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Oracle Email Archive Service Adapter Administrator's Guide

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Oracle Email Archive Service Adapter Administrator's Guide

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Preface

Enterprises need to integrate diverse sets of applications that often come from different vendors and run on different platforms. Enterprise integration requires connectivity to a broad range of systems such as messaging middleware, legacy, mainframe, and packaged application systems. An adapter is a software component that an application server or an application client uses to connect to a specific Enterprise Information System (EIS).

Oracle adapters enable companies to leverage investments in existing custom or otherwise unique applications, and to integrate them with other applications. The Oracle approach is to provide a suite of standards-based integration adapters that implement bi-directional connectivity between Oracle applications and other EIS applications and enable faster, flexible, efficient and cost-effective integration.

The Oracle Email Archive Service Adapter works in conjunction with Oracle Universal Online Archive to store and manage email content for compliance purposes. Together, these components provide a comprehensive archiving solution for compliance issues and the need to search through a growing variety of data types. In particular, the Oracle Email Archive Service Adapter enables customers to use a single repository for email management and storage.

Audience

This document is intended for system administrators who need to install and configure the Oracle Email Archive Service Adapter. System administrators will also use this guide to manage the Adapter configuration requirements and monitor the generated activity log data 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.

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Related Documents

For more information, see the following documents in the Oracle Fusion Middleware documentation set:

- *Oracle Fusion Middleware Administrator's Guide for Universal Online Archive*
- *Oracle Fusion Middleware High-Volumn Imp;orter's Guide for Universal Online Archive*
- *Oracle Fusion Middleware Administrator's Guide for Universal Records Manager*
- *Oracle Fusion Middleware Setup Guide for Universal Records Manager*
- *Oracle Fusion Middleware User's Guide for Universal Records Manager*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.
Forward slashes (/)	Forward slashes are used to separate the directory levels in a path to a UNIX server, directory, or file. Forward slashes are also used to separate parts of an Internet address. A forward slash will always be included at the end of a UNIX directory name and might or might not be included at the end of an Internet address.
Backward slashes (\)	Backward slashes are used to separate the levels in a path to a Windows server, directory, or file. A backward slash will always be included at the end of a Windows server, directory, or file path.

Convention	Meaning
<*install_dir*>/	This notation refers to the location on your system of the main product installation directory.

1 Introduction

This section covers the following topics:

- "Product Overview" on page 1-1
- "Software Requirements" on page 1-3

1.1 Product Overview

Oracle Universal Records Manager (URM) provides the ability to perform records 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 Email Archive Service Adapter (hereafter abbreviated as the Adapter) obtains these policies from the URM server and applies them to the content items stored in the Oracle Email Archive Service.

The Adapter provides the bridge between URM, which manages the retention policies, and the Oracle Email Archive Service 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.

This section covers the following topics:

- "Standard Installation Architecture" on page 1-1
- "Overview of URM and the Adapter Integration" on page 1-2
- "Overview of the Retention Functions" on page 1-2

1.1.1 Standard Installation Architecture

The major components involved in a typical installation include:

- **Universal Records Manager:** 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.
- **Oracle Universal Online Archive and Oracle Email Archive Service (OEAS):** Combined, these two components provide an optimal combination of data accessibility and security that allows an organization to deploy and manage a comprehensive archiving system for emails. UOA enables an organization to archive its complete range of content. The OEAS enables organizations to easily

offload emails to an archive location where they can be safely stored for compliance purposes.

- **Oracle URM Adapter for OEAS:** Communicates between URM and Oracle Email Archive Service. The Adapter enables corporations to control emails identified as records 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.

Caution: The legal holds applied to emails by URM should not be removed using OEAS interfaces. Doing so will enable OEAS or UOA to delete those emails.

1.1.2 Overview of URM and the Adapter Integration

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 a 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.

The Oracle Email Archive Service archives emails in UOA. Through OEAS, UOA 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 UOA has the ability to ensure that the records will remain unalterable during the retention period. Upon request, UOA is also able to purge the records at the end of the retention period.

When retention of emails is no longer necessary, they 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 Adapter provides mechanisms to establish legal holds in OEAS and UOA ensuring content is not removed before the lifecycle is completed.

1.1.3 Overview of the Retention Functions

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

The Adapter provides the following basic functions:

- **Registration:** The Adapter registers itself with URM. This ensures that URM knows about OEAS and is ready to manage the stored content within the repository.
- **Configuration:** The Adapter handles all configuration requirements. This includes collecting the proper identification and credentials information for URM security

and communications as well as the login values necessary to access OEAS. 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 OEAS 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 and require an internal checkin.
- **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 OEAS 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 destroy using another disposition method) an item that is stored in OEAS.
  - When a litigation hold applies to emails in OEAS, URM may want the Adapter to retrieve a list of affected items and preserve (freeze) them to ensure that they are not edited or destroyed.
  - When a litigation hold is removed, URM may want the Adapter to stop preserving (unfreeze/thaw) the affected items.

  Caution: The legal holds applied to emails by URM should not be removed using OEAS interfaces. Doing so will enable OEAS or UOA to delete those emails.
- **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.

1.2 Software Requirements

This section covers the following topics:

- "Compatibility with URM and Content Server" on page 1-4
- "Operating Systems" on page 1-4
- "Supported Databases" on page 1-4
- "Optional Hardware Requirements" on page 1-4

1.2.1 Compatibility with URM and Content Server

Currently, the Adapter communicates with Oracle Universal Records Manager 10gR3 (10.1.3.3.2). This version of URM is supported only on Oracle Content Server versions 10gR3 (10.1.3.3.2) and later

1.2.2 Operating Systems

The current version of the Adapter runs on Linux OEL4 and RHEL4.

> **Note:** This version of the adapter is certified against the production release of OEAS 6.0.5 build 171.

The current version of the Oracle Email Archive Service has been certified on Windows.

The current version of the Oracle Universal Online Archive has been certified on Linux OEL4 and RHEL4.

1.2.3 Supported Databases

The current versions of the Adapter, Oracle Email Archive Service, and Oracle Universal Online Archive support Oracle Database 11g.

1.2.4 Optional Hardware Requirements

The installation of the Adapter requires 1 GB RAM.

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Installation

This section provides the installation requirements and procedures for the Oracle Email Archive Service Adapter and covers the following topics:

- "Installing the Adapter" on page 2-1
- "Setting Up the Adapter Database Objects" on page 2-1
- "Post-Installation Setup" on page 2-2
- "Uninstalling the Adapter" on page 2-10

2.1 Installing the Adapter

This section provides installation instructions.

> **Note:** The installation procedures provided in this guide assume that you have already successfully installed URM, OEAS, and UOA on other servers. It also assumes that you have successfully established the mechanism for archiving emails into UOA through OEAS.
>
> For additional information, refer to the *Oracle Fusion Middleware Installation Guide for Universal Records Manager*, *Oracle Fusion Middleware Installation Guide for Oracle Universal Online Archive*, and *Oracle Fusion Middleware Installation Guide for Oracle Email Archive Service*.

To install the Adapter:

1. Create the directory where the OEAS Adapter will be stored.
2. Download the **URM_OEASAdapter_10gR3_20090304.zip** file from MetaLink or Automated Release Updates (ARU).
3. Unzip the file in the desired location.

2.2 Setting Up the Adapter Database Objects

To set up the adapter database objects, you will need to run scripts provided in the Adapter distribution media.

1. Create the database user for the Adapter:

```
sqlplus system/<password>@//<dbhost>:1521/<service>
CREATE USER <adapter_user> IDENTIFIED BY <password>
    DEFAULT TABLESPACE <tablespace>
```

```
    TEMPORARY TABLESPACE TEMP
    ACCOUNT UNLOCK;
GRANT connect, resource to <adapter_user>;
```

2. Create the database user for the Adapter:

```
sqlplus <adapter_user>/<password>@//<dbhost>:1521/<service> @scripts/Adapter_
Oracle
sqlplus <adapter_user>/<password>@//<dbhost>:1521/<service> @scripts/Framework_
Oracle
```

2.3 Post-Installation Setup

After you have successfully installed the Adapter, you will need to perform some additional tasks. This section covers the following topics:

- "Configure the Adapter" on page 2-2
- "Define a Content Profile in URM for the Adapter" on page 2-2

2.3.1 Configure the Adapter

After installing the Adapter, you will need to complete the configuration. Chapter 3 provides important conceptual background and configuration information and related tasks. Chapter 4, "Administration" provides conceptual information about monitoring and managing the system and related tasks. Appendix A provides detailed explanations of each user interface screen.

2.3.2 Define a Content Profile in URM for the Adapter

OEAS 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 OEAS metadata fields.

If OEAS 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 OEAS 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 OEAS 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.

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).

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

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 Fusion Middleware Application Administrator's Guide for Content Server*.

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 UOA metadata fields. To accomplish this, the following procedures are necessary:

- Mapping a String Literal in the OEAS to the URM Profile Metadata Field
- Defining the URM Content Profile

2.3.2.1 Mapping a String Literal in the OEAS 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

2.3.2.1.1 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: 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 2-6.

   The trigger metadata field for the content profile is selected in Step 4 in the procedure to "Select the Profile Trigger" on page 2-6. The trigger value for the trigger metadata field is assigned in Step 4 in the procedure to "Create the Profile and Add Rule(s)" on page 2-9.

   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.

   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 **xRMProfileTrigger**.

9. Click **Next**.

   The URM Sources 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" on page 3-13.

11. Click **Finish**.

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

2.3.2.1.2 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 2-6.

   The trigger metadata field for the content profile is selected in Step 4 in the procedure to "Select the Profile Trigger" on page 2-6. The trigger value for the trigger metadata field is assigned in Step 4 in the procedure to "Create the Profile and Add Rule(s)" on page 2-9.

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6. Click **OK**.

   The value is entered into the Repository Field cell.

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

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.

2.3.2.2 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)

Note: You can define a single content profile that deals with of 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, xRMProfileTrigger 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 xRMProfileTrigger 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.

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*.

2.3.2.2.1 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 **xRMProfileTrigger**, 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)" on page 2-9. This is the final step for Defining the URM Content Profile.

2.3.2.2.2 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).

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.

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.
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.

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 UOA are preserved when the data is transferred and checked in to URM.

   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 UOA.

   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.

2.3.2.2.3 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" on page 2-3 or Step 5 in the procedure for "Mapping the String Literal While Editing an Existing URM Adapter Source" on page 2-5. 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.**

2.4 Uninstalling the Adapter

If you need to uninstall Adapter, simply delete all of the Adapter-related files from the original OEAS_URM_Adapter.zip file in the installation directory.

