on a partition other than that of the OS or the Media Repository.

For a very high capacity Content Manager--there is substantial performance benefit in isolating differing I/O activities by having multiple storage volumes.

An example division of I/O for a very high-capacity Server:

Volume_1_BOOT_OS_Apps: A 32 to 80 GB RAID-1 2xHD storage pack or SSD.

Volume_2_TEMP_SWAP_Transact: A 36 to 80 GB 2xHD RAID-1 or 4xHD RAID-1+0 storage pack for the system paging file, system %TEMP%/ %SPOOL% directories ,and the Transaction Logs for the Database.

Volume_3_DATABASE: A 32 to 160GB SSD or 2xHD RAID-1 or 4xHD RAID-1+0 or 4xHD RAID-6 storage pack.

Volume_4_MEDIA_TRANSMISSION: 144GB to several TB. Minimally 4xHD RAID-1+0 or RAID-6. For volumes of "several TB" in size the suggested configuration would be to employ at least eight drives in a RAID-6+0 configuration--2x(4xHD RAID-6) RAID-0 striped. As many as possible smaller HD's are preferable to "large" devices. (Based on the known behavior of current HD devices, Q3'2008, no HD used should be larger than 750GB).

File System Fragmentation: To maintain operational efficiency of the storage sub-systems it is strongly encouraged that the Content Manager 5 Server be configured with a good automatic/background commercial Defragmentation product. Both the Diskeeper Corp. "Diskeeper" and RAXCO "Perfect Disk" products are recommended. If SSD's are to be used, please see the SSD vendor notes on the appropriateness of defragmentation products. Some SSD devices do benefit from such products if the products have been written for the special needs of such devices. Others can be damaged by such software.

Storage Capacity Sizing and Configuration by Content Manager-network load class:

SMALL NETWORKS: A single 40GB or larger, but less than 750GB, HDD. RAID-1 encouraged.

MEDIUM NETWORKS: Two 60GB or larger, but less than 750GB, HDD's in a RAID-1 configuration. Appropriate partitioning to isolate file system use:

OS+Apps, Temp_Swap, Database, Media; is encouraged.

LARGE NETWORKS: Four HDD's of 36GB or larger size in a RAID-1+0 or RAID-6 configuration. OS+Apps, Temp_Swap, Database, Media; is encouraged.

ENTERPRISE NETWORKS: Two HDD's of 36GB or larger, but less than 80GB, size as a RAID-1 boot volume. Four HDD's of 36GB or larger size, but less than 750GB, in a RAID-1+0 or RAID-6 configuration for data. The data volume should be partitioned with separate file systems for data, swap, transaction logs, and media. Consideration of SSD's for database and database transaction logs is not inappropriate.

2.2.2 Recommended Operating Systems

- Windows XP Professional SP 3 for Small Networks.
- Windows Server 2003 SP2 Web Edition for Medium and Large Networks.
- Windows Server 2003 SP2 32-bit Standard or Enterprise Edition for Enterprise Class Networks.

NOTE: Either Microsoft Server OS Client Access Licenses, CAL's, or the unlimited "Internet Connector Licenses" are required.

The following operating systems are not approved for Content Manager 5:

- Microsoft 64-bit Operating Systems (Any edition)
- Microsoft Windows Server 2008

- Microsoft Vista (Any edition)

For purchases of Vista Business Edition, Ultimate Edition, or Windows Server 2008 Editions, we suggest the exercise of "Downgrade Rights" to a supported Operating system.

2.2.3 Recommended Processors

SMALL NETWORKS: Intel Pentium Dual-Core 2180 or better. Core2 Duo E6300 or better suggested. AMD AM2 Athlon-X2 BE4350 or faster.

MEDIUM NETWORKS: Intel Pentium Dual-Core 2180 or better. Core2 Duo E6300 or better suggested. AMD AM2 Athlon-X2 BE4350 or faster.

LARGE NETWORKS: Intel Core2 Duo E6400 or better suggested. AMD AM2 Athlon-X2 5000+, Phenom, or Opteron.

ENTERPRISE NETWORKS: Intel Core2 Quad Q6600, XEON E5405, or better suggested. AMD Quad-Core Phenom or Opteron.

2.2.4 Recommended System Memory

SMALL NETWORKS: Dual-bank, DDR2-5300 or better, 2 GB total.

MEDIUM NETWORKS: Dual-bank, DDR2-5300 or better, 2 GB total.

LARGE NETWORKS: Dual-bank, DDR2-5300 or better, 2 GB total. [4 GB (2.8 to 3.25GB available) with Standard or Enterprise Windows Server 2003, 32-bit, in PAE mode]

ENTERPRISE NETWORKS: Dual-bank/Triple-bank/Quad-bank/Hex-bank, DDR2-5300 or better, 2 GB total. [4 GB (2.8 to 3.25GB available) with Standard or Enterprise Windows Server 2003, 32-bit, in PAE mode]

||||| 3 | Overview

3.1 Scala Products

Scala Designer is an authoring application that allows a creative resource to quickly create content in the Scala native format, called Scala scripts. These scripts are either self-contained productions, or templates that can be filled in later. The ScalaScript language has very advanced capabilities to build content that can behave dynamically, access external data or talk to other devices.

Scala Content Manager⁵ is a web based application that centrally controls all media that will flow through the network. It has a media library from which users can create playlists, then schedule them to play at specific times and locations. Scala Content Manager also collects data from locations to generate reports about player health and playback logs.

Scala Player software typically runs on a dedicated PC, connected to a display device at a remote site. It receives its directions from Scala Content Manager, then downloads the necessary media files and plays them according to defined schedule.

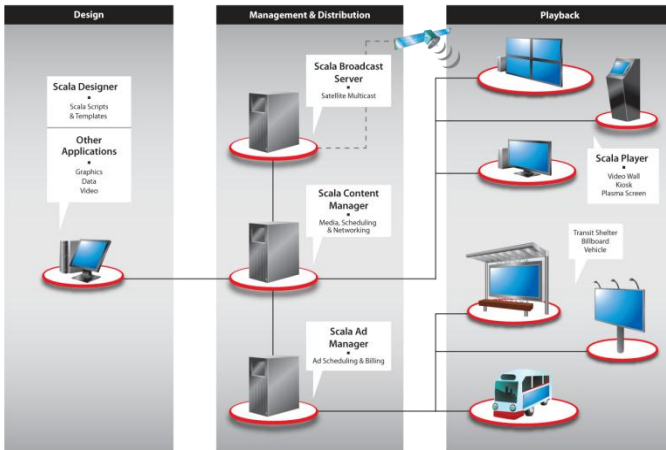
Scala Ad Manager is a product for larger networks that are advertising based. Scala Ad Manager provides a tool to manage advertising programs and networks across multiple channels.

3.2 Corporate Messaging

A common use of Scala is to enable corporations to communicate more effectively with their employees and customers. Scala lets different stakeholders in an organization communicate their messages without requiring email or time-consuming meetings.

For example, a screen might be placed in the break room, cafeteria or office area with key announcements and messages. Many companies also use Scala in the front lobby to welcome visitors or VIPs.

Scala Network



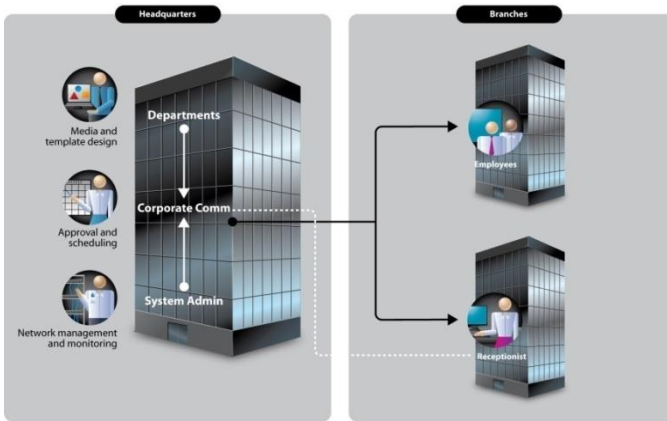
In a corporate environment, a graphic designer in the

Marketing department can **upload videos** and **create templates** in Scala Designer.

Other staff members can use those templates to create their own **messages** with Scala Content Manager's Template Composer Module. Supervisors can **approve messages** before they are displayed.

Workgroups allow content to be segmented by department. Typically a corporate IT group **administers** the overall network.

Corporate Network



3.3 Retail Advertising

The key to effective digital signage in retail is being able to target your message with accuracy, make it relevant to the customer, and display it at the right time and location where it can affect purchase decisions the most.

Digital signage in a store can also be used off-hours for staff training and corporate messaging.

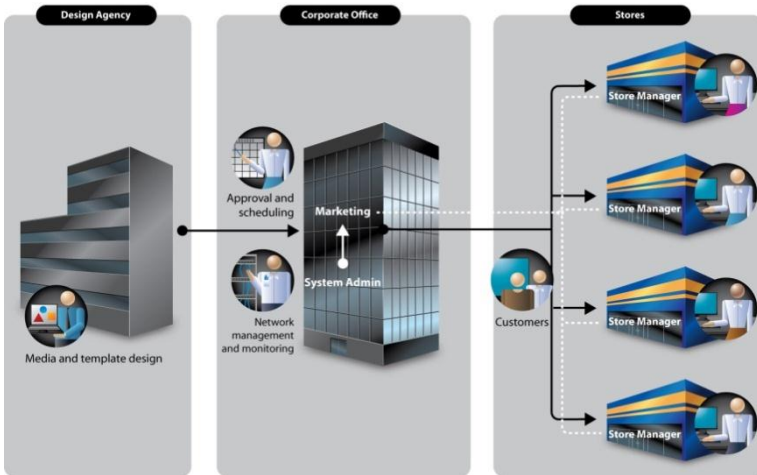
Advertising media is created by agencies or marketing departments, but location and distribution of that media is usually planned by other groups or departments that handle merchandising and promotion.

Scala Content Manager can be configured to allow creative users to **publish or upload media** to Content Manager without being involved in the playlist decision. This can be accomplished by the in-store promotions group who controls **playlist** order as well as **schedules**.

Different **channels** can be created for different areas of the store, and playlists within those channels can be scheduled to appear at different times of day, based on customer traffic and store hours.

In networks where each location has unique criteria such as type of weather, local branding or services, **metadata** can be used to place alternative entries in a single playlist instead of having to make a different playlist for every location.

Retail Network

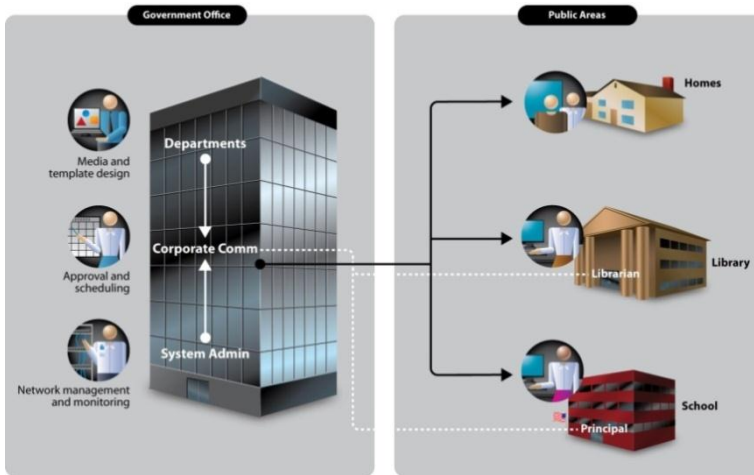


3.4 Public Information

Information for the general public can be distributed via TV channels or digital signage to communities, hotel guests, students on campus or in a variety of other important settings.

These networks typically don't have the same resources as corporate or advertising installations, so the ability to keep content updated easily and efficiently is key.

Public Network



3.5 User Access and Control

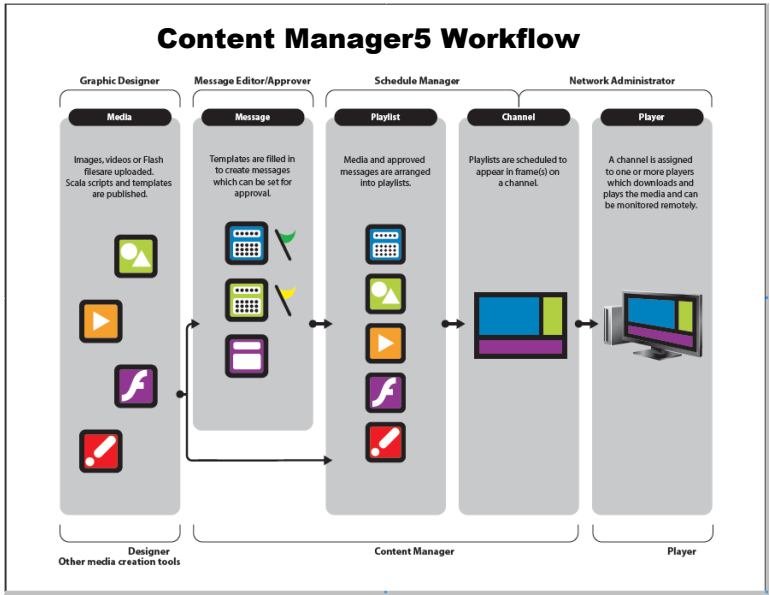
Scala Content Manager 5 has a simple web interface for editing **template-based messages**, and fine **control of user access** to different parts of the interface as well as different content. Users can be given control over just the things they need to control.

Also, with Scala's **Windows Scripting**, any data that already exists in some other form such as schedules, news feeds or localized information does not need to be entered twice. It can be imported directly from the source into a script.

3.6 Scala Workflow

Scala is designed to enable individuals to work in different roles based on their expertise and need for access. These standard roles match the default roles installed with Scala Content Manager.

- **Graphic Designers** typically use Scala Designer to create scripts and templates. They might also use Scala Content Manager to upload images or videos.
- **Message Editors** use Scala Content Manager to create and edit messages with templates created in Scala Designer by the Graphic Artist.
- The **Message Approver** reviews and approves or rejects messages by Message Editors.
- The **Schedule Manager** sets up playlists of media and messages, and schedules when the playlists will appear.
- The **Network Administrator** configures Scala Content Manager's network settings, and monitors the players for errors.



3.7 Troubleshooting Tips

If your Player is not receiving new plans or is not playing what it should be playing, below are some settings you can check:

1. Check in Content Manager -> Settings -> License Status to see if the License file has been downloaded and is current.
2. Check to see if the Content Manager and Player are using the current release. In Content Manager, navigate to Settings -> Server Settings and select the System Information tab. In the Player 5 Configuration, select the Info tab.

3. In Content Manager, go to Network -> Players and select a Player and click Synchronize Now. In Content Manager check Network -> Network Monitor for the Player “New Plan revision downloaded” message. This may take a minute or two for the message to show. If not go to Step 4. If yes then go to Step 9.
4. On the Player system, check to see if the Player Transmission Client is running.
5. In the Player 5 Configuration tool, check to see if you are able to connect to Content Manager, by clicking the “Refresh” button. If so, the Player should load the Network name. If not go to Step 7.
6. Using a web browser on the player, see if you can connect to:

`http://[HostNameOrIP:PortNumber]`

to see if you can view the Apache Tomcat default web page. If the default web page is not shown, check to see if the Apache Tomcat Service is running. Also, check if any firewalls, routers, and anti-virus software are blocking the web port.

7. Open a command prompt on the Player, and type:

`PING HostNameOrIP`

Where HostNameOrIP is the Content Manager's Hostname or IP Address. This is a test to see if the player can talk to the

hostname or IP Address of Content Manager. If not, check the network connection and cabling.

8. Open a command prompt on the Player, and type:

```
TELNET HostNameOrIP:portnumber
```

Where HostNameOrIP is the Content Manager's Hostname or IP Address and portnumber is the web port. This is another connectivity test.

9. Check the Incoming Messages folder on the Content Manager system. In Windows Explorer, go to:

```
C:\Documents and Settings\All Users\Application Data\Scala\InfoChannel Transmission Server 5\Network\Incoming Messages.
```

If there are .XML files in that directory, then the Scala Transmission Server is not processing them. This can be because Content Manager does not have a valid license or the Scala Transmission Server Service not running.

10. Check to see if the Scala Transmission Server, and Scala Support Server Services are Started and are set to Automatic. Go to Start -> Settings -> Control Panel. Double-click on Administrative Tools, then Services.
11. Try rebooting the Content Manager system.

12. Check the Scala Transmission Server Service IC.log file for errors.
13. Check the Player's IC.log for errors. (The shortcut to the log folder is in the start menu).

Note: This is one of the most significant locations to identify issues with your system. The most recent error is at the bottom of the log file.

14. In Content Manager, navigate to: Network -> Players select a player, click the properties button, then click Configuration tab and check to see that the correct Distribution Server is selected. If using the "Main – Point-to-Point" distribution server, verify the correct "Plan Delivery" setting is selected.

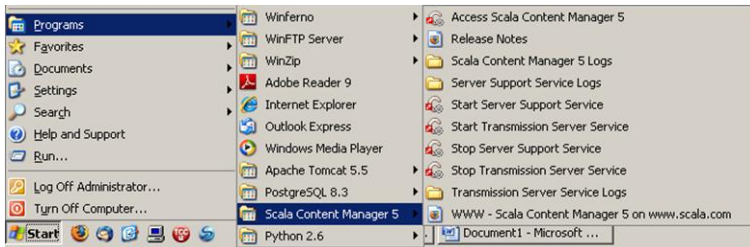
IIII 4 | Getting Started with Content Manager

4.1 Accessing Content Manager

Once Content Manager has been installed, a user will be able to access the system using a standard web browser from anywhere on the network.

4.1.1 Local Machine Access

To access Content Manager from the server, select the Windows icon in the bottom left side of the computer screen. Then select Programs from the menu list.



The list of all of the programs installed on your computer can be accessed from this screen. Select Scala Content Manager 5.

The menu items will expand to include a number of items that are part of Content Manager. Open Content Manager by selecting the red icon – Access Content Manager⁵.

You can also access Content Manager from a standard web browser. The URL for your server is available from your IT or system administrator that installed the Content Manager system.

A typical URL for accessing Content Manager will appear in this format: <http://192.168.1.1/ContentManager>.

4.1.2 Logging on to Content Manager

When you first log on to Content Manager and every subsequent time you access the system, you will be provided with a login screen. All users will need to enter their Username and Password in order to access the information in Content Manager.

Note: Since much of the content in Content Manager is user driven and user specific and since Content Manager uses workflow for assignments and approvals, it is important that all users have separate Usernames and that Passwords are set according to the security policies of your company in order to keep content secure.

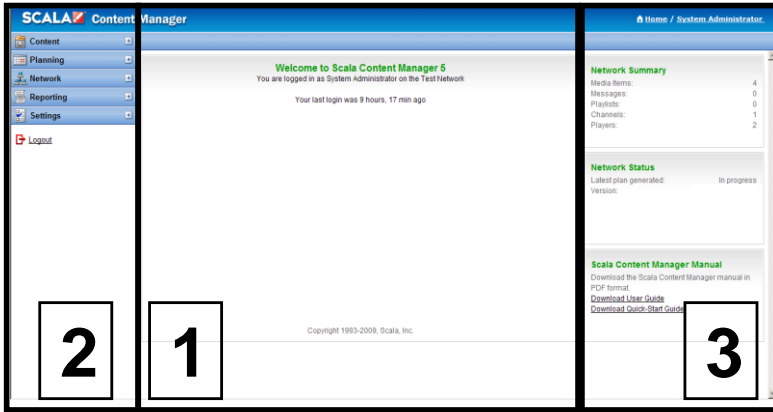


Enter Username and Password and select the Login button.

This will take you to the Scala dashboard where most of the day to day operations and actions using Content Manager will occur.

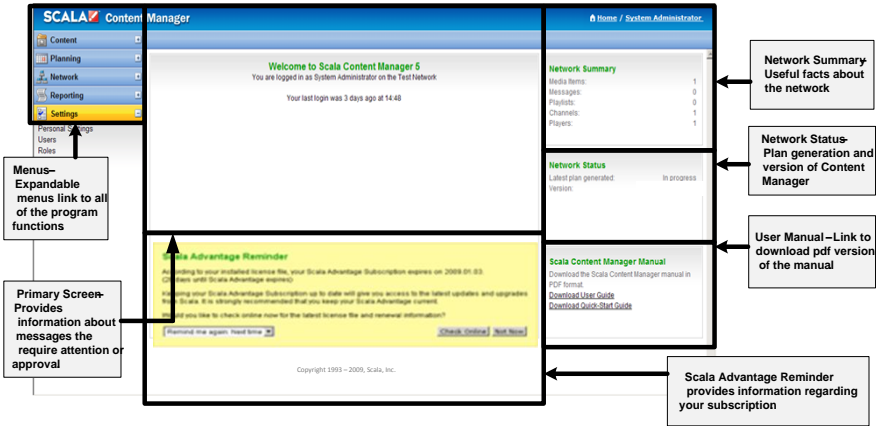
4.1.3 Content Manager Dashboard

The Content Manager dashboard provides a full array of operations for every type of user. Based on user roles and access, information available and tools available within the dashboard will vary.



The dashboard is divided into three distinct areas for use.

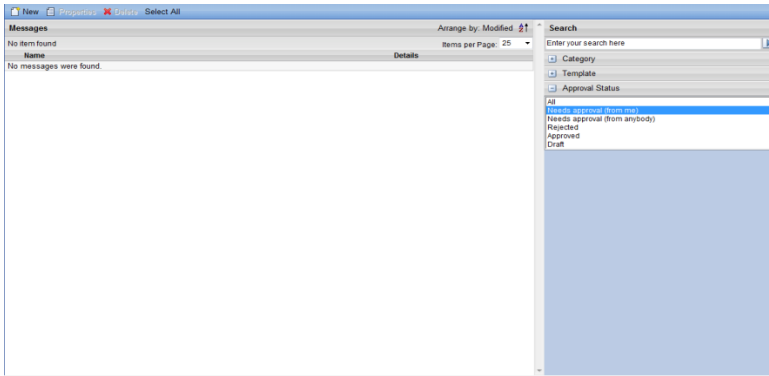
The primary screen provides messaging and workflow activities. Users will be able to access approvals and messages and review rejected messages for re-editing.



The left hand pane includes the menus the user will need to access the tools inside Content Manager.

The right hand pane is sometimes used for summary messaging – when you log on, other times is assumed into the primary pane and most often will contain search options to assist the user in more effectively finding content in Content Manager.

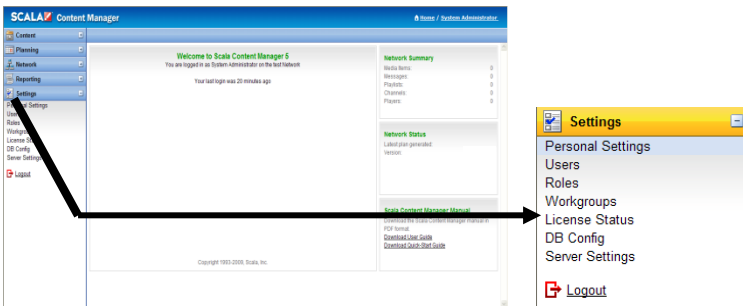
Select one of the message links on the primary screen of the dashboard. This will advance the user to the Message Center where multiple actions and activities occur.



Complete information on Messaging is covered in the Content section of this guide – (5.4 Messages).

4.2 The Settings Menu

Select the “Settings” tab by clicking on the + sign on the setting bar.



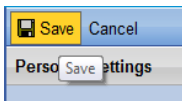
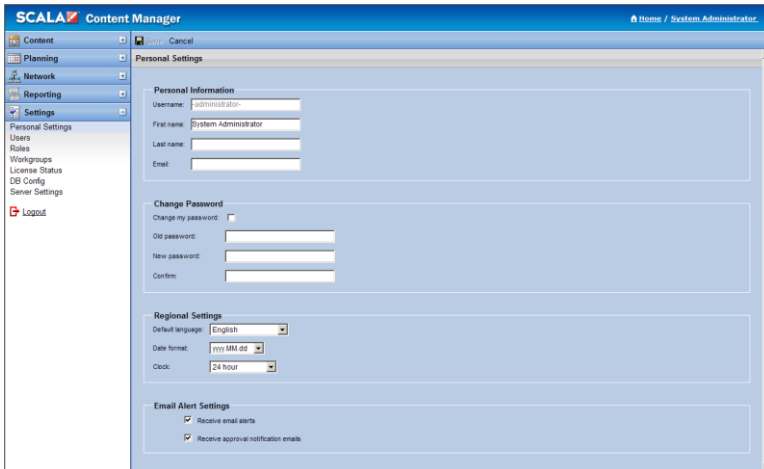
This will expand the bar to include those areas relevant to settings that the user will need to access and control.

Note: Settings options are also controlled and available based on Roles and users will see options based on the role that the administrator has set for them. The view in this manual is typically the role of the administrator where all options are available to view.

4.2.1 Personal Settings

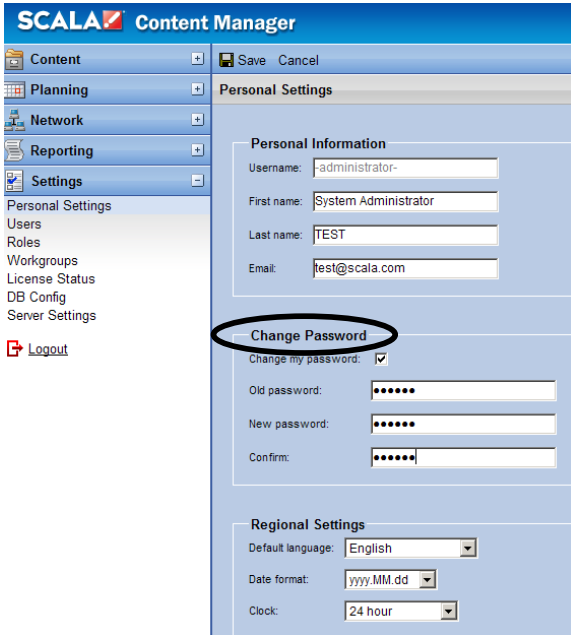
Next select “Personal Settings” to access personal information, manage passwords and set regional settings.

The Administrator username is assigned by the system and cannot be changed by the user.



Identifying information such as first and last name and email address can be managed by the user.

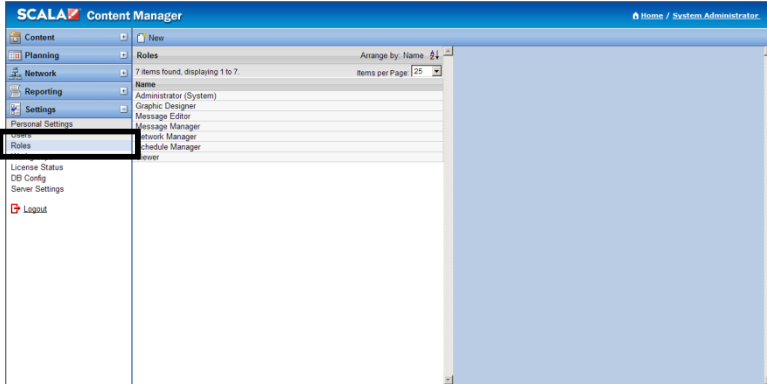
To change name, password or regional settings fill in the appropriate fields or select the appropriate drop downs and select Save at the top of the page. If this operation occurred in error, select Cancel and the system will remain as originally configured.



4.2.2 Roles

Prior to adding users, it is important for users to understand the “roles” that they will be assigned to and how to modify roles using the roles tool in Content Manager.

Additionally, workgroups should also be configured prior to users being added to the system.

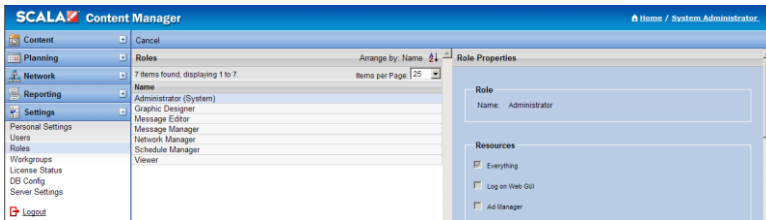


Select the roles option in the left pane. This will provide a list of available and predetermined roles in Content Manager.

Each of those roles has a fixed set of actions that will limit what actions and activities the user will be allowed to take when using the Content Manager.

4.2.3 System Administrator

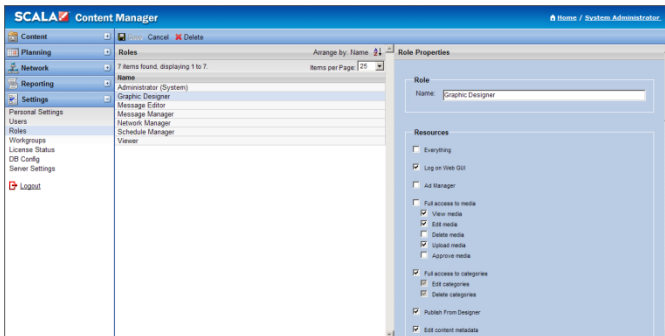
The System Administrator is a set role and the only role that cannot be managed.



It allows the administrator full access to the system. In all other roles, the administrator can rename the role and change the actions, activities or resources available to and associated with that role.

4.2.4 Other Roles

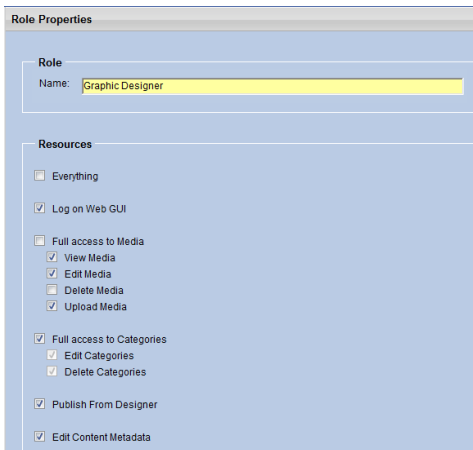
Select a role other than Administrator and review the resources available to that role.



The Graphic Designer role has prescribed actions that allow that role to accomplish the work of a graphic designer in the Content Manager system.

The list below provides a comprehensive view into all of the available actions and resources.

Based on system needs, the Administrator can change and modify the actions and resources on a role by role basis.



This list of roles and resources includes access to:

[Media](#)

- Categories
- Templates
- Messages
- Playlists
- Schedules
- Channels
- Players
- Player Groups
- Workgroups
- Maintenance Jobs
- Remote Publish
- Locations
- Distribution
- Network Settings
- Network Monitor
- Health Monitoring
- User Activity
- Playback Audit Module
- Roles
- Users



Note: Under Roles / Resources, the resource for reporting is now called Full access to Reporting, for consistency.

The feature allowing the person who requested an approval to cancel the request is now called "withdrawing".

- Full access to Players
 - View Players
 - Edit Players
 - Delete Players
 - Reset Player Signature
 - Synchronize Players

- Full access to Player Groups
 - Edit Player Groups
 - Delete Player Groups

- Full access to Workgroups
 - View Workgroups
 - Edit Workgroups
 - Delete Workgroups

- Full access to Maintenance Jobs
 - View Maintenance Jobs
 - Edit Maintenance Jobs
 - Delete Maintenance Jobs

- Edit Player Metadata

- Full access to Remote Publish Locations
 - View Remote Publish Locations
 - Edit Remote Publish Locations
 - Delete Remote Publish Locations

- Full access to distribution
 - View distribution
 - Edit distribution settings
 - Delete distribution servers
 - Synchronize servers
 - Edit broadcast media priority

- Full access to network settings
 - View network settings
 - Edit network settings

- Full access to network monitor
 - View network monitor
 - Clear network errors

- Full access to user activity

- Full access to reporting
 - View reports
 - Create reports
 - Delete reports
 - View DB settings
 - Edit DB settings
 - View report settings
 - Edit report settings

- Full access to roles
 - View roles
 - Edit roles
 - Delete roles

- Full access to users
 - View users
 - Edit users
 - Delete users

4.2.5 Renaming Roles

To rename a role select that role in the list in the Content Manager dashboard middle panel. The role name and that roles access will appear in the right panel.

Roles	Arrange by: Name
7 items found, displaying 1 to 7.	
Items per Page: 25	
Name	
Administrator (System)	
Graphic Designer	
Message Editor	
Message Manager	
Network Manager	
Schedule Manager	
Viewer	

Highlight the name and type the new name that will identify the role.

Role Properties

Role

Name:

Role Properties

Role

Name:

Select Save to save your changes or Cancel to revert back to the present name.

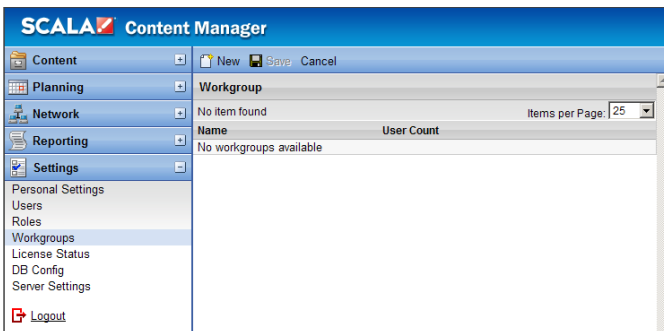
Roles	Arrange by: Name
7 items found, displaying 1 to 7.	
Items per Page: 25	
Name	
Administrator (System)	
Graphic Designer	
Message Editor	
Message Manager	
Network Manager	
Schedule Manager	
Viewer	

To change the access and resources that a particular role has, select the role, review the access and resources and make selections based on access required for that role.

4.2.6 Workgroups

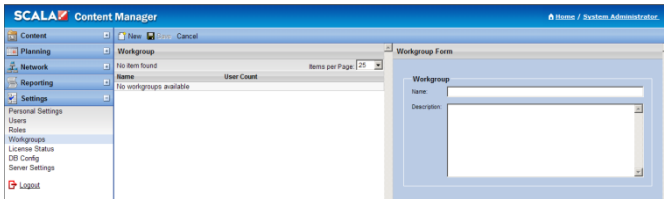
Content Manager allows the user to create, edit and delete Workgroups.

A Workgroup is a simple way of associating one or more users to a particular collection of other users. This can be helpful in creating associations between content, playlists and groups of users.



Select “Workgroups” from the left panel of the dashboard in Content Manager. If Workgroups have already been created they will appear in a list in the middle panel.

To create a Workgroup – select “New” at the top of the middle panel.



Define the name of the Workgroup and its description in the appropriate fields. You should select names that clearly identify the purpose of the group. Workgroups are assigned at the user level when you create a new or edit an existing user.



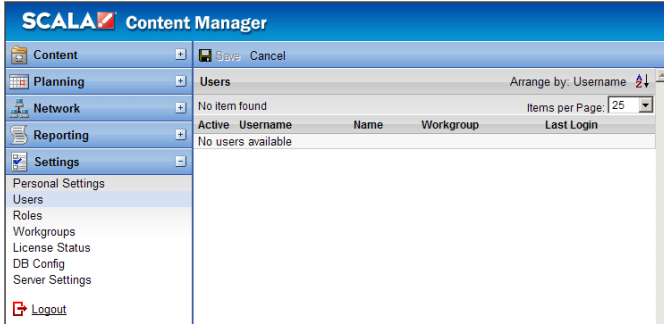
Select Save to save the Workgroup or Cancel if you do not wish to save the new Workgroup.

4.2.7 Adding Users

To create new users, select New at the top of the middle panel on the Content Manager dashboard.

The right hand panel will allow you to add user – assigning a username and password and assigning roles. If workgroups

have been set up they can be assigned to a workgroup. Regional Settings and other Miscellaneous Settings can be applied.



The screenshot shows a user creation form with the following sections:

- Personal Information:** Includes text input fields for Username, Password, Confirm password, First name, Last name, and Email. It also features a dropdown menu for Roles with options: Administrator, Default User, Graphic Designer, and Message Editor.
- Workgroup:** A single text input field.
- Regional Settings:** Includes a dropdown for Default language (set to English), a dropdown for Date format (set to MM-dd-yyyy), and radio buttons for Clock (set to 24-hour).
- Miscellaneous Settings:** A list of five checkboxes, all of which are checked:
 - User account is active
 - Approve all content from this user
 - User can change password
 - User must change password at next logon
 - Receive email alerts

Create a username and assign the user a password.

The user can be required to change their password when they login for the first time (see Miscellaneous Settings).

Based on the setting selected by the administrator, the user will be able to maintain and change their passwords when they log onto the system.

Enter the user's first name and last name and email address in the appropriate fields.

Note: Including email addresses at this point is an important step since player error notifications are sent out by email as well as shown within the Content Manager dashboard.

Assign the user's role by highlighting the role from the list.

The screenshot shows a 'Properties' dialog box with the following fields and values:

- Username: bsmithson
- Password: [masked]
- Confirm password: [masked]
- First name: Bob
- Last name: Smithson
- Email: bsmithson@scala.com
- Roles: Administrator, Default User, Graphic Designer, Message Editor
- Workgroup: Scala Main Content

Assign the user to the appropriate workgroup.

Select any regional settings from the drop down and radio button.

Choose any miscellaneous settings that are appropriate for this user.

Note: Miscellaneous settings allow the administrator to inactivate user accounts and control user access and actions around content approvals (workflow), passwords and email.

Properties

Personal Information

Username:

Password:

Confirm password:

First name:

Last name:

Email:

Roles:
Default User
Graphic Designer
Message Editor

Workgroup

Workgroup:

Regional Settings

Default language:

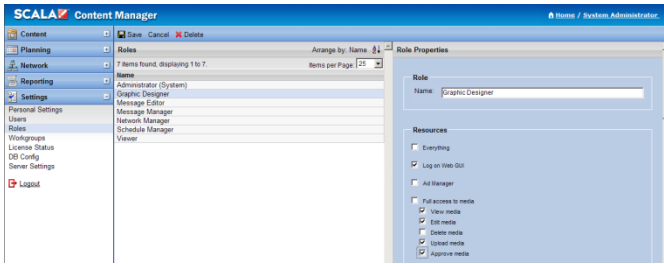
Date format:

Clock: 24 12 hour

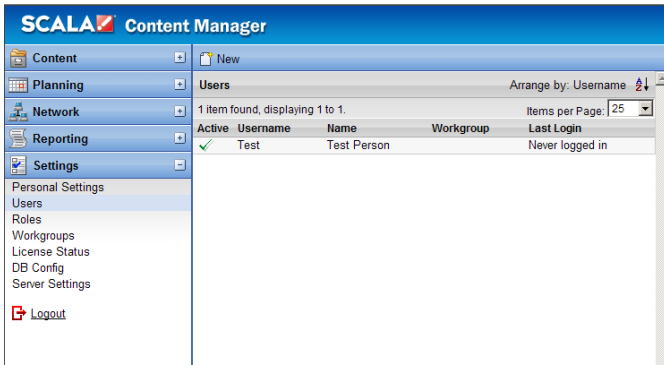
Miscellaneous Settings

- User account is active
- Approve all content from this user
- User can change password
- User must change password at next logon
- Receive email alerts

Save the user by selecting Save from above the center panel in the Content Manager dashboard.



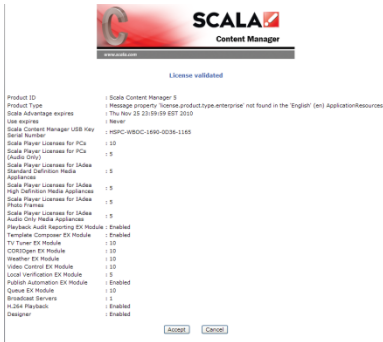
Users can now be managed from the center panel of the Content Manager dashboard.



4.2.8 License Status

Scala Content Manager allows you to monitor license status and usage from the middle panel of the dashboard.

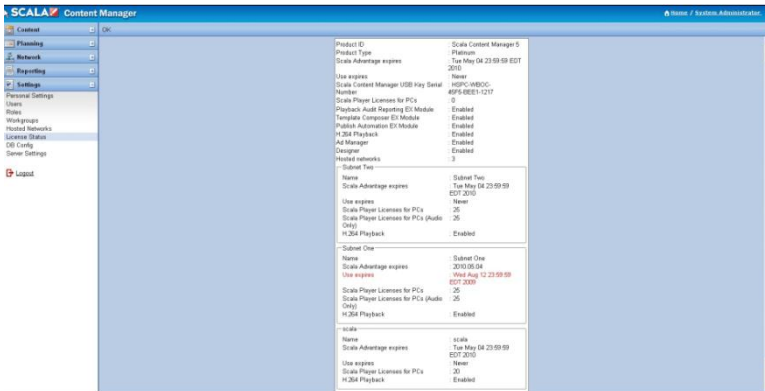
Select “License Status” from the list in the left panel under Settings.



The status screen provides detailed information related to your Scala Content Manager license including number of available licenses, and the modules your license contains.

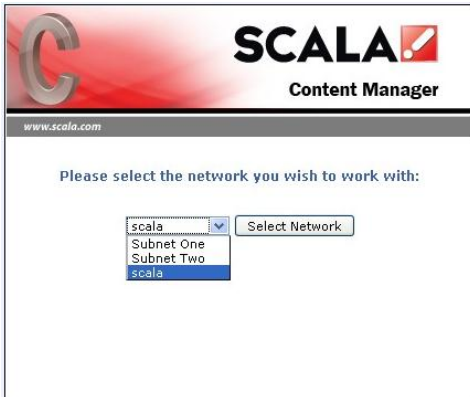
4.2.9 Hosting Server

Users that have purchased the Content Manager Hosting Server can access multiple Content Manager sites from a single sign on.



The Administrator of a hosted network can access the **Settings > Hosted Networks** tab and see the licenses for each network, see the users of each network, as well as add and remove users from each network.

When logging on to a Content Manager Hosting Server with a user account that is associated with multiple Hosted networks, the last logged-into network is presented as the default network to log into.



This allows users to choose which network they want to log on to by selecting the named network and then clicking on Select Network.

Users can be associated with one or multiple networks – allowing them to access whatever Content Manager networks to which they are assigned.

4.2.10 Adding Licenses

In order to update your license for Content Manager you will need to contact your Scala Sales Representative.

4.2.11 Software Updates

From time to time software updates will be made available for download at www.scala.com/updates. These updates are available for customers on software maintenance program called Scala Advantage.

If your software maintenance has expired, you will not have access to any software updates.

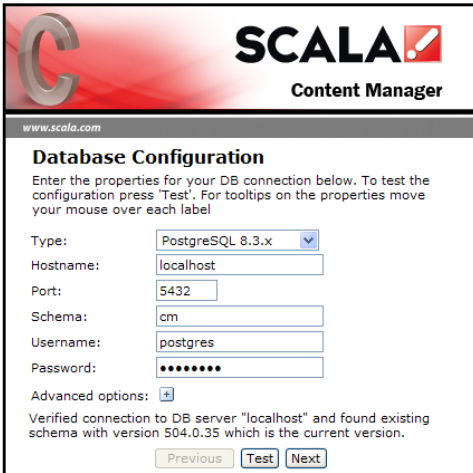
For further information related to licenses, software maintenance and software updates you should contact your Scala sales representative.

4.2.12 Database Configuration

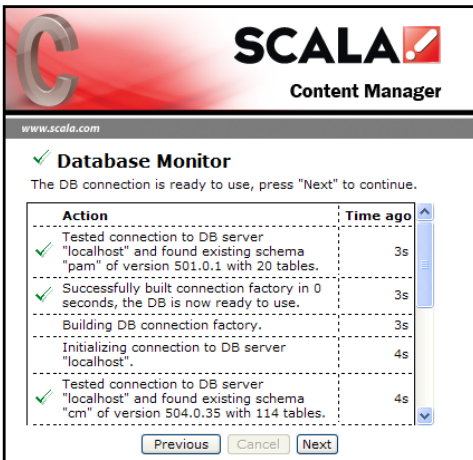
The DB Config tool in the Content Manager dashboard allows you to view and modify the current database configuration settings.

Select “DB Config” from the list in the left panel under Settings.

These settings were initiated when Content Manager was first installed and configured.



The screenshot shows the 'Database Configuration' screen in the SCALA Content Manager. It features a header with the SCALA logo and 'Content Manager' text. Below the header is the URL 'www.scala.com'. The main section is titled 'Database Configuration' and contains instructions: 'Enter the properties for your DB connection below. To test the configuration press "Test". For tooltips on the properties move your mouse over each label'. The configuration fields are: Type (PostgreSQL 8.3.x), Hostname (localhost), Port (5432), Schema (cm), Username (postgres), and Password (masked with dots). There is an 'Advanced options' section with a '+' icon. Below this, a message states: 'Verified connection to DB server "localhost" and found existing schema with version 504.0.35 which is the current version.' At the bottom are 'Previous', 'Test', and 'Next' buttons.



