



Upgrading Oracle Knowledge Applications

Version 8.4.2.2
July, 2012

Oracle, Inc.

COPYRIGHT INFORMATION

Copyright © 2002, 2011, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are “commercial computer software” or “commercial technical data” pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle America, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group. Other names may be trademarks of their respective owners.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Contents

About This Guide	1
In This Guide	1
Screen and Text Representations	1
References to World Wide Web Resources	2
Planning to Upgrade Oracle Knowledge	3
Supported Upgrade Paths	3
Upgrading from Releases Earlier than 8.1.x	3
Analytics Upgrade Options	4
Requirements, Prerequisites, and Dependencies	4
Supported Platforms, Databases, and Web Servers	4
Upgrading from 32-bit to 64-bit Operating Systems	4
Supported Web Servers and Release Levels	4
Required User Authority	4
Required User Authority in Microsoft Windows 2003 and 2008 R2 Environments	4
Required User Authority in Linux Environments	5
Required User Authority for Upgrading Information Manager	5
Required Updates and Patches	5
The Oracle Knowledge Upgrade Utilities	5
Acquiring the Upgrade Utilities	5
The Intelligent Search Upgrade Utility	5
The Information Manager Upgrade Utility	5
Operating the Information Manager Upgrade Utility from the GUI	6
Operating the Information Manager Upgrade Utility from the	

ICE Command Line	6
Upgrading the Information Manager Tomcat Webserver	6
How the Information Manager Upgrade Utility Works	6
Upgrading Multiple Information Manager Instances	7
Upgrading Information Manager Databases	7
Upgrading Information Manager Web Applications	7
Specifying Information Manager Upgrade Utility Command Line Arguments	8
Information Manager Upgrade Utility Command Line Arguments	8
The Analytics Upgrade Utility	9
Preparing to Upgrade Oracle Knowledge	10
Backing Up Oracle Knowledge Components and Data	10
Ensure Intelligent Search Runtime Index Quality	11
Remove Obsolete Information Manager Components	11
Preparing to Upgrade Analytics	11
Loading Unprocessed Log Files	11
Segregating Custom MicroStrategy Report Definitions and Metadata	12
Setting Oracle Database Permissions	12
Starting and Stopping Oracle Knowledge Environments and Instances	12
Starting the ICE Environment	12
Starting an Oracle Knowledge Instance	12
Stopping an Oracle Knowledge Instance	13
Upgrading Intelligent Search	14
Extracting the Upgrade Utility	14
Running the Upgrade Utility from the ICE Command Line	14
Rebuilding the Intelligent Search Web Applications	15
Updating the WorkClient and QueryWorker Instances	15
Ensuring that the Global Public Content Setting is Correct	15
Upgrading the Dictionary	15
Disabling Atomic Boolean Arg Search Rules	16
(Optional) Merging the Search Performance Pack	17
Verification of the PRE-8.4.2.2 Dictionary	17
Upgrade Instructions	18
Modify Relative Weights in Launch Document Search Rule	20
(Optional) Import Additional Synonyms of Base Concepts Domain Concepts in French, German, Italian, Japanese, and Spanish	20
(Optional) Import Additional Synonyms For Computer Concepts Domain Concepts in French, German, Spanish	21
(Optional) Import Additional Synonyms For Computer Concepts Domain Concepts in Italian, Japanese, Simplified Chinese, Slovak, and Taiwanese Chinese	21
Upgrading the Content Store Database	22

Upgrading Information Manager	23
Operating the Upgrade Utility in GUI Mode	23
Operating the IMUpgrader Utility in Command Line Mode	23
Manually Upgrading Information Manager Components	24
Rebuilding Channel XML	24
Recreating the Full Text Index	24
Re-installing the IM Service (Windows and Release 8.2 or Earlier Only) ..	24
Updating InfoCenter JSP Pages	25
Upgrading Unregistered Web Applications	25
Validating Upgraded Instances	26
Reviewing the Upgrade Logs	26
Verifying the Web Applications	26
Verifying the Upgrade History	26
Checking for Startup Errors	26
Upgrading MicroStrategy Analytics	28
Installing Analytics	28
Updating the Analytics Schema	28
Updating the Analytics Database Schema	28
Updating the Information Manager Operational Schema	28
Upgrading the Intelligent Search ODS Archive	29
Updating the Information Manager Star Schema	29
Updating the Information Manager Star Schema Staging Areas	29
Updating the Analytics Staging Areas	29
Updating the MicroStrategy Metadata Schema	29
Upgrading to OBIEE Analytics 30	
Installing and Configuring OBIEE	30
Installing Release 8.4.2.2 Analytics	30
Deploying the Repository Definition File and Catalog	31
Updating the Analytics Schema	31
Updating the Intelligent Search ODS and Information Manager	
ODS and Star Schema	31
Updating the Information Manager Operational Schema	31
Updating the Intelligent Search ODS Archive	31
Updating the Information Manager Star Schema	32
Updating the Information Manager ODS Staging Areas	32
Updating the Analytics Staging Areas	32
Diagnosing Information Manager Upgrade Issues	33
Upgrade Utility Fails to Upgrade Database due to Failure to Locate	
Java (Linux)	33
Current Version Information Missing from Version.xml	34

Processing Search Log Files Created in Previous Releases	35
Locating the Product Version of the Log File	35
Locating the Corresponding Product Version Database File	36
Creating a New Product Version File	36

About This Guide

This guide describes the upgrade software, processes, and procedures that technical staff can use to upgrade Oracle Knowledge Applications, including Intelligent Search, Information Manager, Analytics, and InfoCenter-based applications such as SSP and iConnect.

This guide support upgrades to the current Release (8.4.2.2) from previous Releases as described in “Supported Upgrade Paths” on page 3. It addresses only the processes of upgrading Oracle Knowledge applications “as installed”; it does not include processes for upgrading any customized components.

Consult the Release Notes for the specific release that you are installing for more information about new features, enhancements, and resolved defects.

Important! You should apply and thoroughly test all upgrade-related changes in a development environment prior to implementing them in production environments. You should also make backup copies of all application data prior to upgrading to mitigate risk of data loss.

In This Guide

Upgrading Oracle Knowledge is divided into the following sections:

- [Chapter 1, Planning to Upgrade Oracle Knowledge](#)
- [Chapter 2, Preparing to Upgrade Oracle Knowledge](#)
- [Chapter 3, Upgrading Intelligent Search](#)
- [Chapter 4, Upgrading Information Manager](#)
- [Chapter 5, Upgrading MicroStrategy Analytics](#)
- [Chapter 6, Upgrading to OBIEE Analytics](#)
- [Chapter A, Diagnosing Information Manager Upgrade Issues](#)
- [Chapter B, Processing Search Log Files Created in Previous Releases](#)

Screen and Text Representations

The product screens, screen text, and file contents depicted in the documentation are examples. We attempt to convey the product's appearance and functionality as accurately as possible; however, the actual product contents and displays may differ from the published examples.

References to World Wide Web Resources

For your convenience, we refer to Uniform Resource Locators (URLs) for resources published on the World Wide Web when appropriate. We attempt to provide accurate information; however, these resources are controlled by their respective owners and are therefore subject to change at any time.