3

Configuration

This chapter covers the following topic:

- "Sources" on page 3-1
- "Metadata Fields" on page 3-2
- "Mapped Metadata Fields" on page 3-3
- "Repository Searches and Search Directions" on page 3-4
- "System Logs and Audit Trails" on page 3-9
- "Search Queries" on page 3-10
- "Configuring the Adapter" on page 3-11

3.1 Sources

This section covers the following topics:

- "Types of Sources" on page 3-1
- "About URM Adapter Sources" on page 3-1

3.1.1 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 OEAS repository, there is a single URM Source that is designated for the entire OEAS system.
- **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 (OEAS) into the target URM 'container' (the URM Source).

3.1.2 About URM Adapter Sources

The Adapter uses URM Adapter sources to associate groups of similar content items stored in OEAS 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 OEAS 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 3-2 and "Searchable URM Custom Metadata Fields" on page 3-3.

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 3-16.

3.2 Metadata Fields

This section covers the following topics:

- "URM System Metadata Fields" on page 3-2
- "URM Custom Metadata Fields" on page 3-2
- "Searchable URM Custom Metadata Fields" on page 3-3

3.2.1 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 need to be mapped to the OEAS metadata fields (standard fixed email metadata).

3.2.2 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 OEAS metadata fields. In this situation, you will need to generate the necessary URM custom metadata fields that can be mapped to the corresponding UOA repository metadata fields. This is done as part of the process to create URM Adapter sources.

On the URM Sources 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 3-3.

Caution: When you define a custom metadata field for a URM Adapter source, you have the option to configure it as a required field. If the field is required, then the OEAS field that is mapped to the required URM custom field **MUST** have a value (either user-supplied or as a pre-defined default). If a value for a required metadata field is not passed to URM, the email checkin will fail.

To ensure that these types of custom metadata fields always have assigned values, you can define a content profile in URM that will supply default values. For more information, see "Define a Content Profile in URM for the Adapter" on page 2-2.

3.2.3 Searchable URM Custom Metadata Fields

When you create URM Custom Metadata Fields using the Adapter's URM Adapter source creation wizard, you can specify whether they are searchable. 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: Define Custom Fields" on page A-7.

3.3 Mapped Metadata Fields

The Adapter is aware of the metadata model used in OEAS 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: Establish Field Mappings" on page A-6.

Subsequent communications between the Adapter and URM use the metadata labels from the OEAS 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 Subject will retain that name as opposed to dDocTitle.

Caution: When creating a URM Adapter source using the Adapter's URM Sources Screen, do not map an OEAS metadata field to any internal URM metadata fields included in the drop-down selection list. Internal URM metadata fields are any that are prefixed with an 'x' (for example, xCategoryID or xIsRecord). Mapping these fields to an incorrect value will cause unexpected results in URM.

This section covers the following topics:

- "Single-Mapped Metadata Fields" on page 3-3
- "Double-Mapped Metadata Fields" on page 3-4

3.3.1 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 OEAS repository with applicable URM metadata fields. Many of the existing OEAS repository metadata fields can be mapped logically with existing URM metadata fields. These field mapping sets are considered to be single-mapped metadata fields.

3.3.2 Double-Mapped Metadata Fields

Some of the metadata field lengths in the OEAS repository 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 OEAS repository 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 OEAS repository 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 OEAS field is automatically truncated to fit into the mapped URM system metadata field. If you have established a double-mapping for the OEAS repository field, then URM also stores a complete version of the data in the corresponding URM custom metadata field.

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.

Caution: When you configure a double-mapping for a large OEAS repository 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 repository field.

If you double-map a large OEAS repository 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 standard fixed OEAS email metadata field may have an unlimited length (i.e. Subject). 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.

3.4 Repository Searches and Search Directions

The Adapter performs searches in OEAS to find emails whose data would be of interest to URM. If new items have been recently added to the OEAS repository, the

Adapter finds them during a search interval, applies the applicable mapped metadata to the matching items, and forwards the information to URM.

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.

This section covers the following topics:

- "New and Historical Content Repository Searches" on page 3-5
- "Chronology of Repository Search Processing" on page 3-6

3.4.1 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 the Adapter is 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.

Important: The first time the Adapter starts, it performs an initial search in the OEAS repository 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.

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 OEAS repository 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.

Note: For detailed information about designing and constructing search queries, see "Search Queries" on page 3-10 and the "Search Creation Screen: Create New Search Screen" on page A-10. To verify that your search queries return the desired results, use the Search Preview Screen to test and validate them.

3.4.2 Chronology of Repository Search Processing

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

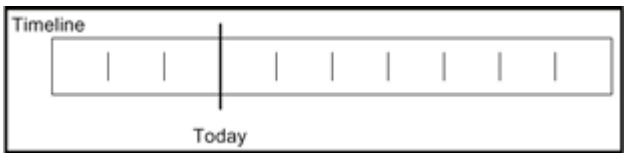
- "Basic Timeline Overview" on page 3-7
- "Elapsed Time for Installation and Configuration" on page 3-7
- "Establish the Start Date" on page 3-7
- "New Content Search Interval Characteristics" on page 3-8
- "Historical Content Search Interval Characteristics" on page 3-8

- "Temporary Search Suspensions" on page 3-9
- "Summary" on page 3-9

3.4.2.1 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.

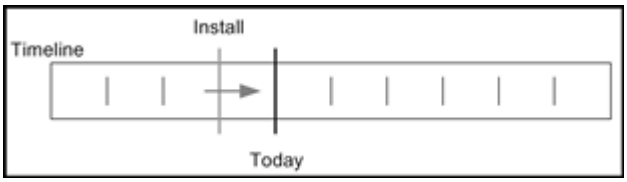
Figure 3–1 Operational Timeline



3.4.2.2 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, custom metadata fields are created, all currently existing 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.

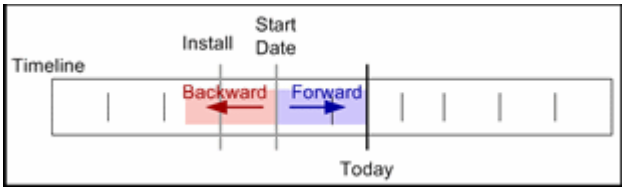
Figure 3–2 Setup Time Span



3.4.2.3 Establish the Start Date

After the search queries are satisfactorily constructed and verified, they can be enabled (activated) to begin searching OEAS 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 3–3 Start Date



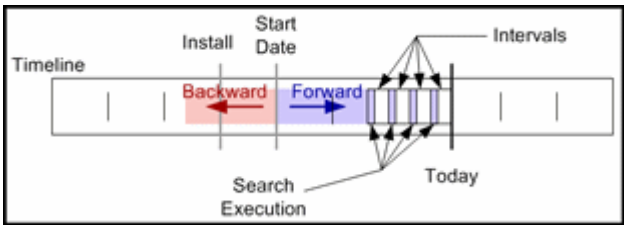
3.4.2.4 New Content Search Interval Characteristics

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 UOA repository is added to URM management.

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

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 3–4 New Search Intervals

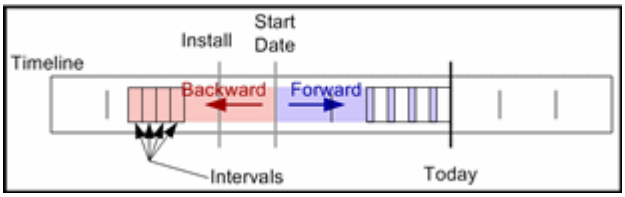


3.4.2.5 Historical Content Search Interval Characteristics

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 3–5 Historical Search Intervals

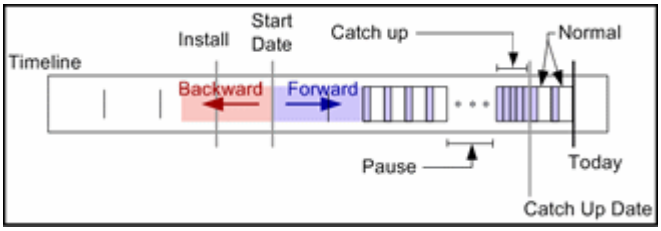


3.4.2.6 Temporary Search Suspensions

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 A-11 and "Advanced Screen" on page A-13 for details.

Figure 3–6 Search Deactivation



3.4.2.7 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 OEAS.

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.

3.5 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 "Declaration Errors Screen" on page A-17
- Disposition errors: see "Disposition Errors Screen" on page A-18

- System messages and events: see "Error Details Screen" on page A-18

3.6 Search Queries

This section covers the following topics:

- "Initial Searches" on page 3-10
- "Mapped Search Queries" on page 3-10
- "Proximity Search Feature" on page 3-10

3.6.1 Initial Searches

The first time the Adapter Service starts, it performs an initial search in the OEAS repository 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.

3.6.2 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 OEAS repository, 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 OEAS. See "Repository Searches and Search Directions" on page 3-4 and the "Advanced Screen" on page A-13.

3.6.3 Proximity Search Feature

If you use the search criteria operator '`contains all`' when configuring a search query, the value is a list of words that the Adapter must find in the document. In addition, the '`contains all`' operator allows a proximity specification in the list of words that can further refine your search. This feature stipulates that the words in the

list must also be found within a specified distance (number of words) of each other. The format for the proximity specification is `proximity(n)` where `n` specifies the distance in number of words. For example:

```
body contains all oracle database proximity(4)
```

For more detailed information about query construction, see "Search Creation Screen: Equation Editor" on page A-10. To configure a search query, see "Defining a New Search Query" on page 3-17, "Editing a Search Query" on page 3-18, and "Duplicating and Editing a Search Query" on page 3-18.

3.7 Configuring the Adapter

The Adapter enables you to specify the various configuration options for continuous operation and uninterrupted monitoring of OEAS.