The screenshot shows the 'Database Monitor' screen in the SCALA Content Manager. It features a header with the SCALA logo and 'Content Manager' text. Below the header is the URL 'www.scala.com'. The main section is titled 'Database Monitor' with a green checkmark icon and the text: 'The DB connection is ready to use, press "Next" to continue.' Below this is a table with two columns: 'Action' and 'Time ago'. The table contains five rows of log entries, each with a green checkmark in the first column. At the bottom are 'Previous', 'Cancel', and 'Next' buttons.

Action	Time ago
Tested connection to DB server "localhost" and found existing schema "pam" of version 501.0.1 with 20 tables.	3s
Successfully built connection factory in 0 seconds, the DB is now ready to use.	3s
Building DB connection factory.	3s
Initializing connection to DB server "localhost".	4s
Tested connection to DB server "localhost" and found existing schema "cm" of version 504.0.35 with 114 tables.	4s

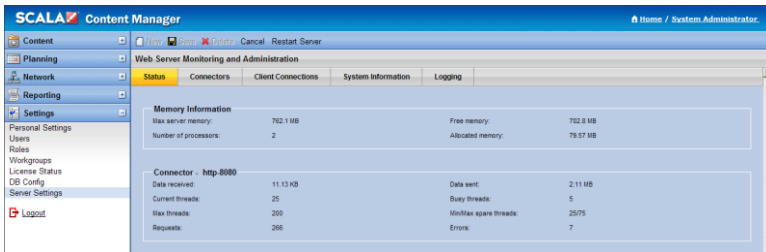
Note: Any changes made to these settings will modify the database and the original settings of your existing installation. Changes should be made ONLY in consultation with or by the Network Administrator. Complete

understanding of configuration options is necessary for ANY changes in order to maintain the system.

4.2.13 Server Settings and Status

Some Server Settings in Content Manager are not editable.

The Server Settings Status page shows information regarding Content Manager’s memory usage and connection details.



Maximum server memory: This is the maximum amount of memory available to the Java Virtual Machine

Free memory: This is the amount of free memory within the Java Virtual Machine

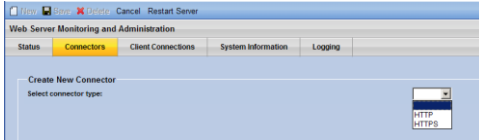
Number of processors: This represents the number of processors available to the Java Virtual Machine

Allocated memory: This is the amount of memory currently allocated by the Java Virtual Machine

4.2.14 Connectors

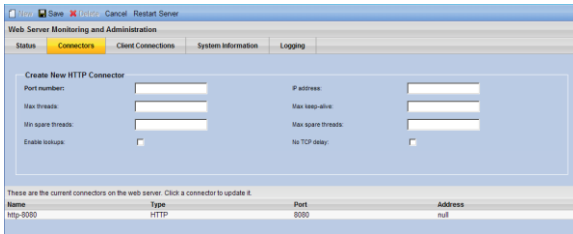
Content Manager is able to utilize secure HTTPS connectors.

Select the Connector tab and then choose “New”. From the drop down selector. You can choose either HTTP or HTTPS.

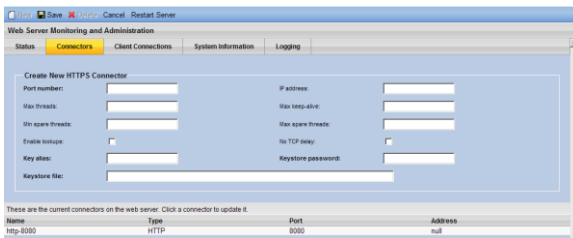


Once you have selected either a HTTP or HTTPS connectors, you can use Content Manager to determine the connections.

The HTTP configuration screen is shown here:



To complete a HTTPS connection see Section 4.3.



You can edit certain settings:

Port number - The port number the connector will bind to. You can only bind one connector to each port on each IP address.

Maximum Threads – Enter the maximum number of concurrent threads this connector can use. The connector will not be able to serve more simultaneous requests than it has threads.

The default value is 150.

You should set this based on how many players are directly connected to Content Manager. To ensure stable content delivery this value should be set to about 4/3 the number of connected players. Specifying a value of more than 1000 has little effect on Windows Operating systems, because there is a limit to the number of threads available to each process.

Max keep alive - Enter the maximum number of requests that can be kept alive waiting for subsequent requests on this connector. The default is 100, and a value of 1 disables this setting. Generally Scala recommends disabling this setting on networks with more than 50 players.

Min spare threads - Enter the minimum number of spare threads for the thread pool on this connector. This setting is the number of threads that are available to serve requests when they arrive. The default value is 4. If your network contains more than 50 players, this setting should be set to 25.

Max spare threads - Enter the maximum number of spare threads for the thread pool on this connector. This setting is the maximum number of idle threads that can live in the pool before the server

begins to close them. The default value is 50. If your network contains more than 50 players, this setting should be set to 100.

Enable lookups - If enabled, Tomcat will attempt to resolve the hostnames of clients (such as players). Enabling this setting can negatively affect performance.

No TCP delay - If enabled, this setting generally improves performance.

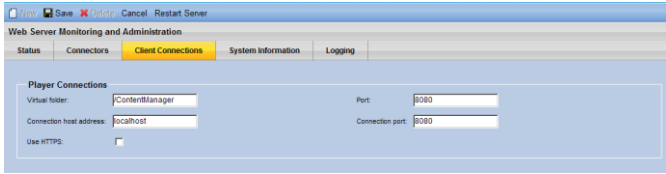
If you edit any of the connector settings, make sure to click the Save button. Then click the Restart Server button to use your new settings. You can create new connectors by using the New button.

4.2.15 Client Connections

NOTE: If you make any changes to the client connections, your player(s) might not be able to connect back to Content Manager. Meaning that you will need to reconfigure any existing players in the field to use the new settings!

When you install Content Manager, the client connection settings are pre-configured.

If you want to change them post installation, go to *Settings > Server Settings* and click the *Client Connections* tab. You can then edit certain settings:



Virtual Folder: - The virtual folder is the path that Content Manager uses within the webserver. For example, the full path after the hostname and port would be:

www.myhost.com:8080/VirtualFolder

Port: - The port number the Content Manager will listen for requests.

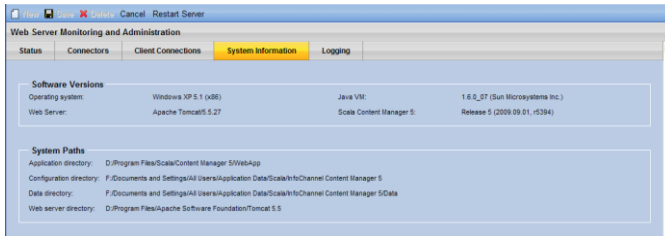
Hostname: - The hostname the Content Manager will tell players to connect to.

Connection port: - The port number the Content Manager will tell players to connect to. If you are using port forwarding, you can specify a different port.

Any changes that you make need to be saved by clicking the Save button. Once any changes are made select the Restart Server button.

4.2.16 System Information

The system information tab displays miscellaneous information about the Content Manager system.



Software Versions

- *Operating System* - Operating system version and architecture.
- *Java VM* - Java virtual machine version.
- *Web server* - Apache Web server version.
- *Content Manager 5* - Content Manager version.

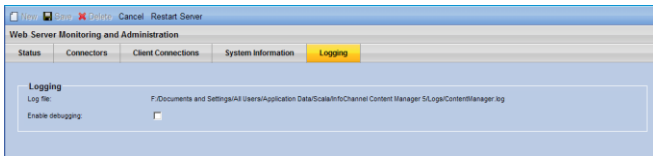
System Paths

- *Application directory*: - The path on the server to the directory where the Content Manager web application is installed.
- *Configuration directory*: - The path on the server to the directory where the Content Manager configuration files are stored.
- *Data directory*: - The path on the server to the directory where the Content Manager data directory is located.

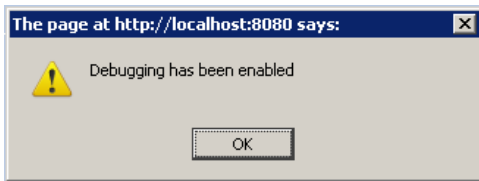
- *Web server directory:* - The path on the server to the directory where the Apache Tomcat web server is installed.

4.2.17 Logging

The logging tab shows the location of the Content Manager log files and also enables you to enable or disable debugging.



If you enable debugging, a dialog box will require that you acknowledge it. Click OK to continue.



4.2.18 Firewalls and Security

Almost all data transferred in a Scala Content Manager network uses HTTP. When Content Manager is installed, by default, port 8080 will be used. If you choose the default port you must ensure that port 8080 is open between your Content Manager and Player machines.

If you specified another port as part of the installation process, please be sure that port is available.

If you are using Windows XP or Windows 2003, Microsoft enables a software firewall by default. However, as part of the installation process, the installer asks you if it's okay to add exclusions to the Microsoft software firewall.

If you chose not to do so, you must add those exclusions manually. Otherwise your player(s) will not be able to communicate with Content Manager. For more information, please consult Microsoft's Windows Firewall documentation.

Many Anti-Virus packages also install (or have available) a software firewall, you must be sure that the Anti-Virus software firewall also allows your network traffic to pass through.

NOTE: The FTP protocol is only used when you specify Player- Direct FTP. This option applies for both Content Manager and Player. If you are not using this plan delivery type, then you do not have to add exceptions for FTP.

4.3 HTTPS Connections

Content Manager supports HTTPS. To configure HTTPS, follow the instructions below.

4.3.1 Generate a certificate

A certificate must be generated first. The Sun Java Development Kit (JDK) and Java Runtime Environment (JRE) distributions include the application *keytool.exe* that creates a certificate.

The *keytool.exe* application exists in the JRE bin directory that Content Manager installs (JRE 1.6_03). Your installed JRE or

JDK bin directory might differ, so you would need to modify it to reflect that difference. To generate a certificate, open a command line and navigate to this folder:

```
C:\Program Files\Java\jre1.6.0_03\bin
```

and execute this command:

```
keytool -genkey -alias cm -keyalg "RSA" -keystore  
"C:\Documents And Settings\All Users\Application  
Data\Scala\InfoChannel Content Manager  
5\Conf\tomcat.keystore"
```

This will create a password protected keystore and add the certificate to it. The keytool will prompt you for information about the certificate:

- *Enter keystore password:* – Enter the password that will protect the keystore.
- *What is your first and last name?* - Enter the URL you'll use when accessing the Content Manager over HTTPS. For example: www.yourdomain.com.
- *What is the name of your organizational unit?* - Enter your department name. For example – Engineering.
- *What is the name of your organization?* - Enter the name of the organization. For example - Scala, Inc.

- *What is the name of your City or Locality?* - Enter the city or locality in which you reside. For example - Exton.
- *What is the name of your State or Province?* - Enter the state or province in which you reside. For example - Pennsylvania.
- *What is the two-letter country code for this unit?* - Enter the two letter country code in which you reside. For example, the United States of America is: US.

4.3.2 Generate a Certificate Signing Request

In order to make Designer publish to Content Manager using HTTPS, you have to have a signed certificate. But first, you have to generate a certificate signing request.

To generate a Certificate Signing Request open the command prompt and navigate to this folder:

```
C:\Program Files\Java\jre1.6.0_03\bin
```

The keytool.exe application exists in the JRE bin directory that Content Manager installs (JRE 1.6_03). Your installed JRE or JDK bin directory might differ, so you would need to modify it to reflect that difference.

```
keytool -certreq -keyalg "RSA" -alias cm -file "C:\cm_certreq.csr" -  
keystore "C:\Documents And Settings\All Users\Application  
Data\Scala\InfoChannel Content Manager  
5\Conf\tomcat.keystore"
```

This action will prompt you to enter the keystore password before a certificate signing request file is generated. Once generated, you can then send the file:

```
C:\cm_certreq.csr
```

to a Certificate Authority that will create a signed certificate for you. Proceed to the next section to install the signed Certificate.

4.3.3 Installing the Signed Certificate

When you receive the signed certificate from your Certificate Authority it must be installed into the keystore. The Certificate Authority should provide instructions for this procedure. However, below is some general information that might help.

First, you must download the Chain Certificate or Root Certificate from your Certificate Authority, and import it into the keystore. To do this, open a command prompt and navigate to this folder:

```
C:\Program Files\Java\jre1.6.0_03\bin
```

The keytool.exe application exists in the JRE bin directory that Content Manager installs (JRE 1.6_03). Your installed JRE or JDK bin directory might differ, so you would need to modify it to reflect that difference.

and type this command:

```
keytool -import -alias root -file "CHAIN_CERTIFICATE_PATH" -  
keystore "C:\Documents And Settings\All Users\Application
```

```
Data\Scala\InfoChannel Content Manager  
5\Conf\tomcat.keystore" -trustcacerts
```

The CHAIN_CERTIFICATE_PATH is the full path to the Chain Certificate that you downloaded from your Certificate Authority.

For PKCS#7 formatted certificate replies, the supporting certificate chain is included in the certificate, so you don't have to install the Chain or Root certificate.

To import your new Certificate:

```
keytool -import -alias root -file "YOUR_CERTIFICATE_PATH" -  
keystore "C:\Documents And Settings\All Users\Application  
Data\Scala\InfoChannel Content Manager  
5\Conf\Conf\tomcat.keystore" -trustcacerts
```

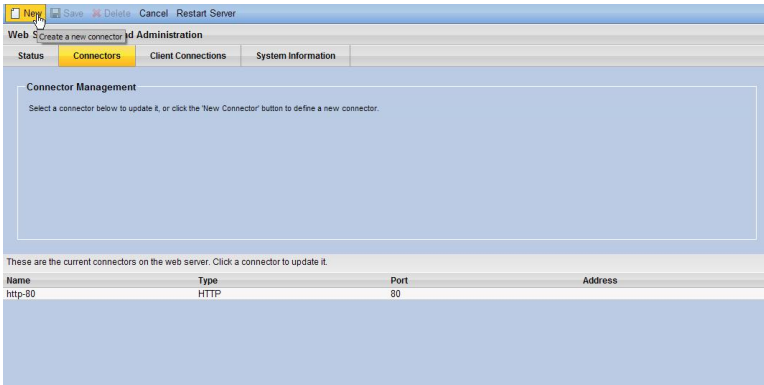
Where YOUR_CERTIFICATE_PATH is the full path to the Certificate that you downloaded.

For more information about these processes, go to:

<http://java.sun.com/j2se/1.5.0/docs/tooldocs/solaris/keytool>

4.3.4 Creating a HTTPS Connector

Once a signed Certificate has been obtained and installed, you need to create a new HTTPS connector.

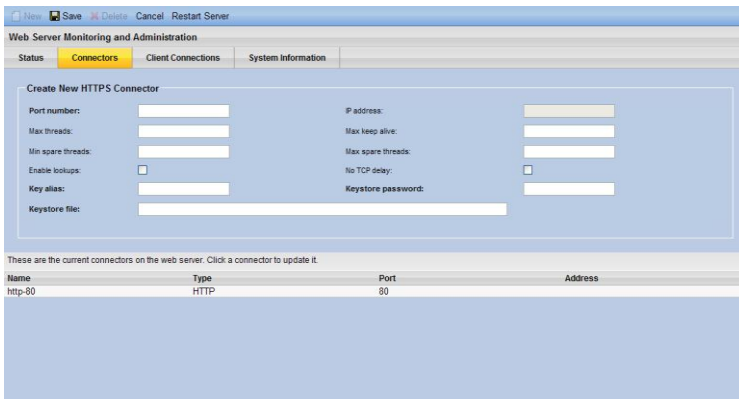


Go to *Settings > Server Settings* and click on the *Connectors* tab.

Then click the *New* button to create a new connector.

Select *HTTPS* from the *Select Connector Type*: drop down menu.

You see this form:



When you add a new HTTPS connector, there are a number of options that can be set:

Port number - The port number the connector will bind to. You can only bind one connector to each port on each IP address. For HTTPS this is usually port 443.

IP address - This setting currently cannot be changed.

Max threads - (Optional) Enter the maximum number of concurrent threads this connector can use. The connector will not be able to serve more simultaneous requests than it has threads. The default value is 150.

You should set this based on how many players are directly connected to Content Manager. To ensure stable content delivery this value should be set to about $\frac{4}{3}$ the number of connected players. Specifying a value of more than 1000 has little effect on Windows 32-bit operating systems, because there is a limit to the number of threads available to each process. Windows operating systems that have 64-bit support can use more than 1000 threads.

Max keep alive - (Optional) Enter the maximum number of requests that can be kept alive waiting for subsequent requests on this connector. The default is 100, and a value of 1 disables this setting. Generally Scala recommends disabling this setting on networks with more than 50 players.

Min spare threads - (Optional) Enter the minimum number of spare threads for the thread pool on this connector. This setting

is the number of threads that are available to serve requests when they arrive. The default value is 4. If your network contains more than 50 players, this setting should be set to 25.

Max spare threads - (Optional) Enter the maximum number of spare threads for the thread pool on this connector. This setting is the maximum number of idle threads that can live in the pool before the server begins to close them. The default value is 50. If your network contains more than 50 players, this setting should be set to 100.

Enable lookups - (Optional) If enabled, Tomcat will attempt to resolve the hostnames of clients (such as players). Enabling this setting can negatively affect performance.

No TCP delay - (Optional) If enabled, this setting generally improves performance.

Key alias - Enter the alias of the certificate in the keystore that Tomcat uses for the connector. If not specified, the first key read from the keystore will be used. Note: You must use the same *key alias* that you specified when you generated your self-signed certificate.

Key password - Enter the password Tomcat will use when retrieving the certificate from the keystore. The default value is *changeit*. You must use the same key password that you specified when you generated your self-signed certificate.

Keystore file - Enter the full path of the keystore file (that contains the certificate Tomcat should use) for this connector. If not

specified, the connector will use a file named *.keystore* in the user's home directory. Note: If you followed the instructions for generating a self-signed certificate this path is:

```
C:\Documents And Settings\All Users\Application Data\  
Scala\InfoChannel Content Manager 5\Conf\tomcat.keystore
```

Once the HTTPS connector has been configured, you should configure the client connections to use the HTTPS connector.

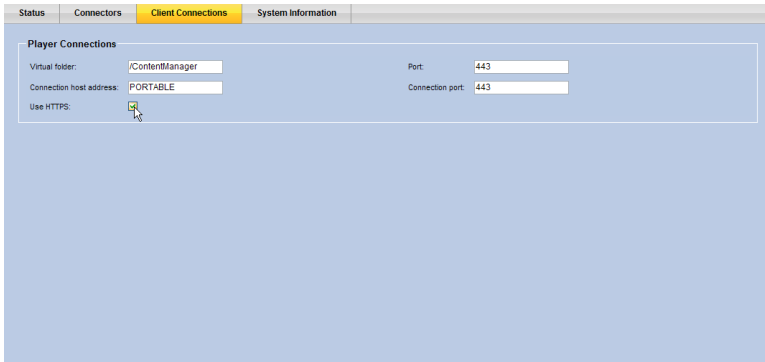
4.3.5 Configuring HTTPS Client Connections

Go to *Settings > Server Settings* and click the *Client Connections* tab.

Change the *Port:* value. Typically this is the same value you specified for the HTTPS connector *Port number* setting.

If Content Manager's traffic is not being port forwarded, the *Connection port:* should match the *Port:* setting. Otherwise use a value your IT administrator suggests.

Then enable the *Use HTTPS:* setting:



Save your settings by clicking the *Save* button.

Click the *Restart Server* button to use your new HTTPS configuration.

||||| 5 | The Content Menu

5.1 Using the Content Menu

The Content Menu is the area where the user will upload and manage all content in the Content Manager system. In this section we will outline how to find and upload content created in Designer and manage that content for use.

Select the Media menu item in the Content drop down.

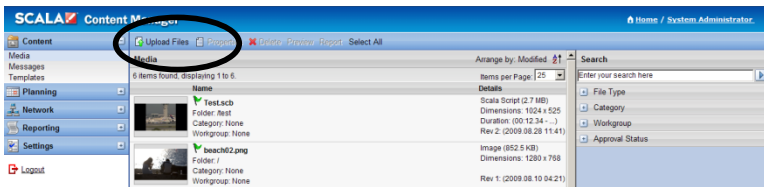
If there are media items in the media library they will appear here. If this is the first time you are using Content Manager, you will need to add media files to the library.

Items created using Scala's Designer can be published into Content Manager.

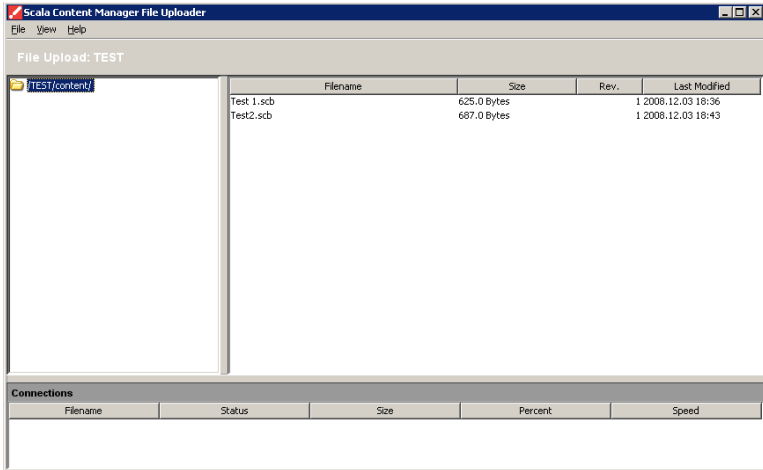
5.1.1 Media Files

Media files are either uploaded directly into Content Manager or published to Content Manager from Designer (5.3.2 Adding Templates).

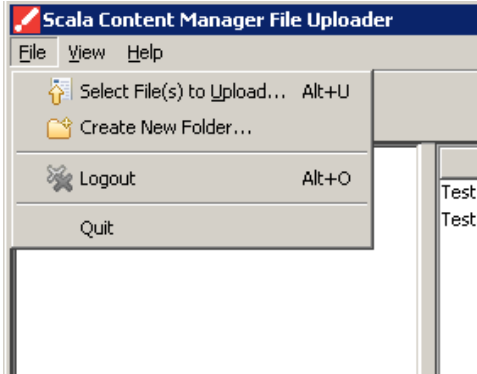
To add Media files - click on Upload Files



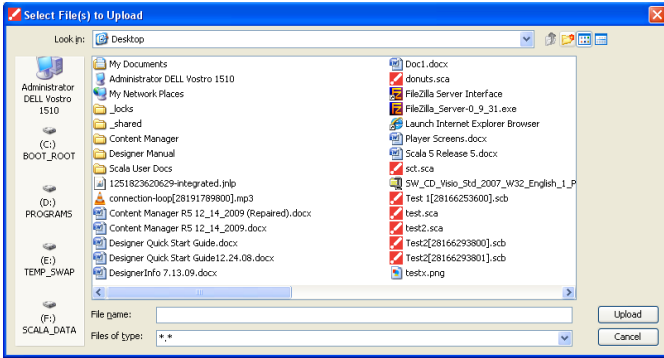
Clicking on Upload Files will open Scala File Uploader in a separate window.



Select File/Select File(s) to Upload (users can also use shortcut keys by selecting ALT+U)



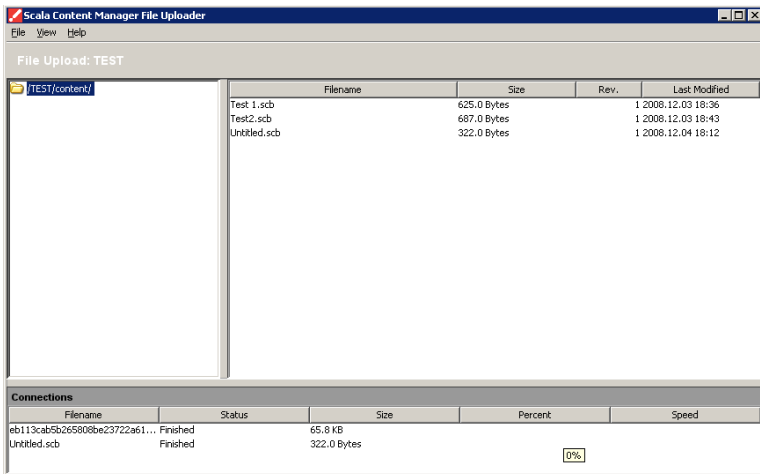
Select File/Select File(s) to Upload (users can also use shortcut keys by selecting ALT+U)



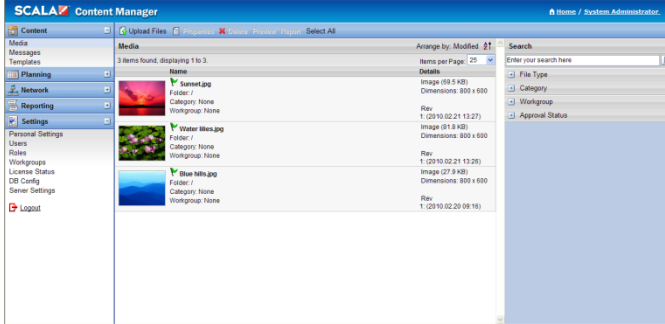
Double clicking on the selected file will add it to the Scala File Uploader or highlight the appropriate file and select the “Upload” tab in the bottom right corner of the Uploader.

You can add multiple files at the same time to the Uploader to add to Content Manager.

The files are now available for use.

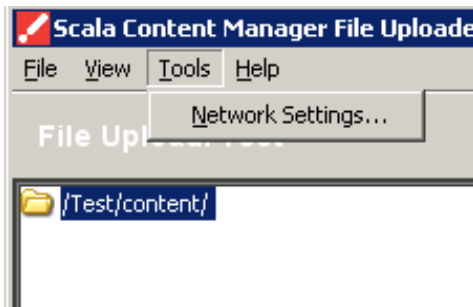


Click on the Media menu item in the Content drop down to refresh the list of items in Content Manager.



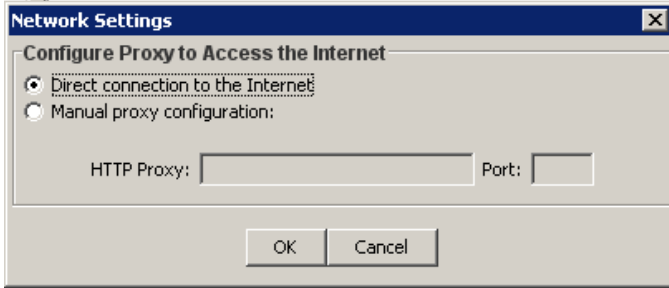
5.1.2 Configuring Proxy Server Connection

The File Uploader in Content Manager is capable of utilizing a proxy server. To configure the proxy server connection, choose Network Settings from the drop-down list in “Tools”.



The Network Setting dialog box allows you to access the internet via direct connection or through a manual proxy configuration. If

you select Manual proxy configuration, you will need to have a valid HTTP Proxy and the port location.

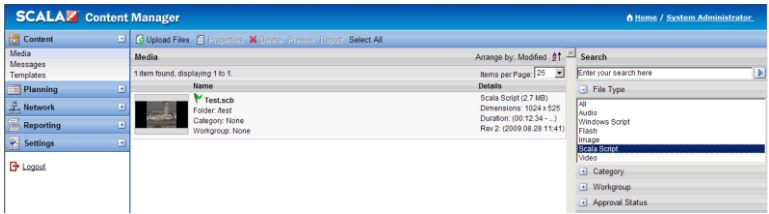


5.1.3 Searching Media Files

Managing multiple files in Content Manager can also be accomplished by using the Search capability in the right panel of the dashboard.

Search allows the user to refine the number of files in the primary pane of the Content Manager dashboard. The user can select an attribute based on “File Type” or “Assigned Category”. (Assigning categories will be covered later in this chapter).

Selecting a “File Type” will resort and expose only those files with the chosen attribute. In the example below, the selected file type “Video” shows only those files in Content Manager that are video files.

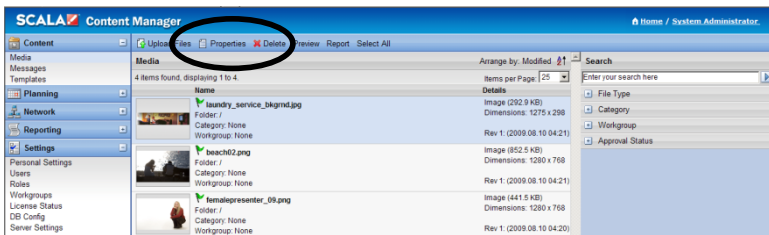


Each of the options: Audio, Windows Script, Flash, Image, Scala Script and Video will provide the user with the list of only those File Types in the primary pane of the Content Manager dashboard.

Search can also be used to identify files by category. However in order to accomplish this type of search, the file must have assigned properties.

5.1.4 Assigning Properties to Media Files

Select a file or files by clicking on them to highlight the file name.



Choose Properties from the menu bar or double click on the selected file to open the Media Properties to edit properties to a media item.

This will allow the user to add or edit:

Description(s)

Categories

Assign Workgroups

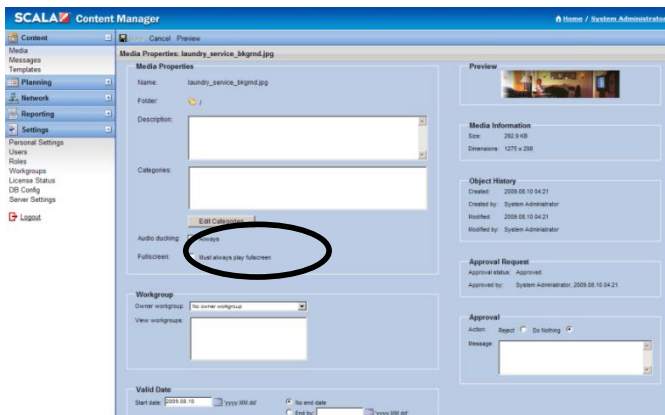
Select or Edit the Valid and End Date(s)

Preview the Item

Review Object History

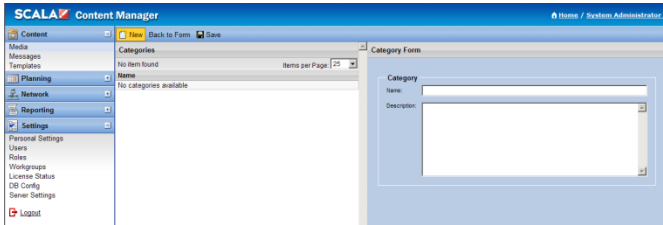
5.1.5 Editing Categories

Editing categories allows the user to initiate a category search for item in the Media Content area of the Content Manager. This allows the user to more effectively tag and locate items as the list of media types and categories grows over time. Select Edit Categories.

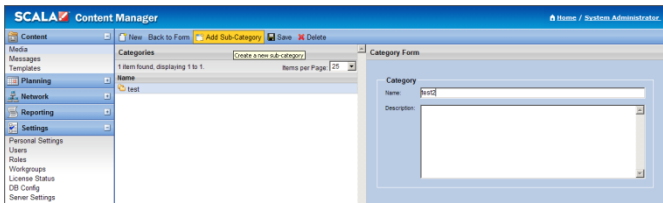


The category form will open allowing the user to name and describe appropriate categories for the media item.

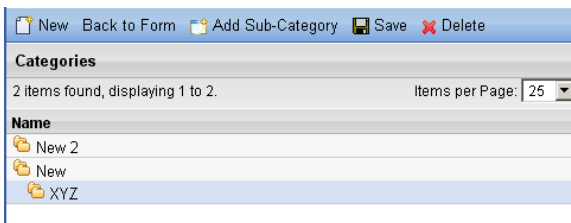
Select New at the top of the menu bar.



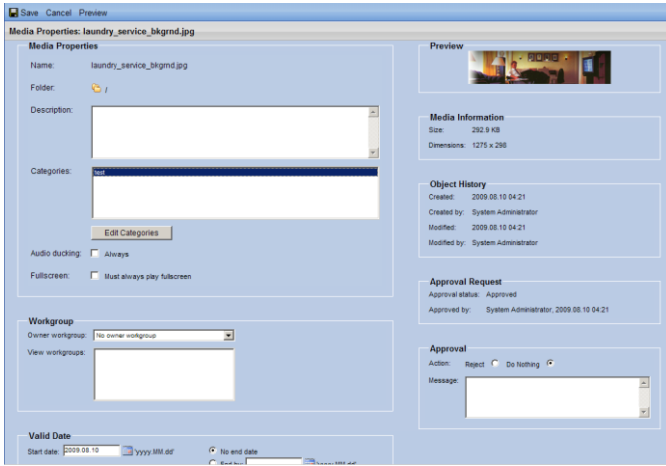
Users will also be able to Add Sub-Categories by selecting a category by highlighting the category and selecting Add Sub-Categories from the menu items.



This will allow the user to add sub-categories using the Category Form. Select Back to Form to return to the Media Properties toolset.

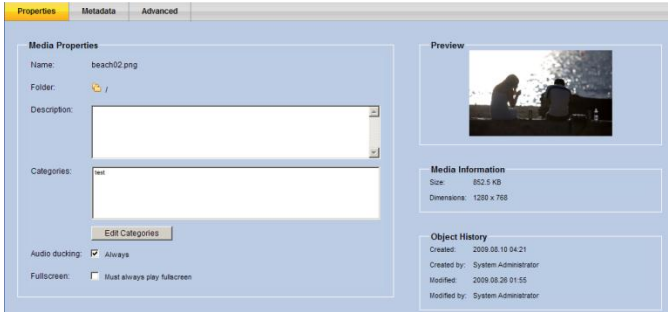


The user can now add a category to the Media item by selecting the desired category and selecting Save from the menu items to keep the changes.



Once the Category types have been added to Content Manager, Media items can now be sorted and searched by selecting the category in the drop down under the Search section of the right hand pane of the dashboard.

In this example, the media item was tagged under the category and therefore appears when the category is selected as a search parameter.



If you select a media item and view its properties, the dimensions and duration of Video files, ScalaScripts, Templates, and Messages are now shown in the Media Information box (image files only show dimensions). (You may need to **Regenerate Thumbnail** to see this information for media already present in your library.)

5.1.6 Audio Ducking

Certain media types support **Audio Ducking**, meaning the player can turn down the volume of other audio (typically background audio tracks) when another media item is playing. You can now specify any of the following:

Media Properties

Name: laundry_service_bkgnd.jpg

Folder: /

Description:

Categories: test

Edit Categories

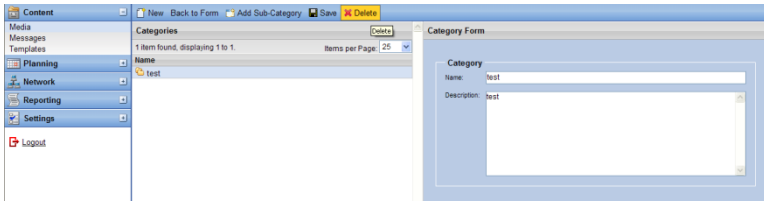
Audio ducking: Always

Fullscreen: Must always play fullscreen

- Mark a Media Item so that it always causes audio ducking when it plays.
- Mark a Playlist Item so that it causes audio ducking when it plays.
- Mark an Event Trigger or Time Trigger so that causes audio ducking when it plays.
- Mark a timeslot so that it causes audio ducking for its duration.

5.1.7 Deleting Categories

Each media item can be associated with a category.



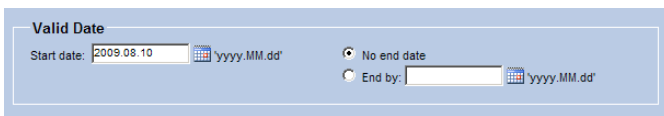
You can delete the category by selecting the name of the category and selecting the Delete button.

5.1.8 Valid Dates

The Content Manager Properties system defaults the valid date – from the date that the item was added to the Content Manager.

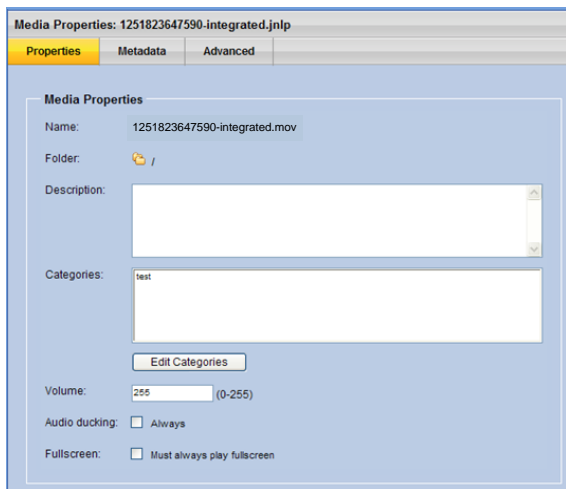
The system also defaults to “No end date”. Both the “Start date” and the “End by date” can be adjusted.

Select the calendar icon next to the “Start date” to adjust the date. Choose the radio button next to “End by” to adjust the ending valid date and select the calendar to adjust the date.



5.1.9 Volume

Certain media items allow an additional property – “Volume”. This allows the user to override the volume of a selected media item.

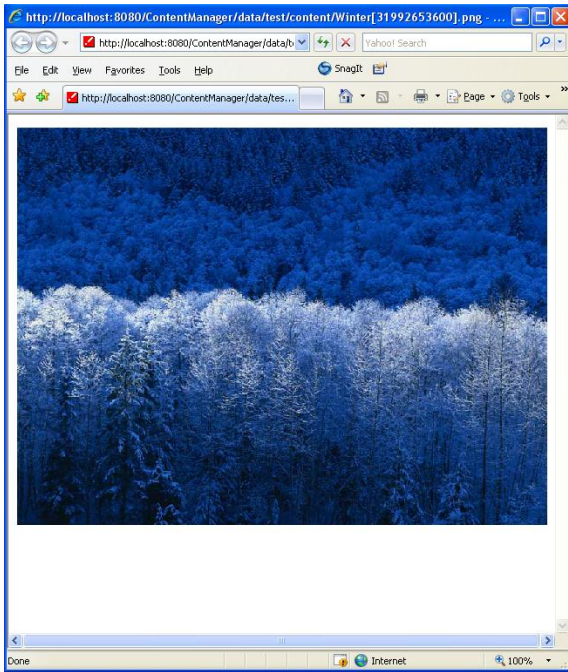


The screenshot shows a dialog box titled "Media Properties: 1251823647590-integrated.jnlp". It has three tabs: "Properties" (selected), "Metadata", and "Advanced". The "Properties" tab contains the following fields and options:

- Name:** 1251823647590-integrated.mov
- Folder:** / (with a folder icon)
- Description:** A large empty text area.
- Categories:** A text box containing the word "test". Below it is an "Edit Categories" button.
- Volume:** A numeric input field with the value "255" and a range "(0-255)".
- Audio ducking:** A checkbox labeled "Always" which is currently unchecked.
- Fullscreen:** A checkbox labeled "Must always play fullscreen" which is currently unchecked.

5.1.10 Preview

The Preview icon allows the user to view the media item.



Note: *If the media item is a Scala script file, it must be associated with a player in order to preview the item.*

5.1.11 Object History

The “Object history” provides details of when the item was created, who created the item, when the item was modified and who modified the item.

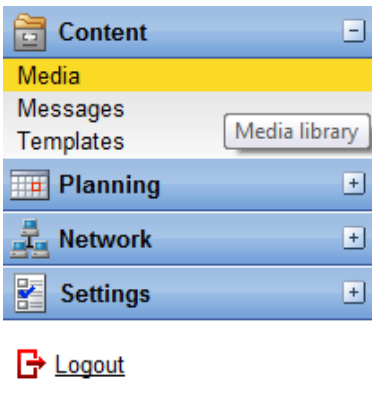
Preview



Object history

Created:	2008.12.03 06:36 PM
Created by:	System Administrator TEST
Modified:	2008.12.03 06:36 PM
Modified by:	System Administrator TEST

Users can return to the Media Library by selecting Media from the Content Menu.



- Content
 - Media
 - Messages
 - Templates
- Planning +
- Network +
- Settings +
- [Logout](#)

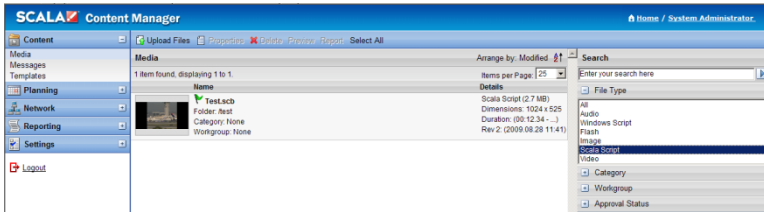
5.1.12 Adding Metadata to a Media Item

There are two primary types of metadata in Content Manager:

Metadata has numerous uses in Content Manager. Users will be able to use metadata in conjunction with media and messages when creating a playlist (see 6.1 Creating Playlists).

Media metadata matching the user selected criteria can be automatically added to a playlist.

Metadata can also be attached to channels.

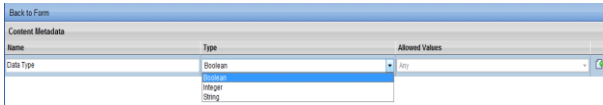


To add Metadata to a media item, select the item from the list of Items by highlighting the item then select Properties or double click on the item to open the Media Properties tool for the item.

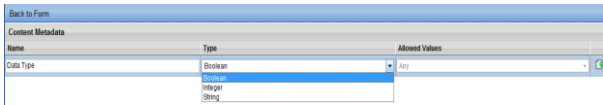
Select the Metadata tab in the menu items.



Select the “Edit Metadata” button. This will open the Content Metadata tool that will allow the user to edit appropriate metadata for an item.

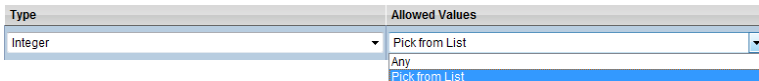


Attaching or adding Metadata to an item can be accomplished by adding a name in the name field of the metadata form.

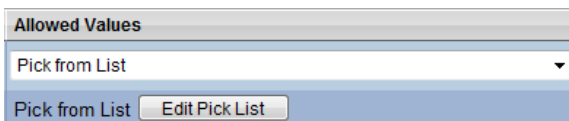


Next select the type of metadata from the Type drop down list and select the add button at the far right hand side of the Content Metadata tool.

The type of metadata selected will determine the “Allowed Values” for the type of metadata.

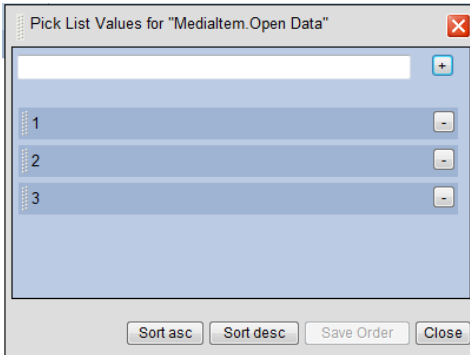


Selecting Integer or String as the type of metadata will provide for “Allowed Values” that includes “Any” or “Pick from List”.

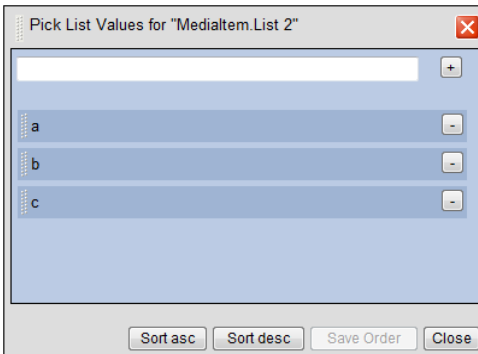


When Pick from List is selected as the allowed value, you must Edit Pick List by selecting the button.

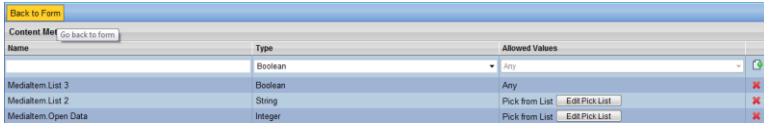
Metadata item values that are integers must include integers as values. Type in the integer value in the open field and select the + sign to add that value to the list.



