

## **Oracle® Universal Records Management**

Universal Records Management Adapters Administration Guide  
for Oracle URM Adapter for Microsoft SharePoint 2007 and  
2010

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# Contents

## 1 Introduction

1.1	About This Guide.....	1-1
1.1.1	Product Overview.....	1-1
1.1.2	Standard Installation Architecture.....	1-1
1.1.3	Audience.....	1-2
1.1.4	Installation Requirements.....	1-3
1.2	About the Adapter.....	1-3
1.2.1	Overview of URM and the Adapter Integration.....	1-3
1.2.2	Overview of the Retention Functions.....	1-3
1.3	Software Requirements.....	1-5
1.3.1	General SharePoint Considerations.....	1-5
1.3.2	Compatibility with URM and Content Server.....	1-5
1.3.3	Operating Systems.....	1-5
1.3.4	Supported Databases.....	1-6
1.3.5	Supported Microsoft Sharepoint Versions.....	1-6
1.4	Conventions.....	1-6

## 2 Installation

2.1	Installation.....	2-1
2.1.1	Install Microsoft Prerequisites.....	2-1
2.1.2	Create an Adapter Database.....	2-1
2.1.3	Create an ODBC Data Source.....	2-2
2.1.4	Setting up the Adapter Accounts.....	2-2
2.1.5	Install the Adapter.....	2-3
2.2	Post-Installation Setup.....	2-4
2.2.1	Register the Adapter.....	2-5
2.2.2	Install the Microsoft SharePoint Feature.....	2-5
2.2.3	Configure the Adapter.....	2-5
2.2.4	Define a Content Profile in URM for the Adapter.....	2-5
2.2.4.1	Mapping a String Literal in the SharePoint System to the URM Profile Metadata Field.....	2-7
2.2.4.1.1	Mapping the String Literal While Creating a New URM Adapter Source...	2-7
2.2.4.1.2	Mapping the String Literal While Editing an Existing URM Adapter Source.....	2-8
2.2.4.2	Defining the URM Content Profile.....	2-9
2.2.4.2.1	Select the Profile Trigger.....	2-10

2.2.4.2.2	Configure the Rule(s) for the Profile .....	2-10
2.2.4.2.3	Create the Profile and Add Rule(s).....	2-12
2.3	Uninstalling the Adapter .....	2-13
2.3.1	Uninstall the Microsoft Sharepoint Feature.....	2-13
2.3.2	Uninstall the Adapter.....	2-14

### 3 Configuration

3.1	About Content Retention Management.....	3-3
3.1.1	Sources.....	3-3
3.1.1.1	Types of Sources .....	3-3
3.1.1.2	About URM Adapter Sources.....	3-3
3.1.2	Metadata Fields.....	3-4
3.1.2.1	Repository Metadata Fields .....	3-4
3.1.2.2	URM System Metadata Fields .....	3-5
3.1.2.3	URM Custom Metadata Fields .....	3-5
3.1.2.4	Searchable URM Custom Metadata Fields .....	3-5
3.1.3	Mapped Metadata Fields.....	3-5
3.1.3.1	Single-Mapped Metadata Fields.....	3-6
3.1.3.2	Double-Mapped Metadata Fields .....	3-6
3.1.4	Repository Searches and Search Directions.....	3-7
3.1.4.1	New and Historical Content Repository Searches.....	3-8
3.1.4.2	Chronology of Repository Search Processing .....	3-9
3.1.4.2.1	Basic Timeline Overview.....	3-10
3.1.4.2.2	Elapsed Time for Installation and Configuration.....	3-10
3.1.4.2.3	Establish the Start Date.....	3-10
3.1.4.2.4	New Content Search Interval Characteristics .....	3-11
3.1.4.2.5	Historical Content Search Interval Characteristics.....	3-11
3.1.4.2.6	Temporary Search Suspensions .....	3-12
3.1.4.2.7	Summary .....	3-12
3.1.5	Repository Search Constraints with Microsoft Sharepoint .....	3-12
3.1.5.1	About Microsoft Sharepoint Crawls.....	3-13
3.1.5.2	About Microsoft Sharepoint Content Indexing.....	3-13
3.1.5.3	Coordination of Search Intervals and Crawl Cycles .....	3-14
3.1.5.4	Adapter Searches in the Microsoft Sharepoint Repository .....	3-15
3.1.6	Regulatory Compliance Tasks .....	3-15
3.1.7	System Logs and Audit Trails.....	3-16
3.1.8	Configuration Files .....	3-16
3.2	About Search Queries.....	3-16
3.2.1	Repository Search Queries .....	3-17
3.2.2	Construction of Search Queries .....	3-17
3.2.2.1	Expression Grouping Option.....	3-18
3.2.2.2	Expression Option .....	3-19
3.2.2.3	Add Term Option .....	3-19
3.2.2.4	Compound Expressions.....	3-20
3.2.3	Mapped Search Queries.....	3-20
3.2.4	Federated Search.....	3-21
3.3	Configuring the Adapter .....	3-21

3.3.1	Registering the Adapter .....	3-22
3.3.2	Changing the Authentication Information .....	3-22
3.3.3	Changing the Database Connection.....	3-23
3.3.4	Activating the Content Retention Feature .....	3-23
3.3.5	Sorting Field Data Columns.....	3-23
3.3.6	Adding a New URM Adapter Source.....	3-24
3.3.7	Mapping Metadata Fields.....	3-26
3.3.8	Defining a URM Custom Metadata Field.....	3-26
3.3.9	Double-Mapping Metadata Fields .....	3-26
3.3.10	Viewing the Configuration Data of a URM Adapter Source .....	3-27
3.3.11	Editing an Existing URM Adapter Source .....	3-27
3.3.12	Defining a New Search Query .....	3-28
3.3.13	Editing a Search Query .....	3-28
3.3.14	Duplicating and Editing a Search Query .....	3-29
3.3.15	Deleting a Search Query .....	3-29
3.3.16	Mapping a Search Query .....	3-29
3.3.17	Activating/Deactivating a Search Query.....	3-30
3.3.18	Modifying the Advanced Settings Values .....	3-30
3.4	The Configuration User Interface.....	3-30
3.4.1	Adapter Administration Manager .....	3-31
3.4.2	Connection Screen .....	3-33
3.4.3	Microsoft SharePoint Feature Screen.....	3-34
3.4.4	Field Sort Order.....	3-35
3.4.5	URM Sources Screen .....	3-36
3.4.6	URM Sources Screen: Pop-up Menus .....	3-38
3.4.7	URM Sources Screen: Create New URM Source Screen .....	3-39
3.4.8	URM Sources Screen: Create New URM Source Screen - Establish Field Mappings .....	3-40
3.4.9	URM Sources Screen: Create New URM Source Screen - Define Custom Fields ...	3-42
3.4.10	Search Creation Screen.....	3-44
3.4.11	Search Creation Screen: Create new search Screen.....	3-45
3.4.12	Search Creation Screen: Equation Editor .....	3-46
3.4.12.1	Equation Editor: Expression Design Pop-up Menus.....	3-48
3.4.12.2	Equation Editor: Field Variable Pop-up Menus.....	3-49
3.4.12.3	Equation Editor: Operator Variable Pop-up Menus.....	3-50
3.4.12.4	Equation Editor: Value Variable Text Field .....	3-51
3.4.12.5	Equation Editor: Value Variable Drop-down Calendar .....	3-51
3.4.13	Search Mapping Screen.....	3-52
3.4.14	Advanced Screen .....	3-55

## 4 Administration

4.1	About Adapter Operation and Administration .....	4-2
4.1.1	Internal and External Checkins .....	4-2
4.1.2	Cluster Support.....	4-2
4.1.3	Stops and Restarts.....	4-4
4.1.4	Log Files .....	4-4
4.1.4.1	Log File Administration .....	4-5

4.1.4.2	Log File Characteristics.....	4-5
4.1.4.3	Status and Error Message Severity Codes .....	4-5
4.1.5	Audit Trails.....	4-6
4.2	Managing the Adapter .....	4-6
4.2.1	Stopping and Restarting the Adapter Service .....	4-7
4.2.1.1	Stopping/Restarting From the Adapter Administration Manager .....	4-7
4.2.1.2	Stopping/Restarting From the Services Application.....	4-7
4.2.2	Viewing Declaration Errors and Message Details .....	4-7
4.2.3	Viewing Disposition Errors and Message Details .....	4-8
4.2.4	Sorting Error Results .....	4-8
4.2.5	Previewing Search Query Results .....	4-8
4.2.6	Viewing Status Data for the Adapter.....	4-9
4.2.7	Viewing Status Data for the Adapter Service.....	4-9
4.2.8	Sorting Status Results.....	4-9
4.2.9	Viewing the Daily Event Records and Error Message Details.....	4-9
4.3	The Administration User Interface.....	4-10
4.3.1	Error Management Link .....	4-10
4.3.2	Error Management: Declaration Errors Screen .....	4-11
4.3.3	Error Management: Disposition Errors Screen.....	4-11
4.3.4	Error Management: Error Details Screen .....	4-12
4.3.5	Error Management: Sort Order.....	4-12
4.3.6	Search Preview Screen .....	4-13
4.3.7	Status Link .....	4-15
4.3.8	Status: Adapter Status Tab .....	4-16
4.3.9	Status: Service Status Tab .....	4-17
4.3.10	Status: Sort Order.....	4-19
4.3.11	Log Viewer Screen.....	4-19
4.3.12	Log Viewer: Message Dialog Box.....	4-20

## A Metadata Field Lengths

A.1	Lengths for URM Metadata Field Types .....	A-1
A.2	Lengths for SharePoint Archive Metadata Field Types .....	A-2
A.3	Displayed Field Lengths for Mapping.....	A-2
A.4	Field Lengths and Double-Mapping.....	A-3

## B Third Party Licenses

B.1	Apache Software License .....	B-1
B.2	W3C Software Notice and License .....	B-1
B.3	Zlib License .....	B-2
B.4	General BSD License.....	B-3
B.5	General MIT License.....	B-3
B.6	Unicode License .....	B-3
B.7	Miscellaneous Attributions.....	B-4

## Index

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# Introduction

This section contains the following topics:

- ["About This Guide"](#) on page 1-1
- ["About the Adapter"](#) on page 1-3
- [""](#) on page 1-5
- ["Software Requirements"](#) on page 1-5
- ["Conventions"](#) on page 1-6

## 1.1 About This Guide

This section contains the following topics:

- ["Product Overview"](#) on page 1-1
- ["Standard Installation Architecture"](#) on page 1-1
- ["Audience"](#) on page 1-2
- ["Installation Requirements"](#) on page 1-3

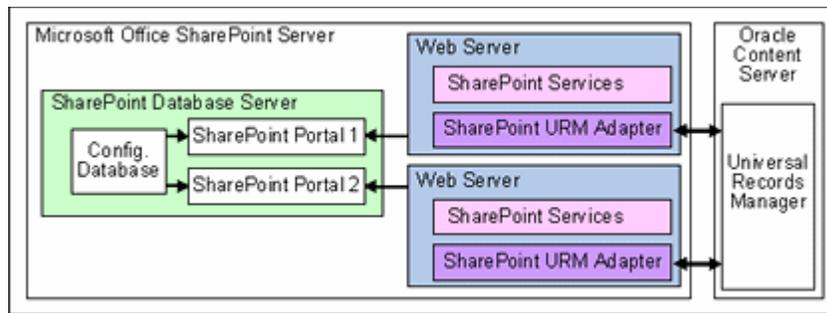
### 1.1.1 Product Overview

Oracle Universal Records Manager (URM) provides the ability to perform records management, retention management, and litigation support across the entire enterprise. From a single Oracle URM server, organizations can define all their policies for records and retention management, as well as perform legal searches and apply litigation holds. The Oracle Universal Records Management Adapter for Microsoft SharePoint 2007 and 2010 Administration Guide (hereafter abbreviated as the Adapter) obtains these policies from the Oracle URM server and applies them to the content items stored in the SharePoint System.

The Adapter provides the bridge between URM, which manages the retention policies, and the SharePoint System, which stores the content. The Adapter also sends information back to the URM server, so it can maintain an up-to-date catalog of the enterprise's important content. Thus, companies can apply their records and retention policies to more content, more consistently, with less administrative effort, and less disruption for users. These same benefits apply to litigation searches and holds.

### 1.1.2 Standard Installation Architecture

This section provides a general overview of the relationships between the primary products.

**Figure 1–1 Standard Adapter Installation Architecture**

The major components involved in a typical installation include:

- **URM:** Allows organizations to manage their records and retention policies, disposition processes and litigation or audit holds in a central repository known as a URM Server. These policies, dispositions, and holds are applied to repository content through the Adapter.
- **Windows SharePoint Services:** Provides a platform for document collaboration, offering a common framework for document management and a common repository for storing documents of all types. Users can create workspaces and then publish, store, share, and keep track of information, workflow, and documents. In addition to collaborating in browser-based workspaces, SharePoint helps ensure content item integrity with features that include the option to require document checkout before editing, the ability to view past revisions and restore to previous versions, and the ability to set document-specific security.

**Microsoft Office SharePoint Server:** Offers an integrated suite of easy-to-use server applications that makes it possible for people and teams to publish information to the entire organization. It connects sites, people, and business processes by enabling information-sharing across boundaries. Office SharePoint Server provides comprehensive content management and enterprise searching. It facilitates knowledge sharing by offering enterprise-wide functionality for records management, search, workflows, portals, and personalized sites.

- Oracle URM Adapter for Microsoft SharePoint 2007 and 2010: Communicates between URM and the SharePoint Database Server. The Adapter enables corporations to control content retention in the SharePoint Database Server through URM which deploys the enterprise's policies. The Adapter provides common retention functionality:
  - Identifying the content in the repository that is of interest to URM.
  - Performing searches and declaring the applicable content items to URM.
  - Performing disposition actions on the existing content items when their retention periods end.
  - Establishing holds and freezes on the content items, as necessary.

### 1.1.3 Audience

This administration guide is intended for system administrators who need to install and configure the Adapter. System administrators will also use this guide to manage the Adapter configuration requirements and generated activity log files. This guide assumes that the product has been installed correctly and that you are familiar with Oracle products and the architecture of Content Server.

## 1.1.4 Installation Requirements

Typically, there is one instance of the Adapter installed on each web server that is managed by SharePoint Portal Server. The overall architecture for a SharePoint installation can be very complex when it involves multiple websites on load-balanced web servers in a clustered database server environment. See ["Cluster Support"](#) on page 4-2. All of the Adapter instances run in an active/passive mode environment and work seamlessly with the necessary Event Handlers associated with document libraries.

Because it resides on a peripheral web server, the Adapter is installed from an external executable rather than as a component using Content Server's installation utilities (Component Manager or Component Wizard). [Chapter 2, "Installation"](#) provides related information and the actual procedures for preparing and installing the Adapter application.

## 1.2 About the Adapter

This section covers the following topics:

- ["Overview of URM and the Adapter Integration"](#) on page 1-3
- ["Overview of the Retention Functions"](#) on page 1-3

### 1.2.1 Overview of URM and the Adapter Integration

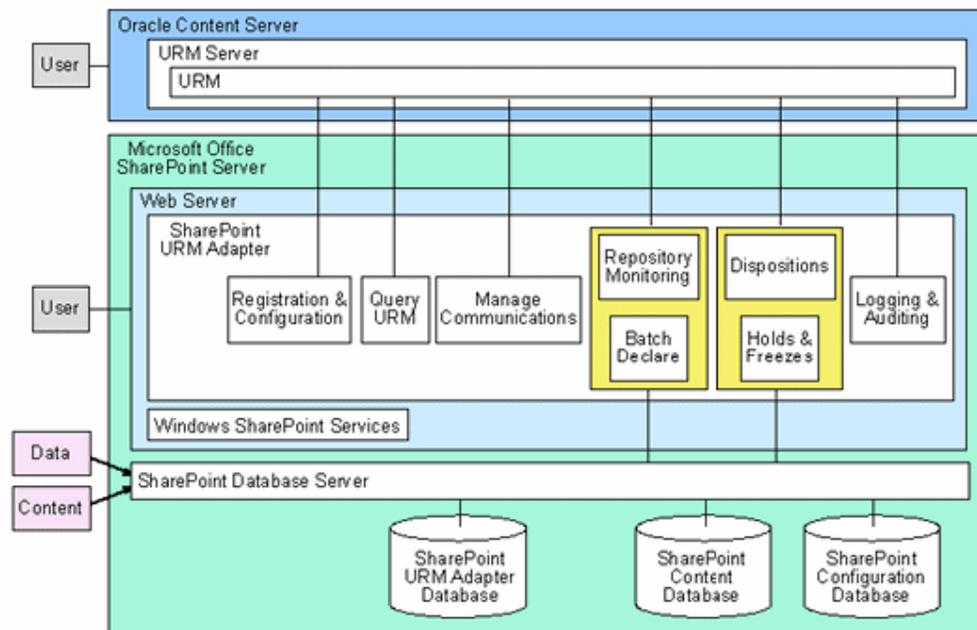
Oracle Universal Records Management (URM) allows organizations to manage their records and retention policies, disposition processes, and litigation holds or freezes in a central repository known as an Oracle Universal Records Management Server (URM). They can then apply those policies, dispositions, and holds to content stored in multiple repositories through URM Adapters. The repositories may be any server or application that holds content whose retention is to be controlled.

In this case, the SharePoint System holds records that need to be preserved for a retention period, specified in a corporate retention schedule, and then destroyed according to a corporate disposition process. The records are preserved in place because the SharePoint System has the ability to ensure that the records will remain unalterable during the retention period. Upon request, the SharePoint System is also able to purge the records at the end of the retention period.

The SharePoint System may also hold content that is not considered business records (non-records). There is no requirement that the content be preserved for the retention period although it may be desirable for various reasons. When retention of this content is no longer necessary, it can be disposed of according to the disposition processes stored within URM. With both records and non-records, there is an obligation to ensure that any material that is subject to a litigation or audit hold (freeze) is not deleted, either by a user or as part of a disposition process. The Adapters allow URM to ensure that deletion does not happen.

### 1.2.2 Overview of the Retention Functions

The Adapter is the intermediary between URM and the SharePoint System and manages their intercommunications. Content is stored in and remains in the SharePoint System while URM simultaneously enforces corporate retention policies, disposition processes, and legal holds on the stored content.

**Figure 1–2 Overview of the Adapter Retention Functions**

The Adapter provides the following basic retention functions:

- **Registration:** The Adapter registers itself with URM. This ensures that URM knows about the SharePoint System and is ready to manage the stored content within the repository.
- **Configuration:** The Adapter collects and stores the proper identification and credentials information in addition to handling the remoting port configuration setting. This port ensures that the SharePoint Event Handler can communicate with the Adapter. Configuration information also includes mapping metadata fields and defining searches.
- **Query URM:** The Adapter queries URM for certain information. For example, it may need to retrieve retention schedules for specific items of interest. Or, the Adapter may need to request URM metadata for content items and obtain lifecycle information.
- **Manage Communications:** The Adapter monitors batch processes, handles communication errors with URM, and handles large work requests by grouping them into communication blocks and processing the response in chunks.
- **Repository Monitoring and Batch Declare:** The Adapter monitors the SharePoint System by periodically searching the repository and informing URM of any changes in the repository that affect disposition processes or audit holds. For example, the Adapter will inform URM about new content checkins that need to be managed.
- **Perform URM Tasks:** The Adapter periodically asks URM for tasks that need to be performed within the repository. These tasks enable URM to abide by the corporate retention policies and disposition processes. Typical tasks include:
  - URM may want the Adapter to perform a search within the SharePoint System and provide a list of items matching the search criteria.

- As part of a scheduled disposition process, URM may want the Adapter to purge (or use another disposition method) an item that is stored in the SharePoint System.
- When a litigation hold applies to managed content within the SharePoint System, URM may want the Adapter to retrieve a list of affected items and preserve them to ensure that they are not edited or destroyed.
- When a litigation hold is removed, URM may want the Adapter to stop preserving the affected items.
- **Logging and Auditing:** The Adapter provides consistent logging for the activities it coordinates. The Adapter contributes event information to the log files that are then uploaded to URM, consolidated, and stored.

## 1.3 Software Requirements

This section covers the following topics:

- ["General SharePoint Considerations"](#) on page 1-5
- ["Compatibility with URM and Content Server"](#) on page 1-5
- ["Operating Systems"](#) on page 1-5
- ["Supported Databases"](#) on page 1-6

### 1.3.1 General SharePoint Considerations

To ensure that the Adapter functionality works as expected with SharePoint Portal Server, you should be aware of the following considerations:

- When SharePoint and URM are running on different servers, you **MUST** use the actual server name (i.e., <http://www.mysharepoint.com>) when you define SharePoint sites. Using the reserved computer descriptions 'localhost' or '127.0.0.1' disables the links in URM. For additional information about the Adapter installation architecture, see ["Standard Installation Architecture"](#) on page 1-1 and ["Cluster Support"](#) on page 4-2.
- During the installation process, you will need to set up Adapter accounts. There are a number of requirements that must be implemented to ensure that the Adapter functions properly. For more detailed information, see ["Setting up the Adapter Accounts"](#) on page 2-2.

### 1.3.2 Compatibility with URM and Content Server

Currently, the Oracle URM Adapter for Microsoft SharePoint 2007 and 2010 10gR3 communicates with Oracle Universal Records Manager 10gR3 or 11gR1.

### 1.3.3 Operating Systems

The current version of the Adapter supports the following operating systems:

- Windows 2003 Server R2 for 32-bit and 64-bit editions
- Windows Server 2008, R2 for 32-bit and 64-bit editions

### 1.3.4 Supported Databases

The current version of the Adapter supports the following databases:

- Microsoft SQL Server 2005, 2008, or 2008 R2
- Oracle Database 9i, 10g, or 11g

### 1.3.5 Supported Microsoft Sharepoint Versions

The current version of the Adapter supports the following Microsoft Sharepoint versions:

- Microsoft Sharepoint Server 2007 SP2
- Microsoft Sharepoint Server 2010

These alternate configurations are also supported:

- Microsoft Windows SharePoint Services 3.0 SP2 with Search Server 2008 Express
- Microsoft Sharepoint Foundation 2010 with Search Server 2010 Express

## 1.4 Conventions

The following conventions are used throughout this guide:

- The notation *<Install\_Dir>/* is used to refer to the location on your system where the content server instance is installed.
- Forward slashes (/) are used to separate the directory levels in a path name. A forward slash will always appear after the end of a directory name.

This section covers the following topics:

- ["Installation"](#) on page 2-1
- ["Post-Installation Setup"](#) on page 2-4
- ["Uninstalling the Adapter"](#) on page 2-13

## 2.1 Installation

This section covers the following topics:

- ["Install Microsoft Prerequisites"](#) on page 2-1
- ["Create an Adapter Database"](#) on page 2-1
- ["Create an ODBC Data Source"](#) on page 2-2
- ["Setting up the Adapter Accounts"](#) on page 2-2
- ["Install the Adapter"](#) on page 2-3

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**Note:** The installation procedures provided in this guide assume that you have already successfully installed URM on a different server. Refer to the *Oracle Universal Records Manager Installation Guide*.

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### 2.1.1 Install Microsoft Prerequisites

You must install and Microsoft prerequisites for the Adapter to function properly:

- Microsoft Web Services Enhancements (WSE) 3.0 for Microsoft .NET Redistributable Runtime MSI from the Microsoft Download Center.
- Microsoft Visual J# Redistributable Package Second Edition for your operating system.

### 2.1.2 Create an Adapter Database

You will need to create a database for the Adapter to store the system configuration data. This includes the created searches, the URM Adapter source names and definitions, search mappings, declaration settings, and other configuration data. It also contains the work queue activity information that describes the tasks that the Adapter needs to perform for URM.

After the Adapter installation process, you must run the database installation wizard. It runs database configuration scripts to set up the required database tables. For more detailed information, refer to the applicable user and administration manuals for your database server.

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**Important:** The Adapter must be installed on every web server in the configuration. See "[Setting up the Adapter Accounts](#)" on page 2-2. However, only one SharePoint Adapter Database is required and it is shared by each instance of the Adapter.

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### 2.1.3 Create an ODBC Data Source

You will need to create an ODBC Data Source that points to the Adapter database.

To create the ODBC Data Source:

1. Open the ODBC Data Source Administrator:  
From the **Start** menu, select **Control Panel, Administrative Tools, Data Sources (ODBC)**, and then **ODBC Data Source Administrator**.
2. Click the **System DSN** tab.  
The System Data Source screen is displayed.
3. Click **Add**.  
The Create New Data Source screen is displayed.
4. Select the applicable driver for the Adapter's database, and click **Finish**.
5. Enter the applicable field values, and click **Next**.
6. Select the applicable options, and click **Next**.
7. Enter the applicable field values and/or select the applicable options, and click **Next**.
8. Select the applicable options, and click **Finish**.  
The ODBC <database> Setup screen is displayed.
9. To validate the ODBC Data Source, click **Test Data Source**.  
The results are displayed on the <database> ODBC Data Source Test dialog box.
10. Click **OK**.
11. Click **OK** to complete the new ODBC Data Source.  
The ODBC Data Source Administrator is displayed and the new ODBC Data Source is added to the System Data Source list on the System DSN tab

### 2.1.4 Setting up the Adapter Accounts

The Oracle URM Adapter for Microsoft SharePoint 2007 and 2010 runs as the Microsoft SharePoint administrator account. This account does not have a predefined name. It must be created by the person who is installing and configuring the adapter. The account must be the Microsoft SharePoint administrator. **DO NOT** confuse this account with Administrator, the local computer administrator account, or a domain

administrator account. These accounts may not have the privileges required by the Adapter.

When you are setting up the accounts for the Adapter, you will need to implement the following security requirements:

- To ensure that the Adapter runs, the Adapter Service must run under a valid NT account.
- The Adapter Service account must be able to perform SharePoint Administrative functions. It must either belong to local administrators or belong to the NT group that is assigned to SharePoint administration.
- Ensure that the Adapter Service account has sufficient NTFS permissions to create, read, write, and delete files from the log directory (<program\_directory>\log).
- The NT account must have sufficient SharePoint rights to view all of the SharePoint websites/lists that will be managed by the Adapter.
- The NT account must have 'datareader' privileges to all of the SharePoint Content Databases.
- The NT account must have write access to the Lists table in each SharePoint Content Database.
- To facilitate search mapping, the user must have sufficient SharePoint rights to view all of the SharePoint websites/lists that will be managed by the Adapter.

## 2.1.5 Install the Adapter

To install the Adapter:

1. Locate and double-click the Oracle\_URM\_SharePoint\_Adapter.zip folder.

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**Important:** Microsoft SharePoint has the ability to run multiple websites on load-balanced web servers. However, to support a configuration using multiple web servers in a clustered environment, you must install and run the Adapter on every web server in the configuration.

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2. Double-click the **setup.exe** application.

The Oracle URM SharePoint Adapter installation wizard welcome screen is displayed.

3. Click **Next**.

The License Agreement screen is displayed.

Optionally, you can print a copy of the License Agreement by clicking **Print** and using the displayed **Save As** screen to select a directory.

4. Accept the terms in the license agreement, and click **Next**.

The Customer Information screen is displayed.

5. Enter the applicable information, and click **Next**.

The Setup Type screen is displayed.

6. Select the applicable setup type:

**Complete:** Installs all the features of the Adapter.

**Custom:** Enables you to select the features that you want to install and the directory location.

7. If you run on a 64-bit operating system, select Sharepoint.

8. Click **Next**.

The Ready to Install the Program screen is displayed.

9. Click **Install**.

The installation prompts you for the service account information. See "[Setting up the Adapter Accounts](#)" on page 2-2:

10. Click **OK**.

The installation wizard completes the Adapter installation process.

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---

**Important:** if you have not run the database utility before, or if you are changing or creating a new database, you must immediately run the database wizard utility. This utility is located in the installation folder.

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11. Select the Database Type and enter the applicable ODBC Data Source information in the fields. See "[Create an ODBC Data Source](#)" on page 2-2. Click **Next**.

The Script Execution screen is displayed.

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**Note:** Alternatively, if you did not create an ODBC Data Source before using the Oracle URM Adapter for Microsoft SharePoint 2007 and 2010 installation wizard to install the Adapter, you can do so now. Clicking ODBC opens the ODBC Data Source Administrator. Follow the steps included in the procedure to [Create an ODBC Data Source](#).

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12. Click **Execute**.

The Status column indicates whether the scripts have run successfully.

13. Click **Finish**.

The installation wizard completes the database configuration process.

14. Click **Finish**.

The Adapter is installed and an icon is displayed on the desktop.

## 2.2 Post-Installation Setup

This section covers the following topics:

- "[Register the Adapter](#)" on page 2-5
- "[Install the Microsoft SharePoint Feature](#)" on page 2-5
- "[Configure the Adapter](#)" on page 2-5

- ["Define a Content Profile in URM for the Adapter"](#) on page 2-5

## 2.2.1 Register the Adapter

To register the Adapter to URM:

1. Open the [Adapter Administration Manager](#).
2. Click the **Connection** link in the navigation hierarchy panel.  
The [Connection Screen](#) is displayed.
3. Enter the applicable information. All fields are required.
4. In the File menu, select **Save**.

## 2.2.2 Install the Microsoft SharePoint Feature

To install the content retention feature:

1. Open the [Adapter Administration Manager](#).
2. Click the **Microsoft SharePoint** link in the navigation hierarchy panel.  
The [Microsoft SharePoint Feature Screen](#) is displayed.
3. Click the **Install** button  
The Adapter installs the Microsoft Sharepoint feature on your computer.
4. In the File menu, select **Save**.
5. In the Service menu, select **Start**.

## 2.2.3 Configure the Adapter

[Chapter 3, "Configuration"](#) provides the necessary information to complete the configuration of this instance of the Adapter. This chapter provides important conceptual background information in addition to detailed explanations of each user interface screen and their related tasks.

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**Important:** It is recommended that you complete the installation process by defining one or more content profiles in URM before you use any search queries to process new or historical content in the SharePoint System. See ["Define a Content Profile in URM for the Adapter"](#) on page 2-5.

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## 2.2.4 Define a Content Profile in URM for the Adapter

The SharePoint System will not always have appropriate archive metadata to correspond to all of the required metadata fields in URM. As a result, there will be some required URM metadata fields that are not mapped to SharePoint System metadata fields.

If SharePoint System metadata fields are not mapped to some of the required URM metadata fields, then the declaration data that the Adapter sends will not include values for the required URM metadata fields that remain unmapped. Even when SharePoint System metadata fields are mapped to the required URM metadata fields, values for these fields might not exist in the stored content items. In this case, the Adapter would not pass values for these fields in URM.

To resolve this issue, you can create a content profile in URM that will supply default values for the required URM metadata fields if data is not provided. An appropriately configured content profile ensures that the required URM metadata fields will always be populated with valid values. You should design the content profile to:

- Accept the values that are transferred from the Adapter if the values are not empty strings. This ensures that values derived from repository searches are preserved when the data is forwarded to URM via the declaration process.
- Use the profile's default values for the required URM metadata fields if the Adapter sends empty strings for these fields.
- Use the profile's default values for the required URM metadata fields if these fields are not mapped to SharePoint System metadata fields and values are not included in the declaration data.

