



Installing and Configuring Oracle Knowledge

Installing and Configuring Oracle Knowledge on IBM WebSphere® Application Server

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About This Guide

This guide is intended for technical staff who are responsible for installing Oracle Knowledge. It provides detailed information on installing Oracle Knowledge product components and post-installation.

The preface contains the following information:

- **In This Guide**
- **Examples of Product Screens and Text**
- **Operating System Variations in Examples and Procedures**
- **References to Web Content**

In This Guide

This book, *Installing and Configuring Oracle Knowledge*, is divided into the following chapters:

Chapter	Description
Chapter 1, Oracle Knowledge Overview	Describes the general installation process, and lists hardware and software requirements.
Chapter 2, Planning to Install Oracle Knowledge	Describes the requirements that must be met before installing Oracle Knowledge products.
Chapter 3, Preparing to Install Oracle Knowledge on WebSphere	Describes preparation measures, such as WebLogic server installation, that must be done prior to installation.
Chapter 4, Installing and Configuring Intelligent Search on WebSphere	Describes using the automated installer to install and configure Oracle Knowledge Intelligent Search components.
Chapter 5, Installing and Configuring Information Manager on WebSphere	Describes using the automated installer to install and configure Oracle Knowledge Information Manager components.
Chapter 6, Installing and Configuring OBIEE on WebSphere	Describes the necessary procedures to configure OBIEE on WebSphere.
Chapter 7, Installing and Configuring Analytics on WebSphere	Describes using the automated installer to install and configure Oracle Knowledge Analytics components.
Chapter 8, Installing and Configuring AnswerFlow on WebSphere	Describes using the automated installer to install and configure Oracle Knowledge AnswerFlow components.

Examples of Product Screens and Text

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.

Operating System Variations in Examples and Procedures

We generally use Linux screen displays and naming conventions in our examples and procedures. We include other operating system-specific procedures or steps as noted in section headings, or within topics, as appropriate.

We present command syntax, program output, and screen displays:

- in Linux format first
- in other Unix-specific variants only when necessary for proper operation or to clarify functional differences
- in Windows format only when necessary for clarity

References to Web Content

For your convenience, this guide refers 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.

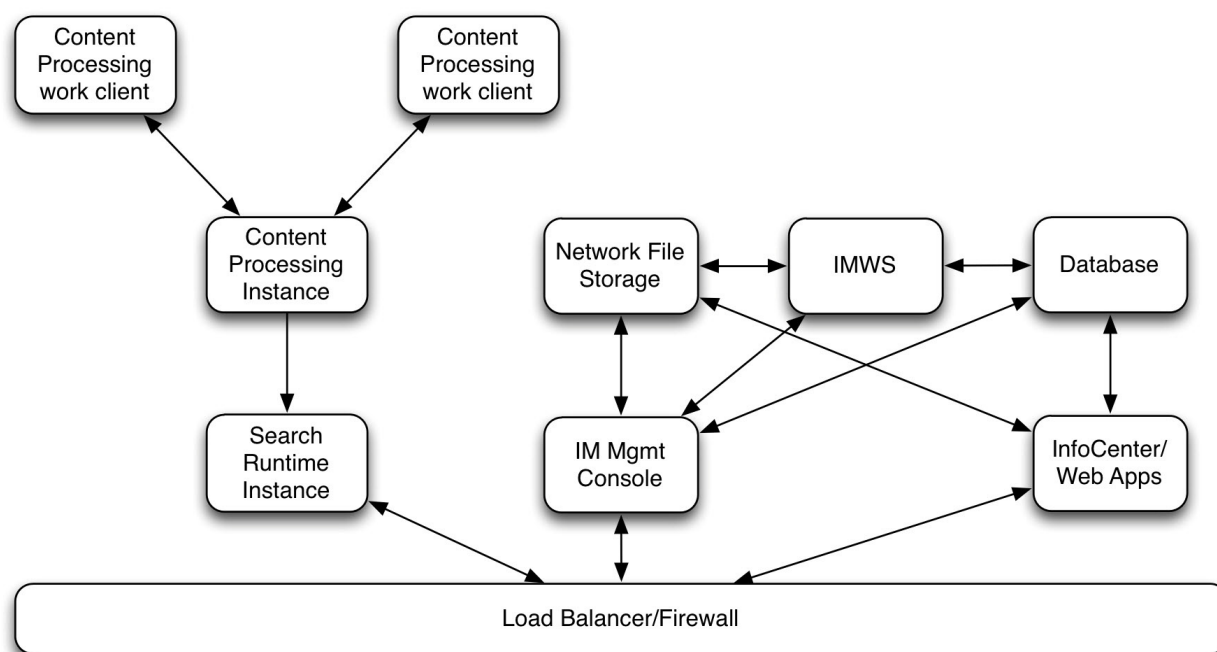
Oracle Knowledge Overview

This chapter provides an overview of the Oracle Knowledge components for which this guide provides installation and configuration instructions. These components are:

- Intelligent Search** Provides components for Language Workbench and the associated web interface for defining and performing content searches.
- Information Manager** Provides components for content creation and management as well as iConnect web applications and InfoCenter integration.
- OBIEE and Analytics** Provides components for performing standard and customized performance metrics.
- AnswerFlow** Provides components for building automated solutions in response to customer queries.

Oracle Knowledge Features

Oracle Knowledge is a suite of components that provide enterprise class Knowledge Management functionality that can scale to the needs of the most demanding customer.



Oracle Knowledge components

Intelligent Search provides natural language analysis of user's questions in more than 20 languages. Intelligent Search includes a scalable enterprise search engine that can index web sites, file systems, databases, discussion forums, and other stores of knowledge including social media. Intelligent Search can be scaled as needed for load simply by adding additional instances to the network.

Information Manager (IM) is used to create new knowledge for use within the enterprise Knowledge Base. IM provides the ability to define customized templates to capture knowledge and configurable workflows to manage the review and publication of the knowledge. A role based security system provides coverage from knowledge creation thru distribution and consumption.

The Oracle Knowledge web applications include:

- **InfoCenter** - a reference web self service UI that can be customized by customers for their own needs. InfoCenter embodies some good KCS best practices that can be adapted for an organizations needs.
- **iConnect** - iConnect provides reference integrations to external systems such as Siebel, Oracle on Demand, RightNow, and other CRM vendors products.

Oracle Knowledge Analytics is a business intelligence application that provides insight into the effectiveness and performance of Oracle Knowledge Intelligent Search and Information Manager implementations. The Analytics application provides intuitive dashboards and packaged reports that provide insight into the most important aspects of search and content performance and user interaction. Analytics features near-realtime data integration, easy end-user access to application data for creating custom reports, and a comprehensive set of reporting tools packaged within Oracle's Business Intelligence presentation environment.

The Oracle Knowledge documentation set is available at:

<http://www.oracle.com/technetwork/indexes/documentation/knowledge-documentation-1506742.html>

Oracle Knowledge Environments

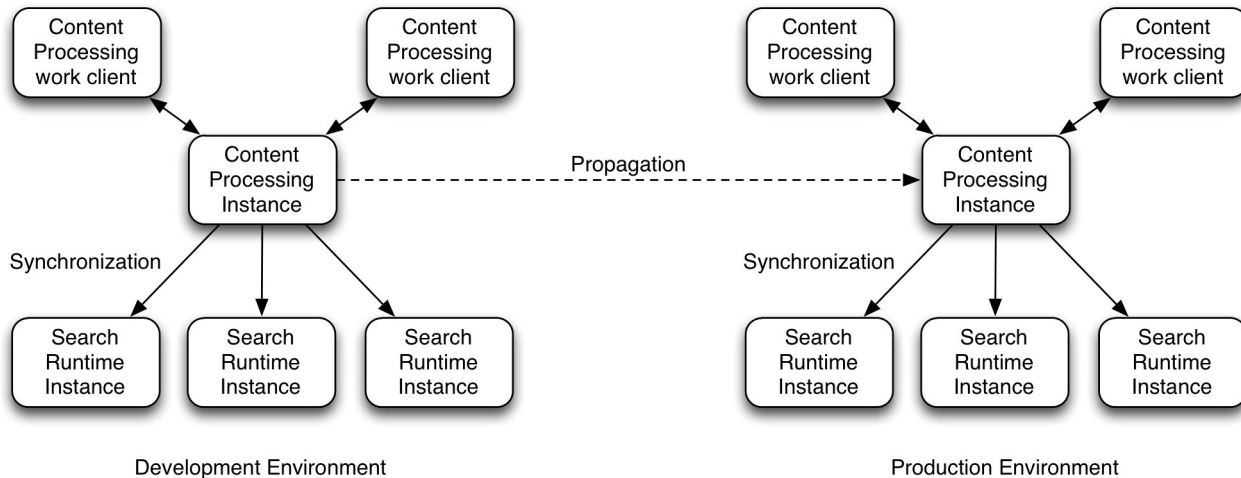
Oracle Knowledge architecture supports the following environments in which you configure and deploy defined instances, as described in each of the product chapters in this guide, to support and control the creation and distribution of application data.

Environment	Description
Development	Development environments can contain multiple Tools, Scheduler (default), Work Client, and Runtime instances used for developing and testing application components and data. The default settings in the Common Environment application configuration program configures a Development (also referred to as Standalone) environment.
Staging	Staging environments are intended as separate testing environments. They support all operations. Staging environments can contain multiple Scheduler (default), Work Client, and Runtime instances used for validating application components and data prior to synchronization with production instances. The only way to get information into the staging environment is via propagation.
Production	<p>Production environments are intended to support scheduled operations and hands-off administration; they support only scheduled indexing operations and request processing operations.</p> <p>You move data into production environments using the propagation process. The production environment can contain:</p> <ul style="list-style-type: none"> • One or more Runtime instances configured to receive application data from configured Scheduler instances and to communicate with the production application server • One or more Controller instances for use by the data synchronization process • One or more Query Worker instances for use in distributed request processing environments

For additional information on product-specific environments, review the sections below and see "Installation Process Overview" on page 9.

Intelligent Search Instance Environments

Intelligent Search is composed of a content processing instance and one or more search runtime (request processing) instances that are used to process search requests. The following graphic illustrates the relationships between components and the Development and Production environments:



Oracle Knowledge Intelligent Search components

Content processing can be distributed across multiple machines using work clients to improve indexing performance. Typically there is a single content processing instance in per environment (development, staging, or production) and one or more work clients available to perform indexing operations. The content processing instance also hosts the Search System Manager web application that is used to configure the Search collections and schedule indexing on the collections.

Each environment also has one or more search runtimes available. These runtimes are typically load balanced to allow greater scalability and fault tolerance in the environment. Depending on the size of the overall index it may be necessary to set up a distributed runtime environment in order to more efficiently handle the search requests. Configuring the distributed runtime is outside of the scope of this installation guide. More information can be found on the Oracle Knowledge support site.

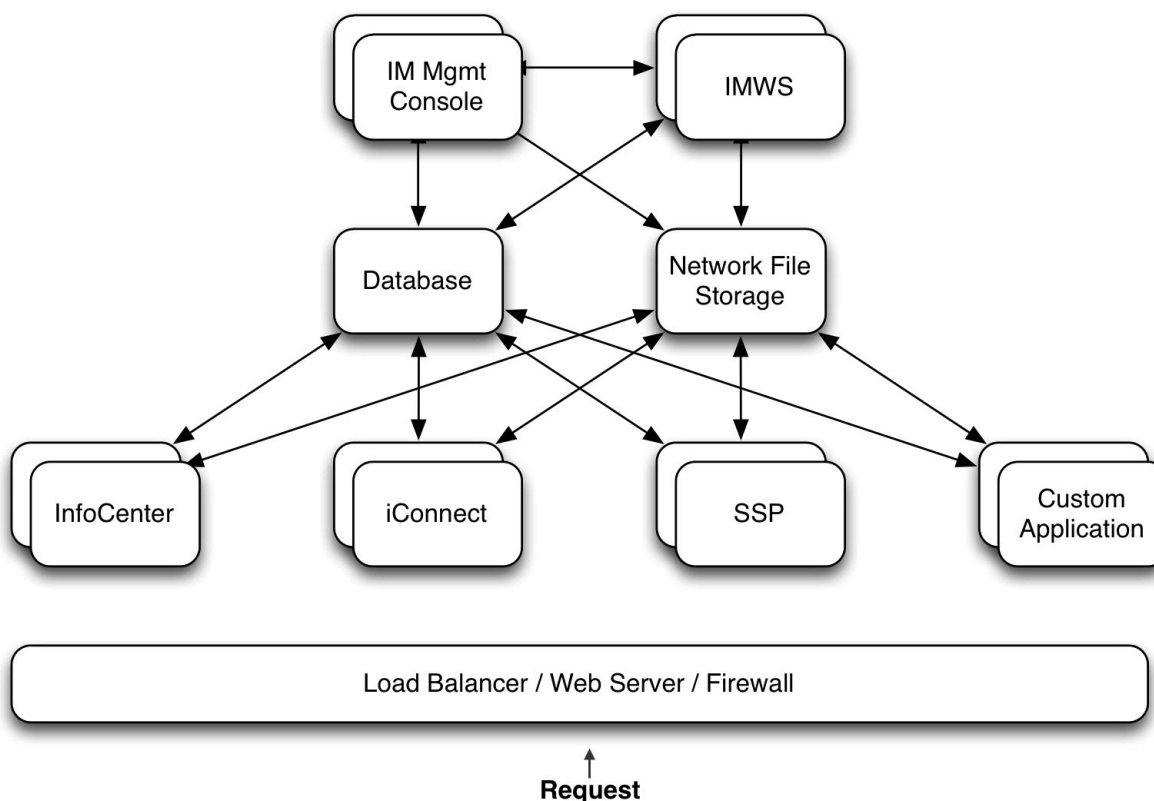
Intelligent Search typically uses two or three different environments. The development environment is used for developing business rule conditions and experimenting with search tuning. The staging environment is typically used to perform final testing before pushing the changes to the production environment. The production environment is used for answering customer requirements.

The Search software must be installed in each environment separately. After the software is installed, the Dictionary and configuration changes can be propagated between environments using the Content processing instance and tasks configured in the Search System Manager.

Information Manager Instance Environments

An Information Manager application uses the following components, which are installed and configured in the standard installation process. You can configure Information Manager components on a single server or distribute them throughout a network.

The following diagram illustrates the relationships between the logical application components:



Oracle Knowledge Information Manager components

Component

Description

Information Manager Tag
Library Web Applications
Web Server

Information Manager uses a J2EE servlet container supporting JSP version 1.2 and higher compatible tag libraries to distribute Information Manager application content.

An external Web server is used as the primary interface to the Information Manager based Web applications.

Information Manager
Content Resource Store

The Information Manager Content Resource Store stores resources (files) that are attached to content records in the application. The content resource store is a directory on a file system that is accessible to the Management Console and the application Web server. It can be located on the same server as the Management Console, or on a network file system. You can configure Information Manager to maintain separate staging and production resource stores. Resources can be served by separate Web servers or configured to use resource caching services (such as Akamai). The content resource store stores XML versions of content records used for search indexing, and tracks all versions of content records and attached resources.

Management Console

The Management Console is a Web-based user interface to all content creation and management functions. The Management Console can be replicated on multiple servers.

There are two different configurations that a management console can run in. When running in "batch" mode, the IM Console should be used to process batch operations and content crawling requests. When running in "authoring and admin" mode, the instance can be used to configure the IM repository and author knowledge articles.

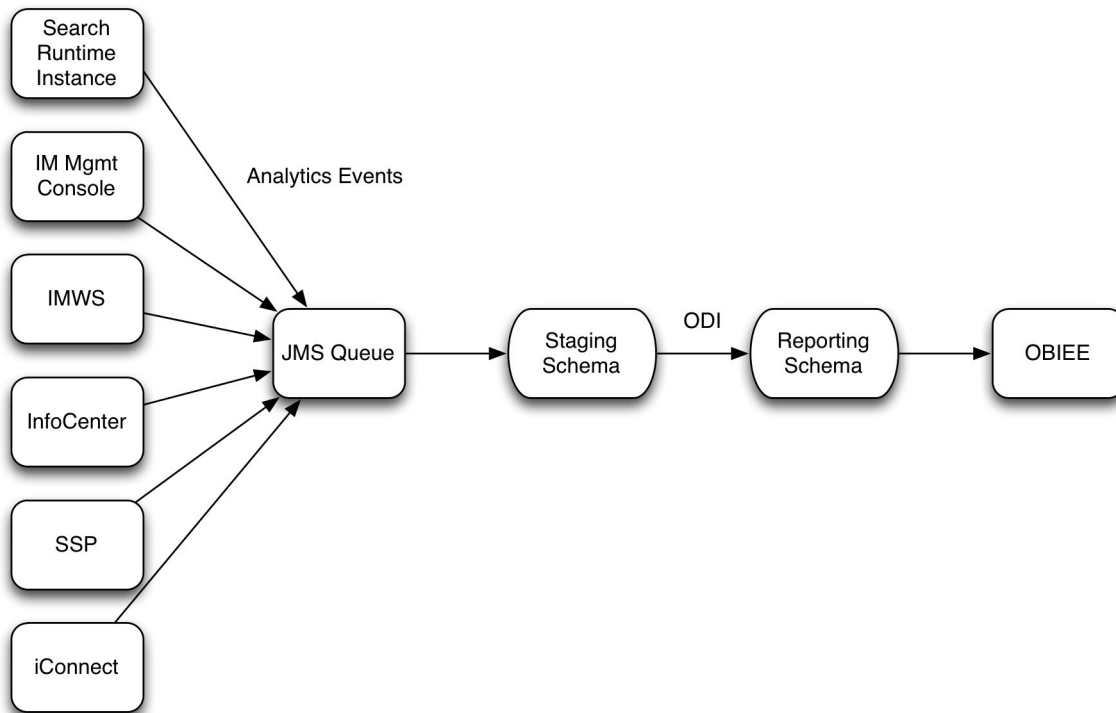
Component	Description (Continued)
Database Server	The Information Manager database stores the Information Manager content management objects. The installation process automatically creates the required tables in a specified database.
Information Manager Web Services	Information Manager provides an open set of Web services and a native platform API (Java and Microsoft .Net platforms) to support adding and modifying content, content categories, and user information from external applications.

Analytics Instance Environments

You can use Oracle Knowledge Analytics to:

- Understand user behavior, such as why users visit your site, and what they try to achieve
- Assess the quality of Oracle Knowledge responses and determine whether users are finding the information they need
- Determine if important information is missing from your application content

The following diagram illustrates the Oracle Knowledge Analytics process flow:



Oracle Knowledge Analytics components

AnswerFlow Instance Environments

Oracle Knowledge AnswerFlow is a guided knowledge delivery application that enables you to provide precise and dynamic automated answers and user assistance for complex customer questions.

AnswerFlow enables you to create and deploy service processes that provides automated guidance that

increases agent productivity and improves service quality by prompting users for guiding leveraging rich contextual data from internal and external systems to diagnose and resolve complex service processes with guided knowledge delivery.

Some of the benefits of AnswerFlow include:

- Presents knowledge in a prescribed, repeatable manner.
- Enhances answer accuracy by bringing in additional CRM content.
- Visual process mapping to streamline service processes.
- Framework that allows transactional data to influence the service process model.

AnswerFlow is ideal in environments where delivering answers meets most or all of the following criteria:

- **Answers are conditional** – The answer may be based on a customers account status or the specific piece of equipment they are using.
- **Answer diagnostics are complex** – The question has many potential answers. Getting the correct answer involves asking several detailed questions to eliminate other possibilities.
- **Answers require knowledge** – Delivering the right answer requires the use of accurate information whether it is dynamic customer data or static corporate policies.

The components of the AnswerFlow application include:

- the Editor, which you use to create and manage AnswerFlow processes, context variables, and service calls
- the datastore, which stores the AnswerFlow objects
- the Runtime user interface, which you use to display AnswerFlow processes to end-users, and which you can customize to integrate with your application's look and feel

Planning to Install Oracle Knowledge

This chapter provides an overview of the installation process and describes the requirements for installing, configuring, and operating Oracle Knowledge products.

Installation Process Overview

The following is a summary of the tasks required for installing Oracle Knowledge:

- 1** Design the Knowledge Management (KM) system topology. A typical installation requires instances for indexing content, answering questions, creating knowledge, displaying the knowledge enhanced UI, analytics transformation, and reporting. Separate environments are typically configured for development, staging, and production usage. Load balancers, external web servers, and firewalls should be included based on the requirements of the organization.
- 2** For each environment (development, staging, production) install the pre-requisite software. A database server is needed with schemas for the content processing, knowledge creation, and analytics staging and reporting. Install WebSphere, Oracle Data Integrator, and Oracle Business Intelligence on the designated KM machines should be done prior to starting any of the installations of the Oracle Knowledge components.
- 3** Install the Oracle Knowledge components. The components can be installed in any order to accommodate the specifics of the environment being configured. In general it is a good idea to install all of the components of a single type (Search, IM, etc) in an environment at the same time to make sure that they are all working together properly. After the instances of each component are installed, the configuration between components can be completed as needed.
 - a** Common Environment is a common operational environment for Oracle Knowledge applications that is installed and configured as part of the standard installation process. The Common Environment contains tools and utilities that assist in creating, administering, and maintaining Oracle Knowledge instances and applications, enabling you to easily:
 - b** Intelligent Search - The Search application consists of content processing components and runtime components. The content processing components should be installed prior to installing the runtime components. Once the content processing components are installed - content collections can be created and the indexing process can begin. Once the indexing process is complete, the indexes and configuration can be synchronized and propagated to the search runtime instances in the environment.
 - c** Information Manager - The IM application consists of an administration console, a web services application, and a JSP custom tag library that is used by the InfoCenter based web applications. Typically the IM admin console and web services are installed first. Once the IM admin console is installed, the KM system can be configured, content and users can be imported, workflows defined, and IM content can be indexed by Intelligent Search. The web applications can be deployed at any

time after an IM repository is created. This means that after running the installer for the initial installation, after you create the IM repository, you must run the installer again, selecting to install only the web applications you choose to install.

- d Analytics - The analytics application consists of a JMS queue and event listener that writes incoming events into a staging database. Oracle Data Integrator (ODI) and Oracle Business Intelligence (OBIEE) is used to transform and report on the events that get generated by the Oracle Knowledge applications. Search and IM both need to be configured with the correct JMS queue information in order to send events to the Analytics subsystem. The default values should be used for a first time installation to avoid having to jump back and forth during the installation process.
 - e AnswerFlow - the AnswerFlow application is a business process design utility that is used to orchestrate specific business flows to solve a specific problem. It requires access to IM and Search and should be installed after those components are installed and operational.
- 4 Perform post installation configuration and validation steps. The installers help you get all of the Oracle Knowledge components installed correctly. Depending on your configuration needs for a particular environment there must be some post installation configuration work in order for the environment to work together properly. This typically involves setting up load balancers, firewalls, and external web servers to server static content. Integrating into existing security mechanisms is out of the scope of this manual.

Installation Planning Worksheet

Use the following worksheet to help collect the necessary information needed to successfully install all of the Oracle Knowledge components in each environment. You may have multiple instances of a given component. You should have a detailed network architecture diagram for each environment that completely specifies the number of instances, load balancers, and firewall configuration.

The worksheet reflects the default port value as recommended in the installed version of Oracle Knowledge.

Environment	Host Name	IP Address	Type of Instance	TCP Port
Development			Content Processing	8222
Development			Search Runtime	8223
Development			InfoManager	8226
Development			InfoCenter	
Development			IM Client Library	8226
Development			ODI Server	
Development			OBIEE Server	

Oracle Knowledge Product Distribution

Oracle Knowledge software components and installers are distributed as the following platform-specific media packages. These packages are distributed on Oracle Software Delivery Cloud or on CD-ROMs.

Media Package	Contents	Installer
Oracle Knowledge Search for Linux	Oracle Knowledge base software components (includes Intelligent Search), Dictionaries, and installers.	<code>install_search_websphere_LINUXx64_build_68.bin</code>
Oracle Knowledge Information Manager for Linux	Oracle Knowledge Information Manager software components and installers.	<code>install_im_websphere_LINUXx64_build_68.bin</code>
Oracle Knowledge Analytics for Linux	Oracle Knowledge Analytics software components and installers.	<code>install_analytics_websphere_LINUXx64_build_68.bin</code>
Oracle Knowledge AnswerFlow for Linux	Oracle Knowledge AnswerFlow software components and installers.	<code>install_answerflow_websphere_LINUXx64_build_68.bin</code>

Installation Requirements

This section describes requirements for installing Oracle Knowledge products, including:

- Operating System requirements, as described in “System Requirements” on page 11.
- Application server integration, as described in “Application Server Requirements” on page 12.
- Databases and database drivers, as described in “Database Schema Requirements” on page 12.
- Disk space requirements, as described in “Disk Space Requirements” on page 13.
- User permissions, as described in “User Permissions” on page 13.
- Java Virtual Machine (JVM) allocation requirements, as described in “Java Virtual Machine (JVM) Allocation Requirements” on page 13.
- Keystore requirements, as described in “Creating the Oracle Knowledge Keystore” on page 14.
- ODI requirements for Oracle Knowledge Analytics, as described in “Installing Oracle Data Integrator (ODI)” on page 22.
- OBIEE requirements for Oracle Knowledge Analytics, as described in “OBIEE Requirements for Analytics” on page 24.

System Requirements

Oracle Knowledge has the following system requirements:

- 4 GB of RAM for each Oracle Knowledge instance (recommended)
- minimum of two processor cores (2GHz+) for each instance

Supported 64 bit operating systems include:

- Oracle Enterprise Linux v6

Supported databases include:

- Oracle 11g

See *Oracle Knowledge Platform Requirements and Language Reference* for complete information on supported platforms, databases, and versions. This document is available on Oracle Technology Network.

Application Server Requirements

WebSphere

Each Oracle Knowledge application instance that is installed must be installed with its own Profile. We recommend that you install WebSphere Application Server as a non-root user.

For additional information, see “Preparing to Install Oracle Knowledge on WebSphere” on page 25.

Database Schema Requirements

Oracle Knowledge requires a database schema for the following components:

- Intelligent Search application content and internal data storage (needed during content processing operations)
- Information Manager content and metadata storage (needed for content authoring and runtime content access)
- Oracle Knowledge Analytics staging and reporting data storage

Note: Oracle Knowledge supports Oracle Database 10g and 11g.

Configure the database server to store UTF-8 formatted information in order to take full advantage of Oracle Knowledge's multilingual capabilities. Consult your database server documentation for configuration instructions.

We recommend the following guidelines for creating database schemas:

- Create the schemas for each component with separate tablespaces for the data and indexes.
- Create the Search and IM schemas on a database instance specifically configured for OLTP operations.
- Create the analytics schemas on a database instance specifically configured for data warehousing operations.
- Configure the Information Managers with CASE INSENSITIVITY.
- Configure the Intelligent Search schemas to support CASE SENSITIVE operations.

Configure the database server to store UTF-8 formatted information in order to take full advantage of Oracle Knowledge's multilingual capabilities. Consult your database server documentation for configuration instructions.

You can view the details of the Information Manager and Analytics database schema by browsing the data dictionary documentation located at:

- `<IM_INSTALL_ROOT>/InfoManager/database/datadictionary.html`
- `<ANALYTICS_INSTALL_ROOT>/inquira/sql/documentation/DW_REPORTING/index.html`
- `<ANALYTICS_INSTALL_ROOT>/inquira/sql/documentation/DW_STAGE/index.html`

Disk Space Requirements

Oracle Knowledge disk space requirements largely depend on the amount of application data to be processed. We recommend that a shared disk array be used to store attachments to Information Manager documents. You can also use shared disk space to centralize configuration information, which simplifies maintenance operations. The application or shared disk space should be included in a regular backup and virus-scanning operations. Allocate a minimum of 50 GB for each environment (development, staging, and production). Closely monitor the disk space usage on both the database server and the file server as content is imported.

In addition:

- The product code requires approximately 2 GB of disk space for installation and configuration.
- The application logs require up to 6 GB for each instance running under the Oracle Knowledge service.
- The application content space requirement ranges from 10 to 30 times the size of the content that you intend to process.

Browser Requirement for AnswerFlow Editor

To use AnswerFlow Editor with the Internet Explorer Release 7 or Release 8 browser, you must install Google Chrome Frame. The free Google Chrome Frame download is available from:

<http://www.google.com/chromeiframe?quickenable=true>

User Permissions

To install and operate Oracle Knowledge products on Linux, you must be logged on as a non-root user. Create a standard Oracle Knowledge administrative user to install and run Oracle Knowledge. This user must have permission to access network shares while running as a service.

In general, all of the Oracle Knowledge applications should be owned by an application user account created on the operating system, and not from a normal user account. For convenience, it is useful to add this application user account to an Administrative user group, so that other authorized administrators can view and edit the installation files. The owner and group should have full control over the file in the installation directory.

Note: Do not install, configure, or operate other Oracle Knowledge or supplementary software components as a user with root privileges. The functions that Oracle Knowledge products use to maintain data integrity do not operate properly if the user that owns the Oracle Knowledge processes has root permissions.

Java Virtual Machine (JVM) Allocation Requirements

You must allocate sufficient memory to the Java Virtual Machine (JVM) process for the Oracle Knowledge application and the associated Web server or application server. Configuring JVM parameters related to memory usage and garbage collection contributes to product performance; in general, product performance improves when you allocate a larger Java heap size. Optimal memory allocation, stack size, heap size, and garbage collection settings vary, depending on several factors, including:

- The resources available to the JVM in your environment
- The amount of application data that a given instance will be processing

Creating the Oracle Knowledge Keystore

You must create a single encryption keystore that all Oracle Knowledge applications use. The keystore is a repository for the site-specific key that encrypts all sensitive data. Oracle Knowledge uses the shared keystore to generate and access encrypted strings that are used across all products in your environment.

Requirements for Creating the Keystore

You must create the keystore in a location that all Oracle Knowledge applications can access.

Important: If you cannot place the keystore in a shared location, you must manually copy it to each Oracle Knowledge product installation, as described in “Manually Copying the Keystore to Additional Instances” on page 15.

You must use the installation program to create the keystore and configure all products to use the keystore as described in “Specifying the Oracle Knowledge Keystore” on page 15.

Recommendations for Creating the Keystore

We recommend that you:

- Select a keystore location that is protected from external access
- Create a secure backup copy of the keystore
- Record the Keystore Password, Site Name, and Key Password values that you specify in “Specifying the Oracle Knowledge Keystore” on page 15 in a secure location for future reference
- Use the default installation keystore file permissions as described in “Keystore Access Permissions” on page 14

Keystore Contents

The keystore contains the following files:

File	Description
ewallet.p12	This is the Oracle wallet, which stores all encrypted keys.
keystore.jks	This is the keystore, which stores the public key certificates.

Keystore Access Permissions

The installer sets the following file permissions for the keystore directory and files to enable administrators of other installed products to access the keystore.

DEFAULT KEYSTORE DIRECTORY PERMISSIONS

The installer sets the keystore directory permissions to 774:

User	Read	Write	Execute
Owner	Yes	Yes	Yes
Group	Yes	Yes	Yes
World	Yes	No	No

DEFAULT KEYSTORE FILE PERMISSIONS

The installer sets the keystore file and wallet file permissions to 644:

User	Read	Write	Execute
Owner	Yes	Yes	No
Group	Yes	No	No
World	Yes	No	No

Keystore Parameters

You must specify the following information when you create the keystore during the installation process:

Keystore Password	The password that protects the keystore.
Site Name	The identifier for the encryption key.
Key Password	The password that protects the keystore encryption key.

Specifying the Oracle Knowledge Keystore

Each Oracle Knowledge installation program prompts you to specify the keystore location. We recommend that you follow this process to specify a common keystore:

- Designate a secure location that is accessible to all Oracle Knowledge products that you install.
- Specify this location when you install the first Oracle Knowledge product in your environment.

The installation program then creates the keystore in the specified location, when you have completed the first Oracle Knowledge product installation.

- Create a secure backup copy of the keystore directory.
- Specify this same key store location for each subsequent Oracle Knowledge installation.

Manually Copying the Keystore to Additional Instances

We recommend that you create and configure the keystore in a location that all Oracle Knowledge applications can access. If you cannot place the keystore in a shared location, you must manually copy it to each Oracle Knowledge product installation.

Important! You must manually copy the keystore to the each instance's product directory before you start the installation program for each instance.

To manually copy the keystore:

- Use the installation program to create the keystore during your initial product installation as described in “Specifying Keystore Parameters” on page 45
- Copy the keystore directory to the desired location for each instance before starting the installation program for each subsequent installation

Planning the Oracle Knowledge Analytics Installation

This section provides the prerequisites for installing Oracle Knowledge Analytics. The information in this chapter assumes that you have a working knowledge of how to create and use Oracle and Microsoft SQL database schemas, and how to install and configure OBIEE and ODI.

The Analytics Application Overview

An Oracle Knowledge Analytics application consists of multiple components configured to extract, store, and present data collected from one or more configured Intelligent Search and/or Information Manager instances. Analytics components include:

- The data warehouse, which stores the Intelligent Search and Information Manager Analytics event data in a staging schema, and stores reporting data in a reporting schema.
- The Analytics Application router, which is deployed to a WebSphere server and is sent Analytics event data through the Java Messaging Service (JMS); it processes this event data, then stores it in the staging schema. See “Prerequisites to Installing Analytics on WebSphere” on page 117.
- A configured Oracle Data Integrator (ODI) instance to convert staging data from the staging schema to reporting data in the reporting schema. Install ODI as a standalone agent.
- A configured Oracle Business Intelligence Enterprise Edition (OBIEE) instance, which provides the user interface for generating, viewing, and working with reports from data in the reporting schema.

Creating the Analytics Data Warehouse

A data warehouse integrates data from various sources to a central repository and stores current and historical data used for creating trending reports. Data warehouses are designed to help you analyze data; for example, to learn more about your company's sales data, you can build a warehouse that concentrates on sales. A data warehouse consists of the database schemas, database privileges, and database tablespaces.

You must create the Analytics Data Warehouse before you install Analytics on Websphere to ensure that the Analytics environment is configured correctly and the Analytics components install successfully by executing these procedures:

- **Creating the Required Database Schemas**
- **Adding Database Privileges to Schemas**
- **Creating the Required Database Tablespaces**
- **Increasing the Number of Server Processes**
- **Adding Redo Log Files**
- **Installing ODI as a Standalone Agent**

Creating the Required Database Schemas

Before installing Analytics, you must create the following three schemas in one database:

- a reporting schema (must be named **DW_REPORTING**)
- a staging schema (must be named **DW_STAGE**)

Note: DW_REPORTING and DW_STAGE must have read, write, and truncate access on the WORK schema.

- an ODI_WORK schema (can have any name). ODI uses the work schema to manage the temporary tables it needs for its loading, integration and transformation from the various sources to the target.

Adding Database Privileges to Schemas

Privileges control which users can modify database objects owned by another user. They are granted or revoked either by the instance administrator, a user with the ADMIN privilege or, for privileges to a certain object, by the owner of the object. An object privilege is the right to perform a particular action on an object or to access another user's object, such as DELETE, LOAD, EXECUTE, etc.

A system privilege is the right to perform a particular action or to perform an action, such as ADMIN, ALTER ANY TABLE, ALTER ANY TABLE, etc.

Some privileges confer other privileges. For example, ADMIN privilege confers all other privileges, or the CREATE ANY TABLE system privilege confers the CREATE TABLE object privilege.

If the correct level of privileges are not granted, an *Insufficient privileges* error may occur. To avoid these errors, add the following database privileges to the database schemas.

Adding Database Privileges to Schemas on Oracle Server

Note: For the procedure to grant or revoke privileges, see Providing authorization to objects through privileges procedure located here:

http://docs.oracle.com/cd/E11882_01/timesten.112/e21633/accesscontrol.htm#TTOPR242

- 1 Log into the Oracle Data Integrator and create the DW_STAGE, DW_REPORTING, and WORK schemas.
- 2 Add the following privilege statements:

DW_STAGE Schema

Create the DW_STAGE Schema:

```
CREATE USER DW_STAGE
IDENTIFIED BY <password>
DEFAULT TABLESPACE DW_STAGE
TEMPORARY TABLESPACE DW_STAGE_TEMP
PROFILE DEFAULT ACCOUNT UNLOCK;
```

Grant Privileges to DW_STAGE Schema:

```
GRANT CONNECT TO DW_STAGE;
GRANT RESOURCE TO DW_STAGE;
```

DW_REPORTING Schema

Create the DW_REPORTING Schema:

```
CREATE USER DW_REPORTING
IDENTIFIED BY <password>
DEFAULT TABLESPACE DW_REPORTING_
TEMPORARY TABLESPACE DW_REPORTING_TEMP
PROFILE DEFAULT ACCOUNT UNLOCK;
```

Grant Privileges to DW_REPORTING Schema:

```
GRANT CONNECT TO DW_REPORTING;
GRANT RESOURCE TO DW_REPORTING;
```

Grant SYSTEM Privileges to DW_REPORTING Schema:

```
GRANT ANALYZE ANY TO DW_REPORTING;
GRANT UNLIMITED TABLESPACE TO DW_REPORTING;
```

Grant OBJECT Privileges for DW_REPORTING

Note: Execute the following two statements **after** the tables are created in the schema.

```
GRANT SELECT, UPDATE, DELETE ON DW_STAGE.DW_STG_DATA TO DW_REPORTING;
GRANT SELECT, UPDATE, DELETE ON DW_STAGE.DW_STG_EVENT TO DW_REPORTING;
```

ODI_WORK Schema

Create the ODI_WORK Schema:

```
CREATE USER ODI_WORK
IDENTIFIED BY <password>
DEFAULT TABLESPACE ODI_WORK;
GRANT RESOURCE TO ODI_WORK;
GRANT CONNECT TO ODI_WORK;
ALTER USER ODI_WORK DEFAULT ROLE ALL;
ALTER USER ODI_WORK QUOTA UNLIMITED ON <tablespace>;
GRANT UNLIMITED TABLESPACE TO ODI_WORK;
```

Grant SYSTEM Privileges to ODI_WORK Schema:

```
GRANT ANALYZE ANY TO ODI_WORK;
GRANT DELETE ANY TABLE TO ODI_WORK;
GRANT DROP ANY TABLE TO ODI_WORK;
GRANT INSERT ANY TABLE TO ODI_WORK;
GRANT SELECT ANY SEQUENCE TO ODI_WORK;
GRANT SELECT ANY TABLE TO ODI_WORK;
GRANT UPDATE ANY TABLE TO ODI_WORK;
```

Using DW_REPORTING Schema as ODI_WORK Schema

The ODI_WORK schema does all the work for the physical schemas (DW_REPORTING, and DW_STAGE), so it requires higher level privileges to access, select, update, delete, etc. on the objects owned by those schemas. For example, the ODI_WORK schema requires the DROP ANY TABLE privilege to truncate the DW_REPORTING tables to perform the ETL.

However, granting the higher SYSTEM level privilege, which is similar to a DBA privilege, may be less restrictive than desired and you may not want to grant these privileges to the ODI_WORK schema. The alternative approach is to use the DW_REPORTING schema as the ODI_WORK schema.

Adding Database Privileges to Schemas on Microsoft SQL Server

Use the following procedure to add privileges to the MSSQL server.

- 1 Log into SQL Server Management Studio (SSMS) as System Administrator (sa) user.
- 2 Create databases named DW_STAGE, DW_REPORTING and WORK.
- 3 Create a login named ODIWORK.
- 4 Assign *public* and *sysadmin* server roles to the ODIWORK login.

Map the DW_STAGE, DW_REPORTING and WORK databases and ODI Repository database to the ODIWORK login

Creating the Required Database Tablespaces

A database's data is collectively stored in the database's tablespace; as a database administrator, you can create a new tablespace (defined by an additional datafile) to increase the size of a database.

Calculating the Tablespace Capacity

To ensure an adequate amount of database space for Analytics processing, use this procedure to calculate the approximate amount of tablespace you must allocate to your databases.

- 1 Determine your general daily traffic (searches and documents); for example your knowledge base receives 5000 questions and 5000 document views.
- 2 Use the following algorithm to calculate how much tablespace you require, where:
 - one question = 20 events,
 - one document view = 10 events
$$(Q * 20) + (Doc * 10) = \text{Total events}$$

For the example of 5000 questions and 500 document views received:

$$(5000 * 20) + (5000 * 10) = 150000 \text{ events}$$
- 3 Allocate the proper tablespace.

For each 100,000 events generated, allocate 2GB of total tablespace:

 - 1.66 GB for the Staging schema
 - 272 MB for the Reporting schema

For the example above, you want to allocate 4GB of tablespace.

Creating Tablespaces

Create the following tablespaces for the Analytics databases. For step-by-step instructions on creating tablespaces, see *Oracle® Database Administrator's Guide* located here:

http://docs.oracle.com/cd/B28359_01/server.111/b28310/tspaces002.htm

CREATE THE DW_STAGE TABLESPACES

Create the DW-STAGE tablespace

```
CREATE TABLESPACE PERF_DW_STAGE DATAFILE
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage1.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage2.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage3.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage4.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage5.dbf' SIZE 20G
NOLOGGING EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO;
```

Create the DW-STAGE temporary tablespace

```
CREATE TEMPORARY TABLESPACE PERF_DW_STAGE_TEMP TEMPFILE
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage_temp1.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage_temp2.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage_temp3.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage_temp4.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_stage_temp5.dbf' SIZE 20G;
```

CREATE THE DW-REPORTING TABLESPACES

Create the DW_REPORTING tablespace.

```
CREATE TABLESPACE PERF_DW_REPORTING DATAFILE
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting1.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting2.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting3.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting4.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting5.dbf' SIZE 20G
EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO;
```

Create the DW_REPORTING temporary tablespace

```
CREATE TEMPORARY TABLESPACE PERF_DW_REPORTING_TEMP TEMPFILE
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting_temp1.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting_temp2.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting_temp3.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting_temp4.dbf' SIZE 20G,
'/<PATH_TO_DATAFILES_LOC>/PERF_dw_reporting_temp5.dbf' SIZE 20G;
```

CREATE THE USER TABLESPACES

Create the DW_STAGE USER tablespace

```
CREATE USER DW_STAGE IDENTIFIED BY password
DEFAULT TABLESPACE "PERF_DW_STAGE"
```

```
TEMPORARY TABLESPACE "PERF_DW_STAGE_TEMP";

GRANT "CONNECT" TO DW_STAGE ;
GRANT "DBA" TO DW_STAGE ;
ALTER USER DW_STAGE DEFAULT ROLE "CONNECT", "DBA";
```

Create the DW_REPORTING USER

```
CREATE USER DW_REPORTING IDENTIFIED BY password
DEFAULT TABLESPACE "PERF_DW_REPORTING"
TEMPORARY TABLESPACE "PERF_DW_REPORTING_TEMP";

GRANT "CONNECT" TO DW_REPORTING;
GRANT "DBA" TO DW_REPORTING ;
ALTER USER DW_REPORTING DEFAULT ROLE "CONNECT", "DBA";
```

Create the ODI User

```
CREATE USER ODI IDENTIFIED BY odi;

GRANT "CONNECT" TO ODI;
GRANT "DBA" TO ODI;
ALTER USER ODI DEFAULT ROLE "CONNECT", "DBA";
```

Increasing the Number of Server Processes

You can increase the number of processes available to service requests. When you deploy more processes, the system can handle more requests, so increase the number of processes to increase your system capacity.

- 1 From an sql prompt, run the following:

```
show parameter processes;
```

Results:

```
NAME TYPE VALUE
processes integer 150
```

- 2 **Optional.** If the VALUE is 150 (default) or less, run the following statement to increase:

```
alter system set processes=450 scope=spfile;
```

- 3 Restart the database.

Adding Redo Log Files

Redo logs store all changes made to the database as they occur; every instance of an Oracle Database has an associated redo log to protect the database in case of an instance failure.

Tuning the redo log options can provide performance improvement. Generally, larger redo log files provide better performance by reducing checkpoint activity.

You must create at least three redo logs, and each file should be 2G. However, to maximize Analytics performance, we recommend that you create **10** redo log files. Each file should be **500M**. For more information and procedures for creating redo logs, see *Oracle® Database Administrator's Guide*, located here:

http://docs.oracle.com/cd/B28359_01/server.111/b28310/onlineredo003.htm

Installing Oracle Data Integrator (ODI)

ODI is not included in the Oracle Knowledge product distribution.

As part of the Analytics installation process you must install and configure an instance of ODI as a standalone agent and at least one Java agents.

We recommend to install ODI and OBIEE on separate physical (or virtual) machines in the production environment. In other environments, such as Development and Staging, they can be co-located. Installations that generate a large volume of analytic data require that you install additional Java agents on additional servers to process the data transformation efficiently.

For complete information on installing and configuring ODI, see the documentation located here:

http://docs.oracle.com/cd/E28280_01/install.1111/e16453/install.htm

Prerequisites for Installing ODI as a Standalone Agent

Before you begin installing ODI as a stand-alone agent, make sure you have completed the following prerequisites:

- Installed Oracle Database 11g.
- Installed Oracle Data Integrator (ODI) 11gR1
- Created the ODI Master and Work Repositories

For complete information on installing and configuring ODI, see the documentation located here:

http://docs.oracle.com/cd/E28280_01/install.1111/e16453/install.htm

Installing ODI as a Standalone Agent

- 1 Navigate to your <oracle_user> location.
- 2 Generate the encrypted password string with the agent command: `encode.sh password`.
- 3 Edit the `odiparams.sh` by revising the following parameters. This sets the repository connection information for the ODI Agent to use.

