Cisco Prime Service Catalog 10.0 R2
Installation Guide

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Preface

Objectives

The Cisco Prime Service Catalog 10.0 R2 Installation Guide contains instructions related to the installation, upgrade and configuration tasks for the Cisco Prime Service Catalog (Service Catalog) product and its prerequisite software.

Audience

This guide is intended for system administrators and systems integrators responsible for installing and configuring Cisco Prime Service Catalog products.

About Cisco Prime Service Catalog Licensing

Cisco Prime Service Catalog is integrated with Cisco Intelligent Automation for Cloud to facilitate self-service ordering from a unified Service Catalog for compute, network, storage, and other data center resources. When included in Cisco Intelligent Automation for Cloud, the Cisco Prime Service Catalog is licensed on a per server or per blade basis.

Cisco Prime Service Catalog is also licensed to manage desktop, communications, bring your own devices, and other end-user service requests through a catalog of workplace services for employees. When licensed for workplace services, the Cisco Prime Service Catalog is licensed on a per user basis.

These use cases are licensed separately. The licenses are determined as follows:

- Cisco Prime Service Catalog per server edition is licensed based on the number of servers managed by the product.
- Cisco Prime Service Catalog per user edition is licensed based on the number of users who will be given the permission to access the product.

If you choose to use Cisco Prime Service Catalog to manage both data center and workplace use cases you need to license both the per user and per server options. You may also discuss Enterprise License Agreement (ELA) with your account manager.

For more information about licensing contact your account manager.
Document Organization

The *Cisco Prime Service Catalog 10.0 R2 Installation Guide* is divided into the following four chapters:

- **Chapter 1, “Installation and Configuration Guide”:** This chapter contains instructions for installing and configuring Cisco Prime Service Catalog.
- **Reporting Guide, page 1:** This chapter contains instructions for installing and configuring Cisco Prime Service Catalog Reporting and Cognos software.
- **Chapter 3, “Upgrade Guide”:** This chapter contains instructions for upgrading Cisco Prime Service Catalog Release 9.2 or above to Release 10.0 R2.
- **Chapter 4, “Advanced Configuration and Troubleshooting Tips for Cognos”:** This chapter contains troubleshooting tips and optional configuration instructions for Cognos.

Conventions

This document uses the following conventions:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>bold font</strong></td>
<td>Commands and keywords and user-entered text appear in <strong>bold font</strong>.</td>
</tr>
<tr>
<td><em>italic font</em></td>
<td>Document titles, new or emphasized terms, and arguments for which you supply values are in <em>italic font</em>.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Elements in square brackets are optional.</td>
</tr>
<tr>
<td>{x</td>
<td>y</td>
</tr>
<tr>
<td>[ x</td>
<td>y</td>
</tr>
<tr>
<td>string</td>
<td>A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.</td>
</tr>
<tr>
<td>&lt; &gt;</td>
<td>Nonprinting characters such as passwords are in angle brackets.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Default responses to system prompts are in square brackets.</td>
</tr>
<tr>
<td>!, #</td>
<td>An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.</td>
</tr>
<tr>
<td>Choose <strong>Menu item</strong> &gt; <strong>Submenu item</strong> from the X menu.</td>
<td>Selections from a menu path use this format. For example: Choose <strong>Import &gt; Formats</strong> from the File menu.</td>
</tr>
</tbody>
</table>

**Note**

Means *reader take note.*

**Tip**

Means *the following information will help you solve a problem.*
Caution
Means reader be careful. In this situation, you might perform an action that could result in equipment damage or loss of data.

Timesaver
Means the described action saves time. You can save time by performing the action described in the paragraph.

Warning
Means reader be warned. In this situation, you might perform an action that could result in bodily injury.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly What’s New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:


Subscribe to the What’s New in Cisco Product Documentation as an RSS feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service. Cisco currently supports RSS Version 2.0.
Overview

The Installation and Configuration Guide is divided into the following sections:

- **Prerequisites and Installation Overview**: A quick reference on software and hardware requirements.
- **Configuring Database**: Instructions for configuring your databases for use with Service Catalog.
- **Preinstallation Configuration for JBoss**: Instructions for preparing your computer for installing Service Catalog with JBoss Application Server.
- **Preinstallation Configuration for WebLogic**: Instructions for configuring WebLogic Application Server prior to installing Service Catalog.
- **Preinstallation Configuration for WebSphere**: Instructions for configuring WebSphere Application Server prior to installing Service Catalog.
- **Running the Service Catalog Installer**: Instructions for executing the Service Catalog installer.
- **Postinstallation Configuration for JBoss**: Instructions for starting the Service Catalog applications on JBoss Application Server.
- **Postinstallation Configuration for WebLogic**: Instructions for deploying the Service Catalog WAR files on WebLogic Application Server.
- **Postinstallation Configuration for WebSphere**: Instructions for deploying the Service Catalog WAR files on WebSphere Application Server.

Related Documentation

For information about performing an upgrade installation, see Chapter 3, “Upgrade Guide”.

For information about installing the Reporting and IBM Cognos software, see Reporting Guide, page 2-1.

For information about configuring Directory Integration and Service Link, including LDAP, see the Cisco Prime Service Catalog Integration Guide.

For information about customizing Service Catalog stylesheets, see the Cisco Prime Service Catalog Configuration Guide.

For information about Platform Support Matrix, see the Cisco Prime Service Catalog Compatibility Matrix document

These guides are available on the http://www.cisco.com product download site.
Prerequisites and Installation Overview

Deployment Topology

The following diagram depicts a typical deployment topology for Service Catalog with one application server containing both Request Center and Service Link applications:

Figure 1-1 Typical Topology
For a WebLogic or WebSphere Cluster environment, the topology may include multiple application server machines. The following diagram shows an example of an application server cluster with two nodes containing the Request Center application, and a standalone application server containing the Service Link application:

![Clustered Topology Diagram](image)

Subsequent sections in this chapter describe the software and hardware requirements for a typical deployment topology.

**Software Requirements**

The following table lists the supported third-party software for this release of Cisco Prime Service Catalog. Also refer to the “Cisco Prime Service Catalog Compatibility Matrix” document.

<table>
<thead>
<tr>
<th>Browser</th>
<th>Supported Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Explorer 8</td>
<td>(supported for all modules, except Service Catalog)</td>
</tr>
<tr>
<td>Internet Explorer 9</td>
<td>(supported for the following modules only: Service Catalog, Order Management, My Services, Service Portal, Demand Management)</td>
</tr>
<tr>
<td>Mozilla Firefox 24.0 esr</td>
<td>(supported for the following modules only: Service Catalog, Order Management, My Services, Service Portal, Demand Management)</td>
</tr>
<tr>
<td>Chrome 29.0.1547.xx</td>
<td>(supported for the following modules only: Service Catalog, Order Management, My Services, Service Portal, Demand Management)</td>
</tr>
<tr>
<td>Safari 6.0.x (on MAC OS only)</td>
<td>(supported for the following modules only: Service Catalog, Order Management, My Services, Service Portal, Demand Management)</td>
</tr>
</tbody>
</table>
Table 1-1  
**Supported Software (continued)**

<table>
<thead>
<tr>
<th><strong>Browser Plugin</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Service Link Home panel graph is optional and for informational purpose only. Adobe® Flash® Player is required to display the optional Service Link Home Panel graph.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Web Server</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Apache 2.4.7.</td>
</tr>
<tr>
<td>IBM HTTP Server 7.0</td>
</tr>
<tr>
<td>Microsoft Internet Information Services (IIS) 7.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Application Server + Java Development Kit</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle WebLogic 11g (10.3.6) + Oracle JDK 6 Update 45 (or higher Update)</td>
</tr>
<tr>
<td>IBM WebSphere 7.0.0.29 (or higher 7.0.0.x) + IBM Java 1.6.0 (SR13 or higher)</td>
</tr>
<tr>
<td>JBoss 7.1.1.Final + Oracle JRE 6 Update 45 (or higher Update)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Application Server Operating System</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows Server 2008 R2 (64-bit) with SP1</td>
</tr>
<tr>
<td>Red Hat Enterprise Linux Server 5.9 (64-bit)</td>
</tr>
<tr>
<td>CentOS Linux 5.7 (64-bit)</td>
</tr>
<tr>
<td>IBM AIX 7.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Database</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft SQL Server 2008 R2, with SP2</td>
</tr>
<tr>
<td>(Express Edition of SQL Server is not recommended for production use)</td>
</tr>
<tr>
<td>Oracle 11g, version 11.2.0.3 (or higher 11.2.0.x)</td>
</tr>
<tr>
<td>(Express Edition of Oracle Database is not recommended for production use)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>LDAP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Active Directory 2003 or 2008</td>
</tr>
<tr>
<td>Sun Java System Directory Server 5.2 P6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>IBM Cognos®</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Note: IBM Cognos software is only supported on Microsoft Windows Server 2008 R2 64-bit operating system.)</td>
</tr>
<tr>
<td>IBM Cognos Business Intelligence Server, version 10.2.1, plus Fix Pack 2</td>
</tr>
<tr>
<td>IBM Cognos Data Manager, version 10.2.1, plus Fix Pack 2</td>
</tr>
</tbody>
</table>

**Software Configuration Prerequisites**

This section describes how to configure the software listed above for use with Service Catalog.

**Browser**

The following settings must be configured on the web browser used to connect to the Service Catalog application:

- Popup blocker is turned OFF.
- Cookies are enabled.
To run an Asian language version of the system, you must install East Asian Language Support from the vendor of your web browser.

Adobe Reader® is required on your web browser machine, in order to view and print reports.

**Note** If you are a user who needs to access the Administration module or the designer related modules (such as Service Designer, Organization Designer, Portal Designer, etc.), then you must use Internet Explorer 8 browser.

### Application Server

If you choose JBoss as your application server, you do not need to install JBoss software as a prerequisite. The Cisco Prime Service Catalog installer will automatically install the Jboss Application Server and deploy the Service Catalog applications. Follow the instructions in the “Preinstallation Configuration for JBoss” section on page 1-14 to prepare your machine for installing Service Catalog with the JBoss Application Server.

If you choose WebLogic as your application server, you need to install the Oracle WebLogic Application Server software as a prerequisite on your machine. This guide does not contain instructions for installing the WebLogic software. However you will need to follow the instructions in the “Preinstallation Configuration for WebLogic” section on page 1-16 to prepare your WebLogic Server for use with Service Catalog.

If you choose WebSphere as your application server, you need to install the IBM WebSphere Application Server software as a prerequisite on your machine. This guide does not contain instructions for installing the WebSphere software. However you will need to follow the instructions in the “Preinstallation Configuration for WebSphere” section on page 1-33 to prepare your WebSphere Server for use with Service Catalog.

### Clustering Considerations

To deploy Service Catalog in a clustered WebLogic or WebSphere environment, WebLogic or WebSphere Application Server must be set up in a clustered configuration before you install Service Catalog. Additionally, if you want to provide full fail-over capability, then you must configure cluster-able sessions on one or more of the clustered nodes. See your application server documentation for information on clustered configuration.

**Note** A clustered configuration is not supported for the JBoss Application Server.

### Web Server

As a prerequisite, your web server must already be installed and running. Your web server does not have to be installed on the same machine as your application server, or on the machine where you plan to execute the Service Catalog installer.

The web server must have the plugin configuration necessary to communicate with your application server. For example, if you choose to use Apache web server with WebLogic Application Server for your deployment topology, then as a prerequisite, you need to manually configure the plugin for your Apache server to connect to your WebLogic server. The plugin between the web server and the application server will not be configured by the Service Catalog installer.
Internet Information Service (IIS) with JBoss

If you select JBoss as your application server on a Windows operating system, the Service Catalog installer can configure the Tomcat plugin for the IIS web server automatically for you, if it detects that the IIS web server is already installed on the same Windows machine where you execute the installer.

You will see the "Configure IIS" option on the installation wizard during the installation, and can select or deselect that option as you desire. To enable this feature, the IIS web server must meet the following required settings:

- IIS Web Server is installed on the same Windows machine where you execute the Service Catalog installer
- IIS Web Server has the following Role Services: ISAPI Filters, ISAPI Extensions

Java Development Kit

Java Development Kit is a prerequisite software on your application server machine. As listed in Table 1-1, only specific versions (and vendors) of JDK or JRE are supported for each type of application server. More information about how to configure Java for your application server is described in the “Preinstallation Configuration for JBoss” section on page 1-14, the “Preinstallation Configuration for WebLogic” section on page 1-16, and the “Preinstallation Configuration for WebSphere” section on page 1-33.

Java 1.6 is also a prerequisite for the Cisco Prime Service Catalog installer. Therefore if you plan to execute the Service Catalog installer on a machine different from your application server, then you need to install either Java Runtime Environment or Java Development Kit, version 1.6.0_x, on that machine. If you plan to execute the Service Catalog installer on the same machine where your application server is installed, then just set JAVA_HOME environment variable to the same Java that is used by your application server.

Database

If you choose SQL Server 2008 R2 as your RDBMS, then you need to install the Microsoft SQL Server 2008 R2 software as a prerequisite (see Table 1-1 for specific version).

If you choose Oracle 11g as your RDBMS, you need to install the Oracle 11g Database Server software as a prerequisite (see Table 1-1 for specific version).

Do not install any SQL Server Client or Oracle Client connectivity software on your application server. You must use the JDBC driver that is bundled with the Cisco Prime Service Catalog product. For the JBoss application server, the Cisco Prime Service Catalog installer automatically installs the appropriate JDBC driver and configures the JDBC datasource to use this driver. For WebLogic or WebSphere, you will need to manually copy the appropriate JDBC driver jar file (included in the Cisco Prime Service Catalog product image) to your WebLogic or WebSphere directory, and manually configure the JDBC datasource to use that driver. The instructions for configuring JDBC datasource for WebLogic or WebSphere are described in later sections of this chapter.

Your database must be configured to enable TCP/IP for client connectivity. The “Configuring Database” section on page 1-10 contains instructions on how to create a database or schema for use with Service Catalog.
Chapter 1      Installation and Configuration Guide

Prerequisites and Installation Overview

LDAP

Service Catalog can be integrated with your corporate LDAP server to access your company’s employee directory. This integration feature is optional, so an LDAP server is not a prerequisite software for installing Service Catalog.

If you plan to use the LDAP integration feature, see the Cisco Prime Service Catalog Integration Guide. Ensure that you use only one of the supported LDAP software listed in Table 1-1.

IBM Cognos

Service Catalog is bundled with an OEM version of the IBM Cognos software, which is used for the (optional) Reporting module. To enable all Reporting and Advanced Reporting features in the Service Catalog application, the Cognos software must be installed in your deployment topology. This software can be installed after the Service Catalog software is installed. The instructions for installing and configuring Cognos software can be found in Reporting Guide, page 2-1

Other Miscellaneous Settings

X-Window or Xvfb

The Service Catalog installer is a GUI program. Therefore if you are on a UNIX or Linux operating system, you must have either an X-Window Server or an X11 emulator to display the installation wizard. The Service Catalog installer does not support console mode or CLI mode.

You must also have either X-Window Server or Xvfb (virtual framebuffer X server) installed and running on your application server machine, in order for the KPI Charts in the Reporting module to be displayed properly on the browser. If you are not using the KPI Charts feature in the Reporting module, then X-Window Server is not required for the application server machine.

Unzip Utility

You need to have an Unzip program (on Windows) or a GNU-compatible tar utility (on UNIX or Linux) available on your machine to extract the Cisco Prime Service Catalog software installer package.

Network – TCP/IP

TCP/IP must be configured on all host computers.

SMTP

You need to set up an SMTP server that listens to port 25, for email notification and a valid email address that the Service Catalog system will use to send out system alerts to the system administrator. You must provide the SMTP address and a valid email address during the installation of the Service Catalog software. The SMTP Server must not require user authentication.
Hardware Requirements

Sizing

We recommend a minimum of three computers for a typical (nonclustered) deployment topology:

- Web Server + Application Server together
- Database Server
- Reporting Server

Your hardware configuration depends on site-specific factors. Contact the Cisco Technical Assistance Center (TAC) if you need more sizing recommendations.

The variables that can affect your hardware configuration include the following:

- the number of people who will use the system
- the number and frequency of service requests that the installed product will handle
- the nature of the service requests (complexity, type, and so on)
- reporting frequency
- systems integration and system availability requirements

Minimum Hardware Requirements for Application Server Host

Your application server machine must meet the following minimum hardware requirements:

- 4 Core, 2 GHz (or faster) processor
- 4 GB RAM
- 50 GB free hard disk space

Note: If you have a clustered application server environment, the hardware requirements specified above are applicable for each node (that is, each machine) in your clustered environment.

Minimum Hardware Requirements for Web Server Host

If your web server resides on a different machine from your application server, then your web server machine must meet the following minimum hardware requirements:

- 4 Core, 2 GHz (or faster) processor
- 2 GB RAM
- 2 GB free hard disk space

Minimum Hardware Requirements for Database Host

Your database server machine must meet the following minimum hardware requirements:

- 4 Core, 2 GHz (or faster) processor
- 4 GB RAM
- 100 GB free hard disk space. (Disk space requirement is dependent on the projected size of your Service Catalog databases over time, to account for the growth in user data, service definitional data, transactional data, and reporting data.)

**Minimum Hardware Requirements for Reporting Server Host**

Your Cognos machine must meet the following minimum hardware requirements:
- 4 Core, 2 GHz (or faster) processor
- 4 GB RAM
- 50 GB free hard disk space

*Note* The IBM Cognos 10.2.1 software that is bundled with Service Catalog can be installed only on a Microsoft Windows Server 2008 R2 (64-bit) operating system.

**Overview of Installation Process**

This section provides a road map of the installation process for Service Catalog:

**Step 1** Follow the instructions provided in this section to ensure that you have adequately addressed the minimum hardware and software requirements, and installed the prerequisite software.

**Step 2** Create the Request Center database, as described in the Configuring Database. Complete the “Database Information Worksheet” at the end of the section. You will need this information when running the Service Catalog installation wizard.

**Step 3** Prepare the application server for use with Service Catalog, by performing the tasks described in one of the following sections:
- a. For JBoss, go to the Preinstallation Configuration for JBoss.
- b. For WebLogic, go to the Postinstallation Configuration for WebLogic.
- c. For WebSphere, go to the Postinstallation Configuration for WebSphere.

Complete the “Application Server Information Worksheet” at the end of the section. You will need this information when running the Service Catalog installation wizard.

**Step 4** Run the Service Catalog installer on the application server machine, as described in the Running the Service Catalog Installer. If you are performing an upgrade installation from a previous release, see Chapter 3, “Upgrade Guide” in conjunction with this section.

**Step 5** Perform the post installation tasks for your application server and verify your installation as described in one of the following sections:
- a. For JBoss, go to the Postinstallation Configuration for JBoss.
- b. For WebLogic, go to the Postinstallation Configuration for WebLogic.
- c. For WebSphere, go to the Postinstallation Configuration for WebSphere.

To fully enable the Reporting features, you also need to install the Reporting software module and the Cognos software, and configure the Cognos Server to integrate with the Service Catalog application. When you are ready to do this, follow the instructions in Reporting Guide, page 2-1.
Configuring Database

The Cisco Prime Service Catalog product requires an OLTP database, which is referred to as the RequestCenter database. The RequestCenter database can be manually created by the DBA prior to executing the Cisco Prime Service Catalog installer, or automatically created by the installer if the user selects the "Create Database" option on the installation wizard. The following sub-sections contain the manual instructions for creating the RequestCenter database on either Oracle or SQL Server.

**Note**

The installer does not automatically create the Oracle tablespaces for you. It only creates a RequestCenter schema with a fixed size of 500 MB in the tablespaces specified by you on the installation wizard. Thus, even if you decide to let the installer create the RequestCenter schema automatically, you may still want to follow the instructions in the subsequent sections to prepare your Oracle server with the appropriate tablespaces, prior to running the Cisco Prime Service Catalog installer.

Configuring Oracle

If you choose to use Oracle for your database, follow the instructions in this section to prepare the Oracle server and to create an Oracle user to be the owner of the RequestCenter schema.

**catcio.sql Package**

**Step 1** Execute the following sql command as the Oracle "sys" user to find out if the catcio.sql package has been installed on the Oracle database:

```
select count(*) from all_tables where owner='SYS' and table_name like 'IND_ONLINE$';
```

**Step 2** If the returned value is ZERO, then log in to Oracle database as "sys" user (connect as "sysdba"), and install the catcio.sql package. This needs to be done before you proceed with the Service Catalog installation. The catcio.sql script is usually located in the $ORACLE_HOME/rdbms/admin directory.

**Redo Logs**

Allocate at least 250 MB for the Redo logs for Oracle.

**Unicode Character Set**

For a new installation, you must configure the Oracle database to use one of the following Unicode characters sets: "AL32UTF8" or "AL16UTF16".

To determine if the database character set is Unicode, execute the following sql command:

```
SELECT VALUE FROM NLS_DATABASE_PARAMETERS WHERE PARAMETER='NLS_CHARACTERSET'
```

If the value returned for the NLS_CHARACTERSET parameter is neither "AL32UTF8" nor "AL16UTF16", then you need to create a new Oracle database, and specify the character set to be either "AL32UTF8" or "AL16UTF16" at creation time.
Creating Tablespace and User for RequestCenter Database

For a new installation, you can prepare the tablespaces and user for the RequestCenter database as described in this section before executing the Service Catalog installer, or you can let the Service Catalog installer create the database user on the default tablespaces for you by selecting the "Create Database" option presented by the installation wizard. The "Create Database" option of the Service Catalog installer is described in more detail in the "Running the Service Catalog Installer" section.

To create tablespace and user for RequestCenter Database:

**Step 1** Create a new tablespace named **REQUESTCENTER**, with initial size of 500 MB and AUTOEXTEND ON.

**Step 2** Create a new temporary tablespace named **REQUESTCENTER_TEMP**, with initial size of 30 MB and AUTOEXTEND ON.

**Step 3** Create a database user named **RCUser**, with default tablespace set to **REQUESTCENTER** and temporary tablespace set to **REQUESTCENTER_TEMP**. **RCUser** should be granted QUOTA UNLIMITED on the **REQUESTCENTER** tablespace.

**Step 4** Log in to the Oracle server as the "sys" user, and execute the following commands to grant the permissions to "RCUser":

```sql
GRANT CREATE SESSION,
    CREATE TABLE,
    CREATE PROCEDURE,
    CREATE SEQUENCE,
    CREATE TRIGGER,
    CREATE VIEW,
    CREATE MATERIALIZED VIEW,
    CREATE SYNONYM,
    ALTER SESSION
TO RCUser;

GRANT EXECUTE ON DBMS_LOB TO RCUser;

COMMIT;
```

**Step 5** The permissions listed above are required for the normal operation of the Service Catalog application. There are some special permissions needed for the application to monitor and automatically recover from long-running query that may affect the performance of the product. If these additional permissions are not granted to "RCUser", the product will not fail; but the user may see an error message in the application server's log file that is similar to the following:

```text
ERROR [com.newscale.bfw.udkernel.udsql.UdSqlBean] (ajp--0.0.0.0-8009-1)
COR-ID=-7123843321231324051::SQL Exception while getting open session:
java.sql.SQLSyntaxErrorException: [newscale][Oracle JDBC Driver][Oracle]ORA-00942:
table or view does not exist
```
To grant these special permissions, log in to the Oracle server as the "sys" user, and execute the following commands:

```
GRANT ALTER SYSTEM TO RCUser;
GRANT SELECT ON v_$session TO RCUser;
GRANT SELECT ON v_$mystat to RCUser;
COMMIT;
```

---

### Configuring Microsoft SQL Server

If you choose to use Microsoft SQL Server for your databases, follow the instructions in this section to prepare the SQL Server, and to create the RequestCenter database.

#### Default Instance or Named Instance

The SQL Server can be set up as a Default Instance or a Named Instance. Port number for each instance must be unique per database host.

#### Mixed-Mode Authentication

The SQL Server must be configured to use mixed-mode authentication.

#### Creating RequestCenter Database and Login User

For a new installation, you can prepare the RequestCenter database and login user as described in this section before executing the Service Catalog installer, or you can let the Service Catalog installer create the database and login user for you by selecting the "Create Database" option presented by the installation wizard. The "Create Database" option of the Service Catalog installer is described in more detail in the "Running the Service Catalog Installer" section.

To create the RequestCenter database and login user:

1. **Step 1** Create a database named **RequestCenter** in the SQL Server, with the following settings for the data file
   - Initial size = 500 MB.
   - Autogrowth = By 10 percent
2. **Step 2** Set the collating sequence for the RequestCenter database to case-insensitive.
3. **Step 3** Put the RequestCenter database in SINGLE-USER mode, and execute the following command:
   ```sql
   ALTER DATABASE RequestCenter SET READ_COMMITTED_SNAPSHOT ON.
   ```
4. **Step 4** Put the RequestCenter database back in MULTI-USER mode.
5. **Step 5** Create a SQL Server Login named **RCUser**, with the Default Database property set to “RequestCenter”.

**Note**

RCUser must be a SQL Server login account that authenticates to the SQL Server using SQL Server authentication method, and not Windows authentication method.
Step 6  Ensure that the “Enforce Password Policy” option is unchecked in the Security setting properties for RCUser. Furthermore, the password for RCUser must contain only alphanumeric characters. For example, enter only letters and numbers for password. Do not enter any special characters like underlines, asterisks, brackets, and so on. Some combinations of these special characters may cause the installer to fail at product installation time with a “Database Connection Test failed” error message.

Step 7  Assign this RCUser to be the db_owner of the “RequestCenter” database. Verify your setting to ensure that:

- The user name “RCUser” in the RequestCenter database is mapped to the login name “RCUser” in the SQL Server.
- The default schema is “dbo”.
- The user name “RCUser” has the “db_owner” database role membership.

Step 8  There are some special permissions needed for the application to monitor and automatically recover from long-running query that may affect the performance of the product. If these additional permissions are not granted to "RCUser", the product will not fail; but the user may see some error messages in the application server’s log file that are similar to the following:

```
ERROR [com.newscale.bfw.udkernel.udsql.UdSqlBean]
(org.springframework.scheduling.quartz.SchedulerFactoryBean#0_Worker-3) SQL Exception while getting open session: java.sql.SQLException: [newscale][SQLServer JDBC Driver][SQLServer]The user does not have permission to perform this action.
Error: Error while validation policies java.lang.Exception: Connection SessionId could not be obtained exiting policy check for service item subscription
```

To grant these special permissions, log in to the SQL Server as the "sa" user, and execute the following commands:

```
EXEC sp_addsrvrolemember 'RCUser', 'sysadmin'
GRANT ALTER ANY CONNECTION TO RCUser
```

Database Information Worksheet

Complete the following database information worksheet by entering your configuration values in the value column. You will need the information in this worksheet when you run the Service Catalog and Reporting installation wizards.

**Table 1-2 Database Information Worksheet**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RequestCenter Database</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database Type</td>
<td>The type of RDBMS. Enter <strong>Microsoft SQL Server</strong> or <strong>Oracle</strong>.</td>
<td></td>
</tr>
<tr>
<td>Hostname</td>
<td>The Hostname or IP address of the Database Server for the RequestCenter database. For example, servername.domain.com. The default value is the full qualified domain name (FQDN) of the machine you are currently on.</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>The TCP/IP Port Number used by your Database Server. Valid port numbers are from 1 to 65535. For Microsoft SQL Server, the default value is 1433. For Oracle, the default value is 1521.</td>
<td></td>
</tr>
<tr>
<td>Database Name (Microsoft SQL Server only)</td>
<td>The name of the RequestCenter database. By default this is RequestCenter.</td>
<td></td>
</tr>
</tbody>
</table>
Preinstallation Configuration for JBoss

This section contains instructions for preparing your computer, prior to installing Service Catalog with JBoss application server.

This release of Service Catalog supports JBoss Application Server on the following operating systems, web servers, and Java Runtime Environment:

Table 1-3  JBoss Supported Operating System, Web Server, and Java

<table>
<thead>
<tr>
<th>JBoss Application Server</th>
<th>Operating System</th>
<th>Web Server</th>
<th>Java</th>
</tr>
</thead>
<tbody>
<tr>
<td>JBoss AS 7.1.1.Final</td>
<td>Windows Server 2008 R2 (64-bit), with SP1</td>
<td>Microsoft Internet Information Services (IIS) 7.5</td>
<td>Oracle JRE 6 Update 45 (or higher update)</td>
</tr>
<tr>
<td>JBoss AS 7.1.1.Final</td>
<td>Red Hat Enterprise Linux Server 5.9 (64-bit)</td>
<td>Apache 2.4.7</td>
<td>Oracle JRE 6 Update 45 (or higher update)</td>
</tr>
<tr>
<td>JBoss AS 7.1.1.Final</td>
<td>CentOS Linux 5.7 (64-bit)</td>
<td>Apache 2.2.3</td>
<td>Oracle JRE 6 Update 45 (or higher update)</td>
</tr>
</tbody>
</table>

Note  Oracle Java SE 7 (i.e. Java version 1.7.0_x) is not supported.

---

Table 1-2  Database Information Worksheet (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database SID or Database Service Name (Oracle only)</td>
<td>The SID or Service Name of the Oracle server where the RequestCenter database resides. By default this is ORCL. Also, write down whether this value is an SID or a Service Name.</td>
<td></td>
</tr>
<tr>
<td>Username</td>
<td>The username that the Service Catalog application uses to authenticate with the RequestCenter database at runtime. The default username is RCUser.</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>The password for the Database User.</td>
<td></td>
</tr>
</tbody>
</table>

Oracle Advanced Options only

| Enable multiple tablespaces? | Check the check box to enable multiple tablespaces. Enter the names of the tablespaces below. This is unchecked by default. |       |
| Default tablespace           | If you checked “Enable multiple tablespaces?” above, enter the Default tablespace. The default is CCPDATA01. |       |
| Directory tablespace         | If you checked “Enable multiple tablespaces?” above, enter the Directory tablespace. The default is CCPDATA02. |       |
| Transaction tablespace       | If you checked “Enable multiple tablespaces?” above, enter the Transaction tablespace. The default is CCPDATA03. |       |
| Index tablespace             | If you checked “Enable multiple tablespaces?” above, enter the Index tablespace. The default is CCPINDX. |       |
Installing Java

In this section, you will install Oracle Java Runtime Environment as a prerequisite, and prepare the environment variables on your computer.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Download Oracle JRE 6 Update 45 (or higher Update) from the Oracle website. Ensure that you download the correct version of JRE 6. Only Update 45 or later is supported.</td>
</tr>
<tr>
<td>2</td>
<td>Install Oracle JRE 6 on your computer.</td>
</tr>
<tr>
<td>3</td>
<td>Set the system environment variable JAVA_HOME to point to the Oracle JRE that you installed.</td>
</tr>
<tr>
<td>4</td>
<td>On a Windows operating system, add &quot;%JAVA_HOME%\bin&quot; to the %PATH% environment variable. On Linux, add &quot;$JAVA_HOME/bin&quot; to the $PATH environment variable.</td>
</tr>
</tbody>
</table>

Installing JBoss Software

Cisco Prime Service Catalog is bundled with the JBoss AS 7.1.1.Final software distribution. If you select JBoss as the application server on the installation wizard, the Service Catalog installer will automatically install and deploy the JBoss software on the same machine where you are running the installer. You do not need to install the JBoss Application Server software as a prerequisite. We recommend that you let the Service Catalog installer install the JBoss software for you.

You can choose to install only the Request Center application on your computer, only the Service Link application on your computer, or both Request Center and Service Link applications together on the same computer. When you choose to install both applications together on the same computer, the installer will always create two separate JBoss server instances, one for the Request Center application, and one for the Service Link application.

The JMS service is configured in the JBoss server where the Request Center application resides.

Preparing IIS Web Server

If you are running the Service Catalog installer on a Windows operating system, the installer can automatically configure the tomcat plugin for the IIS web server, and configure the JBoss servers as Windows services. The options for "Configure IIS" and "Configure windows services" are presented on the installation wizard, and you can select or deselect each option as you desire.

If you want the Service Catalog installer to configure the tomcat plugin for the IIS web server, then you need to perform the following prerequisite tasks:

- Install IIS on the same Windows operating system where you plan to execute the installer.
- Add the following role services for IIS: ISAPI Extensions, ISAPI Filters.
- You will prompted to enter the name of the IIS web site. You can enter either "Default Web Site" or the name of another web site. If you enter the name of another website, then you must create that website as a prerequisite.

If you are running the Service Catalog installer on a Linux operating system, then the installer will install only the JBoss software. It will not configure the tomcat plugin for the Apache web server, and will not configure JBoss servers as Linux services.
Application Server Information Worksheet

Complete the following “Application Server Information Worksheet” by entering your configuration values in the "Value" column. The information in this worksheet will be needed when you run the Service Catalog or the Reporting installer.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Center hostname</td>
<td>The fully qualified domain hostname or IP address of the computer where you plan to execute the installer, and choose to install the RequestCenter application.</td>
<td></td>
</tr>
<tr>
<td>Service Link hostname</td>
<td>The fully qualified domain hostname or IP address of the computer where you plan to execute the installer, and choose to install the Service Link application. If you choose to install both Request Center and Service Link applications on the same computer, the installer will automatically set this value to the same value as the &quot;Request Center hostname&quot;.</td>
<td></td>
</tr>
<tr>
<td>IIS Website</td>
<td>The name of the IIS website on your computer where you want the installer to configure the tomcat plugin. The Default value is “Default Web Site”.</td>
<td></td>
</tr>
<tr>
<td>Queue hostname</td>
<td>The fully qualified domain hostname or IP address of the computer where the JBoss JMS service is running. Since the JMS service is always configured in the same JBoss server where the RequestCenter application resides, this value should be the same as the &quot;Request Center hostname&quot; above.</td>
<td></td>
</tr>
<tr>
<td>Custom content archive</td>
<td>If you plan to install &quot;custom content&quot;, enter the path to the custom content archive file.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> The archive must be in the Zip format.</td>
<td></td>
</tr>
<tr>
<td>SMTP hostname</td>
<td>The fully qualified domain hostname or IP address of the SMTP server. Ensure that your computer can connect to this SMTP server.</td>
<td></td>
</tr>
<tr>
<td>SMTP port</td>
<td>The SMTP server must listen to port 25.</td>
<td></td>
</tr>
<tr>
<td>System email address</td>
<td>The sender email address to be used for system generated notifications.</td>
<td></td>
</tr>
</tbody>
</table>

What's Next?