Planning to Upgrade Oracle Knowledge

This section contains information to help you plan to upgrade Oracle Knowledge applications, including:

- the releases from which you can upgrade using the utilities and processes described in this guide as described in “Supported Upgrade Paths” on page 3
- options for upgrading Analytics to use either OBIEE or MicroStrategy as described in “Analytics Upgrade Options” on page 4
- requirements, prerequisites, and dependencies, including supported platforms and databases, required user authority, and required updates and patches, as described in “Requirements, Prerequisites, and Dependencies” on page 4
- details about the upgrade utilities as described in “The Oracle Knowledge Upgrade Utilities” on page 5

Supported Upgrade Paths

This guide describes how upgrade Intelligent Search, Information Manager, Analytics, as well as InfoCenter and other Oracle Knowledge web applications, from:

- Releases 8.1.2 and later

to:

- Release 8.4.2.2

Note: You upgrade Analytics to Release 8.4.2.2 by selecting one of the options described in “Analytics Upgrade Options” on page 4:

Upgrading from Releases Earlier than 8.1.x

Release 8.4.2.2 upgrade utilities do not support releases earlier than 8.1.x. If you want to upgrade to Release 8.4.2.2 and preserve data and configuration information from a release that is not supported by the 8.4.2.2 upgrade process, such as 7.x or 8.0.x, we recommend that you install this release into a new environment, and work with Oracle Consulting Services to migrate your data into the newly installed environment.

Important! You must complete the 8.4.2.2 upgrade process by downloading and applying the 8.4.3 rollup patch (13403758), and any subsequent patches, as described in “Required Updates and Patches” on page 5.

Analytics Upgrade Options

Beginning with Release 8.4.2.2, Oracle Knowledge Analytics uses Oracle Business Intelligence Enterprise Edition as the user interface for generating, viewing, and working with reports. If you are an existing Analytics customer, you can upgrade to the OBIEE-based Analytics, or continue to use the MicroStrategy-based Analytics in an upgraded environment.

Note: If you are planning to install Analytics for the first time in your organization, you must install OBIEE-based Analytics.

Requirements, Prerequisites, and Dependencies

The following sections describe requirements, prerequisites, and dependencies for supported platforms and databases, web server releases, user authorities, and Oracle Knowledge updates and patches.

Supported Platforms, Databases, and Web Servers

You must upgrade Oracle Knowledge applications to supported operating systems and databases as described in Oracle Knowledge Platform and Language Requirements.

Important! You must have compatible systems and databases available before you begin the upgrade process.

Upgrading from 32-bit to 64-bit Operating Systems

If you are planning to upgrade an implementation that is installed on 32-bit operating systems to a 64-bit environment, you must install Release 8.4.2.2 into the new environment, then migrate your existing data to the new environment.

Supported Web Servers and Release Levels

The upgrade process updates the Apache Tomcat server to version 6.0.29.

Required User Authority

This section describes the user authority required to upgrade Oracle Knowledge applications in Microsoft Windows and Linux environments.

Required User Authority in Microsoft Windows 2003 and 2008 R2 Environments

In Windows Server 2003 and 2008 R2 environments, you must perform the upgrade as a user who belongs to the Administrators group.

You must start the InQuira Common Environment (ICE) as an administrator in order to install, uninstall, stop, or start Oracle Knowledge services.

The user who performs the upgrade must also have ownership of, and Full Control permissions in, the product directory (`InQuira_<release>`), including all subdirectories and objects. The user that upgrades and operates the application must have permission to access network shares while running as a service.

Required User Authority in Linux Environments

In Linux environments, you must upgrade Oracle Knowledge applications as a non-root user. We recommend that you create a standard administrator user, and use this user to upgrade and operate Oracle Knowledge software. The user that upgrades and operates Oracle Knowledge must have authority to access NFS or SAN mounted drives.

Required User Authority for Upgrading Information Manager

You must perform certain manual Information Manager upgrade processes as an information manager user with super user, super support, or site admin privileges. See “Upgrading Information Manager” on page 23 for more information on performing these steps.

Required Updates and Patches

You must download and apply the 8.4.3 rollup patch (13403758), and any subsequent patches, to complete the 8.4.2.2 upgrade process. Updates and patches are available at <https://support.oracle.com>.

The Oracle Knowledge Upgrade Utilities

Oracle Knowledge Release 8.4.2.2 provides the following automated upgrade utilities:

- the Intelligent Search upgrade utility
- the Information Manager upgrade utility
- the Analytics upgrade utility

Note: The automated upgrade utilities support upgrades from Releases 8.1.x and later.

Acquiring the Upgrade Utilities

You acquire the upgrade utilities by downloading them from the Oracle Software Delivery Cloud, located at <https://edelivery.oracle.com>.

The Intelligent Search Upgrade Utility

The Intelligent Search upgrade utility comprises an Apache ANT-based script and associated files, which are packaged in a platform-independent archive (.zip). You use the upgrade utility by executing a command from an ICE prompt. The utility then copies the required files to the correct locations.

The Information Manager Upgrade Utility

The Information Manager upgrade utility is a java-based command line application packaged within a GUI program. You can operate the upgrade utility

- directly from the GUI
- from the ICE command line

Operating the Information Manager Upgrade Utility from the GUI

You must upgrade at least one Information Manager instance using the GUI. GUI mode is a convenient method of upgrading an Information Manager instance. When you upgrade an instance in GUI mode, the upgrader creates upgrade-specific files in the `<$IM_HOME>/upgrade` directory. You must copy this folder to any instances that you want to upgrade using command line mode.

Important! Operating the upgrade utility in GUI mode upgrades the Tomcat webserver. The upgrade utility places the upgraded files in the `<$IM_HOME>/instance/appserverim` directory; copying the `<IM_HOME>/upgrade` directory to another instance and upgrading in command line mode will not upgrade the Tomcat webserver. See “Upgrading the Information Manager Tomcat Webserver” on page 6 for more information.

Operating the Information Manager Upgrade Utility from the ICE Command Line

Using the ICE command line enables you to specify various command line arguments to control the upgrade process, as described in “Specifying Information Manager Upgrade Utility Command Line Arguments” on page 8. To enable command line mode, you must operate the upgrader in GUI mode on an Information Manager instance, then copy the `<IM_HOME>/upgrade` directory from the upgraded instance to all other instances that you want to upgrade using command line mode.

Important! Operating the upgrade utility in GUI mode upgrades the Tomcat webserver. The upgrade utility places the upgraded files in the `<IM_HOME>/instance/appserverim` directory; copying the `<IM_HOME>/upgrade` directory to another instance and upgrading in command line mode will not upgrade the Tomcat webserver. See “Upgrading the Information Manager Tomcat Webserver” on page 6 for more information.

Upgrading the Information Manager Tomcat Webserver

You must upgrade the Tomcat webserver as part of the upgrade process. When you upgrade an Information Manager instance in GUI mode, the upgrade utility automatically upgrades Tomcat by placing the upgraded files in the `<IM_HOME>/instance/appserverim` directory. When you upgrade an instance in command line mode, you must take additional steps to upgrade the Tomcat webserver by:

- performing the webserver upgrade steps in GUI mode
- copying the `<IM_HOME>/instance/appserverim` directory from an instance that has been previously upgraded in GUI mode

How the Information Manager Upgrade Utility Works

The Information Manager upgrade utility:

- creates a copy of each web application and stores it in the `<$IM_HOME>/backup` directory. The upgrade process creates a separate directory for each version that you upgrade to
- creates upgrade-specific files in the `<$IM_HOME>/upgrade` folder; you can copy this folder to additional instances that you want to upgrade
- discovers the current application version by reading previous upgrade information stored in the database
- determines the required upgrade steps by reading the `version.xml` file located in the `<$IM_HOME>/upgrade` directory
- checks information about each deployed web application in the `<$IM_HOME>/config/registeredapps.xml` file, and replaces the binary files for each web application

- executes pre-migration SQL scripts, data migration classes, and post-data migration SQL scripts, and stores the upgrade results in the `<IM_HOME>/logs/UPGRADE` folder
- creates a new log file of the upgrade activity, which you review as part of the upgrade validation process
- stores installation and upgrade information for each component in the `INSTALLHISTORY` table
- uses the `INSTALLHISTORY` table information to
 - determine the release level of each component, and skips the upgrade process for components that have been upgraded to the current release
 - evaluate files and application components on the same server instance, and skips the upgrade process for any that have been upgraded to the current release
- maintains a record of the upgrade process in the `<$IM_HOME>/receipts` folder

Upgrading Multiple Information Manager Instances

Typical enterprise Information Manager implementations consist of multiple Information Manager instances configured to share major components, such as the database and `<$IM_HOME>` directories. The upgrade utility can operate on only one instance each time you execute it; when you upgrade multiple instances with shared components, you must organize the upgrade process so that:

- you upgrade all Information Manager instances in your environment
- you do not upgrade shared components more than once

Important! You must not upgrade the Information Manager database more than once.