Note: Use the encrypted password (from step 2) for token <PUT_ENCODED_PASSWORD_HERE>.

```
ODI_INIT_HEAP=2048m
ODI_MAX_HEAP=8192m
ODI_CONNECTION_RETRY_COUNT=1000
ODI_MASTER_ENCODED_PASS = <PUT_ENCODED_PASSWORD_HERE>
ODI_CONNECTION_RETRY_DELAY=31000
```

- 4 At the Oracle Data Integrator Studio, navigate to Topology > Physical Architecture > Agent > Create New Agent.
- 5 Create a new agent with the following values:
 - a agent name = a name that you assign to the agent
 - b agent hostname = the name of the host location
 - c maximum number of sessions = 250

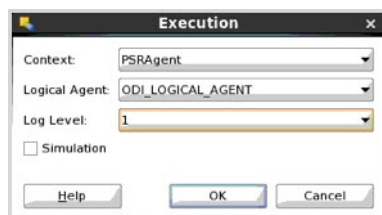
- d for all other fields, use the defaults
- 6 From the ODI locations, execute `./agent.sh -NAME=<agent name>` (from step 5a)
 - Select the test button on the upper pane for <agent name> to ensure it works properly.
- 7 Navigate to Topology > Contexts > New context and create a new context:
 - a Context name = agent name
 - b Create a Logical Agent for <agent name> and map all the physical agents to it.
 - c At Agents, associate the name of the new logical agent to the new context <agent name>.
- 8 Navigate to Topology > Physical Architecture > Technologies > Oracle > oracle_server/dw_reporting
 - Add the context <agent name> to the target.
- 9 Navigate to Topology > Physical Architecture > Technologies > Oracle > oracle_server/dw_staging
 - Add the Context <agent name> to the target.
- 10 Check the redo logs to ensure you have an adequate number. We recommend that you create 10 redo log files; each file should be 500M.

```
SELECT
  GROUP#,
  THREAD#,
  SEQUENCE#,
  ARCHIVED,
  STATUS,
  MEMBER AS REDOLOG_FILE_NAME,
  (BYTES/1024/1024) AS SIZE_MB
```

For example:

```
FROM
  v$log a JOIN v$logfile b ON a.Group#=b.Group#
ORDER BY
  GROUP# ASC;
```

- 11 RUN ODI using the <agent name> you created.



See also “OBIEE Requirements for Analytics” on page 24.

Increasing the ODI Repository Tablespace

After you install ODI, you can increase the ODI repository tablespace size if needed.

- 1 In the screen Repository Creation Security: Map Tablespace select **Manage Tablespace**.
- 2 Change the tablespace size to 100GB.
Note: This value is a default; if your system requires a larger tablespace size, enter that value.
- 3 Select **OK**.

OBIEE Requirements for Analytics

Oracle Business Intelligence Enterprise Edition (OBIEE) is required for all customers that intend to use Oracle Knowledge Analytics.

Important! You must install and configure an instance of OBIEE before installing Oracle Knowledge Analytics.

We recommend to install ODI and OBIEE on separate physical (or virtual) machines in the production environment. In other environments, such as for development and staging, they can be co-located.

See the *Oracle Fusion Middleware Quick Installation Guide for Oracle Business Intelligence* for OBIEE hardware and software requirements, installation requirements, and instructions for installing, configuring, and uninstalling Oracle Business Intelligence products. You can access the Oracle Business Intelligence documentation library at: <http://www.oracle.com/technetwork/middleware/bi-enterprise-edition/documentation/index.html>. It is strongly recommended that you familiarize yourself with the contents of this documentation.

Note: The initial Analytics configuration process depends on the OBIEE Administration Tool, which runs only on Windows. Consult the OBIEE documentation for specific Administration Tool requirements.

See also “Installing and Configuring OBIEE on WebSphere” on page 111.

ADDITIONAL ORACLE DOCUMENTATION

- For more information on Database Administration for MS SQL Server, refer to Using Microsoft SQL Server at:

http://download.oracle.com/docs/cd/E13218_01/wlp/docs102/db/SQL.html

- Database Admin Guide - XA Support

http://docs.oracle.com/cd/E13218_01/wlp/docs81/sp2/db/5XA.html

Preparing to Install Oracle Knowledge on WebSphere

Using WebSphere with Oracle Knowledge

This chapter provides the following configuration information on WebSphere Application Server (WAS):

- **Create WebSphere Profile**
- **Set WebSphere Privileges**
- **Set the LDPATH for Intelligent Search**
- **Set JVM Arguments for the Information Manager Server**
- **Start the WebSphere Application Servers**

Important! Use the IBM WebSphere documentation to install and configure WAS. This document provides the necessary configuration parameters to use WebSphere components with Oracle Knowledge products but does not provide complete WebSphere installation instructions.

Create WebSphere Profile

Use the WebSphere Customization Toolbox to create new profiles. You must create a separate profile for each Oracle Knowledge instance you plan to install. For example, if you plan to install Intelligent Search with the Indexer and Runtime applications, you must create a profile for each Indexing and Runtime instance you plan to install.

To create a profile:

- 1 Login to the Linux machine where WAS is installed and go to WebSphere Home (WAS_HOME)
Typically, WAS_HOME = /opt/IBM/WebSphere/AppServer
- 2 Navigate to WAS_HOME/bin/ProfileManagement/
- 3 Open terminal in this directory and execute the following command:

```
./pmt.sh
```

The Profile Management Tool launches.
- 4 Click **Create** to create a new profile.
- 5 On the Environment Selection screen select **Application Server**.
- 6 Select **Advanced Profile Creation** and click **Next** until you reach the Profile Name & Location screen.

- 7 Complete each screen as described below. Use **Next** and **Previous** to navigate through the tool. For each profile you create, record the Name, Directory, Node Name, Server Name, Host Name, HTTPS port, HTTP port, User Name, and Password. You will use this information during the Oracle Knowledge Installation process.

Create each profile using the following parameters:

Parameter Definition

Profile Name and Location

Profile Name	Profile Name and Profile Directory should be same. For example, if the profile name is <code>abc_profile</code> then the directory should be <code>/opt/IBM/WebSphere/AppServer/profiles/abc_profile</code> . This is because the Oracle Knowledge installer validates this entry on the directory level during the installation. If there is a mismatch during this validation, the installation fails.
Profile Directory	Change the directory to match the Profile Name as explained above.

Node and Host Names

Node Name	Accept the default node name.
Server Name	Enter the server name. If you plan to use the <code>createApp</code> utility, then the server name should be <code><instance_name>_Server</code> . If you plan to create the default apps through the installer, then <code><instance_name>_Server</code> for Indexer and <code><instance_name>rt1_Server</code> for Runtime. See the specific installation chapters for required instances for each Oracle Knowledge product. The server name is case-sensitive
Host Name	Enter the host server name.

Administrative Security

User Name	Enter the user name for WAS profile administration.
Password	Enter the password associated with the user name above.

Port Values Assignment

Administrative console port	Accept and note the default HTTPS Administrative console port value. This is the port used for profile administration.
HTTP Transport Port	Accept and note the default value port as this is the port the application is deployed on and you must enter it during Oracle Knowledge Installation.

- 8 When you reach the Profile Creation Summary, click **Create**.
- 9 Click **Finish** and click **exit** on next screen.

Set WebSphere Privileges

After you have created all of the necessary profiles, you must grant the required privileges to each profile that you just created.

To grant privileges:

- 1 Navigate to the `<WAS_HOME>/profiles` directory and execute the following command:

```
sudo su
```
- 2 Enter the user password, then the following command:

```
chmod -R 777 <Profile Name>
```

Set the LDPATH for Intelligent Search

Before you install Intelligent Search, set the LDPATH for BASIS, OLT, and Stellent for the servers. To set the LDPATH for BASIS, OLT, and Stellent:

- 1 **Stop** the server using the command line with the following command:

```
./stopServer.sh -profileName <ProfileName> <ServerName>
```

- 2 On any WebSphere installation that uses Search, you must add the following bold, blue line to the {WAS_HOME}/bin/setupCmdLine.sh file.

```
LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:{SEARCH_INSTALL_DIR}/inquira/src/
prep/ext/stellent/export:{SEARCH_INSTALL_DIR}/inquira/basis/rlp/bin/
{BASIS_PLATFORM}:{SEARCH_INSTALL_DIR}/inquira/basis/rlp/lib/
{BASIS_PLATFORM}:{SEARCH_INSTALL_DIR}/inquira/olt_lexer/olt/bin

WAS_LIBPATH="$JAVA_NATIVE_LIB_DIR":"$WAS_HOME"/bin
WAS_EXT_DIRS="$WAS_EXT_DIRS"
NLSPATH=/usr/lib/locale/%L/LC_MESSAGES/%N:${NLSPATH:=}
JAVA_HIGH_ZIPFDS=200
```

Note: Replace {SEARCH_INSTALL_DIR} with actual directory; {BASIS_PLATFORM} for Linux 6 is amd64-glibc24-gcc41. The non bold lines provide context to show where in the file to add the new line.

- 3 **Start** the server using the command line with the following command:

```
./startServer.sh -profileName <ProfileName> <ServerName>
```

Subsequent Intelligent Search server restarts can be performed using [Start the WebSphere Application Servers](#).

Set JVM Arguments for the Information Manager Server

Before you install Information Manager, set the JVM arguments for the IM server. To set JVM arguments:

- 1 Login with Admin credentials that were set in Create Profile, step 7.
- 2 Click **Server Types** on the left side panel of the WAS Admin Console.
- 3 Click **WebSphere Application Servers**.
- 4 Click the server that was created in the procedure above (server name should be <instance_name>_Server.).
- 5 Click **Java & Process Management** under *Server Infrastructure*.
- 6 Click **Process Definition**.
- 7 Click **Java Virtual Machine** under *Additional Properties*.
- 8 Enter the following values:

Parameter	Value
Initial Heap Size	1200
Maximum Heap Size	2800

Parameter	Value (Continued)
Generic JVM Arguments	<p>Note: In the following example, replace <code>{INSTALL_DIR}</code>, <code>{KEYSTORE_DIR}</code>, <code>{SEARCH_HOST}</code>, <code>{HTTP_TPT_PORT}</code>, and <code><instance_name></code> with the actual values from your installation.</p> <pre> -DentityExpansionLimit=500000 -Djava.io.tmpdir={INSTALL_DIR}/instances/<instance_name>/tmp -Dcom.sun.management.jmxremote -verbose:gc -Djcifs.smb.client.disablePlainTextPasswords=true -DKEYSTORE_LOCATION={KEYSTORE_DIR} -DSOAP_URL=http://{SEARCH_HOST}:{HTTP_TPT_PORT}/inquiragw/servlet/ rpcrouter -Dcom.inquiria.infra.config.url=file://{INSTALL_DIR}/inquiria/ install_override.xml,file://{INSTALL_DIR}/instances/<instance_name>/ installation.xml,file://{INSTALL_DIR}/instances/<instance_name>/cus- tom.xml -Dcom.inquiria.infra.instance=default -Dcom.inquiria.infra.baseDirectory={INSTALL_DIR}/instances/ <instance_name> -Dcom.inquiria.infra.installDirectory={INSTALL_DIR}/inquiria -Dcom.inquiria.infra.environment=development -Dderby.system.home={INSTALL_DIR}/instances/<instance_name>/develop- ment/content/data/log -Djavax.xml.transform.TransformerFactory=org.apache.xalan. processor.TransformerFactoryImpl -DOK_JMS_CONFIGURATION_FILE={INSTALL_DIR}/conf/ok_jms.properties - DIM_HOME={INSTALL_DIR}/InfoManager </pre>

9 Click **Apply**.

10 Click **Save the Configuration** when you are prompted for conformation.

Start the WebSphere Application Servers

Important! You must start /stop the Search instances through the WebSphere command line only.

Start the server using the command line. This is mandatory for Search, Information Manager and AnswerFlow before starting the Oracle Knowledge installation.

To **stop** and **start** the servers using the command line, navigate to the `<WAS_HOME>/profiles/<ProfileName>/bin` directory and execute one of the following commands:

```

./stopServer.sh -profileName <ProfileName> <ServerName>
./startServer.sh -profileName <ProfileName> <ServerName>

```

After the server has started, you can access the Admin screen for each profile with the following URL:

```
https://<server_Name_or_IP_address>:<port#>/ibm/console
```

Note: Port number is the HTTPS Administrative console port assigned when the profile was created.

Important! You must repeat this procedure for all application servers that you need to deploy.

Installing and Configuring Intelligent Search on WebSphere

This document describes the installation and configuration of Oracle Knowledge Search on IBM WebSphere® Application Server (WAS). This document provides the following information:

- **Prerequisites**
- **Run the Search WAS Installer**
- **Complete Post-installation Configuration Tasks**
- **View the Oracle Knowledge Search Application Logs**
- **Work with the Configured Application**

Important! Use the WebSphere documentation to install WAS. This document provides the necessary configuration parameters to use WebSphere with Oracle Knowledge but *does not* provide complete WebSphere installation instructions.

Prerequisites

Please complete the following requirements before configuring WAS for Oracle Knowledge:

- Install WAS 8.0.0.6 on Linux 6
After you install, you must complete the configuration described in “Preparing to Install Oracle Knowledge on WebSphere” on page 25. When finished, make certain the server is running.
- Install and configure the Oracle database, creating the necessary database users.

Run the Search WAS Installer

The following installation process is required:

- 1 Ensure that WebSphere is installed and the servers are running.
- 2 A database schema must be created for the content store and quality monitor database.
- 3 If Analytics support is being installed, you must know the host name, user credentials, and bootstrap port of the WebSphere instance serving the queue. If you have modified the default configuration values for the JMS installation, you also need the JNDI information for the JMS queue and connection factory.
- 4 Install and configure the content processing instance.
- 5 Install and configure the search runtimes.

Important! When you install on remote servers from the Content processing instance, do not configure any applications within the installer, those are done with the `createApp` utility.

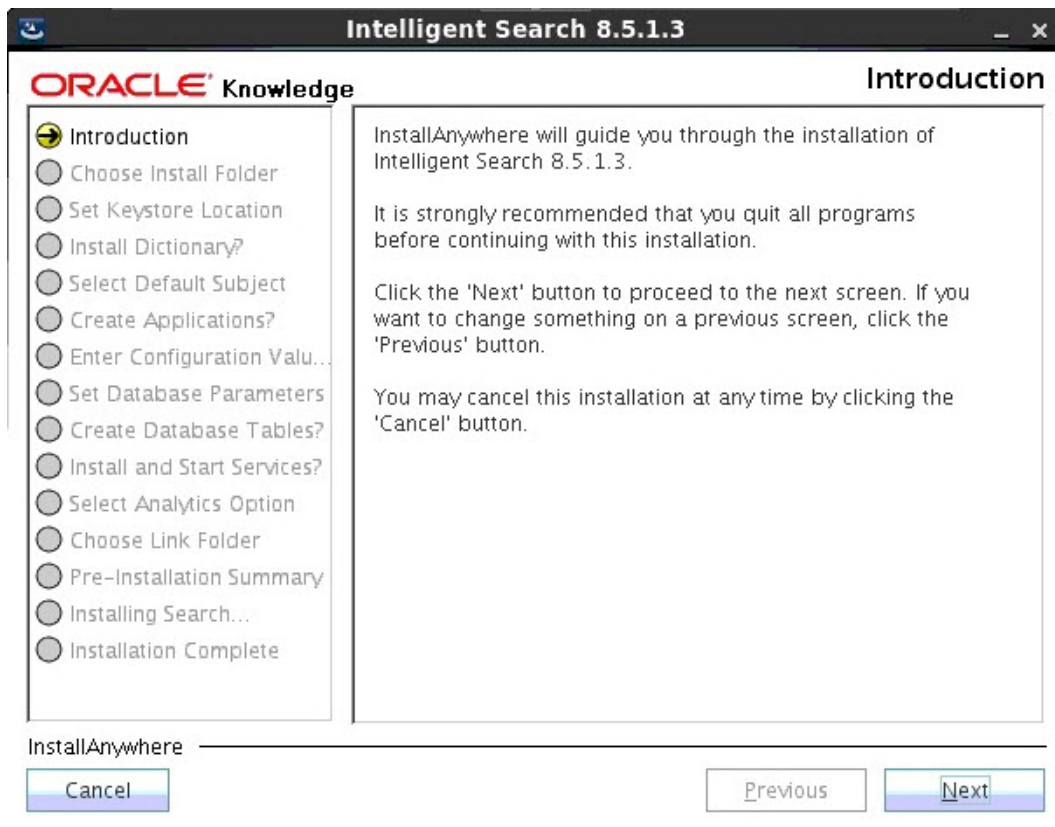
- 6 Verify the installation and operation of the Search components is correct.
- 7 Configure local and remote instances for operation, as described in “Complete Post-installation Configuration Tasks” on page 54.

Start the Installer

To start the installer in Linux environments:

- 1 Open a bash shell by entering bash command:
`bash`
- 2 Use `cd` to go to the installer temporary directory.
- 3 Set the default locale for the bash shell to `en_US` by entering the following:
`export LC_ALL="en_US"`
- 4 Set permissions on the binary files so that they are executable by entering:
`chmod +x *.bin`
- 5 Start the installer:
`./install_search_websphere_LINUXx64_build_68.bin`

The Installation Introduction screen recommends that all other programs running be stopped and provides information on operating the installer:



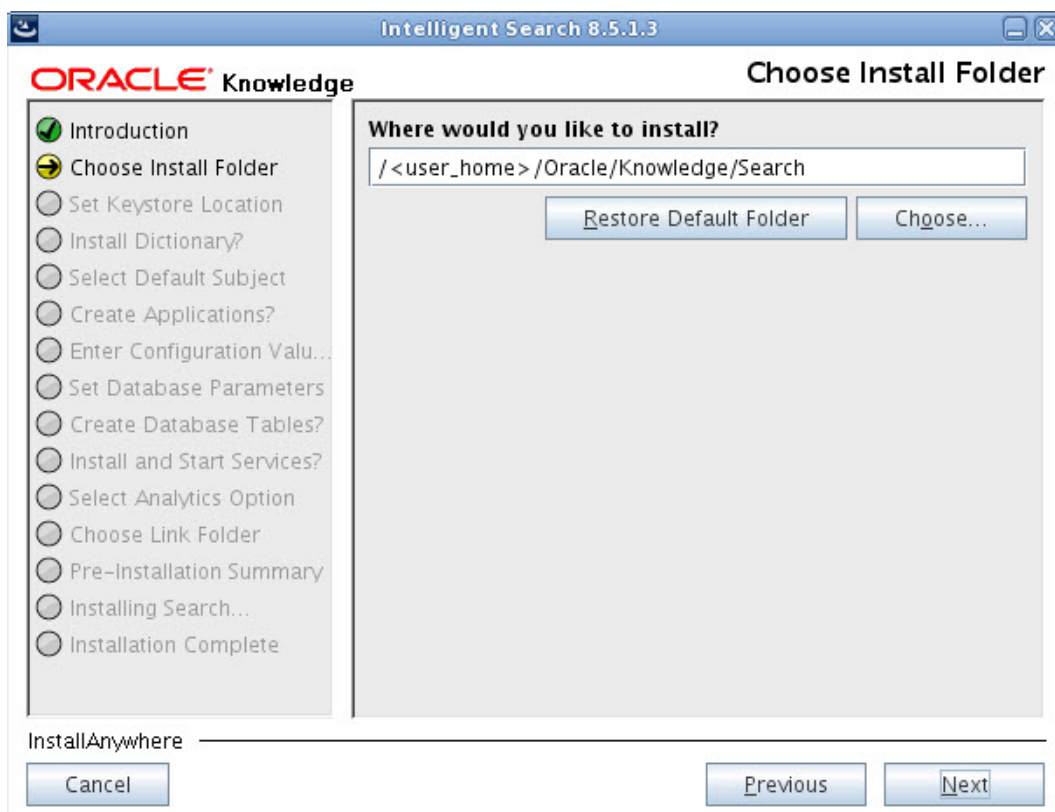
Select **Next** to continue.

The installer prompts you to specify the installation location.

Choose the Installation Location

Specify the location according to the following requirements:

- You cannot install Intelligent Search in a location containing an existing Intelligent Search installation or any remaining Intelligent Search files or directories from a previous installation or installation attempt.
- You must specify an installation directory name containing no blank spaces. The Common Environment does not support Oracle Knowledge installation directory names containing blank spaces. Ensure that the target file system is large enough to install the software and create your indexes.



The default Linux location is:

<user_home>/Oracle/Knowledge/Search

Use the **Choose** option to open a file explorer and select an alternate location.

Use the **Restore Default Folder** option to reset the default installation directory, if necessary.

Select **Next** to continue.

The installer asks you to **Specify the WebSphere Java Options**.

Specify the WebSphere Java Options

Enter Java memory options.

Intelligent Search 8.5.1.3

ORACLE Knowledge

Specify Java Options

- ☒ Introduction
- ☒ Choose Install Folder
- ☐ Set Keystore Location
- ☐ Install Dictionary?
- ☐ Select Default Subject
- ☐ Create Applications?
- ☐ Enter Configuration Valu...
- ☐ Set Database Parameters
- ☐ Create Database Tables?
- ☐ Install and Start Services?
- ☐ Select Analytics Option
- ☐ Choose Link Folder
- ☐ Pre-Installation Summary
- ☐ Installing Search...
- ☐ Installation Complete

Java Home used by WebSphere (Specify the parent directory of the IBM JDK's bin directory)

/opt/IBM/WebSphere/AppServer/java

Restore Default Choose...

Memory Allocation Pool Initial Size (-Xms in Megabytes)

1200

Memory Allocation Pool Maximum Size (-Xmx in Megabytes)

2800

InstallAnywhere

Cancel Previous Next

Specify the following Java parameters:

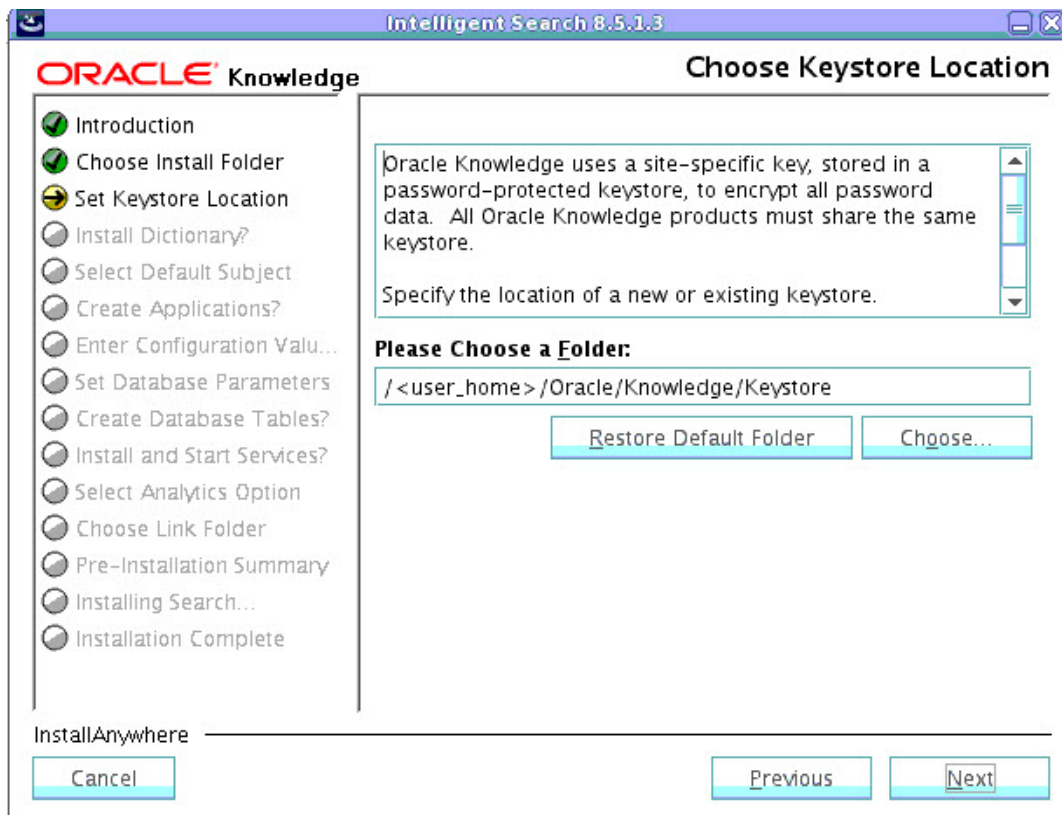
Option	Description
Java Home used by WebSphere	Specify the parent directory for the JDK bin directory used by WebSphere.
Memory Allocation Pool Initial Size	Specify the <code>-Xms.nM</code> argument, where <i>n</i> is a number of megabytes. The default value is 1200.
Memory Allocation Pool Maximum Size	Specify the <code>-Xmx.nM</code> argument, where <i>n</i> is a number of megabytes. The default value is 2800.

Select **Next** to continue.

Create the Encryption Keystore

The installer prompts you to specify the location of the Oracle Knowledge keystore. If you are installing Search first or without Information Manager or Analytics, create a new keystore. If you have already installed Oracle Knowledge Information Manager or Analytics, use the same keystore created during that installation by selecting the location of that keystore.

For more information about the keystore, see “Creating the Oracle Knowledge Keystore” on page 14.



You must configure a keystore that is used by all Oracle Knowledge products, as described in <xref Specifying the Oracle Knowledge Key Store in the Planning section>.

Specify one of the following:

- the location of an existing keystore that can be shared by all Oracle Knowledge products.
- the location of a new keystore that the installation program creates.

The default key store location is:

<INSTALL_FOLDER_PARENT>/Keystore

where:

<INSTALL_FOLDER_PARENT> is the parent folder of the top-level installation folder. For example, if you are installing in <user_home>/Oracle/Knowledge/Search, then the installer uses the default key store location: <user_home >/Oracle/Knowledge/Keystore.

Select **Next** to continue.

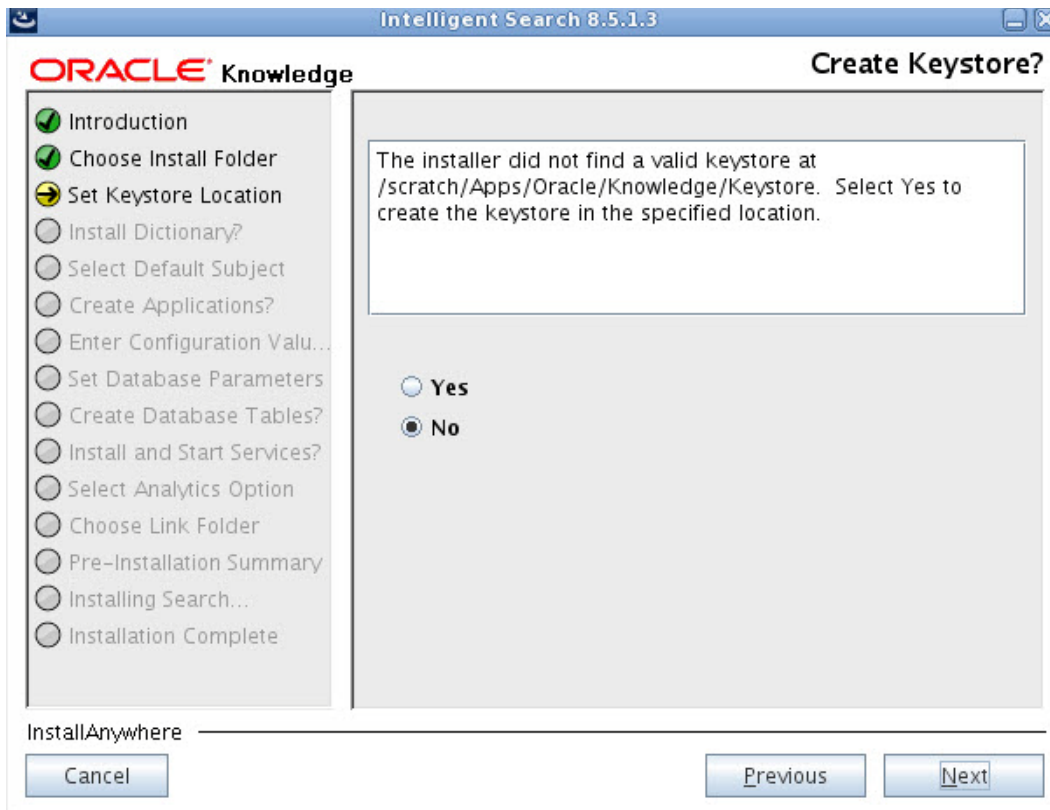
The installation program checks whether a keystore exists in the specified location.

If you specify a new keystore location, the installer prompts you to create the keystore, displaying the **Creating the Keystore** screen.

If you specify the location of an existing keystore, the installer uses the existing keystore files to encrypt the necessary values, as required, and displays the **Install the Dictionary** screen.

Creating the Keystore

The installation program prompts you to create the keystore.



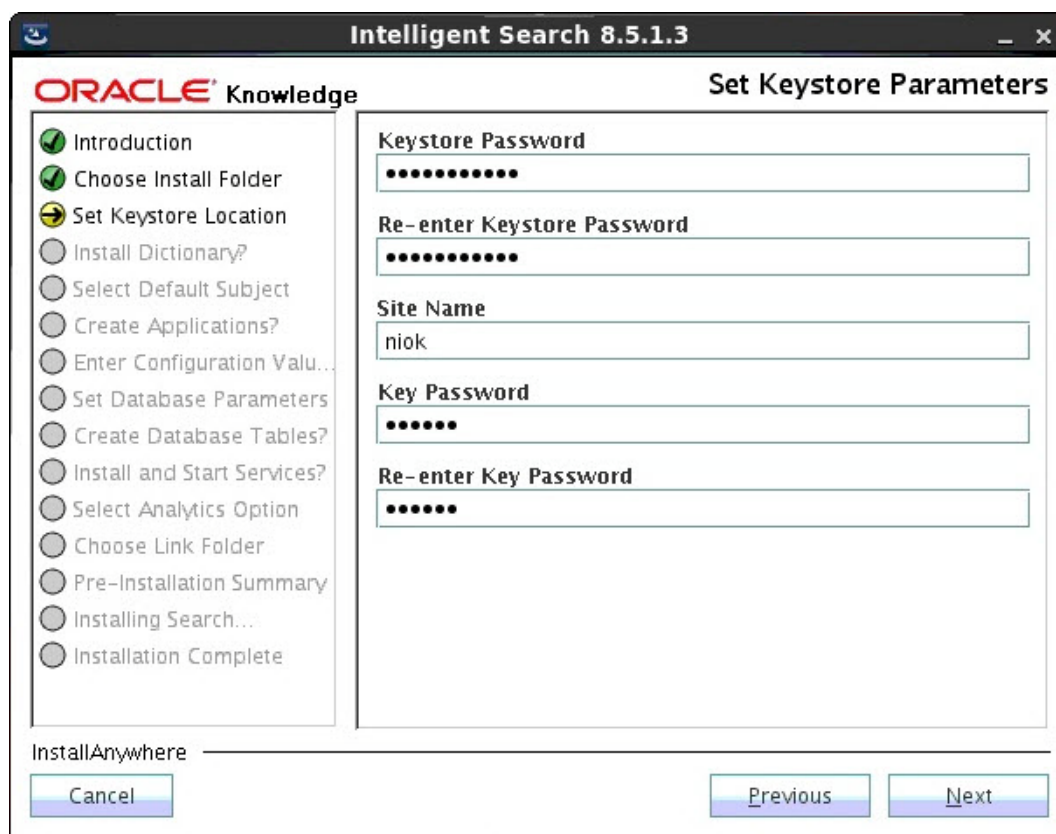
Select **Yes**.

Select **Next** to continue.

The installation program creates the keystore and prompts you to specify key store parameters, displaying the **Specifying Keystore Parameters** screen.

Specifying Keystore Parameters

The installer prompts you to specify keystore security parameters:



To create a new keystore, the installer prompts you to specify:

Field	Description
Keystore Password	The password used to protect the keystore.
Site Name	The unique identifier used to identify the encryption key.
Key Password	The password used to protect the encryption key in the keystore.

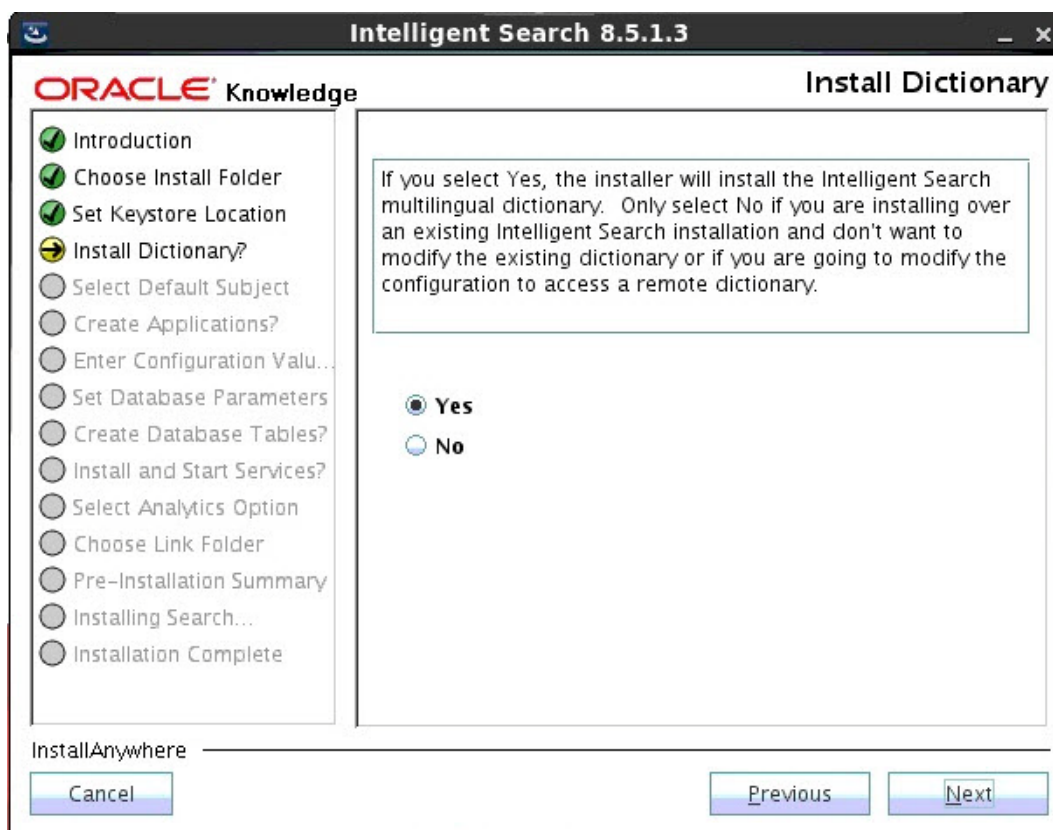
Important! We recommend that you record the keystore parameter values in a secure location for future reference.

Select **Next** to continue.

The installer displays the **Install the Dictionary** screen.

Install the Dictionary

The installer prompts you to install the Dictionary. Typically, the Dictionary is installed on the Content Processing instance and then propagated to the runtime instances. The Dictionary should not be installed on remote machines by the installer.



Select **Yes** or **No**.

Select **No** only if you are:

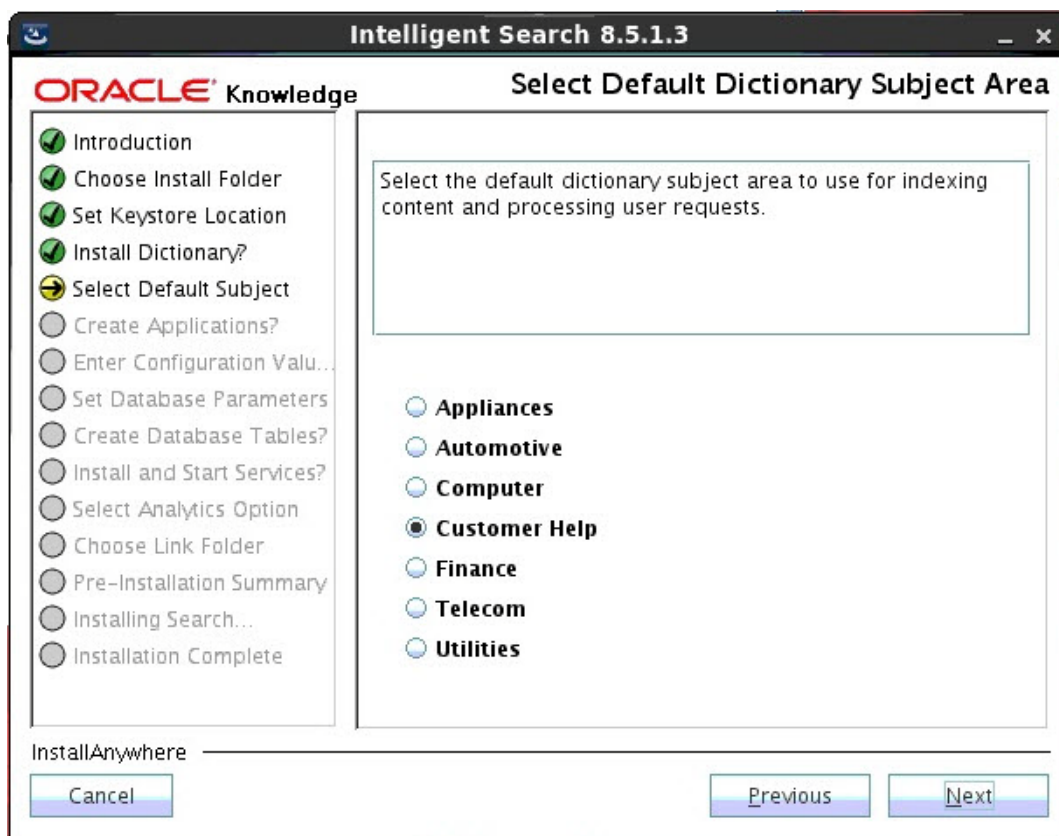
- Installing over an existing Oracle Knowledge Installation and do not want to modify the existing Dictionary.
- or
- Intending to modify the configuration to access a remote Dictionary.

Select **Next** to continue.

The installer displays the **Select the Default Dictionary Subject Area** screen.

Select the Default Dictionary Subject Area

The installer prompts you to select the default Dictionary subject.



Select the desired default Dictionary subject. The default Dictionary subject is Customer Help. The Customer Help Dictionary is included as a part of all other available Dictionaries.

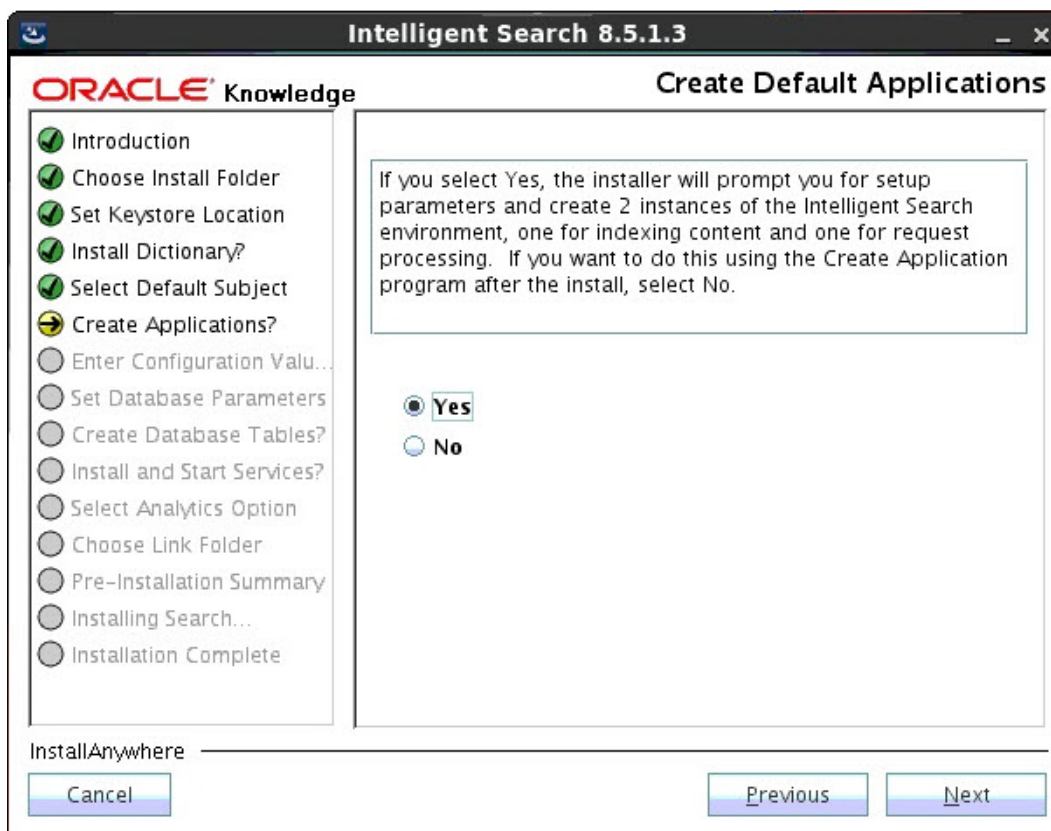
Select **Next** to continue.

The installer prompts you for information about **Create the Application Instance**.

Create the Application Instance

Most customers should follow the typical installation process—where you install one or more runtime components on a separate instance using the createApp utility.

Note: The installer provides the option to create a consolidated installation—where both the content-processing instance and a request processing instance are installed on the local machine. This automated process is generally appropriate only for small-scale purposes such as a demonstration, and not for production installations of any type.



Select **No** to continue with a typical installation or select **Yes** for a consolidated installation.

Select **Next** to continue.

If you select **No**, the installer displays the **Configure the WebSphere Server** screen.

If you select **Yes**, the installer displays screens to specify parameters for a **Consolidated Installation**.

Consolidated Installation

The following sections describe the installation screens for a consolidated installation.

Specifying Instance Parameters (Consolidated Installation)

The Instance Configuration Parameters screen contains fields in which you specify the configuration parameters for the content processing instance and request processing instance that the installer creates.

The installer displays the Instance Configuration Parameters screen only if you specify to automatically create the application instances, as described in “Create the Application Instance” on page 39.

Intelligent Search 8.5.1.3

ORACLE Knowledge

Get Instance Configuration Parameters

- ☒ Introduction
- ☒ Choose Install Folder
- ☒ Set Keystore Location
- ☒ Install Dictionary?
- ☒ Select Default Subject
- ☒ Create Applications?
- ☒ Enter Configuration Values...
- ☐ Set Database Parameters
- ☐ Create Database Tables?
- ☐ Install and Start Services?
- ☐ Select Analytics Option
- ☐ Choose Link Folder
- ☐ Pre-Installation Summary
- ☐ Installing Search...
- ☐ Installation Complete

Customer name

Indexing -- host name

Indexing -- transport port #

Indexing -- gateway port #

Request Processing -- host name

Request Processing -- transport port #

Request Processing -- gateway port #

InstallAnywhere

You can accept the following instance parameter defaults:

Parameter	Description
Customer name	Specify the name of the default instance. The application creation process uses this name for the instance directory within the Oracle Knowledge directory structure. This name is also used as the prefix for the runtime instance. Specify a descriptive name, using no blank spaces within the directory name.
Indexing -- host name	Specify the host name for the default indexing instance. The default is localhost.
Indexing -- transport port	Specify the port for the default Indexing instance. The default is 9000.
Indexing -- gateway port	Specify the port for the Indexing instance web application. This must be the WebSphere scheduler profile http port. The default is 8222.

Parameter (Continued)	Description (Continued)
Request Processing -- host name	Specify the host name for the request processing (runtime) instance. The default is <code>localhost</code> .
Request Processing -- transport port	Specify the port for the request processing (runtime) instance. The default is 9002.
Request Processing -- gateway port	Specify the port for the request processing (runtime) instance web application. This must be the WebSphere runtime profile http port. The default is 8223.

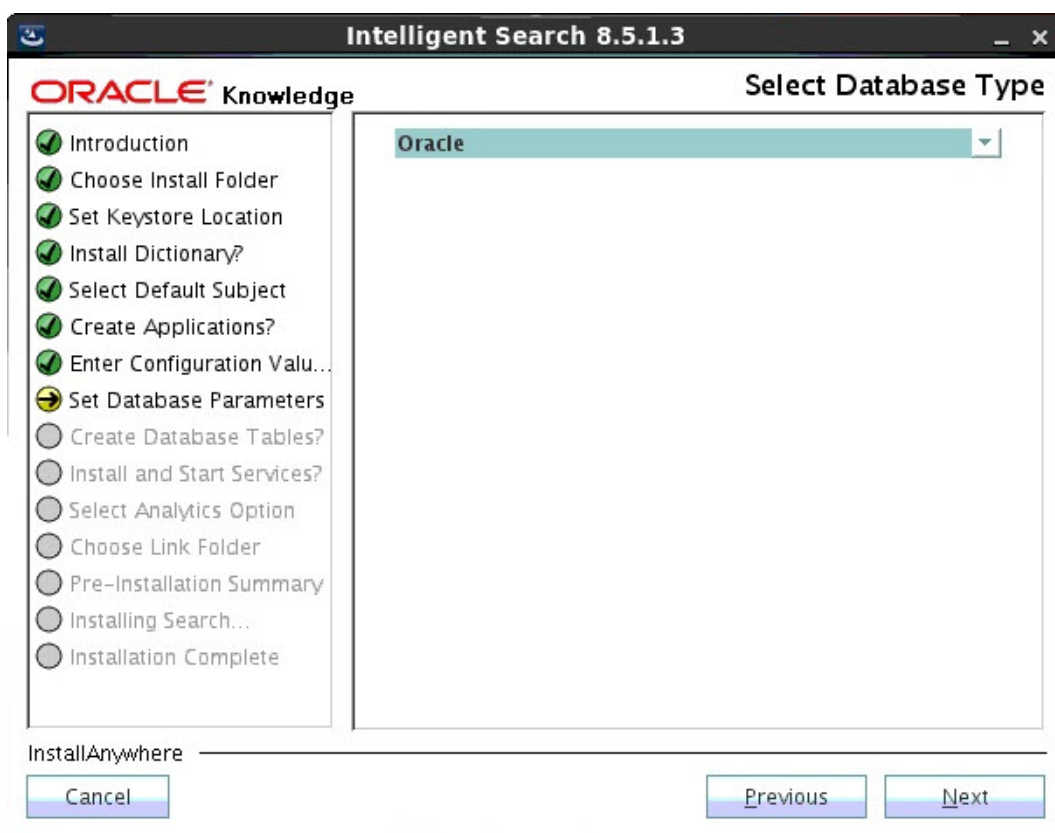
Select **Next** to continue.