Your JBoss environment is ready. You can proceed to the Running the Service Catalog Installer.

Preinstallation Configuration for WebLogic

This section contains instructions for configuring the Oracle WebLogic Application Server, prior to installing Service Catalog.

This release of Service Catalog supports the WebLogic Application Server on the following operating systems and Java Development Kit:
Note

Oracle JRockit is not supported. Oracle Java SE 7 (i.e. java version 1.7.0_x) is not supported.

It is assumed that you have already installed WebLogic Server 11g (10.3.6) software on one of the supported operating systems. You will follow instructions in this section to create and configure a new managed WebLogic Server, exclusively for the Cisco Prime Service Catalog application.

Installing Java

Although the WebLogic software installation is bundled with some version of JRockit or Oracle Java, you will not use any bundled JRockit or Java. Instead, you need to download and install Oracle JDK 6. In the next section, you will configure your WebLogic Server to use this version of Oracle JDK 6.

Table 1-5

<table>
<thead>
<tr>
<th>Oracle WebLogic Application Server</th>
<th>Operating System</th>
<th>Java</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 11g (10.3.6)</td>
<td>Windows Server 2008 R2 (64-bit), with SP1</td>
<td>Oracle JDK 6 Update 45 (or higher Update)</td>
</tr>
<tr>
<td>Version 11g (10.3.6)</td>
<td>Red Hat Enterprise Linux Server 5.9</td>
<td>Oracle JDK 6 Update 45 (or higher Update)</td>
</tr>
</tbody>
</table>

| Step 1 | Access the Oracle JDK 6 download web site to download Oracle JDK 6. |
| Step 2 | Download the correct version of Oracle JDK 6 for your OS platform. See Table 1-5 for the supported Update version of JDK 6. |
| Step 3 | Install Oracle JDK 6 on the same machine where WebLogic software is installed. |
| Step 4 | After Oracle JDK 6 is installed, navigate to the <WL_HOME>\common\bin directory. |
| Step 5 | Modify the following file: (For Windows) Modify commEnv.cmd as follows: a. set JAVA_HOME="<the installation directory for Oracle JDK 6>" b. set JAVA_VENDOR=Sun (For UNIX or Linux) Modify commEnv.sh as follows: a. JAVA_HOME="<the installation directory for Oracle JDK 6>" b. JAVA_VENDOR=Sun |
| Step 6 | Restart all WebLogic servers, including the WebLogic Administration Server and Node Manager. |

Note

If you have a WebLogic Cluster environment, perform Steps 3–6 on every node in the Cluster.
Downloading Service Catalog Software Image

In this section, you will download the electronic software distribution for Service Catalog.

**Step 1** Access the Cisco product download web site and authenticate with the user name and password provided to you.

**Step 2** Search by product name, or navigate within the product selector to locate the product you want to download. (Navigation: Downloads Home > Products > Cloud and Systems Management > Service Catalog > Cisco Prime Service Catalog).

**Step 3** A list of different releases is displayed. Locate Release 10.0 R2 and click it.

**Step 4** Download file CPSC_10.0.0R2_win.zip for the Windows operating system, or file CPSC_10.0.0R2_unix.tar.gz for the UNIX/Linux operating system.

**Step 5** Extract the software image to a directory on your application server machine. If you have WebLogic Cluster environment, then extract the Cisco Prime Service Catalog software on the machine where the WebLogic Administration Server is running. For example, extract the software to C:\Cisco_Download (for Windows) or /opt/Cisco_Download (for UNIX/Linux). For the rest of this section, this directory is referred to as the `<ServiceCatalog_Software_Dir>`.

**Note** The CPSC_10.0.0R2_unix.tar.gz file must be un tarred using a GNU-compatible tar utility. Older tar utilities may have problems unzipping tar files that contain filenames longer than 100 characters.

Installing Custom Java Libraries

In this section, you will copy several java library files from the `<ServiceCatalog_Software_Dir>` to the `<WL_HOME>` directory, and add these jar files to the class paths. Afterward, you need to restart the WebLogic servers in order to pick up the new java libraries.

**Step 1** Under the “<WL_HOME>” directory, create a subdirectory called “cisco”. And under “cisco”, create two sub-directories called "endorsed" and "lib".

**Step 2** Copy the following jar files from the “<ServiceCatalog_Software_Dir>\preinstall\weblogic\jre_lib_endorsed” directory to the “<WL_HOME>\cisco\endorsed” directory:

- serializer.jar
- xalan.jar
- xercesImpl.jar
- xml-apis.jar

**Step 3** Copy the following jar files from the "<ServiceCatalog_Software_Dir>\preinstall\weblogic\cisco_lib" directory to the "<WL_HOME>\cisco\lib" directory:
Step 4 Navigate to the “<WL_HOME>/common/bin” directory and modify the following file:

(For Windows) Modify `commEnv.cmd` as follows:

a. Search for the line that contains the parameter “WEBLOGIC_CLASSPATH=".

b. Add the value `%WL_HOME%\cisco\lib\commons-lang-2.4.jar;` to the beginning of the existing value. Do not forget to include the semicolon character.

c. Perform this step only if your database is SQL Server: Append the value `;%WL_HOME%\cisco\lib\sqljdbc4.jar` to the end of the existing value. Do not forget to include the semicolon character before the %WL_HOME%.

For example, after you modify the WEBLOGIC_CLASSPATH, it may look like:

```
WEBLOGIC_CLASSPATH="%WL_HOME%\cisco\lib\commons-lang-2.4.jar;
%PATCH_CLASSPATH%;%JAVA_HOME%\lib\tools.jar;%WL_HOME%\server\lib\weblogic_sp.jar;%WL_HOME%\server\lib\weblogic.jar;%FEATURES_DIR%\weblogic.server.modules_10.3.0.0.jar;%WL_HOME%\server\lib\webservices.jar;%ANT_HOME%\bin\ant-all.jar;%ANT_CONTRIB%\lib\antcontrib.jar;%WL_HOME%\cisco\lib\sqljdbc4.jar"
```

(For UNIX or Linux) Modify `commEnv.sh` as follows:

a. Search for the line that contains the parameter “WEBLOGIC_CLASSPATH=".

b. Add the value `"${WL_HOME}/cisco/lib/commons-lang-2.4.jar"` to the beginning of the existing value.

c. Perform this step only if your database is SQL Server: Append the value `"${CLASSPATHSEP}${WL_HOME}/cisco/lib/sqljdbc4.jar"` to the end of the existing value.

For example, after you modify the WEBLOGIC_CLASSPATH, it may look like:

```
WEBLOGIC_CLASSPATH="$(WL_HOME)/cisco/lib/commons-lang-2.4.jar"$(CLASSPATHSEP)$(PATCH_CLASSPATH)$(CLASSPATHSEP)$(JAVA_HOME)/lib/tools.jar$(CLASSPATHSEP)$(WL_HOME)/server/lib/weblogic_sp.jar$(CLASSPATHSEP)$(WL_HOME)/server/lib/weblogic.jar$(CLASSPATHSEP)$(FEATURES_DIR)/weblogic.server.modules_10.3.0.0.jar$(CLASSPATHSEP)$(WL_HOME)/server/lib/webservices.jar$(CLASSPATHSEP)$(ANT_HOME)/lib/ant-all.jar$(CLASSPATHSEP)$(ANT_CONTRIB)/lib/ant-contrib.jar$(CLASSPATHSEP)$(WL_HOME)/cisco/lib/sqljdbc4.jar"
```
Preinstallation Configuration for WebLogic

Step 5

Restart the WebLogic Administration Server and WebLogic Node Manager. You must restart all WebLogic servers for them to pick up the custom Java libraries that you just installed.

Note

If you have a WebLogic Cluster environment, perform Steps 1–5 on every node in the Cluster.

Note

If you are upgrading from a previous release of Prime Service Catalog to this release, you must still repeat steps 1 to 5 in this section on your WebLogic environment. This is because:

a) You have to overwrite the older version of the Cisco jar files with the newer version shipped with this release of Prime Service Catalog.

b) There is a new JDBC driver for SQL Server (sqljdbc4.jar) that is bundled with this release of Prime Service Catalog.

Creating a Managed WebLogic Server

In this section you will create a new managed WebLogic Server, to be used exclusively for Service Catalog.

Step 1

Log on to the WebLogic Administration Console.

Step 2

If your WebLogic was installed in PRODUCTION mode, click Lock & Edit so that you can proceed to make changes. Otherwise, you can skip this step.

Step 3

Choose Environment > Servers.

Step 4

Click New. The “Create a New Server” panel appears.

Figure 1-3 Create New WebLogic Server

<table>
<thead>
<tr>
<th>Create a New Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish</td>
</tr>
</tbody>
</table>

Server Properties

The following properties will be used to identify your new server:

1. Select one or more required fields

   What would you like to name your new server?

   Server Name: server1

   Where will this server listen for incoming connections?

   Server Listen Address: 

   Server Listen Port: 8081

   Should this server belong to a cluster?

   ○ No, this is a stand-alone server.
   ○ Yes, create a new cluster for this server.
Step 5  Enter a Server Name (for example, “server1”). Enter a port number different from 7001 (for example, 8001), because port 7001 is most likely already used by the WebLogic Administration Server. Choose the No, this is a stand-alone server option.

Step 6  Click Finish. Your newly created WebLogic Server appears on the list.

Step 7  Click the newly created Server “server1” to open its properties.

Step 8  Choose Configuration > General.

![Figure 1-4 Configuration – General Settings](image)

Step 9  In the Machine drop-down list, select a machine (i.e. Node Manager machine) where the WebLogic server will run, and click Save.

Step 10 Choose Configuration > Keystores.

Step 11 Click the Change button next to the Keystores field. Select Custom Identity and Java Standard Trust from the drop-down list. Click Save.
### Setting the Arguments for Java Virtual Machine

**Step 1** Choose **Configuration > Server Start**.

**Step 2** Enter values for the following parameters:

- **Arguments** = `-server -Xms1024m -Xmx1024m -XX:PermSize=256m -XX:MaxPermSize=256m -XX:NewRatio=3
  -Dweblogic.ext.dirs=<WL_HOME>/cisco/lib -Djava.endorsed.dirs=<WL_HOME>/cisco/endorsed
  -XX:CompileCommand=exclude,com/newscale/bfw/signon/filters/AuthenticationFilter,doFilter
  -XX:CompileCommand=exclude,org/apache/xml/dtm/ref/sax2dtm/SAX2DTM,startElement
  -XX:CompileCommand=exclude,org/exolab/castor/xml/Marshaller,marshal
  -XX:CompileCommand=exclude,org/apache/xpath/compiler/XPathParser,UnionExpr
  -XX:CompileCommand=exclude,org/apache/oro/text/regex/Perl5Compiler,__parseAtom
  (where <WL_HOME>/cisco/lib and <WL_HOME>/cisco/endorsed are the directories described in the **Installing Custom Java Libraries**).

- **User Name** = weblogic

- **Password** = `<the password for the “weblogic” username>`

- **Confirm Password** = `<re-enter the password for the “weblogic” username>`

**Step 3** Click **Save**.

**Step 4** If your WebLogic was installed in PRODUCTION mode, click **Activate Changes**. Otherwise, you can skip this step.

**Step 5** Open the **Control** tab.

**Step 6** Choose the WebLogic Server named “server1”, then click **Start**. Wait until you see State=RUNNING.

Your new WebLogic Server has now been configured to use Oracle JDK 6 and the Cisco java libraries that you installed in this section.
Configurations for WebLogic Cluster

The Service Catalog product is comprised of two enterprise applications named “RequestCenter” and “ServiceLink”. However, the Service Catalog installer does not automatically deploy the RequestCenter and ServiceLink applications on your WebLogic Server for you. The installer will generate two WAR files (RequestCenter.war for the RequestCenter application, and ISEE.war for the ServiceLink application) which are customized for your WebLogic environment. After you execute the Service Catalog installer, you will need to follow the instructions in a later section of this chapter to manually deploy RequestCenter.war and ISEE.war on your WebLogic Server.

The RequestCenter.war file and ISEE.war file can be deployed together in the same WebLogic Server even though they are two separate enterprise applications. However, if you are setting up a WebLogic Cluster environment with multiple nodes (where each node is a separate computer), you need to perform the additional configurations as follows:

**Step 1** Perform the tasks described in the Installing Java and Installing Custom Java Libraries on each node (that is, each computer) in the Cluster.

**Step 2** Follow the instructions in the Creating a Managed WebLogic Server to create the WebLogic Server for each node and to set the JVM arguments for each server, before you add these servers to the Cluster.

**Step 3** Each WebLogic Server in your Cluster must be configured to use the same port number. For example, your Cluster contains two nodes. If the WebLogic Server on Node 1 is running on port 8001, then the WebLogic Server on Node 2 must also be configured to run on port 8001.

**Step 4** RequestCenter.war file is deployed on the WebLogic Cluster. But, the ISEE.war file cannot be deployed in the same Cluster; it must be deployed on a stand-alone WebLogic Server that is not a member of any Cluster. Therefore, if you have a clustered WebLogic environment, then you must create an additional stand-alone WebLogic Server (that is, not a member of the Cluster), to be used for ISEE.war. For the rest of the chapter, this stand-alone WebLogic Server is referred to as the “Service Link WebLogic Server”. For this stand-alone “Service Link WebLogic Server”, the JVM arguments can be set as follows:

```
Arguments = -server -Xms1024m -Xmx1024m -XX:PermSize=256m -XX:MaxPermSize=256m
            -XX:NewRatio=3 -Dweblogic.ext.dirs=<WL_HOME>/cisco/lib
            -Djava.endorsed.dirs=<WL_HOME>/cisco/endorsed
```

(where `<WL_HOME>/cisco/lib` and `<WL_HOME>/cisco/endorsed` are the directories described in the Installing Custom Java Libraries).

**Step 5** If the stand-alone “Service Link WebLogic Server” resides on another machine, then make sure that you also performed the tasks described in the Installing Java and Installing Custom Java Libraries on that WebLogic machine. The port number for the “Service Link WebLogic Server” does not have to match the port numbers of the WebLogic Servers in the Cluster.

Configuring JMS Server

In this section, you will configure a JMS Server and JMS Queues that will be used by Service Catalog.

**Note** If RequestCenter.war and ISEE.war are deployed together on the same nonclustered WebLogic Server, then the JMS configurations described in this section are performed for that WebLogic Server. However, if you have a WebLogic Cluster environment, then the JMS configurations are performed for the “Service Link WebLogic Server”.
Creating a Persistent Store

Step 1 On your computer, cd to `<WL_HOME>`.
Step 2 Create a subdirectory called `CiscoFileStore`.
Step 3 Log on to the WebLogic Administration Console.
Step 4 If your WebLogic was installed in PRODUCTION mode, click Lock & Edit. Otherwise, you can skip this step.
Step 5 Choose Services > Persistent Stores.
Step 6 Choose New > Create FileStore. The “Create a New File Store” panel appears.
Step 7 In the Name field, enter `CiscoFileStore`.
Step 8 In the Target drop-down list, choose your WebLogic Server.
Step 9 In the Directory text box, enter the full path of the CiscoFileStore directory you created in Step 2 above (for example, `/opt/bea/wlserver_10.3/CiscoFileStore`).
Step 10 Click OK.

Creating a JMS Server

Step 1 On the WebLogic Administration Console, choose Services > Messaging > JMS Modules.
Step 2 Click New. The “Create a New JMS Server” panel appears.
Step 3 In the Name field, enter `CiscoJMSServer`.
Step 4 In the Persistent Store drop-down list, choose the Persistent Store named `CiscoFileStore`.
Step 5 Click Next.
Step 6 In the Target drop-down list, choose your WebLogic Server. (If you have a WebLogic Cluster environment, click Service Link WebLogic Server.)
Step 7 Click Finish.

Creating a JMS Module

Step 1 On the WebLogic Administration Console, choose Services > Messaging > JMS Modules.
Step 2 Click New. The Create JMS System Module panel appears.
Step 3 In the Name field, enter `CiscoJMSModule` and click Next.
Step 4 Choose your WebLogic Server as the target. (If you have a WebLogic Cluster environment, choose Service Link WebLogic Server.) and click Next.
Step 5 Click Finish.
Step 6 Click the newly created JMS Module named `CiscoJMSModule` to open its properties.
Step 7 Open the Subdeployments tab and click New.
Step 8 In the Subdeployment Name field, enter `CiscoSubdeployment` and click Next.
Step 9  Choose the JMS Server named CiscoJMSServer. and click Finish.

Creating Connection Factory

Step 1  On the WebLogic Administration Console, choose Services > Messaging > JMS Modules.
Step 2  Click the JMS Module named CiscoJMSModule to open its properties.
Step 3  Open the Configuration tab and click New.
Step 4  Choose the Connection Factory option and click Next.
Step 5  In the Name and JNDI Name fields, enter NSConnectionFactory and click Next.
Step 6  Click Advanced Targeting.
Step 7  In the Subdeployments drop-down list, choose CiscoSubdeployment. The screen is refreshed to show that the JMS Server named “CiscoJMSServer” is already selected.
Step 8  Click Finish.

Creating JMS Templates

Step 1  On the WebLogic Administration Console, choose Services > Messaging > JMS Modules.
Step 2  Click the JMS Module named CiscoJMSModule to open its properties.
Step 3  Open the Configuration tab and click New.
Step 4  Choose the JMS Template option and click Next.
Step 5  In the Name field, enter CiscoQueueTemplate and click OK.

Creating Queues

Step 1  On the WebLogic Administration Console, choose Services > Messaging > JMS Modules.
Step 2  Click the JMS Module named CiscoJMSModule to open its properties.
Step 3  Open the Configuration tab and click New.
Step 4  Choose the Queue option.
Step 5  Click Next.
Step 6  In the Name and JNDI Name fields, enter ISEEInboundQueue.
Step 7  In the Template drop-down list, choose the CiscoQueueTemplate that you created and click Next.
Step 8  In the Subdeployments drop-down list, choose CiscoSubdeployment. The screen is refreshed to show that the JMS Server named “CiscoJMSServer” is already selected.
Step 9  Click Finish.
Step 10  Repeat the above steps four more times to create four more JMS Queues with the following names:
Preinstallation Configuration for WebLogic

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Configuring JDBC Data Sources

In this section, you will configure a JDBC Data Source to point to the RequestCenter database that you created in the Configuring Database.

Use the worksheet that you filled out at the end of the Configuring Database to retrieve the necessary database information.

Step 1  Log on to the WebLogic Administration Console.

Step 2  If your WebLogic was installed in PRODUCTION mode, click **Lock & Edit**. Otherwise, you can skip this step.

Step 3  Choose **Services > Data Sources**.

Step 4  Choose **New > Generic Data Source**.

Update the information for this panel as provided in Table 1-6 and click **Next**.

**Table 1-6**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>REQUESTCENTERDS</td>
</tr>
<tr>
<td>JNDI Name field</td>
<td>eis/REQUESTCENTER</td>
</tr>
<tr>
<td>Database Type drop-down list</td>
<td></td>
</tr>
</tbody>
</table>
  - (For SQL Server), choose **MS SQL Server**
  - (For Oracle), choose **Oracle**

Step 5  On the next panel, select one of the following values from the Database Driver drop-down list, then click **Next**:

- Select "Microsoft's MS SQL Server Driver (Type 4) Version:2005 and later" if your database is MS SQL Server.
- Select "Oracle's Driver (Thin) for Instance connections; Version:9.0.1 and later" if your database is Oracle, using SID to connect.
- Select "Oracle's Driver (Thin) for Service connections; Version:9.0.1 and later" if your database is Oracle, using Service Name to connect.

Step 6  On the next panel, select the "Support Global Transactions" option and the "One-Phase Commit" option, then click **Next**.

---

<table>
<thead>
<tr>
<th>Name &amp; JNDI Name</th>
<th>Template</th>
<th>Subdeployments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISEEOutboundQueue</td>
<td>CiscoQueueTemplate</td>
<td>CiscoSubdeployment</td>
</tr>
<tr>
<td>BEEERequisitionsQueue</td>
<td>CiscoQueueTemplate</td>
<td>CiscoSubdeployment</td>
</tr>
<tr>
<td>BEEEAAuthorizationsQueue</td>
<td>CiscoQueueTemplate</td>
<td>CiscoSubdeployment</td>
</tr>
<tr>
<td>BEEEinboundQueue</td>
<td>CiscoQueueTemplate</td>
<td>CiscoSubdeployment</td>
</tr>
</tbody>
</table>

Step 11  If your WebLogic was installed in PRODUCTION mode, click **Activate Changes**. Otherwise, you can skip this step.
Step 7  Update the information for this panel as provided in Table 1-7 and click Next.

Table 1-7

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Name</td>
<td>• (For SQL Server), enter the name of the database, for example, &quot;RequestCenter&quot;.</td>
</tr>
<tr>
<td></td>
<td>• (For Oracle), enter the SID if you are using SID to connect to your Oracle database, or the Service Name if you are using Service Name to connect to your Oracle database.</td>
</tr>
<tr>
<td>Host Name</td>
<td>Enter the database server name or IP address</td>
</tr>
<tr>
<td>Port</td>
<td>Enter the database port number</td>
</tr>
<tr>
<td>Database User Name</td>
<td>Enter the name of the db_owner (or schema user) of the RequestCenter database (for example, enter RCUser).</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the password for the Database User Name</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>Re-enter the password for the Database User Name</td>
</tr>
</tbody>
</table>

Caution  Do not click the Test Configuration button.

Step 8  Update the information for this panel as provided in Table 1-8 and click Next.

Table 1-8

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Class Name</td>
<td>Enter the value (one string)</td>
</tr>
<tr>
<td></td>
<td>For SQL Server: “com.microsoft.sqlserver.jdbc.SQLServerDriver”</td>
</tr>
<tr>
<td></td>
<td>For Oracle: “oracle.jdbc.OracleDriver”</td>
</tr>
<tr>
<td>URL</td>
<td>Enter the following value (one string):</td>
</tr>
<tr>
<td></td>
<td>For SQL Server: jdbc:sqlserver://&lt;db_server&gt;:&lt;db_port&gt;;databaseName=&lt;db_name&gt;</td>
</tr>
<tr>
<td></td>
<td>(For example, jdbc:sqlserver://mysqlserver.cisco.com:1433;databaseName=RequestCenter)</td>
</tr>
<tr>
<td></td>
<td>For Oracle SID: jdbc:oracle:thin:@&lt;db_server&gt;:&lt;db_port&gt;:&lt;SID&gt;</td>
</tr>
<tr>
<td></td>
<td>(For example, jdbc:oracle:thin:@myoracle.cisco.com:1521:PROD)</td>
</tr>
<tr>
<td></td>
<td>For Oracle Service Name: jdbc:oracle:thin:@//&lt;db_server&gt;:&lt;db_port&gt;/&lt;service_name&gt;</td>
</tr>
<tr>
<td></td>
<td>(For example, jdbc:oracle:thin:@//myoracle.cisco.com:1521/PRODSN)</td>
</tr>
<tr>
<td>Database User Name</td>
<td>Enter the name of the db_owner (or schema user) of the RequestCenter database (for example, enter RCUser).</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the password for the Database User Name.</td>
</tr>
</tbody>
</table>
Table 1-8

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm Password</td>
<td>Re enter the password for the Database User Name.</td>
</tr>
<tr>
<td>Properties</td>
<td>Enter the following name-value pairs (one per line):</td>
</tr>
<tr>
<td></td>
<td>For SQL Server:</td>
</tr>
<tr>
<td></td>
<td>userName=&lt;db_username&gt;</td>
</tr>
<tr>
<td></td>
<td>selectMethod=direct</td>
</tr>
<tr>
<td></td>
<td>For Oracle:</td>
</tr>
<tr>
<td></td>
<td>user=&lt;db_username&gt;</td>
</tr>
<tr>
<td>Test Table Name</td>
<td>SQL SELECT * FROM CnfParams</td>
</tr>
</tbody>
</table>

Step 9  Choose your WebLogic Server as the Target.

**Note**  If you have a WebLogic Cluster environment, then choose both the Cluster name and the “Service Link
WebLogic Server” as the Targets for this data source.

Step 10  Click Finish.

The newly created data source named “REQUESTCENTERDS” should appear on the Summary of JDBC Data Sources panel. Verify that the JNDI Name and Target information for this data source is correct.

Step 11  Click REQUESTCENTERDS to open its properties.

Step 12  Choose Configuration > Connection Pool.

Step 13  Change the values for the following parameters on the screen:

- Initial Capacity = 20
- Maximum Capacity = 80
- Minimum Capacity = 20

Step 14  Click Save.

Step 15  In Connection Pool tab, at the bottom of the panel, choose Advanced.
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Preinstallation Configuration for WebLogic

Figure 1-6       Connection Pool – Advanced Settings

Step 16  Click the **Test Connections On Reserve** option.

Step 17  In the Test Table Name field, enter the following value, then click **Save**:

```
SQL SELECT * FROM CnfParams
```

Step 18  If your WebLogic was installed in PRODUCTION mode, click **Activate Changes**. Otherwise, you can skip this step.

---

**Restarting WebLogic Server**

You must restart your WebLogic Server in order for it to pick up the new JMS and Data Sources configurations.

**Step 1**  Restart your WebLogic Server.

**Note**  If you have WebLogic Cluster environment, restart all the WebLogic servers in the Cluster as well as the “Service Link WebLogic Server”.

**Step 2**  Once the WebLogic Server is started successfully, navigate to its **Configuration > General** tab.
Step 3  Click the link called View JNDI Tree right above the Name field. The JNDI Viewer window appears.

Step 4  In the JNDI Tree Structure on the left hand side, look for the following entries:
- eis> REQUESTCENTERDS
- BEEEEAuthorizationsQueue
- BEEEEInboundQueue
- BEEEERequisitionsQueue
- ISEEInboundQueue
- ISEEOutboundQueue
- NSConnectionFactory

Step 5  If you have a clustered WebLogic environment, then the JNDI Tree for your WebLogic Cluster should contain only the following entry:
- eis> REQUESTCENTERDS

And the JNDI Tree for the “Service Link WebLogic Server” should contain the following entries:
- eis> REQUESTCENTERDS
- BEEEEAuthorizationsQueue
- BEEEEInboundQueue
- BEEEERequisitionsQueue
- ISEEInboundQueue
- ISEEOutboundQueue
- NSConnectionFactory

Complete the following “Application Server Information Worksheet” by entering your configuration values in the Value column. The information in this worksheet will be needed when you run the Service Catalog Installation Wizard.
### Table 1-9  Application Server Information Worksheet for WebLogic

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Request Center Configuration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Request Center hostname</td>
<td>The Hostname or IP address of the computer where the WebLogic Server is running. For example, servername.domain.com. The default value is the full qualified domain name (FQDN) of the machine you are currently on.</td>
<td></td>
</tr>
<tr>
<td>Request Center HTTP port</td>
<td>The Listen Port of the WebLogic Server. Valid port numbers are from 1 to 65535. The default value is 7001.</td>
<td></td>
</tr>
<tr>
<td>Request Center JNDI port</td>
<td>The JNDI Port of the WebLogic Server. This number should be set to the same value as the Listen Port of the WebLogic Server.</td>
<td></td>
</tr>
<tr>
<td>Request Center protocol</td>
<td>The web protocol for the WebLogic Application Server. Choose http or https from the drop-down menu. The default is http.</td>
<td></td>
</tr>
<tr>
<td>Datasource JNDI name</td>
<td>The datasource JNDI name for the RequestCenter database. This setting must have the prefix “eis/”. The default name is “eis/REQUESTCENTERDS”.</td>
<td></td>
</tr>
<tr>
<td><strong>Application Server Configuration Advanced Options</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable clustering</td>
<td>Check the check box to enable a Clustered Application Server environment with multiple nodes. This is unchecked by default.</td>
<td></td>
</tr>
<tr>
<td>Multicast address</td>
<td>If you checked “Enable clustering” above, enter the multicast address.</td>
<td></td>
</tr>
<tr>
<td>Custom content?</td>
<td>Check the check box to use Custom content. You must enter the path to the Custom content archive below.</td>
<td></td>
</tr>
<tr>
<td>Custom content archive</td>
<td>If you checked “Custom content?” above, enter the path to the Custom content archive including the name of the archive, or click Browse to locate and choose the custom content archive. The archive directory structure must match the deployment directory structure. The archive must be in the Zip format.</td>
<td></td>
</tr>
<tr>
<td><strong>Service Link Configuration (Note: These settings will only be prompted if you choose the “Custom” installation option.)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Link hostname</td>
<td>The Hostname or IP address of the computer where the “Service Link WebLogic Server” is running. For a standalone environment, this value is the same as the Request Center hostname for the Application Server.</td>
<td></td>
</tr>
<tr>
<td>Service Link HTTP port</td>
<td>The Listen Port of the “Service Link WebLogic Server”. If you have a clustered environment, then Service Link must be deployed on a separate WebLogic server outside of the cluster. Enter the port number for this separate WebLogic server. The default value is 7001.</td>
<td></td>
</tr>
<tr>
<td>Service Link JNDI port</td>
<td>The JNDI Port of the &quot;Service Link WebLogic Server&quot;. This number should be set to the same value as the Listen Port of the &quot;Service Link WebLogic Server&quot;.</td>
<td></td>
</tr>
<tr>
<td>Service Link protocol</td>
<td>The web protocol for the Service Link WebLogic Server. Choose http or https from the drop-down menu. The default is http.</td>
<td></td>
</tr>
<tr>
<td>Datasource JNDI name</td>
<td>The datasource JNDI name for the RequestCenter database. This setting must have the prefix “eis/”. The default name is “eis/REQUESTCENTERDS”.</td>
<td></td>
</tr>
<tr>
<td><strong>Messaging Configuration (Note: These settings will only be prompted if you choose the “Custom” installation option.)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Queue hostname</td>
<td>The Hostname or IP address of the computer where the JMS service is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on.</td>
<td></td>
</tr>
</tbody>
</table>
### What's Next?

Your WebLogic environment is ready. You can proceed to the Running the Service Catalog Installer.

---

**Table 1-9 Application Server Information Worksheet for WebLogic (continued)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queue port</td>
<td>Port Number used by your JMS service. Valid port numbers are from 1 to 65535. The default value is 7001.</td>
<td></td>
</tr>
<tr>
<td>Queue username</td>
<td>The username of the JMS Queue User. This field is mandatory.</td>
<td></td>
</tr>
<tr>
<td>Queue password</td>
<td>The password for the JMS Queue User. This field is mandatory.</td>
<td></td>
</tr>
<tr>
<td>Queue Connection factory</td>
<td>The name of the JMS Queue Connection Factory. The default name is NSConnectionFactory</td>
<td></td>
</tr>
</tbody>
</table>

**Messaging Queues Configuration**

- **Authorizations queue**: The name of the Authorizations Queue. The default is BEEEAauthorizationsQueue.
- **Requisitions queue**: The name of the Requisitions Queue. The default is BEEERequisitionsQueue.
- **Request Center inbound queue**: The name of the Request Center Inbound Queue. The default is BEEEInboundQueue.
- **Service Link inbound queue**: The name of the Service Link Inbound Queue. The default is ISEEInboundQueue.
- **Service Link outbound queue**: The name of the Service Link Outbound Queue. The default is ISEEOutboundQueue.

**Service Catalog Administration Configuration**

- **SMTP hostname**: The Hostname or IP address of the SMTP server.
- **SMTP port**: The SMTP Port Number used by the SMTP server. Valid port numbers are from 1 to 65535. The default value is 25.
- **System email address**: The sender email address to be used for system generated notifications.
- **Service Catalog Site Administrator: Password**: Password of the Cisco Prime Service Catalog site administrator, required only for a new installation.
- **Service Catalog Site Administrator Confirm password**: Re-enter your site administrator’s password to confirm.
Preinstallation Configuration for WebSphere

This section contains the instructions for configuring the IBM WebSphere Application Server, prior to installing Cisco Prime Service Catalog.

This release of Cisco Prime Service Catalog supports WebSphere Application Server on the following operating systems and IBM Java.

### Table 1-10 Supported Operating System and Java

<table>
<thead>
<tr>
<th>IBM WebSphere Application Server</th>
<th>Operating System</th>
<th>Java</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 7.0.0 FixPack 29 (or higher FixPack)</td>
<td>Windows Server 2008 R2 (64-bit) with SP1</td>
<td>IBM Java SDK 1.6.0 (SR13 or higher)</td>
</tr>
<tr>
<td>Version 7.0.0 FixPack 29 (or higher FixPack)</td>
<td>IBM AIX 7.1</td>
<td>IBM Java SDK 1.6.0 (SR13 or higher)</td>
</tr>
<tr>
<td>Version 7.0.0 FixPack 29 (or higher FixPack)</td>
<td>Red Hat Enterprise Linux Server 5.9</td>
<td>IBM Java SDK 1.6.0 (SR13 or higher)</td>
</tr>
</tbody>
</table>

It is assumed that you have already installed WebSphere Application Server 7.0.0.x software on one of the supported operating systems. You will follow instructions in this section to create and configure a WebSphere Server, exclusively for the Cisco Prime Service Catalog application.

### Downloading Service Catalog Software Image

In this section, you will download the electronic software distribution for Cisco Prime Service Catalog.

#### Step 1
Access the Cisco product download web site and authenticate with the user name and password provided to you.

#### Step 2
Search by product name, or navigate within the product selector to locate the product you want to download. (Navigation: Downloads Home > Products > Cloud and Systems Management > Service Catalog > Cisco Prime Service Catalog).

#### Step 3
A list of different releases is displayed. Locate Release 10.0 R2 and click it.

#### Step 4
Download file CPSC_10.0.0R2_win.zip for the Windows operating system, or file CPSC_10.0.0R2_unix.tar.gz for the UNIX/Linux operating system.

#### Step 5
Extract the software image to a directory on your application server machine. If you have Clustered WebSphere environment, then extract the Cisco Prime Service Catalog software on the machine where the WebSphere Deployment Manager server is running. For example, extract the software to C:sers\Cisco Download (for Windows) or /opt/Cisco Download (for UNIX/Linux). For the rest of this section, this directory is referred to as the `<ServiceCatalog_Software_Dir>`.

#### Note
The CPSC_10.0.0R2_unix.tar.gz file must be untarred using a GNU-compatible tar utility. Older tar utilities may have problems unzipping tar files that contain filenames longer than 100 characters.
Installing Custom Java Library

In this section, you will copy several custom Java library files from `<ServiceCatalog_Software_Dir>` to the `<WAS_INSTALL_ROOT>` directory, where `<ServiceCatalog_Software_Dir>` is where you extracted the electronic software distribution for Cisco Prime Service Catalog (for example, C:\Cisco_Download or /opt/Cisco_Download), and `<WAS_INSTALL_ROOT>` is the installation directory of your WebSphere application server (for example, C:\IBM\WebSphere\AppServer, or /opt/IBM/WebSphere/AppServer).