You can use command line mode to tailor the upgrade process for your specific implementation by including or excluding specific parts of the upgrade process on various instances; for example, you can bypass the database update process as described in “Upgrading Information Manager Databases” on page 7, or selectively update specific types of web applications as described in “Upgrading Information Manager Databases” on page 7. See “Specifying Information Manager Upgrade Utility Command Line Arguments” on page 8 for more information.

Upgrading Information Manager Databases

The upgrade utility uses the database properties stored in the `IMADMIN/application.properties` file to access and upgrade the database. You can bypass the database upgrade process while upgrading an Information Manager instance by specifying the parameter `-updatedb` as an argument to the upgrade command on the ICE command line.

See “Specifying Information Manager Upgrade Utility Command Line Arguments” on page 8 for additional parameters that you can specify to override the default JDBC connection settings and control other upgrade utility functions.

Upgrading Information Manager Web Applications

The upgrade process updates the web application binary files; you must upgrade each deployed web application on each instance. In GUI mode, the upgrade utility updates all the web applications that are registered in the `<$IM_HOME>/config/registeredapps.xml` file on the upgraded instance. In command line mode, you can use the following options to upgrade only the specified type of web application, as described in “Specifying Information Manager Upgrade Utility Command Line Arguments” on page 8:

- `-allwebapps`

- -iconnect
- -infocenter
- -ssp

Note: The upgrade utility will update all web applications of the specified type that are registered on the instance.

Specifying Information Manager Upgrade Utility Command Line Arguments

You specify Information Manager upgrade utility commands in Windows environments using the following syntax:

```
<$InQuira_HOME>\InfoManager\upgrade imupgrader.bat "im_home=
c:\<full_path_to_IM_configuration_files>" "-updatedb=true"
```

Important! You must enclose each argument to the batch script within double quotes; in addition, you cannot enter more than ten arguments per command, due to command processor limitations.

Information Manager Upgrade Utility Command Line Arguments

Use the following optional parameters as command line arguments to customize the upgrade process.

Parameter	Description
-updatedb=<true false>	Specifies whether or not to update the database. This parameter is optional; the default is true. Use -updatedb=false to specify not to update the database.
-updatefiles=<true false>	Specifies whether or not to update/replace the web application, IMWS, or InfoManager files. This parameter is optional; the default is true.
-user=<db user to update>	Specifies the jdbc user to use when upgrading. The specified value overrides the JDBCUser value set in the IMADMIN/application.properties file.
-passwd=<db user passwd>	Specifies the jdbc password to use when upgrading. The specified value overrides the JDBCPassword value set in the IMADMIN/application.properties file.
-jdbcurl=<db JDBC URL to update>	Specifies the jdbc URL to use when upgrading. The specified value overrides the JDBCURL value set in the IMADMIN/application.properties file.
-jdbcdriver=<db driver class>	Specifies the jdbc driver to use when upgrading. The specified value overrides the JDBCDRIVER value set in the IMADMIN/application.properties file.
-version=<version to apply>	Installs only the specified version. You cannot specify this option in combination with -script or -class options.
-script=<SQL script to apply>	Runs only the specified SQL script. The path needs to be relative to the IMUpgrader utility folder. You cannot specify this option in combination with -version or -class options.

Parameter	Description
-class=<full java class name of migration class>	Executes the specified java migration class to perform. You cannot specify this option in combination with -version or -script options.
-infocenter	Does the following: <ul style="list-style-type: none"> • Upgrades InfoCenter config file (infocenter.properties). • Compares the current config and the original installed config (under \InfoManager\install\taglib). Any changes are considered customer modifications. The changes are moved to a custom config file named infocenter_custom.properties. This new custom config overrides any entry in the infocenter.properties after the upgrade. • Upgrades InfoCenter resource files (ApplicationResource.properties). • Compares the current resource file and the original installed resource file (under \InfoManager\install\taglib). Any changes are considered customer modifications. Changes are moved to a custom config file named ApplicationResource_custom_locale.properties. This new custom config overrides any entry in the corresponding locale of the ApplicationResource_locale.properties after upgrade.
-allwebapps	Performs the same tasks that -infocenter performs for all three application types (InfoCenter, iConnect, and Self-Service Portal).
-iconnect	Performs similar tasks to -infocenter but, for iConnect.
-SSP	Performs similar tasks to -infocenter but, for Self-Service Portal

The Analytics Upgrade Utility

The Analytics upgrade utility is installed with the new Release of the Analytics application. It is an Apache ANT-based set of scripts which you invoke from a command line. You use the same upgrade utility to upgrade to both OBIEE and MicroStrategy versions of Analytics; the two Analytics versions use the same database schema.

The upgrade utility updates the existing analytics schema by creating new tables, columns, and indexes as required, and copies new MicroStrategy report definitions into the Analytics database tables.

Important! The upgrade process includes a step that overwrites existing MicroStrategy report definitions, including any customizations. You must backup any customizations that you want to preserve, and merge them into the new MicroStrategy report definitions, as described in “Preparing to Upgrade Analytics” on page 11.

Preparing to Upgrade Oracle Knowledge

This section describes how to prepare for upgrading Oracle Knowledge applications, including backing up existing application data and additional processes specific to preparing to upgrade Intelligent Search, Information Manager, and Analytics, as described in the following sections:

- **Backing Up Oracle Knowledge Components and Data**
- **Ensure Intelligent Search Runtime Index Quality**
- **Remove Obsolete Information Manager Components**
- **Preparing to Upgrade Analytics**

This section also includes instructions on starting and stopping the ICE environment and Oracle Knowledge instances, as described in:

- **Starting and Stopping Oracle Knowledge Environments and Instances**

Backing Up Oracle Knowledge Components and Data

We recommend that you create backup copies or archives of important components and data prior to upgrading, including:

- Intelligent Search components:
 - the VCRoot (version control root)
 - custom code, including content classifiers and content acquisition (crawlers)
 - log files intended for use with Analytics
 - the last known good revision bundle
- Information Manager components:
 - the `<$IM_HOME>` directory
 - database schema
 - content repository
 - web applications
 - log files intended for use with Analytics
- Analytics components:
 - all database schema
 - MicroStrategy report definitions

In addition, you should suspend all user access and stop all application instances that you plan to upgrade.

Ensure Intelligent Search Runtime Index Quality

Ensure that each Intelligent Search runtime instance has a good index in place.

Remove Obsolete Information Manager Components

The `IMWOWebServices` components are obsolete, and are replaced by `IMWS.war`. You should update your applications to use `IMWS.war` and the Client Library API by:

- removing the obsolete components from the web application and application servers as follows:

In the Directory...

```
<$InQuira_ROOT>/
instances/<company>/
appserverim/webapps
<$InQuira_ROOT>/
instances/<company>/
appserverim/conf/
Catalina/localhost
```

Remove...

```
the IMWOWebServices folder
IMWOWebServices.war
the context file IMWOWebServices.xml
```

- replace all code using the obsolete XML-based interface with calls to the Client Library API

Preparing to Upgrade Analytics

Beginning with Release 8.4.2.2, Oracle Knowledge Analytics uses Oracle Business Intelligence Enterprise Edition as the user interface for generating, viewing, and working with reports. If you are an existing Analytics customer, you can upgrade to the OBIEE-based Analytics, or continue to use the MicroStrategy-based Analytics in an upgraded environment.