The **Setting Database Tables (Consolidated Installation)** screen displays.

Setting Database Tables (Consolidated Installation)

If you elect to create the application instances using the installer, the installer presents options to configure the database connection and to create the Content Store and Quality Monitor tables.

The Set Database Parameters screen allows you to set your database connection parameters. The database users must already be created in order for the user validation to complete successfully.



Select your Database type: **Oracle** or **SQL Server**.

Select **Next** to continue.

The installer displays the **Setting Database Parameters (Consolidated Installation)** screen.

Setting Database Parameters (Consolidated Installation)

Enter the database connection parameters

Enter the following parameters:

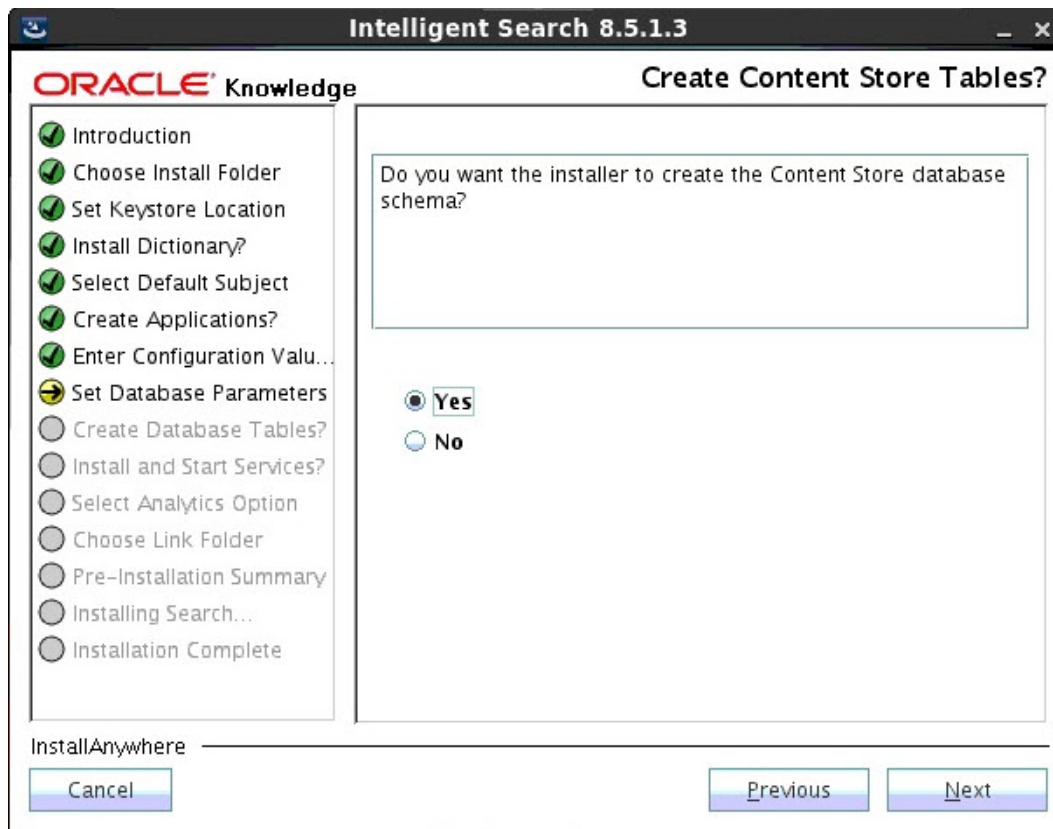
Parameter	Description
Database JDBC URL	The JDBC URL used to connect to the database.
Database User	The user name the system uses to connect to the database.
Database Password	The password associated with the user name above.

Select **Next** to continue.

The installer displays the **Creating Database Tables (Consolidated Installation)** screen.

Creating Database Tables (Consolidated Installation)

The Create Content Store Table screen allows you the option to have the installer create the Content Store database schema. The default is **No**. We recommend that you select **Yes**.



Select **Yes**.

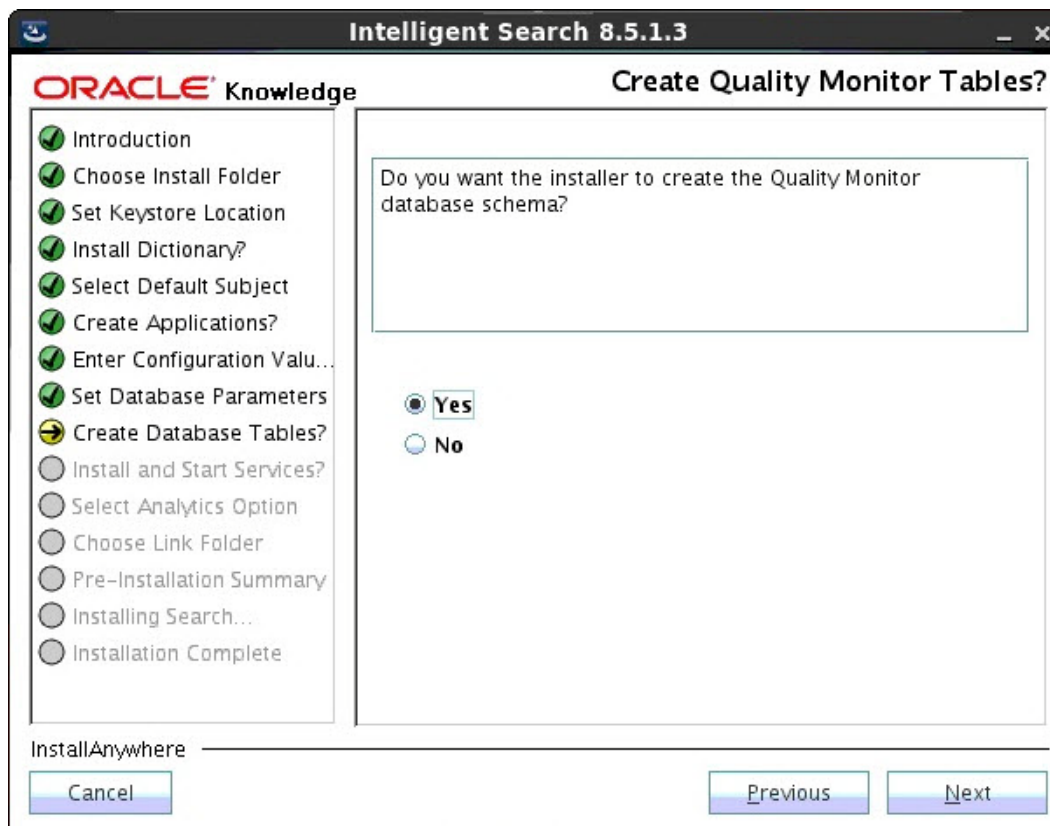
Select **Next** to continue.

The installer displays the **Creating Quality Monitor Tables (Consolidated Installation)** screen.

Creating Quality Monitor Tables (Consolidated Installation)

The Create Quality Monitor Tables screen displays.

The Create Quality Monitor Tables screen allows you the option to have the installer create the Quality Monitor Tables database schema. The default is **No**. We recommend that you select **Yes**.



Select **Yes**.

Select **Next** to continue.

The installer displays the **Choosing the WebSphere Install Directory** screen.

Configure the WebSphere Server

The installer prompts you to specify information about your IBM WebSphere Server environments.

Choosing the WebSphere Install Directory

Choose the directory where WebSphere is installed.



Select the directory in which WebSphere Server is installed (for example, `/opt/IBM/WebSphere/AppServer`).

Select **Next** to continue.

The installer displays the **Defining Profile Configuration Values for Indexer** screen.

Defining Profile Configuration Values for Indexer

Intelligent Search 8.5.1.3

ORACLE Knowledge **Profile Configuration Values for Indexer**

Introduction
 Choose Install Folder
 Set Keystore Location
 Install Dictionary?
 Select Default Subject
 Create Applications?
 Enter Configuration Valu...
 Set Database Parameters
 Create Database Tables?
 Install and Start Services?
 Select Analytics Option
 Choose Link Folder
 Pre-Installation Summary
 Installing Search...
 Installation Complete

Please enter the Profile, Cell and Node for indexer

Indexer Profile Name
 NI_CP2

Indexer Cell Name
 slc07ftvNode06Cell

Indexer Node Name
 slc07ftvNode06

InstallAnywhere

Cancel Previous Next

Enter the following parameters:

Value	Description
Indexer Profile Name	The name of the profile created for indexing and content processing instance..
Indexer Cell Name	The name of the cell that contains this profile.
Indexer Node Name	The name of the node associated with this cell and profile.

Select **Next** to continue.

The installer displays the **Defining WebSphere Admin Credentials for Indexer** screen.

Defining WebSphere Admin Credentials for Indexer

Intelligent Search 8.5.1.3

ORACLE Knowledge

WebSphere Admin Credentials For Indexer

Please provide the credentials of the Indexer Admin Server on which you want Indexer to be deployed.

Administrator User Name
ok1

Administrator User Password
...

Re-enter Administrator User Password
...

InstallAnywhere

Cancel Previous Next

Enter the following parameters:

Parameter	Description
Administrator User Name	The user name the system uses to connect to the content processing server.
Administrator User Password	The password associated with the user name above.

Select **Next** to continue.

The installer displays the **Defining Profile Configuration Values for Runtime** screen.

Defining Profile Configuration Values for Runtime

Intelligent Search 8.5.1.3

ORACLE Knowledge **Profile Configuration Values for Runtime**

Introduction
 Choose Install Folder
 Set Keystore Location
 Install Dictionary?
 Select Default Subject
 Create Applications?
 Enter Configuration Valu...
 Set Database Parameters
 Create Database Tables?
 Install and Start Services?
 Select Analytics Option
 Choose Link Folder
 Pre-Installation Summary
 Installing Search...
 Installation Complete

Please enter the Profile, Cell and Node for runtime.

Runtime Profile Name
 NI_CP2_RT

Runtime Cell Name
 slc07ftvNode08Cell

Runtime Node Name
 slc07ftvNode08

InstallAnywhere

Cancel Previous Next

Enter the following parameters:

Value	Description
Runtime Profile Name	The name of the profile created for the runtime instance.
Runtime Cell Name	The name of the cell that contains this profile.
Runtime Node Name	The name of the node associated with this cell and profile.

Select **Next** to continue.

The installer displays the **Defining WebSphere Admin Credentials for Runtime** screen.

Defining WebSphere Admin Credentials for Runtime

Intelligent Search 8.5.1.3

ORACLE Knowledge **WebSphere Admin Credentials For Runtime**

Introduction
 Choose Install Folder
 Set Keystore Location
 Install Dictionary?
 Select Default Subject
 Create Applications?
 Enter Configuration Valu...
 Set Database Parameters
 Create Database Tables?
 Install and Start Services?
 Select Analytics Option
 Choose Link Folder
 Pre-Installation Summary
 Installing Search...
 Installation Complete

Please provide the credentials of the Runtime Admin Server on which you want Indexer to be deployed.

Administrator User Name
 ok1

Administrator User Password
 ...

Re-enter Administrator User Password
 ...

InstallAnywhere

Cancel Previous Next

Enter the following parameters:

Parameter	Description
Administrator User Name	The user name the system uses to connect to the runtime server.
Administrator User Password	The password associated with the user name above.

Select **Next** to continue.

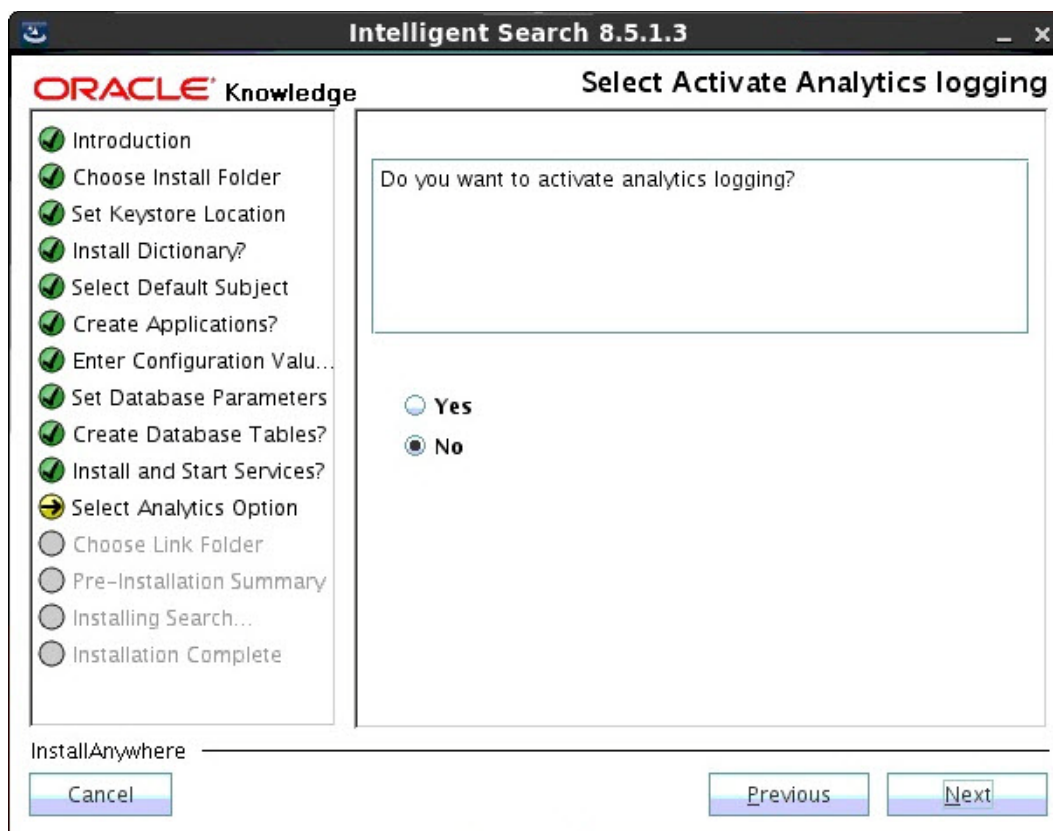
The installer displays the **Specify Oracle Knowledge Analytics Event Messaging** screen.

Specify Oracle Knowledge Analytics Event Messaging

The installer prompts you to activate logging for Oracle Knowledge Analytics.

Specify the configuration parameters to the instance of WebSphere where the Analytics event listener is running and monitoring the JMS queue.

Note: In high-volume environments, multiple JMS queues might already exist. Make sure that you are configuring the correct JMS queue or event listener.



Select **Yes** or **No**.

Select **Next** to continue.

If you select **Yes**, the installer prompts you to specify JMS queue parameters so that Intelligent Search application data is available for use by a configured Oracle Knowledge Analytics application and displays the **Configure the JMS Queue for Oracle Knowledge Analytics Logging** screen.

If you select **No**, the Intelligent Search application is not configured to send data to an Analytics application using the JMS queue. The Analytics support files are installed, but Analytics logging is inactivated. The installer displays the **Review the Pre-installation Summary** screen.

Configure the JMS Queue for Oracle Knowledge Analytics Logging

Configure the JMS queue for Search events to be accessed by Analytics.

Intelligent Search 8.5.1.3

ORACLE Knowledge

Set JMS Queue Parameters

Please enter the JMS queue information. This information will be used to publish search events to JMS queue.

JMS Queue URL
t3://slc03jtt:7002

JMS Queue User
[Empty field]

JMS Password
[Empty field]

Re-enter JMS Password
[Empty field]

JMS Factory Name
jms/AnalyticsConnectionFactory

JMS Queue Name
jms/AnalyticsQueue

InstallAnywhere

Cancel Previous Next

The installer prompts you for the following JMS queue values:

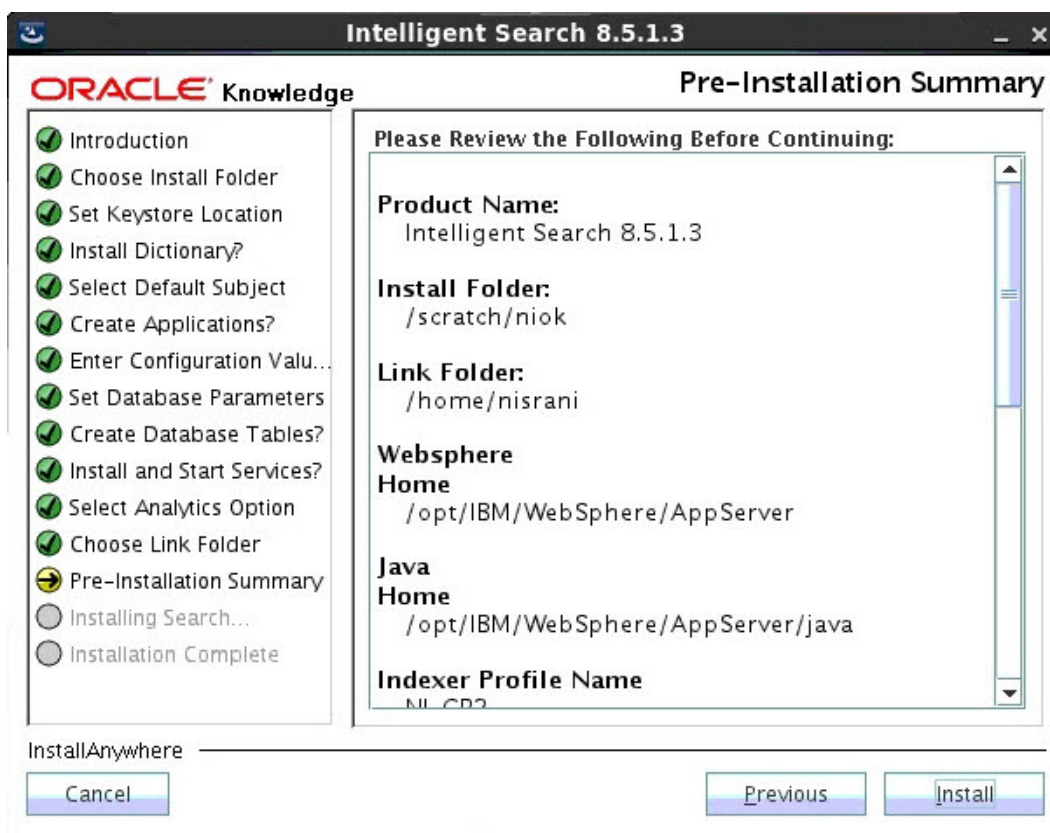
Value	Description
JMS Queue URL	Specify the WebSphere Server (WAS) domain that is serving the queue. For example: t3://<listen address>:<bootstrap port> Note: The URL must contain the host name of the queue server.
JMS Queue User	Specify the user ID for the WebSphere console/domain where the queue is configured.
JMS Password	Specify the password for the WebSphere console/domain where the queue is configured.
JMS Factory Name	Specify a JMS factory name or use the default name: jms/AnalyticsConnectionFactory.
JMS Queue Name	Specify a JMS factory name or use the default name: jms/AnalyticsQueue

Select **Next** to continue.

The installer displays the **Review the Pre-installation Summary** screen.

Review the Pre-installation Summary

The Pre-installation Summary screen displays.



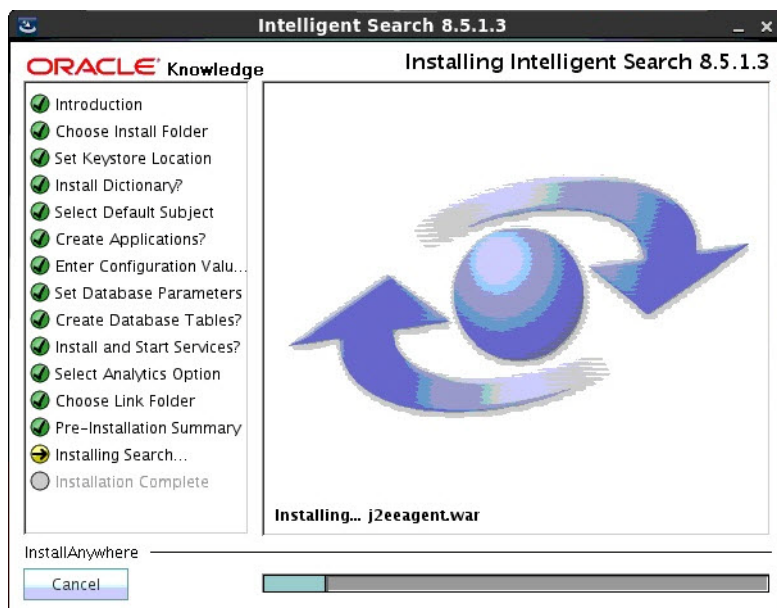
Review the preinstallation summary and make any necessary changes by selecting Previous.

Select **Install** to continue.

The installer displays a progress screen.

Install the Product Files

The installer displays a progress screen during installation.



When the installation is complete, the installer displays the **Complete the Installation** screen.

Complete the Installation

Intelligent Search is now installed in the specified location.



Select **Done** to exit the installer.

The installer executes its cleanup routines and terminates.

Complete Post-installation Configuration Tasks

Important! For a typical installation, you must complete post-installation configuration tasks (steps 3 - 9). For a consolidated installation, you only need to complete steps 1 and 2 below.

You must complete the following steps:

- 1 Set the Administrator account password in Workbench.
- 2 Restart the Oracle Knowledge Service.
- 3 Create a content processing instance.
- 4 Prepare the remote servers for search software installation.
- 5 Create remote content processing (workclient) instances on designated machines in the environment.
- 6 Create remote request processing (runtime) instances on designated machines in the environment.
- 7 Configure the application data stores.
- 8 Create the application database tables.
- 9 Restart the application.

Set the Administrator Account Password in Workbench

Perform the following steps to reset the Administrator password:

- 1 Open a command prompt into the Common environment for the content processing instance.
- 2 On Linux execute `workbench.sh`,
- 3 When the Workbench utility displays, enter the following (case sensitive):
 - a Username: Administrator
 - b Password: Administrator
- 4 Enter the new password for the Administrator account when prompted.

You can now log into the Search System Manager console using the new password for the Administrator account.

Accessing System Manager

Use System Manager to configure content processing and data storage options for your application.

You must first set the Administrator password using the Workbench utility before you can to log into System Manager. See “Set the Administrator Account Password in Workbench” on page 54.

The System Manager requires that the Oracle Knowledge Application Service is running.

To access System Manager:

- 1 Open a Web browser and enter the following URL:
`http://<hostname>:<port>/inquirawb/`
where `<hostname>:<port>` specifies the Websphere scheduler profile host name and port specified during the installation process, as described in “Create a Content Processing Instance” on page 55.
The System Manager Login page displays. The System Manager login fields are case-sensitive.

- 2 Log onto the System Manager as:
 - User name: Administrator
 - Password: <password defined in “Set the Administrator Account Password in Workbench”>.The System Manager displays the Job List.

- 3 From the Job List Screen, select the Tools menu in the upper-right portion of the screen.

- 4 Select **Advanced Config**.

The System Manager displays the Advanced Configuration page.

The Advanced Configuration Facility is divided into the following functional areas:

- System
- Instances

See the *Oracle Knowledge Intelligent Search Administration Guide* for more information on the Advanced Configuration Facility and advanced Oracle Knowledge administration.

Restart Intelligent Search from the WebSphere Profile Console

To start or restart Oracle Knowledge Intelligent Search from the WebSphere Profile Console, see the instructions in “Start the WebSphere Application Servers” on page 28.

You can now access the System Manager application, as described in “Accessing System Manager” on page 54.

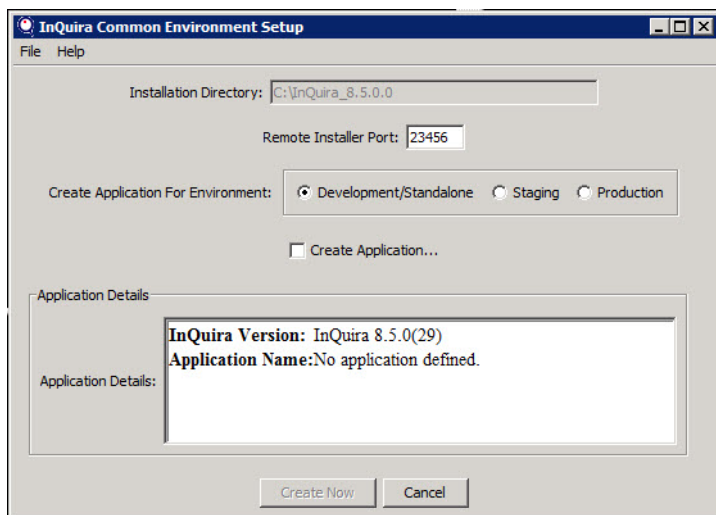
Create a Content Processing Instance

On your local server, start the Create Application program by executing the following command from the Common Environment:

Linux:

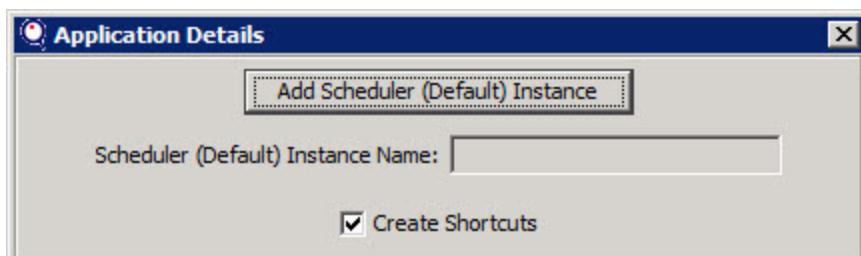
```
<install_root>/bin/createApp.sh
```

The Common Environment Create Application console opens, and the Common Environment Setup dialog displays.

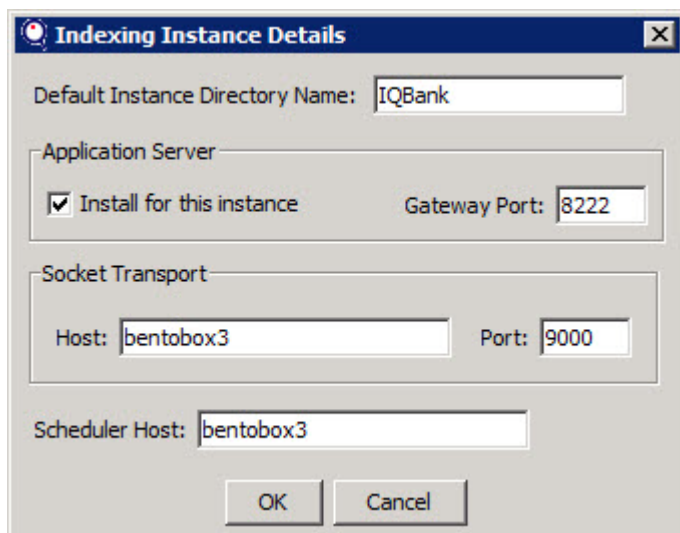


Perform the following steps to create a Content Processing instance on the local machine:

- 1 Select the appropriate environment.
- 2 Select **Create Application....**



- 3 Click **Add Scheduler (Default) Instance** in the new dialog window.
The Indexing Instance dialog box displays the following:



- 4 Provide a **Default Instance Directory Name** for the instance in this environment.
- 5 Verify the values entered by default, click **OK**. On WebSphere, the instance Gateway Port must be modified to match the **HTTP Transport Port** assigned when the application server profile was created for the Scheduler/Indexer instance.
- 6 Click **Create Configuration**.

Review the confirmation screen and save your changes to create the content processing instance. When you have finished creating the content processing instance:

- 1 Launch the Common Environment command line prompt.
- 2 While in the same Common Environment command Window used to create the Scheduler/Indexer instance, run the `initNavigation.sh` script, which generates the default taxonomy for the site.
- 3 Then, follow the instructions to build the web application (`buildWebApp.sh`).
- 4 Set JVM arguments (`setServerArgs.sh`).
- 5 Deploy the application (`deployApp.sh`).
- 6 Restart the server.

Prepare Remote Servers for Search Software Installation

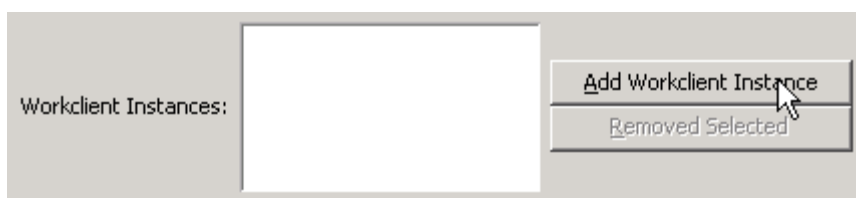
Prior to installing Search on remote servers - it is necessary to prepare the remote servers for search installation. To prepare the remote servers run the Search installer but DO NOT elect to install a Dictionary or the web applications (content processing instance or search runtimes). The installer provides the required software to communicate with the `createApp` utility.

On Linux, use the remote machine(s) ICE window to execute `remoteInstaller.sh`.

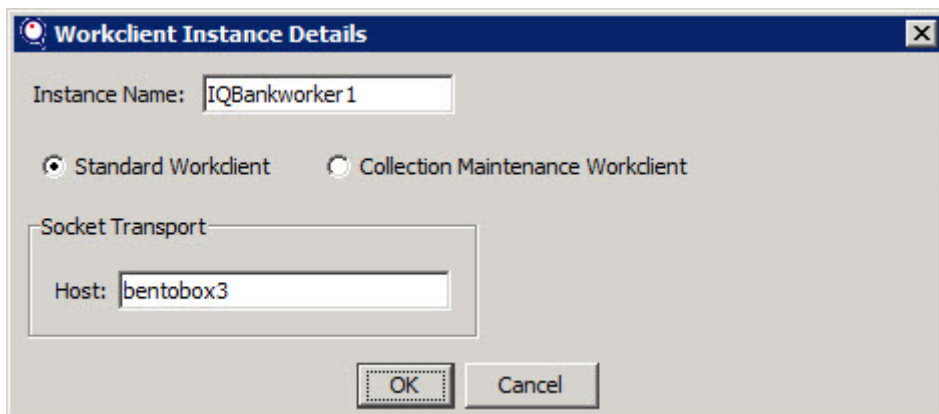
Create the Remote Content Processing (Workclient) Instance

After the base Search software is installed on a remote server, you can install an instance of a content processing work client on it using the `createApp` utility. Follow these instructions:

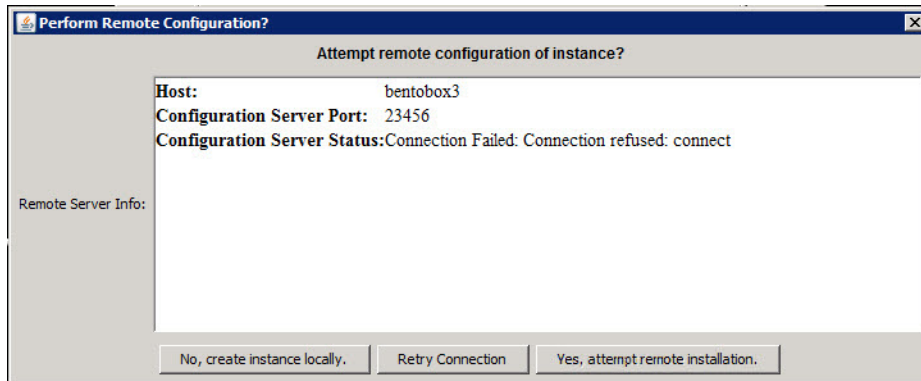
- 1 Start the `createApp` utility from the Common Environment.



- 2 Select the **Add Workclient Instance** option.
The Workclient Instance Details dialog displays.



- 3 Fill in the required fields for the remote workclient server.
- 4 Select **OK**.
The Create Application program attempts to connect to the specified processor, and displays connection status:



5 Select Yes, attempt remote installation.

If you are not creating a distributed multi-server Oracle Knowledge application Search installation (using remote processors) select **No, create instance locally.**

The Application Details dialog displays the settings for the defined instances that are created.

Create the Remote Request Processing (Runtime) Instance

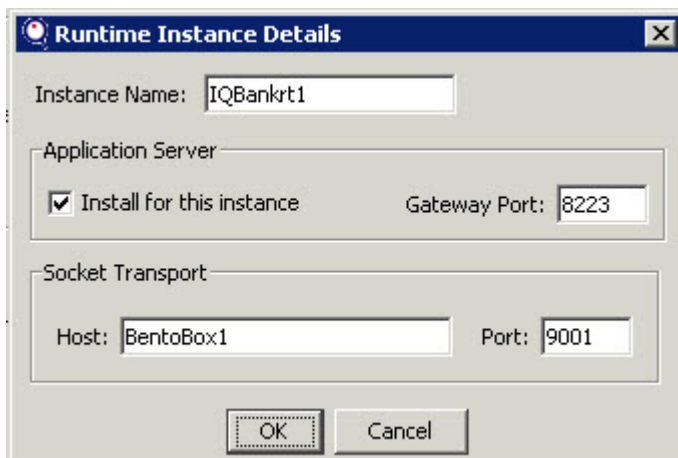
After the base Search software is installed on a remote server, you can install an instance on your local server, the Application Details dialog displays an option to create a remote request processing (Runtime) instance.

Do the following:

1 Start the createApp utility from the Common Environment.

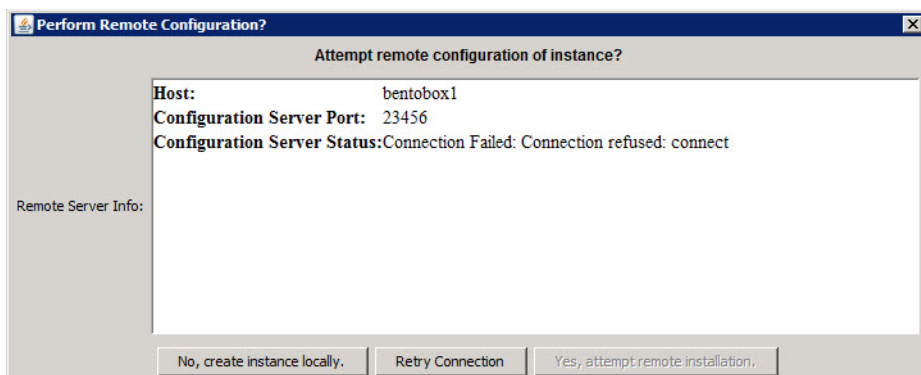


2 Select the Add Runtime Instance option. The runtime Instance Details dialog displays.



- 3 Fill in the required fields for the remote runtime instance. On WebSphere, the instance Gateway Port must be modified to match the **HTTP Transport Port** assigned when the application server profile was created for the runtime instance.
- 4 Select **OK**.

The `createApp` utility attempts to connect to the specified processor, and displays connection status.



- 5 Select **Yes, attempt remote installation**.

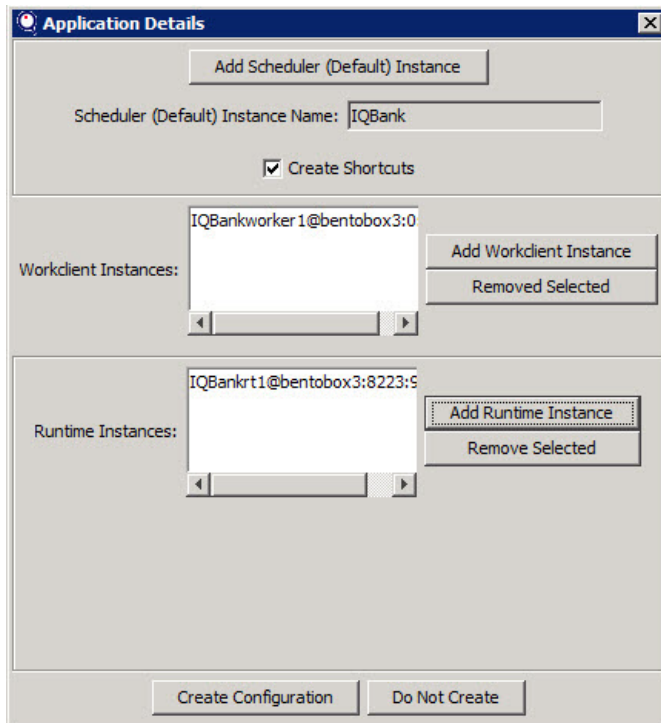
If you are installing the Runtime instance on the local server, select **No, create instance locally**.

The Application Details dialog displays the settings for the defined instances that are created.

Confirm the Distributed Application Details

Note: Only one runtime instance can be created at a time. For installing multiple runtimes on a single WAS instance, please contact Customer Support or Oracle Consulting.

On your local server, the Application Details dialog displays the parameters of the defined instances to create.



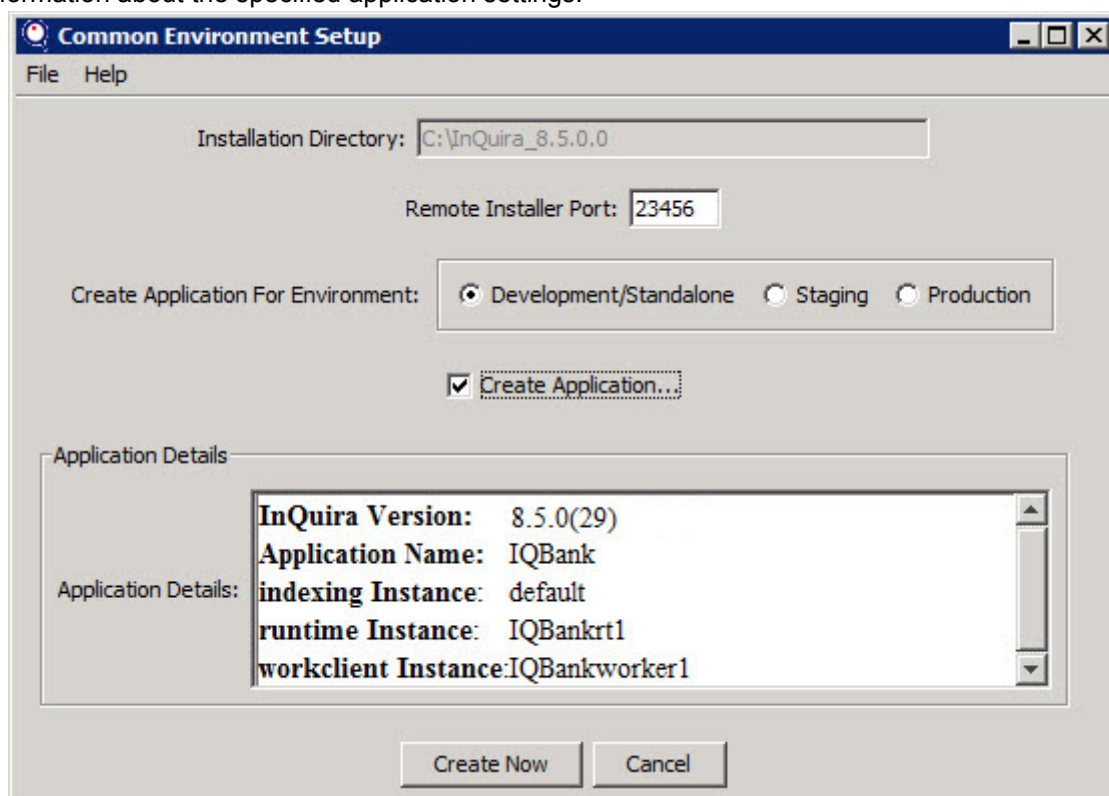
The "Application Details" dialog box is shown. It has a title bar with a close button. The main area is divided into three sections. The top section has a button "Add Scheduler (Default) Instance" and a text field "Scheduler (Default) Instance Name:" containing "IQBank". Below this is a checked checkbox "Create Shortcuts". The middle section is labeled "Workclient Instances:" and contains a list box with "IQBankworker 1@bentobox3:0". To the right of the list box are buttons "Add Workclient Instance" and "Removed Selected". The bottom section is labeled "Runtime Instances:" and contains a list box with "IQBankr1@bentobox3:8223:5". To the right of the list box are buttons "Add Runtime Instance" and "Remove Selected". At the bottom of the dialog are two buttons: "Create Configuration" and "Do Not Create".

Select **Create Configuration**.

The Oracle Knowledge Common Environment Setup dialog displays summary information about the specified application settings, as described in "Create the Specified Distributed Application" on page 62.

Create the Specified Distributed Application

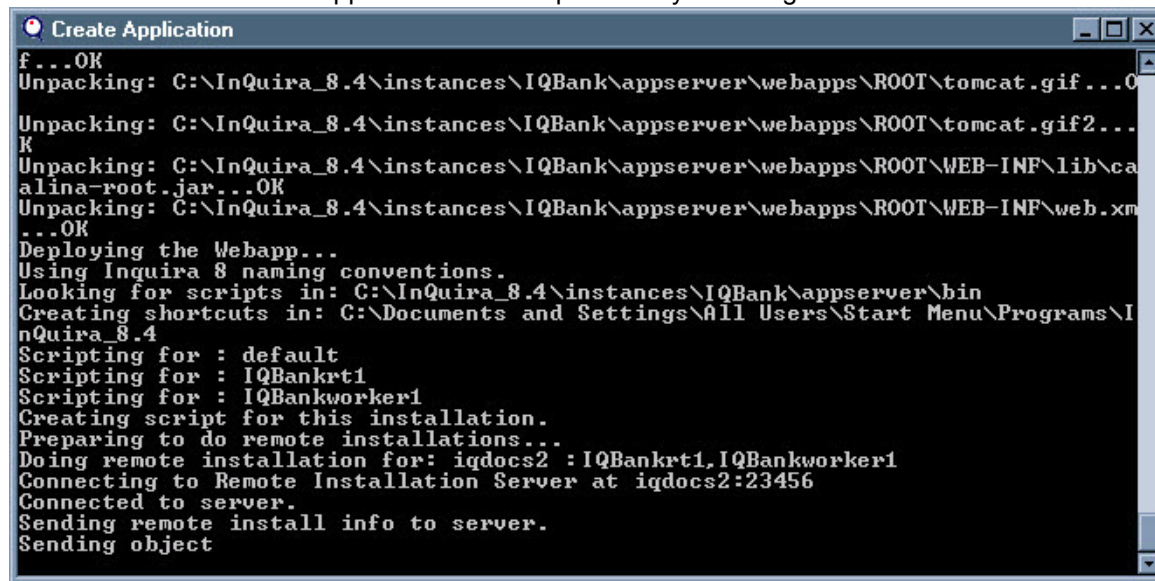
On your local server, the Oracle Knowledge Common Environment Setup dialog displays summary information about the specified application settings.



1 Select **Create Now**.

The instance certification is saved locally and an attempt is made to send it to each remote instance for which **Yes, attempt remote installation** was selected. If the ICE remote installer is running on each of these systems, each receives and saves their respective configuration.

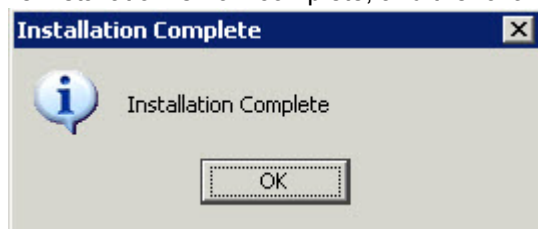
You can monitor the application creation process by watching the console.



```

Create Application
f...OK
Unpacking: C:\InQuira_8.4\instances\IQBank\appserver\webapps\ROOT\tomcat.gif...O
K
Unpacking: C:\InQuira_8.4\instances\IQBank\appserver\webapps\ROOT\tomcat.gif2...
K
Unpacking: C:\InQuira_8.4\instances\IQBank\appserver\webapps\ROOT\WEB-INF\lib\ca
alina-root.jar...OK
Unpacking: C:\InQuira_8.4\instances\IQBank\appserver\webapps\ROOT\WEB-INF\web.xml
...OK
Deploying the Webapp...
Using InQuira 8 naming conventions.
Looking for scripts in: C:\InQuira_8.4\instances\IQBank\appserver\bin
Creating shortcuts in: C:\Documents and Settings\All Users\Start Menu\Programs\I
nQuira_8.4
Scripting for : default
Scripting for : IQBankrt1
Scripting for : IQBankworker1
Creating script for this installation.
Preparing to do remote installations...
Doing remote installation for: iqdocs2 : IQBankrt1,IQBankworker1
Connecting to Remote Installation Server at iqdocs2:23456
Connected to server.
Sending remote install info to server.
Sending object
  
```

The installation is now complete, and the following message displays:



2 Select **OK**.

The createApp utility closes.