This section covers the following topics:

- "Invoking the Adapter Administration Manager" on page 3-11
- "Registering the Adapter" on page 3-12
- "Changing the URM Configuration Information" on page 3-12
- "Changing the Database Configuration Information" on page 3-12
- "Changing the Connection Pool Configuration Information" on page 3-12
- "Connecting to OEAS" on page 3-13
- "Changing the User Authentication Information" on page 3-13
- "Sorting Field Data Columns" on page 3-13
- "Adding a New URM Adapter Source" on page 3-13
- "Mapping Metadata Fields" on page 3-15
- "Defining a URM Custom Metadata Field" on page 3-15
- "Double-Mapping Metadata Fields" on page 3-15
- "Viewing the Configuration Data of a URM Adapter Source" on page 3-16
- "Editing an Existing URM Adapter Source" on page 3-16
- "Defining a New Search Query" on page 3-17
- "Editing a Search Query" on page 3-18
- "Duplicating and Editing a Search Query" on page 3-18
- "Deleting a Search Query" on page 3-18
- "Mapping a Search Query" on page 3-19
- "Activating/Deactivating a Search Query" on page 3-19
- "Modifying the Advanced Settings Values" on page 3-20

3.7.1 Invoking the Adapter Administration Manager

To start and access the Adapter Administration Manager:

1. Open a command prompt window.
2. Change the path in the command prompt to navigate to the directory where the OEAS Adapter's `administration.jar` file is located.

For example: `/scratch/oesadapter`

3. Enter and execute the following command:

```
java -jar administration.jar
```

> **Note:** The recommended JDK version is 1.5.

The Adapter Administration Manager screen is displayed.

3.7.2 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**.

3.7.3 Changing the URM Configuration 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. Update the settings in the URM Configuration pane as necessary.
3. In the File menu, select **Save**.

   The Adapter implements the new configuration information.

> **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 "Starting the Adapter Process" on page 4-4.

3.7.4 Changing the Database Configuration Information

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**.

3.7.5 Changing the Connection Pool Configuration Information

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 Connection Pool pane.
3. In the File menu, select **Save**.

3.7.6 Connecting to OEAS

To define the values that the Adapter uses to connect to OEAS:

1. In the Adapter Administration Manager, click the **OEAS** link in the navigation hierarchy panel.

   The OEAS Configuration Screen is displayed.

2. Enter the applicable information in the required and optional fields (as necessary).
3. In the File menu, select **Save**.

   After you have provided the appropriate configuration information for OEAS connection, you will have access to the remaining screens.

3.7.7 Changing the User Authentication Information

To change the log in credentials for a user:

1. In the Adapter Administration Manager, click the **OEAS** link in the navigation hierarchy panel.

   The OEAS Configuration Screen is displayed.

2. Update the settings in the OEAS Configuration pane as necessary.
3. In the File menu, select **Save**.

3.7.8 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.

3.7.9 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.

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.

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: 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 ID / dDocName and Created / dCreateDate field mappings. However, in the Subject / dDocTitle field mapping, you may change the OEAS Field value (Subject) but not the URM Field value (dDocTitle).

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

   - ID / dDocName
   - Created / dCreateDate
   - Subject *(see below)* / dDocTitle

   You must enter an OEAS 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 2-2). Otherwise, you must specify the value during the source creation process.

5. In the OEAS 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 OEAS 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: 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 UOA repository 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.

3.7.10 Mapping Metadata Fields

The second step in the procedure to create a new URM Adapter source involves mapping applicable OEAS 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.

Caution: When creating a URM Adapter source using the Adapter's URM Sources Screen, do not map an OEAS metadata field to any internal URM metadata fields included in the drop-down selection list. Internal URM metadata fields are any that are prefixed with an 'x' (for example, xCategoryID or xIsRecord). Mapping these fields to an incorrect value will cause unexpected results in URM.

3.7.11 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 OEAS repository 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.

Caution: When you define a custom metadata field for a URM Adapter source, you have the option to configure it as a required field. If the field is required, then the OEAS field that is mapped to the required URM custom field **MUST** have a value (either user-supplied or as a pre-defined default). If a value for a required metadata field is not passed to URM, the email checkin will fail.

To ensure that these types of custom metadata fields always have assigned values, you can define a content profile in URM that will supply default values. For more information, see "Define a Content Profile in URM for the Adapter" on page 2-2.

3.7.12 Double-Mapping Metadata Fields

To double-map an OEAS repository 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 3-15.

> **Note:** If you are changing the field mappings in an existing URM Adapter source, see "Editing an Existing URM Adapter Source" on page 3-16.

3. Map the same OEAS repository metadata field to a URM custom metadata field in the Custom Fields pane. See "Defining a URM Custom Metadata Field" on page 3-15.

> **Important:** When you use the double-mapping feature, you must select the same UOA repository 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 "Single-Mapped Metadata Fields" on page 3-3.

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

   The Adapter establishes the double-mapped metadata field.

3.7.13 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.

3.7.14 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

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.

---

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

3.7.15 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 Targets and Search Equation panes are displayed on the Search Creation screen.
5. In the Search Targets pane, select the storage locations in the OEAS repository 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 "Search Creation Screen: Equation Editor" on page A-10.
8. In the File menu, select **Save**.

The Adapter creates the new search query and includes it in the defined searches drop-down list.

3.7.16 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 Targets and Search Equation panes.

3. Edit the information as necessary. For more detailed information about query construction, see "Search Creation Screen: Equation Editor" on page A-10.

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

   The Adapter saves the changes and implements the new configuration information

3.7.17 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 3-17.

   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 "Search Creation Screen: Equation Editor" on page A-10.

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

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

3.7.18 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.

3.7.19 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.

> **Important:** When you map a search query to a URM retention category for records, the Adapter performs an internal checkin and moves qualifying content items from the repository into URM. Conversely, when you map a search query to a URM retention category for non-records, the Adapter performs an External checkin and sends only the metadata of qualifying content items to URM.
>
> For brief overviews of record/non-record content and internal/external checkins, see "Overview of URM and the Adapter Integration" on page 1-2 and "External Checkins" on page 4-1. For more detailed information about record and non-record retention categories in URM, refer to the applicable guide in the Oracle Fusion Middleware URM documentation set.

3.7.20 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.

3.7.21 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

Administration

This chapter covers the following topic:

- "External Checkins" on page 4-1
- "Stops and Restarts" on page 4-1
- "Log Files" on page 4-2
- "Audit Trails" on page 4-3
- "Managing the Adapter" on page 4-4

4.1 External Checkins

The Adapter is designed to use an external checkin process for content items stored in the repository. An external checkin 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.

4.2 Stops and Restarts

By default, the Adapter Service is running when the Adapter is started unless you have configured it to start manually. See "Starting the Adapter Process" on page 4-4. 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 URM Configuration Information" on page 3-12.
- Any changes on the Advanced Screen. See "Modifying the Advanced Settings Values" on page 3-20.

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

- Database configuration changes. See "Changing the Database Configuration Information" on page 3-12 and "Changing the Connection Pool Configuration Information" on page 3-12.

- User authentication changes. See "Changing the User Authentication Information" on page 3-13.
- URM Adapter source additions/changes. See "Adding a New URM Adapter Source" on page 3-13, "Viewing the Configuration Data of a URM Adapter Source" on page 3-16, "Mapping Metadata Fields" on page 3-15, and "Defining a URM Custom Metadata Field" on page 3-15
- Search query additions/changes. See "Defining a New Search Query" on page 3-17, "Editing a Search Query" on page 3-18, "Duplicating and Editing a Search Query" on page 3-18, and "Deleting a Search Query" on page 3-18
- Search query mapping additions/changes. See "Mapping a Search Query" on page 3-19 and "Activating/Deactivating a Search Query" on page 3-19

4.3 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 topic:

- "Log File Administration" on page 4-2
- "Log File Characteristics" on page 4-2
- "Status and Error Message Severity Codes" on page 4-3

4.3.1 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.

4.3.2 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.

4.3.3 Status and Error Message Severity Codes

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.).

> **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 OEAS repository 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.

- **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.

4.4 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.

4.5 Managing the Adapter

This section covers the following topic:

- "Starting the Adapter Process" on page 4-4
- "Viewing Declaration Errors and Message Details" on page 4-4
- "Viewing Disposition Errors and Message Details" on page 4-5
- "Sorting Error Results" on page 4-5
- "Previewing Search Query Results" on page 4-5
- "Viewing Status Data for the Adapter" on page 4-6
- "Viewing Status Data for the Adapter Service" on page 4-6
- "Sorting Status Results" on page 4-6
- "Viewing the Daily Event Records and Error Message Details" on page 4-6

4.5.1 Starting the Adapter Process

To activate the Adapter's administrative functionality:

1. Open a command prompt window.
2. Change the path in the command prompt to navigate to the directory where the OEAS Adapter's `OEASAdapter.jar` file is located.
3. Enter and execute the following command:

```
java -Xms128m -Xmx512m -jar OeasAdapter.jar
```

Note: The recommended JDK version is 1.5.

The Adapter Administration Manager screen is displayed.

Note: The heap size settings should be increased for larger deployments.

4.5.2 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 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 Details Screen is displayed.
5. Click **OK**.

   The Error Details screen closes.

4.5.3 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 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 Details Screen is displayed.
5. Click **OK**.

   The Error Details screen closes.

4.5.4 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 Declaration Errors Screen or the 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.

4.5.5 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.

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 "Starting the Adapter Process" on page 4-4.

---

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.

4.5.6 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 4-6.

4.5.7 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 **Process Status** tab.

   The Status: Process 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 4-6.

4.5.8 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 **Process Status** tab.

   The Status: Adapter Status Tab or the Status: Process 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.

4.5.9 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 and an error message details dialog is displayed.
4. Click **OK**.

   The Message dialog box closes.

A

User Interface

This section provides detailed information about the user interface screens and the applicable field descriptions.

A.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 invoking the Adapter executable stored in the OEAS Adapter's installation directory.