- Loading Unprocessed Log Files**
- Segregating Custom MicroStrategy Report Definitions and Metadata**
- Setting Oracle Database Permissions**

Loading Unprocessed Log Files

Load any application logs created in the previous version before upgrading the Analytics database.

Note: If you are unable to use the standard ETL process to load existing log files, use the process described in “Processing Search Log Files Created in Previous Releases” on page 35 to process logs from previous versions after you complete the upgrade process.

Segregating Custom MicroStrategy Report Definitions and Metadata

The Analytics upgrade process includes a step that updates the MicroStrategy metadata schema, which store the report definitions, including any custom reports that you have created. If you have custom report definitions that you want to preserve, you must back up the metadata and report definitions, or install the new metadata into a new schema, then merge the existing metadata containing your customizations into the new MicroStrategy report definitions after the upgrade process completes.

Setting Oracle Database Permissions

If you are using an Oracle database, you must grant the `create sequence` permission to the Analytics user. To grant the `create sequence` permission:

- Open a command prompt, and start the `sqlplus` command line environment:

```
sqlplus username/password@sid
```

where `username` is the analytics user name, `password` is the associated password, and `sid` is the name of the Oracle instance where the Analytics data is located.

- Enter the following command to grant `create sequence` permission:

```
grant create sequence to <analytics_dbuser/owner>
```

Starting and Stopping Oracle Knowledge Environments and Instances

This section describes how to start the InQira Common Environment (ICE) Environment and Oracle Knowledge instances, which is required as part of various upgrade-related processes.

Starting the ICE Environment

To start the ICE environment:

- change to the `$InQira_Home/instances/<instance>` directory.
- enter the appropriate command:

```
setenv.sh (Linux)
```

```
setenv.bat (Windows)
```

Starting an Oracle Knowledge Instance

To start an Oracle Knowledge instance:

- enter the following on the ICE command line:

```
inquira.sh start (Linux)
```

```
inquira.bat start (Windows)
```

Stopping an Oracle Knowledge Instance

To stop the Oracle Knowledge instance:

- enter the following on the ICE command line:

```
inquirash stop (Linux)
```

```
inquirash stop (Windows)
```

Upgrading Intelligent Search

This section describes how to upgrade Intelligent Search applications, including the Dictionary component, using the upgrade utility.

Important! Before you upgrade an instance of Intelligent Search, ensure that you are prepared as described in “Planning to Upgrade Oracle Knowledge” on page 3 and “Preparing to Upgrade Oracle Knowledge” on page 10.

You upgrade an Intelligent Search instance by:

- extracting the Intelligent Search upgrade utility as described in “Extracting the Upgrade Utility” on page 14
- running the Intelligent Search upgrade utility from an ICE command line as described in “Running the Upgrade Utility from the ICE Command Line” on page 14
- rebuilding and redeploying the Intelligent Search web applications as described in “Rebuilding the Intelligent Search Web Applications” on page 15 and “To redeploy the web applications:” on page 15
- updating WorkClient and QueryWorker instances as described in “Updating the WorkClient and QueryWorker Instances” on page 15
- ensuring that the global public content setting is correct, as described in “Ensuring that the Global Public Content Setting is Correct” on page 15

In addition you must upgrade the Dictionary by following the steps that are appropriate for the release you are upgrading from, as described in “Ensuring that the Global Public Content Setting is Correct” on page 15:

Extracting the Upgrade Utility

Download the Search Upgrader package and extract the contents into a temporary directory; we will refer to this directory as <TMP-DIR> throughout upgrade process.

Running the Upgrade Utility from the ICE Command Line

You must run the upgrade utility on each Intelligent Search instance that you are upgrading. To run the upgrade utility:

- open an ICE command window on the instance you are upgrading as described in “Starting the ICE Environment” on page 12
- navigate to the <TMP-DIR> that contains the extracted upgrade files
- execute the upgrade utility using the appropriate script:

```
upgrade.sh (Linux)
```

`upgrade.bat` (Windows)

The upgrade utility runs and writes its output, including any errors that occur, to the console window.

Rebuilding the Intelligent Search Web Applications

You must rebuild and redeploy the scheduler (`inquirawb.war`) and runtime (`inquiragw.war`) web applications for each Scheduler, Runtime, and QueryCoordinator instance.

To rebuild the web applications on an instance:

- close any ICE windows
- start a new ICE window
- execute the following command:

`buildWebapp.sh` (Linux)

`buildWebapp.bat` (Windows)

To redeploy the web applications:

- enter the following on the ICE command line:

`deployApp.sh` (Linux)

`deployApp.bat` (Windows)

Updating the WorkClient and QueryWorker Instances

You must apply the updates to each Workclient and QueryWorker instance. To apply the updates:

- enter the following on the ICE command line:

`applyUpdates.sh` (Linux)

`applyUpdates.bat` (Windows)

Ensuring that the Global Public Content Setting is Correct

The IM collection configuration contains a `Force Public` parameter that sets global access to content and overrides document-level settings. When `Force Public` is On, all content in the collection is public, regardless of the individual document settings. To check the value of this parameter:

- log onto System Manager
- select Advanced Settings for the collection
- ensure that `Force Public` is set to Off.

Upgrading the Dictionary

You must upgrade the Dictionary using the steps described in this section. Some steps apply only to upgrades from specific releases. Use the following table to determine which Dictionary upgrade steps you need to perform.

If you are upgrading from...	Perform these steps:
8.1.x	all
8.2.3 through 8.3.2	<ul style="list-style-type: none"> • Disabling Atomic Boolean Arg Search rules • (Optional) Merge Search Performance Pack • Modifying Relative Weights in Launch Document Search rule • (Optional) Import additional synonyms for computer concepts domain concepts in Italian, Japanese, Simplified Chinese, Slovak, and Taiwanese Chinese
8.4.2.0 and later	<ul style="list-style-type: none"> • Disabling Atomic Boolean Arg Search rules • Modifying Relative Weights in Launch Document Search rule • (Optional) Import additional synonyms for computer concepts domain concepts in Italian, Japanese, Simplified Chinese, Slovak, and Taiwanese Chinese

Disabling Atomic Boolean Arg Search Rules

There are two Atomic Boolean Arg Search rules; one is a member of the Boolean Speak domain, the other is a member of the Boolean Speak Embedded domain. To disable these rules:

- locate the rules using the Dictionary Find Tool
- right click on each rule, and select **Disable**
- commit these changes to the dictionary

(Optional) Merging the Search Performance Pack

You can upgrade an 8.1.x or 8.2.x. Dictionary to the 8.4.2.2 Search Performance Pack by importing Performance Package V6. The performance pack updates configuration information for the following domains:

- Base Concept Appearance
- Base Concept Appearance Lite
- Base Standard
- Contact
- English

Performance Package V6 is available in the directory:

```
<$InQuira_HOME>\resources\Dictionary_Import_Files\Performance_Package_V6.
```

Verification of the PRE-8.4.2.2 Dictionary

IDENTIFY WHETHER PERFORMANCE PACKAGE V5 WAS INSTALLED

You can confirm whether Performance Package V5 was installed in the PRE-8.4.2.2 Dictionary by checking:

- 1 whether there is a domain named Performance,
- 2 whether there are rules whose IML patterns are “thisblocksnonperformancerule”.

Performance Package V5 was installed if either 1) or 2) is true.

IDENTIFY WHETHER BASE CONCEPT APPEARANCE LITE DOMAIN IS BEING USED

You can confirm whether domain “Base Concept Appearance Lite” is being used in the PRE-8.4.2.2 Dictionary by checking whether this domain is on any active domain list.

IDENTIFY WHETHER INSTALLED RULES IN AFFECTED DOMAINS WERE CUSTOMIZED

You can confirm whether installed rules in the five affected domains were customized in the PRE-8.4.2.2 Dictionary by checking whether the author of the rule is internal\InQuira.