**Step 1**

Within `<WAS_INSTALL_ROOT>`, create a directory called "cisco_lib". And within "cisco_lib", create two sub-directories called "java_ext" and "was_ext".

**Step 2**

Copy the following files from the “<ServiceCatalog_Software_Dir>/preinstall/websphere/lib_ext” directory to the “<WAS_INSTALL_ROOT>/cisco_lib/was_ext” directory:

- geronimo-ccpp_1.0_spec-1.0-beta.jar
- sqljdbc4.jar
- ojdbc6.jar
- pluto-container-api-2.0.2.jar
- pluto-container-driver-api-2.0.2.jar
- pluto-taglib-2.0.2.jar

**Step 3**

Copy the following files from the “<ServiceCatalog_Software_Dir>/preinstall/websphere/java_jre_lib_ext” directory to the “<WAS_INSTALL_ROOT>/cisco_lib/java_ext” directory:

- portlet-api_2.0_spec-1.0.jar
- wsdl4j-1.6.1.jar

---

**Note**

If you have WebSphere Cluster environment, then you have to perform Steps 1–3 on every node in the Cluster, including the machine that hosts the WebSphere Deployment Manager server.

**Note**

If you are upgrading from a previous release of Prime Service Catalog to this release, you must still repeat steps 1 to 3 in this section on your WebSphere environment. This is because:

a) You have to overwrite the older version of the Cisco jar files with the newer version shipped with this release of Prime Service Catalog.

b) There are new JDBC drivers for Oracle (ojdbc6.jar) and SQL Server (sqljdbc4.jar) that are bundled with this release of Prime Service Catalog.
Creating a WebSphere Server

In this section you will create a WebSphere Server, to be used exclusively for Cisco Prime Service Catalog.

**Step 1** Log on to the WebSphere Administration Console.

**Step 2** Choose Servers > Server Types, and click WebSphere application servers.

**Step 3** In the right pane, click New. The “Create a new application server” panel appears.

**Step 4** Choose the node name from the drop-down list, enter a server name (for example, enter server1), then click Next.

**Step 5** Choose the “default” template, then click Next.

**Step 6** Choose the Generate Unique Ports option, then click Next.

**Step 7** Click Finish.

**Step 8** Click Save directly to the master configuration.

Setting the Arguments for Java Virtual Machine

**Step 1** Click the newly created WebSphere Server (for example, click on “server1”), and open the Configuration tab.

**Step 2** Under the Server Infrastructure section in the right pane, expand Java and Process Management, and click Process Definition.

**Step 3** Under the Additional Properties section in the right pane, click Java Virtual Machine.

**Step 4** Modify only the following settings on the screen:
- Initial heap size = 1024
- Maximum heap size = 1024
- Deselect the "Debug Mode" option (if it is selected)
- Generic JVM arguments = -Djava.net.preferIPv4Stack=true -Dclient.encoding.override=UTF-8

**Step 5** Click OK.

**Step 6** Back on the Process Definition page, click Java Virtual Machine again.

**Step 7** Under the Additional Properties section in the right pane, click Custom properties.

**Step 8** Click the New button.

**Step 9** Enter values for the following properties, then click OK:
- Name = ws.ext.dirs
- Value = <WAS_INSTALL_ROOT>/cisco_lib/was_ext
  (For example, Value = C:/IBM/WebSphere/AppServer/cisco_lib/was_ext. Make sure you use the forward slash as directory separator, even on Windows operating system.)

**Step 10** Click the New button again to enter another Custom property.

**Step 11** Enter the values for the following properties, then click OK:
Preinstallation Configuration for WebSphere

- Name = java.ext.dirs
- Value = \(<\textit{WAS\_INSTALL\_ROOT}>/\text{java}/\text{lib}/\text{ext};\textit{WAS\_INSTALL\_ROOT}>/\text{cisco\_lib}/\text{java\_ext}\)

(For example, Value = C:/IBM/WebSphere/AppServer/java/jre/lib/ext;C:/IBM/WebSphere/AppServer/cisco_lib/was_ext. Make sure you use forward slash as directory separator, even on Windows operating system. On UNIX/Linux operating system, replace the semicolon with a colon in between the two paths. For example, on Unix/Linux, Value = /opt/IBM/WebSphere/AppServer/java/jre/lib/ext:/opt/IBM/WebSphere/AppServer/cisco_lib/java_ext.

Step 12 Click \textit{Save directly to the master configuration}.

---

Configuring the DISPLAY Property (for UNIX or Linux Only)

Perform the following steps to enable the display of KPI charts on the Service Catalog UI. As stated in the prerequisites section, if your Application Server machine is running a UNIX or Linux operating system, you must have either X-Window Server or Xvfb (virtual framebuffer X server) installed and running on your machine, so that WebSphere can communicate with X-Windows Server or Xvfb to display the KPI charts.

To configure the DISPLAY property:

Step 1 Click the newly created WebSphere Server (that is, \textit{server1}), and open the \textit{Configuration} tab.
Step 2 Under the Server Infrastructure section in the right pane, choose \textit{Java and Process Management}, and click \textit{Process Definition}.
Step 3 Under the Additional Properties section in the right pane, click \textit{Environment Entries}.
Step 4 Click \textit{New}.
Step 5 Enter the following values:
  - Name = DISPLAY
  - Value = localhost:0.0
Step 6 Click \textit{OK}.
Step 7 Click \textit{Save directly to the master configuration}.

---

Getting Port Numbers

Step 1 Click the newly created WebSphere Server (that is, \textit{server1}), and open the \textit{Configuration} tab.
Step 2 Under the Communication section in the right pane, choose \textit{Ports}. A table that shows the Port Name and Number appears.
Step 3 Write down the port number for the following Port Names. You will need this information when completing the worksheet at the end of this section.
  - \textit{BOOTSTRAP\_ADDRESS} =?
  - \textit{WC\_defaulthost} =?
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Preinstallation Configuration for WebSphere

If you need to modify these port numbers:

a. To the right of the Ports table, click Details.
b. Click the link for either BOOTSTRAP_ADDRESS or WC_defaulthost to open its General Properties panel.
c. Modify the value in the Port field.
d. Click OK.
e. Click Save directly to the master configuration.

Configurations for WebSphere Cluster

The Service Catalog product is comprised of two enterprise applications named “Request Center” and “Service Link.” However, the Service Catalog installer does not automatically deploy the Request Center and Service Link applications on your WebSphere Server for you. The installer will generate two WAR files (RequestCenter.war for the Request Center application, and ISEE.war for the Service Link application) which are customized for your WebSphere environment. After you execute the Service Catalog installer, you will need to follow the instructions in a later section of this guide to manually deploy RequestCenter.war and ISEE.war on your WebSphere Server.

The RequestCenter.war file and ISEE.war file can be deployed together in the same WebSphere Server even though they are two separate enterprise applications. However, if you are setting up a WebSphere Cluster environment with multiple nodes (where each node is a separate computer), then you need to perform the additional configurations as follows:

**Step 1**
Perform the tasks described in the Installing Custom Java Libraries on each node (that is, each computer) in the Cluster.

**Step 2**
Follow the instructions in the Creating a WebSphere Server to create the WebSphere Server for each node and to set the JVM arguments for each server, before you add these servers to the Cluster.

**Step 3**
Each WebSphere Server in your Cluster must be configured to use the same BOOTSTRAP_ADDRESS port number, and WC_defaulthost port number. For example, your Cluster contains two nodes. If the WebSphere Server on Node 1 is using BOOTSTRAP_ADDRESS=2810 and WC_defaulthost=9080, then the WebSphere Server on Node 2 must also be configured to use BOOTSTRAP_ADDRESS=2810 and WC_defaulthost=9080. If necessary, follow the instructions in the Getting Port Numbers to set the BOOTSTRAP_ADDRESS and WC_defaulthost port numbers for all WebSphere Servers in the Cluster to be the same.

**Step 4**
RequestCenter.war file is deployed on the WebSphere Cluster. But, the ISEE.war file cannot be deployed in the same Cluster; it must be deployed on a stand-alone WebSphere Server that is not a member of any Cluster. Therefore, if you have a clustered WebSphere environment, then you must create an additional stand-alone WebSphere Server (that is, not a member of the Cluster), to be used for ISEE.war. For the rest of the chapter, this stand-alone WebSphere Server is referred to as the “Service Link WebSphere Server”. For this stand-alone “Service Link WebSphere Server”, the JVM arguments can be set as follows:

- Initial heap size = 1024
- Maximum heap size = 1024
- Deselect the “Debug Mode” option (if it is selected)
- Generic JVM arguments = -Djava.net.preferIPv4Stack=true
Step 5 Configure the same Custom Properties "ws.ext.dirs" and "java.ext.dirs" as described in steps 7 - 12 of the "Setting the Arguments for Java Virtual Machine".

Step 6 If the stand-alone “Service Link WebSphere Server” resides on another machine, then make sure that you also install the custom Java library as described in the “Installing Custom Java Library” section on page 1-34 on that machine. The BOOTSTRAP_ADDRESS and WC_defaulthost port numbers for the “Service Link WebSphere Server” do not have to match the port numbers of the WebSphere Servers in the Cluster.

---

**Configuring Virtual Host**

Step 1 Log on to the WebSphere Administration Console.

Step 2 Choose Environment > Virtual hosts.

Step 3 In the right pane, click New. The “Virtual Hosts > New” panel appears.

Step 4 In the Name field, enter ns_host and click OK.

Step 5 Click Save directly to the master configuration.

Step 6 Click the newly created ns_host to open its properties panel.

Step 7 Under Additional Properties, click the Host Aliases link.

Step 8 Click New.

Step 9 Enter the following values on the screen:

- Host Name = *
- Port = <Enter the port number for WC_defaulthost used by your WebSphere Server. For example, enter 9080.>

Step 10 Click OK.

Step 11 Click New again to add another entry.

Step 12 Enter the following values on the screen:

- Host Name = *
- Port = <Enter the port number used by your Web Server. For example, enter 80. A Web Server (such as IBM HTTP Server or IIS) should already be configured with the necessary Plugin for WebSphere.>

Step 13 Click OK.

Step 14 Click Save directly to the master configuration.

---

**Note**

If you have a WebSphere Cluster environment, the virtual host called “ns_host” that you created is used only for the WebSphere Cluster. You need to create another virtual host called “sl_host” that will be used for the stand-alone “Service Link WebSphere Server”. Follow the same instructions as above to create a virtual host named sl_host, but for Step 9(entering port number), enter the WC_defaulthost port number used by the “Service Link WebSphere Server”.

---
Configuring JMS Server

In this section, you will configure a JMS Server and the JMS Queues that will be used by Service Catalog.

Note

If RequestCenter.war and ISEE.war are deployed together on the same nonclustered WebSphere Server, then the JMS configurations described in this section are performed for that WebSphere Server. However, if you have a WebSphere Cluster environment, then the JMS configurations are performed for the “Service Link WebSphere Server”.

Creating Bus

Step 1  Log on to the WebSphere Administration Console.
Step 2  Choose Service integration > Buses.
Step 3  On the right pane, click New. The “Create a new bus panel” appears.
Step 4  Enter the following values, then click Next:
  * Name = nsbus
  * Deselect the Bus security option (if it is selected)
Step 5  Click Finish.
Step 6  Click Save directly to the master configuration.
Step 7  Click the newly created nsbus to open its Configuration panel.
Step 8  Under the Topology section, click the Bus members link.
Step 9  Click Add.
Step 10 Choose the Server option, and in the drop-down list next to it, choose the WebSphere Server where you plan to deploy ISEE.war. (For example, if you have a WebSphere Cluster environment, choose the Service Link WebSphere Server in the drop-down list.)
Step 11 Click Next.
Step 12 Choose the File store option, then click Next.
Step 13 On the “Configure file store” panel, do not make any changes. Click Next.
Step 14 On the “Tune performance parameters” panel, do not make any changes. Click Next.
Step 15 On the Summary panel, click Finish.
Step 16 Click Save directly to the master configuration.
Step 17 Click nsbus again to reopen its Configuration panel.
Step 18 Under the Destination resources section, click the Destinations link.
Step 19 Click New.
Step 20 Choose the Queue option, and click Next.
Step 21 In the Identifier field, enter ISEEInboundQueue, then click Next.
Step 22 On the next panel, choose the bus member that you created in the previous steps. Click Next.
Step 23 Click Finish.
Preinstallation Configuration for WebSphere

**Step 24** (Do not click **Save** yet.) Repeat Steps 19–23 four more times to create four more queues with the following names:

- ISEEOutboundQueue
- BEEERequisitionsQueue
- BEEEAuthorizationsQueue
- BEEEinboundQueue

**Step 25** Click **Save** directly to the master configuration after you finish the fifth queue.

---

**Creating Queue Connection Factory**

**Step 1** On the WebSphere Administration Console, choose **Resources > JMS**.

**Step 2** Click **Queue connection factories**.

**Step 3** From the Scope drop-down list, choose your WebSphere Server. (For example, choose the value “Node=<node_name>, Server=server1” for Scope.)

**Note** If you have a WebSphere Cluster environment, then choose the Service Link WebSphere Server from the Scope drop-down list instead. The Queue Connection Factory you are about to create only needs to be visible to the WebSphere Server where the ISEE.war is deployed.

**Step 4** Click **New**.

**Step 5** Choose the **Default messaging provider** option, then click **OK**. The “New Queue Connection Factory” panel appears.

**Step 6** Enter the following values on the screen:

- **Name** = NSConnectionFactory
- **JNDI Name** = NSConnectionFactory
- **Bus name** = nsbus

**Step 7** Click **Apply**.

**Step 8** Under the Additional Properties section to the right, click the **Connection pool properties** link.

**Step 9** Enter the following values on the screen:

- **Connection timeout** = 360
- **Maximum connections** = 35

**Note** The “Maximum connections” are used only during peak traffic. If you have a clustered WebSphere environment, the setting for “Maximum connections” may need to be increased.

**Step 10** Click **Apply**.

**Step 11** Under the Additional Properties section, click the **Advanced connection pool properties** link.
Step 12  Enter the following value on the screen:
  • Surge threshold = -1

Step 13  Click Save directly to the master configuration.

Creating Queues

Step 1  On the WebSphere Administration Console, choose Resources > JMS.

Step 2  Click Queues.

Step 3  From the Scope drop-down list, choose your WebSphere Server. (For example, choose the value “Node=<node_name>, Server=server1” for Scope.)

Note  If you have a WebSphere Cluster environment, then choose the Service Link WebSphere Server from the Scope drop-down list instead. The Queues you are about to create only need to be visible to the WebSphere Server where ISEE.war is deployed.

Step 4  Click New.

Step 5  Choose the Default messaging provider option, then click OK. The New Queue panel appears.

Step 6  Modify only the following settings on the screen:
  • Name = ISEEInboundQueue
  • JNDI Name = ISEEInboundQueue
  • Bus name = nsbus
  • Queue name = ISEEInboundQueue
  • Delivery mode = Persistent

Step 7  Click OK.

Step 8  (Do not click Save yet.) Repeat Steps 4–7 four more times to create four more queues with the following names:
  • ISEEOutboundQueue
  • BEEERequisitionsQueue
  • BEEEAuthorizationsQueue
  • BEEEInboundQueue

Step 9  Click Save directly to the master configuration after you finish the fifth queue.
Configuring J2C Authentication Data

In the Configuring Database, you created the RequestCenter database. In this section, you will add the database user that owns the RequestCenter schema to the J2C Authentication Data.

Step 1 On the WebSphere Administration Console, choose Security > Global security.
Step 2 Under the Authentication section in the right pane, click Java Authentication and Authorization Service.
Step 3 Click J2C authentication data.
Step 4 Click New.
Step 5 Enter the following values on the screen (replace “RCUser” with the actual ID that you created as the schema owner for the RequestCenter database):
   - Alias = RCUser
   - User ID = RCUser
   - Password = <Enter the password for the database user RCUser:>
Step 6 Click OK.
Step 7 Click Save directly to the master configuration.

Configuring JDBC Data Sources

In this section, you will configure a JDBC Data Source for the RequestCenter database.

Use the worksheet that you filled out at the end of the Configuring Database to retrieve the necessary database information.

Creating JDBC Provider

Step 1 On the WebSphere Administration Console, choose Resources > JDBC, and click JDBC Providers.
Step 2 From the Scope drop-down list, choose your WebSphere Server. (For example, choose the value “Node=<node_name>, Server=server1” for Scope.)

Note If you have a WebSphere Cluster environment, then choose the WebSphere Cluster name from the Scope drop-down list instead. The JDBC Provider you are about to create need to be visible to all WebSphere Servers that belong in the Cluster.

Step 3 Click New. The “Create new JDBC provider” panel appears.
Step 4 Enter the following values on the screen:
   - Database Type = User-defined
   - Implementation class name = <enter one of the following values:>
     - (For SQL Server:) com.microsoft.sqlserver.jdbc.SQLServerConnectionPoolDataSource
     - (For Oracle:) oracle.jdbc.pool.OracleConnectionPoolDataSource
- Name = Cisco JDBC Driver for <database_type>
- Description = Cisco JDBC Driver for <database_type>

Step 5  Click Next. The “Enter database class path information” panel appears.

Step 6  Replace the “Class path” with the following line:
- (For SQL Server:) com.ibm.websphere.rsadapter.MicrosoftSQLServerDataStoreHelper
- (For Oracle:) com.ibm.websphere.rsadapter.Oracle11gDataStoreHelper

Step 7  Click Next. The Summary panel appears.

Step 8  Review the information on the Summary panel. If everything looks correct, then click Finish.

Step 9  Click Save directly to the master configuration.

Note  If you have a WebSphere Cluster environment, then the JDBC Provider that you just created will not be visible to the stand-alone “Service Link WebSphere Server”, which does not belong to the Cluster. Therefore, you need to create the same JDBC Provider by repeating Steps 1–9, but this time, at Step 2, set the Scope to the Service Link WebSphere Server.

Creating REQUESTCENTERDS Data Source

Step 1  Click the newly created JDBC Provider to open its Configuration panel.

Step 2  Under the Additional Properties section, click the Data sources link.

Step 3  Click New. The “Enter basic data source information” panel appears.

Step 4  Enter the following values on the screen:
- Data source name = REQUESTCENTERDS
- JNDI name = eis/REQUESTCENTERDS

Step 5  Click Next.

Step 6  Enter the following value in the “Data store helper class name” field:
For SQL Server: com.ibm.websphere.rsadapter.MicrosoftSQLServerDataStoreHelper
For Oracle: com.ibm.websphere.rsadapter.Oracle11gDataStoreHelper

Step 7  Click Next.

Step 8  In the drop-down list for the “Component-managed authentication alias” field, choose the “RCUser” alias that you created for J2C authentication data in the previous section (for example, choose the value “<host>CellManager01/RCUser”).

Step 9  Click Next.

Step 10  Review the information on the Summary panel. If everything looks correct, then click Finish.

Step 11  Click Save directly to the master configuration.

Step 12  Click the newly created data source named REQUESTCENTERDS to open its General Properties panel.

Step 13  Under Additional Properties section, click the Connection pool properties link.
Step 14  Enter the following values on the screen:

- Maximum connections = 80
- Minimum connections = 20

Step 15  Click OK.

Step 16  (Do not click Save yet.) Under the Additional Properties section, click the Custom properties link. A long list of property names is displayed. The list of property names may span multiple pages.

Step 17  For SQL Server, delete all of the existing property names that you see on the screen. For Oracle, delete all of the existing property names, except for the property called "URL". You may have to navigate to the next page of property names in order to delete more entries.

Step 18  If your database is Oracle:

a. Click the existing URL property.
b. Modify the Value for URL as follows:
   - (For Oracle SID) URL = jdbc:oracle:thin:@<db_host>:<db_port>:<SID>
   - (For Oracle Service Name) URL =
     jdbc:oracle:thin:@//<db_host>:<db_port>/<Service_Name>
   where <db_host> is the hostname of the database server, <db_port> is the port number used by the database server, <SID> is the Oracle SID, and <Service_Name> is the Oracle Service Name.
c. Click OK.
d. Click Save directly to the master configuration.

Step 19  If your database is SQL Server:

a. Click New to add a new property.
b. Enter the following values on the screen.
   - Name = serverName
   - Value = <db_host>
   - Type = java.lang.String
c. Click OK.
d. Click New to add a 2nd property.
e. Enter the following values on the screen:
   - Name = portNumber
   - Value = <db_port>
   - Type = java.lang.String
f. Click OK.
g. Click New to add a 3rd property.
h. Enter the following values on the screen.
   - Name = databaseName
   - Value = <db_name>
   - Type = java.lang.String
i. Click OK.
j. Click New to add a 4th property.
k. Enter the following values on the screen.
   - Name = selectMethod
   - Value = direct
   - Type = java.lang.String

l. Click OK.

m. Click New to add a 5th property.

n. Enter the following values on the screen.
   - Name = webSphereDefaultIsolationLevel
   - Value = 2
   - Type = java.lang.String

o. Click OK.

p. Click Save directly to the master configuration.

---

### Starting WebSphere Server

You need to restart the WebSphere Server for it to pick up all of the configurations that you have done in the previous sections.

**Note**

If you have a WebSphere Cluster environment, then you need to restart the Cluster as well as the “Service Link WebSphere Server.”

After the WebSphere Server is restarted, verify that the Bus is running:

**Step 1** Log on to the WebSphere Administration Console.

**Step 2** Choose **Service integration > Buses**.

**Step 3** Click **nsbus** to open its Configuration panel.

**Step 4** Under the Topology section, click the **Messaging engines** link.

**Step 5** Verify that the messaging engine has the status of “Started” (that is, a green arrow as shown in the screenshot below).
Application Server Information Worksheet

Complete the following “Application Server Information Worksheet” by entering your configuration values in the Value column. The information in this worksheet will be needed when you run the Service Catalog Installation Wizard.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Request Center Configuration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Request Center hostname</td>
<td>The Hostname or IP address of the computer where the WebSphere Server is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on. If you have WebSphere Cluster environment, enter “localhost”.</td>
<td></td>
</tr>
<tr>
<td>Request Center HTTP port</td>
<td>The WC_defaulthost port number used by the WebSphere Server. Valid port numbers are from 1 to 65535. The default value is 9080.</td>
<td></td>
</tr>
<tr>
<td>Request Center JNDI port</td>
<td>The BOOTSTRAP_ADDRESS port number used by the WebSphere Server. Valid port numbers are from 1 to 65535. The default value is 2809.</td>
<td></td>
</tr>
<tr>
<td>Request Center protocol</td>
<td>The web protocol for the WebSphere Application Server. Choose http or https from the drop-down menu. The default is http.</td>
<td></td>
</tr>
<tr>
<td>Datasource JNDI name</td>
<td>The datasource JNDI name for the RequestCenter database. This setting must have the prefix “eis/”. The default name is “eis/REQUESTCENTERDS”.</td>
<td></td>
</tr>
<tr>
<td><strong>Advanced Options</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable clustering</td>
<td>Check the check box to enable a Clustered Application Server environment with multiple nodes. This is unchecked by default.</td>
<td></td>
</tr>
<tr>
<td>Multicast address</td>
<td>If you checked “Enable clustering” above, enter the multicast address.</td>
<td></td>
</tr>
<tr>
<td>Custom content?</td>
<td>Check the check box to use Custom content. You must enter the path to the Custom content archive below.</td>
<td></td>
</tr>
</tbody>
</table>
Table 1-11 Application Server Information Worksheet for WebSphere (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom content archive</td>
<td>If you checked “Custom content?” above, enter the path to the Custom content archive including the name of the archive, or click Browse to locate and choose the custom content archive. The archive directory structure must match the deployment directory structure. The archive must be in the Zip format.</td>
<td></td>
</tr>
<tr>
<td>Service Link Configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Link hostname</td>
<td>The Hostname or IP address of the computer where the “Service Link WebSphere Server” is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on.</td>
<td></td>
</tr>
<tr>
<td>Service Link HTTP port</td>
<td>The WC_defaulthost port number used by the Service Link WebSphere Server. If you have a clustered environment, then Service Link must be deployed on a separate WebSphere server outside of the cluster. Enter the port number for this separate WebSphere server. The default value is 9080.</td>
<td></td>
</tr>
<tr>
<td>Service Link JNDI port</td>
<td>The BOOTSTRAP_ADDRESS port number used by the Service Link WebSphere Server. If you have a clustered environment, then Service Link must be deployed on a separate WebSphere server outside of the cluster. Enter the port number for this separate WebSphere server. The default value is 2809.</td>
<td></td>
</tr>
<tr>
<td>Service Link protocol</td>
<td>The web protocol for the Service Link WebSphere Application Server. Choose http or https from the drop-down menu. The default is http.</td>
<td></td>
</tr>
<tr>
<td>Datasource JNDI name</td>
<td>The datasource JNDI name for the RequestCenter database. This setting must have the prefix “eis/”. The default name is “eis/REQUESTCENTERDS”.</td>
<td></td>
</tr>
<tr>
<td>Messaging Configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Queue hostname</td>
<td>The Hostname or IP address of the computer where the JMS service is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on.</td>
<td></td>
</tr>
<tr>
<td>Queue port</td>
<td>Port Number used by your JMS service. Valid port numbers are from 1 to 65535. The default value is 2809.</td>
<td></td>
</tr>
<tr>
<td>Queue username</td>
<td>The username of the JMS Queue User. For WebSphere, this value is not required, and thus can be set to blank.</td>
<td></td>
</tr>
<tr>
<td>Queue password</td>
<td>The password for the JMS Queue User. For WebSphere, this value is not required, and thus can be set to blank.</td>
<td></td>
</tr>
<tr>
<td>Queue Connection factory</td>
<td>The name of the JMS Queue Connection Factory. The default name is NSConnectionFactory.</td>
<td></td>
</tr>
<tr>
<td>Messaging Queues Configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authorizations queue</td>
<td>The name of the Authorizations Queue. The default is BEEEAuthorizationsQueue.</td>
<td></td>
</tr>
<tr>
<td>Requisitions queue</td>
<td>The name of the Requisitions Queue. The default is BEEERequisitionsQueue.</td>
<td></td>
</tr>
<tr>
<td>Request Center inbound queue</td>
<td>The name of the Request Center Inbound Queue. The default is BEEEInboundQueue.</td>
<td></td>
</tr>
<tr>
<td>Service Link inbound queue</td>
<td>The name of the Service Link Inbound Queue. The default is ISEEInboundQueue.</td>
<td></td>
</tr>
<tr>
<td>Service Link outbound queue</td>
<td>The name of the Service Link Outbound Queue. The default is ISEEOutboundQueue.</td>
<td></td>
</tr>
</tbody>
</table>
Running the Service Catalog Installer

This section provides instructions for executing the Service Catalog installer.

Two modes of installation are provided—Typical and Custom. The Typical installation performs a streamlined installation using default settings. It requires a smaller footprint as the three foundational application components—Request Center application, Service Link application, and JMS service—are hosted on the same application server (except for JBoss application server). Typical installation is commonly used when setting up sandbox environments.

The Custom installation allows you to configure a different deployment topology and to apply custom changes to the application. Use the Custom Installation mode if you have any of the following requirements:

- Have Request Center application, Service Link application, JMS service running on separate application servers
- Have a clustered Request Center topology (for WebLogic or WebSphere.)
- Have separate tablespaces for definitional data, transactional data and indexes (for Oracle Only)
- Add custom content to the RequestCenter.war
- Recreate the RequestCenter.war or ISEE.war files without executing any database scripts
- For JBoss, the Custom mode allows the user to install "Request Center only", "Service Link only" or "both"

Two installation scenarios are provided that walk you through all steps of the installation wizard:

- **Scenario 1: New Typical Installation**
- **Scenario 2: New Custom Installation**

For information about performing an upgrade installation, see Chapter 3, “Upgrade Guide”.

Table 1-11 Application Server Information Worksheet for WebSphere (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Catalog Administration Configuration</strong></td>
<td></td>
<td>-------</td>
</tr>
<tr>
<td>SMTP hostname</td>
<td>The hostname or IP address of the SMTP server.</td>
<td>-------</td>
</tr>
<tr>
<td>SMTP port</td>
<td>The SMTP Port Number used by the SMTP server. Valid port numbers are from 1 to 65535. The default value is 25.</td>
<td>-------</td>
</tr>
<tr>
<td>System email address</td>
<td>The sender email address to be used for system generated notifications.</td>
<td>-------</td>
</tr>
<tr>
<td>Service Catalog Site Administrator: Password</td>
<td>Password of the Cisco Prime Service Catalog Site Administrator, required only for a new installation.</td>
<td>-------</td>
</tr>
<tr>
<td>Service Catalog Site Administrator: Confirm password</td>
<td>Re-enter your Site Administrator’s password to confirm.</td>
<td>-------</td>
</tr>
</tbody>
</table>
Before You Begin

- Review the Prerequisites and Installation Overview to ensure that you have adequately addressed the minimum hardware and software requirements for running the system.

- Ensure that you have performed the database tasks described in the Configuring Database, and completed the Database Information Worksheet.

- Ensure that you have performed the preinstallation tasks for your type of application server and completed the Application Server Information Worksheet.

- The Cisco Prime Service Catalog installer requires Java 1.6. Make sure that the JAVA_HOME environment variable on your computer is set to point to a Java 1.6 directory. On Windows, add %JAVA_HOME%\bin to the PATH environment variable. On Unix/Linux, add $JAVA_HOME/bin to the PATH environment variable.

- The Cisco Prime Service Catalog installer is a GUI program. On Unix or Linux operating system, you will need a graphical display, such as X-window. The installer does not support console mode or CLI mode.

- During the installation, you will be asked to specify the destination directory for the software. On Windows, the default destination directory is "C:\CiscoPrimeServiceCatalog". On Linux/UNIX, the default destination directory is "/opt/CiscoPrimeServiceCatalog". Ensure that there is at least 2 GB free disk space in the destination directory; otherwise, the installer will display the following error message:

  there isn't enough disk space to continue.

- During installation, the installer requires an additional 2 GB of free disk space in the TMP directory, where it extracts some temporary files. The TMP directory is different for different operating systems and/or user profiles. On Windows, the TMP directory is the %TMP% or %TEMP% environment variable for the user profile. On Linux/UNIX, the TMP directory is usually either /tmp or /var/tmp directory.

Executing Setup

Service Catalog is installed by executing a setup program that launches an installation wizard. If you are on a Windows operating system, you need to have administrative rights to the machine. If you are on a Unix/Linux machine, it is advisable that you login as "root" user to execute the installer.
To execute the setup program:

**Step 1** Extract the electronic software distribution file that you downloaded from the Cisco web site to your computer, if you have not already done so.

**Step 2** On a Windows operating system, double-click `setup.cmd` to launch the GUI installation wizard. For a UNIX or Linux operating system, run `./setup.sh` from a graphical interface, such as X-window.

A progress bar appears, as shown in Figure 1-9 below.

![Setup Progress Bar](image)

When complete, the introduction panel appears.

---

### How to Use the Installation Wizard

The installation wizard guides you through the installation of Cisco Prime Service Catalog by presenting panels of fields to be configured. As each panel is completed, click **Next** to advance to the next panel, or **Previous** to return to a previous panel. At the end of the wizard, click **Install** to begin the installation.

At any time, you may click **Cancel** to exit the installation wizard without installing Service Catalog.

Some panels may have the Restore Default button. If this button is clicked, the input values on the current panel will be restored back to the factory-default values. If the Custom installation mode is selected, some panels might have the Advanced Options button. Click this button to see more advanced settings for the database or the application server.

The installation configuration options are case-sensitive, so ensure that you enter a value, such as a database name or a JMS queue name, with case sensitivity; otherwise, your installation may fail.

---

### Scenario 1: New Typical Installation

In this scenario, a new database schema is created for a new Service Catalog installation. A “Typical” installation type is chosen in the installation wizard when you want to perform a streamlined installation using default settings.

**Step 1** If you are on a Windows operating system, stop the IIS web server.

**Step 2** Launch the installation wizard (see the Executing Setup).

**Step 3** On the Introduction panel, click **Next** to begin.
Step 4 In the Choose Install Folder panel, enter a destination folder for the installation and click Next.
- For a Windows environment, C:\CiscoPrimeServiceCatalog is entered as the default destination folder.
- For Linux/Unix, the default destination folder is “/opt/CiscoPrimeServiceCatalog”. Enter a different destination folder, or click Choose to locate and select a folder (or create a new one). The destination folder field cannot be blank, and must not contain any space character.

Note: Do not enter the installation folder of your WebLogic or WebSphere root directory. We recommend that you create the destination folder outside of your application server directory.

Throughout this document, this destination folder is referred to as <ServiceCatalog_Install_Dir>.

For WebLogic or WebSphere, this directory is where the Service Catalog installer creates the generated WAR files for the Service Catalog application. For JBoss, this directory is also where the Service Catalog installer installs and configures the JBoss Application Server software.

Step 5 On the Installation Type panel, select Typical radio button and click Next.

Step 6 On the Application Server Selection panel, select the application server and click Next. The subsequent panels may look different depending on which application server you select at this point. Refer to the Application Server Information Worksheet that you filled out earlier.

Step 7 On the Database Selection panel, select a database platform (Microsoft SQL Server or Oracle) and click Next. The subsequent panels may look different depending on which database platform you select at this point. Refer to the Database Information Worksheet that you filled out earlier to determine your database platform.

Step 8 On the Request Center Database Creation panel:
- If you have not created the database in advance, select Yes. By selecting Yes, you are telling the installer to create the database automatically for you. In the next panel, you will be prompted for the information that the installer will use to create the database user and database schema for RequestCenter. Refer to the Database Information Worksheet for the description of each field on this panel.
- If you have already created your database, then select No. In the next panel, you will be prompted for the information of the existing database user and database schema. Refer to the Database Information Worksheet for the description of each field on this panel. (If you are performing an upgrade installation, you must select No. Refer to Chapter 3: Upgrade Guide for more detailed information).