Configure the Application Data Stores and Sources

To configure the application data stores, you access the Advanced Configuration section in System Manager.

Configuring the Application Data Stores

An Oracle Knowledge application requires configured data sources for various types of application data. Using System Manager (see Starting the System Manager), you configure an application to use a single data source for the required data tables, which includes:

- The Content Store, which contains the indexed documents used to answer users' questions.
- The Quality Monitor data store, which stores data used for testing application request processing performance.

If you use the optional Oracle Knowledge Information Manager product, you must configure data sources, as described in the Information Manager product documentation.

You configure data sources for an application by:

- Specifying database connection information for each component
- Creating the data tables

To configure data sources for additional components, select the corresponding Advanced Configuration facility menu items, and configure the appropriate data sources:

To Configure the Data Source for...

Select...

Content Store	Content Storage in the Instances portion of the Advanced Configuration facility.
Quality Monitor Store	Workbench , in the System section of the Advanced Configuration facility.

Configuring the Content Store Data Source

The Oracle Knowledge Content Store is the database that contains the application content used in request processing.

You must configure a data source for the Content Store to store content for use by the application.

You configure the data source for the Content Store by specifying appropriate values for the fields in the Content Store Data Sources page of the Advanced Configuration Facility.

You can use a single database as a data source for multiple Oracle Knowledge components; for example you can configure the same database for the Content Store and the Oracle Knowledge module.

To configure a data source for the Content Store do the following:

- 1 Select **Content Storage** from the Instances section of the Advanced Configuration Facility menu. The Content Storage page displays.

ORACLE Advanced Configuration [HELP 71](#)

Content Storage

☐ Show Advanced Options [Edit](#)

Data Source : inquir_a_Oracle

Default Encoding ▶ content.encoding[Cp1252] (Cp1252)content.encoding[Cp1252] (ISO-8859-1)

Default Language ▶ English United States

[Edit](#)

- 2 Select **Edit** on the Content Storage page. Content Storage page displays the list of defined data sources in the Data Source field.

ORACLE® Advanced Configuration [HELP](#)

Editing: Content Storage

☐ Show Advanced Options OK Cancel

Data Source : [Edit List](#)

Default Encoding ▶

Default Language ▶

OK Cancel

- 3 Select **Edit List** in the Data Source field.
The Data Sources page displays the currently configured data sources.
- 4 Select the copy icon next to appropriate sample data source, for example, SAMPLE_MSSQL.

ORACLE® Advanced Configuration [HELP](#)

Editing: Content Storage > Data Sources OK Cancel

Data Sources :

inquire_Oracle		
SAMPLE_MSSQL		
SAMPLE_MSSQL (copy)		
SAMPLE_ORACLE		

[Add New Item](#)

OK Cancel

- 5 Select the **Data Sources** name to edit that item.
The Data Sources page displays fields for entering data source information.

ORACLE Advanced Configuration HELP ?

Editing: Content Storage > Data Sources > Data Sources

Item Name ▶ Inquire_Oracle (copy)

Data Sources

datasourceType ▶ Oracle [Edit List](#)

URL ▶ jdbc:oracle:thin:@slc01n:1521:slc01n

User ▶ Administrator

Password :

Properties

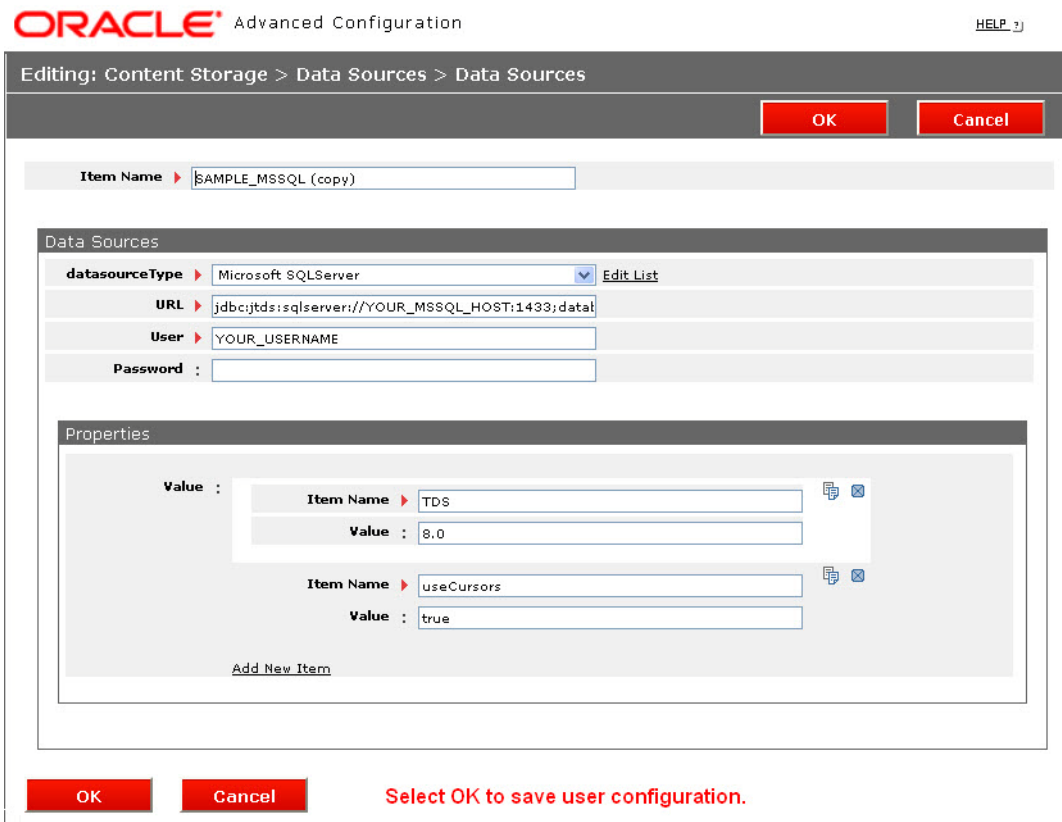
Value : (none)
[Add New Item](#)

OK **Cancel**

- 6 Specify the following parameters to configure the data source:

Parameter	Description
Item Name	Specify a name for the data source. The name must be a single string without spaces.
Datasource Type	Specify the database type. Select the type of data source from the list of supported types (ORACLE, MSSQL).
URL	Specify the connection URL for the JDBC connection. Enter the value of the connection URL as appropriate for your RDBMS and JDBC driver, for example, YOUR_HOST_NAME and YOUR_DATABASE_NAME.
User	Specify the user name to use for the specified data source.
Password	Specify the password to use for the specified data source. The Advanced Configuration Facility encrypts the saved password; the contents of the field might not appear to match the specified password.
Properties	Specify any additional required connection properties. The sample data source configurations might contain additional default properties.
TDS	(MS SQL Server only) Specifies the Tabular Data Stream (TDS) version. TDS is the protocol that SQL Server uses to communicate with database clients. SQL Server 2005 uses Version 8.0. Newer database server versions usually understand older protocol versions.
UseCursors	<p>(MS SQL Server only) Specifies that the TDS driver uses server side cursors instead of direct selects (AKA firehose cursors) for forward-only read-only result sets.</p> <p>For other types of result sets, server- or client-side cursors are always used.</p> <p>SQL Server creates a fast forward-only cursor when this property is set to true.</p>

- 7 Select **OK** to save your changes while reverting to the Content Storage page.



ORACLE Advanced Configuration HELP ?

Editing: Content Storage > Data Sources > Data Sources

Item Name ▶ SAMPLE_MSSQL (copy)

Data Sources

datasourceType ▶ Microsoft SQLServer Edit List

URL ▶ jdbc:jtds:sqlserver://YOUR_MSSQL_HOST:1433;data

User ▶ YOUR_USERNAME

Password :

Properties

Value :

Item Name ▶ TDS ✎ ✕

Value : 8.0

Item Name ▶ useCursors ✎ ✕

Value : true

[Add New Item](#)

OK **Cancel** Select OK to save user configuration.

- 8 Select **OK**.
- 9 Select your newly created Data Source from the drop down list.
- 10 Select **OK**.
- 11 Select **Save**.

Configuring the Quality Monitor Data Source

The Oracle Knowledge Quality Monitor Data Store is the database that stores data used for testing application request processing accuracy.

You must configure a data source for the Quality Monitor Data Store to store content for use by the application. See in for more information. You configure the data source for the Quality Monitor by specifying appropriate values for the fields in the Workbench page of the Advanced Configuration Facility. It is possible to re-use the same schema as the Content Store database tables.

To configure a data source for the application:

- 1 Select **Workbench** from the **System** section of the **Advanced Configuration** facility menu.
The Workbench page displays.
- 2 Select **Edit** on the Workbench page.
Workbench page displays a drop down list of data sources.

- 3 If you want to re-use the Content Store data source, select that data source. Otherwise, create a new data source for your Quality Monitor schema, following step 3 - step 9 under “Configuring the Content Store Data Source” on page 64.
- 4 Select **OK** to save your changes and return to the Advanced Configuration page.
- 5 Select **Save** on the Workbench page.

You can now create the tables for the Oracle Knowledge content store, as described in [Create the Search Application Database Tables](#).

Create the Search Application Database Tables

The Common Environment provides a facility to create the Content Store and Quality Monitor database tables for the configured data source.

To create the content store database tables, enter the following command from the Common Environment prompt:

- 1 On Linux:

```
createContentStore.sh
```

- 2 Restart the application instance. See the instructions under “Restarting the Application” on page 71.

To create the Quality Monitor database tables, enter the following command from the Common Environment prompt:

- 1 On Linux:

```
createQualityMonitorStore.sh
```

- 2 Restart the application instance. See the instructions under “Restarting the Application” on page 71.

View the Oracle Knowledge Search Application Logs

The Common Environment provides a facility for viewing the STDOUT and STDERR logs for the Oracle Knowledge Web application.

To view the application logs:

Enter the following command at the Common Environment command prompt:

```
tailTheLog.sh -a
```

Oracle Knowledge displays application log information in a separate window.

See the *Oracle Knowledge Intelligent Search Administration Guide* for more information on Oracle Knowledge logs and how to access log data.

Work with the Configured Application

The Oracle Knowledge application is now configured and ready to use. You can now begin working with the application to process content, schedule tasks, and develop language processing components using the System Manager, and additional Oracle Knowledge tools and processes.

To begin working with the application by processing content and scheduling jobs, see the *Oracle Knowledge Intelligent Search Administration Guide*.

To begin working with the application by developing language processing components, see *Oracle Knowledge Intelligent Search Language Administration Guide* and *Oracle Knowledge Intelligent Search Language Developers' Guide*.

Installing and Configuring Information Manager on WebSphere

This document describes the installation and configuration for Oracle Knowledge Information Manager on IBM WebSphere® Application Server (WAS). This document provides the following information:

- **Prerequisites**
- **Run the Information Manager WAS Installer**
- **Start Information Manager from the WebSphere Profile Console**
- **Install InfoCenter**

Important! Use the WebSphere documentation to install WAS. This document provides the necessary configuration parameters to use WebSphere with Oracle Knowledge but *does not* provide complete WebSphere installation instructions.

Prerequisites

Please complete the following requirements before configuring WAS for Oracle Knowledge:

- Install WAS 8.0.0.6 on Linux 6
 - After you install, you must complete the configuration described in “Preparing to Install Oracle Knowledge on WebSphere” on page 25. When finished, make certain the server is running.
- Install and configure the Oracle database, creating the necessary database users.

Run the Information Manager WAS Installer

Start the installer by locating and executing the appropriate version of the installer for your environment.

To start the installer on Linux:

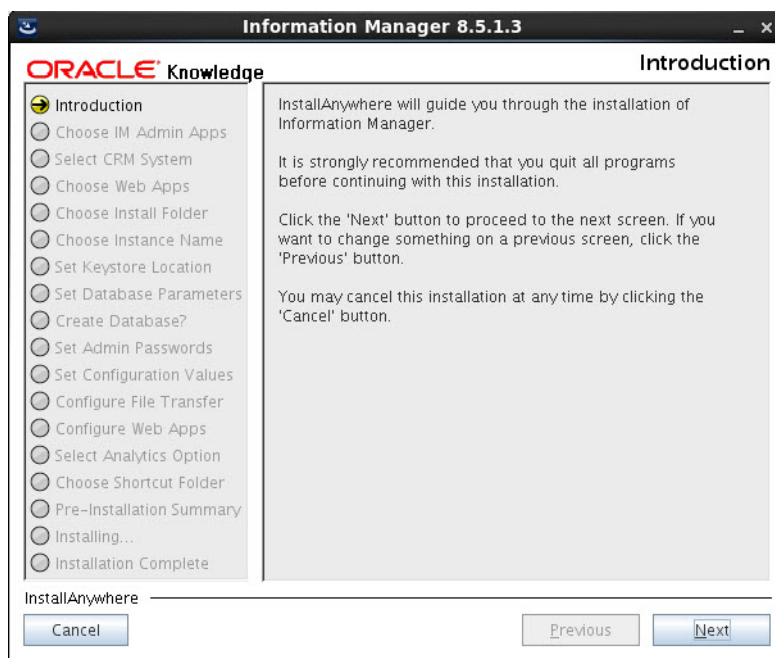
```
./<Installer Directory>/install_im_websphere_LINUXx64_build_68.bin
```

On Linux, Oracle Knowledge software must be installed using a non-root user. Before running the installer, create a standard Oracle Knowledge admin (Linux) user in the operating system. This user installs and runs the Oracle Knowledge software and must be given permission to access network shares while running as a service.

When the initialization progress dialog completes, the installer displays the introduction screen.

The Information Manager Installation Introduction

The installer's introduction screen provides general information about the installation process and recommends that you close any other programs that are currently running.

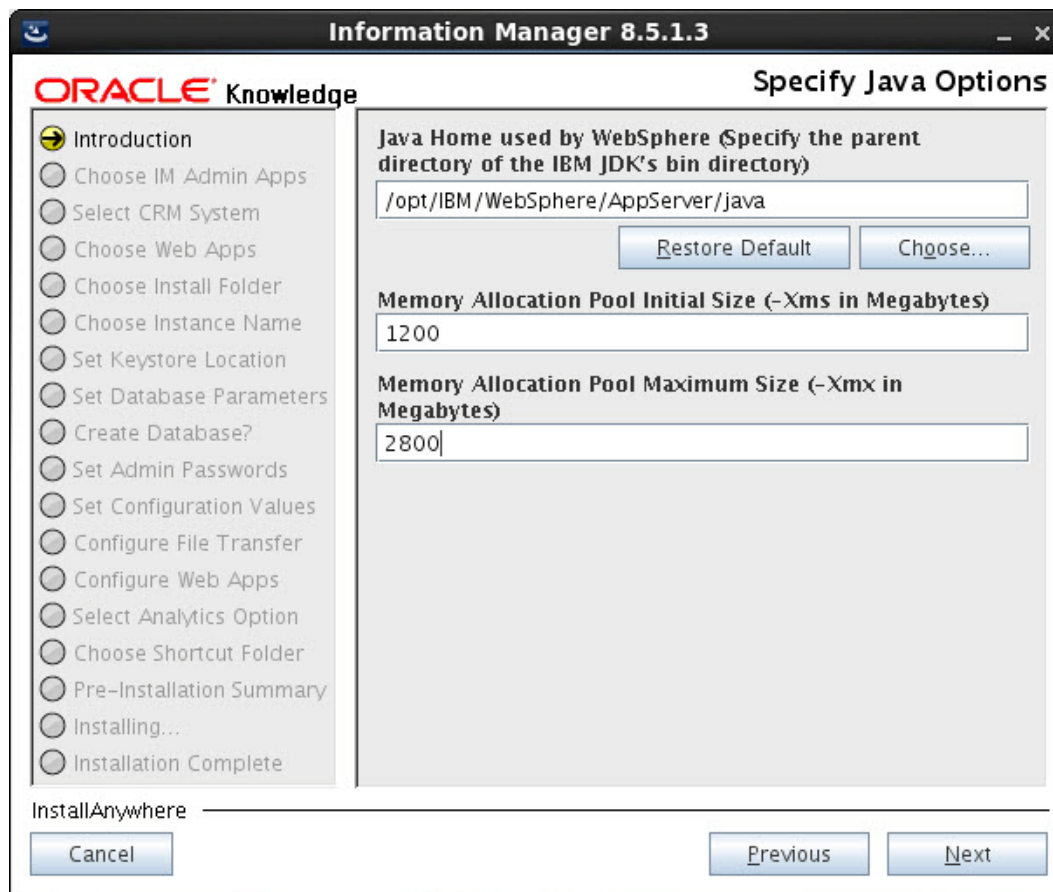


Select **Next** to continue.

The installer displays the **Specify the Java Options** screen.

Specify the Java Options

Specify the Java Home and memory allocation arguments.



Enter the following parameters:

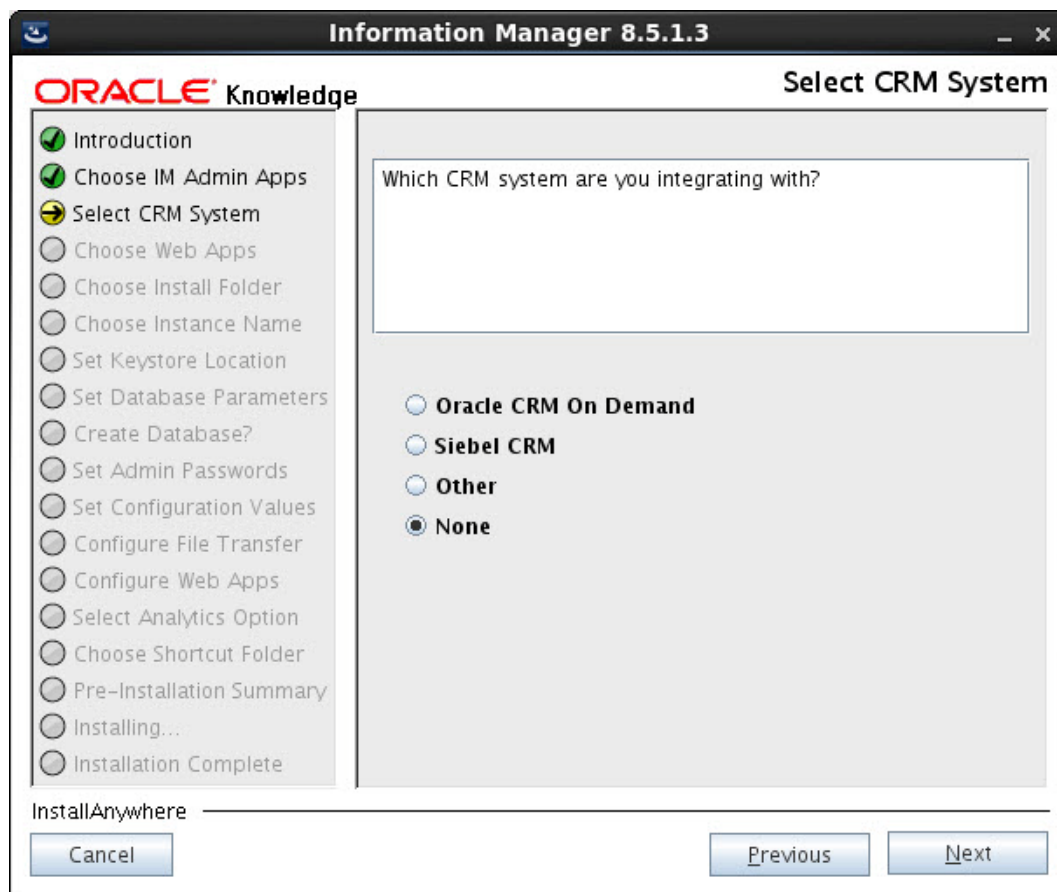
Option	Description
Java Home used by WebSphere	Specify the parent directory of the IBM JDK's bin directory (for example, <code>/opt/IBM/WebSphere/AppServer/java</code>). This must be the same <code>JAVA_HOME</code> directory used by the WebSphere server.
Memory Allocation Pool Initial Size	Specify the <code>-XmsnM</code> argument, where <i>n</i> is a number of megabytes. The default value is 1200.
Memory Allocation Pool Maximum Size	Specify the <code>-XmxnM</code> argument, where <i>n</i> is a number of megabytes. The default value is 2800.

Select **Next** to continue.

The installer displays the **Select the CRM System** screen.

Select the CRM System

Select the CRM system with which you are integrating. Choose **Other** to install the base iConnect software for use when creating custom integrations to non supported CRM systems. Choose **None** to enable the default web self service application, InfoCenter, to be installed without installing any CRM integration support.



The installer displays the following options:

- Oracle CRM On Demand
- Siebel CRM
- Other
- None

Select the CRM system files to install. The choice of CRM affects the available Web applications for installation.

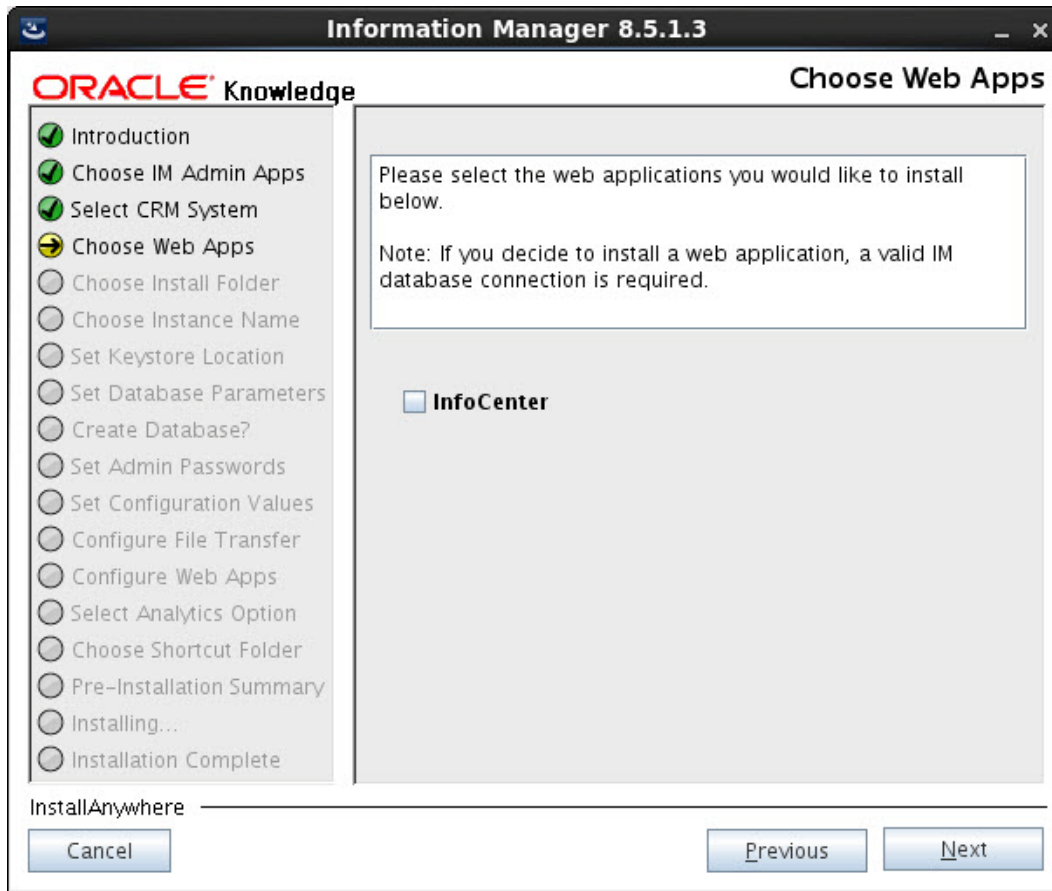
Select **Next** to continue.

If Siebel CRM is selected, the installer displays the **Configure Information Manager for Siebel CRM** screen. Otherwise, the installer displays the **Choose the Web Applications to Install** screen.

Choose the Web Applications to Install

Installing Web applications requires configuration to an existing Information Manager repository. As you initially install Information Manager do not select any Web applications. After you have installed IM and created a new repository, rerun the installer to make selections here and install the necessary Web applications.

Select the Web applications to install: iConnect, iConnect for Siebel, iConnect for Oracle CRM On Demand, Information Center (InfoCenter), or Self-Service Portal (SSP). The Web applications can be installed independently or in any available combination.



The Web application choices vary with the CRM system chosen. Refer to the following table for the choices of Web applications available for each of the CRM Systems:

CRM System	iConnect	InfoCenter	SSP
Oracle CRM On Demand	Yes	No	Yes
Siebel CRM	Yes	Yes	No
Other	Yes	Yes	No
None	No	Yes	No

Select **Next** to continue.

The installer displays the **Select the Installation Location** screen.

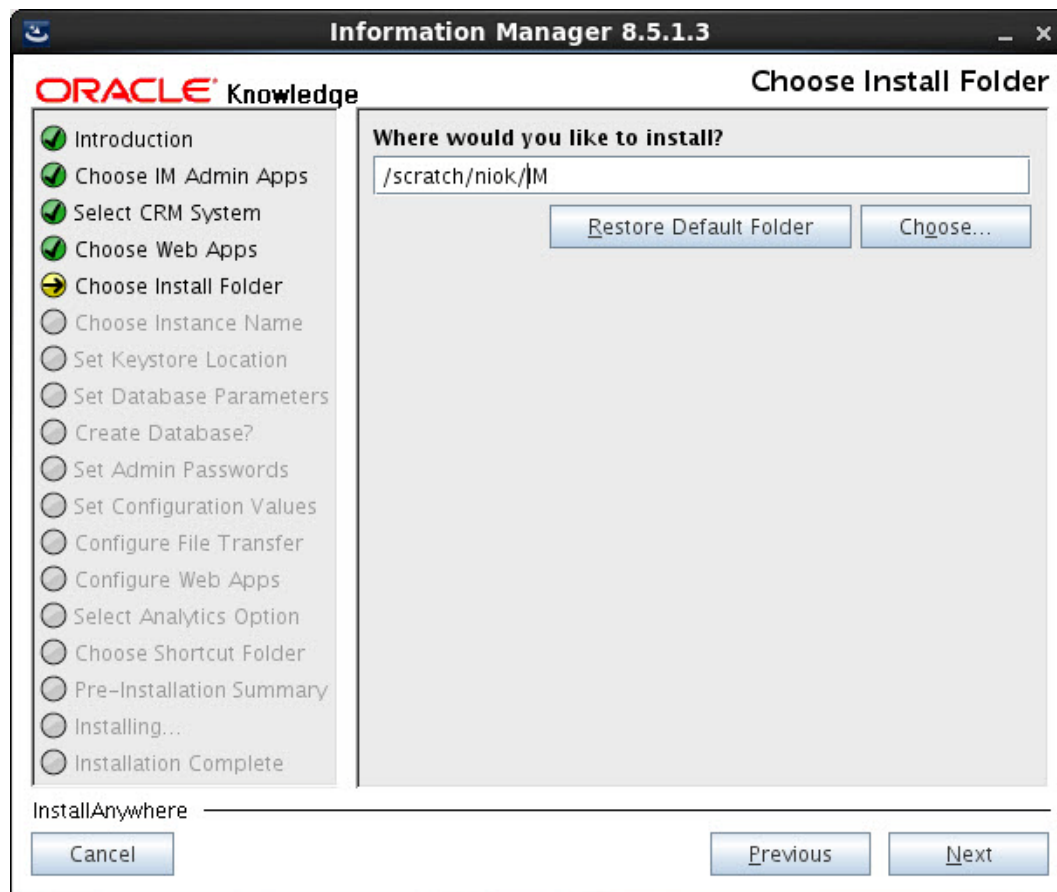
Select the Installation Location

Select the location at which you want to install Information Manager.

The installer displays the default Oracle Knowledge installation directory:

- <user_home>/Oracle/Knowledge/IM on Linux

You can install at any location. The suggested location is the base Oracle Knowledge application directory for Information Manager.



Specify the appropriate directory.

Select **Choose** to open a file browser and select an alternate Oracle Knowledge base directory. Use the **Restore Default Folder** option to reset the default installation directory, if necessary.

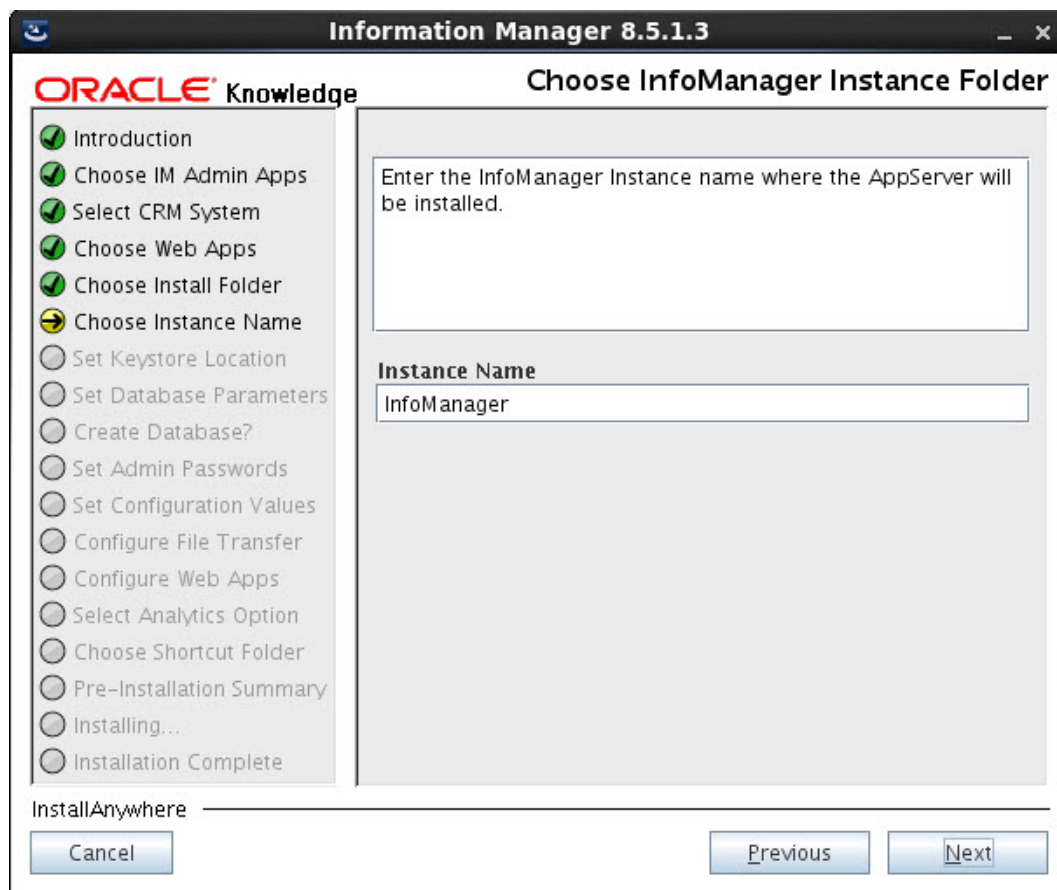
Select **Next** to continue.

If the location you selected is appropriate, the installer displays the Instance Name specification screen. If the installer detects that the location contains an existing Oracle Knowledge Intelligent Search or Analytics installation or an existing Oracle Knowledge Information Manager installation with one or more of the applications you selected already installed, the installer prompts you to provide an alternate location.

The installer displays the **Specify the Information Manager Instance Folder** screen.

Specify the Information Manager Instance Folder

Enter the Information Manager instance folder where the application server is installed. This is the instance name defined in step 7 under **Create WebSphere Profile**.



Enter the **Instance Name**.

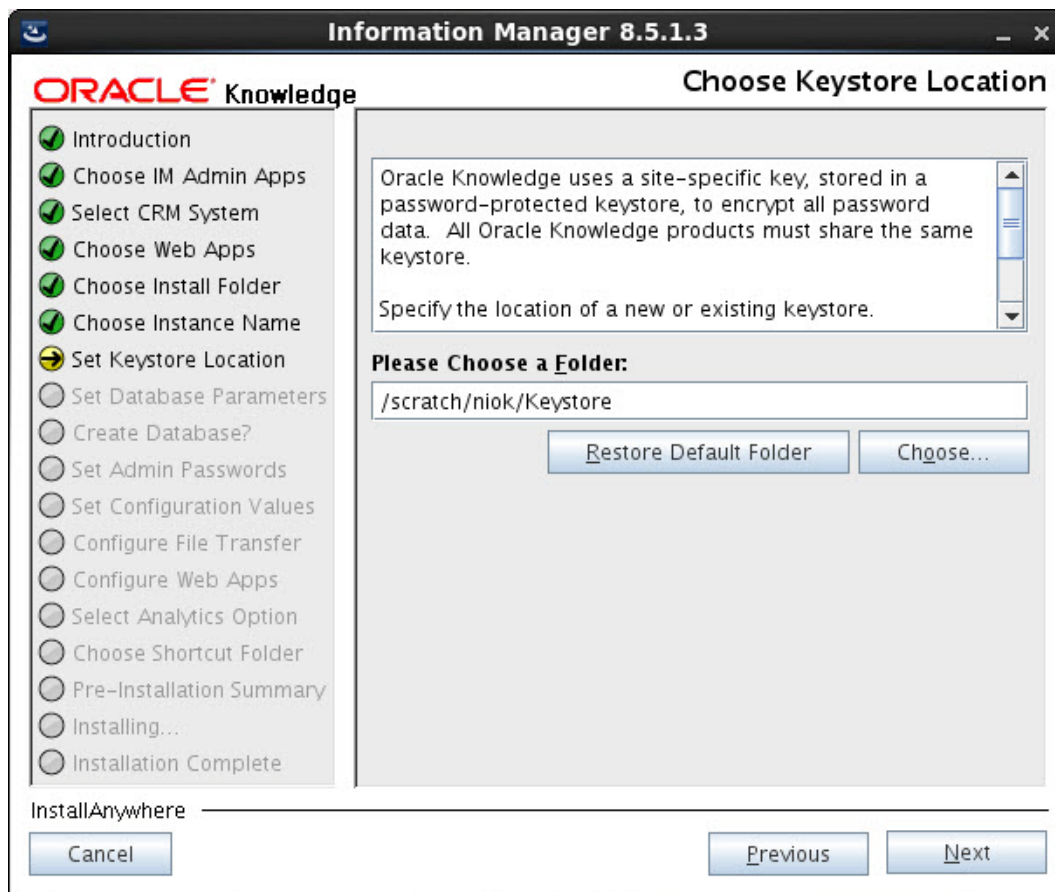
Select **Next** to continue.

The installer prompts you to **Configure the Keystore**.

Configure the Keystore

The installer prompts you to specify the location of the Oracle Knowledge keystore. If you have already installed Oracle Knowledge Search or Analytics, use the same keystore created during that installation by selecting the location of that keystore. If you are installing Information Manager without Search or Analytics, create a new keystore.

For more information about the keystore, see “Creating the Oracle Knowledge Keystore” on page 17.



You must configure a keystore that is used by all Oracle Knowledge products, as described in “Creating the Oracle Knowledge Keystore” on page 17.

Specify one of the following:

- the location of an existing keystore that can be shared by all Oracle Knowledge products.
- the location of a new keystore that the installation program creates.

The default key store location is:

`<INSTALL_FOLDER_PARENT>/Keystore`

where:

`<INSTALL_FOLDER_PARENT>` is the parent folder of the top-level installation folder. For example, if you are installing in `<user_home>/Oracle/Knowledge/Search`, then the installer uses the default key store location: `<user_home >/Oracle/Knowledge/Keystore`.

Select **Next** to continue.

The installation program checks whether a keystore exists in the specified location.

If you specify a new keystore location, the installer prompts you to create the keystore, displaying the **Creating the Keystore** screen.

If you specify the location of an existing keystore, the installer uses the existing keystore files to encrypt the necessary values, as required, and displays the **Specify the Information Manager Database Type** screen.

Creating the Keystore

The installation program prompts you to create the keystore.

Select **Yes**.

Select **Next** to continue.

The installation program creates the keystore and prompts you to specify key store parameters, displaying the **Specifying Keystore Parameters** screen.

Specifying Keystore Parameters

The installer prompts you to specify keystore security parameters:

If you chose to create a new keystore, the installer prompts you to specify:

Field	Description
Keystore Password	The password used to protect the keystore.
Site Name	The unique identifier used to identify the encryption key.
Key Password	The password used to protect the encryption key in the keystore.

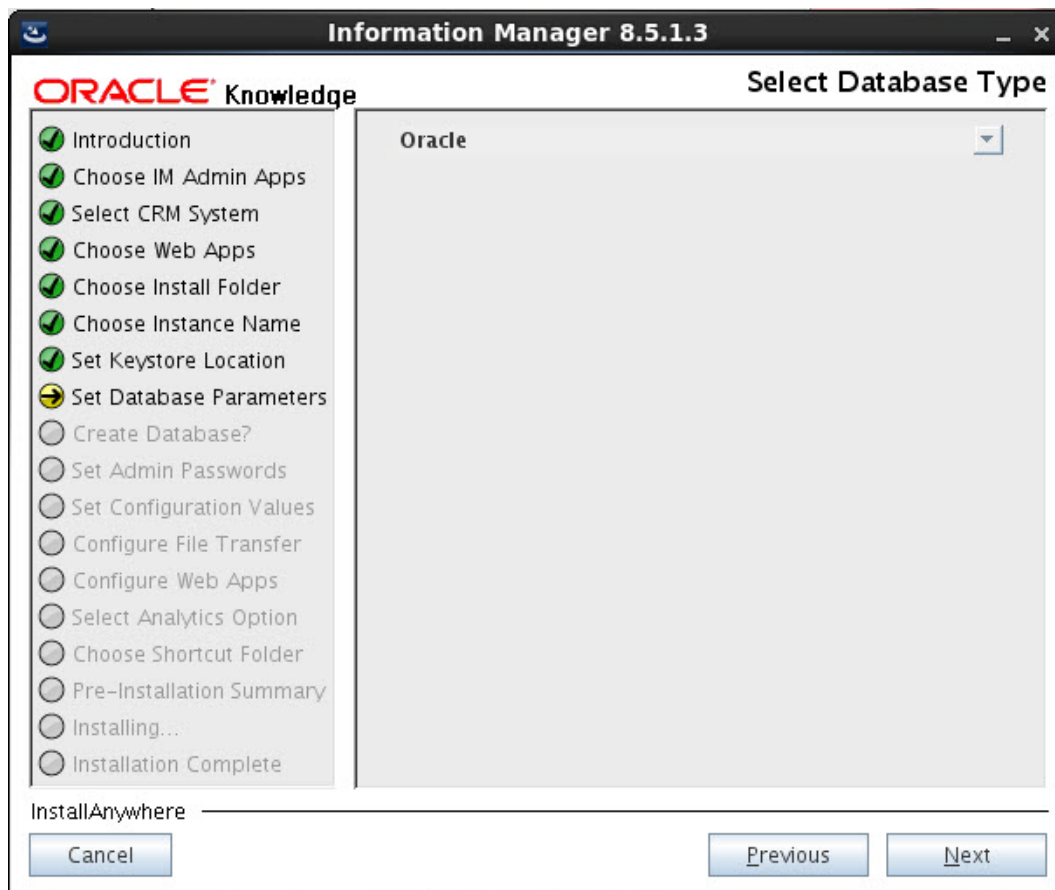
Important! We recommend that you record the keystore parameter values securely for future reference.

Select **Next** to continue.

The installer displays the **Specify the Information Manager Database Type** screen.

Specify the Information Manager Database Type

Select the type of database that you use for the Information Manager. The installation process prompts you to automatically create the database tables if they have not been created previously. See “Database Schema Requirements” on page 12 in “Installation Requirements” on page 11 for more information on supported databases.



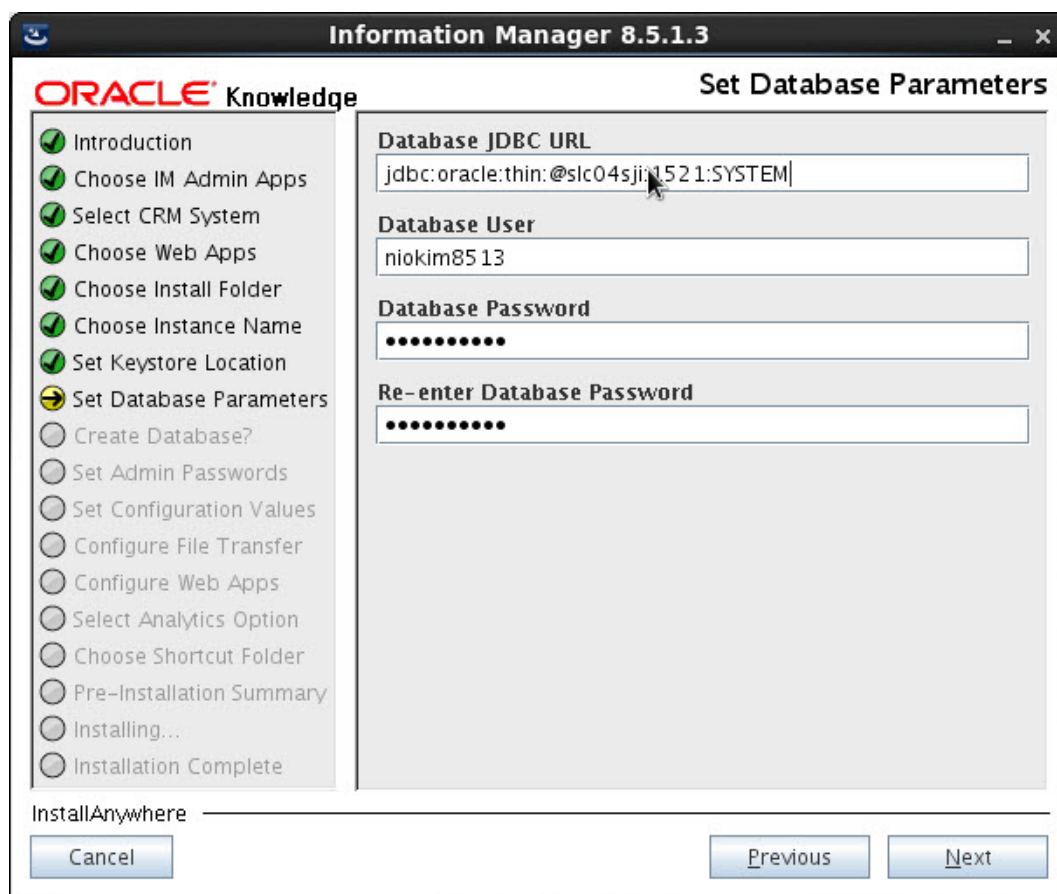
Select the appropriate database type.

Select **Next** to continue.

The installer displays the **Specify Database Connection Properties** screen.

Specify Database Connection Properties

Specify the connection properties for the Information Manager database. The database user must already exist, the installer must validate the database connection information before allowing you to proceed.



Specify the appropriate values for the following database parameters:

Database Property	Description
Database JDBC URL	Specify the connection URL for the JDBC connection. The installer populates this field with a template based on the specified database type and the local hostname. Edit the connection URL as appropriate for your RDBMS and JDBC driver.
Database User	Specify the user name to use for the specified database.
Database Password	Specify the password to use for the specified database.
Database Name	Specify the database name. (MSSQL Server only)

Select **Next** to continue.

The installer displays the **Specify Database Table Creation** screen.

Specify Database Table Creation

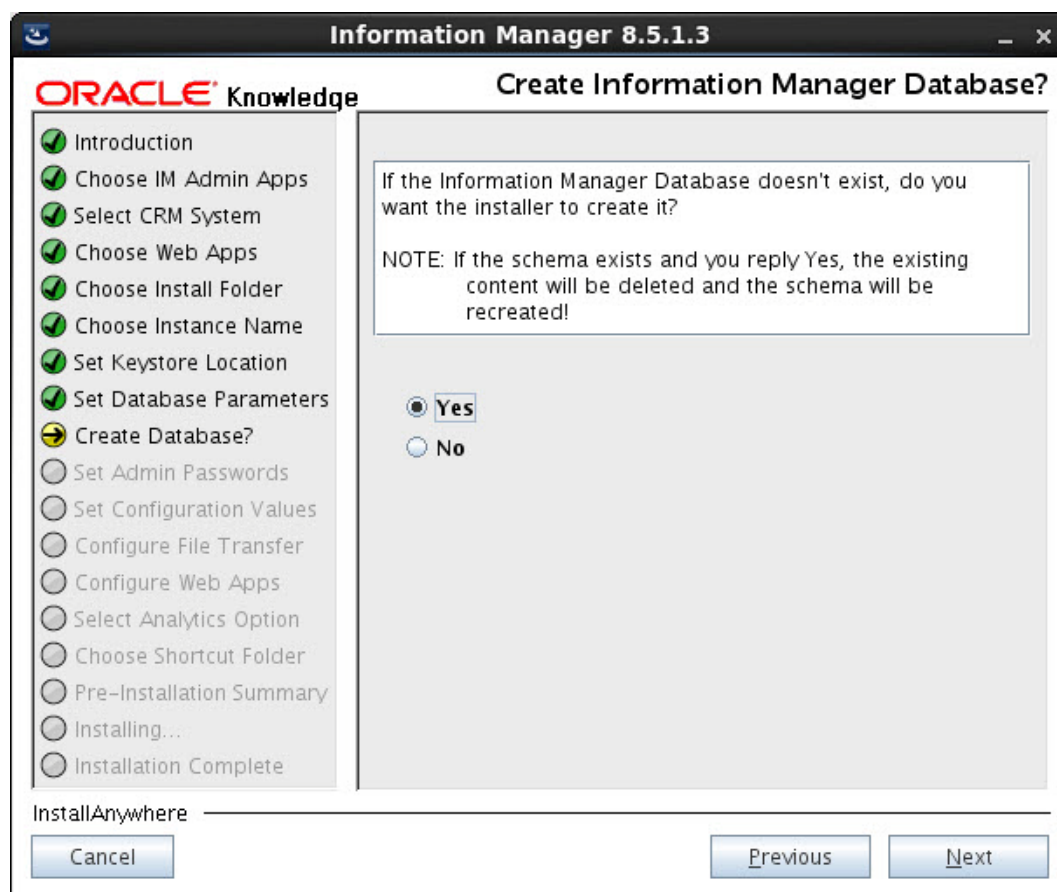
The installer prompts you to specify whether the installer automatically creates the Information Manager tables in the specified database. If you do not create the tables during installation, you must create the tables manually, as described in the *Oracle Knowledge Information Manager Administration Guide* prior to using Information Manager.