Installed rules are authored by internal\InQuira. If a rule’s author is no longer internal\InQuira, it may have been customized.

Important! If any installed rules were customized, evaluate the customizations and make a list of the customizations that need to be carried over to 8.4.2.2.

This section contains the following upgrade instructions::

- 1 **Back up and Delete Non-performance Rules.**
- 2 **Import Performance Package V6 Rules.**
- 3 **Import Ontology Fixes.**
- 4 **Fix Concepts that are Wrongly Identified As Openclass.**
- 5 **Handle PRE-8.4.2.2 Verification Results.**
 - a **If performance package v5 was installed.**

- b If “base concept Appearance lite” domain is being used.
 - c If Installed rules in affected domains were modified.
- 6 Commit and verify.

Upgrade Instructions

BACK UP AND DELETE NON-PERFORMANCE RULES

- 1 Create a directory to back up the PRE-8.4.2.2 rules at <install-root>\resources\8.x_Rules_Backup, and create five subdirectories therein.
 - 8.x_Rules_Base Concept Appearance
 - 8.x_Rules_Base Concept Appearance Lite
 - 8.x_Rules_Base Standard
 - 8.x_Rules_Contact
 - 8.x_Rules_English
- 2 Log on Dictionary Manager in the 8.4.2.2 installation as any PRE-8.4.2.2 user.
- 3 Iterate through the five affected domains, export the rules to the 5 subdirectories, and delete the rules from the Dictionary.
- 4 Commit.

Important! You must commit rule deletion before importing Performance Package V6 rules; otherwise performance rules which have the same name and domain of deleted rules cannot be imported.

IMPORT PERFORMANCE PACKAGE V6 RULES

- 1 **Dictionary Manager -> Tools -> Import Dictionary Objects ->** Point to <install-root>\resources\Dictionary_Import_Files\Performance_Package_V6\Performance_Package_V6_Rules
- 2 Click **Import**.
- 3 In the Dialog Box that displays, “Do you want to only check for errors...?” Click **NO**.
- 4 When the import completes, verify that the import messages end with *Imported 122 Rules*.

IMPORT ONTOLOGY FIXES

- 1 **Dictionary Manager -> Tools -> Import Ontology Objects ->** Point to <install-root>\resources\Dictionary_Import_Files\Performance_Package_V6\Performance_Package_V6_Ontology
- 2 Click **Import**.
- 3 In the Dialog Box that displays, “Do you want to only check for errors...?” Click **NO**.
- 4 In the Dialog Box that displays, “Some objects already exist,” Click **Replace All**.
- 5 When import completes, verify that import messages end with *1 synset was imported*.

FIX CONCEPTS THAT ARE WRONGLY IDENTIFIED AS OPENCLASS

- 1 **Dictionary Manager -> Find Tool -> Find Concepts** with Openclass: *YES*.
- 2 Select concepts in the Find results whose name does not contain 'openclass', right click, and select **Unset openclass**.

HANDLE PRE-8.4.2.2 VERIFICATION RESULTS

For each of the PRE-8.4.2.2 Dictionary verifications described in "Verification of the PRE-8.4.2.2 Dictionary", take the following actions if the verification returns *true*.

If performance package v5 was installed

Back up and delete Performance Package V5:

- 1 Copy Question Patterns from rule **Define Frequent Stem Temp** in domain **Performance** to same name rule in domain **Base Standard**.
- 2 Create a subdirectory in `<install-root>\resources\8.x_Rules_Backup:`
`8.x_Rules_Performance_V5`
- 3 Export rules in the Performance domain to the subdirectory and delete the rules from the Dictionary.

If "base concept Appearance lite" domain is being used.

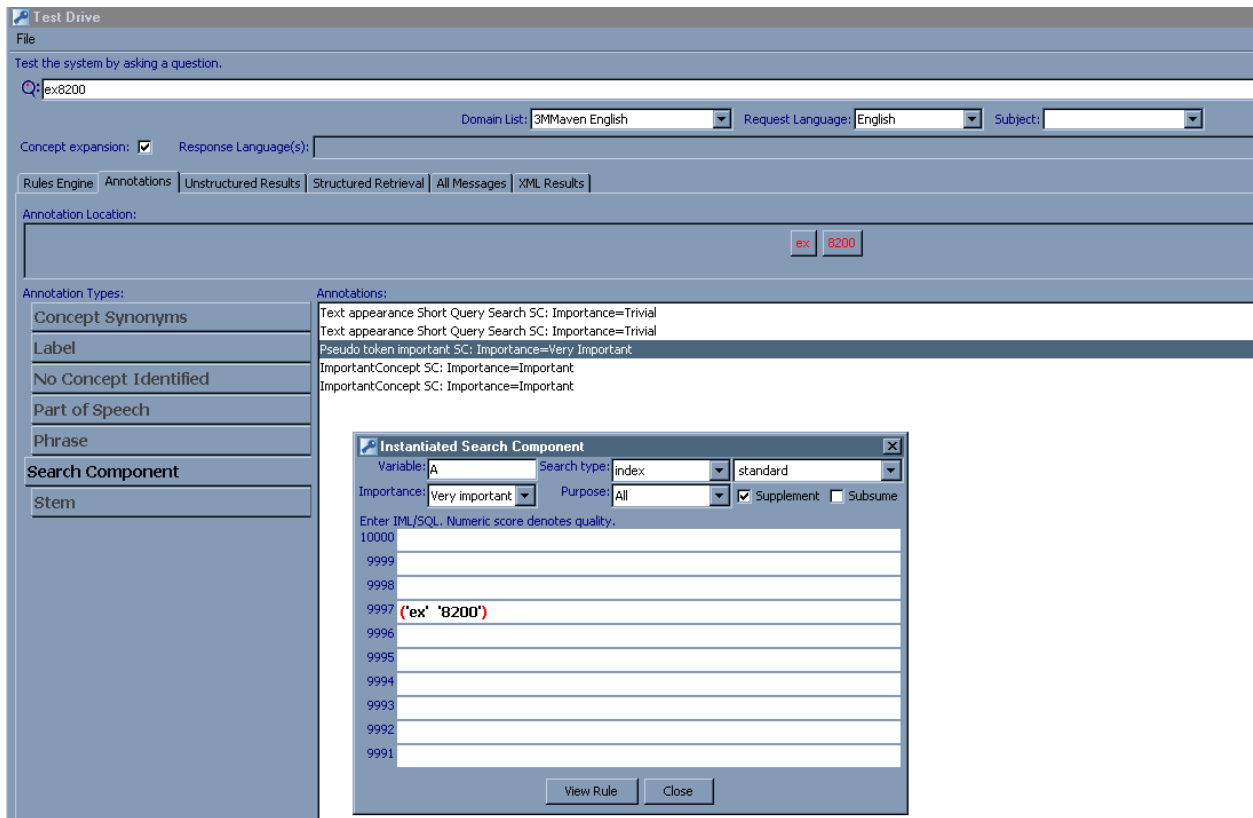
Iterate through active domain lists, remove domain "Base Concept Appearance Lite" domain and add domain "Base Concept Appearance".

If Installed rules in affected domains were modified.

Go through customizations identified in "Identify Whether Installed Rules in Affected Domains were Customized" that need to be carried over to the 8.4.2.2 Dictionary, and customize the installed rules according to the PRE-8.4.2.2 Dictionary.

COMMIT AND VERIFY

- 1 Commit.
- 2 Re-open Workbench.
- 3 Ask ex8200.
- 4 In **Annotations > Search Component**: Make sure that the following search component *Pseudo token important SC* triggers:



Modify Relative Weights in Launch Document Search Rule

- 1 Find and open "Launch Document Search" in the "Base Standard" domain.
- 2 On the tab labeled "Relative Weights" change the values to:

Search Components	70
Relevance of Documents	0.000001 (no change)
Recency of Documents	0 (no change)
Proximity of Search Terms	29.999999
- 3 Save changes to the rule.
- 4 Commit.

