



Version 10.00 Administrator's Guide

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Contractor/Manufacturer is Inmagic, Inc., 200 Unicorn Park Drive, Fourth Floor, Woburn, MA 01801, U.S.A.

Questions regarding any Inmagic product should be addressed to Inmagic, Inc. or your local authorized Inmagic dealer.

Inmagic, Inc.
200 Unicorn Park Drive
Fourth Floor
Woburn, MA 01801 U.S.A.
Telephone: 781-938-4444 or 800-229-8398
Fax: 781-938-4446
<http://www.inmagic.com>

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Introduction

This guide describes ongoing administrative and maintenance tasks for Inmagic® *Content Server* that should be performed by the Content Server Administrator.

Inmagic *Content Server* is an enterprise-wide scalable content management system. It combines the advantages of a robust and flexible database management environment with high speed search and categorization, making finding relevant information fast, easy, and precise. Web publishing capabilities are built into Inmagic *Content Server*, offering a better way to publish, access, and maintain information on corporate intranets and the Internet.

Content Server is built on industry standard architecture, incorporating Microsoft SQL Server as its data store. *Content Server* makes extensive use of open standards and technologies, the most obvious being Extensible Markup Language (XML), which forms the basis for much of its Web publishing functionality.

Using the components of *Content Server*, you can display, add, modify, and delete information using your desktop and/or a Web browser.

Content Server is made up of two components:

- *CS/TextWorks*. This is the Windows desktop component.
- *CS/WebPublisher PRO*. This component gives your organization the ability to publish textbases on the Web. Anyone with a Web browser can point to an HTML screen and submit a query. The results are returned dynamically, in forms that your organization can design. Your organization can also design an interface so users can add, edit, and delete records in a textbase via the Web.

Content Server also provides your organization with access to Inmagic.net™ and the Inmagic *CS/Importer*. Inmagic.net gives you the ability to connect to the Inmagic server from within a *CS/TextWorks* session to accomplish various tasks related to acquiring, cataloging, indexing, and disseminating information throughout an organization. The *CS/Importer* service enables you to load records in Inmagic tagged, delimited ASCII, and XML formats into one or more textbases, while automatically and continually processing imports in the background. For more information about these features, see the *Content Server* online help.

Content Server is available in the following configurations:

- *Content Server Standard*. This configuration supports one instance of Microsoft SQL Server 2000 or Microsoft SQL Server 2005.
- *Content Server Workgroup*. This configuration supports one instance of Microsoft SQL Server 2005 Express Edition (referred to as SQL Server Express throughout the rest of this document) or Microsoft SQL Server 2000 Desktop Engine (MSDE). Note also that for *Content Server Workgroup*, you can purchase the *CS/TextWorks* desktop component of this configuration separately, without the *CS/WebPublisher PRO* Web publishing component.

Audience for this Document

Except where noted, everything in this document applies to both editions of the *Content Server* software: *Content Server Standard* and *Content Server Workgroup*.

This document is for the Content Server Administrator. This is the person who will perform the ongoing administrative and maintenance tasks necessary to make and keep the SQL Server for *Content Server* up and running smoothly. This person may perform some of these tasks using the Inmagic Content Server Administration program.

This person may be a member of an Information Technology (IT) department who does not typically work in your organization's information center, a non-IT person who typically works in the information center, or a combination of both.

The Content Server Administrator's responsibilities may include:

- Installing and updating the software (depending on the size and structure of your organization, this may include installing SQL Server or SQL Server Express, as well as *Content Server* software, and any other software required to maintain and administer SQL Server and *Content Server*).
- Performing data maintenance duties to monitor and optimize your SQL Server's performance.
- Performing routine data preservation duties (for example, backing up files, such as textbase files and their related files; and restoring files).
- Setting up and monitoring security for your *Content Server* system.

The Content Server Administrator will find it useful to be familiar with the basic concepts for and how to use the *Content Server* software. To do so, see the *Content Server* online help. For a list of the documentation available for the *Content Server* product, see its README file. You received electronic copies of the *Content Server* documentation set when you installed the software. You will find them in the Documentation subfolder of the CS/TextWorks installation folder and, if applicable, the Documentation subfolder of the CS/*WebPublisher PRO* installation folder. In addition, you can access the documentation set through the Inmagic Customer Extranet at <http://support.inmagic.com/downloads/extranet.html>.

Contacting Inmagic and Communicating with Other Users

For help, you can contact Inmagic, Inc. or your local Inmagic dealer. You can also communicate with other Inmagic users.

If you have a maintenance agreement, please have your customer ID ready, and try to be at your computer when you call. If that is not possible, note exactly what you were doing when you encountered the problem, the exact text of any error messages you received, and your *Content Server* version number and serial number (open CS/TextWorks and choose **Help>About CS/TextWorks**.) If you do not have a maintenance agreement, you can contact Inmagic Customer Service to purchase one.

Inmagic, Inc.

200 Unicorn Park Drive, Fourth Floor
Woburn, MA 01801
U.S.A.
Tel: 781-938-4444 or 800-229-8398
Fax: 781-938-4446
<http://www.inmagic.com>

support@inmagic.com - technical support questions
CustomerSvc@inmagic.com - general company, product, and services questions
sales@inmagic.com - sales, product pricing, and custom solution questions
wishlist@inmagic.com - feature requests

If your message is intended for a particular person at Inmagic, Inc. (for example, a Technical Support representative who is expecting the message or files), please include the name of that person in the subject and in the message.

Communicating with Other Users

You can participate in user-to-user discussions through an Inmagic forum on the Web. Note that the forums are not an official customer or technical support channel for Inmagic products. To participate in a forum, go to the Inmagic Customer Extranet at <http://support.inmagic.com/downloads/extranet.html>.

Chapter 1: About Installing Software

This chapter provides information that you should be aware of before you install an instance of Microsoft SQL Server or Inmagic® *Content Server*.

For a list of the system requirements for *Content Server*, see the installation notes document for the product, or for the most up-to-date system requirements, go to the Inmagic Web site.

About Installing Microsoft SQL Server/SQL Server Express

To install Microsoft SQL Server, see the installation instructions provided with that product. If you are installing the SQL Server Express provided only with the *Content Server* Workgroup configuration, see the separate installation notes document that you received with it.

When installing SQL Server, be sure to address the following issues, as appropriate:

- You can assign SQL Server a named instance, or use the default instance. To use the default instance of SQL Server on any machine, reference it referenced by the machine name (the network name). Do not use “local”.
- Specify the appropriate authentication mode for security, based on the *Content Server* configuration you have purchased:
 - **If you have *Content Server* Workgroup, use SQL Authentication.** The Workgroup configuration does not support Windows Authentication.

Note: For security purposes and to avoid requiring the Content Server Administrator to get involved with permissions in order to make textbases usable, the Content Server Administration program automatically creates a SQL login called **_Inmagic_Content_Server**, which is required by the Workgroup configuration. This login is created with membership in the SQL Server fixed bulkadmin and dbcreator roles. All *Content Server* Workgroup access to a SQL database is implemented by connecting as that user. This requires that SQL Authentication be available.

- **If you have *Content Server* Standard, use either Windows or SQL Authentication.** During the installation process, you selected which authentication method to use.

Once SQL Server is installed, be sure to address the following issues, as appropriate:

- Ensure that the operating system and SQL Server engine are patched with the latest releases and upgrades from Microsoft Corporation. The most obvious way to do this is to use the automatic update tool provided by Microsoft. However, the Content Server Administrator and other involved parties should determine ahead of time how your organization will handle SQL Server releases and upgrades as related to the *Content Server* product.
- Create a shared TEMP folder on the server machine and give the SQL Server Full access (that is, the ability to read, write, modify, and delete) to it. Inform your *Content Server* users of this location, as it will be needed when a staff member tries to use the Express Import or Load New Textbase functions in CS/TextWorks. (The software asks where to put temporary files for the SQL Server BULK INSERT operation.)

About Installing *Content Server*

To install the *Content Server* software, see the separate installation document that you received with it.

Note the following about *Content Server*:

- Once the software is installed, you must perform certain operations using the Content Server Administration program (InmCSAdmin.EXE) before you can use the software. This executable and the operations it is used to perform are explained in “Chapter 2: Content Server Administration Program” on page 5.
- The account running the SQL Server service needs Full Control access to the following:
 - Temporary file path for SQL Server Bulk Insert (Express Import, Load New Textbase, and Recover Textbase).
 - Paths specified for backup file sets (Back Up Textbase and Restore Textbase).
- The Content Server Administrator must ensure that any *Content Server* releases and upgrades from Inmagic, Inc. are installed in a timely and efficient manner. The Content Server Administrator and other involved parties should determine how your organization will handle this matter.

Important! If you are upgrading from DB/TextWorks to CS/TextWorks, you must use the Content Server Administration program to convert your textbases and menu screens. If you are upgrading from DB/Text *WebPublisher PRO* to CS/*WebPublisher PRO*, you must use the Content Server Administration program to convert your Web screens, forms, and so forth. The conversion process is described in *Converting to the Inmagic Content Server Platform*, a PDF that was installed with your *Content Server* software and is also available from the Inmagic Customer Extranet at <http://support.inmagic.com/downloads/extranet.html>.

- The Content Server Administrator must monitor SQL Server in relationship to *Content Server* to ensure that *Content Server* is running smoothly and efficiently.
- To see how you can improve index browsing performance in *Content Server*, see “Performance Enhancements for Index Browsing” on page 42.

Chapter 2: Content Server Administration Program

Once you install *Content Server*, you have access to the Content Server Administration program (InmCSAdmin.EXE).

The Content Server Administrator uses this program to perform a number of administrative and maintenance tasks for the *Content Server* system. These tasks—which are explained in the following chapters—can be for textbase management (for example, to copy, rename, delete, or move a textbase), as well as for backing up *Content Server* textbases.

The Administration program also provides the Content Server Administrator with tools for other management activities.

Why are there two Content Server Administration programs?

During installation, this Content Server Administration program is installed in both the CS/TextWorks installation folder and the CS/*WebPublisher PRO* Exec subfolder. These two instances are independent. Some tasks performed with the Administration program have to be done twice, specifically the **Select SQL Instance** command or the **Change SQL Password** command. These commands ensure that the Content Server software components (CS/TextWorks or CS/*WebPublisher PRO*) have consistent information about the SQL Server hosting the textbases.

As part of the installation process, Setup opens the Content Server Administration window so the configuration needed to enable database connectivity is done, such as, for example, selecting the SQL Server instance that will be used with Content Server. This process is covered in the installation notes document provided with your *Content Server* product.

How do I start the Content Server Administration program?

For CS/TextWorks, from the Windows Start menu, choose **Programs>Inmagic Applications>Content Server>Administration (CSTW)**. This shortcut only appears on the machine on which CS/TextWorks is installed. It does not appear on workstations or on the Web server on which CS/*WebPublisher PRO* is installed. Note that you can also double-click InmCSAdmin.EXE located in the main CS/TextWorks installation folder.

For CS/*WebPublisher PRO*, choose **Programs>Inmagic Applications>Content Server>Administration (CSWPP)**. You can also double-click InmCSAdmin.EXE located in the Exec subfolder of the main CS/*WebPublisher PRO* installation folder.

