Cisco Service Portal Installation Guide

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About this Guide

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Objectives

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

Audience

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

Document Organization

The *Cisco Service Portal Installation Guide* is divided into the following five chapters:

- Chapter 1, "Platform Support Matrix": This chapter contains the Cisco Service Portal Platform Support Matrix table.
- Chapter 2, "Installation and Configuration Guide": This chapter contains instructions for installing and configuring Cisco Service Portal.
- Chapter 3, "Reporting Guide": This chapter contains instructions for installing and configuring Cisco Service Portal Reporting and Cognos software.
- Chapter 4, "Upgrade Guide": This chapter contains instructions for upgrading Cisco Service Portal Release 2008.3 or above to Release 9.4.
- Chapter 5, "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:

Convention	Indication
bold font	Commands and keywords and user-entered text appear in **bold** font.
italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in *italic* font.
[ ]	Elements in square brackets are optional.
{x | y | z }	Required alternative keywords are grouped in braces and separated by vertical bars.
[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
< >	Nonprinting characters such as passwords are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.
Choose **Menu item > Submenu item** from the X menu.	Selections from a menu path use this format. For example: Choose **Import > Formats** from the File menu.

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:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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.

CHAPTER 1

Platform Support Matrix

Table 1-1 Cisco Service Portal Platform Support Matrix

	Cisco Service Portal Release Version				
	9.4	**9.3.1/9.3.2**	**9.3**	**9.1**	**2008.3**
Browser					
Mozilla® Firefox® 3.6	My Services Portal Manager	My Services Portal Manager	My Services Portal Manager	My Services	My Services
Internet Explorer® (IE) 6				My Services Service Manager Service Designer	My Services
Internet Explorer (IE) 7	My Services Portal Manager Service Manager Excludes Catalog Deployer module	Yes	Yes	Yes	Yes
Internet Explorer (IE) 8	Yes	Yes	Yes	Yes	Yes
Safari® 4 on Mac OS® only				My Services	My Services
Web Server					
Apache™ 2.2	Yes	Yes	Yes	Yes	Yes
IBM® HTTP 6.1				Yes	Yes
IBM HTTP 7.0	Yes	Yes			
Microsoft® Internet Information Services (IIS) 6			Yes	Yes	Yes
Microsoft Internet Information Services (IIS) 7.5	Yes	Yes			
Application Server OS					
IBM AIX® 5.3 (32 & 64-bit)				Yes	Yes
IBM AIX 7.1 (64-bit)	Yes	Yes			
Microsoft Windows Server® 2003 SP2 (32-bit & 64-bit)			Yes	Yes	Yes
Microsoft Windows Server 2008 R2 (64-bit) with SP1	Yes	Yes			

Table 1-1 Cisco Service Portal Platform Support Matrix (continued)

	Cisco Service Portal Release Version				
	9.4	**9.3.1/9.3.2**	**9.3**	**9.1**	**2008.3**
Red Hat® Linux® ES/AS 4 (32-bit & 64-bit)			Yes	Yes	Yes
Red Hat Enterprise Linux 5.6 (32-bit & 64-bit)	Yes	Yes			
Sun™ Solaris™ 10 (64-bit)	Yes	Yes	Yes	Yes	Yes
Application Server					
Oracle® WebLogic® 10.3 (Sun JDK™ 6)	JDK 6 Update 30	JDK 6 Update 30	JDK 6 Update 23	JDK 6 Update 16	JDK 6 Update 12
IBM WebSphere® 6.1.x (IBM Java 1.5)				IBM Java 1.6 SR9	IBM Java 1.6 SR8
IBM WebSphere 7.0.0.x (IBM Java 1.6)	IBM Java 1.6 SR9	IBM Java 1.6 SR9			
Jboss® 4.2.3 (Sun JDK 6)		JDK 6 Update 30	JDK 6 Update 23	JDK 6 Update 16	JDK 6 Update 12
Jboss® 7.1.1.Final (Sun JDK 6)	JDK 6 Update 30				
Database					
Microsoft SQL Server® 2005			SP3	SP3	SP2
Microsoft SQL Server 2008 R2	SP1	SP1			
Oracle 10g			10.2.0.4	10.2.0.4	10.2.0.4
Oracle 11g	11.2.0.3	11.2.0.3			
LDAP					
IBM Tivoli® Directory Server 6.0	FP6	FP6		FP6	FP6
Microsoft Active Directory® 2003			Yes	Yes	Yes
Microsoft Active Directory 2008	Yes	Yes			
Sun Java™ System Directory Server 5.x	5.2 P6	5.2 P6	5.2 P6	5.2 P6	5.2 P6

Table 1-1 Cisco Service Portal Platform Support Matrix (continued)

	Cisco Service Portal Release Version				
	9.4	**9.3.1/9.3.2**	**9.3**	**9.1**	**2008.3**
Virtualization					
Virtualization Policy		Cisco is dedicated to the running of its products on virtualized platforms subject to the notes below: • Support for virtualized environments is conditioned on support of the guest operating system on which the Cisco product is running. • Cisco may attempt to address issues discovered in virtualized environments by recreating them in nonvirtual environments. Issues reported on VMware environments will be recreated on a VMware virtualized environment. • If a reported problem is likely caused by the virtualization layer, customers may be required to follow the guidance of the virtualization vendor's support which may include installing available patches or newer versions of the virtualization software. • Performance guidelines are based on dedicated, physical systems and should be adjusted accordingly for virtualized environments.			

CHAPTER 2

Installation and Configuration Guide

Overview

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

- "Prerequisites and Installation Overview" section on page 2-2: A quick reference on software and hardware requirements.
- "Configuring Databases" section on page 2-9: Instructions for configuring your databases for use with Service Portal.
- "Preinstallation Configuration for JBoss" section on page 2-13: Instructions for preparing your computer for installing Service Portal with JBoss Application Server.
- "Preinstallation Configuration for WebLogic" section on page 2-29: Instructions for configuring WebLogic Application Server prior to installing Service Portal.
- "Preinstallation Configuration for WebSphere" section on page 2-46: Instructions for configuring WebSphere Application Server prior to installing Service Portal.
- "Running the Service Portal Installer" section on page 2-64: Instructions to execute the Service Portal installer.
- "Postinstallation Configuration for JBoss" section on page 2-94: Instructions to deploy the Service Portal WAR files on JBoss Application Server.
- "Postinstallation Configuration for WebLogic" section on page 2-96: Instructions to deploy the Service Portal WAR files on WebLogic Application Server.
- "Postinstallation Configuration for WebSphere" section on page 2-99: Instructions to deploy the Service Portal WAR files on WebSphere Application Server.

Related Documentation

For information about performing an upgrade installation, see Chapter 4, "Upgrade Guide".

For information about installing the Reporting and IBM Cognos software, see Chapter 3, "Reporting Guide".

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

For information about customizing Service Portal stylesheets, see the *Cisco Service Portal Configuration Guide*.

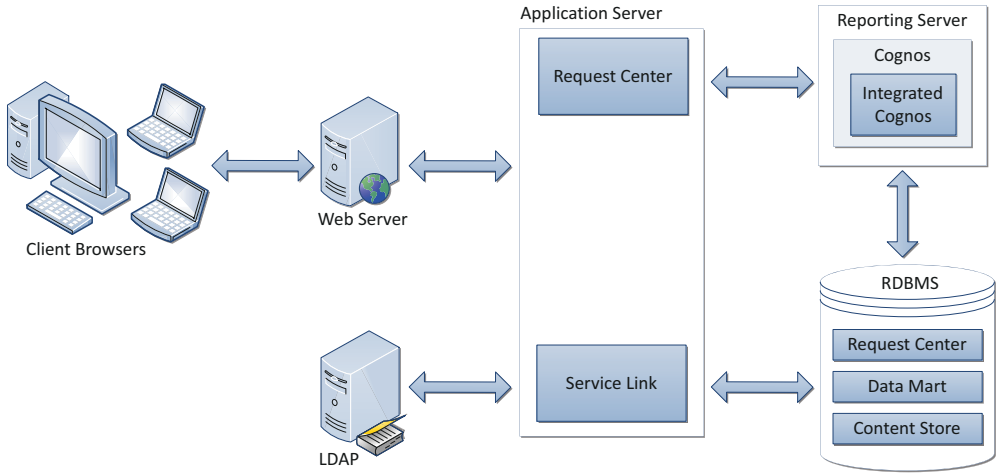
These guides are available on the http://www.cisco.com product download site.