(Optional) Import Additional Synonyms of Base Concepts Domain Concepts in French, German, Italian, Japanese, and Spanish

- 1 Choose Import Ontology Objects from the *Tools* menu, and browse to the appropriate directory for each language:

```
<install-root>\resources\Dictionary_Import_Files\Synonym_translations_for_8.2\
Base_Concept_synonym_translations_for_8.2\[Language]_Base_Concept_synonym_translations_for_8.2
```

- 2 Click **Import**.
- 3 If *Synset Exists* prompt occurs, choose **Merge All**.
- 4 Commit.

(Optional) Import Additional Synonyms For Computer Concepts Domain Concepts in French, German, Spanish

- 1 Choose **Import Ontology Objects** from the *Tools* menu, and browse to the appropriate directory for each language:

```
<install-root>\resources\Dictionary_Import_Files\Synonym_translations_for_8.2\Computer_Concept_synonym_translations_for_8.2\[Language]_Computer_Concept_synonym_translations_for_8.2
```

- 2 Click **Import**.
- 3 If *Synset Exists* prompt occurs, choose **Merge All**.
- 4 Create French Computer, German Computer, Spanish Computer domain lists.
 - a Choose **Edit Domain Lists** from the *Tools* menu.
 - b Click on **English Computer**.
 - c Select **French** in the *Language* dropdown list, and observe French replaces English on the *Included Domains* list.
 - d Move *US Localization* to **Excluded Domains**.
 - e Move *France Localization* to **Included Domains**.
 - f Choose **Save as** from the *File* menu.
 - g Enter the **Save As** name as *French Computer*.
 - h Click **OK**.
 - i Repeat a to h to create German Computer and Spanish Computer domain lists:
 - replacing *French* with *German* or *Spanish* as **Language** in c.
 - replacing *French Localization* with *German Localization* or *Spanish Localization* in e.
 - replacing *French Computer* with *German Computer* or *Spanish Computer* in g.
 - j Commit.

(Optional) Import Additional Synonyms For Computer Concepts Domain Concepts in Italian, Japanese, Simplified Chinese, Slovak, and Taiwanese Chinese

- 1 Choose **Import Ontology Objects** from the *Tools* menu, and browse to the appropriate directory for each language:

```
<install-root>\resources\Dictionary_Import_Files\Synonym_Translations_for_8.4.2.2\Computer_Concept_Synonym_Translations_8.4.2.2\[Language]_Computer_Concept_Synonym_Translations_8.4.2.2
```

- 2 Click **Import**.
- 3 If *Synset Exists* prompt occurs, choose **Merge All**.
- 4 Create Italian Computer, Japanese Computer, Simplified Chinese Computer, Slovak Computer, Taiwanese Chinese Computer domain lists.
 - a Choose **Edit Domain Lists** from the *Tools* menu.
 - b Click on **English Computer**.
 - c Select **Italian** in the *Language* dropdown list, and observe Italian replaces English on the *Included Domains* list.
 - d Move *US Localization* to **Excluded Domains**.
 - e Move *Italy Localization* to **Included Domains**.
 - f Choose **Save as** from the *File* menu.
 - g Enter the **Save As** name as *Italian Computer* domain list.
 - h Click **OK**.
 - i Repeat a to h to create Japanese Computer, Simplified Chinese Computer, Slovak Computer, and Taiwanese Chinese Computer domain lists:
 - replacing *Italian* with *Japanese*, *Simplified Chinese*, *Slovak* or *Taiwanese Chinese* as **Language** in c.
 - replacing *Italy Localization* with *Japan Localization*, *China Localization* or *Taiwan Localization* in e [Note that *Slovak Localization* is currently not available].
 - replacing *Italian Computer* with *Japanese Computer*, *Simplified Chinese Computer*, *Slovak Computer*, or *Taiwanese Computer* in g.
 - j Commit

Upgrading the Content Store Database

Use the following steps to upgrade the Content Store database following the Oracle Knowledge 8.4.2.2 upgrade.

The upgrade utility copies the `update_8400.sql` script to the `$INSTALL_HOME/inquira/sql` folder.

- open SQL Plus or an SQL Query tool
- connect to the content store database
- execute the following script from the `$INSTALL_HOME/inquira/sql` directory
- execute the following script:

```
update_8400.sql
```

- check the logs to determine if there are any errors

Upgrading Information Manager

This section describes how to upgrade Information Manager applications using the upgrade utility.

Important! Before you upgrade an instance of Information Manager, ensure that you are prepared as described in “Preparing to Upgrade Oracle Knowledge” on page 10.

You upgrade an Information Manager application by operating the upgrade utility on each instance that you want to upgrade, performing additional manual steps, and validating the upgrade for each instance, as described in:

- **Operating the Upgrade Utility in GUI Mode**
- **Operating the IMUpgrader Utility in Command Line Mode**
- **Manually Upgrading Information Manager Components**
- **Validating Upgraded Instances**

Operating the Upgrade Utility in GUI Mode

You must run the upgrade utility from the GUI to upgrade at least one Information Manager instances in your environment, as described in “The Information Manager Upgrade Utility” on page 5. To run the upgrade utility:

- execute the appropriate program for the environment:

`imupgrader.bin` (Linux)

`imupgrader.exe` (Windows)

When you upgrade an instance in GUI mode, the upgrader creates upgrade-specific files in the `<IM_HOME>/upgrade` directory. You must copy this folder to any instances that you want to upgrade using command line mode.

Operating the IMUpgrader Utility in Command Line Mode

You can operate the upgrade utility in command line mode to specify various command line arguments that control the upgrade process, as described in “Specifying Information Manager Upgrade Utility Command Line Arguments” on page 8. You enable command line mode by running the upgrader in GUI mode on an Information Manager instance, then copying the `<IM_HOME>/upgrade` directory from the upgraded instance to any instances that you want to upgrade using command line mode.

To run the upgrade utility in command line mode:

- 1 open an ICE window
- 2 execute the upgrade utility with the required argument:

`imupgrader.sh -im_home=<full_path_to_IM_configuration_files>` (Linux)

```
imupgrader.bat "-im_home=<full_path_to_IM_configuration_files>" (Windows)
```

Important! When you run the upgrade utility from the ICE command line in a Windows environment, you must enclose the arguments to the batch script in double quotes. Also, the Windows command processor will not accept more than ten arguments per command.

Manually Upgrading Information Manager Components

You must complete the manual upgrade steps for all Information Manager instances.

Important! These steps require super user, super support, or site administration privileges.

Note: The time required to rebuild the channel xml and recreate the full text index depends on the size of the IM database. For exceptionally large databases, processing can take up to several hours to complete.

Rebuilding Channel XML

To rebuild the XML for each channel:

- 1 Log into the IM Console
- 2 Select the **Repository** tab
- 3 Select **List** from the left **Action Bar** under **Channels**
- 4 Select **Rebuild XML** for each channel in the list

Recreating the Full Text Index

To recreate the full text index:

- 1 Log into the IM Console
- 2 Select the **Tools** tab
- 3 Select **Reindex** from the left **Action Bar** under **Full Text Search**
- 4 Select **Index Repository** at the bottom of the page

Re-installing the IM Service (Windows and Release 8.2 or Earlier Only)

If you are upgrading from Release 8.2 or earlier in a Windows environment, you must re-install all Oracle Knowledge services to remove the obsolete OpenJMS service and enable the newer Java Service Wrapper.