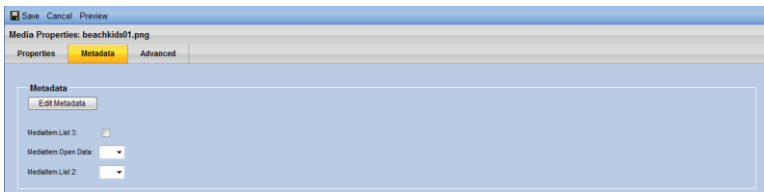
String values for a pick list can include any value appropriate for the item including numbers or words.



Metadata lists can be sorted in either ascending or descending order by selecting the Sort asc or Sort desc buttons in Pick List Values dialog box.



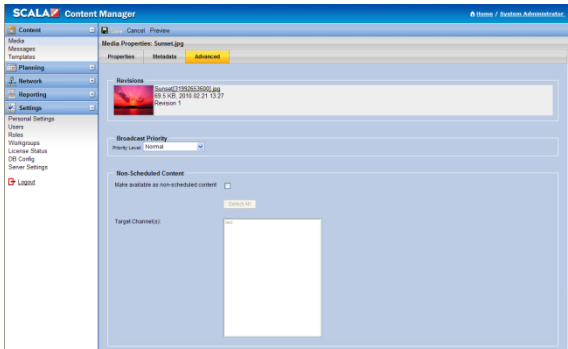
Metadata lists can be deleted by selecting the red x at the right below the Add button. When the user has completed defining metadata types, select the “Back to Form” button on the menu bar.



The user can now select the type of metadata to attach to the item by selecting any Boolean type by selecting the check box next to that type or by selecting the drop down for any String or Integer item.

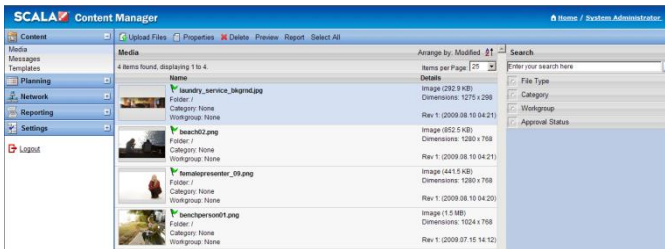
5.1.13 Advanced Information

The advanced tab in the menu bar allows the user to view revisions of the media file, determine broadcast priority using the drop down menu and make the media file available as non-scheduled content by selecting the button and adding or selecting a target channel.



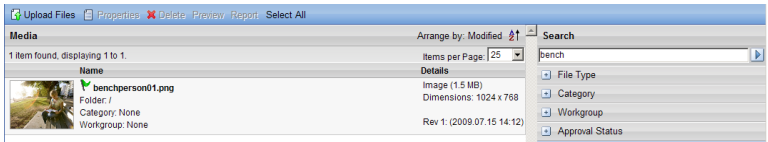
5.2 Using Search

If you have an extensive library of accumulated media, channels and players, Content Manager search capability will allow the user to search for specific information.



This provides the user options to scrolling through lists in order to find the desired content.

Content Manager contains a search function in all of the major category panels for Media, Messages, Templates, Playlists and Players.



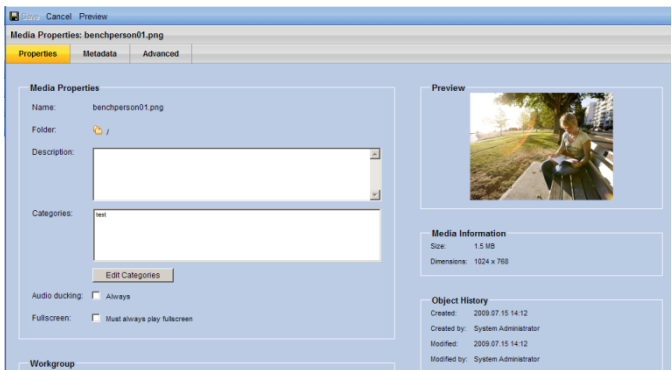
Using Search allows the user to define the item they are looking for or entering the search term in the search box.

Select the arrow on the right (or use the Enter key) to reveal the results in the list panel.

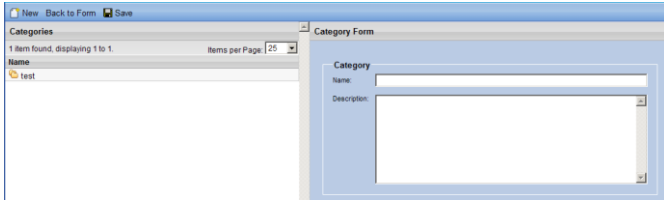
5.2.1 Media Categories

Categories are labels that can be created and assigned to media items, templates, messages and playlists. These labels may also be used to help organize and search for items that match your desired category.

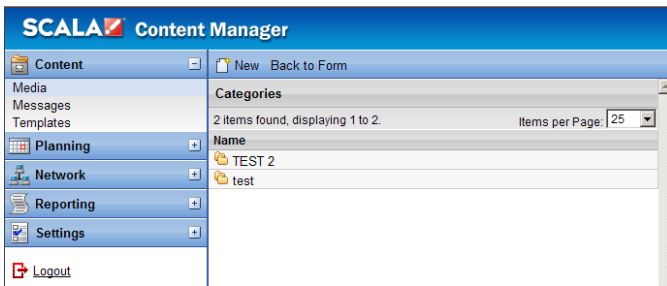
To create and assign categories, first select a media item to view its corresponding *Properties*. Choose *Edit Categories* to create or assign the properties.



If categories have not been created, then you will see the message in the list “No categories available”. Select the *New* button at the top of the panel to create a new category.



A new *Category Form* panel will appear on the right side. Provide a name and description for your new category.



Click the *Save* button at the top of the category panel and your new category name will appear in the list. When selected in the list column, the *Category Form* will appear on the right where edits can be made and re-saved.

To further define your media organization, you may also create nested sub-categories. Simply click the *Sub-Categories* button at the top of the panel and complete the *Category Form* in the same manner as the master category.

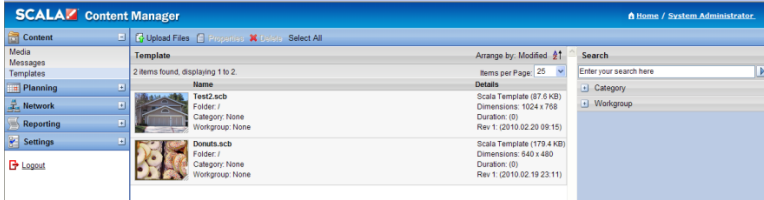
When you have completed editing Categories, simply click the *Back To Form* button to exit back to the media item properties.

5.3 Templates

Templates are created and uploaded using Scala Designer. The template author has created a placeholder for text and/or graphics. When published to Content Manager, it will display all uploaded templates which can easily be managed.

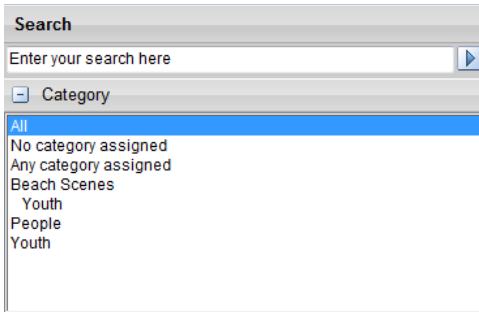
5.3.1 Viewing Templates

If you have already uploaded templates, the dashboard will list the templates available to the user. The dashboard thumbnails and the template list name and details provide other identifying information for each template.



The templates can also be found using the search tool in the right hand pane.

Searching templates is limited to filtering by category.

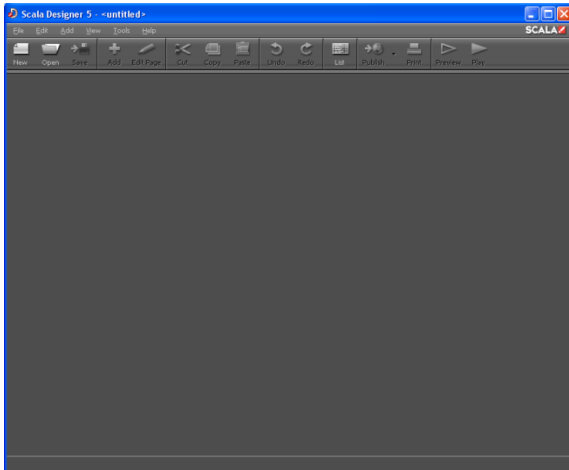


Adding new templates can be accomplished using Designer.

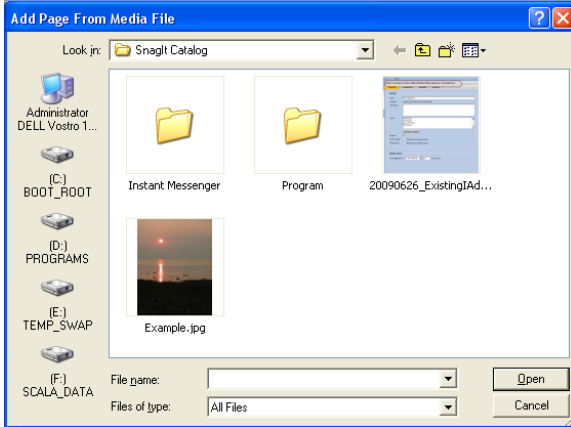
Before you add a template, make sure that Designer is properly installed and available.

5.3.2 Adding Templates

In order to add a template to Content Manager open the Designer application and select Open from the top tool bar.

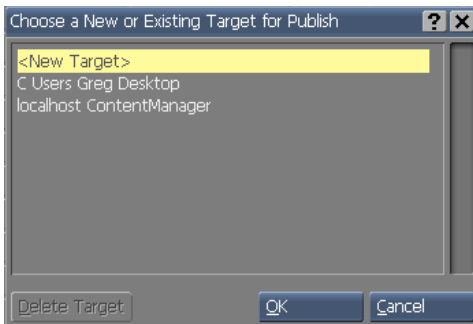


The system will bring up a dialog box that will allow the user to select the existing template from any stored templates available.

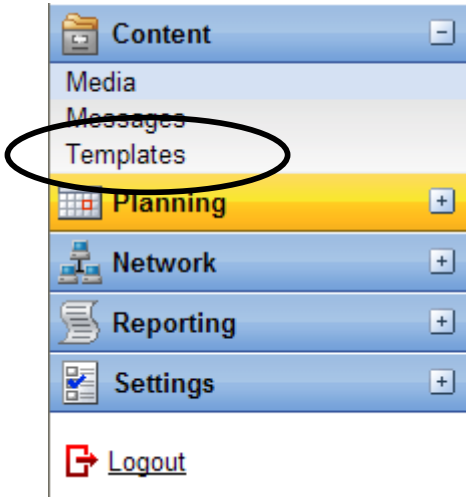


Select the appropriate file to add and click on the Open button at the bottom right side of the dialog box.

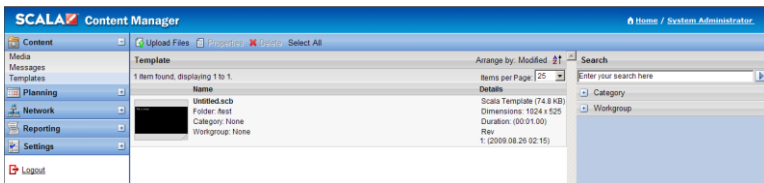
This will bring the user back to Designer. Choose Publish and select the target where you intend to publish the content and select OK.



The new Template will not automatically appear in the template list in Content Manager. Click on the Templates option in the Content menu.



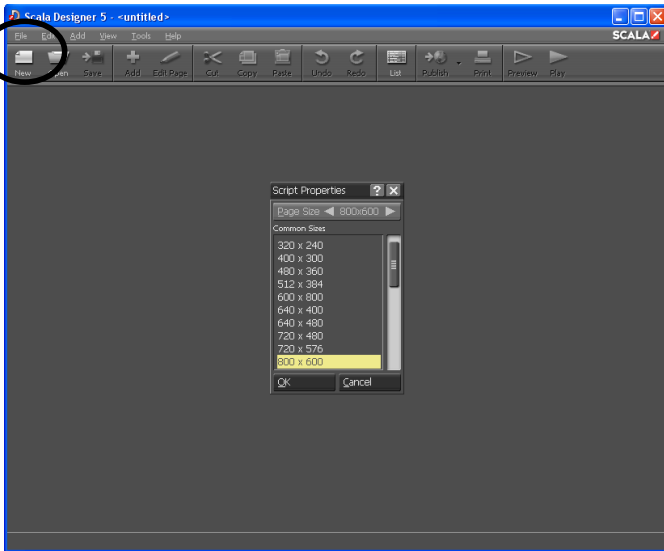
This will refresh the list and will include the new template that you uploaded.



5.3.3 Creating New Templates

Note: *Creating new templates is covered in detail in the Designer user manual. This overview will not cover the same level of detail for creating complex new templates.*

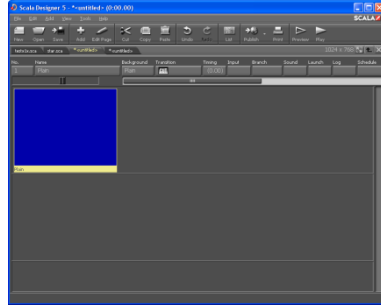
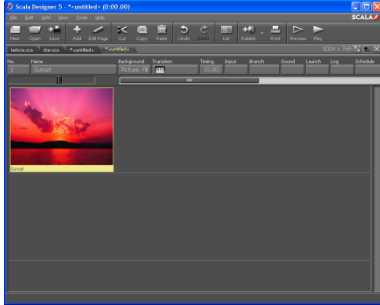
To create a new template, select New in Designer.



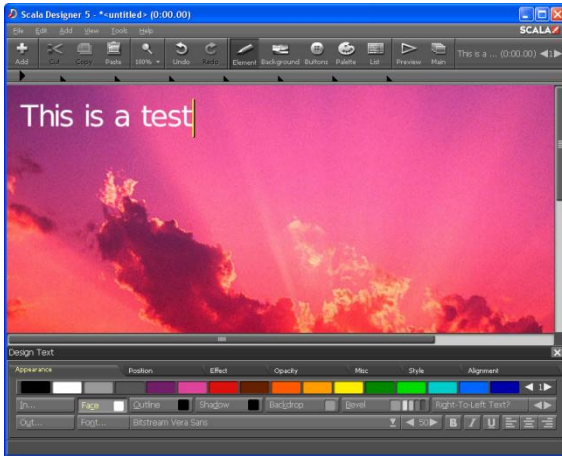
Select the Page Size in the dialog box that appears in the primary pane of the system.

Click OK.

You can add an existing item by selecting the Add Button or go to the drop down menu and select Add/Add Plain Page.



Clicking on the picture or the plain page will open the editing screen allowing the user to enter text or add content elements to the template.



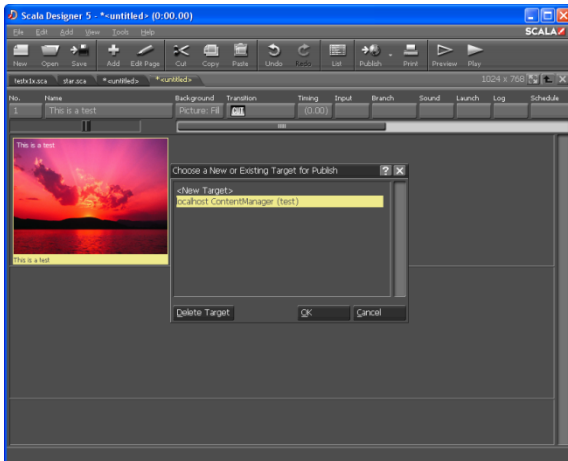
In order to bind the test to a data field you can right-click on it and select Bind to data field.

Select Preview to preview the final template.

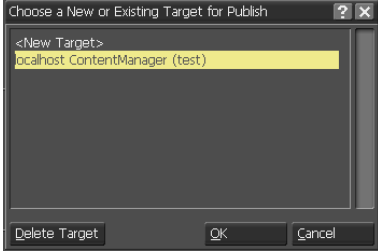


Click on the screen to Close the Preview.

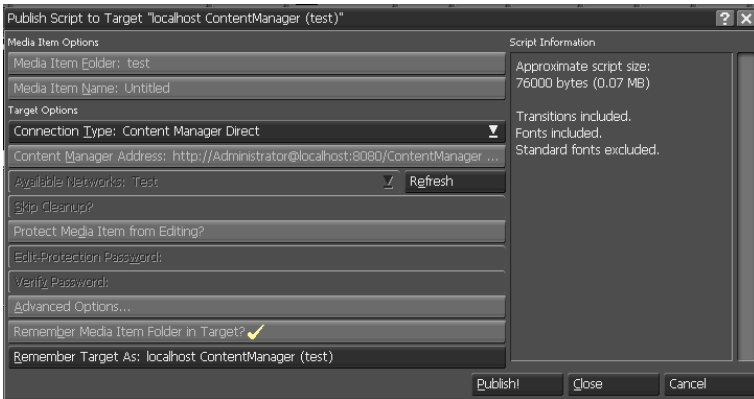
The system will provide a dialog box to ask if you want to save the changes. Click Yes.



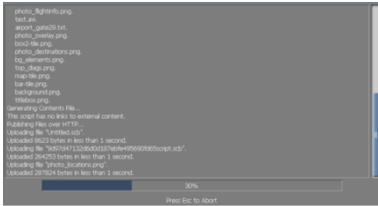
Choose Publish and select the target where you intend to publish the template to and select OK.



This will open the Publish Script details dialog box. (For specific details on which options to select, please see the Designer User Manual)

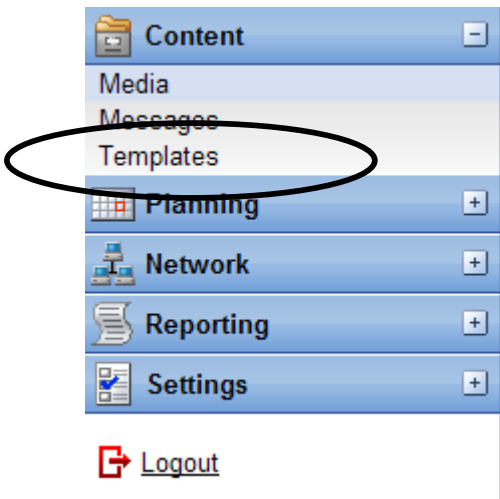


Once you have chosen the appropriate options, click on the Publish button at the bottom right side of the screen.



The progress bar will show the % complete. Once the bar is finished click on the Close button in the middle of the bottom portion of the dialog box.

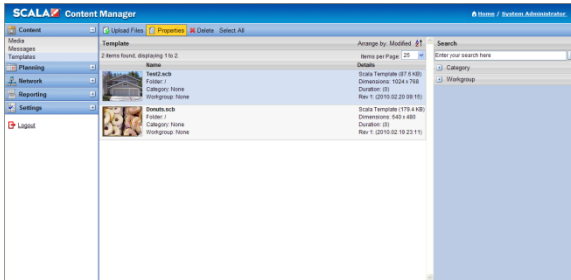
The new template will not automatically appear in the template list in Content Manager. Click on the Templates option in the Content menu.



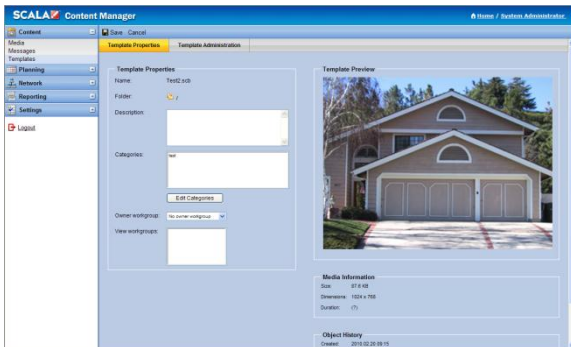
This will refresh the list and will include the new template that you published.

5.3.4 Template Properties

Select a template from the template list by highlighting it in the list. You can open the template properties by either double clicking on the template or by selecting Properties from the tool bar.



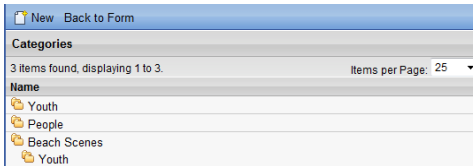
This will open the Template Properties options in the primary pane of the dashboard.



The name of the Template and the folder where the template is stored will appear at the top of the page.

The properties tool allows the user to add a description of the template, assign it to a category and to select which owner/viewer workgroup to attach the template.

The user can also edit the categories by clicking on the Edit Categories button in the middle of the pane. This will take you to the Categories tool where you can add additional categories (see 5.1.5 Editing Categories).



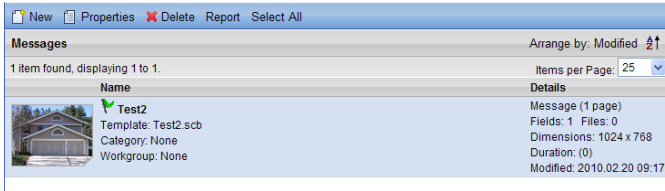
5.3.5 Template Administration

Template fields can be changed using the template fields administration tool.

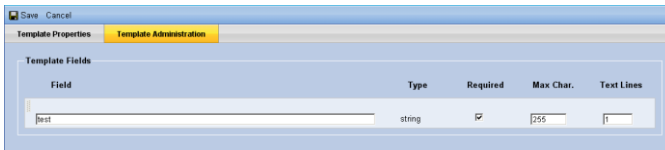
The user can set the field values, determine if the field is required, set the maximum number of characters and limit the maximum number of lines.

In Template Administration, select the desired field to change and make the changes.

This allows the user to manage the message templates and the required information as well as the field, type, required vs. not required, maximum character length and maximum lines for messages in the system.




Changes in the template administration will show up in the messages that use this template.



The Message screen now shows the changes made in Template Administration. The user also has the option of updating the preview – by clicking on the Update Preview button.

Message Preview, Page 1 of 1



|| ◀ ▶

Update Preview

Media Information

Dimensions: 1024 x 768

Duration: (?)

Approval Request

Approval status: Approved

Approved by: System Administrator, 2010.02.20 09:17

Approval

Action: Reject Do Nothing

Message:

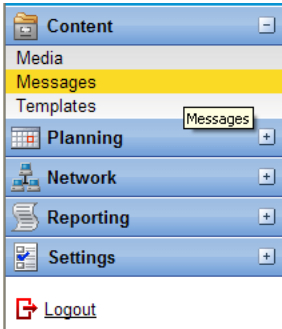
5.4 Messages

Adding messages into Content Manager is an important part of managing content across the system.

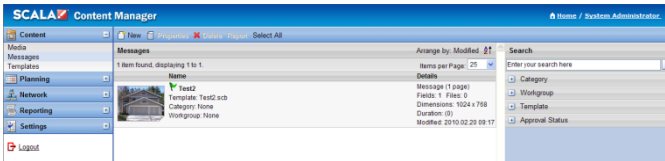
Note: Before the messaging feature can be used, there must be templates in the system in order to send or receive or use the message system. (See 5.3

Temp

ates)

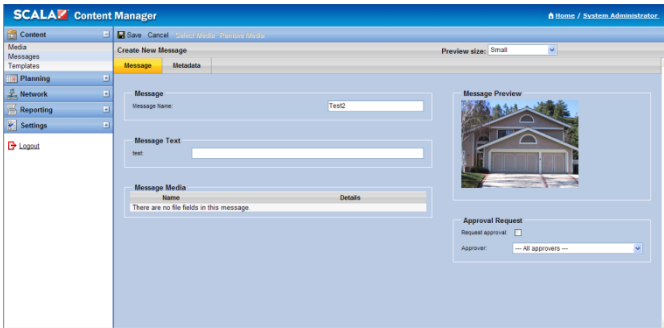


In order to add a message, click New then select one of the templates on the primary pane of the dashboard.



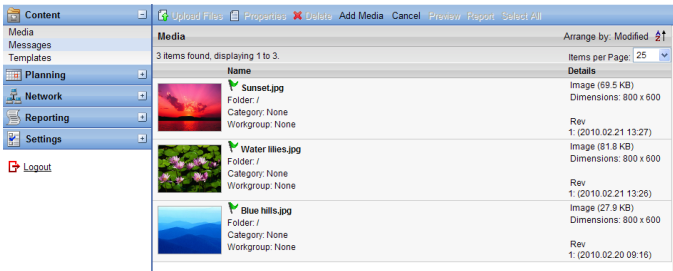
Once you've highlighted the template, select Next on the toolbar.

The Message Name will pre-populate with the name of the template.

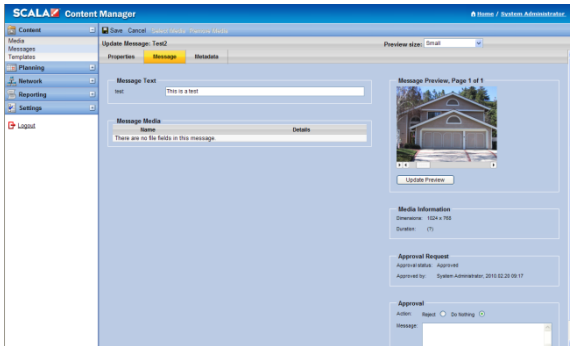


In this example all Message Text fields are required.

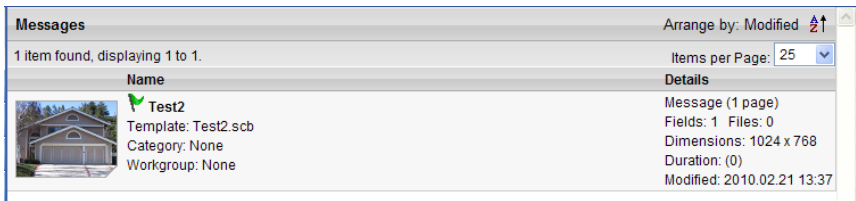
To select the Message Media to include in the message, double click the box under Message Media.






This will open the list of media that the user can attach to the message. Select the appropriate media and click on Add Media on the top tool bar.

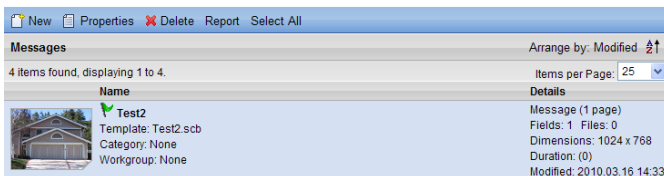


The Approval Request option will allow you to initiate workflow. Select the box – Request Approval then choose the Approver from the drop down list.

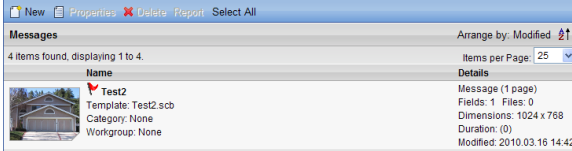


All messages include a flag status indicator.

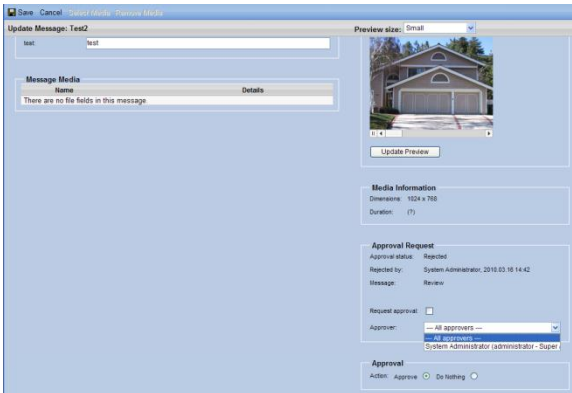
Green	Approved	
Yellow	Approval Needed	
Red	Rejected	



Messages requiring action will appear in the Network Summary section on the dashboard.

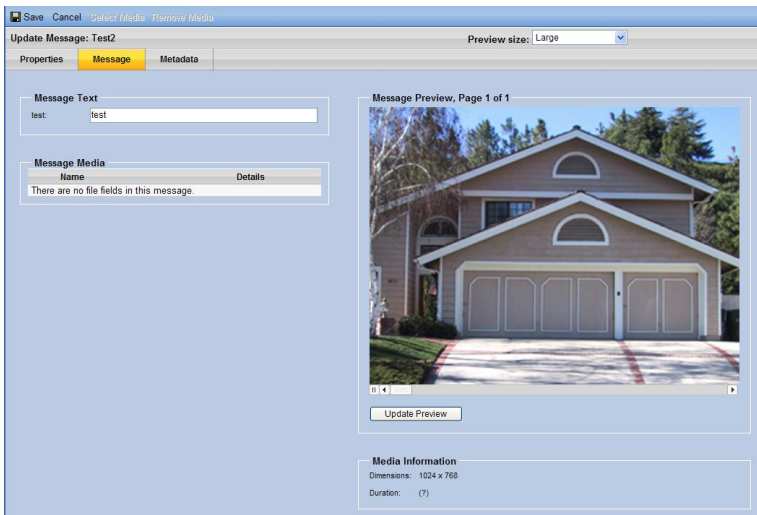
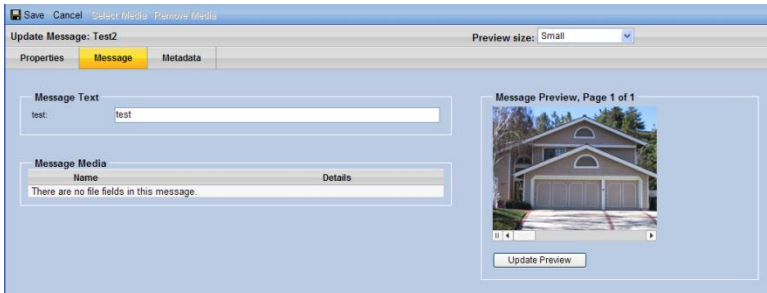


Select the message from the list – this will take the user to the message requiring action in the message section of the system.

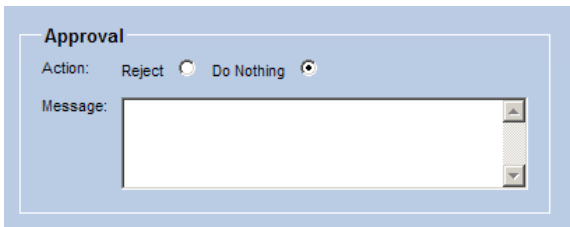


Approval-related emails include the thumbnail of the item to approve, and a link you can click to visit Content Manager.

On the **Messages** screen, you can choose between Small and Large **Preview size**. The large size makes it easier to see all the details of the message.

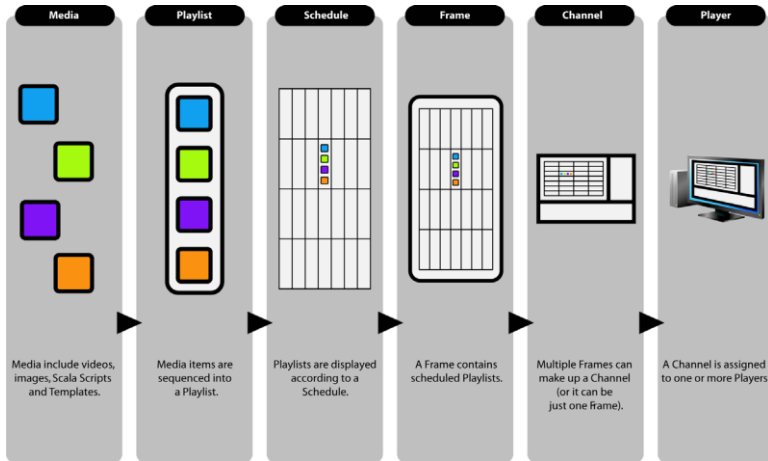


To approve messages, choose the radio button for Reject or Do Nothing or Approve. The system allows you to add a message.



IIII 6 | THE PLANNING MENU

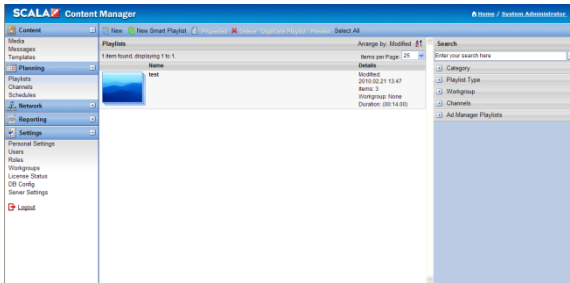
Users can start planning for publishing and playing content by using the Planning menu in the left hand pane on the Dashboard.



The flow of media content through Content Manager is a simple and intuitive process. Media (videos, images and Scala Scripts) are published from Designer or selected inside Content Manager and sequenced in a Playlist.

Once a Playlist is created, it is assigned and scheduled to a Frame in a Channel which then plays on a Scala Player, or series of Players.

Select the + sign next to Planning to open the menu. Playlists, Channels and Schedules are the items that appear. Select Playlists.



Note: Users will also be able to use the Search utility to search for and find playlists.

6.1 Creating Playlists

Select New from the menu items at the top of the toolbar. This will allow the user to create new playlists.

The system defaults to the Properties tab – allowing the user to edit or select the properties of the playlist including the name that you will use to identify the playlist and choose the Category to which the playlist will belong.

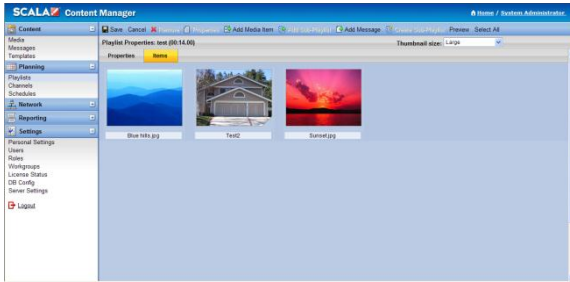
6.1.1 Editing or Adding Workgroups



To add or edit a workgroup owner, choose the Owner Workgroup dropdown and select the appropriate workgroup owner. This will allow that workgroup to view the selected content.

6.1.2 Adding Media Items to Playlist

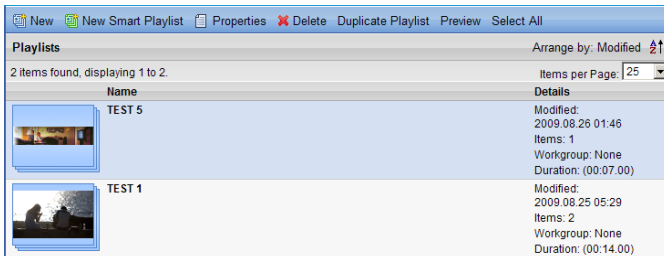
Select the Items tab next to the Properties tab in the Playlist Properties. Then select Add Media Item from the tool bar at the top of the Content Manager dashboard.



Choose the item or items from the list of media items by clicking the item name. You can select multiple items by clicking on the item in the list.

To deselect the item you will need to click on the item a second time.

Items that you have selected will appear highlighted in light blue.



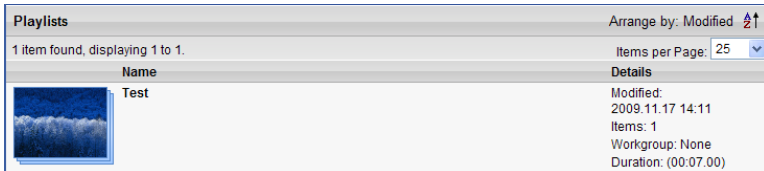
Select Add Item(s) in the tool bar to add the item(s) to the Playlist Properties.



The toolbar also allows you to Select All of the media items which would allow the user to add all of the media items to the playlist properties.

Selecting cancel will not delete any items but will return the user to the Playlist Properties screen and cancel the actions taken including selecting any or all of the media items prior to adding them to the playlist properties.

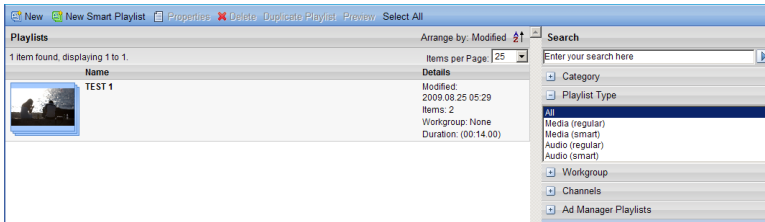
Once a media item or items have been added to the playlist properties, it will appear in the list of items.



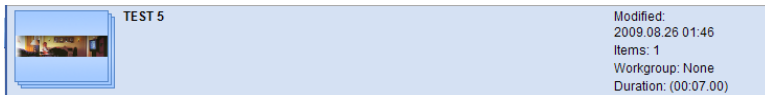
Select Save to add the media item and the system will return the user to the Playlist. The media item will appear in the Playlist.



When creating a Playlist or Smart Playlist, a **Type:** selector that lets you choose between **Media**, **Audio**, and **Data**. **Media** is the default. **Audio** is for playlists that contain only audio Media Items and other audio sub-playlists. **Data** lets you put any type of file, including non-media types such as XML, into a playlist. This is primarily useful for playlists to be used as non-scheduled content playlist.

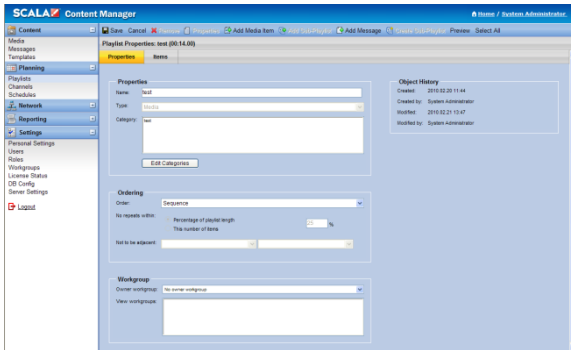


Content Manager now shows the expected duration of playlists.

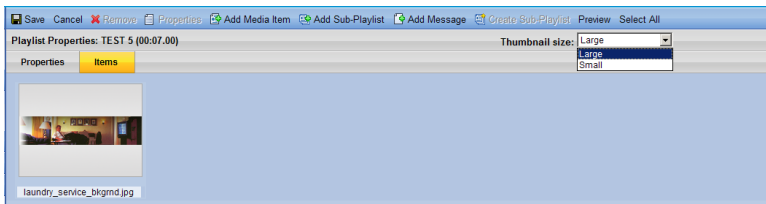


6.1.3 Playlist Properties

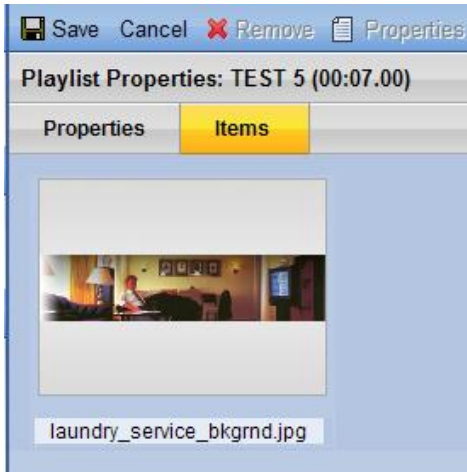
Playlist Properties allows the user to set up properties for playlists and develop messages around the content for playlists.



On the **Playlists** screen, when viewing Items you can select between small and large thumbnail size.



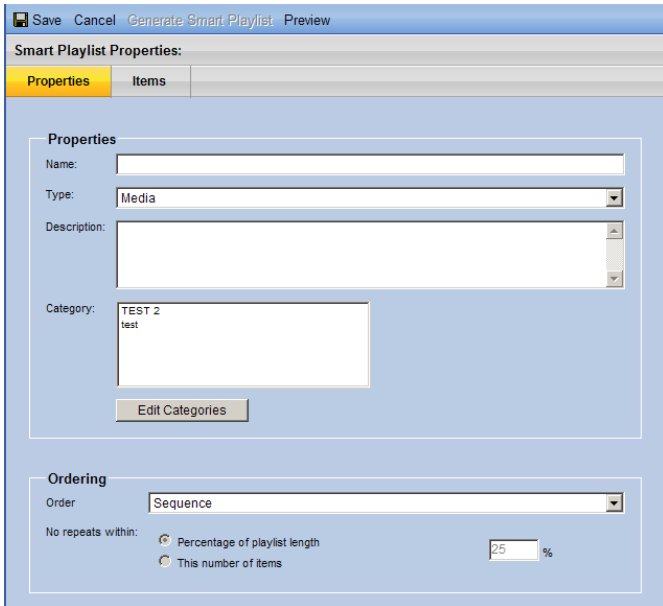
When adding pictures to a playlist, the default duration is seven seconds.



6.1.4 Creating Smart Playlists

Select the New Smart Playlist Menu item from the toolbar. This will open up the Properties screen necessary to create a smart playlist.

Just like with a regular playlist, enter the name for the smart playlist.



Select the Smart Playlist type by using the *Type* selector. The choices are Media, Audio and Data. By selecting Audio, *Playlist Media Item Properties* are not available.

Enter an optional description in the description field.

Choose the category for the playlist. You can edit the categories by selecting the Edit Category button below the category list. (5.1.5 Editing Categories)

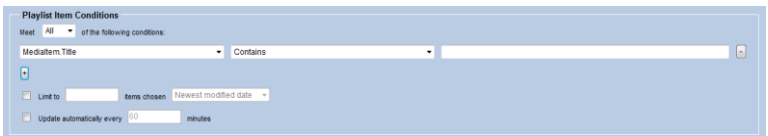
Select the Workgroup [for additional information see: (6.1.1 Editing or Adding **Workgroups**)

If Media or Data Type is chosen, the *Playlist Media Item Properties* are editable.



This tool allows the user to choose or modify the duration of the image(s), the type of transition, and the transition duration.

All smart playlist types can choose Playlist Item Conditions. Select the + sign to add conditions that the item(s) will meet. Options include having the item(s) meet any or all of a single or multiple conditions set up in the Playlist Item Conditions tool.



If you select the playlist to be updated randomly, the system will warn you about bandwidth consumption.

Select Save to keep the changes.

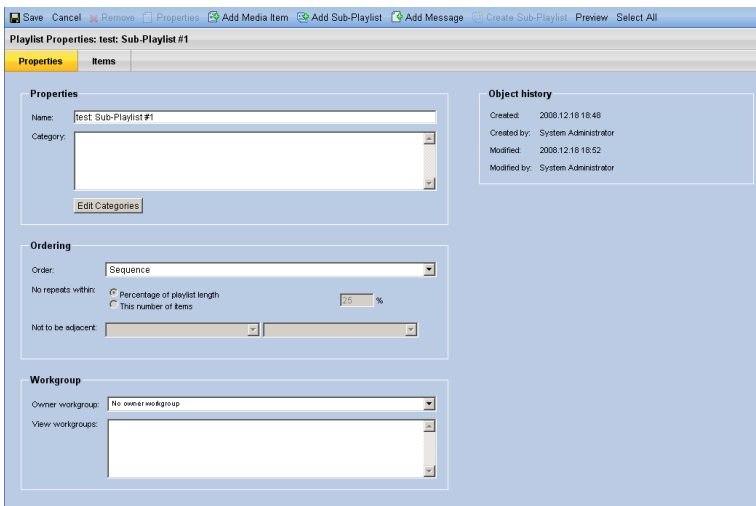
When you select an item from the Playlist you can review the playlist properties, delete the playlist, duplicate the playlist or preview the playlist.

Selecting Preview will result in a pop up message indicating that the playlist has been sent to the appropriate preview player(s).

6.1.5 Creating Sub-Playlists

Sub-Playlists are nested inside each other, so you can create several smaller playlists which can function independently, or grouped together inside a larger, master playlist.

When a Playlist is open, you can add any other playlist in your library as a sub-playlist.



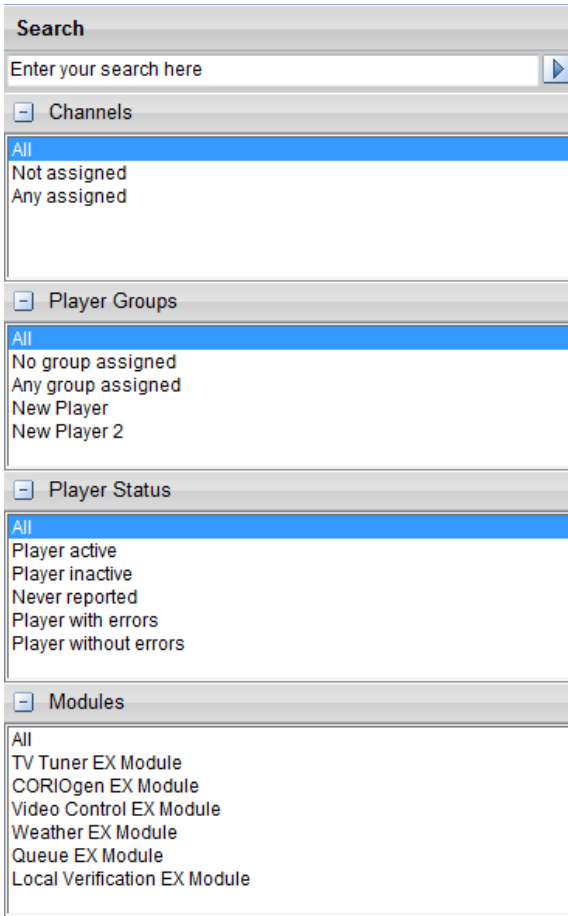
Double-click on a Playlist to open the Playlist. Select the Add Sub-Playlist button at the top of the Playlist panel. Then select a playlist from those listed in your library and click the Add button at the top of the panel.