Prerequisites and Installation Overview

Deployment Topology

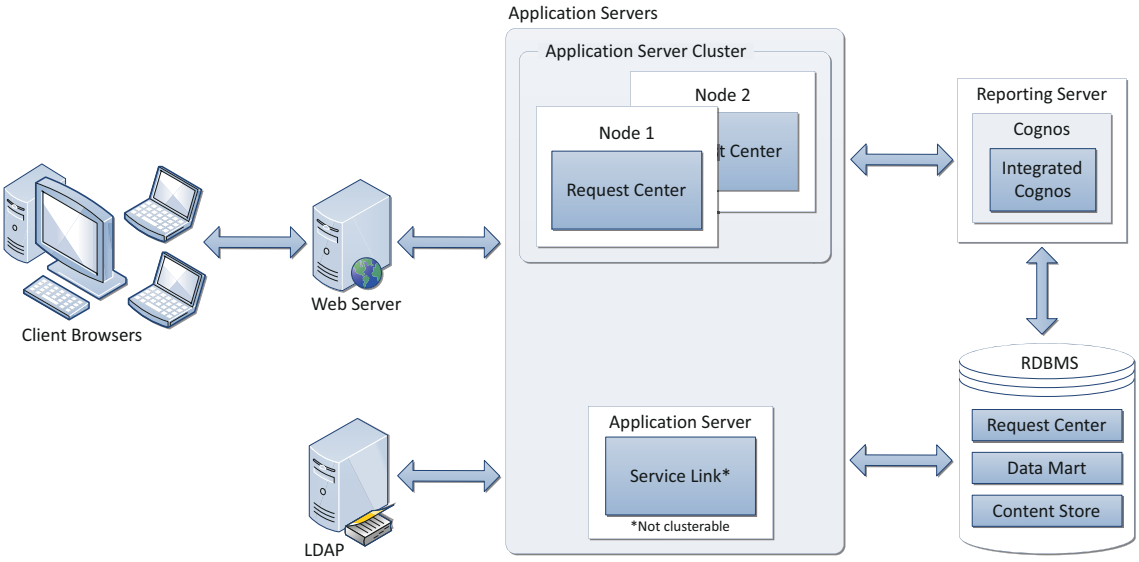
The following diagram depicts a typical deployment topology for Service Portal with one application server containing the Request Center and Service Link applications:

Figure 2-1 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 nonclusterable application server containing the Service Link application:

Figure 2-2 Clustered Topology



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 Service Portal.

Table 2-1 Supported Software

Browser
Microsoft Internet Explorer 8
Microsoft Internet Explorer 7 (*supported for the My Services, Portal Manager, and Service Manager modules only; not supported for the Catalog Deployer module*)
Mozilla Firefox 3.6.x (*supported for the My Services and Portal Manager modules only)*
Browser Plugins
Adobe® Flash® Player is required to display the Service Link Home Page graph.
Web Server
Apache 2.2.x
IBM HTTP Server 7.0
Microsoft Internet Information Services (IIS) 7.5
Application Server + Java Development Kit
Oracle WebLogic 10.3 + Sun JDK 6 Update 30 (or higher Update)
IBM WebSphere 7.0.0.21 (or higher 7.0.0.x) + with IBM Java 1.6.0 SR9 (or higher SR)
JBoss 7.1.1.Final + with Sun JDK 6 Update 30 (or higher Update)
Application Server Operating System
Microsoft Windows Server 2008 R2 (64-bit) with SP1
Red Hat Enterprise Linux Server 5.6 (64-bit)
Sun Solaris 10
IBM AIX 7.1
Database
Microsoft SQL Server 2008 R2, with SP1 (Express Edition of SQL Server is not recommended for production use)
Oracle 11g, version 11.2.0.3 (or higher 11.2.0.x) (Express Edition of Oracle Database is not recommended for production use)
LDAP
Microsoft Active Directory 2008
Sun Java System Directory Server 5.2 P6
IBM Tivoli Directory Server 7.0
IBM Cognos® (Note: IBM Cognos software is only supported on Microsoft Windows Server 2008 R2 (64-bit) operating system.)

Table 2-1 Supported Software (continued)

IBM Cognos Business Intelligence Server, version 8.4.1, with FP4
IBM Cognos Data Manager, version 8.4.1, with FP4

Software Configuration Prerequisites

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

Browser

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

- Popup blocker is turned OFF.
- Cookies are enabled.
- For Internet Explorer, the Privacy Option must be set to Medium High or lower.
- 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 The Mozilla Firefox browser is only supported for the **My Services** and **Portal Manager** modules of the Service Portal product. Thus, if you are an administrative user who needs to access other modules such as **Administration** or **Service Link**, you must use Internet Explorer (IE) 7 or 8. Furthermore, you will need IE 7 or 8 to complete your tasks during the installation verification process, described later in this guide.

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 Portal installer.

The web server must also 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 Portal installer.

If you choose to use Apache Web Server running on Solaris operating system, then your Apache installation must include all of the Apache Web Server optional modules.

Verify that your web server is running by opening a browser and connect to the URL http://<webserver_host>:<webserver_port>, where <webserver_host> is the hostname of your web server, and <webserver_port> is the port number used by your web server. Write down the values for <webserver_host> and <webserver_port>; you will need to provide these values during the installation.

Application Server

If you choose JBoss as your application server, you need to install the JBoss Application Server software as a prerequisite on your machine. Follow the instructions in the "Preinstallation Configuration for JBoss" section on page 2-13 to prepare your machine for installing Service Portal 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 2-29 to prepare your WebLogic Server for use with Service Portal.

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 2-46 to prepare your WebSphere Server for use with Service Portal.

Clustering Considerations

If you are going to deploy Service Portal in a clustered WebLogic or WebSphere environment, your WebLogic or WebSphere Application Servers must be set up in a clustered configuration before you install Service Portal. Additionally, if you want to provide full failover capability, then you must configure clusterable sessions on one or more of the clustered nodes. Please see your application server documentation for information on clustered configuration.

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

Java Development Kit

Java Development Kit is a prerequisite software on your application server machine. As listed in Table 2-1, only specific versions (and vendors) of Java Development Kit 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 2-13, the "Preinstallation Configuration for WebLogic" section on page 2-29, and the "Preinstallation Configuration for WebSphere" section on page 2-46.

Java is also a prerequisite for the Cisco Service Portal installer. Thus, you need to install Java Development Kit on the machine where you plan to execute the Cisco Service Portal installer.

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 2-1 for specific version). You do not need to install any SQL Server Client Connectivity software on your application server machine. The Cisco Service Portal installer will automatically install the JDBC driver needed for communicating with the database server.

If you choose Oracle 11g as your RDBMS, you need to install the Oracle 11g Database Server software as a prerequisite (see Table 2-1 for specific version). You do not need to install any Oracle Client Connectivity software on your application server machine. The Cisco Service Portal installer will automatically install the JDBC driver needed for communicating with the database server.

Your database must be configured to enable TCP/IP for client connectivity. The "Configuring Databases" section on page 2-9 contains instructions on how to create a database or schema for use with Service Portal.

LDAP

Service Portal 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 Portal.

If you plan to use the LDAP integration feature, see the *Cisco Service Portal Integration Guide*. Ensure that you use only one of the supported LDAP software listed in Table 2-1.

IBM Cognos

Service Portal 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 Portal application, the Cognos software must be installed in your deployment topology. This software can be installed after the Service Portal software is installed. The instructions for installing and configuring Cognos software can be found in Chapter 3, "Reporting Guide."

Other Miscellaneous Settings

X-Window or Xvfb

For the UNIX or Linux operating system, you must have either X-Window Server or Xvfb (virtual framebuffer X server) installed AND running, in order for the KPI Charts, which are included in the Reporting module, to be displayed properly on the Service Portal UI. If you are not using the KPI Charts feature in Service Portal, then X-Window Server is not required.

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, in order to extract the Cisco Service Portal software installer package.

Network – TCP/IP

TCP/IP must be configured on all host computers.

SMTP

You need to set up a SMTP server for email notification, and a valid email address that the Service Portal system will use to send out system alerts to the system administrator. You will need to supply the SMTP address and a valid email address during the installation of the Service Portal software.