Step 9 On the Request Center Database panel, enter the information for the RequestCenter database.
- If you selected Yes in the last panel, you will see a "Create Database" button on this panel, and the Next button is grayed out. Notice that you need to enter the password for either the "sys" user (for Oracle) or the "sa" user (for SQL Server) which the installer will use to connect to your database server. Once you fill out the information on this panel, click the "Create Database" button. If you get the message "Request Center database created successfully", click OK to close the message. The Next button is now enabled.
- If you selected No in the last panel, you just need to fill out the information for the existing RequestCenter database, and select the "Execute database scripts" check box.
The "Create Database" feature creates a very basic RequestCenter database that meets the minimum requirements for the Service Catalog application to operate. This feature is recommended for a Demo or Test system. For a Production system, contact your DBA in advance, to create the RequestCenter database which meets all of the product requirements as described in the Configuring Databases section, as well as any performance, reliability, and security requirements that adhere to your corporate policy.

Step 10 Click Next to continue. The installer connects to the database to validate the required settings for the database. If the installer created the database for you, then it would meet all of the required settings, and the validation test would pass. If you provided the information for an existing database, then the installer may report a validation error if any database setting is missing. (Refer to the Supported Software section in this chapter for the database requirements.) If a database validation error occurs, you can do the following:

- Close the error dialog and click Cancel to exit the installation wizard, or
- Fix the missing database setting on a separate database connection session. Then come back to this screen, close the error dialog, and click Next again. At this point, the installer will repeat the validation test, and if the test passes, it will let you move to the next panel.

Step 11 If you selected JBoss as the application server, the installation procedure is as follows:

a. The Choose Java Virtual Machine panel is displayed. This panel displays all the available java executable programs on the computer. Select a Java version 1.6.0_x from the list or click the Search Another Location button to navigate to the correct location of Java 1.6.0_x on your computer and click Next.

Note You must specify the location of Java for JBoss because the installer will install the JBoss Application Server software on your computer, and it will set the JAVA_HOME variable in the JBoss configuration to use this particular Java.

b. On the Request Center Configuration panel, enter the information for the JBoss server where the Request Center application (i.e. RequestCenter.war) will be deployed. Refer to the Request Center Configuration Table for JBoss for the description of each field on this panel. Click Next.

c. On the Service Link Configuration panel, enter the information for the JBoss server where Service Link application (i.e. ISEE.war) will be deployed. Refer to the Service Link Configuration Table for JBoss for the description of each field on this panel. Click Next.

Note For WebSphere or WebLogic, you will not see this panel. This is because for a Typical installation mode for WebSphere or WebLogic, the Request Center application (i.e. RequestCenter.war) and Service Link application (i.e. ISEE.war) will be deployed together in the same WebSphere or WebLogic server. Thus, there is no need for the installer to prompt for the information of the Service Link server. However, for a Typical installation mode for JBoss, the installer will always create two separate JBoss servers, one for Request Center application and one for Service Link application, even though both JBoss servers are running on the same machine.

d. On the Messaging Configuration panel, enter the information for the JMS Queue connection Factory, user name and password. Refer to the Messaging Configuration Table for the description of each field on this panel. Click Next.
e. On the Service Catalog Administration Configuration panel, enter the information for the SMTP server, and the password for the Site Administrator. Refer to the Service Catalog Administration Configuration Table for the description of each field on this panel. Click Next.

**Step 12**

If you selected Weblogic or Websphere as the application server, the installation procedure is as follows:

a. In the Request Center Configuration panel, enter the information for the WebSphere or WebLogic server where Request Center application (i.e. RequestCenter.war) will be deployed. Refer to the Application Server Information Worksheet that you have filled out earlier. For more information, see Request Center Configuration for WebLogic and WebSphere.

b. Click Next to display the Messaging Configuration panel. Enter the information for the JMS Queue Connection Factory. Refer to the Application Server Information Worksheet that you filled out earlier. For more information, see Messaging Configuration Table.

c. Click Next to display the Messaging Queues Configuration panel. Enter the queue names as how you prepared them for your WebSphere or WebLogic server. Refer to the Application Server Information Worksheet that you filled out earlier.

| Note | For JBoss, you will not see this panel. This is because for JBoss, all the queue names are preset when the installer installs the JBoss AS software on your computer. You do not have the option to overwrite these queue names. |

d. Click Next to display the Service Catalog Administration panel. Enter details as provided in Service Catalog Administration Configuration Table.

e. Click Next.

**Step 13**

Click Install in the Pre-Installation Summary panel to begin installation.

The installer will display the progress bar. It may take up to 30 minutes for the installer to complete. Do not interrupt or abort the installer during this process.

**Step 14**

If the installation process completes successfully, the Install Complete panel appears. Click Done to exit the installation wizard.

---

**What’s Next**

You have completed the execution of the Service Catalog installer. You can now skip to the Postinstallation Configuration section for the appropriate application server below.

**Scenario 2: New Custom Installation**

In this scenario, a "Custom" installation type is chosen in the installation wizard to customize aspects of the installation rather than accepting the defaults.

**Step 1**
If you are on a Windows operating system, stop the IIS web server.

**Step 2**
Launch the installation wizard (see the Executing Setup).

**Step 3**
On the first panel of the installation wizard, click Next to begin. The Choose Install Folder panel of the installation wizard appears.
**Step 4** Choose a destination folder for the installation and click **Next**.
- For a Windows environment, C:\CiscoPrimeServiceCatalog is entered as the default destination folder.
- For Linux/Unix, the default destination folder is “/opt/CiscoPrimeServiceCatalog”. Enter a different destination folder, or click **Choose** to select a folder (or create a new one). The destination folder field cannot be blank.

**Note** Do not enter the installation folder of your application server. We recommend that you create the destination folder outside the application server directory. The path name for the destination folder must not contain any spaces.

Throughout this document, this destination folder is referred to as `<ServiceCatalog_Install_Dir>`. For WebLogic or WebSphere, this directory is where the Service Catalog installer creates the generated WAR files for the Service Catalog application. For JBoss, this directory is also where the Service Catalog installer installs and configures the JBoss Application Server software.

**Step 5** Select the **Custom** radio button on the Installation Type panel and click **Next**.

The Application Server Selection panel appears.

**Step 6** On the Application Server Selection panel, select one of the Application server radio buttons and click **Next**.
- If you select JBoss, continue with Component Selection panel in Step 7
- If you select WebSphere or WebLogic, skip Step 7

**Step 7** Select a component in the Component Selection panel and click **Next**.

The Custom installation mode for JBoss allows you to install
- only the Request Center server,
- only the Service Link server, or
- both Request Center and Service Link servers on the same computer.

**Step 8** Choose the database platform (Microsoft SQL Server or Oracle) you want, on the Database Selection panel and click **Next**.

The subsequent panels may look different depending on the database platform you select. Refer to the Database Information Worksheet to determine your database platform.

**Step 9** On the Request Center Database Creation panel:
- If you have not created the database in advance, select Yes. By selecting Yes, you are telling the installer to create the database automatically for you. In the next panel, you will be prompted for the information that the installer will use to create the database user and database schema for RequestCenter. Refer to the Database Information Worksheet for the description of each field on this pane.
- If you have already created your database, then select No. In the next panel, you will be prompted for the information of the existing database user and database schema. Refer to the Database Information Worksheet for the description of each field on this panel. (If you are performing an upgrade installation, you must select No. Refer to Chapter 3: Upgrade Guide for more detailed information.)
Step 10  On the Request Center Database panel, enter the information for the RequestCenter database.

- If you selected Yes in the last panel, you will see a "Create Database" button on this panel, and the Next button is grayed out. Notice that you need to enter the password for either the "sys" user (for Oracle) or the "sa" user (for SQL Server) which the installer will use to connect to your database server. Once you fill out the information on this panel, click the "Create Database" button. If you get the message "Request Center database created successfully", click OK to close the message. The Next button is now enabled.

- If you selected No in the last panel, you just need to fill out the information for the existing RequestCenter database, and select the "Execute database scripts" check box.

Note  The "Create Database" feature will create a very basic RequestCenter database that meets the minimum requirements for the Service Catalog application to operate. This feature is recommended for a Demo or Test system, but for a Production system, it is advisable that you work with your DBA to create the RequestCenter database in advance which meets all of the product requirements as described in the Configuring Databases section, as well as any performance, reliability, and security requirements that adhere to your corporate policy.

Step 11  Click Next.

The installer will connect to the database to validate the required settings for the database. If the installer created the database for you, then it would meet all of the required settings, and the validation test would pass. If you provided the information for an existing database, then the installer may report a validation error if it detects that certain required database setting is missing. (Refer to the Configuring Databases page section in this Chapter for the database requirements.) If a database validation error occurs, you can do the following:

- Close the error dialog and click Cancel to exit the installation wizard, or
- Fix the missing database setting on a separate database connection session. Then come back to this screen, close the error dialog, and click Next again. At this point, the installer will repeat the validation test, and if the test passes, it will let you move to the next panel.

Step 12  If you selected JBoss as the application server the, installation procedure is as follows:

a. The Choose Java Virtual Machine window is displayed. This window contains all of the java executable program that it detects on the computer. Select a Java version 1.6.0_x from the list or click Search Another Location button to navigate to the correct location of Java 1.6.0_x on your computer and Click Next.

Note  You must specify the location of Java for JBoss because the installer will install the JBoss Application Server software on your computer, and it will set the JAVA_HOME variable in the JBoss configuration to use this particular Java.

b. On the Request Center Configuration panel:

- Enter the information for the JBoss server where the Request Center application (i.e. RequestCenter.war) will be deployed. Refer to the Request Center Configuration Table for JBoss for the description of each field on this panel.

- Click the Advanced Options button. Enter the information on the Advanced Options window, see Advanced Options Table for Request Center Configuration panel for reference and click Close.

- Click the Change Ports button if you want to change any of the default port numbers assigned to the JBoss server for Request Center and click Close.
c. Click **Next** to display the Service Link Configuration panel.
   - Enter the information for the JBoss server where Service Link application (i.e. ISEE.war) will be deployed. Refer to the Service Link Configuration Table for JBoss for the description of each field on this panel.
   - Click the **Change Ports** button if you want to change any of the default port numbers assigned to the JBoss server for Service Link and click **Close**.
   - Click **Next**. The Messaging Configuration window is displayed.

d. Enter the information for the JMS Queue server and click **Next**. Refer to the Application Server Information Worksheet that you filled out earlier. For more information, see Messaging Configuration Table for Custom Installation.

e. On the Service Catalog Administration Configuration panel, enter the information for the SMTP server, and the password for the Site Administrator. Refer to the Service Catalog Administration Configuration Table for the description of each field on this panel. Click **Next**.

**Step 13** If you selected WebLogic or WebSphere as the application server, the installation procedure is as follows:

a. On Request Center Configuration panel:
   - Enter the information for the WebSphere or WebLogic server where Request Center application (i.e. RequestCenter.war) will be deployed. Refer to the Application Server Information Worksheet that you have filled out earlier. For more information, see Request Center Configuration for WebLogic and WebSphere.
   - Click the **Advanced Options**. To enter the advanced options details see, Advanced Options Table for Request Center Configuration panel.
   - Click **Close** in the Advanced Options window and click **Next**.
   The Service Link Configuration window is displayed.

b. Enter the information for the WebSphere or WebLogic server where Service Link application (i.e. ISEE.war) will be deployed and Click **Next**. Refer to the Application Server Information Worksheet that you have filled out earlier. See Service Link Configuration Table for Custom Installation using WebLogic or WebSphere.

---

**Note**  
If Request Center is deployed in a Clustered WebSphere or Clustered WebLogic, then Service Link must be deployed in a separate WebSphere or WebLogic server that does not belong to the Cluster.

c. In the Messaging Configuration window enter information for the JMS Queue Server and Click **Next**. Refer to the Application Server Information Worksheet that you filled out earlier. For more information, see Messaging Configuration Table for Custom Installation.

d. Click **Next** to display the Messaging Queues Configuration panel. Enter the queue names as how you prepared them for your WebSphere or WebLogic server. Refer to the Application Server Information Worksheet that you filled out earlier.

e. On the Service Catalog Administration Configuration panel, enter the information for the SMTP server, and the password for the Site Administrator. Refer to the Service Catalog Administration Configuration Table for the description of each field on this panel. Click **Next**.

**Step 14** Click Install in the Pre-Installation Summary panel to begin installation.

The installer will display the progress bar. It may take up to 30 minutes for the installer to complete. Do not interrupt or abort the installer during this process.
Step 15  If the installation process completes successfully, the **Install Complete** window appears. Click **Done** to exit the installation wizard.

---

**What’s Next**

You have completed the execution of the Service Catalog installer. You can now skip to the Postinstallation Configuration section for the appropriate application server below.

**Reference Tables for Installation Procedures**

*Table 1-12  Database Information Worksheet*

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition for SQL Server</th>
<th>Definition for Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostname</td>
<td>Hostname or IP address of the database server</td>
<td>Host name or IP address of the database server.</td>
</tr>
<tr>
<td>Port</td>
<td>TCP/IP Port number used by the database server. The default value is 1433.</td>
<td>TCP/IP Port number used by the database server. The default value is 1521.</td>
</tr>
<tr>
<td>Databasename</td>
<td>The name of the database for the Service Catalog application. Enter alphanumeric characters and do not include any space characters. The default value is “RequestCenter”.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>sa Password</td>
<td>To create the database in SQL Server, the installer must connect to SQL Server as “sa” user. Enter any sa password.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Username</td>
<td>Database username is the login ID and the db_owner of the “RequestCenter” database. The default value is “RCUser”.</td>
<td>Database username is the login ID and the schema name for the database schema. The default value is “RCUSER”.</td>
</tr>
<tr>
<td>Password</td>
<td>Password for the database username.</td>
<td>Password for the database username.</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>Re-enter the password for the database username.</td>
<td>Re-enter the password for the database username.</td>
</tr>
<tr>
<td>Database SID or Database Service Name</td>
<td>Not Applicable</td>
<td>If you use SID to connect to your Oracle database, then select the SID radio button, and enter the Oracle SID value. If you use Service Name to connect to your Oracle database, then select the Service Name radio button, and enter the Service Name value.</td>
</tr>
</tbody>
</table>
Chapter 1      Installation and Configuration Guide

Running the Service Catalog Installer

Table 1-13 Request Center Configuration Table for JBoss

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition for SQL Server</th>
<th>Definition for Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS Password</td>
<td>Not Applicable</td>
<td>To create the database schema in Oracle, the installer must connect to Oracle as the &quot;sys&quot; user. Enter the password for &quot;sys&quot; user.</td>
</tr>
<tr>
<td>User tablespace</td>
<td>Not Applicable</td>
<td>Enter a tablespace name if you already have a specific Oracle tablespace name. The default tablespace name will be set to this value. If you leave this value blank, then the installer will use the default user tablespace provided by the Oracle server.</td>
</tr>
<tr>
<td>Temp tablespace</td>
<td>Not Applicable</td>
<td>Enter a temp tablespace name if you already have a specific Oracle tablespace name. The default temp tablespace name will be set to this value. If you leave this value blank, then the installer will use the default temp user tablespace name provided by the Oracle server.</td>
</tr>
<tr>
<td>Execute database scripts?</td>
<td></td>
<td>The option is enabled only if you have clicked No in the Request Center Database Creation panel. This option should always be selected, which tells the installer to execute the sql scripts to either create a brand new schema in the RequestCenter database in the case of a new installation, or to upgrade an existing schema from a previous release to the current release in the case of an upgrade installation. (Refer to Chapter3: Upgrade Guide for more detailed information on upgrading database.) When you want to reinstall the product WAR files without overwriting the existing RequestCenter database, you can deselect this option. Make sure you understand its implication before deselecting this option.</td>
</tr>
</tbody>
</table>

Field Definition for SQL Server Definition for Oracle

Request Center hostname Enter the fully qualified domain hostname or IP address of the current machine. The installer should detect the hostname or IP address of the current machine automatically, and display that value as the default value.

JBoss admin username Since the installer will install the JBoss AS software automatically for you, it presets the JBoss admin username to "adminuser". This username can be used to connect to the JBoss Admin Console should you need to perform any administration tasks for the JBoss installation. This value is grayed out so you can't overwrite it.
<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>JBoss admin password</td>
<td>Enter a password for the JBoss “adminuser”. Enter only alphanumeric characters with no spaces.</td>
</tr>
<tr>
<td>Confirm password</td>
<td>Re-enter a password for the JBoss “adminuser”.</td>
</tr>
<tr>
<td>Service Link URL</td>
<td>Enter the http address that includes the hostname and portnumber of Service link server. The default port number used by Service Link on JBoss is 6080.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: You will see this option if you have selected to install only the Request Center server on your computer. The computer will need to know the URL of the service link server to connect to the service link server at runtime if only request center server is installed on the computer.</td>
</tr>
</tbody>
</table>

**Configure as windows service**  
(For Windows only) On Windows operating system, the installer can automatically configure the JBoss server as a windows service. Select this option if you would like the installer to configure the JBoss server as a service named "Cisco Request Center". This service will be configured to start up automatically at boot time. But right after the installation is completed, the service will not be started up for you. You will have to open the Microsoft Windows Services Console to start the “Cisco Request Center” service for the first time after the installation. The service however will be started automatically when the Windows operating system is rebooted.
Running the Service Catalog Installer

Table 1-14 Service Link Configuration Table for JBoss

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Link Hostname</td>
<td>This value is preset to the same value that you entered for the Request Center hostname field on the Request Center Configuration panel. This is because both JBoss servers, one for Request Center application and one for Service Link applications, will be running on the same machine. This value is grayed out so you can't overwrite it.</td>
</tr>
</tbody>
</table>

Note

If you plan to install Cognos software (see Reporting Guide, page 2:1) on the same Windows machine where you are installing JBoss, then you must deselect the “Configure IIS” option at this time. IIS must be used for the Cognos software when you install Cognos and the Reporting module.

If you select this option, the installer will perform validation test against the IIS web server. If it detects that the IIS web server is missing some required settings, then the validation test will fail, and the installer will not let you proceed unless you deselect the "Configure IIS" option. (Refer the Software Configuration Prerequisites section for more information on IIS requirements.)
**Variable** | **Definition**
---|---
JBoss admin username | The installer has preset the JBoss admin username to "adminuser" because it will install the JBoss AS software automatically for you. This username can be used to connect to the JBoss Admin Console if you need to perform any administration tasks for the JBoss installation. This value is grayed out so you can't overwrite it.

**Note** | Field "JBoss admin password" is not presented on this panel. This is because the password is preset to the same value that you entered for the JBoss admin password field on the Request Center Configuration panel.

Configure as windows service | (For Windows only) On Windows operating system, the installer can automatically configure the JBoss server as a windows service. Select this option if you would like the installer to configure the JBoss server as a service named "Cisco Service Link". This service will be configured to start up automatically at boot time. But right after the installation is completed, the service will not be started up for you. You will have to open the Microsoft Windows Services Console to start the "Cisco Service Link" service for the first time after the installation. The service however will be started automatically when the Windows operating system is rebooted.

---

### Table 1-15 Messaging Configuration Table

<table>
<thead>
<tr>
<th>Field</th>
<th>JBoss</th>
<th>WebLogic</th>
<th>WebSphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queue connection factory</td>
<td>Value of JMS Queue Connection Factory for JBoss is preset to “jms/RemoteConnectionFactory”, and is grayed out.</td>
<td>Default value of JMS Queue Connection Factory for WebLogic is “NSConnectionFactory”</td>
<td>Default value of JMS Queue Connection Factory for WebSphere is “NSConnectionFactory”</td>
</tr>
<tr>
<td>Queue username</td>
<td>Username that can have read/write access to JMS Queues. This Value for JBoss is preset to “jmsuser”, and is grayed out.</td>
<td>The value of username for WebLogic is “weblogic”.</td>
<td>For WebSphere, Bus security feature must be turned off, so there is no authentication required to access the JMS queues. You can leave this value this blank.</td>
</tr>
</tbody>
</table>
### Running the Service Catalog Installer

#### Table 1-16 Service Catalog Administration Configuration Table

<table>
<thead>
<tr>
<th>Field</th>
<th>JBoss</th>
<th>WebLogic</th>
<th>WebSphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queue password</td>
<td>For JBoss, enter a password for the &quot;jmsuser&quot;. The &quot;jmsuser&quot; will be created by the installer when it installs the JBoss software.</td>
<td>Enter the password for the &quot;weblogic&quot; user.</td>
<td>For WebSphere, Bus security feature must be turned off, so there is no authentication required to access JMS queues. You can leave this blank.</td>
</tr>
<tr>
<td>Confirm password</td>
<td>This field is applicable for JBoss only. Re-enter the password for the &quot;jmsuser&quot;.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

#### Field Definitions

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMTP hostname</td>
<td>Enter the fully qualified domain hostname or IP address of the SMTP server. The Service Catalog application will connect to this SMTP server to send out all email notifications.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: There is an optional Test SMTP button on this panel. After you enter the SMTP hostname and system email address, you can click the Test SMTP button to verify the connection to the SMTP server. The installer will display a message dialog which shows whether the Test connection to the SMTP server succeeds or fails. If the STMP server test connection fails, the installer will still let you move on to the next step. Just close the message dialog, then Click Next to continue.</td>
</tr>
<tr>
<td>SMTP Port</td>
<td>The SMTP server must be listening to port 25.</td>
</tr>
<tr>
<td>System email address</td>
<td>Enter the email address of the system administrator. This is used as the sender's email address for all system-level email notifications.</td>
</tr>
<tr>
<td>Service Catalog Site Administrator Password</td>
<td>(This option is not shown for an &quot;upgrade&quot; installation.) Enter the password for the Site Administrator of the application. The password cannot be blank. Enter alphanumeric characters for the password.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: The Site Administrator's username is preset to &quot;admin&quot; and can not be changed.</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>(This option is not shown for an &quot;upgrade&quot; installation.) Re-enter the password for Site Administrator.</td>
</tr>
</tbody>
</table>
### Table 1-17  Request Center Configuration for WebLogic and WebSphere

<table>
<thead>
<tr>
<th>Field</th>
<th>WebLogic</th>
<th>WebSphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Center hostname</td>
<td>Enter the fully qualified domain hostname or IP address of the machine where the WebLogic server is running. The installer does not have to be executed on the same machine where the WebLogic server is running. So make sure that you enter the correct value for hostname here.</td>
<td>Enter the fully qualified domain hostname or IP address of the machine where the WebSphere server is running. The installer does not have to be executed on the same machine where the WebSphere is running. So make sure that you enter the correct value for hostname here.</td>
</tr>
<tr>
<td>Request Center HTTP port</td>
<td>Enter the Listen Port number assigned to the WebLogic server. The default value is 7001.</td>
<td>Enter the WC_default port number assigned to the WebSphere server. The default value is 9080.</td>
</tr>
<tr>
<td>Request Center JNDI port</td>
<td>Enter the Listen Port number assigned to the WebLogic server. The default value is 7001.</td>
<td>Enter the BOOTSTRAP_ADDRESS port number assigned to the WebSphere server. The default value is 2809.</td>
</tr>
<tr>
<td>Request Center protocol</td>
<td>Select the value “http” from the drop-down list. If you select “https”, then make sure that you enter the SSL Listen Port number in the Request Center HTTP port field instead.</td>
<td>Select the value “http” from the drop-down list. If you select “https”, then make sure that you enter the “WC_default_secure port number” in the Request Center HTTP port field instead.</td>
</tr>
<tr>
<td>Datasource JNDI name</td>
<td>Enter the datasource JNDI name for the RequestCenter database which you have already configured for the WebLogic server as a prerequisite. The default value is &quot;eis/REQUESTCENTERDS&quot;.</td>
<td>Enter the datasource JNDI name for the RequestCenter database which you have already configured for the WebSphere server as a prerequisite. The default value is &quot;eis/REQUESTCENTERDS&quot;.</td>
</tr>
<tr>
<td>Data Mart JNDI name</td>
<td>Enter the datasource JNDI name for the Data Mart database here. The Data Mart database is needed if you plan to install the Reporting module. If you don’t have the Reporting module, you can leave this value blank. The default value is &quot;eis/DATAMARTDS&quot;.</td>
<td>Enter the datasource JNDI name for the Data Mart database here. The Data Mart database is needed if you plan to install the Reporting module. If you don’t have the Reporting module, you can leave this value blank. The default value is &quot;eis/DATAMARTDS&quot;.</td>
</tr>
<tr>
<td>Field</td>
<td>Definition for SQL Server</td>
<td>Definition for Oracle</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hostname</td>
<td>Hostname or IP address of the database server</td>
<td>Hostname or IP address of the database server</td>
</tr>
<tr>
<td>Port</td>
<td>TCP/IP Port number used by the database server. The default value is 1433.</td>
<td>TCP/IP Port number used by the database server. The default value is 1521.</td>
</tr>
<tr>
<td>Database SID or Database Name</td>
<td>Not Applicable</td>
<td>If you use SID to connect to your Oracle database, then select the SID radio button, and enter the Oracle SID value. If you use Service Name to connect to your Oracle database, then select the Service Name radio button, and enter the Service Name value.</td>
</tr>
<tr>
<td>Username</td>
<td>Database username is the login ID and the db_owner of the “RequestCenter” database. The default value is “RCUser”.</td>
<td>Database username is the login ID and the schema name for the database schema. The default value is “RCUSER”.</td>
</tr>
<tr>
<td>Password</td>
<td>Password for the database username.</td>
<td>Password for the database username.</td>
</tr>
<tr>
<td>Execute Database Scripts?</td>
<td>The option is enabled only if you have clicked No in the Request Center Database Creation panel. This option should always be selected, which tells the installer to execute the sql scripts to either create a brand new schema in the RequestCenter database in the case of a new installation, or to upgrade an existing schema from a previous release to the current release in the case of an upgrade installation. (Refer to Chapter 3: Upgrade Guide for more detailed information on upgrading database.) When you want to reinstall the product WAR files without overwriting the existing RequestCenter database, you can deselect this option. Make sure you understand its implication before deselecting this option.</td>
<td></td>
</tr>
<tr>
<td>Advanced Options</td>
<td>This button is available in the Request Center Database window for Oracle only. When you click this button, Advanced Options window with the following files is displayed. Click Close after you enter the required details in the Advanced Options window.</td>
<td></td>
</tr>
<tr>
<td>Enable multiple tablespace?</td>
<td>Select this option if your existing Request Center database was created on multiple table spaces on Oracle.</td>
<td></td>
</tr>
<tr>
<td>Default tablespace</td>
<td>The name of the tablespace where all of the definitional-data tables are created. Definitional-data tables have names that start with DEF. The default value is CCPDATA01</td>
<td></td>
</tr>
<tr>
<td>Directory tablespace</td>
<td>The name of the tablespace where all of the directory-data tables are created. Directory-data tables have names that start with DIR. The default value is CCPDATA02</td>
<td></td>
</tr>
</tbody>
</table>
### Table 1-19 Advanced Options Table for Request Center Configuration panel

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition for SQL Server</th>
<th>Definition for Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction tablespace</td>
<td>The name of the tablespace where all of the transactional-data tables are created. Transactional-data tables have names that start with TX. The default value is CCPDATA03. Any tables whose names are different from DEF, DIR or TX are stored in the Default tablespace.</td>
<td></td>
</tr>
<tr>
<td>Index tablespace</td>
<td>The name of the tablespace where all of the table indexes are created. The default value is CCPINDEX.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable clustering</td>
<td>This option is not available for JBoss and is grayed out. For WebSphere or WebLogic, select this option if you have a Clustered WebSphere or Clustered WebLogic environment.</td>
</tr>
<tr>
<td>Multicast address</td>
<td>This option is not available for JBoss and is grayed out. For WebSphere or WebLogic, if you select the Enable clustering option above, then you must enter a multicast IP address, which the Request Center application uses to communicate among the different nodes in the Cluster.</td>
</tr>
<tr>
<td>Custom content?</td>
<td>Select this option if you want to insert custom contents into the RequestCenter.war during the installation. After the installation your deployed RequestCenter.war directory will contain the custom contents, such as ISF and custom stylesheets. This is an optional step. If you don't install Custom Content at installation time, then after the installation, you can always extract the Content zip file manually on top of the deployed RequestCenter.war directory.</td>
</tr>
</tbody>
</table>
| Custom content archive     | Enter the location of the zip file that contains the custom contents. The zip file must adhere to the directory structure underneath RequestCenter.war directory. For example, inside the content.zip file, there are the following contents:  
  - isfcode\*  
  - custom\mystyle\*  
  - images\*  
  
  Everything will be extracted toRequestCenter.war directory, keeping the same directory structure intact. |
### Table 1-20  Service Link Configuration Table for Custom Installation using JBoss Server

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Link Hostname</td>
<td>This value is preset to the same value that you entered for the Request Center hostname field on the Request Center Configuration panel. This is because both JBoss servers, one for Request Center application and one for Service Link application, will be running on the same machine. This value is grayed out so you cannot overwrite it.</td>
</tr>
<tr>
<td>JBoss admin username</td>
<td>The installer has preset the JBoss admin username to &quot;adminuser&quot; because it will install the JBoss AS software automatically for you. This username can be used to connect to the JBoss Admin Console if you need to perform any administration tasks for the JBoss installation. This value is grayed out so you can't overwrite it.</td>
</tr>
<tr>
<td>JBoss admin password</td>
<td>If you chose to install only Service Link server on this computer, then the installer will prompt you to enter the password for the JBoss administrator user. This field will not be shown if you chose the &quot;Both&quot; option instead. This is because the password is preset to the same value that you entered for the JBoss admin password field on the Request Center Configuration panel.</td>
</tr>
<tr>
<td>Confirm password</td>
<td>Re-enter the password for the JBoss administrative user. This field will not be shown if you chose the &quot;Both&quot; option.</td>
</tr>
<tr>
<td>Configure as windows service</td>
<td>(For Windows only) On Windows operating system, the installer can automatically configure the JBoss server as a windows service. Select this option if you would like the installer to configure the JBoss server as a service named &quot;Cisco Service Link&quot;. This service will be configured to start up automatically at boot time. But right after the installation is completed, the service will not be started up for you. You will have to open the Microsoft Windows Services Console to start the &quot;Cisco Service Link&quot; service for the first time after the installation. The service however will be started automatically when the Windows operating system is rebooted.</td>
</tr>
</tbody>
</table>
### Table 1-21  Messaging Configuration Table for Custom Installation

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition for JBoss</th>
<th>Definition for WebLogic</th>
<th>Definition of WebSphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queue hostname</td>
<td>Enter the fully qualified domain hostname or IP address of the JMS server.</td>
<td>The JMS server can reside in any WebSphere or WebLogic server. But if you deploy Request Center in a Clustered WebSphere or Clustered WebLogic, then the JMS server needs to be configured on the WebSphere or WebLogic server where you deploy Service Link.</td>
<td>The JMS server can reside in any WebSphere or WebLogic server. But if you deploy Request Center in a Clustered WebSphere or Clustered WebLogic, then the JMS server needs to be configured on the WebSphere or WebLogic server where you deploy Service Link.</td>
</tr>
<tr>
<td>Queue port</td>
<td>Enter the JNDI Port assigned to the Request Centers server. The default value is 4447.</td>
<td>Enter the Listen Port number assigned to the WebLogic server. The default value is 7001.</td>
<td>Enter the BOOTSTRAP_ADDRESS port number assigned to the WebSphere server. The default value is 2809.</td>
</tr>
<tr>
<td>Queue connection factory</td>
<td>For JBoss, this value is preset to &quot;jms/RemoteConnectionFactory&quot;, and thus is grayed out</td>
<td>The default value is &quot;NSConnectionFactory&quot;</td>
<td>The default value is &quot;NSConnectionFactory&quot;</td>
</tr>
<tr>
<td>Queue Username</td>
<td>Username that can have read/write access to JMS Queues. This Value for JBoss is preset to “jmsuser”, and is grayed out.</td>
<td>The value of username for WebLogic is “weblogic”.</td>
<td>For WebSphere, Bus security feature must be turned off, so there is no authentication required to access the JMS queues. You can leave this blank.</td>
</tr>
<tr>
<td>Field</td>
<td>Definition for JBoss</td>
<td>Definition for WebLogic</td>
<td>Definition of WebSphere</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Queue password</td>
<td>For JBoss, enter a password for the “jmsuser”. The “jmsuser” will be created by the installer when it installs the JBoss software.</td>
<td>Enter the password for the “weblogic” user.</td>
<td>For WebSphere, Bus security feature must be turned off, so there is no authentication required to access the JMS queues. You can leave this blank.</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>This field is applicable for JBoss only. Re-enter the password for the “jmsuser”.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**Table 1-22  Service Link Configuration Table for Custom Installation using WebLogic or WebSphere**

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition for WebLogic</th>
<th>Definition for WebSphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Link hostname</td>
<td>Enter the fully qualified domain hostname or IP address of the machine where the WebLogic server is running.</td>
<td>Enter the fully qualified domain hostname or IP address of the machine where the WebSphere server is running.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>The installer does not have to be executed on the same machine where the WebSphere or WebLogic server is running. So make sure that you enter the correct value for hostname here.</td>
<td>The installer does not have to be executed on the same machine where the WebSphere or WebLogic server is running. So make sure that you enter the correct value for hostname here.</td>
</tr>
<tr>
<td>Service Link HTTP Port</td>
<td>Enter the Listen Port number assigned to the WebLogic server. The default value is 7001.</td>
<td>Enter the WC_default port number assigned to the WebSphere server. The default value is 9080.</td>
</tr>
<tr>
<td>Service Link JNDI port</td>
<td>Enter the Listen Port number assigned to the WebLogic server. The default value is 7001</td>
<td>Enter the BOOTSTRAP_ADDRESS port number assigned to the WebSphere server. The default value is 2809.</td>
</tr>
</tbody>
</table>
Postinstallation Configuration for JBoss

The Service Catalog installer installs and configures JBoss for the Request Center and Service Link applications on your computer, but it will not automatically start up the JBoss servers. This section contains instructions for starting and stopping the JBoss servers for Request Center and Service Link.

Starting JBoss Server on Windows

If you selected the "Configure windows service" option for Request Center and Service Link during the installation, then the "Cisco Request Center" service and "Cisco Service Link" service are registered on your computer.