The database connection properties are stored in the `$Oracle Knowledge_ROOT/InfoManager/config/IMADMIN/application.properties` and `$Oracle Knowledge_ROOT/InfoManager/config/IMWEBSERVICES/application.properties` files after the installation has been completed successfully.

Select the desired option, then select Next to continue.

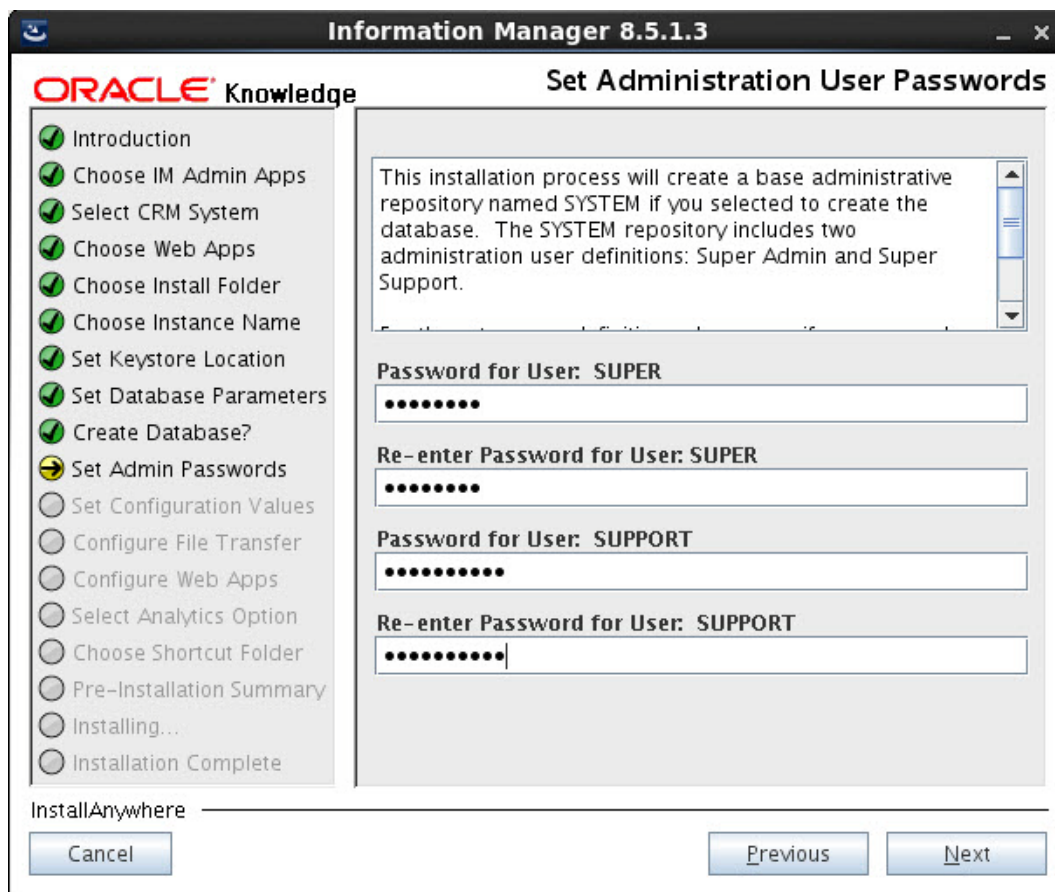
Note: This screen is only available if no Web applications are selected to be installed.

The installer displays the administration user passwords configuration screen.



Set the Administrator Passwords

The base administrative repository named SYSTEM includes two administrative user definitions: Super Admin and Super Support. Specify a password for each of these user definitions.



Enter passwords for SUPER and SUPPORT administrators. Note the new passwords.

Select **Next** to continue.

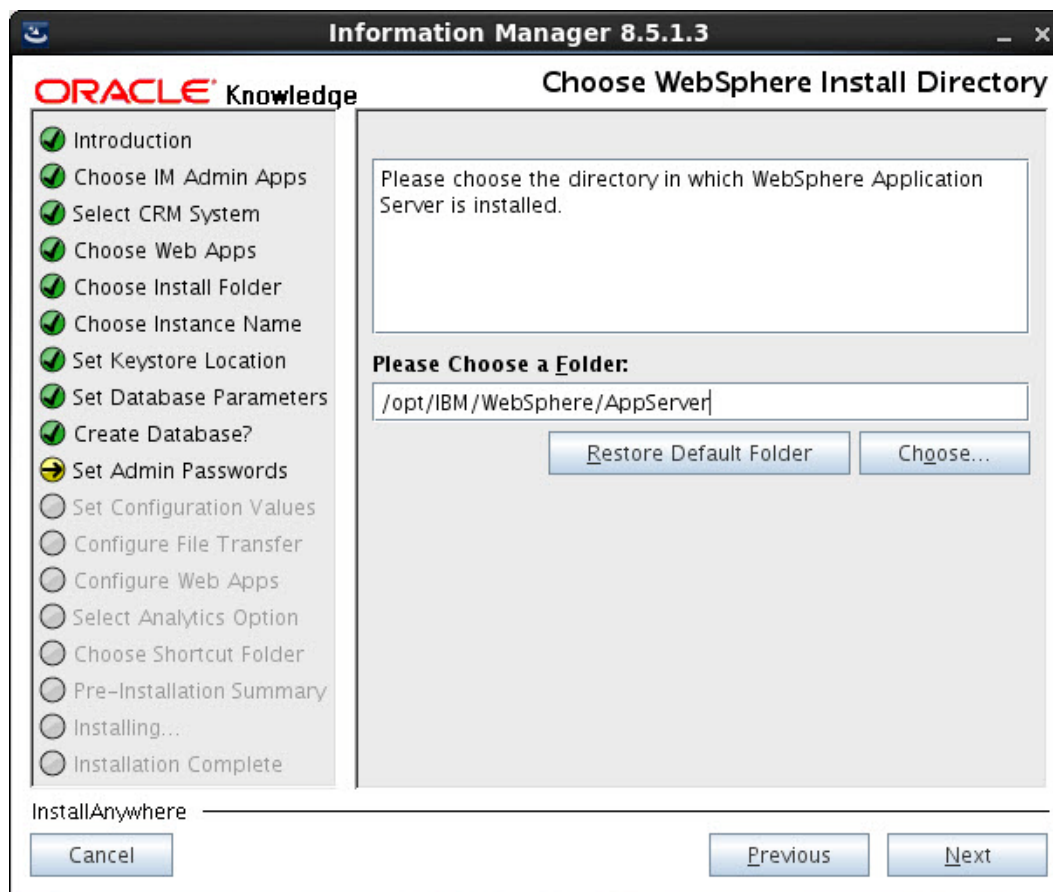
If you use WebSphere Server, the installer displays the **Configure the WebSphere Application Server** screens.

If you use Tomcat Server, the installer displays the **Configure Access to Information Manager** screen.

Configure the WebSphere Application Server

The installer collects various information about your WebSphere Application Server environment.

Choosing the WebSphere Application Server Installation Directory



Select the directory in which WebSphere Server is installed (for example, `opt/IBM/WebSphere/AppServer`).

Select **Next** to continue.

The installer displays the **Defining WebSphere Profile Configuration Values for Information Manager** screen.

Defining WebSphere Profile Configuration Values for Information Manager

Enter the following parameters:

Value	Description
Profile Name	Name of the profile created for indexing and content processing instance.
Cell Name	Name of the cell that contains this profile.
Node Name	Name of the node associated with this cell and profile.
Profile Default Port	Default port defined when the profile was created.

Select **Next** to continue.

The installer displays the **Setting the WebSphere Administrator Credentials** screen.

Setting the WebSphere Administrator Credentials

Provide the credentials to the specified WebSphere administration server.

Information Manager 8.5.1.3

ORACLE Knowledge Set WebSphere Administrator Credentials For IM

Please provide the credentials of the server/profile on which you want IM to be deployed.

Administrator User Name
ok1

Administrator User Password
...

Re-enter Administrator User Password
...

InstallAnywhere

Cancel Previous Next

Enter the following:

Property	Description
Administrator User Name	Specify the user name used to boot the administration server.
Administrator User Password	Specify the password associated with the user above.

Select **Next** to continue.

The installer displays the **Configure Access to Information Manager** screen.

Configure Access to Information Manager

Specify the URL to access the Information Manager Management Console. The URL configuration property is stored in the <Oracle_Knowledge_home>/InfoManager/config/SYSTEM/config.properties after the installation has been completed successfully.

Note: If you did not select to install an IM Console on this instance, provide the URL to access an existing IM Console instance.

Information Manager 8.5.1.3

ORACLE Knowledge

Configure Access to Information Manager

Please specify the hostname and port for the Information Manager application server and the URL to access the Information Manager Management Console.

Note: If you did not select to install an IM Console on this instance, provide the URL to access an existing IM Console

Information Manager Host
slc07plz

Information Manager Port
9084

Management Console URL
http://slc07plz:9084/InfoManager/WebObjects/InfoManager.w

InstallAnywhere

Cancel Previous Next

Specify the appropriate values for the following parameter:

Property	Description
Information Manager Host	Specify the Information Manager host server name.
Information Manager Port	Specify the HTTPS Transport Port on the host server.
Management Console URL	Specify the URL for the Management Console. Default is http://<IM_Host>:<IM_Port>/InfoManager/WebObjects/ InfoManager.woa.

Select **Next** to continue.

The installer displays the **Configure Email Properties** screen.

Configure Email Properties

Specify the hostname of the email server for your organization and an Information Manager administrator email address. Specify whether or not the SMTP server requires authentication, and if so, provide the credentials Information Manager should use to send email. The email configuration properties are stored in the <Oracle_Knowledge_home>/InfoManager/config/SYSTEM/config.properties file after the installation has been completed successfully.

Information Manager 8.5.1.3

ORACLE Knowledge

Specify Email Configuration

Please specify the hostname of the email server for your organization and an Information Manager administrator email address. Specify whether or not the SMTP server requires authentication, and if so, provide the credentials Information Manager should use to send emails.

☒ Introduction
☒ Choose IM Admin Apps
☒ Select CRM System
☒ Choose Web Apps
☒ Choose Install Folder
☒ Choose Instance Name
☒ Set Keystore Location
☒ Set Database Parameters
☒ Create Database?
☒ Set Admin Passwords
☒ Set Configuration Values
☐ Configure File Transfer
☐ Configure Web Apps
☐ Select Analytics Option
☐ Choose Shortcut Folder
☐ Pre-Installation Summary
☐ Installing...
☐ Installation Complete

SMTP Host: slc07plz

Administrator Email Address:

☐ Requires SMTP Authentication

SMTP User Name:

SMTP Password:

Re-enter SMTP Password:

InstallAnywhere

Cancel Previous Next

Specify the following properties:

Property	Description
SMTP Host	Specify the hostname of the email server to use for email-related functions.
Administrator Email Address	Specify the email address for the Information Manager administrator.
Requires SMTP Authentication	Specify whether or not the SMTP server requires authentication.
SMTP User Name	Specify the user name to be used when authenticating requests to the SMTP server.
SMTP Password	Specify the password to be used when authenticating requests to the SMTP server.

If you use Tomcat Server, the installer displays the **Configure a Local File System Content Resource Store** screens.

Configure a Local File System Content Resource Store

Specifying the Content Resource Mount Point

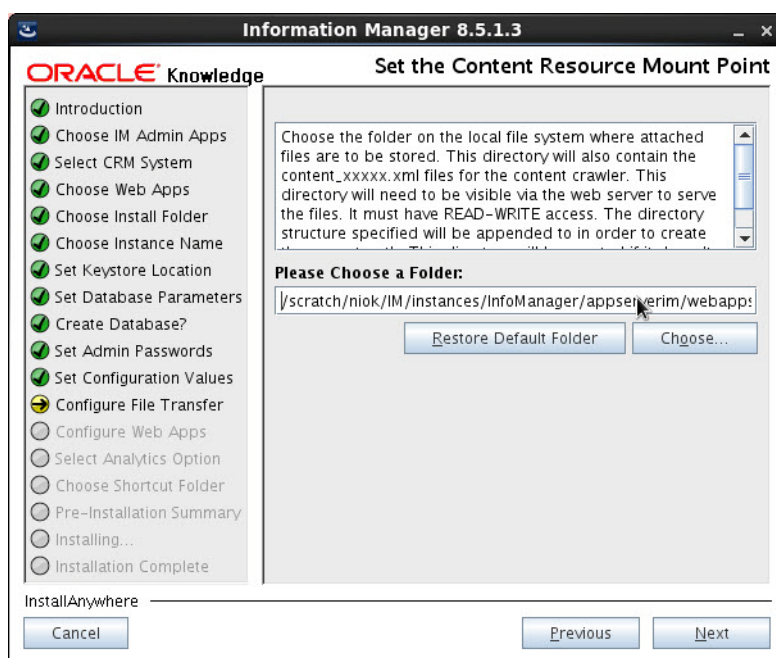
The installer prompts you to configure a local directory referred to as the content resource mount point for Information Manager storage of, and access to content resources for the production instance. These content resources include document attachments to content records.

Specify the full path to a directory on the local file system for the location of file attachments.

The specified location must be accessible to the Oracle Knowledge application server, and the application server must have READ and WRITE permissions to the directory. If using a shared storage area on Linux, mapped drives need to be NFS mounted. If using a shared storage area on Windows, the application user must have permissions to login as a service and must have the appropriate network privileges. In addition, the UNC naming convention must be used when mapping the drive (e.g. \\Server_Name\Shared_Folder).

On WebSphere, the default location is <Oracle_Knowledge_home>/instances/<Instance_Name>/webapps/<Context_Name>/apps/resources

This directory also contains the content_xxxxx.xml files for the content crawler. The directory structure specified is appended to in order to create the correct path. This physical path must be available via URL in order for the IM content crawler from Search to index the IM repository.



Note: If you specify a directory that does not exist, the installation process automatically creates the directory.

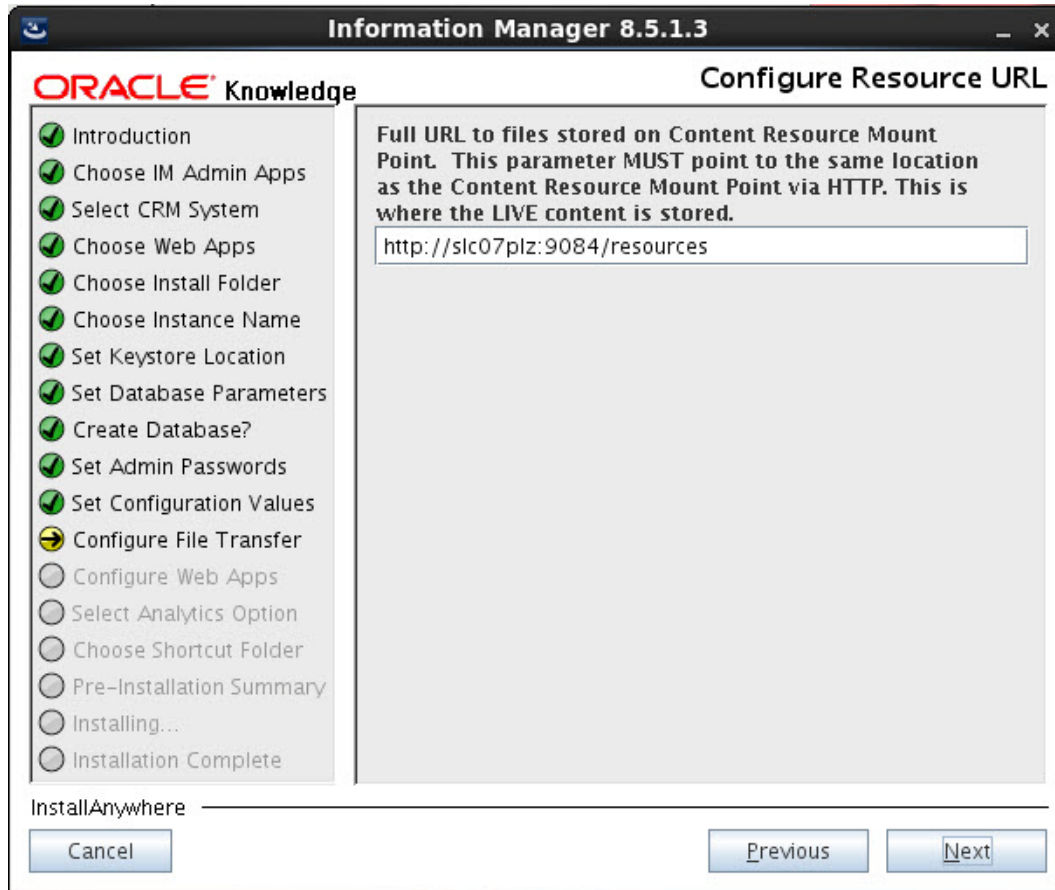
Select **Next** to continue.

The installer displays the **Configuring the Content Resource URL** screen.

Configuring the Content Resource URL

Specify a URL for the local directory that you specified as the content resource store. The default URL is `http://<Information_Manager_Host>:<Information_Manager_Port>/<Resource_Directory_Name>`.

Specify the URL that corresponds to the local directory specified as the content resource location. Information Manager uses the URL to read (retrieve) documents attached to content records in the production environment.



Select **Next** to continue.

The installer prompts you to **Configure the Web Applications** you have decided to install, as described in the topics that follow.

If you have not chosen any Web applications, then the installer prompts you to **Activating Analytics Logging**.

Configure the Web Applications

This section describes a set of screens that allow you to configure any Web applications you have decided to install. There are three configuration steps:

- 1 “Configuring the IM Console Instance to Run Batch Jobs” on page 91 (available only if IM Console is selected).
- 2 “Selecting the Folder Containing the CRMOD Integration Files (SSP Only)” on page 92 (available only if SSP is selected).
- 3 “Specifying the Web Applications Information Manager Repository” on page 92.

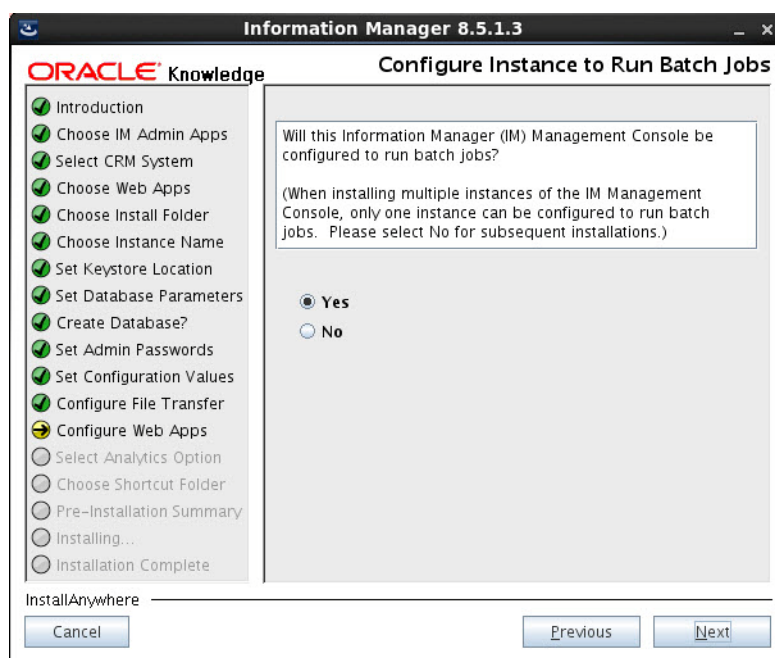
Configuring the IM Console Instance to Run Batch Jobs

If you selected to install the IM Console Web application, the installer displays the Configuring Instance to Run Batch Jobs screen. The IM Console has the ability to run jobs, or processes, that maintain the Repository's data through a scheduling service. If you select Yes, then the installed IM Console instance can run these jobs and add and remove Repositories.

Specify whether this IM Console is configured to run batch jobs.

Note: If you are installing multiple instances of the IM Console, only one should be configured to run batch jobs, in order to maintain the integrity of the job scheduler.

For the initial installation, we recommend that you maintain the preselected value of **Yes** and use this instance to add and remove Repositories. For subsequent installations, it is strongly recommend to select **No**; then, the ability to add and remove Repositories is disabled for these instances.



Select **Next** to continue.

If other web applications are selected, the installer displays the web application configuration screens. If not, the installer prompts you to **Configure Analytics Logging**.

Selecting the Folder Containing the CRMOD Integration Files (SSP Only)

Select the folder containing the exported CRMOD integration configuration properties files. The specified folder should contain the following:

- appconfig.properties
- crmodconfig.properties
- crmodlocalemapping.properties
- mapping.properties

Select **Choose** to open a file browser and select the folder containing the exported properties files. Use the **Restore Default Folder** option to reset the default installation directory, if necessary.

Note: This screen is available only if SSP is marked for installation.

Select **Next** to continue.

The installer displays the **Specify Web Apps IM Repository** screen.

Note: This screen is available only if web applications are marked for installation. If you did not select web applications for installation, the installer displays the **Configure Analytics Logging** screens.

Specifying the Web Applications Information Manager Repository

Specify the reference key of the Information Manager repository for the Web applications. This repository must be created prior to installing the InfoCenter based web applications.

Select **Next** to continue.

The installer prompts you to **Activating Analytics Logging**.

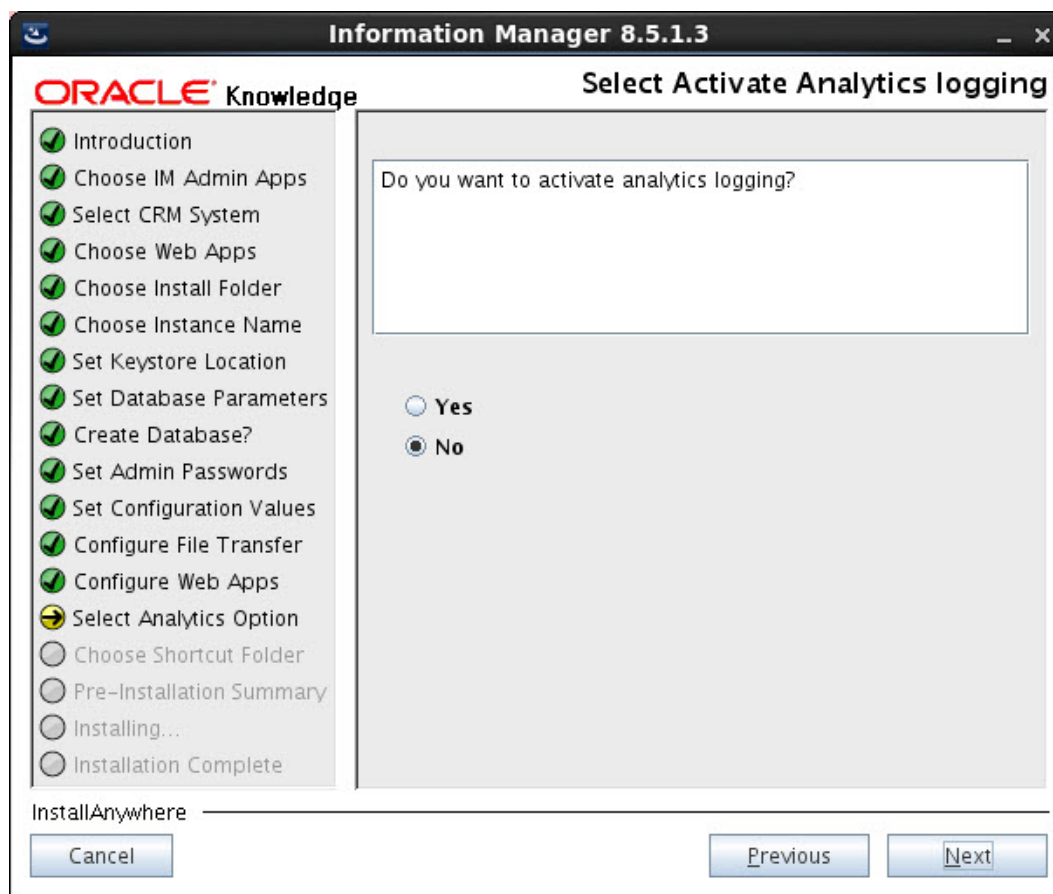
Configure Analytics Logging

The installer displays:

- **Activating Analytics Logging**
- **Configuring the JMS Queue for Oracle Knowledge Analytics Logging**

Activating Analytics Logging

The Select Activate Analytics logging screen prompts you to activate Oracle Knowledge Analytics logging.



Select **Yes** to display the **Configuring the JMS Queue for Oracle Knowledge Analytics Logging** screen.

Select **No** only if you are not planning to install Oracle Knowledge Analytics. The installer displays **Review Installation Values** (Linux).

Configuring the JMS Queue for Oracle Knowledge Analytics Logging

The Select Activate Analytics logging screen prompts you to activate Oracle Knowledge Analytics logging by configuring a JMS queue. Oracle Knowledge Analytics product uses this JMS queue to obtain application data for reporting purposes.

Select **Yes** to configure the JMS queue.

Note: Select **No** only if you are not planning to install the Analytics package.

The installer prompts you for the following JMS queue values:

Property	Description
JMS Queue URL	Specify the URL to the WebSphere Server that is serving the queue. For example: <code>t3://<listen_address>:<bootstrap_port></code> Note: The URL must contain the host name of the queue server.
JMS Queue User	Specify the user ID for the WebSphere console/domain where the queue is configured.
JMS Password	Specify the password for the WebSphere console/domain where the queue is configured.
JMS Factory Name	Specify a JMS factory name or use the default name: <code>jms/AnalyticsConnectionFactory</code> .
JMS Queue Name	Specify a JMS factory name or use the default name: <code>jms/AnalyticsQueue</code> .

Select **Next** to continue. On Linux, the installer displays **Review Installation Values**.

Review Installation Values

The preinstallation summary screen displays a summary of your installation selections, as well as disk space information, prior to transferring the product files from the distribution.

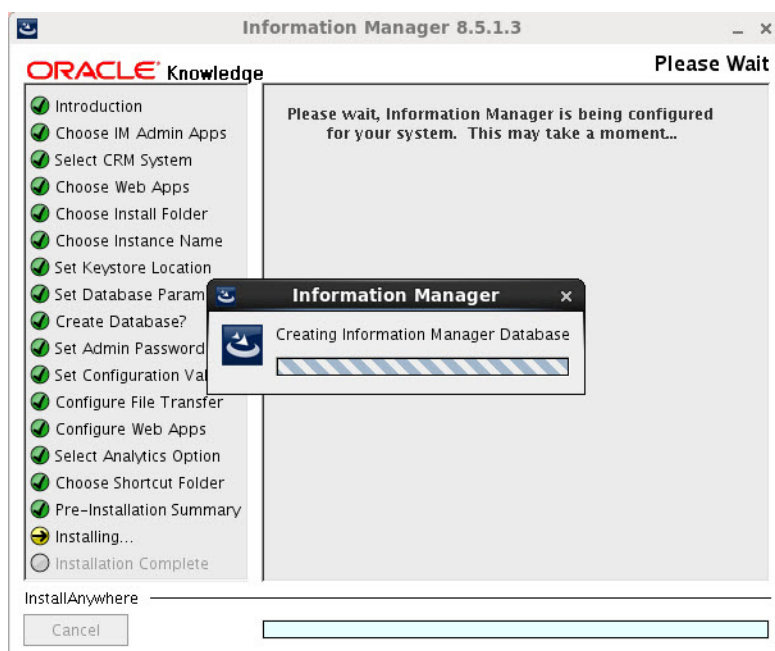


Review your selections.

Select **Previous** to make any corrections.

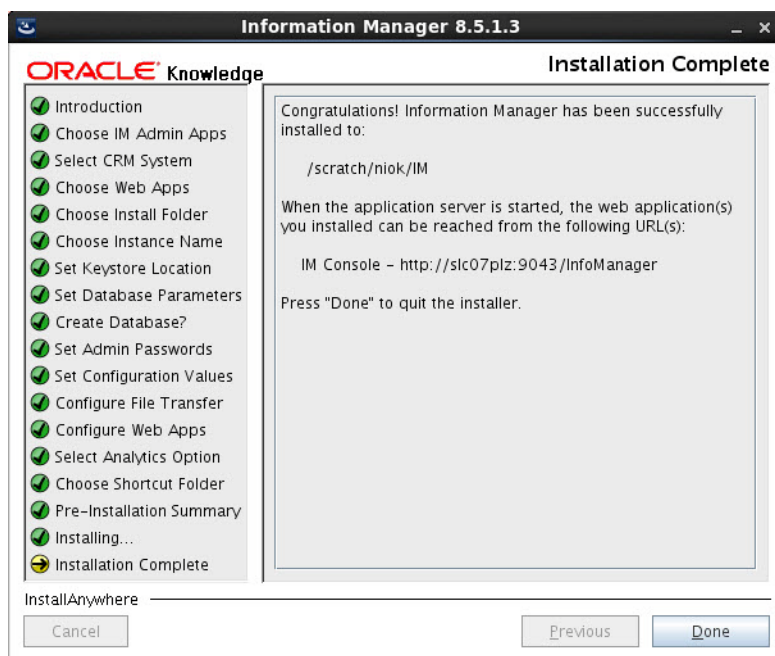
Select **Install** to continue.

The installer begins installing Information Manager in the specified location.



Complete the Information Manager Installation

The completion screen summarizes the installation process.



The Information Manager component directories and files are now installed in the specified location.

Select **Done** to exit the installer.

The installer executes its cleanup routines and terminates.

Start Information Manager from the WebSphere Profile Console

After the Information Manager installation is complete:

- 1 Login into Websphere Profile console to verify the Applications deployed. Use the following URL:
https://<server_Name_or_IP_address>:<port#>/ibm/console
 The following applications should be deployed and running:
 - InfoManager
 - OKResource
 - imws
- 2 Login to Information Manager Console as super/<super_password> in SYSTEM repository and create a new repository. In these instructions the new repository is called DEMO.

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3 Select **Add** under Repositories.

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The Create Repository page displays.

ORACLE Knowledge Help

Create Repository

Repository Name*
DEMO

Reference Key*
DEMO

Task ID Prefix

☐ Filter tasks so users are only made aware of tasks matching their skill category
☐ Require at least one matching skill category from every top-level category branch

Default Locale*
English United States ▼

Select Supported Locales

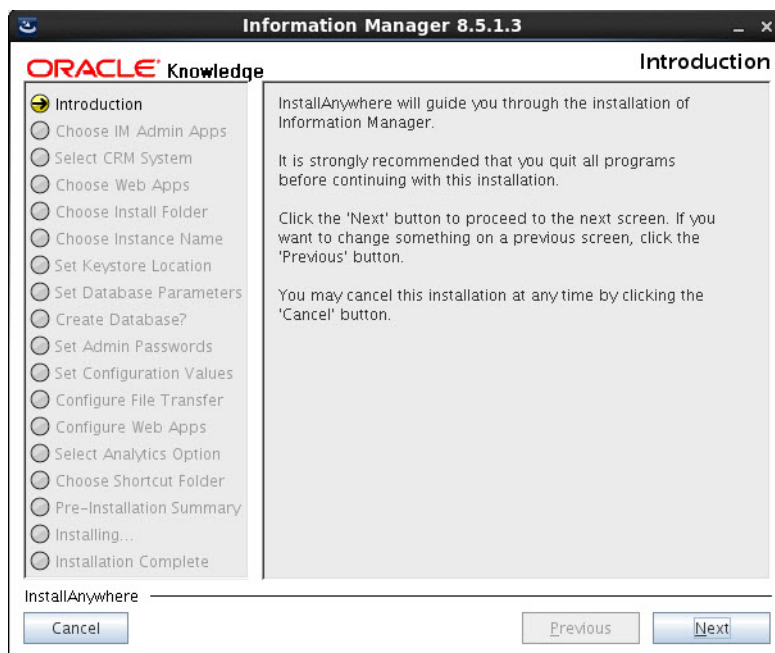
- ☐ Arabic Saudi Arabia
- ☐ Čeština Česká republika
- ☐ Dansk Danmark
- ☐ Deutsch Deutschland
- ☐ English United States
- ☐ Español España
- ☐ Suomi Suomi
- ☐ Français France
- ☐ Hebrew Israel
- ☐ Italiano Italia
- ☐ 日本語 日本
- ☐ 한국어 한국
- ☐ Nederlands Nederland
- ☐ Norsk
- ☐ Polski Polska
- ☐ Português Brasil
- ☐ Português Portugal
- ☐ русский Россия
- ☐ Slovenčina Slovensko
- ☐ Svenska Sverige
- ☐ ภาษาไทย ประเทศไทย
- ☐ Türkçe Türkiye

- 4 Enter the **Repository Name** and **Reference Key**.
- 5 Complete other details as necessary.
- 6 Select **Save Repository Properties**.

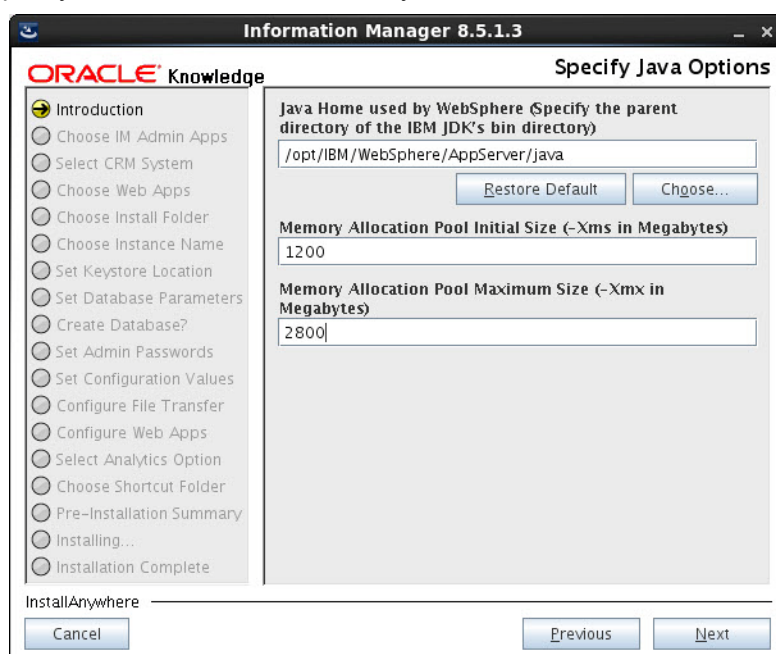
Install InfoCenter

Use the same installer as Information Manager and follow the steps:

Note: When you install Information Manager and InfoCenter on the same machine, profile, node, cell, server name, and port number all remain the same as for Information Manager.



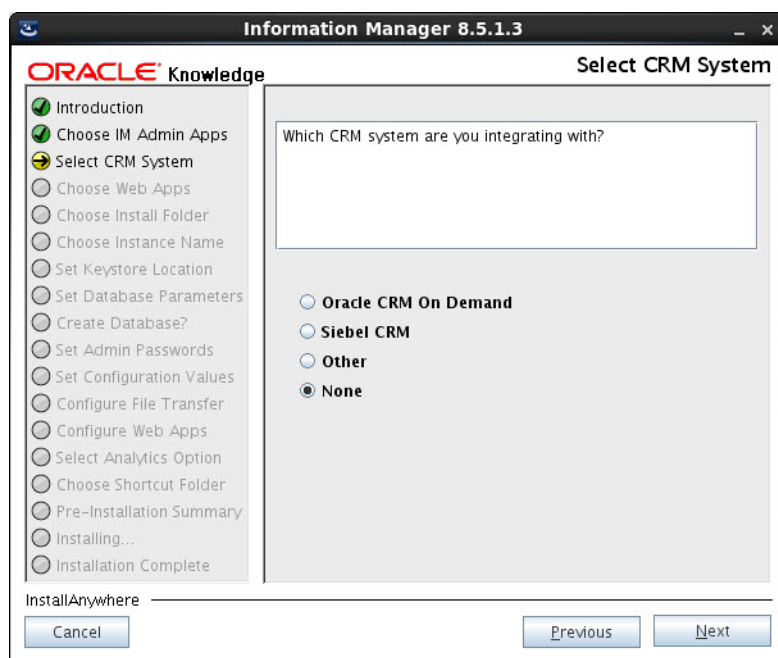
- 1 Select **Next** to continue.
The installer displays the **Specify the Java Options** screen.
- 2 Specify the Java Home and memory allocation values.



Use the same values that you used in the previous installer run.

3 Select **Next** to continue.

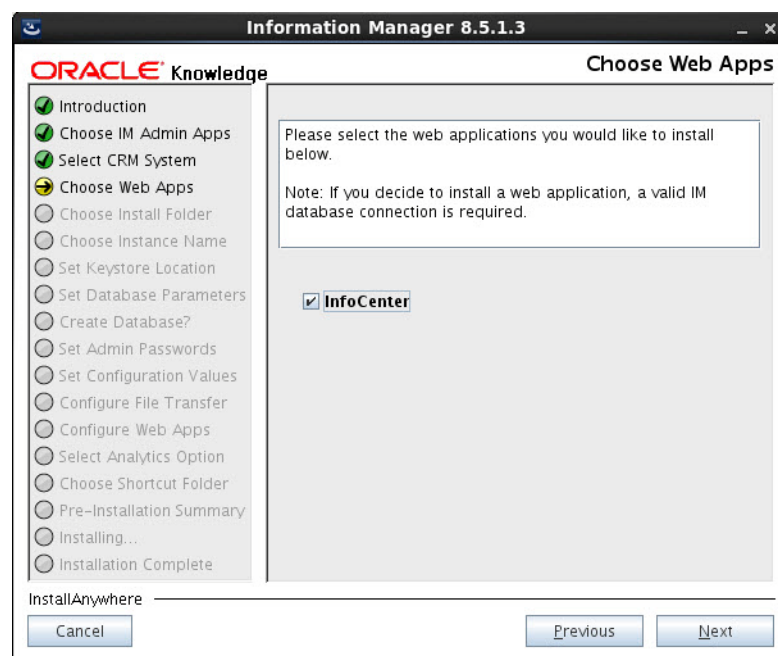
The installer displays the **Select the CRM System** screen.



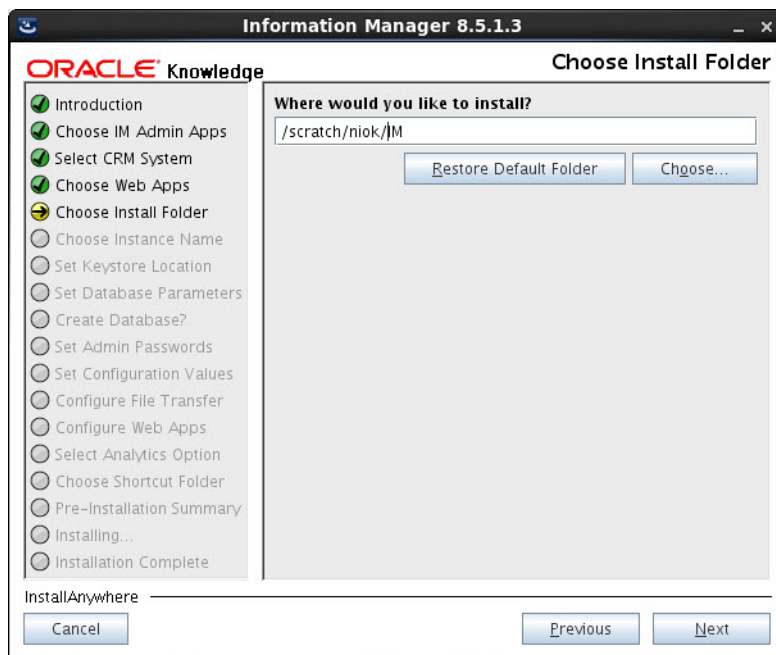
4 Select **None**.

5 Select **Next** to continue.

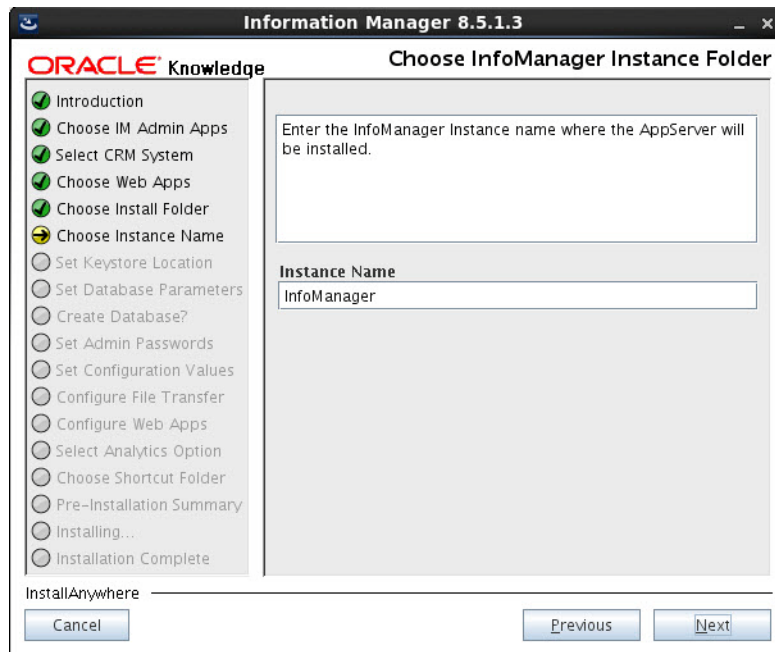
The installer displays the **Choose the Web Applications to Install** screen.



- 6 Select InfoCenter.
- 7 Select **Next** to continue.
The installer displays the **Select the Installation Location** screen.
- 8 Select the same location that you selected previously.



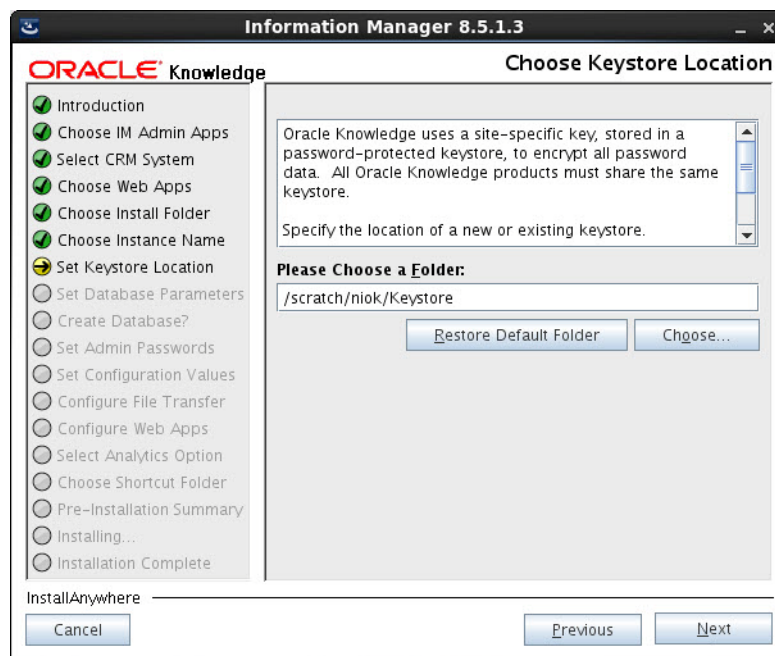
- 9 Select **Next** to continue.
If the location you selected is appropriate, the installer displays the Instance Name specification screen. If the installer detects that the location contains an existing Oracle Knowledge Intelligent Search or Analytics installation or an existing Oracle Knowledge Information Manager installation with one or more of the applications you selected already installed, the installer prompts you to provide an alternate location.
The installer displays the **Specify the Information Manager Instance Folder** screen.