If you set up this profile to include all of the required URM metadata fields, the same profile can be used for all of the URM Adapter sources (defined in the Adapter). That way, all of the URM Adapter sources can use any set of field mappings and URM will always use this content profile to resolve the required URM metadata fields. This ensures that default values for required URM metadata fields are consistent for all of the content items that are declared into each URM repository category.

Alternatively, you can set up a separate URM content profile for each URM Adapter source in the Adapter. Each URM Adapter source could use a unique metadata value to trigger a specific URM content profile. This can be useful if you have different default values that you want to use for different kind of documents (for example, documents originating from different departments or with different security codes). Then, depending on which URM Adapter source is run, a particular content profile is activated in URM and different default values for required metadata fields are used.

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**Note:** It is recommended that you determine all of the required URM metadata fields and their current option list values before you begin defining your profile(s). Then, you must decide what you want to use as default values for each required metadata field. Make any necessary changes for these fields in URM before you begin to define the profile(s).

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**Note:** When you created your URM Adapter source(s) in the Adapter, you may or may not have mapped SharePoint System metadata fields to all of the required URM metadata fields. Even if a field is mapped, however, it does not necessarily mean that every SharePoint System field will always have a value. In either case, you should still define one or more content profiles in URM.

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**Note:** The two-part procedure included below is meant to be used as a generic example. Therefore, it does not include detailed or comprehensive information. To define a content profile that meets your specific requirements, you will need to refer to the content profile information provided in the *Oracle Content Server Managing Repository Content* guide.

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---

This section describes how to define a content profile in URM that will provide default values for required URM metadata fields that are not mapped to corresponding SharePoint System metadata fields. To accomplish this, the following procedures are necessary:

- [Mapping a String Literal in the SharePoint System to the URM Profile Metadata Field](#)
- [Defining the URM Content Profile](#)

#### 2.2.4.1 Mapping a String Literal in the SharePoint System to the URM Profile Metadata Field

There are two ways that you can map the string literal:

- [Mapping the String Literal While Creating a New URM Adapter Source](#)
- [Mapping the String Literal While Editing an Existing URM Adapter Source](#)

##### 2.2.4.1.1 Mapping the String Literal While Creating a New URM Adapter Source

1. In the Adapter Administration manager, click the **URM Sources** link.  
The [URM Sources Screen](#) is displayed.
2. Click **New**.  
The [URM Sources Screen: Create New URM Source Screen](#) is displayed.
3. Enter the applicable information, and click **Next**.  
The [URM Sources Screen: Create New URM Source Screen - Establish Field Mappings](#) is displayed.
4. Right-click in any column, and select **Add** from the pop-up menu.  
A new row is added to the Establish Field Mappings pane.
5. In the Repository Field drop-down list select **Literal Text**.  
The Literal Text dialog box is displayed.
6. Enter a value for this metadata field.

---

---

**Important:** This value MUST match the trigger value that is assigned to the trigger metadata field when you define the URM content profile. Otherwise, when the Adapter checks in declaration data, the value of this metadata field WILL NOT activate the expected content profile in URM. See "[Defining the URM Content Profile](#)" on page 2-9.

The trigger metadata field for the content profile is selected in Step 4 in the procedure to [Select the Profile Trigger](#). The trigger value for the trigger metadata field is assigned in Step 4 in the procedure to [Create the Profile and Add Rule\(s\)](#).

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**Important:** The value that you enter in this step is the metadata field value that will activate the content profile when the Adapter declares the content data that is associated with this URM Adapter source. Mapping the correct string literal value ensures that when URM receives the declared batch, this value will invoke the corresponding content profile.

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**Tip:** If you should ever need to edit this string literal (because it is misspelled or you change the corresponding value in the URM content profile), you can click the table cell and re-select the Literal Text option from the list. The Literal Text dialog box is displayed pre-populated with the previous value. Edit the value as necessary.

---

---

7. Click **OK**.

The value is entered into the Repository Field cell.

8. In the URM Field drop-down list, select **wwwRMProfileTrigger**.

9. Click **Next**.

The [URM Sources Screen: Create New URM Source Screen - Define Custom Fields](#) is displayed.

10. Add information as necessary. See Steps 10 and 11 in the procedure for [Adding a New URM Adapter Source](#).

11. Click **Finish**.

The Adapter creates the new URM Adapter source. It includes the mapped URM profile metadata field.

#### 2.2.4.1.2 Mapping the String Literal While Editing an Existing URM Adapter Source

1. In the Adapter Administration manager, click the **URM Sources** link.

The [URM Sources Screen](#) is displayed.

2. In the URM Adapter sources drop-down list, select the existing URM Adapter source that needs to have a string literal mapped to the URM profile metadata field.

The URM Sources screen refreshes and displays the configuration information for the selected URM Adapter source.

3. In the Field Mappings pane, right-click in any column, and select **Add** from the pop-up menu.

A new row is added to the Field Mappings pane.

4. In the Repository Field drop-down list select **Literal Text**.

The Literal Text dialog box is displayed.

5. Enter a value for this metadata field.

---

---

**Important:** This value *MUST* match the trigger value that is assigned to the trigger metadata field when you define the URM content profile. Otherwise, when the Adapter checks in declaration data, the value of this metadata field *WILL NOT* activate the expected content profile in URM. See "[Defining the URM Content Profile](#)" on page 2-9.

The trigger metadata field for the content profile is selected in Step 4 in the procedure to [Select the Profile Trigger](#). The trigger value for the trigger metadata field is assigned in Step 4 in the procedure to [Create the Profile and Add Rule\(s\)](#).

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**Important:** The value that you enter in this step is the metadata field value that will activate the content profile when the Adapter declares the content data that is associated with this URM Adapter source. Mapping the correct string literal value ensures that when URM receives the declared batch, this value will invoke the corresponding content profile.

---



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**Tip:** If you should ever need to edit this string literal (because it is misspelled or you change the corresponding value in the URM content profile, you can simply click the table cell and re-select the Literal Text option from the list. The Literal Text dialog box is displayed pre-populated with the previous value. Edit the value as necessary.

---



---

6. Click **OK**.

The value is entered into the Repository Field cell.

7. In the URM Field drop-down list, select **wwxRMProfileTrigger**.

8. In the File menu, select **Save**.

The Adapter saves the changes to the URM Adapter source. It includes the mapped URM profile metadata field.

### 2.2.4.2 Defining the URM Content Profile

This process consists of the following main steps:

- [Select the Profile Trigger](#)
- [Configure the Rule\(s\) for the Profile](#)
- [Create the Profile and Add Rule\(s\)](#)

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---

**Note:** You can define a single content profile that deals with all the required URM metadata fields and is activated for each URM Adapter source in the Adapter. Or, you can define multiple profiles and set up a separate profile for each URM Adapter source in the Adapter. This is useful if you have different default values that you want to use for different kind of documents (for example, documents originating from different departments or with different security codes).

For example, `wwxRMProfileTrigger` is the trigger metadata field for all URM profiles and the option list values might include: `record`, `nonrecord`, and `unknown`. If you have created three profiles, you could assign the trigger values as follows: ProfileA can use `record` as the trigger value, ProfileB can use `nonrecord`, and ProfileC can use `unknown`.

When the Adapter checks in declaration data and the `wwxRMProfileTrigger` metadata field has a value of `nonrecord`, ProfileB is activated for that data. This means that when the data is processed using ProfileB, different default values are assigned to the required URM metadata fields that are unpopulated.

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**Important:** This guide assumes that you are familiar with Oracle products and the URM architecture. Additionally, you should be fairly proficient with Idoc Script and writing necessary statements. For detailed information about content profiles, refer to the *Oracle Content Server Managing Repository Content* guide. For detailed information about Idoc Script, refer to the *Oracle Content Server Idoc Script Reference Guide*.

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#### 2.2.4.2.1 Select the Profile Trigger

To select a trigger metadata field:

1. In URM, open the Configuration Manager.  
From the **Administration** menu, select **Admin Applets**, then select **Configuration Manager**
2. Click the **Profile** tab.
3. Click **Select**.  
The Edit Trigger Field screen is displayed.
4. Select **wwxRMProfileTrigger**, and click **OK**.

---

---

**Note:** In URM, you can select only one trigger metadata field and it applies to all content profiles that are defined. If more than one profile is defined, a different value for the trigger metadata field must be assigned to each profile. Then, when checked-in content matches a trigger value for a profile, that profile is evaluated for the checked in content. See Step 4 in the procedure to [Create the Profile and Add Rule\(s\)](#). This is the final step for [Defining the URM Content Profile](#).

---

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#### 2.2.4.2.2 Configure the Rule(s) for the Profile

If you have not already done so, before you begin to configure the rule(s) for your profile(s), you should determine all of the required URM metadata fields and their current option list values. You will need to decide what you want to use as default values for each field. When the Adapter checks in declaration data, the values should be appropriate for the corresponding URM metadata fields. You will need to make any necessary changes in URM before you begin to define the content profile(s).

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---

**Note:** A content profile can have more than one rule. When evaluated, each profile rule determines how the affected metadata fields are configured and resolved. In this case, the rules will provide default values for any required URM metadata fields that are blank or not included in the checked-in declaration data.

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To configure the profile rules:

1. Click the **Rules** tab.
2. Click **Add**.  
The General tab on the Add New Rule screen is displayed.
3. Enter the name and optional description of the rule.

4. Click the **Fields** tab.

---

---

**Note:** It is recommended that you include all of the required URM metadata fields either in a single rule or in multiple rules. This ensures that default values are assigned to the fields if values are blank or not included in the Adapter's declaration data.

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5. Click **Add**.

The Add Rule Field screen is displayed.

6. In the Field Name drop-down list, select one of the required URM metadata fields and click **OK**.

The Add Rule Field <field\_name> screen for the selected metadata field is displayed.

---

---

**Note:** You should not plan to select the optional Use default value check box. This attribute allows you to display a default value for this metadata field on the Check In Form or Search page. Do not confuse this default value with the default value for the trigger metadata field selected on the Profile tab.

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---

7. Select the **Is derived field** check box and click **Edit**.

The Script Properties tabs on the Edit Derived Value screen are displayed.

---

---

**Note:** The Script Properties tabs are used to configure the evaluation conditions for each metadata field included in the rule. These tabs enable you to set specified values to the included metadata fields during check-in. These are the default values that are assigned to the required URM metadata fields that are blank or not included in the Adapter's checked-in declaration data.

The remaining steps in this procedure provide general guidelines rather than explicit instructions for Idoc Script or attribute choices (which is beyond the scope of this guide). For detailed information, refer to the *Oracle Content Server Managing Repository Content* guide and the *Oracle Content Server Idoc Script Reference Guide*.

---

---

8. You can choose to configure a customized value or a hard-coded value for the metadata field.

---

---

**Important:** In this step, you will need to build Idoc Script statements that instruct URM how to assign values to each metadata field included in this rule. It is recommended that you assign a default (hard-coded) value to the metadata fields that do not have values included in the Adapter's declaration data.

However, if a value is included in this data, that value should be used rather than the default value. This ensures that the original values in the SharePoint System are preserved when the data is transferred and checked in to URM.

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**Tip:** It is probably easiest to start with the Conditions tab and allow it to automatically generate the Idoc Script for the hard-coded metadata field values. This is helpful to ensure proper Idoc Script code is used. For example, when you are assigning values to the metadata fields, you cannot use the actual name of the metadata field (such as dDocTitle). Instead, the following syntax must be used:

```
<$dprDerivedValue=' 'user1' '$>
```

After allowing the Conditions tab to build these statements, you can use the Custom tab to build additional Idoc Script code around the generated statements. The custom code is necessary to ensure the integrity of the original values from the SharePoint System.

---

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**Customized value:**

- a. If you are proficient with Idoc Script, click the **Custom** tab.
- b. Select the **Custom** check box.  
The custom text pane is activated.
- c. Enter your customized Idoc Script.
- d. Click **OK**.  
The Add Rule Field *<field\_name>* screen is displayed.

**Hard-coded value:**

- a. Otherwise, on the **Conditions** tab, click **Add**.  
The Add Condition screen is displayed.
  - b. Enter a name for the condition, and click **OK**.  
The screen refreshes and displays the lower expression pane with fields that are used to define the attributes of the hard-coded field value.
  - c. Configure the attributes as necessary for the metadata field. When you have finished the configuration, click **OK**.  
The Add Rule Field *<field\_name>* screen is displayed.
9. Click **OK**.  
The Fields tab on the Add New Rule screen is displayed.
  10. You will need to define a default value for each required URM metadata field. To do this, repeat **Steps 5** through **9**.
  11. When you have finished defining default values for all of the required fields, click **OK**.  
The Fields tab of the Edit Rule *<rule\_name>* screen is displayed.
  12. Click **OK**.  
The Rules tab of the Configuration Manager is displayed.

#### 2.2.4.2.3 Create the Profile and Add Rule(s)

To complete the profile:

1. Click the **Profiles** tab.

2. Click **Add**.

The Add Profile screen is displayed.

3. Enter the profile name, and click **OK**

The Add Profile <profile\_name> screen is displayed.

4. Enter the display label, optional description, and trigger value.

---

**Important:** The trigger value entered in this step *MUST* match the value that you entered for the string literal that is mapped to the profile metadata field: See Step 6 in the procedure for [Mapping the String Literal While Creating a New URM Adapter Source](#) or Step 5 in the procedure for [Mapping the String Literal While Editing an Existing URM Adapter Source](#). Otherwise, when the Adapter checks in declaration data, the value of the trigger metadata field *WILL NOT* activate the expected content profile in URM.

---

5. Click **Add**.

The Add Rule screen is displayed.

6. Select a rule to be included in this profile from the Name drop-down list, and click **OK**.

---

**Note:** If you have defined more than one rule for this profile, you will need to repeat Steps 5 and 6 until all of the rules have been added.

---

7. Click **OK**.

## 2.3 Uninstalling the Adapter

To completely uninstall the Adapter, you must:

- [Uninstall the Microsoft Sharepoint Feature](#)
- [Uninstall the Adapter](#)

---

**Caution:** You must uninstall the Microsoft SharePoint feature *BEFORE* you uninstall the Adapter. If you uninstall the Adapter without uninstalling the feature, your Microsoft SharePoint instance will not function properly and you will be unable to modify or delete content items.

Further, the application to uninstall the feature is removed when the Adapter is uninstalled. Therefore, if you do not uninstall the feature before you uninstall the Adapter, you will *NEVER* be able to do so.

For more detailed information, see "[Microsoft SharePoint Feature Screen](#)" on page 3-34.

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### 2.3.1 Uninstall the Microsoft Sharepoint Feature

To uninstall the content retention feature:

1. Open the [Adapter Administration Manager](#).
2. Click the **Microsoft Sharepoint** link in the navigation hierarchy panel.  
The [Microsoft SharePoint Feature Screen](#) is displayed.
3. Click the **Uninstall** button  
The Adapter removes the Microsoft Sharepoint feature from your computer.
4. Close the Adapter Administration manager.

### 2.3.2 Uninstall the Adapter

To uninstall the Adapter:

1. Open the **Control Panel**:  
From the **Start** menu, select **Settings**, then select **Control Panel**
2. Double-click **Add or Remove Programs**.
3. Locate and select the **Oracle URM Adapter for I/PM** application.
4. Click **Remove**.  
You are asked to verify that you want to remove the program.
5. Click **Yes**.  
The **Oracle URM Adapter for I/PM** application is removed from your computer.

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## Configuration

This section covers the following topics:

### Concepts

- ["About Content Retention Management"](#) on page 3-3
- ["Sources"](#) on page 3-3
- ["Types of Sources"](#) on page 3-3
- ["About URM Adapter Sources"](#) on page 3-3
- ["Metadata Fields"](#) on page 3-4
- ["Repository Metadata Fields"](#) on page 3-4
- ["URM System Metadata Fields"](#) on page 3-5
- ["URM Custom Metadata Fields"](#) on page 3-5
- ["Searchable URM Custom Metadata Fields"](#) on page 3-5
- ["Mapped Metadata Fields"](#) on page 3-5
- ["Single-Mapped Metadata Fields"](#) on page 3-6
- ["Double-Mapped Metadata Fields"](#) on page 3-6
- ["Repository Searches and Search Directions"](#) on page 3-7
- ["New and Historical Content Repository Searches"](#) on page 3-8
- ["Chronology of Repository Search Processing"](#) on page 3-9
- ["Repository Search Constraints with Microsoft Sharepoint"](#) on page 3-12
- ["Regulatory Compliance Tasks"](#) on page 3-15
- ["System Logs and Audit Trails"](#) on page 3-16
- ["Configuration Files"](#) on page 3-16
- ["About Search Queries"](#) on page 3-16
- ["Repository Search Queries"](#) on page 3-17
- ["Construction of Search Queries"](#) on page 3-17
- ["Expression Grouping Option"](#) on page 3-18
- ["Expression Option"](#) on page 3-19
- ["Add Term Option"](#) on page 3-19
- ["Compound Expressions"](#) on page 3-20

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- ["Mapped Search Queries"](#) on page 3-20

#### **Tasks**

- ["Registering the Adapter"](#) on page 3-22
- ["Changing the Authentication Information"](#) on page 3-22
- ["Changing the Database Connection"](#) on page 3-23
- ["Activating the Content Retention Feature"](#) on page 3-23
- ["Sorting Field Data Columns"](#) on page 3-23
- ["Adding a New URM Adapter Source"](#) on page 3-24
- ["Mapping Metadata Fields"](#) on page 3-26
- ["Defining a URM Custom Metadata Field"](#) on page 3-26
- ["Double-Mapping Metadata Fields"](#) on page 3-26
- ["Viewing the Configuration Data of a URM Adapter Source"](#) on page 3-27
- ["Editing an Existing URM Adapter Source"](#) on page 3-27
- ["Defining a New Search Query"](#) on page 3-28
- ["Editing a Search Query"](#) on page 3-28
- ["Duplicating and Editing a Search Query"](#) on page 3-29
- ["Deleting a Search Query"](#) on page 3-29
- ["Mapping a Search Query"](#) on page 3-29
- ["Activating/Deactivating a Search Query"](#) on page 3-30
- ["Modifying the Advanced Settings Values"](#) on page 3-30

#### **Interface**

- ["Adapter Administration Manager"](#) on page 3-31
- ["Connection Screen"](#) on page 3-33
- ["Microsoft SharePoint Feature Screen"](#) on page 3-34
- ["Field Sort Order"](#) on page 3-35
- ["URM Sources Screen"](#) on page 3-36
- ["URM Sources Screen: Pop-up Menus"](#) on page 3-38
- ["URM Sources Screen: Create New URM Source Screen"](#) on page 3-39
- ["URM Sources Screen: Create New URM Source Screen - Establish Field Mappings"](#) on page 3-40
- ["URM Sources Screen: Create New URM Source Screen - Define Custom Fields"](#) on page 3-42
- ["Search Creation Screen"](#) on page 3-44
- ["Search Creation Screen: Create new search Screen"](#) on page 3-45
- ["Search Creation Screen: Equation Editor"](#) on page 3-46
- ["Equation Editor: Expression Design Pop-up Menus"](#) on page 3-48
- ["Equation Editor: Operator Variable Pop-up Menus"](#) on page 3-50

- ["Equation Editor: Value Variable Text Field"](#) on page 3-51
- ["Equation Editor: Value Variable Drop-down Calendar"](#) on page 3-51
- ["Search Mapping Screen"](#) on page 3-52
- ["Advanced Screen"](#) on page 3-55

## 3.1 About Content Retention Management

This section covers the following topics:

- ["Sources"](#) on page 3-3
- ["Metadata Fields"](#) on page 3-4
- ["Mapped Metadata Fields"](#) on page 3-5
- ["Repository Searches and Search Directions"](#) on page 3-7
- ["Regulatory Compliance Tasks"](#) on page 3-15
- ["System Logs and Audit Trails"](#) on page 3-16
- ["Configuration Files"](#) on page 3-16

### 3.1.1 Sources

This section covers the following topics:

- ["Types of Sources"](#) on page 3-3
- ["About URM Adapter Sources"](#) on page 3-3

#### 3.1.1.1 Types of Sources

Within the infrastructure of the corresponding Adapter and URM instances, there are two types of sources. To fully understand the interactions between URM and the Adapter, it is essential that you understand the conceptual attributes and purpose of each type as follows:

- **URM Source:** A URM Source is from URM's perspective. In this case, the term 'Source' is intended to represent an external repository that stores documents. The documents in this URM Source (repository) are allocated for retention management under URM. For the SharePoint repository, there is a single URM Source that is designated for the entire SharePoint System.

Presumably, the SharePoint System contains a wide variety of documents. Consequently, when the documents are classified into similar groups, there will be a wide variety of retention categories associated with the content items in the URM Source. Thus, the content items in the URM Source share two characteristics: they are all derived from one repository and the all have the same metadata.

- **URM Adapter source:** A URM Adapter source is from the Adapter's perspective. In this case, the term 'source' is more representative of a 'target' since the Adapter is pushing data from the Adapter's repository (the SharePoint System) into the target URM 'container' (the URM Source).

#### 3.1.1.2 About URM Adapter Sources

The Adapter uses URM Adapter sources to associate groups of similar content items stored in the SharePoint System with corresponding retention categories in URM. Each URM Adapter source is configured with exclusive [Mapped Metadata Fields](#) and

associated with one or more [Repository Searches and Search Directions](#). This enables you to organize records and non-record content into groups that have the same characteristics.

A search query linked to a URM Adapter source looks through the SharePoint System and identifies all the record and non-record items that have the same metadata values. The data for each matching item is transferred to URM and stored as a record in the corresponding URM Adapter source database table. Thus, all of the records and non-records associated with a URM Adapter source have the same retention and disposition characteristics. This means that the same rules and instructions for content retention and disposition are applied to each content item associated with that URM Adapter source.

When you create a URM Adapter source during the Adapter configuration process, additional new user interface elements are added to the URM interface. These include a corresponding URM Adapter source node in the External Content tray and the new links contained in it: Create *sourcename* Item and Search *sourcename* Items. When you click these links, their respective pages open and they enable you to submit a content item record to URM and to find stored content item records that meet your search criteria. For more information, see "[URM Custom Metadata Fields](#)" on page 3-5 and "[Searchable URM Custom Metadata Fields](#)" on page 3-5.

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**Important:** Once you have created a URM Adapter source, it cannot be deleted. However, you can add new entries and selectively modify existing entries using the fully populated URM Sources screen. See "[Editing an Existing URM Adapter Source](#)" on page 3-27 and "[URM Sources Screen: Pop-up Menus](#)" on page 3-38.

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## 3.1.2 Metadata Fields

This section covers the following topics:

- "[Repository Metadata Fields](#)" on page 3-4
- "[URM System Metadata Fields](#)" on page 3-5
- "[URM Custom Metadata Fields](#)" on page 3-5
- "[Searchable URM Custom Metadata Fields](#)" on page 3-5

### 3.1.2.1 Repository Metadata Fields

When content items are archived into the SharePoint System, they are also indexed. The level of indexing (full-text and/or metadata) is flexible and can be defined to match the level of detail that meets the organization's requirements. Generally, the SharePoint System is configured to support basic classification, based on document properties such as directory, file name, and file extension. Thus, the repository archive metadata fields are derived from this common set of properties and are provided for each content item stored in the SharePoint System.

### 3.1.2.2 URM System Metadata Fields

During the configuration process, the Adapter requests and receives a list of all the available system metadata fields from URM. These are the metadata fields that must be mapped to the SharePoint System metadata fields.

### 3.1.2.3 URM Custom Metadata Fields

In some cases, there may be an insufficient number of appropriate metadata fields in URM to map individually to each of the SharePoint System metadata fields. In this situation, you will need to generate the necessary URM custom metadata fields that can be mapped to the corresponding SharePoint System metadata fields. This is done as part of the process to create URM Adapter sources.

On the [URM Sources Screen: Create New URM Source Screen - Define Custom Fields](#) screen, you can enter the names of one or more URM custom metadata fields. The names that you enter convert to actual display names in URM. Depending on how you define the URM custom metadata fields, the names may or may not be displayed, searchable, and/or required. For example, if you create a custom field that is enabled and searchable, it will be listed on the Search *sourcename* Item page in URM. See ["Searchable URM Custom Metadata Fields"](#) on page 3-5.

### 3.1.2.4 Searchable URM Custom Metadata Fields

Name	Caption	Default	Type	Enabled	Searchable	Required
BCC	Blind Copies		BigText	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CC	Carbon Copies		BigText	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TO	Recipient		BigText	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

When you create [URM Custom Metadata Fields](#) using the Adapter's URM Adapter source creation wizard, you can specify whether they are searchable (see the inset above). If you select the searchable check box for new URM custom metadata fields, they can be used as search criteria on the Search *sourcename* Items page in URM. For more information about creating URM custom metadata fields, see ["URM Sources Screen: Create New URM Source Screen - Define Custom Fields"](#) on page 3-42.

## 3.1.3 Mapped Metadata Fields

The Adapter is aware of the metadata model used in the SharePoint System as well as the model used in URM. Part of the configuration process for the Adapter involves mapping corresponding metadata fields and sending that mapping to URM. See ["URM Sources Screen: Create New URM Source Screen - Establish Field Mappings"](#) on page 3-40.

Subsequent communications between the Adapter and URM use the metadata labels from the SharePoint System model rather than the corresponding URM metadata labels. This ensures that audit trails are intuitively logical to end users. For example, in the audit log, a content item field labeled Author will retain that name as opposed to dDocAuthor.

This section covers the following topics:

- ["Single-Mapped Metadata Fields"](#) on page 3-6
- ["Double-Mapped Metadata Fields"](#) on page 3-6

### 3.1.3.1 Single-Mapped Metadata Fields

URM uses the declaration data supplied by the Adapter to manage the lifecycles and dispositions of repository content items based on the metadata fields and their values. Thus, it is important to carefully map the metadata fields in the SharePoint System with applicable URM metadata fields. Many of the existing SharePoint System metadata fields can be mapped logically with existing URM metadata fields. These field mapping sets are considered to be single-mapped metadata fields.

### 3.1.3.2 Double-Mapped Metadata Fields

Some of the metadata field lengths in the SharePoint System are greater than 100 bytes. As a result, these fields would need to be either mapped to longer URM custom metadata fields (if available) or truncated to fit into the corresponding URM system metadata fields. Unfortunately, if oversized SharePoint System fields are truncated to fit into shorter URM fields, the original data is lost.

To resolve this problem, you can use the double-mapping feature in the Adapter. This feature ensures that the data values in lengthy repository metadata fields can be retained in their entirety. Double-mapping enables you to map the same SharePoint System metadata field twice. That is, a single repository field is initially mapped to a URM system field and then to a URM custom field.

When the Adapter transmits declaration data to URM, the oversized data from the SharePoint System field is automatically truncated to fit into the mapped URM system metadata field. If you have established a double-mapping for the SharePoint System field, then URM also stores a complete version of the data in the corresponding URM custom metadata field.

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**Note:** If a large repository field is single-mapped to a smaller URM system field, then the Adapter is responsible for pre-truncating the data before sending it to URM. In this case, the Adapter shortens the repository field value to a length that is equal to the maximum length of the mapped URM metadata field.

However, if you use the double-mapping feature, the Adapter automatically transmits the complete repository field value. URM is then responsible for handling the transferred data. Consequently, when the data is sent, depending on the size of the field value, the URM system field receives a truncated value and the URM custom field receives the entire value.

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**Caution:** When you configure a double-mapping for a large SharePoint System metadata field, you must ensure that the URM custom metadata field is large enough to hold the original data. Therefore, logically, the size of the URM custom metadata field must be larger than the corresponding URM system field. When fields are double-mapped, the Adapter always uses the length of the URM custom metadata field to truncate the data in the SharePoint System field.

If you double-map a large SharePoint System metadata field to a URM custom field that is the same length or shorter than the URM system field, both of the URM fields receive data that is truncated at the custom field's length. For example, a typical SharePoint System metadata field has an unlimited length. If you single-map it to a URM system field that has a length of 200 characters and then double-map it to a URM custom field that has a length of 100 characters, both of the URM fields receive data that the Adapter has truncated to 100 characters.

**Figure 3–1 Example of Double-Mapped Repository Metadata Field**

Field Mappings			
Caption	Repository Field	URM Field	Status
	Id	dLongName	✓
	"ADACCT"	dDocType	✓
	Title	dDocTitle	✗

Custom Fields							
Name	Caption	Default Value	Type	Enabled	Required	Searchable	Status
Title	Title		Memo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓

**Note:** If you use URM 11g, the dDocType is usually "Document."

In this example, the Title metadata field in the SharePoint System is mapped to the URM dDocTitle field. Because the Title field has a length of 512 characters and dDocTitle is limited to 200 characters, the Title field's text might exceed the dDocTitle field's capacity. See ["Field Lengths and Double-Mapping"](#) on page A-3.

In this case, if you single-mapped the Title and dDocTitle metadata fields, the Adapter is responsible for truncating the transferred data. However, you can ensure data integrity if you double-map the Title metadata field to a URM custom metadata field that is large enough to accommodate the entire field value. This way, the Adapter forwards the entire field value. Then, URM is responsible for sending the truncated value to the dDocTitle field (the URM system field) and the entire value to the URM custom field Title.

### 3.1.4 Repository Searches and Search Directions

The Adapter performs searches in the SharePoint System to find content items whose data would be of interest to URM. If new items have been recently added to the SharePoint System, the Adapter finds them during a search interval, applies the applicable mapped metadata to the matching items, and forwards the information to URM.

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**Important:** Content items that match the search criteria are assigned appropriate retention schedules. After the processing is finished, the relevant content items are marked complete and are not returned in future searches because their data has been checked into URM. This ensures that content item data is not duplicated in URM.

Therefore, if you create and run a subsequent search query that has a higher priority, the query will not change the assigned retention schedule of previously declared content items. Furthermore, if two search queries are run and both find the same content item, that item is returned to the search query with the higher priority.

For more information about the priority for search queries, see the up and down arrow descriptions on the [Search Mapping Screen](#).

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This section covers the following topics:

- ["New and Historical Content Repository Searches"](#) on page 3-8
- ["Chronology of Repository Search Processing"](#) on page 3-9

#### **3.1.4.1 New and Historical Content Repository Searches**

The Adapter is designed to distinguish between new and historical content searches. After you have installed and configured the Adapter, you need to set the values for new and historical searches. When any of the installed Adapters are started, both the new and the historical search directions are disabled. To perform searches, you must explicitly enable one or both searching directions.

Enabling one or both search directions irrevocably establishes a search start date. That date denotes the division between a new search and a historical search. For more information about new and historical searching for search queries, see the [Advanced Screen](#). For the Adapter, see the descriptions of the Enabled check boxes for new and historical content on the [Advanced Screen](#).