However, the installer does not automatically start up the windows services for the first time right after the installation. (They will be automatically started the next time you reboot your computer.) You can perform the following steps to start the services for the first time:

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition for WebLogic</th>
<th>Definition for WebSphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Link protocol</td>
<td>Select the value “http” from the drop down list. If you select &quot;https&quot; from the dropdown list, then make sure that you enter the SSL Listen Port number in the Service Link HTTP port field instead.</td>
<td>Select the value “http” from the drop down list. If you select &quot;https&quot;, then make sure that you enter the WC_default_secure port number in the Service Link HTTP port field instead.</td>
</tr>
<tr>
<td>Datasource JNDI name</td>
<td>Enter the datasource JNDI name for the RequestCenter database which you have already configured for the WebSphere or WebLogic server as a prerequisite. The default value is &quot;eis/REQUESTCENTERDS&quot;.</td>
<td>Enter the datasource JNDI name for the RequestCenter database which you have already configured for the WebSphere or WebLogic server as a prerequisite. The default value is &quot;eis/REQUESTCENTERDS&quot;.</td>
</tr>
</tbody>
</table>

If you did not select the "Configure windows service" option during the installation, then you will need to execute a command script to start up each JBoss server. Perform the following steps to start the JBoss servers:
Step 1  It is assumed that your installation directory is "C:\CiscoPrimeServiceCatalog". Open a Command Prompt window, and navigate to the "C:\CiscoPrimeServiceCatalog\bin" directory.

Step 2  Execute the script `startRequestCenter.cmd` to start the JBoss server for Request Center.

Step 3  Wait for a few minutes for the Request Center server to be completely up. The JMS service is configured in the same JBoss server with the Request Center application; thus, you want to allow enough time for the JMS service to be ready before starting up the Service Link server.

Step 4  Open Command Prompt, and navigate to the "C:\CiscoPrimeServiceCatalog\bin" directory.

Step 5  Execute the script `startServiceLink.cmd` to start the JBoss server for Service Link.

**Note** Because you start the JBoss server using command scripts, if you log out of the Windows operating system, the JBoss server will be automatically killed when your login session is ended. So make sure that you don't log off the session where the JBoss servers are running. Follow the instructions in the "Configure JBoss As Windows Service" section below if you want to configure the JBoss servers as windows services after the installation. When the JBoss servers are running as windows services, they will not be killed when you log out of Windows operating system.

Step 6  To stop the JBoss servers, you can either:
- Press Control+C in the Command Prompt window where the Service Link server or Request Center server is running, or
- Execute the script "`stopServiceLink.cmd`" or "`stopRequestCenter.cmd`", located under the C:\CiscoPrimeServiceCatalog\bin directory.

## Starting JBoss Server on Linux

Perform the following steps to start the JBoss Servers on Linux:

Step 1  It is assumed that your installation directory is "/opt/CiscoPrimeServiceCatalog". Use SSH to connect to the Linux machine as the "root" user, and navigate to the "/opt/CiscoPrimeServiceCatalog/bin" directory.

Step 2  Execute the following command to start the JBoss server for Request Center in the background:
```
nohup ./startRequestCenter.sh > startRequestCenter.log 2>&1 &
```

Step 3  Wait for a few minutes for the Request Center server to be completely up. The JMS service is configured in the same JBoss server with the Request Center application; thus, you want to allow enough time for the JMS service to be ready before starting up the Service Link server.

Step 4  Execute the following command to start the JBoss server for Service Link in the background:
```
nohup ./startServiceLink.sh > startServiceLink.log 2>&1 &
```

Step 5  To stop the JBoss servers: It is recommended that you stop the Service Link server first. Execute the following scripts as the "root" user to stop the JBoss servers for Service Link and Request Center:
```
./stopServiceLink.sh
./stopRequestCenter.sh
```
Configure JBoss As Windows Service

**Step 1**
It is assumed that your installation directory is "C:\CiscoPrimeServiceCatalog". Open a Command Prompt window, and navigate to the "C:\CiscoPrimeServiceCatalog\bin" directory. Execute the script "installRequestCenterService.cmd" to configure the JBoss server for Request Center as a windows service. The service will be named "Cisco Request Center".

**Step 2**
Execute the script "installServiceLinkService.cmd" to configure the JBoss server for Service Link as a window service. The service will be named "Cisco Service Link".

**Step 3**
To remove the windows services: First you need to manually stop the "Cisco Request Center" and "Cisco Service Link" services. Then, execute the scripts "uninstallRequestCenterService.cmd" and "uninstallServiceLinkService.cmd"

Verifying Your Installation

Verify your installation by performing the following tasks:

**Step 1**
Open a browser, and connect to the following URL: http://<hostname>:<port>/RequestCenter where <hostname> = The fully qualified domain hostname of the computer where you installed the JBoss server for Request Center.

[port] =The HTTP Port number assigned to the JBoss server for Request Center. The default value for HTTP Port number is 8080.

**Note**
If you are on a Windows operating system, and during the installation you selected the "Configure IIS" option, then the Service Catalog installer automatically configured the tomcat plugin for the IIS web server on your machine to redirect to the JBoss server. Thus, in this case, the URL for Request Center should point to the port number used by the IIS web server instead. For example, if your IIS web server is using port 80, then the URL should be http://<hostname>:80/RequestCenter, or http://<hostname>/RequestCenter since port 80 can be omitted from the URL.

**Step 2**
Log in as the Site Administrator. For a new installation of Service Catalog, the username for the Site Administrator is "admin" and the password is the value you entered on the Service Catalog Administration Configuration panel of the installation wizard.

**Step 3**
Navigate to the Service Link module.

**Step 4**
On the left hand side of the panel, under Service Link Status, verify that the connection has a green status.

You have completed the installation for Cisco Prime Service Catalog on JBoss.
Postinstallation Configuration for WebLogic

When the Service Catalog installation wizard completes, it creates the following WAR files underneath the “<ServicePortal_Install_Dir>\dist” directory:

- RequestCenter.war
- ISEE.war

The Service Catalog installation wizard did not automatically deploy these WAR files on your WebLogic Server. You need to follow the instructions in this section to manually deploy these WAR files. See the Application Server Information Worksheet that you completed earlier to get the parameter values needed during the deployment.

Extracting WAR Files

You must deploy RequestCenter.war and ISEE.war in extracted format. To extract the WAR files:

**Step 1**
Create a subdirectory called applications underneath the “<BEA_HOME>\user_projects\domain\<your_domain>” directory, if it does not already exist. Note that you perform this task on the computer where the WebLogic Administration Server is running.

**Step 2**
Create two subdirectories underneath “applications” as follows:

- RequestCenter
- ServiceLink

**Step 3**
Extract the WAR files (generated by the Service Catalog installation wizard) into the new directories that you just created:

a. Unzip file “<ServicePortal_Install_Dir>\dist\RequestCenter.war” into the “<BEA_HOME>\user_projects\domain\<your_domain>\applications\RequestCenter” directory.

b. Unzip file “<ServicePortal_Install_Dir>\dist\ISEE.war” into the “<BEA_HOME>\user_projects\domain\<your_domain>\applications\ServiceLink” directory.

**Note**
If the RequestCenter or ServiceLink subdirectory under the “<BEA_HOME>\user_projects\domain\<your_domain>\applications” directory is not empty, you must first empty the entire directory before extracting the contents of the new RequestCenter.war or ISEE.war file into it. This is because the unzip utility may only overwrite files with the same names. There may be some “remnants” of old files in your destination directory that may be inadvertently deployed.

Deploying RequestCenter.war

**Step 1**
Log on to the WebLogic Administration Console.

**Step 2**
Start your WebLogic Server (or WebLogic Cluster) if it is not already running.

**Step 3**
If WebLogic was installed in PRODUCTION mode, click Lock & Edit so that you can proceed to make changes. Otherwise, you can skip this step.
Step 4  In the left pane, click Deployments.

Step 5  Click Install.

Step 6  Browse to (or enter the full pathname of) the directory
"<BEA_HOME>\user_projects\domain\<your_domain>\applications." You should see the two
subdirectories called “RequestCenter” and “ServiceLink”.

Step 7  Click the radio button for RequestCenter, then click Next.

Step 8  Choose the Install this deployment as an application option, then click Next.

Step 9  Choose your WebLogic Server (or WebLogic Cluster) as the Target, then click Next.

Step 10  Enter RequestCenter in the Name field. Select the Copy this application onto every target for me
option. Click Next.

Step 11  Choose the No, I will review the configuration later option, then click Finish. The progress indicator
begins. This may take several minutes to complete.

Step 12  Wait until the screen is refreshed to show that the “RequestCenter” application has State=Active and
Health=OK. If your WebLogic Application Server was installed in PRODUCTION mode, then the State
may be set to “Prepared” until you click Activate Changes.

---

**Deploying ISEE.war**

Step 1  Log on to the WebLogic Administration Console.

Step 2  Start your WebLogic Server if it is not already running (if you have a WebLogic Cluster environment,
then start the “Service Link WebLogic Server”. The Service Link application cannot be deployed on a
Cluster).

Step 3  If your WebLogic was installed in PRODUCTION mode, click Lock & Edit so that you can proceed to
make changes. Otherwise, you can skip this step.

Step 4  In the left pane, click Deployments.

Step 5  Click Install.

Step 6  Browse to (or enter the full pathname of) the directory
"<BEA_HOME>\user_projects\domain\<your_domain>\applications." You should see the two
subdirectories called “RequestCenter” and “ServiceLink”.

Step 7  Click the radio button for ServiceLink, then click Next.

Step 8  Choose the Install this deployment as an application option, then click Next.

Step 9  Choose your WebLogic Server as the Target. (If you have a WebLogic Cluster, choose the stand-alone
“Service Link WebLogic Server” as the Target.) Then click Next.

Step 10  Enter ServiceLink in the Name field. Select the Copy this application onto every target for me
option. Click Next.

Step 11  Choose the No, I will review the configuration later option, then click Finish. The progress indicator
begins. This may take several minutes to complete.

Step 12  Wait until the screen is refreshed to show that the “ServiceLink” application has State=Active and
Health=OK. If your WebLogic Application Server was installed in PRODUCTION mode, then the State
may be set to “Prepared” until you click Activate Changes.
Verifying Your Installation

**Step 1**  Test your installation by opening a new browser and connect to the following URL:

http://<AppServer_Host>:<Port>/RequestCenter

where <AppServer_Host> = the host name of your WebLogic Server, and <Port> = the port number used by your WebLogic Server.

For example,

http://m1.cisco.com:8001/RequestCenter

**Step 2**  Log in as the Site Administrator. For a new installation of Service Catalog, the username for the Site Administrator is "admin" and the password is the value you entered on the Service Catalog Administration Configuration panel of the installation wizard.

**Step 3**  Navigate to the Service Link Module.

**Step 4**  On the left hand side of the panel, under Service Link Status, verify that the connection has a green status.

You have completed the installation for Cisco Prime Service Catalog on WebLogic.

Configuring Web Server

At this time, you should configure the plugin for your Web Server to point to your WebLogic Server (or your WebLogic Cluster). The following Web Servers are supported with WebLogic Server:

- Apache 2.4.7
- IIS 7.5

This chapter does not contain instructions on how to configure your Web Server Plugin. Any plugin configurations between your Web Server and WebLogic are not handled by the Service Catalog installer program. There is no Cisco library or binary that needs to be installed or configured on your Web Server installation. You should follow instructions provided by either Oracle (for WebLogic Plugin) or by the vendor of your web server.

This section contains only examples of the settings that you may want to add to your web server configuration file.

The following are examples for the settings for Apache 2.4.7 Web Server. Add the following entries to the end of file `httpd.conf`:

```
LoadModule weblogic_module modules/mod_wl_24.so

<Location /RequestCenter>
  SetHandler weblogic-handler
  PathTrim /
</Location>
```

-and-

```
<IfModule mod_weblogic.c>
  WebLogicHost m1.mydomain.com
  WebLogicPort 8001
</IfModule>
```
Postinstallation Configuration for WebSphere

When the Service Catalog installation wizard completes, it creates the following WAR files underneath the `<ServicePortal_Install_Dir>/dist` directory:

- RequestCenter.war
- ISEE.war

The Service Catalog installation wizard did not automatically deploy the WAR files on your WebSphere Server. You will need to follow the instructions in this section to manually deploy WAR files. See the Application Server Information Worksheet that you completed earlier to get the parameter values needed during the deployment.

Deploying RequestCenter.war

1. Log on to the WebSphere Administration Console.
2. Start your WebSphere Server (or WebSphere Cluster) if it is not already running.
3. Choose Applications > Application Types, and click WebSphere enterprise applications.
4. In the right pane, click Install. The “Path to the new application” panel appears.
5. If your browser is running on the same machine where `<ServicePortal_Install_Dir>` resides, then choose the Local file system option. Otherwise, choose the Remote file system option.
6. Click Browse, and navigate to the “<ServicePortal_Install_Dir>/dist” directory.
7. Choose RequestCenter.war and click OK.
8. Click Next. The “How do you want to install the application?” panel appears.
Step 9 Perform the following tasks on this panel:
   a. Choose the Detailed option.
   b. Expand Choose to generate default bindings and mappings.
   c. Choose the Generate Default Bindings option.
   d. Choose the Use default virtual host name for Web and SIP modules option.
   e. In the Host Name field, enter **ns_host**.

Step 10 If a similar Application Security Warnings panel appears, you can safely ignore it and click **Continue**.
**Figure 1-11 Application Security Warnings**

Specifies the resulting security warnings from an analysis of this application.

```java
//
// Template policy file for enterprise application. Extra permissions can be added if required by the enterprise application. //
// NOTE: Syntax errors in the policy files will cause the enterprise application fail to start. Extreme care should be taken when editing these policy files. It is advised to use // the policytool provided by the JDK for editing the policy files. //</WAS_HOME>/was/jre/bin/policytool>

grant codebase "file:${application}" {
    }
grant codebase "file:${ser}" {
    }
grant codebase "file:${connectComponent}" {
    }
grant codebase "file:${webComponent}" {
    }
grant codebase "file:${dbComponent}" {
    }
```

---

**Step 11**  On the “Step 1: Select installation options” panel, enter RequestCenter in the “Application name” field, overwriting the existing value.

**Step 12**  Click Next. The “Step 2: Map modules to servers” panel appears.
Step 13 Perform the following tasks on this panel:

a. First, choose your WebSphere Server name (or WebSphere Cluster name) in the “Clusters and servers” drop-down list.

b. Next, click the Select All icon in the table header. This will automatically select all of the rows in the table.

c. Next, click Apply next to the “Clusters and servers” drop-down list. This will automatically set the value in the Server column in the table to the selected WebSphere Server name (or WebSphere Cluster name).

Step 14 Click Next.

Step 15 Skip Steps 3–6, and go directly to Step 7 by clicking the Step 7: Map virtual hosts for Web modules link on the left pane.
Figure 1-13  Map Virtual Hosts for Web Modules

Step 16  Choose ns_host in the “Virtual host” drop-down list.
Step 17  Click Next.
Step 18  On the “Step 8: Map context roots for Web modules” panel, enter /RequestCenter in the Context Root field. Then, click Next.
Step 19  On the “Step 9: Summary” panel, click Finish.
Step 20  The installation process for “RequestCenter.war” begins. This process may take a few minutes to complete. Once you see the message “Application RequestCenter installed successfully” appear on the screen, click Save directly to the master configuration.

Figure 1-14  Application Installed Successfully

Step 21  On the Enterprise Applications panel, click the newly created RequestCenter link to open its Configuration panel.
Step 22 Under the Detail Properties section, click the Class loading and update detection link. The “RequestCenter > Class loader” panel appears.

**Figure 1-15 Class Loader**

<table>
<thead>
<tr>
<th>Enterprise Applications &gt; RequestCenter &gt; class loader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use this page to configure the reloading of classes when application files change.</td>
</tr>
<tr>
<td><strong>General Properties</strong></td>
</tr>
<tr>
<td>Class reloading options</td>
</tr>
<tr>
<td>☐ Override class reloading settings for Web and EJB modules</td>
</tr>
<tr>
<td>Rolling interval for updated files</td>
</tr>
<tr>
<td>Class loader order</td>
</tr>
<tr>
<td>☐ Classes loaded with parent class loader first</td>
</tr>
<tr>
<td>☑ Classes loaded with local class loader first (parent last)</td>
</tr>
<tr>
<td>WAR class loader policy</td>
</tr>
<tr>
<td>☐ Class loader for each WAR file in application</td>
</tr>
<tr>
<td>☑ Single class loader for application</td>
</tr>
<tr>
<td>[Apply] [OK] [Reset] [Cancel]</td>
</tr>
</tbody>
</table>

Step 23 Choose the Single class loader for application option.
Step 24 Click OK.
Step 25 Click Save directly to the master configuration.

---

**Deploying ISEE.war**

Step 1 Log on to the WebSphere Administration Console.
Step 2 Choose Applications > Application Types, and click WebSphere enterprise applications.
Step 3 In the right pane, click Install. The “Path to the new application” panel appears.
Step 4 If your browser is running on the same machine where <ServicePortal_Install_Dir> resides, then choose the Local file system option. Otherwise, choose the Remote file system option.
Step 5 Click Browse, and navigate to the <ServicePortal_Install_Dir>/dist directory.
Step 6 Choose ISEE.war, and click OK.
Step 7 Click Next. The “How do you want to install the application?” panel appears.
Figure 1-16 Generate Default Bindings

Preparing for the application installation

How do you want to install the application?
- Fast Path - Prompt only when additional information is required.
- Detailed - Show all installation options and parameters.

☐ Choose to generate default bindings and mappings

- Generate Default Bindings
- Override existing bindings

Specific bindings file [Browse]

- Use default virtual host name for Web and SIP modules

Host name
ns_host

Step 8 Perform the following tasks on this panel:
- Choose the Detailed option.
- Expand Choose to generate default bindings and mappings.
- Choose the Generate Default Bindings option.
- Choose the Use default virtual host name for Web and SIP modules option.
- In the Host Name field, enter ns_host.

Note If you have a WebSphere Cluster environment, then enter sl_host instead of “ns_host” for Host Name, because “ns_host” is mapped to the WebSphere Cluster, and “sl_host” is mapped to the “Service Link WebSphere Server”.

Step 9 Click Next.
Step 10 If you see an Application Security Warnings panel similar to the following, you can safely ignore it and click Continue.
Step 11 On the “Step 1: Select installation options” panel, enter ServiceLink in the “Application name” field, overwriting the existing value.

Step 12 Click Next. The “Step 2: Map modules to servers” panel appears.
Step 13 Perform the following tasks on this panel:

- First, choose your WebSphere Server name in the “Clusters and servers” drop-down list. If you have a WebSphere Cluster environment, then make sure you choose the “Service Link WebSphere Server”.
- Next, click the Select All icon in the table header. This will automatically select all of the rows in the table.
- Next, click Apply next to the “Clusters and servers” drop-down list. This will automatically set the value in the Server column in the table to the selected WebSphere Server name.

Step 14 Click Next.

Step 15 Skip Steps 3–6, and go directly to Step 7 by clicking the Step 7: Map virtual hosts for Web modules link in the left pane.
Step 16  In the “Virtual host” drop-down list, choose ns_host. If you have a WebSphere Cluster environment, choose sl_host instead of “ns_host”.

Step 17  Click Next.

Step 18  On the “Step 8: Map context roots for Web modules” panel, in the Context Root field, enter the value /IntegrationServer. Then, click Next.

Step 19  On the “Step 9: Summary” panel, click Finish.

Step 20  The installation process for “ISEE.war” begins. This process may take a few minutes to complete. Once you see the message “Application ServiceLink installed successfully” appear on the screen, then click Save directly to the master configuration.
Starting Service Catalog Applications

Step 1  Log on to the WebSphere Administration Console.

Step 2  Choose Applications > Application Types, and click WebSphere enterprise applications. In the right pane, you should see two newly created applications named “RequestCenter” and “ServiceLink”.

Step 3  Choose both applications and click Start.

Figure 1-21  Start Enterprise Applications

Verifying Your Installation

Step 1  Test your installation by opening a new browser and connect to the following URL:
http://<AppServer_Host>:<Port>/RequestCenter
where <AppServer_Host> is the host name of the WebSphere Server machine, and <Port> is the WC_defaulthost port number for the WebSphere Server where RequestCenter.war was deployed.

Step 2  Log in as the Site Administrator. For a new installation of Service Catalog, the username for the Site Administrator is "admin" and the password is the value you entered on the Service Catalog Administration Configuration panel of the installation wizard. The My Services home panel appears.

Step 3  Navigate to the Service Link Module drop-down list at the upper right hand corner of the screen, next to the Logout button. The Service Link home panel should appear.

Step 4  On the left hand side of the panel, under Service Link Status, verify that the connection has a green status.

You have completed the installation for Cisco Prime Service Catalog on WebSphere.
Configuring Web Server

You should now configure the plugin for your Web Server to point to your WebSphere Server (or your WebSphere Cluster). The following Web Servers are supported with WebSphere Application Server:

- IBM HTTP Server 7.0
- IIS 7.5
- Apache 2.4.7

This chapter does not contain instructions on how to configure your Web Server Plugin. Any plugin configurations between your Web Server and WebSphere are not handled by the Service Catalog installer program. There is no Cisco library or binary that needs to be installed or configured on your Web Server installation. You should follow instructions provided by either IBM (for WebSphere Plugin) or by the vendor of your Web Server to configure the plugin.

This section describes only examples of the settings that you may want to add to your Web Server configuration file. The following is an example for the settings for IBM HTTP Server v7.0: (Note that all directory names shown below are only examples.)

Add the following entries to the end of file `httpd.conf`:

```plaintext
LoadModule was_ap22_module /opt/IBM/HTTPServer/Plugins/bin/32bits/mod_was_ap22_http.so
WebSpherePluginConfig /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/config/cells/plugin-cfg.xml
```

Regenerating Plugin Config File

After you deployed RequestCenter.war and ISEE.war, you need to regenerate the WebSphere Plugin Configuration file so that it will pick up all of the new application names, port numbers, and virtual host names that you have configured for Service Catalog.

**Step 1**
On the machine where your WebSphere Deployment Manager server is running, navigate to the directory “<WAS_INSTALL_ROOT>/profiles/Dmgr01/bin.”

**Step 2**
Execute the following script:

- (For Windows) `GenPluginCfg.bat`
- (For UNIX or Linux) `/GenPluginCfg.sh`

This will modify file `plugin-cfg.xml`, which is usually located in the “<WAS_INSTALL_ROOT>/profiles/Dmgr01/config/cells” directory. In the example above for IBM HTTP Server v7.0, the parameter `WebSpherePluginConfig` that you added to the end of the `httpd.conf` file references this `plugin-cfg.xml` file. If your IBM HTTP Server is running on a different machine than your WebSphere Deployment Manager, then copy this `plugin-cfg.xml` file to your IBM HTTP Server machine, and set the `WebSpherePluginConfig` parameter to point to the `plugin-cfg.xml` file on your IBM HTTP Server machine.

You must also restart your IBM HTTP Server in order for it to pick up the changes.

Repeat the Steps described in the Verifying Your Installation to verify that your Web Server plugin is configured correctly to point to your WebSphere Application Server. However, this time connect to the URL = http://<WebServer_Host>:<Webserver_Port>/RequestCenter, where `<WebServer_Host>` is the host name of the web server machine, and `<WebServer_Port>` is the port number used by the web server.
Overview

This chapter describes how to install the Reporting software module, and to use the various installer utilities developed by Cisco to install the Cognos software components and integrate them with the Cisco Prime Service Catalog application.

Cognos environment is comprised of an application server and a database server.

- An application server is the computer where you install the IBM Cognos software, and execute the configuration scripts to integrate Cognos with the Cisco Prime Service Catalog application.
- A database server is the computer where the Content Store database resides.

The following sections describe the prerequisites for the Cognos application server and database server.

Intended Audience

This chapter is intended for system administrators and systems integrators responsible for installing and configuring Service Catalog products. This chapter assumes familiarity with the installation and configuration of Cognos and related components.

Cognos Application Server Requirements

Operating Systems

- IBM Cognos software must be installed on a computer that runs Windows Server 2008 R2 (64-bit) operating system.
Cognos Application Server Requirements

- It is recommended but not required that the Cognos application server is a separate computer from the Cisco Prime Service Catalog application. However, if the Cisco Prime Service Catalog application is running on a UNIX or Linux computer, then the Cognos application server must be a separate machine with the Windows operating system.

Memory and Disk Space

- The application server must have at least 4GB RAM and 2.5 GB of free disk space.
- There must be at least 1 GB of free disk space on the drive that contains the %TEMP% directory, if this is different from the drive when you plan to install the Cognos software.

Internet Information Services (IIS)

- The “Web Server (IIS)” role must be installed on the Cognos application server.
- The “World Wide Web Publishing Service” is configured to start up automatically.
- IIS must have a site named “Default Web Site”.
- The following role services must be enabled for IIS:
  - CGI
  - ISAPI Extensions
  - ISAPI Filters

![Select Role Services for Web Server](image)

Internet Explorer

- Microsoft Internet Explorer (IE) version 8, 9, and 10 are supported. Use IE8, IE9, or IE10 browser when accessing the Cognos UI or the “Advanced Reporting” module inside of the Cisco Prime Service Catalog application.
- The following browser settings must be enabled:
- Accept third-party cookies
- JavaScript
- Run ActiveX controls and plug-ins
- Script ActiveX controls marked safe for scripting
- Active scripting
- Allow META REFRESH

**Database Client Connectivity**

The appropriate Database Client Connectivity software must be installed on the Cognos application server, and preconfigured to connect to all three databases: Request Center database, Data Mart database, and Content Store database.

- **For Oracle 11g**: The Oracle Client 11.2.0.1 (32-bit) software is required (note that the 32-bit version of Oracle 11g Client software must be used, even though the Windows Server 2008 R2 operating system is a 64-bit version). The Cognos software installation is not bundled with the necessary JDBC driver to connect to an Oracle database. Thus, if the Content Store database is on Oracle, you must install the Oracle Client software on the Cognos application server. When installing Oracle Client 11.2.0.1, choose the “Runtime” option:

  ![Select Installation Type](image)

- **For Microsoft SQL Server 2008 R2**: The SQL Server 2008 R2 Client Connectivity software is not required. The Cognos installation is already bundled with the necessary JDBC driver to connect to the SQL Server database server.
Other Requirements

- You must log in as a user with administrative privileges on the application server to install the Cognos software. This user must also have read and write permission to the %TEMP% directory.
- The following machines must all be set to the same timezone:
  - The Cisco Prime Service Catalog application server
  - The Cognos application server
  - The database server where the following databases reside: Request Center, Data Mart, and Content Store
- A domain name system (DNS) should have been configured for the computer. The Primary DNS suffix of the hostname must be assigned to an appropriate value (for example, mydomain.com) and the hostname should resolve to the fully qualified domain name (for example, “ping myserver” should resolve to myserver.mydomain.com).
- The Service Catalog application server and the Cognos application server must belong in the same domain. For example, if the Service Catalog application server was installed on a computer in the domain called mydomain.com, then the Cognos application server must also belong in the same domain mydomain.com.
- Throughout this installation process, whenever you have to enter a host name or a server name, you must enter it as a fully qualified domain name. For example, do not enter “localhost,” or “cognosserver”; instead, enter “cognosserver.mydomain.com”. When you connect to Service Catalog, you must also enter the fully qualified domain name in the URL, for example, http://servicecatalog.mydomain.com/RequestCenter.
- Throughout this installation process, whenever you open a Command Prompt window to execute any script, make sure you increase the Command History Buffer Size (to something like 999) so that you can view the entire output on the Command Prompt window. Not all output is captured in the installation log file.

Cognos Database Server Requirements

The Reporting module requires access to three databases:

- The Request Center database
- The Data Mart database
- The Content Store database

In addition to the Request Center database, the Reporting module requires two more databases, Data Mart and Content Store. The next section describes how to create the Data Mart and Content Store database on either Oracle 11g or SQL Server 2008 R2.

The Data Mart and Content Store database must be on the same type and version of RDBMS as the Request Center database. For example, if the Request Center database is on Oracle 11g, then the Data Mart and Content Store databases must also be created on Oracle 11g. If the Request Center database is on SQL Server 2008 R2, then the Data Mart and Content Store databases must also be created on SQL Server 2008 R2.

The database server must be configured to support TCP/IP protocol for client connectivity, and must be accessible from the Cognos application server.
The database administrator must back up the Data Mart and Content Store database regularly because they contain all of the Cognos data, including custom reports and views as well as saved reports. To ensure the security and integrity of the databases, it is also important to protect the databases from unauthorized or inappropriate access.

Creating Data Mart and Content Store Databases for Oracle

For a new installation, you can prepare the tablespaces and users for the Data Mart and Content Store databases manually as described in this section before executing the Reporting installer, or you can let the Reporting installer create the database users on the default tablespaces for you by selecting the "Create Database" option presented by the installation wizard. The "Create Database" option of the Reporting installer is described in more detail in the "Installing Reporting" section.

To create tablespace and users for the Data Mart and Content Store database:

**Step 1** The Oracle database must be configured to use a Unicode character set (that is, either UTF-8 or UTF-16). To determine if the database character set is Unicode, execute the following SQL command:

```sql
SELECT VALUE FROM NLS_DATABASE_PARAMETERS WHERE PARAMETER='NLS_CHARACTERSET';
```

If the returned value for the NLS_CHARACTERSET parameter is either AL32UTF8 or AL16UTF16, then your Oracle database supports Unicode. Otherwise, you need to create a new Oracle database, and specify the character set to be either AL32UTF8 or AL16UTF16 at creation time.

**Step 2** The ORACLE parameter CURSOR_SHARING must be set to EXACT. Execute the following command to find out what value the parameter CURSOR_SHARING is set to:

```sql
SHOW PARAMETER CURSOR_SHARING;
```

**Step 3** If CURSOR_SHARING is not set to EXACT, you can use the following command to change it:

```sql
ALTER SYSTEM SET CURSOR_SHARING=EXACT SCOPE=BOTH SID='*';
```

**Step 4** Create a new tablespace named DATAMART, with initial size of 500 MB and AUTOEXTEND ON.

**Step 5** Create a new temporary tablespace named DATAMART_TEMP, with initial size of 30 MB and AUTOEXTEND ON.

**Step 6** Create a database user named DMUser, with default tablespace set to DATAMART and temporary tablespace set to DATAMART_TEMP. DMUser should be granted QUOTA UNLIMITED on the DATAMART tablespace. DMUser will be the owner of the Data Mart schema.

**Step 7** Grant the following permissions to DMUser:

```sql
GRANT
    CREATE SESSION,
    CREATE TABLE,
    CREATE PROCEDURE,
    CREATE SEQUENCE,
    CREATE TRIGGER,
    CREATE VIEW,
    CREATE MATERIALIZED VIEW,
    CREATE SYNONYM,
    ALTER SESSION
TO DMUser;
```
Cognos Database Server Requirements

Chapter 2      Reporting Guide

Step 8        Create another database user named CSUser, with default tablespace set to DATAMART and temporary tablespace set to DATAMART_TEMP. CSUser should be granted QUOTA UNLIMITED on the DATAMART tablespace. CSUser will be the owner of the Content Store schema.

Step 9        Grant the following permissions to CSUser:

```sql
GRANT
CREATE SESSION,
CREATE TABLE,
CREATE PROCEDURE,
CREATE SEQUENCE,
CREATE TRIGGER,
CREATE VIEW
TO CSUser;
```

Creating Data Mart and Content Store Databases for MS SQL Server 2008 R2

For new installation, you can prepare the Data Mart and Content Store databases and login users as described in this section before executing the Reporting installer, or you can let the Reporting installer create the databases and login users for you by selecting the "Create Database" option presented by the installation wizard. The "Create Database" option of the Reporting installer is described in more detail in the "Installing Reporting" section.

To create the Data Mart and Content Store databases and login users:

Step 1        SQL Server can be installed as Default Instance or a Named Instance.

Step 2        SQL Server must be configured with mixed-mode authentication (that is, allows both SQL Server authentication and Windows authentication).

Step 3        Create two separate databases called "Datamart" and "ContentStore", each with initial size of 500 MB and autogrowth by 10 percent. The collating sequence of each database must be case-insensitive.

Step 4        Create two separate database login accounts named "DMUser" and "CSUser".

---

Note        DMUser and CSUser must be SQL Server login accounts that authenticate to the SQL Server using SQL Server authentication method, and not Windows authentication method.

Step 5        Assign the database user account "DMUser" as the db_owner of the "Datamart" database. Verify your settings to ensure that a) the user "DMUser" in the Data Mart database is mapped to the login account "DMUser" in the SQL Server, b) the default schema is "dbo", and c) the user "DMUser" has the "db_owner" database role membership.

Step 6        Assign the database user account "CSUser" as the db_owner of the "ContentStore" database. Verify your settings to ensure that a) the user "CSUser" in the Content Store database is mapped to the login account "CSUser" in the SQL Server, b) the default schema is "dbo", and c) the user "CSUser" has the "db_owner" database role membership.
Sizing the Content Store Database

The size of the Content Store database depends on a number of factors:

- Number of concurrent users
- Number of saved reports (plus number of pages/rows/images per report)
- Number of saved report views (plus number of pages/rows per report)
- Format of the reports (PDF, HTML, and so on)

The following guidelines, adapted from an article published in the Cognos Knowledge Base, may help you estimate database sizing requirement, based on usage estimates from the above parameters.

Content Store sizing is a function of:

- System space: transaction logs; Cognos estimates 3,000,000 KB for a database with 250 active users.
- Temporary space: required to generate reports; estimate 100,000 KB per concurrent user.
- Data space: required to hold reports and views saved by users; user folders; and the Framework Manager models on which the reports are based.
- The total number of saved reports and views is a major factor in terms of Content Store sizing, and the most difficult to predict. This can be partially controlled by Cognos Administrators limiting the number of versions of a report that can be saved by each user.
- The size of each saved report is based on the number of report pages. Factors that may influence the average size of a report include number of pages; formatting and text selection; and the inclusion of images. Cognos estimates that following requirements for saved objects which users may create.
- Cognos also estimates the number of each of these saved objects that a “typical” user is likely to maintain. Multiplying these numbers by the storage requirements for each object yields an estimate for volume- (user-)dependent storage requirements for data space within the Content Store.

<table>
<thead>
<tr>
<th>Object</th>
<th>Storage Requirements (Estimate)</th>
<th># Per User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saved Report, PDF format, 1–10 pages</td>
<td>340 KB</td>
<td>2</td>
</tr>
<tr>
<td>Saved Report, PDF format, 10–100 pages</td>
<td>440 KB</td>
<td>9</td>
</tr>
<tr>
<td>Saved View, 1–100 rows</td>
<td>250 KB</td>
<td>3</td>
</tr>
<tr>
<td>Saved View, 100–1000 rows</td>
<td>350 KB</td>
<td>8</td>
</tr>
<tr>
<td>Schedule (daily or weekly)</td>
<td>30 KB</td>
<td>2</td>
</tr>
</tbody>
</table>

- You need only multiply these requirements by the number of Cognos users to estimate this most volatile aspect of disk usage.