Configuration Screens

- "Connection Screen" on page A-2
- "OEAS Configuration Screen" on page A-3
- "URM Sources Screen" on page A-3
- "URM Sources Screen: Create New URM Source Screen" on page A-4
- "URM Sources Screen: Establish Field Mappings" on page A-6
- "URM Sources Screen: Define Custom Fields" on page A-7
- "Search Creation Screen" on page A-9
- "Search Creation Screen: Create New Search Screen" on page A-10
- "Search Creation Screen: Equation Editor" on page A-10
- "Search Mapping Screen" on page A-11
- "Advanced Screen" on page A-13

Error Management Screens

- "Declaration Errors Screen" on page A-17
- "Disposition Errors Screen" on page A-18
- "Error Details Screen" on page A-18

Administration Screens

- "Search Preview Screen" on page A-19
- "Status Screen" on page A-20
- "Status: Adapter Status Tab" on page A-20
- "Status: Process Status Tab" on page A-22

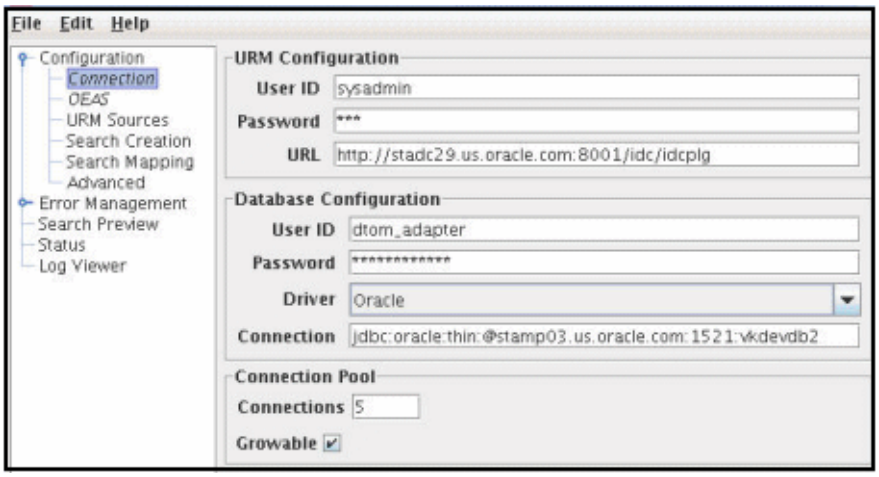
- "Log Viewer Screen" on page A-24

Adapter Source Screens in Content Server/URM

- "Content Server Search Page" on page A-25
- "Search urm_source_name Items Page" on page A-25
- "Search Results for urm_source_name Screen" on page A-26

A.2 Connection Screen

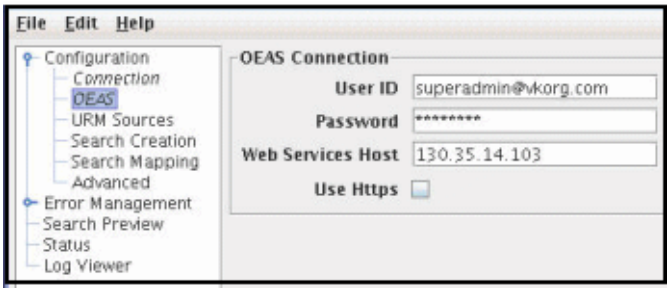
Use the Connection screen to provide authentication information to URM. This ensures that URM knows that the OEAS Adapter is an authorized Adapter. When the Adapter registers itself, then URM knows about OEAS and is ready to manage content stored within that repository. By default, the Connection screen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



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.
URL field	The URM Server's web address.
User ID field (database)	A valid user account name for the Adapter schema that is recognized by OEAS.
Password field (database)	An encrypted series of characters associated with the specified OEAS User Id.
Driver drop-down list	Lists the available supported databases. For example, select Oracle to connect to an Oracle database.
Connection field	The machine, port, and database service values for the path to connect to the selected database.
Connections field	The default number of database connections.
Growable check box	**Selected:** Allows the number of database connections to exceed the default number. **Clear:** Restricts the number of database connections to the default value.

A.3 OEAS Configuration Screen

Use the OEAS configuration screen to define the values that are used to access the Oracle Email Archive Service and set parameters for functional interaction between OEAS and URM. You can access this screen by clicking the **OEAS** link in the navigation hierarchy on the Adapter Administration Manager.

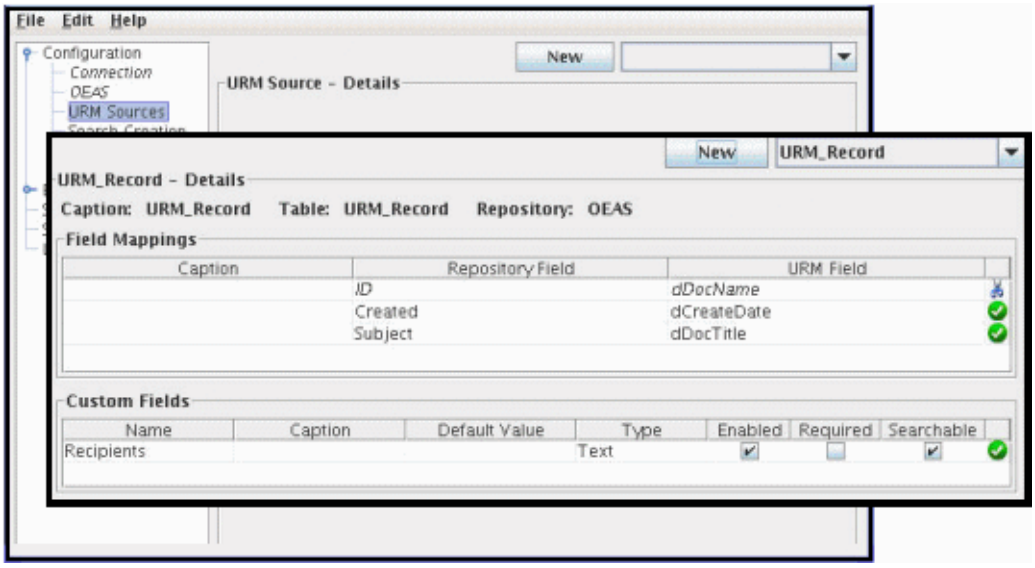


Element	Description
User ID field	A valid user account name that is recognizd by OEAS.
Password field	An encrypted series of characters associated with the specified OEAS User ID.
Web Services Host field	The host name or IP address of the machine where OEAS is running.
Use Https check box	**Selected:** Ensures secure communications between the Adapter and OEAS. **Clear:** Secure communications are not ensured.

A.4 URM Sources Screen

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 OEAS. 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.

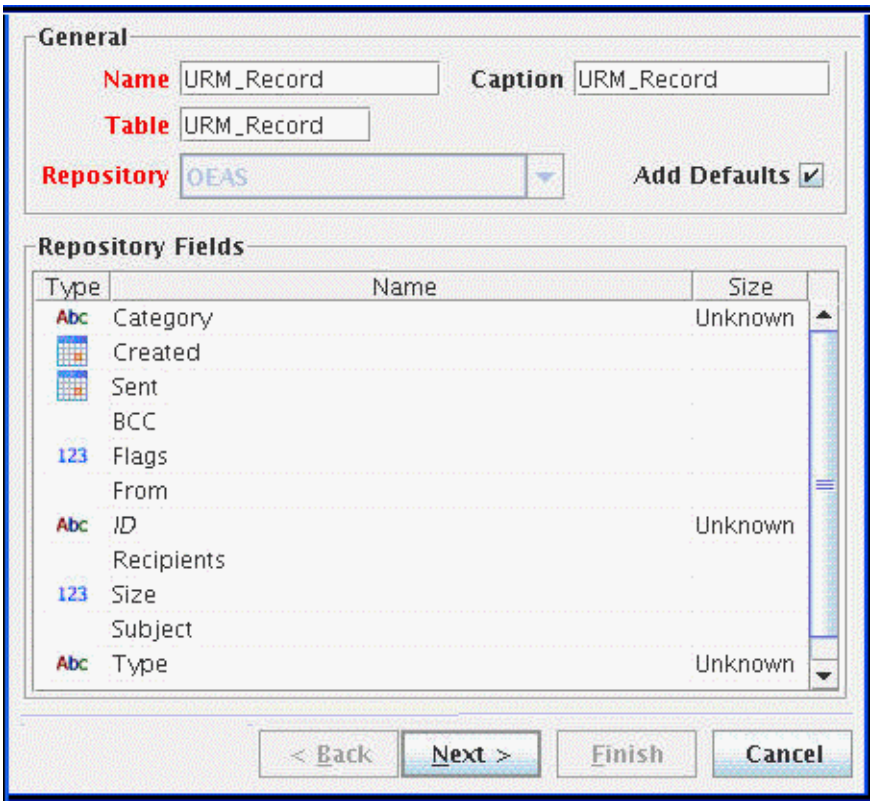
The populated URM Sources screen consists of three information panes: Details, Field Mappings, and Custom Fields (as shown in the inset). This data is derived from the three-part wizard used to create new URM Adapter sources. You can access this screen by clicking the **URM Sources** link in the navigation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



Element	Description
New button	Displays the URM Sources Screen: Create New URM Source Screen.
URM Adapter sources drop-down list	Lists the existing URM Adapter sources. Selecting a URM Adapter source from the list 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. **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	Provides information about the OEAS metadata fields that are mapped to corresponding URM metadata fields. For more detailed information about the individual fields, see "URM Sources Screen: Establish Field Mappings" on page A-6.
Custom Fields pane	Provides information about the URM custom metadata fields that are created and mapped to OEAS. For more detailed information about the individual fields, see "URM Sources Screen: Define Custom Fields" on page A-7.

A.4.1 URM Sources Screen: Create New URM Source Screen

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.



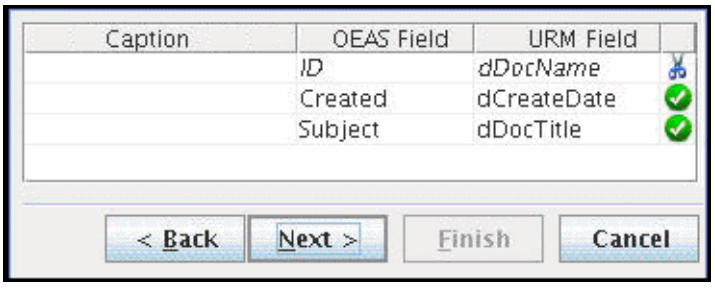
Element	Description
Name field	The descriptive name of the URM Adapter source to be added. This name corresponds to URM's dSource metadata field.
Caption field	The name assigned to the new URM Adapter source and displayed on the populated URM Sources Screen for a selected URM Adapter source.
Table field	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 OEAS that is associated with this URM Adapter source. Each URM Adapter source, then, retains a dedicated database table. **Note:** 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	**Selected:** Configures the Adapter to automatically populate the Establish Field Mappings screen (Step 2 of the three-part wizard) with required field mappings along with several additional optional field mappings. The Adapter also automatically populates the Define Custom Fields screen (Step 2 of the three-part wizard) with optional URM custom metadata fields. This is the default setting. **Clear:** Configures the Adapter to populate the Establish Field Mappings screen (Step 2 of the three-part wizard) with only the required field mappings.

Element	Description
Repository Fields table	For reference purposes, this table lists all of the OEAS metadata field names that can be mapped to archive and custom metadata fields. **Type:** Icons and tool tips specify the type of data the field holds. For example, string, date, integer, etc. **Name:** The names of the available metadata fields in OEAS. **Size:** Specifies the maximum lengths for each field.
Back button	When enabled, returns you to the previous screen to change values.
Next button	When enabled, proceeds to the next screen in this multistep procedure to create a URM Adapter source.
Finish button	When enabled, saves the configuration data and generates the 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.