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**Important:** The first time the Adapter starts, it performs an initial search in the SharePoint System and executes all the activated search queries. The Adapter Service looks for content that matches the defined expressions in the activated search queries. Depending on the search direction that is enabled, the Adapter Service will search forward to look for new content item checkins and/or search the repository in reverse chronological order to collect historical data for URM.

Content items that match the search criteria are assigned appropriate retention schedules. After the processing is finished, the relevant content items are marked complete and are not returned in future searches because their data has been checked into URM. This ensures that content item data is not duplicated in URM.

Therefore, if you create and run a subsequent search query that has a higher priority, the query will not change the assigned retention schedule of previously declared content items. Furthermore, if two search queries are run and both find the same content item, that item is returned to the search query with the higher priority.

For more information about the priority for search queries, see the up and down arrow descriptions on the [Search Mapping Screen](#).

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**Caution:** Due to the permanent nature of the initial and subsequent new and historical searches, it is imperative that you carefully design, configure, and test your search queries before enabling the search directions. If you want all of the historical and new data in the SharePoint System to be properly collected, you must be absolutely certain that all of the new and historical search queries are precisely configured and that they are returning the exact data that you expect. For more information about enabling the search directions, see the descriptions for the Enabled check boxes for historical and new content on the [Advanced Screen](#).

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**Note:** For detailed information about designing and constructing search queries, see "[About Search Queries](#)" on page 3-16 and the "[Search Creation Screen](#)" on page 3-44. To verify that your search queries return the desired results, use the [Search Preview Screen](#) to test and validate them.

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### 3.1.4.2 Chronology of Repository Search Processing

This section describes how the Adapter processes the new and historical repository searches. This section covers the following topics:

- "[Basic Timeline Overview](#)" on page 3-10
- "[Elapsed Time for Installation and Configuration](#)" on page 3-10
- "[Establish the Start Date](#)" on page 3-10
- "[New Content Search Interval Characteristics](#)" on page 3-11
- "[Historical Content Search Interval Characteristics](#)" on page 3-11

- ["Temporary Search Suspensions"](#) on page 3-12
- ["Summary"](#) on page 3-12

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**Important:** This section provides a high-level conceptual overview of the Adapter's search processes. However, some of the Adapter's search capabilities are inextricably dependent on the Incremental and Full crawl processes of Microsoft Sharepoint. See ["Repository Search Constraints with Microsoft Sharepoint"](#) on page 3-12.

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### 3.1.4.2.1 Basic Timeline Overview

In general, it is helpful to understand how the function of time is involved in the overall operations of the Adapter; such as the duration of time from installation and configuration to the Adapter's eventual operation. However, it is particularly important to recognize how time is an integral part of the new and historical searching processes. In this section, the following timeline is used as the basis to illustrate how time passage affects repository searching operations.

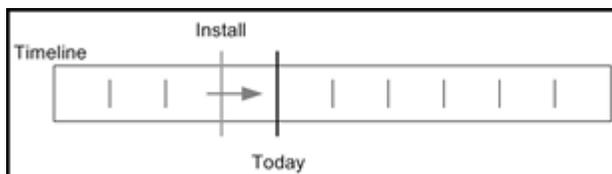
**Figure 3–2 Operational Timeline**



### 3.1.4.2.2 Elapsed Time for Installation and Configuration

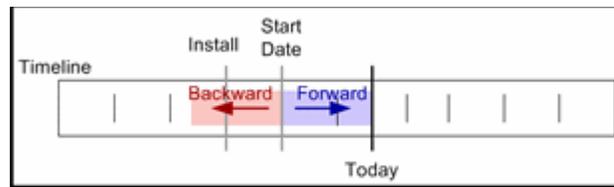
The first significant time increment involves the timespan that occurs between installing and configuring the Adapter. During this period, connectivity and authentication are established, all metadata fields are mapped, search queries are defined and mapped, and Adapter-level parameters are set. The search preview function is available to optimize and refine the search queries and ensure that the returned results are precise.

**Figure 3–3 Setup Time Span**



### 3.1.4.2.3 Establish the Start Date

After the search queries are satisfactorily constructed and verified, they can be enabled (activated) to begin searching the SharePoint System to find matching content items and declare their data to URM for retention management. Activating the search queries automatically sets the 'start date' that delineates the time periods for new and historical searches. Although the new and historical search functions can be enabled independently, as soon as either of them is enabled the 'start date' is set and cannot be altered.

**Figure 3–4 Start Date**

#### 3.1.4.2.4 New Content Search Interval Characteristics

On the [Advanced Screen](#), a search interval, with units in hours, is defined to control new content searching. This interval establishes how often the new search mechanism cycles through the search queries that are looking for new content not yet declared to URM. The smaller the interval, the more often the search queries are run and the more quickly new content that is checked into the SharePoint System is added to URM management.

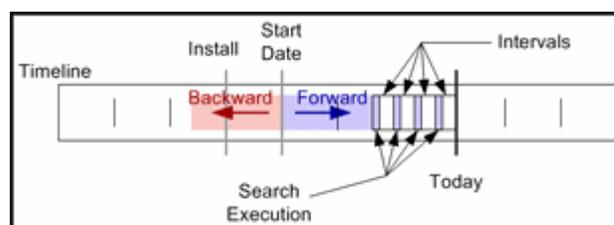
Smaller intervals cause the search queries to run more frequently which increases the load on the SharePoint System. Therefore, when the new searching time interval is set, two considerations need to be evaluated: the flow of content checked into the SharePoint System versus the urgency of getting the content under URM retention management.

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**Important:** When the Adapter runs the search queries for new content, some contingencies exist in the Microsoft Sharepoint repository that can affect the time lag and success of finding content items. These contingencies are a direct result of how the administrator has configured the Full or Incremental crawls in the Microsoft Sharepoint repository. For more information, see "[Repository Search Constraints with Microsoft Sharepoint](#)" on page 3-12.

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New content search queries are always confined to the current time. They are performed each time the specified interval of time has elapsed since the last interval was completed. If the searches are completed in less time than the set interval, then the Adapter pauses until the current interval has elapsed before rerunning the search queries.

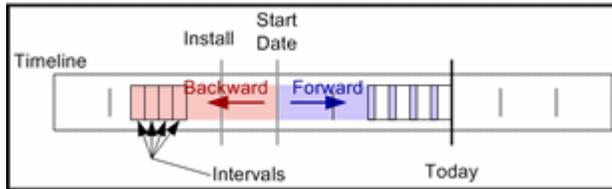
**Figure 3–5 New Search Intervals**

#### 3.1.4.2.5 Historical Content Search Interval Characteristics

Historical search intervals are also defined on the [Advanced Screen](#). Like the new search interval, the historical interval specifies the number of hours to be considered when searching backward in time. Unlike the new search, however, the historical search does not pause between search intervals. Rather, it executes the search queries continuously and without interruption.

Uninterrupted historical searching can impose a significant performance penalty on the system. Therefore, the associated scheduling feature can be configured to run the historical searches during off-peak hours. When the Adapter reaches the end of the schedule, it completes the historical search that is currently running. This will cause the Adapter to work beyond the scheduled end time. This aspect should be considered when the historical search schedule is defined.

**Figure 3–6 Historical Search Intervals**

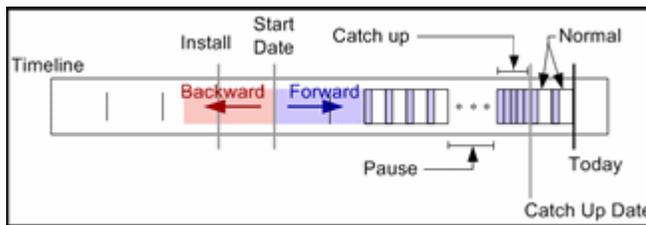


### 3.1.4.2.6 Temporary Search Suspensions

If new content searches are temporarily disabled and later re-enabled, the new searching process works continuously to catch up. The Adapter continues to run these searches until they have caught up with the current time. If historical content searches are temporarily disabled and later re-enabled, the Adapter continues to operate as if an interruption had not occurred.

For more comprehensive information about suspending searches and the implications of doing so, read the descriptions about activating/deactivating search queries and enabling/disabling new and historical content declarations. See ["Search Mapping Screen"](#) on page 3-52 and ["Advanced Screen"](#) on page 3-55 for details.

**Figure 3–7 Search Deactivation**



### 3.1.4.2.7 Summary

Once the content within a period of time has been processed, by either the new or historical content searching processes, that period will not be reconsidered. Occasionally, existing searches are modified or new searches are added that may alter how content is classified within the SharePoint System.

In this case, these search changes are applied during the next search interval. They are not reapplied to the periods of time already processed. Therefore, it is very important that all new and historical search queries are designed, tested, and verified before they are enabled for the production environment.

## 3.1.5 Repository Search Constraints with Microsoft Sharepoint

This section covers the following topics:

- ["About Microsoft Sharepoint Crawls"](#) on page 3-13
- ["About Microsoft Sharepoint Content Indexing"](#) on page 3-13

- ["Coordination of Search Intervals and Crawl Cycles"](#) on page 3-14
- ["Adapter Searches in the Microsoft Sharepoint Repository"](#) on page 3-15

### 3.1.5.1 About Microsoft Sharepoint Crawls

Microsoft Sharepoint uses two types of crawls to find and index checked-in content.

- **Full crawl:** This type of crawl performs a search that includes all of the content in the Microsoft Sharepoint farm. By default, the Full crawl feature does not have a configured schedule. However, the administrator can configure the run intervals in increments of minutes as necessary.
- **Incremental crawl:** This type of crawl searches only through the content items that were added since the last crawl. By default, Microsoft Sharepoint is initially configured to run an Incremental crawl every 20 minutes. However, the administrator can reconfigure and adjust the intervals as necessary.

Both the Full and Incremental crawls can be scheduled to run individually as well as simultaneously. The administrator for Microsoft Sharepoint must determine and configure a crawl schedule that meets the organization's requirements. For more information about configuring the Adapter's search intervals, see the interval field descriptions on the Adapter's [Advanced Screen](#).

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**Tip:** The Adapter's searches can easily be improved by adjusting the crawl schedules of Microsoft Sharepoint. For example, the expected method for Microsoft Sharepoint is to schedule shorter intervals for Incremental crawls (more frequent runs). Correspondingly, Full crawls should occur less frequently, perhaps once a week or once each night. For more information about configured intervals and run schedules, see ["Coordination of Search Intervals and Crawl Cycles"](#) on page 3-14.

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### 3.1.5.2 About Microsoft Sharepoint Content Indexing

Microsoft Sharepoint uses the Full and Incremental crawls to index the checked-in documents. After completing a crawl (Incremental or Full), the content items are indexed and available for retrieval via searching. Thus, if documents are added after the crawl, they will not be indexed until the next scheduled crawl.

When the Adapter runs a search query, it will only be able to find indexed content and obtain the applicable declaration information from the found items. Thus, the results of Adapter search queries are directly dependent on how the Microsoft Sharepoint crawl intervals are configured. The URM/Adapter administrator should be aware of crawl schedules when configuring the search query intervals.

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**Caution:** By default, there are several file types that Microsoft Sharepoint does not index. These include, but are not limited to, PDFs and image/graphic documents with .bmp, .jpg, and .png file extensions. This means that the Adapter will never find these types of content items because they will not be indexed.

If you have these types of documents in your SharePoint System and you want to have them managed by URM, the administrator must configure Microsoft Sharepoint to include these file types in its indexing function. For information about doing this, consult the applicable Microsoft Sharepoint documentation.

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### 3.1.5.3 Coordination of Search Intervals and Crawl Cycles

Internally, the Adapter monitors the crawling cycles completed by Microsoft Sharepoint and is designed to run search queries after it detects crawl activity. Content added to the SharePoint System is indexed during the crawl process. Because a search query cannot find a non-indexed item, the Adapter attempts to keep itself behind the Microsoft Sharepoint crawl cycle. Ideally, this scheme mitigates unnecessary time lapses.

The following event sequence demonstrates the interdependencies between SharePoint crawls and Adapter searches:

- **1:37 P.M.:** The Adapter ran the last search pass in the SharePoint System. It is configured for one-hour search intervals.
- **2:25 P.M.:** Microsoft Sharepoint ran the last Incremental crawl. It is configured to use the default Incremental crawl schedule (once every 20 minutes).
- **2:30 P.M.:** Document\_A is added to the SharePoint System.

Note that this document was checked into the SharePoint System *AFTER* the last Incremental crawl was run. Therefore, it was *NOT* indexed.

- **2:37 P.M.:** The next time the Adapter is scheduled to run a search.

If the Adapter runs its scheduled search, it will not be able to find Document\_A because it is not indexed (and won't be indexed until the scheduled 2:45 P.M. crawl).

However, the Adapter is designed to monitor the crawl times and not proceed beyond the last one. Thus, when it wakes up at 2:37 P.M. to run its search, it will determine that the 2:37 P.M. search is *AFTER* the 2:25 crawl event.

As a result, instead of running its scheduled search, the Adapter will wait and allow the Incremental crawl to run first.

- **2:45 P.M.:** The next time Microsoft Sharepoint is scheduled to run an Incremental crawl.

Document\_A is now indexed and can be found by the Adapter search query.

Note that the Adapter did not run its scheduled search at 2:37 P.M. Instead, it will now wake up and perform its search that was originally scheduled for 2:37 P.M. and it will find Document\_A.

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**Important:** If the administrator configures Microsoft Sharepoint to wait several days or weeks between scheduled crawls, the Adapter will find content significantly later than when the items were originally checked into the repository.

This causes a considerable delay before the Adapter can forward the declaration data for managed content items to URM. To minimize such time lags, the administrators should plan to carefully coordinate the crawl and search intervals for Microsoft Sharepoint and the Adapter, respectively.

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**Caution:** In the unlikely event that both the Full and Incremental crawls are disabled, no content will be indexed in the SharePoint System. Subsequently, the Adapter search queries will not find any content items because the new and historical search processes would simply go to sleep. These processes will remain dormant and wait for Microsoft Sharepoint to perform a crawl. Unfortunately, during the elapsed time, content items are neither indexed nor found for URM management.

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#### 3.1.5.4 Adapter Searches in the Microsoft Sharepoint Repository

The Adapter's search capabilities are dependent upon how the Incremental and Full crawl processes are configured in Microsoft Sharepoint. In addition, the frequency of the crawls will control whether or not content is available in the SharePoint System for the Adapter to search. However, the Adapter's search interval still controls the size of the time window that is processed during the Microsoft Sharepoint crawls.

The historical search function of the Adapter is not affected by crawls; only new content searches are contingent on how the Microsoft Sharepoint crawls are configured. Therefore, to ensure efficient new content searches and timely declarations, Microsoft Sharepoint should perform crawls substantially more often than the Adapter's configured interval.

For example, if the Adapter is searching in one-hour intervals, Microsoft Sharepoint should run Incremental crawls more often than hourly. Otherwise, the Adapter will experience situations where it must wait nearly double its configured interval because of badly planned intervals. See "[Coordination of Search Intervals and Crawl Cycles](#)" on page 3-14. Essentially, the longer crawls are delayed, the more time will elapse after a document is added to the SharePoint System and before it is processed for URM management.

### 3.1.6 Regulatory Compliance Tasks

As part of its routine interaction with URM, the Adapter periodically asks URM for tasks that need to be performed within the SharePoint System. Those tasks enable URM to abide by the corporate retention policies and disposition processes. The Adapter regularly performs the following regulatory compliance tasks:

- **Batch Declarations/Confirmations:** When the search queries find data that is of interest to URM, it must be forwarded to URM. The Adapter needs to provide enough metadata information to allow URM to manage the content items' retention. Batch declaration and confirmation is the ongoing interactive process between the Adapter and URM that ensures data is forwarded and the receipt is acknowledged.
- **Dispositions:** This is the process the Adapter uses to remove managed content from the system when its relevance has expired. At the end of the retention period for a set of items in storage, URM directs the Adapter to dispose of them. After appropriate disposal, the Adapter informs URM about content items that are deleted to ensure URM stops tracking the retention lifecycle of those content items.
- **Holds/Freezes:** As part of the records management process, organizations may need to place a litigation or audit hold/freeze on certain items. URM ensures that affected content items are not edited or deleted. The Adapter assists URM by providing information about the litigation hold status of these content items and

to ensure they are properly preserved. When a litigation or audit hold/freeze is removed, the Adapter unmarks the content items so they can be edited or deleted as necessary.

### 3.1.7 System Logs and Audit Trails

The Adapter uses log file and error message records to maintain an audit trail that you can view and use to determine whether your corporate retention policies and disposition processes have been met. The audit trail provides information for each managed content item about what disposition actions have been taken, by whom, and when.

You can open the log file and error message records from within the Adapter Administration Manager to search for and view specific records. The log files are also transmitted to URM so that these records can be used and tracked as audit trails. The checked-in log files can be assigned a default retention schedule and maintained as a record that can be produced when needed as part of a legal proceeding.

There are three types of error or message records that you can view and monitor in the Adapter. The generated declaration and disposition error lists enable you to monitor the status and overall operations. System messages provide a means to collect the necessary information for the audit trail requirements. In addition to the table view of log entries, you can view detailed transcripts of the generated messages in pop-up dialog boxes. The error and message lists include:

- Declaration errors: see "[Error Management: Declaration Errors Screen](#)" on page 4-11
- Disposition errors: see "[Error Management: Disposition Errors Screen](#)" on page 4-11
- System messages and events: see "[Error Management Link](#)" on page 4-10

### 3.1.8 Configuration Files

The Adapter uses various configuration files to store database connection and Adapter registration information. All of the configuration files are preconfigured during installation and are updated only when the database location changes or when the user identification and/or password information is modified. Rather than manually editing the applicable configuration file, updates are made using the [Connection Screen](#).

There are three configuration files:

- **Administration.exe.config**: Contains the logging level information and the type of Adapter that it is administering.
- **Sharepoint07Adapter.exe.config**: Contains the logging-level information.
- **Oracle.URMAdapter.dll.config**: Contains the database configuration information and the web service declaration information.

## 3.2 About Search Queries

This section covers the following topics:

- "[Repository Search Queries](#)" on page 3-17
- "[Construction of Search Queries](#)" on page 3-17

- ["Mapped Search Queries"](#) on page 3-20
- ["Federated Search"](#) on page 3-21

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**Important:** The first time the Adapter Service starts, it performs an initial search in the SharePoint System and executes all the activated search queries. The Adapter Service looks for content that matches the defined expressions in the activated search queries. Depending on the search direction that is enabled, the Adapter Service will search forward to look for new content item checkins and/or search the repository in reverse chronological order to collect historical data for URM.

Content items that match the search criteria are assigned appropriate retention schedules. After the processing is finished, the relevant content items are marked complete and are not returned in future searches because their data has been checked into URM. This ensures that content item data is not duplicated in URM.

Therefore, if you create and run a subsequent search query that has a higher priority, the query will not change the assigned retention schedule of previously declared content items. Furthermore, if two search queries are run and both find the same content item, that item is returned to the search query with the higher priority.

For more information about the priority for search queries, see the up and down arrow descriptions on the [Search Mapping Screen](#).

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### 3.2.1 Repository Search Queries

A repository search query consists of a combination of logical expressions that include SharePoint System comparison variables to define the selection criteria. One or more searches are linked to a URM Adapter source that, in turn, is associated with a URM retention category. Therefore, the search query for a particular URM Adapter source must define search criteria that can find content items in the SharePoint System that match the associated URM retention category requirements.

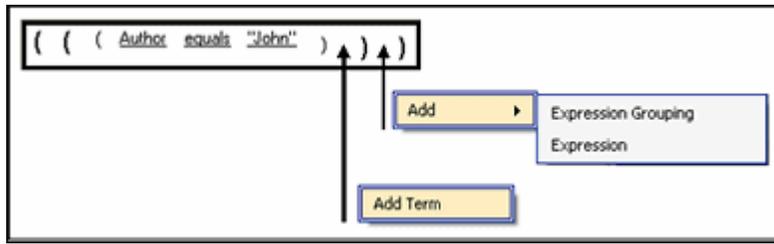
The [Search Creation Screen](#) enables you to create new repository query searches using the equation editor. You can design them to search the SharePoint System's multi-layered storage locations to find content items that precisely match the disposition instructions associated with the linked URM search. You construct the search queries using expressions and operators that are based on the native query language of the SharePoint System.

### 3.2.2 Construction of Search Queries

When you design your search query using the [Search Creation Screen](#), you will use expression-based elements. The main elements of a search query include sets of balanced parenthesis, expressions, and boolean operators. These query elements are inserted using the [Equation Editor: Expression Design Pop-up Menus](#).

However, the overall equation architecture determines which pop-up menu is displayed and, subsequently, what element can be inserted. For example, as shown below, right-clicking in one set of parenthesis versus another enables you to add one of the main query equation elements. Mandatory boolean operators link two consecutive expressions together to create compound expressions.

**Figure 3–8 Expression Pop-up Menus**



Each expression contains the three basic variables that define a set of selection criteria. The expression variables include a metadata field variable, an appropriate operand, and an applicable user-supplied alphanumeric value or date value. The [Equation Editor: Operator Variable Pop-up Menus](#) provide lists of value options for the variables.

Compound expressions are generated with a mandatory boolean operator (AND or OR) that combines two consecutive expressions. When designing your search equations, be especially careful about how the compound expressions are placed within the parenthesis. The Adapter evaluates the entire search equation based on how the expressions are placed within the sets of balanced parenthesis and the connecting boolean operators.

This section covers the following topics:

- ["Expression Grouping Option"](#) on page 3-18
- ["Expression Option"](#) on page 3-19
- ["Add Term Option"](#) on page 3-19
- ["Compound Expressions"](#) on page 3-20

**3.2.2.1 Expression Grouping Option**

The initial search equation editor pane contains only a single set of parenthesis that enclose the entire query. See [Figure 3–9](#). You begin the equation construction process by right-clicking inside this initial set of parenthesis which displays the Add pop-up menu (see ["Equation Editor: Expression Design Pop-up Menus"](#) on page 3-48). Selecting the first menu option (Expression Grouping) inserts an additional set of balanced parenthesis. See [Figure 3–10](#).

You can continue building an indefinite hierarchy of parenthesis sets until you insert the initial expression. See ["Expression Option"](#) on page 3-19. After entering the first expression, subsequent expression groupings include a boolean operator that joins the preceding and following expressions. See [Figure 3–11](#). You can choose to combine two expressions using either AND or OR boolean operators.

**Figure 3–9 Initial Parenthesis Set**



**Figure 3–10 Initial Expression Grouping Option**



**Figure 3–11 Subsequent Expression Grouping Option**

```
( ( ( Author equals "John" ) ) <Operator>
  ( ) )
```

### 3.2.2.2 Expression Option

When you right-click in the initial set of parenthesis in the search equation editor pane, you have the option to insert an additional set of parenthesis (Expression Grouping) or an option to insert a three-variable expression. Selecting the second option (Expression) inserts an initial expression that consists of three variables: a metadata field, an operand, and an alphanumeric value (see [Figure 3–12](#)). Some contingencies exist between the variables.

For example, depending on the metadata field option that you select from the Field pop-up menu, you will be presented with the one of two pop-up menus: the Date / number pop-up menu or the Text pop-up menu (see "[Equation Editor: Operator Variable Pop-up Menus](#)" on page 3-50). The value variable is also subject to these choices. It will be either alphanumeric text or dates. See "[Equation Editor: Value Variable Text Field](#)" on page 3-51 or "[Equation Editor: Value Variable Drop-down Calendar](#)" on page 3-51.

Similar to the subsequent expression grouping option, you can only enter the initial expression option once (see [Figure 3–11](#) and [Figure 3–12](#)). Then, a subsequent expression must be joined with the initial expression using a boolean operator. To ensure that this occurs, the equation editor automatically prefixes a boolean operator variable to each successive expression that you add. The syntax for a subsequent expression option is identical to the syntax for the [Add Term Option](#).

**Figure 3–12 Initial Expression Option**

```
( ( <Field> <Operator> <Value> ) )
```

**Figure 3–13 Subsequent Expression Option**

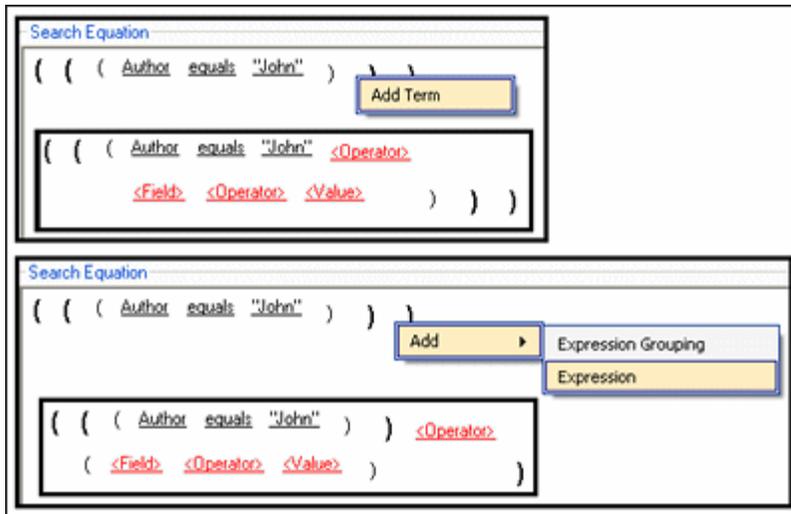
```
( ( ( Author equals "John" ) <Operator>
  ( <Field> <Operator> <Value> ) ) )
```

### 3.2.2.3 Add Term Option

The equation editor ensures that all consecutive expressions are joined by boolean operators into compound expressions. It does this by prefixing a boolean operator onto a subsequent expression option that you insert. Alternatively, depending on the set of parenthesis, the equation editor will provide the option to add a term rather than an expression.

Regardless of whether you add a term or an expression, the syntax is identical. However, the compound expression is evaluated and resolved contingent upon where the term or compound expression is placed (see [Figure 3–14](#)). Ultimately, this will influence how the search query equation is resolved and what content items the generated search results will include.

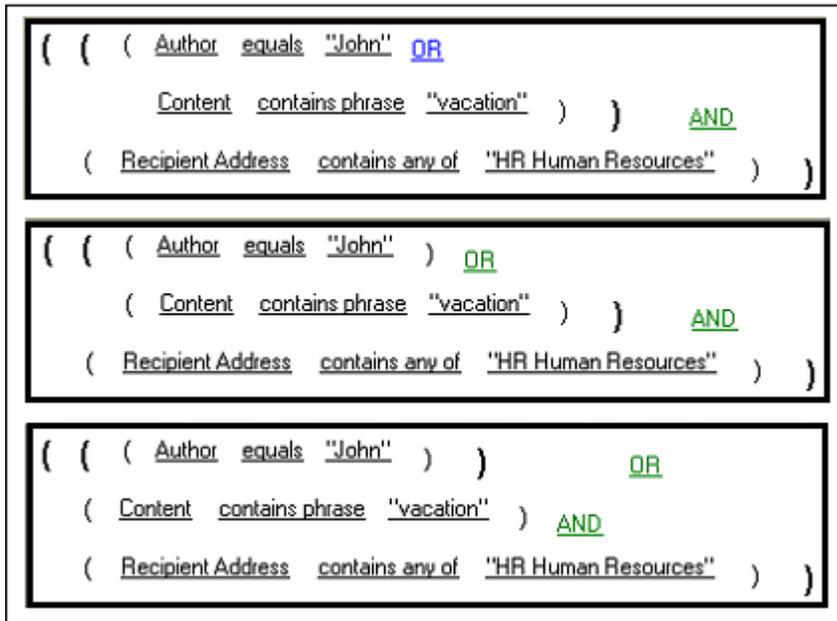
**Figure 3–14 Add Term Option vs. Add Subsequent Expression Option**



### 3.2.2.4 Compound Expressions

When creating a search query, the equation editor requires the use of compound expressions (boolean-connected expressions). See "Expression Option" on page 3-19 and "Add Term Option" on page 3-19. As shown below, the identical expressions can be inserted differently within the balanced sets of parenthesis. Each combination produces a variation of the final search equation and the SharePoint System search results will also differ. It is possible to test your final search query using the [Search Preview Screen](#).

**Figure 3–15 Compound expression structures**



### 3.2.3 Mapped Search Queries

After you have defined the URM Adapter sources and constructed your validated search queries, you map the queries to specific URM Adapter sources and URM

retention categories. The final mappings ensure that when the Adapter searches the SharePoint System, the applicable content items are properly marked and associated with the correct retention category. This ensures that the data is forwarded to URM and the content items are placed appropriately within the retention management scheme.

The [Search Mapping Screen](#) enables you to complete the necessary mappings but also makes it possible to designate which search queries will be activated and which ones will remain temporarily disabled. Search queries must have a search direction assigned before they can be activated. The search direction options determine whether the search query will process historic content, new content, or both in the SharePoint System. See ["Repository Searches and Search Directions"](#) on page 3-7 and the ["Advanced Screen"](#) on page 3-55.

### 3.2.4 Federated Search

"Federation" is a term used to describe the process of providing a single point of contact/entry for searching multiple disparate data sources. This is a search of all possible content using adapters to schedule the search. Searching for content in Sharepoint is not in real time, and is dependent on adapters to complete the search. This will be a separate call to the adapter API with search criteria that will need to find the results matching those criteria for the source in question and return all metadata (not just mapped metadata) as well as the document data itself.

For more information on federated search, please see:

- **10gR3:** Oracle Universal Records Management Adapter Services Reference Guide, chapter 4, "Performing URM Tasks."
- **11gR1:** Oracle Fusion Middleware Administrator's Guide for Universal Records Management, chapter 15, "Using Federated Searches and Freezes."

## 3.3 Configuring the Adapter

The Adapter enables you to specify the various configuration options for continuous operation and uninterrupted monitoring of the SharePoint System. This section covers the following topics:

- ["Registering the Adapter"](#) on page 3-22
- ["Changing the Authentication Information"](#) on page 3-22
- ["Changing the Database Connection"](#) on page 3-23
- ["Activating the Content Retention Feature"](#) on page 3-23
- ["Sorting Field Data Columns"](#) on page 3-23
- ["Adding a New URM Adapter Source"](#) on page 3-24
- ["Mapping Metadata Fields"](#) on page 3-26
- ["Defining a URM Custom Metadata Field"](#) on page 3-26
- ["Double-Mapping Metadata Fields"](#) on page 3-26
- ["Viewing the Configuration Data of a URM Adapter Source"](#) on page 3-27
- ["Editing an Existing URM Adapter Source"](#) on page 3-27
- ["Defining a New Search Query"](#) on page 3-28
- ["Editing a Search Query"](#) on page 3-28

- ["Duplicating and Editing a Search Query"](#) on page 3-29
- ["Deleting a Search Query"](#) on page 3-29
- ["Mapping a Search Query"](#) on page 3-29
- ["Activating/Deactivating a Search Query"](#) on page 3-30
- ["Modifying the Advanced Settings Values"](#) on page 3-30

### 3.3.1 Registering the Adapter

To register the Adapter to URM:

1. Open the [Adapter Administration Manager](#).
2. Click the **Connection** link in the navigation hierarchy panel.  
The [Connection Screen](#) is displayed.
3. Enter the applicable information. All fields are required.
4. In the File menu, select **Save**.
5. In the Service menu, select **Start** (*ONLY* if you have already installed the Microsoft Sharepoint feature. See ["Install the Microsoft SharePoint Feature"](#) on page 2-5.