To uninstall and re-install the IM service:

- 1 Create an ICE window for the standalone or default instance:

```
cd <install_dir>\instances\InfoManager
or
cd <install_dir>\instances\<default_instance_name>
```
- 2 Set the environment:

```
.\setenv.bat
```

3 Uninstall the IM service:

```
InQuiraimservice -uninstall
```

4 Re-install the IM service:

```
InQuiraimservice -install
```

Updating InfoCenter JSP Pages

The IMUpgrader utility does not replace any JSP pages that are deployed with a web application. The IMUpgrader utility only replaces files inside the WEB-INF folder. You must manually apply any changes to InfoCenter JSP pages. You must update both system and custom JSP files when you upgrade:

- system pages are JSP pages that are shipped with the product (out-of-the-box)
- custom pages are pages that are created or modified specifically for your organization

You upgrade system files by:

- copying them into place

or

- creating a new InfoCenter webapp using the IM Console mechanism

You upgrade custom JSP files by manually migrating them.

Note: We recommend the following approach to upgrading InfoCenter JSP pages to incorporate changes to associated with the new product version while preserving your custom code.

To upgrade custom JSP pages:

- compare the custom source version files to the out-of-the-box source version files, and note where custom code exists
- compare the out-of-the-box source version files to out-of-the-box upgrade version files, and note changes to files due to the upgrade
- carefully merge the two sets of differences to produce the final custom upgrade version file

Upgrading Unregistered Web Applications

Older versions of Information Manager and their associated IM web services and JSP web applications did not reliably identify the product version. In Release 8.2.x and later, the `registeredapps.xml` file, located in `<IM_HOME>/config`, maintains the version and location of each web application. This file is updated each time a registered web application starts. The upgrade utility process relies on the information in `registeredapps.xml`; web applications that are not registered in this file will not be upgraded; you need to manually upgrade any unregistered applications.

Validating Upgraded Instances

Perform the following steps to validate the IM upgrade process:

- 1 **Reviewing the Upgrade Logs**
- 2 **Verifying the Web Applications**
- 3 **Verifying the Upgrade History**
- 4 **Checking for Startup Errors**

Reviewing the Upgrade Logs

The upgrade logs are located in `<IM_HOME>/logs/upgrade`. Search the log files for any errors that are not marked as `INFO` or `WARNING`.

Verifying the Web Applications

The deployed web applications are located in the `appserverim/webapps` directory. Verify that:

- each `.war` file has been replaced
- the `version.txt` file within the `WEB-INF` directory now indicates the upgraded version
- the `<IM_HOME>/wars` directory has the latest `.war` files copied to it

If you are using an IM tag library, verify that:

- the files within the IM tag library application `WEB-INF` folders have been updated
- the `<IM_HOME>/install/taglib` directory has the latest InfoCenter JSP and binaries installed

Verifying the Upgrade History

Compare the upgrades records in the `INSTALLHISTORY` database table to the upgrades listed in the file `<IM_HOME>\upgrade\version.xml`. If any records are missing, check for corresponding entries in the log file located in the `<IM_HOME>/logs/upgrader` directory.

Checking for Startup Errors

Restart the IM application and review the startup log for installation-related errors similar to the following example:

```
ERROR com.InQuira.services.notification.templates.NotificationTemplateManager - COULD NOT FIND CONTENTS FOR TEMPLATE = ../InQuira_8.1/InfoManager/config/SYSTEM/taskconfig/contentinlimbo_en.xml -- MAKE SURE THE TEMPLATE FILES ARE LOADED FOR ALL LOCALES
```

To resolve missing template issues similar to the issue described above:

- 1 Stop the IM application
- 2 Copy the missing templates from:

```
<IM_HOME>/upgrade/files/deploy/InfoManager/config/SYSTEM/taskconfig  
to
```


<IM_HOME>/config/SYSTEM/taskconfig
In the newly upgraded system

- 3 Re-start the IM application

Upgrading MicroStrategy Analytics

This section describes how to upgrade Analytics to work with existing MicroStrategy implementations.

You upgrade Analytics using the following process:

- **Installing Analytics**
- **Updating the Analytics Schema**
- **Updating the MicroStrategy Metadata Schema**

Installing Analytics

You install Analytics by downloading and installing Release 8.4.2.2 on the Indexer instance as described in Installing Analytics. Specify the existing analytics database as the database for the new installation.

Updating the Analytics Schema

You update the Analytics database schema by opening an ICE window, then executing the upgrade scripts from the ICE command line as described in the following sections:

- **Updating the Analytics Database Schema**
- **Updating the Information Manager Operational Schema**
- **Upgrading the Intelligent Search ODS Archive**
- **Updating the Information Manager Star Schema**
- **Updating the Information Manager Star Schema Staging Areas**
- **Updating the Analytics Staging Areas**

Updating the Analytics Database Schema

Enter the following command to upgrade:

- the Intelligent Search ODS and Star schema
- the Information Manager ODS

```
scheduler.sh run DBInterface -u analytics (Linux)
```

```
scheduler run DBInterface -u analytics (Windows)
```

Updating the Information Manager Operational Schema

Enter the following command to upgrade the Information Manager Operational schema, which includes the dimension tables used for reporting by time and date:

```
scheduler.sh run DBInterface -u imoltp (Linux)
scheduler run DBInterface -u imoltp (Windows)
```

Upgrading the Intelligent Search ODS Archive

Enter the following command to upgrade the Intelligent Search ODS archive:

```
scheduler.sh run DBInterface -u odsarchive (Linux)
scheduler run DBInterface -u odsarchive (Windows)
```

Updating the Information Manager Star Schema

Enter the following command to upgrade the Information Manager Star schema:

```
scheduler.sh run DBInterface -u imanalytics (Linux)
scheduler run DBInterface -u imanalytics (Windows)
```

Updating the Information Manager Star Schema Staging Areas

The ETL process uses the staging area tables when it transforms loaded log data to the Information Manager Star schema that is used for reporting. Enter the following command to upgrade the staging area tables:

```
scheduler.sh run DBInterface -u imods (Linux)
scheduler run DBInterface -u imods (Windows)
```

Updating the Analytics Staging Areas

The ETL process uses the staging area tables when it transforms loaded log data to the Intelligent Search Star schema used for reporting. Enter the following command to upgrade the staging area tables:

```
scheduler.sh run DBInterface -u ods (Linux)
scheduler run DBInterface -u ods (Windows)
```

Updating the MicroStrategy Metadata Schema

You update the report definitions and other metadata that supports Analytics by updating the Metadata schema.

Important! This script overwrites the existing Analytics metadata, including all report definitions. If you have custom report definitions that you want to preserve, you must back up the metadata and report definitions, or install the new metadata into a new schema, then merge the existing metadata containing your customizations into the new MicroStrategy report definitions after the upgrade process completes.

Run the following script to upgrade the MicroStrategy Metadata schema:

```
scheduler.sh run DBInterface -c metadata (Linux)
scheduler run DBInterface -c metadata (Windows)
```

You can now re-start the Scheduler instance.

Upgrading to OBIEE Analytics

You can upgrade Oracle Knowledge Analytics applications to use the OBIEE-based application newly available in Release 8.4.2.2 using the processes described in the following sections:

- **Installing and Configuring OBIEE**
- **Installing Release 8.4.2.2 Analytics**

Installing and Configuring OBIEE

Install the OBIEE application on the designated Reports server using the process described in the OBIEE installation documentation. Ensure that you have installed the OBIEE Repository Creation Utility (RCU) and the BI Administration Tool. Refer to the *Oracle Fusion Middleware Quick Installation Guide for Oracle Business Intelligence* for OBIEE hardware and software requirements, installation prerequisites, and instructions for installing, configuring, and uninstalling Oracle Business Intelligence products on a single computer.

You can access the Oracle Business Intelligence Documentation Library at: <http://www.oracle.com/technetwork/middleware/bi-enterprise-edition/documentation/index.html>. We strongly recommend that you familiarize yourself with the contents of the *Oracle Business Intelligence Documentation Library*.

The Oracle Knowledge Analytics distribution includes an RPD (repository) file, `analyticsReports.rpd`, and a catalog file, `analyticsReports.zip`, that define the Oracle Knowledge project, including the dashboards and reports.