Note that when the Content Server Administration program is running, the title bar indicates the component (CS/TextWorks or CS/*WebPublisher PRO*) with which it was installed.

What else should I know about the Content Server Administration program?

The Content Server Administration program lets anyone who can start it have access to the functions it performs (for example, the ability to delete textbases). Note that some functions require administrator privileges, while others do not. Chapter 4 describes the security features of *Content Server*.

Because the Content Server Administrator may not want to make these functions available to the average *Content Server* user, we recommend the administrator secure access to the executable (InmCSAdmin.EXE).

Chapter 3: Configuring the Software on SQL Server

Content Server uses SQL Server as its data store, requires a single SQL Server instance to be specified, and creates a control database called *_InmTextbases*. This is the database that tracks each textbase created in CS/TextWorks.

During the *Content Server* installation process, Setup will start the Content Server Administration program so this can be accomplished.

This chapter explains how to change instances of SQL Server, how to create and upgrade a control database on the SQL Server, and how to upgrade textbases on the SQL Server.

The most efficient way to configure the software on SQL Server the first time you have to do it is to use the Setup Wizard from Content Server Administration window, which is only accessible when you use the Content Server Administration program (InmCSAdmin.EXE).

Important! You must have SQL Administrator privileges to be able to use the commands on these menus.

The Configure SQL Server menu is used after you install the *Content Server* software for the first time, or later if you need to move your textbase files to a different SQL instance. Use this command:

- **Setup Wizard.** Use this command to start a series of dialogs that take you through the necessary steps to connect to a new or different SQL instance. This command performs both functions described in the next two bullets. For more information, see “Using the Setup WizardUsing the Setup Wizard” on page 7.

OR, use these commands:

- **Select/Change SQL Instance.** Use this command to specify the SQL Server instance that you want to use with *Content Server*. For more information, see “Specifying or Changing the SQL Server Instance” on page 9.
- **Create Control Database.** Use this command to create the necessary databases and log in on your SQL Server. For more information, see “Creating the Control Database” on page 7.

The Manage Upgrades menu is used to perform updates after you receive an upgrade:

- **Upgrade Content Server>Control Database.** When you receive updates to the *Content Server* software, and the upgrade notes specify that this is needed, use this command to update the control database and all existing *Content Server* textbases to the latest version of the software. However, you have the option to only update the control database—you can use the **Upgrade Content Server>Textbases** command (see the next bullet) to update your textbases later. For more information, see “Upgrading the Control Database” on page 8.
- **Upgrade Content Server>Textbases.** If you choose not to upgrade your existing *Content Server* textbases when you upgrade the control database (see the previous bullet), use this command to upgrade one or more textbases to the latest version of the software. For more information, see “Upgrading *Content Server* Textbases” on page 8.
- **Upgrade Content Server>Menu Screens.** When you receive updates to the *Content Server* software, use this command to update your existing menu screens to the latest version of the software.

The Manage Upgrades menu is also used to convert your files from DB/Text to *Content Server*:

- **Convert from DB/Text>Textbases.** Use this command to convert your textbases.
- **Convert from DB/Text>Menu Screens.** Use this command to convert your menu screens.
- **Convert from DB/Text>Web Components.** Use this command to convert your Web screens, forms, and so forth when you upgrade from *WebPublisher PRO* to *CS/WebPublisher PRO*.

Note: For more information about upgrading from DB/TextWorks and *WebPublisher PRO* to CS/TextWorks and *CS/WebPublisher PRO*, see *Converting to the Inmagic Content Server Platform*, a PDF that was installed with your *Content Server* software and is also available from the Inmagic Customer Extranet at <http://support.inmagic.com/downloads/extranet.html>.

Using the Setup Wizard

During the installation of *Content Server* you can use the Setup Wizard. Using the Setup Wizard lets you select the SQL instance, assign user rights to that SQL instance, and create the control database for the *Content Server* SQL instance.

To use the Setup Wizard

1. Select **Configure SQL Server>Setup Wizard**.
2. On the Setup Wizard: Select SQL Instance dialog box, specify the SQL Server. Use the **Browse** button to choose from a list of available SQL Servers on your network. Then click **Next**.
3. Depending on your situation:
 - If you are using Windows Authentication, on the Setup Wizard: Assign User Rights to SQL Server dialog box, assign user rights to the SQL Server. Then click **Finish**.
 - If you are using SQL Authentication, on the Setup Wizard: Change SQL Password dialog box, fill in the **New password** box. Then click **Finish**.
4. Once you see the Content Server has been successfully configured on SQL Server <name of SQL instance> message, the control database has been created. Click **OK** to dismiss the message.

If you do not use the Setup Wizard, you will have to use the separate functions to accomplish what the Setup Wizard does:

For Workgroup configurations or Standard configurations using SQL Authentication:

- **Configure SQL Server>Initialize SQL Server>Select SQL Instance**
- **Configure SQL Server>Initialize SQL Server>Create Control Database**
- **Manage Security>Change SQL Password**

For Standard configurations using Windows Authentication:

- **Configure SQL Server>Initialize SQL Server>Select SQL Instance**
- **Configure SQL Server>Initialize SQL Server>Create Control Database**
- **Configure SQL Server>Manage Security>Assign User Rights to SQL Server**

Creating the Control Database

If you need to change the SQL instance you are using for your textbases, first change the SQL instance, then use this command to create a control database (choose **Configure SQL Server>Initialize SQL Server>Create Control Database**) on your SQL Server. This will prepare the SQL Server for use with the *Content Server* software.

The **Create Control Database** command creates the following required items on the SQL Server:

- The control database on the server, called **_InmTextbases**. This is the database that tracks each textbase created in CS/TextWorks.
- A database table to store IDs for each textbase.
- If you are using SQL Authentication, a SQL login name for the server, called **_Inmagic_Content_Server**.

To create the control database on your SQL Server

1. Choose **Configure SQL Server>Initialize SQL Server>Create Control Database** to start the creation process for the current SQL Server.
2. When the control database has been created, click **OK** to dismiss the completion message.

Upgrading the Control Database

When you receive updates to the *Content Server* software, you may be asked to update the control database and your existing textbase tables on your SQL Server.

Note: If you are installing *Content Server* for the first time, you run the Setup Wizard instead. This function will create the control database automatically. See “Using the Setup Wizard” on page 7.

To upgrade the control database and textbase tables

1. Choose **Manage Upgrades>Upgrade Content Server> Control Database** to start the upgrade process.
2. A message asks if you also want to upgrade all textbases on the SQL Server. Depending on what you want to do, click one of the following buttons.
 - **Yes** to upgrade the textbases. During the process, the Operation Status dialog box opens and its Operation log and progress bars show the status of the upgrade.

Note: If any of the textbases has passwords, you will be prompted for the Master password during the upgrade process.

- **No** to not upgrade the textbases. Only the control database is upgraded on the SQL Server. When this process is complete, a message displays. Click **OK** to dismiss the message box. You can upgrade textbases later by using the **Upgrade Content Server> Textbases** command.

Upgrading Content Server Textbases

This step is needed only if the upgrade notes specified it was, and you did not upgrade your *Content Server* textbases when you upgraded the control database on your SQL Server (as explained in the previous section).

Some *Content Server* upgrades require that the textbase tables in the SQL databases be up-to-date with the current version of the software. If a needed textbase upgrade is not performed, the textbase cannot be opened using the new version of the software.

To upgrade a Content Server textbase

1. Choose **Manage Upgrades>Upgrade Content Server>Textbases** to open the Select Content Server Textbase dialog box.
2. Navigate the **Look in** drop-down list to the folder containing the textbase(s) you plan to update. You must have Full Control access to this folder.

Note: If you plan to upgrade multiple textbases and they are not in the same folder, you must choose **Manage Upgrades>Upgrade Content Server>Textbases** on the Content Server Administration window for each folder containing the textbases.

3. Select the textbase(s) you want, then click **Open**.

Note: If any of the textbases has a password, you will be prompted for the Master password during the upgrade process.

- The Confirm Update Settings dialog box opens so you can review the textbases that will be upgraded and then click **Finish** to start the process. During the upgrade, the Operation Status dialog box opens and its Operation log and progress bars show the status.

Specifying or Changing the SQL Server Instance

Use the **Select SQL Instance** command to specify the SQL Server instance you want to use with *Content Server* when you first install the software. Note that this is not recommended, as the Setup Wizard will guide you through the appropriate steps, including this one.

Use the **Change SQL Instance** command if you need to move your textbases to a different SQL instance. (If you have already specified a SQL instance, the **Select SQL Instance** menu command changes to **Change SQL Instance**.)

To specify a SQL Server instance

1. Choose **Configure SQL Server>Initialize SQL Server>Select SQL Instance** to open the Select SQL Instance dialog box.
2. In the **SQL Instance** box, use the **Browse** button to enter the SQL Server instance. If you must enter it manually, use one of the following formats:

- **IP address followed by a comma and the port number on the SQL Server.**

Example: 192.168.0.199,1783

Note: If you do not include a port number, the default port (1433) is used.

- **Server name.**

Example: SQLDATA

This will connect to the default instance of SQL Server on the named server.

Tip! If you are running the Content Server Administration program from the same machine on which SQL Server resides, you can type a period “.” in the SQL Instance box to automatically enter the default SQL instance.

If you are upgrading an existing the Workgroup configuration with MSDE, this does not apply; you must use the format **<machinename>|ICS_MSDE** (unless you installed the MSDE instance independently, with a different instance name than ICS_MSDE).

- **Server name followed by a backslash and the instance name.**

Example: SQLDATA\SQL254

3. Click **OK**.

Important! When you change to a different SQL Server, you will not be able to access textbases on the previous SQL Server. If you need to move textbases to the new server, back them up before using this command, and restore them to the new server after using this command.

Chapter 4: Managing Security

Depending on the edition of *Content Server* you have, there are different ways to authenticate users who access it.

- **Content Server Standard.** This configuration uses Windows Authentication by default to access databases. You can specify SQL Authentication instead. See a discussion of the pros and cons of each later in this document.
- **Content Server Workgroup.** This configuration, which supports SQL Server Express (or MSDE) only, uses SQL Authentication to access databases. The Workgroup edition does not support Windows Authentication.

Security/access settings are specified through the **Configure SQL Server>Manage Security** menu on the Content Server Administration window, which is only accessible when you use the Content Server Administration program (InmCSAdmin.EXE).

The Manage Security menu contains the following commands:

- **Change SQL Password.** This command is only enabled if you are using SQL Authentication. This command lets you change the password assigned to the SQL Server account (**_Inmagic_Content_Server**). This account is created automatically during the installation of *Content Server*. For more information, see “Changing the SQL Password” on page 11.
- **Assign User Rights to SQL Server.** This command is only enabled if *Content Server* is using Windows Authentication. This command lets you specify the users/groups that can use *Content Server* to perform operations and whether they can modify the control database. For more information, see “Setting *Content Server* Security on SQL Server” on page 15.
- **Assign User Rights to Textbase.** This command is only enabled if *Content Server* is using Windows Authentication. This command lets you specify the users/groups that can open a particular textbase and the level of access granted to each (for example, Read-only access, editing rights, ability to edit the textbase structure, and so forth). For more information, see “Setting *Content Server* Security on a Textbase” on page 16.

Note: For information about the additional security measures a textbase administrator can apply within a textbase (for example, using Master passwords, Field Access/Silent passwords, and record-level security), see the online help.