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**Caution:** After you have provided your authentication and connection credentials, you will have access to the remaining screens to complete the configuration process. However, to ensure that the Adapter functions properly, you *MUST* install the Microsoft Sharepoint feature. For installation and overview information about this feature, see ["Install the Microsoft SharePoint Feature"](#) on page 2-5 and ["Microsoft SharePoint Feature Screen"](#) on page 3-34.

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### 3.3.2 Changing the Authentication Information

To change the authentication information for URM registration:

1. In the [Adapter Administration Manager](#), click the **Connection** link in the navigation hierarchy panel.  
The [Connection Screen](#) is displayed.
2. Enter the new information in the URM Configuration pane.
3. In the File menu, select **Save**.  
The Adapter implements the new configuration information.

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**Note:** In some cases, the authentication changes will not be noticed immediately. In this case, you may need to stop and restart the Adapter Service. See ["Stopping and Restarting the Adapter Service"](#) on page 4-7.

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### 3.3.3 Changing the Database Connection

To change the current database connection:

1. In the [Adapter Administration Manager](#), click the **Connection** link in the navigation hierarchy panel.

The [Connection Screen](#) is displayed.

2. Enter the new information in the Database Configuration pane.
3. In the File menu, select **Save**.
4. In the Service menu, select **Stop**.
5. In the Service menu, select **Start**.

The Adapter implements the new configuration information.

### 3.3.4 Activating the Content Retention Feature

To activate the content retention feature you must install the Microsoft Sharepoint feature:

1. In the [Adapter Administration Manager](#), open the **Configuration** link in the navigation hierarchy panel by clicking the plus icon.

2. Click the **Microsoft Sharepoint** link.

The [Microsoft SharePoint Feature Screen](#) is displayed.

3. Click the **Install** button.

The Adapter automatically installs the feature.

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**Caution:** You *MUST* install the Microsoft Sharepoint feature before continuing the configuration process. If the feature is not installed, the Adapter will not start. For more detailed information about the feature, see "[Microsoft SharePoint Feature Screen](#)" on page 3-34.

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**Caution:** You should never uninstall the Microsoft Sharepoint feature unless you are planning to uninstall the Adapter. In this case, you *MUST* uninstall the feature *BEFORE* you uninstall the Adapter. See "[Uninstalling the Adapter](#)" on page 2-13.

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If you uninstall the feature and continue to operate the Adapter, the Adapter is unable to enforce the in-place content management functionality. As a result, users would be able to modify or delete records and frozen items (compromising their integrity).

---

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### 3.3.5 Sorting Field Data Columns

To sort the entries listed on the URM Sources screen based on a specific column:

1. In the [Adapter Administration Manager](#), open the **Configuration** link in the navigation hierarchy panel by clicking the plus icon.
2. Click the **URM Sources** link.

The [URM Sources Screen](#) is displayed.

3. Left-click on a column heading to sort the list in a descending or ascending order. The arrow next to the heading indicates which column has been used to sort the list and in what order. See "[Field Sort Order](#)" on page 3-35.

### 3.3.6 Adding a New URM Adapter Source

To create a URM Adapter source:

1. In the [Adapter Administration Manager](#), click the **URM Sources** link in the navigation hierarchy panel.

The [URM Sources Screen](#) is displayed.

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---

**Note:** If you select the Add Defaults check box on the [URM Sources Screen](#), the Adapter will automatically populate the Establish Field Mappings and Define Custom Fields screens with several pre-defined values. See Steps 4 and 9 below. These are suggested rather than mandatory values.

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---

2. Click **New**.

The [URM Sources Screen: Create New URM Source Screen](#) is displayed.

3. Enter the URM Adapter source and database table names in the appropriate fields.

4. Click **Next**.

The [URM Sources Screen: Create New URM Source Screen - Establish Field Mappings](#) is displayed.

---

**Important:** By default, the Adapter includes entries on this screen for required field mappings. Every URM Adapter source must include these completed mappings. You cannot modify or delete the Record Key / dLongName and Path / dUrl field mappings. However, in the <repository\_field> / dDocTitle field mapping, you may change the Repository Field value but not the URM Field value.

The following required field mappings are listed using the format *Repository Field value / URM Field value*:

- Record Key / dLongName
- Path / dUrl
- *(see below)* / dDocTitle

You must enter a Repository Field value to correspond with dDocTitle. You cannot insert additional mapping entries until this field is complete. You can include optional captions for each mapping by double-clicking the applicable cell and entering the caption text.

Alternatively, you can create a URM content profile that automatically inserts a specified dDocType value (see "[Define a Content Profile in URM for the Adapter](#)" on page 2-5). Otherwise, you must specify the value during the source creation process.

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5. In the Repository Field drop-down list, select a value to correspond with dDocTitle.
6. Right-click any table cell, and select **Add** from the pop-up menu.  
A new row is inserted at the bottom of the Establish Field Mappings pane.
7. Select corresponding options from the Repository Field and URM Field drop-down lists. Entering a caption for the mapped metadata fields is optional.
8. Repeat Steps 6 and 7 to include additional metadata field mappings.
9. Click **Next**.

The [URM Sources Screen: Create New URM Source Screen - Define Custom Fields](#) is displayed.

10. Right-click in any table cell, and select **Add** from the pop-up menu.  
A new row is inserted at the bottom of the Define Custom Fields pane.
11. Enter and/or select the applicable values in the fields to link an SharePoint System metadata field to a new URM custom metadata field.
12. Repeat Steps 10 and 11 to include additional URM custom metadata fields.
13. Click **Finish**.

The Adapter creates the new URM Adapter source and displays the configuration information in the populated Field Mappings and Custom Fields panes.

### 3.3.7 Mapping Metadata Fields

The second step in the procedure to create a new URM Adapter source involves mapping applicable SharePoint System metadata fields to corresponding URM metadata fields. This is done using the URM Adapter source creation wizard that is launched from the [URM Sources Screen](#) by clicking the New button. The process to map metadata fields is included in Steps 6 through 8 of the procedure for [Adding a New URM Adapter Source](#).

### 3.3.8 Defining a URM Custom Metadata Field

The third step in the procedure to create a new URM Adapter source involves defining new URM custom metadata fields and mapping them to applicable SharePoint System metadata fields. This is done using the URM Adapter source creation wizard that is launched from the [URM Sources Screen](#) by clicking the New button. The process to create the custom URM metadata fields is included in Steps 10 and 11 of the procedure for [Adding a New URM Adapter Source](#).

For more detailed information about I/PM Applications and custom metadata fields, refer to the applicable product documentation for Oracle Imaging and Process Management.

### 3.3.9 Double-Mapping Metadata Fields

To double-map an SharePoint System metadata field in a URM Adapter source:

1. In the [Adapter Administration Manager](#), click the **URM Sources** link in the navigation hierarchy panel.  
The [URM Sources Screen](#) is displayed.
2. Map the applicable metadata fields in the Field Mappings pane. See "[Mapping Metadata Fields](#)" on page 3-26.

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---

**Note:** If you are changing the field mappings in an existing URM Adapter source, see "[Editing an Existing URM Adapter Source](#)" on page 3-27.

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3. Map the same SharePoint System metadata field to a URM custom metadata field in the Custom Fields pane. See "[Defining a URM Custom Metadata Field](#)" on page 3-26.

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**Important:** When you use the double-mapping feature, you must select the same SharePoint System metadata field from the Repository Field list in the Field Mappings pane and from the Name list in the Custom Fields pane. For more detailed information, see "[Double-Mapped Metadata Fields](#)" on page 3-6.

---

---

4. In the File menu, select **Save**.

The Adapter establishes the double-mapped metadata field.

### 3.3.10 Viewing the Configuration Data of a URM Adapter Source

To view the configuration data of an existing URM Adapter source:

1. In the [Adapter Administration Manager](#), click the **URM Sources** link in the navigation hierarchy panel.

The [URM Sources Screen](#) is displayed.

2. Select the desired URM Adapter source from the URM Adapter sources drop-down list.
3. The Field Mappings and Custom Fields panes are displayed on the URM Sources screen and are populated with the configuration information of the selected URM Adapter source.

### 3.3.11 Editing an Existing URM Adapter Source

Once you have created a URM Adapter source, it cannot be deleted. However, you can add new entries and selectively modify existing entries.

To edit an existing URM Adapter source:

1. In the [Adapter Administration Manager](#), click the **URM Sources** link in the navigation hierarchy panel.

The [URM Sources Screen](#) is displayed.

2. To add a new field mapping or custom URM field entries:
  - a. Right-click in any table cell in either the Field Mappings pane or the Custom Fields pane, and select **Add** from the pop-up menu.  
A new row is inserted at the bottom of the pane.
  - b. Enter and/or select the applicable values.
3. To add or modify the caption values of new or existing field mappings and/or custom URM fields:
  - a. Double-click any **Caption** cell in the Field Mappings pane or the Custom Fields pane.
  - b. Enter the desired text for the caption.
4. To add or modify the default value of a new or existing custom URM field:
  - a. Double-click on the **Default Value** cell in the Custom Fields pane.
  - b. Enter the desired text for the caption.
5. To enable or disable the attributes of a new or existing custom URM field:
  - a. Locate the desired custom field entry.
  - b. Select or clear one of the following attribute check boxes:
    - Enabled check box
    - Required check box
    - Searchable check box

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**Important:** The changes you make on the populated URM Sources screen can be edited and deleted until you save them (File menu and the Save option). After saving, the new field mappings and URM custom metadata fields are permanent.

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6. In the File menu, select **Save**.

### 3.3.12 Defining a New Search Query

To define a new search query:

1. In the [Adapter Administration Manager](#), click the **Search Creation** link in the navigation hierarchy panel.  
The [Search Creation Screen](#) is displayed.
2. Click **New**.  
The [Search Creation Screen: Create new search Screen](#) is displayed.
3. Enter the name of the new search query in the Search Name field.
4. Click **OK**.  
The Search Archives and Search Equation panes are displayed on the Search Creation screen.
5. In the Search Archives pane, select the storage locations in the SharePoint System that this search query will browse to find matching content items.
6. In the Search Equation pane, right-click in the initial parenthesis to add either an expression grouping or an expression.
7. Complete the search query using the search equation functions. For more detailed information about query construction, see "[Construction of Search Queries](#)" on page 3-17 and "[Search Creation Screen: Equation Editor](#)" on page 3-46.
8. In the File menu, select **Save**.  
The Adapter creates the new search query and includes it in the defined searches drop-down list.

### 3.3.13 Editing a Search Query

To modify the variables or structure of an existing search query:

1. In the [Adapter Administration Manager](#), click the **Search Creation** link in the navigation hierarchy panel.  
The [Search Creation Screen](#) is displayed.
2. Select the desired search query from the defined searches drop-down list.  
The configuration information for the selected search query is displayed in the Search Archives and Search Equation panes.
3. Edit the information as necessary. For more detailed information about query construction, see "[Construction of Search Queries](#)" on page 3-17 and "[Search Creation Screen: Equation Editor](#)" on page 3-46.
4. In the File menu, select **Save**.

---

The Adapter saves the changes and implements the new configuration information

### 3.3.14 Duplicating and Editing a Search Query

To duplicate and then modify the variables or structure of an existing search query:

1. In the [Adapter Administration Manager](#), click the **Search Creation** link in the navigation hierarchy panel.

The [Search Creation Screen](#) is displayed.

2. Select a search query from the defined searches drop-down list or create a new search query. See "[Defining a New Search Query](#)" on page 3-28.

The selected search query is displayed in the Search Equation pane.

3. Click **Save As**.

The Save search as screen is displayed.

4. Enter the name of the copied search query and click **OK**.

The Adapter duplicates the original search query and displays the new (copied) search query in the Search Equation pane.

5. Edit the information as necessary. For more detailed information about query construction, see "[Construction of Search Queries](#)" on page 3-17 and "[Search Creation Screen: Equation Editor](#)" on page 3-46.

6. In the File menu, select **Save**.

The Adapter saves the changes and implements the new configuration information.

### 3.3.15 Deleting a Search Query

To delete an existing search query:

1. In the [Adapter Administration Manager](#), click the **Search Creation** link in the navigation hierarchy panel.

The [Search Creation Screen](#) is displayed.

2. Select a search query from the defined searches drop-down list.

3. Click **Delete**.

You are asked to verify that you want to delete the displayed search query.

4. Click **Yes**.

The default Search Creation screen is displayed.

---

---

**Note:** If you have mapped the selected search query to a URM Adapter source and a URM retention category, the Adapter automatically removes the mapping from the Search Mapping list when you delete the selected search query.

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### 3.3.16 Mapping a Search Query

To map search queries to URM Adapter sources and URM retention categories:

1. In the [Adapter Administration Manager](#), select the **Search Mapping** link in the navigation hierarchy panel.  
The [Search Mapping Screen](#) is displayed.
2. Enter the applicable values in the fields for each search query.
3. In the File menu, select **Save**.  
The Adapter saves the changes and implements the new configuration information.

### 3.3.17 Activating/Deactivating a Search Query

To activate or deactivate a search query:

1. In the [Adapter Administration Manager](#), click the **Search Mapping** link in the navigation hierarchy panel.  
The [Search Mapping Screen](#) is displayed.
2. Locate the search query that you want to activate or deactivate and select or clear the **Enabled** check box as necessary.
3. In the File menu, select **Save**.  
The Adapter saves the changes and implements the new configuration information.

### 3.3.18 Modifying the Advanced Settings Values

To modify one or more of the advanced settings:

1. In the [Adapter Administration Manager](#), select the **Advanced** link in the navigation hierarchy panel.  
The [Advanced Screen](#) is displayed.
2. Enter the applicable values in the appropriate fields.
3. In the File menu, select **Save**.
4. In the Service menu, select **Stop**.
5. In the Service menu, select **Start**.  
The Adapter implements the new configuration information.

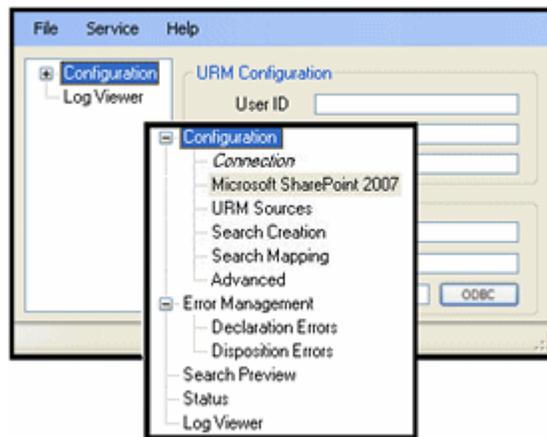
## 3.4 The Configuration User Interface

This section covers the following topics:

- ["Adapter Administration Manager"](#) on page 3-31
- ["Connection Screen"](#) on page 3-33
- ["Microsoft SharePoint Feature Screen"](#) on page 3-34
- ["Field Sort Order"](#) on page 3-35
- ["URM Sources Screen"](#) on page 3-36
- ["URM Sources Screen: Pop-up Menus"](#) on page 3-38
- ["URM Sources Screen: Create New URM Source Screen"](#) on page 3-39

- "URM Sources Screen: Create New URM Source Screen - Establish Field Mappings" on page 3-40
- "URM Sources Screen: Create New URM Source Screen - Define Custom Fields" on page 3-42
- "Search Creation Screen" on page 3-44
- "Search Creation Screen: Create new search Screen" on page 3-45
- "Search Creation Screen: Equation Editor" on page 3-46
- "Equation Editor: Expression Design Pop-up Menus" on page 3-48
- "Equation Editor: Field Variable Pop-up Menus" on page 3-49
- "Equation Editor: Operator Variable Pop-up Menus" on page 3-50
- "Equation Editor: Value Variable Text Field" on page 3-51
- "Equation Editor: Value Variable Drop-down Calendar" on page 3-51
- "Search Mapping Screen" on page 3-52
- "Advanced Screen" on page 3-55

### 3.4.1 Adapter Administration Manager



The Adapter Administration manager is the component interface that provides access to the user-controlled functions of the Adapter. You can access the Adapter Administration manager by clicking the Adapter icon located on your computer's desktop.

Element	Description
File menu	Save: Saves the settings on the current screen. Save All: Saves the settings on all the screens. Exit: Closes the Adapter Configuration manager.

Element	Description
Service menu	<p>Start: Starts the Adapter Service. This option is enabled only if the service is stopped. By default, when you start up the Adapter Service, the Adapter Service is stopped unless you have configured it to start automatically. See "<a href="#">Stopping and Restarting the Adapter Service</a>" on page 4-7.</p> <p>Stop: Stops the Adapter Service. This option is enabled only if the service is started.</p> <p>Restart: Restarts the Adapter Service in one step rather than stopping and restarting the service.</p> <p>Status: Displays the Service status dialog that displays the current operational state of the Adapter.</p>
Help menu	About: Displays version, build, and copyright information for the Adapter.
Navigation tree	The navigation tree is an organized hierarchy that lists links to access the configuration and administration screens. Use the plus and minus icons unfold or collapse additional links for related screens.
Connection link	Used to provide authentication information to URM. Displays the <a href="#">Connection Screen</a> .
Microsoft Sharepoint link	Used to install and uninstall the Microsoft Sharepoint feature that enables you to retain content items within the SharePoint repository rather than checking them into URM. Displays the <a href="#">Microsoft SharePoint Feature Screen</a> .
URM Sources link	Used to add URM Adapter sources and define their respective field mappings and custom fields. Displays the <a href="#">URM Sources Screen</a> .
Search Creation link	Used to create searches. Displays the <a href="#">Search Creation Screen</a> .
Search Mapping link	Used to assign specific searches for each URM Adapter source. Displays the <a href="#">Search Mapping Screen</a> .
Advanced link	Used to fine tune the Adapter's operations. Displays the <a href="#">Advanced Screen</a> .
Declaration Errors link	Used to view number and types of declaration errors. Displays the <a href="#">Error Management: Declaration Errors Screen</a> .
Disposition Errors link	Used to view the number and types of disposition errors. Displays the <a href="#">Error Management: Disposition Errors Screen</a> .
Search Preview link	Used to preview the results of a search query. Displays the <a href="#">Search Preview Screen</a> .
Status link	Used to monitor the overall status of the Adapter. Displays the <a href="#">Status: Adapter Status Tab</a> and <a href="#">Status: Service Status Tab</a> .
Log Viewer link	Used to monitor the daily log files that contain all of the Adapter's generated messages. Displays the <a href="#">Log Viewer Screen</a> .

### 3.4.2 Connection Screen

Use the Connection screen to provide authentication information to URM. This ensures that URM knows that the Oracle URM Adapter for Microsoft SharePoint 2007 is an authorized Adapter. When the Adapter registers itself, then URM knows about the SharePoint System and is ready to manage content stored within that repository. By default, the Connection screen is displayed when you activate the Adapter.

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**Note:** You will need to provide authentication credentials when you start the Adapter. The Adapter user and applicable credentials are initially created when URM is set up and configured. During this process, the administrator assigns the appropriate rights and roles to the Adapter user and ensures that the designated privileges enable successful connection authentication.

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**Caution:** After you have provided your authentication and connection credentials, you will have access to the remaining screens to complete the configuration process. However, to ensure that the Adapter functions properly, you **MUST** install the Microsoft Sharepoint feature. For installation and overview information about this feature, see "[Install the Microsoft SharePoint Feature](#)" on page 2-5 and "[Microsoft SharePoint Feature Screen](#)" on page 3-34.

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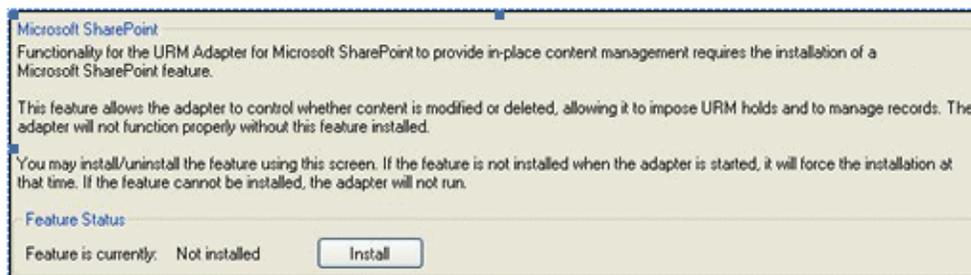
#### URM Configuration pane:

Element	Description
User ID field	A valid user account name that is recognized by URM.
Password field	An encrypted series of characters associated with the specified URM User Id.
URI/URL field	The URM Server's web address. <b>Important:</b> If you connect to URM 11g, then the URI must include "_dav" immediately following the server port. For example: <code>http://server:port/_dav/urm/IDCPLG.</code>

**Database Configuration pane:**

Element	Description
User ID field	A valid user account name that is recognized by the SharePoint System.
Password field	An encrypted series of characters associated with the specified SharePoint System User Id.
ODBC DSN field	The name of the ODBC data source used by the Adapter Configuration manager and the Adapter (when it is running) to connect to the Adapter database.  <b>Note:</b> The Adapter database stores the configuration data. This includes the created searches and the URM Adapter source names and definitions.
ODBC button	Opens the ODBC Data Source Administrator tool.

### 3.4.3 Microsoft SharePoint Feature Screen



Use the Microsoft Sharepoint feature screen to install and uninstall the content retention feature. The current status of the feature is displayed along with a corresponding button that toggles between Install and Uninstall actions. You can access this screen by clicking the **Microsoft Sharepoint** link in the navigation hierarchy on the [Adapter Administration Manager](#).

When installed, the Microsoft Sharepoint feature enables the Adapter to restrict operations (such as modifications or deletions) on content items that are records or have been frozen. Consequently, you will not need to perform internal checkins (moving content into URM) because this feature ensures that content items are preserved over their retention period and properly purged when necessary.

---

**Caution:** You *MUST* install the Microsoft Sharepoint feature before continuing the configuration process. If the feature is not installed, the Adapter will not start.

---

**Caution:** You should never uninstall the Microsoft Sharepoint feature unless you are planning to uninstall the Adapter. In this case, you **MUST** uninstall the feature **BEFORE** you uninstall the Adapter. See "[Uninstalling the Adapter](#)" on page 2-13.

If you uninstall the feature and continue to operate the Adapter, the Adapter is unable to enforce the in-place content management functionality. As a result, users would be able to modify or delete records and frozen items (compromising their integrity).

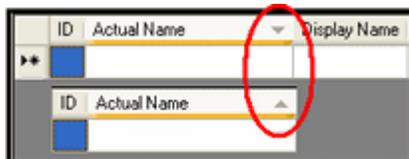
**Microsoft Sharepoint pane:**

Element	Description
Text area	Provides a brief description of the Microsoft Sharepoint feature.

**Feature Status pane:**

Element	Description
Feature state	<p><b>Installed:</b> Indicates that the feature is currently installed.</p> <p><b>Uninstalled:</b> Indicates that the feature is currently not installed. This is the default state.</p>
Install/Uninstall button	Clicking this button initiates the installation or uninstallation process for the feature.

**3.4.4 Field Sort Order**



On the [URM Sources Screen](#), you can click on column headings to sort the lists in either ascending or descending order. When you click on a column heading, the entire list is resorted based on that column. After you click on a column, a small arrow is displayed next to the heading, indicating which column has been used to sort the list and in what order (ascending or descending).

### 3.4.5 URM Sources Screen

The screenshot shows the 'URM Source - Details' window. At the top, there is a 'New' button and a dropdown menu. Below this, the 'Field Mappings' table is displayed with the following data:

Caption	Repository Field	URM Field	Status
	Author	dDocAuthor	✓
	Created	dCreateDate	✓
	Record Key	dLongName	✓
	"ADACCT"	dDocType	✓
	Path	dUrl	✓
	Title	dDocTitle	✓

Below the Field Mappings table is the 'Custom Fields' table with the following data:

Name	Caption	Default Value	Type	Enabled	Required	Searchable	Status
FileExtension			Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
Filename			Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓
Size			Int	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	✓

Use the URM Sources screen to create new URM Adapter sources and view the configuration data of existing URM Adapter sources. URM Adapter sources are associated with content categories in the SharePoint System. By default, the URM Sources screen is blank when it opens. However, if you select an existing URM Adapter source from the drop-down list, all of the configured data for that URM Adapter source is displayed.

The populated URM Sources screen consists of three information panes: Details, Field Mappings, and Custom Fields (as shown in the inset). This data is derived from the three-part wizard used to create new URM Adapter sources. You can access this screen by clicking the **URM Sources** link in the navigation hierarchy on the [Adapter Administration Manager](#).

---

**Important:** You cannot delete a URM Adapter source after it is created. However, you can add new entries and selectively modify existing entries. See "[Editing an Existing URM Adapter Source](#)" on page 3-27 and "[URM Sources Screen: Pop-up Menus](#)" on page 3-38.

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**Note:** The features of existing Field Mapping and Custom Fields entries that you can modify after the URM Adapter source is created include:

- New entries can be added to both the Field Mappings and the Custom Fields panes.
  - Caption values can be added or edited in all of the entries in both the Field Mappings and the Custom Fields panes.
  - Default values can be added or edited in all of the entries in the Custom Fields pane.
  - All of the attribute check boxes can be enabled or disabled for all of the entries in the Custom Fields pane.
-

**Default screen display:**

Element	Description
New button	Displays the <a href="#">URM Sources Screen: Create New URM Source Screen</a> .
URM Adapter sources drop-down list	Lists the existing URM Adapter sources. Selecting a URM Adapter source from the lists displays all of its configuration data in the Details pane.
URM Source - Details pane	If a URM Adapter source is selected from the drop-down list, all of the associated configuration data is displayed in this pane. This includes the table and repository names, established field mappings, and defined custom fields.

**Details pane:**

The values for the following features are entered when you create a new URM source. For more detailed information about each feature, see "[URM Sources Screen: Create New URM Source Screen](#)" on page 3-39.

Element	Description
Caption	The caption assigned to the URM Adapter source when it is created.
Table	The name of the URM database table created for this URM Adapter source.
Repository	The name of the repository associated with this URM Adapter source where the managed content items are stored.

**Field Mappings pane:**

The values for the following features are entered when you establish the field mappings for the new URM source. For more detailed information about each feature, see "[URM Sources Screen: Create New URM Source Screen - Establish Field Mappings](#)" on page 3-40.

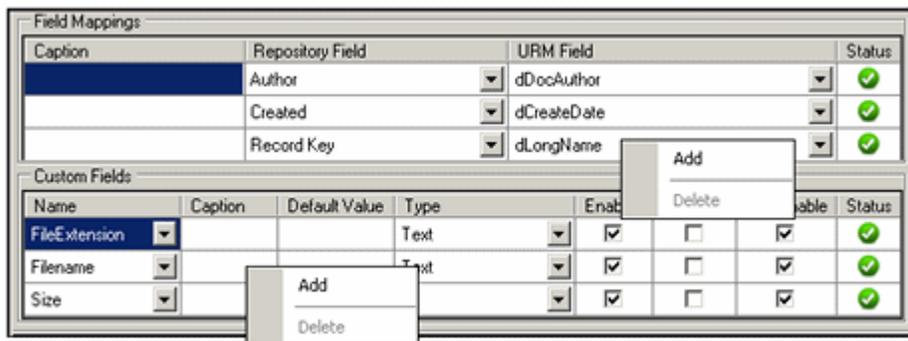
Element	Description
Caption field	The descriptive name used to identify the mapped pair of metadata fields.
RepositoryField drop-down list	The name of the source metadata field in the mapped pair of metadata fields.
URM Field drop-down list	The name of the target metadata field in the mapped pair of metadata fields.
Status field	<p>Icons and tool tips indicate an entry's general condition and whether a particular mapping is acceptable or problematic (i.e. some mapped metadata fields may require data truncation).</p> <p><b>Note:</b> The scissors icon used in the Status column indicates that the data in the SharePoint System metadata field could potentially be truncated because the length of this field is larger than the corresponding mapped URM metadata field.</p> <p>This means that some of the original data could be lost when the Adapter transmits the declaration data to URM. To avoid this, you can use the double-mapping feature. See "<a href="#">Double-Mapped Metadata Fields</a>" on page 3-6 or "<a href="#">Field Lengths and Double-Mapping</a>" on page A-3.</p>

**Custom Fields pane:**

The values for the following features are entered when you define the custom fields for the new URM source. For more detailed information about each feature, see "[URM Sources Screen: Create New URM Source Screen - Define Custom Fields](#)" on page 3-42.

Element	Description
Name drop-down list	The name of the source metadata field in the mapped pair of metadata fields.
Caption field	The display name of the URM custom metadata field in the mapped pair of metadata fields.
Default Value field	The assigned value for the URM custom metadata field.
Type drop-down list	The classification type for the data associated with the URM custom metadata field.
Enabled check box	Indicates whether the URM custom metadata field is displayed on various URM pages.
Required check box	Indicates whether the URM custom metadata field accepts or rejects managed content data information into URM Adapter source databases.
Searchable check box	Indicates whether the URM custom metadata field can be used as search criteria.
Status field	<p>Icons and tool tips indicate an entry's general condition and whether a particular mapping is acceptable or problematic (i.e. some mapped metadata fields may cause data truncation).</p> <p><b>Note:</b> The scissors icon used in the Status column indicates that the data in the SharePoint System metadata field could potentially be truncated because the length of this field is larger than the corresponding mapped URM metadata field.</p> <p>This means that some of the original data could be lost when the Adapter transmits the declaration data to URM. To avoid this, you can use the double-mapping feature. See "<a href="#">Double-Mapped Metadata Fields</a>" on page 3-6 or "<a href="#">Field Lengths and Double-Mapping</a>" on page A-3.</p>

**3.4.6 URM Sources Screen: Pop-up Menus**



After a URM Adapter source is created, it cannot be deleted. However, it can be modified by inserting additional field mappings and URM custom metadata fields. You can also edit various field values in the existing URM custom metadata field entries. See "[URM Sources Screen](#)" on page 3-36 and "[Editing an Existing URM Adapter Source](#)" on page 3-27.

---

**Important:** The changes you make on the populated URM Sources screen can be edited and deleted until you save them (File menu and the Save option). After saving, the new field mappings and URM custom metadata fields are permanent.