Installing Cognos Software

This section describes how to install Cognos 10.2.1.

**Note**

You must log in as a user with administrative privileges to perform the installation tasks described in this section.
Installing Cognos Business Intelligence Server

Step 1  (Assuming that you extracted the Cognos BI software under the C:\cognos_bi_software directory) Open the folder C:\cognos_bi_software\winx64h.

Step 2  Double-click isssetup.exe to launch the Cognos Setup program.

Step 3  Walk through the installation wizard by choosing all default values presented on the screen, until you get to the Component Selection screen.

Step 4  Choose only the following components:
   • Application Tier Components
   • Gateway
   • Content Manager

Step 5  Click Next and proceed with the rest of the installation wizard, until you get to the Finish screen.

Step 6  Uncheck the “Start IBM Cognos Configuration” option, and then click Finish.
Installing Cognos Data Manager

Step 1 Go to C:\cognos_dm_software\winx64h directory (assuming that the Cognos Data Manager software is extracted to this location).

Step 2 Double-click isetup.exe to launch the Cognos Setup program.

Step 3 Walk through the installation wizard by choosing all default values presented on the screen, until you get to the Installation Location screen.

Step 4 Enter the same folder name where you have installed the Cognos Business Intelligence Server (for example, C:\Program Files\cognos\c10_64). Then click Next.

Step 5 If you see the message “Warning: You are installing to the same location as a previous installation. Do you want to continue?”, click Yes to proceed.

Step 6 If the following message appears, click No to proceed:

Figure 2-3 Installation Location Warning Message

Step 7 When the Component Selection screen appears, choose only the following component, and deselect all other components:
- Data Manager Engine

Step 8 Click Next and proceed with the rest of the installation wizard, until you get to the Finish screen.

Step 9 Uncheck the “Start IBM Cognos Configuration” option, and then click Finish.

Installing Cognos Fix Pack

Step 1 Assuming that you extracted the Cognos software under the C:\cognos_fixpack folder, go to the folder "C:\cognos_fixpack\winx64h".

Step 2 Double-click isetup.exe to launch the Cognos Setup program.

Step 3 Walk through the installation wizard by choosing all default values, until you get to the Installation Location screen.

Step 4 Enter the same folder name where you have installed the Cognos Business Intelligence Server (for example, C:\Program Files\cognos\c10_64). Click Next.

Step 5 If the following message appears, click No to proceed:
Installing Reporting

This section describes how to install and configure Cisco Prime Service Catalog Reporting.

Note
You must log in as a user with administrative privileges to perform the installation tasks described in this section.

Executing Reporting Setup

Reporting is installed by running a setup program which installs and launches an installation wizard.

To execute the setup program:

Step 1
On the Cognos machine, set or modify the JAVA_HOME environment variable to 
"<COGNOS_HOME>\bin64\jre\7.0", where <COGNOS_HOME> is the installation directory for
Cognos (i.e. C:\Program Files\cognos\c10_64). Then, add "%JAVA_HOME%\bin" to the beginning of
the PATH environment variable. This will ensure that the java executable under
<COGNOS_HOME>\bin64\jre\7.0\bin will be used.

Step 2
Extract the Cisco Prime Service Catalog software that you downloaded from the Cisco web site to your
computer, if you have not already done so.

Step 3
Double-click reporting_setup.cmd to launch the installation wizard.

A progress bar appears, when complete, the first page of the installation wizard appears.

How to Use the Installation Wizard

The installation configuration options are case-sensitive, so ensure that you enter a value, such as a
database name or a JMS queue name, with case sensitivity; otherwise, your installation may fail.
Running the Reporting Installation Wizard

This section provides instructions for running the Reporting installation wizard.

**Step 1** Stop the IIS web server.

**Step 2** Launch the installation wizard (see Executing Reporting Setup).

**Step 3** On the first page of the installation wizard, click Next to begin.

**Step 4** On the Choose Install Folder panel, enter a destination folder for the installation and click Next.

The default destination folder is “C:\CiscoPrimeServiceCatalog”. If desired, enter a different destination folder, or click Choose to locate and select another folder (or create a new one). The path name for the destination folder must not contain any spaces. Throughout this document, this destination folder is referred to as `<Reporting_Install_Dir>`.

**Step 5** Enter the Cognos root directory. This is where you installed the Cognos 10.2.1 software. The default Cognos root directory is "C:\Program Files\ibm\cognos\c10_64". If needed, enter a different root directory, or click Browse to locate and choose the directory. Click Next.

**Step 6** In the Database Selection panel, choose the database platform (Microsoft SQL Server or Oracle) and click Next.

Refer to your Database Information Worksheet that you filled out earlier to determine your database platform.

**Step 7** In the Request Center Database panel, enter your Request Center database configuration values. For more information on updating the values on the Request Center Database panel, see Request Center Database Table for Reporting. Use your Database Information Worksheet that you filled out earlier to help you determine what configuration values to enter.

<table>
<thead>
<tr>
<th>Field</th>
<th>SQL Server</th>
<th>Oracle Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostname</td>
<td>Enter the Hostname or IP address of the server where the Request Center database resides.</td>
<td>Enter the Hostname or IP address of the server where the Request Center database resides.</td>
</tr>
<tr>
<td>Port</td>
<td>Enter the TCP/IP Port Number used by your Database Server. Valid port numbers are from 1 to 65535. The default value is 1433.</td>
<td>Enter the TCP/IP Port Number used by the Database Server. The default value is 1521.</td>
</tr>
<tr>
<td>Database Name</td>
<td>Enter the name of the RequestCenter database. By default, the value is “RequestCenter”. Enter only alphanumeric characters. Do not use any space characters.</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
Chapter 2      Reporting Guide

Installing Reporting

Step 8  Click **Next** to proceed to the next page of the wizard.

The installer performs a connection test to your Request Center database using the configuration values you entered and checks that the prerequisites for your database platform have been fulfilled.

If the database connection test fails, a "Database Test Connection Failed" dialog box message appears. If you get this message, click **OK** to close the dialog box, and make any necessary modifications to the information on the Request Center Database panel. If you want to abort the installation wizard at this point, click **Cancel**.

If the database connection test passes, the Data Mart Database Creation panel appears.

Step 9  In the Data Mart Database Creation panel:

- If you have already created your database, then select **No** here and click **Next** to continue. You will be prompted for the information of your existing database. Refer to the Table 2-1 Request Center Database Table for Reporting to enter the database information.

- If you have not created the database in advance, select **Yes** to let the installer create the database for you and click **Next**. You will be prompted for the connection information to your database server so that the installer can create the database on the fly. Enter the database information on the Data Mart Database Creation panel and click **Create Datamart**.

If the database creation is successful, the Data Mart database successful message dialog appears. Click **OK** to close the message dialog box. Refer to the Table 2-1 Request Center Database Table for Reporting below to enter the database information.

<table>
<thead>
<tr>
<th>Field</th>
<th>SQL Server</th>
<th>Oracle Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database SID or Database</td>
<td>Not Applicable</td>
<td>If you use SID to connect to your Oracle database, then select the SID radio</td>
</tr>
<tr>
<td>Service Name</td>
<td></td>
<td>button, and enter the Oracle SID value. If you use Service Name to connect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to your Oracle database, then select the Service Name radio button, and enter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the Service Name value.</td>
</tr>
<tr>
<td>Username</td>
<td>Enter the</td>
<td>Enter the database username. Enter only alphanumeric characters. Do not</td>
</tr>
<tr>
<td></td>
<td>database username.</td>
<td>include any space characters. This username is the login ID and the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>db_owner of the &quot;RequestCenter&quot; database. The default value is &quot;RCUser&quot;.</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the</td>
<td>Enter the password for the Database Username.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enter only alphanumeric characters. Do not include any space characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This username is the login ID and schema name for the database schema. The</td>
</tr>
<tr>
<td></td>
<td></td>
<td>default value is &quot;RCUSER&quot;.</td>
</tr>
</tbody>
</table>

Table 2-1  Request Center Database Table for Reporting
Note This "Create Datamart" feature will create a very basic Data Mart database that meets the minimum requirements for the Service Catalog Reporting module to operate. This feature is recommended for a Demo or Test system, but for a Production system, it is advisable that you work with your DBA to create the Data Mart database in advance which meets all of the product requirements as described in the Configuring Databases section, as well as any performance, reliability and security requirements that adhere to your corporate policy.

- If you are performing an upgrade installation, then select No and click Next. You will be prompted to enter the information of your existing Data Mart database. Refer to the Data Mart Database Table for Reporting to enter the database information. Refer to Chapter 3, “Upgrade Guide” for more detailed information.

Note The fields in the Data Mart Database panel varies depending on whether you clicked Yes or No in the Data Mart Database Creation panel. Use the Data Mart Database Table for Reporting accordingly.

### Table 2-2 Data Mart Database Table for Reporting

<table>
<thead>
<tr>
<th>Field</th>
<th>SQL Server</th>
<th>Oracle Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostname</td>
<td>Enter the Hostname or IP address of the Database Server.</td>
<td>Enter the Hostname or IP address of the Database Server.</td>
</tr>
<tr>
<td>Port</td>
<td>Enter the TCP/IP Port Number used by the Database Server. The default value is 1433.</td>
<td>Enter the TCP/IP Port Number used by the Database Server. The default value is 1521.</td>
</tr>
<tr>
<td>Database name</td>
<td>Enter the name of the database for the Data Mart. Enter only alphanumeric characters. Do not include any space characters. The default value is &quot;Datamart&quot;</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>sa password</td>
<td>To create the database in SQL Server, the installer must connect to SQL Server as the &quot;sa&quot; user. Enter the password for the &quot;sa&quot; user here.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>sys password</td>
<td>Not Applicable</td>
<td>Enter the password for the “sys” user.</td>
</tr>
<tr>
<td>Database SID or Database Service Name</td>
<td>Not Applicable</td>
<td>If you use SID to connect to your Oracle database, then select the SID radio button, and enter the Oracle SID value. If you use Service Name to connect to your Oracle database, then select the Service Name radio button, and enter the Service Name value.</td>
</tr>
</tbody>
</table>
Installing Reporting

Step 10
In the Data Mart Database panel, click the Next button to continue. The installer will connect to the database to validate the required settings for the database. If the installer created the database for you, then it would meet all of the required settings, and the validation test would pass. If you provided the information for an existing database, then the installer may report a validation error if it detects that a certain required database setting is missing. If a database validation error occurs, the installer will not allow you to move on. You can do one of the following:

a. Close the error dialog and click Cancel to exit the installation wizard, or

b. Fix the missing database setting on a separate database connection session. Then come back to this screen, close the error dialog, and click Next again. At this point, the installer will repeat the validation test, and if the test passes, it will let you move to the next page.

If the database validation passes, the Content Store Database Creation panel appears.

Step 11
For a new installation, you can prepare the database in advance as described in the Cognos Database Server Requirements section.

- If you have already created your database, then select No and click Next to continue. You will be prompted for the information of your existing database.

Refer to the Content Store Database Table for Reporting below to enter the database information. Click Next.
If you have not created the database in advance, select Yes to let the installer create the database for you and click Next. You will be prompted for the connection information to your database server so that the installer can create the database on the fly. Enter the database information on the Content Store Database Creation panel and click Create Content Store. If the database creation is successful, the Content Store Database successful message dialog will appear.

The Create Database feature will create a very basic Content Store database that meets the minimum requirements for the Service Catalog Reporting module to proceed. This feature is recommended for a Demo or Test system, but for a Production system, it is advisable that you work with your DBA to create the Content Store database in advance which meets all of the product requirements as described in the Cognos Database Server Requirements section, as well as any performance, reliability and security requirements that adhere to your corporate policy.

If you are performing an upgrade installation, then select No and click Next. You will be prompted to enter the information of your existing Content Store database. Refer to Chapter 3, “Upgrade Guide” for more detailed information.

Refer to the Content Store Database Table for Reporting below to enter the database information. Click Next.

The fields in the Content Store Database panel varies depending on whether you clicked Yes or No in the Content Store Database Creation panel. Use the Content Store Database Table for Reporting accordingly.

### Table 2-3 Content Store Database Table for Reporting

<table>
<thead>
<tr>
<th>Field</th>
<th>SQL Server</th>
<th>Oracle Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostname</td>
<td>Enter the Hostname or IP address of the Database Server.</td>
<td>Enter the Hostname or IP address of the Database Server.</td>
</tr>
<tr>
<td>Port</td>
<td>Enter the TCP/IP Port Number used by the Database Server. The default value is 1433.</td>
<td>Enter the TCP/IP Port Number used by the Database Server. The default value is 1521.</td>
</tr>
<tr>
<td>Database name</td>
<td>Enter the name of the database for the Content Store. Enter only alphanumeric characters. Do not include any space characters. The default value is &quot;ContentStore&quot;</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>sa password</td>
<td>To create the database in SQL Server, the installer must connect to SQL Server as the &quot;sa&quot; user. Enter the password for the &quot;sa&quot; user here.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Database SID or Database Service Name</td>
<td>Not Applicable</td>
<td>If you use SID to connect to your Oracle database, then select the SID radio button, and enter the Oracle SID value. If you use Service Name to connect to your Oracle database, then select the Service Name radio button, and enter the Service Name value.</td>
</tr>
</tbody>
</table>
Installing Reporting

Step 12  Click the **Next** button on the Content Store Database panel to continue. The installer will connect to the database to validate the required settings for the database. If the installer created the database for you, then it would meet all of the required settings, and the validation test would pass. If you provided the information for an existing database, then the installer may report a validation error if it detects that certain required database setting is missing. If a database validation error occurs, the installer will not allow you to move on. You can do one of the following:

a.  Close the error dialog and click **Cancel** to exit the installation wizard, or

b.  Fix the missing database setting on a separate database connection session. Then come back to this screen, close the error dialog, and click **Next** again. At this point, the installer will repeat the validation test, and if the test passes, it will let you move to the next page.

If the database validation passes, the Content Store Root Directory page appears.

Step 13  Click **Next** to proceed. The Cognos Settings page appears.

---

**Table 2-3 Content Store Database Table for Reporting**

<table>
<thead>
<tr>
<th>Field</th>
<th>SQL Server</th>
<th>Oracle Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username</td>
<td>Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username will be the login ID and the db_owner of the &quot;ContentStore&quot; database. The default value is &quot;CSUser&quot;.</td>
<td>Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username will be the login ID and schema name for the database schema.</td>
</tr>
<tr>
<td>Password</td>
<td>Enter the password for the Database Username.</td>
<td>Enter the password for the Database Username.</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>Re enter the password for the Database Username.</td>
<td>Re enter the password for the Database Username.</td>
</tr>
<tr>
<td>User tablespace</td>
<td>Not Applicable</td>
<td><em>(Optional value)</em> If you have a specific Oracle tablespace name, enter it here. The default tablespace for the schema will be set to this value. If you leave this value blank, then the installer will use whatever the default USER tablespace that the Oracle server provides.</td>
</tr>
<tr>
<td>Temp tablespace</td>
<td>Not Applicable</td>
<td><em>(Optional value)</em> If you have a specific Oracle temp tablespace name, enter it here. The temp tablespace for the schema will be set to this value. If you leave this value blank, then the installer will use whatever the default TEMP tablespace that the Oracle server provides.</td>
</tr>
</tbody>
</table>
Step 14 Enter the following information for Cognos server.

- Cognos Server Name: Enter the fully qualified domain hostname (not IP address) of the computer where the Cognos software is installed.
- Configure IIS?: Do not deselect this option. The installer will automatically configure the Cognos application on the IIS web server on this computer.
- IIS Web Site: Do not change the default value of "Default Web Site".

Step 15 Click the Advanced Options button. The Advanced Options dialog box appears.

Specify if you want to execute the database scripts as part of the installation by selecting the Execute SQL Scripts checkbox. This checkbox is selected by default.

You should deselect this setting only in exceptional circumstances such as:

- If a separate review of the scripts by internal personnel is required before they execute. In this case, you will need to step through this wizard again, this time selecting the checkbox, in order to execute the scripts and complete the installation.
- A previous installation attempt successfully executed these scripts but failed later during the installation process. In this case, you can save time during the installation process the second time through by deselecting the checkbox, since execution of the scripts takes some time and if they have already executed, there is no need to do so again.

Step 16 Click Next to proceed.

The Form Data Reporting panel appears.

Step 17 Enter your Form Data Reporting Tables settings as described in Form Data Reporting Tables. Should you decide that you need to modify some of these settings after the installation, there is a utility for you to do so. See the Modifying Form Data Reporting Configuration for more information.

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dictionary table prefix</td>
<td>The prefix for the names of the Dictionary Tables. Default value is &quot;DM_FDR_DICTIONARY_.&quot; It is recommended to go with this prefix. If you must change the prefix, use only alphabetic characters and the underscore character. Do not use any numeric or special characters.</td>
</tr>
<tr>
<td>Service table prefix</td>
<td>The prefix for the names of the Service Tables. Default value is &quot;DM_FDR_SERVICE_.&quot; It is recommended to go with this prefix. If you must change the prefix, use only alphabetic characters and the underscore character. Do not use any numeric or special characters.</td>
</tr>
<tr>
<td>Table columns prefix</td>
<td>The prefix for the field names in each table. Default value is &quot;FIELD.&quot; It is recommended to use the default value unless there is absolute necessity to change it. This name is used to create tables with field name like FIELD1, FIELD2, ..., FIELDn.</td>
</tr>
<tr>
<td>Text column max length</td>
<td>This parameter indicates the maximum size of dictionary and service table object varchar field size. The default value is 200.</td>
</tr>
</tbody>
</table>

Step 18 Click Next to proceed. The Form Data Reporting Dictionary Settings panel appears.
Installing Reporting

Step 19 Enter Form Data Reporting Dictionary Settings as described in Form Data Reporting Dictionary Settings Table.

Table 2-5 Form Data Reporting Dictionary Settings Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dictionary tables</td>
<td>Number of tables required in the Data Mart database to store the data for reportable dictionaries. One table is needed per reportable dictionary. The default value is 50, which is also the minimum value allowed.</td>
</tr>
<tr>
<td>Text Fields</td>
<td>Number of Text type fields that are used in dictionaries based on the customer form reporting analysis. The default value is 40.</td>
</tr>
<tr>
<td>Numeric fields</td>
<td>Number of Numeric fields that are used in dictionaries based on the customer form reporting analysis. The default value is 10.</td>
</tr>
<tr>
<td>Date fields</td>
<td>Number of Date fields that are used in dictionaries based on the customer form reporting analysis. The default value is 10.</td>
</tr>
</tbody>
</table>

Step 20 Click Next to proceed. The Form Data Reporting Service Settings page appears.

Step 21 Enter your Form Data Reporting Service Settings as described in Form Data Reporting Service Settings Table.

Table 2-6 Form Data Reporting Service Settings Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service tables</td>
<td>Number of tables required in the Data Mart database to store the data for reportable dictionaries. One table is needed per reportable dictionary. The default value is 50, which is also the minimum value allowed.</td>
</tr>
<tr>
<td>Text Fields</td>
<td>Number of Text type fields that are used in dictionaries based on the customer form reporting analysis. The default value is 80.</td>
</tr>
<tr>
<td>Numeric fields</td>
<td>Number of Numeric fields that are used in dictionaries based on the customer form reporting analysis. The default value is 20.</td>
</tr>
<tr>
<td>Date fields</td>
<td>Number of Date fields that are used in dictionaries based on the customer form reporting analysis. The default value is 20.</td>
</tr>
</tbody>
</table>

Step 22 Click Next. The SMTP Settings panel appears.

Step 23 Enter your SMTP settings as described in SMTP Settings Table.

Table 2-7 SMTP Settings Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service tables</td>
<td>Number of tables required in the Data Mart database to store the data for reportable dictionaries. One table is needed per reportable dictionary. The default value is 50, which is also the minimum value allowed.</td>
</tr>
<tr>
<td>Text Fields</td>
<td>Number of Text type fields that are used in dictionaries based on the customer form reporting analysis. The default value is 80.</td>
</tr>
</tbody>
</table>
Step 24  (Optional) Click the "Test SMTP" button to verify the connection to the SMTP server. If the test connection fails, the installer will still let you move on to the next page.

Step 25  Click Next to proceed. The Pre-Installation Summary panel appears.

The installation wizard has enough information to start the installation process. Review the settings that appear on this panel. If you need to make any changes, click Previous to go back to a particular panel and make the necessary changes. If they are correct, click Install to begin the installation of Reporting.

The installation process may take up to 20 minutes to complete. Do not interrupt the installation wizard during this process. If the installation process completes successfully, the Install Complete panel of the installation wizard appears.

Step 26  Click Done to exit the installation wizard.

### Executing create_datasource.cmd

**Step 1**  Open a Command Prompt window, and navigate to the `<Reporting_Install_Dir>\cognos\bin` directory.

**Step 2**  Execute `create_datasource.cmd`.

**Step 3**  After `create_datasource.cmd` completes successfully, open a browser on the Cognos machine, and connect to the URL `http://localhost/cognos10`.

**Step 4**  Enter the User ID and Password of the Service Catalog Site Administrator user, then click OK to log in.

**Step 5**  In the UI, click the My home link.

**Step 6**  In the top right corner of the UI, click the Launch link, and click the IBM Cognos Administration drop-down menu.

**Step 7**  Click the Configuration tab.

**Step 8**  In the left pane, click the Data Source Connections link.

**Step 9**  In the right pane, click on "RequestCenter".

**Step 10**  Skip this step if your database is SQL Server. If your database is Oracle, you must perform the steps a to f described below to modify the JDBC connection parameters.

   a. Click the "Set properties - RequestCenter" icon under the Actions column as shown below:
b. Click the Connection tab, and click the "Edit connection string" icon, which appears next to Connection string text box.

c. Under the OCI tab, copy the value in the "SQL*Net connect string" text box.

d. Open the JDBC tab, then select the Thin radio button for Driver type, paste the connection string copied in the above step to the "Oracle Net Descriptor" text box as shown below:

Figure 2-6  Driver Type Selection Window

```
 isSelected = true
(DESCRIPTION=(ADDRESS = (PROTOCOL = TCP)(HOST = vmpvdvb1-wz38.cisco.com)(PORT = 1521))((CONNECT_DATA = (SERVER = FORCEREDirect)(keyword = ALL)(SERVICE_NAME = wmpcor)))
```

```
32588
```

e. Click the OK button to save the changes.

f. Click OK button again to close the "Set properties - RequestCenter" page.

**Step 11**  Perform this step for both SQL Server and Oracle. Click the "Test the connection" icon under the Actions column for RequestCenter.

**Figure 2-7  Test the Connection Window**

```
Test Connection Icon
```

**Step 12**  On the next page, click the Test button.
Step 13  Verify that the status show “Succeeded” for both JDBC entries on the screen. You can now proceed to the next section.

Importing Service Catalog Reports

Perform the following tasks to configure and import the Service Catalog Standard Reports Archive to the Cognos environment.

Step 1  Open a Command Prompt window and navigate to the `<Reporting_Install_Dir>\cognos\bin` directory.

Step 2  Execute `import_reports.cmd`.

Step 3  Execute `update_datamart_std.cmd`.

Note  This script may take several minutes to complete.

Restart the Service Catalog Application

Step 1  **Restart the Service Catalog application.** This will allow the Service Catalog application server to pick up the new configuration which enables it to integrate with the Cognos application server. Restart the entire application server where the Request Center application is running.

Step 2  Once the application server is started, connect to the URL using the Fully Qualified Domain hostname (for example, http://myservicecatalog.cisco.com/RequestCenter). Log in as the Site Administrator user.

Step 3  Choose the **Reporting** module.

Step 4  Click the **Reports** tab.

Step 5  Verify that the Public Folders tab appears with a folder named “Service Performance Reports”. This is a good indication that the Reporting module of Service Catalog is integrated successfully with the Cognos application server.

**Figure 2-8  The Report Tab**

Step 6  Proceed to “Configuring Advanced Reporting”.

Installing Reporting

Configuring Advanced Reporting

Execute the following scripts to set up the Advanced Reporting components. If you do not want Advanced Reporting, skip to the Postinstallation Tasks.

**Step 1** On the Cognos machine, open a Command Prompt window, and navigate to the `<Reporting_Install_Dir>cognos\bin` directory.

**Step 2** Execute `update_datamart.cmd`. This script may take several minutes to complete.

**Step 3** Execute `create_model.cmd`.

**Step 4** Execute `publish_fdr_pkg.cmd`. This script may take several minutes to complete.

**Step 5** Log out of the Service Catalog UI, then log back in as Site Administrator user. Remember that you must enter the Fully Qualified Domain hostname on the URL, for example, `http://myservicecatalog.cisco.com/RequestCenter`.

**Step 6** Choose the **Advanced Reporting** module.

**Step 7** Click the **Ad-Hoc Reports** tab.

**Step 8** Click the **Custom Report Data Models** link.

**Step 9** If you see the Query Studio window, then it is a good indication that the Advanced Reporting module of Service Catalog is integrated successfully with the Cognos application server.

![Query Studio Window](image)

**Figure 2-9** Query Studio Window

Postinstallation Tasks

The postinstallation tasks consist of scheduling the ETL processes to be run. The amount of time each process takes to complete is proportional to the amount of data in the Request Center database which must be extracted and transmitted to the Data Mart database.
Postinstallation Tasks for Reporting

Set up the following script as scheduled tasks on the Cognos machine. All scripts reside in the 
<Reporting_Install_Dir>cognos\bin directory.

<table>
<thead>
<tr>
<th>Standard Report Script</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>update_datamart_std.cmd</td>
<td>This script extracts the data from the Request Center database and transmits it to the Data Mart database. This data is used to refresh the Service Catalog Standard Reports. This script can be scheduled to run however often you want Standard Reports to be refreshed. Normally, this script can be scheduled to run once a day, at off-peak hours.</td>
</tr>
</tbody>
</table>

Postinstallation Tasks for Advanced Reporting

If you have Advanced Reporting, then you must also perform the tasks described in this section.

**Step 1**

On the Cognos machine, set up the following scripts as scheduled tasks. All scripts reside in the 
<Reporting_Install_Dir>cognos\bin directory.

<table>
<thead>
<tr>
<th>Advanced Report Scripts</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>update_datamart.cmd</td>
<td>This script updates fact tables and dimensions in the Data Mart database.</td>
</tr>
<tr>
<td>create_model.cmd</td>
<td>This script creates the framework model used by the Cognos reporting tools (Query Studio and Report Studio).</td>
</tr>
<tr>
<td>publish_fdr_pkg.cmd</td>
<td>This script publishes the Cognos framework for the Request Center module of Service Catalog.</td>
</tr>
</tbody>
</table>

**Note**

We recommend scheduling the advanced report scripts in the table above to run once daily during off-peak hours. The data in the Data Mart database are available during this time, however performance may be adversely affected.

Allow 40 minutes per 10,000 new or changed requisitions between update_datamart.cmd and create_model.cmd. Allow 30 minutes per 10,000 new or changed requisitions between create_model.cmd and publish_fdr_pkg.cmd.

The scripts must be run without overlapping. If the scripts overlap, you may encounter data inconsistency.
Upgrade Guide

- Overview, page 3-1
- Upgrading Service Catalog, page 3-1
- Upgrading Reporting, page 3-16

Overview

This chapter describes how to perform an upgrade from a previous release of Cisco Prime Service Catalog to this release.

Audience

This chapter is for technical administrators possessing the following skills:
- Advanced RDBMS knowledge and expertise
- Familiarity with the customized areas of your environment

Upgrading Service Catalog

Overview

Release Upgrade Path

This upgrade process supports direct database component upgrade from Service Catalog Release 9.2 or above to Release 10.0 R2. To bring the database schema to the supported upgrade level, the database installer program for the most recently available service pack, as listed in Table 3-1 below, has to be executed against the database.
Chapter 3      Upgrade Guide

Upgrading Service Catalog

If your existing installation is prior to 9.2, you must first upgrade it to a supported version. In some cases, you may need to perform multiple back-to-back database component upgrades.

Table 3-1  Direct Upgrade Paths

<table>
<thead>
<tr>
<th>From Release Version</th>
<th>To Release Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.2 (limited release)</td>
<td>10.0 R2</td>
</tr>
<tr>
<td>9.3 or 9.3-R2</td>
<td>10.0 R2</td>
</tr>
<tr>
<td>9.3.1</td>
<td>10.0 R2</td>
</tr>
<tr>
<td>9.3.2</td>
<td>10.0 R2</td>
</tr>
<tr>
<td>9.4</td>
<td>10.0 R2</td>
</tr>
<tr>
<td>9.4.1 or 9.4.1-R2</td>
<td>10.0 R2</td>
</tr>
<tr>
<td>10.0</td>
<td>10.0 R2</td>
</tr>
</tbody>
</table>

Table 3-2  Multistep Upgrade Paths

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2008.3 with any SP prior to SP9</td>
<td>2008.3 SP9</td>
<td>9.3</td>
<td>10.0 R2</td>
</tr>
<tr>
<td>9.1 with any SP prior to SP3</td>
<td>9.1 SP3</td>
<td>9.3</td>
<td>10.0 R2</td>
</tr>
</tbody>
</table>

Limitations and Notes

The following section includes product limitation or important notes that should be considered when upgrading to this version.

New Platform Support

Please refer to the Cisco Prime Service Catalog Compatibility Matrix for changes in platform support in this release.

New JDBC Drivers

New JDBC drivers for Oracle and SQL Server are shipped with this release of Prime Service Catalog. If you are using WebLogic or WebSphere application server, you will need to delete the existing REQUESTCENTERDS datasource (which used the DataDirect driver in newscale_drivers.jar), and recreate the REQUESTCENTERDS datasource using the new JDBC driver (either ojdbc6.jar for Oracle or sqljdbc4.jar for SQL Server). More details are described in the II. Preparing the Upgrade Environment section.

Note

If you have any customization that makes use of the newScale unified driver, it has to be replaced with the appropriate JDBC driver based on the database type.
Service Import/Export Not Backwards Compatible

Service Import/Export is not backwards compatible to previous releases. Services exported in prior releases cannot be imported to this release. Please be sure to export any services you maintain in a code repository after the upgrade is complete.

Catalog Deployer Packages Not Backwards Compatible

Due to the change in the XML format in Catalog Deployer in Release 10.0, packages in “Deployed” or “Received for Deployment” status are no longer usable. The content also may not render. For this reason, all packages pending deployment should be processed before upgrading to Release 10.0.

What is Upgraded

The upgrade process outlined in this chapter upgrades Service Catalog software as well as the Request Center database to support new capabilities provided in Service Catalog. These capabilities include more stringent control over data and referential integrity, ensuring enhanced data quality of the Service Catalog database.

What is Not Upgraded

The upgrade process identifies all objects in the existing database that are not recognized as part of the application schema.

- Unrecognized objects are automatically removed from the database, if they interact with any Service Catalog tables. For examples, the following objects (if they exist) will be dropped:
  - An unrecognized index on a Service Catalog table.
  - An unrecognized trigger on a Service Catalog table.
  - An unrecognized constraint on a Service Catalog table.
  - An unrecognized foreign key constraint that points to a Service Catalog table.
- All other types of unrecognized objects that do not interact with Service Catalog tables will only be reported and not dropped. For examples, the following objects (if they exist) are left alone: tables, columns, sequences, stored procedures, functions, and indexes that do not reference Service Catalog tables, constraints that do not affect Service Catalog tables.

Assumptions and Best Practices

- You must create and validate database backups and file system backups before upgrading. This is critical because you can rollback an upgrade only by restoring your databases and file system manually; no rollback function is built into the upgrade program.
- The production site will be down during the upgrade process, so you should schedule the upgrade for maintenance periods.
- You are upgrading from 9.2 or later. See the Release Upgrade Path.
Prerequisites

- A sandbox environment for upgrade.
- Database backups and a well-rehearsed restore process.
- A complete list of all customizations (custom style sheets, JavaScript libraries, LDAP java mapping code, and so on.)
- All databases should meet the requirements as stated in the Configuring Database.

High-Level Upgrade Methodology

Your organization most likely has already developed an upgrade methodology for Service Catalog solutions or has best practices for other enterprise software upgrades. The methodology described in this guide is useful to either follow as an alternate or to augment your established practices for specific new upgrade requirements.

We recommend that you create a sandbox environment where you rehearse a dry run of the upgrade procedures for your existing Service Catalog system. Take notes of any technical issues and resolutions that may arise along the way. This will help you prepare for the actual upgrade of your production system. This dry run exercise will also provide you with an overall timeline of the upgrade process from beginning to end, which can help you plan the appropriate system downtime needed to complete the upgrade of your production system.

Once you can successfully upgrade the system in your sandbox environment and feel comfortable with the process, you can schedule the upgrade of your production system, and repeat the same process by following the instructions in this guide, in conjunction with the technical notes that you prepared during the dry run exercise.

At a high level, the upgrade procedures are as follows:

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Back up the current production databases and restore them onto another set of databases.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note</td>
<td>Since SQL Server 2005 database and Oracle 10g database are no longer supported in this release, you must restore your database backups onto a brand new SQL Server 2008 R2 database or an Oracle 11g database.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Create a sandbox environment that has all the prerequisites for Release 10.0 R2. This is the environment where you will be executing the upgrade program from the Release 10.0 R2 package and needs to be configured to connect to the copy of production databases.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Execute the Service Catalog setup program as described in the Running the Service Catalog Installer. On the Request Center Database panel of the installation wizard, enter the connection information for the copy of the production database.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Click Next.</td>
</tr>
<tr>
<td>Step 5</td>
<td>Click Upgrade Existing Database.</td>
</tr>
<tr>
<td>Step 6</td>
<td>Click Validate Schema.</td>
</tr>
</tbody>
</table>
Step 7  Click **View Errors**. If any schema errors in your database are reported, work with your database administrator and application programmer to fix the schema errors. Some schema errors may come with a *suggested* SQL command to fix the error, which you can discuss with your DBA and application programmer to see if it is applicable for your error condition. Others may require that you consult with the Cisco Technical Assistance Center (TAC) to come up with an appropriate fix. Document all of the validation errors and resolutions you encounter.

Step 8  Click **Validate Schema** iteratively after each time you fix the validation errors, until there are no more errors reported.

Step 9  Click **Validate Data**.

Step 10 Click **View Errors**. If any data errors in your database are reported, work with your database administrator and application programmer to fix the errors in the data. There are two types of data errors—Validation Errors and Auto-Repairable Errors. Some validation errors may come with a *suggested* SQL command to fix the error, which you can discuss with your DBA and application programmer to see if it is applicable for your error condition. Others may require that you consult with the Cisco Technical Assistance Center (TAC) to come up with an appropriate fix. Document all of the validation errors and resolutions you encounter.