The selected Sub-Playlist is now added to your master playlist in the Playlist Items panel. Click the Save button to retain the added Sub-Playlist items.

6.1.6 Searching Playlists

The Search tool in the right hand pane of the dashboard allows the user to search on multiple attributes of the Channels, Player Groups, Player Status or Modules.

When you search for an item, either enter the name of the item in the search area <Enter your search here> or select the attribute in the lists below to narrow the search result set by the selected attribute.



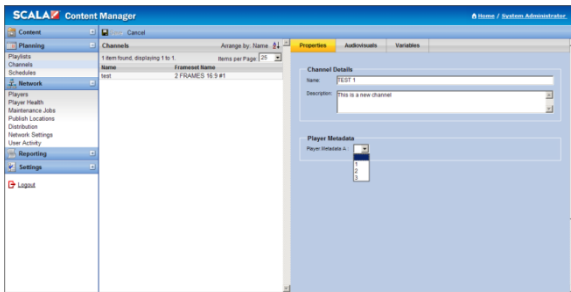
6.2 Creating Channels

Select the Channels menu from the left hand list. Then select New from the toolbar at the top of the dashboard to create a new Channel.

This will open the Channel Details tool in the right hand pane of the dashboard.

6.2.1 Channel Properties

First choose the properties of the Channel including name and description. If there is metadata available, it will appear in the properties tab.



Note: It is important to identify properties by names that clearly mark the information so that it can be located using the search tool at a later time. In large Scala implementations, the size and number of items will require the use of the search tool and this tool will be more effective when appropriate naming conventions are used.

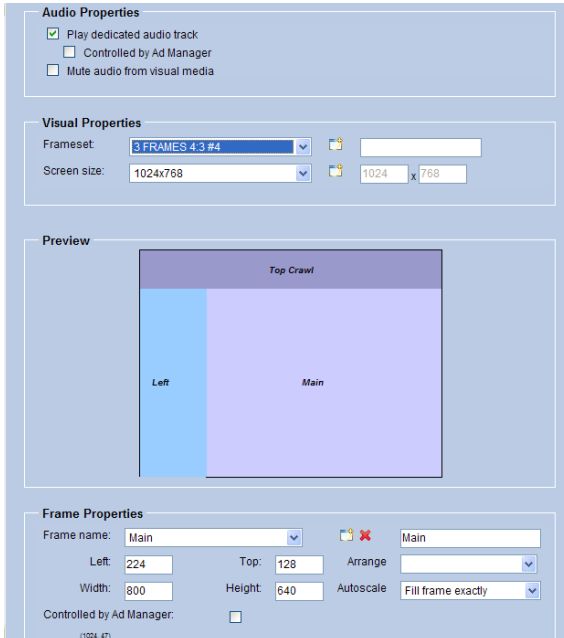
You will also be able to select any Player Metadata that has been identified or added to Players.

6.2.2 Audiovisuals

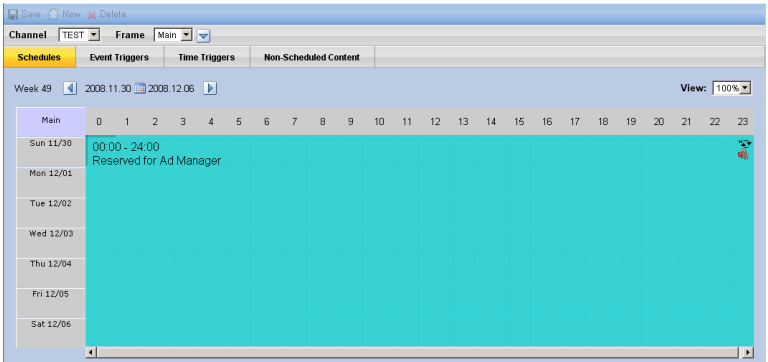
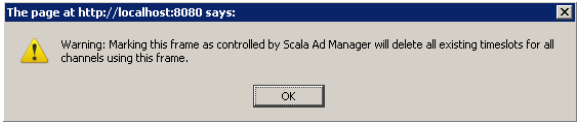
The Visual Properties tool allows the user to define and set the appropriate frames, screen size and frame properties for a

channel. The preview area will allow you to view the Properties as they will appear on the channel.

Select the Frame Properties and Screen size from the drop down list. The preview area will adjust based on the selected frameset properties. This will allow you to visually see the results of your selections.

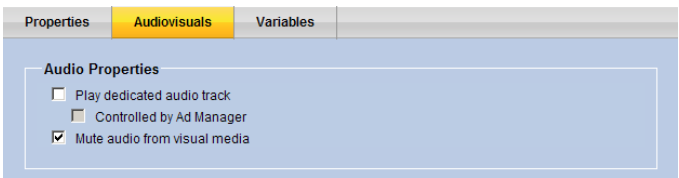


If you place a check in the Controlled by Ad Manager box, the schedule will be only available for Ad Manager. Check with your Scala authorized representative to find out more regarding Ad Manager.



When defining a channel, there are additional audio-control options:

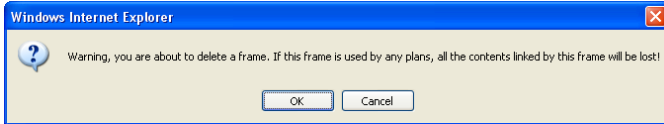
- Play separate audio track
- Mute audio from visual media items



This lets you add a separate audio track to a channel (instead of or in addition to any audio within the channel's visual Media Items), or lets you define an audio-only channel.

6.2.3 Channel Warning Notices

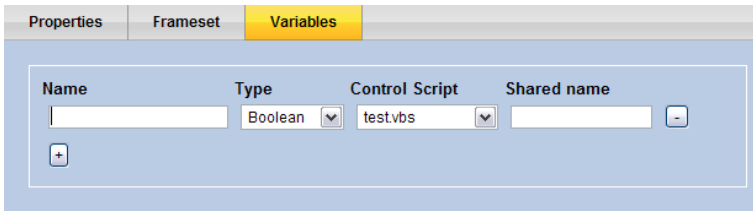
If you delete a frame and it is used by any channel, the contents linked to the frame will be deleted and lost.



If the frameset is changed or modified, it can affect schedules for the selected channel causing them to disappear.

6.2.4 Channel Variables

Set the channel variables by selecting the Variables tab at the top of the Channel Variables tool in the right hand side of the dashboard. This allows you to select variables that are attached to the channel that can be selected in the set up of the channel.



Channel Variables is the way to link a control script to a channel. To access Channel Variables, go to *Planning-> Channels*. Select the Channel you want to add a channel variable to, and click the *Variables* tab. Click the plus button under Name heading to create a new channel variable. You see this form:

Name	Type	Control Script	Shared name
Variable 1	Integer	<Please Upload Scr	<input type="text"/>
Variable 2	String	<Please Upload Scr	<input type="text"/>

Note: *The variable name cannot start with a digit.*



This form allows you to do the following:

Name - Set a name for the Channel Variable. This name must be unique, and is automatically prepended with “Channel”.

Type - Select the variable type you want to use. This can be either Boolean, Integer or String. Note that currently only Boolean and Integers can be used to trigger playlists. However, you can also share String variables between your Control Script(s) and Scala.

Control Script - Content Manager automatically lists all Control Scripts that have been uploaded. Select the Control Script you want to be associated with this channel variable.

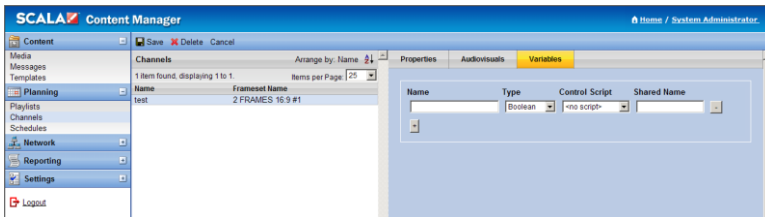
Shared Name - The name by which your Control Script will see and be able to modify this Channel Variable. It will initially be filled in automatically with the text used in the Name field (except it will not have the “Channel.” prefix - periods are not allowed in variable names), but it can be anything you want.

The important part is that it must match the name of a variable used inside the Control Script.

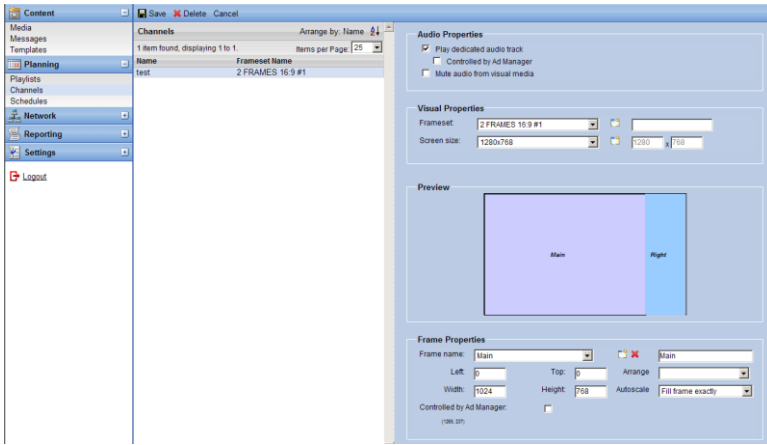
More than one Channel Variable can be linked to the same Control Script. Simply choose the same Control Script for each Channel Variable. Note that in this case, only one Control Script will be run. Once you have added one or more variables to your channel, make sure you click the Save button to keep your changes.

Once you have completed setting up the Channel, select Save at the top of the toolbar in the dashboard to save the channel.

You can also delete channels by select an existing channel from the list by highlighting the channel and selecting delete at the top of the toolbar in the dashboard.

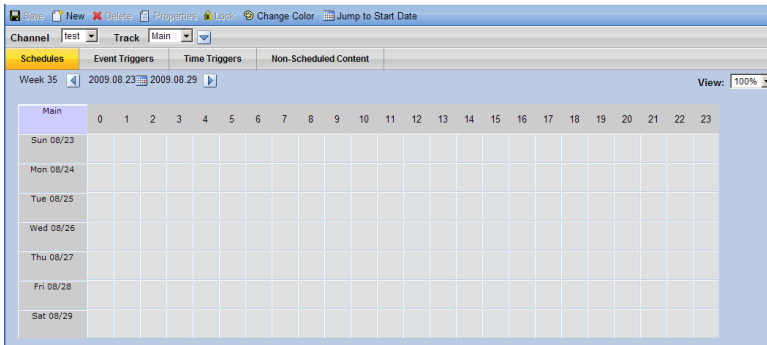


The name of the new channel will now appear in the list of Channels along with the Frameset Name.



6.3 Creating Schedules

Select the Schedules item in the list in the left pane of the dashboard.



This will open the Schedules tool in the primary pane of the dashboard. This tool can be used to establish schedules for

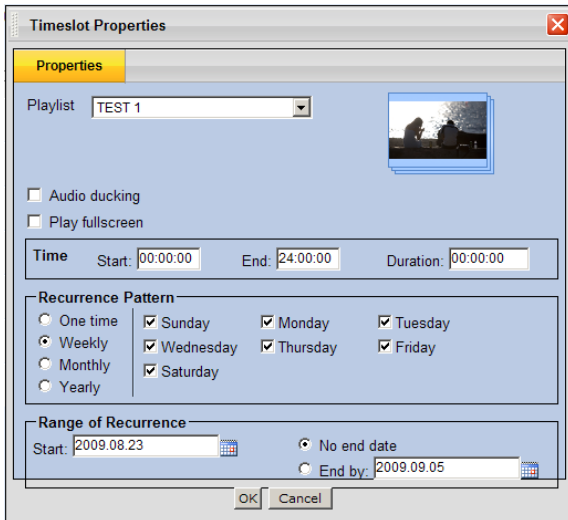
channels, select event triggers and time triggers for content, and allow for non scheduled content as well.

On the Schedules screen, the button-bar has buttons for Properties, Lock, Unlock, Change Color, and Jump to Start Date.

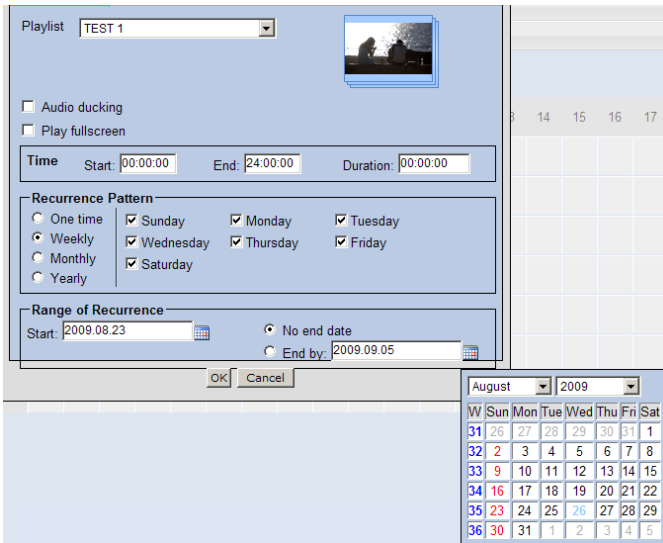
All schedules are related to their specific channel. Select the appropriate channel in the drop down to create or change the schedule.



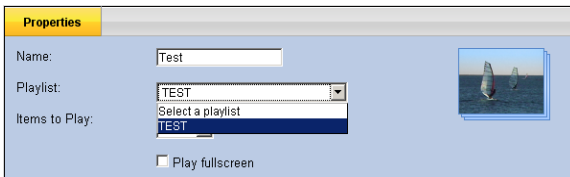
Select New in the top tool bar. This will open the Timeslot Properties tool and allow you to select the playlist and other timeframe information for the schedule.



Timeslots can be scheduled to the nearest second.



Select the Playlist from the drop down menu.

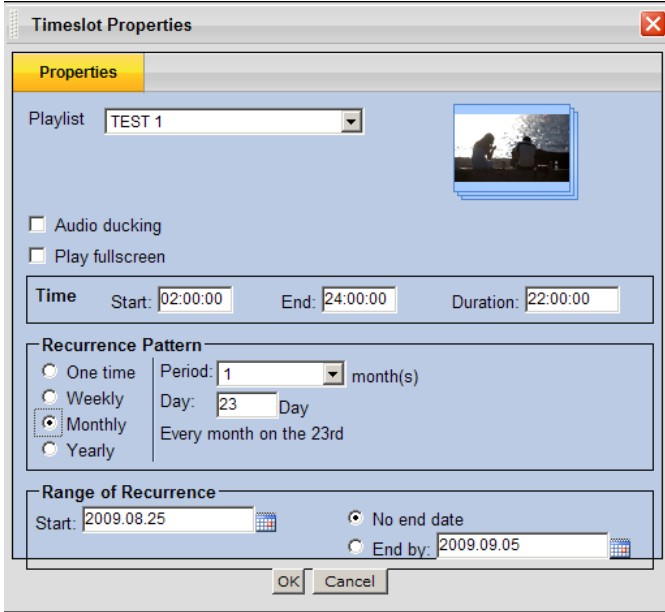


The system defaults to a start time of 00:00:00 and end time of 24:00:00 – the full 24 hour period and defaults to a recurrence pattern of weekly on the present date with “No end date” for range of recurrence.

Each of these elements can be adjusted based on the schedule you choose.

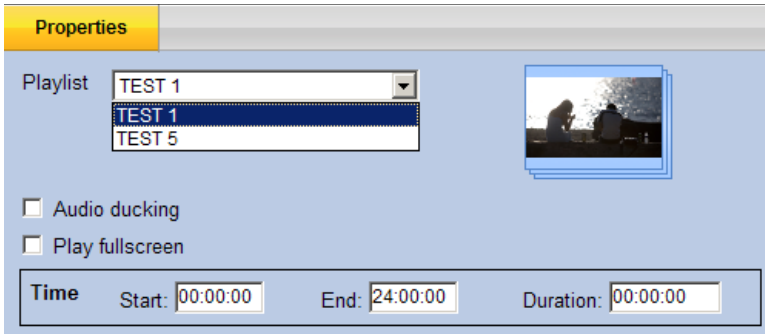
In order to change the schedule properties of a Playlist, edit the target event – Time, Recurrence Pattern or Range of Recurrence

- type in the appropriate information and select OK at the bottom of the dialog box to save the changes entered.

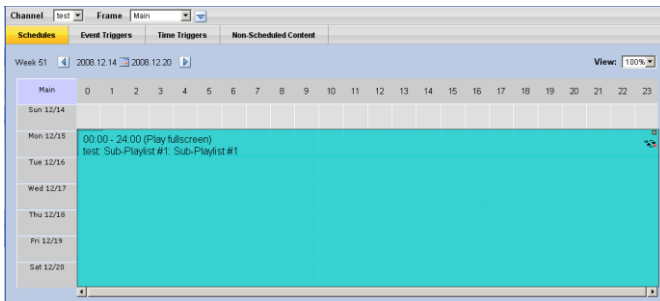


The new schedule pattern will now appear in the primary pane of the dashboard.

Separate playlists can be selected using the dropdown.



Select the Schedules tab to see the time calendar of the schedule that you chose.

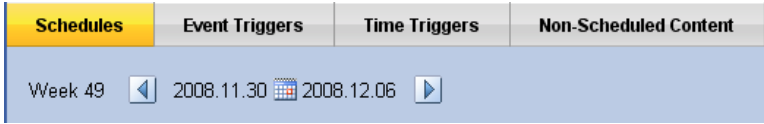


Mouse over information about the schedule is available by scrolling over and holding on the icon on the schedule.

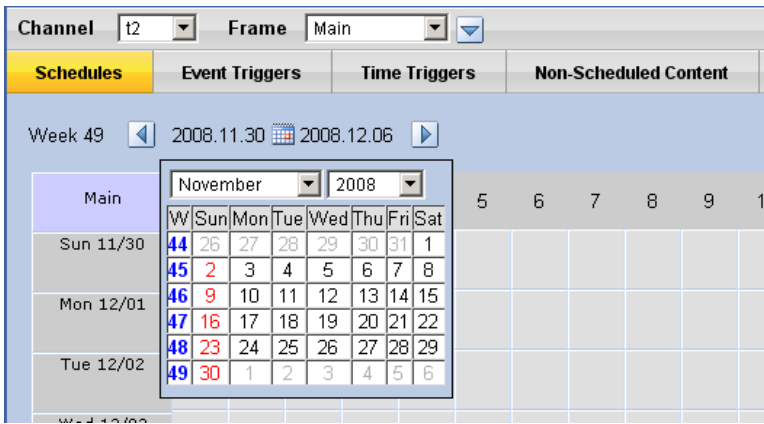


While you can change the schedule information and properties by double clicking on the item in the calendar, the timing of the

schedule can be adjusted and changed without going back to the properties dialog box by using the schedule tool at the top of the calendar.



The system defaults to the present week. You can adjust the week for the schedule by using the calendar in the middle of the schedule tool or by moving the weeks up or down by using the arrows next to the present week.



6.3.1 Channels That Contain More Than One Frame

Users can utilize the tool to develop scheduling for content in specific areas of the screen. This tool allows the user to schedule content other frames by schedule clicking the frame drop-down menu.

6.4 Triggers


Triggers is a way to define, in Content Manager, a specific playlist for a player to start playing when some external input happens. This input comes from Control Scripts, like a VBScript that monitors a file or controls an external device through a serial port.

Control scripts are VBScripts, JScripts or Python Scripts that are created using third party tools, specifically for the purpose of managing external conditions that you want, at times, to interrupt the normal playback of a frame in your channel.

Once written, these must be uploaded to Content Manager. To upload a Control Script, go to *Content->Media*. Click the *Upload Files* button to launch the Scala File Uploader. Once the File Uploader has started, you can upload files by either dragging the control script(s) into the File Uploader window or by clicking *File->Select File(s) to Upload*.

Once your Control Scripts are uploaded, they appear in the Media list tagged with *Type: Windows Script*. You can view all control scripts by expanding the File Type filter under the search text entry box and selecting the Windows Script entry.

A typical control script looks like this:

Name	Details
 testVbs Folder: / Category: Workgroup: None	Modified: 2007.04.17 14:04 Size: 14 Bytes Revision: 1 Type: Windows Script

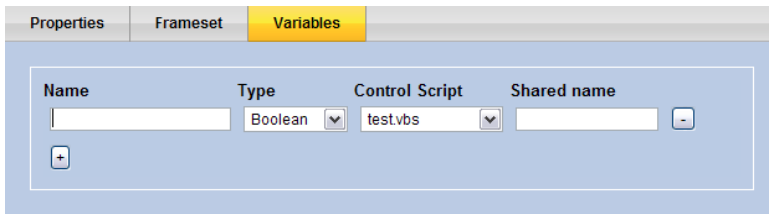
Once you have a control script uploaded, you can then assign the control script to one or more channels by defining channel variables.

6.4.1 Channel Variables

Channel Variables is the way to link a control script to a channel. To access Channel Variables, go to *Planning-> Channels*.

Select the Channel you want to add a channel variable to, and click the *Variables* tab. Click the plus button under Name heading to create a new channel variable.

You see this form:



The screenshot shows a software interface with three tabs: 'Properties', 'Frameset', and 'Variables'. The 'Variables' tab is selected and highlighted in yellow. Below the tabs is a table with the following structure:

Name	Type	Control Script	Shared name
<input type="text"/>	Boolean <input type="button" value="v"/>	test.vbs <input type="button" value="v"/>	<input type="text"/> <input type="button" value="-"/>

Below the table is a plus sign button to add a new row.

This form allows you to do the following:

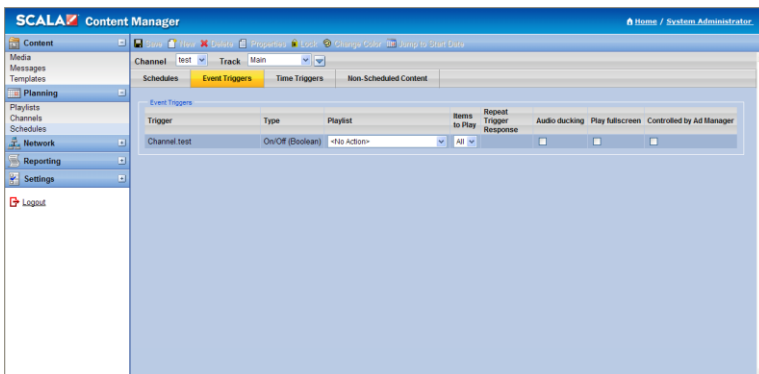
- *Name* - Set a name for the Channel Variable. This name must be unique, and is automatically prepended with "Channel".
- *Type* - Select the variable type you want to use. This can be either Boolean, Integer or String. Note that currently only Boolean and Integers can be used to trigger playlists. However, you can also share String variables between

your Control Script(s) and Scala.

- *Control Script* - Content Manager automatically lists all Control Scripts that have been uploaded. Select the Control Script you want to be associated with this channel variable.
- *Shared name* - The name by which your Control Script will see and be able to modify this Channel Variable. It will initially be filled in automatically with the text used in the *Name* field (except it will not have the “Channel.” prefix - periods are not allowed in variable names), but it can be anything you want. The important part is that it must match the name of a variable used inside the Control Script.

6.3.2 Event Triggers

Event triggers are based on an external event that triggers content to be played on the player.



6.3.3 Setting up a Trigger

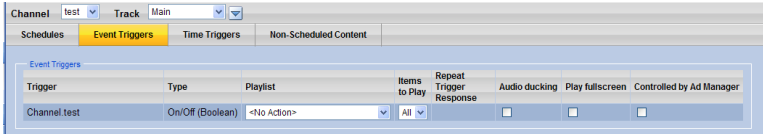
More than one Channel Variable can be linked to the same Control Script. Simply choose the same Control Script for each Channel Variable. Note that in this case, only one Control Script will be run. Once you have added one or more variables to your channel, make sure you click the *Save* button to keep your changes.

Playlists to be triggered are no different than regular playlists. However, when you created your playlists, they might not have met the criteria that are now needed. A playlist to be triggered is special because it only plays when a channel variable is changed. It is recommended that you create any playlists to be triggered now (before moving on to the next section).

You might also want to prepend the name of any these playlists with “Trigger” so they can be identified easier. Once you have a playlist created, you can now configure it to play when the channel variable you set up is changed by your control script.

Once you have uploaded your control scripts, setup your channel variables and created any additional playlists, the next step is to configure what playlist plays when a channel variable is changed. You do this by going to *Planning -> Schedules*. Select the Channel you created the Channel Variables for, then click the *Triggers* tab to view the triggers form.

Below is an example that uses two channel variables (one of each type - boolean and integer):



Under each heading, you see the variable(s) details listed. Based on the variable type, certain options can be changed.

6.3.4 Triggering on Boolean and Integer Variables

Ignore if already playing - The player ignores any changes to the channel variable and continues to play the playlist to completion. Like Boolean channel variables, you can select the playlist that will play when the control script has changed the channel variable. However, any change in the value causes the playlist to start, and the player goes back to playing its regular timeslot after the playlist has played a single time.

The *Repeat Trigger Response* option is available to control what happens if a trigger happens again while the playlist is playing. You have four choices: For boolean channel variables, the only option that can be changed is Playlist. Here you select a playlist to play when the Control Script changes the boolean value from false to true (or 0 to 1). Notice that under the heading *Repeat Trigger Response*, the value is set to *Play while on*. This means that the playlist specified will continue to play in a loop until the control script changes the channel variable back to false or 0. At that point the playlist is ended immediately, and the player goes back to playing its regular timeslot.

- *Restart upon change* - The player will restart the playlist from the beginning and attempt to play until completion

every time the channel variable is changed.

- *Loop until unchanged* - If one or more triggers happen before the playlist ends, then the playlist loops once instead of ending. Triggers in subsequent loops follow the same logic.
- *Loop once per change* - For each trigger that happened while the playlist is playing, another loop of the playlist is added.

A Simple Trigger Example

1. Configure a player to play back in One Channel (Window) mode. This is necessary as the example uses Windows message boxes.
2. Open notepad and type:

```
Doresult = msgbox ("Play Trigger Playlist?", vbYesNo)
If (result = 6) Then
MyTrigger = True
msgbox "Press OK to stop Trigger Playlist from playing."
MyTrigger = False
Else
MyTrigger = False
End If
Loop
```

3. Save the file as *MyControlScript.vbs*
4. Upload the file to Content Manager using the File Uploader in the Media items list. To see the benefits of using triggers, follow these instructions to setup a trigger: Once any changes are made be sure to click Save to keep those settings.
5. Go to *Planning -> Channels*. Select a channel you want to use for this example, then click the *Variables* tab.
6. In the name field, type *MyTrigger*. This should automatically change the Name to *Channel.MyTrigger*, and the Shared name should be *MyTrigger*.
7. Leave the *Variable Type* as Boolean. Select the *MyControlScript.vbs* file you uploaded in step 4 as the *Control Script*.
8. Click *Save*.
9. Go to *Planning > Schedules*. Select the channel you added the channel variable *MyTrigger* for, then click the *Triggers* tab.
10. Select a playlist to play when the channel variable *MyTrigger* is set to true.
11. Click *Save*.

12. Synchronize player.

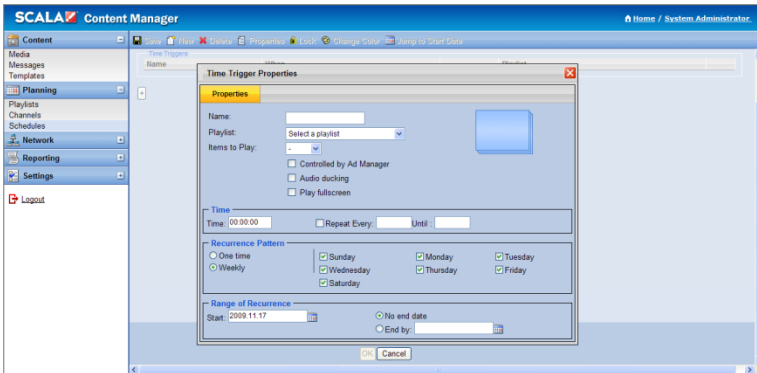
Once the player has received the plan, and has downloaded all of the necessary content, you will see a Windows dialog box on screen.

If you want to play the trigger playlist (that was specified in Step 10) click Yes. To stop playing the trigger playlist while it is playing, click OK. To stop the player, select the player window and press ESC or click the window close button.

6.3.5 Time Triggers

The user can also setup specific content to play at a given time using the Time Triggers tool.

Click on the + button to create a new Time Trigger. The Time Trigger dialog is shown.



Assign a name, playlist, the number of items to play. Then set the time the trigger occurs (and repeat interval if necessary), the

recurrence pattern, and range or recurrence. Click the Save button to keep the changes.

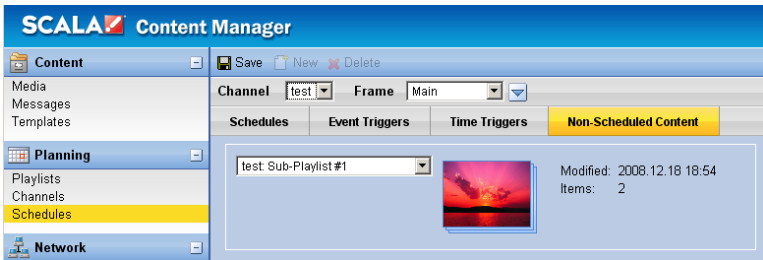
6.3.6 Non-Scheduled Content

Non-scheduled Content is a way for you to deliver content to one or more channels independently of any playlist. This is useful for many reasons:

- You want to deliver a file or files ahead of time that you know your players will need in the future.
- You want to deliver a file or files that are used by a VBScript or another scripting language that are not used in any playlist.

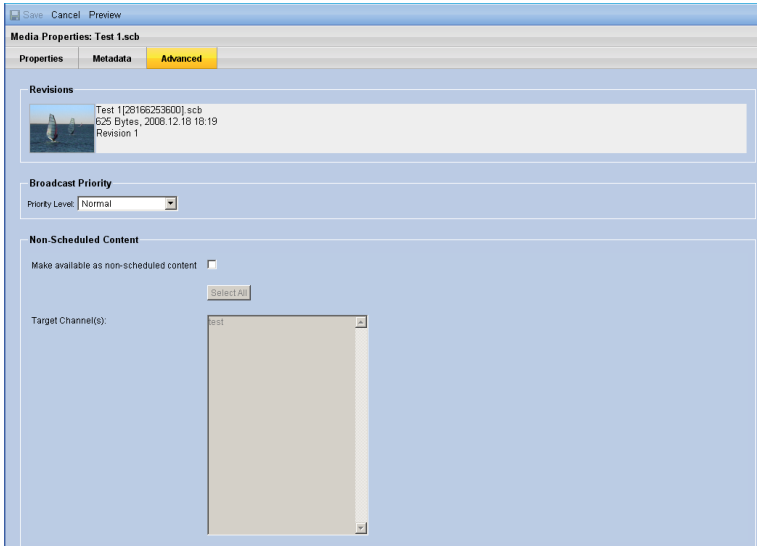
To complete this process: Go to *Planning > Schedules > Non Scheduled Content*

Select a media item that you want to mark as non-scheduled content.



Select *Properties*.

Click on the *Advanced* tab.



Under the Non-Scheduled Content section, click the *Make available as non-scheduled content* checkbox.

Click the *Select All* button to select all the **CURRENT** channels, or select each individual channel in the target channels list.

Click *Save* to keep your changes.

In order for your channels to pickup any newly marked Non-Scheduled content, you must generate a plan for any of the players that use that channel.

These are a couple of important points:

- If you add a new channel **AFTER** you mark a piece of media as non-scheduled content, and you want the newly added channel to receive any of the non-scheduled content, you will need to edit the media item and add the new channel to the target channel list.
- All non-scheduled content is delivered to the players using the same folder layout that exists in Content Manager. Meaning that if you uploaded a media item to a sub-folder called images, when the player downloads that media item, the player will store it in the folder:
Content:\images.

This is important because if you are using Designer to setup an image as linked content, you will need to have the placeholder image in the folder Content:\images instead of just Content:\. If this is not setup correctly, the player will not be able to find the media. The same is true if your Remote Publish Location places media in a folder named after the Publish Location.

- Keep in mind of the bandwidth considerations when marking one or more media items as non-scheduled content. Especially if you are sending non-scheduled content to all your channels.

You can very easily overwhelm your existing infrastructure if, for instance, you have 10 channels with 10 players on each channel and you mark a video file that is 1 GB in size as non-scheduled content. Be aware in this case that Content Manager will have to

transmit 100 GB of data (even though each player will only download 1 GB).

These are just a few of the reasons why this feature can be useful.

6.3.7 Preloading Content on Players

Players support the notion of pre-loaded content. This allows you to pre-install content on the Player systems before putting them in the field, to optimize away the need for the player to download the content when the player connects to Content Manager.

Note: Any pre-installed content is not available for use until you add it to the plan (you must put it in a playlist or mark it as Non-Scheduled Content).

When the player goes to download a given file from Content Manager, it first checks for an exact match in the Pre Loaded Content folder. If found, the pre-loaded copy is used, and the download is skipped.

By default, this folder on the player is:

```
C:\Documents and Settings\All Users\Application  
Data\Scala\InfoChannel Player 5\Network\PreLoadedContent
```

The default folder can be overridden with the PreLoadedContent MMOS.INI keyword. For example:

```
PreLoadedContent = "C:\MyPreLoadedContent"
```

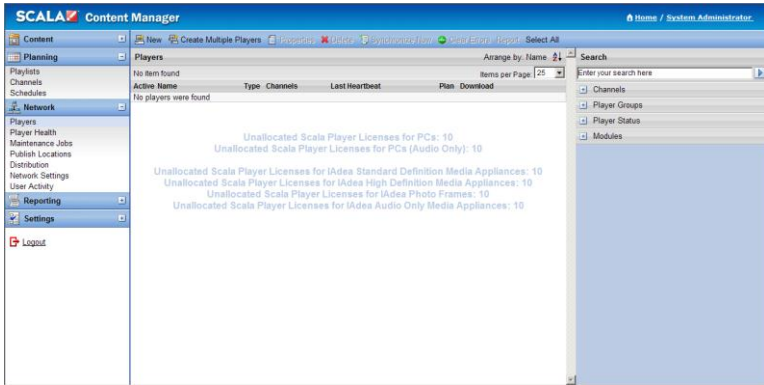
For example, you can place a file BigVideo.mpg in this folder. If the player's plan requires a file called BigVideo.mpg, and the MD5 signature of the preloaded version matches the MD5 signature of the version needed by the plan, the preloaded copy will get used, skipping the download.

||||| 7 | The Network Menu

7.1 Players

Users can control a number of important activities from the Network Menu.

Select the + sign on the Network menu item on the left pane of the Content Manager dashboard and then select Players from the list.



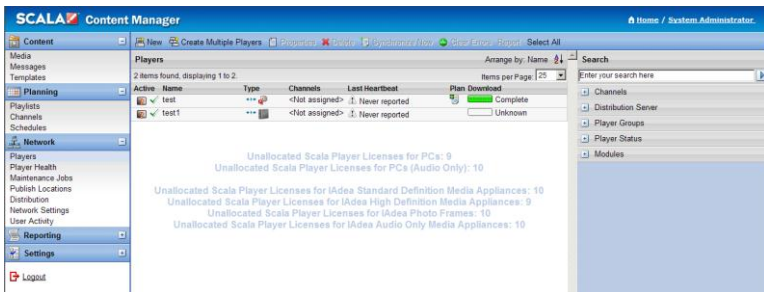
License information regarding available allocated and unallocated information is available in the primary panel of the dashboard.

From this location, you will be able to add new or delete players, control properties and channels of players and manage other aspects of the player list. Any players already added will appear in the primary center pane of the dashboard.

Once you have created channels in Content Manager, you may then create Players to display them. When you create players in Content Manager, they must also be configured on the player computer to be able to communicate with the Content Manager.

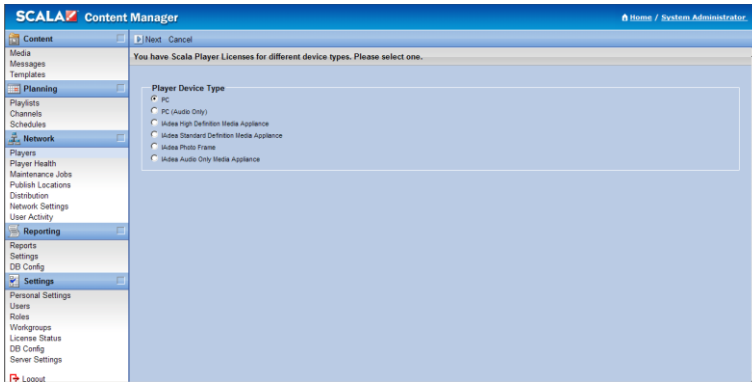
On the player, the Player Configuration utility relies on the correct setup being established in Content Manager, so do this step first. This process is described in further detail in the Player Users Guide. Clicking on the Players button will open the Players panel. The first time you open this panel the list of players will be blank so you will have to create one by clicking on the New button at the top of the panel. Input the player name and description properties and select a channel where it will play at the bottom of the panel.

The right hand pane in the dashboard will allow you to filter by Channels, Player Groups, Player Status and Modules.



7.1.1 Adding New Players

Select New from the menu items. This will open up the tools necessary to add new players to the system.



Content Manager allows the user to manage different types of Player devices including Audio only players.

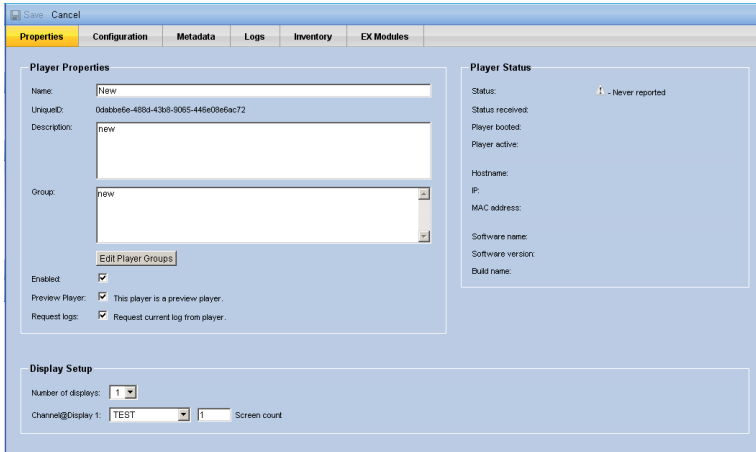
These devices provide a wider range of options and types of players including:

- PCs
- PCs with Audio Only
- IDea High Definition Media Appliances
- IDea Standard Definition Media Appliance
- IDea Photo Frame
- IDea Audio Only Media Appliance

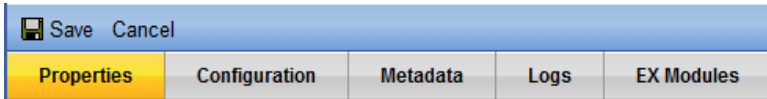
In order for users to effectively understand how to use IDea appliances, it is necessary to explain the details of installation and use of the IDea Bridge Server.

This is covered in detail in Section 7.3 including the details of adding IDea players.

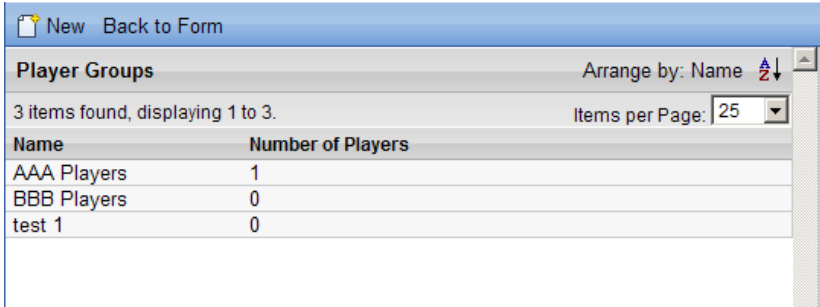
To add a PC or a PC w/ Audio Only player - use the radio buttons and select a Player Device Type. The Player Properties menu will appear.



The menu items will allow you to set the Properties, Configuration, Metadata, Logs and EX Modules for the player selected.

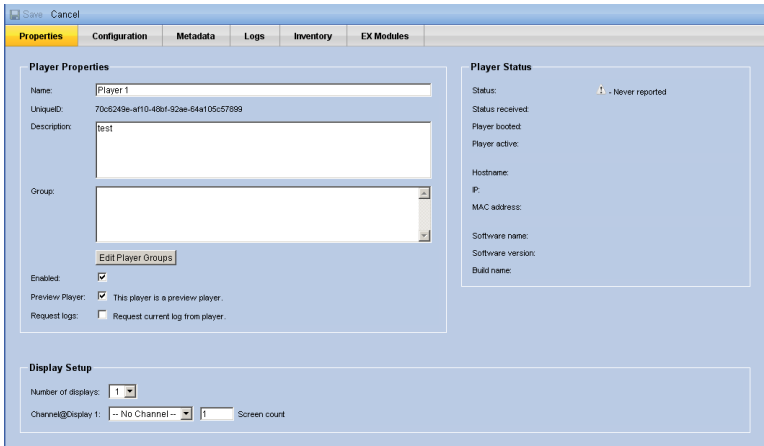


You can Edit Player Groups clicking the Edit Player Groups button.



Select New to create a new player group.

This will refresh the right hand pane in the dashboard with the Player Group Form. Identify and complete the name and description of the Player Group and select Save from the menu at the top of the navigation bar.



Once you have completed creating Player Groups, select Back to Form on the menu bar.

Name	Number of Players
New Player	0
New Player 2	0

Now you will be able to complete the Player Properties information.

Player Properties

Name:

Description:

Group:

Enabled

Preview Player: This player is a preview player.

Request logs: Request current log from player.

Display Setup

Number of displays:

Channel@Display 1: Screen count

The new player will automatically default to Enabled. If you want to disable the player, deselect the box Enabled.

If the Player is a Preview Player, check the Preview Player box. If you want to immediately request the logs for this player, check the Request logs box.

The Display Setup tool allows the user to choose the number of displays that will be enabled per player – limited to 1 or 2 displays and to set the channel for each display.

Display Setup

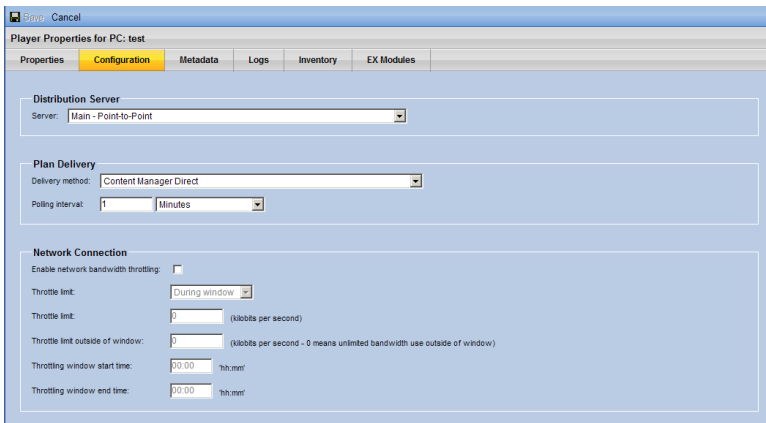
Number of displays:

Channel@Display 1: Screen count

Select either 1 or 2 displays – the system defaults to 1 channel 1 screen. The screen count can be changed by entering the total number of screens connected to each display. This value is used to determine the total number of media item layouts.

Select Configuration from the Menu items.

This will allow the user to set the distribution server, download threads and set logging levels.



Select Save from the menu items.