Important! If you use a SQL Server database, you must install Microsoft Data Access Components (MDAC), also known as Windows DAC, on the Reports server in order to connect OBIEE to the SQL Server database. See *Microsoft Data Access Components (MDAC) 2.8 SPI* for more information on installing MDAC.

Installing Release 8.4.2.2 Analytics

You install Release 8.4.2.2 on an Indexer instance. Specify the existing analytics database as the database for the new version. When the Analytics installation is complete, you can deploy the Repository Definition File and Catalog that define the Analytics project, and update the Analytics database schema, as described in:

- **Deploying the Repository Definition File and Catalog**
- **Updating the Analytics Schema**

Deploying the Repository Definition File and Catalog

After you have installed OBIEE, you can configure the connection between OBIEE and the data warehouse, reset the RPD (repository) password, and deploy the RPD (`analyticsReports.rpd`) and Catalog (`analyticsReports.zip`) to create the Oracle Knowledge Analytics project within OBIEE.

Refer to the following sections in the *Oracle Knowledge Analytics Installation Guide*:

- Connecting OBIEE to the Data Warehouse
- Changing the RPD Password
- Deploying the RPD and Catalog

Important! We strongly recommend that you consult with a database administrator or other qualified personnel to perform this step.

Updating the Analytics Schema

You update the Analytics database schema by opening an ICE window, then executing the upgrade scripts from the ICE command line as described in the following sections:

- **Updating the Intelligent Search ODS and Information Manager ODS and Star Schema**
- **Updating the Information Manager Operational Schema**
- **Updating the Intelligent Search ODS Archive**
- **Updating the Information Manager Star Schema**
- **Updating the Information Manager ODS Staging Areas**
- **Updating the Analytics Staging Areas**

Updating the Intelligent Search ODS and Information Manager ODS and Star Schema

Run the following script to update the Intelligent Search ODS and Information Manager Analytics ODS and star schema:

```
scheduler.sh run DBInterface -u analytics (Linux)
scheduler run DBInterface -u analytics (Windows)
```

Updating the Information Manager Operational Schema

Run the following script to update the Information Manager Operational schema, including the dimension tables used for reporting by time and date:

```
cheduler.sh run DBInterface -u imoltp (Linux)
scheduler run DBInterface -u imoltp (Windows)
```

Updating the Intelligent Search ODS Archive

Run the following script to update the Intelligent Search ODS archive:

```
scheduler.sh run DBInterface -u odsarchive (Linux)
scheduler run DBInterface -u odsarchive (Windows)
```

Updating the Information Manager Star Schema

Run the following script to update the Information Manager Star schema:

```
scheduler.sh run DBInterface -u imanalytics (Linux)
scheduler run DBInterface -u imanalytics (Windows)
```

Updating the Information Manager ODS Staging Areas

Run the following script to update staging areas for the Information Manager Star Schema Analytics data warehouse:

```
scheduler.sh run DBInterface -u imods (Linux)
scheduler run DBInterface -u imods (Windows)
```

Updating the Analytics Staging Areas

Run the following script to update the Analytics data warehouse staging areas:

```
scheduler.sh run DBInterface -u ods (Linux)
scheduler run DBInterface -u ods (Windows)
```

Diagnosing Information Manager Upgrade Issues

This section describes how to diagnose and resolve the following Information Manager upgrade-related issues.

Upgrade Utility Fails to Upgrade Database due to Failure to Locate Java (Linux)

If you run the upgrade utility installer in a new shell where the ICE environment has not been set, the utility will be unable to locate the Oracle Knowledge java installation. The utility calls Java, but does not specify the full path, which should be `<install_dir>/jre/bin/java`. The script that sets the ICE environment, `<install_dir>/instances/<instance_name>/setenv.sh`, contains code that sets `<JAVA_HOME>` and adds `<JAVA_HOME>/bin` to the `PATH`.

You are not required to set the ICE environment in order to run the IM Upgrader utility installer; you can instead modify the upgrade utility by editing the `imupgrader.sh` script so that it will locate and set the full path for java in your environment.

The code to enable the script to locate and set the full path for java is listed in the following example:

```
DIR=`pwd`
cd `dirname $0`
SCRIPTPATH=`pwd`
cd "$SCRIPTPATH/../../
INSTALL_DIR=`pwd`
cd "$DIR"
$INSTALL_DIR/jre/bin/java ...
```

The code in the example:

- saves the current working directory in `DIR`
- sets `SCRIPTPATH` to the directory path for the `imupgrader.sh` script (`<install_dir>/infoManager/upgrade`)
- changes the working directory to the directory two levels up from the script location (`<install_dir>`)
- sets `INSTALL_DIR` to this directory
- changes the working directory back to its original location
- executes the upgrade utility using the full path to the Oracle Knowledge java installation

Current Version Information Missing from Version.xml

The upgrade utility log file contains a record of all upgrade-related actions. At the top of the log, there is a section that identifies the currently installed version, and lists any unapplied updates that the upgrade process detects in the `version.xml` file. If the upgrade process does not find the current version in the `version.xml` file, the upgrade utility will not operate.

The upgrade utility attempts to identify the current version of your installation by inspecting the `INSTALLHISTORY` table in the Information Manager repository schema. If the latest version that is reported in this table is not listed in the `$IM_HOME/upgrade/version.xml` file, the upgrade will fail.

Processing Search Log Files Created in Previous Releases

Important! This section provides a method for loading log files from multiple versions of Intelligent Search into a single version of Analytics. Use this method only if you are unable to process the log files at the time of upgrade.

You can process log files from previous releases using this alternate method to:

- Locate the product version of the log file you need to process
- Locate the derby database product version file on the scheduler instance that corresponds to the product version listed in the log file
- Create a new product version file that corresponds to the version to which you have upgraded

Locating the Product Version of the Log File

Locate the product version of the log file by examining the first section of the log file. For example:

```
[1 WrapperStartStopAppMain(1)] Event (Code=INSTANCE_EVENT, id=#0B0I1P-1) started
at 7/
8/10 6:13 AM: Instance MyCompanyrt1 in runtime/Development mode with uuid
c017b15f-9a30-11df-b7ec-889aa0ea362b created. Release MLD Build 7

[2 WrapperStartStopAppMain(2)] Event (Code=START_INSTANCE, id=#0B0I2P-1) started
at 7/
28/10 6:13 AM: Instance MyCompanyrt1 in runtime/Development mode with uuid
c017b15f-
9a30-11df-b7ec-889aa0ea362b is initializing.

[3 WrapperStartStopAppMain (2)]
#####

[4 WrapperStartStopAppMain (2)] Initializing instance with name MyCompanyrt1 in
development/runtime mode at Wed Jul 28 03:13:20 PDT 2010.

[5 WrapperStartStopAppMain (2)] Release 8.1.2.34

[6 WrapperStartStopAppMain (2)]
#####

Note: The example product version is listed in this line:

[5 WrapperStartStopAppMain (2)] Release 8.1.2.34
```

Locating the Corresponding Product Version Database File

The Oracle Knowledge Indexer instance contains a derby database file, located in:

```
<InQuira_HOME>\instances\<<Indexer Name>\  
development\content\data\log\def
```

The derby database file is named `logevent-n.n.n.nn.db`, where `n.n.n.nn` corresponds to the product version of the log file. For example, a database file named `logevent-8.1.2.34.db` enables the database to read 8.1.2.34 log files.

Creating a New Product Version File

To create a new product version file that corresponds to the product version of the log file that you want to process:

- 1 Copy the existing `logevent-n.n.n.nn.db` file in the same location.
- 2 Rename the new file to the version to which you have upgraded, for example:

```
logevent-8.2.4.1.db
```

The new derby database file enables the ETL process to extract and load the data from the log file created in the previous version, as well as new log generated from the upgraded version.