---

Element	Description
Add/Delete field mappings pop-up menu	<p>Right-clicking in any table cell opens this menu.</p> <p><b>Add:</b> Inserts a new entry that enables you to add another complete mapping. The columns are populated in a similar manner as Step 2 when using the URM Adapter source creation wizard. See "<a href="#">URM Sources Screen: Create New URM Source Screen - Establish Field Mappings</a>" on page 3-40.</p> <p><b>Delete:</b> Removes the selected entry.</p>
Add/Delete custom fields pop-up menu	<p>Right-clicking in any table cell opens this menu.</p> <p><b>Add:</b> Inserts a new entry that enables you to add another complete mapping. The columns are populated in a similar manner as Step 3 when using the URM Adapter source creation wizard. See "<a href="#">URM Sources Screen: Create New URM Source Screen - Define Custom Fields</a>" on page 3-42.</p> <p><b>Delete:</b> Removes the selected entry.</p>
Existing custom field captions and default values	<p>Double-clicking in an existing Custom Fields' caption or Default table cell enables you to enter a new value.</p>

### 3.4.7 URM Sources Screen: Create New URM Source Screen

The screenshot shows a wizard window titled 'Step 1 of 3'. The 'General' section contains the following fields:

- Name:** [Empty text box]
- Caption:** [Empty text box]
- Table:** [Empty text box]
- Repository:** Microsoft SharePoint (dropdown menu)
- Add Defaults:**

The 'Repository Fields' section contains a table with the following data:

Type	Name	Size
Id	Id	36
Time Modified	Time Modified	
File Name	File Name	256

At the bottom, there are 'Next' and 'Cancel' buttons.

This screen is Step 1 of a three-part wizard used to collect the necessary information to create a new URM Adapter source. In this step, you provide general information about the URM Adapter source. The field values entered on this screen are used to populate the fields in the Details pane on the URM Sources screen. You can access this screen by clicking the New button on the [URM Sources Screen](#).

#### General pane:

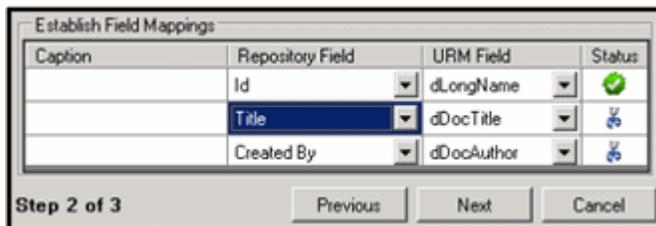
Element	Description
Name field	The descriptive name of the URM Adapter source to be added. This name corresponds to URM's dSource metadata field.

Element	Description
Caption field	The name assigned to the new URM Adapter source and displayed on the populated <a href="#">URM Sources Screen</a> for a selected URM Adapter source.
Table field	A valid URM database table name. This name corresponds to URM's dTable metadata field. During the process of creating a URM Adapter source, a new custom table is created in URM's database to store necessary data and records for the controlled content in the SharePoint System that is associated with this URM Adapter source. Each URM Adapter source, then, retains a dedicated database table.  <b>Note:</b> The URM Adapter source creation wizard performs basic error checking. However, it is recommended that you avoid using non-characters when naming your URM Adapter source database table. For example, spaces are not allowed.
Repository drop-down list	Lists the names of available repositories that can be associated with the URM Adapter source being created. The URM-controlled documents associated with this URM Adapter source are stored in the selected repository.
Add Defaults check box	<b>Selected/Clear:</b> Currently, this feature is not supported. Selecting or clearing the check box has no effect on the entries in the Field Mappings and Custom Fields panes.

**Repository Fields pane:**

Element	Description
Repository Fields table	For reference purposes, this table lists all of the archive metadata field names.  <b>Type:</b> Icons and tool tips specify the type of data the field holds. For example, string, date, integer, etc.  <b>Name:</b> The names of the available metadata fields in the SharePoint System.  <b>Size:</b> Specifies the maximum lengths for each field.
Next button	When enabled, proceeds to the next screen (step) in this multistep procedure to create a URM Adapter source.
Cancel button	Closes the create new URM Adapter source wizard without saving any configuration data and does not add the new URM Adapter source.

**3.4.8 URM Sources Screen: Create New URM Source Screen - Establish Field Mappings**



This screen is Step 2 of a three-part wizard used to collect the necessary information to create a new URM Adapter source. In this step, you map SharePoint System metadata fields to corresponding URM metadata fields. The field values entered on this screen are used to populate the fields in the Field Mappings pane on the URM Sources screen. You can access this screen by clicking the Next button on the [URM Sources Screen](#).

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**Important:** The metadata field mappings are one-to-one only. When a metadata field is selected for a pairing, it cannot be selected again for a different pairing.

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**Important:** By default, the Adapter includes entries on this screen for required field mappings. Every URM Adapter source must include these completed mappings. You cannot modify or delete the Record Key / dLongName and Path / dUrl field mappings. However, in the *<repository\_field>* / dDocTitle field mapping, you may change the Repository Field value but not the URM Field value.

The following required field mappings are listed using the format *Repository Field value / URM Field value*:

- Record Key / dLongName
- Path / dUrl
- *(see below)* / dDocTitle

You must enter a Repository Field value to correspond with dDocTitle. You cannot insert additional mapping entries until this field is complete. You can include optional captions for each mapping by double-clicking the applicable cell and entering the caption text.

Alternatively, you can create a URM content profile that automatically inserts a specified dDocType value (see "[Define a Content Profile in URM for the Adapter](#)" on page 2-5). Otherwise, you must specify the value during the source creation process.

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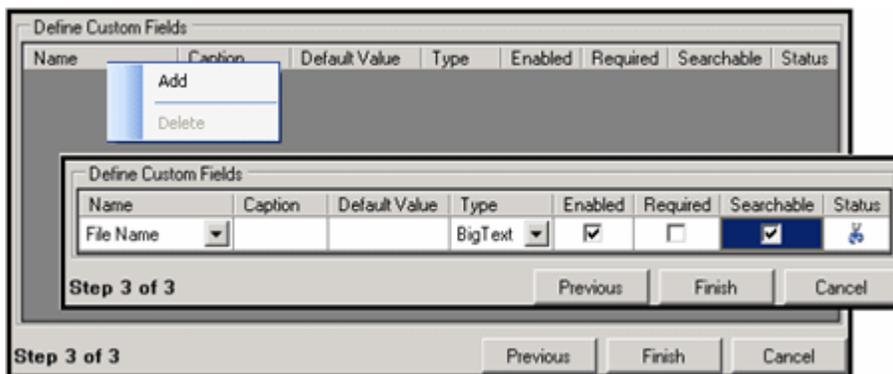


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Element	Description
Caption field	The descriptive name used to identify the mapped pair of metadata fields. You can include optional captions for each mapping by double-clicking the applicable cell and entering the caption text.

Element	Description
Repository Field drop-down list	<p>Lists the available SharePoint System metadata fields that can be mapped to corresponding URM metadata fields. The list includes the available archive metadata fields.</p> <p><b>Tip:</b> In the Repository Field, you are allowed to enter a string literal value (the Literal Text value) and map it to a URM metadata field. You do not need to enclose the value in quotes because the URM Adapter source creation wizard automatically enters them.</p> <p><b>Example:</b> Select Literal Text from the Repository Field drop-down list, enter the string Email, and map it to the dMediaType URM metadata field. Then, every time content information is reported (declaration data), URM assigns a value of Email to the dMediaType metadata field.</p>
URM Field drop-down list	Lists the available URM metadata fields that can be mapped to the SharePoint System metadata field selected from the Repository Field drop-down list.
Status field	<p>Icons and tool tips indicate a particular mapping's general condition and whether it is acceptable or problematic (i.e., some mapped metadata fields may cause data truncation).</p> <p><b>Note:</b> The scissors icon used in the Status column indicates that the data in the SharePoint System metadata field could potentially be truncated because the length of this field is larger than the corresponding mapped URM metadata field.</p> <p>This means that some of the original data could be lost when the Adapter transmits the declaration data to URM. To avoid this, you can use the double-mapping feature. See "<a href="#">Double-Mapped Metadata Fields</a>" on page 3-6 or "<a href="#">Field Lengths and Double-Mapping</a>" on page A-3.</p>
Previous button	When enabled, returns you to the previous screen (step) to change values.
Next button	When enabled, proceeds to the next screen (step) in this multistep procedure to create a URM Adapter source.
Cancel button	Closes the create new URM Adapter source wizard without saving any configuration data and does not add the new URM Adapter source.

### 3.4.9 URM Sources Screen: Create New URM Source Screen - Define Custom Fields



This screen is Step 3 of a three-part wizard used to collect the necessary information to create a new URM Adapter source. In this step, you create URM custom metadata fields that can be mapped to SharePoint System metadata fields. By default, the screen displays only the column headings. You must add the first and all subsequent entries.

The inset illustrates a completed entry inserted using the Add pop-up menu option. The field values entered on this screen are used to populate the fields in the Custom

Fields pane on the URM Sources screen. You can access this screen by clicking the Next button on the [URM Sources Screen](#).

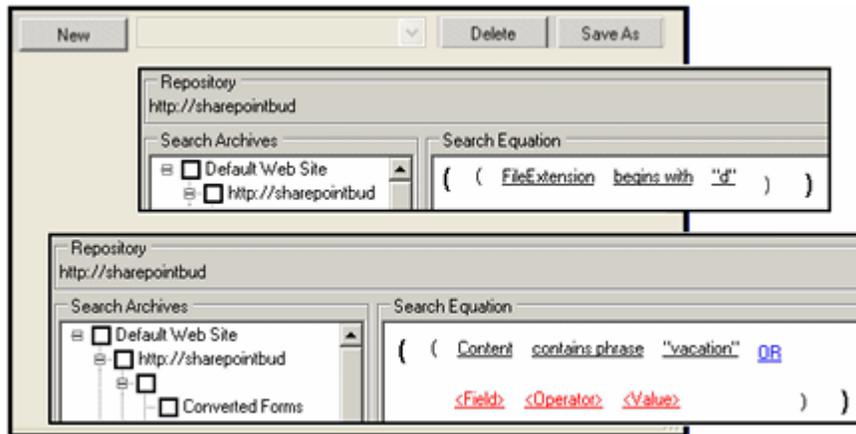
Some SharePoint System metadata fields do not logically correspond to any of the available URM metadata fields and, therefore, cannot be appropriately mapped. However, this screen enables you to create custom metadata fields for URM that can then be mapped to these unique SharePoint System metadata fields.

These URM custom metadata fields are displayed in URM on the Create sourcename Item page for a specific URM Adapter source that is listed in the External Content tray. When enabled, the URM custom metadata fields are also included on the item's Content Information page. For more information about URM custom metadata fields, see "[URM Custom Metadata Fields](#)" on page 3-5.

Element	Description
Add/Delete pop-up menu	<p>Right-clicking in any table cell opens this menu.</p> <p><b>Add:</b> Inserts a new entry that enables you to add another URM custom metadata field that is linked to an SharePoint System metadata field.</p> <p><b>Delete:</b> Removes the selected entry.</p>
Name drop-down list	<p>Lists all of the SharePoint System archive metadata field names. However, any SharePoint System metadata fields that were mapped during Step 2 of the URM Adapter source creation process are not included in this list because they can only be mapped once.</p>
Caption field	<p>The descriptive name of the URM custom metadata field that is displayed on the URM Adapter source's Create sourcename Item page and the item's Content Information page in URM. See "<a href="#">URM Custom Metadata Fields</a>" on page 3-5.</p> <p>Entering a value is optional. However, if you do not enter a value, then, by default, the repository name of the mapped SharePoint System metadata field (from the Name drop-down list) is used on the URM pages.</p> <p>For example, if the repository name of the metadata field is SMTP_CC and a caption such as Carbon Copy is not entered, then SMTP_CC is displayed on the applicable URM pages.</p>
Default Value field	<p>The assigned value for the metadata field. Some documents do not have a complete set of metadata values associated with them. This field enables you to supply the missing value. For example, you can enter the value 'None' in this field and if a value is not available, the value 'None' is inserted.</p>
Type drop-down list	<p>Lists the available classification types of information that can be used as the value for this custom metadata field. In this case, this metadata field is not the primary key in the database table. Therefore, you must specify the actual data type to be entered into this field. Possible values include: Text, BigText, Checkbox, Date, Int, and Memo.</p>
Enabled check box	<p><b>Selected:</b> In URM, configures this field to be displayed on the URM Adapter source's Create <i>sourcename</i> Item page and the item's Content Information page.</p> <p><b>Clear:</b> This field is not displayed on URM pages. This is the default setting.</p>

Element	Description
Required check box	<p><b>Selected:</b> Prevents managed content data from being accepted into URM without entering a value.</p> <p><b>Clear:</b> Allows managed content data to be accepted into URM without entering a value. This is the default setting.</p>
Searchable check box	<p><b>Selected:</b> In URM, enables users to use this field as search criteria on the Search <i>sourcename</i> Item page. This means that you can use this field to search the data records for information about specific managed content items. See "<a href="#">Searchable URM Custom Metadata Fields</a>" on page 3-5.</p> <p><b>Clear:</b> In URM, this field is not displayed on the Search <i>sourcename</i> Item page. This is the default setting.</p>
Status field	Icons and tool tips indicate a particular custom field's general condition and whether the entry is acceptable or problematic (i.e. some mapped metadata fields may cause data truncation).
Previous button	When enabled, returns you to the previous screen (step) to change values.
Next button	When enabled, proceeds to the next screen (step) in this multistep procedure to create a URM Adapter source.
Cancel button	Closes the create new URM Adapter source wizard without saving any configuration data and does not add the new URM Adapter source.

### 3.4.10 Search Creation Screen



Use the Search Creation screen to design new repository queries or modify existing repository queries. The queries are used to perform the searches in the SharePoint System to gather new or updated information about the managed content items. Each repository query is associated with a specific URM Adapter source. You can access this screen by clicking the **Search Creation** link in the navigation hierarchy on the [Adapter Administration Manager](#).

By default, the Search Creation screen does not display the Search Archives and Search Equation panes when it opens. However, if you select an existing repository query from the drop-down list, the fully configured query information is displayed in two editable panes: Search Archives and Search Equation. See the inserts above.

You have the option to modify an existing query or duplicate it with a new name and modify the copy. Or, you can create a new search using the equation editor. The basic expression is shown in the first insert above. This provides the basis for the new search

equation. You can also develop complex boolean expression groupings as shown in the second insert above.

---

**Important:** The first time the Adapter Service starts, it performs an initial search in the SharePoint System (executing all the defined search queries). During this search, the Adapter Service not only looks for new content item checkins, but it also searches the repository in reverse chronological order to collect historical data for URM.

Content items that match the search criteria are assigned appropriate retention schedules. After the processing is complete, the relevant content items are marked complete and are not returned in future searches because their data has been checked into URM. Therefore, if you create and run a subsequent search query that has a higher priority, the query will not change the assigned retention schedule of previously declared content items.

For more information about the priority for search queries, see the up and down arrow descriptions on the [Search Mapping Screen](#).

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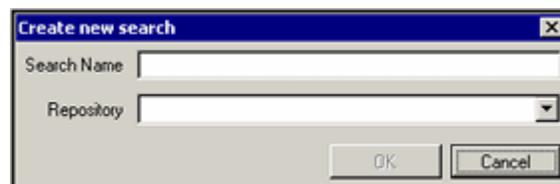
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**Important:** It is recommended that you define one or more content profiles in URM before you use any search queries to process new or historical content in the SharePoint System. For more detailed information about content profiles and their importance in the search process, see "[Define a Content Profile in URM for the Adapter](#)" on page 2-5.

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Element	Description
New button	Displays the <a href="#">Search Creation Screen: Create new search Screen</a> .
Defined searches drop-down list	Lists the existing search queries that are currently defined. These queries are available for modification as necessary or are ready for search mapping. See " <a href="#">Search Mapping Screen</a> " on page 3-52.
Delete button	Removes the selected search query and related data from the Adapter database table. The deleted query is not included in the drop-down list of defined searches nor is it listed in the column of Search Names on the Search Mapping screen.
Save As button	Saves a duplicate of an existing query under a different name.

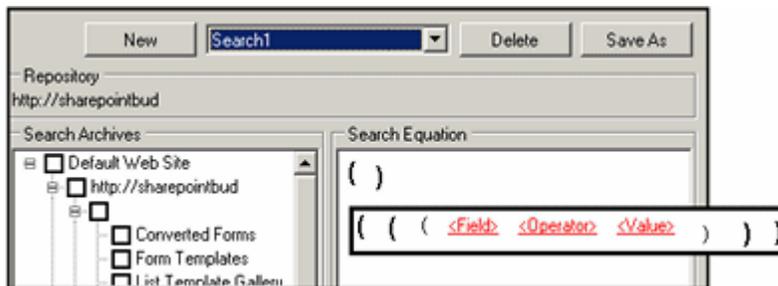
### 3.4.11 Search Creation Screen: Create new search Screen



Use the Create new search screen to provide a descriptive name for the new search query. You can access this screen by clicking the **New** button on the [Search Creation Screen](#).

Element	Description
Search Name field	The descriptive name of the new query.
Repository drop-down list	When applicable, lists the available repositories. The selected repository is linked to the search query being created and is displayed on the populated Search Creation screen. See the information about the Repository pane on " <a href="#">Search Creation Screen: Equation Editor</a> " on page 3-46.
OK button	Generates a new search query with the assigned Search Name and displays the initial equation parenthesis on the <a href="#">Search Creation Screen: Equation Editor</a> .
Cancel button	Closes the Create new search screen without generating a new search query.

### 3.4.12 Search Creation Screen: Equation Editor



After you generate a new search query, the Search Creation screen refreshes and displays the default components of the equation editor screen: the collapsed SharePoint System storage tree and an initial set of empty equation parenthesis. The inset shows the initial basic expression construct.

You use the following menus to build a search query:

- [Equation Editor: Expression Design Pop-up Menus](#)
- [Equation Editor: Field Variable Pop-up Menus](#)
- [Equation Editor: Operator Variable Pop-up Menus](#)
- [Equation Editor: Value Variable Text Field](#)
- [Equation Editor: Value Variable Drop-down Calendar](#)

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**Note:** For information about the buttons and list at the top of the screen, see "[Search Creation Screen](#)" on page 3-44.

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**Note:** For information about the buttons and list at the top of the screen, see "[Search Creation Screen](#)" on page 3-44.

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**Repository pane:**

Element	Description
Repository name	Lists the repository associated with the search query being created.

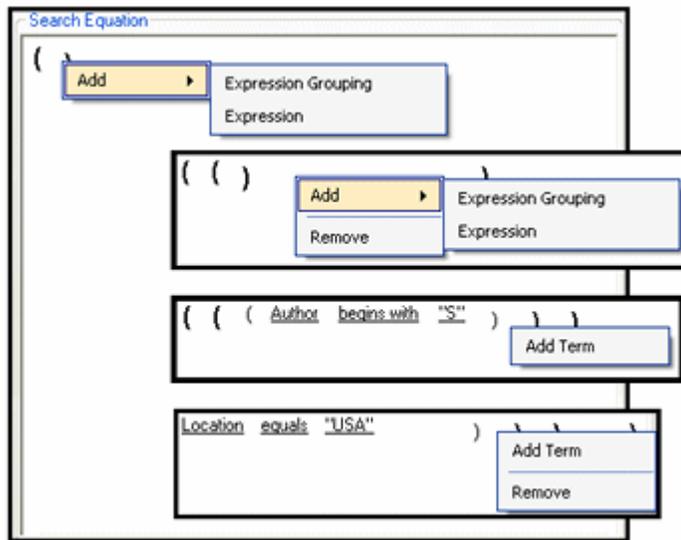
**Search Archives pane:**

Element	Description
Search Archives storage tree check boxes	<p>By default, only the SharePoint repository selected on the <a href="#">Search Creation Screen</a> is initially displayed. This is the top level of the repository storage tree. The repository storage tree is an organized hierarchy that consists of the SharePoint content subdivisions.</p> <p>Use the plus and minus icons in front of the check boxes to unfold or collapse the child locations. Use the check boxes to select the storage locations that this search query will browse to find matching content items.</p> <p><b>Note:</b> The storage locations are created and named when the SharePoint System is initially configured. There is only one SharePoint System, but multiple subordinate child storage locations. The Adapter obtains the storage tree names from the SharePoint System and displays them in their hierarchical order.</p>

**Search Equation pane:**

Element	Description
Equation editor pop-up menus	<p>By default, the only equation components displayed on this screen are the initial set of expression parenthesis. Right-clicking on them displays the Add pop-up menu. Selecting the Expression option generates the construct shown in the inset above.</p> <p>As additional expressions are added to create compound boolean expressions, right-clicking near the internal parenthesis can also display the Add/Remove pop-up menu and the Add Term pop-up menu.</p> <p>For more information about these menus, see "<a href="#">Equation Editor: Expression Design Pop-up Menus</a>" on page 3-48.</p>
Field variable	<p>Left-clicking the Field variable displays the Field pop-up menu (see "<a href="#">Equation Editor: Field Variable Pop-up Menus</a>" on page 3-49). This menu lists all the display or caption names of the archive metadata fields in the SharePoint System.</p>
Operator variable	<p>Depending on the option selected for the Field variable, left-clicking the Operator variable displays the Date/number pop-up menu, the AND/OR boolean pop-up menu, or the Text pop-up menu (see "<a href="#">Equation Editor: Operator Variable Pop-up Menus</a>" on page 3-50).</p>
Value variable	<p>Depending on the option selected for the Operator variable, left-clicking the Value variable displays either the <a href="#">Equation Editor: Value Variable Text Field</a> or the <a href="#">Equation Editor: Value Variable Drop-down Calendar</a>.</p>

### 3.4.12.1 Equation Editor: Expression Design Pop-up Menus



Depending on the state of your search equation (i.e., initial parenthesis, basic expression, or compound expression), right-clicking within a set of parenthesis displays one of several pop-up menus. Use these menus to design the structure of your search query.

Element	Description
Add pop-up menu	<p>As shown in the first inset above, the Add pop-up menu provides two options:</p> <p><b>Expression Grouping:</b> Inserts an additional set of parenthesis.</p> <p><b>Expression:</b> If this is the first expression in the search query, this option inserts a basic expression with the following syntax:                      (&lt;Field&gt; &lt;Operator&gt; &lt;Value&gt;)</p> <p>Each subsequent expression in the search query has the same syntax as the expression inserted using the Add Term pop-up menu (described below).</p> <p>For more detailed information about these elements, see "<a href="#">Search Creation Screen: Equation Editor</a>" on page 3-46 or "<a href="#">Construction of Search Queries</a>" on page 3-17; see "<a href="#">Expression Grouping Option</a>" on page 3-18 and "<a href="#">Expression Option</a>" on page 3-19.</p>
Add/Remove pop-up menu	<p>As shown in the second inset above, the Add/Remove pop-up menu provides two options:</p> <p><b>Add:</b> Displays the Add pop-up menu options (see "<a href="#">Equation Editor: Expression Design Pop-up Menus</a>" on page 3-48).</p> <p><b>Remove:</b> Deletes the added expression grouping or expression, depending on the set of parenthesis where you right-click.</p>

Element	Description
Add Term pop-up menu	<p>As shown in the third inset above, the Add Term pop-up menu inserts a boolean expression with the following syntax:</p> <pre>(&lt;Operator&gt; &lt;Field&gt; &lt;Operator&gt; &lt;Value&gt;)</pre> <p>In this case, the first &lt;Operator&gt; variable in the inserted expression is actually a boolean operator. When you left-click on it, the And/OR boolean pop-up menu is displayed (see <a href="#">"Equation Editor: Operator Variable Pop-up Menus"</a> on page 3-50).</p> <p>For more detailed information about these elements, see <a href="#">"Search Creation Screen: Equation Editor"</a> on page 3-46 or <a href="#">"Construction of Search Queries"</a> on page 3-17; see <a href="#">"Compound Expressions"</a> on page 3-20.</p>
Add Term/Remove pop-up menu	<p>As shown in the fourth inset above, the Add Term/Remove pop-up menu provides two options:</p> <p><b>Add Term:</b> Displays the Add Term pop-up menu options (see <a href="#">"Equation Editor: Expression Design Pop-up Menus"</a> on page 3-48).</p> <p><b>Remove:</b> Deletes the added expression grouping or expression, depending on the set of parenthesis where you right-click.</p>

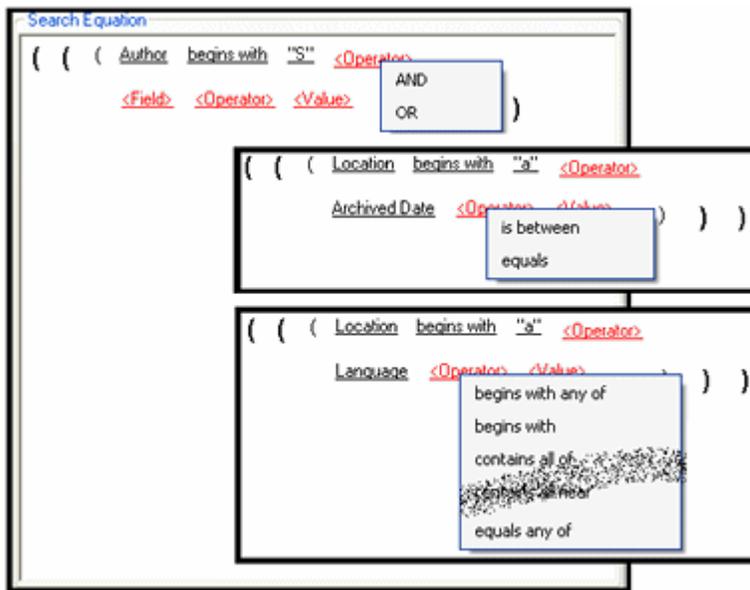
### 3.4.12.2 Equation Editor: Field Variable Pop-up Menus



Left-clicking the Field variable in an expression displays the Metadata option and, by moving your cursor over it, the Field pop-up menu is displayed. This menu lists all the display or caption names of the archive metadata fields in the SharePoint System.

Element	Description
Field pop-up menu	<p>Left-clicking the Field variable displays the field pop-up menu. The inset above shows a partial list of the menu options. The full list includes the display and caption names of all the SharePoint System archive metadata fields.</p>

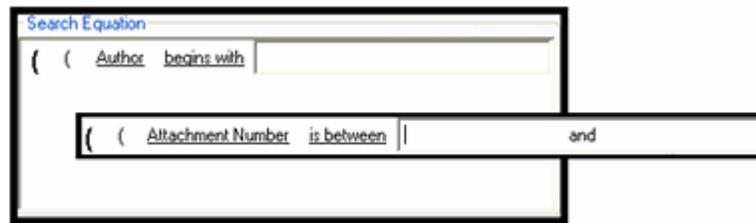
### 3.4.12.3 Equation Editor: Operator Variable Pop-up Menus



The Operator variable pop-up menus are lists of options that are displayed when you left-click on the Operator variables in an expression.

Element	Description
AND/OR boolean pop-up menu	<p>Left-clicking the connecting Operator variable in a compound expression displays the boolean pop-up menu. It lists the boolean operators that can be used to combine two consecutive expressions:</p> <p><b>AND:</b> Configures the search query to find content items that match the both of the combined expressions.</p> <p><b>OR:</b> Configures the search query to find content items that match at least one of the combined expressions.</p>
Date/number pop-up menu	<p>If the value of the Field variable is a date or number type, then left-clicking the Operator variable displays the operator date/number pop-up menu. As shown in the second inset above, this menu provides the following options:</p> <p><b>is between:</b> Configures the search query to filter the results based on the two values that define a range that is delineated by either two dates or two alphanumeric values. See Dual-entry text field set ("<a href="#">Equation Editor: Value Variable Text Field</a>" on page 3-51) and Dual date field set ("<a href="#">Equation Editor: Value Variable Drop-down Calendar</a>" on page 3-51).</p> <p><b>equals:</b> Configures the search query to filter the results based on the specified alphanumeric value(s). See Single-entry text field ("<a href="#">Equation Editor: Value Variable Text Field</a>" on page 3-51) and Single date field ("<a href="#">Equation Editor: Value Variable Drop-down Calendar</a>" on page 3-51).</p>
Text pop-up menu	<p>If the value of the Field variable is a text type, then left-clicking the Operator variable in an expression displays the text pop-up menu. The third inset above shows a partial list of the menu options. The full list includes many options that support individual parameter values as well as space-separated lists of multiple parameter values. See Single-entry text field ("<a href="#">Equation Editor: Value Variable Text Field</a>" on page 3-51)</p>

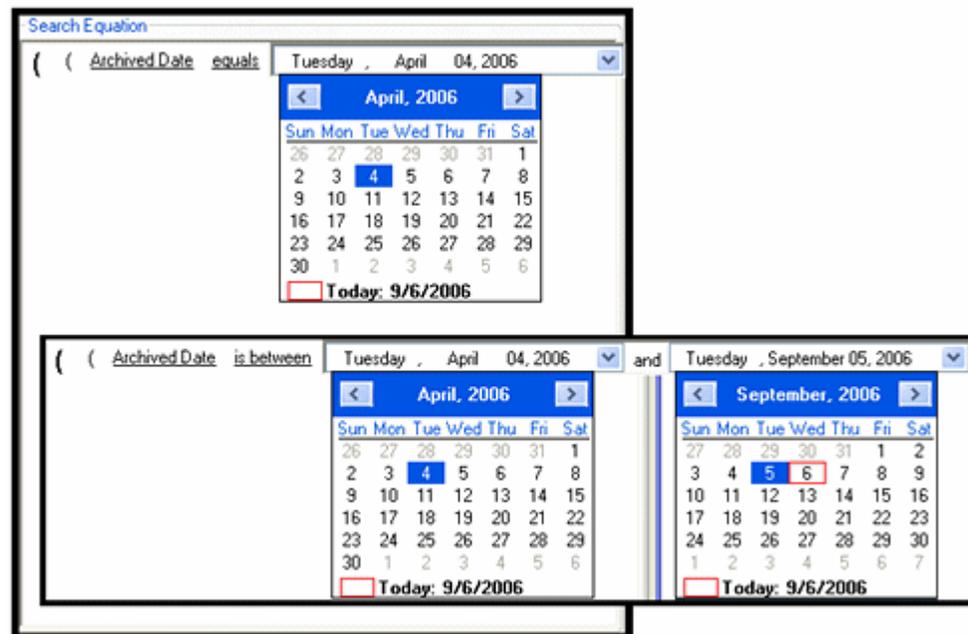
### 3.4.12.4 Equation Editor: Value Variable Text Field



Either the single-entry text field or the dual-entry text field is displayed when you select any Operator value (except 'is between') from any of the [Equation Editor: Operator Variable Pop-up Menus](#). In this case, left-clicking the Value variable displays a user-editable text field.

Element	Description
Single-entry text field	Displays a single user-editable text field that accepts any alphanumeric value. Options support individual parameter values as well as space-separated lists of multiple parameter values.
Dual-entry text field set	Displays two user-editable text fields that accept any alphanumeric values. Options support individual parameter values as well as space-separated lists of multiple parameter values.

### 3.4.12.5 Equation Editor: Value Variable Drop-down Calendar



If the value of the Field variable is a date type, then left-clicking the Value variable displays the date field that includes an arrow to open the drop-down interactive calendar. This calendar enables users to quickly select dates and easily move between previous and future months and years. It eliminates date-formatting errors and typos because the fields are automatically populated with the user-selected dates.