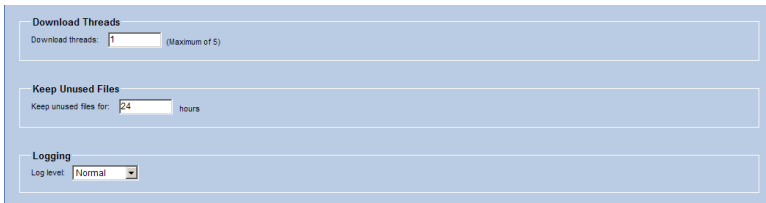
The new Player will be updated in the list of Players and provide the user with the attributes related to that player.

The system will report the player status and indicate when the plan and content has been download. See the indicator bar under Download column.

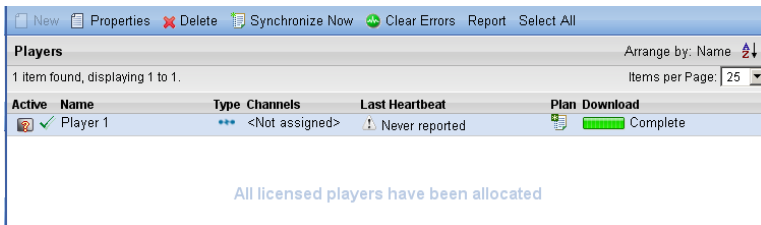
The system also allows the user to identify the type of player, the channels the player has been assigned to, monitoring (heartbeat)

information about the player and information about the plan and download status for the player.

Users can control the minimum amount of time unused content files are retained on players for reuse. This can be useful in reducing transmission time in cases where certain content is removed for a time and then re-activated (e.g., switching channels for demos, switching to unplanned emergency content, ad-hoc planned scheduling).



This setting can be found in the Player configuration tab using the “Keep Unused Files” text entry field.



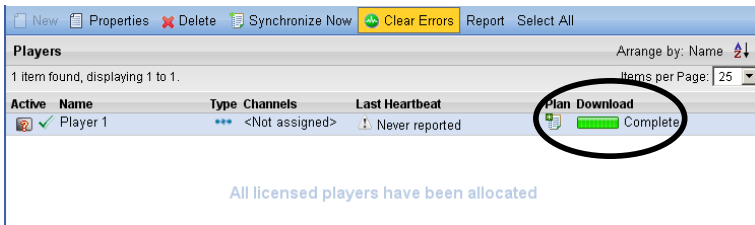
Note too that the number of unused licensed players has been reduced by the number of players added to the system.

You can view player logs directly from within Content Manager. On the **Players** screen, select any Player then go to the **Logs**

tab. You can double-click any log to view it. The logs themselves can be filtered by log-message type and log-message source.

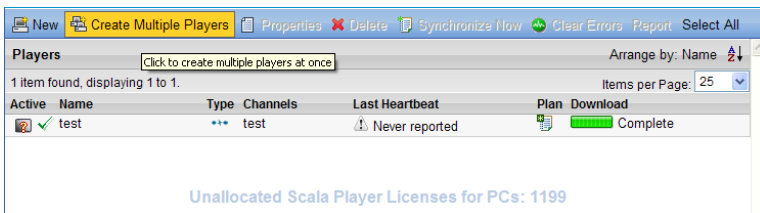
7.1.2 Last Heartbeat

The system will automatically report back to Content Manager at regular intervals, with a series of “heartbeats”, to let it know it is still functioning properly.



7.1.3 Creating Multiple Players

The system allows users to create multiple players by selecting Create Multiple Players.



If you have several players that will be receiving the same channel, then you can select the *Create Multiple Players* button at the top of the panel.







You can also enter the number of players (up to your maximum allowable per license) and give them a name and description.

The name of the player must include a # symbol so it will automatically number each of the individual players for identification purposes. Select the channel which they will use, and click Save.

7.1.4 Configuring Players for a Broadcast Server

When you are configuring players for use with a broadcast server, you must associate the player the corresponding Broadcast Server and set the Player ID to match the value configured in the player itself.


In the Players list, the icons in the **Type** column help you tell (at a glance) which Players are connected by point-to-point and which are connected via broadcast:




Active	Name	Type	Channels
✓	BroadcastTest_000		Simple Channel
✓	BroadcastTest_0002		Simple Channel
✓	BroadcastTest_0003		Simple Channel
✓	BroadcastTest_0004		Simple Channel
✓	BroadcastTest_0005		Simple Channel
✓	Fennis		Simple Channel

7.1.5 Synchronizing Players

You manage synchronization of players using the **Distribution** menu. The **Distribution to Players** screen displays a list of servers which includes **Main** (the point-to-point distribution engine).

If the Broadcast Server EX Module is enabled in your license, this feature allows you to define Broadcast Server(s). The **Distribution Servers** list displays the status of each server:



Server	Sync Status	Received Plan	Transfer	Remaining	Next Sync
Main	Complete		1/1 player		Completed
Broadcast	Transferring		0/1 player	24.94 MB	

You see the following: Synchronization status, Plan status, Transfer status, Remaining data to be transferred and Next action planned or needed.

If changes have been made to the player’s plan, those changes may not be automatically sent to the player(s).

To manually send the new plan, select a distribution server from this list and click the **Synchronize Now** button. A dialog box is displayed, which shows a progress bar that indicates the status for building the transmission.

If you want to send the transmission without inspecting it, click the **Send** button. If you want to inspect the transmission, click the **Inspect** button.

7.1.6 Inspecting Point to Point Transmissions

For point to point transmissions, when you click the *Inspect* button, Content Manager displays the Synchronize Player screen.

You see a list of files (if needed), that are required to update all the point to point players. To update the player(s), click the **Send** button. Otherwise click the **Cancel** button.

7.1.7 Inspecting Broadcast Transmissions

For broadcast transmissions, when you click the *Inspect* button, Content Manager displays the Broadcast Package Builder. You see a list of files that are required to update all the broadcast players:

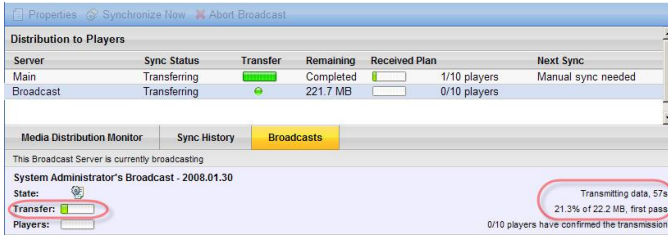


For each item, you see the **Name**, **Size**, and the number of **Players** that have or need this file. The **Transfer** column shows the total size.

You can selectively remove files you don't want to send (e.g. a large file that's not needed until sometime in the future.) You can

use the search and filter capabilities to narrow the view to the files of interest.

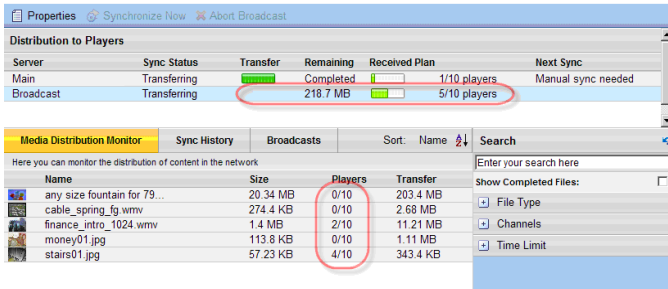
Make any adjustments, then click **Send**. The display is updated to show the broadcast status:



When a broadcast is in progress, Players receive the entire broadcast package before they begin the individual file processing.

The transfer will progress to 100% before the first players report they have received the plan, and before the players report that they have received individual files within the broadcast.

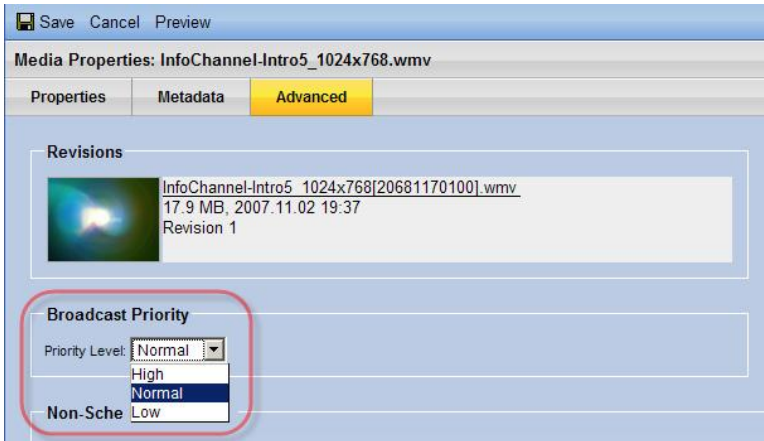
When players begin reporting that they have plans and media files, the distribution summary, and the Media Distribution Monitor are updated:



7.1.8 Broadcast Priorities

You can set a Broadcast Priority to High, Normal, or Low for each media item. When creating a broadcast transmission, Content Manager automatically tags the broadcast with the appropriate priority.

If a single broadcast contains files of different priority, a separate package is sent for each priority. Packages of higher priority are processed first, sent first, and received first. This can be used to down prioritize large media not needed urgently, and up prioritize files that need more rapid updates:

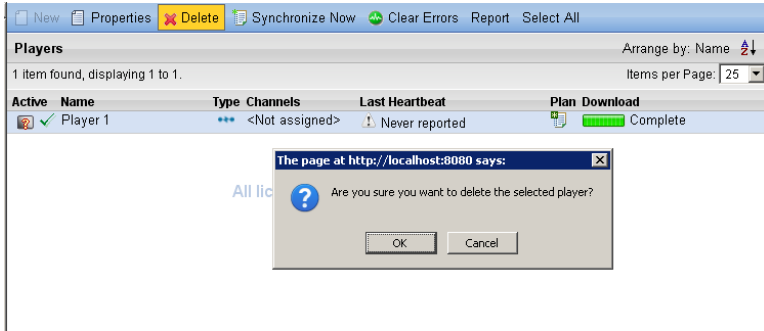


7.1.9 Deleting Players

If you no longer need a player, made a mistake in creating one, or just need to free up room for new players, you can simply

delete them from the list. Select the player you wish to delete and click the *Delete* button at the top of the panel.

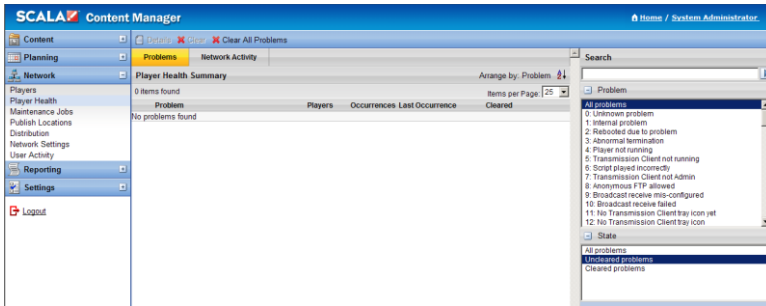
A dialog asking you to confirm the deletion will pop-up.



NOTE: Once a player is deleted, new plans will no longer be generated for that player. However, if the player is not decommissioned, the player will continue to play its content for 30 days. After 30 days, the player will no longer play any content until it receives a new plan.

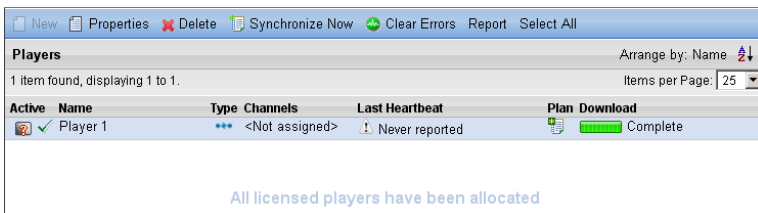
7.2 Player Health

The Player Health tab provides detailed information about problems and network activity.



The **Player Health** summary screen allows the user to access any errors that have been reported by player(s).

Once you have a player configured and running a scheduled plan, you can monitor the player’s “health” and network activity. You can configure the player to send a “heartbeat” at predetermined intervals so the system will recognize that it is still operating efficiently.



If the player does not send a heartbeat signal at a predetermined time, an optional email can be sent to one or more users. You could then create a new maintenance task, for instance, to reboot the player.

7.2.1 Uncleared Problems

By default, Content Manager lists every problem that has not been cleared from Content Manager. To view more details about a problem, select the problem, and click the *Details* button.

To clear a problem, select the problem and click the *Clear* button. Note that clearing the problem in Content Manager does not fix the problem which has occurred with the player. It simply removes the item from the *Uncleared problems* list.

You must resolve the problem on your player, otherwise the problem will reappear in Content Manager at a later time. To clear all problems, click the *Clear All Problems* button.

7.2.2 Problem Details

The *Problem Details* screen contains detailed information about a problem that has occurred on one or more players. This information should be used to diagnose a problem with a player on your network. A problem detail contains:

- *Summary* – The type of problem that has occurred.
- *Description* – A description of the problem.
- *Details* – Detailed information about the error. This information is very useful when contacting Scala Technical Support.

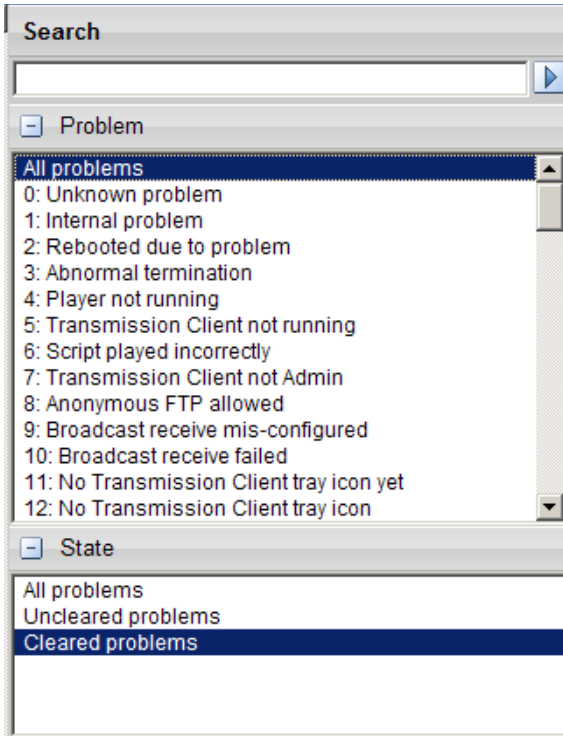
7.2.3 Cleared Problems

To view cleared errors, click Cleared Errors in the State filter. The Cleared Problems lists all problems that have been cleared using the *Clear* or *Clear All Problems* button(s).

Double-clicking an entry in the **Player Health** summary leads to the **Player Health Problem Details** screen.

7.2.4 Searching for Problems

Navigating to Network > Player Health allows the user to search for over 70 specific problems as well as searching for problem states.



7.2.5 Network Activity

The *Network Activity* tab gives you the ability to see exactly what your player(s) have been recently uploading and downloading. The list currently contains a maximum of fifty (50) entries. There are four columns that show this information.

- *Icon* – This column reveals a visual representation of the action that has occurred. A few samples are: Checked Plan, Heartbeat, and New Plan.
- *Player* – This column lists the player name as defined in the Network > Players list.
- *Time* – This column lists how recently the specific event occurred.
- *Message* – This column lists a text based message of the action that has occurred.

7.3 IAdea Bridge Server Setup and Installation

IAdea Bridge Server is an optional add-in module to Content Manager. You need to install Bridge Server when you connect IAdea players to Content Manager.

7.3.1 Introduction

The following contains instructions to set up IAdea Players for management with Scala Content Manager Release 5 software. You will need the following:

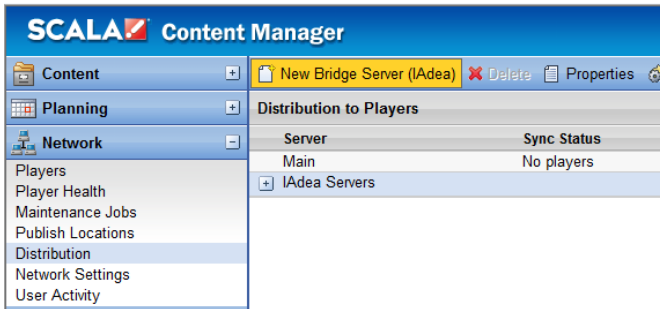
From IAdea or Partners, one of the following products:

	IAdesa	ViewSonic	Mitsubishi	Advantech
IAdesa SD Player	NMP-200U	NMP-200	NMP-200U	DSA-2020
IAdesa HD Player	XMP-300 XMP-305	NMP-550	NMP-305	DSA-2130
IAdesa Digital Signboard (Photo Frame-type Player)	XDS-100	CD1010		

Note: Set up requires installing the Scala Content Manager 5 Release 5, enabling the IAdesa Bridge Server, and adding an IAdesa Player to the system.

7.3.2 Installing Content Manager 5 with Bridge Server

In Content Manager navigate to *Network > Distribution*, click *New Bridge Server (IAdesa)* to register an IAdesa Bridge Server.



Click the Save button to keep the IAdesa Distribution server you just added. You can modify the settings later.

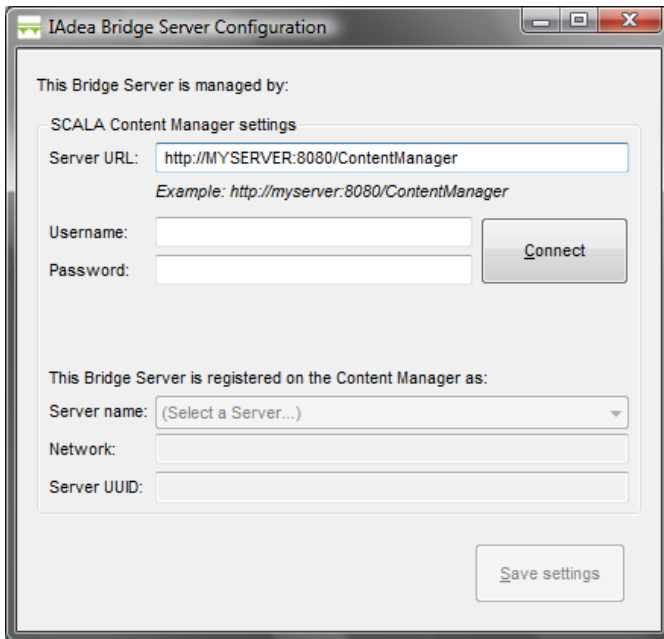
Run the IAdesa Bridge Server installer included with Scala Content Manager 5.

After Bridge Server installation, the *IAdesa Bridge Server*

Configuration utility pops up asking for Content Manager’s location. Enter the Server URL that points to your Content Manager, followed by *Username* and *Password*.

Then click the *Connect* button.

If connection is successful, the utility displays a list of Bridge Servers. Select a Bridge Server to associate with this installation. Then click *Save settings* and close the utility.



After configuration, point your browser to the Bridge Server at <http://server:port/BridgeServer> (replacing server:port with actual alpha-numerical values) and you should see the following page:

IAdea Bridge Server is *Running*

The Bridge Server is configured to be managed by

Scala Content Manager	http://localhost:8080/ContentManager
As IAdea Server (UUID)	Hybrid Server (48b082d6-35c4-41ca-8927-a1a304970f3a)
User name	Administrator
Last successful connection	2009-05-24 03:46:26 GMT-05:00

To change the above configuration, run the Bridge Server Configuration Tool from the server where Bridge Server is installed.

You may [check for software updates](#), or visit <http://www.IAdea.com/BridgeServer> for further information.

7.4 Configuring IAdea Bridge Server

Bridge Server can be used in one of two configurations: *centralized* mode and *distributed* mode.

7.4.1 Centralized Mode

In centralized mode, Bridge Server is co-located with Content Manager. It directly shares the Apache Tomcat server with Content Manager. This is the simplest mode of operation and recommended for general applications.

7.4.2 Distributed Mode

In distributed mode, multiple Bridge Servers are installed on separate computers as “site servers” near the players. This allows distributing the computation and communication load on the Bridge Servers to multiple server computers.

7.4.3 Configuring Content Manager

Before installing Bridge Server, the user needs to add an “IAdea Server” to Content Manager. During the installation of Bridge Server, user must identify this IAdea Server to link Bridge Server to the Content Manager.

Note: When using Content Manager with IAdea players, the Content Manager “server name” must NOT be in WINS format (looking like “MYCOMPUTER”) but MUST BE in either IP domain name (“server.site.com”) or IP address (“72.168.12.24”) format that the IAdea player can resolve from its location. IAdea players are unable to perform WINS name resolution.

Installation Note:

To install Bridge Server on a computer, run the installation software package.

The installer detects the presence of Apache Tomcat server. Version 5.5 or later is required. If one is not found, a link is provided to allow the user to download and install the software before continuing installation.

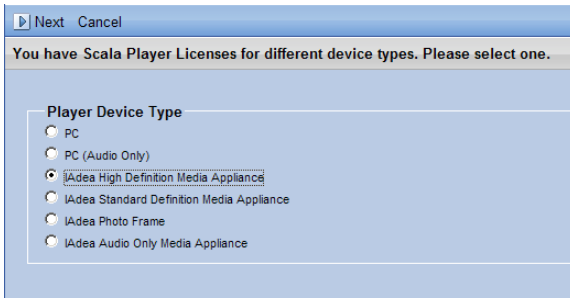
After installation, the system automatically runs the Bridge Server Configuration Tool which requires the user to register an IAdea Server (configured in the previous section) that represents the installed Bridge Server. The user is prompted to enter a Content Manager URL, user name, and password. The Configuration Tool then logs into the Content Manager and retrieves a list of

registered IAdea Server records. The user needs to select one that will be used to identify this Bridge Server installation.

7.5 Configuring IAdea Players

7.5.1 Adding IAdea Player to Content Manager

Content Manager allows the user to select from four new types of players: IAdea HD, IAdea SD, IAdea Photo Frame, and IAdea Audio-only. Steps to add an IAdea Player is similar to adding a standard Scala Player.



Once configured, click the save button to keep the changes.

7.5.2 Configuring the IAdea Player Device

Please consult the user's manual for your IAdea SD, HD, Photo Frame, or Audio-only player device for specific instructions on configuring Bridge Server and IAdea Player.

7.5.3 Troubleshooting

1. The IAdea player is blank or is not showing content
 - a. Make sure your IAdea player has a firmware that supports Scala software. The required minimum firmware version numbers are listed below. Contact support@IAdea.com to receive the latest available firmware for your device.
 - i. IAdea HD Player: 1.0.8b or later
 - ii. IAdea SD Player: 1.5.6.b5 or later
 - iii. IAdea Digital Signboard: any version
 - b. IAdea players default to requiring a DHCP network (dynamic IP assignment). Make sure the network you are connecting to supports DHCP, and it does not limit access to approved devices only. Ask your network administrator if you are not sure.
 - c. If you are installing on a machine different from your Content Manager, make sure your Windows firewall allows external access to the server port you are using.
 - d. After you added an IAdea Player to Content Manager, you need to “synchronize” your player at least once so a “plan file” is generated for your player. In Network/Players, select your player and click the “Synchronize” button.

- e. The player is likely to be downloading media files from Content Manager. Please wait 3 to 5 minutes for the update to complete
- f. VERY OFTEN, the configuration in Content Manager sets the server name to a WINS name (e.g., MYCOMPUTER) instead of an IP domain name (my.server.com) or IP address (192.168.0.100). The IAdea Players are unable to resolve WINS names. As a result they will not be able to find any of the media files and will never complete downloading. Change the Content Manager name to either an IP domain name or IP address to solve the problem.
- g. If none of the above works, it is possible that your recent firmware update has failed. Check to ensure you have downloaded the complete firmware file and try updating again.

For Further Assistance

Should you encounter issues not addressed in this document, please contact support@IAdea.com.

7.5.4 Looking for a Heartbeat from IAdea Player

After the IAdea player starts up, you should see a sign of heartbeat in Content Manager.

The screenshot shows a software interface for managing players. At the top, there is a menu bar with options: New, Create Multiple Players, Properties, Delete, Synchronize Now, Clear Errors, Report, and Select All. Below the menu, the title 'Players' is displayed along with 'Arrange by: Name' and 'Items per Page: 25'. A status bar indicates '13 items found, displaying 1 to 13.' The main area contains a table with the following data:

Active	Name	Type	Channels	Last Heartbeat	Plan Download
	IAdesa HD Player 1	***	IAdesa HD Channel	< 1 minute ago	Complete
	IAdesa Photoframe Player 1	***	IAdesa SD Channel	< 1 minute ago	Complete
	IAdesa SD Player 1	***	IAdesa SD Channel	< 1 minute ago	Complete
	Player D1	***	Video Channel	< 1 minute ago	Complete
	Player D3	***	Video Channel	< 1 minute ago	Complete
	Player D4	***	Video Channel	< 1 minute ago	Complete
	Player D8	***	Video Channel	< 1 minute ago	Complete
	Player D9	***	Video Channel	< 1 minute ago	Complete
	Player 10	***	Video Channel	< 1 minute ago	Complete
	Player 11	***	Video Channel	< 1 minute ago	Complete
	Player 12	***	Video Channel	< 1 minute ago	Complete
	Player 15	***	Video Channel	< 1 minute ago	Complete
	Player 17	***	Video Channel	< 1 minute ago	Complete

Below the table, the following summary statistics are displayed:

- Unallocated Scala Player Licenses for PCs: 990
- Unallocated Scala Player Licenses for PCs (Audio Only): 100
- Unallocated Scala Player Licenses for IAdesa Standard Definition Media Appliances: 99
- Unallocated Scala Player Licenses for IAdesa High Definition Media Appliances: 99
- Unallocated Scala Player Licenses for IAdesa Photo Frames: 99
- Unallocated Scala Player Licenses for IAdesa Audio Only Media Appliances: 100

This indicates that everything is working well. If you do not see this, you may take a number of steps to correct the problem.

7.5.5 IAdesa Bridge Server Performance Tuning

A number of parameters are available for global performance tuning for a network consisting of multiple Bridge Servers.

Bridge Server Option	Description
Plan Refresh Interval	Controls how often Bridge Server polls for plan changes. Set this to a large number to reduce network load, and a small number if you want accurate status indication.
Log Level	Controls how detailed Bridge Server records its

Bridge Server Option	Description
	activities.
Minimum Schedule Expansion	Sets the minimum number of days a plan is expanded into raw format to conserve memory for the IAdea SD Player. Players must be allowed to refresh its plan within this period after the last schedule expansion. For other IAdea Players, this value is ignored
Schedule Expansion Time	Sets time of day at which schedule expansion is performed to lengthen the valid period of the translated plan.
Plan Retry Interval	Sets the time interval to retry downloading a plan file after a previous attempt fails. Set this larger than Plan Refresh Interval to avoid network congestion due to heavy network load.
Player Heartbeat Interval	Sets the time interval between successive heartbeat signals from players. Set this to a large number to reduce network load.
Heartbeat Retry Interval	Sets the time interval to retry sending a heartbeat signal after one fails. Set this larger than Player Heartbeat Rate to avoid failures due to heavy network load.
Plan Status Report Retry Interval	Sets the time interval to retry sending a plan status update after one fails. Set this to a large value to avoid failures due to heavy network load.

For further information, product updates and support, visit <http://www.IAdea.com/BridgeServer/>.

7.6 Maintenance Jobs

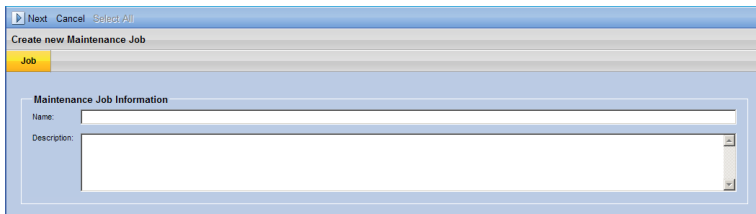
Select Maintenance Jobs from the left hand navigation. The navigation tools will appear in the primary pane of the dashboard.

7.6.1 Creating a New Maintenance Job

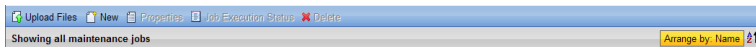
Select New in the top tool bar to create a new maintenance job.



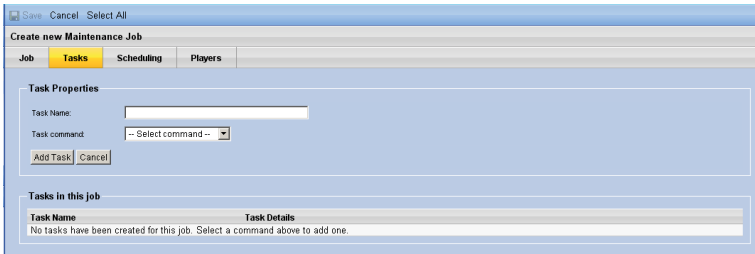
Creating a new maintenance job is available for both Scala Players and IDea players. Select the desired type of maintenance job using the radio button and select Next.



Create an appropriate name and description for the job.



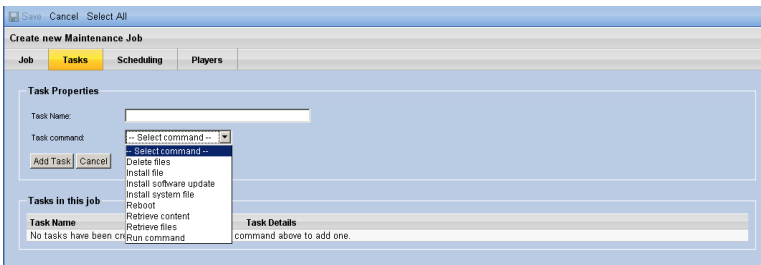
This will open the maintenance job Information tool.



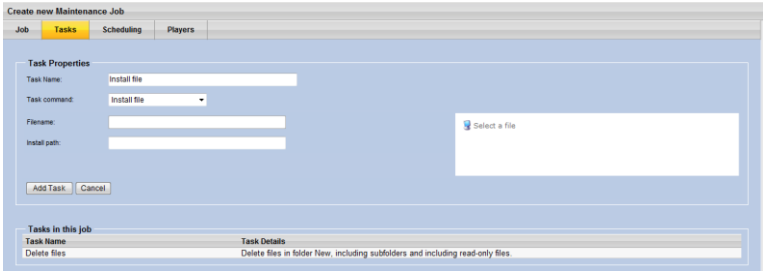
Name the new job and its description and select Next.

7.6.2 Adding Tasks for Scala Players

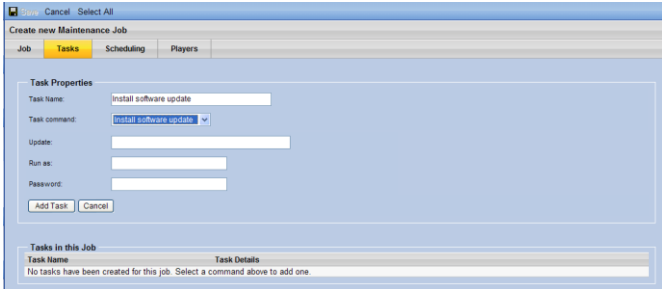
Select the Tasks tab in the Create New Maintenance Job tool.



This will allow the user to choose a number of tasks to complete and the schedule including Deleting Files, Installing Files and Installing System Files, in which each case a file must be selected to delete or install.



Installing software updates.



Software updates are an important step in keeping your players healthy and ensuring any new features are readily supported.

NOTE: Your Scala Advantage contract must be current in order to apply the latest software updates. This is controlled via the software license.

To check if your license is current, go to Settings >License Status. If your license is current, create a software update job by:

1. Clicking the *Upload Files* button. In the resulting dialog, Click *File > Select File(s) to Upload...* Using the Windows file dialog box, browse to the location where the software update exists. Select the file, and click *UPLOAD*. Once

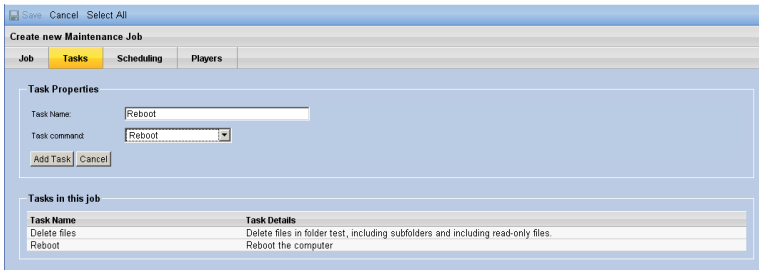
- the file has completely uploaded, close the file uploader by clicking the *File > Quit*, then click OK to exit the file uploader.
2. Click *New* button.
 3. Type a Name for the job and an optional Description.
 4. Click the Next button.
 5. Under Task Properties select Install software update from the Task Command drop down menu.
 6. Select the software update you want to install.
 7. If the player is NOT using an account that has administrator privileges, enter account details for a user that does using the Run as user and Run as password text entry fields.
 8. Click the Add Task button.
 9. Click the Scheduling tab.
 10. Under Schedule Properties, select the appropriate option in the Schedule Type drop down menu.
 11. Click the Add Schedule button.
 12. Click the Players tab.

13. Select the Players you want to update.

14. Click the Save button.

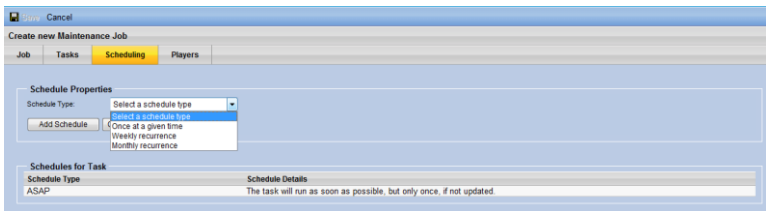
NOTE: The Install Software Update task automatically reboots the player machine. Therefore, you do not need to add a reboot task to the job.

Rebooting, retrieving content or running a command

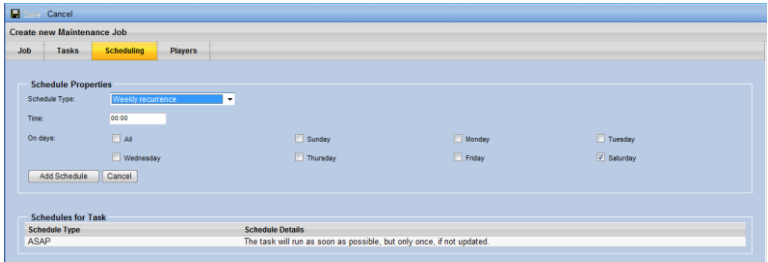


7.6.3 Setting the Schedule

Maintenance Jobs can be schedule to occur or for recurrence based on a number of selected criteria. Choose the Scheduling tab in the Create New Maintenance Job tool.

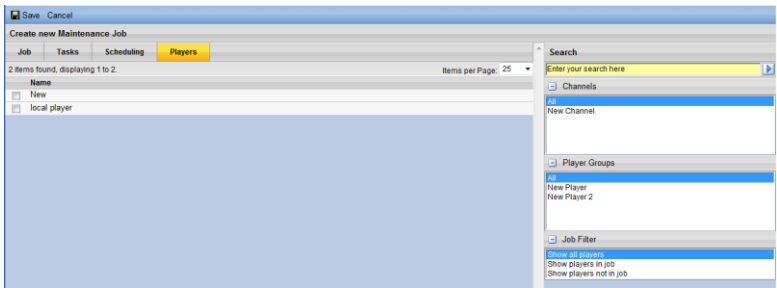


Depending on the Schedule Type, which the user can select using the drop down, the form will open to assist the user to adjust and schedule the maintenance job.



7.6.4 Selecting Players

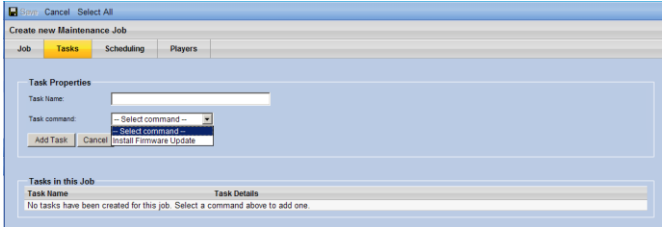
The user can select which players the maintenance job will occur against. Select the Players tab in the Create New Maintenance Job tool and choose the correct players for the job.



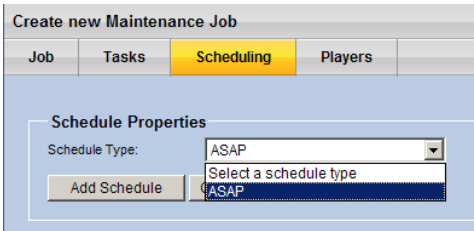
To save the Maintenance job select Save at the top tool bar on the dashboard.

7.6.5 Adding Task Properties for IAdesa Players

Maintenance jobs for IAdea players allow the user to install all firmware updates. Select the install option.

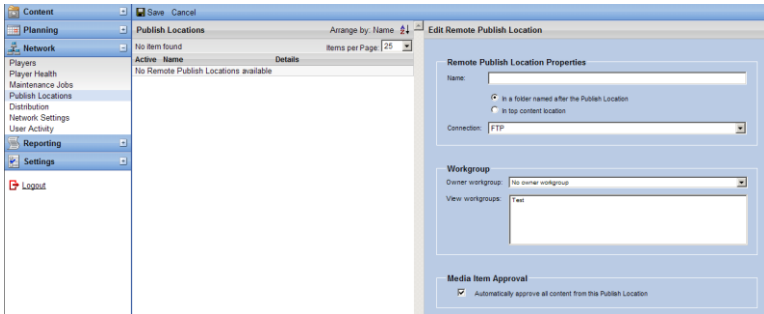


Scheduling is limited to ASAP.



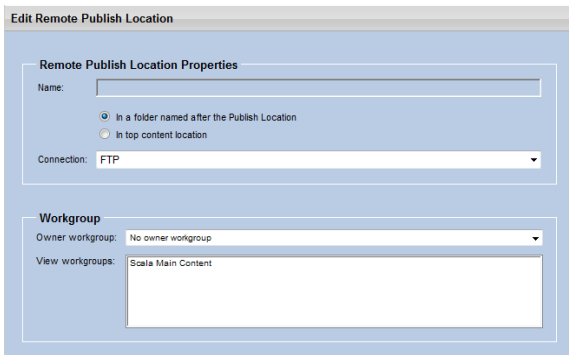
7.7 Publish Locations

Select Publish Locations from the left hand navigation in the left hand pane of the dashboard and then select New at the top of the tool bar.



The Edit Remote Publish Locations form allows the user to select the location to where remote content can be downloaded.

Select the Connection drop-down menu to determine what type of connection is used by Content Manager to retrieve the content. The choices are FTP and UNC.



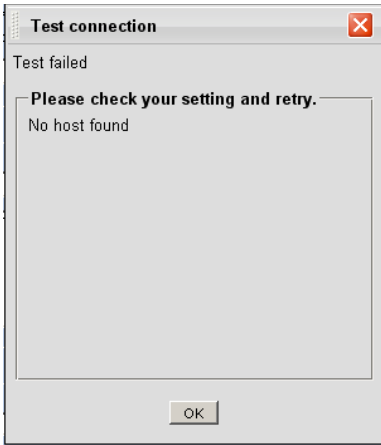
For FTP, this form is shown:

The screenshot shows a 'Host Details' configuration form with the following fields and options:

- Host: [Text input field]
- Port: [Text input field]
- Path: [Text input field]
- Include subfolders
- Username: [Text input field]
- Password: [Text input field]
- Confirm password: [Text input field]
- Check every: [Text input field] minutes
- Enabled:
- FTP: Active mode, Passive mode
- Category: [List box containing: Youth, People, Beach Scenes, Youth]
- [Edit Categories] button
- [Test connection] button

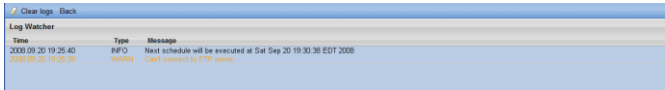
Once the Remote Publish Location details have been entered, test the connection by clicking the Test Connection button at the bottom of the page.

A dialog box will open to inform the user of the success of failure of the action.

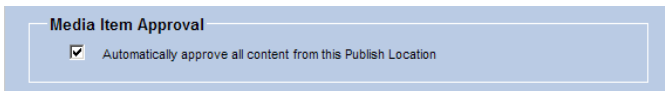


Click OK, then click Save to keep the changes.

By clicking selecting a Remote Publish Location and then clicking the Log Watcher button, details are shown regarding the current status of the remote publish location.



Remote Publish Locations lets you specify that their Media Items are automatically approved.



7.8 Distribution

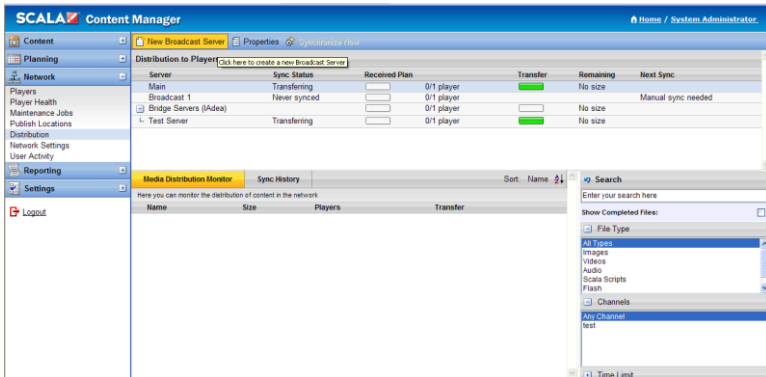
The Distribution panel enables you to monitor and control distribution of content on your network using Broadcast Server.

You will need to obtain a proper license and have Scala Broadcast Server installed and configured.

7.8.1 Creating a Broadcast Server

To create a broadcast server, click the **Distribution** button under the Network menu.

Click New Broadcast Server. The following screen is displayed:



Enter name that you can use to easily identify the server and optionally enter a description for the server.

The screenshot shows a configuration window with a yellow 'Properties' tab and a 'Driver' sub-tab. It is divided into four sections: 'Name' with fields for 'Name' (set to 'Broadcast') and 'Description'; 'Broadcast Settings' with 'Driver Type' (empty), 'Plan Delivery' (empty), 'Log Level' (set to 'Normal'), and 'Player Broadcast Cache Size' (set to '0 MB'); 'Network Monitoring Settings' with checkboxes for 'Enable Player Heartbeats?' (checked), 'Players Upload Logs' (checked), and input fields for 'Player Heartbeat Rate' (set to '2 min'), 'Plan Status Interval' (set to '1 min'), 'Timeout Warning After' (set to '5 min'), and 'Max Logfile Age' (set to '7 days'); and 'Playback Audit Settings' with a checked 'Enable Playback Uploads?' checkbox and input fields for 'Max Logfile Age' (set to '7 days') and 'Max Database Age' (set to '90 days').

Configure the settings for your server:

This close-up shows the 'Broadcast Settings' section. 'Driver Type' is set to 'IP Multicast' and 'Plan Delivery' is set to 'Content Manager Direct'. 'Polling Interval' is set to '1 min', 'Log Level' is 'Normal', and 'Player Broadcast Cache Size' is '0 MB'.

When using the IP Multicast driver you can select either Content Manager direct for the Plan Delivery or Push to Broadcast Server.

Select the Driver tab and enter the Server Transmission IP address.

Most of the other attributes are standard can remain set on the defaults or can be adjusted according to the user’s needs.

The screenshot shows a configuration panel titled "Network Options" with the following fields:

Group IP:	234.5.6.7	Group Port:	8910
Server Transmits on IP:	192.168.10.152	Server Listens on Port:	40000
Packet Size:	576 bytes	Time to Live:	128
Bandwidth limit:	1024 kbps	Control Redundancy:	3
Control Interval:	100 kb		

You can set the schedule using the schedule tab to either manual mode or automated mode.

The screenshot shows a configuration panel with tabs for "Properties", "Driver", and "Schedule". The "Automation Settings" section contains two radio buttons: "Manual" (which is selected) and "Automated".

The Broadcast Server Properties supports setting the **Player Broadcast Cache Size**.

This governs the amount of broadcast data that a player will retain, which can be useful to resolve files that arrive out of order through the use of Linked Content, non-scheduled content, and manual addition and removal of media items from broadcasts.