Using Content Server with SQL Authentication

If you are using *Content Server* Workgroup, you must use SQL Authentication.

When the control database is created on SQL Server Express, a SQL Server account (**_Inmagic_Content_Server**) is created automatically and a default password is assigned. This account controls access to all textbases. All users are connected to the SQL databases using this account.

Important! If you plan to use both CS/TextWorks and CS/*WebPublisher PRO*, you must first change this initial SQL password for each component by using the **Change SQL Password** command on the Manage Security menu for both CS/TextWorks and CS/*WebPublisher PRO*. You have to use the same password for CS/TextWorks and CS/*WebPublisher PRO*. (You do not need to know the default password to change it.)

Note that the **Change SQL Password** command is not enabled if you are using *Content Server* Standard unless you change the authentication mode from Windows Authentication (the default) to SQL Authentication.

Changing the SQL Password

If you want to change the password assigned to the **_Inmagic_Content_Server** account, you must do so through the Change SQL Password dialog box (start the Content Server Administration program, then choose **Configure SQL Server>Manage Security>Change SQL Password**) in both the CS/TextWorks and CS/WPP Admin programs.

Caution! Changing the password with SQL Server management tools will make your textbases inaccessible.

To change a SQL Server password

1. Choose **Configure SQL Server>Manage Security>Change SQL Password** to open the Change SQL Password dialog box.
2. Type a new password in the **New password** box and click **OK**.
3. Confirm your new password and click **OK**. Your new password is in effect.

If you change the SQL Server password and you have CS/*WebPublisher PRO*, you must also run the Administration program from where you installed CS/*WebPublisher PRO* and specify the same SQL password. Choose **Programs>Inmagic Applications>Content Server>Administration (CSWPP)**. These activities ensure that CS/TextWorks, CS/*WebPublisher PRO*, and any affected copies of SQL Server remain synchronized. For the new password to take effect, you must restart your World Wide Web Publishing Service.

Using *Content Server* with Windows Authentication

Windows Authentication helps you protect *Content Server* from unauthorized use by authenticating users based on their Windows user account. This is done by assigning user/group names to *Content Server* role memberships. These roles determine whether a user can access *Content Server* and, if so, what operations the user can perform.

To use Windows Authentication with *Content Server*, the Content Server Administrator must perform several tasks—some using SQL Server management tools and others using the Content Server Administration program (specifically, the **Configure SQL Server>Manage Security** menu on the Content Server Administration window).

Note: *Content Server* Workgroup does not support Windows Authentication. It requires SQL Authentication.

To set up *Content Server* security with Windows Authentication

You must complete the following tasks before users can be authenticated when logging in to *Content Server*.

1. Ensure that all users and/or groups exist in the Windows domain of which SQL Server is a member. For more information, see your Windows documentation.
2. On the SQL Server, use the SQL Server Enterprise Manager provided with SQL Server 2000, or the SQL Server Management Studio provided with SQL Server 2005. These are typically accessible from the computer's Start menu. Create SQL Server logins for each user or group you want to be able to access *Content Server*. For more information about creating SQL Server logins, see your Microsoft SQL Server documentation.
3. Grant the login names specified in step 2 a *Content Server* role membership for the SQL Server. This role determines whether the login name can use *Content Server* to perform any operations and, if so, whether that login name can modify the control database (which is changed whenever a textbase is created or destroyed). To do this, choose **Configure SQL Server>Manage Security>Assign User Rights to SQL Server**. For more information, see “Setting *Content Server* Security on SQL Server” on page 15.
4. Grant the database user names created in step 2 a *Content Server* role membership for each textbase. The role you assign determines whether the user can access a particular textbase and the level of access that user has to it (for example, specify that a user can only search and view records, but not edit them). To do this, choose **Configure SQL Server>Manage Security>Assign User Rights to Textbase**. For more information, see “Setting *Content Server* Security on a Textbase” on page 16.
5. For users/groups that require broader access than the *Content Server* roles allow, grant them membership in additional SQL Server fixed server roles and SQL Server fixed database roles, as appropriate. These additional roles may be needed for non-admin users/groups that will be doing management activities, such as backing up *Content Server* textbases and using Express Import. Note, however, that any user/group with **sysadmin** privileges does not need any role memberships to be able to have full access to the software. For more information, see “Using SQL Server fixed roles” on page 13.

Content Server roles

Windows Authentication security relies on users having membership in roles. The roles determine exactly which operations a user can perform.

Content Server comes with a defined set of roles for the SQL Server control database and for individual textbases. Role membership is assigned to users/groups through the Manage Security menu on the Content Server Administration window (choose **Configure SQL Server>Manage Security>Assign User Rights to SQL Server** and **Configure SQL Server>Manage Security>Assign User Rights to Textbase**).

Each role is detailed in the following sections: “To set or change security on the *Content Server* control database” on page 15 and “To set or change security for a database user on a *Content Server* textbase” on page 16.

Each user should have one role for the SQL Server (that is, a role specifying whether they can modify the control database) and one role for each individual textbase.

Important! Any user with **sysadmin** privileges or **db_owner** role membership does not need any *Content Server* roles to be able to access any textbase.

Using SQL Server fixed roles

While the *Content Server* roles are sufficient for most users, there may be some who require broader access to the software. To accommodate this, you can assign those users membership in specific SQL Server fixed server roles and SQL Server fixed database roles.

Assigned using the SQL Server Enterprise Manager or SQL Server Management Studio, these roles allow you to expand the access that a particular user/group has to *Content Server* and its textbases on the SQL Server. For information about how SQL Server fixed roles can affect a user’s privileges, see the tables and discussion on page 17. For information about using the SQL Server Enterprise Manager or SQL Server Management Studio, see your Microsoft SQL Server documentation.

Adding a database user

Once you have created a SQL Server login for each user/group you want to access *Content Server*, you must add these login names as users for the individual databases (including the control database).

Use the Content Server Administration program to add users for the control database and the individual databases (textbases).

To add a database user

1. From the Assign User Rights to SQL Server dialog box (for the control database) or from the Assign User Rights to Textbase dialog box (for a particular textbase), click the **Add User** button to open the Add Database User dialog box.
2. Select a SQL Server login name from the **Login Name** drop-down list.

Important! For login names other than the default **BUILTIN\Administrators** login to appear in the **Login Name** drop-down list, the users/groups must exist in the Windows domain (of which SQL Server is a member) and have a login on the SQL Server. If the list is blank, all possible login names have already been added. If you are converting textbases from DB/TextWorks to the *Content Server* platform (choose **Manage Upgrades>Convert from DB/Text>Textbases**), the login you use to perform the conversion will not appear in the **Login Name** drop-down list, as it is automatically a member of **db_owner** for all of the textbases being converted.

3. [Optional] Type a user name in the **User Name** box. Note that if you specified a user name for this login in your domain or on the SQL Server, it will appear here automatically.
4. Click **OK**. Notice that on the applicable dialog box (Assign User Rights to SQL Server or Assign User Rights to Textbase) the User Name appears in the Current Database Users list.

Tip! You can also use this dialog box to remove users from a SQL database (and, therefore, deny them access to the textbase). This will not remove the login(s) from the SQL Server.

Setting *Content Server* Security on SQL Server

Before any user can use *Content Server*, that user's SQL Server login must be added as a user for the control database. The user name must also have a *Content Server* role assigned.

The *Content Server* roles for SQL Server grant access to the SQL Server and the *Content Server* control database. The control database (named **_InmTextbases**) is the SQL database that tracks all textbases created with *Content Server*. It maps the names of the textbases you create to the SQL databases. Each textbase is assigned a SQL Server reference name (used internally by SQL Server only) in the format of *_InmTB_1*, *_InmTB_2*, and so forth.

To specify security settings for the SQL Server and the *Content Server* control database, use the Assign User Rights to SQL Server dialog box, accessible from the Content Server Administration window.

To set or change security on the *Content Server* control database

1. Choose **Configure SQL Server>Manage Security>Assign User Rights to SQL Server**.
2. On the Assign User Rights to SQL Server dialog box, from the Current Database Users list, select the user name for which you want to set security. If the user name is not in the list, click the **Add User** button to locate and add the user name to the list. (Note that for a user name to be visible, the user/group must exist in the Windows domain [of which SQL Server is a member] and have a login on the SQL Server. To add a user or group to the SQL Server, use the management tools distributed with the Microsoft SQL Server software.) For more information about adding a database user, see "Adding a database user" on page 14.
3. From the Content Server role membership group, select an option button to assign the user name membership in the appropriate *Content Server* role. A user can only be assigned one *Content Server* role.
 - **None.** The user name does not have membership in any *Content Server* role and cannot access the SQL Server or the control database. This means that user name will not be able to use the *Content Server* software.
 - **Content Server User.** The user name has Read and Execute permission. This is required for any user you plan to let open any *Content Server* textbase.
 - **Content Server Administrator.** The user can perform all textbase management functions (for example, renaming and deleting a textbase). The user can also modify tables in the control database. We recommend this user also be a member of the SQL Server fixed server role of **dbcreator**, which enables textbase creation.

Note: To set security for individual textbases, use the Assign User Rights to Textbase dialog box. For more information, see "Setting *Content Server* Security on a Textbase" on page 16.

4. Click **Apply**.
5. Repeat steps 2–4 for each user/group that you want to access *Content Server*.
6. Click **Close**.

Setting *Content Server* Security on a Textbase

Before users can open any *Content Server* textbases, the Content Server Administrator must add their SQL Server logins as users for each textbase to which the users should have access. Each user/group name must also be given role membership to determine the access they have to each textbase.

To do this, use the Assign User Rights to Textbase dialog box, accessible from the Content Server Administration window.

To set or change security for a database user on a *Content Server* textbase

1. Choose **Configure SQL Server>Manage Security>Assign User Rights to Textbase**.
2. On the Select Content Server Textbase dialog box, select the textbase on which you want to set security and click the **Open** button. If the textbase has passwords, you are prompted for the Master password.
3. On the Assign User Rights to Textbase dialog box, from the Current Database Users list, select the user name for which you want to set security. If the user name is not listed, click the **Add User** button to locate and add the user name to the list. (Note that for a user name to be visible, the user/group must exist in the Windows domain [of which SQL Server is a member] and have a login on the SQL Server.) For more information about adding a database user, see “Adding a database user” on page 14.
4. [Optional] If you want the user or group with the user name selected in step 3 to be able to edit the structure of the *Content Server* textbase, select the **Member of db_owner** check box from the Properties group. If you select this option, the user or group will automatically have **Content Server Textbase Writer** role membership and the options in the next step will be disabled. (This is also true if the user has **sysadmin** privileges.)
5. From the Content Server role membership group, select an option button to assign the user name membership in the appropriate *Content Server* role. A user can only be assigned one *Content Server* role.
 - **None.** The user name does not have any *Content Server* role membership and cannot access the textbase.
 - **Content Server Reader.** The user name has Read-only access to the textbase. The user name only has Select permission in SQL tables.
 - **Content Server Data Writer.** The user name can search and modify record information (that is, search for, add, edit, and/or delete records), but cannot update validation and substitution lists.
 - **Content Server Textbase Writer.** The user name can search and modify record information (that is, search for, add, edit, and/or delete records) and modify validation lists when overriding validation, if the appropriate option is checked in Edit Textbase Structure.
6. Click **Apply**.
7. Repeat steps 3-6 for each user/group you want to access this textbase.
8. Click **Close**. The Assign User Rights to Textbase dialog box closes, and the Select Content Server Textbase dialog box opens so that you can select another textbase for which to specify security. If you do not want to specify security for another textbase, click **Cancel** on that dialog box.