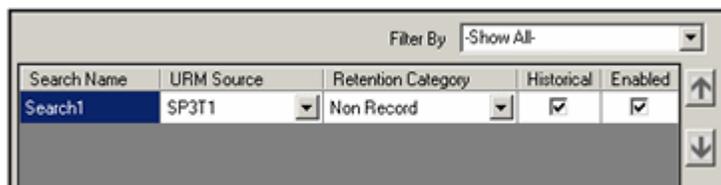
**Date field:**

Element	Description
Single date field	Displays a single interactive drop-down calendar.
Dual date field set	Displays two interactive drop-down calendars.

**Calendar:**

Element	Description
Left-facing arrow	Enables you to navigate consecutively to previous months. Each click regresses one month and the calendar adjusts to display the appropriate days for the earlier month.
Right-facing arrow	Enables you to navigate consecutively to future months. Each click progresses one month and the calendar adjusts to display the appropriate days for the future month.
Month pop-up menu	Left-clicking the month at the top of the calendar displays a list of months. You can select a month rather than use the left- and right-facing arrows.
Year up and down arrows	Left-clicking the year at the top of the calendar displays up and down arrows. You can increment or decrement the year by clicking either the up or down arrow, respectively. The date ranges are indefinite for both historical years and future years.
Monthly calendar days	Displays the days appropriate for the selected month and year. Click a day on the calendar to select it and it automatically replaces the date in the applicable date field. The highlighted day populates the applicable date field and the boxed day is the current day.

### 3.4.13 Search Mapping Screen



Use the Search Mapping screen to map a search query to a URM Adapter source in the Adapter and a retention category in URM. You can access this screen by clicking the **Search Mapping** link in the navigation hierarchy on the [Adapter Administration Manager](#).

Element	Description
Filter By drop-down list	<p><b>&lt;URMsource_name&gt;</b>: The drop-down list includes the names of all the URM Adapter sources currently defined in the Adapter. Selecting a URM Adapter source from the list generates results that include only the search queries that are currently mapped to the selected URM Adapter source.</p> <p><b>Show Unassigned</b>: Generates results that include only the search queries that have not yet been assigned to a URM Adapter source.</p> <p><b>Show All</b>: Generates results that include all of the currently defined search queries regardless of their assigned status. This is the default value.</p>

Element	Description
Search Name field	The name of the search query that matches the filtering criteria selected in the Filter By drop-down list and included in the generated results. A search query can be mapped to only one URM Adapter source and retention category.
URM Source drop-down list	Lists all of the currently defined URM Adapter sources in the Adapter. A URM Adapter source can be mapped to one or more search queries. <b>Important:</b> If a search query is not mapped to a URM Adapter source, it cannot be activated and will not execute.
Retention Category drop-down list	Lists all of the retention categories that are currently defined in the URM FilePlan. A retention category can be mapped to one or more search queries. To enter a value into this field, double-click a specific retention category from the drop-down list. <b>Note:</b> When you are selecting the mappings for a search query, the URM Adapter source must be assigned before the retention category.
Historical check box	<b>Selected:</b> Enables the Adapter to use this search query when it performs historical searches in the SharePoint System. <b>Clear:</b> Prevents the Adapter from using this search query when it performs historical searches in the SharePoint System. <b>Important:</b> If you have enabled a search query (see Enabled check box below) but you do not select the corresponding Historical check box, then the Adapter will execute the search query only during new content searches in the repository. <i>See also the Important and Caution messages below.</i>
Enabled check box	<b>Selected:</b> Activates the search query and enables it to execute. <b>Clear:</b> Deactivates the search query and prevents it from executing. However, the search query will not lose its URM Adapter source and retention category mappings.
<i>About repository searches and search query activation</i>	If a search query is not activated, the Adapter will not run that query during repository searches. The Adapter executes search queries only if they are activated on the Search Mapping screen AND if one or both declaration settings (the Enabled check boxes for new and/or historical content) are enabled on the <a href="#">Advanced Screen</a> . The Adapter does not run a search query if: <ul style="list-style-type: none"> <li>■ The search query is activated but the applicable content declaration setting(s) are disabled. In this case, the Adapter pauses the new and/or historical search and declaration functions. When you reactivate the search query, the Adapter resumes the search processes starting at the prior termination points. Searching continues until all elapsed time intervals are completed.</li> <li>■ The search query is deactivated. In this case, if the new and/or historical content declaration setting(s) are disabled, the search process is temporarily suspended. However, if the new and/or historical content declaration setting(s) are enabled, the Adapter does not run the search query but continues to process search time intervals. <i>See the Caution message below.</i></li> </ul>

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Element	Description
<i>About time window processing</i>	<p>The Adapter processes a time window <b>ONLY ONCE</b>. When the new and/or historical content declaration settings are enabled, the Adapter continues to advance the time windows whether or not search queries are activated and executed.</p> <p>For example, if you deactivate a search query and the new and/or historical content declaration settings are enabled, the Adapter processes applicable time windows without searching the SharePoint System. As a result, the items that might have been returned by the deactivated search query during the processed time interval will <b>NEVER</b> be found. A time window cannot be processed again.</p> <p>Therefore, it is recommended that if you want to temporarily suspend a search and declaration process, you should disable the new and/or historical content declaration settings on the <a href="#">Advanced Screen</a> rather than deactivate the applicable search query.</p>
Up / down arrows	<p>Used to adjust the specific placement order of the selected entry in the search query list. The position of each search query entry in the list is relevant to its priority in the declaration process.</p> <p>The higher a search query is positioned in the list, the higher its priority is in the hierarchy. Each click on the up or down arrow moves the selected search query up or down one position in the list.</p> <p>You cannot modify the priorities of search queries in the list if you have applied a filter to the list. <i>See the additional Note below.</i></p>
<i>About duplicate results from search queries</i>	<p>When the Adapter performs searches, it is very likely that two search queries will return the same content item from the SharePoint System. It is also probable that the two search queries are mapped to different URM Adapter sources and/or URM retention category.</p> <p>A content item can only be declared once. However, when the results for two or more search queries include the same item, the Adapter uses the assigned priorities of the search queries to determine which one is allowed to declare the item.</p> <p>For example, one search query is mapped to source_A, another search query is mapped to source_B, and a third search query is mapped to source_C. If all three search queries find the same content item, and the search query for source_B is higher in the list than the other two, the item is declared into source_B.</p>

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### 3.4.14 Advanced Screen

**Declaration Settings**

Batch Size

**New Content Declaration**

Enabled

Interval

Window  to

Last Processed: Wednesday, November 29, 2006 11:25:22 AM

**Historical Content Declaration**

Historical Complete

Enabled

Interval

Window  to

Cutoff Date

Last Processed: Tuesday, November 28, 2006 4:08:27 PM

**Remote Access Settings**

Remoting Port

**Miscellaneous Settings**

Data Directory  ...

HTML Encoding

Use the Advanced screen to configure settings that are used to control various features of the Adapter. These include batch size and search settings for new and historical content items. In particular, the Advanced screen provides the mechanisms to enable or disable content search and declaration functions and configure their respective time intervals. You can access this screen by clicking the **Advanced** link in the navigation hierarchy on the [Adapter Administration Manager](#).

#### Declaration Settings pane:

Element	Description
Batch Size field	The maximum number of content item data records that can be included in a single batch submitted to URM. The range is 100 to 1,000. The default value is 100.

**Declaration Settings: New Content Declaration pane:**

Element	Description
Enabled check box: new content	<p><b>Selected:</b> Configures the Adapter to perform searches in the SharePoint System for new content items. These include items that have been checked in after the Adapter was installed.</p> <p><b>Clear:</b> Prevents the Adapter from performing searches for new content items. This is the default setting.</p> <p><b>Note:</b> If you disable the New Content Declaration function, the Adapter will stop declaring new content data to URM. However, when you re-enable this function, the Adapter will resume the search and declaration processes for new content starting at its prior termination point.</p> <p><b>Important:</b> If the Enabled check boxes for both new and historical content (see the description of the Enable check box for historical content below) are cleared, then all of the search queries are prohibited from browsing through content in the SharePoint System.</p> <p>In this case, the search queries are effectively disabled regardless of whether their respective Enabled check boxes are selected. See the Enabled check box on the <a href="#">Search Mapping Screen</a>.</p>
<i>About time window processing and enabling the new content check box</i>	<p>When the Adapter is started and the New Content Declaration setting is enabled on the Advanced screen, the Adapter continues to advance the forward time windows. Furthermore, the Adapter processes a time window <b>ONLY ONCE</b> whether or not search queries are activated on the <a href="#">Search Mapping Screen</a> and running.</p> <p>For example, if you deactivate a search query and the New Content Declaration setting is enabled, the Adapter processes forward time windows but does not use the deactivated search query to look for matching content in the SharePoint System. As a result, the items that might have been returned by the deactivated search query during the processed time interval will <b>NEVER</b> be found. A time window cannot be processed a second time.</p>
<i>About suspending the search and declaration process</i>	<p>Occasionally, you might have a need to temporarily suspend the search and declaration process. For example, you may need to test a new search query before using it in a production environment. In this case, it is recommended that you disable the new and/or historical content declaration settings on the Advanced screen rather than deactivate the applicable search query on the <a href="#">Search Mapping Screen</a>.</p> <p>Disabling the content declaration processes prevents the Adapter from processing new and/or historical content because the time windows stop progressing. Deactivating a search query, however, does not stop the progression of time windows. Instead, it simply prevents the Adapter from processing that particular search query.</p>

Element	Description
<i>About optimizing results from search queries</i>	<p>When you start or restart the Adapter, it begins processing all time windows if the new and historical content declaration settings are enabled. (See the Caution and Important messages above.) Therefore, before you run your search queries in a production environment, they should be tested to verify their effectiveness and accuracy.</p> <p>To ensure that your search queries return optimal results, use the following general guidelines for testing:</p> <ul style="list-style-type: none"> <li>■ Before starting the Adapter, disable the new and historical content declaration settings on the Advanced screen</li> <li>■ Start the Adapter. See <a href="#">"Stopping and Restarting the Adapter Service"</a> on page 4-7</li> <li>■ Use the <a href="#">Search Preview Screen</a> to test your search queries.</li> <li>■ When you are satisfied with the results, stop the Adapter again and enable the new and historical content declaration settings.</li> <li>■ Restart the Adapter.</li> </ul>
Interval field: new content	<p>Specifies the number of hours the Adapter remains idle between searches for new content items.</p> <p>For example, if you set this to 4, the Adapter wakes up every four hours and runs a search to find content that has been added within the previous four hours.</p> <p>If the search exceeds the specified interval time period, the Adapter continues the search and will not sleep. The allowed range is 1 to 24. The default value is 1.</p> <p><b>Important:</b> Some of the Adapter's new content search capabilities are inextricably dependent on the Incremental and Full crawl processes of Microsoft Sharepoint. See <a href="#">"Repository Search Constraints with Microsoft Sharepoint"</a> on page 3-12.</p>
Window time period selection fields: new content	<p>Specifies a range of hours for the Adapter to use for new content searching. Click the up or down arrows to increase or decrease the time in one-hour increments.</p> <p><b>Tip:</b> Setting both time fields to the same hour enables the Adapter to process new content declarations during each interval (as defined in the Interval field for new content) every 24 hour period.</p>
Last Processed field	<p>The date and time that the Adapter completed its declaration processing for new content. Right-clicking this value updates it to the most current date/time.</p>

### Declaration Settings: Historical Content Declaration pane:

Element	Description
Historical Complete check box	<p><b>Selected:</b> Indicates that the Adapter has completed its declaration processing for historical content up to the selected cutoff date (see the Cutoff Date drop-down calendar). This setting disables the other Historical Content Declarations fields.</p> <p><b>Clear:</b> Indicates the historical content declaration process is not finished. This check box must be clear to enable the other Historical Content Declarations fields.</p>

Element	Description
Enabled check box: historical content	<p><b>Selected:</b> Configures the Adapter to perform searches in the SharePoint System for pre-existing content items. These include items that were stored before the Adapter was installed.</p> <p><b>Clear:</b> Prevents the Adapter from performing searches for legacy content items. This is the default setting.</p> <p><b>Note:</b> If you disable the historical declaration function, the Adapter will stop declaring legacy content item data to URM. However, when you re-enable this function, the Adapter will resume the search and declaration processes for legacy content starting at its prior termination point.</p> <p><b>Important:</b> If the Enabled check boxes for both new (see the description for the Enabled check box for new content above) and historical content are cleared, then all of the search queries are prohibited from browsing through the SharePoint System content.</p> <p>In this case, the search queries are effectively disabled regardless of whether their respective Enabled check boxes are selected. See the Enabled check box on the <a href="#">Search Mapping Screen</a>.</p>
<i>About time window processing and enabling the historical content check box</i>	<p>When the Adapter is started and the historical content declaration setting is enabled on the Advanced screen, the Adapter continues to process the backward time windows. Furthermore, the Adapter processes a time window <b>ONLY ONCE</b> whether or not search queries are activated on the <a href="#">Search Mapping Screen</a> and running.</p> <p>For example, if you deactivate a search query and the historical content declaration setting is enabled, the Adapter processes reverse time windows but does not use the deactivated search query to look for matching content in the SharePoint System. As a result, the items that might have been returned by the deactivated search query during the processed time interval will <b>NEVER</b> be found. A time window cannot be processed a second time.</p>
<i>About suspending the search and declaration process</i>	<p>Occasionally, you might have a need to temporarily suspend the search and declaration process. For example, you may need to test a new search query before using it in a production environment. In this case, it is recommended that you disable the new and/or historical content declaration settings on the Advanced screen rather than deactivate the applicable search query on the <a href="#">Search Mapping Screen</a>.</p> <p>Disabling the content declaration processes prevents the Adapter from processing new and/or historical content because the time windows stop progressing. Deactivating a search query, however, does not stop the progression of time windows. Instead, it simply prevents the Adapter from processing that particular search query.</p>
<i>About optimizing results from search queries</i>	<p>When you start or restart the Adapter, it begins processing all time windows if the new and historical content declaration settings are enabled. (See the Caution and Important messages above.) Therefore, before you run your search queries in a production environment, they should be tested to verify their effectiveness and accuracy.</p> <p>To ensure that your search queries return optimal results, use the following general guidelines for testing:</p> <ul style="list-style-type: none"> <li>■ Before starting the Adapter, disable the new and historical content declaration settings on the Advanced screen</li> <li>■ Start the Adapter. See "<a href="#">Stopping and Restarting the Adapter Service</a>" on page 4-7</li> <li>■ Use the <a href="#">Search Preview Screen</a> to test your search queries.</li> <li>■ When you are satisfied with the results, stop the Adapter again and enable the new and historical content declaration settings.</li> <li>■ Restart the Adapter.</li> </ul>

Element	Description
Interval field: historical content	Specifies, in hours, the time span that the Adapter uses when searching for historical content. The supported range is from 1 hour to 168 hours (7 days).
Window time period selection fields: historical content	Specifies a range of hours for the Adapter to use for historical content searching. Click the up or down arrows to increase or decrease the time in one-hour increments.  Historical declaration processing can be very resource intensive for the combined operations of the Adapter, the SharePoint System, and URM. To optimize the overall process, it is recommended that you restrict the time periods that you choose. For example, choose off hours for historical data processing.
Cutoff Date drop-down calendar	Establishes the cutoff date when the Adapter stops reverse declaration processing. Content items that were checked in or modified before this date are not processed even if a search might have included them in a results file.  The date range extends from January 1, 1900 until the present. For more detailed information about the drop-down calendar, see " <a href="#">Equation Editor: Value Variable Drop-down Calendar</a> " on page 3-51.
Last Processed field	The date and time that the Adapter completed its declaration processing for historical content.  Depending on the defined interval (see the description of the Interval field for historical content), the displayed date may be earlier than the cutoff date (see the Cutoff Date drop-down calendar).  Right-clicking this value updates it to the most current date/time.  <b>Note:</b> By default, the Last Processed date is updated only once. It is saved the first time you open the Advanced tab.

#### Remote Access Settings pane:

Element	Description
Remoting Port field	Specifies the port that is used by remote applications to access the Adapter. If the port is in use when a remote application tries to access it, the Adapter logs an error and is not available for remote access.  The range is from -1 to 65,535. Setting the value to 0 or -1 disables remote access. Setting the value to 1 and higher opens the port and enables remote applications to access the Adapter.

#### Miscellaneous Settings pane:

Element	Description
Data Directory field	Specifies the directory on the local disk where the Adapter creates a file to store data during processing operations. Ensure that the Adapter account has sufficient NTFS permissions to create, read, write, and delete files from this directory. See <a href="#">Section 2.1.4, "Setting up the Adapter Accounts"</a> .
Data directory browse button	Opens the standard Browse for Folder dialog box that enables you to navigate to and select the data directory location. If an applicable folder is unavailable, the dialog also provides a Make New Folder button to use as needed.
HTML Encoding drop-down list	Defines the character encoding that the Adapter uses to communicate with URM which is done via web services. Options include: ASCII, Unicode, UTF-7, UTF-8 (the default value), and UTF-32.



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# Administration

This section covers the following topics:

## Concepts

- ["About Adapter Operation and Administration"](#) on page 4-2
- ["Internal and External Checkins"](#) on page 4-2
- ["Cluster Support"](#) on page 4-2
- ["Stops and Restarts"](#) on page 4-4
- ["Log Files"](#) on page 4-4
- ["Log File Administration"](#) on page 4-5
- ["Log File Characteristics"](#) on page 4-5
- ["Status and Error Message Severity Codes"](#) on page 4-5
- ["Audit Trails"](#) on page 4-6

## Tasks

- ["Stopping and Restarting the Adapter Service"](#) on page 4-7
- ["Viewing Declaration Errors and Message Details"](#) on page 4-7
- ["Viewing Disposition Errors and Message Details"](#) on page 4-8
- ["Sorting Error Results"](#) on page 4-8
- ["Previewing Search Query Results"](#) on page 4-8
- ["Viewing Status Data for the Adapter"](#) on page 4-9
- ["Viewing Status Data for the Adapter Service"](#) on page 4-9
- ["Sorting Status Results"](#) on page 4-9
- ["Viewing the Daily Event Records and Error Message Details"](#) on page 4-9

## Interface

- ["Error Management Link"](#) on page 4-10
- ["Error Management: Declaration Errors Screen"](#) on page 4-11
- ["Error Management: Disposition Errors Screen"](#) on page 4-11
- ["Error Management: Error Details Screen"](#) on page 4-12
- ["Error Management: Sort Order"](#) on page 4-12

- ["Search Preview Screen"](#) on page 4-13
- ["Status Link"](#) on page 4-15
- ["Status: Adapter Status Tab"](#) on page 4-16
- ["Status: Service Status Tab"](#) on page 4-17
- ["Status: Sort Order"](#) on page 4-19
- ["Log Viewer Screen"](#) on page 4-19
- ["Log Viewer: Message Dialog Box"](#) on page 4-20

## 4.1 About Adapter Operation and Administration

This section covers the following topics:

- ["Internal and External Checkins"](#) on page 4-2
- ["Cluster Support"](#) on page 4-2
- ["Stops and Restarts"](#) on page 4-4
- ["Log Files"](#) on page 4-4
- ["Log File Administration"](#) on page 4-5
- ["Log File Characteristics"](#) on page 4-5
- ["Status and Error Message Severity Codes"](#) on page 4-5
- ["Audit Trails"](#) on page 4-6

### 4.1.1 Internal and External Checkins

The Adapter is designed to use two types of check in processes for content items stored in the repository:

- **Internal checkin:** This involves moving the content items from the repository into URM. This is necessary if the repository is not able to preserve records or non-records over their retention period and ensure they are not altered. Internal checkins are also required if the repository is unable to purge the records properly when it is time for disposal.

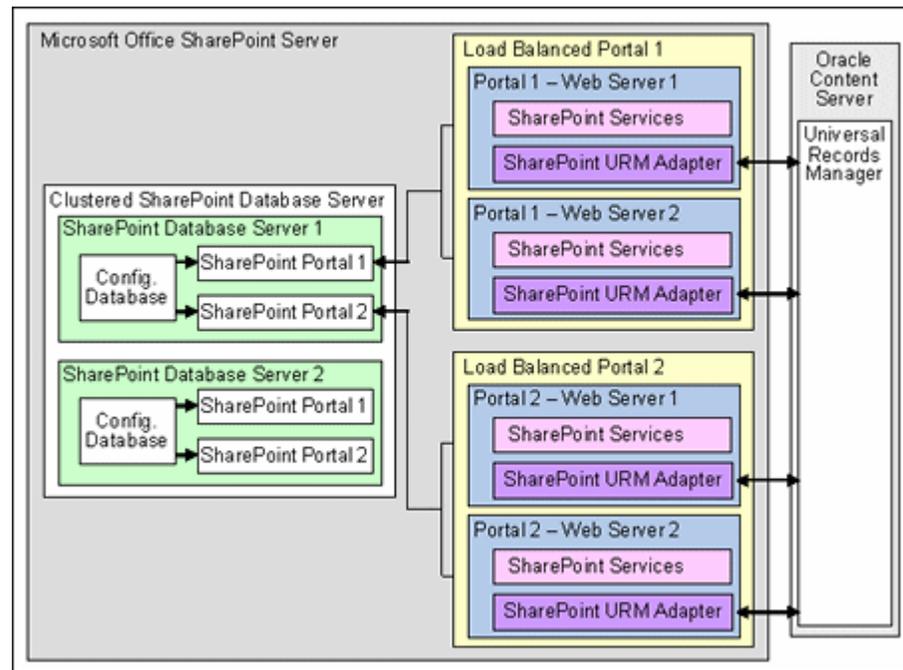
Internal checkins are not required if the repository can preserve records or non-records over their retention period and purge them properly when necessary. In this case, the content items can remain in place. This is true for the Sharepoint System. Therefore, internal checkins are not required.

- **External checkin:** This involves sending the declaration data to URM. The search queries collect the metadata of qualifying content items and the Adapter forwards this data in batches to URM. The declaration process (external checkin) is performed as new content items are added to the repository. External checkins can be performed regardless of whether the repository can properly preserve and purge content items.

### 4.1.2 Cluster Support

This section provides an overview of the architecture for an instance of Microsoft Office SharePoint Server in a load-balanced, clustered environment.

**Figure 4–1 Example of Microsoft Office SharePoint Server Architecture in a Clustered Environment**




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**Caution:** When SharePoint and URM are running on different servers, you **MUST** use the actual server name (i.e., <http://www.mysharepoint.com>) when you define SharePoint sites. **DO NOT** use the reserved computer descriptions *localhost* or *127.0.0.1*. Failure to use the server name will prevent direct linking of documents between URM and SharePoint.

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Microsoft Office SharePoint Server is designed to drive multiple websites on multiple web servers. This is accomplished by installing the SharePoint databases (Content Database(s) and Configuration Database) on a database server. An instance of SharePoint Services is installed on each web server to be managed by Microsoft Office SharePoint Server. Each web server is configured to use the central SharePoint Configuration Database.

In the sample architecture above, multiple web servers are used in a load balancing scheme. This produces an equal distribution of workload among the web servers and ensures that no single web server is overwhelmed. The web servers are not set up in active/passive roles to merely provide failover support. Conversely, all of the web servers are active and each responds to requests from browsers.

An instance of the Adapter must be installed and running on each web server in the clustered environment. The Adapters work with SharePoint Event Handlers to manage stored content. Although each Adapter is running, only one instance is active. Only the active Adapter is responsible for performing declarations and dispositions. However, both the active and passive Adapters are responsible for monitoring the SharePoint System for document and document library activities (item insertions, updates, or deletions).

### 4.1.3 Stops and Restarts

By default, the Adapter Service is running when the Adapter is started unless you have configured it to start manually. See ["Stopping and Restarting the Adapter Service"](#) on page 4-7. When the Adapter Service is running, there are times when it is necessary to stop and restart it. Primarily, there are a number of settings that you can change using the [Adapter Administration Manager](#) that require the Adapter Service to be stopped and restarted to implement the new configuration information. Other setting changes are applied immediately.

Changes that require the Adapter Service to be stopped and restarted include:

- Database connection information changes. See ["Changing the Database Connection"](#) on page 3-23
- Any changes on the Advanced screen. See ["Modifying the Advanced Settings Values"](#) on page 3-30

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**Important:** If more than one instance of the Adapter is installed and running, when a change is made to one Adapter that requires a restart, all of the Adapters in the configuration (both active and passive) must be restarted. For more detailed information about the active/passive roles of installed Adapters, see ["Cluster Support"](#) on page 4-2.

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Changes that the Adapter implements immediately (without a restart) include:

- URM connection changes. See ["Changing the Authentication Information"](#) on page 3-22
- URM Adapter source additions/changes. See ["Adding a New URM Adapter Source"](#) on page 3-24, ["Viewing the Configuration Data of a URM Adapter Source"](#) on page 3-27, ["Mapping Metadata Fields"](#) on page 3-26, and ["Defining a URM Custom Metadata Field"](#) on page 3-26
- Search query additions/changes. See ["Defining a New Search Query"](#) on page 3-28, ["Editing a Search Query"](#) on page 3-28, ["Editing a Search Query"](#) on page 3-28, and ["Deleting a Search Query"](#) on page 3-29
- Search query mapping additions/changes. See ["Mapping a Search Query"](#) on page 3-29 and ["Activating/Deactivating a Search Query"](#) on page 3-30

### 4.1.4 Log Files

The Adapter generates and maintains log files that contain records of all processing information as tasks are performed. The logging information is formatted and displayed in a table view on the [Log Viewer Screen](#). After you upload the log files to URM, they can be checked into URM as documents that are assigned a retention category. Thus, the checked-in log files are maintained as a record.

The Adapter generates the log files using a format that, when converted, is compatible within URM. In addition to viewing the records using the Adapter Log Viewer, they can also be viewed from within URM. Therefore, as stored and managed records in URM, the log files function as an audit trail to document all of the Adapter's activity. And, as records, they are readily available and can be produced when needed as a part of a legal proceeding.

This section covers the following topics:

- ["Log File Administration"](#) on page 4-5

- "Log File Characteristics" on page 4-5
- "Status and Error Message Severity Codes" on page 4-5

#### 4.1.4.1 Log File Administration

Once each day (24-hour period), the Adapter invokes a mechanism that converts one or more previous log files into a format similar to that used by URM. (The current day's log file is not converted until the next run time.) Then, the converted log files are automatically uploaded to URM and archived in URM. After they are under URM management, all of the log files remain accessible from within URM and are available as an audit trail.

The Adapter retains a limited number of the daily log files that you can view and are available in the log file tree on the [Log Viewer Screen](#). There is a pre-defined, internal time limit during which the daily log files are conserved. After reaching this pre-configured age, the oldest log files are permanently deleted and are not archived within the Adapter database. The maturation time frame for log files is preset and cannot be reconfigured.

#### 4.1.4.2 Log File Characteristics

The Adapter stores status information and errors in log files. Log files are used to record system events, together with their date and time of occurrence, detailed information, and other significant data. These log files can be valuable for general activity information and troubleshooting efforts. Not only do log files indicate that specific events have occurred, they also provide important entries that act as clues about a chain of events that led to an error or problem.

The log files associated with the Adapter have the following characteristics:

- They are generated only once each day at the time that the Adapter is started and the first event occurs that requires logging.
- No empty log files are generated.
- A limited number of daily log files are available for selection and viewing from the log file tree.
- When the Adapter purges the log files, they are permanently deleted, not archived.

#### 4.1.4.3 Status and Error Message Severity Codes

Severity	Time	Message	Tool ...	Proc...	Thre...	Even...	Mac...	Date
Info...	13:09...	Loaded AgentConfiguration object [St...	Admini...	376	1	0	COS-B...	2006/...
War...	13:10...	Service SpVI UrmAgent encountered...	Admini...	376	1	0	COS-B...	2006/...
Info...	13:11...	Loaded AgentConfiguration object [St...	Admini...	4068	9	0	COS-B...	2006/...
Info...	13:13...	Loaded AgentConfiguration object [St...	Admini...	2592	1	0	COS-B...	2006/...
Detail	13:34...	Successfully retrieved [1] URM Sourc...	Admini...	1792	1	0	COS-B...	2006/...
Detail	13:34...	Successfully retrieved [1] URM Sourc...	Admini...	1792	1	0	COS-B...	2006/...
Error	13:34...	The Configuration UI has encountered...	Admini...	1792	4	0	COS-B...	2006/...

The Adapter generates the following types of log file entries:

- **Information:** Displays basic status information about system operation to inform the administrator that an event has occurred. For example, status information is logged if a configuration file is successfully loaded.
- **Detail:** Displays more specific, detailed information about Adapter processing and operations. These messages are intended for debugging purposes. For example,

these messages provide operational information in minute detail ('Document Key=12345 declared', 'Document Key=12346 declared', etc.).

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**Note:** The primary difference between Information and Detail type messages is the specificity. For example, an Information message may state that a content item has been declared to URM whereas a Detail message states that batches of items have been extracted from the SharePoint System and submitted for staging. Or, an Information message may state that a log file has been uploaded to URM while a Detail message would list each of the steps involved in processing the log file before submitting it to URM.

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- **Warning:** Displays errors that occur but do not stop the Adapter from running. The Adapter believes it can recover sufficiently to continue processing. For example, a warning is logged when the Adapter Service is not found.
- **Error:** Displays errors that stop the software from functioning. The Adapter aborts because it is unable to recover enough to continue processing. For example, a fatal error is logged if the Configuration UI encounters a critical internal error and shuts down because it cannot connect to the remote server.

### 4.1.5 Audit Trails

The [Log Files](#) that the Adapter generates provide chronological lists of all operations and processing activities that occur. Therefore, they can be used as an audit trail mechanism. You can use the detailed event records included in each daily log file to establish that the company has met its obligations.

For example, logged messages indicate whether necessary litigation holds were applied and the information was properly communicated. Other log file entries indicate what actions were carried out and how each user responded to the communications. Also, disposition actions are recorded that include timestamps and information about the types of disposals and the users involved.

Additionally, the recorded messages include all notifications that have been sent and the related actions taken. These, in turn, have corresponding user confirmations that are also recorded. Collectively, the log file entries provide the necessary evidence that a company is meeting its responsibility to apply holds and perform dispositions according to their retention policies.