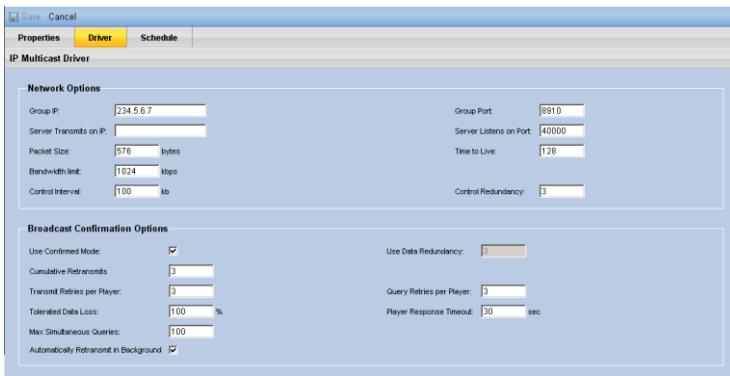
7.8.2 Defining Broadcast Server Properties

1. Select the broadcast server you require.
2. On the **Properties** tab, choose the driver type you require from the Driver Type list. You can choose from:
 - IP Multicast (see , *IP Multicast*)
 - File Delivery (see , *File Delivery*)

- HughesNet (see , *HughesNet*)
3. Define how the players communicate with the Content Manager by choosing a delivery method. You can choose from:
- **Content Manager Direct** - the Broadcast Server connects in to Content Manager to get its instructions.
 - **Push to Broadcast Server** - Content Manager delivers the instructions to the Broadcast Server. For **Server Address**, specify the local folder or FTP location where the Broadcast Server can be reached. For FTP folders, use the syntax *ftp://user:password@hostname/path*

7.8.3 IP Multicast

When you create Broadcast Server using the IP Multicast driver, you can specify the following options on the Driver tab:



Network Options

- **Group IP:** The multicast group IP address that this server will transmit on.
- **Group port:** The port number this server will transmit on.
- **Server Transmits on IP:** If the server has multiple IP addresses, use this field to specify the IP address that is used when sending transmissions. You can leave this field blank if the server has only a single IP address.
- **Server listens on port:** The port the server listens for incoming connections.
- **Packet size:** The size of the multicast packets sent by this server. This value needs to be smaller than the MTU size of the network.
- **Time to live:** The time to live for packets sent by this server
- **Bandwidth limit:** The maximum data rate at which this server will broadcast.
- **Control interval:** The interval at which broadcast-control messages are sent.

- **Control redundancy:** The degree of redundancy for control messages

7.8.4 Broadcast Confirmation Options

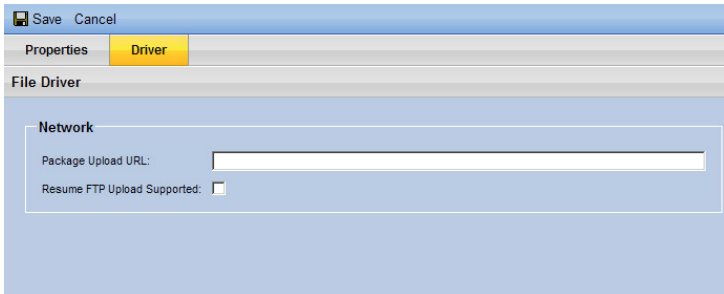
Broadcast Confirmation Options Players report back which data blocks they have received or missed. In Confirmed Mode (the preferred choice), the Broadcast Server relies on these confirmations to automatically determine what to resend and when.

The settings limit the number amount of data that will be resent, the number of retries of a given player before the server gives up on that particular player, and so on.

When you set up the players using the Player Configuration tool, you need to ensure you use matching values for the multicast IP (“ippipe”) settings.

7.8.5 File Delivery

When you create Broadcast Server using the File Delivery driver, you can specify the following options on the Driver tab:



The Package Upload URL specifies where the package file is uploaded. Use a full URL in the following format:

ftp://username:password@hostname:portnumber/folder

7.8.6 HughesNet

When you create Broadcast Server using the HughesNet driver, you can specify the following options on the Driver tab:

The screenshot shows a configuration window titled "HughesNet Driver" with two tabs: "Properties" and "Driver". The "Driver" tab is active. It is divided into two sections: "Network" and "Account".

Network Section:

- Package Upload FTP URL: [Text Input Field]
- Resume FTP Upload Supported:
- XML Interface URL: [Text Input Field]
- Best Effort Mode: Best Effort Count: [2] [Spin Box]
- FEC Overhead: [0] [%] Status Delay: [60] [Spin Box] Seconds

Account Section:

- Source Client: [Text Input Field] Client Key: [Text Input Field]
- Destination Address: [Group] [Dropdown Menu] Community: [Text Input Field]
- Destination Client: [Text Input Field]
- PDSEnder DTD: [C:\Program Files\Hughes Network Systems\PDSEnder\sf\dt\pd\1.0] [Text Input Field]
- Report Email: [Text Input Field]

The options include:

- URL where broadcast packages are to be uploaded to the HughesNet Enterprise Package Delivery Server
- URL to the XML status interface of the HughesNet server

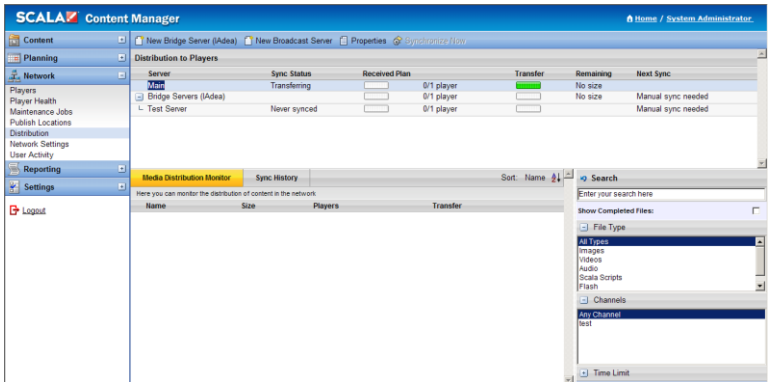
- “Best Effort” mode, and count
- FEC (forward error correction) overhead
- Account-information for the HughesNet server

When you set up the players using the Player Configuration tool, you need to ensure you use matching values for the HughesNet settings.

7.8.7 Media Distribution Monitor

The media distribution monitor allows the user to monitor the distribution of content in the network.

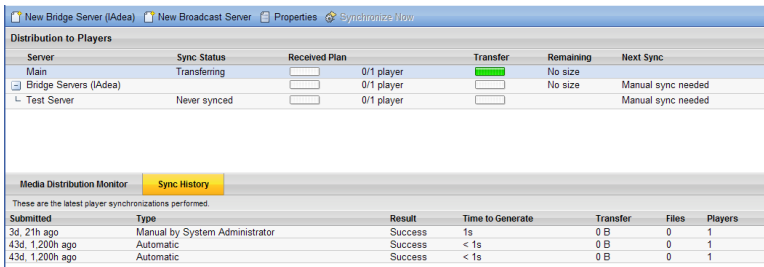
Select the Media Distribution Monitor tab. The user will then be able to monitor the name, size, players to which the content is distributed and the transfer of that content.



The search tool allows the user to show completed files in the media distribution monitor screen - by type, channel and time limit ranges.

7.8.8 Sync History

The sync history tab allows the user to see the history of content that has been synced to players.



7.8.9 Editing Pending Broadcast Jobs

It is possible to editing a pending broadcast job. Navigate to Network -> Distribution, then select the appropriate Broadcast Server and click the Broadcasts tab. Then select the broadcast job, and click the Edit button.

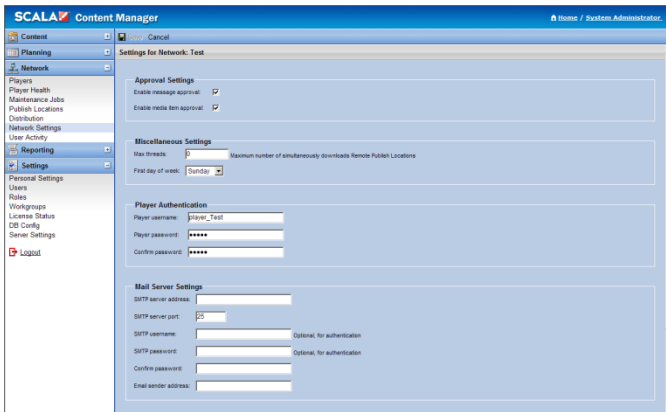
When editing a pending broadcast, there is a **Players** tab, where the user can view the Players associated with a given broadcast, and optionally add or remove Players from that list.

When editing a pending broadcast, there is also a **Media** tab, where the user can view the Media Items in a given broadcast, and optionally add or remove Media Items from that list.

When editing a pending broadcast, you can change the **schedule** of when this broadcast has been sent, and you can edit or re-run an existing broadcast.

7.9 Network Settings

Content Manager allows you to view and modify various settings for your Network.



Click on *Network* -> *Network Settings* to view the groups of settings.

If you make any changes, be sure to click the *Save* button in the button bar so your changes are committed.

7.9.1 Approval Settings

You can enable message approval by checking the *Enable message approval* option.

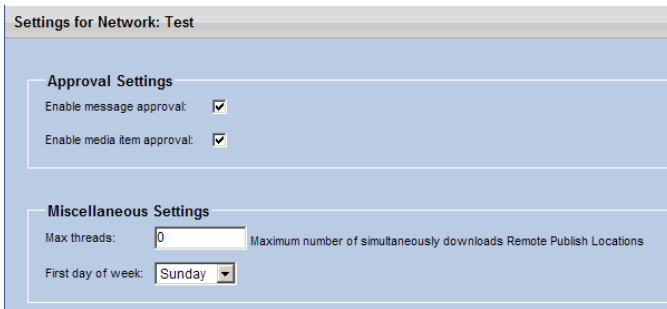
When enabled, you can request approval of messages before they are shown on a player. If the option is not enabled, then the messages will not require approval before being shown on a player.

Content Manager also allows you to set approvals at the media item level.

Select the appropriate box in order to activate the approval settings.

7.9.2 Miscellaneous Settings

The Miscellaneous Settings allows for further customization of Content Manager. Users can choose to change the maximum number of threads downloaded from remote publish locations.

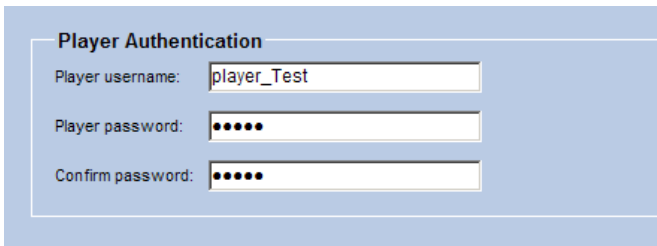


Max Threads – The maximum number of threads that are available for use to download from a remote publish location. The default value is one (1). If you change this setting, you **MUST** stop/start the Apache Tomcat service in order for the new setting to take effect.

First day of week – Allows you to select the first day of the week. The two choices are Sunday or Monday. The default value is Sunday.

7.9.3 Player Authentication

The player authentication settings are the username and password that your player(s) use when connecting to Content Manager.



The screenshot shows a light blue rectangular box containing the 'Player Authentication' settings. The title 'Player Authentication' is at the top left. Below it are three input fields: 'Player username:' with the text 'player_Test', 'Player password:' with five black dots, and 'Confirm password:' with five black dots.

Player username – The username player(s) use to connect to Content Manager. The default value is *player_<networkname>*.

Player password – The password player(s) use to connect to Content Manager. The default value is *scala*.

Confirm password – Requires you to re-enter a password for confirmation. The default value is *scala*.

7.9.4 Mail Server Settings

The SMTP settings allow you to configure Content Manager to use a mail server to send you an email when a player problem occurs. The settings are:

A screenshot of a web form titled "Mail Server Settings". The form contains several input fields: "SMTP server address:" with an empty text box; "SMTP server port:" with a text box containing the number "25"; "SMTP username:" with an empty text box and the text "Optional, for authentication" to its right; "SMTP password:" with an empty text box and the text "Optional, for authentication" to its right; "Confirm password:" with an empty text box; and "Email sender address:" with an empty text box. The form has a light blue background and a thin border.

SMTP server address – The IP address or machine name of the SMTP server you want to use.

SMTP server port – The port of the SMTP server. The default value is twenty-five (25).

Email sender address – The email address that will appear in the *From* line of the email.

SMTP username – If the mail server requires authentication, enter the username.

SMTP password – If the mail server requires authentication, enter the password the account.

Confirm password – Requires you to re-enter a password for confirmation.

7.9.5 Web Services

The web services authentication settings are the username and password that the Scala Playback Audit Parser and/or third party application uses when connecting to Content Manager.

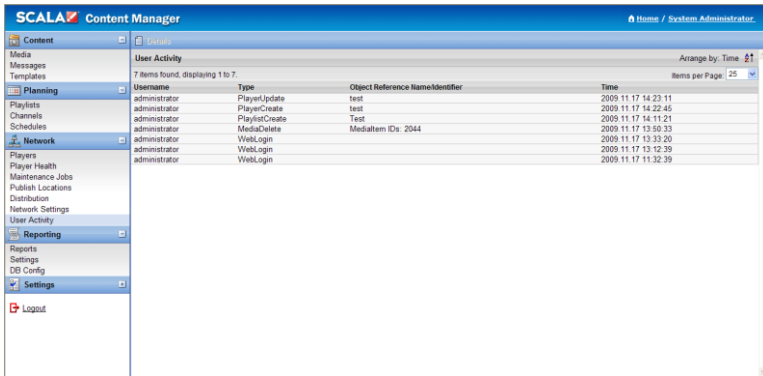
Username – The username used to connect to Content Manager. This username must be unique.

Password – The password used to connect to Content Manager.

Confirm password – Requires you to re-enter a password for confirmation.

7.10 User Activity

Content Manager logs when any user has logged into the web interface. It also logs any changes that may have occurred.



The screenshot shows the SCALA Content Manager interface. The left sidebar contains a navigation menu with categories like Content, Planning, Network, Reporting, and Settings. The main area displays the 'User Activity' log, which is a table with the following data:

Username	Type	Object Reference Name/Identifier	Time
administrator	PlayerUpdate	test	2009 11 17 14:23:11
administrator	PlayerCreate	test	2009 11 17 14:22:45
administrator	PlaylistCreate	Test	2009 11 17 14:11:21
administrator	MediaDelete	MediaItem ID: 2044	2009 11 17 13:50:33
administrator	WebLogin		2009 11 17 13:33:20
administrator	WebLogin		2009 11 17 13:12:39
administrator	WebLogin		2009 11 17 11:32:39

Click on *Network > User Activity* to view the list. This list contains four columns:

- *Username* – The username of the person.
- *Type* – The type of action that was performed.

- *Object Reference Name/Identifier* – The object that was changed.
- *Time* – The time the action was performed.

||||| 8 Advanced Topics

8.1 Backing Up Content Manager's Data

This chapter describes how to backup and restore Scala Content Manager 5. Databases currently supported are:

- PostgreSQL 8.2.x or 8.3.x
- MySQL 4.1 or 5.0
- Microsoft SQL Server 2000
- Microsoft SQL Server 2005
- Microsoft SQL Server 2005 Express

Content Manager does not contain an automated backup/restore feature, so these instructions comprise a set of manual steps.

These steps could be automated, but are beyond the scope of this User Guide. The backup process assumes that you have copied or archived the necessary files from the Content Manager system to another location.

The restore process relies on either copying or extracting the files from the backup location to the original location. Scala does not make recommendations as to where your backup files should reside. However, it is assumed good backup principles are followed.

8.1.1 Backup Instructions

Follow the five steps outlined below:

Step 1: Stopping Apache Tomcat and Transmission Server services

Since the backup process is not an integrated part of Content Manager, the Apache Tomcat and Transmission Server services have to be stopped first. Go to Start -> Control Panel then double-click on Administrative Tools. Double-click on Services, and then find the Apache Tomcat service. Right-click and select Stop. Wait for the service to stop completely.

Find the Scala Transmission Server service. Right-click and select Stop. Wait for the service to stop completely before moving to the next step.

Step 2: Backing up the data files

All data files must be backed up. By default, the location of this directory is:

```
C:\Documents and Settings\All Users\Application  
Data\Scala\InfoChannel Content Manager 5\Data
```

If your data location differs the one listed above, you can find the location in Content Manager under Settings-> Server Settings-> System Paths frame-> Data root. You should backup all files, folders and subfolders from this directory except the folder WEB-INF.

Step 3: Backing up the configuration files

The following configuration files must be backed up. By default, the location of this directory is:

C:\Documents and Settings\All Users\Application Data\Scala\InfoChannel Content Manager 5

You must backup these files and folders/subfolder within:

- Conf – All files and subfolders
- License – All files
- Logs – Not necessary, but you might want to keep the log files
- SavedValues – All files and subfolders
- License.xml – The license file

Note: The default location of the data files exists in the same location as the configuration files. So if you are using the Content Manager 5 installation default values, you can combine step 1 and step 2.

You must also backup the configuration files for the Transmission Server. By default, the location of this directory is:

C:\Documents and Settings\All Users\Application Data\Scala\InfoChannel Transmission Server 5

All files and subfolders should be backed up.

Step 4: Backing up the database

Depending on the type of database server you are using, a different set of instructions are required in order to backup the Content Manager 5 database. You should only read and follow the instructions for the type of database you are using.

Step 5 – Start Apache Tomcat and Transmission Server services

The backup process is now complete. You can start Apache Tomcat and Scala Transmission Server services.

Go to Start -> Control Panel then double-click on Administrative Tools. Double-click on Services, and then find the Apache Tomcat service. Right click and select Start. Wait for the service to start completely. Find the Scala Transmission Server service. Right-click and select Start. Wait for the service to start completely. You can now access Content Manager 5.

8.1.2 PostgreSQL

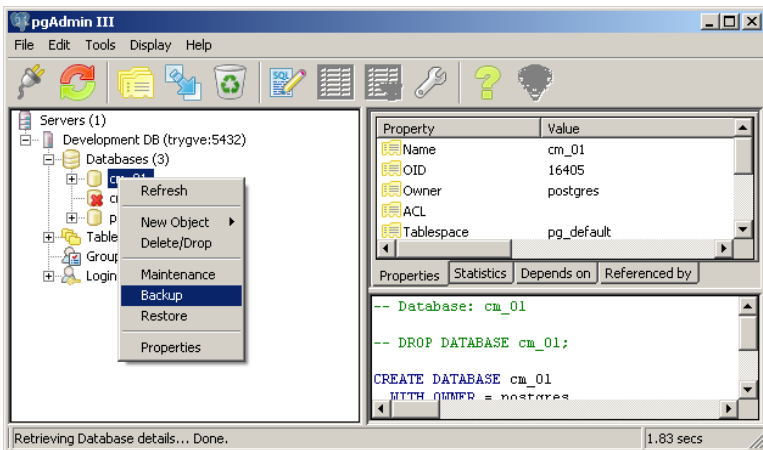
Backing up the PostgreSQL database is performed by either using the pgAdmin tool or the command line tool `pg_dump.exe`.

A detailed explanation of the procedure using the pgAdmin tool follows as well as a short example of `pg_dump.exe` usage. The following steps illustrate the step-by-step process of performing a backup of a PostgreSQL database schema `cm_01`.

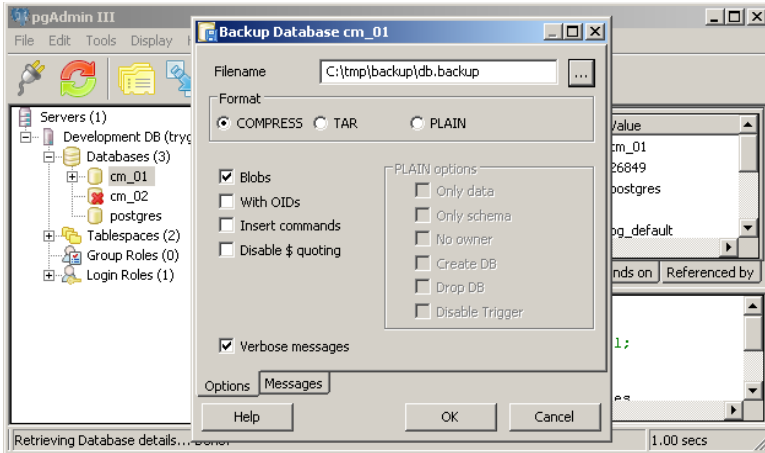
Open the pgAdmin tool by navigating to Start -> Programs -> PostgreSQL 8.3 -> pgAdmin.

Note: There is a significant performance increase in running pgAdmin from the same computer that the PostgreSQL database server is running on.

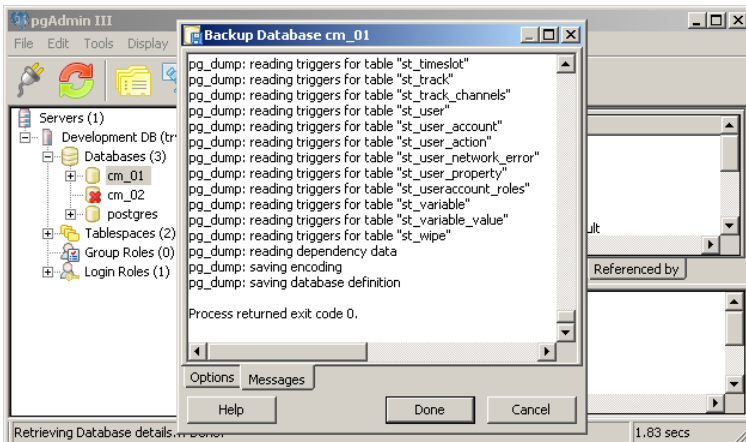
Connect to your database server using the same Username and Password you entered when you installed Content Manager 5. Select the database schema you want to backup, then right-click and select Backup.



Set the backup options in the backup dialog, choose a path and filename for the backup file, and press OK to start the backup.



Verify the result. Wait for the backup process to finish, and verify that the final message is "Process returned exit code 0". If the exit code is different, this means that the backup was not successful.



Using command line you may choose to use the command line tool `pg_dump.exe` to backup the database. To create the same backup as shown above, execute the following command:

```
pg_dump --format=custom --compress=5 -U postgres -W cm_01  
> C:\tmp\backup\db.backup
```

Please refer to the PostgreSQL manual for more details when using the command line tools.

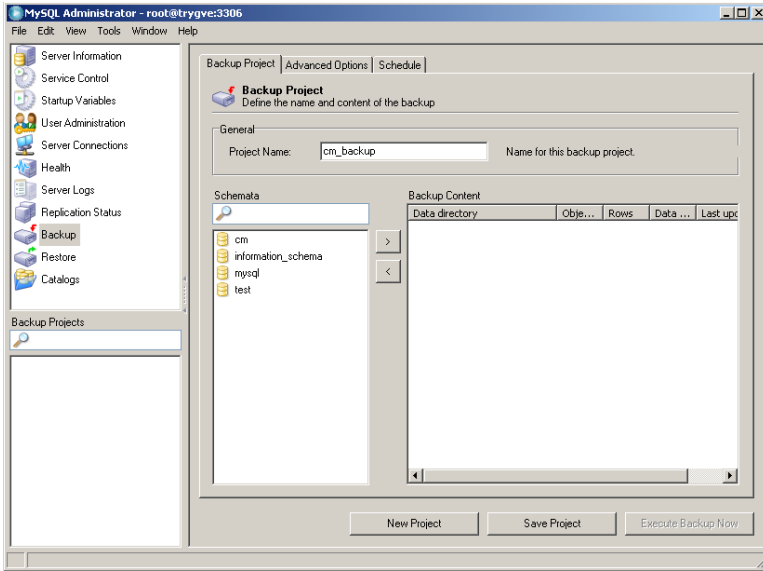
8.1.3 MySQL

A backup of the MySQL database can be done either through the MySQL Administrator interface or using the command line tool `mysqldump.exe`. Detailed instructions on how to use MySQL Administrator are provided here, as well as a short example of `mysqldump.exe` usage.

Note: A backup created using MySQL Administrator cannot be restored using `mysqldump` and vice-versa.

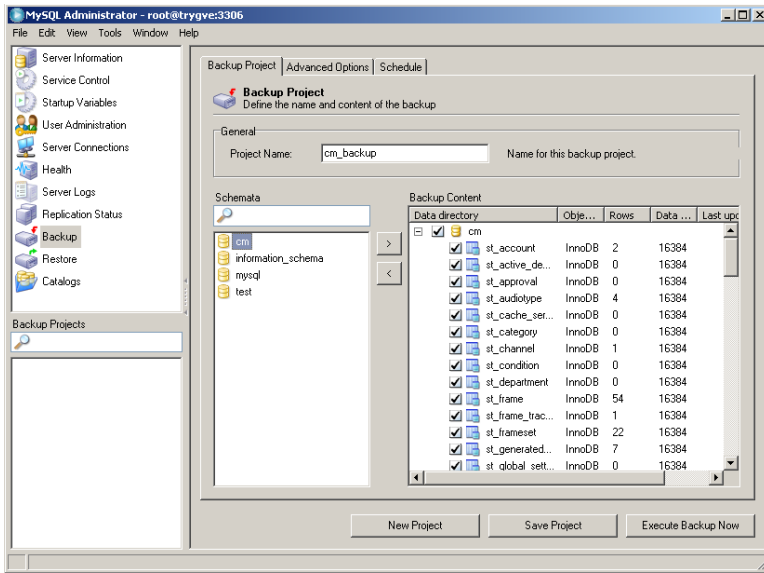
The following steps illustrate the step-by-step process of performing a backup of a MySQL database schema `cm`.

First, create the backup project, by connecting to your MySQL database server and select Backup from the left menu. Then click New Project, and give the project a name.

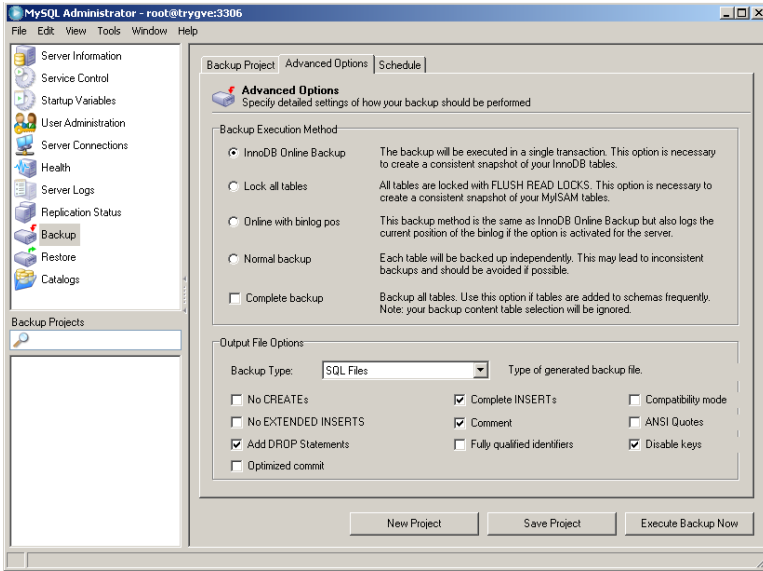


Select the cm database schema, and click the > button to select the contents of the schema.

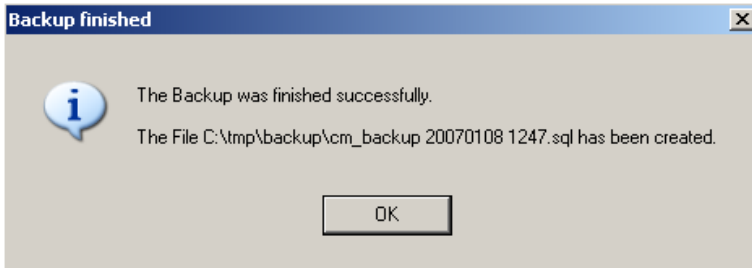
All tables should be selected.



The Backup Execution Method must be set to **InnoDB Online Backup**. Scala recommends that the other options remain unchanged.



Execute the backup and verify the results. Click the Execute Backup Now button, and verify that the backup completed successfully:



Using command line You may choose to use the command line tool mysqldump.exe to backup the database. To create the same backup as shown above, execute the following command:

```
mysqldump -u root -p cm > C:\tmp\backup\cm_backup.sql
```

Please refer to the MySQL manual for more details for the command line tools.

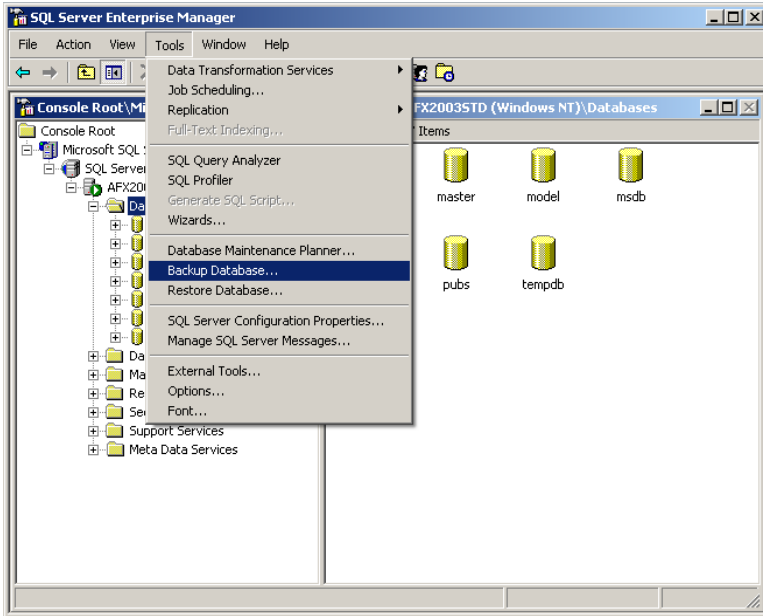
8.1.4 Microsoft SQL Server 2000

A backup of the Microsoft SQL Server 2000 can be performed using the Microsoft SQL Server Enterprise Manager. There are many different types of backup tools available for Microsoft SQL Server 2000.

However, this guide only demonstrates how to create a single complete backup. If your networked database uses Microsoft SQL Server 2000, you are likely to use a more sophisticated (incremental) backup policy. Please consult the Microsoft SQL Server 2000 documentation or your database administrator for more information.

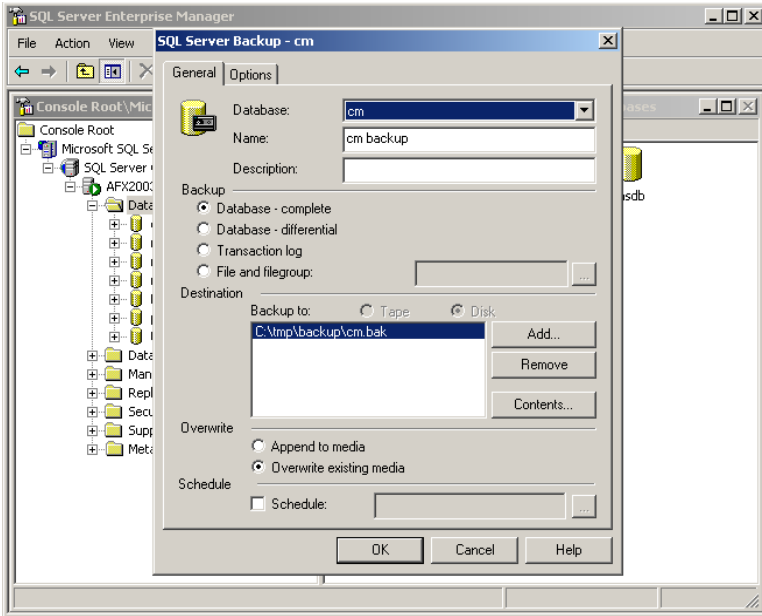
The following steps illustrate the step-by-step process of performing a backup of a Microsoft SQL Server 2000 database schema cm.

Create the backup project by connecting to your database server using the Microsoft SQL Server Enterprise Manager, and start the Backup Database wizard.



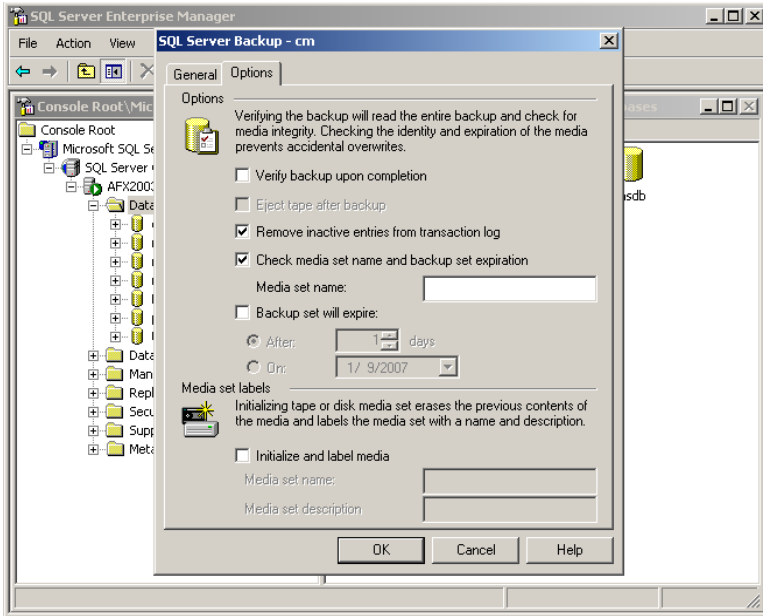
Select the SQL database you want to backup, and add at least one destination for the backup.

Set the Overwrite option to Overwrite existing media, if you don't want to keep previous backups. Also make sure the Backup option is set to Database – complete to ensure a complete backup is performed.



Scala recommends that the default options remain unchanged.

Execute the backup by pressing the OK button, and verify that the backup process completed successfully.



8.1.5 Microsoft SQL Server 2005

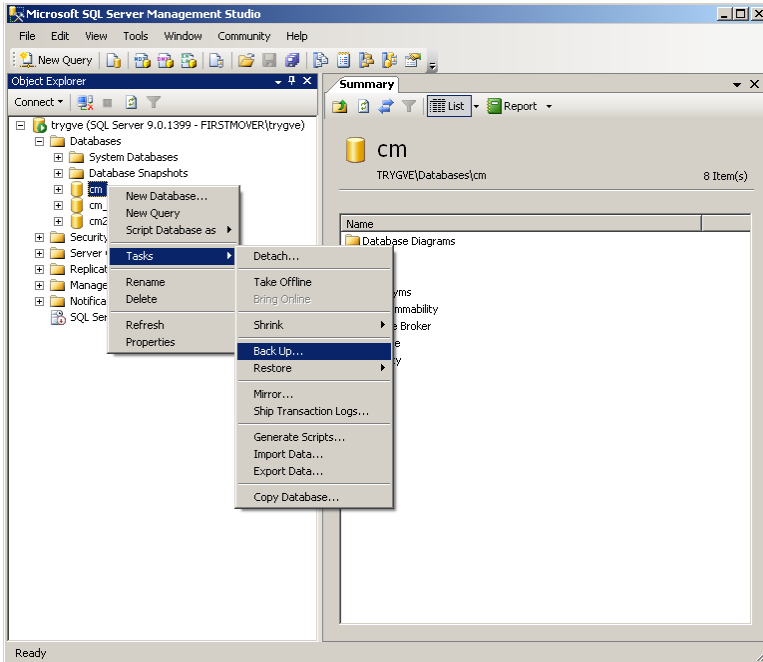
A backup of the Microsoft SQL Server 2005 can be performed using the Microsoft SQL Server Management Studio. There are many different types of backup tools available for Microsoft SQL Server 2005.

However, this guide only demonstrates how to create a single complete backup. If your networked database uses Microsoft SQL Server 2005, you are likely to use a more sophisticated (incremental) backup policy.

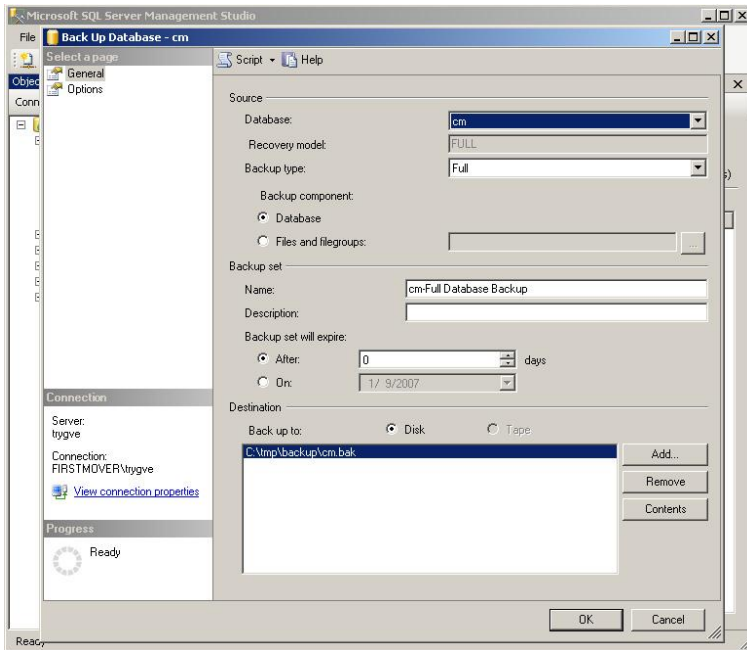
Please consult the Microsoft SQL Server 2005 documentation or your database administrator for more information.

The following steps illustrate the step-by-step process of performing a backup of a Microsoft SQL Server 2005 database schema cm.

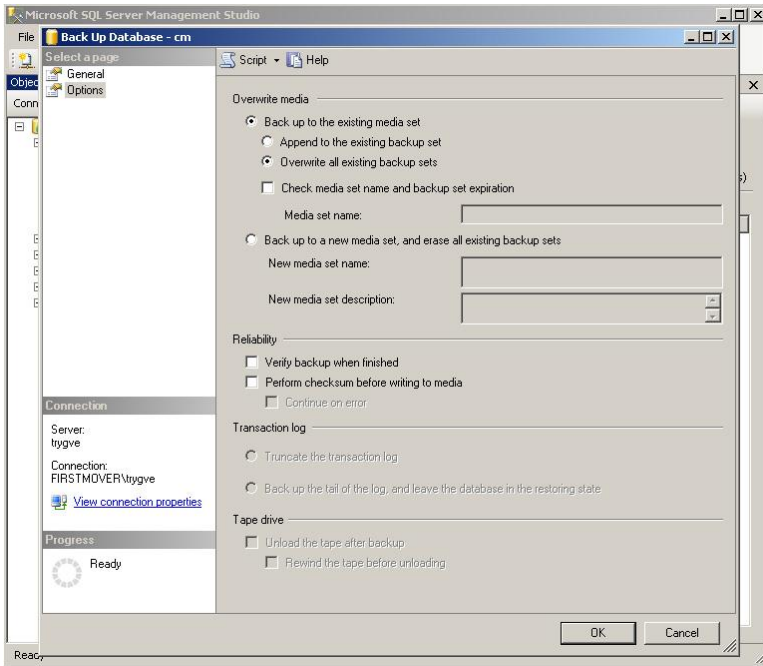
Connect to your database server using Microsoft SQL Server Management Studio, and select the database you want to backup. Choose Back Up as shown below.



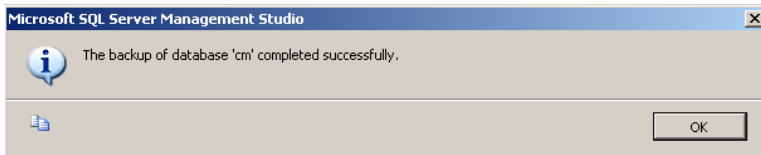
Choose one or more destinations for the backup. Scala recommends that the other options remain unchanged.



On the Options page, select Overwrite all existing backup sets if you want to overwrite old backups. Scala recommends that the other options remain unchanged.



Press the OK button to start the backup. If the backup was successful you will see this message.



8.2 Restoring Content Manager's Data

By following the steps below, you can restore your Content Manager data 5 from a backup. There are many reasons for

performing a restore. For example: you are recovering from a system crash (data loss) or reverting changes to the data.

8.2.1 Restore Instructions

Step 1: Perform a new install

If you're restoring to a system that already has Content Manager 5 installed, you must uninstall it first. Then you must delete its data and configuration files directories. You will also have to delete the configuration files directory for the Scala Transmission Server. Once completed, install the version of Content Manager that matches the one you have backup data for. At the end of the installation the installer will automatically open the welcome page in the browser for you.

DO NOT configure Content Manager! Instead, close the browser.

Step 2: Stop Apache Tomcat and Scala Transmission Server services

The installer automatically starts Apache Tomcat and the Scala Transmission Server services, so you must stop them before proceeding with the restore process. Go to Start -> Control Panel then double-click on Administrative Tools. Double-click on Services, then find the Apache Tomcat service. Right-click and select Stop. Wait for the service to stop completely. Find the Scala Transmission Server service. Right-click and select Stop. Wait for the service to stop completely before moving to the next step.

Step 3: Restore the data files Restore the data files from the backup location to the data files directory. There should only be one folder, WEB-INF, in the data directory prior to restoring.

Step 4: Restore the configuration files Restore the configuration files from the backup location to the configuration files directory. Some files are automatically created when Apache Tomcat was started by the installer, and must be overwritten when restoring. You must also restore the Transmission Server configuration files. When restoring these files, existing files must be overwritten.

Step 5: Restore the database Depending on the type of database server you are using, a different set of instructions are required in order to restore the Content Manager 5 database. You should only read and follow the instructions for the type of database you are using.

Step 6: Start Apache Tomcat and Scala Transmission Server services

The restore process is now complete. You can start Apache Tomcat and Scala Transmission Server services.

Go to Start -> Control Panel then double-click on Administrative Tools. Double-click on Services, then find the Apache Tomcat service. Right-click and select Start. Wait for the service to start completely. Find the Scala Transmission Server service.

Right-click and select Start. Wait for the service to start completely.

You can now access Content Manager 5.

8.2.2 PostgreSQL

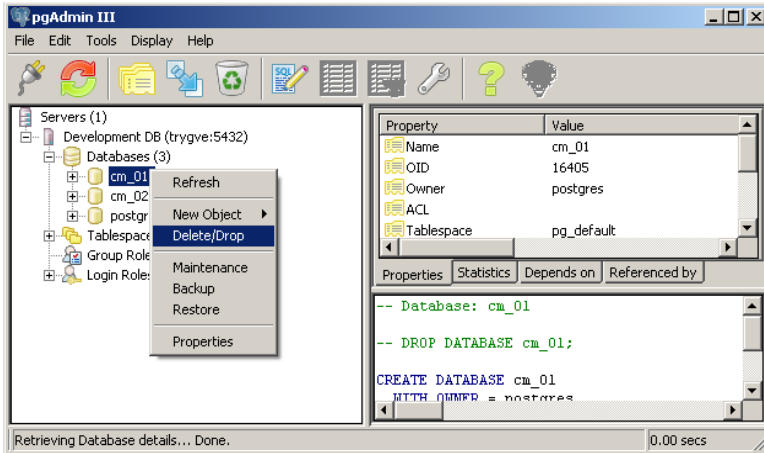
As with the backup process, pgAdmin is used to restore the database.

If the database schema you're restoring already exists, you must first delete it. Open pgAdmin by navigating to:

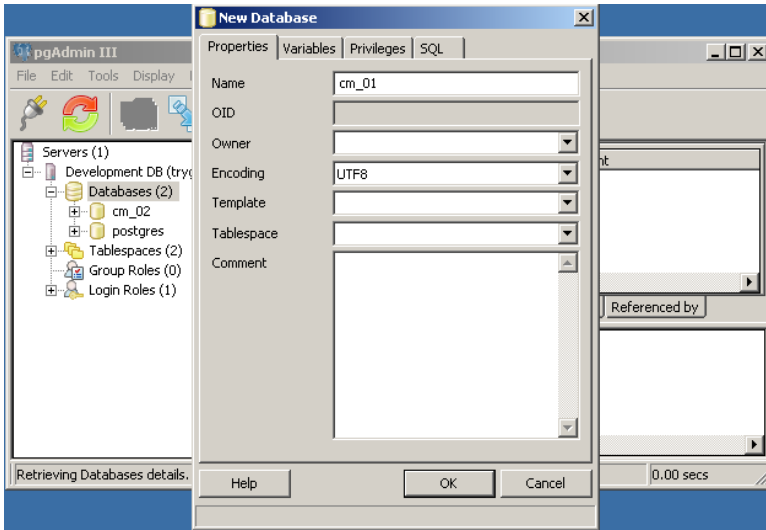
Start -> Programs ->PostgresSQL 8.3 -> pgAdmin.

Connect to your database server using the same Username and Password you entered when you installed Content Manager 5.

Select the database schema you want to delete, then right-click and select Delete/Drop. In the "Drop Database?" dialog, click Yes.