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 exact 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:

- Intel Core 2 Duo processor or equivalent
- 4 GB RAM
- 40 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:

- Intel Core 2 Duo processor or equivalent
- 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:

- Intel Core 2 Duo processor or equivalent
- 4 GB RAM

- 50 GB *free* hard disk space. (Disk space requirement is dependent on the *projected* size of your Service Portal 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:

- Intel Core 2 Duo processor or equivalent
- 2 GB RAM
- 40 GB *free* hard disk space

Note The IBM Cognos 8.4.1 software that is bundled with Service Portal 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 Portal:

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 RequestCenter and Datamart databases, as described in the "Configuring Databases" section on page 2-9. Complete the "Database Information Worksheet" at the end of the section. You will need this information when running the Service Portal installation wizard.

Step 3 Prepare the application server for use with Service Portal, by performing the tasks described in one of the following sections:

a. For JBoss, go to the "Preinstallation Configuration for JBoss" section on page 2-13.

b. For WebLogic, go to the "Preinstallation Configuration for WebLogic" section on page 2-29.

c. For WebSphere, go to the "Preinstallation Configuration for WebSphere" section on page 2-46.

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

Step 4 Run the Service Portal installer on the application server machine, as described in the "Running the Service Portal Installer" section on page 2-64. If you are performing an upgrade installation from a previous release, see Chapter 4, "Upgrade Guide" in conjunction with this section.

Step 5 Perform the postinstallation 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" section on page 2-94.

b. For WebLogic, go to the "Postinstallation Configuration for WebLogic" section on page 2-96.

c. For WebSphere, go to the "Postinstallation Configuration for WebSphere" section on page 2-99.

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 Portal application. When you are ready to do this, follow the instructions in Chapter 3, "Reporting Guide".

Configuring Databases

The Cisco Service Portal product requires two databases—a RequestCenter database and a Datamart database. Both databases must be of the same type and version of RDBMS, although they may reside on two different database instances. For example, both databases must be on the same version of SQL Server 2008, or both databases must be on the same version of Oracle 11g. There cannot be a mixture of a SQL Server database and an Oracle database.

Note The IBM Cognos software requires its own database called ContentStore, which is not described in this chapter. The instructions for configuring the ContentStore database are included in Chapter 3, "Reporting Guide". The ContentStore database must also be of the same type and version of RDBMS as the RequestCenter and Datamart databases.

Configuring Oracle

If you choose to use Oracle for your databases, follow the instructions in this section to prepare the Oracle server and to create two Oracle users: one for the RequestCenter database schema, and one for the Datamart database 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 Portal 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.

Creating Tablespace and User for RequestCenter Database

Note If you cannot create the tablespaces and the database user accounts, contact your database administrator and provide the database requirements outlined in this chapter.

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 Grant the following permissions to **RCUser**:

```
CREATE SESSION
CREATE TABLE
CREATE PROCEDURE
CREATE SEQUENCE
CREATE TRIGGER
CREATE VIEW
CREATE MATERIALIZED VIEW
CREATE SYNONYM
ALTER SESSION
CREATE ANY DIRECTORY
```

Creating Tablespace and User for Datamart Database

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

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

Step 3 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.

Step 4 Grant the following permissions to **DMUser**:

```
CREATE SESSION
CREATE TABLE
CREATE PROCEDURE
CREATE SEQUENCE
CREATE TRIGGER
CREATE VIEW
CREATE MATERIALIZED VIEW
CREATE SYNONYM
ALTER SESSION
```

Grant Execute Permission on DBMS_LOB

Grant “RCUser” the permission to execute all functions inside the DBMS_LOB package (which is owned by the SYS user):

- Login to Oracle database as SYS user (for example, sqlplus sys/<pwd>@<ORACLE_SID> as sysdba).
- Execute the following commands:

```
GRANT EXECUTE ON DBMS_LOB 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 two databases: RequestCenter and Datamart.

Default Instance

The SQL Server must be set up as a ***Default Instance***. *Named Instance* SQL Server is not supported.

Mixed-Mode Authentication

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

Creating RequestCenter Database and User

Step 1 Create a database named **RequestCenter** in the *Default Instance* of SQL Server, with initial size of 500 MB.

Step 2 Put the RequestCenter database in single-user mode, and execute the following command:

ALTER DATABASE RequestCenter SET READ_COMMITTED_SNAPSHOT ON.

Step 3 Put the RequestCenter database back in multiuser mode.

Step 4 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 5 Ensure that the “Enforce Password Policy” option is unchecked in the Security setting properties for RCUser. Furthermore, the password for RCUser should be a combination of letters (either upper or lowercase) and numbers. Do not use any special characters like underlines, asterisks, brackets, and so on. Some combinations of these special characters could cause the installer to fail at product installation time with a “Database Connection Test failed” error message.

Step 6 Assign this RCUser to be the **db_owner** of the “RequestCenter” database. Verify your setting to ensure that a) the user name “RCUser” in the RequestCenter database is mapped to the login name “RCUser” in the SQL Server, b) the default schema is “dbo”, c) the user name “RCUser” has the “db_owner” database role membership.

Creating Datamart Database and User

Step 1 Create a database named **Datamart** in the *Default Instance* of SQL Server, with initial size of 500 MB.

Step 2 Create a SQL Server Login named **DMUser**, with the Default Database property set to “Datamart”.

Note DMUser must be a SQL Server login account that authenticates to the SQL Server using SQL Server authentication method, and not Windows authentication method.

Step 3 Ensure that the "Enforce Password Policy" option is unchecked in the Security setting properties for DMUser. Furthermore, the password for DMUser should be a combination of letters (either upper or lowercase) and numbers. Do not use any special characters like underlines, asterisks, brackets, and so on. Some combinations of these special characters could cause the installer to fail at product installation time with a "Database Connection Test failed" error message.

Step 4 Assign this DMUser to be the **db_owner** of the "Datamart" database. Verify your setting to ensure that a) the user name "DMUser" in the Datamart database is mapped to the login name "DMUser" in the SQL Server, b) the default schema is "dbo", c) the user name "DMUser" has the "db_owner" database role membership.

Database Information Worksheet

Complete the following "Database Information Worksheet" by entering your configuration values in the "**Value**" column. The information in this worksheet will be needed when you run the Service Portal and Reporting installation wizards.

Table 2-2 Database Information Worksheet

Field	Description	Value
Service Portal Database		
Database Type	The type of RDBMS. Enter **Microsoft SQL Server** or **Oracle**.	
Hostname	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.	
Port	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.	
Database Name (**Microsoft SQL Server only**)	The name of the RequestCenter database. By default this is RequestCenter.	
Database SID (**Oracle only**)	The SID of the Oracle server where the RequestCenter database resides. By default this is ORCL.	
Username	The username that the Service Portal application uses to authenticate with the RequestCenter database at runtime. The default username is RCUser.	
Password	The password for the Database User.	
Execute database scripts? (**Advanced Installation only**)	Check the check box to execute all database scripts. This is checked by default.	
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.	

Table 2-2 Database Information Worksheet (continued)

Field	Description	Value
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.	
Reporting Data Mart Database		
Hostname	The Hostname or IP address of the Database Server for the Datamart database. For example, servername.domain.com. The default value is the full qualified domain name (FQDN) of the machine you are currently on.	
Port	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.	
Database Name (**Microsoft SQL Server only**)	The name of the Datamart database. By default this is Datamart.	
Database SID (**Oracle only**)	The SID of the Oracle server where the Datamart database resides. By default this is ORCL.	
Username	The User ID that Service Portal application uses to authenticate with the Datamart database at runtime. The default username is DMUser.	
Password	The password for the Datamart Database User.	

Preinstallation Configuration for JBoss

This section contains instructions for configuring the JBoss Application Servers, prior to installing Service Portal.

This release of Service Portal supports JBoss Application Server on the following operating systems, web servers, and Java Development Kit:

Table 2-3 JBoss Supported Operating System, Web Server, and Java

JBoss Application Server	Operating System	Web Server	Java
JBoss AS 7.1.1.Final	Windows Server 2008 R2 (64-bit), with SP1	Microsoft Internet Information Services (IIS) 7.5	Oracle JDK 6 Update 30 (or higher update)
JBoss AS 7.1.1.Final	Red Hat Enterprise Linux Server 5.6	Apache 2.2.x	Oracle JDK 6 Update 30 (or higher update)

There are two recommended topologies for the JBoss platform:

1. **One JBoss server**: where the Request Center application, the Service Link application, and the JMS service are all located in the same JBoss server.
2. **Two JBoss servers on the same machine**: where JBoss server #1 will have the Request Center application and JMS service, and JBoss server #2 will have only the Service Link application.

Note For a nonproduction system, the One-JBoss-server topology can be used to save resources. For a production system, the Two-JBoss-server topology is recommended for better performance.

The configuration settings for JBoss will depend on which topology you choose. This chapter describes the settings for both topologies.

Furthermore, if you choose the "One-JBoss-server topology", when you run the Service Portal installation wizard, you can choose either the "Typical" or "Advanced" installation option. But, if you choose the "Two-JBoss-server topology", when you run the Service Portal installation wizard, you must choose the "Advanced" installation option.

The "Typical" installation option assumes that all of the following reside in the same application server: a) Request Center application, b) Service Link application, c) JMS service. Thus, the Service Portal installation wizard prompts you to enter the application server information only once.

The "Advanced" installation option allows you to enter the application server information separately for each of the following: Request Center application, Service Link application, and JMS service. So in the case of the "Two-JBoss-server topology", the application server information for the Request Center application is different from the application server information for the Service Link application. But since the JMS service resides in the same JBoss server with Request Center, the application server information for JMS is the same as that of Request Center.

Note A clustered JBoss environment is NOT supported for this release of Cisco Service Portal.

Installing Java

In this section, you will install the Java Development Kit as prerequisite, and prepare the environment variables on your computer.

Step 1 Download Oracle JDK 6 Update 30 (or higher Update) from the Oracle web site. Make sure you download the correct version of JDK 6. Only Update 30 or later is supported. JDK 7 is not supported.

Step 2 Install Oracle JDK 6 on your computer.

Step 3 Set the system environment variable JAVA_HOME to point to the Oracle JDK that you installed.

Step 4 On a Windows operating system, add "%JAVA_HOME%\bin" to the %PATH% environment variable. On Linux, add "$JAVA_HOME/bin" to the $PATH environment variable.

Installing JBoss Software

In this section, you will download and install the JBoss AS software.

Step 1 Go to the JBoss Community web site. Browse for the project named "JBoss Application Server 7". Then download file "jboss-as-7.1.1.Final.zip" or "jboss-as-7.1.1.tar.gz" for your corresponding operating system.

Step 2 Extract the JBoss file to a directory that will become the *<JBOSS_DIR>* on your computer. For example,

- (On Windows) Extract the file to the "C:\jboss-as-7.1.1.Final" directory.

- (On Linux) Extract the file to the "/opt/jboss-as-7.1.1.Final" directory.

Downloading Service Portal Software

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

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 portal solution you have purchased. (Navigation: **Products > Network Management and Automation > Data Center Management and Automation > Intelligent Automation> Cisco Cloud Portal,** or **Cisco Workplace Portal**).

Step 3 Choose **Product Install** and click the link for the appropriate operating system.

Step 4 You are presented with a list of folders for the different releases available. Locate Release **9.4** and click it.

Step 5 Download file **CSP_9.4.0_win.zip** for the Windows operating system, or file **CSP_9.4.0_unix.tar.gz** for the UNIX/Linux operating system.

Step 6 The installer program is common across all the products within the product family. If you have purchased Reporting or Demand Center in addition to Cloud or Workplace Portal, you do not need to download the installer again.

Step 7 Extract the software image to a directory on your application server machine. For example, extract the software to C:\CSP_Download (for Windows) or /opt/CSP_Download (for UNIX/Linux). For the rest of this document, this directory is referred to as the <*ServicePortal_Software_Dir*>.

Note The CSP_9.4.0_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 Cisco Library

In this section, you will copy some Cisco library files to the <*JBOSS_DIR*> directory.

Step 1 Open the "<*ServicePortal_Software_Dir*>/jboss/modules" folder.

Step 2 Copy everything under the "<*ServicePortal_Software_Dir*>/jboss/modules" to the "<*JBOSS_DIR*>/modules" directory, keeping the directory structure intact.

Step 3 Copy file "<JAVA_HOME>/jrelib/rt.jar" to the "<JBOSS_DIR >/modules/sun/io/main" folder.

Modifying Startup Parameters for JBoss

In this section, you will modify the JBoss "standalone.conf" file, which contains the startup parameters for JBoss, including the JVM memory settings.

For the Windows operating system:

Step 1 Locate file **standalone.conf.bat** under the "<*JBOSS_DIR*>\bin" directory, and make the modifications as listed below.

Step 2 Search for the string "JAVA_HOME=". Remove the word **rem** at the beginning of the statement, and set the value to the JDK installation directory on your computer. For example, the modified statement should look like:

```
set "JAVA_HOME=C:\jdk1.6.0_30"
```

Step 3 Search for the string "JAVA_OPTS=-Xms64M". Replace the entire statement (i.e. the entire line) with the following:

```
set "JAVA_OPTS=-Xms1024m -Xmx1024m -XX:PermSize=256m -XX:MaxPermSize=256m -XX:NewRatio=3"
```

Step 4 Search for the string "config=standalone.xml". Replace it with "**config=standalone-full.xml**".

Step 5 Search for the string ":JAVA_OPTS_SET". Right above this statement, add a brand new statement (all on one line) as follows:

```
set "JAVA_OPTS=%JAVA_OPTS%
-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"
```

For the Linux operating system:

Step 1 Locate file **standalone.conf** under the "<*JBOSS_DIR*>/bin" directory, and make the modifications as listed below.

Step 2 Search for the string "JAVA_HOME=". Remove the **#** sign at the beginning of the statement, and set the value to the JDK installation directory on your computer. For example, the modified statement should look like:

```
JAVA_HOME="/opt/jdk1.6.0_30"
```

Step 3 Search for the string "JAVA_OPTS=-Xms64M". Replace the following part of the line:

```
JAVA_OPTS="-Xms64m -Xmx512m -XX:MaxPermSize=256m
```

with the following values, leaving everything after "-XX:MaxPermSize= 256m" as is:

```
JAVA_OPTS="-Xms1024m -Xmx1024m -XX:PermSize=256m -XX:MaxPermSize=256m -XX:NewRatio=3
```

Step 4 Search for the string "config=standalone.xml". Replace it with "**config=standalone-full.xml**".

Step 5 Go to the bottom of the file and add a brand new statement (all on one line) as follows:

```
JAVA_OPTS="$JAVA_OPTS
-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"
```

Adding Users

In this section, you will use the "add-user" utility to create an administrator user and an application user for your JBoss installation.

Step 1 Open a Command Prompt (on Windows) or a console window (on Linux), and cd to the "<*JBOSS_DIR*>/bin" directory.

Step 2 Execute **add-user.bat** (on Windows) or **./add-user.sh** (on Linux). (*Note: You will create a management user for the Administration Console.*)

Step 3 At each prompt, enter the value as seen in **bold print** below:

```
What type of user do you wish to add?
a) Management User (mgmt-users.properties)
b) Application User (application-users.properties)
(a):  a
Enter the details of the new user to add.
Realm (ManagementRealm) :
Username :  adminuser
Password :  <adminuser_password>
Re-enter Password : <re-enter the adminuser_password>
Are you sure you want to add user 'adminuser'  yes/no?  yes
About to add user 'adminuser' for realm 'ManagementRealm'
Is this correct yes/no?  yes
Add user 'adminuser' to file 'C:\jboss-as-7.1.1.Final\
standalone\configuration\mgmt-users.properties'
Add user 'adminuser' to file 'C:\jboss-as-7.1.1.Final\domain\
configuration\mgmt-users.properties'
Press any key to continue . . .
```

Step 4 Execute **add-user.bat** (on Windows) or **./add-user.sh** (on Linux) again. (*Note: You will create an application user for the JMS Queues.*)

Step 5 At each prompt, enter the value as seen in **bold print** below:

```
What type of user do you wish to add?
a) Management User (mgmt-users.properties)
b) Application User (application-users.properties)
(a):  b
Enter the details of the new user to add.
Realm (ApplicationRealm) :
Username : jmsuser
Password : <jmsuser_password>
Re-enter Password : <re-enter the jmsuser_password>
What roles do you want this user to belong to? (Please enter a comma separated list, or
leave blank for none) : jmsrole
About to add user 'jmsuser' for realm 'ApplicationRealm'
Is this correct yes/no? yes
Added user 'jmsuser' to file 'C:\jboss-as-7.1.1.Final\
standalone\configuration\application-users.properties'
Added user 'jmsuser' to file 'C:\jboss-as-7.1.1.Final\domain\
configuration\application-users.properties'
Added user 'jmsuser' with roles jmsrole to file
'C:\jboss-as-7.1.1.Final\standalone\configuration\application-roles.properties'
```