A.4.2 URM Sources 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 OEAS 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.

> **Caution:** When creating a URM Adapter source, do not map an OEAS metadata field to any internal URM metadata fields included in the drop-down selection list. Internal URM metadata fields are any that are prefixed with an 'x' (for example, xCategoryID or xIsRecord). Mapping these fields to an incorrect value will cause unexpected results in URM.



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
OEAS Field field	Lists the available OEAS metadata fields that can be mapped to corresponding URM metadata fields. The list includes the available archive and custom metadata fields. **Tip:** In the OEAS 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. **Example:** Select Literal Text from the OEAS 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.
URM Field field	Lists the available URM metadata fields that can be mapped to the Oracle Email Archive Service metadata field selected from the OEAS Field drop-down list.
Status field	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). **Note:** The scissors icon used in the Status column indicates that the data in the OEAS metadata field could potentially be truncated because the length of this field is larger than the corresponding mapped URM metadata field. This means that some of the original data could be lost when the Adapter transmits the declaration data to URM.
Back button	When enabled, returns you to the previous screen to change values.
Next button	When enabled, proceeds to the next screen in this multistep procedure to create a URM Adapter source.
Finish button	When enabled, saves the configuration data and generates the 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.

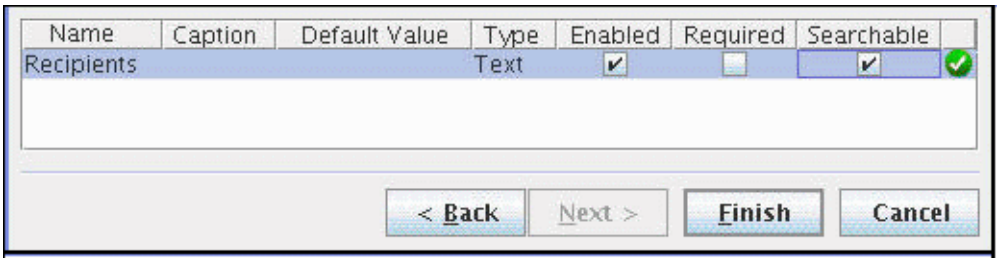
A.4.3 URM Sources Screen: Define Custom Fields

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 OEAS metadata fields. By default, the screen displays only the column headings. You must add the first and all subsequent entries.

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. Some OEAS 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 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.

Caution: When you define a custom metadata field for a URM Adapter source, you have the option to configure it as a required field. If the field is required, then the OEAS field that is mapped to the required URM custom field **MUST** have a value (either user-supplied or as a pre-defined default). If a value for a required metadata field is not passed to URM, the email checkin will fail.

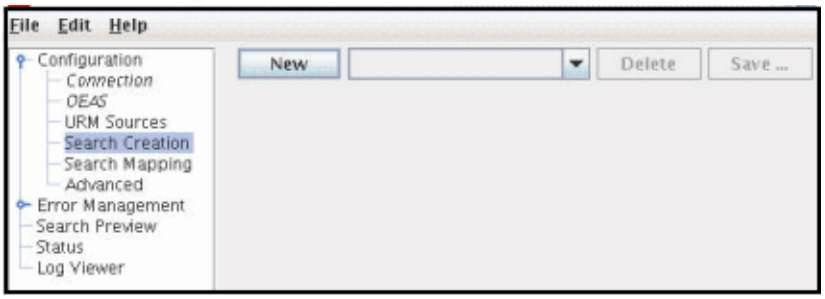


Element	Description
Name field	Lists all of the OEAS metadata field names. However, any metadata fields that were mapped during the field mapping process (see "URM Sources Screen: Establish Field Mappings" on page A-6) are not included in this list because they can only be mapped once.
Caption field	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. Entering a value is optional. However, if you do not enter a value, then, by default, the repository name of the mapped OEAS metadata field (from the Name field) is used on the URM pages. 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.
Default Value field	The assigned value for the metadata field. Some emails 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.
Type field	Lists the actual data type that is used as the value for this custom metadata field. Examples of possible values include: Text, BigText, Checkbox, Date, Int, and Memo.
Enabled check box	**Selected:** In URM, configures this field to be displayed on the URM Adapter source's Create *sourcename* Item page and the item's Content Information page. **Clear:** This field is not displayed on URM pages. This is the default setting.
Required check box	**Selected:** Prevents managed content data from being accepted into URM without entering a value. **Clear:** Allows managed content data to be accepted into URM without entering a value. This is the default setting.

Element	Description
Searchable check box	Selected: In URM, enables users to use this field as search criteria on the Search sourcename Item page. This means that you can use this field to search the data records for information about specific managed content items. Clear: In URM, this field is not displayed on the Search sourcename Item page. This is the default setting.
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).
Back button	When enabled, returns you to the previous screen to change values.
Next button	When enabled, proceeds to the next screen in this multistep procedure to create a URM Adapter source.
Finish button	When enabled, saves the configuration data and generates the 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.

A.5 Search Creation Screen

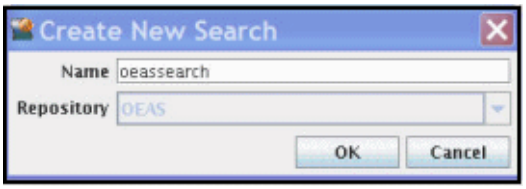
Use the Search Creation screen to design new repository queries or modify existing repository queries. The queries are used to perform the searches in OEAS to gather new or updated information about the managed content items. Each repository query is associated with a specific URM Adapter source. You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



Element	Description
New button	Displays the Search Creation Screen: Create New Search Screen.
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.
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.

A.5.1 Search Creation Screen: Create New Search Screen

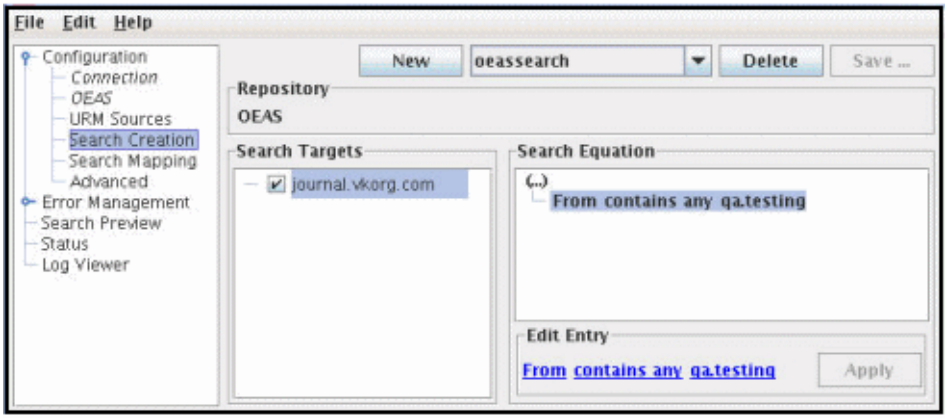
Use the Create new search screen to provide a descriptive name for the new search query. You can access this screen by clicking the **New** button on the Search Creation Screen.



Element	Description
Name field	The descriptive name of the new query.
Repository field	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 the "Search Creation Screen: Equation Editor" on page A-10.
OK button	Generates a new search query with the assigned name.
Cancel button	Closes the Create new search screen without generating a new search query.

A.5.2 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. When you have completely defined and saved your search equation, the name is included in the defined searches drop-down list on the Search Creation Screen.

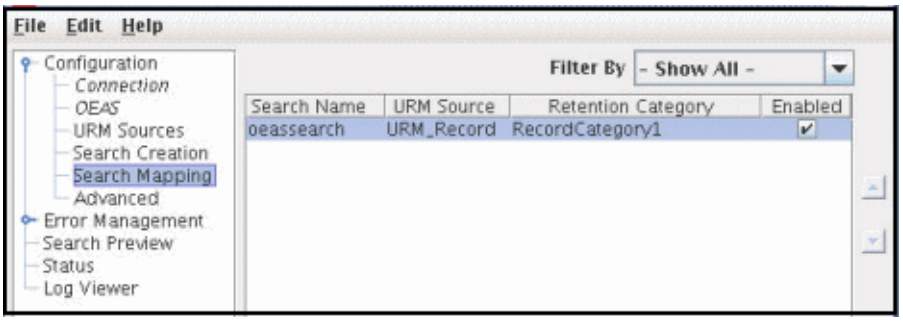


Element	Description
Repository name	Lists the repository associated with the search query being created.
Search Targets storage tree check boxes	The repository storage tree is an organized hierarchy that consists of the OEAS content subdivisions. Use the plus and minus icons in front of the check boxes 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.

Element	Description
Search Equation editor pane	Displays the initial set of expression parenthesis. Right-click to display the Add Terms/Add Groups pop-up menu and enable the search equation operator fields.
Edit Entry pane	Displays the available operator fields used to build search equation expressions. **NOTE:** If you use the search criteria operator '`contains all`' when configuring a search query, the value is a list of words that the Adapter must find in the document. In addition, the '`contains all`' operator allows a proximity specification in the list of words that can further refine your search. This feature stipulates that the words in the list must also be found within a specified distance (number of words) of each other. The format for the proximity specification is `proximity(n)` where `n` specifies the distance in number of words. For example: `body contains all oracle database proximity(4)`
Apply button	Adds the selected operator field to the search equation expression in the Search Equation pane.

A.6 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.