10 Enter the **Instance Name**.

11 Select **Next** to continue.

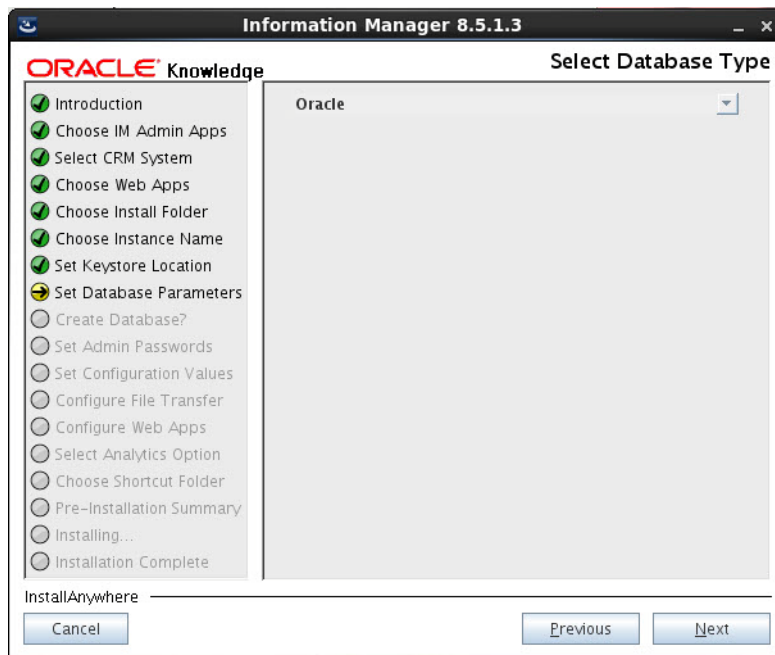
The installer prompts you to **Configure the Keystore**.



12 Select an existing keystore.

13 Select **Next** to continue.

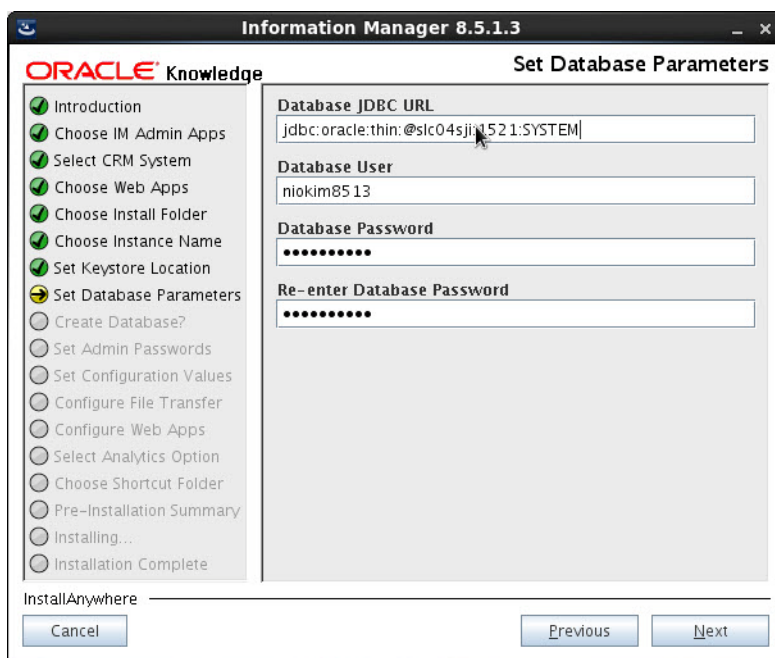
The installer displays the Select Database Type screen.



14 Select the same database type as in the previous run.

15 Select **Next** to continue.

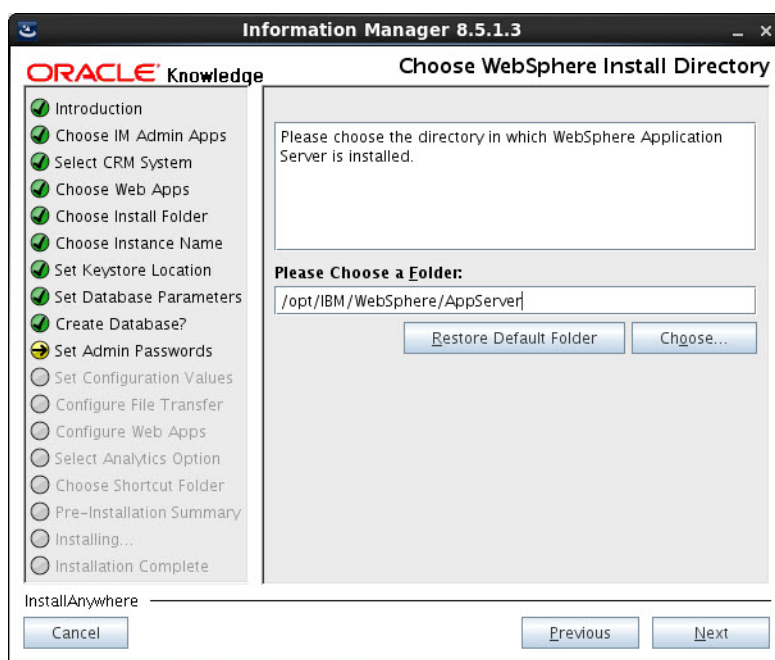
The installer displays the Set Database Parameters screen.



16 Specify the same values as you did previously.

17 Select **Next** to continue.

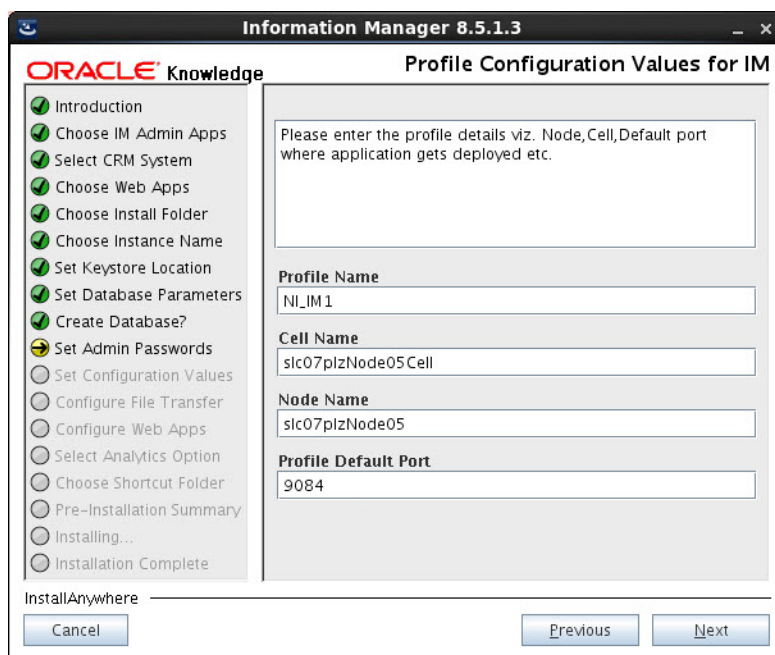
The installer displays the Choose WebSphere Install Directory screen.



18 Select the directory in which WebSphere Server is installed (for example, `opt/IBM/WebSphere/AppServer`).

19 Select **Next** to continue.

The installer displays the **Profile Configuration Values for Information Manager** screen.



20 Enter the same parameters as entered previously for Information Manager.

21 Select **Next** to continue.

The installer displays the **Setting the WebSphere Administrator Credentials** screen.

Information Manager 8.5.1.3

ORACLE Knowledge Set WebSphere Administrator Credentials For IM

Introduction
 Choose IM Admin Apps
 Select CRM System
 Choose Web Apps
 Choose Install Folder
 Choose Instance Name
 Set Keystore Location
 Set Database Parameters
 Create Database?
 Set Admin Passwords
 Set Configuration Values
 Configure File Transfer
 Configure Web Apps
 Select Analytics Option
 Choose Shortcut Folder
 Pre-Installation Summary
 Installing...
 Installation Complete

Please provide the credentials of the server/profile on which you want IM to be deployed.

Administrator User Name
 ok1

Administrator User Password
 ...

Re-enter Administrator User Password
 ...

InstallAnywhere

Cancel Previous Next

22 Enter the same user name and password as entered previously for Information Manager.

23 Select **Next** to continue.

The installer displays the **Configure Access to Information Manager** screen.

Information Manager 8.5.1.3

ORACLE Knowledge Configure Access to Information Manager

Introduction
 Choose IM Admin Apps
 Select CRM System
 Choose Web Apps
 Choose Install Folder
 Choose Instance Name
 Set Keystore Location
 Set Database Parameters
 Create Database?
 Set Admin Passwords
 Set Configuration Values
 Configure File Transfer
 Configure Web Apps
 Select Analytics Option
 Choose Shortcut Folder
 Pre-Installation Summary
 Installing...
 Installation Complete

Please specify the hostname and port for the Information Manager application server and the URL to access the Information Manager Management Console.

Note: If you did not select to install an IM Console on this instance, provide the URL to access an existing IM Console

Information Manager Host
 slc07plz

Information Manager Port
 9084

Management Console URL
 http://slc07plz:9084/InfoManager/WebObjects/InfoManager.w

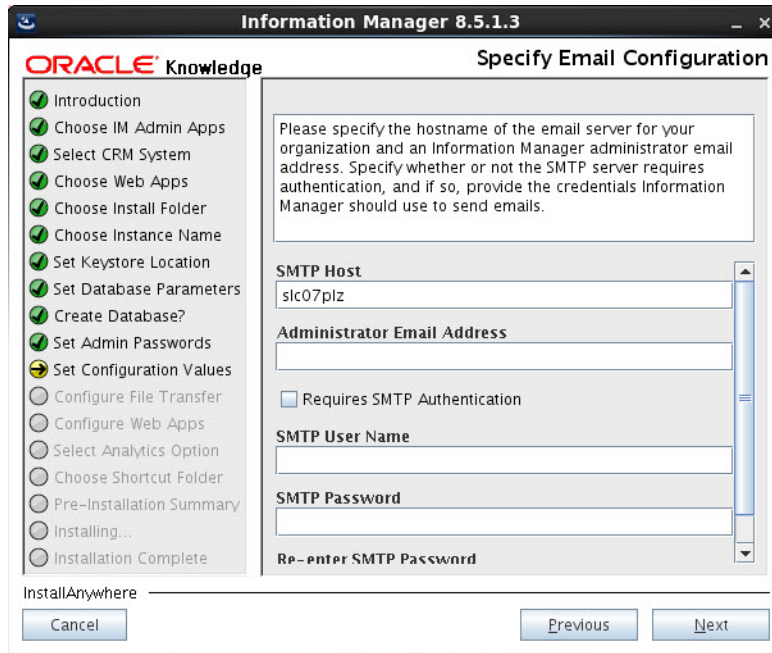
InstallAnywhere

Cancel Previous Next

24 Provide the Host, Port, and URL to access the existing IM Console instance.

25 Select **Next** to continue.

The installer displays the **Configure Email Properties** screen.

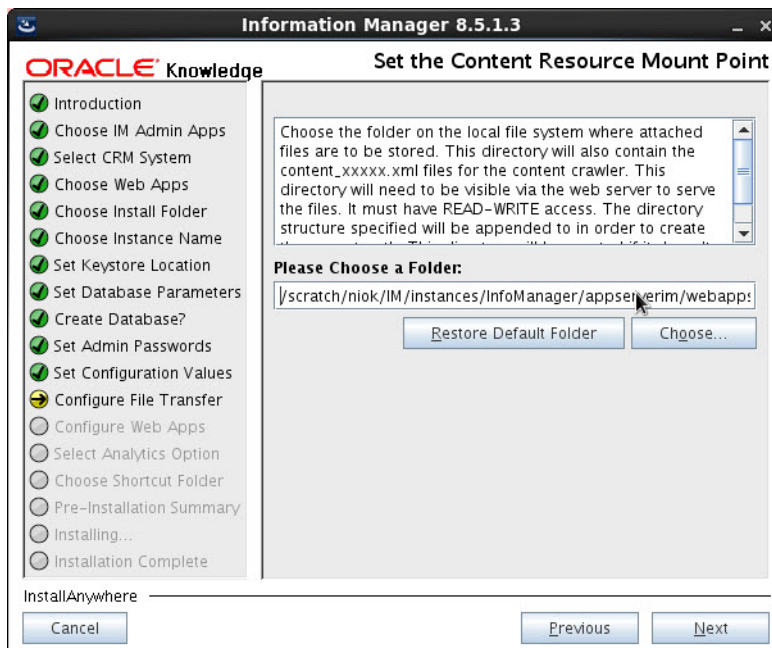


- 26 Enter the same values as entered for the Information Manager installation.
The installer displays the **Set the Content Resource Mount Point** screens.

- 27 Specify the content resource store location.

On WebSphere, the default location is `<Oracle_Knowledge_home>/instances/
<Instance_Name>/webapps/<Context_Name>/apps/resources`

This directory also contains the `content_XXXXX.xml` files for the content crawler. The directory structure specified is appended to in order to create the correct path. This physical path must be available via URL in order for the IM content crawler from Search to index the IM repository.



Note: If you specify a directory that does not exist, the installation process automatically creates the directory.

28 Select **Next** to continue.

The installer displays the **Configuring the Content Resource URL** screen.

29 Specify a URL for the local directory that is specified as the content resource store. The default URL is:

```
http://<Information_Manager_Host>:<Information_Manager_Port>/
<Resource_Directory_Name>
```

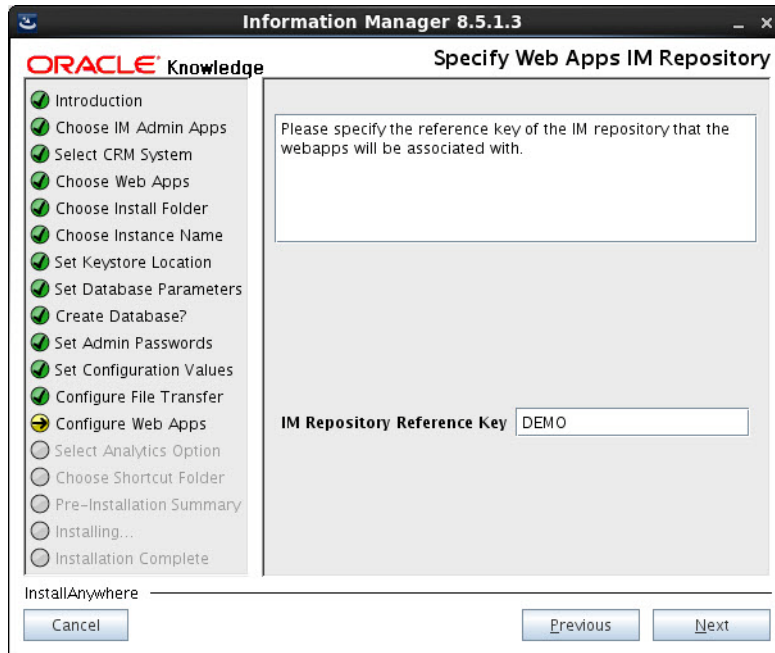
Specify the URL that corresponds to the local directory specified as the content resource location. Information Manager uses the URL to read (retrieve) documents attached to content records in the production environment.



30 Select **Next** to continue.

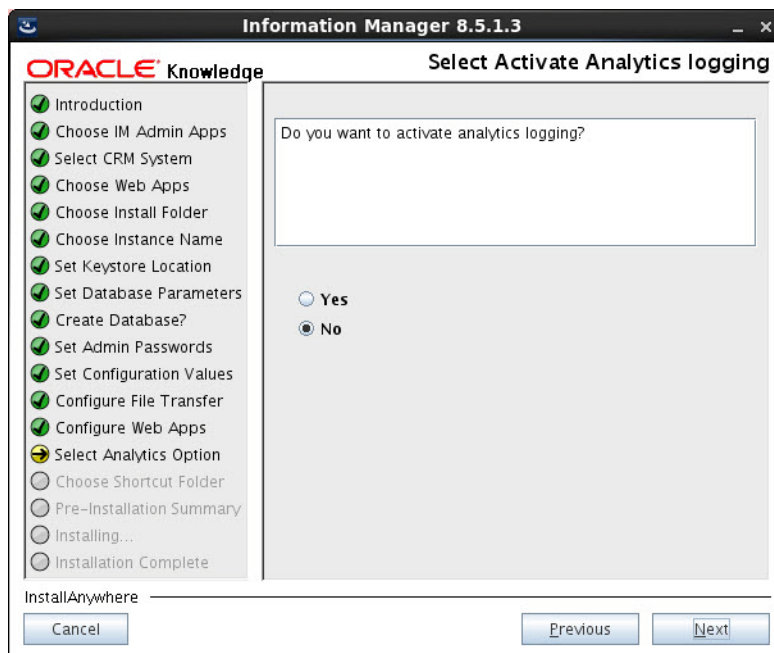
The installer displays the Web applications Information Manager repository key specification screen.

31 Enter the Repository Reference Key for the repository that you just created.



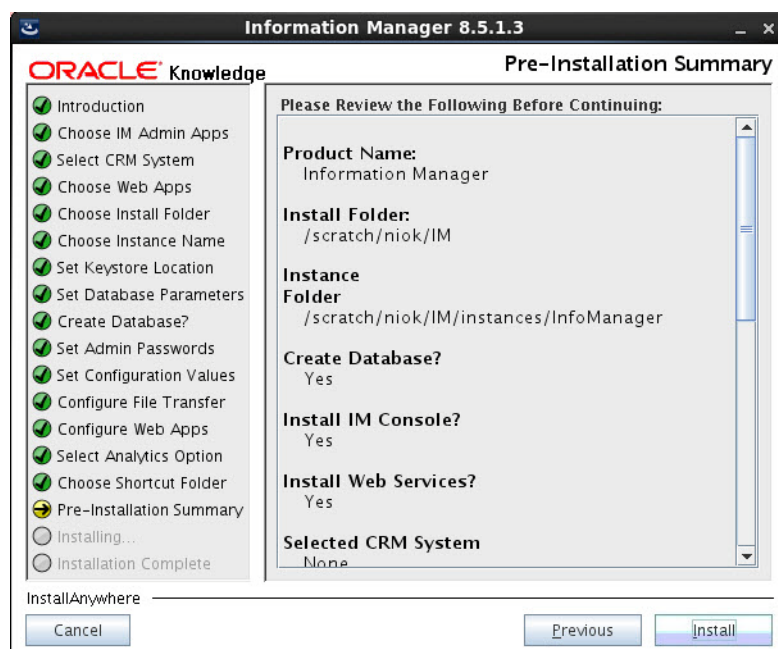
32 Select **Next** to continue.

The installer prompts you to **Activating Analytics Logging**.



33 Select **No**.

The installer displays the **Pre-Installation Summary**.



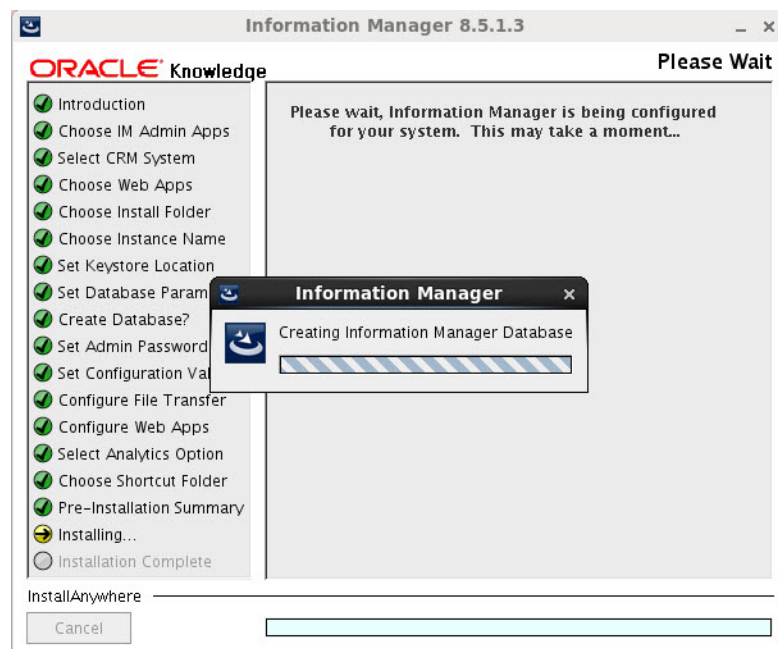
34 Review your selections.

Select **Previous** to make any corrections.

- or -

Select **Install** to continue.

The installer begins installing Information Manager in the specified location.



The completion screen summarizes the installation process.



After the installation, InfoCenter will be deployed on the WebSphere profile console.

Installing and Configuring OBIEE on WebSphere

This section describes the OBIEE installation and configuration on the WebSphere platform.

The Oracle Business Intelligence, Enterprise Edition (OBIEE) is a comprehensive enterprise business intelligence platform and toolset that provides the basis for running Oracle Knowledge Analytics.

The WebSphere Application Server (WAS) is a software framework and middleware that hosts Java based web applications.

The OBIEE installation consists of the following processes:

- **Install the WebSphere Application Server (WAS)**
- **Install and Configure OBIEE on WAS**
- **Configure the OBIEE Data Warehouse Connection**
- **Apply the Analytics Styles to OBIEE**
- **Validate the OBIEE Installation**

Documentation References

Before beginning this installation, we recommend you access the following documentation:

- *Oracle® Fusion Middleware Third-Party Application Server Guide 11g Release 1 (11.1.1.7) Part Number E17852-03*, located here:
http://docs.oracle.com/cd/E28280_01/upgrade.1111/e17852/intro.htm
- *Oracle Knowledge Analytics Administrator's Guide* located here:
http://docs.oracle.com/cd/E38112_02/index.htm
- IBM® WebSphere documentation:
Use the IBM WebSphere documentation to install and configure WAS. This document provides the necessary configuration parameters to use WebSphere components with Analytics but does not provide complete WebSphere installation instructions.

Install the WebSphere Application Server (WAS)

- 1 Install the WebSphere Application Server 7.0.
- 2 Apply the Fix Pack 27 (7.0.0.27)
Consult the IBM WebSphere Application Server documentation for the installation process.

Install and Configure OBIEE on WAS

After the installation is complete, you must perform some additional tasks before the WAS 7.27 is installed properly. Refer to the *Oracle® Fusion Middleware Third-Party Application Server Guide 11g Release 1* located here:

http://docs.oracle.com/cd/E28280_01/bi.1111/e10539/c3_requirmnts.htm#BIEIG3127.

Complete the following configuration procedures.

- **Create the Database Schemas Using the Repository Creation Utility (RCU)**

This procedure is located in Section 10.2.1.1 of the guide listed above.

- **Configure Software Only Install Procedure on IBM WebSphere**

This procedure is located in Section 10.2.1.2 of the guide listed above.

- **Configure Oracle Business Intelligence in a New IBM WebSphere Cell**

This procedure is located in Section 10.2.2 of the guide listed above.

Configure the OBIEE Data Warehouse Connection

After you have installed OBIEE, there are additional tasks you must complete before the Oracle Knowledge Analytics reporting components can be installed.

Perform the following tasks:

- Configure the connection between OBIEE and the data warehouse
- Deploy the RPD and Catalog to create the Oracle Knowledge Analytics project within OBIEE

Connect OBIEE to the Data Warehouse

You connect the OBIEE instance to the data warehouse by editing the database connection parameters in the RPD file that was installed as part of the Analytics installation process. You edit the RPD file using the OBIEE Administration Tool. This tool only runs on the Windows platform.

Copy the Analytics OBIEE components to a temporary directory on the Windows machine where the BI Administration Tool is installed.

Open the RPD

You must open the RPD file to configure it for your installation. This operation must be performed on a Windows machine using the OBIEE BI Administration Tool.

- 1 Open the Oracle BI Administration Tool.
- 2 Select File > Open > Offline.
- 3 Select the Oracle Knowledge Analytics RPD file.
- 4 Enter the default password: `password85`

Change the RPD Password

The RPD file is shipped with a default password. It is strongly recommend that you change the RPD password prior to deploying the RPD and Catalog.

To change the RPD password:

- 1 Select File > Change Password.
- 2 Enter the current (old) password: `password85`
- 3 Enter the new password and confirm it.
The repository password must be at least eight characters, with at least one numeric character. The New Password field cannot be empty.

Configure Connections to the Database

The next step is to configure the OBIEE connection to the data warehouse. This requires the creation of System ODBC data sources using the Windows Control Panel.

Set your connections using the Oracle Business Intelligence (BI) Administration tool.

Connect to the Reporting Schema

Use the following procedures to set the data source, set the reporting schema password, and check the connection to the reporting schema.

To set the database connection properties, do the following:

- 1 In the OBIEE Administration Tool, Physical pane, select Oracle Data Warehouse > Oracle Data Warehouse Connection Pool.
- 2 Enter the ODBC data source name for the `DW_REPORTING` schema.
- 3 Enter the password for schema `DW_REPORTING` under Shared Logon.
- 4 Repeat for Oracle Data Warehouse > Oracle Data Warehouse Repository Initblocks Connection Pool.

To check the connection:

- 1 Select Oracle Data Warehouse > `DW_REPORTING` > `DIM_REPOSITORY`, then select View Data.
- 2 Select Oracle Data Warehouse Connection Pool, then select Select, then select OK.
If no data has been propagated from the staging schema to the reporting schema, the test succeeds.

- 3 Repeat this test, but select Oracle Data Warehouse Repository Initblocks Connection Pool instead of Oracle Data Warehouse Connection Pool.

Save the RPD

Use this procedure to save the RPD.

- 1 Select File > Save.
- 2 Close the OBI Administration Tool.

Deploy the RPD and Catalog

The RPD and catalog define the Oracle Knowledge Analytics project, including the dashboards and reports, that you access using the OBIEE user interface.

To deploy the catalog:

- 1 Navigate to OBIEE Enterprise Manager at <http://<hostname>:9002/em>, where <hostname> is the name of the server where OBIEE is installed.
- 2 Log onto OBIEE with the user name and password used to create the new BI Presentation Catalog system during the WebSphere OBIEE Configuration.
- 3 On the left pane, select Business Intelligence/coreapplication.
- 4 On the right pane, select **Lock and Edit Configuration**.
This prevents anyone else from making configuration changes at the same time. Wait for confirmation popup.
- 5 On the right pane, select **Deployment/Repository**.
- 6 Select Upload BI Server Repository > Choose File, and select the edited RPD file.
- 7 Copy the analyticsReportingModel85V2 folder to the catalog directory at:
`<OBIEE_INSTALL_DIR>\instances\instance1\bifoundation\OracleBIPresentationServicesComponent\coreapplication_obips1\catalog`
- 8 At BI Presentation Catalog, change the catalog location to `$ORACLE_INSTANCE/bifoundation/OracleBIPresentationServicesComponent/$COMPONENT_NAME/catalog/analyticsReportingModel85V2`.
- 9 Enter the Repository password.
- 10 Select **Apply**.
- 11 Select **Activate Changes**.
- 12 Select **Restart to Apply Recent Changes**.
- 13 Select **Restart**.

The RPD is deployed and the catalog that defines the Oracle Knowledge Analytics project within OBIEE is added.

Apply the Analytics Styles to OBIEE

Analytics requires a specific set of styles and formats to display the reports as they are designed to be viewed.

1 Copy **custom.css**

from

Analytics_OBIEE_Artifacts /s_OracleKnowledge/b_mozilla_4/custom.css

to

<WAS installed apps directory> / res/ s_blafp/b_mozilla_4/custom.css

Example

Copy the custom.css

from:

<OKA_INSTALL_DIR>\Analytics_OBIEE_Artifacts-8.5.1\CSS\s_OracleKnowledge\b_mozilla_4

to

*/WebSphere/AppServer/user_projects/domains/bifoundation_celln2/bifoundation_celln2_node0/
installedApps/bifoundation_celln2/analytics_11.1.1.ear/analytics.war/res/s_blafp/b_mozilla_4/
custom.css*

2 Copy **views.css** and **portalcontent.css**

from

Analytics_OBIEE_Artifacts/s_OracleKnowledge/b_mozilla_4/views.css

Analytics_OBIEE_Artifacts/s_OracleKnowledge/b_mozilla_4/ portalcontent.css

to

<WAS installed apps directory>/ res/ s_blafp/b_mozilla_4/views.css/ res

<WAS installed apps directory>/ res/ s_blafp/b_mozilla_4/ s_blafp/b_mozilla_4/portalcontent.css

Example

Copy **views.css** and **portalcontent.css**

from

*<OKA_INSTALL_DIR>\Analytics_OBIEE_Artifacts-
8.5.1\CSS\s_OracleKnowledge\b_mozilla_4/views.css*

*<OKA_INSTALL_DIR>\Analytics_OBIEE_Artifacts-
8.5.1\CSS\s_OracleKnowledge\b_mozilla_4/portalcontent.css*

to

*/WebSphere/AppServer/user_projects/domains/bifoundation_celln2/
bifoundation_celln2_node0/installedApps/bifoundation_celln2/
analytics_11.1.1.ear/analytics.war/res/s_blafp/b_mozilla_4/views.css
/WebSphere/AppServer/user_projects/domains/bifoundation_celln2/
bifoundation_celln2_node0/installedApps/bifoundation_celln2/
analytics_11.1.1.ear/analytics.war/res/s_blafp/b_mozilla_4/
portalcontent.css*

3 Copy **views.css** and **portalcontent.css**

from

Analytics_OBIEE_Artifacts/s_OracleKnowledge/b_mozilla_4/views.css

Analytics_OBIEE_Artifacts/s_OracleKnowledge/b_mozilla_4/ portalcontent.css

to

WAS installed apps directory/ res/s_FusionFX/b_mozilla_4/views.css

WAS installed apps directory/ res/s_FusionFX/b_mozilla_4/portalcontent.css

Example

Copy **views.css** and **portalcontent.css**

from

```
<OKA_INSTALL_DIR>\Analytics_OBIEE_Artifacts-
8.5.1\CSS\s_OracleKnowledge\b_mozilla_4\views.css
<OKA_INSTALL_DIR>\Analytics_OBIEE_Artifacts-
8.5.1\CSS\s_OracleKnowledge\b_mozilla_4\portalcontent.css
```

to

```
/opt/IBM/WebSphere/AppServer/user_projects/domains/bifoundation_celln2/
bifoundation_celln2_node0/installedApps/bifoundation_celln2/
analytics_11.1.1.ear/analytics.war/res/s_FusionFX/b_mozilla_4/views.css
/opt/IBM/WebSphere/AppServer/user_projects/domains/bifoundation_celln2/
bifoundation_celln2_node0/installedApps/bifoundation_celln2/
analytics_11.1.1.ear/analytics.war/res/s_FusionFX/b_mozilla_4/
portalcontent.css
```

- 4 Restart all BI Services.

Validate the OBIEE Installation

Until the first set of data transforms occurs you cannot validate the report installation. You can verify the RPD connection to the database by opening the RPD in online mode and browsing the data directly in the RPD. There won't be any data in most of the tables but you should be able to connect and see data in the DIM_DATE table.

You can log onto the OBIEE reporting user interface to validate the installation and configuration process.

You can validate the installation process by logging onto the application at: `http://<hostname>:9704/analytics`, and using the user name and password used during the WebSphere OBIEE Configuration.

The Oracle Knowledge Analytics Home Page displays the preconfigured dashboards. You can open one, such as Search Analysis, to validate the installation. You can now perform other administrative tasks, as described in the *Oracle Knowledge Analytics Administration Guide*.

Installing and Configuring Analytics on WebSphere

This section describes the Analytics installation and configuration processes on the WebSphere platform.

Important! Before you begin the installation process, make sure you have completed all the prerequisites in “Planning the Oracle Knowledge Analytics Installation” on page 16.

Installing Analytics on WebSphere requires that you install the following components:

- **WebSphere Application Server (WAS).** The WebSphere Application Server (WAS) is a software framework and middleware that hosts Java based web applications. The WAS runs the Analytics Router instances.
- **WebSphere MQ.** The Websphere Message Queue (MQ) is a middleware product that allows independent applications on a distributed system to communicate with each other. It provides the universal messaging backbone to transport messages and data for the Analytics Router.

Important! Use the IBM WebSphere documentation to install WAS and WebSphere MQ. This document provides the necessary configuration parameters to use WebSphere components with Analytics but does not provide complete WebSphere installation instructions.

This chapter provides the following sections that describe how to install, configure, and deploy Analytics on WebSphere:

- [Installing Analytics on WebSphere](#)
- [Installing Analytics on WebSphere](#)
- [Deploy the Analytics Application Router](#)

Note: Information and procedures to install Analytics appear in “Installing and Configuring Analytics on WebSphere”.

Prerequisites to Installing Analytics on WebSphere

Complete the following processes are completed before installing the Analytics Router.

- [Installing WAS 8.0.0.6](#)
- [Installing and Configuring WebSphere MQ 7.5](#)
- [Creating and Configuring a JMS Error Queue](#)
- [Configuring the Redelivery Limit](#)

Installing WAS 8.0.0.6

The Analytics Router is installed on WAS 8.0.0.6; the Information Manager and Intelligent Search applications may also be installed on this server. However, we recommend that each application instance have a separate profile.

- 1 Install the WebSphere Application Server 8.0.
- 2 Apply the WebSphere Application Server V8.6 Fix Pack.

Consult the IBM WebSphere Application Server documentation for the installation process.

Post WAS Installation Tasks

You must complete the following tasks to ensure WAS is properly installed.

CREATE A PROFILE

See the “Create WebSphere Profile” section of this guide for the step-by-step procedure.

Important! Note the **Profile Name**, **Cell Name**, **Node Name** and **Server Name**. You will need this information later in the process.

SET WEBSHERE PRIVILEGES

Grant the required privileges (777) to each profile that you create.

See the “Set WebSphere Privileges” section of this guide for the step-by-step procedure.

Installing and Configuring WebSphere MQ 7.5

Prerequisites

Complete the following tasks before installing WebSphere MQ:

- a Check and verify the hardware and software requirements
- b Set up user IDs and group IDs
- c Create WebSphere MQ file systems

Consult the IBM WebSphere MQ documentation for step-by-step procedures for each task.

Install WebSphere MQ 7.5

Install the WebSphere MQ 7.5

Consult the IBM WebSphere Application Server documentation for the installation process.

Configure WebSphere MQ

Complete the following configuration tasks to ensure WebSphere MQ is properly configured for Analytics.

- Create a New Queue Manager
- Create a New Local Queue
- Disable the Channel Authentication (CHLAUTH) Record
- Configuring the JMS Resources on WAS

CREATE A NEW QUEUE MANAGER

Run `/<IBM_MQ_HOME>/mqm/bin/strmqcfg` (bin directory) command to launch the WebSphere MQ Explorer.

Or, select *Applications > Programming > IBM MQ Explorer*.

Create a new queue manager named *QMA*.

- 1 Select *New > Queue Manager* and follow the *Create new queue* wizard.
- 2 Complete the Analytics required fields:

Field	Input / Action
Queue manager name	Enter <i>QMA</i>
<i>Make this the default queue manager</i>	Select this checkbox
Dead letter queue	Enter <i>SYSTEM.DEAD.LETTER.QUEUE</i>
Use circular logging	Select this radio button
Data and Log paths	The following values are defaults: <ul style="list-style-type: none"> • Enter Data path: <i>/var/mqm/qmgrs</i> • Enter Log path: <i>/var/mqm/log</i>
<i>Start Queue manager after it has been created</i>	Select this checkbox
<i>Create server-connections channel</i>	Select this checkbox
<i>Create listener configured for TCP/IP</i>	Select this checkbox
<i>Autoreconnect</i>	Select this checkbox
<i>Automatically refresh information shown to this queue manager</i>	Select this checkbox

The new queue manager is created.

CREATE A NEW LOCAL QUEUE

Create a new local queue named *ANALYTICSQUEUE*

- 1 Select *New > Local Queue* and follow the *Create local queue* wizard.
- 2 Complete the Analytics required fields:

Field	Input/Action
Name	Enter <i>ANALYTICSQUEUE</i> Note: This field is case-sensitive.
Queue type	Enter <i>Local</i>
Put messages	Select <i>Allowed</i>
Get messages	Select <i>Allowed</i>
Default persistence	Select <i>Persistent</i>

Scope	<i>Queue Manager</i>
Usage	<i>Select Normal</i>

The local queue is created.

DISABLE THE **CHANNEL AUTHENTICATION (CHLAUTH)** RECORD

On the same server, run the following commands:

```
<IBM_MQ_HOME>./bin/runmqsc QMA
DIS QMGR CHLAUTH
Output:-
AMQ8408: Display Queue Manager details.
QMNAME(QMA)                                CHLAUTH(ENABLED)
ALTER QMGR CHLAUTH(DISABLED)
Output:-
AMQ8005: WebSphere MQ queue manager changed.
DIS QMGR CHLAUTH
Output:-
AMQ8408: Display Queue Manager details.
QMNAME(QMA)                                CHLAUTH(DISABLED)
```

The WebSphere MQ configuration is complete.

Configuring the JMS Resources on WAS

Note: It is mandatory that you install and configure WebSphere MQ **before** you configure the JMS connections.

- **Create a Connection Factory**
- **Create a Queue**
- **Create Activation specifications**
- **Create the JAAS - J2C authentication data**

Log onto the WebSphere Admin Console and complete the following configuration tasks in the order in which they appear.

CREATE A CONNECTION FACTORY

- 1 Select *Resources > JMS providers > WebSphere MQ messaging provider > Connection factories*.
- 2 Select *New* and follow the Create Factory wizard.
- 3 Complete the Analytics required fields:

Field	Input/Action
Connection Factory Name	<i>AnalyticsConnectionFactory</i>
JNDI name	<i>jms/AnalyticsConnectionFactory</i>
Select connection method	Select <i>Enter all the required information into this wizard</i> .
Queue manager or queue sharing group name	<i>QMA</i>
Hostname	Host on which WebSphere MQ is installed
Port	The Listen on port number for Queue Manager and QMA. The default value is <i>1414</i> .

CREATE A QUEUE

- 1 Select *JMS Providers > Websphere MQ Messaging provider > Queues*.
- 2 Select *New* and follow the Queue wizard.
- 3 Complete the Analytics required fields:

Field	Input/Action
Name	<i>AnalyticsQueue</i>
JNDI Name	<i>jms/AnalyticsQueue</i>
WebSphere Queue name	<i>ANALYTICSQUEUE</i>
Queue manager or queue sharing group name	<i>QMA</i>

CREATE ACTIVATION SPECIFICATIONS

- 1 Select JMS providers > WebSphere MQ messaging provider (In Node, Server scope) > Activation specifications
- 2 Select the Scope
- 3 Select *New* and follow the wizard.
- 4 Complete the Analytics required fields:

Field	Input/Action
Name	<i>SingleAnalyticsQueueListener</i>
JNDI name	<i>jms/SingleAnalyticsQueueListener</i>
Destination JNDI Name	<i>jms/AnalyticsQueue</i>
<i>Enter all the required information into this wizard</i>	Select this radio button
<i>Queue Manager or queue sharing group name</i>	<i>QMA</i>
Hostname	The host on which WebSphere MQ is installed.
Port	The Listen on port number for Queue Manager and QMA. The default value is <i>1414</i> .

- 5 Test the connection.
- 6 Select *Save* and then select *SingleAnalyticsQueueListener*.

CREATE THE JAAS - J2C AUTHENTICATION DATA

- 1 Select *Security > Global Security*
- 2 In the Authentication area, expand Java Authentication and Authorization Service and select *JAAS - J2C authentication data*.
- 3 Select *New* and follow the wizard.
- 4 Complete the Analytics required fields:

Field	Input/Action
Alias	<i>DW_STAGE</i>
User ID	<i>DW_STAGE</i>
Password	<i>password</i>
Description	<i>DW_STAGE</i>

Configure the Security on WAS

You must configure the security to retrieve signer certificates for a *handshake* (the process of setting a communication channel between the servers.)

Important! Make sure you configure both servers; that is, add the signer certificate of the source instance WAS server to the Analytics Router WAS server, and add the signer certificate of the Analytics Router WAS server to the source instance WAS server.

- 1 On the Analytics WAS, select *Security > SSL certificate and key management* (on both servers)
- 2 Follow the *SSL certificate and key management* wizard.
- 3 Complete the Analytics required fields:

Field	Input/Action
SSL Configuration settings	Select <i>Manage endpoint security configurations</i>
Local Topology	Expand <i>Outbound > <server name>(NodeDefaultSSLSettings)</i> and select <i>IIOp</i>
General properties	Select <i>Key stores and certificates</i>
Key stores and certificates	Click on <i>NodeDefaultTrustStore</i>
NodeDefaultTrustStore	At Additional Properties list, select <i>Signer certificates</i>
Signer certificates	Select <i>Retrieve from port</i>
Retrieve from port	<ul style="list-style-type: none"> • Enter the <i>Host</i> server name • Enter the <i>Port</i> number • Enter the <i>Alias</i> (name to mark the source application)
Retriever signer information	Select this button to test connection.

- 4 Select **OK** and **Save**.
- 5 Repeat this process for the source instance server.
- 6 Restart both servers.

Creating and Configuring a JMS Error Queue

We strongly recommend that you set up a JMS error queue (also called *error destination*) for messages that have expired or reached their redelivery limit. If you don't configure an error queue, then these messages are simply dropped. The descriptions, definitions, and procedures for creating and configuring error queues are located here:

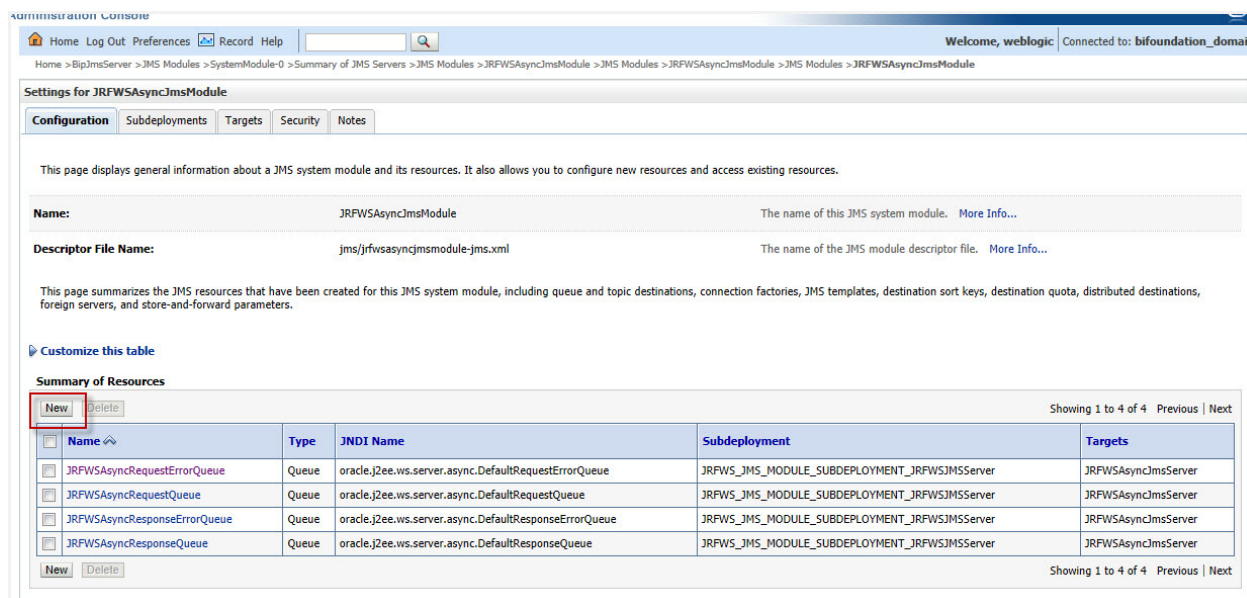
http://docs.oracle.com/cd/E28280_01/web.1111/e13738/basic_config.htm#JMSAD167

You can access the *Oracle WebLogic Server Administration Console Online Help* before you attempt to create a new error queue. This online help provides complete procedures for each step below, as well as definitions and descriptions of the JMS components and inputs. It is located here:

http://docs.oracle.com/cd/E28280_01/apirefs.1111/e13952/core/index.html

Creating an Error Queue

- 1 Make sure you have configured at least one JMS server.
The *Configuring JMS Servers* procedure is located here:
http://docs.oracle.com/cd/E28280_01/apirefs.1111/e13952/taskhelp/jms_servers/ConfigureJMSServers.html#WLACH01907__snmp1115318.
- 2 Start the WebLogic Administration Server.
The *Start the Console* procedure is located here:
http://docs.oracle.com/cd/E12839_01/apirefs.1111/e13952/taskhelp/console/StartTheConsole.html
- 3 Navigate to JMS Modules and select the JMS module for which you want to create an error log.
- 4 Select a module and select New.
 - Select Lock and Edit to see all buttons.



- 5 Select Queue and select Next.
- 6 Provide a name for the error queue and JNDI and select Next.
Information about JNDI is located here:
http://docs.oracle.com/cd/E28280_01/web.1111/e13730/toc.htm#WJNDI119
- 7 Select or create a new subdeployment and the resulting target for the error queue and select Finish.
 - The creating subdeployments procedure appears in the *JMS System Module: Create Subdeployment*, located here:
http://docs.oracle.com/cd/E28280_01/apirefs.1111/e13952/pagehelp/JMSjmsssystemmodulecreatesubdeploymenttitle.html#tasks

The Summary of Resources page appears with the new queue added to the list.

Create a New JMS System Module Resource

Back Next Finish Cancel

The following properties will be used to target your new JMS system module resource

Use this page to select a subdeployment to assign this system module resource. A subdeployment is a mechanism by which JMS resources are grouped and targeted to a server instance, cluster, or SAF agent. If neces new subdeployment by clicking the **Create a New Subdeployment** button. You can also reconfigure subdeployment targets later by using the parent module's subdeployment management page.

Select the subdeployment you want to use. If you select (none), no targeting will occur.

Subdeployments: JRFWS_JMS_MODULE_SUBDEPLOYMENT_JRFWSJMSServer Create a New Subdeployment

What targets do you want to assign to this subdeployment?