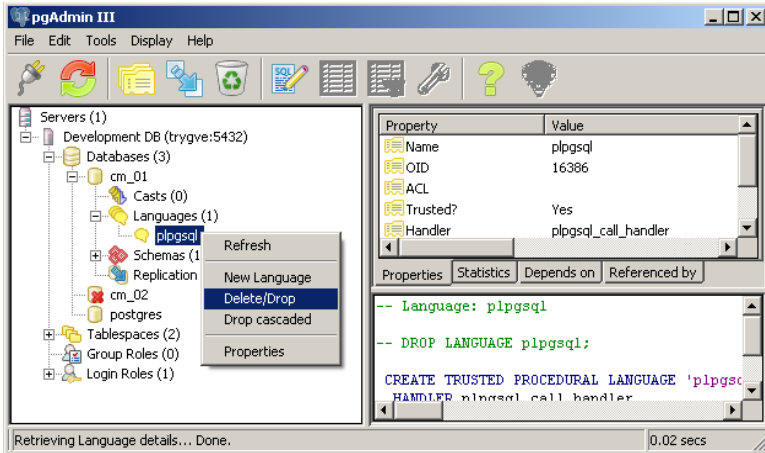
Select Databases, and then click Edit -> New Object -> New Database. Type the database schema name you want to restore. Make sure the encoding is set to UTF-8. Click OK.



The plpgsql language must be deleted. However, by default it is not visible in the user interface. To show it, navigate to File > Options. Then click the Display tab. Check the option “Languages” and click OK.

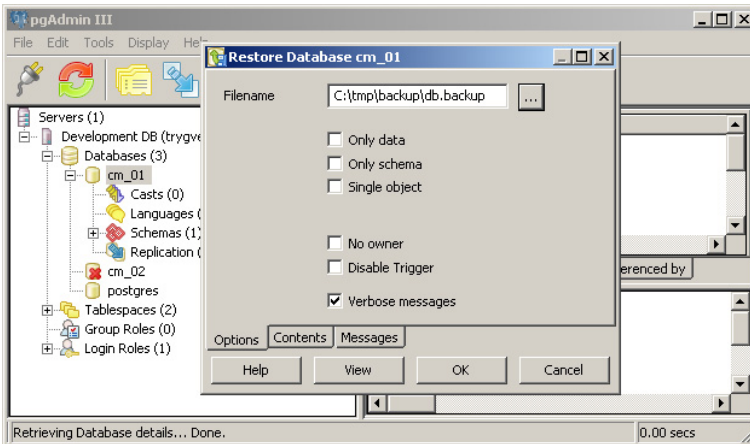
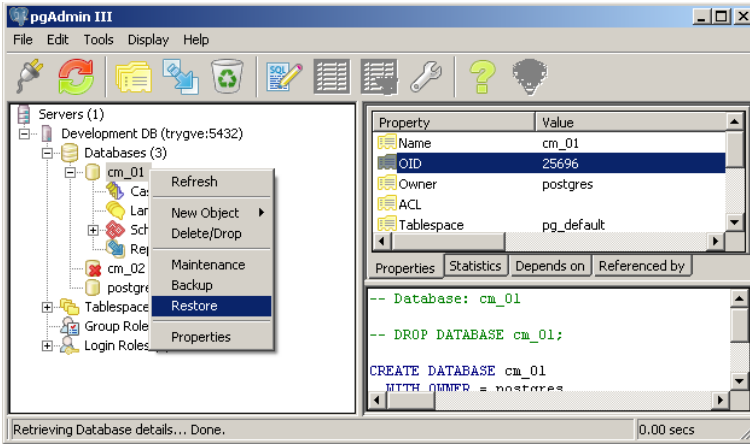
Select the database you just created, and expand it. Then expand the Languages entry.

Select plpgsql then right click and select Delete/Drop. In the “Drop Language?” dialog, click Yes.

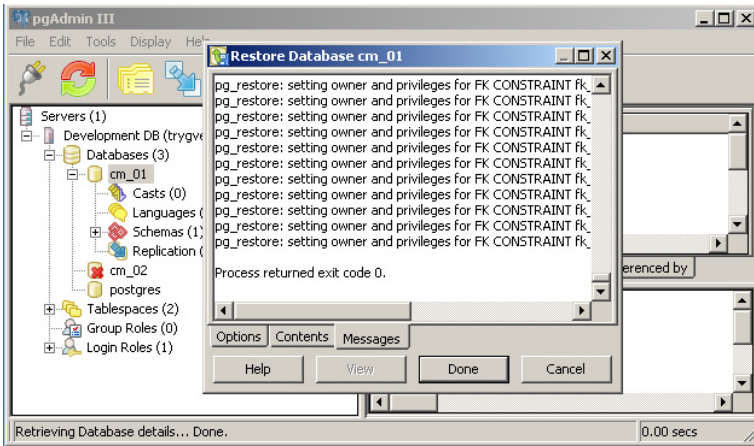


Restore the database tables and data.

You can now restore the tables and data. Select the database, right click, and choose Restore. In the resulting dialog box, choose the database backup file that was created. If you backed up the database using specific options, you must change the restore options accordingly. Otherwise the defaults are okay.



Wait for the restore process to finish, and verify that the final message is Process returned exit code 0. If a different exit code is shown, it indicates that some part of the restore process has failed.



Using command line You may choose to use the command line tool `pg_restore.exe` to restore the database. To restore a backup, execute the following command:

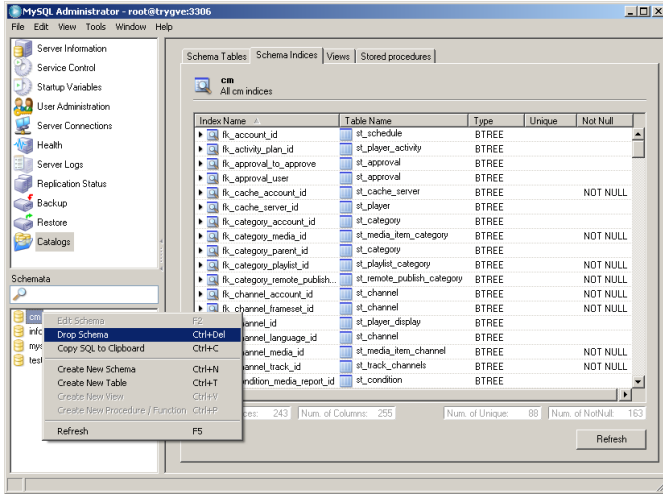
```
pg_restore --dbname=cm_01 --format=custom -U postgres -W C:\tmp\db.backup
```

Please refer to the PostgreSQL manual for more details on the command line tools.

8.2.3 MySQL

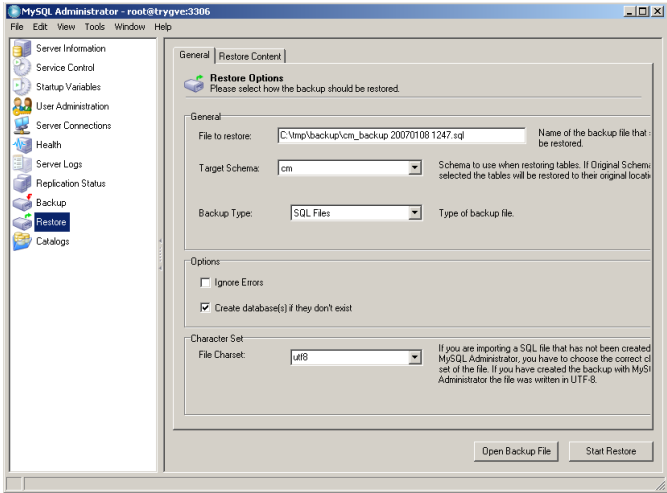
If you are using the MySQL database, you must follow these steps to restore your backup. Like the backup process, restoring the database also uses MySQL Administrator.

If the schema you are restoring already exists, it must be dropped first.

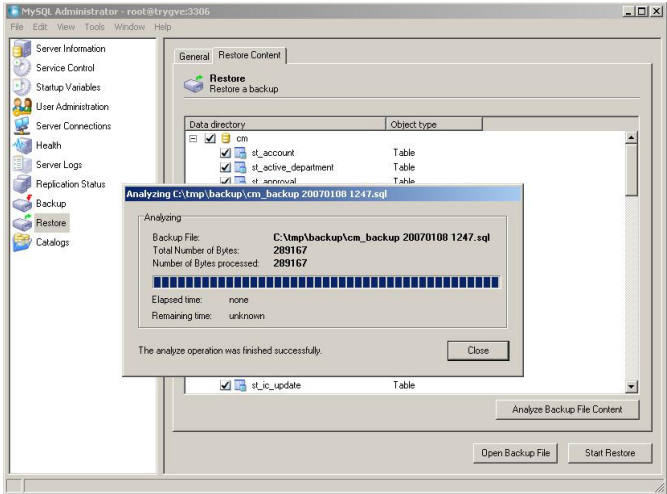


Open the backup file you want to restore from by choosing Restore from the left menu, and clicking the Open Backup File button.

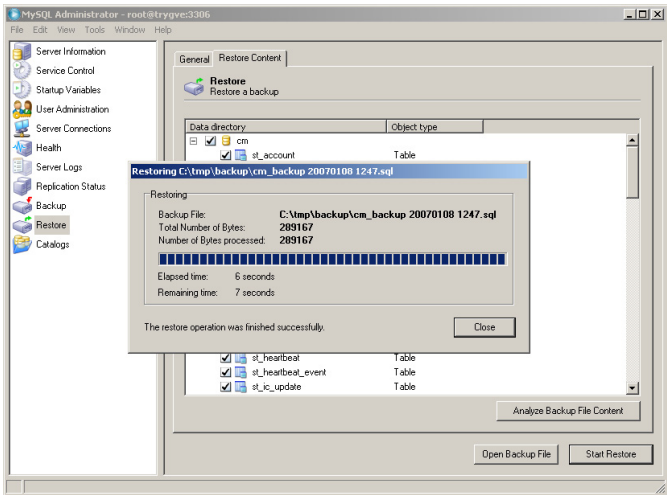
Select the target schema or use the original schema, and check Create database(s) if they don't exist.



The backup file must be analyzed before its contents can be restored. Click the Restore Content tab, then Analyze Backup File Content button to perform this operation. Verify that the backup file was successfully analyzed. All tables should be selected for restore.



Click the Start Restore button to begin. When finished, verify that the restore completed successfully.



Using command line

You may choose to use the command line tool `mysql.exe` to restore the database. To restore a backup, execute the following command:

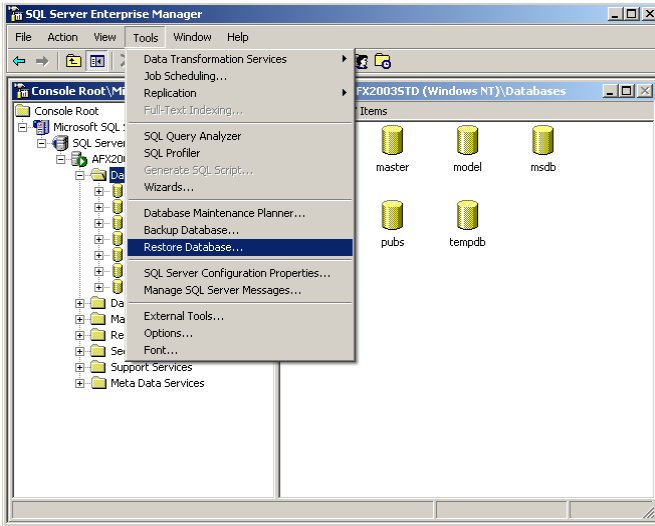
```
mysql -u root -p cm < C:\tmp\backup\cm_backup.sql
```

Please refer to the MySQL manual for more details on the command line tools.

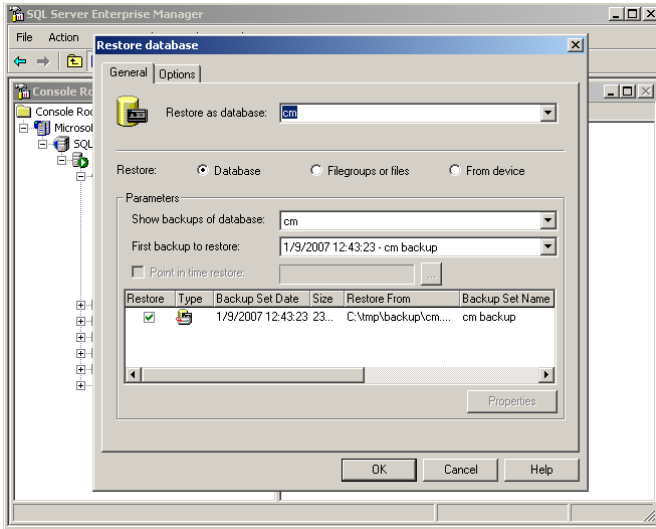
8.2.4 Microsoft SQL Server 2000

Using Microsoft SQL Server Enterprise Manager, select the If you are using the Microsoft SQL Server 2000 database, you must follow these steps to restore your backup. Like the backup process, restoring the database also uses Microsoft SQL Server Enterprise Manager.

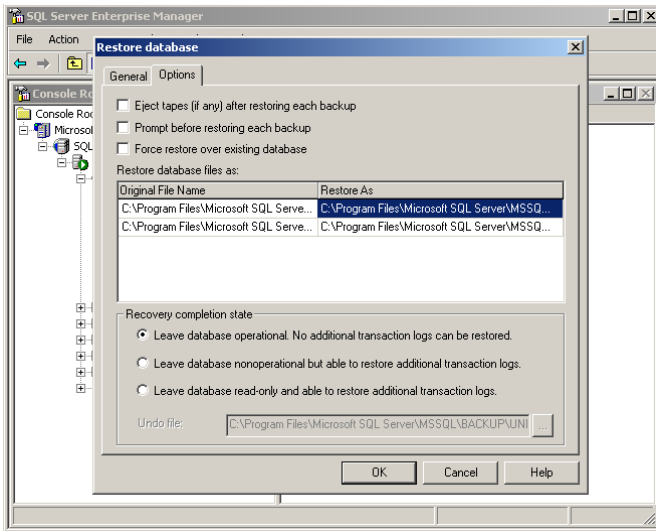
Select the database you want to restore, and click Tools -> Restore Database.



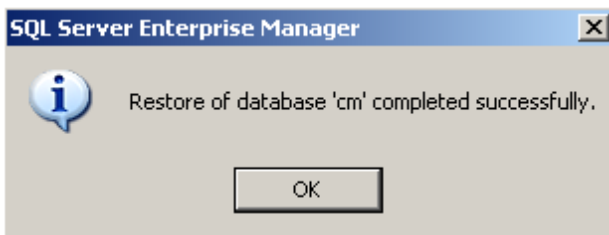
Select or type the name of the database you want to restore, then select the source to restore from.



Click the Options tab. Scala recommends that the default options remain unchanged. Once chosen, click OK.



If the restore process is successful, you will see this dialog:

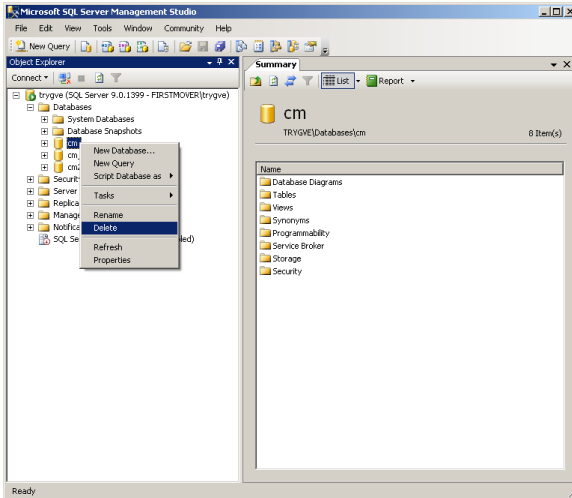


Click OK to complete the restore of the database.

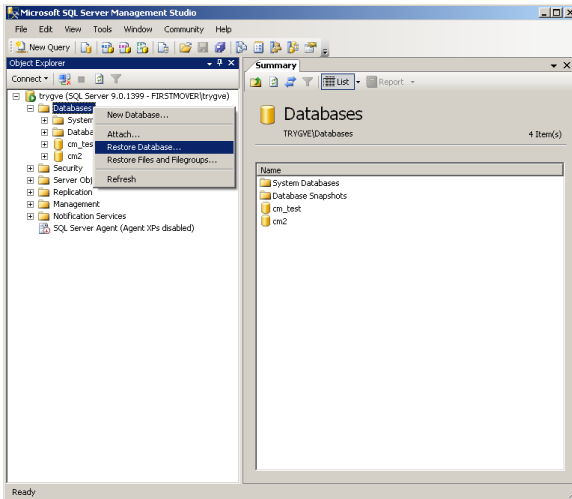
8.2.5 Microsoft SQL Server 2005

If you are using the Microsoft SQL Server 2005 database, you must follow these steps to restore your backup. Like the backup process, restoring the database also uses Microsoft SQL Server Management Studio.

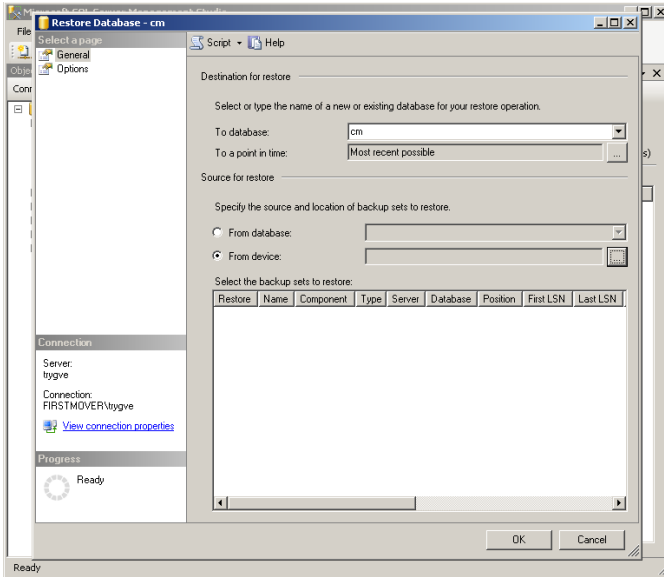
Using Microsoft SQL Server Management Studio, delete the existing database you want to restore to. **DO NOT** delete the backup and restore history information for the database.



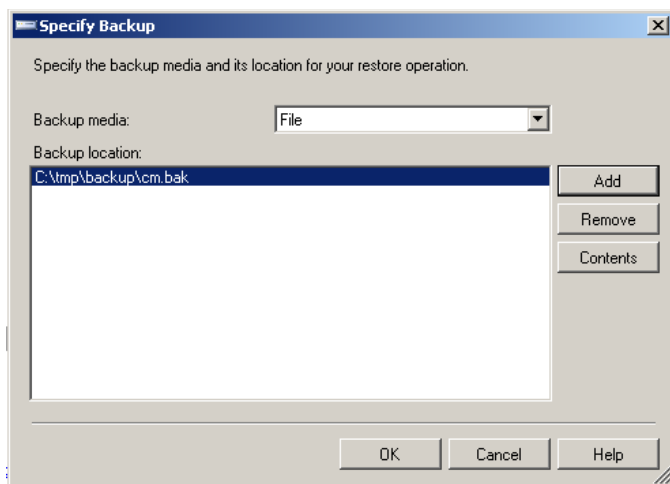
Now start the restore process by right clicking the Databases element.



Type the name of the database you want to restore. Select the From device radio button and click the “...” button.



Add the backup file you want to restore from to the list of backup locations, and click OK.

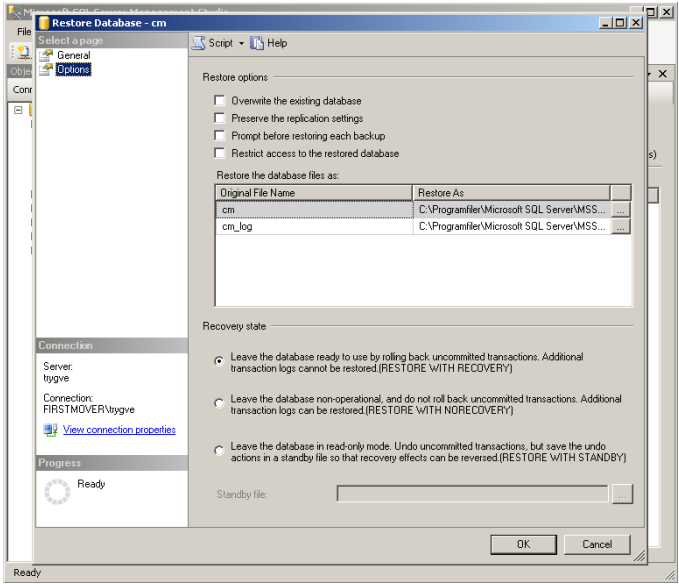


Make sure to select the Restore checkbox after adding the file:

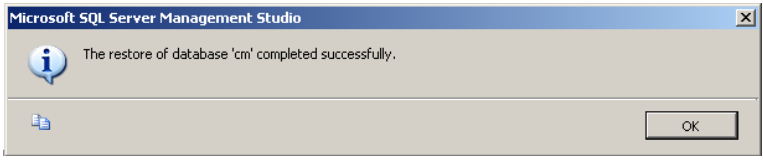
Select the backup sets to restore:					
Restore	Name	Component	Type	Server	Database
<input checked="" type="checkbox"/>	cm-Full Database Backup	Database	Full	TRYGVE	cm

Check options and execute restore. Scala recommends that the default options remain unchanged.

Click the OK button to start the restore process. Once complete, verify that the restore was successful.



Click OK to continue



Click OK to complete the restore of the database.

8.3 Reporting

The user can generate Playback Audit reports using Content Manager. There are three types of reports that the system supports; Media Item reports, Player reports and audit reports.

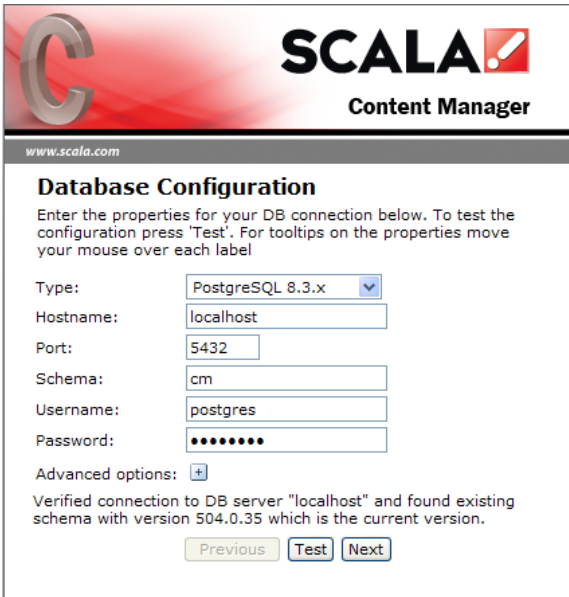
In order to for the Content Manager system to generate reports, there are a number of steps that must be initiated.

8.3.1 DB Configuration and Parser Installation

The Playback Audit Parser is an added feature and must be installed seperately from Content Manager.



The user can configure the Database type and connectivity parameters for the parser database. This configuration is per network. The system will default to the correct Schema for the network.



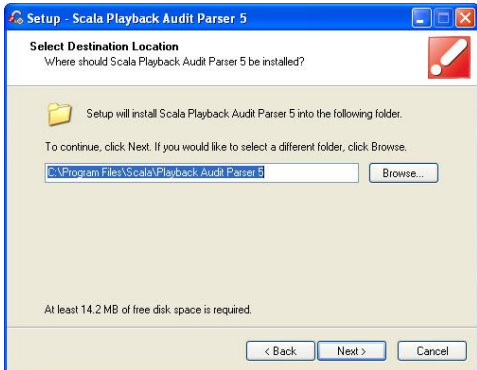
Before installing the Audit Parser, you must enable Web Services in Content Manager. Once Web Services is enabled, start the installer by double-clicking on it, then select Next.



This will open the installer. Click Next to continue.

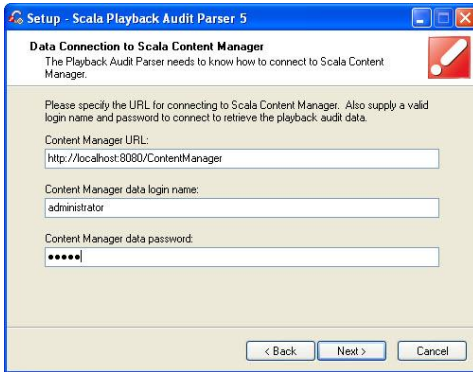


Select the radio button for I accept the agreement and click Next to continue.



The installer will select the appropriate location for the installation. You can change the location using the browse button, or select Next to continue.

Add the appropriate URL for the connection location. Provide the Content Manager User Name and Password.



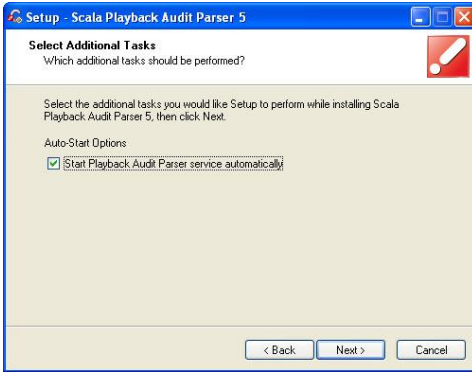
Select Next to continue.

Provide the appropriate web services username and password.



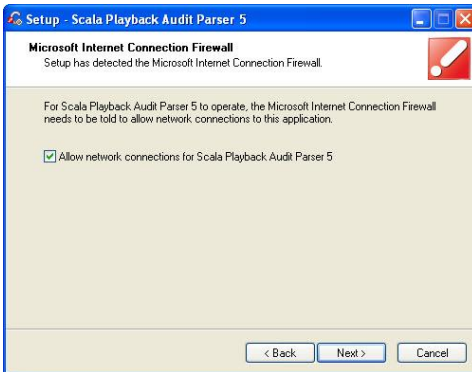
Select Next to continue.

Any additional tasks that need to be completed will be listed in the next dialog box.



Select Next to continue.

The Microsoft Internet Connection Firewall must allow network connections to this application.

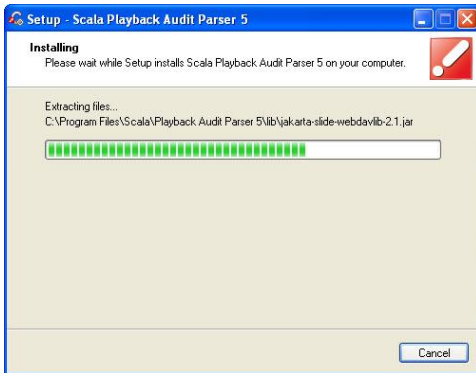


Select Next to continue.

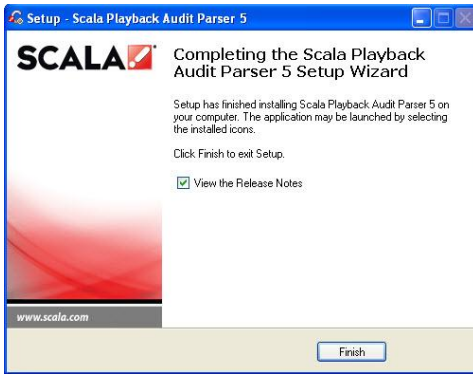
You are now ready to install the Audit Playback Parser.



Click Install to continue.



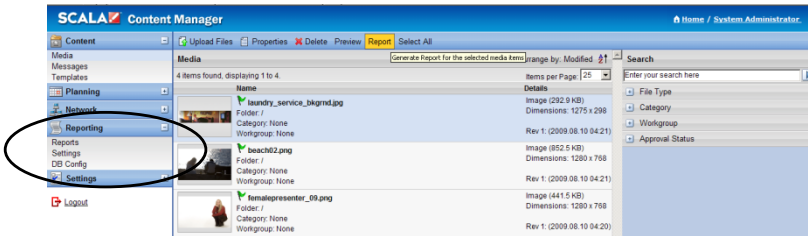
The installer dialog box will provide information about the progress of the install.



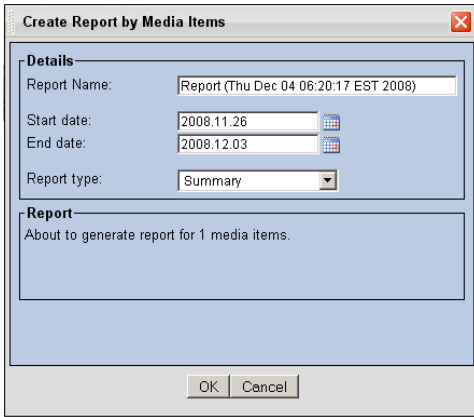
When the installer has completed the install, click Finish. The Playback Audit Parser is now installed on your Scala Content Manager system.

8.3.2 Accessing Reports

Media item summary and detail reports can be generated from the Media tab by selecting one or more media items and clicking the Report button or by using the Reporting tab on the left hand navigation bar.

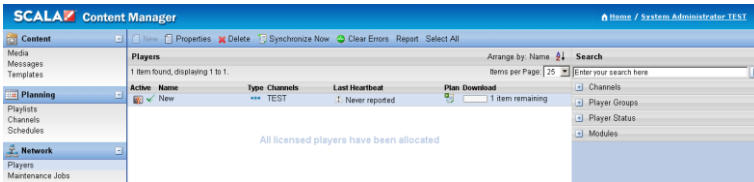


The “Create Report by Media Items” dialog is shown:



You can name the report, specify a date range and choose the report type.

Playback Audit Reports can also be created from the Player list. Select one or more players and click the Report button.

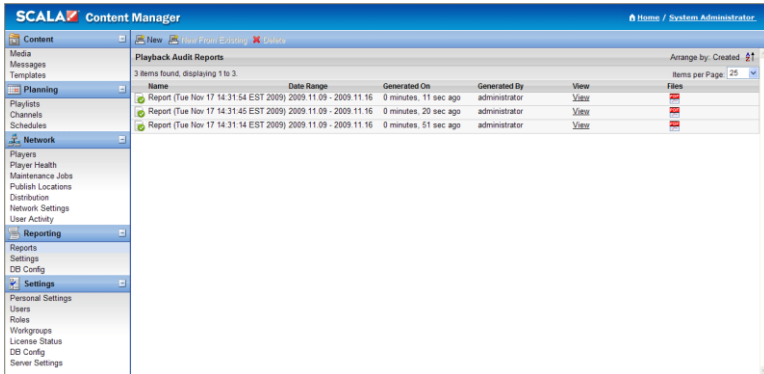


When generating Playback Audit Reports from the players list, the user can choose a name for the report, specify a date range, and choose the report type. The report generated contains the relevant information.

8.3.3 Reports List

The page lists all the reports that have been generated by a user.

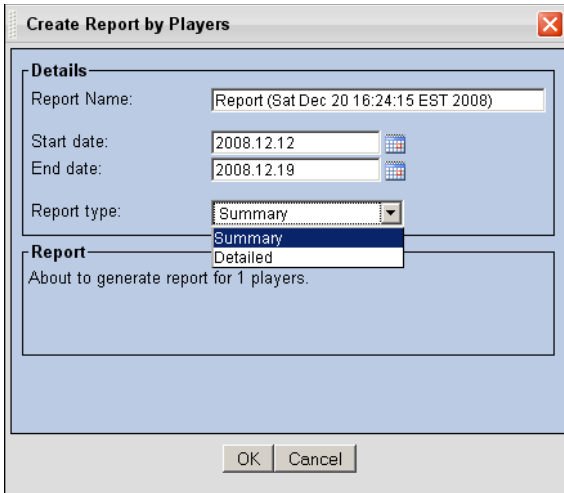
By clicking on the PDF link, the report will automatically open in a PDF viewer (if available).



Right click on the link and choose “Save Link As...” to save a copy of the PDF locally.

Reports can be deleted by selecting a report and clicking the delete button.

Reports are accessible also from Network > Players under Report.



Or from Media > Report.

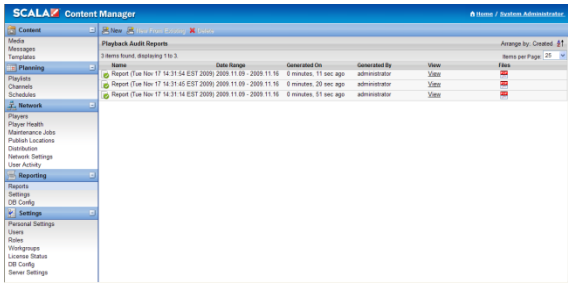
Either Player or Media reports can be created by type using the dropdown Report Type. Select either Summary or Detail for the correct type of report.

8.3.4 Report Format

Content Manager allows you to view reports in HTML and PDF format.

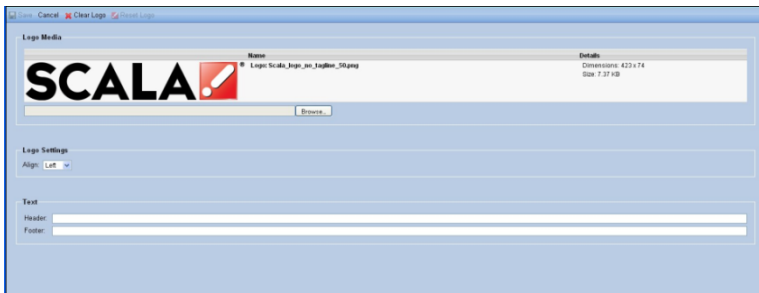
8.3.5 Sample Reports

The system supports two types of reports: Player reports and Media reports.

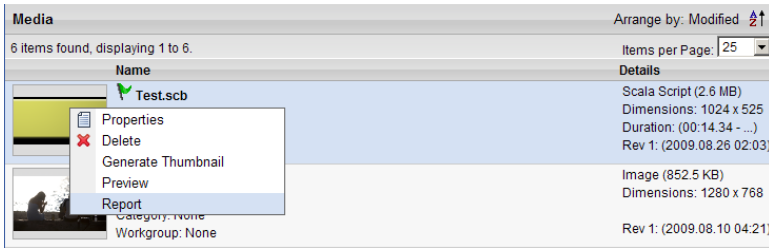


Reports can be accessed in the Playback Audit menu by clicking Reports. All available reports will be listed in the primary pane.

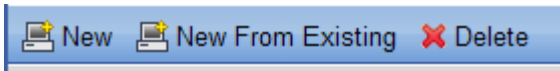
You can add a customizable logo, header, and footer to your Playback Audit reports.



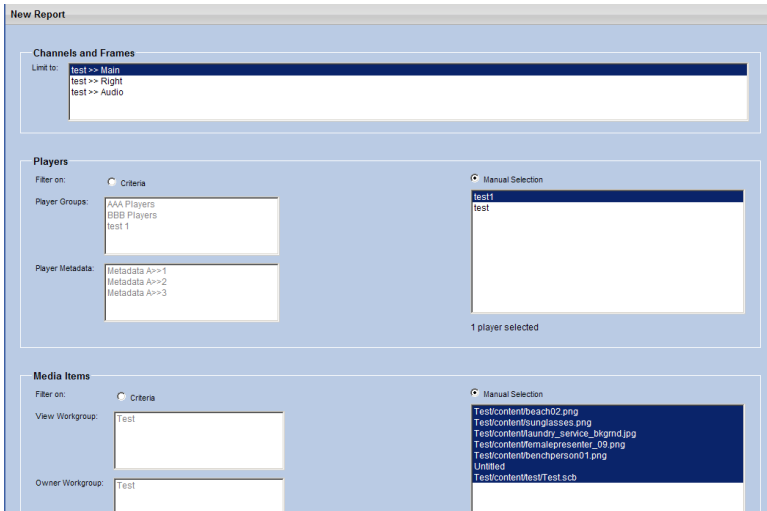
Additionally, the right-mouse context menu for Media, Messages, and Players, now contains a **Report** selection.



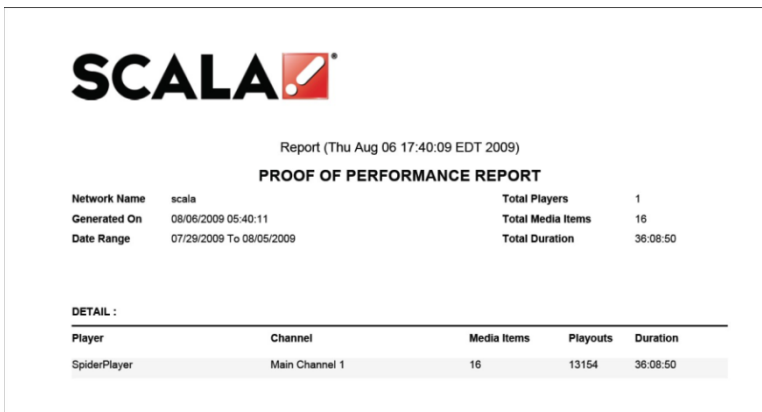
Under the **Reports** tab, you can make a new report, or make a **New From Existing** report.




In these reports, you can select any set of Players, and any set of Media Items, by criteria or direct manual selection. If using criteria, the matching Players or Media Items will automatically be highlighted.



Reports are now customized and available in .pdf and HTML formats.





Report (Thu Aug 06 17:39:34 EDT 2009)

PROOF OF PERFORMANCE REPORT

Network Name	scala	Total Players	1
Generated On	08/06/2009 05:39:38	Total Media Items	25
Date Range	07/29/2009 To 08/05/2009	Total Duration	169:37:21

DETAIL :

Player	Channel	Media Items	Playouts	Duration
Mandrill Player	Channel 1	8	69760	158:53:08
Mandrill Player	Main Channel 2	17	2585	10:44:13

8.4 Web Services

8.4.1 Introduction

Web Services is a standards-based approach for other applications to communicate with and control Scala Content Manager over the network.

Web Services will let you integrate Content Manager with other applications or into other workflows, and extend the functionality in certain ways.

Web Services represents an opportunity for partners to add value and to successfully address specific verticals.

8.4.2 Standards

The standards that web services uses are:

- SOAP - messages over HTTP or HTTPS. This means it's a standard way to control or query a web-server based application over the internet.
-

(<http://en.wikipedia.org/wiki/SOAP>)

- WSDL is a way for a web-server to declare the details of the web services that it offers. Content Manager exposes the WSDL for its Web Services.

(http://en.wikipedia.org/wiki/Web_Services_Description_Language)

SOAP and WSDL are well-supported. Visual Studio and other development tools can be pointed at the WSDL on the Content Manager Server, and they automatically generate the necessary interface classes.

8.4.3 Developer Community

We have created a community for developers to get access to important information such as Web Services documentation.

The Technical Community Wiki will contain important information and best practices for large scale networks.

Share your knowledge on the Wiki. Visit:

<http://developer.scala.com>

8.4.4 Ideas

Here are some specific ideas you can do using web services:

- Build templated Messages from a data source
Take any data source (RSS, XML, CSV, proprietary), and build a set of Messages using Templates, and populate a Playlist.
- Present a playlist over RSS
Scan the items in a playlist or in a channel, and generate an RSS feed containing images and details.
Lets someone view a Content Manager Playlist in any RSS reader
- Convert a Podcast to a Playlist
Scan a podcast, and upload H.264 video from it into Content Manager, and build a Playlist from that.
- Site Configuration Portal
If you had a network of doctors offices, create a simple web portal that lets you enter the name of the doctor or practice, and set it as Player Metadata using Web Services.
- Bulk Configuration for large networks

Automatically apply a bunch of settings to many Players, perhaps from an existing site-database. Or apply settings to many Media Items.

8.5 Scalability

8.5.1 Before You Start

It is important to plan ahead before configuring and deploying your network. A successful deployment of a network at any size starts at the beginning. Take into consideration the initial network size and what it might be in the future.

It is important to take into consideration the size of the content and the number of players. Make sure to do the bandwidth calculations to ensure your network can handle the increase traffic load.

When deploying larger networks, automation is crucial.

8.5.2 Configuration and Setup Tips

1. Before installing Content Manager, choose hardware that matches your network size.
2. Configure Content Manager to use one port for player traffic. Use a different port for user traffic.

Tune these parameters to match your needs:

- Heartbeat rate
 - Player plan polling interval
 - Plan status interval
 - Synchronization settings
 - Turn off playback logs if you don't need them
3. Run your database on a dedicated box. Choose your hardware carefully.
 4. For reliability and performance you should consider setting up your database in HA (High Availability) configuration or Master-Master replication.
 5. If using a MySQL database, there are lots of tips and trick available on the internet. Google:
 - MySQL master master
 - MySQL HA
 - MySQL scalability
 6. Do regular backup and maintenance of your database. This is extremely important.

7. Add a cache server to your network to take the load off Content Manager.

A cache will greatly improve your scalability. Choose a caching strategy that fits you:

- Central Cache
- Regional Caches
- Local Caches

Use a dedicated server for caching. Linux is preferred.

Squid-Cache is tested and known to work:

<http://www.squid-cache.org/>

Relevant search keywords:

- Reverse proxy
- Web accelerator

8.5.3 Large Network Deployment

Deploying a large network (100+ players) can be difficult, labor-intensive work. Each player should have local content.

Individually created playlists for each player will not work, but you still want local content on your players.

The answer is player metadata and playlist conditions. Entering metadata for each player, even if you only have to do it once, can be too much work.

Player metadata can change over time so you need to do regular maintenance. What is the solution?

- Integrate and automate
- Content Manager makes it possible for you to integrate directly using Web Services.
- You can link Content Manager to existing CRM systems that store metadata.
- It lets you automatically create and maintain correct metadata on all your players with little or no manual labor.
- Web Services also lets you create and update playlists automatically.
- Makes local content on each player easy at any network size.

8.6 Microsoft SQL Server 2005 Recommendations

When using a Content Manager with a Microsoft SQL Server 2005 database, below are routine maintenance suggestions.

8.6.1 Backups

At a minimum, daily full backups should be scheduled. A full backup captures the state of the database at that moment in time. For example, if a daily backup is performed at 12:00AM

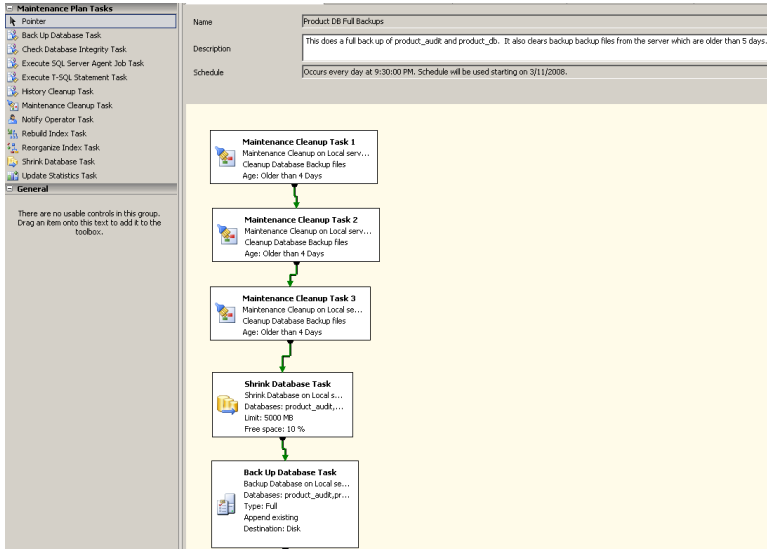
and the database fails at 11:00AM, when the database is restored, it will be in state it was as of 12:00AM. The result is a loss of 11 hours worth of data. This scenario will all require the client to truncate the transaction log manually. For some clients this may be acceptable. The only requirement for a full backup is for the database to be in Simple Recovery model, which is the default for all databases when they are created.

The recommended backup scenario is to perform daily full backups and a transactional backup every 15 minutes. In the previous example, if a full backup were performed at 12:00AM and then a transaction log every 15 minutes between full backups, when the database fails at 11:00AM, it can be restored up to 10:45AM. This results in a loss of only 15 minutes worth of data. Additionally, with every transaction log backup, the transaction log is truncated. This prevents the transaction log from running out of disk space and stopping database operations.

In order to perform transaction log backups, the database must be placed in Full Recovery model. In order to implement full recovery mode, right-click on the database in SQL Server Management Studio and choose Properties, then choose Options from the Database Properties window and choose Full from the Recovery Model drop-down box.

To schedule backups, use the Maintenance Plans tool found under the Management folder in the SQL Server Management Studio. A maintenance plan should be configured for each backup type. Additionally, a file clean up task should be included in each plan to prevent old back up files from filling up vital disk space.