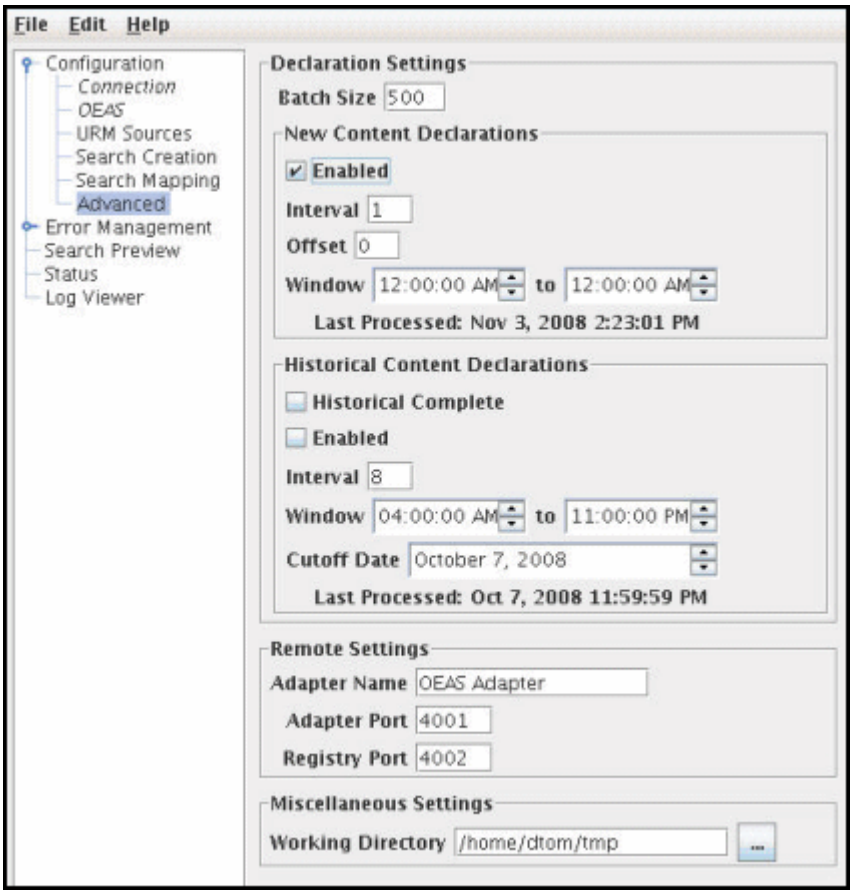
Element	Description
Filter By drop-down list	**<URMsource_name>:** The drop-down list includes the names of all the URM Adapter sources currently defined in the Adapter. Selecting a URM Adapter source from the list generates results that include only the search queries that are currently mapped to the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

Element	Description
URM Source field	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. **Important:** If a search query is not mapped to a URM Adapter source, it cannot be activated and will not execute.
Retention Category field	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.
Enabled check box	**Selected:** Activates the search query and enables it to execute. **Clear:** Deactivates the search query and prevents it from executing. However, the search query will not lose its URM Adapter source and retention category mappings.
About repository searches and search query activation	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 Advanced Screen). The Adapter does not run a search query if: ■ 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. ■ 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. *See the next message below.*
About time window processing	The Adapter processes a time window **ONLY ONCE**. 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. 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 OEAS. As a result, the items that might have been returned by the deactivated search query during the processed time interval will **NEVER** be found. A time window cannot be processed again. 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 Advanced Screen rather than deactivate the applicable search query.
Up/down arrows	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. 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. *See the additional information below about duplicate results.*

Element	Description
About duplicate results from search queries	When the Adapter performs searches, it is very likely that two search queries will return the same content item from OEAS. It is also probable that the two search queries are mapped to different URM Adapter sources and/or URM retention category. 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. 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.

A.7 Advanced Screen

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.



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.
Enabled check box (new content)	**Selected:** Configures the Adapter to perform searches in OEAS for new content items. These include items that have been checked in after the Adapter was installed. **Clear:** Prevents the Adapter from performing searches for new content items. This is the default setting. **Note:** 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. **Important:** 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 OEAS. 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 "Search Mapping Screen" on page A-11.
About time window processing and enabling the new content check box	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 ONLY ONCE whether or not search queries are activated on the Search Mapping Screen and running. 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 OEAS. As a result, the items that might have been returned by the deactivated search query during the processed time interval will NEVER be found. A time window cannot be processed a second time.
About suspending the search and declaration process	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 Search Mapping Screen. 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.

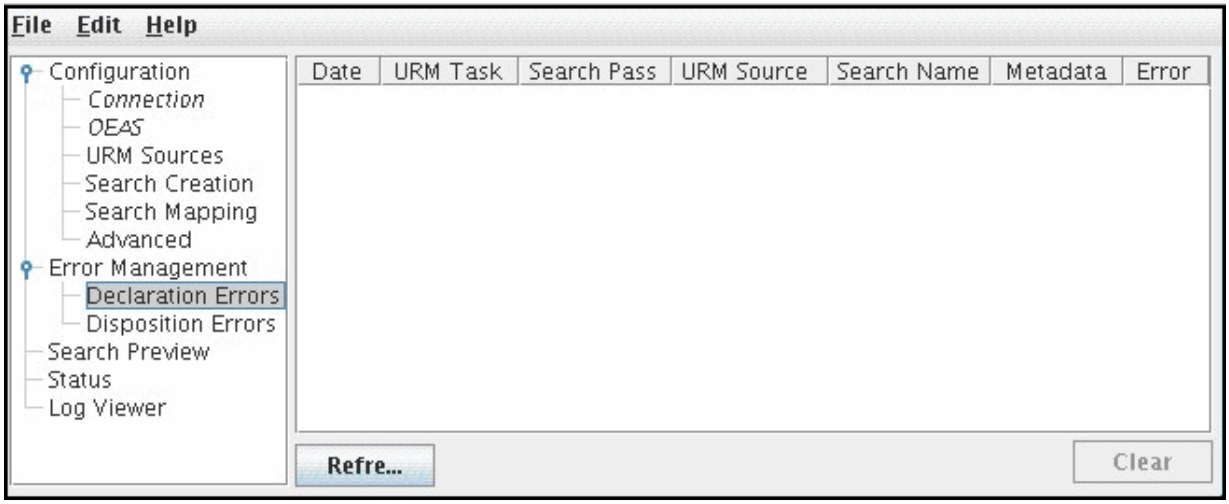
Element	Description
About optimizing search query results	When you start or restart the Adapter, it begins processing all time windows if the new and historical content declaration settings are enabled. (See the related information above.) Therefore, before you run your search queries in a production 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: **1.** Before starting the Adapter, disable the new and historical content declaration settings on the Advanced screen **2.** Start the Adapter. **3.** Use the Search Preview Screen to test your search queries. **4.** When you are satisfied with the results, stop the Adapter again and enable the new and historical content declaration settings. **5.** Restart the Adapter.
Interval field (new content)	Specifies the number of hours the Adapter remains idle between searches for new content items. 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. 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.
Offset field (new content)	The delay in hours behind the current time of the search window. For example, a value of 24 indicates searches should be processed up to a day behind the current time. This delay allows OEAS to complete email indexing before an attempt is made to search the emails.
Window time period selection fields (new content)	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. **Tip:** 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.
Last Processed (new content)	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.
Historical Complete check box (historical content)	Selected: 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. Clear: Indicates the historical content declaration process is not finished. This check box must be clear to enable the other Historical Content Declarations fields.

Element	Description
Enabled check box (historical content)	**Selected:** Configures the Adapter to perform searches in OEAS for pre-existing content items. These include items that were stored before the Adapter was installed. **Clear:** Prevents the Adapter from performing searches for legacy content items. This is the default setting. **Note:** 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. **Important:** 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 OEAS content. 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 Search Mapping Screen.
About time window processing and enabling the historical content check box	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 **ONLY ONCE** whether or not search queries are activated on the Search Mapping Screen and running. 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 Oracle Email Archive Service. As a result, the items that might have been returned by the deactivated search query during the processed time interval will **NEVER** be found. A time window cannot be processed a second time.
About suspending the search and declaration process	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 Search Mapping Screen. 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.
About optimizing search query results	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 related information above.) 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: 1. Before starting the Adapter, disable the new and historical content declaration settings on the Advanced screen 2. Start the Adapter. 3. Use the Search Preview Screen to test your search queries. 4. When you are satisfied with the results, stop the Adapter again and enable the new and historical content declaration settings. 5. Restart the Adapter.

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 Oracle Email Archive Service, 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 time period field (historical content)	Establishes the cutoff date when the Adapter stops reverse declaration processing. Content items that were checked in or modified before this date are not processes even if a search might have included them in a results file. The date range extends from January 1, 1900 until the present.
Last Processed (historical content)	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. **Note:** By default, the Last Processed date is updated only once. It is saved the first time you open the Advanced tab.
Adapter Name field	The name used to identify this Adapter instance.
Adapter Port field	Any available port (i.e. 4401). Used to communicate to the Adapter process.
Registry Port field	Any available port (i.e. 4402). Used to register the Adapter process.
Working Directory field and button.	A local directory used for temporary files. Clicking the adjacent button displays the dialog to select a working directory.

A.8 Declaration Errors Screen

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.

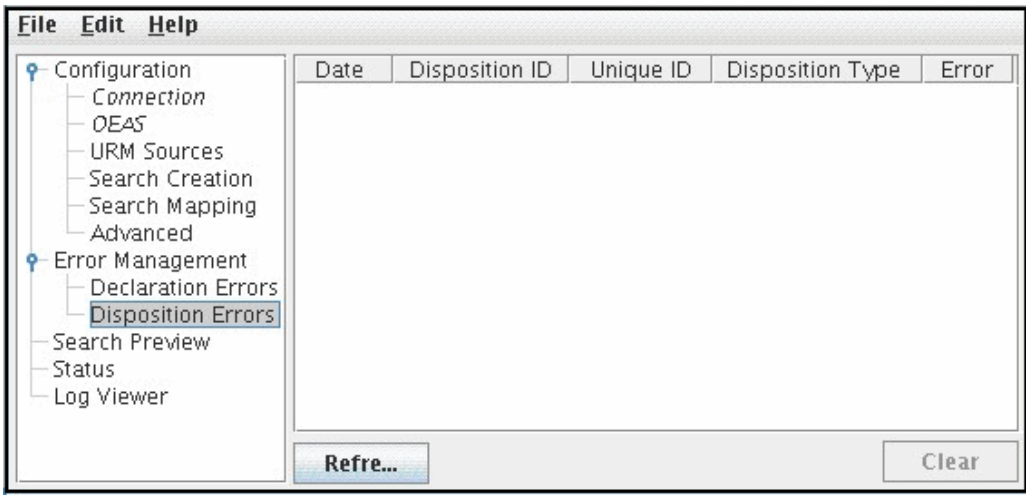


Element	Description
Error records list	Lists all of the errors that have occurred while the Adapter Service was processing declaration tasks. You can sort this list based on a column by clicking on the column heading. The default sort order is by error date (ascending), which means the most recent error is at the bottom of the list. Double-clicking either the Data or Error column opens a dialog that contains the complete message pertaining to the declaration data or the failure error.

A.9 Disposition Errors Screen

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. 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.