Targets :

JMS Servers
<input type="radio"/> BipJmsServer
<input checked="" type="radio"/> JRFWSAsyncJmsServer

Back Next Finish Cancel

Configuring the Redelivery Limit

The redelivery limit is the number of redelivery tries a message can have before it is moved to the error destination. When a message is rolled back or recovered, the redelivery delay is the amount of time a message is put aside before an attempt is made to redeliver the message.

- 1 At the Weblogic Server Administration Console, navigate to JMS Modules and select the desired module.
- 2 At the *Summary of Resources* list, select the error queue for which you want to configure the redelivery limit.
- 3 At the *Settings for <error queue name>* screen, select Configuration > Delivery Failure and complete the fields to define the message delivery failure parameters.

Note: A complete description of each parameter appears on this screen.

The parameters are:

- **Redelivery Delay Override.** This parameter specifies the length of time, or delay, before rolled back or recovered messages are redelivered. The default value (-1) specifies that the destination will not override the RedeliveryDelay setting specified by the consumer and/or connection factory.
- **Redelivery Limit.** This parameter specifies the limit on the number of times that WebLogic JMS will attempt to redeliver a message to an application. For example, if you enter 3, then the JMS will attempt to redeliver a message three times before it goes to the error queue. The default value (-1) specifies that the destination will not override the message sender's redelivery limit setting.
- **Expiration Policy.** This parameter specifies which message Expiration Policy to use when an expired message is encountered on a destination. You can select

- None - expired messages are removed from the destination.
- Discard - same as None.
- Log - removes expired messages from the system and writes an entry to the server log file indicating that the messages have been removed from the system.
- Redirect - moves expired messages from their current location to the Error Destination.
- Error Destination. This parameter specifies the name of the target error destination for messages that have expired or reached their redelivery limit.
- **Expiration Logging Format.** This parameter specifies what information, about the message, is logged when the Expiration Policy is set to *Log*. The valid logging policy values are:
 - %header% - all JMS header fields are logged.
 - %properties% - all user-defined properties are logged.
 - JMSDeliveryTime - this WebLogic JMS-specific extended header field is logged.
 - JMSRedeliveryLimit - this WebLogic JMS-specific extended header field is logged.
 - foo - any valid JMS header field or user-defined property is logged.
- Error Destination. This parameter specifies the target error destination for messages that have expired or reached their redelivery limit.

4 Select Save.

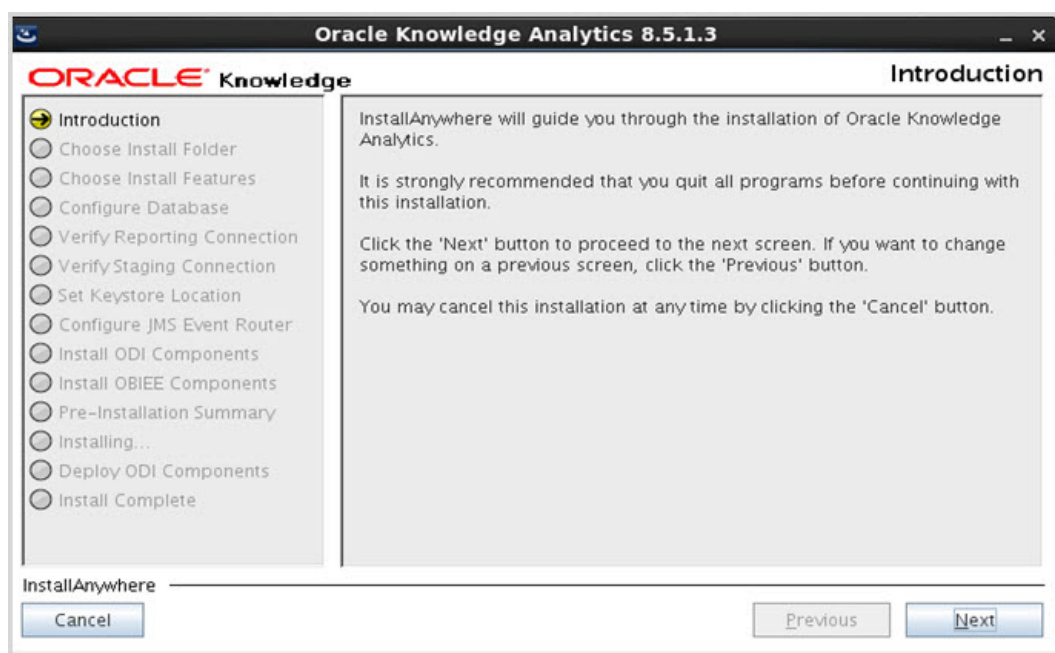
For more information on the JMS message redelivery limit, see *Configuring a Message Redelivery Limit On a Destination*, located here:

http://docs.oracle.com/cd/E28280_01/web.1111/e13727/manage_apps.htm#JMSPG253

Installing Analytics on WebSphere

To start the installer in Linux environments:

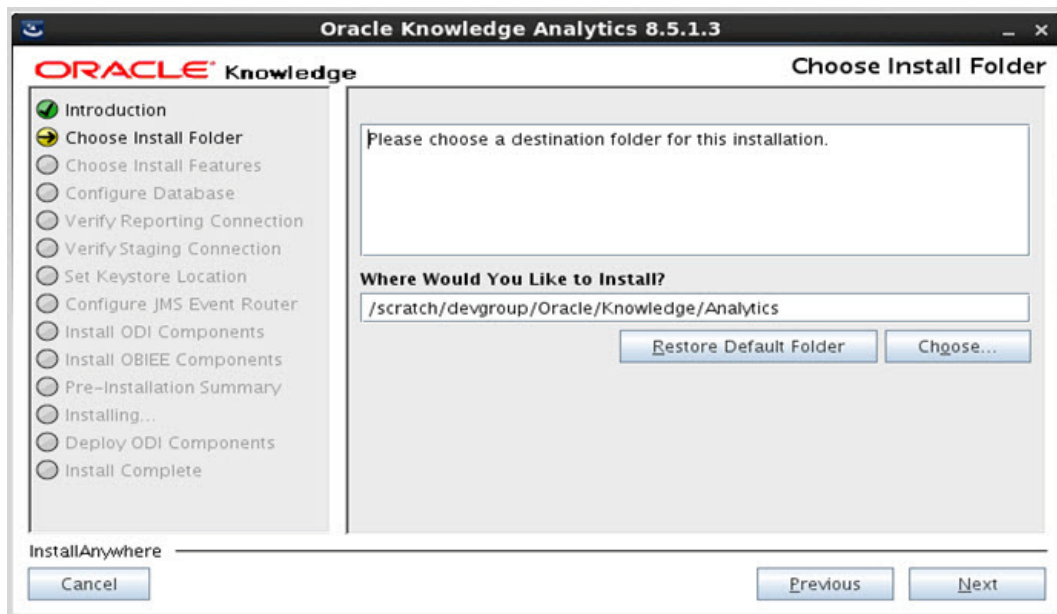
- 1 Open a bash shell by entering bash command:
`bash`
- 2 Use `cd` to go to the installer temporary directory.
- 3 Set the default locale for the bash shell to `en_US` by entering the following:
`export LC_ALL="en_US"`
- 4 Set permissions on the binary files so that they are executable by entering:
`chmod +x *.bin`
- 5 Start the installer:
`./install_analytics_websphere_LINUXx64_build_68.bin`



Select **Next** to continue.

Choose Install Directory

At the Choose Install Folder screen, select or enter the directory location where you want to install the selected Analytics components. This directory holds the artifacts from the various options for the Analytics installer.



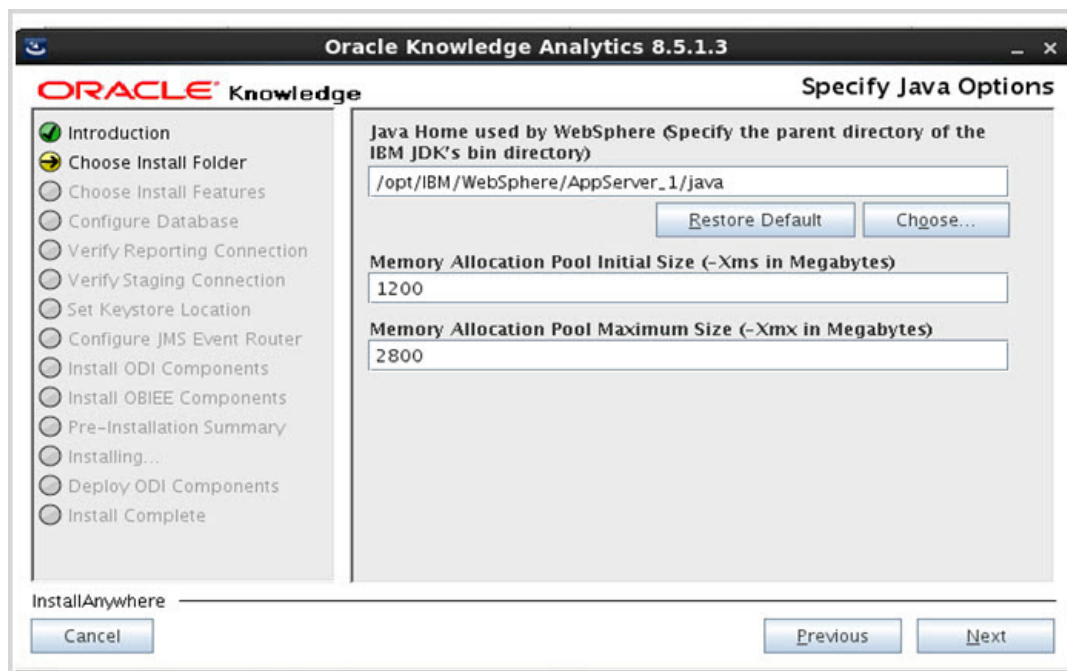
Select **Choose** to open a file explorer if you want to select an alternate location.

Select **Restore Default Folder** if you want to reset the default installation directory.

Select **Next** to continue.

Specify the WebSphere Java Options

Select the location for IBM Java options.



Option	Description
Java Home used by WebSphere	Enter the parent directory for the JDK bin directory used by WebSphere.
Memory Allocation Pool Initial Size	Enter the -XmsnM argument, where <i>n</i> is a number of megabytes. The default value is 1200.
Memory Allocation Pool Maximum Size	Specify the -XmxnM argument, where <i>n</i> is a number of megabytes. The default value is 2800.

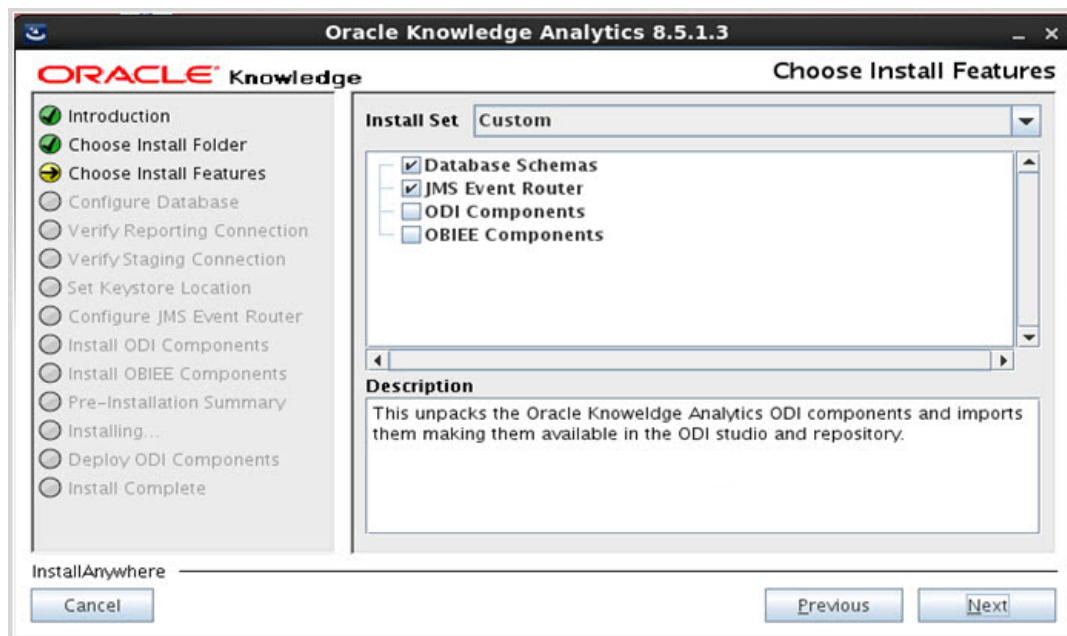
Select **Next** to continue.

Choose Install Features

Select the Analytics features you wish to install. The features you select determine the sequence of steps the installer goes through after this step.

If you select *JMS Event Router*, *ODI Components*, or *OBIEE Components*, the installer checks to see if the Reporting Schema is installed. The Database Schemas option must be selected to install the necessary database schemas for the remaining three options.

Note: Although the features are optional for any given run of the installer, all features must eventually be installed in order to complete the Analytics installation.



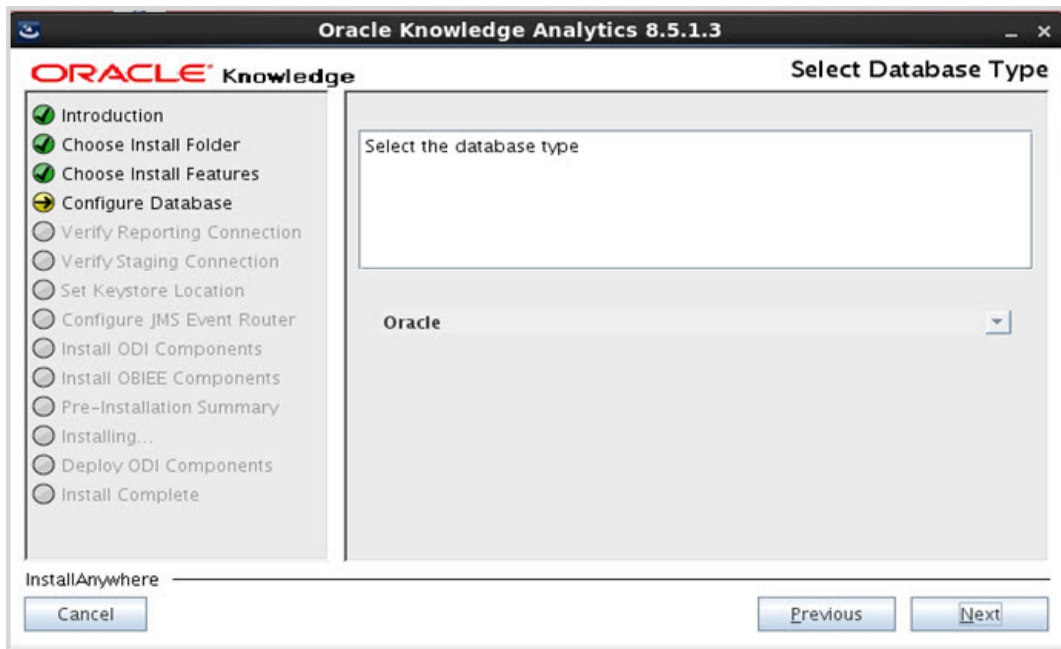
Available features include:

- Database Schemas** This feature creates and populates the Oracle Knowledge Analytics Reporting and Staging database tables in existing database schemas. If you select any of the following features, you must select this to install the related database schemas.
- JMS Event Router** This configures and deploys the Oracle Knowledge Analytics JMS Event Router to the specified WebSphere server. This option should be run from the JMS queue server.
- ODI Components** This option connects to the ODI instance and import the Oracle Knowledge Analytics interfaces into the ODI repository. This option should be run from the server hosting the ODI installation.
- OBIEE Components** This unpacks the Oracle Knowledge Analytics OBIEE Components so they can be updated and imported using the OBIEE Administration Tool. Run this option from the Windows machine being used to run the OBIEE BI Admin tool.

Select **Next** to continue.

Select the Database Type

Select the database type for this installation.



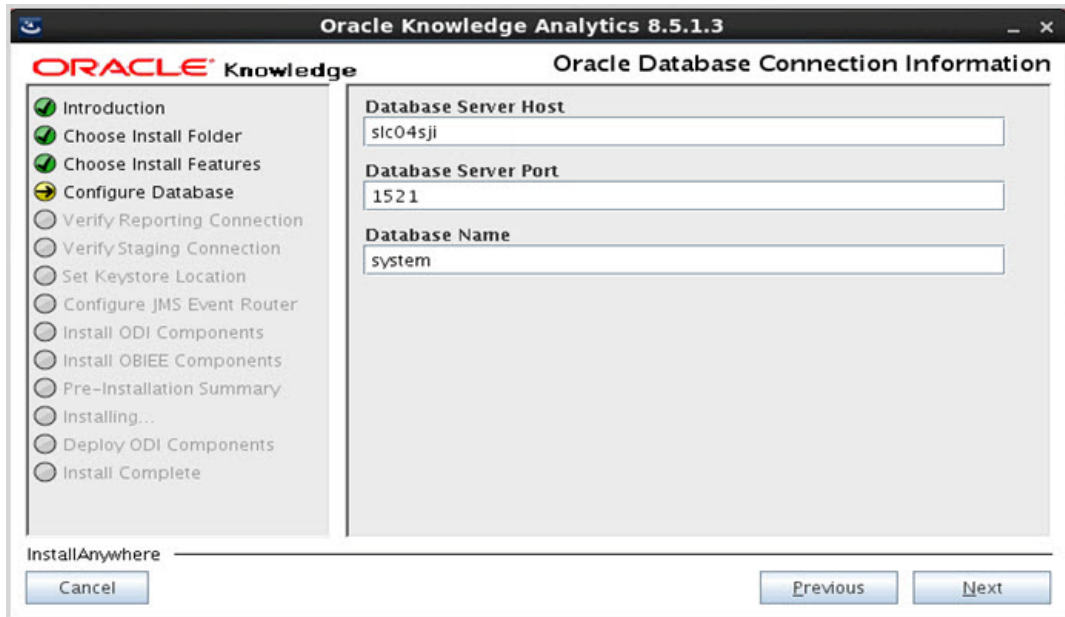
Select *Oracle*.

Select **Next** to continue.

Specify Database Connection Information (Oracle Database)

Enter the database connection details.

Important! You must create the database schema **before** you start this installation.



The screenshot shows the 'Oracle Database Connection Information' window of the Oracle Knowledge Analytics 8.5.1.3 installer. On the left is a list of installation steps: Introduction, Choose Install Folder, Choose Install Features, Configure Database (highlighted with a yellow arrow), Verify Reporting Connection, Verify Staging Connection, Set Keystore Location, Configure JMS Event Router, Install ODI Components, Install OBIEE Components, Pre-Installation Summary, Installing..., Deploy ODI Components, and Install Complete. The main area contains three input fields: 'Database Server Host' with the value 'slc04sjl', 'Database Server Port' with the value '1521', and 'Database Name' with the value 'system'. At the bottom are 'Cancel', 'Previous', and 'Next' buttons.

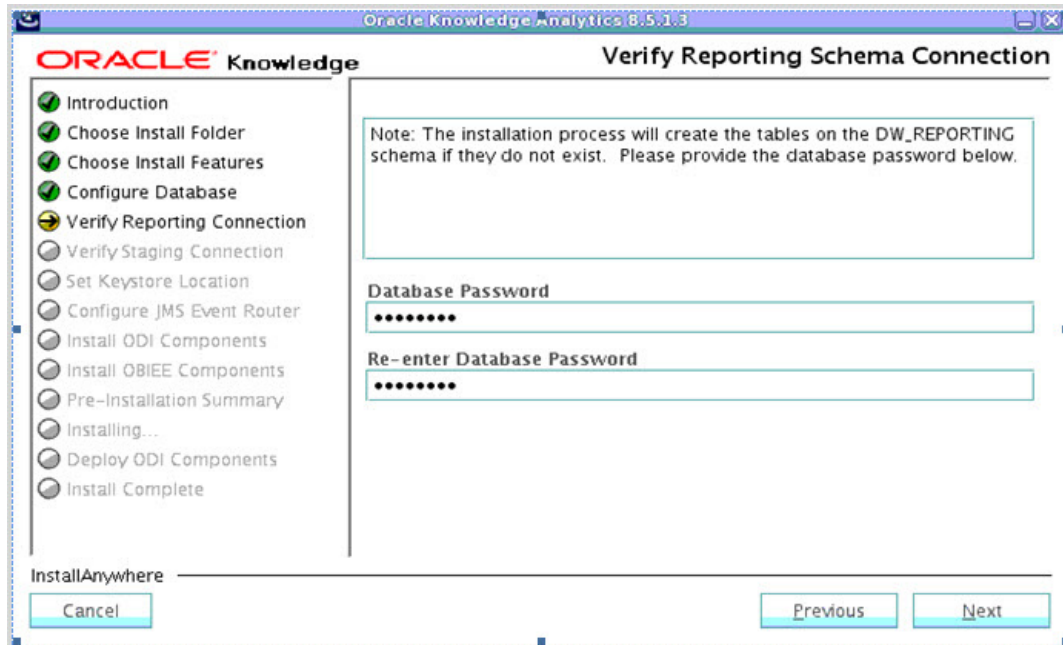
Enter the database host, port, and name.

Select **Next** to continue.

Verify Reporting Schema Connection (Oracle Database)

Enter the DW_REPORTING schema password.

Important! You must create the database schema before you start this installation.



Enter the password for the DW_REPORTING reporting schema.

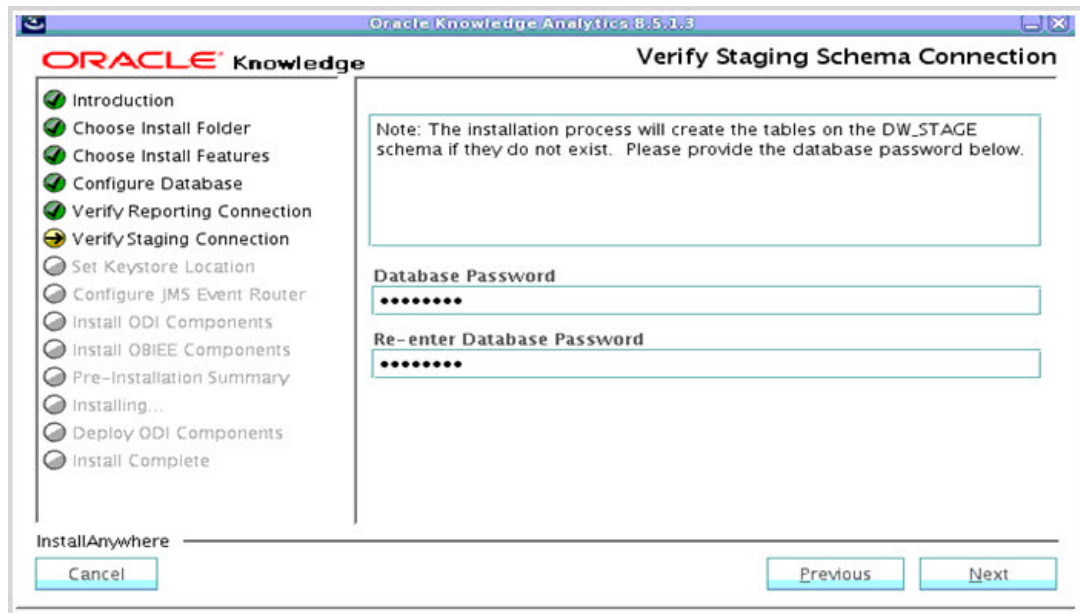
The installer attempts to validate the database connection information.

Select **Next** to continue.

Verify Staging Schema Connection (Oracle Database)

Enter the DW_STAGE schema password.

Important! You must create the database schema before you start this installation.



Enter the password for the DW_STAGE reporting schema.

Select **Next** to continue.

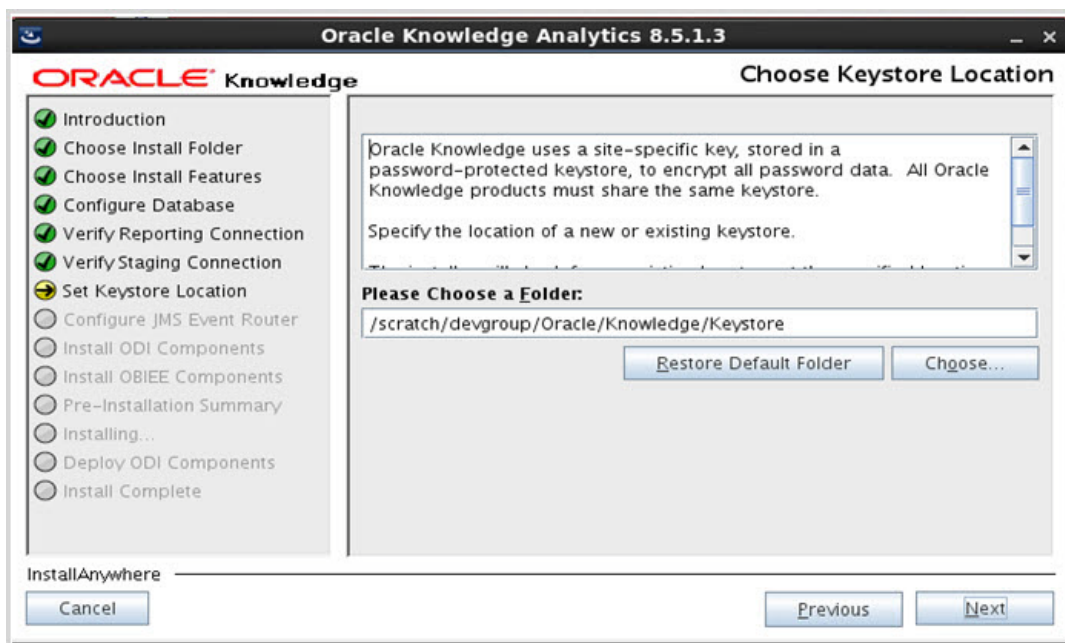
Choose the Keystore

If you have already installed Oracle Knowledge Search or Information Manager, use the same keystore created during that installation by selecting the location of that keystore. If you are installing Analytics before installing Search or Information Manager, create a new keystore and use this keystore for subsequent installations.

For more information about the keystore, see “Creating the Oracle Knowledge Keystore” in this guide.

Choose Keystore Location

Specify the location of the Oracle Knowledge keystore.



- Specify the location of an existing keystore that can be shared by all Oracle Knowledge products.

The default key store location is:

`<INSTALL_FOLDER_PARENT>/Keystore`

where:

`<INSTALL_FOLDER_PARENT>` is the parent folder of the top-level installation folder.

For example, if you are installing in `<user_home>/Oracle/Knowledge/Analytics`, then the installer uses the default key store location: `<user_home >/Oracle/Knowledge/Keystore`.

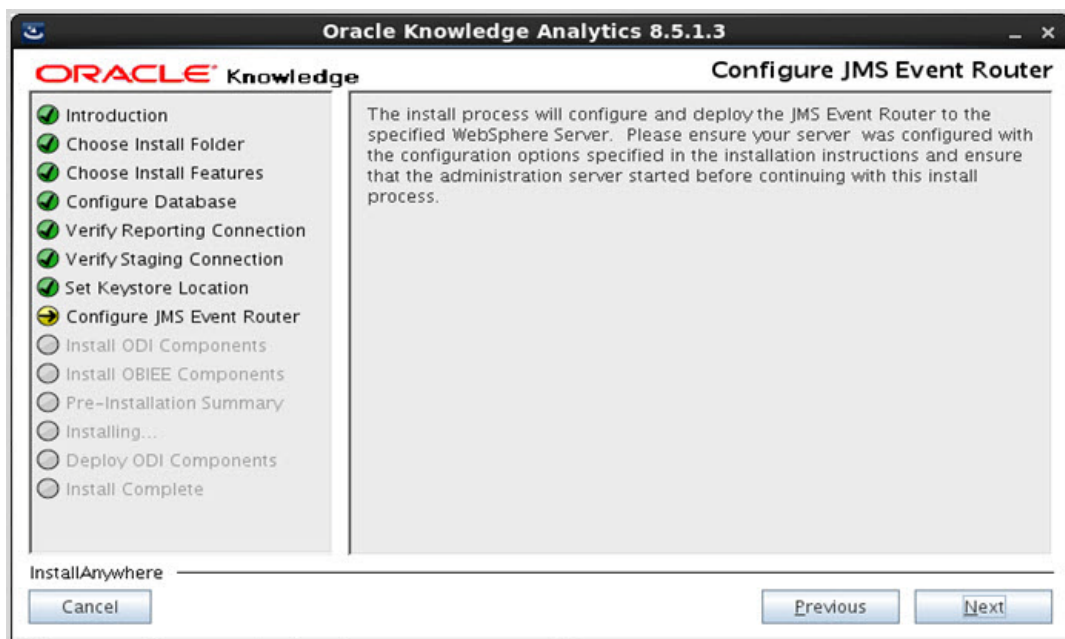
The installation program checks whether a keystore exists in the specified location.

- If you need to create a new keystore, see, [Create the Encryption Keystore](#).

If you specify the location of an existing keystore, the installer uses the existing keystore files to encrypt the necessary values, as required, and displays the Configure the JMS Event Router screen.

Select **Next** to continue.

Configure the JMS Event Router



The installer configures and deploys the JMS Event Router to the specified IBM Websphere profile.

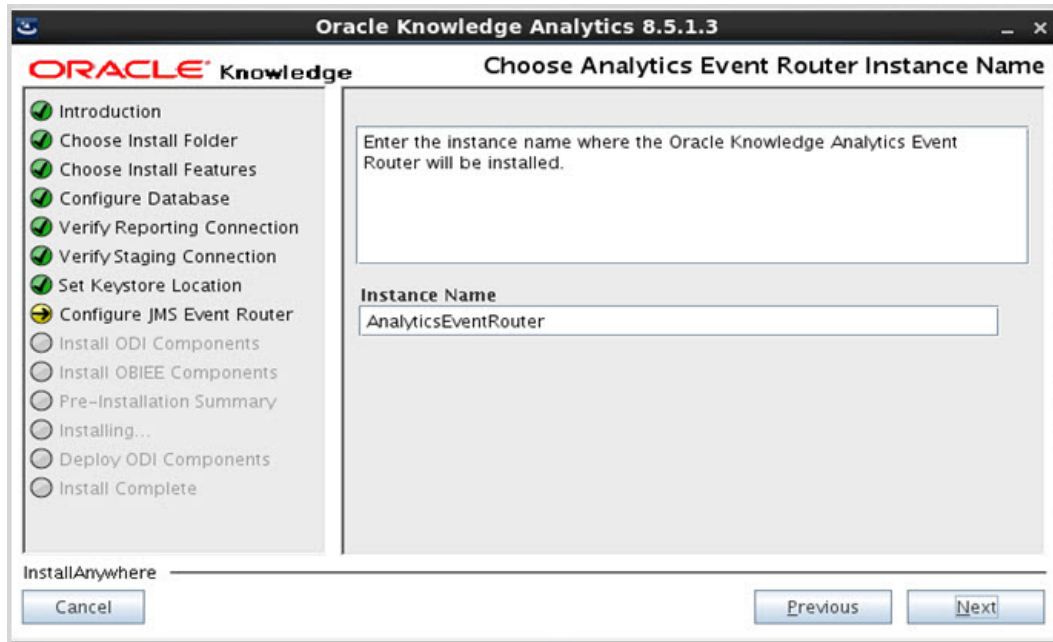
Make sure that your target profile is configured from the configuration options listed in the “Configuring the JMS Resources on WAS” section of this guide.

Select **Next** to continue.

Important! Make sure the WAS Analytics Server is running prior to executing the following steps so the installer can properly configure the JMS queue and deploy the Oracle Knowledge Event Router.

Choose the Analytics Router Instance Name

Enter the instance name where the event router is to be installed, for example, *AnalyticsEventRouter*.

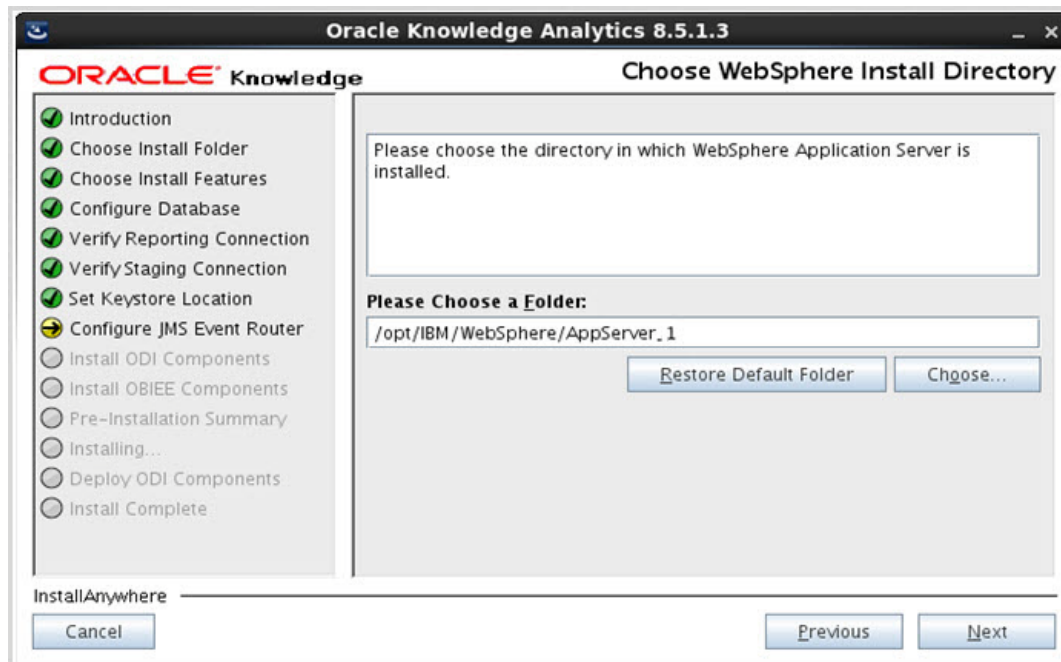


This name is used to create the folder under the `<INSTALL_ROOT>/instances` directory.

Select **Next** to continue.

Choose the WebSphere Server Installation Directory

Choose the directory in which WAS is installed.



Select the WebSphere home directory (the parent directory of *bin*)

Select **Choose** to open a file explorer if you want to select an alternate location.

Select **Restore Default Folder** if you want to reset the default installation directory.

Select **Next** to continue.

Enter Profile Details

Enter the Profile, Cell, Node and server names you noted when installing WAS 8.0.0.6.

Oracle Knowledge Analytics 8.5.1.3

ORACLE Knowledge Profile Configuration Values for Indexer

Introduction
 Choose Install Folder
 Choose Install Features
 Configure Database
 Verify Reporting Connection
 Verify Staging Connection
 Set Keystore Location
 Configure JMS Event Router
 Install ODI Components
 Install OBIEE Components
 Pre-Installation Summary
 Installing...
 Deploy ODI Components
 Install Complete

Please enter the Profile, Cell and Node for indexer

Profile Name
 Analytics_Profile

Cell Name
 slc07guaNode02 Cell

Node Name
 slc07guaNode01

Server Name
 Analytics_Server

InstallAnywhere

Cancel Previous Next

Field	Description
Profile Name	Enter the profile name from the “Create WebSphere Profile” section.
Cell Name	Enter the cell name from the “Create WebSphere Profile” section.
Node Name	Enter the node name from the “Create WebSphere Profile” section.
Server Name	Enter the Analytics server name

Select **Next** to continue.

Set the WebSphere Credentials

Provide the credentials to the administration server on which the application is deployed.

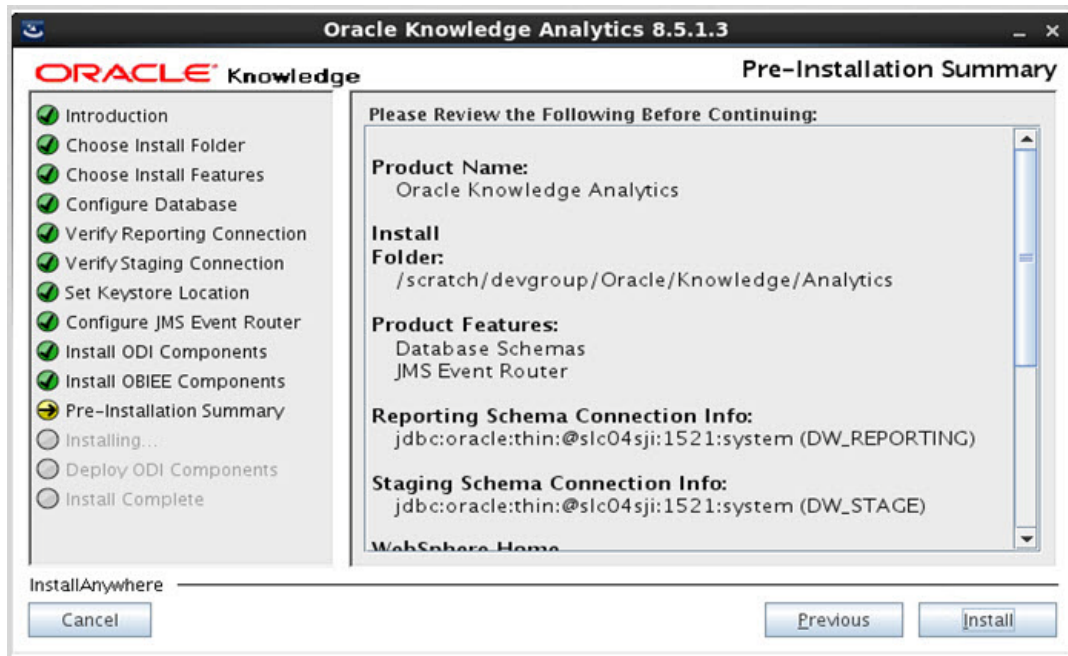
The screenshot shows the 'WebSphere Admin Credentials' dialog box within the Oracle Knowledge Analytics 8.5.1.3 installer. On the left, a list of installation steps is shown, with 'Configure JMS Event Router' selected. The main area contains a text box for instructions, followed by three input fields: 'Administrator User Name' (containing 'ok1'), 'Administrator User Password' (masked with dots), and 'Re-enter Administrator User Password' (also masked). At the bottom, there are 'Cancel', 'Previous', and 'Next' buttons.

Field	Description
Administrator User Name	Specify the user name of the user used to boot the administration server.
Administrator User Password	Specify the password of the user used to boot the administration server.

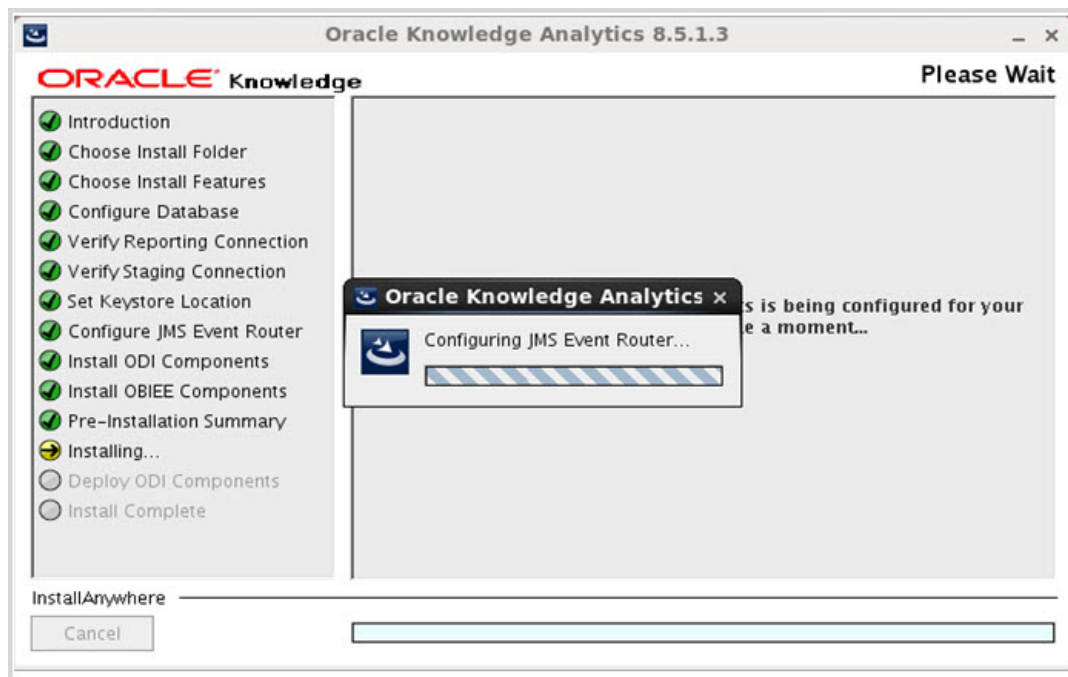
Select **Next** to continue.

Verify the Installation Specifications and Begin Installing

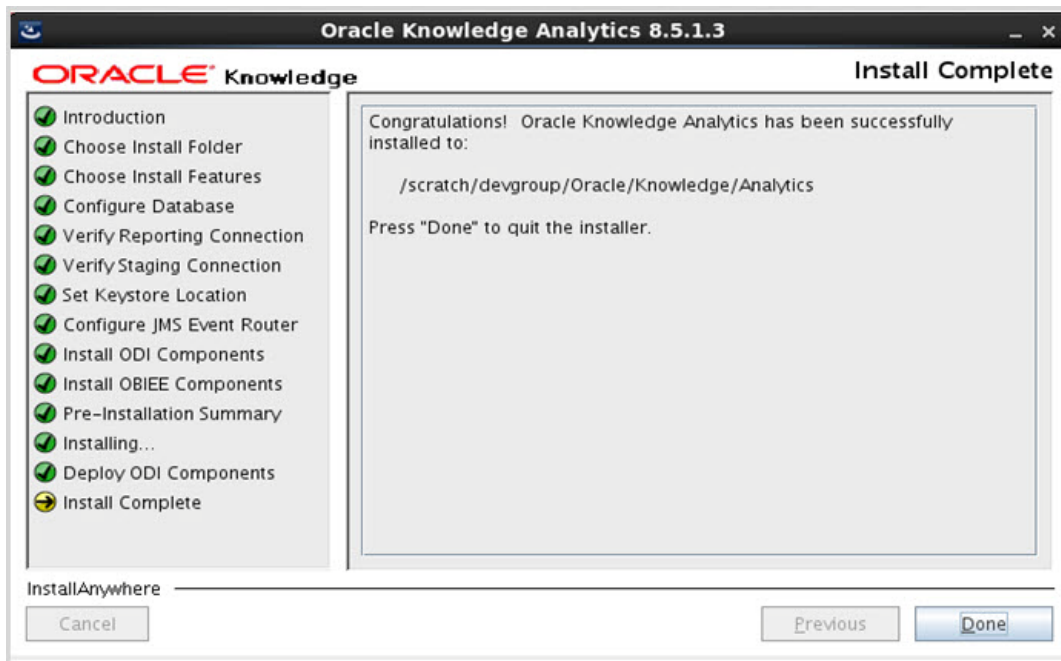
In the Pre-installation Summary screen, check your selections. To modify, select **Previous** until you get back to the screen on which you need to make a change.



Select **Install** to continue.



The Installing Oracle Knowledge Analytics screen displays the progress of the installation. Note that installing the reporting schema might take a substantial length of time.



The completion screen summarizes the installation process. The Analytics component directories and files are now installed in the specified location.

Select **Done**.

Deploy the Analytics Application Router

Complete the following procedure to deploy the Analytics Router on the WAS.

- 1 Log into the Websphere Admin Console
- 2 Select *Applications > New Application > New Enterprise Application*.
- 3 Select **Install** and follow the Install wizard. The Analytics required actions are:

Field	Input/Action
Path to the application	Enter <code>\${INSTALL_DIR}/instances/\${INSTANCE_NAME}/webapps</code> directory
How do you Install the Application	Select <i>Fast Path</i>
Select installation options	Select: <ul style="list-style-type: none"> • Distribute application • Application name: Enter <i>AnalyticsEventRouterEA</i> • Create MBeans for resources • Validate Input: <i>Warn</i> • File Permissions <user requirements> • Application Build ID - 8.5.1.3 Note: Your organization may require different selections.
Map modules to servers	Select <i>AnalyticsEventRouter</i>
Bind listeners for message-driven	<ul style="list-style-type: none"> • Select <i>AnalyticsEventRouter</i> • Select <i>Activation Specification</i> • At the Target Resource JNDI Name field, enter: <i>jms/SingleAnalyticsQueueListener</i>
Metadata for modules	Select metadata-complete attribute

- 4 Click on **Apply > Save** and then restart the WAS server.

Analytics is now installed and deployed.

Installing and Configuring AnswerFlow on WebSphere

This document describes the installation and configuration for Oracle Knowledge AnswerFlow on IBM WebSphere® Application Server (WAS). This document provides the following information:

- **Prerequisites**
- **Start the AnswerFlow Installer**
- **Verify AnswerFlow in the WebSphere Profile Console**
- **Deploy xmemcached-1.4.1.jar**
- **Set JSP and JSF options**
- **Deploy AnswerFlow SampleUI Runtime**

Important! Use the WebSphere documentation to install WAS. This document provides the necessary configuration parameters to use WebSphere with Oracle Knowledge but *does not* provide complete WebSphere installation instructions.

Prerequisites

Before you can install AnswerFlow, you must complete the following prerequisites in Information Manager and WebSphere.