Minimum Roles Required for *Content Server* Functions

This section lists the minimum permissions needed to use specific *Content Server* commands. It applies only if *Content Server* is using Windows Authentication, not SQL Authentication. (Under SQL Authentication, all *Content Server* users are members of the fixed SQL Server roles `bulkadmin` and `dbcreator`. They may also have `sysadmin` privileges if they are administrators on the machines hosting the SQL instance.)

CS/TextWorks Functions

| Function | CS Role | Textbase Role |
|--|----------|---------------|
| Create a new textbase | CSAdmin | |
| Edit a textbase structure | CSUser | db_owner |
| Search a textbase | CSUser | CSReader |
| Edit textbase records | CSUser | CSWriter |
| Import records | CSUser | CSWriter |
| Import records using Express method | sysadmin | see note (1) |
| Edit lists (validation, substitution) | CSUser | db_owner |
| Update validation lists during edit/import | CSUser | CSTBWriter |

CS Admin Tool Functions

| Function | CS Role | Textbase Role |
|--|----------|-----------------------|
| Configure SQL Server (all functions) | sysadmin | |
| Recover or Load textbase | sysadmin | see note (1) |
| Delete a textbase | CSAdmin | |
| Clear record locks | CSUser | db_owner |
| Back up a textbase | CSUser | db_owner (see note 2) |
| Restore textbase, replacing current one from a local backup set (see note 3) | CSAdmin | |
| Restore textbase, from a backup set created elsewhere (see note 4) | sysadmin | |
| Upgrade control database | CSAdmin | |
| Upgrade CS menu screens | CSUser | |
| Convert DB/Text textbases | CSAdmin | |
| Convert DB/Text menu screens | CSUser | |
| Convert DB/Text Web components | CSUser | |

Notes

1. Instead of a `sysadmin` role, this function can be accomplished by a `db_owner` who has also been assigned to the SQL Server `bulkadmin` role.
2. An alternative role to `db_owner` is the SQL Server role `db_backupoperator`.
3. A local backup set is one that was created from the textbase being overwritten. Both the textbase being replaced and the one replacing it will have the same `db_owner`, so `sysadmin` privileges are not required.
4. A backup set created elsewhere, or a backup set that is not being used to replace an existing textbase, may need to have its owner changed to the person doing the restore. The ability to change a database owner requires `sysadmin` privileges. This is a SQL Server constraint, not a *Content Server* constraint.

Chapter 5: Managing Textbases

The Content Server Administrator can perform a number of administrative tasks for the *Content Server* system through the Content Server Administration program. These include tasks related to textbase management, which are accessed through the Manage Textbases menu on the Content Server Administration window.

Keep in mind that data related to *Content Server* resides both inside and outside SQL Server. The textbase files that reside outside SQL Server all have the same file name with different extensions. For example, a textbase called *Sales* uses files named SALES.CBA, SALES.CBS, SALES.CAC, and so forth. For more information about textbase files, see the CS/TextWorks online help.

Note: Renaming, deleting, or moving textbases may have an effect on Recordset scripts, menu screens, and Link fields.

Copying, Renaming, and Deleting Textbases

Use the following procedures to copy, rename, or delete a textbase.

Note that you cannot copy or rename a textbase that is Read-only.

Important! Never use Windows Explorer to simply delete, copy, or rename the external files. Deleting, copying or renaming the external files does not update the tables inside SQL Server, and can lead to orphan databases, multiple external files pointing to the same internal database, or erroneous List Textbases information.

To copy a textbase

The following steps can only be used to copy a textbase onto the **same** server.

For instructions on how to copy a textbase **between** servers, see “Example of When You May Use the Back Up Textbases Function for Purposes Other Than for a Backup” on page 32.

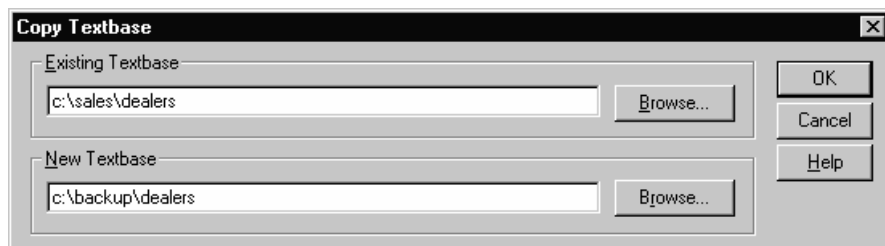
Note that the copy operation requires exclusive access to a textbase (meaning no one else can have it open), and the Master password, if the textbase has passwords.

When you copy a textbase, a new SQL Server database is created on the SQL Server and external textbase files are placed in the location specified in the **New Textbase** box on the Copy Textbase dialog box (see step 4, below).

1. Make sure the textbase is not in use by anyone.
2. Choose **Manage Textbases>Copy Textbase** to open the Copy Textbase dialog box.
3. Type the full path and name of the textbase you want to copy in the **Existing Textbase** box, or click the **Browse** button and navigate to it.

4. Type the full path and name of the textbase you want to create in the **New Textbase** box, or click the **Browse** button to navigate to the location where you want to put the new textbase and specify its name.

Note: The **Copy Textbase** command will not create a new folder for you. If you type the name of a folder that does not exist, a textbase by that name will be created. For example, if you type C:\OOPS, a textbase called OOPS will be created. Also note that you cannot overwrite an existing textbase.



5. Click **OK**, then respond to the confirmation prompts.

If you gave the textbase a new name, and a user file of that name does not exist in your user file path, *Content Server* copies your user file to a copy with the new name.

Tip! The first time a user opens the textbase in its new location, he or she may see a message warning that the textbase is not where the user file expects it to be. It is safe to ignore this message (choose **Yes** to continue).

To rename a textbase

Note that this operation requires exclusive access to a textbase (meaning no one else can have it open), and the Master password, if the textbase has passwords.

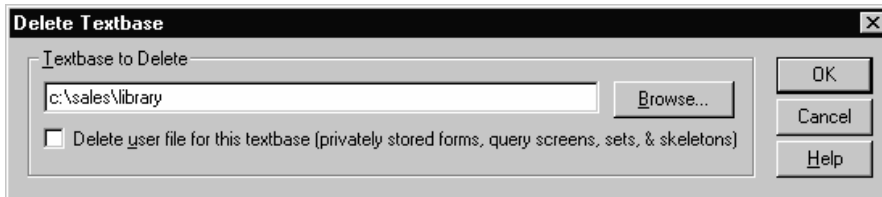
1. Make sure the textbase is not in use by anyone.
2. Choose **Manage Textbases>Rename Textbase** to open the Rename Textbase dialog box.
3. Type the full path and name of the textbase you want to rename in the **Existing Textbase** box, or click the **Browse** button to navigate to it. For example, to rename a textbase called Old, type: C:\DIR\OLD.
4. Type the new full path and name you want for the textbase in the **New Textbase** box, or click the **Browse** button to navigate to the location you want and specify its name. For example, to call the new textbase New and keep it in the same location, type: C:\DIR\NEW.
5. Click **OK**, then respond to the confirmation prompts.
6. If you renamed a secondary textbase (that is, a textbase that is accessed indirectly through a Link field in a primary textbase), open the primary textbase (the one that contains the Link field), and edit the textbase structure to redefine the link definition.

Note: This command automatically renames the local textbase user file. If a textbase is on a network and is used by others, remind anyone else who uses the textbase and stores private elements in their user files to rename their corresponding user file, using Windows Explorer. User files are stored locally, so each user must rename his/her own user file.

To delete a textbase

Note that this operation requires exclusive access to a textbase (meaning no one else can have it open), and the Master password, if the textbase has passwords. It also requires the user to be a SQL administrator.

1. Make sure the textbase is not in use by anyone.
2. Choose **Manage Textbases>Delete Textbase** to open the Delete Textbase dialog box.
3. Type the full path and name of the textbase you want to delete in the **Textbase to Delete** box, or click the **Browse** button to navigate to it.



Note: If you have upgraded all of your textbases from DB/TextWorks to *Content Server*, you can use this command to delete each of your old textbases (which have a .TBA extension). When you click the **Browse** button and navigate to the location of a textbase, select **DB/TextWorks Textbases (*.tba)** from the **Files of type** drop-down list, and select the textbase.

4. Decide whether to delete the user file. User files contain locally stored forms, query screens, sets, and skeletons:
 - Select the **Delete user file for this textbase** check box if you want to delete the user file.

Note: Selecting this check box also deletes the textbase .IDI and .TBS files. For more information about these files, see the CS/TextWorks online help.

- Clear the **Delete user file for this textbase** check box to preserve the user file. (This is the default.) For example, if you just copied a textbase to a new location, and you are now deleting the old textbase, **do not** delete its user file.
5. Click **OK**, then respond to the prompts.

Moving a Textbase to a Different Drive

Use the following procedure to move a textbase to a **different drive**. If you want to move a textbase to a different directory on the **same drive**, use **Manage Textbases>Rename Textbase**. Note also that this operation requires exclusive access to a textbase (meaning no one else can have it open), and the Master password, if the textbase has passwords.

To move a textbase to a different drive

This operation only moves the external files to a different drive. To move a textbase to a different SQL Server, see “Example of When You May Use the Back Up Textbases Function for Purposes Other Than for a Backup” on page 32.

1. Copy the textbase to its new location, then delete the old textbase, following the procedures explained above. Do not delete the user file unless you have given the textbase a new name.
2. If the textbase that you moved is a secondary textbase (that is, a textbase that is accessed indirectly through a Link field in a primary textbase), open the primary textbase (the one that contains the Link field), and redefine the link definition (by editing the textbase structure), so it points to the moved textbase.

Tip! The first time a user opens the textbase in its new location, he or she may see a message warning that the textbase is not where the user file expects it to be. It is safe to ignore this message (choose **Yes** to continue).

Dumping and Loading Textbase Records

Use the Dump Textbase function (choose **Manage Textbases>Dump Textbase**) to copy record information from all fields in all records in the primary textbase to a text file in Inmagic tagged format. Dump Textbase is typically used in conjunction with and before Load New Textbase.

The **Dump Textbase** command also writes out the image annotation list at the end of the resulting .DMP file.

Dumping a textbase backs up records, and you may want to use it as part of your regular maintenance routine.

To dump textbase records to a file

1. Make sure the textbase is not in use by anyone.
2. Choose **Manage Textbases>Dump Textbase** to open the Dump Content Server Textbase dialog box.
3. Select the textbase containing the records you want to dump and click **Open**. If the textbase has passwords assigned, you are prompted for the Master password. The Specify Dump File dialog box opens.
4. Specify a name (the default file extension is .DMP) and location for the file that will be created and click **Save**.

Note: When loading a new textbase, the software looks for the extension .DMP by default.