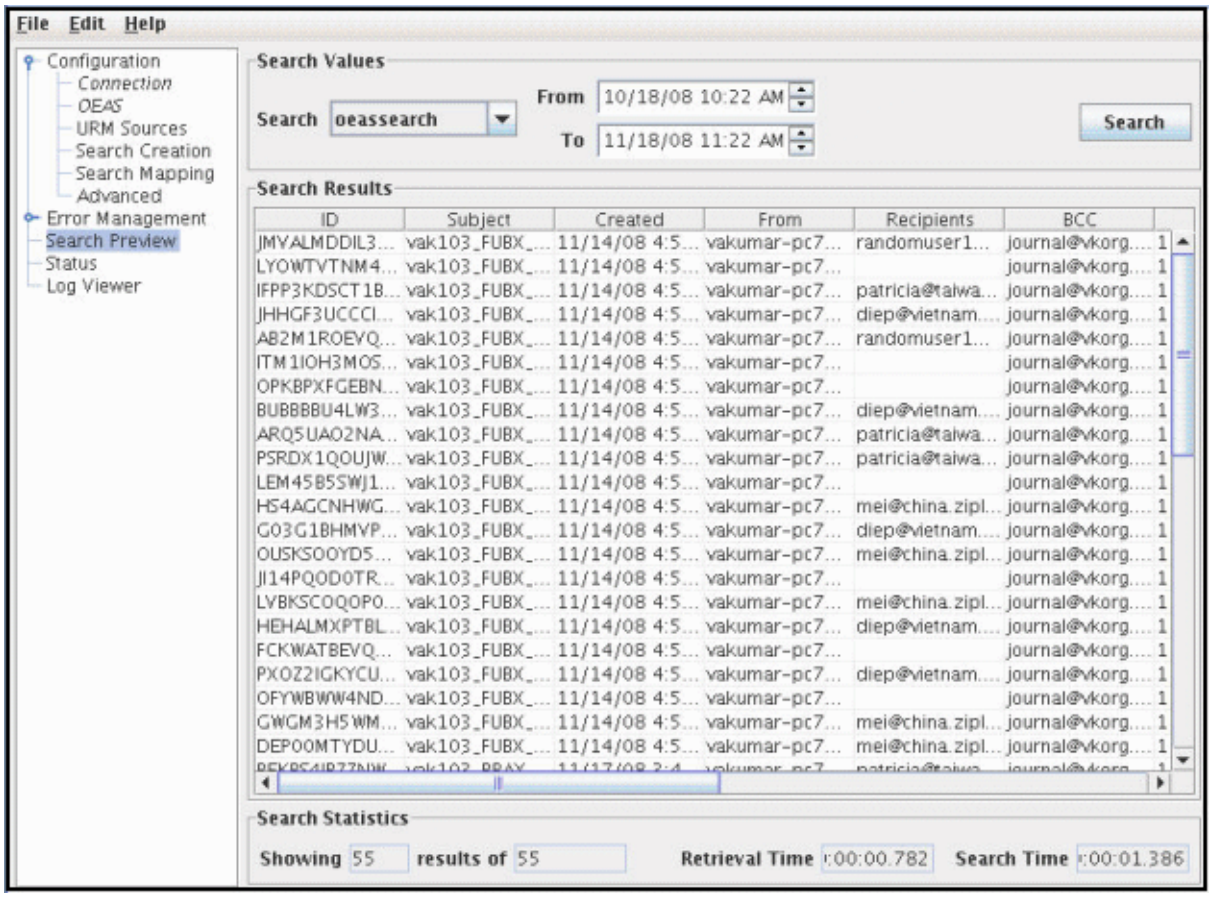
Element	Description
Error records list	Lists all of the errors that have occurred while the Adapter Service was processing disposition tasks. You can sort this list based on a column by clicking on the column heading. The default sort order is by error date (ascending), which means the most recent error is at the bottom of the list. Double-clicking either the Data or Error column opens a dialog that contains the complete message pertaining to the declaration data or the failure error.

A.10 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 (Declaration Errors Screen and Disposition Errors Screen).

A.11 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.



Element	Description
Search drop-down list	Lists all of the currently defined search queries.
Date range selection fields	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.
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.
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.

Element	Description
Returned results counts	**Note:** 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. **Showing:** Displays the total number of results that are displayed in the Search Results pane. **results of:** 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.
Search Time field	Displays how long it took to run the search query. **Tip:** 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. 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: [(400,000 / 100) * 77 seconds] / 60 seconds = ~5133 minutes (~86 hours) Clearly, this search query is not practical and need to be refined.

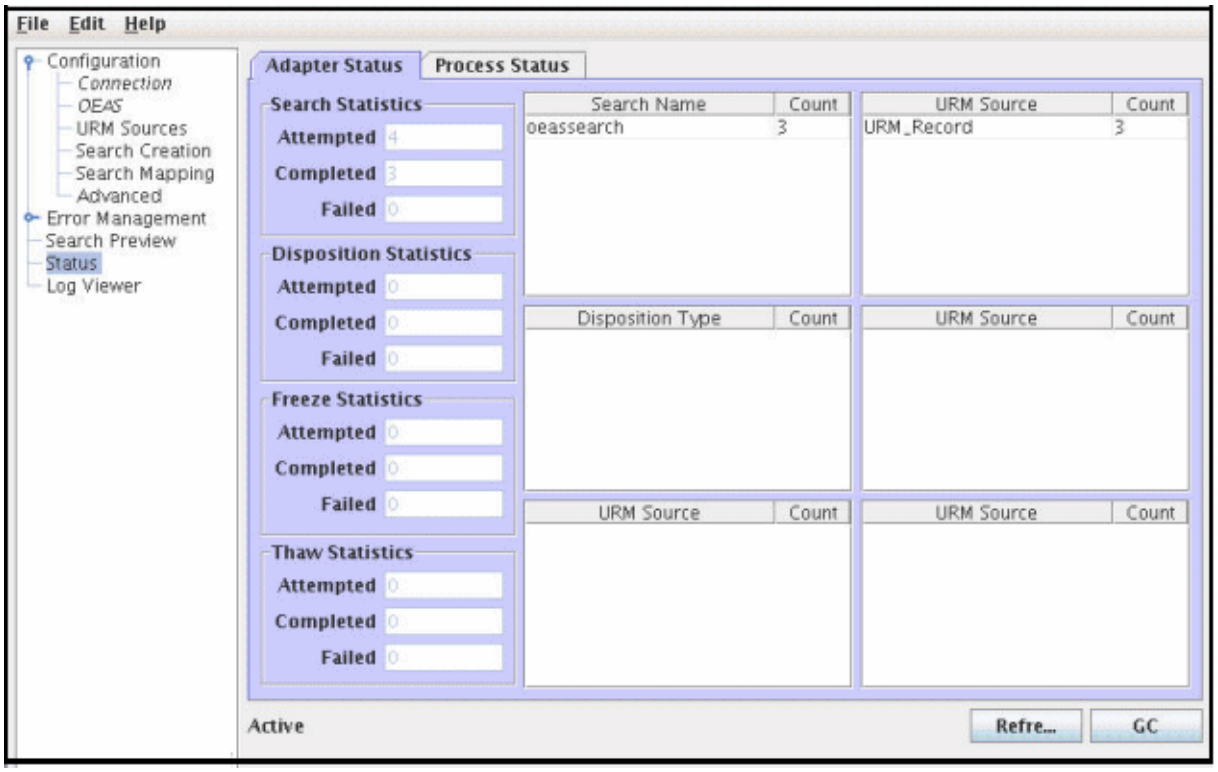
A.12 Status Screen

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 Process.

A.12.1 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 graphic 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.

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.



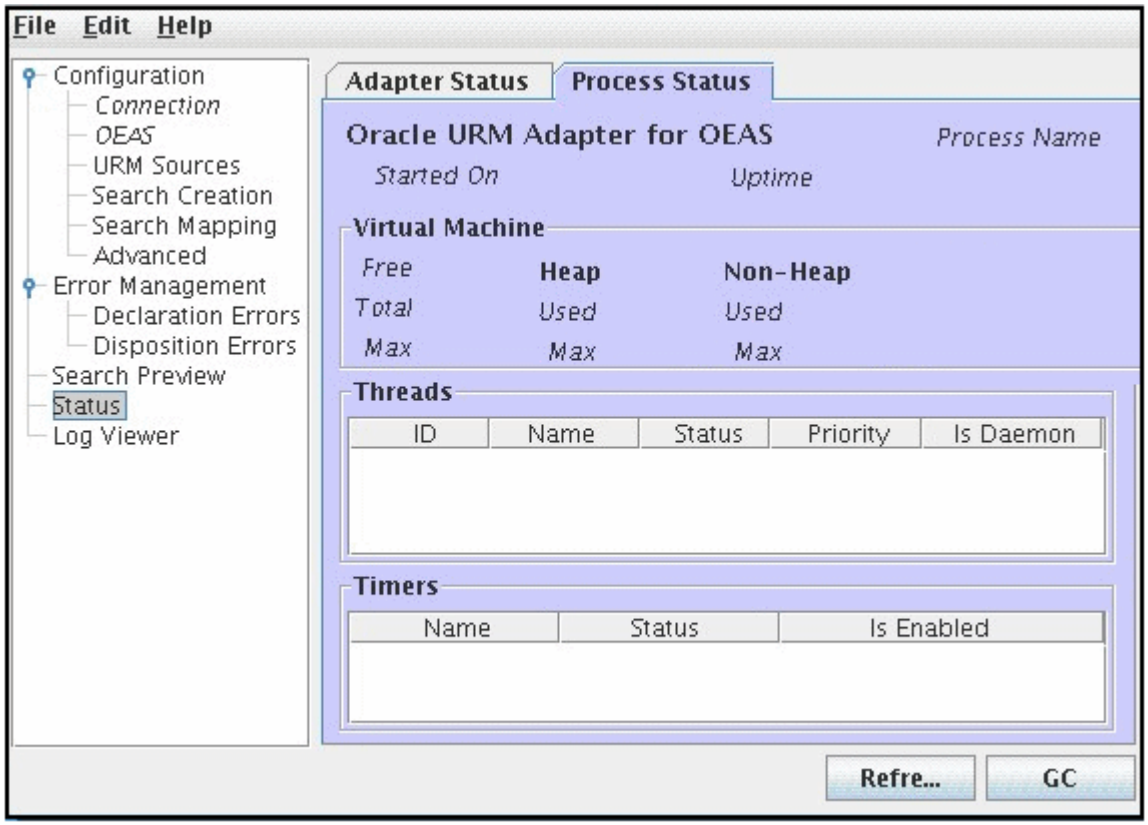
Element	Description
Search Statistics pane	**Attempted:** Displays the total number of search queries that have been invoked. This includes those that are currently running in addition to the completed and failed counts. **Completed:** Displays the number of search queries that ran successfully. **Failed:** Displays the number of search queries that failed.
Disposition Statistics pane	**Attempted:** 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. **Completed:** Displays the number of dispositions that were processed successfully. **Failed:** Displays the number of dispositions that failed.
Freeze Statistics pane	**Attempted:** 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. **Completed:** Displays the number of holds that were successfully applied. **Failed:** Displays the number of holds that failed.
Thaw Statistics pane	**Attempted:** 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. **Completed:** Displays the number of holds that were successfully removed. **Failed:** Displays the number of holds that failed to be removed.