## 4.2 Managing the Adapter

This section covers the following topics:

- ["Stopping and Restarting the Adapter Service"](#) on page 4-7
- ["Viewing Declaration Errors and Message Details"](#) on page 4-7
- ["Viewing Disposition Errors and Message Details"](#) on page 4-8
- ["Sorting Error Results"](#) on page 4-8
- ["Previewing Search Query Results"](#) on page 4-8
- ["Viewing Status Data for the Adapter"](#) on page 4-9
- ["Viewing Status Data for the Adapter Service"](#) on page 4-9
- ["Sorting Status Results"](#) on page 4-9

- ["Viewing the Daily Event Records and Error Message Details"](#) on page 4-9

## 4.2.1 Stopping and Restarting the Adapter Service

To stop and restart the Adapter Service, use one of the following methods:

- [Stopping/Restarting From the Adapter Administration Manager](#)
- [Stopping/Restarting From the Services Application](#)

### 4.2.1.1 Stopping/Restarting From the Adapter Administration Manager

1. Open the [Adapter Administration Manager](#).
2. In the Service menu, select **Stop**.  
The Adapter Service is stopped.
3. In the Service menu, select **Start**.  
The Adapter Service is started.

### 4.2.1.2 Stopping/Restarting From the Services Application

1. Open the **Services** application:  
From the **Start** menu, select **Control Panel**, **Administrative Tools**, and then **Services**
2. Scroll to locate the Adapter Service named:  
URM Adapter for Microsoft Sharepoint
3. On the **Action** menu, click **Stop**.  
Services stops the Adapter Service and updates the Status to Stopped.
4. On the **Action** menu, click **Start**.  
Services starts the Adapter Service and updates the Status to Started.
5. Close the Services application.

## 4.2.2 Viewing Declaration Errors and Message Details

To view the declaration errors and specific message details:

1. In the [Adapter Administration Manager](#), open the Error Management link in the navigation hierarchy panel by clicking the plus icon.
2. Click the **Declaration Errors** link.  
The [Error Management: Declaration Errors Screen](#) is displayed. By default, the screen opens and displays the most recent messages. These are located at the bottom of the list.
3. Scroll up to find the message that you want to examine.
4. Double-click either the Data or the Error column of the selected message.  
The [Error Management: Error Details Screen](#) is displayed.
5. Click **OK**.  
The Error Details screen closes.

### 4.2.3 Viewing Disposition Errors and Message Details

To view the disposition errors and specific message details:

1. In the [Adapter Administration Manager](#), open the Error Management link in the navigation hierarchy panel by clicking the plus icon.

2. Click the **Disposition Errors** link.

The [Error Management: Disposition Errors Screen](#) is displayed. By default, when the screen opens, the most recent messages are displayed. These are located at the bottom of the list.

3. Scroll up to find the message that you want to examine.

4. Double-click the Error column of the selected message.

The [Error Management: Error Details Screen](#) is displayed.

5. Click **OK**.

The Error Details screen closes.

### 4.2.4 Sorting Error Results

To sort the declaration or disposition error lists based on a specific column:

1. In the [Adapter Administration Manager](#), open the **Error Management** link in the navigation hierarchy panel by clicking the plus icon.

2. Click either the **Declaration Errors** or the **Disposition Errors** link.

The [Error Management: Declaration Errors Screen](#) or the [Error Management: Disposition Errors Screen](#) is displayed, respectively. By default, when the screen opens, the most recent messages are displayed. These are located at the bottom of the list.

3. Left-click on a column heading to sort the list in a descending or ascending order. The arrow next to the heading indicates which column has been used to sort the list and in what order. See "[Error Management: Sort Order](#)" on page 4-12 or "[Status: Sort Order](#)" on page 4-19.

### 4.2.5 Previewing Search Query Results

To test your search query and preview the results:

1. In the [Adapter Administration Manager](#), click the **Search Preview** link in the navigation hierarchy panel.

The [Search Preview Screen](#) is displayed.

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**Note:** Make sure that the Adapter Service is started before you try to preview your search query. Otherwise, the Adapter cannot process the search query. See "[Stopping and Restarting the Adapter Service](#)" on page 4-7.

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2. Open the Search drop-down menu and select the search query you want to test.

3. Select the date range that you want to use as a search window.

- a. Open the 'Between' drop-down calendar and select a beginning date.
- b. Open the 'And' drop-down calendar and select an end date.

4. Click **Search**.

The Adapter processes the search query and displays the results.

## 4.2.6 Viewing Status Data for the Adapter

To monitor the status data for the Adapter:

1. In the [Adapter Administration Manager](#), click the **Status** link in the navigation hierarchy panel.
2. Click the **Adapter Status** tab.

The [Status: Adapter Status Tab](#) is displayed.

3. Click **Refresh** to ensure the most current data is displayed. For more detailed information about any abnormalities, review the log files. See "[Viewing the Daily Event Records and Error Message Details](#)" on page 4-9.

## 4.2.7 Viewing Status Data for the Adapter Service

To monitor the status data for the Adapter Service:

1. In the [Adapter Administration Manager](#), click the **Status** link in the navigation hierarchy panel.
2. Click the **Service Status** tab.

The [Status: Service Status Tab](#) is displayed.

3. Click **Refresh** to ensure the most current data is displayed. For more detailed information about any abnormalities, review the log files. See "[Viewing the Daily Event Records and Error Message Details](#)" on page 4-9.

## 4.2.8 Sorting Status Results

To sort the Adapter or service status lists based on a specific column:

1. In the [Adapter Administration Manager](#), click the **Status** link in the navigation hierarchy panel.
2. Click either the **Adapter Status** or the **Service Status** tab.

The [Status: Adapter Status Tab](#) or the [Status: Service Status Tab](#) is displayed, respectively.

3. Left-click on a column heading to sort a selected list in a descending or ascending order. The arrow next to the heading indicates which column has been used to sort the list and in what order.

## 4.2.9 Viewing the Daily Event Records and Error Message Details

To view the log file for a specific day and specific message details:

1. In the [Adapter Administration Manager](#), click the **Log Viewer** link in the navigation hierarchy panel.

The [Log Viewer Screen](#) is displayed. By default, when the screen opens, the most recent messages are displayed. These are located at the bottom of the list.

2. Scroll up to find the message that you want to examine.
3. Double-click any column of the selected message.

The [Log Viewer: Message Dialog Box](#) is displayed.

4. Click **OK**.

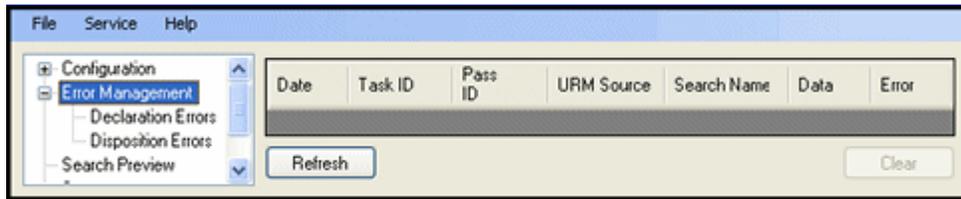
The Message dialog box closes.

## 4.3 The Administration User Interface

This section covers the following topics:

- ["Error Management Link"](#) on page 4-10
- ["Search Preview Screen"](#) on page 4-13
- ["Status Link"](#) on page 4-15
- ["Log Viewer Screen"](#) on page 4-19
- ["Log Viewer: Message Dialog Box"](#) on page 4-20

### 4.3.1 Error Management Link



The **Error Management** link provides access to additional links that enable you to access the declaration and disposition error lists. It is included in the navigation hierarchy on the [Adapter Administration Manager](#). Clicking the plus icon displays the links for the declaration and disposition errors screens.

Element	Description
Declaration Errors link	Used to view the declaration errors. Displays the <a href="#">Error Management: Declaration Errors Screen</a> .
Disposition Errors link	Used to view the disposition errors. Displays the <a href="#">Error Management: Disposition Errors Screen</a> .
Refresh button	Updates the list to display the most current messages.
Clear button	Truncates the error tables in the Adapter database and purges the error history. This list may contain many rows and you may not need the entire history of errors. Using the clear button conserves database storage space.

### 4.3.2 Error Management: Declaration Errors Screen

Date	Task ID	Pass ID	URM Source	Search Name	Data	Error
12/5/2006 1:55 PM		52			<ItemExtension> doc</ItemExtension> <ItemName> Record 08.doc</ItemName>	
12/5/2006 1:55 PM		55			<ItemExtension> doc</ItemExtension> <ItemName> Record 08.doc</ItemName>	
12/5/2006 11:24 AM		1			<ItemExtension> doc</ItemExtension> <ItemName> Non Record 03.doc</ItemName>	
12/5/2006 11:24 AM		1			<ItemExtension> doc</ItemExtension> <ItemName> Record 04.doc</ItemName>	

Use the Declaration Errors screen to view the declaration errors that have occurred in the Adapter. You can access this screen by clicking the **Declaration Errors** link in the navigation hierarchy on the [Adapter Administration Manager](#).

Element	Description
Error records list	<p>Lists all of the errors that have occurred while the Adapter Service was processing declaration tasks. You can sort this list based on a column by clicking on the column heading.</p> <p>The default sort order is by error date (ascending), which means the most recent error is at the bottom of the list. For more information about sorting by columns, see "<a href="#">Error Management: Sort Order</a>" on page 4-12.</p> <p>Double-clicking either the Data or Error column opens the <a href="#">Error Management: Error Details Screen</a> that contains the complete message pertaining to the declaration data or the failure error.</p>

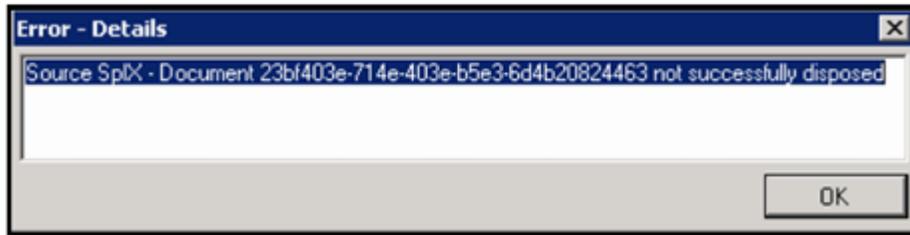
### 4.3.3 Error Management: Disposition Errors Screen

Date	Disposition ID	Item ID	Action	Error
9/28/2006 3:43 PM	AE2KMqKATVgrOD9VICvo61U		da_Archive	Source SpIX - Document 1831316b-f52a-45
9/28/2006 3:43 PM	AE2KMqKATVgrOD9VICvo61U		da_Archive	Source SpIX - Document 071ac84d-7ef2-48
9/28/2006 3:43 PM	AE2KMqKATVgrOD9VICvo61U		da_Archive	Source SpIX - Document 4933b30d-dd0c-4
9/28/2006 3:43 PM	AE2KMqKATVgrOD9VICvo61U		da_Archive	Source SpIX - Document 983dee01-0c08-4

Use the Disposition Errors screen to view the disposition errors that have occurred in the Adapter. You can access this screen by clicking the **Disposition Errors** link in the navigation hierarchy on the [Adapter Administration Manager](#).

Element	Description
Error records list	<p>Lists all of the errors that have occurred while the Adapter Service was processing disposition tasks. You can sort this list based on a column by clicking on the column heading.</p> <p>The default sort order is by error date (ascending), which means the most recent error is at the bottom of the list. For more information about sorting by columns, see "<a href="#">Error Management: Sort Order</a>" on page 4-12.</p> <p>Double-clicking the Error column opens the <a href="#">Error Management: Error Details Screen</a> that contains the complete message pertaining to the disposition failure error.</p>

### 4.3.4 Error Management: Error Details Screen

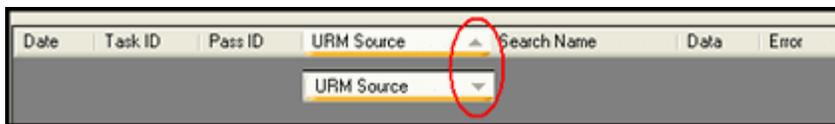


Use the Error Details screen to view the entire message text of any entry contained in either of the error management lists: [Error Management: Declaration Errors Screen](#) and [Error Management: Disposition Errors Screen](#). You can display this screen using one of the following methods:

- Double-clicking either the Data or Error column of a specific error contained in the Declaration Errors list.
- Double-clicking the Error column of a specific error contained in the Disposition Errors list.

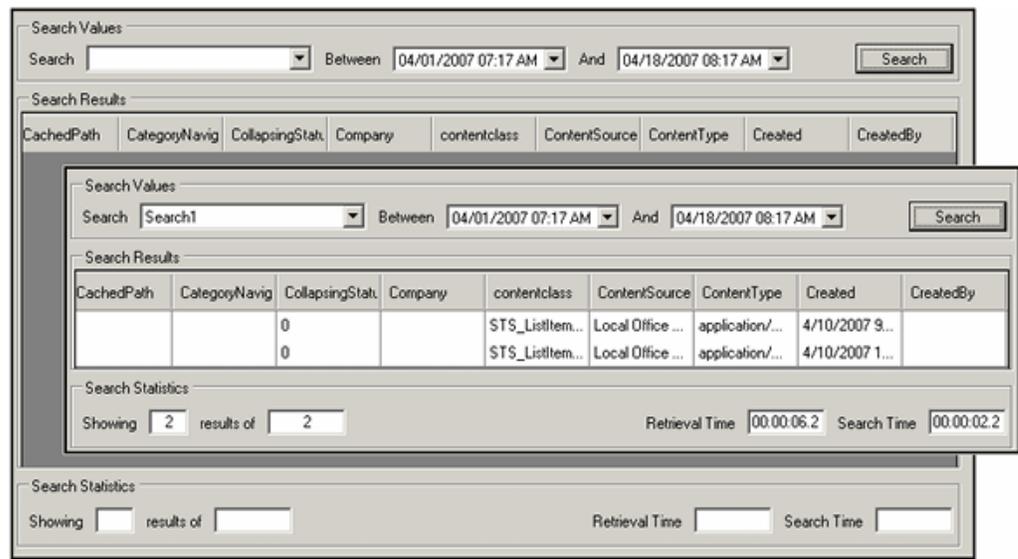
Element	Description
Message pane	Displays the complete message text.
OK button	Closes the Error Details screen.

### 4.3.5 Error Management: Sort Order



When the results lists for declaration and disposition errors are displayed in table view pages, you can click on column headings to sort the lists in either ascending or descending order. When you click on a column heading, the entire list is resorted based on that column. After you click on a column, a small arrow is displayed next to the heading, indicating which column has been used to sort the list and in what order (ascending or descending).

## 4.3.6 Search Preview Screen



Use the Search Preview screen to review the results of a specific search query to evaluate the effectiveness of the query expressions. This previewing screen enables you to test the accuracy of your search query and filter the results using a specific date range. You can access this screen by clicking the **Search Preview** link in the navigation hierarchy on the [Adapter Administration Manager](#).

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**Note:** Make sure that the Adapter Service is started before you try to preview your search query. Otherwise, the Adapter cannot process the search query. See "[Stopping and Restarting the Adapter Service](#)" on page 4-7.

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**Tip:** When you start or restart the Adapter, it begins processing all time windows if the new and historical content declaration settings are enabled on the [Advanced Screen](#). Therefore, before you run your search queries in a production environment, they should be tested to verify their effectiveness and accuracy.

To ensure that your search queries return optimal results, use the following general guidelines for testing:

- Before starting the Adapter, disable the new and historical content declaration settings on the [Advanced Screen](#)
  - Start the Adapter. See "[Stopping and Restarting the Adapter Service](#)" on page 4-7
  - Use the Search Preview screen to test your search queries.
  - When you are satisfied with the results, stop the Adapter again and enable the new and historical content declaration settings.
  - Restart the Adapter
-

**Search Values pane:**

Element	Description
Search drop-down list	Lists all of the currently defined search queries.
Date range drop-down calendars	Provides a range of dates for the search query to use. Only content items that meet the search criteria and fall within the selected dates are displayed in the results.  For more detailed information about the drop-down calendar, see <a href="#">"Equation Editor: Value Variable Drop-down Calendar"</a> on page 3-51.
Search button	Activates the selected search query. The search is based on the defined search query expressions and the date range selected from the drop-down calendars.

**Search Results pane:**

Element	Description
Records list	Displays the search results of the selected search query. The list includes all of the content items that meet the search criteria and are within the specified date range.

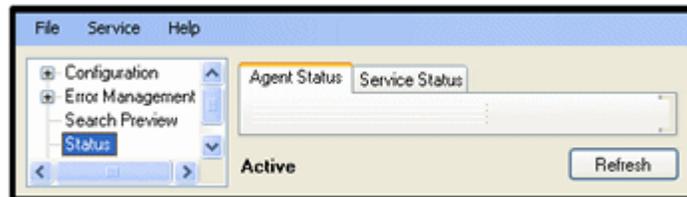
**Search Statistics pane:**

The Adapter calculates the results from the search preview based on the number of archives that the search query is configured to run against. The search preview function will never display more than 100 results for each included archive. By default, the results are the oldest matching items rather than the most recent in the specified date range.

Element	Description
Returned results counts	<b>Showing:</b> Displays the total number of results that are displayed in the Search Results pane.  <b>results of:</b> Displays the total number of results that the search query produced when run against one or more archives. This sum combines the results from all the archives included in the search.  For example, if you ran a search query on four archives and the first produced 87 results, the second and third produced none, and the fourth produced 4,724, you would see the following:  Showing 187 results of 4811
Retrieval Time field	Displays how long it took to retrieve the data for all the displayed results in the Search Results pane.

Element	Description
Search Time field	<p>Displays how long it took to run the search query.</p> <p><b>Tip:</b> You can use the retrieval and search times to help you optimize your search query or to simply determine the query's feasibility. For example, you might run a search query over a one-hour window and learn that it takes 20 seconds to run the search and 77 seconds to retrieve the data for 100 displayed results out of 400,000 produced results.</p> <p>Using this information, you can calculate how long it would take to run the search query and retrieve the data for all of the produced results. For example:</p> <ul style="list-style-type: none"> <li>▪ <math>[(400,000 / 100) * 77 \text{ seconds}] / 60 \text{ seconds} = \sim 5133 \text{ minutes} (\sim 86 \text{ hours})</math></li> </ul> <p>Clearly, this search query is not practical and need to be refined.</p>

### 4.3.7 Status Link



The Status link provides access to the status screens that display overall general information. It is included in the navigation hierarchy on the [Adapter Administration Manager](#). Clicking the **Status** link displays the tabs to access the status data for the Adapter and the Adapter Service.

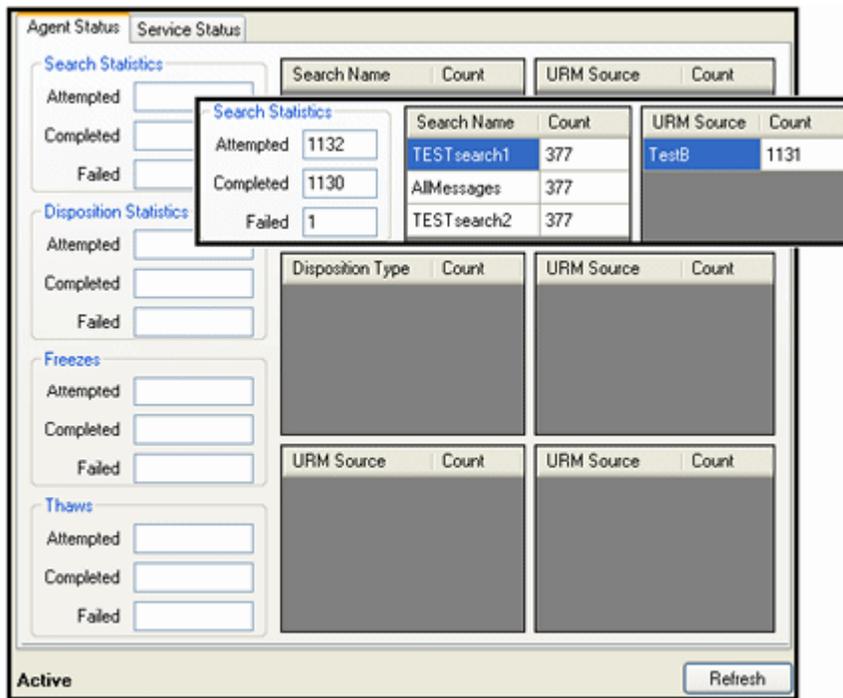
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**Note:** The information provided on the status tabs is profiling data about the Adapter. It is intended to help you detect operational abnormalities. However, more specific information is available in the daily log files. These can be viewed using the [Log Viewer Screen](#).

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Element	Description
Adapter Status tab	Used to view the operating status of the Adapter. Displays the <a href="#">Status: Adapter Status Tab</a> .
Service Status tab	Used to view the operating status of the Adapter Service. Displays the <a href="#">Status: Service Status Tab</a> .
Adapter state	<p><b>Active:</b> Indicates that the Adapter instance that you are connected to is the one currently interacting with the SharePoint System.</p> <p><b>Standby:</b> Indicates that the Adapter instance that you are connected to is currently waiting for the active instance to terminate or be shut down.</p> <p>See <a href="#">Table 4.1.2, "Cluster Support"</a>.</p>
Refresh button	Updates the data fields and individual lists to display the most current status data for the Adapter and the Adapter Service.

### 4.3.8 Status: Adapter Status Tab



Use the Adapter Status tab to monitor the status of tasks performed by the Adapter. The data provided on this tab is instantaneously current. As soon as you access the tab or refresh the screen, the Adapter automatically populates the fields with fresh data. The inset illustrates an example of populated data panes for search queries that have executed. You can access this screen by clicking the **Status** link in the navigation hierarchy on the [Adapter Administration Manager](#). By default, the Adapter Status tab is displayed first.

The data provided on this screen is for the duration of the Adapter's current run. However long the Adapter runs, the values continue to increment and are not reset. However, if you stop and restart the Adapter Service, all of the profiling data that is collected is reset to zero. The data is not persisted across multiple runs.

Element	Description
Search Statistics pane	<p><b>Attempted:</b> Displays the total number of search queries that have been invoked. This includes those that are currently running in addition to the completed and failed counts.</p> <p><b>Completed:</b> Displays the number of search queries that ran successfully.</p> <p><b>Failed:</b> Displays the number of search queries that failed.</p>
Disposition Statistics pane	<p><b>Attempted:</b> Displays the total number of dispositions that have been initiated. This includes those that are currently being processed in addition to the completed and failed counts.</p> <p><b>Completed:</b> Displays the number of dispositions that were processed successfully.</p> <p><b>Failed:</b> Displays the number of dispositions that failed.</p>

Element	Description
Freezes pane	<p><b>Attempted:</b> Displays the total number of holds that have been applied. This includes those that are currently being applied in addition to the completed and failed counts.</p> <p><b>Completed:</b> Displays the number of holds that were successfully applied.</p> <p><b>Failed:</b> Displays the number of holds that failed.</p>
Thaws pane	<p><b>Attempted:</b> Displays the total number of holds that have been removed. This includes those that are currently being removed in addition to the completed and failed counts.</p> <p><b>Completed:</b> Displays the number of holds that were successfully removed.</p> <p><b>Failed:</b> Displays the number of holds that failed.</p>
Operation status boxes	<p>The data in these status boxes provide information that help to profile overall condition of the Adapter's functions and processes.</p> <p><b>Upper-left:</b> Lists the individual search queries and the number of times each has run.</p> <p><b>Upper-right:</b> Lists the individual URM Adapter sources and the number of search queries that have run for each.</p> <p><b>Middle-left:</b> Lists the individual disposition types and the number of completed disposals for each.</p> <p><b>Middle-right:</b> Lists the individual URM Adapter sources and the number of dispositions performed for each.</p> <p><b>Lower-left:</b> Lists the individual URM Adapter sources and the number of applied holds for each.</p> <p><b>Lower-right:</b> Lists the individual URM Adapter sources and the number of removed holds for each.</p>

### 4.3.9 Status: Service Status Tab

Adapter Status: **Service Status**

**Oracle URM Adapter for SharePoint 3.0**      Process Name Sharepoint30Adapter      Process ID 5676

Uptime 2 minutes 5 seconds      Total CPU Time 5 seconds      User CPU Time 1 second

Working Set Size Current: 72MB      Peak: 72MB

Paged Memory Size Current: 63MB      Peak: 65MB

Virtual Memory Size Current: 239MB

Threads

ID	Name	Status	Priority	Is Background
12	Dispositions	Resting - Waking at: 4/18/2007 8:20:17 AM	Normal	<input type="checkbox"/>

Timers

Name	Status	Is Enabled
Heartbeat Timer	Inactive	<input checked="" type="checkbox"/>
Declaration Check Timer	Created	<input checked="" type="checkbox"/>
Log Upload Timer	Created	<input checked="" type="checkbox"/>

**Active**      Refresh

Use the Service Status tab to monitor the status of the Adapter Service's processes that are currently running. This screen also displays some common performance measures for these processes. The data provided on this tab is instantaneously current. As soon as you access the tab or refresh the screen, the Adapter automatically populates the

fields with fresh data. You can access this screen by clicking the **Status** link in the navigation hierarchy on the [Adapter Administration Manager](#). Click the Service Status tab.

---



---

**Note:** Many of the service statistics presented on this screen are derived from the system's Task Manager. This information enables you to monitor the key indicators associated with the Adapter's performance and related processes.

---



---

**Processes status pane:**

The data provided on this screen is for the run of the Adapter. However long the Adapter runs, the values continue to increment and are not reset. However, if you stop and restart the Adapter Service, all of the profiling data that is collected is reset to zero. The data is not persisted across multiple runs.

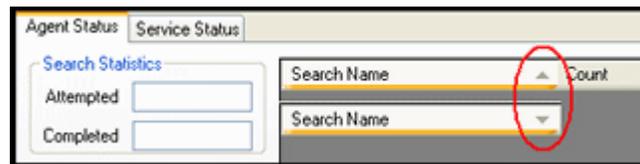
Element	Description
Process Name field	The Adapter's running process.
Process ID field	The system-assigned numerical identifier that uniquely distinguishes the process while it runs.
Uptime field	The length of time that the Adapter has been running without crashing or being stopped.
Total CPU Time field	The total length of time the Adapter has dedicated to a process (rather than 'sleeping').
User CPU Time field	The total length of time the Adapter has been running processes in non-kernel mode.
Working Set Size field	<p><b>Current:</b> The amount of memory the current process is using at this time.</p> <p><b>Peak:</b> The maximum amount of memory the current process has used during its overall run time.</p>
Paged Memory Size field	<p>Paged memory is the memory that has been swapped out to a disk.</p> <p><b>Current:</b> The amount of paged memory the current process is using at this time.</p> <p><b>Peak:</b> The maximum amount of paged memory the current process has used during its overall run time.</p>
Virtual Memory Size field	<b>Current:</b> The total amount of memory the Adapter has available for processing. As the Adapter runs, this value may grow a small amount as it requests access to more memory from the operating system.

**Threads pane:**

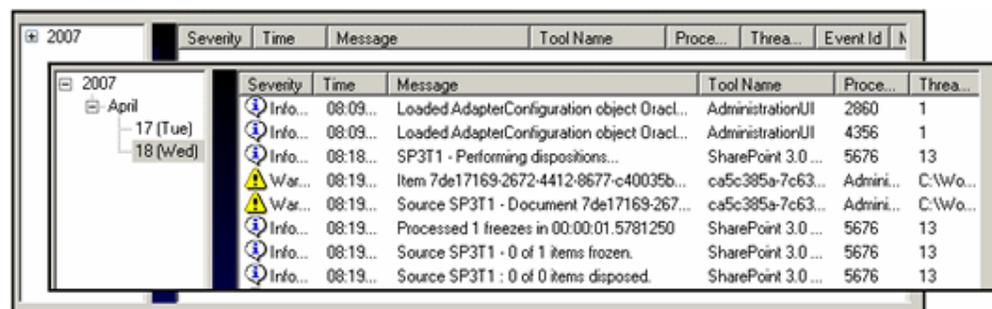
Element	Description
Processes list	<p>Displays a list of the processes that are running at the time the Adapter retrieves this status information. Generally, several processes execute concurrently and independently.</p> <p>The system dynamically assigns each process thread a unique identification number. You cannot select the Is Background check box. However, it is selected when a background process is running and included in the list.</p>

**Timers pane:**

Element	Description
Functions list	<p>Displays a list of the timer functions that are running at the time the Adapter retrieves this status information. Generally, several timers execute concurrently and independently.</p> <p>The system dynamically assigns each timer thread a unique identification number. You cannot select the Is Enabled check box. However, it is selected when a background timer function is running and included in the list.</p>

**4.3.10 Status: Sort Order**

When the data lists for Adapter and service errors are displayed in status boxes or table view pages, you can click on column headings to sort the lists in either ascending or descending order. When you click on a column heading, the entire list is resorted based on that column. After you click on a column, a small arrow is displayed next to the heading, indicating which column has been used to sort the list and in what order (ascending or descending).

**4.3.11 Log Viewer Screen**

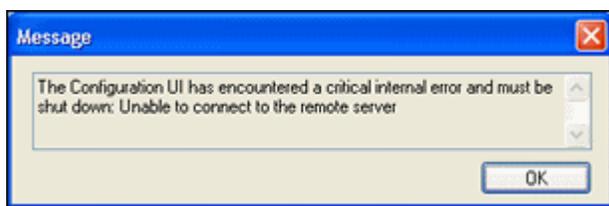
Use the Log Viewer screen to select and view the event records for a specific day. The inset illustrates the list of messages generated for a day that was selected from the hierarchical log file tree. You can access this screen by clicking the Log Viewer link in the navigation hierarchy panel on the [Adapter Administration Manager](#).

Once each day, the Adapter invokes a mechanism that converts the current log file into a format similar to that used by URM. The converted log file is then uploaded to URM. When the log files that you can view in the Log Viewer screen reach a pre-defined age, they are permanently deleted and are not archived within the Adapter.

The log file tree is an organized hierarchy that consists of the current year(s), month(s), and days, as applicable. Due to the deletion process for matured log files, two years/months may be listed in the navigation hierarchy. This may include the last one or more days of the previous month and some in the current month. This is also applicable to years (when log files are available for December and January).

Element	Description
Log file tree	<p>The Adapter generates a daily log file that stores all of the event records for that 24-hour period. You can drill down the hierarchy to navigate to a specific date to access the processing and status information entries that were recorded that day.</p> <p>Use the plus and minus icons in front of the individual years and months to unfold or collapse their contents. The days of the month are listed and are links that, when clicked, will access and display the log file contents in the log entry list.</p>
Log entry list	<p>Lists all of the recorded event messages for a selected day in chronological order (oldest to newest). By default, the most current records are displayed when the window opens. To view the oldest records, scroll to the top of the file.</p> <p>Information is listed in a table format with standard column headers. The only column that you can fully display is the message text in the <a href="#">Log Viewer: Message Dialog Box</a>. For more information about the status and event messages, see "<a href="#">Status and Error Message Severity Codes</a>" on page 4-5.</p>

### 4.3.12 Log Viewer: Message Dialog Box



Use the Message dialog box to view the entire message text of any entry contained in a log file. You can display this dialog box using one of the following methods:

- Double-click the text in any column for a specific record.
- Right-click the text in any column and select View Message Text from the pop-up menu.

Element	Description
Message pane	Displays the complete message text.
OK button	Closes the Message dialog box.