5. Click **OK** to dismiss the message indicating that the dump operation is complete.

To load records into a new, empty textbase

The Load New Textbase function (choose **Manage Textbases>Load New Textbase**) is intended primarily as a recovery mechanism, to be used on an empty textbase or in situations where you are sure records will not be duplicated. For example, if you have to recreate a textbase, you can use the **Load New Textbase** command to move all of the dumped or exported record information into the new, empty textbase. **Load New Textbase** is typically used in conjunction with and after **Dump Textbase**.

Important! The **Load New Textbase** command does not check for matching records or validation. This operation may result in duplicate records when used on a textbase that already contains records. The **Load New Textbase** command and the **Import** command (choose **File>Import**) are two very different operations. Do not use them interchangeably.

The **Load New Textbase** command automatically adds all of the records to the textbase **without checking for matching records, validation, or strict fields**. It assumes the file is in Inmagic tagged format, and uses Express Import and Exclusive Textbase Access, locking others out of the textbase during the load. Computed and Automatic fields are treated as text (that is, *Content Server* does not change incoming values or create new values for Computed and Automatic fields). Rejected records are copied to an exception file, which has the same name and location as the dump file you loaded, with a file extension such as .X01, .X02, and so forth.

1. Make sure the textbase is not in use by anyone.
2. Choose **Manage Textbases>Load New Textbase** to open the Load Content Server Textbase dialog box.
3. Select a new, empty textbase and click **Open**. If the textbase has passwords, you are prompted for the Master password.
4. On the Select Dump File dialog box, select a file to load. The software looks for files with the file extension .DMP, but you can specify a different extension, such as .TXT or .ASC.
5. Click **Open** to open the SQL Server Bulk Insert Options dialog box.
6. Do the following:
 - In the **Maximum records to buffer** box, enter the maximum number of records you want *Content Server* to prepare before loading them into the SQL Server database. When determining the number you want to use, consider the balance you want between performance and resource consumption. Larger numbers often result in faster loads, but tend to consume more disk space in the temporary file path. The default value is 30000.
 - Specify the location of your SQL Server by selecting the appropriate option button:
 - ◆ **SQL Server is local (located on this computer)**. Select this option if your SQL Server is located on this computer.
 - ◆ **SQL Server is remote (located on different computer)**. Select this option if your SQL Server is located on a computer other than the one you are using now. If you select this option, in the **Temp file path** box, enter the path to the public directory on the network in which you want to store temporary files needed for the load operation. Note that this location must be accessible from both this computer and the SQL Server (using the format \\server\share\...), and your account and the account used by the SQL Server service must have read/write/delete access to the directory.
 - Click **OK** to start the loading process.

Recovering a Textbase

Recovering a textbase involves dumping its contents to an ASCII file, making an empty copy of the textbase, and loading the ASCII file into the copied textbase. You can perform the necessary steps individually, or, if you have enough disk space, *Content Server* can perform them for you.

The Recover Textbase function is most often used when a textbase is damaged.

You can use either the single-step recovery procedure or the multi-step recovery procedure. Note, however, that the single-step recovery procedure requires access to the Content Server Administration program, as well as membership in a particular role (see page 17).

To perform a Single-Step Recovery

1. Make sure the textbase is not in use by anyone, including a service such as the *CS/Importer*.
2. Start the Content Server Administration program (*InmCSAdmin.EXE*).
3. Choose **Manage Textbases>Recover Textbase**, then specify a textbase, and click **Open**. Note that you will need the Master password if the textbase has passwords.
4. Click **Yes** on the confirmation message that appears.
5. On the SQL Server Bulk Insert Options dialog, specify the maximum number of records to buffer and the SQL Server location. If the SQL Server is not located on this machine, also specify the path to a shared folder on a network server that is read- and write-accessible from this machine as well as the SQL Server (using the format `\\server\share\...`). This folder will hold temporary files created during the operation. Click **OK**.
6. When the operation finishes, click **OK** twice to dismiss the completion messages. Your old textbase will still exist, with a new backup name. (The second completion message tells you the new name.)

To perform a Multi-Step Recovery

Use the multi-step recovery procedure if:

- You do not have sufficient privileges to run the Content Server Administration program (*InmCSAdmin.EXE*). If you do not, you will not be able to perform steps 4 and 5 below. However, you will have a new textbase that is accessible.
- The damage is in the .CBA file (for example, a public form). You need to clear the **Copy Public Textbase Elements** check box when you create the new textbase.
- You need to modify the structure before importing the records.
- There is insufficient space available to perform the single-step recovery explained above.

Once you have determined that you need to perform a multi-step recovery, do the following:

1. If you have not already done so, export records from the damaged textbase using **Manage Textbases>Dump Textbase**.
2. Use *CS/TextWorks* to create a new textbase by copying the structure of the damaged one.
 - Choose **File>New Textbase**. On the Specify New Content Server Textbase dialog box, name the new textbase. You cannot use the same name as the existing damaged textbase, but you can rename the new textbase later. Click **Save**.
 - On the Create Textbase Structure dialog box, select the **Copy an Existing Inmagic Structure** option button, then click **OK**. Use the next dialog box to select the existing damaged textbase to use as the basis for the new textbase structure, then click **Open**. (When prompted, copy the user file, too.)

Note: Instead of copying the structure of an existing textbase, you can create the new textbase structure from a textbase structure backup file (.CBB). For more information, see “Creating the new textbase from a .CBB file,” next.

- Follow the prompts to specify a Master password (if required) and to copy validation lists, passwords, textbase elements, and so forth. *CS/TextWorks* creates a new textbase. The textbase does not have any

records in it. If you copied textbase elements, the textbase includes any forms, query screens, sets, and record skeletons that were saved in the textbase file.

- Close the textbase by choosing **File>Close**.
- 3. Load records into the new empty textbase. Choose **Manage Textbases>Load New Textbase** and load the dumped file from step 1 into the new empty textbase that you just created in step 2. You now have a new textbase, complete with records. For more specific details about loading a textbase, see “To load records into a new, empty textbase” on page 22.
- 4. Delete the original damaged textbase files. Start the Content Server Administration program and choose **Manage Textbases>Delete Textbase**. (Do not delete the user file.) Do not use Windows to delete the textbase files; this will not delete the SQL database.
- 5. Rename the new textbase back to its original name by choosing **Manage Textbases>Rename Textbase**, if applicable.
- 6. If you have stored sets in your textbase or user file, open the new textbase in CS/TextWorks and choose **Sets>Refresh Sets** to rebuild the sets. If others use this textbase and have private sets, ask them to do the same.

Note: **Refresh Sets** performs the search again; it does not retain any omissions specified using **Omit Record**.

Creating the new textbase from a .CBB file

Instead of copying the structure of an existing textbase (as described in the previous set of instructions), you can create the new textbase from a textbase structure backup file (.CBB extension).

Before doing this, export all of your public elements from the damaged textbase (choose **Maintain>Manage Textbase Elements**). Once your new textbase is created, you can import these public elements into the textbase.

Perform the multi-step recovery process described above, but with the following exception:

- In step 2, on the Create Textbase Structure dialog box, select the **Restore from Textbase Structure Backup File** option button.

Once the new textbase is created with a new name, it will automatically have a corresponding user file with the same name (<textbasename>.CBU). This user file will be empty. If you had any private elements, they are still located within the damaged textbase’s corresponding .CBU file.

To recover your private elements (if any), do one of the following:

- **If you are able to rename textbases:** Delete the damaged textbase and rename the new one with the name of the original, damaged textbase. The .CBU file containing your private elements still exists, and—because it now has the same name—is used with the new textbase. (Note that the empty user file that was created with the new textbase will be unused and can be deleted using Windows Explorer.)
- **If you are not able to rename textbases:** Copy the user file for the damaged textbase over the one for the new textbase so that the new .CBU file contains your private elements.

Clearing Textbase Record Locks

The **Clear Textbase Record Locks** command checks for records left locked when a user aborted or lost power or connection while editing a record. It unlocks any records found locked. This is safe because exclusive access to the textbase is required in order to use this function, guaranteeing that you are not clearing a lock held by another active user.

If you do not clear locks, a user attempting to edit a locked record will be denied access because of a non-active lock that was not previously released.

Non-active locks remain locked for 20 minutes, at which time the lock is automatically cleared. You can change the default 20-minute value by adding the `RecordLockInterval=` parameter to the [Advanced] section of the `InmCSrv.INI` file. Note that the time must be entered in milliseconds (meaning that the default is `RecordLockInterval=1200000`).

Active locks remain locked indefinitely. For example, when a user is updating a record, it remains locked for as long as the record is open in the Edit window.

This command is safe to run whether or not you have locked records.

To unlock records in a textbase

1. Close any textbase that is open.
2. Choose **Manage Textbases>Clear Textbase Record Locks** to open the Select Content Server Textbase dialog box.
3. Select the textbase whose record locks you want to clear, then click **Open**. You must have exclusive access to the textbase.

Note: If the textbase has a Master password, you will be prompted for it before the records can be unlocked. If you are using Windows Authentication, you must also have either **sysadmin** privileges or be a member of the SQL Server fixed database role of **db_owner**.

4. If the textbase has any locks to clear, a confirmation message appears. Review the message, then click **Yes** to unlock the record(s).
5. Click **OK** to dismiss the completion message.

Analyzing a Textbase

The **Analyze Textbase** command analyzes each record in the specified textbase and generates a tabular report listing the following information about each field in the textbase:

- **Max Entries.** The maximum number of entries in a single record.
- **Max Entry Length.** The maximum length of a single entry.
- **Max Record Length.** The maximum length of this field in a single record.

To analyze a textbase

1. If the textbase you want to analyze is open, close it by choosing **File>Close**.
2. Choose **Manage Textbases>Analyze Textbase** to open the Analyze Content Server Textbase dialog box.
3. Use the **Look in** drop-down list to navigate to the folder in which the textbase is located, select it, then click **Open**.
4. If the textbase has passwords, you are prompted for the Master password. Type the password in the **Password** box, then click **OK**. You must use the Master password and have exclusive access to the textbase to analyze it.
5. On the Specify Text File dialog box, do the following:
 - In the **File name** box, type a name for the report file to be generated.
 - Navigate the **Save in** drop-down list to the location where you want to save the report file.
 - Click the **Save** button.
6. Wait while *Content Server* analyzes the textbase. While the textbase is being analyzed, the Analyze Textbase Operation Status dialog box opens.

Note: If you want to stop the process before it is completed, click the **Stop Analyze Textbase Operation** button.

7. A completion message appears, detailing the number of records analyzed and the location of the resulting report file. Click **OK** to open the report file in Microsoft Notepad.

If you want to view the report again later, use a text editor (for example, Microsoft Notepad) to open the report file, located in the folder you specified.

Listing Textbases on the SQL Server

The **List Textbases** command lists each textbase on the current SQL Server, its location, and its corresponding SQL database name.

To display a list of textbases on a SQL server

Choose **Manage Textbases>List Textbases**. The Textbase List window appears, listing the textbases on your SQL Server.

You can use the toolbar buttons on the Textbase List window to:

- **Find information in the list.** Click the Find toolbar button to locate any text or numeric information in the list, such as a specific textbase, directory, or SQL Server database name.
- **Print the list.** Click the Print toolbar button to print the list to a printer.
- **Save the list to a file.** Click the Print toolbar button and select the option to print the list to a text file (.TXT).