A screen shot of an example plan:



8.6.2 Database Consistency

The Database Consistency Checker “CHECKDB” command “checks the allocation, structural, and logical integrity of all the objects in the specified database.” It performs this function by running a series of other commands including: CHECKALLOC, CHECKTABLE, and CHECKTABLE. The commands are used to detect and repair physical corruptions to the database.

It is recommended that the CHECKDB command be run monthly on production databases and just before a full backup operation. The CHECKDB will have to be performed during off peak hours on the database, due to the high intensity of the process.

Additionally, the database will have to be placed in single-user mode in order to use the REPAIR_REBUILD option.

The CHECKDB command can be implemented in two ways:

- From a query window in SQL Server Management Studio.
- Using a SQL Server maintenance plan.

When using a maintenance plan, choose the Check Database Integrity task. By using the maintenance plan, this important check can be scheduled on a regular basis. However, it is important to note the REPAIR_REBUILD option is not included with the T-SQL created by the maintenance plan. This will have to be added. Additional SQL code will also have to be included to place the database in single user mode.

8.6.3 Index Maintenance

There are two types of indexes used by the Scala databases: clustered and non-clustered. Clustered indexes sort the table from A to Z or lowest to highest, just like a phone book. A non-clustered index acts much like the index in the back of a book. It tells the query optimizer where to find the data on the hard drive. Both aid in the performance of SELECT queries.

The two techniques for maintaining databases:

- Re-organizing the index will defrag the leaf level of both the clustered and not clustered indexes for all tables and views in the database. It also compacts the index pages based on the fill ratio of the index.

While a re-organization can be performed while the index is online, once the fragmentation of the index has reached a greater than 40 percent threshold, it is no longer useful and a rebuild is required.

- Rebuilding an index drops and re-creates the index. This also removes fragmentation, reclaims disk space by compacting the pages based on the specified or existing fill factor setting, and reorders the index rows in contiguous pages.
- To check the fragmentation level of the data, several methods can be employed. Namely:
- Check the Fragmentation screen under Index properties in SQL Server Management Studio.
- Go to the Summary tab for the database, then choose the Disk Usage report from the Report drop-down menu.

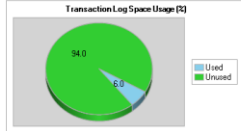
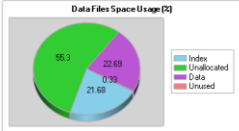
Once the report finishes running, expand the Physical Statistics for All Indexes header. This will list all the tables in the database. Choose the table of interest and expand it to reveal all the indexes for that table and the recommended actions for the index.

Disk Usage: [product_db]

on bcsqvs at 6/22/2008 9:32:31 PM

This report provides detailed data on the utilization of disk space by files and objects within the Database.

Total Space Usage:	19,860.89 MB
Data Files Space Usage:	15,842.31 MB
Transaction Log Space Usage:	4,218.56 MB



- Disk Space Used by Data Files
- Disk Space Used by Tables
- Disk Space Used by Partitions

Data/Log Files Autogrow/Shutdown Events

Physical Statistics for All Indexes

Index Name	Index Type	# Partitions	Depth	Operation Recommended
NCL_create_d	NONCLUSTERED INDEX	1	3	Reorganize
NCL_order_adverts	NONCLUSTERED INDEX	1	3	Reorganize
PK_ADVERTISER	NONCLUSTERED INDEX	1	3	Reorganize
UC_advertiser_n	CLUSTERED INDEX	1	3	Reorganize

Partition No.	Avg. Fragmentation (%)	# Fragments	Avg. Pages Per Fragment	# Pages	Avg. Page Fullness (%)	# Records	# Ghost Records	# Version Ghost Records	# Forwarded Records	Avg. Record Size (bytes)	Min. Record Size (bytes)	Max. Record Size (bytes)
1	0.53	1271	8.97	11406	98.90	2627600	0	0		32,738	15	76

The frequency of index maintenance will vary from client database to another. Fragmentation is the result of INSERT and DELETE commands on tables which have indexes. The greater number of these commands, the quicker the index will become fragmented. It is recommended to begin with reorganizing all indexes on a weekly basis. As fragmentation increases, change the reorganization to a rebuild. Continue escalating the frequency of rebuilds and reorganizations until queries are performing optimally.

Index reorganization can be implemented in two ways:

- Use the ALTER INDEX command with the REORGANIZE option.
- Use the Reorganize Index task in the maintenance plans.

An index rebuild also be implemented in two very similar ways to the reorganization:

- Use the ALTER INDEX command and the REBUILD option
- Use the Rebuild Index task from the maintenance plan.

8.6.4 Summary

While the items listed in the prior sections are a requirement for the health and preservation of a database, the rules for implementing the items are not.

For example, the maintenance of indexes not only varies from database to database, but from table to table. And while one client may find it acceptable to only perform transaction log backups on the hour, another may find it necessary to execute them every minute.

It is important to review the business rules of the organization and determine the best strategy for maintaining the database based upon those rules.

8.7 Script Toolkits

Your Scala Certified Partner can provide custom integration for News, Weather and RSS feeds, Coupon Printers, Bar code scanners, RFID readers, Hotel Reservation Systems, Casino gaming systems, Conference Room scheduling systems, remote screen control, interactive way finders, and many other applications.

Contact your Scala certified partner for a quote on adding this functionality to your network.

||||| 9 | Scala - End User License Agreement

This Software License Agreement ("Agreement") is entered into between Scala, Inc. (which, for purposes of this Agreement, shall be deemed to include any wholly owned subsidiary of Scala, Inc.) ("Scala"), and the purchaser, licensee or user ("Licensee") of Scala Software (as defined below). The terms of this Agreement also apply to any Scala Software Updates, and/or Software Maintenance (as each term is defined below) for the Scala software, unless other terms accompany those items. If so, those terms apply.

READ THIS LICENSE CAREFULLY. BY OPENING THE SCALA SOFTWARE PRODUCT PACKAGING AND/OR USING THE SCALA SOFTWARE, LICENSEE AGREES TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS AGREEMENT.

If Licensee does not agree to the terms of this Agreement prior to opening the Scala Software packaging or installing the Scala Software, Licensee shall cease using (or refrain from commencing use of) the Scala Software, and shall, as applicable, uninstall and/or permanently delete the Scala Software, Documentation (and any copies thereof) from the computers or computer system(s) on which the Scala Software has been loaded or stored, and return the Scala Software and Documentation, all media on which it is stored, all product packaging, and proof of payment to the Scala Partner (as defined below) pursuant to such Scala Partner's return policy. If Licensee does not agree to the terms of this Agreement, and has acquired the Scala Software as part of a preconfigured computer system on which the Scala Software has been installed, Licensee must either promptly cease using the Scala Software, uninstall and/or permanently delete the Scala Software and Documentation (and any copies thereof) from the computer system(s) on which the Scala Software has been preloaded, or return the pre-configured system pursuant to the system vendor's return policy.

1. DEFINITIONS.

- 1.1. "Commencement Date" means the ship date of the Scala Software from Scala or a Scala Partner to the Licensee.
- 1.2. "Documentation" means the user guides, tutorials, printed instructions, reference manuals, and other explanatory materials developed by Scala that accompany or are stored on or in the Scala Software for use in connection with the Scala Software.
- 1.3. "End User" means, as applicable, Licensee or any person or entity (including, for the avoidance of doubt, any employee or agent of Licensee) that uses the Scala Software.
- 1.4. "Object Code" means the form of Scala Software wherein computer programs are assembled or compiled in magnetic or electronic binary form on software media, which are readable and usable by machines, but not generally readable by humans without reverse-assembly, reverse-compiling, or reverse-engineering.
- 1.5. "Software Maintenance" means the provision of Software Updates.
- 1.6. "Scala Partner" means any Scala Certified Partner, reseller or distributor of Scala that sold or licensed the Scala Software to Licensee.
- 1.7. "Scala Software" means, as applicable, the Object Code form of Scala Starter Kit, Scala Designer, Scala Player, Scala Content Manager, Scala Broadcast Server, Scala Ad Manager or such other Scala software products or access licenses as may be identified in a purchase order provided to Scala or a Scala Partner, and shall be deemed to include the Documentation for such Scala Software, the license keys, clip art, fonts and multimedia files included in such Scala Software, their related software options, software extensions, software upgrades and Software Updates, and Third Party Software integrated into such identified products.
- 1.8. "Software Updates" means bug fixes, documentation improvements and feature additions, including all major (i.e., numbered) and minor (i.e., point) releases, when and if made available by Scala.
- 1.9. "Third Party Software" means software, referred to as redistributable code that is licensed to Scala by third party licensors for redistribution with the Scala Software. The redistributable code is the property of Scala's licensors, and protected under United States and international copyright, trade secret or other proprietary rights laws, and international treaties.

2. GRANT OF LICENSE RIGHTS.

2.1 License. Subject to the terms, restrictions and limitations set forth herein, Scala hereby grants to Licensee a non-exclusive, non-transferable, non-sublicensable license to use (and to permit its End Users to use) the Object Code version of the Scala Software, including any Third Party Software included therein or therewith, along with any graphical, textual, pictorial, audio or visual works or materials incorporated into or delivered with the Scala Software, including the Documentation.

2.2 Term. This Agreement is effective as of the date at which Licensee accepts the license terms as set forth above, and will continue unless terminated as provided in Sections 7.3 or 8.

2.3. Scope of License and Use

A. Internal Use. Licensee may use the Scala Software and Documentation only for its own internal use and only on one, single-user computer. Licensee may internally transfer the Scala Software to a different, single-user computer (a "Transferred Installation"), provided that the Scala Software and any copies thereof are permanently uninstalled and/or deleted from the computer from which the Scala Software is transferred.

B. Limitations. In connection with the development of content files using the Scala Software, Licensee may publish files for use or viewing via web page or other file protocol. Licensee expressly acknowledges and agrees that a separate, paid Scala Player end user license is required to display, perform or otherwise deliver content files created using Scala Software. Licensee shall not, directly or indirectly, distribute or cause to be distributed Scala Software content files in a manner calculated to circumvent the license limitation set forth in this Section 2.3(B).

C. Copies. Licensee may make one (1) copy of the Scala Software and one (1) copy of the related Documentation for archival or back-up purposes, only.

D. Third Party Software. The license granted hereunder includes the right of Licensee to use the Third Party Software in Object Code form, solely in connection with the authorized operation and use of the Scala Software in conformance with the terms and conditions of this Agreement. For the avoidance of doubt, Licensee may not decouple, disassemble or otherwise separate the Third Party Software from the Scala Software or use the Third Party Software except in connection with the use and operation of the Scala Software as permitted hereunder.

E. Restrictions. The Scala Software is licensed, not sold. This Agreement only gives you some rights to use the Scala Software. Scala reserves all other rights. Unless and solely to the extent otherwise permitted under applicable law, you may use the Scala Software only as expressly permitted in this Agreement. Except as expressly permitted under applicable law, or as otherwise agreed to in writing by Scala, Licensee shall not, and shall not permit any End User to: (i) work around any technical limitations in the Scala Software; (ii) publish the Scala Software for others to copy; (iii) make more copies of the Scala Software than authorized under this Agreement; (iv) sell, lease, rent, redistribute, assign, sublicense, or transfer the Scala Software and/or Third Party Software; (v) reproduce, decompile, reverse engineer or disassemble the Scala Software and/or Third Party Software; (vi) offer the use of the Scala Software to third parties as an application service provider, service bureau or remote-hosted service; or (vii) deliver, export, transfer or otherwise distribute the Scala Software acquired hereunder to, or use the Scala Software acquired hereunder in, a country other than the country in which the Scala Software was purchased (including, for the avoidance of doubt, in connection with a Transferred Installation).

3. LICENSE AND OTHER FEES. Licensee agrees to be bound by and pay the license fee(s) set forth in the Scala Software price list in effect as of the date of purchase. License fees for Scala Software and maintenance fees for Software Maintenance may be updated and changed at any time.

3.1 Software Maintenance Coverage. Where Software Maintenance is offered upon separate purchase terms from the Scala Software, the Scala Software products are sold with one (1) year (the "Initial Maintenance Term") of Software Maintenance coverage included in the price of the product. During the Initial Maintenance Term, Licensee shall be entitled to Software Updates if and when made available by Scala. All use of Scala Software provided pursuant to Software Maintenance coverage shall be subject to the terms of this Agreement. Licensee may elect to continue Software Maintenance beyond the Initial Maintenance Term, subject to availability, upon payment to Scala (or, as applicable, a Scala Partner) of the Scala annual maintenance fee in effect at the time of renewal.

3.2 Taxes and Duties. Prices to Licensee do not include taxes, duties, tariffs, handling fees, or other such assessments of any nature. Whenever imposed, such assessments are payable by Licensee. Income or other taxes that are required to be paid or withheld by Licensee or Scala under the laws of jurisdictions other than the United States, in connection with the license and other fees paid by Licensee hereunder, are the sole obligation of Licensee and shall be exclusive of the license and other fees paid by Licensee.

3.3 Other Services. Licensee acknowledges that any additional services offered by Scala, such as installation, customization or professional services, are not provided under this Agreement, and any such services to be provided by Scala (or, as applicable, a Scala Partner) shall be subject to the mutual agreement of the parties, the terms and conditions for which shall be set forth in a separate agreement.

4. CONFIDENTIAL INFORMATION, TITLE AND COPYRIGHTS.

4.1 Licensee acknowledges that the Scala Software, Documentation, Software Updates, enhancements, modifications, additions, new releases or to the Scala Software contain confidential information of, are trade secrets of, and are proprietary to Scala and its licensors and that title to such materials is and shall remain in Scala and its licensors, as the case may be. Licensee shall maintain in strict confidence the Scala confidential information, but, at a minimum, to take those precautions that it utilizes to protect its own confidential information. Licensee shall have no obligation of confidentiality with respect to information that (i) at the time of disclosure is in or becomes available to the public through no breach of this Agreement on the part of the Licensee; (ii) was lawfully in Licensee's possession prior to receipt from Scala; (iii) is received independently from a third party free to lawfully disclose such confidential information to Licensee and who does not owe an obligation to Scala with respect to confidential information; (iv) Licensee independently develops without the benefit of any confidential information disclosed hereunder or (v) is required to be disclosed by a government agency; provided that the Licensee will use best efforts to minimize such disclosure and will notify Scala promptly of any such demand, order or judgment in order to permit Scala to seek an appropriate protective order.

4.2 All applicable rights to patents, copyrights, trademarks and trade secrets in the Scala Software and other proprietary materials are and shall remain in Scala and its licensors. Licensee shall not assert any right, title or interest in the Scala Software or other materials provided to Licensee under this Agreement, except for the limited license rights expressly granted to Licensee hereunder.

4.3 Licensee shall not obscure or remove any copyright or other proprietary notice or legend contained on or included in the Scala Software and shall reproduce all such information on all copies made hereunder. Licensee shall not, directly or indirectly, disclose or distribute any technical information of Scala provided with or in the Scala Software without the prior written consent of Scala, which consent may be withheld at Scala's sole discretion.

5. LIMITED WARRANTIES.

5.1 **Media and Documentation.** Scala warrants that if the media or Documentation is in a damaged or physically defective condition at the time the Scala Software is delivered to Licensee, and if such media or Documentation is returned to Scala within thirty (30) days of the effective date of this Agreement, Scala will provide Licensee with a replacement at no charge.

5.2 Software Limited Warranty and Remedy.

A. Provided that Licensee is not in breach of any of its obligations under this Agreement, and in addition to the warranty set forth in Section 5.1, Scala warrants for a period of thirty (30) days from the Commencement Date ("Warranty Period"), that the software will substantially conform to the

Documentation provided by Scala with the Scala Software. Licensee's sole remedy and Scala's and Scala Partner's sole obligation under this Agreement for breach of this warranty is, at Scala's sole option, (i) the remedy of the nonconformity or (ii) the authorization of a refund for the price paid for the media and or Scala Software by Scala or the Scala Partner from which the Scala Software was originally obtained. Any request for the above remedies must be made within the Warranty

Period and proof of purchase (i.e., copy of the invoice or receipt) is required to be presented to Scala. In the event of a refund, this Agreement will immediately terminate without further notice, and Licensee will have no further rights or license to use Scala Software or Documentation.

B. Any replacement software or media will be warranted for the remainder of the original Warranty Period or for an additional thirty (30) days whichever is longer.

C. This limited warranty is void if nonconformance of the Scala Software results from or is related to the (i) improper installation or operation of the Scala Software by or on behalf of the Licensee, (ii) failure of Licensee's hardware or non-Scala software, (iii) incompatibility of such hardware and non-Scala software systems with Scala Software, (iv) alteration, modification or unauthorized integration of Scala Software by or on behalf of Licensee, or (v) accident, abuse or misapplication of Scala Software.

D. If the Scala Software is provided as a trial or evaluation version, the grant of the license to use the Software shall be on an "AS IS" basis and subject to the express limitations of the trial. Unless Licensee shall have entered into a separate written license agreement prior to the expiration or termination of the trial period, Licensee agrees to cease all use of the Scala Software provided on a trial or evaluation basis and to return such Scala Software, or to return any license keys and destroy or permanently delete any and all copies of such Scala Software.

5.3 **Disclaimer of Warranties.** SCALA AND ITS LICENSORS MAKE NO WARRANTY, REPRESENTATION OR PROMISE EXCEPT AS SPECIFICALLY SET FORTH IN THIS AGREEMENT. TO THE FULLEST EXTENT PERMITTED BY LAW, SCALA AND ITS LICENSORS DISCLAIM AND EXCLUDE ANY AND ALL OTHER WARRANTIES, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR RESULTS. SCALA AND ITS LICENSORS DO NOT WARRANT THAT THE SCALA SOFTWARE OR DOCUMENTATION WILL SATISFY LICENSEE'S REQUIREMENTS; THAT THE SCALA SOFTWARE AND DOCUMENTATION ARE WITHOUT DEFECT OR ERROR; OR THAT THE OPERATION OF THE SCALA SOFTWARE WILL BE UNINTERRUPTED. TO THE MAXIMUM EXTENT PERMITTED UNDER THE LAW, THE UN CONVENTION FOR THE SALE OF GOODS AND THE UNIFORM COMMERCIAL CODE DO NOT APPLY TO THIS LICENSE AGREEMENT.

6. LIMITATION OF LIABILITY.

6.1 **IN NO EVENT SHALL SCALA OR ITS LICENSORS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS). REGARDLESS OF WHETHER SCALA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. TO THE MAXIMUM EXTENT PERMITTED BY LAW, SCALA'S AGGREGATE LIABILITY ARISING FROM OR RELATING TO THIS LICENSE**

OR THE SCALA SOFTWARE AND DOCUMENTATION IS LIMITED TO THE AMOUNT ACTUALLY PAID FOR THE LICENSE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY.

7. INDEMNIFICATION.

7.1 Scala's Obligation. Subject to the Licensee indemnification set forth at Section 7.2 and the restrictions and limitations set forth herein, Scala shall indemnify and hold harmless Licensee, its officers, directors and employees from and against any costs or demands awarded against Licensee by a court of competent jurisdiction pursuant to a final judgment as a result of a claim or action by a third party against Licensee that the Scala Software or Documentation infringes a registered copyright, trademark, valid patent or other intellectual property right of a third party in North America, European Economic Area or Japan. The foregoing indemnity is conditioned on Licensee (i) promptly notifying Scala of such claim; (ii) permitting Scala to control the response thereto and the defense thereof, including any agreement relating to the settlement thereof, and (iii) assisting and cooperating with Scala, at Scala's expense, in the defense or settlement thereof. Licensee may participate, at its own expense, in such defense directly or through counsel of its choice on a monitoring, non-controlling basis. Scala shall obtain Licensee's prior written consent to any compromise or settlement of any claim which would require an admission of liability on the part of Licensee or which would subject Licensee to any injunction or other equitable relief. Notwithstanding the foregoing, in no event shall Scala or its licensors be liable to indemnify, defend, settle or hold Licensee harmless from and against any or all claims which allege infringement of intellectual property that reads upon or is infringed by a generally recognized audio, video, technology or patent standard, including without limitation MPEG-1, MPEG-2, MPEG-4, JPEG, DV, Flash, VC-1, AAC, AC-3, DVCPRO or AVS (each including all profiles, options, parts or levels);

7.2 Scala shall have no obligation under Section 7.1, and otherwise will have no liability for, any claim of infringement caused or alleged to be caused by: (i) the use or combination of the Scala Software with non-Scala software, hardware, data, or content, including but not limited to software, hardware, data, or content of Licensee; (ii) infringement that would have been avoided without the use or combination of the Scala Software with other non-Scala software, hardware, content, or data; (iii) the presence of any alteration or modification of the Scala Software by Licensee or any third party acting on Licensee's behalf; or (iv) the Licensee's continuing the allegedly infringing activity after being notified thereof or after being informed and provided with modifications that would have avoided the alleged infringement.

7.3 In the event that a claim of infringement of a valid North American, European Economic Area or Japanese software patent or copyright is made against Scala or Licensee or if Scala reasonably believes that such a claim will be made, Scala, at its option and in lieu of indemnification, may (a) procure for Licensee the right to use the Scala Software without patent or copyright infringement; (b) modify the Scala Software to make it noninfringing; (c) replace the Scala Software with substantially equivalent software that is non-infringing; or (d) direct Licensee to cease use of the Scala Software, and refund to Licensee a percentage of the aggregate fees received for such Scala Software that are the subject of such a claim, based on a five (5) year straight line depreciation

7.4 The foregoing Sections 7.1-7.3 set forth the exclusive remedy and entire liability and obligation of Scala with respect to third party claims against Licensee alleging intellectual property infringement or misappropriation.

7.5 Licensee Obligation. Except for the infringement claims set forth in Section 7.1, Licensee shall indemnify, defend and hold Scala, its directors, officers, agents and employees harmless from any claims, demands, or causes of action whatsoever by a third party against Scala arising as a result of Licensee's use or operation of the Scala Software. For the avoidance of doubt, and without limiting the scope of the immediately preceding sentence, Licensee shall indemnify, defend and hold Scala, its directors, officers, agents and employees harmless from any third party claims, demands, or causes of action whatsoever arising from or related to the display, broadcast, reproduction, performance or other use or distribution of audio, visual, graphical and textual information developed by or on behalf of Licensee and not included in the Scala Software.

8. TERMINATION.

8.1 By Licensee. Licensee may terminate this Agreement at any time without notice to Scala. The license fee is not refundable and Scala will have no obligation to refund any amounts paid by Licensee under this Agreement upon its termination (except for any right of refund as set forth in Sections 5 and 7.3).

8.2 Scala. Scala may terminate this Agreement and all licenses granted hereunder upon thirty (30) days prior written notice if Licensee fails to comply with any of the terms and conditions of this Agreement or any Schedule to this Agreement, and such noncompliance is not cured within such thirty (30) day period.

8.3 Return of Software. Upon any termination of this Agreement, Licensee must cease all use of the Scala Software, and return to Scala all copies of the Scala Software, including license keys, together with the Documentation, or shall return all license keys and certify to Scala's reasonable satisfaction the destruction or permanent deletion of all copies of the Scala Software and Documentation from its computer systems.

9. GENERAL.

9.1 Audit Rights. Scala shall have the right reasonably to audit the deployment and use of the Scala Software by Licensee, including without limitation Licensee's conformance with the provisions of Section 3 herein. Licensee agrees to cooperate with Scala's reasonable request for access to Licensee's computer systems to ensure Licensee's adherence with the license terms hereunder.

9.2 Purchase in Canada. If Licensee acquired this software in Canada, Licensee agrees to the following: The parties hereto have expressly required that the present Agreement and any exhibits hereto be drawn up in the English language. / Les parties aux présents ont expressément exigé que la présente convention et ses Annexes soient rédigées en langue anglaise.

9.3 Notices. Any notice required or permitted to be given by Licensee hereunder shall be in writing and shall be deemed to have been duly given (i) upon hand delivery, (ii) on the third day following delivery to the postal service as certified mail, return receipt requested and postage prepaid, or (iii) on the first day following delivery to a recognized overnight courier service, fee prepaid and return receipt or other confirmation of delivery requested. Any such notice shall be delivered or sent to Scala at the address as set forth below, or to such other address as Scala may designate from time to time. **Scala, Inc., 350 Eagleview Boulevard, Suite 150, Exton, PA 19341, USA.**

NOTICE ABOUT THE MPEG-2 VISUAL STANDARD. This software may include MPEG-2 visual decoding technology. MPEG LA, L.L.C. requires this notice: USE OF THIS PRODUCT IN ANY MANNER THAT COMPLIES WITH THE MPEG 2 VISUAL STANDARD IS PROHIBITED, EXCEPT FOR USE DIRECTLY RELATED TO (A) DATA OR INFORMATION (i) GENERATED BY AND OBTAINED WITHOUT CHARGE FROM A CONSUMER NOT THEREBY ENGAGED IN A BUSINESS ENTERPRISE, AND (ii) FOR PERSONAL USE ONLY; AND (B) OTHER USES SPECIFICALLY AND SEPARATELY LICENSED BY MPEG LA, L.L.C. If you have questions about the MPEG-2 visual standard, please contact MPEG LA, L.L.C., 250 Steele Street, Suite 300, Denver, Colorado 80206; <http://www.mpegla.com>. NOTICE ABOUT THE AVC VISUAL STANDARD. This software may include AVC visual decoding technology. MPEG LA, L.L.C. requires this notice: THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NONCOMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE [HTTP:// WWW.MPEGLA.COM](http://WWW.MPEGLA.COM)

9.4 Governing Law.

A. United States Sales. If you acquired the Scala Software in the United States, Pennsylvania state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles.

B. Sales Outside the United States. If you acquired the Scala Software in any other country outside the United States, the laws of the country of the wholly-owned Scala subsidiary that sold the Scala Software to you applies, regardless of such country's conflicts of law provisions.

9.5 Legal Effect. This Agreement describes certain legal rights. You may have other rights under the laws of your state or country. You may also have rights with respect to the party from whom you acquired the Scala Software. This Agreement does not change your rights under the laws of your state or country if the laws of your state or country do not permit it to do so.

9.6 U.S. Government Restricted Rights Legend. The Scala Software, hardware, and Documentation provided under this Agreement bear restricted rights. Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the rights in technical data and computer software clause at DFARS 252.227-7013 or subparagraphs (c)(1) and (2) of the Commercial Computer Software Restricted Rights clause at 48 CFR 52.277-19, as applicable. Scala, Inc., 350 Eagleview Boulevard, Suite 150; Exton, PA 19341 USA.

9.7 Assignment. Neither party may assign any rights, duties, obligations or privileges under this Agreement without the prior written consent of the other party. A change of control or ownership shall not be deemed to be an assignment under this Section so long as the new owner has expressly assumed in writing all of the duties and obligations of the assignor and further provided, that Licensee shall remain liable and responsible to Scala (and its licensors) for the performance and observance of all such duties and obligations.

9.8 Severability. Should any part or provision of this Agreement be held unenforceable or in conflict with the law of any jurisdiction, the validity of the remaining parts or provisions shall not be affected by such holding.

9.9 Limitation on Effect of Waiver. Failure on the part of Scala to exercise, or Scala's delay in exercising, any of Scala's rights hereunder shall not be construed as a waiver or waiver of other breaches of this Agreement. Any single or partial exercise by a party of any right shall not preclude any other or future exercise thereof or the exercise of any other right in the Agreement.

9.10 Entire Agreement. This Agreement contains the entire understanding of the parties with respect to the transactions contemplated and supersedes any prior agreements or understandings among the parties with respect to the subject matter hereof. This

Agreement may be amended only by a writing that refers to this Agreement and is signed by both parties.

9.11 **Export Law Assurances.** Licensee acknowledges that the Scala Software included herewith is subject to restrictions and controls imposed under the U.S. Export Administration Act and Canadian Exportation Laws. Licensee must comply with all domestic and international export laws and regulations that apply to the software. These laws include restrictions on destinations, end users and end use. Licensee hereby expressly agrees to defend, hold harmless and indemnify Scala, its directors, officers, and employees, from any claim, suit or dispute alleging that Licensee has exported the Scala Software in violation of any domestic or international export laws.

9.12 **Construction.** The headings in this Agreement are for convenience of the parties only. They do not constitute a portion of this Agreement and shall not be used in interpreting the construction of this Agreement.

9.13 **Third Party Beneficiary.** Licensee hereby agrees that the licensors of Third Party Software shall be considered third party beneficiaries of this Agreement and shall be entitled to bring a direct action against Licensee in the event of breach of any applicable provisions of this Agreement, pursuant to the terms and conditions of this Agreement.

9.14 **Force Majeure.** Neither party shall be in default if failure to perform any obligation hereunder is caused solely by unforeseen supervening conditions beyond that party's reasonable control, which could not have been prevented by the non-performing party's reasonable precautions, commercially accepted processes or substitute services, including acts of God, civil disturbances, strikes and labor disputes.

9.15 **Negation of Agency and Similar Relationships.** Nothing contained in this Agreement shall be deemed to create an agency, joint venture or partnership relationship.

||||| 10 | Index

6

64-bit Operating Systems, 51

A

Ad Manager, 55, 166

Add Item, 156

Add Media, 148, 155

add user, 82

adding users, 45

Administrative Tools, 246, 248,
262, 263

administrator, 73, 76, 84, 85,
107, 255, 258

Administrator, 38, 39, 41, 43,
76, 77

administrator username, 73

advanced tab, 129

Allocated memory, 92

ALTER INDEX, 306, 307

Analyze Backup File Content,
271

Anti-Virus, 99

Apache Tomcat, 24, 25, 35, 63,
246, 248, 262, 263

Application directory, 97

Approval Request, 149

approvals, 43, 44, 68, 70, 85

assignments, 43

B

Backup Instructions, 245

backup/restore, 245

Backups, 301

bandwidth, 161, 187

Bandwidth limit, 233

BigVideo.mpg, 189

Boolean, 129, 169, 178, 181,
183

break room, 56

broadcast, 129, 200, 202, 203

Broadcast Confirmation, 234

broadcast distribution, 13

broadcast package, 203

Broadcast Priority, 203

Broadcast Server, 200, 201

C

cafeteria, 56

calendar, 122, 175, 176

Category Form, 118, 132

CD-ROM, 19

Certificate Authority, 102

certificate signing request, 101,
102

Certificate Signing Request,
101

channel, 129, 166, 168, 169,
170, 186, 187, 196, 197

Channel, 164, 165, 168, 170

Channel Details, 165

Channel Variable, 169, 170

channel variables, 178, 180,
181

channels, 58, 59, 126, 130,
170, 172, 191, 197

Channels, 153, 163, 164, 170,
192

checklist, 48

Cleared Errors, 207

clustered, 304

Clustered indexes, 304

CM5 Server, 50

command, 223

Configuration directory, 97

configuration options, 15, 92

configurations, 14, 15, 47, 48

Connection Host Address, 32

Connection port, 96, 107

Content Manager, 13, 14, 15,
16, 18, 37, 43, 45, 47, 49,
51, 55, 67, 68, 69, 71, 74,
75, 77, 80, 81, 82, 85, 86,
87, 90, 92, 94, 95, 96, 97,
98, 99, 100, 101, 105, 107,
111, 113, 114, 115, 116,
117, 119, 122, 126, 130,
133, 137, 142, 146, 153,
155, 169, 187, 188, 191,
201, 202, 204, 206, 238,
239, 240, 241, 242, 245,
246, 247, 248, 249, 261,
262, 263, 264, 281

Content Manager Direct, 14,
15, 232

Content Manager Server, 296

Content Menu, 110, 111, 125

Control interval, 233

Control Panel, 246, 248, 262, 263

Control redundancy, 234

Control Script, 169, 170, 177, 179, 180, 181, 183

corporate messaging, 58

Corporate Messaging, 56

Create Multiple Players, 199

creative, 55, 58

D

dashboard, 43, 69, 70, 71, 80, 82, 85, 86, 87, 90, 115, 116, 119, 133, 143, 147, 150, 155, 163, 164, 165, 168, 170, 171, 174, 191, 192, 195, 218, 224, 225

Data directory, 97

Data Location., 27

database, 49, 51, 90, 91, 247, 248, 249, 251, 252, 254, 255, 256, 258, 259, 263, 264, 265, 266, 267, 269,

270, 273, 274, 276, 277, 278, 282

database configuration, 90

Database Consistency, 303

Database Monitor, 40

database schema, 40, 249, 255, 259, 264

Database storage, 49

DB Config, 90

DB Configuration, 282

DBCC CHECKDB, 303

default port, 98

Defragmentation, 50

Deleting Files, 220

Designer, 55, 57, 61, 111, 133, 134, 135, 136, 138, 141, 153

detailed view, 19

Developer community, 296

dialog box, 19, 20, 23, 24, 25, 26, 27, 32, 36, 37, 38

digital signage, 57, 59

Digital signage, 58

DirectX, 23, 24

Diskeeper, 50

display device, 55

display scenarios, 48

Display Setup, 196

Distribution menu, 200

distribution server, 197, 201

Dual-bank, DDR2-5300, 52, 53

DVD, 20, 21

E

Edit Categories, 117, 131, 144

Edit Category, 160

Editing categories, 117

Editing Categories, 117

Effect, 315

email address, 74, 84, 241

End by date, 122

End User License Agreement,
26

ending valid date, 122

ENTERPRISE NETWORKS,
51, 52, 53

Error Details, 207

EULA, 26

event, 313, 314, 316

event triggers, 172

Event Triggers, 307

exclusions, 99

external data, 55

extracting files, 37

F

file clean up, 302

File Delivery, 231, 234, 235

files, 55, 111, 113, 115, 116,
202, 203, 204

firewall, 34, 99

Firewall, 34, 99

Flash, 314

fragmentation, 305, 306

Fragmentation, 305, 306

Frameset, 165, 166, 170

FTP password, 15

FTP protocol, 99

FTP server, 14

FTP site, 15

G

Graphic Designer, 77

Graphic Designers, 61

Group IP, 233

Group port, 233

H

hard disk space, 49

hardware requirements, 47, 48

HD devices, 50

heartbeat, 197, 206

heartbeats, 47, 199

Heatbeat, 199

Hostname, 63, 64, 96

HTTPS, 99, 100, 101, 103,
104, 105, 107, 108, 296

HTTPS Connections, 99

HTTPS connector, 103, 105,
107

HughesNet, 232, 235, 236

I

icon view, 19

images, 61, 153, 187

index maintenance, 306

Index Maintenance, 304

InnoDB Online Backup, 253

install, 14, 17, 36, 38, 95, 99,
102, 188, 220, 262

installation, 20, 28, 29, 33, 38,
48, 91, 95, 98, 99, 247, 262

Installation, 28

installation process, 98, 99

Installing Files, 220

Installing software updates,
221

Integer, 127, 129, 169

integers, 128

IP address, 94, 105, 241

IP Multicast, 231, 232

J

Java, 92, 97, 99, 101

JDK, 99

JRE, 99

JScripts, 177

K

Key alias, 106

keystore, 100, 101, 102, 103,
106, 107

keytool, 99, 100, 101, 102, 103

L

language, 26, 55, 185, 266

Large Network Deployment,
300

LARGE NETWORKS, 51, 52,
53

license, 16, 87, 90, 201, 247

license status, 87

linked content, 187

logging, 98, 197

login, 68, 84

logs, 55, 196

M

maintenance job, 219, 224

Maintenance job, 224

Maintenance Jobs, 218

marketing departments, 58

master playlist, 162

Max keep alive, 94, 105

Maximum server memory, 92

Maximum Threads, 94

MD5 signature, 189

media, 311, 313

Media Categories, 131

Media Content, 117

Media Distribution Monitor,
203, 236

media files, 111

Media Files, 111, 115, 116

media item, 116, 118, 119,
121, 123, 124, 126, 156

Media item, 119

- media items, 111, 131, 155, 156, 187
- Media items, 119
- media library, 55, 111
- media organization, 132
- Media Repository, 49
- media storage, 49
- media types, 49, 117
- MEDIUM NETWORKS, 50, 52
- menu, 67, 111, 114, 116, 118, 119, 126, 129, 153, 154, 164, 173, 191, 192, 194, 195, 197
- menu items, 67, 118, 119, 126, 154, 192, 194, 195, 197
- Message Approver**, 61
- Message Center, 71
- Message Editors**, 61
- message links, 71
- Message Media, 148
- Message Text, 148
- messages**, 44, 56, 57, 60, 61, 70, 126, 131, 149
- Messages, 64, 130, 146, 150, 297
- messaging, 44, 70, 71, 146, 147
- metadata**, 58, 126, 127, 129, 165
- Metadata, 125, 126, 127, 128, 129, 194
- Microsoft Server OS, 48, 51
- Microsoft SQL Server 2000, 245, 255, 273
- Microsoft SQL Server 2005, 245, 258, 276
- Microsoft SQL Server 2005 Recommendations, 301
- Microsoft SQL Server Enterprise Manager, 255, 273
- Microsoft SQL Server Management Studio, 258, 276, 277
- Microsystems Sun Java Runtime, 23
- minimum requirements, 48
- Miscellaneous Settings, 83, 239

modify roles, 45, 74

MySQL, 245, 251, 255, 269,
273

mysqldump, 251, 254

N

native format, 55

navigation, 218, 225

navigation tools, 218

Network Activity, 208

Network Administrator, 61, 92

network connections, 35

Network Monitor, 63

Network Options, 233

Network Settings, 238

networks, 13, 14, 58, 59, 94,
105

new users, 82

non-clustered, 304

non-clustered indexes, 304

non-scheduled content, 129,
185, 186, 187

Non-scheduled Content, 185

Non-Scheduled Content, 185,
186, 188

O

Object history, 124

office area, 56

Open Backup File, 270

Operating system, 97

operational efficiency, 50

optimum performance, 48

Overwrite, 256, 260

P

Packet size, 233

password, 15, 29, 30, 39, 41,
74, 82, 84, 100, 102, 106,
222, 232, 235, 240, 241,
242

Password, 42, 43, 68, 69, 84,
249, 264

passwords, 29, 30, 73, 84, 85

PC, 55

PentiumDualCore, 52

- performance, 49, 95, 106, 249
- personal information, 73
- Personal Settings, 73
- pg_dump, 248, 251
- pg_dump.exe, 248, 251
- pgAdmin, 248, 249, 264
- planning, 153
- plans, 14, 47, 62, 203, 205, 306
- Playback Audit Reporting, 281
- player*, 55, 124, 161, 191, 194, 196, 197, 200, 201, 202, 204, 205
- Player, 14, 15, 47, 48, 55, 62, 63, 64, 65, 98, 99, 153, 163, 188, 192, 194, 195, 196, 197, 200, 209, 234, 236, 240, 289, 291, 297, 299, 301
- Player configurations, 14
- Player Group, 195
- Player Groups, 163, 192, 194, 195
- Player Properties, 194, 196
- Player-Direct FTP, 14
- Players, 191, 192, 197, 199, 224
- playlist, 126, 154, 156, 159, 160, 161, 172
- Playlist, 153, 155, 156, 157, 160, 161, 162, 173, 181, 182, 297
- playlists, 55, 58, 61, 81, 131, 154, 162
- plpgsql, 266
- Port*, 94, 96, 105, 107
- port 443, 105
- port 8080, 98
- port number, 94, 96, 105
- PostgreSQL, 31, 36, 39, 245, 248, 249, 251, 264, 269
- PostgreSQL database, 36, 248
- PostgreSQL, 248, 264
- PostgreSQL, 28
- Preloading Content, 188
- Preview Player, 196

properties, 116, 121, 131, 133,
143, 144, 154, 156, 161,
165, 166, 173, 175, 191

Properties, 116, 118, 122, 126,
131, 143, 154, 155, 156,
157, 159, 160, 165, 166,
172, 185, 194

Public Information, 59

publish, 13, 15, 58, 101, 135,
141, 228, 239

Publish, 15, 135, 136, 141,
187, 225

Publish Locations, 225

Push to Player, 14

Python Scripts, 177

Q

Quick Start Guide, 13

R

RAXCO "Perfect Disk", 50

Rebooting, 223

Recommended Storage, 48

Recovery Model, 302

Recurrence, 173

Recurrence Pattern, 173

regional settings, 73, 74, 85

Release Notes, 38

Remote Publish Location, 227,
228

Reorganize Index, 306

Repeat Trigger, 181

reports, 55, 281, 289

Reports List, 289

Repository Storage, 49

Request logs, 196

requests, 94, 96, 105, 106

Restart Server, 96

Restore Content, 271

restore process, 245, 262, 263,
268, 276, 277, 280

retail, 57

Retail Advertising, 57

retrieving content, 223

roles, 45, 61, 74, 75, 76, 80

Roles, 45, 73, 74, 75, 82

S

Sales Representative, 90

Sample Reports, 291

Scala Ad Manager, 55

Scala Content Manager, 13, 14, 15, 16,
26, 42, 55, 57, 58, 61, 67

Scala dashboard, 69

Scala Designer, 15

Scala scripts, 55

Scala Workflow, 61

schedule, 172, 173, 174, 175,
176, 220, 223, 224

Schedule Manager, 61

Schedule Type, 224

Schedules, 153, 171, 175, 180,
183, 185

scheduling, 13, 49, 176

Scheduling, 223

scripts, 55, 61

search, 116, 117, 119, 130,
131, 133, 154, 163, 165,
202

Search, 115, 116, 119, 130,
131, 154, 163

Searching Playlists, 163

security, 43, 68

Server listens on port, 233

Server Transmits on IP, 233

settings, 14, 59, 61, 72, 84, 85,
90, 91, 92, 94, 95, 108, 238,
239, 240, 241

Settings, 72, 73, 83, 84, 85, 87,
90, 238, 242

shared folder, 14, 15

Shared name, 179, 183

Signed Certificate, 102

Simple Recovery, 302

SMALL NETWORKS, 50, 52

Smart Playlist, 159

SOAP, 296

Software updates, 221

spare threads, 94, 105, 106

SQL Server Management, 258,
276, 277

SQL Server Management
Studio, 259, 302, 304, 305

Squid-Cache, 300

SSD, 49, 50, 51

SSD devices, 50

stakeholders, 56

Standards, 295

Start date, 122

Status, 87, 163, 192

Storage Capacity, 50

storage volumes, 49

String, 127, 128, 129, 169

sub-categories, 118, 132

Sub-Categories, 118

sub-folder, 187

Sub-Playlist, 162

Sub-Playlists, 162

Superuser, 30

support utilities, 48

Sync History, 237

synchronization, 200

Synchronize Player, 201

system administrator, 68

System Administrator, 75

system defaults, 34, 122, 154,
173, 176, 197

System Files, 220

System Fragmentation, 50

System Paths, 97, 246

T

Tasks, 220, 223

Technical Community Wiki,
296

template, 60, 133, 134, 135,
137, 138, 139, 140, 142,
143, 144, 145, 147

Template Administration,
144, 145

template fields, 144

templates, 55, 57, 61, 131,
133, 134, 135, 138, 144,
147

Templates, 130, 133, 134, 137,
138, 142, 297

test connection, 227

threads, 94, 105, 106, 197, 239

Time to live, 233

Tomcat, 95, 98, 106, 239, 246,
248, 262, 263

transaction log backups, 302,
307

transactional backup, 302

transition, 161

Transmission Server, 64, 65,
246, 247, 248, 262, 263

triggers, 49, 172

Triggers, 177, 179, 180, 182,
183, 184

Troubleshooting, 62

U

Uncleared Errors, 206

Update Preview, 145

Upload Files, 111

upload media, 58

upload videos, 57

Uploader, 111, 113

USB key, 20

USB slot, 20

User Access and Control, 60

user roles, 69

username, 82

Username, 42, 43, 68, 69, 84,
242, 249, 264

V

Valid Dates, 122

Values, 127, 129

variables, 168, 224

Variables, 168

VBScript, 177, 185

VBScripts, 177

virtual folder, 96

VISTA, 52

VISTA Business Edition, 52

Visual Studio, 296

W

web application, 24, 31, 33, 97

web browser, 67, 68

Web server directory, 98

Web Services, 295, 296, 297,
301

webservice, 96

Windows, 67, 116

Windows 2003, 99

Windows 32-bit, 105

Windows Scripting, 60

Windows Server 2003SP2, 51

Windows Server 2008, 51, 52

Windows XP, 51, 99

Windows XP Professional, 51

Wizard, 26


workflow, 43, 44, 68, 70, 85

workflows, 295

Workgroup, 81, 82, 83, 160

Workgroups, 57, 75, 81, 82,
117, 154

WSDL, 296



United States
Canada
China
Denmark
France
India
Japan
The Netherlands
Norway
Sweden
United Kingdom