---



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## Metadata Field Lengths

This section covers the following topics:

- ["Lengths for URM Metadata Field Types"](#) on page A-1
- ["Lengths for SharePoint Archive Metadata Field Types"](#) on page A-2
- ["Displayed Field Lengths for Mapping"](#) on page A-2
- ["Field Lengths and Double-Mapping"](#) on page A-3

### A.1 Lengths for URM Metadata Field Types

When necessary, you can create URM custom metadata fields that can be mapped to any SharePoint System metadata field. See ["URM Sources Screen: Create New URM Source Screen - Define Custom Fields"](#) on page 3-42. When you create the custom metadata fields for URM, you can specify the length for each. If you do not specify a length, the default value for the field type is used. the following table lists the applicable default values.

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**Note:** If you are using a Microsoft SQL Server 2005 database, the URM Memo field type is a varchar(max). When the Adapter sends a collection of metadata to URM, the field data will be of varying lengths. If the row size does not exceed 8,000 bytes, SQL Server tries to store large value data types in the row along with the other columns. However, if the row size does exceed the 8,000 byte limit, SQL Server stores a 16-byte pointer in the row. The pointer maps to the pages that contain the data comprising the text value of the large-value data types.

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Field Type	Length Range	Default Length
Text field	1 to 100 characters	100 characters
BigText field	101 to 200 characters	200 characters
Memo field (for MS Sql server 2005)	201 characters to 2Gb	1000 characters
Memo field (for Oracle)	201 to 4000 characters	1000 characters
Memo field (for Oracle Japanese)	201 to 2000 characters	1000 characters

## A.2 Lengths for SharePoint Archive Metadata Field Types

The following table lists the field lengths for the SharePoint System metadata fields. Where otherwise indicated, the maximum sizes of the fields is very large and understood to be essentially unlimited. You will need to be aware of the metadata field lengths when you are mapping the SharePoint System metadata fields to URM metadata fields. See "[URM Sources Screen: Create New URM Source Screen - Establish Field Mappings](#)" on page 3-40.

Metadata	Type	Length
ID	Guid	36
Directory	String	512
File Name	String	256
File Extension	String	255
List Title	String	510
Full Url	String	1281
Title	String	512
Author	String	513

## A.3 Displayed Field Lengths for Mapping

When you are mapping the SharePoint System metadata fields to URM metadata fields, the respective drop-down lists include the maximum field lengths for each field in the list. The graphics below illustrate one method used to display field lengths on the [URM Sources Screen](#). The metadata field drop-down lists in both panes include the field lengths for SharePoint System and URM metadata fields.

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**Note:** The same metadata fields menu for the SharePoint System is displayed in both the Repository Field and Name lists.

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**Note:** In addition to including the field lengths in the lists, the field lengths are displayed in pop-ups when you hover the pointer over a selected menu option. See the graphic in "[Field Lengths and Double-Mapping](#)" on page A-3.

---



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Figure A-1 Repository Metadata Field Lists and Lengths

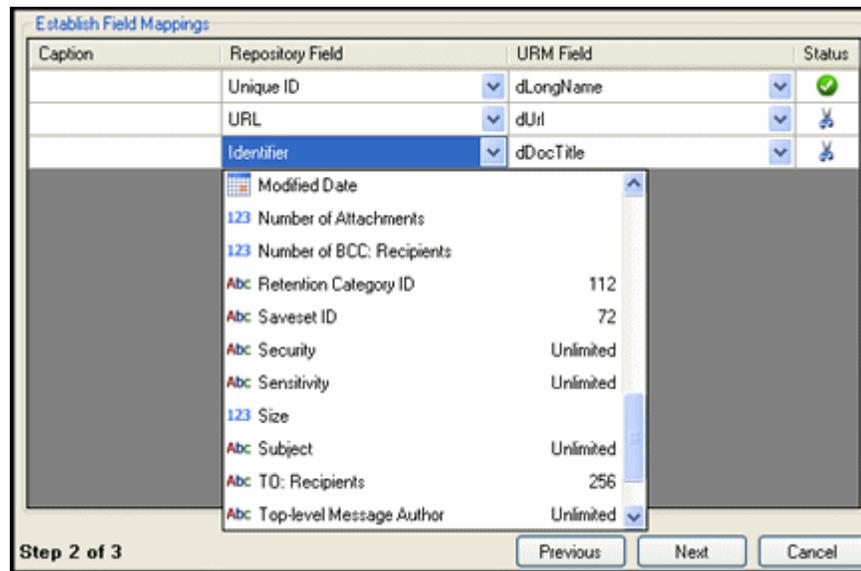
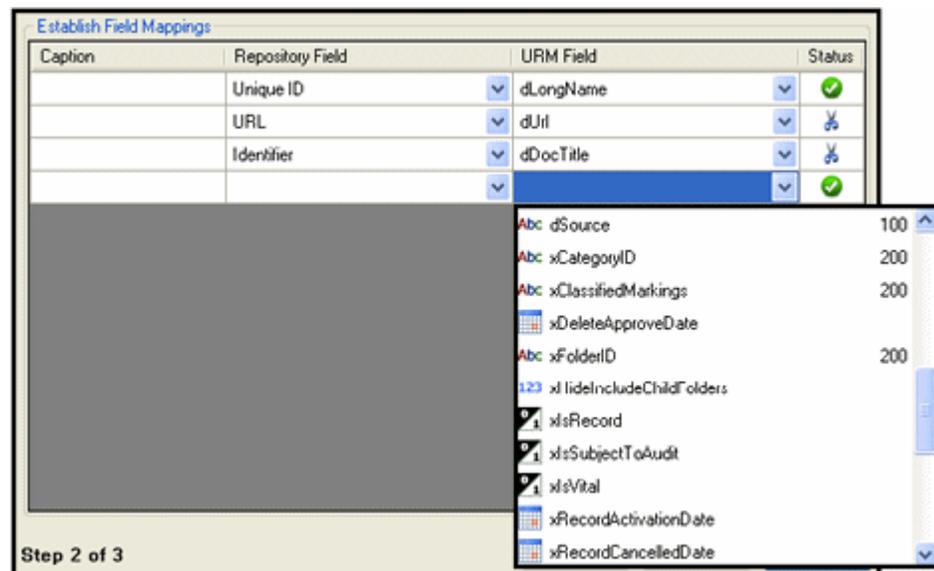


Figure A-2 URM Metadata Field Lists and Lengths



## A.4 Field Lengths and Double-Mapping

As described in the [Displayed Field Lengths for Mapping](#) section, each SharePoint System and URM metadata field included in the drop-down lists on the [URM Sources Screen](#) has an associated size. You can view the field length sizes in the drop-down lists and also by hovering over a selected metadata field option (shown below). When you create a field mapping, the Status column indicates whether or not the data might be truncated.

When the SharePoint System field has a larger length than the URM system field that it is mapped to, the scissors icon in the Status column indicates that the data could potentially be truncated. However, the double-mapping feature enables you to map the same SharePoint System field to a larger-size URM custom metadata field. For

more detailed information about double-mapping, see "[Double-Mapped Metadata Fields](#)" on page 3-6.

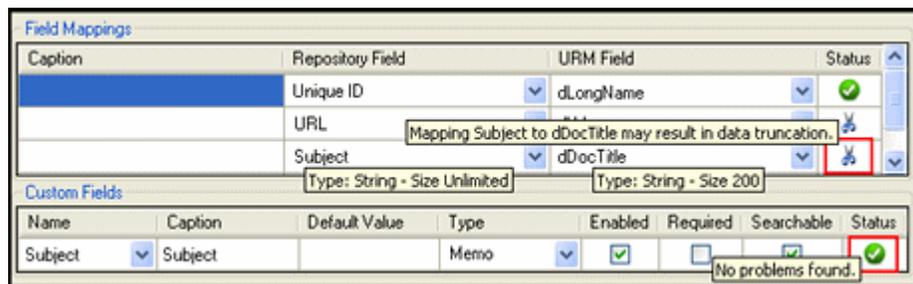
The graphic below illustrates that the repository's Subject field is significantly larger than URM's dDocTitle field. In this case, the Adapter might need to truncate the value which would result in lost data. To resolve this issue, you can double-map the Subject field to a larger URM custom metadata field that would ensure data integrity. See the examples below.

---

**Important:** If you use the double-mapping feature, the field value that the Adapter sends in the declaration data is always truncated to the length of the URM custom metadata field. Therefore, to avoid losing data, you must make sure that the size of the URM custom metadata field is large enough to hold the original data in the SharePoint System metadata field.

---

**Figure A-3 Example of Double-Mapped Repository Metadata Field**



#### Good Double-Mapping Example:

You have mapped the following metadata fields:

- REP\_field\_A, size 500 (SharePoint System metadata field)
- URM\_field\_B, size 200 (URM system metadata field)

In this case, the SharePoint System field is larger than the URM field. When the Adapter sends the declaration data to URM, the Adapter truncates the data in REP\_field\_A to 200 to fit into URM\_field\_B. However, you can double-map REP\_field\_A to a larger URM custom field.

For example, you could map REP\_field\_A to:

- URM\_custom\_C, size Memo (2000, 4000, or unlimited. See "[Lengths for URM Metadata Field Types](#)" on page A-1

Then, the Adapter sends the complete value for REP\_field\_A in the declaration data. When URM sees the double-mapping, it automatically truncates the data from REP\_field\_A to fit into URM\_field\_B (200 characters) and enters the entire value from REP\_field\_A (500 characters) into URM\_custom\_C.

#### Poor Double-Mapping Example:

You have mapped the following metadata fields:

- REP\_field\_A, size 500 (SharePoint System metadata field)
- URM\_field\_B, size 200 (URM system metadata field)
- URM\_custom\_D, size Text (100 characters)

Because the Adapter always sends data at the custom field's length, the data in REP\_field\_A is truncated to 100 characters and sent to URM. As a result, both URM fields (URM\_field\_B and URM\_custom\_D) receive the 100-character truncated version of the original field value.



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# Index

## A

---

accounts  
    setting up for installation, 2-3

Adapter Administration manager  
    installation procedure, 2-3

Adapter Status tab  
    overview and feature descriptions, 4-16

Add - Delete pop-up menu  
    on Define Custom Fields screen, 3-43  
    on URM Sources screen, 3-39

Add - Remove pop-up menu  
    equation editor, 3-48

Add Defaults check box  
    on Create New URM Source screen, 3-40

Add pop-up menu  
    define custom fields on URM Sources  
        screen, 3-39  
    equation editor, 3-48  
    field mappings on URM Sources screen, 3-39

add term  
    inserting into search query, 3-19

Add Term - Remove pop-up menu  
    equation editor, 3-49

Add Term pop-up menu  
    equation editor, 3-49

administration  
    previewing search query results, 4-8  
    sorting error results - declarations and  
        dispositions, 4-8  
    sorting status results - adapter and service, 4-9  
    stopping and restarting SharePoint URM  
        Service, 4-7  
    viewing adapter status data, 4-9  
    viewing declaration errors and messages, 4-7  
    viewing disposition errors and messages, 4-8  
    viewing service status data, 4-9

Advanced link  
    in navigation tree, 3-32

Advanced screen  
    overview and feature descriptions, 3-55

advanced settings  
    modifying, 3-30

Agent Administration manager  
    overview - menus, navigation tree, links, 3-31

AND - OR boolean pop-up menu

    equation editor, 3-50

archive metadata fields  
    for SharePoint System, 3-4

audience, 1-2

audit trails  
    administration overview, 4-6  
    description, 3-16  
    log files - overview, 4-4  
    retention function overview, 1-5  
    viewing log files, 4-9

auditing  
    retention function overview, 1-5

authentication  
    changing connection data, 3-23  
    changing credentials data, 3-22  
    registration process - sending credentials, 3-22

## B

---

batch declarations  
    retention function overview, 1-4

Batch Size field  
    on Advanced screen, 3-55

Browse button  
    on Advanced screen, 3-59

## C

---

calendar  
    dual date field, 3-52  
    for historical searches - on Advanced screen, 3-59  
    for Value variable, 3-51  
    single date field, 3-52

Cancel button  
    on Create new search screen, 3-46  
    on Create New URM Source screen, 3-40  
    on Define Custom Fields screen, 3-44  
    on Establish Field Mappings screen, 3-42

Caption field  
    on Create New URM Source screen, 3-40  
    on Define Custom Fields screen, 3-43  
    on Establish Field Mappings screen, 3-41

Clear button  
    on Declaration Errors and Disposition Errors  
        screens, 4-10

clustering

- support in Adapter architecture, 4-2
- compound expressions
  - inserting into search query, 3-20
- concurrent mode
  - displayed state on Adapter Status and Service Status tabs, 4-15
- concurrent mode state
  - on Adapter Status and Service Status tabs, 4-15
- configuration
  - activating search query, 3-30
  - adding new URM adapter source, 3-24
  - changing credentials data, 3-22
  - changing database connection data, 3-23
  - defining URM custom metadata fields, 3-26
  - deleting search query, 3-29
  - duplicating and editing search query, 3-29
  - editing an existing URM adapter source, 3-27
  - editing search query, 3-28
  - mapping metadata fields, 3-26
  - mapping search queries to URM adapter sources and retention categories, 3-29
  - modifying advanced settings, 3-30
  - registering the adapter, 3-22
  - retention function overview, 1-4
  - sorting results - URM Sources screen, 3-23
  - viewing data of URM adapter source, 3-27
- configuration files
  - overview, 3-16
- Connection field
  - on Connection screen, 3-34
- Connection link
  - in navigation tree, 3-32
- Connection screen
  - overview and feature descriptions, 3-33
- content profile
  - defining in URM, 2-5
- Content Server
  - compatibility with the adapter, 1-5
- Create new search screen
  - overview and feature descriptions, 3-45
- Create New URM Source screen
  - overview and feature descriptions, 3-39
- Custom Fields
  - on URM Sources screen, 3-38
- custom metadata fields
  - displayed in URM Search "sourcename" Items page, 3-5
  - for URM, 3-5
  - searchable in URM, 3-5
- Cutoff Date drop-down calendar
  - Historical Content Declarations - on Advanced screen, 3-59

## D

---

- Data Directory field
  - on Advanced screen, 3-59
- database
  - procedure to create for the adapter, 2-1
- databases

## Index-2

- changing connection data, 3-23
  - software requirements, 1-6
- date - number pop-up menu
  - equation editor, 3-50
- date range drop-down calendars
  - on Search Preview screen, 4-14
- Declaration Errors link
  - in navigation tree, 3-32, 4-10
- Declaration Errors screen
  - overview and feature descriptions, 4-11
- declarations
  - Declaration Errors screen, 4-11
  - error messages - using for audit trails, 3-16
  - regulatory compliance description, 3-15
  - retention function overview, 1-4
  - sorting overview, 4-12
  - sorting results, 4-8
  - viewing errors and messages, 4-7
- Default Value field
  - on Define Custom Fields screen, 3-43
- Define Custom Fields screen
  - overview and feature descriptions, 3-42
- defined searched drop-down list
  - on Search Creation screen, 3-45
- Delete button
  - on Search Creation screen, 3-45
- Delete pop-up menu
  - define custom fields on URM Sources screen, 3-39
  - field mappings on URM Sources screen, 3-39
- Detail
  - message severity code - description, 4-5
- Disposition Errors link
  - in navigation tree, 3-32, 4-10
- disposition Errors screen
  - overview and feature descriptions, 4-11
- Disposition Statistics pane
  - on Adapter Status tab, 4-16
- dispositions
  - Disposition Errors screen, 4-11
  - error messages - using for audit trails, 3-16
  - regulatory compliance description, 3-15
  - retention function overview, 1-5
  - sorting overview, 4-12
  - sorting results, 4-8
  - viewing errors and messages, 4-8
- double-mapping
  - how to, 3-26
  - lengths of fields, A-3
  - metadata fields, 3-6
- down arrow
  - on Search Mapping screen, 3-54

## E

---

- Enabled check box
  - Historical Content Declarations - on Advanced screen, 3-58
  - New Content Declaration - on Advanced screen, 3-56

- on Define Custom Fields screen, 3-43
- on Search Mapping screen, 3-53
- equation editor
  - Add - Remove pop-up menu, 3-48
  - Add pop-up menu, 3-48
  - Add Term - Remove pop-up menu, 3-49
  - Add Term pop-up menu, 3-49
  - AND - OR boolean pop-up menu, 3-50
  - date - number pop-up menu, 3-50
  - dual date field, 3-52
  - dual-entry text field, 3-51
  - expression pop-up menus, 3-48
  - Field variable pop-up menus, 3-49
  - Mail Metadata pop-up menu, 3-49
  - Operator variable pop-up menus, 3-50
  - Search Creation screen, 3-46
  - single date field, 3-52
  - single-entry text field, 3-51
  - text pop-up menu, 3-50
  - Value variable drop-down calendar, 3-51
  - Value variable text field, 3-51
- Error
  - message severity code - description, 4-6
- Error Details screen
  - overview and feature descriptions, 4-12
- error management
  - Declaration Errors link, 4-10
  - Disposition Errors link, 4-10
- Error Management link
  - overview and feature descriptions, 4-10
- error records list
  - on Declaration Errors screen, 4-11
  - on Disposition Errors screen, 4-11
- Establish Field Mappings screen
  - overview and feature descriptions, 3-40
- expression
  - Add - Remove pop-up menu, 3-48
  - Add pop-up menu, 3-48
  - Add Term - Remove pop-up menu, 3-49
  - Add Term pop-up menu, 3-49
  - Field variable, 3-47
  - Field variable pop-up menus, 3-49
  - inserting into search query, 3-19
  - Operator variable, 3-47
  - Operator variable pop-up menus, 3-50
  - Value variable, 3-47
  - Value variable drop-down calendar, 3-51
  - Value variable text field, 3-51
- expression grouping
  - inserting into search query, 3-18
- external checkin
  - description, 4-2

## F

---

- field lengths
  - displayed on drop-down menus, A-2
  - for double-mapping, A-3
  - for repository metadata fields, A-2
  - for URM metadata fields, A-1

- Field Mappings
  - on URM Sources screen, 3-37
- Field variable
  - expression component - equation editor, 3-47
  - Mail Metadata pop-up menu, 3-49
  - pop-up menus - equation editor, 3-49
- File menu
  - for Adapter Administration manager, 3-31
- Filter By drop-down list
  - on Search Mapping screen, 3-52
- freezes
  - regulatory compliance description, 3-15
  - retention function overview, 1-5
- Freezes pane
  - on Adapter Status tab, 4-17
- functions list
  - on Service Status tab, 4-19

## H

---

- Help menu
  - for Adapter Administration manager, 3-32
- Historical check box
  - on Search Mapping screen, 3-53
- Historical Complete check box
  - Historical Content Declaration - on Advanced screen, 3-57
- historical content searches
  - basic timeline, 3-10
  - initial search, 3-9
  - overview, 3-8
  - previewing search query results, 4-8
  - processing overview, 3-9
  - search direction for the Adapter, 3-58
  - search intervals, 3-11
  - start date, 3-10
  - temporary suspension, 3-12
- holds
  - regulatory compliance description, 3-15
  - retention function overview, 1-5
- HTML Encoding drop-down list
  - on Advanced screen, 3-59

## I

---

- Information
  - message severity code - description, 4-5
- installation
  - configure the adapter, 2-5
  - create database - procedure, 2-1
  - create ODBC Data Source, 2-2
  - define content profile in URM, 2-5
  - procedure for, 2-1, 2-3
  - setup SharePoint accounts, 2-3
- installation architecture
  - primary components, 1-1
- installation requirements, 1-3
- internal checkin
  - description, 4-2
- Interval field

New Content Declaration - on Advanced screen, 3-57

## L

---

Last Processed field  
Historical Content Declaration - on Advanced screen, 3-59  
New Content Declaration - on Advanced screen, 3-57

log entry list  
on Log Viewer screen, 4-20

log file tree  
on Log Viewer screen, 4-20

log files  
administration, 4-5  
audit trails overview, 4-6  
characteristics, 4-5  
Detail severity code, 4-5  
error and message codes, 4-5  
Error severity code, 4-6  
Information severity code, 4-5  
overview, 4-4  
retention function overview, 1-5  
using for audit trails, 3-16  
viewing daily event records, 4-9  
Warning severity code, 4-6

Log Viewer link  
in navigation tree, 3-32

Log Viewer screen  
overview and feature descriptions, 4-19

logging  
retention function overview, 1-5

## M

---

Mail Metadata pop-up menu  
equation editor, 3-49

manage communications  
retention function overview, 1-4

mapping  
metadata fields - adding URM adapter source, 3-26  
metadata fields - overview, 3-5  
search queries - overview, 3-20  
search queries - to URM adapter sources and retention categories, 3-29

Message dialog box  
overview and feature descriptions, 4-20

Message pane  
on Error Details screen, 4-12

message pane  
on Message dialog box, 4-20

metadata fields  
archive - for SharePoint System, 3-4  
custom - defining for URM, 3-26  
custom - for URM, 3-5  
double-mapped, 3-6  
double-mapping, 3-26  
lengths displayed on drop-down menus, A-2

lengths for double-mapping, A-3  
lengths for repository fields, A-2  
lengths for URM fields, A-1  
mapping for adding URM adapter source, 3-26  
mapping overview, 3-5  
single-mapped, 3-6  
system - for URM, 3-5

## N

---

Name drop-down list  
on Define Custom Fields screen, 3-43

Name field  
on Create New URM Source screen, 3-39

navigation tree  
Advanced link, 3-32  
Connection link, 3-32  
Declaration Errors link, 3-32, 4-10  
Disposition Errors link, 4-10  
disposition Errors link, 3-32  
File menu, 3-31  
for Adapter Administration manager, 3-32  
Help menu, 3-32  
Log Viewer link, 3-32  
Search Creation link, 3-32  
Search Mapping link, 3-32  
Search Preview link, 3-32  
Service menu, 3-32  
Status link, 3-32  
URM Sources link, 3-32

New button  
on Search Creation screen, 3-45  
on URM Sources screen, 3-37

new content searches  
basic timeline, 3-10  
initial search, 3-9  
overview, 3-8  
previewing search query results, 4-8  
processing overview, 3-9  
search direction for the adapter, 3-56  
search intervals, 3-11  
start date, 3-10  
temporary suspension, 3-12

Next button  
on Create New URM Source screen, 3-40  
on Define Custom Fields screen, 3-44  
on Establish Field Mappings screen, 3-42

## O

---

ODBC button  
on Connection screen, 3-34

ODBC Data Source  
creating for installation procedure, 2-2

OK button  
on Create new search screen, 3-46  
on Error Details screen, 4-12  
on Message dialog box, 4-20

operating systems  
software requirements, 1-5

- operation status boxes
  - on Adapter Status tab, 4-17
- Operator variable
  - AND - OR boolean pop-up menu, 3-50
  - date - number pop-up menu, 3-50
  - expression component - equation editor, 3-47
  - text pop-up menu, 3-50
- Operatorvariable
  - pop-up menus - equation editor, 3-50
- overview
  - about the adapter, 1-1
  - retention functions, 1-3
  - URM and the adapter, 1-3

## P

---

- Paged Memory Size field
  - on Service Status tab, 4-18
- Password field
  - Database Configuration - on Connection screen, 3-34
  - URM Configuration - on Connection screen, 3-33
- pop-up menus
  - Add - Delete on Define Custom Fields screen, 3-43
  - Add - Delete on URM Sources screen, 3-39
  - Add - Remove menu, 3-48
  - Add menu, 3-48
  - Add menu - field mappings, 3-39
  - Add menu - URM custom fields, 3-39
  - Add Term - Remove menu, 3-49
  - Add Term menu, 3-49
  - AND - OR boolean menu, 3-50
  - date - number menu, 3-50
  - Delete menu - field mappings, 3-39
  - Delete menu - URM custom fields, 3-39
  - equation editor - on Search Creation screen, 3-47
  - for expressions - equation editor, 3-48
  - for Field variable - equation editor, 3-49
  - for Operator variable - equation editor, 3-50
  - Mail Metadata menu, 3-49
  - text menu, 3-50
- Previous button
  - on Define Custom Fields screen, 3-44
  - on Establish Field Mappings screen, 3-42
- Process ID field
  - on Service Status tab, 4-18
- process list
  - on Service Status tab, 4-18
- Process Name field
  - on Service Status tab, 4-18
- product overview, 1-1

## Q

---

- query URM
  - retention function overview, 1-4

## R

---

- records list

- on Search Preview screen, 4-14
- Refresh button
  - on Agent Status and Service Status tabs, 4-15
  - on Declaration Errors and Disposition Errors screens, 4-10
- registration
  - process to register the adapter, 3-22
  - retention function overview, 1-4
- regulatory compliance
  - overview of tasks, 3-15
- Remoting Port field
  - on Advanced screen, 3-59
- repository
  - historical search intervals, 3-11
  - initial search, 3-9
  - new content search intervals, 3-11
  - processing search queries, 3-9
  - searching - retention function overview, 1-4
  - temporary search suspensions, 3-12
- repository content
  - external checkins, 4-2
  - internal checkins, 4-2
- Repository drop-down list
  - on Create new search screen, 3-46
  - on Create New URM Source screen, 3-40
- Repository Field drop-down list
  - on Establish Field Mappings screen, 3-42
- Repository Fields table
  - on Create New URM Source screen, 3-40
- repository monitoring
  - retention function overview, 1-4
- Repository name
  - on Search Creation screen, 3-46
- repository storage tree
  - equation editor - on Search Creation screen, 3-47
- Required check box
  - on Define Custom Fields screen, 3-44
- requirements
  - for installation, 1-3
  - for software, 1-5
- retention categories
  - mapping search queries, 3-29
- Retention Category drop-down list
  - on Search Mapping screen, 3-53
- retention management
  - overview of retention functions, 1-3
- Retrieval Time field
  - on Search Preview screen, 4-14
- returned results counts
  - on Search Preview screen, 4-14

## S

---

- Save As button
  - on Search Creation screen, 3-45
- Search "sourcename" Items
  - displays custom metadata fields for URM, 3-5
- Search button
  - on Search Preview screen, 4-14
- Search Creation link

- in navigation tree, 3-32
- Search Creation screen
  - overview and feature descriptions, 3-44
- Search drop-down list
  - on Search Preview screen, 4-14
- search intervals
  - characteristics for historical searches, 3-11
  - characteristics for new content searches, 3-11
- Search Mapping link
  - in navigation tree, 3-32
- Search Mapping screen
  - overview and feature descriptions, 3-52
- Search Name field
  - on Create new search screen, 3-46
  - on Search Mapping screen, 3-53
- Search Preview link
  - in navigation tree, 3-32
- Search Preview screen
  - overview and feature descriptions, 4-13
- search queries
  - activating, 3-30
  - basic timeline, 3-10
  - constructing - add term option, 3-19
  - constructing - compound expressions, 3-20
  - constructing - equation editor, 3-46
  - constructing - expression grouping option, 3-18
  - constructing - expression option, 3-19
  - constructing - expression pop-up menus, 3-48
  - constructing - Field variable pop-up menus, 3-49
  - constructing - new configuration
    - constructing new search query, 3-28
  - constructing - Operator variable pop-up menus, 3-50
  - constructing - Value variable drop-down calendar, 3-51
  - constructing - Value variable text field, 3-51
  - construction overview, 3-17
  - deleting, 3-29
  - description, 3-17
  - duplicating and editing, 3-29
  - editing, 3-28
  - Field variable in expression, 3-47
  - initial search, 3-9
  - mapping overview, 3-20
  - mapping to URM adapter source and retention category, 3-29
  - new and historical content searches - overview, 3-8
  - Operator variable in expression, 3-47
  - overview, 3-7
  - previewing results, 4-8
  - processing overview, 3-9
  - search intervals, 3-11
  - start date, 3-10
  - temporary suspension, 3-12
  - Value variable in expression, 3-47
- Search Statistics pane
  - on Adapter Status tab, 4-16
- search suspensions
  - temporary, 3-12
- Search Time field
  - on Search Preview screen, 4-15
- Searchable check box
  - on Define Custom Fields screen, 3-44
- searching
  - repositories - overview, 3-7
- Service menu
  - for Adapter Administration manager, 3-32
- Service Status tab
  - overview and feature descriptions, 4-17
- single-mapping
  - metadata fields, 3-6
- software requirements, 1-5
  - operating systems, 1-5
  - supported databases, 1-6
  - with Content Server, 1-5
- sorting
  - filtering results - adapter and service status lists, 4-9
  - filtering results - configuration screens, 3-23
  - filtering results - declaration and disposition error lists, 4-8
  - overview - adapter and service errors, 4-19
  - overview - configuration screens, 3-35
  - overview - declaration and disposition errors, 4-12
- sources
  - types of, 3-3
- start date
  - setting for repository searches, 3-10
- Status field
  - on Define Custom Fields screen, 3-44
  - on Establish Field Mappings screen, 3-42
- Status link
  - in navigation tree, 3-32
  - overview and feature descriptions, 4-15
- stopping and restarting the adapter - overview, 4-4
- system logs
  - using for audit trails, 3-16
- system metadata fields
  - for URM, 3-5

## T

---

- Table field
  - on Create New URM Source screen, 3-40
- text field
  - dual-entry value, 3-51
  - for Value variable - equation editor, 3-51
  - single-entry value, 3-51
- text pop-up menu
  - equation editor, 3-50
- Thaws pane
  - on Adapter Status tab, 4-17
- timeline
  - function in repository searches, 3-10
- Total CPU Time field
  - on Service Status tab, 4-18
- Type drop-down list
  - on Define Custom Fields screen, 3-43

## U

---

uninstall

procedure for, 2-13

up arrow

on Search Mapping screen, 3-54

Uptime field

on Service Status tab, 4-18

URI - URL field

on Connection screen, 3-33

URM

overview, 1-3

URM adapter sources

adding, 3-24

defining URM custom metadata fields, 3-26

definition, 3-3

editing, 3-27

mapping metadata fields, 3-26

overview, 3-3

viewing configuration data, 3-27

URM adapter sources drop-down list

on URM Sources screen, 3-37

URM Field drop-down list

on Establish Field Mappings screen, 3-42

URM Source

definition, 3-3

URM Source - Details

on URM Sources screen, 3-37

URM Source drop-down list

on Search Mapping screen, 3-53

URM Sources link

in navigation tree, 3-32

URM Sources screen

overview and feature descriptions, 3-36

sorting overview, 3-35

sorting results, 3-23

User CPU Time field

on Service Status tab, 4-18

User ID field

Database Configuration - on Connection screen, 3-34

URM Configuration - on Connection screen, 3-33

Historical Content Declaration - on Advanced screen, 3-59

New Content Declaration - on Advanced screen, 3-57

Working Set Size field

on Service Status tab, 4-18

## V

---

Value variable

drop-down calendar - equation editor, 3-51

dual date field, 3-52

dual-entry text field, 3-51

expression component - equation editor, 3-47

single date field, 3-52

single-entry text field, 3-51

text field - equation editor, 3-51

Virtual Memory Size field

on Service Status tab, 4-18

## W

---

Warning

message severity code - description, 4-6

Window time period