Chapter 6: Backing Up Content Server Files

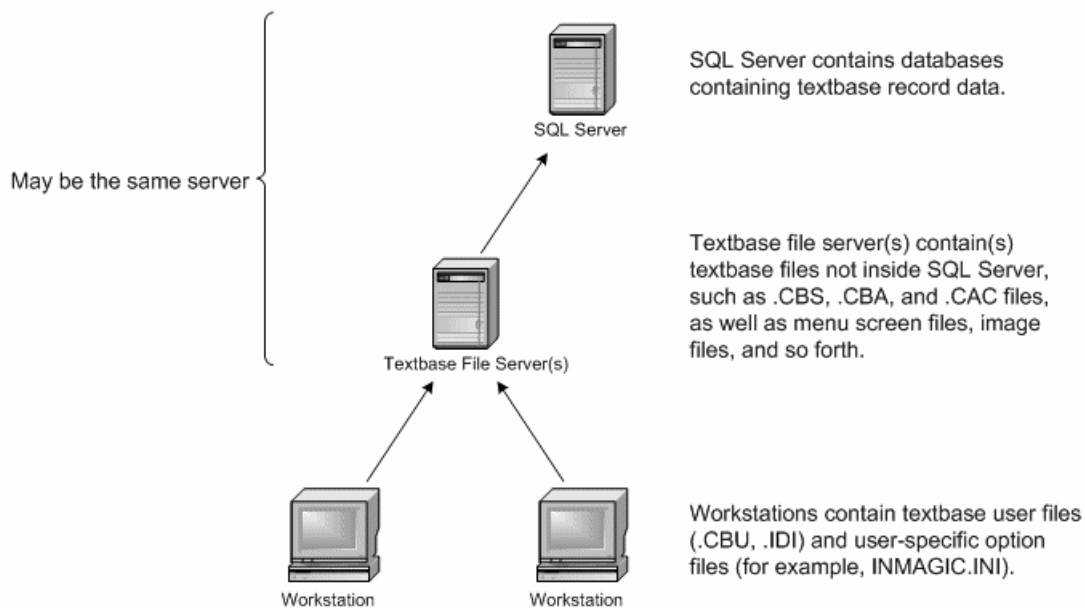
To protect your information against accidental loss or damage, be sure to back it up on a regular basis. If a textbase is of great importance to your organization, consider keeping copies of all files off-site.

The Content Server Administrator should know and do the following, or have procedures in place that get the necessary procedures done. Meaning, if your organization has a database administrator who performs the backups of your organization's SQL Servers and their data, the Content Server Administrator should work with this person. If not, the Content Server Administrator should have procedures in place to get these tasks done:

- Identify a regular backup strategy that will protect the data produced by *Content Server* that is located inside and outside SQL Server. Files required by *Content Server* are stored both inside SQL Server (for example, *Content Server* data files) and outside SQL Server (for example, textbase elements).
- Identify an on-site and, if applicable, an off-site backup strategy, including who needs to do what on what schedule.
- Identify what is to be backed up and how frequently. Backup frequency will be dictated by how often information changes, how difficult it would be to manually regenerate lost information, and the importance of the information to your organization.

Illustration of Where Content Server Files Reside

The following illustration shows where *Content Server* files reside.



Content Server Files Outside SQL Server that Should be Backed Up

This section lists the *Content Server* files that reside outside SQL Server that should be backed up when necessary. As noted below, some can be backed up by the Back Up Textbases function provided in the Content Server Administration program; others only by using Windows Explorer or some other backup software.

Textbase Files (.CBS, .CBA, .CAC)

Back up all your textbases on a regular basis. We recommend you use the Back Up Textbase function (choose **Back Up & Restore>Back Up Textbases**).

Log Files (.LOG)

Optional textbase log file; lists when changes were made to the textbase structure and records. In this way, a log file acts as an audit trail. To back up log files, we recommend you use the Back Up Textbases function (choose **Back Up & Restore>Back Up Textbases**).

User-defined Initialization Files (.INI)

Initialization (.INI) files are text files that a user can edit.

CS/TextWorks uses these initialization files: Inmagic.INI, InmCSrv.INI, and an optional <textbase>.INI file.

CS/*WebPublisher PRO* uses the same .INI files as CS/TextWorks, plus an additional file called ICSWeb.INI.

The CS/*Importer* service uses these initialization files: ICSISrv.INI, InmCSrv.INI, and an optional <textbase>.INI file.

To back up the <textbase>.INI file, we recommend you use the Back Up Textbases function (choose **Back Up & Restore>Back Up Textbases**). To back up the other initialization files, use Windows Explorer or other backup software.

To learn more about the *Content Server*-related INI files, see “INI Files” on page 43.

Menu Screen Files (.CBM)

Menu screen files have the extension .CBM and are located in the directory you specified when you created them. To print a description of a menu screen, open it in the Menu Screen Designer and choose **Menu Operations>Print Definition**. Use Windows Explorer or other backup software to back up .CBM files.

Image Files and Annotation Files

If your textbase records include references to image files (for example, .JPG, .TIF, .BMP files), back up these files as you would any file, using Windows Explorer or other backup software. If the images are annotated, back up the annotation files, too. Each annotated image may have its own annotation file (default extension .ANN) stored outside of the textbase. You supply the file name and location when you save the annotations.

Do the same for any static images (for example, images used in picture boxes or logos) referenced in forms, query screens, or menu screens.

Textbase-Specific Help (.HLP)

In CS/TextWorks, for each textbase, your organization can supply one compiled Windows Help file that describes any topics you want. For example, you can explain the purpose of a textbase and provide tips on how to search, edit, and generate useful reports. Textbase-specific help supplements, not replaces, the *Content Server* help. Users can continue to access the *Content Server* help in the usual ways. If you have created any textbase-specific help file, you should back it up when necessary (for example, after it has been created and when it gets updated) using Windows Explorer or other backup software.

Textbase User Files (.CBU)

User files contain private textbase elements (that is, forms, query screens, record skeletons, and sets) that are not stored in the textbase. Each user file has the same name as its textbase, with the extension .CBU. For example, a textbase called *Sales* has a user file called SALES.CBU. To see where your user files are stored, open any textbase and choose **Display>Textbase Information**. Use Windows Explorer or other backup software to back up your user files. You do not need to back up textbase user files if your users do not save private forms, sets, and so forth.

Tip! You may want to consider backing up your entire user file directory. This will save private elements as well as persistent information, such as the last-used import settings.

User-Specific File (.IDI)

In CS/TextWorks, last-used settings (for example, window size and position, batch modification settings, import parameters, and so forth) for each textbase are stored in the textbase .IDI file. Backing up .IDI files is optional because the settings can easily be recreated the next time someone uses the software. Use Windows Explorer or other backup software to back up .IDI files.

Other Files

Your organization may have other files used with a textbase that should be backed up (for example, HTML files that open in the Application window). Use Windows Explorer or other backup software to back up these files.

Backup Methods

Depending on your organization's needs, you can back up your *Content Server* files using any of the following methods:

- **Content Server Administration program.** Use the **Back Up Textbases** command on the Content Server Administration window to back up your SQL Server database and several of the external files used by the system. This method allows you to restore your textbase to the point at which it was backed up. For more information, see “Backing Up *Content Server* Files with the Administration Program” on page 32.
- **SQL Server backup tools.** Schedule a SQL Server maintenance plan to back up your SQL Server and its transaction log. You must manually back up the bulk of the external *Content Server* files. This method allows you to restore your system to the point of failure. For more information, see “Backing Up *Content Server* Files with SQL Server Backup Tools” on page 34.
- **Automated backup using Windows scheduled batch job.** This method requires you have a backup server available to you. Use SQL Server backup tools to back up SQL Server and its transaction log (as described in the previous bullet), then have a Windows scheduled batch job move the .BAK files for the SQL Server and transaction log, as well as copies of your external *Content Server* files, to your backup server. This method allows for synchronization between all data, both inside and outside of SQL Server. For more information, see “Automating a Full Textbase Backup” on page 35.

The following table details where *Content Server* data resides (inside or outside SQL Server) and whether the data is backed up by the Back Up Textbases function and/or SQL Server backup tools.

| Data | Inside or Outside SQL Server? | Backed up by Back Up Textbases Function? | Backed up by SQL Server Backup Tools? |
|--|--------------------------------------|---|--|
| Records | Inside | Yes | Yes |
| Indexes | Inside | Yes | Yes |
| Validation lists | Inside | Yes | Yes |
| Substitution lists | Inside | Yes | Yes |
| Image annotation list | Inside | Yes | Yes |
| Textbase structure (.CBS) | Outside | Yes | No |
| Textbase elements (.CBA) | Outside | Yes | No |
| Access control file (.CAC) | Outside | Yes | No |
| Textbase log files (.LOG) | Outside | Yes | No |
| User-defined initialization file (.INI): <textbase>.INI | Outside | Yes | No |
| Menu screen files (.CBM) | Outside | No | No |
| Image files (.JPG, .TIF, .BMP, and so forth) | Outside | No | No |
| Image annotation files (.ANN) | Outside | No | No |
| Textbase-specific help file (.HLP) | Outside | No | No |
| User-defined initialization files (.INI): Inmagic.INI, InmCSrv.INI, ICSWeb.INI | Outside | No | No |
| Textbase user files (.CBU) | Outside | No | No |
| Other files (for example, .HTM files that open in the Application window) | Outside | No | No |

Backing Up *Content Server* Files with the Administration Program

Use the Back Up Textbases function on the Inmagic Content Server Administration window to back up one or more textbases in the same folder at a time. The Back Up Textbases function creates a backup file set for each textbase that contains data from both inside and outside SQL Server.

Note that while all textbase-related data is backed up, other files that may be referenced by a textbase (for example, images, and document files) are not backed up by the Back Up Textbases function. You must manually back up these types of files. You must also synchronize the manually created backup files with the corresponding textbase backup file set to ensure that if you do have to restore a backup, you have a truly complete backup. If you do not back up the files referred to by a textbase, when you restore the textbase, your links to these files may not work.

Backup Example

Say you use the Back Up Textbases function on June 4, 2004 at 3 a.m. At the same time, you should back up the other files that are referenced by the backed up textbase (that is, any menu screen, images, and textbase-specific help file). Then you must mark the June 4 backup packages (one produced by the Back Up Textbases function and the other that you manually did for the files referenced by the textbase) so that you have a complete backup that you can use when necessary to restore the textbase and its referenced files for June 4. Note that unless you are restoring a textbase and its referenced files to the same locations, you will have to redirect references to any new, restored locations for them to work correctly.

Example of When You May Use the Back Up Textbases Function for Purposes Other Than for a Backup

You should use the Back Up Textbases and Restore Textbases functions in situations where you want to copy or move a textbase between SQL Servers. For example, if you are having trouble with a textbase and require assistance from Inmagic, Inc., you may have to send a copy of that textbase to an Inmagic support representative (for example, by copying all the files onto a CD). In this situation, you would use the **Back Up Textbases** command (not the **Copy Textbase** command) to make a copy of the textbase. Using the **Back Up Textbases** command means that the support representative will be able to use the **Restore Textbases** command to load the textbase on his or her machine and be able to access it through his or her instance of SQL Server.

To make a copy of a textbase on the **same** server, see “Copying, Renaming, and Deleting Textbases” on page 18.