Step 11 Click **Validate Data** iteratively after each time you fix the validation errors, until no Validation Errors are reported. It is OK to have some Auto-Repairable Errors. They will be programmatically fixed in the next step.

Step 12 Click **Repair Database**. This function will programmatically fix all Auto-Repairable Errors reported in the previous step.

Step 13 When the repair database function completes, click **Next** to complete the remaining pages of the Service Catalog installation wizard.

Step 14 After the installation wizard completes the upgrade installation, reapply any necessary customizations on your sandbox environment.

Step 15 Perform user acceptance testing for the upgraded system in the sandbox environment.

Step 16 Gather all of the technical notes that you have created along the way.

Step 17 At this point, if you feel that you are still not comfortable with the upgrade process, you may want to clean up your sandbox environment, and repeat all steps one more time in the sandbox environment. This time, follow the instructions in this guide, in conjunction with the technical notes that you have documented so far.

Step 18 When you are ready, repeat the entire upgrade process on your production environment.

---

**Upgrading to Service Catalog Release 10.0 R2**

**Overview**

Several platforms have been desupported since Release 9.3.1. Therefore, review *Multistep Upgrade Paths* to find out whether you need to upgrade the versions of the application server, java, web server, or operating system, prior to upgrading Cisco Prime Service Catalog.

If the platform that your existing Service Catalog is running on is no longer supported, you need to prepare a new environment for one of the newly supported platforms, as described in *Chapter 1, “Installation and Configuration Guide”*. 
For example, your Service Catalog system is running on WebLogic 10.3 on Windows Server 2003 operating system. Because both WebLogic 10.3 and Windows Server 2003 are no longer supported for release 10.0-R2 of Service Catalog, you will need to install WebLogic Server 11g (10.3.6) on another computer that has Windows Server 2008 R2 operating system.

For another example, your Service Catalog is running on WebSphere 6.1 on AIX 5.3 operating system. Since both WebSphere 6.1 and AIX 5.3 are not supported in this Release 10.0 R2 of Service Catalog, you will have to prepare another computer that has WebSphere 7.0 on AIX 7.1 operating system.

Upgrading Service Catalog involves:
- Performing preupgrade tasks while the current version of the application is up and running
- Preparing a sandbox environment that meets the newly supported platforms and prerequisites for the Service Catalog Release 10.0 R2 installation
- Running the Service Catalog installation wizard and selecting Upgrade Existing Database.
- Validating the integrity of preupgrade database, and repairing any schema or data issues found
- Performing postupgrade tasks

The upgrade procedures are described in more detail in the following sub-sections:
- I. Performing Preupgrade Tasks, page 3-6
- II. Preparing the Upgrade Environment, page 3-7
- III. Run the Installation Wizard to the Validation Page, page 3-8
- IV Understanding Validations, page 3-9
- V. Validating Schema, page 3-13
- VI. Validating Data, page 3-14
- VII. Repairing the Database, page 3-14
- VIII. Completing Installation, page 3-14
- IX. Performing Postupgrade Tasks, page 3-15

I. Performing Preupgrade Tasks

Perform the following mandatory preupgrade tasks on your production environment.

**Step 1**
If you do not have the Advanced Reporting module, proceed to Step 2. Otherwise, you need to perform several preupgrade tasks for the Advanced Reporting module, as described in the Performing Preupgrade Tasks for Reporting. Perform only the preupgrade steps for the Advanced Reporting module, then return to this section, and complete the rest of the procedures outlined here.

**Step 2**
If there are application server version changes, the unprocessed messages residing in the JMS queues for Service Link will not be migrated automatically to the new application servers. Prior to upgrade, you should check that there are no unprocessed messages in the queues and resolve any that may be present. Once the queues are clear, stop all Service Link agents, so that you have a chance to verify Service Link communication before any agent is restarted after upgrade.

**Step 3**
Catalog Deployer does not support deploying packages between different release levels of Service Catalog. Therefore, prior to upgrade, ensure that you have deployed all assembled packages that are ready for deployment. Otherwise, you will not be able to deploy them after your database is upgraded to Release 10.0 R2. Furthermore, as you approach the time for the upgrade, for any new package that you assemble in your current system, you might want to include the release version of Service Catalog in the description. This will make it easier for you to identify different release versions of packages.
Step 4 An optional activity that may be included in the preupgrade checklist is to review the list of deployed packages. You may want to export and delete the packages that no longer need to be maintained online. Since these packages can no longer be deployed (once the upgrade has taken place), keeping them online is useful only for querying deployment history. By deleting these packages, you recover space in the database. Such clean-up activities can be conducted in all systems (development, test/QA, and production).

Step 5 Stop all Service Catalog services on the application server.

Step 6 Back up all Service Catalog databases. Make sure that you back up all Service Catalog-related databases if you have more than one. For example, in addition to the Request Center database, you may have a separate Data Mart database or Content Store database (which is used by Cognos). If so, you need to back up all databases.

Step 7 Back up all customization scripts or files. The upgrade process will not preserve any customizations on your existing installation. Therefore, after the upgrade, you may need to reapply some or all of these customizations on your system if they are still applicable.

Step 8 Back up the installation directory. Back up the directory where you originally installed the Service Catalog software.

Step 9 Proceed to the II. Preparing the Upgrade Environment section below.

II. Preparing the Upgrade Environment

Skip this section if you are ready to perform the upgrade on your production environment.

In this section, you will be creating a sandbox environment which you will use to perform the dry run exercise for the upgrade process. Once you are comfortable with the upgrade process and are armed with the technical notes that you have collected during the dry run exercise, you can then begin the upgrade procedures on the actual production system.

To prepare a sandbox environment:

Step 1 Restore the production database backups onto another set of databases.

Note Since SQL Server 2005 database and Oracle 10g database are no longer supported in this release, you must restore your database backups onto a brand new SQL Server 2008 R2 database or an Oracle 11g database.

Step 2 If you are using Oracle DBMS, it is recommended that you execute recompile the statistics for each database after it is restored. This step is essential for enhancing the performance of upgrade processes on large databases.
Step 3 If your database is SQL Server, you must activate the READ_COMMITTED_SNAPSHOT by performing the following:

a. Connect to your SQL Server as the “sa” user, and set the SQL Server in single-user mode.

b. Execute the following commands. Replace <database_name> with the name of your RequestCenter database.

   ALTER DATABASE <database_name> SET READ_COMMITTED_SNAPSHOT ON
   GO
   ALTER DATABASE <database_name> SET COMPATIBILITY_LEVEL=100
   GO

c. Put the SQL Server back in multiuser mode.

Step 4 Grant the additional permissions for the database user "RCUser", as described in the Configuring Databases section in Chapter 1. If you are not sure that "RCUser" has all of the necessary permissions for this release, you can execute the commands described in the Configuring Databases section again; these commands can be executed multiple times without causing any issues.

Step 5 Review the list of supported platforms and the prerequisite information as described in Cisco Prime Service Catalog Compatibility Matrix and in Chapter 1. If your platform is no longer supported, then make sure that for the sandbox environment, install the correct versions of application server, web server and JDK on a supported operating system.

Step 6 Read through all the instructions in the Preinstallation Configuration for JBoss, Preinstallation Configuration for WebLogic, or Preinstallation Configuration for WebSphere (depending on what application server you are using) to see if you need to reconfigure or adjust any settings in your existing application server environment. There may be new jar files that you need to copy, or new settings that you need to add for this release of Prime Service Catalog.

Step 7 Because this release of Prime Service Catalog is shipped with new JDBC drivers, you need to delete the existing REQUESTCENTERDS datasource (and DATAMARTDS datasource if it also exists) in your WebLogic or WebSphere environment. You don't have to do this for JBoss environment. Then you need to re-create the REQUESTCENTERDS datasource to use the new JDBC driver. For WebLogic, the instructions for creating datasource can be found in "Configuring JDBC Data Sources" under the "Preinstallation Configuration for WebLogic" section of Chapter 1, "Installation and Configuration Guide." For WebSphere, the instructions for creating datasource can be found in Configuring JDBC Data Sources under Preinstallation Configuration for WebSphere. Note that the DATAMARTDS datasource is no longer required.

Step 8 Proceed to the III. Run the Installation Wizard to the Validation Page section below.

---

III. Run the Installation Wizard to the Validation Page

Step 1 Run the Service Catalog installation wizard as described in the Running the Service Catalog Installer. Choose a Typica] or Custom installation type and follow the corresponding scenario (Scenario 1: New Typical Installation, or Scenario 2: New Custom Installation).

Step 2 On the Request Center Database panel of the installation wizard, enter the values for the database.

Step 3 Click Next to proceed to the next page of the wizard.

The Existing Installation Detected dialog box appears, as shown in Figure 3-1 below.
Step 4  Click **Upgrade Existing Database**.

The Validation page of the installation wizard appears.

**Note**

If you are upgrading from release 10.0 of Service Catalog to release 10.0 R2, you will not see the Validation panel. There is no significant schema changes between release 10.0 and 10.0 R2 that require schema validation.

The Service Catalog installation wizard will not allow you to upgrade an existing database until it has been successfully validated and repaired. The Validation page is designed so that the functions are executed in sequential order:

1. Validate Schema
2. Validate Data
3. Repair Database

You cannot execute Validate Data without having executed Validate Schema at least once. You cannot execute Repair Database without having executed Validate Data at least once.

You can execute each function multiple times. However, each time that you execute Validate Schema, the program reinitializes as if you start the validation process from the beginning. For example, let’s say you have just completed Validate Data. You can proceed with Repair Database. But, instead you choose to execute Validate Schema again. Because you execute Validate Schema, the system is reinitialized, and thus after you complete Validate Schema, you cannot jump to Repair Database. You must execute Validate Data next.

Step 5  Proceed to the **IV Understanding Validations** section below.

### IV Understanding Validations

Skip this section and proceed to the **V. Validating Schema** section if you are already familiar with the database validation process during the Cisco Prime Service Catalog upgrade. You can always come back to review this section when the Validate Schema and Validate Data steps return any error.

The functions on the Validation page verify the integrity of your existing schema and database. The results for all validation scripts are stored in a table called SchValidationLog in the database. See the **SchValidationLog Table** for instructions to view this log file. All possible validation entry ErrorLevels
and their descriptions are shown in Table 3-3 below.

<table>
<thead>
<tr>
<th>ErrorLevel</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>inform</td>
<td>The validation test results in an anomaly that is deemed harmless for the upgrade process, as well as for the application. For example, the validation detects a table that does not belong to the database schema. The existence of this table will not cause the upgrade to fail, nor will it have any ill effect on the application. These unrecognized objects that do not interact with Service Catalog tables are flagged with a status of “inform” in the SchValidationLog table. The following objects (if they exist) are reported only: tables, columns, sequences, stored procedures, functions, indexes and constraints that do not interact with Service Catalog tables. These objects are reported only, and are left alone. All validation entries with ErrorLevel= “inform” will be ignored. No action is required on your part to address these entries.</td>
</tr>
<tr>
<td>inform:</td>
<td>The data validation test results in a data error that is deemed to be harmful. However, this type of error can be safely and programmatically fixed by the Repair Database function. Most errors of this type are the result of internal inconsistencies, possibly introduced by previous upgrades or import utilities, and the repair typically consists of restoring referential or data integrity. The RepairScript column in the SchValidationLog table shows the SQL statement that is used to repair the error. No action is required on your part.</td>
</tr>
<tr>
<td>auto-repairable</td>
<td></td>
</tr>
<tr>
<td>inform:</td>
<td>The Repair Database function executes the sql statement documented in the RepairScript column to fix the error that was reported as “inform: auto-repairable” above. All validation entries with ErrorLevel= “inform: auto-repaired” are shown in the SchValidationLog table, and in the Validation Errors table when you click View Errors for the Repair Database function. No action is required on your part.</td>
</tr>
<tr>
<td>auto-repaired</td>
<td></td>
</tr>
<tr>
<td>inform:</td>
<td>The validation test results in an anomaly that is deemed to be harmful to the upgrade process, but one that will be programmatically repaired during the upgrade process. Missing or modified objects are flagged with a status of “inform: pending-repair” in the SchValidationLog table. An example of this type of anomaly is a missing index or a missing primary key constraint. The missing index or primary key constraint will be created correctly, if it does not exist. No action is required on your part.</td>
</tr>
<tr>
<td>pending-repair</td>
<td></td>
</tr>
</tbody>
</table>
Table 3-3 Validation ErrorLevels (continued)

<table>
<thead>
<tr>
<th>ErrorLevel</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>inform: pending-removal</td>
<td>The validation test detected an unrecognized database object that touches a Service Catalog table. The existence of this object may prevent the upgrade from completing successfully. These unrecognized objects are flagged with a status of “inform: pending-repair” in the SchValidationLog table. For example, the following objects (if they exist) are flagged for removal: a) an unrecognized index on a Service Catalog table, b) an unrecognized trigger on a Service Catalog table, c) an unrecognized constraint on a Service Catalog table, and d) an unrecognized foreign key constraint that points to a Service Catalog table. These objects are automatically deleted. No action is required on your part.</td>
</tr>
<tr>
<td>error</td>
<td>A validation test has resulted in a hard “error” that cannot be fixed programmatically. Usually, this type of error is related to a bad data relationship, such as missing row, or duplicate entries. All validation entries with ErrorLevel= “error” are shown in the SchValidationLog table, and in the Validation Errors table, when you click View Errors for the Validate Schema or Validate Data function. The TestType column indicates the type of error, and the TestDetail column contains the SQL statement that was used for the validation test. This SQL statement should provide you with some hints regarding the error. This error would cause the upgrade to fail; thus, when such an error is detected, it must be fixed before proceeding with the upgrade. The application administrator or database administrator must manually fix all errors of this type, and then run the same Validate function again until it reports no more errors. Contact the Cisco Technical Assistance Center (TAC) if you need assistance on how to fix validation errors. In some cases, the RepairScript column may contain a suggested SQL statement that can be used to fix the error. Consult with your application administrator or DBA to ensure that such a repair script is applicable for your specific situation. Document clearly how each validation error is fixed. You will need your notes when you have to repeat the upgrade procedures on another environment.</td>
</tr>
</tbody>
</table>

As described in Table 3-3 above, only validation entries with ErrorLevel= “error”, as shown in the Validation Errors table when you click View Errors for the Validate Schema or Validate Data function, must be manually fixed. All other validation errors, reported in the SchValidationLog table, are automatically handled.

After you manually fix all validation entries with ErrorLevel= “error”, click the same Validate function again to verify that no more errors are reported. It is possible that as a result of your manual fixes, new validation errors may appear. If this happens, you have to repeat the Validate function again, and fix the validation errors, iteratively.

We recommend that you review and address validation errors by doing so iteratively first for all schema validation errors, and then for all data validation errors. This methodology reduces the chance of regression errors you may encounter by mixing schema validation error fixes with data validation error fixes.

SchValidationLog Table

The results for all validation scripts, regardless of whether validation errors were found or not, are stored in a table called SchValidationLog in the database.

To view the SchValidationLog table:
Step 1  Connect to your database as the schema owner (that is, RCUser), and browse the table SchValidationLog to view the validation results. You can use a utility like SQL Analyzer (Figure 3-2) or SQL*Plus to connect to your database.

![Figure 3-2 Browse SchValidationLog Table](image)

**Figure 3-2 Browse SchValidationLog Table**

<table>
<thead>
<tr>
<th>SchFunctions</th>
<th>dbo</th>
<th>User</th>
<th>1/5/2007 5:28:25 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>SchInd Columns</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchIndexes</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchObjectActionLog</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchObjectsExceptions</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchPackages</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchPrimaryKeys</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchProcedures</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchSequences</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchTableColumns</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchTables</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchTriggers</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchValidationLog</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchValidationRunAttributes</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchViewsColumns</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
<tr>
<td>SchViews</td>
<td>dbo</td>
<td>User</td>
<td>1/5/2007 5:28:25 PM</td>
</tr>
</tbody>
</table>

Step 2  Open the SchValidationLog table to view its contents (Figure 3-3).

**Figure 3-3 SchValidationLog Contents**

<table>
<thead>
<tr>
<th>RunType</th>
<th>TestType</th>
<th>ObjectType</th>
<th>ObjectName</th>
<th>ObjectShortName</th>
<th>ErrorLevel</th>
<th>TestDetail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Schema</td>
<td>Table Column</td>
<td>Column</td>
<td>DiProject.Perce...</td>
<td>DiProject.Perce...</td>
<td>inform</td>
<td>Expected type: ....</td>
</tr>
<tr>
<td>Check Schema</td>
<td>Table Column</td>
<td>Column</td>
<td>DiPerson.SSN</td>
<td>DiPerson.SSN</td>
<td>inform</td>
<td>Expected type: ....</td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected table</td>
<td>Table</td>
<td>CUSTOMER_TAB...</td>
<td>CUSTOMER_TAB...</td>
<td>inform</td>
<td></td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected table</td>
<td>Table</td>
<td>CUSTOMER_TAB...</td>
<td>CUSTOMER_TAB...</td>
<td>inform</td>
<td></td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected table</td>
<td>Table</td>
<td>DiPermission.C...</td>
<td>DiPermission.C...</td>
<td>inform</td>
<td></td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected table</td>
<td>Table Column</td>
<td>DiPerson.CUST...</td>
<td>DiPerson.CUST...</td>
<td>inform</td>
<td></td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected PK</td>
<td>PK</td>
<td>FK_CUSTOMER...</td>
<td>FK_CUSTOMER...</td>
<td>inform</td>
<td>pending removal</td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected index</td>
<td>Index</td>
<td>TxInvocationAtt...</td>
<td>TxInvocationAtt...</td>
<td>inform</td>
<td>pending removal</td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected index</td>
<td>Index</td>
<td>TxObjectRelation...</td>
<td>TxObjectRelation...</td>
<td>inform</td>
<td>pending removal</td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected index</td>
<td>Index</td>
<td>TxSatisfaction.T...</td>
<td>TxSatisfaction.T...</td>
<td>inform</td>
<td>pending removal</td>
</tr>
<tr>
<td>Check Schema</td>
<td>Unexpected index</td>
<td>Index</td>
<td>X2Agent13</td>
<td>X2Agent13</td>
<td>inform</td>
<td>pending removal</td>
</tr>
</tbody>
</table>

Step 3  Check the ErrorLevel column in the SchValidationLog table for the following values and take the recommended actions.

Step 4  Your SchValidationLog table may contain a lot of entries. Thus, you may want to use the following SQL command to filter the contents:

```
SELECT * FROM SchValidationLog WHERE ErrorLevel= "error"
AND RunType= "Check Data";
```

Include the WHERE clause “ErrorLevel= ‘error’” if you just want to see the validation errors that you must fix manually before you can proceed with the upgrade process. Exclude that WHERE clause, or change the value “error” to another value (such as “inform: auto-repairable”; see Table 3-3 for more information) if you want to view other entries in the SchValidationLog table.
Notes about the RunType column in the SchValidationLog table:

- Validate Schema inserts entries with RunType= “Check Schema”.
- Validate Data inserts entries with RunType= “Check Data”.
- Repair Database updates all entries with ErrorLevel= “inform: auto-repairable” to ErrorLevel= “inform: auto-repaired”, and at the same type, changes the RunType to “Fix Data”.

V. Validating Schema

**Step 1**  Click **Validate Schema**.

If the schema validation test completes without validation errors, a “Completed” message appears.

If no errors are reported, proceed to the VI. Validating Data.

If the schema validation test completes with validation errors, a “Completed with errors” message appears.

**Step 2**  Click **View Errors**.

The Validation Errors window appears. Resize the window to see the complete table, as shown in the example below (Figure 3-4).

*Figure 3-4  Validation Errors (Validate Schema)*

**Step 3**  You need to manually fix the errors shown in the Validation Errors table before continuing the upgrade process. See the IV Understanding Validations for more information.

**Step 4**  When all validation errors have been fixed iteratively, proceed to the VI. Validating Data section below.
VI. Validating Data

Step 1  Click **Validate Data**.
If the data validation test completes without validation errors, a “Completed” message appears.
If no errors are reported, proceed to the **VII. Repairing the Database**.
If the data validation encounters validation errors, then a “Completed with errors” message appears.

Step 2  Click **View Errors**.
The Validation Errors window appears.

Step 3  You need to manually fix the errors shown in the Validation Errors table before continuing the upgrade process. See the **IV Understanding Validations** for more information.

Step 4  When all validation errors have been fixed iteratively, proceed to the **VII. Repairing the Database** section below.

VII. Repairing the Database

Step 1  Click **Repair Database**.
When the database has been repaired a “Completed” message appears,

Step 2  (Optional) Click **View Errors**.
The Validation Errors window appears. Resize the window to see the complete table.
Note that the Validation Errors are only with ErrorLevel= “inform:auto-repaired” that are fixed programmatically by the Repair Database function.

Step 3  Proceed to the **VIII. Completing Installation** section below.

VIII. Completing Installation

You have validated and repaired your database, and are now ready to proceed with the upgrade.

Step 1  Click **Next** to proceed to the next page of the Service Catalog installation wizard.

Step 2  Continue to run the installation wizard as described in the **Running the Service Catalog Installer** and your chosen scenario (**Scenario 1: New Typical Installation**, or **Scenario 2: New Custom Installation**, page 1-53).
When you click **Install** on the Pre-Installation Summary page of the installation wizard, the installer proceeds to execute the upgrade scripts to modify your database schema and contents. Depending on the size of your database, the upgrade scripts may take a long time to run. After the upgrade scripts modify the database schema and contents, the installer proceeds to create the WAR files. Follow the same procedures described in **Chapter 1, “Installation and Configuration Guide”** to deploy the WAR files for the Service Catalog product.
Step 3  Once you finish the deployment of the WAR files, and are able to start up the application servers, you have essentially completed the upgrade process. Your Service Catalog application is now at Release 10.0 R2. At this time, if you wish, you can make a backup of the databases and the installation directory. If you are using Oracle DBMS, it is recommended that you again execute recompile statistics for the upgraded databases in order to improve the system runtime performance.

IX. Performing Postupgrade Tasks

Step 1  Where necessary, recreate custom database objects that were deleted from the database by the installer.

Step 2  Any custom code must be compatible with the new version of the JDK:
- Service Link custom adapters must be rebuilt with Release 10.0 R2 version of the Service Link ADK.
- Custom java code developed at the customer site must be rebuilt using the new JDK.
- Any enterprise portal into which Request Center Portlets are deployed must be at JDK version 1.6.

Step 3  Service Import/Export is not backward compatible with previous releases. Services exported in prior releases cannot be imported into Release 10.0 R2. If you have maintained any Services export files in a code repository prior to upgrade, then you may want to export them again, and mark them for Release 10.0 R2.

Step 4  Follow procedures your organization has used in the past to reimplement all customizations for the application.

Step 5  Connect to the Service Catalog application as an administrative user. Navigate to the “Administration” module, and click the Settings tab. Under Customizations Settings, look for “Browser Cache” (as shown in Figure 3-5).

**Figure 3-5  Enable Browser Cache Setting**

<table>
<thead>
<tr>
<th>Browser Cache</th>
<th>Enabled</th>
<th>Disabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

The Browser Cache setting enables the browser side caching of images, javascripts, css, etc., which may improve performance. When the Version value is incremented, the user is prompted to refresh the browser cache immediately until the browser's cache is deleted. Default is Disabled.

Click the Enabled radio button for the “Browser Cache” setting. Click the + button located to the right of the Version text box. This will increment the Version number by one. Then click Update. This setting will notify the users to clear their browser cache when they connect to the Service Catalog URL for the first time after the Service Catalog system is upgraded.

The next section describes the procedures for upgrading the Cognos component of the Reporting module. If your preupgrade Service Catalog system included the Reporting module, then you must continue with the next section to complete the upgrade process for the Cognos component so that the Reporting module will work for Release 10.0 R2.
Upgrading Reporting

Performing Preupgrade Tasks for Reporting

Back up the Data Mart and Content Store Artifacts

To back up the Data Mart and Content Store artifacts:

Step 1 Back up the Data Mart database (If there are any custom Data Mart tables, they can be referred from this backup) and the Content Store database.

Step 2 Back up all custom-defined views that are used by Advanced Reporting from the Request Center database.

Step 3 Export all the backed up custom-defined views that are used by Advanced Reporting from the Request Center database.

Note: The database backups are for safety purposes and the RequestCenter_windows.ctg and Report Data Model folder backups are for reference when you are reapplying any customizations you created in earlier releases.

Uninstalling Cognos 8.4.x Components

This release of Service Catalog uses Cognos version 10.2.1. You can install Cognos 10.2.1 software on a brand new machine. But if you plan to install the Cognos 10.2.1 software on the same machine where you already have Cognos 8.4.x software, then you must first uninstall the Cognos 8.4.x software, by performing the following steps:

Step 1 From your system Start button, choose Programs > IBM Cognos 8 > Uninstall IBM Cognos 8.

Step 2 Choose the display language and click Next.

Step 3 Choose all the components from the package list, and proceed with the rest of the installation wizard until you get to the Finish screen.

Step 4 Reboot the system once all the components have been uninstalled successfully.

Installing Cognos 10.2.1 Software

See Installing Cognos Software, page 2-7 for more details on how to install Cognos 10.2.1
Running the Reporting Installer for Upgrade

Step 1 Run the Reporting installation wizard as described in the Installing Reporting, page 2-10.
Step 2 After entering values for your Data Mart Database, click Next to proceed to the next page of the wizard. The Existing Installation Detected dialog box appears,
Step 3 Click Upgrade Existing Database.
Step 4 Continue with the Reporting installation wizard as described in the Running the Reporting Installation Wizard, page 2-11. You cannot edit the settings in the Form Data Reporting Tables, Form Data Reporting Dictionary Settings, and Form Data Reporting Service Settings pages. On these pages, just click Next to continue. Should you decide that you need to modify some of these settings after the upgrade, there is a utility for you to do so. See the Modifying Form Data Reporting Configuration for more information.

Performing Postupgrade Tasks for Advanced Reporting

Perform the tasks described in Postinstallation Tasks, page 2-22.

Migrating Custom Reports

Custom reports are automatically upgraded during the Cognos upgrade to 10.0 R2. If you wish, you could manually upgrade the reports from the Prime Service Catalog.

Step 1 Log into Service Catalog as a user with the Report Administrator role.
Step 2 Choose Advanced Reporting module from the drop-down.
Step 3 Go to Launch on the right hand side top corner and click IBM Cognos Administration.
Step 4 Click the Configuration tab.
Step 5 Go to Content Administration from the left pane, click on the New Content Maintenance icon and select Report Upgrade, as shown below.

Figure 3-6 Content Administration Window
**Upgrading Reporting**

**Step 6** Enter the Name, Description (optional) and Screen Tips (optional) for the New Content Maintenance task. And click **Next**.

**Step 7** In the Report upgrade screen, click **Add**. Select folders that need to be upgraded, click **Add**, and then at the bottom, click **OK**.

**Step 8** Click **Next**.

**Step 9** Select any of the below actions:
- Save and run once.
- Save and schedule
- Save only

**Step 10** Click **Finish**.

**Step 11** Select the time to run the report upgrade and click **OK**.

**Step 12** To view the result of the job select the check box “View the details of this content maintenance task after closing the dialog”.

**Step 13** Click **OK**.

**Step 14** Click **Refresh** to view the status. Click **Close**.

---

**Reporting Upgrade Issue and its Workaround**

While upgrading from any earlier release to 10.0R2, except for 10.0, certain roles under the Permission tab of the Reports, show up as Unavailable. This happens if the role is either deprecated or renamed in 10.0R2. This change does not impact the reporting functionality but might create confusion for the user.

To avoid this, you could delete the affected roles and add them back if the role is renamed.

**To delete and then add a role:**

**Step 1** Log in to Service Catalog UI, and navigate to the **Advanced Reporting** module.

**Step 2** Navigate to your custom report under your folder name.

**Step 3** Click **More** under the **Actions** column for your custom report.

**Step 4** Click **Set properties** under **Available** actions.

**Step 5** Click on the **Permissions** tab. If any roles are displayed as Unavailable, it is because those roles were deprecated or renamed. You can either remove these roles if you no longer need them, or rename it to an appropriate role name based on the list of new roles that are available in this release.

**Step 6** To remove a role: Select the check box in front on the role that is displayed as Unavailable, then click the **Remove** link at the bottom of the table.

**Step 7** The add a new role: Click the **Add** link at the bottom of the table, click **newScale**, select one or more roles from the Available entries table, click the add arrow to move these roles to the Selected entries table, then click the **OK** button. Next, you have to set the appropriate permissions for the new roles that you just added. After you are done, click the **OK** button to close the Set properties page.

---

These instructions for modifying roles are only applicable for a custom report. You cannot modify a standard report that came along with Prime Service Catalog.
Advanced Configuration and Troubleshooting Tips for Cognos

- Overview, page 4-1
- Miscellaneous Configuration, page 4-1
- Understanding Roles, page 4-3
- Moving Reports from Development to Production Environments, page 4-5
- Modifying Form Data Reporting Configuration, page 4-7
- Configuring HTTPS for Cognos, page 4-14
- Troubleshooting, page 4-16
- Supported Time Zone, page 4-23

Overview

This chapter contains troubleshooting tips and optional configuration instructions for Cognos.

Miscellaneous Configuration

Configuring Client Browsers to View a Report as Excel

Some users may report an issue with attempting to view a report in Excel format. The Excel screen pops up briefly and then disappears. To address this issue, add the Cognos Server URL to the Local Intranet zone of the client browser:

- **Step 1** Open the client browser window.
- **Step 2** Choose **Tools > Internet Options**.
- **Step 3** Click **Security**.
- **Step 4** Choose the **Local Intranet** zone.
- **Step 5** Click **Sites**.
- **Step 6** Click **Advanced**.
Chapter 4      Advanced Configuration and Troubleshooting Tips for Cognos

Step 7  Enter the Cognos Server URL.

Note  To determine the Cognos server URL, try one of the View as Excel features in the Reporting module and look for the URL that appears in the title bar of the window that appears briefly before closing itself. This is the URL you need to enter. You may want to load a screen capture application and snap the screen if it disappears too quickly to read in real time.

Step 8  Click Add.

### Configuring Cognos Memory Usage

You configure Cognos memory usage by modifying the heap size for Cognos. To modify the heap size for the Cognos server:

**Step 1**  Stop the IBM Cognos service.

**Step 2**  Open the `startup.bat` located under the C:\Program Files\cognos\c10_64\bin64 directory.

**Step 3**  In the startup.bat file, you can see different heap size settings recommended by Cognos, based on the RAM size of your Cognos machine:

```
rem "for machines with 1GB RAM"
set CATALINA_OPTS=-Xmx768m -XX:MaxNewSize=384m -XX:NewSize=192m
-XX:MaxPermSize=128m %DEBUG_OPTS%
rem "for machines with 2GB RAM"
rem set CATALINA_OPTS=-Xmx1152m -XX:MaxNewSize=576m -XX:NewSize=288m
-XX:MaxPermSize=128m %DEBUG_OPTS%
rem "for machines with 3GB RAM"
rem set CATALINA_OPTS=-Xmx1536m -XX:MaxNewSize=768m -XX:NewSize=384m
-XX:MaxPermSize=128m %DEBUG_OPTS%
```

Based on your system RAM size, you can use any one the above heap size settings or modify the heap size settings, and comment the rest of the heap size settings by prefixing the line with `rem`.

**Step 4**  Restart the IBM Cognos service.

### Setting the Timeout Interval on IBM Cognos Server

The IBM Cognos session timeout setting should match that of Service Catalog to allow Single Sign-On to work seamlessly.

To set the timeout interval:

**Step 1**  Choose Start > All Programs > IBM Cognos 10-64 > IBM Cognos Configuration.

**Step 2**  Choose Environment > IBM Cognos service.

**Step 3**  Click IBM Cognos.
Step 4 Under Resource Properties, choose **Ping timeout in seconds**. Enter **960** as the timeout interval in seconds. 960 is the maximum possible value.

**Figure 4-1 Choose Ping Timeout Duration**

![IBM Cognos Configuration - Linux](image)

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ping timeout in seconds</td>
<td>960</td>
</tr>
<tr>
<td>Stopwait time in seconds</td>
<td>60</td>
</tr>
<tr>
<td>Maximum memory in mb</td>
<td>160</td>
</tr>
<tr>
<td>Shutdown port number</td>
<td>9099</td>
</tr>
</tbody>
</table>

Step 5 Save the configuration (by clicking the **Save** icon).
Step 6 Restart the IBM Cognos service.

---

**Understanding Roles**

**Roles for Accessing Reporting Features**

The roles listed in the table below are defined in the Organization Designer module, and should be assigned to users who need to access the Reporting and Advanced Reporting modules.

If you assign a user to the predefined role **“Service Operations Report User”**, the user should be able to run the prebuilt Request Center reports.

---

**Table Legend**

RC = Request Center
### Understanding Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Capabilities</th>
<th>Description</th>
</tr>
</thead>
</table>
| Service Operations Report User | • View RC Reports | Module: Reporting  
  • Ability to view the KPI dashboard and run RC (Service Performance) reports |
| Advanced Reporting – BusinessAuthor | • View RC Reports, Ad-Hoc Reports | Modules: Reporting and Advanced Reporting  
  • Access to the Ad-Hoc Reports tab in the Advanced Reporting module |
| Advanced Reporting – ProfessionalAuthor | • View RC Reports, Ad-Hoc Reports, Report Designer | Modules: Reporting and Advanced Reporting  
  • Ability to view the KPI dashboard (RC)  
  • Access to the Ad-Hoc Reports tab in the Advanced Reporting module  
  • Access to Report Designer |
| Reporting Administrator     | • View RC Reports | Modules: Reporting and Advanced Reporting  
  • Access to Reports in the Advanced Reporting module |
| Relationship Manager        | • View RC Reports | Module: Reporting  
  • Access to all reports (RC) |
| Service Level Manager       | • View RC Reports | Module: Reporting  
  • Ability to view the KPI dashboard and run RC (Service Performance) reports |
| Service Team Manager        | • View RC Reports | Module: Reporting  
  • Ability to view the KPI dashboard and run RC (Service Performance) reports |
| Service Team Administrator  | • View RC Reports | Module: Reporting  
  • Ability to view the KPI dashboard and run RC (Service Performance) reports |
| Advanced Reporting Administrator | • View RC Reports, Ad-Hoc Reports, Report Designer, KPI Administrator, Report Administrator | Modules: Reporting and Advanced Reporting  
  • Access to the reports (RC)  
  • Ability to view the KPI dashboard (RC)  
  • Access to Ad-Hoc Reports tab in the Advanced Reporting module  
  • Access to Report Designer  
  • Access to manage Reporting folders, dashboard, administration of Cognos, schedule reports, save reports and permissions administration, create reports  
  • Access to the KPI Administration function |
| Site Administrator          | All          | Modules: Reporting and Advanced Reporting  
  • All Service Catalog and Cognos capabilities |
Moving Reports from Development to Production Environments

This section describes how to move Report Designer reports and Ad-Hoc queries that you create in a development environment to a production environment.