```
Added user 'jmsuser' with roles jmsrole to file
'C:\jboss-as-7.1.1.Final\domain\configuration\application-roles.properties'
Press any key to continue . . .
```

Modifying Configuration Files for JBoss

In this section, you will modify the JBoss configuration files in order for the Service Portal product to work. (Note: The default settings that come with the original installation of JBoss 7.1.1.Final are not enough for the Service Portal product to fully function.)

Optionally, you can overwrite the JBoss configuration files with the templates that the Cisco product team has already prepared. This will save you some time and effort by not having to manually add/modify the settings in the JBoss configuration files yourself, which can be a very time consuming task. However, by using the templates from Cisco, your JBoss installation can ONLY be used for Cisco Service Portal, Release 9.4. You cannot deploy another product on the same JBoss installation.

If overwriting your JBoss configuration files with the templates provided by Cisco is not a feasible option for you, then compare these templates with the original JBoss configuration files to see what entries you need to manually add or modify in your JBoss configuration files in order for the Service Portal product to work.

Do the following if you want to set up the “One-JBoss-server topology”:

Step 1 Locate the following template files under the directory “<*ServicePortal_Software_Dir*>/preinstall/jboss/templates/one-server-topology”:

- standalone-full.xml
- logging.properties

Step 2 Copy the above template files to your “<*JBOSS_DIR*>/standalone/ configuration” directory, overwriting the existing files,

or

Compare the above template files with the ones under your “<*JBOSS_DIR*>/standalone/configuration” directory, and then manually add or modify the settings in your JBoss configuration files to have the same values as the ones shown in the template files.

Do the following if you want to set up the “Two-JBoss-server topology”:

Step 1 Locate the following template file under the directory “<*ServicePortal_Software_Dir*>/preinstall/jboss/templates/two-server-topology/RC”:

- standalone-full.xml
- logging.properties

Step 2 Copy the above template files to your “<*JBOSS_DIR*>/standalone/ configuration” directory, overwriting the existing files,

or

Compare the above template files with the ones under your "<*JBOSS_DIR*>/ standalone/configuration" directory, and then manually add or modify the settings in your JBoss configuration files to have the same values as the ones shown in the template files.

Starting the JBoss Server

You are now ready to start the JBoss server.

For the Windows operating system:

Step 1 Open a Command Prompt window, and cd to the "<*JBOSS_DIR*>\bin" directory.

Step 2 Execute **standalone.bat**.

After executing the above command, you should see output similar to what is shown below.

```
Calling "c:\jboss-as-7.1.1.Final\bin\standalone.conf.bat"
================================================================================
JBoss Bootstrap Environment

JBOSS_HOME: c:\jboss-as-7.1.1.Final

JAVA: C:\jdk1.6.0_30\bin\java

JAVA_OPTS: -XX:+TieredCompilation -Dprogram.name=standalone.bat -Xms1024m -Xmx
1024m -XX:PermSize=256m -XX:MaxPermSize=256m -XX:NewRatio=3 -Dsun.rmi.dgc.client
.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000 -Djava.net.preferIPv
4Stack=true -Dorg.jboss.resolver.warning=true -Djboss.modules.system.pkgs=org.jb
oss.byteman -Djboss.server.default.config=standalone-full.xml -XX:CompileCommand
=exclude,com/newscale/bfw/signon/filters/AuthenticationFilter,doFilter -XX:Compi
leCommand=exclude,org/apache/xml/dtm/ref/sax2dtm/SAX2DTM,startElement -XX:Compil
eCommand=exclude,org/exolab/castor/xml/Marshaller,marshal -XX:CompileCommand=exc
lude,org/apache/xpath/compiler/XPathParser,UnionExpr -XX:CompileCommand=exclude,
org/apache/oro/text/regex/Perl5Compiler,__parseAtom

================================================================================

CompilerOracle: exclude com/newscale/bfw/signon/filters/AuthenticationFilter.doFilter
CompilerOracle: exclude org/apache/xml/dtm/ref/sax2dtm/SAX2DTM.startElement
CompilerOracle: exclude org/exolab/castor/xml/Marshaller.marshal
CompilerOracle: exclude org/apache/xpath/compiler/XPathParser.UnionExpr
CompilerOracle: exclude org/apache/oro/text/regex/Perl5Compiler.__parseAtom
06:33:01,310 INFO  [org.jboss.modules] JBoss Modules version 1.1.1.GA
06:33:01,763 INFO  [org.jboss.msc] JBoss MSC version 1.0.2.GA
06:33:01,857 INFO  [org.jboss.as] JBAS015899: JBoss AS 7.1.1.Final "Brontes" starting…
```

For the Linux operating system:

Step 1 Open a console window, and cd to the "<*JBOSS_DIR*>/bin" directory.

Step 2 Execute **./standalone.sh**.

After executing the above command, you should see output similar to what's shown below.

```
================================================================================
```

```
JBoss Bootstrap Environment

JBOSS_HOME: /opt/jboss-as-7.1.1.Final

JAVA: /opt/jdk1.6.0_30/bin/java

JAVA_OPTS:  -server -XX:+UseCompressedOops -XX:+TieredCompilation -Xms1024m -Xmx1024m
-XX:PermSize=256m -XX:MaxPermSize=256m -XX:NewRatio=3 -Djava.net.preferIPv4Stack=true
-Dorg.jboss.resolver.warning=true -Dsun.rmi.dgc.client.gcInterval=3600000
-Dsun.rmi.dgc.server.gcInterval=3600000 -Djboss.modules.system.pkgs=
org.jboss.byteman -Djava.awt.headless=true
-Djboss.server.default.config=standalone-full.xml
-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

=========================================================================

CompilerOracle: exclude com/newscale/bfw/signon/filters/AuthenticationFilter.doFilter
CompilerOracle: exclude org/apache/xml/dtm/ref/sax2dtm/SAX2DTM.startElement
CompilerOracle: exclude org/exolab/castor/xml/Marshaller.marshal
CompilerOracle: exclude org/apache/xpath/compiler/XPathParser.UnionExpr
CompilerOracle: exclude org/apache/oro/text/regex/Perl5Compiler.__parseAtom
08:39:42,148 INFO  [org.jboss.modules] JBoss Modules version 1.1.1.GA
08:39:42,993 INFO  [org.jboss.msc] JBoss MSC version 1.0.2.GA
08:39:43,129 INFO  [org.jboss.as] JBAS015899: JBoss AS 7.1.1.Final "Brontes" starting…

-------------------------------------------------------------------------------------------
```

How to Stop/Start the JBoss Server

This section describes how to start/stop the JBoss server, in case you need to bounce the server.

For the Windows operating system

To start the JBoss server:

Step 1 Open a Command Prompt window.

Step 2 Cd to the <*JBOSS_DIR*>\bin directory.

Step 3 Execute the following command: **standalone.bat**.

To stop the JBoss server:

Step 1 Press **Ctrl-C** on the same Command Prompt window where the JBoss server was started.

For the Linux operating system

To start the JBoss server in the background:

Step 1 Open a console window.

Step 2 Cd to the <*JBOSS_DIR*>/bin directory.

Step 3 Execute the following command: **nohup ./standalone.sh &**.

Step 4 Monitor the startup progress of the JBoss server by executing the following command: **tail -f nohup.out**.

To stop the JBoss server:

Step 1 Open a console window.

Step 2 Cd to the <*JBOSS_DIR*>/bin directory.

Step 3 Execute the following command: **./jboss-cli.sh --connect --command=:shutdown**.

Finding Port Numbers for JBoss Server

In this section, you will look for the port numbers used by this JBoss server, and write them down. You will need to enter these port numbers when you run the Service Portal installation wizard later.

Step 1 Launch a browser and connect to http://<hostname>:8080, where <hostname> is either the servername or IP address of the machine where the JBoss server is running. You should see the "Welcome to AS 7" page.

Step 2 In the "Welcome to AS 7" page, click the **Administration Console** link.

Step 3 At the Login prompt, enter **adminuser** for the user name, **<adminuser_password>** for the password, and then click **OK**. (This is the user that you created earlier in the "Adding Users" section on page 2-17.)

Step 4 In the top right-hand corner of the screen, click **Profile**.

Step 5 In the left pane of the Administration Console, expand the "General Configuration" node, and click **Socket Binding**.

Step 6 Look for the following names and write down the port numbers.

Name	Port	Where to enter in the Service Portal installation wizard
http	8080	Application Server Configuration page, Field=AppServer HTTP port
remoting	4447	Application Server Configuration page, Field=AppServer JNDI port Messaging Configuration page, Field=Queue port
ajp	8009	This port number is only needed when you configure the plugin with IIS or Apache web server.

What's Next?

If you want to have a "One-JBoss-server topology", then proceed to the "Adding the JDBC Datasource" section on page 2-25.

If you want to have a "Two-JBoss-server topology", then proceed immediately to the Installing Second JBoss Server below.

Installing Second JBoss Server

In this section, you will install a second JBoss server on the same computer. This is referred to as the "Two-JBoss-server topology". This second instance of JBoss is used for the Service Link application.

Step 1 Stop the JBoss server.

Step 2 Rename the <*JBOSS_DIR*> directory to <*JBOSS_DIR_RC*> by appending the string "_RC" to the end of the directory name. For example,

- (On Windows) Rename "C:\jboss-as-7.1.1.Final" to "C:\jboss-as-7.1.1.Final_RC".
- (On Linux) Rename "/opt/jboss-as-7.1.1.Final" to "/opt/jboss-as-7.1.1.Final_RC".

Step 3 Make a duplicate copy of the entire <*JBOSS_DIR_RC*> directory on your computer. This becomes the <*JBOSS_DIR_SL*> directory. For example,

- (On Windows) Copy the entire "C:\jboss-as-7.1.1.Final_RC" directory to "C:\jboss-as-7.1.1.Final_SL".
- (On Linux) Copy the entire "/opt/jboss-as-7.1.1.Final_RC" directory to "/opt/jboss-as-7.1.1.Final_SL".

Modifying Startup Parameters for Second JBoss Server

In this section, you will modify the JBoss "standalone.conf" file, which contains the startup parameters for JBoss, including the JVM memory settings.

For the Windows operating system:

Step 1 Locate file **standalone.conf.bat** under the "<*JBOSS_DIR_SL*>\bin" directory, and make the modifications as listed below.

Step 2 Search for the following statement, and remove it:

```
set "JAVA_OPTS=%JAVA_OPTS%
-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"
```

For the Linux operating system:

Step 1 Locate file **standalone.conf** under the "<*JBOSS_DIR_SL*>/bin" directory, and make the modifications as listed below.

Step 2 Search for the following statement, and remove it:

```
JAVA_OPTS="$JAVA_OPTS
-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"
```

Modifying Configuration Files for Second JBoss Server

In this section, you will modify the JBoss configuration files in order for the Service Portal product to work. (Note: The default settings that come with the original installation of JBoss 7.1.1.Final are not enough for the Service Portal product to fully function.)

Optionally, you can overwrite the JBoss configuration files with the templates that the Cisco product team has already prepared. This will save you some time and effort by not having to manually add/modify the settings in the JBoss configuration files yourself, which can be a very time consuming task. However, by using the templates from Cisco, your JBoss installation can ONLY be used for Cisco Service Portal Release 9.4. You cannot deploy another product on the same JBoss installation.

If overwriting your JBoss configuration files with the templates provided by Cisco is not a feasible option for you, then compare these templates with the original JBoss configuration files to see what entries you need to manually add or modify in your JBoss configuration files in order for the Service Portal product to work.

Do the following for the "Two-JBoss-server topology":

Step 1 Locate the following template files under the directory "<*ServicePortal_Software_Dir*>/preinstall/jboss/templates/two-server-topology/SL":

- standalone-full.xml
- logging.properties
- jboss-cli.xml

Step 2 Copy "standalone-full.xml" and "logging.properties" to your "<*JBOSS_DIR_SL*>/standalone/configuration" directory, overwriting the existing files,

or

Compare "standalone-full.xml" and "logging.properties" with the ones under your "*JBOSS_DIR_SL*>/standalone/configuration" directory, and then manually add or modify the settings in your JBoss configuration files to have the same values as the ones shown in the template files.

Step 3 Copy "jboss-cli.xml" to your "<*JBOSS_DIR_SL*>/bin" directory, overwriting the existing file,

or

Compare "jboss-cli.xml" with the one under your "<*JBOSS_DIR_SL*>/bin" directory, and then manually add or modify the settings in your "jboss-cli.xml" file to have the same values as the ones shown in the template file.

Starting the Second JBoss Server

You are now ready to start the second JBoss server.

For the Windows operating system:

Step 1 Open a Command Prompt window, and cd to the "<*JBOSS_DIR_SL*>\bin" directory.

Step 2 Execute **standalone.bat**.

For the Linux operating system:

Step 1 Open a console window, and cd to the "<*JBOSS_DIR_SL*>/bin" directory.

Step 2 Execute **nohup ./standalone.sh &**.

Step 3 To monitor the startup progress of the JBoss server, execute **tail -f nohup.out**.

Finding Port Numbers for Second JBoss Server

In this section, you will look for the port numbers used by the second JBoss server, and write them down. You will need to enter these port numbers when you execute the Service Portal installation wizard later.

Step 1 Launch a browser and connect to http://<hostname>:6080, where <hostname> is either the servername or IP address of the machine where the second JBoss server is running. You should see the "Welcome to AS 7" page.

Step 2 In the "Welcome to AS 7" page, click the **Administration Console** link.

Step 3 At the Login prompt, enter **adminuser** for the user name, **<adminuser_password>** for the password, and then click **OK**. (This is the user that you created earlier in the "Adding Users" section on page 2-17.)

Step 4 In the top right hand corner of the screen, click **Profile**.

Step 5 In the left pane of the Administration Console, expand the "General Configuration" node, and click **Socket Binding**.

Step 6 Look for the following names and write down the port numbers. Note: You can only see the following screens when you choose the "Advanced" installation option in the Service Portal installation wizard.

Name	Port	Where to enter in the Service Portal installation wizard
http	6080	Service Link Configuration page, Field=AppServer HTTP port
remoting	3447	Service Link Configuration page, Field=AppServer JNDI port

Adding the JDBC Datasource

In this section, you will configure the JDBC datasource for the Service Portal database, via the JBoss Administration Console.

If you have a "Two-JBoss-server topology", then perform the following steps to create the JDBC datasource for the first JBoss server. If you have a "One-JBoss-server topology", then this is the only JBoss server that you will configure the JDBC datasource for.

Step 1 Start the first JBoss server if it's not running.

Step 2 Launch a browser and connect to http://<hostname>:8080, where <hostname> is either the servername or IP address of the machine where JBoss server is running. You should see the "Welcome to AS 7" page.

Step 3 In the "Welcome to AS 7" page, click the **Administration Console** link.

Step 4 At the Login prompt, enter **adminuser** for the user name, **<adminuser_password>** for the password, and then click **OK**. (This is the user that you created earlier in the "Adding Users" section on page 2-17.)

Step 5 In the top right hand corner of the screen, click **Profile**.

Step 6 In the left pane of the Administration Console, expand the "Connector" node, and click **Datasources**.

Step 7 In the right pane, open the Datasources tab and click **Add**.

Step 8 In the Step1/3 dialog box, enter the following values, then click **Next**:

- Name = REQUESTCENTERDS
- JNDI Name = java:/REQUESTCENTERDS

Step 9 In the Step 2/3 dialog box, choose the "newscale" driver and click **Next**.

Perform the following steps if your database is SQL Server:

Step 10 In the Step 3/3 dialog box, enter the following values, then click **Done**:

- Connection URL = jdbc:newscale:sqlserver://**<hostname>**:1433; DatabaseName=**<db_name>**
- Username = **<db_username>**
- Password = **<db_password>**
- Security Domain = <leave this value blank>

Replace all bold parameters above with the actual values of your database.

Step 11 Choose the REQUESTCENTERDS datasource that you just created, and open the Properties subtab.

Step 12 Click **Add** in the Properties subtab, and add each of the entries shown in the following table.

Key	Value
selectMethod	direct
alwaysReportTriggerResults	true
insensitiveResultSetBufferSize	16384
useServerSideUpdatableCursors	false
maxPooledStatements	0
SendStringParametersAsUnicode	true

Perform the following steps if your database is Oracle:

Step 10 In the Step 3/3 dialog box, enter the following values, then click **Done**:

- Connection URL = jdbc:newscale:oracle://<**hostname**>:1521; SID=<**oracle_sid**>
- Username = <**db_username**>
- Password = <**db_password**>
- Security Domain = <leave this value blank>

Replace all bold parameters above with the actual values of your database.

Step 11 Choose the REQUESTCENTERDS datasource that you just created, and open the Properties subtab.

Step 12 Click **Add** in the Properties subtab, and add each of the entries shown in the following table.

Key	Value
wireProtocolMode	2
catalogOptions	2
insensitiveResultSetBufferSize	16384
batchPerformanceWorkaround	false
maxPooledStatements	0
serverType	dedicated
SendStringParametersAsUnicode	true

After Step 12, perform the rest of the steps for either type of database:

Step 13 Open the Pool subtab, and click **Edit**.

Step 14 Edit the following settings, then click **Save**:

- Min Pool Size = 20
- Max Pool Size = 80
- Strict Minimum = <check the check box>

Step 15 Open the Connection subtab.

Step 16 In the upper left-hand corner next to the Add and Remove buttons, click **Enable**. When the confirmation dialog box appears, click **Confirm**. Notice that the "Is enabled?" setting is changed to "true".

Step 17 Click **Test Connection**.

You should expect to see the following message in a popup dialog box:

```
Successfully connected to database REQUESTCENTERDS.
```

Step 18 (Optional) If you plan to install the Reporting module later, then repeat the same steps to create the DATAMARTDS datasource for the Datamart database.

If you have a "Two-JBoss-server topology", then repeat the same steps described above to create the JDBC datasource for the second JBoss server, but this time you will connect to the JBoss Administration Console of the second JBoss server. For the second JBoss server, you only need to create the REQUESTCENTERDS datasource. You do not need to create the DATAMARTDS datasource because the Service Link application does not need to connect to the Datamart database.

Step 1 Launch a browser and connect to http://<hostname>:6080, where <hostname> is either the servername or IP address of the machine where JBoss server is running, and 6080 is the port number used by the second JBoss server. You should see the "Welcome to AS 7" page.

Step 2 On the "Welcome to AS 7" page, click the **Administration Console** link.

Step 3 At the Login prompt, enter **adminuser** for the user name, **<adminuser_password>** for the password, and then click **OK**. (This is the user that you created earlier in the "Adding Users" section on page 2-17.)

Step 4 Follow the same Steps 5–17, as described above.

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 Portal and Reporting installation wizards.

Table 2-4 Application Server Information Worksheet for JBoss

Field	Description	Value
Application Server Configuration		
AppServer hostname	The Hostname or IP address of the computer where the JBoss Application Server is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on.	
AppServer HTTP port	The Listen Port of the JBoss Application Server. Valid port numbers are from 1 to 65535. The default value is 8080. If you use the templates for JBoss provided by Cisco, then the HTTP port is set to 8080.	
AppServer JNDI port	The JNDI port of the JBoss Application Server. Valid port numbers are from 1 to 65535. The default value is 4447. If you use the templates for JBoss provided by Cisco, then the JNDI port is set to 4447.	
AppServer protocol	The web protocol for the JBoss Application Server. Choose **http** or **https** from the drop-down menu. The default is http.	
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. This setting must have the prefix "**java:/**". The default name is "java:/REQUESTCENTERDS".	
DataMart JNDI name	The datasource JNDI name for the Datamart database. For JBoss, this setting must have the prefix "**java:/**". The default name is "java:/DATAMARTDS".	
Advanced Options		
Enable clustering	Check the check box to enable a Clustered environment with multiple nodes. DO NOT CHOOSE THIS OPTION. Clustered JBoss is NOT supported in this release of Cisco Service Portal.	
Multicast address	—	
Use local DTD?	Check the check box to use local DTD. Enter the DTD hostname below.	
DTD hostname	If you checked "Use local DTD?" above, enter the DTD hostname.	
Custom content?	Check the check box to use Custom content. You must enter the path to the Custom content archive below.	

Table 2-4 Application Server Information Worksheet for JBoss (continued)

Field	Description	Value
Custom content archive	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.	
Service Link Configuration (Note: These settings will only be prompted if you choose the "Advanced" installation option.)		
AppServer hostname	The Hostname or IP address of the computer where the "Service Link JBoss Server" is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on.	
AppServer HTTP port	The Listen Port of the "Service Link JBoss Server". Valid port numbers are from 1 to 65535. The default value is 8080. If you use the templates for "one-jboss-server topology", then the HTTP port is set to 8080. If you use the templates for "two-jboss-server topology", then the HTTP port is set to 6080.	
AppServer JNDI port	The JNDI Port of the "Service Link JBoss Server". Valid port numbers are from 1 to 65535. The default value is 4447. If you use the templates for "one-jboss-server topology", then the JNDI port is set to 4447. If you use the templates for "two-jboss-server topology", then the JNDI port is set to 3447.	
AppServer protocol	The web protocol for the Service Link JBoss Application Server. Choose **http** or **https** from the drop-down menu. The default is http.	
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. This setting must have the prefix "**java:/**". The default name is "java:/REQUESTCENTERDS".	
Messaging Configuration (Note: These settings will only be prompted if you choose the "Advanced" installation option.)		
Queue hostname	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.	
Queue port	Port Number used by your JMS service. Valid port numbers are from 1 to 65535. The default value is 4447. If you use the templates for JBoss provided by Cisco, then the Queue port is set to 4447.	
Queue username	The username of the JMS Queue User. This field is mandatory.	
Queue password	The password for the JMS Queue User. This field is mandatory.	
Connection factory	The name of the JMS Queue Connection Factory. For JBoss, the name cannot be changed.	
Messaging Queues Configuration		
Authorizations queue	The name of the Authorizations Queue. The default is jms/queue/BEEEAuthorizationsQueue.	
Requisitions queue	The name of the Requisitions Queue. The default is jms/queue/BEEERequisitionsQueue.	
Portal inbound queue	The name of the Business Engine Inbound Queue. The default is jms/queue/BEEEInboundQueue.	
ISEE inbound queue	The name of the Service Link Inbound Queue. The default is jms/queue/ISEEInboundQueue.	
ISEE outbound queue	The name of the Service Link Outbound Queue. The default is jms/queue/ISEEOutboundQueue.	

Table 2-4 Application Server Information Worksheet for JBoss (continued)

Field	Description	Value
Service Portal 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. Default value is 25.	
System email address	The sender email address to be used for system generated notifications.	
Cisco Service Portal Administrator: Password	Password of the Cisco Service Portal administrator, required only for a new installation.	
Cisco Service Portal Administrator: Confirm password	Re-enter your Administrator password to confirm.	

What's Next?

Your JBoss environment is ready. You can proceed to the "Running the Service Portal Installer" section on page 2-64.

Preinstallation Configuration for WebLogic

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

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

Table 2-5 Supported Operating Systems and JAVA

Oracle WebLogic Application Server	Operating System	Java
Version 10.3	Windows Server 2008 R2 (64-bit), with SP1	Sun JDK 6 Update 30 (or higher Update)
Version 10.3	Red Hat Enterprise Linux Server 5.6	Sun JDK 6 Update 30 (or higher Update)
Version 10.3	Solaris 10	Sun JDK 6 Update 30 (or higher Update)

Note Oracle JRockit is NOT supported.

It is assumed that you have already installed WebLogic Application Server 10.3 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 Service Portal application.

Installing Java

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

Step 1 Access the Oracle Sun JDK 6 download web site to download Sun JDK 6.

Step 2 Download the correct version of Sun JDK 6 for your OS platform. See Table 2-5 for the supported Update version of JDK 6.

Step 3 Install Sun JDK 6 on the same machine where WebLogic software is installed.

Step 4 After Sun 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 Sun JDK 6*>"

b. set JAVA_VENDOR=Sun

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

a. JAVA_HOME="<*the installation directory for Sun 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 Portal Software Image

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

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 portal solution you have purchased. (Navigation: **Products > Network Management and Automation > Data Center Management and Automation > Intelligent Automation**).

Step 3 Choose **Product Install** and click the link for the appropriate operating system.

Step 4 You are presented with a list of folders for the different releases available. Locate Release **9.4** and click it.

Step 5 Download file **CSP_9.4.0_win.zip** for the Windows operating system, or file **CSP_9.4.0_unix.tar.gz** for the UNIX/Linux operating system.

Step 6 The installer program is common across all the products within the portal product family. If you have purchased Reporting or Demand Center in addition to Cloud or Workplace Portal, you do not need to download the installer again.

Step 7 Extract the software image to a directory on your application server machine. If you have WebLogic Cluster environment, then extract the Cisco Service Portal software on the machine where the WebLogic Administration Server is running. For example, extract the software to C:\CSP_Download (for Windows) or /opt/CSP_Download (for UNIX/Linux). For the rest of this section, this directory is referred to as the <*ServicePortal_Software_Dir*>.

Note The CSP_9.4.0_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 Libraries

In this section, you will copy several java library files from the <*ServicePortal_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 "<*JAVA_HOME*>/jre/lib" directory on your WebLogic machine, create a subdirectory called **endorsed**.

Step 2 Copy the following jar files from the "<*ServicePortal_Software_Dir*>/preinstall/weblogic/jre_lib_endorsed" directory to the "<*JAVA_HOME*>/jre/lib/endorsed" directory:

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

Step 3 Under the <*WL_HOME*> directory, create a subdirectory called "cisco_lib".

Step 4 Copy the following jar files from the "<*ServicePortal_Software_Dir*>preinstall/weblogic/cisco_lib" directory to the "<*WL_HOME*>/cisco_lib" directory:

- newscale_drivers.jar
- geronimo-ccpp_1.0_spec-1.0-beta.jar
- pluto-container-api-2.0.2.jar
- pluto-container-driver-api-2.0.2.jar
- pluto-taglib-2.0.2.jar
- portlet-api_2.0_spec-1.0.jar
- commons-lang-2.4.jar

Step 5 Navigate to the "<*WL_HOME*>/common/bin" directory.

Step 6 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. Append the value **;%WL_HOME%\cisco_lib\newscale_drivers.jar** to the end of the existing value. Do not forget to include the semicolon character.

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_H
OME%\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\webservic
es.jar;%ANT_HOME%/lib/ant-all.jar;%ANT_CONTRIB%/lib/ant-contrib.jar;%WL_HOME%\cisco_li
b\newscale_drivers.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 **${WL_HOME}/cisco_lib/commons-lang-2.4.jar${CLASSPATHSEP}** to the beginning of the existing value.

c. Append the value **${CLASSPATHSEP}${WL_HOME}/cisco_lib/newscale_drivers.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}{CLASSPATH
SEP}${JAVA_HOME}/lib/tools.jar${CLASSPATHSEP}${WL_HOME}/server/lib/weblogic_sp.jar${CL
ASSPATHSEP}${WL_HOME}/server/lib/weblogic.jar${CLASSPATHSEP}${FEATURES_DIR}/weblogic.s
erver.modules_10.3.0.0.jar${CLASSPATHSEP}${WL_HOME}/server/lib/webservices.jar${CLASSP
ATHSEP}${ANT_HOME}/lib/ant-all.jar${CLASSPATHSEP}${ANT_CONTRIB}/lib/ant-contrib.jar${C
LASSPATHSEP}${WL_HOME}/cisco_lib/newscale_drivers.jar"
```