Sample Backup Routine for Workgroup Configuration

The following is a sample backup routine if you are using SQL Server Express as your SQL Server:

1. Back up a textbase using the **Back Up Textbases** command in the Content Server Administration program.
2. Manually back up other related files using Windows Explorer. See the table on page 31 for a list of the files not covered by the Back Up Textbases function.
3. Synchronize these two backup file sets. For example, mark them with the date and time of the backup and file them away together.

To back up a textbase with the Back Up Textbases function

1. Start the Content Server Administration program.
2. Choose **Back Up & Restore>Back Up Textbases** to open the Back Up Textbase Options dialog box.
3. In the **Textbases** box, type the location and name of the textbases to back up, or click the **Browse** button and navigate to them. If the machine from which you are running the Content Server Administration program is different from the one on which the SQL Server resides, you must use a Universal Naming Convention (UNC) file path.
4. In the **Backup path** box, type the directory for the backup file set, or click the **Browse** button and navigate to it. The directory for the backup file set should be on the same machine as the SQL Server, or be a public directory to which the SQL Server has access on a shared network. If the machine from which you are running Content Server Administration program is different from the one on which the SQL Server resides, you must use a Universal Naming Convention (UNC) file path.
5. Select or clear the **Shrink SQL Server database** check box, depending on whether you want to shrink the database during the backup process. Shrinking the database will release unused space in the data files, and help to prevent your log file from growing without limit. If selected, the free space in the data files after shrinking will be 10 percent. By default, this check box is selected.
6. Click **OK** to back up the textbases. The Back Up Textbases: Operation Status dialog box opens and shows the progress of the backup operation. Click **Close** when the operation is complete.

The backup creates a copy of all of the textbase files (.CAC, .CBA, .CBS, .INI, and .LOG) in the specified location. Content Server Administration program copies all of the textbase records, indexes, and other information from SQL Server into a .DAT file. The backup file set is Read-only, so that the files are not accidentally modified or deleted.

Any changes you make to the original textbase after the backup will not be reflected in the backup. If you need to restore the textbase from the backup, use the **Restore Textbases** command.

To restore a backup file set using the Restore Textbases function

Use the **Restore Textbase** command to restore one or more textbases backed up with the **Back Up Textbases** command. Using **Restore Textbases**, you can replace an existing textbase or create a new textbase from a backup.

1. Start the Content Server Administration program.
2. Choose **Back Up & Restore>Restore Textbases** to open the Restore Textbase Options dialog box.
3. Type the location and name of the textbase backup set(s), or click **Browse** to locate the backup set(s). The location for the backup file set(s) should be on the same machine as the SQL Server, or be a public directory to which the SQL Server has access on a shared network. If the machine from which you are running the Content Server Administration program is different from the one on which the SQL Server resides, you must use a Universal Naming Convention (UNC) file path.
4. Type the location of the directory where the textbase(s) should be restored, or click **Browse** to select the location. Note that SQL Server needs Write access to the directory. If the machine from which you are running Content Server Administration program is different from the one on which the SQL Server resides, you must use a Universal Naming Convention (UNC) file path.
5. The Restore Textbases: Operation Status dialog box shows the progress of the operation. Click **Close** when it is finished.

Backing Up *Content Server* Files with SQL Server Backup Tools

Note that your IT department, as its standard operating procedure, may back up the SQL Server databases related to *Content Server* (in addition to other SQL Server databases your organization may have). That backup is not complete and cannot be used to restore *Content Server* textbases. The SQL Server backup tools back up only those files that reside inside SQL Server. However, data for *Content Server* textbases reside both inside and outside SQL Server. If your organization uses SQL Server backup tools, you must manually back up *Content Server* files that reside outside SQL Server.

Important! Your IT department should be sure to also schedule a regular backup of the transaction log. This allows you to restore your SQL Server to the point of failure.

If you do not have IT support, and want to use an automated backup tool to ensure that backups are getting done on a regular basis, you may want to use a SQL backup tool such as Database Maintenance Plan Wizard. Once you set up the wizard with a core group of maintenance tasks, you put in place a mechanism to ensure that your SQL database is backed up regularly, is performing efficiently, and is checked for inconsistencies. The Database Maintenance Plan Wizard includes tasks that rebuild indexes, compress data files, back up the database and transaction log files, and so forth.

Backup Example

If you decide to use the SQL Server backup procedures you have in place in your organization, you must also back up the files that reside outside SQL Server, and be sure to keep the two backup packages synchronized. In other words, say your organization backs up the SQL Server files on May 14, 2004 at 4 a.m. At the same time, you must back up the external *Content Server* textbase files. Mark the *Content Server* backup package as such so that later you can match it to the SQL Server backup for May 14, 2004 at 4 a.m. If you then have hard disk problems and both the internal and external files are not available (and the May 14th backup was your last backup), you need to restore the SQL Server May 14 backup package, as well as the *Content Server* backup package of May 14. Note that unless you are restoring a textbase and its supporting files to the same location, you will have to manually redirect supporting files to their new, restored location for them to work correctly.

To back up *Content Server* data inside and outside SQL Server

To back up *Content Server*-related data inside SQL Server, use SQL Server backup tools. See your SQL Server documentation for details.

In conjunction with the SQL Server backup, you should back up the files outside SQL Server, as listed in the table on page 31. You must keep the SQL Server backup package and the *Content Server* backup package synchronized so that you have a complete backup file set that you can use when necessary to restore the textbase and its referenced files for the date involved.

Sample Backup Routine for Standard Configuration

The following is a sample backup routine if you are using SQL Server backup tools:

1. Use SQL Server backup tools to back up *Content Server* files that reside inside SQL Server.
2. Use Windows Explorer to manually back up the *Content Server* files that reside outside SQL Server. See the table on page 31 for a list of these files.
3. Synchronize these two backup file sets. For example, mark them with the date and time of the backup and file them away together.

Automating a Full Textbase Backup

To ensure that the backed up SQL database, transaction log, and external textbase files are automatically synchronized, you can automate the process.

To do this, use a Windows scheduled batch job (with copy statements) to move these backup files off the database server machine and *Content Server* machine. For example, if the transaction log is backed up every half hour, the Windows scheduled batch job should move the transaction log backup file to another machine on the network immediately following the process. The batch job should then make a copy of all textbase files located outside of the SQL Server and move them to the same location as the backed up transaction log. All backup files moved to this “backup” machine should be moved off-site on a regular basis.

For more information about Windows scheduled batch jobs, see your Windows documentation.

Auxiliary Backup Method

A textbase owner can use the backup method described here as an auxiliary backup method. This method is not recommended to be used as your organization’s regular way to back up your *Content Server* textbase and its referenced files. Note that while this auxiliary backup method provides you with ways to back up important portions of *Content Server* data, it does not cover everything. To do a complete backup of *Content Server* data, see the backup methods described earlier in this chapter.

This auxiliary backup method is manually accomplished and ASCII based. It provides a bit of flexibility in that it lets you recover specific data. For example, if a specific record was deleted, you can retrieve the specific record through a backup made from this backup method, as ASCII files can be used to regenerate partial or complete data.

| Task | Explanation | Backup Frequency |
|---|---|--|
| Create a dump (.DMP) file for a textbase. | The records for the textbase are dumped into an ASCII file. | Daily |
| Create a backup file (.CBB) of the textbase structure | The textbase structure definition is put in an ASCII file. | Anytime you change the textbase structure—must have exclusive access to the textbase |
| Back up textbase elements (.XPF, .XPQ, .XPS, .XPK files) | Similar to the .CBA file backed up when you use the Back Up Textbases function. | Periodically, as needed |
| Back up validation and substitution lists. Use the Print to File option when you print a list. | The list prints to an ASCII text file. | Optional—exclusive access to a textbase not required |

Chapter 7: Other Management Activities

This chapter discusses other management activities that a Content Server Administrator may want to do.

The Content Server Administrator should maintain manual or computer-based logs of activities that allow for the proper evaluation of the management of *Content Server*. (Do not confuse these logs with the ones that are produced by *Content Server* or your SQL Server.) These logs may include:

- System Patch Log, to record when patches or software upgrades are performed for the SQL Server for *Content Server*, as well as for *Content Server* itself.
- Maintenance Log for errors and problems.
- System Backup Log for the regularly scheduled backups related to the SQL Server data for *Content Server* and its external data.

Keeping an Enhanced Log File of the Textbase Activity

Unless it has been turned off by the textbase designer, there is a log file that records changes to the textbase. The log file is saved in the same location as the textbase and has the same name, with the extension .LOG.

If you want to enable enhanced logging (that is, you want to track the machine name and login name when a textbase is opened and when records are edited and/or locked), add the following to the <textbase>.INI file.

```
[LogFile]
Details=3
```

The following list shows the values you can use with the `Details` parameter.

- 0 - No enhanced logging
- 1 - Logs when user opens or closes the textbase
- 2 - Logs when user modifies records (and opens/closes the textbase)
- 3 - Logs when user locks/unlocks record (and opens/closes the textbase or modifies records)

The following is an example of a log file section using `Details=3`:

```
6/7/2006 9:52:53 AM: Textbase opened using slot 2 - Inmagic Content Server(v10.00):
LIBRARY: Harold
6/7/2006 9:53:04 AM: Record 7460 locked - Inmagic Content Server(v10.00):
LIBRARY: Harold
ID: 7529
6/7/2006 9:53:49 AM: Record modified - Inmagic Content Server(v10.00): LIBRARY: Harold
ID: 7529
6/7/2006 9:53:50 AM: Record 7460 unlocked - Inmagic Content Server(v10.00):
LIBRARY: Harold
ID: 7529
```

Note: The record numbers in the locked/unlocked messages are the internal record numbers, not any number that appears in the textbase record.

Tracking Who has a Textbase Open

When configuring CS/TextWorks during Setup, you can specify that the machine name and login name be recorded each time a user opens a textbase. On the Track Textbase Access dialog box, select the **Track who has textbase open** check box. Each time a textbase is opened, the user's information will be written to a line in the textbase .SLT file (providing that the user has Write access to the folder containing the textbase). At any time, you can look at the textbase .SLT file (open it with any text editor) to see who has the textbase open.

The .SLT file has the same name and directory as the textbase. For example, a textbase named *Catalog* would have a CATALOG.SLT file. The line in the file shows the following information:

```
<the slot in use>: <the program used to open the textbase> <the machine name>:<the user name>
```

For example:

```
Slot 2: Inmagic CS/TextWorks LIBRARY: Harold
```

When the user closes the textbase, the line in the .SLT file is cleared.

Note: If someone turns off or reboots their computer while the textbase is open, the line in the .SLT file cannot be cleared.

If you have already installed CS/TextWorks and did not specify this option, you can turn the feature on by adding the following to the <textbase>.INI file (to track for just that textbase) or InmCSrv.INI file (to track for all textbases).

```
[Advanced]  
EnableSlotLog=1
```

When this option is turned on, every time someone opens the textbase, the software writes to the textbase .SLT file.

This option also affects CS/*WebPublisher PRO* and the Inmagic CS/*Importer* service, assuming each has full rights to the .SLT file. For it to apply on the Web, you must modify the InmCSrv.INI located in the CS/*WebPublisher PRO* installation folder. The CS/*Importer* service shares the InmCSrv.INI located in the CS/TextWorks installation folder.