Prerequisites

You must be a user with the ability to administer the Reporting module to move reports using the Deployment option discussed below. The predefined roles Site Administrator include this capability. You must have access to the file system of the Cognos servers for both the source and target environments.

Creating an Export File

**Step 1** On the development machine, create a folder named CustomReports in the Public Folders directory of Cognos. The name of the folder may vary, but it must be a public folder.

**Step 2** Copy the new report to the CustomReports folder created above.

**Step 3** Log into Service Catalog as a user with the Report Administrator capability.

**Step 4** Go to Launch on the right hand side top corner and click IBM Cognos Administration.

**Step 5** Click the Configuration tab.

**Step 6** Go to Content Administration, and in the top-right corner of the screen click the New Export icon.

![Select New Export](image)

**Step 7** Provide a name (for example, CustomReports) and other details for the export, and then click Next.

**Step 8** On the Deployment Method page, choose Select public folders and directory content, and then click Next.

**Step 9** Click Add, and choose the CustomReports folder created in Step 1. Choose the Custom reports folders, click Add, and then at the bottom, click OK.
Step 10 Deselect **Disable after import**, and then click **Next**.

Step 11 Click **Next**.

Step 12 In the “Select the directory content” section, choose **Include Cognos groups and roles** and **Replace existing entries**, and click **Next**.

Step 13 In the “Specify the general options” section, choose **Include access permissions** and **Apply to new and existing entries**.

Step 14 Under External namespaces, choose **Include references to external namespaces**.

Step 15 In the “Entry ownership” section, choose **The user performing the import**, and click **Next** in the “Specify the general options” section.

Step 16 In the “Specify a deployment archive” section, click **Next**.

Step 17 In the “Review the summary” section, click **Next**.

Step 18 In the “Select an action” section, click **Finish**.

Step 19 Choose **Now**, and in “Run with options” section click **Run**.

This process creates **CustomReports.zip** in the `<CognosHome>\c10_64\deployment` folder of Cognos SOURCE machine.

### Import the Exported File

Step 1 Copy the exported file **CustomReports.zip** to the `<CognosHome>\c10_64\deployment` folder on the production machine.

Step 2 Go to Launch on the right hand side top corner and click **IBM Cognos Administration**.

Step 3 Click the **Configuration** tab.

Step 4 Go to Content Administration and then click the **New Import** icon in the top-right corner of the screen.
## Modifying Form Data Reporting Configuration

As your environment grows, you may need to increase the number of form data reporting (Ad-Hoc reporting) dictionary and service tables; for example, if you bring additional services online or decide that you need to report on the contents of additional dictionaries. You can use the FDR Configurator utility to modify the form data reporting configuration after installing Cisco Prime Service Catalog Reporting (see Chapter 2, “Reporting Guide”).

This section describes how to launch and configure the FDR Configurator.

### Launching the FDR Configurator

To execute the program:

**Step 1** On the Cognos machine, set the JAVA_HOME environment variable to `<COGNOS_HOME>\bin64\jre\7.0`. Then, add `%JAVA_HOME%\bin` to the beginning of the PATH environment variable.

**Step 2** Stop all programs that access the Data Mart database.

**Step 3** Go to the “<Reporting_Install_Dir>\cognos\bin” directory.

**Step 4** Double-click `fdrConfigurator.exe` to launch the FDR Configurator.

**Note** You must log in as a user with administrative privileges to perform the tasks described in this section.
A progress bar appears. When complete, the first page of the FDR Configurator wizard appears (Introduction), as shown in Figure 4-5 below.

**Figure 4-5  Introduction**

How to Use the Configuration Wizard

The configuration wizard guides you through the configuration by presenting pages of fields to be configured. As each page is completed, click Next to advance to the next page, or Previous to return to a previous page. At the end of the wizard, click Install to begin the configuration. At any time, you may click Cancel to exit the wizard without configuring.

The configuration options are case-sensitive, so ensure that you enter a value, such as a database name, with case sensitivity; otherwise, your configuration may fail.

Running the FDR Configurator Wizard

This section provides instructions for running the FDR Configurator wizard.

1. **Step 1**  Launch the FDR Configurator (see “Launching the FDR Configurator” section on page 4-7).
2. **Step 2**  On the first page of the wizard (Introduction, Figure 4-5), click Next to begin.
Step 3  For the next two pages of the wizard, for the Reporting installation you want to modify, choose your database type and enter the password for your Data Mart database, clicking Next after each page (see Running the Reporting Installation Wizard, page 2-11 for more information).

After clicking Next on the Data Mart Database page, the Form Data Reporting Tables page of the wizard appears, as shown in Figure 4-6 below.

![Figure 4-6 Form Data Reporting Tables](image)

Step 4  Your Form Data Reporting Tables settings are retrieved from your existing Data Mart database. You can modify these settings as described in Table 4-1 below.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dictionary table prefix</td>
<td>If you must change the prefix, use only alphabetic characters and the underscore character. Do not use any numeric or special characters. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database.</td>
</tr>
<tr>
<td></td>
<td>Your form reporting data will need to be regenerated by running the ETL Scripts like 'update_datamart.cmd' or 'update_datamart fdr.cmd' scripts in full mode (see the Reporting Guide, page 2-1). You must also restart the “IMB Cognos” service.</td>
</tr>
</tbody>
</table>
Step 5  
Click Next to proceed to the next page of the wizard.

The Form Data Reporting Dictionary Settings page of the wizard appears, as shown in Figure 4-7 below.

---

**Table 4-1  Form Data Reporting Tables**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service table prefix</td>
<td>If you must change the prefix, use only alphabetic characters and the underscore character. Do not use any numeric or special characters. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Script 'update_datamart.cmd' in full mode (see the Reporting Guide, page 2-1). You must also restart the “IMB Cognos” service.</td>
</tr>
<tr>
<td>Table columns prefix</td>
<td>The prefix for the field names in each table. This name is used to create tables with field name like FIELD1, FIELD2, …, FIELDn. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Script 'update_datamart.cmd' in full mode (see the Reporting Guide, page 2-1). You must also restart the “IMB Cognos” service.</td>
</tr>
<tr>
<td>Text column max length</td>
<td>This parameter indicates the maximum size of dictionary and service table object varchar field size. You can only increment the current value. No data will be lost and timestamp is not reset. A modification will alters the Dictionary and Services tables in the Data mart database by changing the size of VARCHAR() columns.</td>
</tr>
</tbody>
</table>

If you click Restore Defaults, your edited values are overwritten by the current configuration values from your existing Data Mart database.
Step 6  
Your Form Data Reporting Dictionary settings are retrieved from your existing Data Mart database. You can modify your Form Data Reporting Dictionary Settings as described in Table 4-2.

Table 4-2  Form Data Reporting Dictionary Settings

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dictionary tables</td>
<td>Number of tables required in the Data Mart database to store the data for reportable dictionaries. One table is needed per reportable dictionary. You can only increment the current value to maximum of 800. All existing data will be retained and tables are created incrementally.</td>
</tr>
<tr>
<td>Text fields</td>
<td>Number of Text type fields that are used in dictionaries based on the customer form reporting analysis. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Scripts like ‘update_datamart.cmd’ or ‘update_datamart fdr.cmd’ scripts in full mode (see the Advanced Configuration and Troubleshooting Tips for Cognos, page 4-1. You must also restart the “IMB Cognos” service.</td>
</tr>
</tbody>
</table>
Modifying Form Data Reporting Configuration

**Table 4-2  Form Data Reporting Dictionary Settings**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numeric fields</td>
<td>Number of Numeric fields that are used in dictionaries based on the customer form reporting analysis. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Script 'update_datamart.cmd' in full mode (see the Reporting Guide, page 2-1. You must also restart the “IMB Cognos” service.</td>
</tr>
<tr>
<td>Date fields</td>
<td>Number of Date fields that are used in dictionaries based on the customer form reporting analysis. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Script 'update_datamart.cmd' in full mode (see the Reporting Guide, page 2-1. You must also restart the “IMB Cognos” service.</td>
</tr>
</tbody>
</table>

If you click **Restore Defaults**, your edited values are overwritten by the current configuration values from your existing Data Mart database.

**Step 7**  Click **Next** to proceed to the next page of the wizard.

The Form Data Reporting Service Settings page of the wizard appears, as shown in Figure 4-8.

**Figure 4-8  Form Data Reporting Service Settings**
Chapter 4  Advanced Configuration and Troubleshooting Tips for Cognos

Modifying Form Data Reporting Configuration

Step 8  Your Form Data Reporting Service settings are retrieved from your existing Data Mart database. You can modify your Form Data Reporting Service Settings as described in Table 4-3.

Table 4-3  Form Data Reporting Service Settings

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service tables</td>
<td>Number of tables required in the Data Mart database to store the data for reportable services. One table is needed per reportable service. All existing data will be retained and tables are created incrementally.</td>
</tr>
<tr>
<td>Text fields</td>
<td>Number of Text type fields that are used in services based on the customer form reporting analysis. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Script 'update_datamart.cmd' in full mode (see the Reporting Guide, page 2-1. You must also restart the “IMB Cognos” service.</td>
</tr>
<tr>
<td>Numeric fields</td>
<td>Number of Numeric fields that are used in services based on the customer form reporting analysis. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Scripts like 'update_datamart.cmd' or 'update_datamart fdr.cmd' scripts in full mode (see the Reporting Guide, page 2-1. You must also restart the “IMB Cognos” service.</td>
</tr>
<tr>
<td>Date fields</td>
<td>Number of Date fields that are used in services based on the customer form reporting analysis. A modification will cause the tables to be deleted and then recreated. It also resets the timestamp in database. Your form reporting data will need to be regenerated by running the ETL Scripts like 'update_datamart.cmd' or 'update_datamart fdr.cmd' scripts in full mode (see the Reporting Guide, page 2-1. You must also restart the “IMB Cognos” service.</td>
</tr>
</tbody>
</table>

If you click Restore Defaults, your edited values are overwritten by the current configuration values from your existing Data Mart database.

Step 9  Click Next to proceed to the Summary page of the wizard.

Step 10  The configuration wizard has enough information to start the configuration process. Review the settings that appear on this page. If you need to make any changes, click Previous to go back to a page and make the necessary changes. If they are correct, click Install to begin the configuration. Do not interrupt the wizard during this process.

Step 11  If the configuration process completes successfully, click Done to exit the configuration wizard. If the configuration process fails, click Done to exit the configuration wizard, and then return to Step 1 to retry the FDR Configurator. Logs of the configuration process are located in the “<Reporting_Install_Dir>\_CSP_FDRConfigurator\Logs” directory.
Configuring HTTPS for Cognos

Overview of SSL Support in Cognos Server

To enable SSL support on the Cognos Server one has to change the protocol of the Cognos Gateway to HTTPS (assuming that the Web Server like IIS is also setup for HTTPS).

Prerequisites and Assumptions

1. Https should be enabled on IIS Server where Cognos Server is installed.
2. Remove the TCP port (80) on IIS.

Note

In Windows Server 2008 R2 we can not remove TCP port (80) and hence Firewall should be used to disable the TCP port (80).

3. For additional security one can use a Firewall to block all the non-SSL ports on the system where Cognos+IIS is installed (for example, port 80 and 9300).
4. All Command-line utilities used for SA/Reporting will still Http protocol as those commands are run on the same system where Cognos Server is installed.
5. It is also an overhead and performance concern to enable Https/SSL for the command-line utilities, and hence it remains non-SSL.
6. “CognosServername” in the CnfParams table should be manually changed to set the SSL port that is configured on IIS.
Importing IIS Server Certificate to the Cognos Server

To import the IIS certificate to the Cognos server:

**Step 1**
The Server Certificate used for IIS should be copied to a secure location on the Cognos 10.2.1 BI server.

**Note**
Ensure that the Server certificate is in Base-64 encoded X.509 format.

**Step 2**
Open command prompt and go to the folder “C:\Program Files\cognos\c10_64\bin”.

**Step 3**
Set JAVA_HOME=C:\Program Files\cognos\c10_64\bin64\jre\7.0.

**Step 4**
Import the IIS Server certificate into Cognos 10.2.1’s JCA Keystore by typing the following command:

```
ThirdPartyCertificateTool.bat -T -i -r CA_certificate_file -k crn_location/configuration/signkeypair/jCAKeystore -p password
```

(e.g. ThirdPartyCertificateTool.bat -T -i -r “c:\certnew.cer” -k “C:\Program Files\Cognos\c10-64\configuration\signkeypair\jCAKeystore” -p NoPassWordSet)

Configuring Cognos 10.2.1 for SSL

To configure Cognos 10.2.1 for SSL:

**Step 1**
Choose Program Files > IBM Cognos 10-64 > IBM Cognos Configuration.

**Step 2**
Choose Environment > Gateway URI. Change http to https, and port default 80 to 443.

**Step 3**
Choose Cryptography > Use mutual authentication? and change to True.

**Step 4**
Choose Cryptography > Cognos > Use third party CA? and change to True.

**Step 5**
Save the configuration.

**Step 6**
Stop the IBM Cognos Service.

**Step 7**
Restart.

Changes to newscale.properties for SSL

**Step 1**
In the newscale.properties file, find the cognoswebprotocol parameter, and change http to https.

**Step 2**
Restart the Request Center application server.
Verification

Step 1  Log on to https://CognosServername.domain.com/cognos10, and check whether you can logon to Cognos Connection.

Step 2  Log on to https://RequestCenterServername.domain.com/RequestCenter, and check whether you can navigate to Reporting or Advanced Reporting modules.

Troubleshooting

If you receive any of the errors described in this chapter, please try the recommended solution.

CAM_AAA_Authenticate Failed

Error

The root causes for this issue would be:

- Application has not been logged on with fully qualified domain name.
- Cognos server name does not contain a valid domain name.

Solution 1

Log on to the Request Center application with a fully qualified domain name. You need to give the fully qualified name for the host name (<host Name>+<domain names>).

For example:

- inssa.oqkqas.celosis.com
- inssa.celosis.com
- inssa.celosis.net

Solution 2

- Open the setup.properties file located under (<cognos_temp_Installer>/cognosinstaller).
- Edit the gateway and application server as below if the server name does not have a fully qualified domain name.
For example:
- gateway.server.name=inssa.qakqas.celosis.com.
- application.server.name=inssa.qakqas.celosis.com.
- Open a Command Prompt window, go to `<cognos_temp_Installer>/cognosinstaller)` directory, and execute configure.cmd script.

Logon failed (401 Unauthorized) while execution of batch scripts under `<requestcenter.destination>/Cognos/bin`

**Error**

- The root cause for this would be that the customer policy does not allow enabling the Anonymous access option in IIS.

C:\cisco\cognos\bin>create_datasource.cmd
2008-07-11 03:32:33,271 INFO Creating the DataSource...
2008-07-11 03:32:33,567 INFO Database connection String: "User ID: "?Password:;LOCAL=OL;DBInfo_Type=MS;Provider=SQLOLEDB;User ID=%s;Password=%s;DataSource=vmhost13;Provider_String=Initial Catalog=Datamart;#COLSEQ=
2008-07-11 03:32:34,895 ERROR Login failed...
2008-07-11 03:32:34,895 ERROR (401)Unauthorized

**Solution**

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Open Internet Services Manager.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>In the left pane of Internet Information Services, expand the server name.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Expand Default Web Site.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Expand the cognosc10 virtual directory.</td>
</tr>
<tr>
<td>Step 5</td>
<td>Click the cgi-bin virtual directory.</td>
</tr>
<tr>
<td>Step 6</td>
<td>In the right pane of Internet Information Services, right-click the Authentication icon and ensure Anonymous Authentication status is enabled as show below, in order to enable this under actions, you could enable link.</td>
</tr>
</tbody>
</table>

![Anonymous Authentication](image)

**Figure 4-11** Anonymous Authentication

<table>
<thead>
<tr>
<th>Step 7</th>
<th>Restart IIS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 8</td>
<td>Open a Command Prompt window, go to <code>&lt;requestcenter.destination&gt;/Cognos/bin</code> directory, and execute failed batch scripts.</td>
</tr>
</tbody>
</table>
Custom Reports Data Model does not exists error when clicking on the Ad-Hoc Reporting link in Request Center

Error

The root cause for this issue is:
- The Custom Reports Data Model package is not published to the Cognos Server.

Solution

Open a Command Prompt window, go to the `<requestcenter.destination>Cognos\bin` directory, and execute the `create_model.cmd` and `publish_fdr_pkg.cmd` scripts.

Unable to Start Cognos Service and Dispatcher Errors

Error

The root causes for this issue could be various reasons.
- Check the log files (cogserver.log and cogconfig_response.csv) located at `<cognos_installed_location/c10_64/logs>` and capture the error codes and see the solutions below associated with each error code.

Error Codes

CFG-ERR-0103 Unable to start IBM Cognos service. Execution of the external process returns an error code value of `-1`.

The root causes for this issue would be:
- The named account used to start the IBM Cognos service had an expired password or does not have admin privileges.
- The shutdown port number has a conflict.

Solution 1

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Go to the services.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>Go to IBM Cognos Service. Right-click and choose Properties.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Click the Logon tab, enter the account information and password.</td>
</tr>
</tbody>
</table>

**Note**
Ensure that the user account provided has admin privileges and the given password has not expired.

| Step 4 | Go Services and restart the IBM Cognos Service. |
Solution 2

Step 1  Choose Start > Programs > IBM Cognos 10-64 > IBM Cognos Configuration.
Step 2  Change the shut down port number from 9399 to 9410.
Step 3  Save changes and restart the IBM Cognos Service.

Import_reports.cmd fails while upgrading

Error

ERROR CM-REQ-4204 The replace operation failed because the class (exportDeployment) of the existing object, '/adminFolder/exportDeployment[@name='Reports']'.

The root cause for this issue is:


Solution

Step 1  Log on as administrator to Request Center.
Step 2  Choose the Reporting module.
Step 3  Click the Reports tab.
Step 4  On the right-hand side, click Launch > IBM Cognos Administration.
Step 5  Choose the Configuration tab, click Content Administration, then click Reports.
Step 6  Delete Reports.

Figure 4-12 Delete Report

Step 7  Open command prompt and go to <requestcenter.destination>Cognos\bin directory, and execute the create_reports.cmd script.
Update_datamart.cmd fails (For SQL Server Database)

Error

INFO UDA-SQL-0115 Inappropriate SQL request.
INFO UDA-SQL-0564 [Microsoft OLE DB Provider for SQL Server] Could not find stored procedure 'sp_DropDMIndxs'. (SQLSTATE=42000, SQLERRORCODE=2812).

The root cause for this issue is:
- Default schema owner for the Data Mart database objects (table/views/stored procedure) was not dbo.

Solution

Step 1 Ensure the default schema owner for the Data Mart database is dbo.
Step 2 Open a command prompt and go to <requestcenter.destination>\Cognos\bin directory, and execute the update_datamart.cmd script.

publish_fdr_pkg.cmd fails even After create_model.cmd runs Successfully

Error

The root cause for this error would be either the Reportable Dictionary or Service has the same name as a query subject (dimension/fact table name).

2008-10-14 22:19:13,155 INFO Action: Modify successful, continuing...
2008-10-14 22:19:13,202 INFO Action: Modify successful, continuing...
2008-10-14 22:19:13,233 INFO Action: Modify successful, continuing...
2008-10-14 22:19:13,233 INFO Action: Modify failed, skipping...
2008-10-14 22:19:13,249 INFO Reason: BMT-MD-0006 Another object of type 'Query Subject' already exists with the name 'Person' in Namespace 'FormETL'. Please choose a unique name.
2008-10-14 22:19:13,249 INFO Transaction: 10 failed, skipping...
2008-10-14 22:19:13,264 INFO Transaction: 11 failed, skipping...
2008-10-14 22:19:13,280 INFO
2008-10-14 22:19:13,327 INFO Action: SetSecurityViewDefinition failed, skipping...
2008-10-14 22:19:13,327 INFO Reason: BME-SP-0023 Invalid property handle ID: [FormETL].[Person].[REQUISITIONID]
2008-10-14 22:19:13,327 INFO Transaction: 12 failed, skipping...

Note

For more log information, go to c:\<APP_HOME>\logs\cognos_metamodel_update.log.

Solution

Open the particular dictionary or service shown in the log file, rename the dictionary or service to a unique name, run update_datamart.cmd, then create_model.cmd, and then publish_fdr_pkg.cmd.
Do not name a dictionary or service which is reportable with the following names:

- Calendar Scheduled Date
- CalendarStartedDate
- CalendarDueDate
- CalendarClosedDate
- Customer
- Dictionary
- Keyword
- Performer
- Queue
- Requestor
- Service
- TaskType
- All Tasks
- Authorization Tasks
- Service Delivery Tasks
- RequisitionTaskFact
- ServiceRequestFact
- ServiceTaskFact
- TaskEffortEntryFact
- Group
- Organizational Unit
- Person

In order for the ETL scripts to run correctly, it is important that you set the system clock of the Service Catalog Application Server machine correctly, and the system clock of the Service Catalog database machine correctly. Furthermore, the database clock for the RDBMS instance where the Service Catalog database resides needs to match the system clock of the operating system where the database is installed. All date/time values are stored in the Service Catalog database and in the Data Mart database in GMT. Therefore, if you have a distributed environment where the Application Server machine is different from the database machine, it is OK for these two machines to be in different time zones. Just make sure that the system clock is set correctly for whatever time zone each machine happens to be in.

If you are using Symantec Antivirus, you must be running version 10.0.2.2000 or later.
How to find the Report URL

Solution

Step 1  Log on to Request Center.
Step 2  Choose the **Reporting** module.
Step 3  Right-click the Report, and choose **Copy Shortcut**, as shown below.

**Figure 4-13  Copy Shortcut**

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Positions</td>
</tr>
<tr>
<td>Groups by Organizational Unit</td>
</tr>
<tr>
<td>Groups by Region</td>
</tr>
<tr>
<td>Organizations</td>
</tr>
<tr>
<td>People by Group</td>
</tr>
<tr>
<td>People by Client</td>
</tr>
</tbody>
</table>

Step 4  If you paste the shortcut in same browser window as the Request Center instance was opened, it will take you to the respective report.

Step 5  If you open a new browser window and paste the shortcut, it will prompt with the namespace drop-down list. Choose **newScale** namespace, and enter the logon credential—it will take you to the respective report.

How to change the reports home page from default List View to Details View

Solution

Step 1  Log on to the Request Center application.
Step 2  Choose the **Reporting** module.
Step 3  Click the **Reports** tab.
Step 4  On the right-hand side, click **Details View**, as shown below.
Supported Time Zone

The Cisco Prime Service Catalog Reporting installer automatically sets the time zone of the Cognos server to match the time zone of the Service Catalog application. The following table shows the supported time zones for the Service Catalog application. The installer will automatically map the Service Catalog time zone to an equivalent Cognos time zone that has the same GMT offset.

<table>
<thead>
<tr>
<th>Time Zone Name</th>
<th>Computer Time Zone Description (GMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etc/GMT+12</td>
<td>(GMT-12:00) International Date Line West</td>
</tr>
<tr>
<td>Pacific/Apia</td>
<td>(GMT-11:00) Samoa</td>
</tr>
<tr>
<td>US/Hawaii</td>
<td>(GMT-10:00) Hawaii</td>
</tr>
<tr>
<td>US/Aleutian</td>
<td>(GMT-10:00) Hawaii Aleutian Daylight Time</td>
</tr>
<tr>
<td>US/Alaska</td>
<td>(GMT-09:00) Alaska</td>
</tr>
<tr>
<td>America/Tijuana</td>
<td>(GMT-08:00) Pacific Time (US and Canada); Tijuana</td>
</tr>
<tr>
<td>America/Chihuahua</td>
<td>(GMT-07:00) Chihuahua, La Paz, Mazatlan</td>
</tr>
<tr>
<td>US/Arizona</td>
<td>(GMT-07:00) Arizona</td>
</tr>
<tr>
<td>Canada/Mountain</td>
<td>(GMT-07:00) Mountain Time (US and Canada)</td>
</tr>
<tr>
<td>Canada/Saskatchewan</td>
<td>(GMT-06:00) Saskatchewan</td>
</tr>
<tr>
<td>US/Central</td>
<td>(GMT-06:00) Central America</td>
</tr>
<tr>
<td>Canada/Central</td>
<td>(GMT-06:00) Central Time (US and Canada)</td>
</tr>
<tr>
<td>America/Mexico_City</td>
<td>(GMT-06:00) Guadalajara, Mexico City, Monterey</td>
</tr>
<tr>
<td>America/Bogota</td>
<td>(GMT-05:00) Bogota, Lima, Quito</td>
</tr>
<tr>
<td>Canada/Eastern</td>
<td>(GMT-05:00) Eastern Daylight Time (US and Canada)</td>
</tr>
<tr>
<td>America/Jamaica</td>
<td>(GMT-05:00) Eastern Time (US and Canada)</td>
</tr>
<tr>
<td>US/East-Indiana</td>
<td>(GMT-05:00) Indiana (East)</td>
</tr>
<tr>
<td>America/Antigua</td>
<td>(GMT-04:00) Atlantic Time (Canada)</td>
</tr>
<tr>
<td>Canada/Atlantic</td>
<td>(GMT-04:00) Atlantic Daylight Time (Canada)</td>
</tr>
<tr>
<td>America/Manaus</td>
<td>(GMT-04:00) Manaus</td>
</tr>
<tr>
<td>America/Santiago</td>
<td>(GMT-04:00) Santiago</td>
</tr>
<tr>
<td>America/Caracas</td>
<td>(GMT-04:30) Caracas</td>
</tr>
<tr>
<td>America/La_Paz</td>
<td>(GMT-04:00) La Paz (Bolivia)</td>
</tr>
</tbody>
</table>
### Supported Time Zone

<table>
<thead>
<tr>
<th>Time Zone Name</th>
<th>Computer Time Zone Description (GMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>America/Sao_Paulo</td>
<td>(GMT-03:00) Brasilia</td>
</tr>
<tr>
<td>America/Godthab</td>
<td>(GMT-03:00) Greenland</td>
</tr>
<tr>
<td>America/Argentina/Buenos_Aires</td>
<td>(GMT-03:00) Buenos Aires</td>
</tr>
<tr>
<td>America/Guyana</td>
<td>(GMT-04:00) Georgetown</td>
</tr>
<tr>
<td>America/St_Johns</td>
<td>(GMT-03:30) Newfoundland and Labrador</td>
</tr>
<tr>
<td>Atlantic/South_Georgia</td>
<td>(GMT-02:00) Mid-Atlantic</td>
</tr>
<tr>
<td>Atlantic/Azores</td>
<td>(GMT-01:00) Azores</td>
</tr>
<tr>
<td>Atlantic/Cape_Verde</td>
<td>(GMT-01:00) Cape Verde Islands</td>
</tr>
<tr>
<td>Etc/Greenwich</td>
<td>(GMT) Greenwich Mean Time: Dublin, Edinburgh,</td>
</tr>
<tr>
<td>Africa/Casablanca</td>
<td>(GMT) Casablanca, Monrovia</td>
</tr>
<tr>
<td>Europe/Sarajevo</td>
<td>(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb</td>
</tr>
<tr>
<td>Europe/Brussels</td>
<td>(GMT+01:00) Brussels, Copenhagen, Madrid, Paris</td>
</tr>
<tr>
<td>Africa/Brazzaville</td>
<td>(GMT+01:00) West Central Africa</td>
</tr>
<tr>
<td>Europe/Amsterdam</td>
<td>(GMT+01:00) Amsterdam, Berlin, Bern, Rome,</td>
</tr>
<tr>
<td>Europe/Belgrade</td>
<td>(GMT+01:00) Belgrade, Bratislava, Budapest,</td>
</tr>
<tr>
<td>Africa/Cairo</td>
<td>(GMT+02:00) Cairo</td>
</tr>
<tr>
<td>Europe/Helsinki</td>
<td>(GMT+02:00) Helsinki, Kiev, Riga, Sofia, Tallinn,</td>
</tr>
<tr>
<td>Europe/Minsk</td>
<td>(GMT+02:00) Minsk</td>
</tr>
<tr>
<td>Europe/Athens</td>
<td>(GMT+02:00) Athens, Bucharest, Istanbul</td>
</tr>
<tr>
<td>Asia/Jerusalem</td>
<td>(GMT+02:00) Jerusalem</td>
</tr>
<tr>
<td>Africa/Windhoek</td>
<td>(GMT+02:00) Windhoek</td>
</tr>
<tr>
<td>Africa/Harare</td>
<td>(GMT+02:00) Harare, Pretoria</td>
</tr>
<tr>
<td>Asia/Baghdad</td>
<td>(GMT+03:00) Baghdad</td>
</tr>
<tr>
<td>Africa/Nairobi</td>
<td>(GMT+03:00) Nairobi</td>
</tr>
<tr>
<td>Europe/Moscow</td>
<td>(GMT+03:00) Moscow, St. Petersburg, Volgograd</td>
</tr>
<tr>
<td>Asia/Kuwait</td>
<td>(GMT+03:00) Kuwait, Riyadh</td>
</tr>
<tr>
<td>Asia/Tehran</td>
<td>(GMT+03:30) Tehran</td>
</tr>
<tr>
<td>Asia/Baku</td>
<td>(GMT+04:00) Baku</td>
</tr>
<tr>
<td>Asia/Muscat</td>
<td>(GMT+04:00) Abu Dhabi, Muscat</td>
</tr>
<tr>
<td>Asia/Yerevan</td>
<td>(GMT+04:00) Yerevan</td>
</tr>
<tr>
<td>Asia/Tbilisi</td>
<td>(GMT+04:00) Tbilisi</td>
</tr>
<tr>
<td>Asia/Kabul</td>
<td>(GMT+04:30) Kabul</td>
</tr>
<tr>
<td>Asia/Karachi</td>
<td>(GMT+05:00) Islamabad, Karachi, Tashkent</td>
</tr>
<tr>
<td>Asia/Yekaterinburg</td>
<td>(GMT+05:00) Ekaterinburg</td>
</tr>
<tr>
<td>Asia/Kolkata</td>
<td>(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi</td>
</tr>
<tr>
<td>Asia/Kathmandu</td>
<td>(GMT+05:45) Kathmandu</td>
</tr>
<tr>
<td>Asia/Dhaka</td>
<td>(GMT+06:00) Astana, Dhaka</td>
</tr>
<tr>
<td>Asia/Novosibirsk</td>
<td>(GMT+07:00) Novosibirsk</td>
</tr>
<tr>
<td>Asia/Colombo</td>
<td>(GMT+05:30) Sri Jayawardenepura</td>
</tr>
<tr>
<td>Asia/Rangoon</td>
<td>(GMT+06:30) Yangon (Rangoon)</td>
</tr>
<tr>
<td>Asia/Bangkok</td>
<td>(GMT+07:00) Bangkok, Hanoi, Jakarta</td>
</tr>
</tbody>
</table>
### Supported Time Zone

<table>
<thead>
<tr>
<th>Time Zone Name</th>
<th>Computer Time Zone Description (GMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia/Krasnoyarsk</td>
<td>(GMT+08:00) Krasnoyarsk</td>
</tr>
<tr>
<td>Asia/Irkutsk</td>
<td>(GMT+09:00) Irkutsk</td>
</tr>
<tr>
<td>Asia/Kuala Lumpur</td>
<td>(GMT+08:00) Kuala Lumpur, Singapore</td>
</tr>
<tr>
<td>Asia/Taipei</td>
<td>(GMT+08:00) Taipei</td>
</tr>
<tr>
<td>Australia/Perth</td>
<td>(GMT+08:00) Perth</td>
</tr>
<tr>
<td>Asia/Chongqing</td>
<td>(GMT+08:00) Beijing, Chongqing, Hong Kong SAR,</td>
</tr>
<tr>
<td>Asia/Seoul</td>
<td>(GMT+09:00) Seoul</td>
</tr>
<tr>
<td>Asia/Tokyo</td>
<td>(GMT+09:00) Osaka, Sapporo, Tokyo</td>
</tr>
<tr>
<td>Asia/Yakutsk</td>
<td>(GMT+09:00) Yakutsk</td>
</tr>
<tr>
<td>Australia/Darwin</td>
<td>(GMT+09:30) Darwin</td>
</tr>
<tr>
<td>Australia/Adelaide</td>
<td>(GMT+09:30) Adelaide</td>
</tr>
<tr>
<td>Australia/Hobart</td>
<td>(GMT+10:00) Hobart</td>
</tr>
<tr>
<td>Australia/Canberra</td>
<td>(GMT+10:00) Canberra, Melbourne, Sydney</td>
</tr>
<tr>
<td>Australia/Brisbane</td>
<td>(GMT+10:00) Brisbane</td>
</tr>
<tr>
<td>Asia/Vladivostok</td>
<td>(GMT+10:00) Vladivostok</td>
</tr>
<tr>
<td>Pacific/Guam</td>
<td>(GMT+10:00) Guam, Port Moresby</td>
</tr>
<tr>
<td>Pacific/Guadalcanal</td>
<td>(GMT+11:00) Solomon Islands, New Caledonia</td>
</tr>
<tr>
<td>Pacific/Auckland</td>
<td>(GMT+12:00) Auckland, Wellington</td>
</tr>
<tr>
<td>Pacific/Fiji</td>
<td>(GMT+12:00) Fiji Islands</td>
</tr>
<tr>
<td>Pacific/Tongatapu</td>
<td>(GMT+13:00) Nuku alofa</td>
</tr>
</tbody>
</table>

**Note**

The Europe/Moscow, Pacific/Fiji, Pacific/Api, Asia/Yakutsk, and Asia/Vladivostok Time Zones currently do not support Daylight Saving Time. Thus, if you have to use one of these Time Zone Names, then either use one of the other Time Zone Names that has the same GMT offset, or consult with the Cisco Technical Assistance Center (TAC).
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