Element	Description
Operation status boxes	The data in these status boxes provide information that help to profile overall condition of the Adapter's functions and processes. **Upper left:** Lists the individual search queries and the number of times each has run. **Upper right:** Lists the individual URM Adapter sources and the number of search queries that have run for each. **Middle left:** Lists the individual disposition types and the number of completed disposals for each. **Middle right:** Lists the individual URM Adapter sources and the number of dispositions performed for each. **Lower left:** Lists the individual URM Adapter sources and the number of applied holds for each. **Lower right:** Lists the individual URM Adapter sources and the number of removed holds for each.

A.12.2 Status: Process Status Tab

Use the Process Status tab to monitor the status of the Adapter 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.

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.



Process Status and Virtual Machine panes:

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.
Started On field	When the Adapter started the current processing session.
Uptime field	The length of time that the Adapter has been running without crashing or being stopped.

Threads pane:

Element	Description
Processes list	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. 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.

Timers pane:

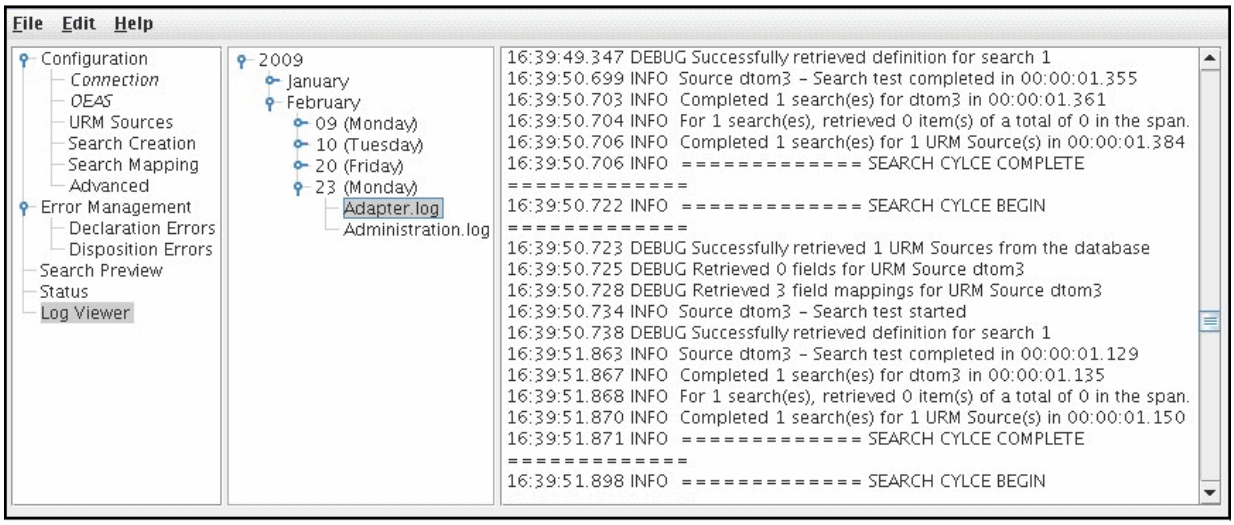
Element	Description
Functions list	Displays a list of the timer functions that are running at the time the Adapter retrieves this status information. Generally, several timers execute concurrently and independently. The system dynamically assigns each timer thread a unique identification number. You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

A.13 Log Viewer Screen

Use the Log Viewer screen to select and view the event records for a specific day. The graphic 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.

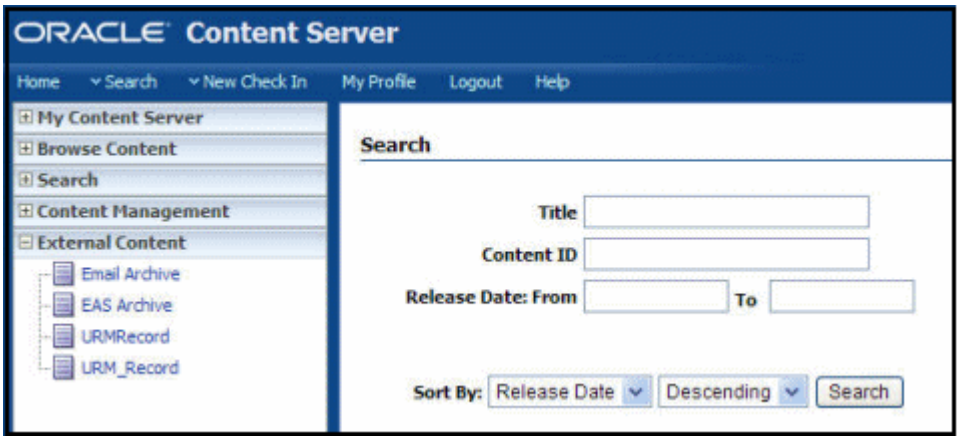
The log file tree is an organized hierarchy that consists of the current year(s), month(s), and days, as applicable. Due to the deletion process for matured log files, two years/months may be listed in the navigation hierarchy. This may include the last one or more days of the previous month and some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



Element	Description
Log file tree	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. 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.
Log entry list	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. Information is listed in a table format with standard column headers.

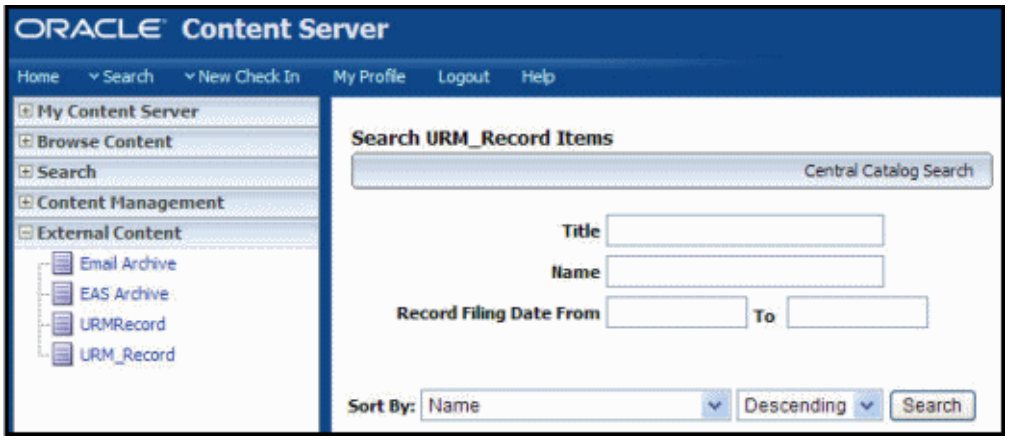
A.14 Content Server Search Page

The URM Adapter sources that are created using the three-part wizard (see "URM Sources Screen" on page A-3) are displayed in the External Content tray in URM.



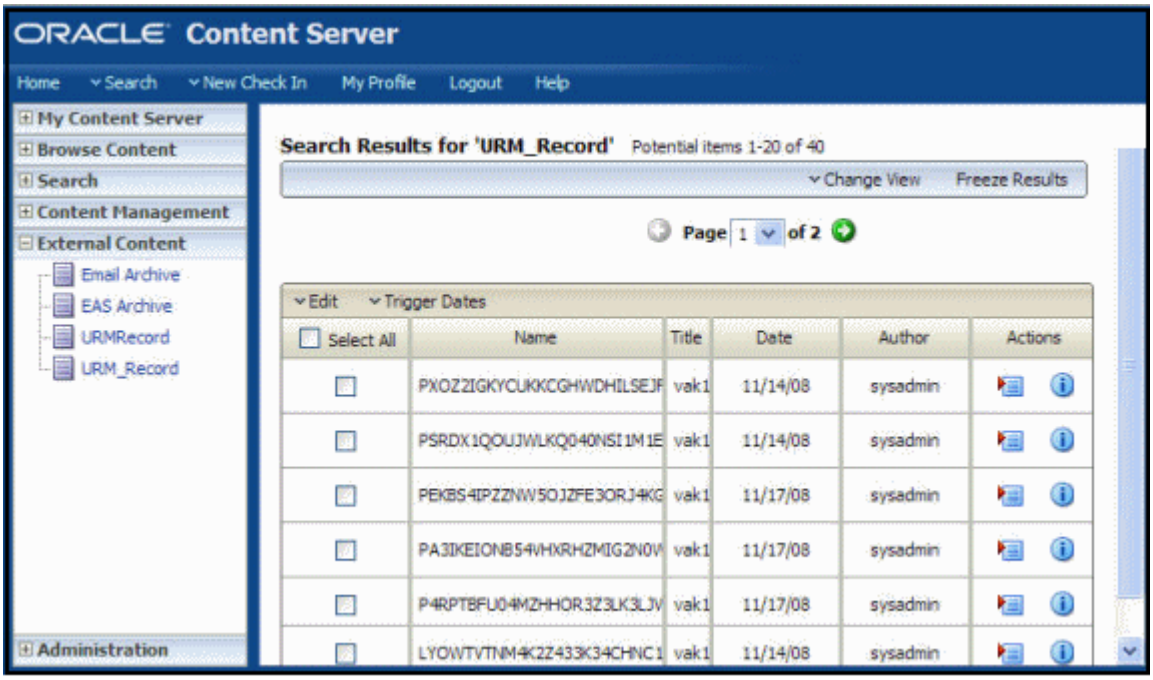
A.15 Search *urm_source_name* Items Page

You can submit a search request pertaining to all of the records associated with each URM Adapter source using the Search <urm_source_name> Items screen. You can access this screen by selecting a specific URM Adapter source from the External Content tray.



A.16 Search Results for *urm_source_name* Screen

Use the Search Results page to display the records that match the search criteria specified in the Search Page. You can access the Search Results page by clicking the **Search** button on the Search Page.



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