Tracking SQL Server Errors

You can specify that *Content Server* should track SQL Server errors and write them to a dump file. The file lists any SQL errors encountered, with a date/time stamp and the textbase name.

To do this, add the `CSErrorDump=1` parameter to the [Advanced] section of the <textbase>.INI file (to track errors for a particular textbase) or the InmCSrv.INI file (to track errors for all textbases). Note that, if you add the option to the <textbase>.INI file, you must provide Write access to the textbase folder for both CS/TextWorks and for the account used by CS/*WebPublisher PRO*. If you add the parameter to the InmCSrv.INI file, modify the copy of InmCSrv.INI in the CS/*WebPublisher PRO* installation folder to affect that product.

```
[Advanced]  
CSErrorDump=1
```

When used in the <textbase>.INI file, SQL Server errors are tracked for that particular textbase. The dump file (named <tbase>_CSErrors.DMP) is created in the textbase folder.

Tip! We recommend you add it to the <textbase>.INI file so that all SQL Server errors from all workstations are tracked in one file.

When used in the InmCSrv.INI file, the dump file (named CSErrors.DMP) is created in the user file path. For CS/TextWorks, this is the user file path, generally on the local hard drive of the workstation. For CS/*WebPublisher PRO*, this is the QSets subfolder of the CS/*WebPublisher PRO* installation folder.

Note that SQL Server errors are appended in the dump file.

Checking a Textbase for Problems

Use the Check Textbase function to check a textbase or a user file and repair certain problems. Review the report file that the Check Textbase function produces.

To check a textbase and optionally repair problems

You can check a textbase to detect and repair problems in a textbase and user file.

Note that you must have exclusive access to the textbase before you can run the Check Textbase function.

1. Start the Content Server Administration program (InmCSAdmin.EXE).
2. Choose **Manage Textbases>Check Textbase**.
3. Specify a textbase to check and click **Open**. If the textbase has passwords, you must supply the Master password.
4. Select what you want to do from the following options:
 - **Repair Structural Problems.** Select this check box if you want to fix problems in the textbase and user file.
 - **Check User File Only.** Select this check box if you want to check your user file only, without checking the textbase. Use this option if you are receiving error messages using a form, query screen, set, or record skeleton saved in your user file, and you do not have the time to also check the textbase.
5. Specify a name and location in the Specify Problem Report File dialog box for the report file that will be created (default extension .CHK).
6. After the check is done—if any problems were encountered—*Content Server* displays the report file, which describes any problems found and suggests how to fix the problems. Perform the suggested repair activities and run **Check Textbase** again, to ensure the textbase is sound.
7. If the report file lists serious errors that *Content Server* could not fix, you may need to recover the damaged textbase. For instructions, see “Recovering a Textbase” on page 23.

For more information about the **Check Textbase** command, see the online help.

To view a Check Textbase report file

After you check a textbase, if there are errors, a window displays the results of the check. To see those results again at a later time, use the **View Check Textbase Report File** command.

1. Choose **Manage Textbases>View Check Textbase Report File**.
2. When prompted, type or select the name of the file that you want to view. The default extension for this type of file is .CHK.
3. The Check Textbase report file includes recommendations at the bottom of the file.
 - If the report file lists problems, perform the necessary repairs and run **Check Textbase** again, to ensure that the textbase is sound.
 - If the report file lists serious errors that *Content Server* could not fix, you may need to recover the textbase. For instructions, see “Recovering a Textbase” on page 23.

Chapter 8: Database Maintenance

Note: This chapter applies to *Content Server* Standard only.

To ensure proper performance and prevent data loss, the Content Server Administrator must regularly maintain the SQL databases.

Database maintenance includes the following:

- Updating information about data optimization.
- Verifying the integrity of the data.
- Performing backups of the database.
- Creating reports and a maintenance history of the database.

We recommend the Content Server Administrator use the Maintenance Plan support provided with Microsoft SQL Server to create an automated maintenance plan that runs on a schedule you specify. For SQL Server 2000, in the SQL Server Enterprise Manager, choose **Tools>Database Maintenance Planner**. For SQL Server 2005, in the SQL Server Management Studio, navigate to Management>Maintenance Plans. For detailed information about these functions, see your SQL Server documentation.

The following list shows the major areas to consider when specifying a database maintenance plan.

- **Updating data optimization information.** As data and index pages fill up, the updating of index statistics and rebuilding of indexes requires more time and pages can become fragmented. You can improve performance by either re-organizing data and index pages or updating statistics on a regular schedule. You can also automate the removal of empty database pages to compress data files. The schedule you specify should be daily or weekly, depending on the system usage and transaction amount.
- **Checking database integrity.** Your maintenance plan can regularly check the allocation and structural integrity of all objects in a database. The schedule you specify should be daily or weekly.
- **Backing up databases.** You can schedule a database and transaction log backup and specify how long to keep the backup files. For a production environment, a full database backup should be done daily or weekly, depending on the size of the database and system usage. Back up transaction logs between two full database backups. Depending on the transaction amount and fault tolerance, the transaction log can be backed up every 15 or 30 minutes, or every hour.

Chapter 9: *Content Server* Performance Guidelines

This chapter describes guidelines to help you improve and maximize the performance of your *Content Server* system.

There are several areas that impact the overall performance of *Content Server*. Each is covered in this chapter.

- System usage
- Textbase size
- Hardware specifications
- *Content Server* configuration
- SQL Server database configuration

System Usage

System usage is directly related to the number of concurrent users and the transaction activities they perform.

If a many users are running activities at the same time, system resources are heavily taxed and overall system performance slows.

The following *Content Server* operations are known to consume large amounts of system resources:

- Batch Modify
- Import
- Load New Textbase

We recommend you perform these types of tasks during off-peak business hours, if possible.

Textbase Size

Content Server can support millions of records. However, obsolete textbase records should be purged regularly.

Hardware Specifications

The hardware used with your *Content Server* system must meet the minimum system requirements outlined in the *Inmagic Content Server Technical Guidelines* document.

For best performance, we recommend you use hardware with the most memory and speed available to you.

Performance Enhancements for Index Browsing

The <textbase>.INI file settings detailed in this section will improve the performance of browsing indexes using CS/TextWorks and/or CS/WebPublisher PRO.

Scroll Bars

The scroll bar on the Query Choices Browser (on the desktop) and on Word Wheels (on the Web) has a negative impact on performance that is more pronounced the larger the index list.

To improve performance we recommend you use the following textbase-specific setting to specify imprecise but faster scroll bars:

```
[LargeQueryLists]
LargeListOptimization=3
```

A value of 3 applies only to Term and Word indexes on Text and Code fields; all others continue to use the precise though slower scroll bar method. You can use a value of 4 to specify the faster scroll bars for all field types. (Values of 0, 1, and 2 are ignored.)

Entry Hits

By default, the Query Choices Browser (on the desktop), Inmagic Choices Browser (on the Web), and Word Wheel (on the Web) show you how many hits there are for entries in the Choices List. For larger indexes, you may notice a negative impact on performance. If this is an issue for you, you can use the following textbase-specific setting to omit the number of hits per entry:

```
[LargeQueryLists]
LargeHitsOptimization=3
```

A value of 3 applies only to Term and Word indexes on Text and Code fields. You can use a value of 4 to suppress hit counts for all field types. (Values of 0, 1, and 2 are ignored.)

SQL Server Database Configuration

Note: This section applies to *Content Server Standard* only.

We recommend you specify the following Microsoft SQL Server configuration settings in the Database options group. For more information about configuration settings, see your Microsoft SQL Server documentation.

- **Auto Shrink.** This option should be disabled. Shrinking a database can affect performance on a busy system due to data pages movement. We recommend you schedule a “shrink database” operation as a batch job and run it during off-peak business hours.
- **Recovery Model.** This option is typically set to **Full** for a production environment that provides complete protection against media failure. However, to improve performance for large-scale Import or Load New Textbase operations, we recommend you set this option to **Bulk-Logged** while loading the data, then reset it to **Full** when done. Using **Bulk-Logged** during the operation provides protection against media failure, while still allowing for best system performance.

Chapter 10: Initialization Files

This chapter discusses the initialization (.INI) files that are used with the *Content Server* software. These files provide you with greater control and flexibility over certain settings and let you customize aspects of the software.

INI Files

Initialization (.INI) files are text files that a user can edit.

CS/TextWorks uses these initialization files: Inmagic.INI, InmCSrv.INI, and an optional <textbase>.INI file.

CS/*WebPublisher PRO* uses Inmagic.INI and <textbase>.INI (both of which are optional), plus additional required files called ICSWeb.INI and InmCSrv.INI.

The CS/*Importer* service uses ICSISrv.INI, InmCSrv.INI, and an optional <textbase>.INI file.

Inmagic.INI

The INMAGIC.INI file includes personal customizations and option settings that affect the current user, such as the settings for the currently selected menu screen (.CBM file), and a setting that determines whether spaces are required around a Boolean or range symbol when searching. Entries are listed by section in the INI file. Some entries can be set using CS/TextWorks menu options, others by editing the INMAGIC.INI file (when CS/TextWorks is not open).

This file is stored in each user's user file path; for CS/*WebPublisher PRO*, in the installation folder.

For more information, see the online help.

InmCSrv.INI

The InmCSrv.INI file contains information about the software configuration settings, such as the language(s) used for month and day names, and how the software interprets two-digit years. It contains the name of the SQL instance in use (very important). For *Content Server Standard*, it is also where you can specify that *Content Server* should use SQL Authentication (instead of Windows Authentication, the default).

This file is located in the CS/TextWorks installation directory. For the settings in this file to apply to CS/*WebPublisher PRO*, you should modify the copy of the InmCSrv.INI file in the CS/*WebPublisher PRO* installation folder.

For more information, see the online help.

<TEXTBASE>.INI

The <textbase>.INI file is an optional text file with the same name and location as the textbase. For example, a textbase named *Loans* can have a *Loans.INI* file. You can create or edit this file yourself using a text editor. The textbase.INI file is used with the Applications menu, Copy Special menu commands, and the Textbase-Specific Help menu command. It has several sections, including [SpecialVendor], which controls the Copy Special function, and [Help], which controls the Textbase-Specific Help function.

The <textbase>.INI file is also where you should specify settings to improve index browsing performance. For more information about these performance-related settings, see “Performance Enhancements for Index Browsing” on page 42.

In addition, the <textbase>.INI file is where the XML match field information you specify in the textbase structure (choose **Maintain>Edit Textbase Structure>XML Match Fields**) is stored.

For more information, see the online help.

ICSWeb.INI

The ICSWeb.INI file contains settings used only by *CS/WebPublisher PRO*, not shared with *CS/TextWorks*. It controls several settings, including where *CS/WebPublisher PRO* looks for textbase and image files, the maximum number of records displayed after a search, Americans with Disabilities Act (ADA) settings, WebSetMax and WebCSSOpt settings, whether a **New Search** button appears on results pages, and whether expanded displays appear in a separate browser window.

This file is created and updated by the *CS/WebPublisher PRO* Setup program. It may also be updated by the software when a client submits a query (the textbase location may be written to the file). To make further changes, you can edit ICSWeb.INI directly using a text editor.

For more information, see Chapter 7, “Publishing and Editing Textbases via the Web” in the *Content Server* online help.

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