Information Manager Prerequisites

After installing Information manager, complete the following sections before you install AnswerFlow.

Create Categories and Channel for AnswerFlow

AnswerFlow uses Information Manager (IM) Categories and Subcategories in its navigation structure. You assign a category to each object. Process flows and process objects are assigned to a category (and subcategory if you want) to make flows more findable, especially in AnswerFlow instances with more than 100 flows. On the AnswerFlow Home page, categories and subcategories are used to navigate to flows and process objects.

Open IM and review the categories already set up in your implementation. If you want to use categories other than the ones already created, you must create those categories in IM now. If you have not already created categories, create and assign them by using the following procedures.

CREATING CATEGORIES

- 1 In the IM Console, go to *Repository > Categories*.
- 2 Create your categories and subcategories.

For information on creating categories and subcategories, see “Adding a Content Category” in the **Oracle Knowledge Information Manager Administration Guide**.

ASSIGNING CATEGORIES TO USERS

- 1 In the IM Console, go to *Users > Console Users > List*.
- 2 Click the name of the user to assign Management Console User Properties.
- 3 Click **Edit User** to access the User details page.
- 4 In the *Categories* section, from the **Available Categories**, move to the **Selected Categories** each category that you want to assign to the user.

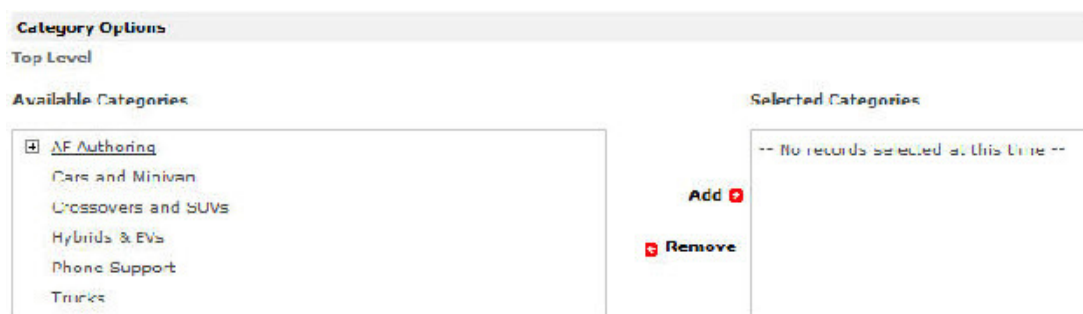
For information on creating users, see “Management Console User Properties” in **Oracle Knowledge Information Manager Administration Guide**.

CREATING AN ANSWERFLOW CHANNEL

Note: During the AnswerFlow installation, you will be prompted for the channel name.

To create an AnswerFlow channel that connects your AnswerFlow editor instance to your IM publishing capabilities:

- 1 In the repository where you plan to promote the Oracle Knowledge AnswerFlow (AnswerFlow) data, create a channel and give it a unique name.
The IM channel reference key that you create is used to determine the IM categories for AnswerFlow objects, and to store the promoted top-level process documents. You will use this reference key in a later procedure.
- 2 In Category Options move the relevant categories from **Available Categories** to **Selected Categories**, as shown in the following figure.



The categories and subcategories selected here will in turn form the AnswerFlow category tree used to navigate AnswerFlow processes and objects.

AnswerFlow Development Data Schema Properties

Attributes

[-] AnswerFlow Development Data (Root) (Node)

[-] System Data (Node)

	Up	Down	Add Attribute	Add Node	Delete
Process Name (Text Field) *MT	Up	Down	Up	Down	Delete
Process Version (Integer) *T	Up	Down	Up	Down	Delete
Process ID (Text Field) *T	Up	Down	Up	Down	Delete
Promotion ID (Text Field) *T	Up	Down	Up	Down	Delete
Tag (Text Field) *A	Up	Down	Up	Down	Delete
Submission Notes (Text Area) *I	Up	Down	Up	Down	Delete
Submitted By (Text Field) *TA	Up	Down	Up	Down	Delete
Submission Date (Date Time) *A	Up	Down	Up	Down	Delete
Preview URL (Text Field) *	Up	Down	Up	Down	Delete
View Detail URL (Text Field) *	Up	Down	Up	Down	Delete
Promotion URL (Text Field) *	Up	Down	Up	Down	Delete
Compiled Data (Text Area) *T	Up	Down	Up	Down	Delete

Create Meta Schema Done

* - Required Field
 M - Master Identifier
 I - Included in full text search
 A - Available in attribute search

In this example of a customer-specific node/schema, the channel name is **AnswerFlow Development Data**.

The categories are navigation filters.

- 3 In the channel that you just created, arrange the schema as shown above.

In the example above the name is AnswerFlow Development Data. Fill out the UI form to create this schema, create the node (System Data), and all the attributes beneath the node as shown in the following table.

Important! Do not edit the System Data node and its attributes. To interface with AnswerFlow, name and define them only as noted in the following table. It is critical to name the attributes as shown and confirm that the reference keys are as specified.

Nodes and Attributes	Field Type*	Reference Key Name
-Root		
--System Data	This is a non-repeating node.	SYSTEM_DATA
---Process Name	*MT - Text Field	PROCESS_NAME
---Process Version	*T - Integer	PROCESS_VERSION
---Process ID	*T - Text Field	PROCESS_ID
---Promotion ID	*T - Text Field	PROMOTION_ID
---Tags	*TA - Text Field	TAGS
---Submission Notes	*T - Text Area	SUBMISSION_NOTES
---Submitted By	*TA - Text Field	SUBMITTED_BY
---Submission Date	*A - Date/Time	SUBMISSION_DATE
---Preview URL	* - Text Field	PREVIEW_URL
---View Detail URL	* - Text Field	VIEW_DETAIL_URL
---Promotion URL	* - Text Field	PROMOTION_URL
---Compiled Data	*T - Text Area	COMPILED_DATA

*.Required Field; M - Master Identifier; T - Included in full text search; A - Available in attribute search

Note: You may add other nodes to the root element, as long as you specify the System Data node and its attributes as above.

WebSphere Application Server Prerequisites

Please complete the following requirements before installing Oracle Knowledge on WAS:

- Install WAS 8.0.0.6 on Linux 6
After you install, you must complete the configuration described in “Preparing to Install Oracle Knowledge on WebSphere” on page 25. When finished, make certain the server is running.
- Install and configure the Oracle database, creating the necessary database users.

Start the AnswerFlow Installer

```
./<Installer Directory>/<filename>_websphere.bin
```

On Linux, Oracle Knowledge software must be installed using a non-root user. Before running the installer, create a standard Oracle Knowledge admin (Linux) user in the operating system. This user installs and runs the Oracle Knowledge software and must be given permission to access network shares while running as a service.

Start the installer by locating and executing the appropriate version of the installer for your environment.

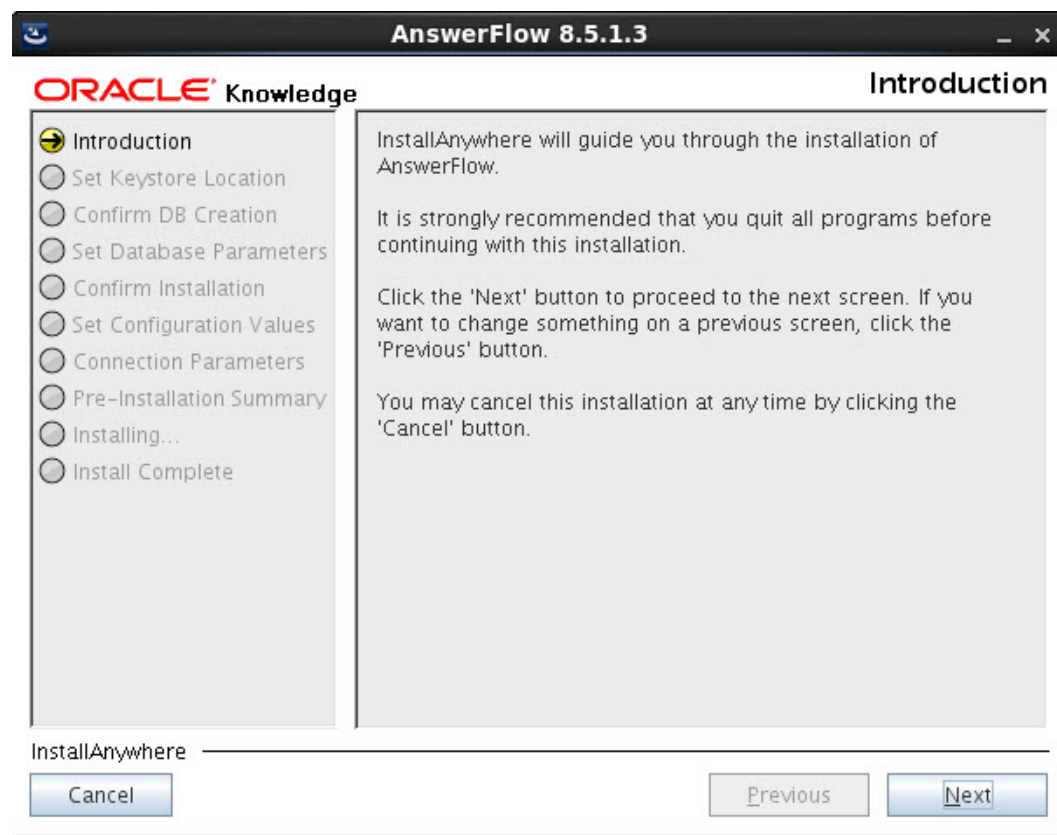
To start the installer on Linux:

- Execute `install_answerflow_websphere_LINUXx64_build_68.bin`

When the initialization completes, the installer displays the **AnswerFlow Installation Introduction** screen.

AnswerFlow Installation Introduction

The installer's introduction screen provides general information about the installation process and recommends that you close any other programs that are currently running.



Select **Next** to continue.

The installer displays the **Choose Installation Folder** screen.

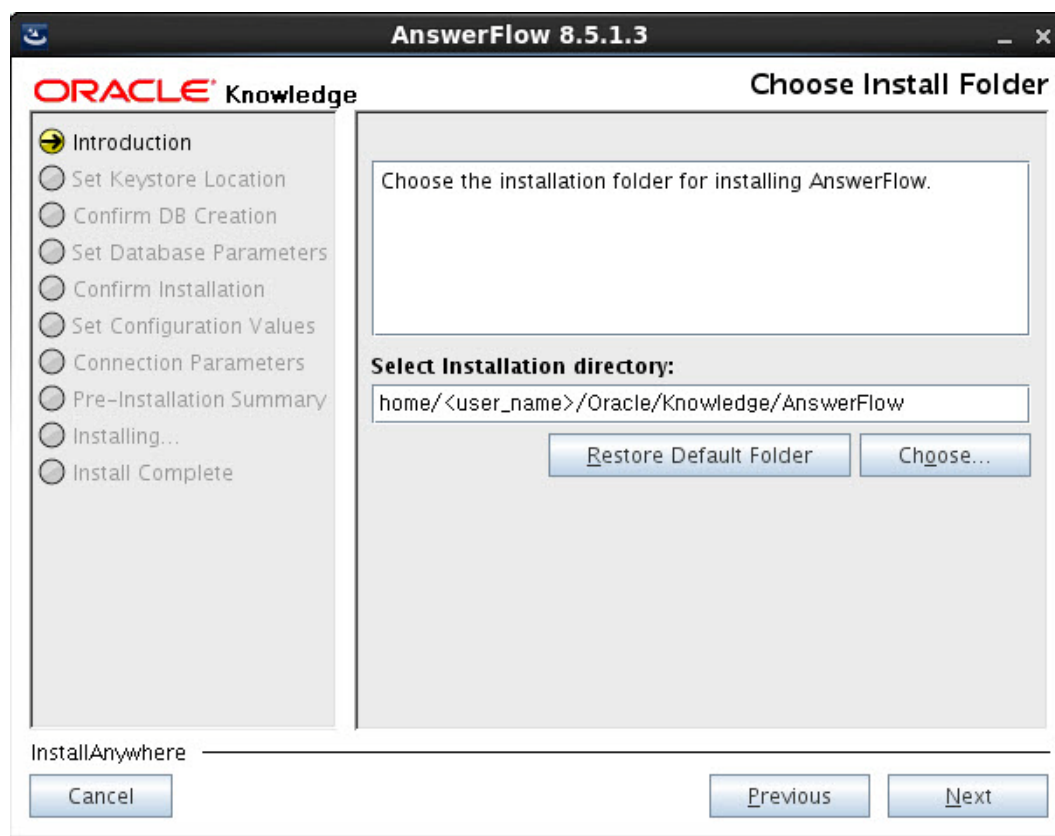
Choose Installation Folder

Select the directory location where you want to install AnswerFlow. You install AnswerFlow within an instance of Information Manager.

The installer displays the default, recommended installation directory:

- `home/<user_name>/Oracle/Knowledge/AnswerFlow` on Linux

You can install at any location. The recommended location is the base Oracle Knowledge application directory.



Select **Choose** to open a file browser and select an alternate Oracle Knowledge base directory.

Use the **Restore Default Folder** option to reset the default installation directory, if necessary.

Select **Next** to continue.

The installer displays the **Set Java Options for WebSphere Application Server** screen.

Set Java Options for WebSphere Application Server

Specify the Java memory options used to start the RuntimeUI web application server.

AnswerFlow 8.5.1.3

ORACLE Knowledge

Specify Java Options

Enter requested information

Java Home used by WebSphere (Specify the parent directory of the IBM JDK's bin directory)

/opt/IBM/WebSphere/AppServer/java

Restore Default Choose...

Memory Allocation Pool Initial Size (-Xms in Megabytes)

1200

Memory Allocation Pool Maximum Size (-Xmx in Megabytes)

2800

InstallAnywhere

Cancel Previous Next

Specify the following Java memory options:

Property	Description
Java Home used by WebSphere	Specify the parent directory of the IBM JDK bin directory.
Memory Allocation Pool Initial Size	The initial and minimum Java heap size in megabytes. Default is 1200.
Memory Allocation Pool Maximum Size	The maximum Java heap size in megabytes. Default is 2800.

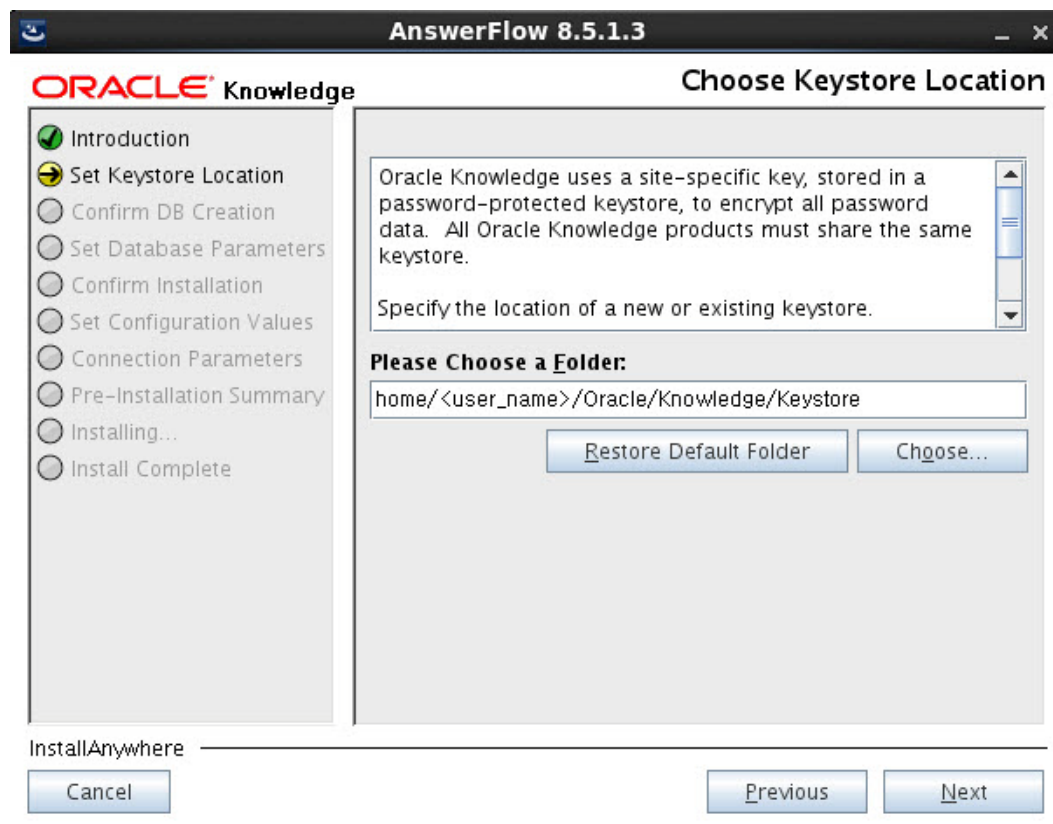
Select **Next** to continue.

The installer displays the **Set Keystore Location** screen.

Set Keystore Location

The installer prompts you to specify the location of the Oracle Knowledge keystore. If you have already installed Oracle Knowledge Search, Information Manager, or Analytics, use the keystore created during that installation by selecting the location of that keystore.

For more information about the keystore, see “Creating the Oracle Knowledge Keystore” on page 17.



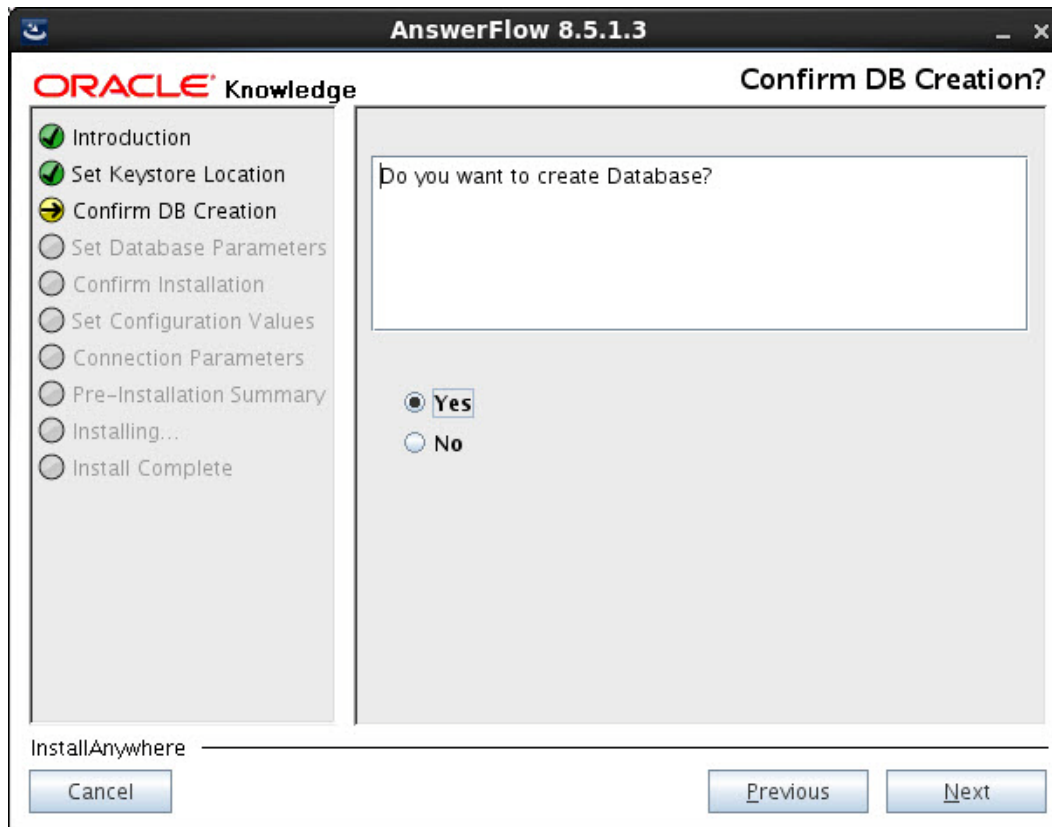
You must configure a keystore that to be used by all Oracle Knowledge products. The installation program generates a unique, site-specific encryption key used to encrypt all sensitive data. This encryption key is stored in the keystore and the keystore is password-protected. You must create the keystore in a folder that is on a shared drive that is accessible to all applications in the environment. An alternative strategy would be to install the keystore once and then copy the folder and its contents to each of the other servers as needed. This is needed to generate and access encrypted strings that are consistent across all of the servers and applications in the environment.

- Specify the location of an existing Keystore.
- Select **Next** to continue.

The installer displays the **Confirm Database Creation** screen.

Confirm Database Creation

Confirm that you want to create a database for AnswerFlow.



Select **Yes**.

Select **Next** to continue.

The installer displays the **Set IM Database Parameters** screen.

Set IM Database Parameters

To create the new database, the installer requires the following parameters.

AnswerFlow 8.5.1.3

ORACLE Knowledge

Set Database Parameters

Please provide database information.

Database User

Database Password

Re-enter Database Password

Database JDBC URL
jdbc:oracle:thin:@slc02jop.us.oracle.com:1521:XE

InstallAnywhere

Cancel Previous Next

Specify the following parameters:

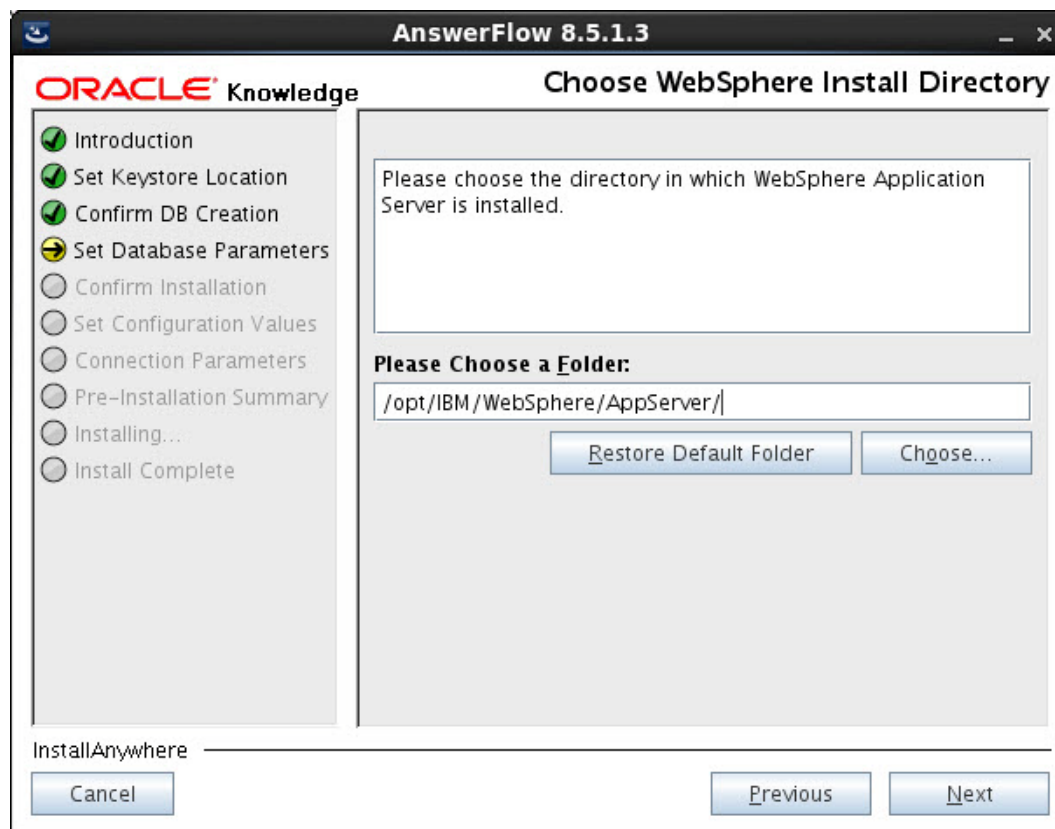
Parameter	Description
Database User	Specify the IM database user.
Database Password	Specify the password associated with user above.
Database JDBC URL	Specify the IM database JDBC URL.

Select **Next** to continue.

The installer displays the **Choose the WebSphere Server Installation Directory** screen.

Choose the WebSphere Server Installation Directory

Select the directory in which WebSphere Application Server is installed. For example, `/opt/IBM/WebSphere/AppServer/`

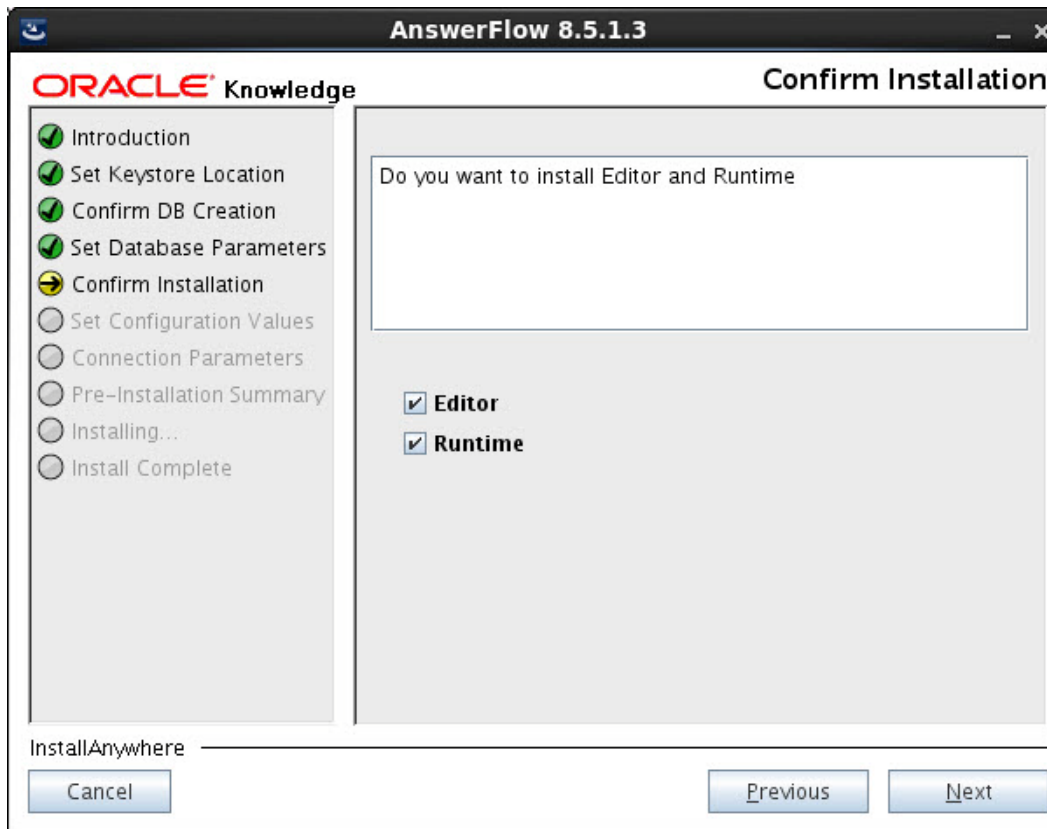


Select **Next** to continue.

The installer displays the **Confirm Installation** screen.

Confirm Installation

Confirm that you are installing both AnswerFlow Editor and AnswerFlow Runtime.



Select **Editor** and **Runtime**.

Select **Next** to continue.

The installer displays the **Profile Configuration Values for AnswerFlow Editor** screen.

Profile Configuration Values for AnswerFlow Editor

Enter the Profile, Cell, Node, and Server names for the Editor profile.

AnswerFlow 8.5.1.3

ORACLE Knowledge

Profile Configuration Values for AF Editor

Please enter the profile details for AnswerFlow Editor viz. Node, Cell etc.

AnswerFlow Editor Profile Name
NI_AF2

AnswerFlow Editor Cell Name
slc07plzNode06Cell

AnswerFlow Editor Node Name
slc07plzNode06

AnswerFlow Editor Server Name
niaf2

InstallAnywhere

Cancel Previous Next

Enter the following parameters:

Value	Description
Editor Profile Name	The name of the profile created for the runtime instance.
Editor Cell Name	The name of the cell that contains this profile.
Editor Node Name	The name of the node associated with this cell and profile.
Editor Server Name	The name of the server containing this profile.

Select **Next** to continue.

The installer displays the **WebSphere Administrator Credentials for AnswerFlow Editor** screen.

WebSphere Administrator Credentials for AnswerFlow Editor

Enter the Administrator User Name, and Password names for the Editor profile.

Enter the following parameters:

Parameter	Description
Administrator User Name	The user name the system uses to connect to the runtime server.
Administrator User Password	The password associated with the user name above.

Select **Next** to continue.

The installer displays the **Profile Configuration Values for AnswerFlow Runtime** screen.

Profile Configuration Values for AnswerFlow Runtime

Enter the Profile, Cell, Node, and Server names for the Runtime profile.

AnswerFlow 8.5.1.3

ORACLE Knowledge **Profile Configuration Values for AF Runtime**

Please enter the profile details for AnswerFlow runtime viz. Node, Cell etc.

AnswerFlow runtime Profile Name
NI_AF2

AnswerFlow runtime Cell Name
slc07plzNode06Cell

AnswerFlow runtime Node Name
slc07plzNode06

AnswerFlow Runtime Server Name
niaf2

InstallAnywhere

Cancel Previous Next

Enter the following parameters:

Value	Description
Runtime Profile Name	The name of the profile created for the runtime instance.
Runtime Cell Name	The name of the cell that contains this profile.
Runtime Node Name	The name of the node associated with this cell and profile.
Runtime Server Name	The name of the server containing this profile.

Select **Next** to continue.

The installer displays the **WebSphere Administrator Credentials for AnswerFlow Runtime** screen.

WebSphere Administrator Credentials for AnswerFlow Runtime

Enter the Administrator User Name, and Password names for the Runtime profile.

AnswerFlow 8.5.1.3

ORACLE Knowledge **Set WAS Credentials For AF Runtime**

Introduction
 Set Keystore Location
 Confirm DB Creation
 Set Database Parameters
 Confirm Installation
 Set Configuration Values
 Connection Parameters
 Pre-Installation Summary
 Installing...
 Install Complete

Please provide the credentials of the server/profile on which you want AnswerFlow Runtime to be deployed.

Administrator User Name
 ok1

Administrator User Password
 ...

Re-enter Administrator User Password
 ...

InstallAnywhere

Cancel Previous Next

Enter the following parameters:

Parameter	Description
Administrator User Name	The user name the system uses to connect to the runtime server.
Administrator User Password	The password associated with the user name above.

Select **Next** to continue.

The installer displays the **Get Information Manager Connection Parameters** screen.

Get Information Manager Connection Parameters

Provide the connection and repository details for your Information Manager installation.

AnswerFlow 8.5.1.3

ORACLE Knowledge

Get Information Manager Connection Parameters

Please enter the connection details for Information Manager.

Information Manager Web Services URL
http://slc07plz.us.oracle.com:9084/imws

Information Manager Resources URL
http://slc07plz.us.oracle.com:9084/resources

Information Manager Console URL
http://slc07plz.us.oracle.com:9084/InfoManager/WebObj

Repository Reference Key
DEMO

Channel
AF1

InstallAnywhere

Cancel Previous Next

Provide the following Information Manager connection parameters:

Parameter	Description
Information Manager Web Services URL	IM Web Services URL for authentication and retrieving IM documents
Information Manager Resources URL	Resource URL for linking to files from IM documents.
Information Manager Console URL	URL to the IM Management Console. Using the host and IM_HTTP_TPT_PORT from the IM Profile, it should be http://{host}:{IM_HTTP_TPT_PORT}/InfoManager/WebObjects/InfoManager.woa?contentid=
Repository Reference Key	This is the IM repository containing the IM documents that are used with AnswerFlow.
Channel	The IM Channel designated for AnswerFlow and deployed in Creating an AnswerFlow Channel .

Select **Next** to continue.

The installer displays the [Get SampleUI Credentials](#) screen.

Get SampleUI Credentials

Provide the credentials that the SampleUI webapp uses to retrieve IM documents. The repository reference key used by the SampleUI webapp to retrieve IM documents should be the same as the one entered in the previous screen since AnswerFlowEditor and SampleUI always use the same IMWS and IM resource URLs.

AnswerFlow 8.5.1.3

ORACLE Knowledge

Get SampleUI Credentials

Please enter the default credentials for SampleUI to use to connect to Information Manager.

Username
user1

Password
••••••

Confirm Password
••••••

Repository Reference Key
DEMO

InstallAnywhere

Cancel Previous Next

Provide the following Information Manager connection parameters:

Parameter	Description
Username	Enter the username for the SampleUI to use to connect to the IM repository.
Password	Enter and confirm the password associated with the username above.
Repository Reference Key	The IM repository containing the IM documents that are used with AnswerFlow.

Select **Next** to continue.

The installer displays the **Pre-Installation Summary** screen.

Pre-Installation Summary

The Pre-Installation Summary screen displays a summary of your installation selections, as well as disk space information, prior to transferring the product files from the distribution.



Review your selections. Use **Previous** to make any corrections.

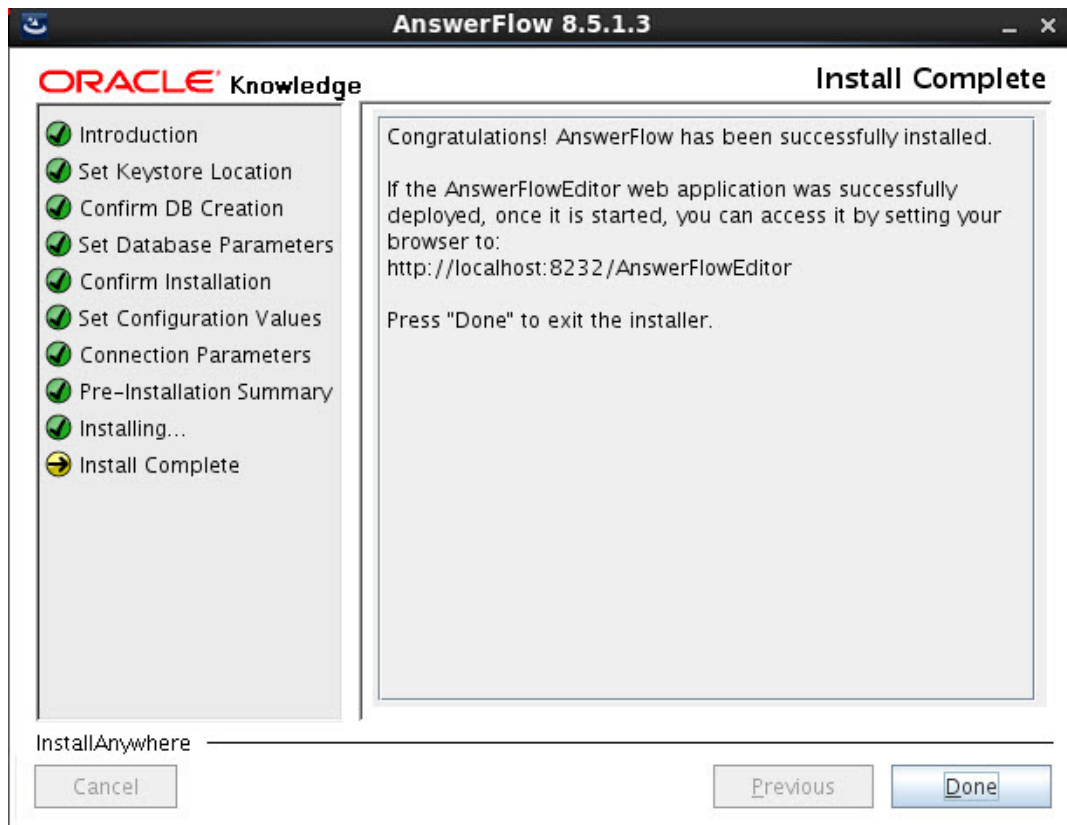
Select **Install** to continue.

The installer begins installing AnswerFlow in the specified location.

When the AnswerFlow installation completes, the installer presents the **Installation Complete** screen.

Installation Complete

The installation program confirms the installation and provides the URL for AnswerFlow Editor.



Select **Done** to exit the installation program.

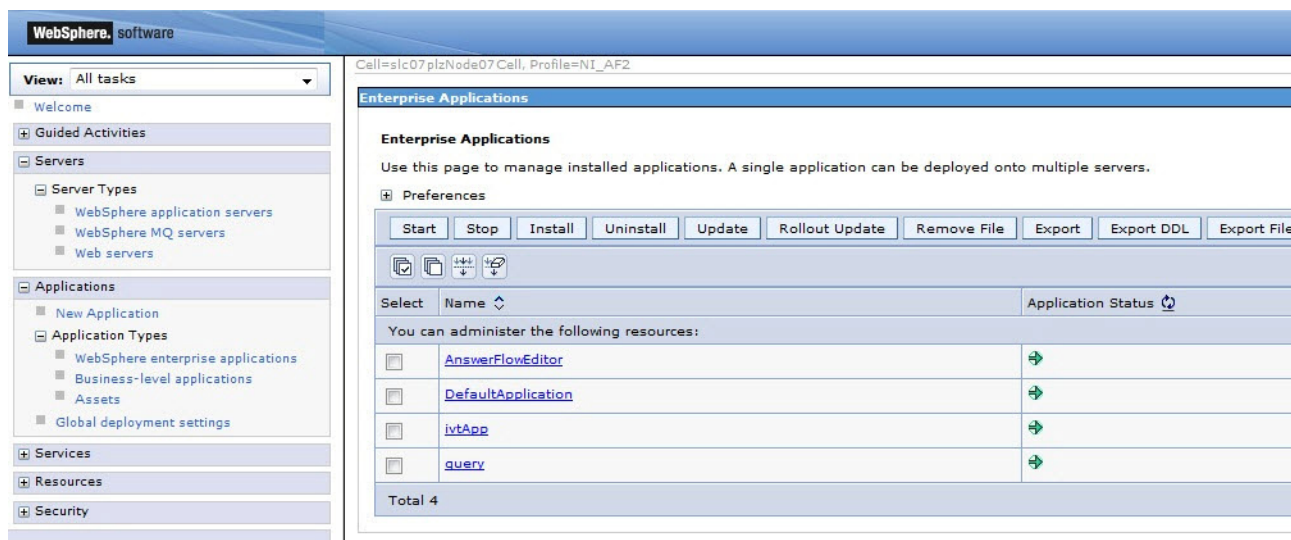
You should also go to the command line from where installer was started and check if errors are displayed there.

After completing the installation, you must complete the following sections before you can use AnswerFlow.

Verify AnswerFlow in the WebSphere Profile Console

To verify application deployment:

- 1 Login to the WebSphere Profile console at
`https://<server Name or IP address>:<port#>/ibm/console.`
- 2 Navigate to **Applications > Application Types > WebSphere enterprise applications.**



AnswerFlowEditor should be deployed and running.

Keep the WAS Console open for the next step.

Deploy xmemcached-1.4.1.jar

To deploy the xmemcached-1.4.1.jar:

- 1 Download <https://xmemcached.googlecode.com/files/xmemcached-1.4.1.jar>.
- 2 Copy xmemcached-1.4.1.jar to
`{AF_INSTALL_DIR}/answerflowlibrary.`
- 3 In the WAS Console, click **Environment > Shared libraries.**
- 4 In the **Scope** dropdown menu, select the scope **Node={NODE_NAME}**.
- 5 Select **New**.

- 6 Enter the following values:

Field	Value
Name	AnswerFlow
Classpath	<AF_Install_DIR>/answerflowlibrary
Class Loading	Select Use an isolated class loader for this shared library

- 7 Save changes.
- 8 Select **Applications > Application Types > WebSphere enterprise applications**.
- 9 Select **AnswerFlowEditor**.
- 10 Select **References > Shared library references**.
- 11 Select the **AnswerFlowEditor.war** module
- 12 Select **Reference shared libraries**.
- 13 Move AnswerFlow from **Available** to **Selected**.
- 14 Save changes.

Set JSP and JSF options

- 1 Select **Applications > Application Types > WebSphere enterprise applications**.
- 2 Select **AnswerFlowEditor**.
- 3 Select **JSP and JSF options** under *Web Module Properties*.
- 4 Select **SunRI1.2** from the **JSF implementation** dropdown menu.

The screenshot shows the WebSphere Enterprise Applications console. The breadcrumb navigation is **Enterprise Applications > AnswerFlowEditor > JSP and JSF options**. The page title is "JSP and JSF options".

JSP reloading options for Web modules

Configure Servlet and JSP reload attributes in web modules.

Web module	URI	JSP enable class reloading	JSP reload interval in seconds
AnswerFlowEditor.war	AnswerFlowEditor.war,WEB-INF/web.xml	<input checked="" type="checkbox"/>	10

JSF implementation

Select a JSF implementation that the container will use for this application.

DEFAULT

SunRI1.2

MyFaces2.0

OK Cancel

Select a JSF implementation that the container will use for this application.

- 5 Save changes.

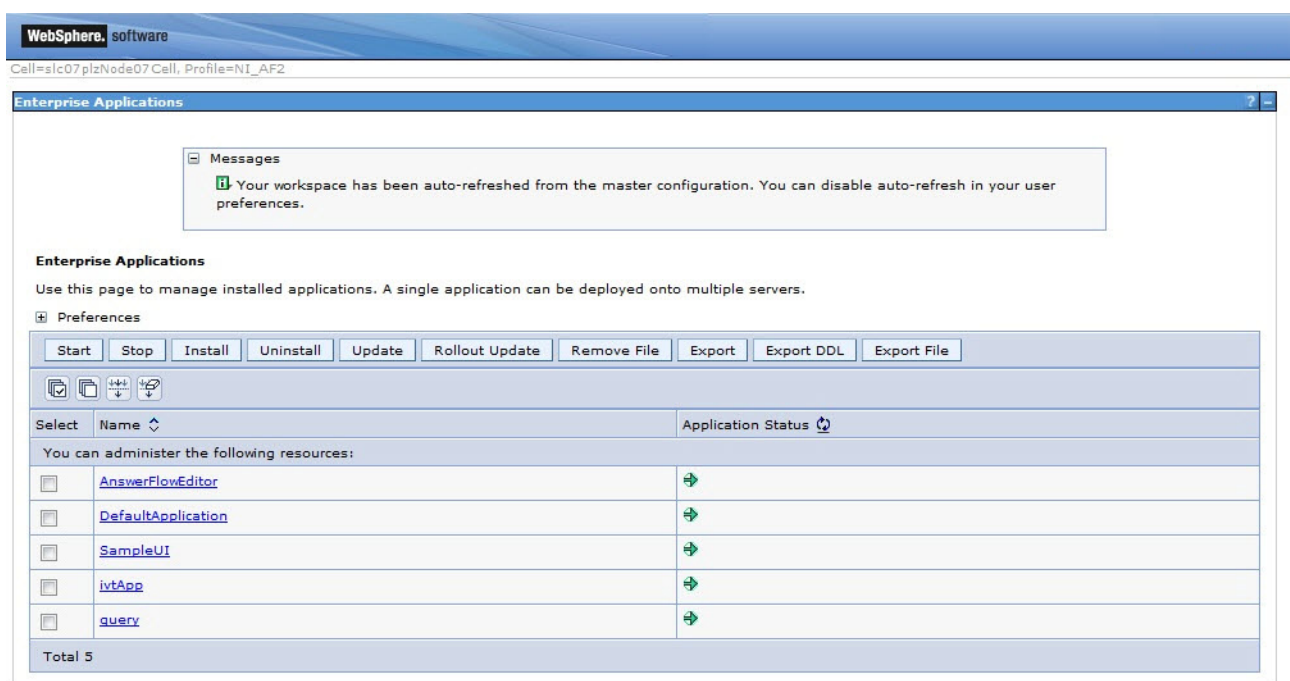
Deploy AnswerFlow SampleUI Runtime

To deploy AnswerFlow SampleUI Runtime:

- 1 Start the RuntimeUI ICE:
 - a Change the directory to `{AF_INSTALL_DIR}/instances/RuntimeUI/`.
 - b Run `setenv.sh`.
- 2 Run the following command in the ICE window:


```
deploy.sh -s {AF_INSTALL_DIR}/Sample/SampleUI -w {AF_INSTALL_DIR}/Sample/SampleUI/target/SampleUI.war
```
- 3 After the installation of AnswerFlow SampleUI Runtime is complete, login into the Websphere Profile console to verify that the application deployed, using the following URL:


```
https://<server_Name_or_IP_address>:<port#>/ibm/console
```
- 4 Navigate to **Applications > Application Types > WebSphere enterprise applications**.



AF Runtime Instance (SampleUI) should be running.

Post Deployment steps for AF RunTime (SampleUI)

- 1 Click **Applications > Applications Types > WebSphere enterprise applications**.
- 2 Click **SampleUI**
- 3 Click **References > Shared library references**.
- 4 Select the **SampleUI.war** module.
- 5 Click **Reference shared libraries**.
- 6 Move SampleUI from **Available** to **Selected**.
- 7 Save changes.
- 8 Restart the server.

Accessing the AnswerFlow User Interface

Use the following URLs to access AnswerFlow:

- AnswerFlow Editor: `http://<server_Name_or_IP>:<port#>/AnswerFlowEditor`
- AnswerFlow RuntimeUI: `http://<server_Name_or_IP>:<port#>/SampleUI`

Key Store Configuration for Multiple AnswerFlow RunTimes

You can create multiple AnswerFlow runtimes in the same environment. The first instance of AnswerFlow Editor and/or runtimes requires a new database to be created and subsequent instances should point to the same database. Similarly, all instances within an environment must point to the same existing KeyStore.