Step 7 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 have installed.

Note If you have a WebLogic Cluster environment, perform Steps 1–7 on every node in the Cluster.

Creating a Managed WebLogic Server

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

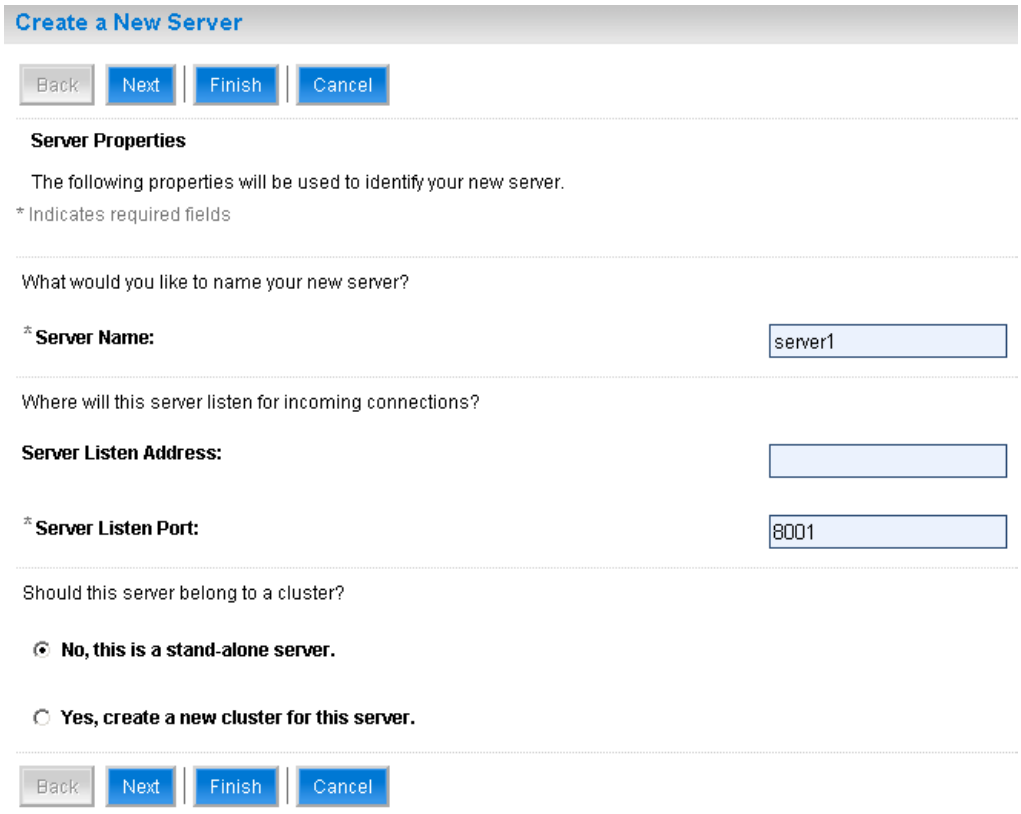
Step 1 Log on to the WebLogic Administration Console.

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" page appears.

Figure 2-3 Create New Weblogic Server



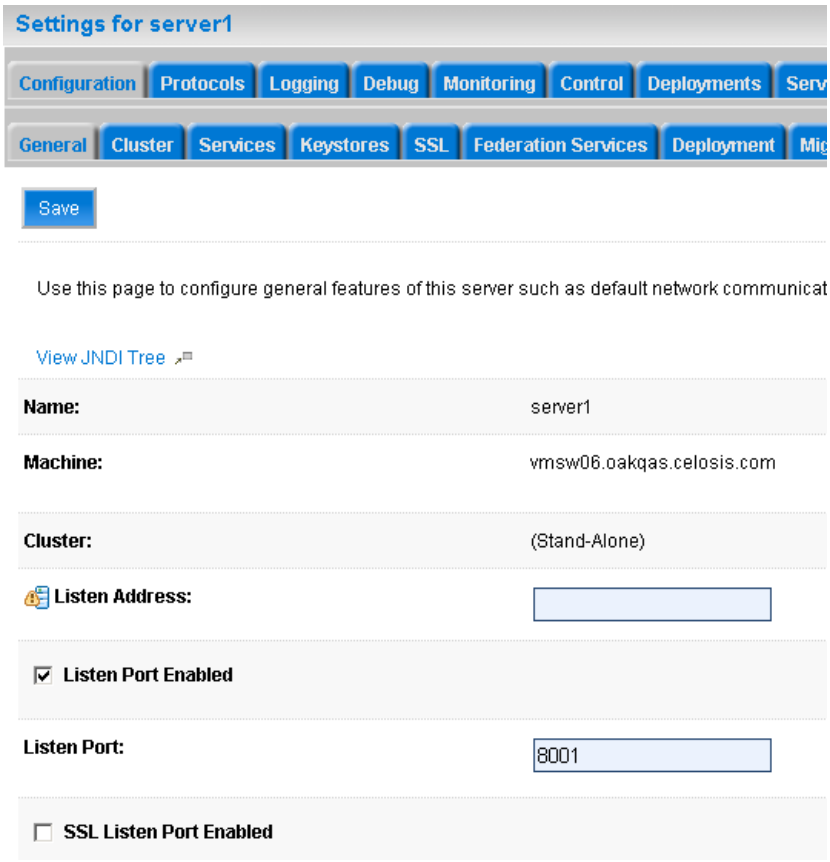
Step 5 Enter a Server Name (for example, "server1"). Enter a port number different from 7001 (for example, 8001), since port 7001 is most likely already used by the WebLogic Administration Server. Choose the **No, this is a stand-alone server** option.

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

Step 7 Click that newly created Server "**server1**" to open its properties.

Step 8 Choose **Configuration > General**.

Figure 2-4 Configuration – General Settings



Step 9 In the Machine drop-down list, choose the machine (or the cluster) where your WebLogic Server will run.

Step 10 Click **Save**.

Step 11 Choose **Configuration > Keystores**.

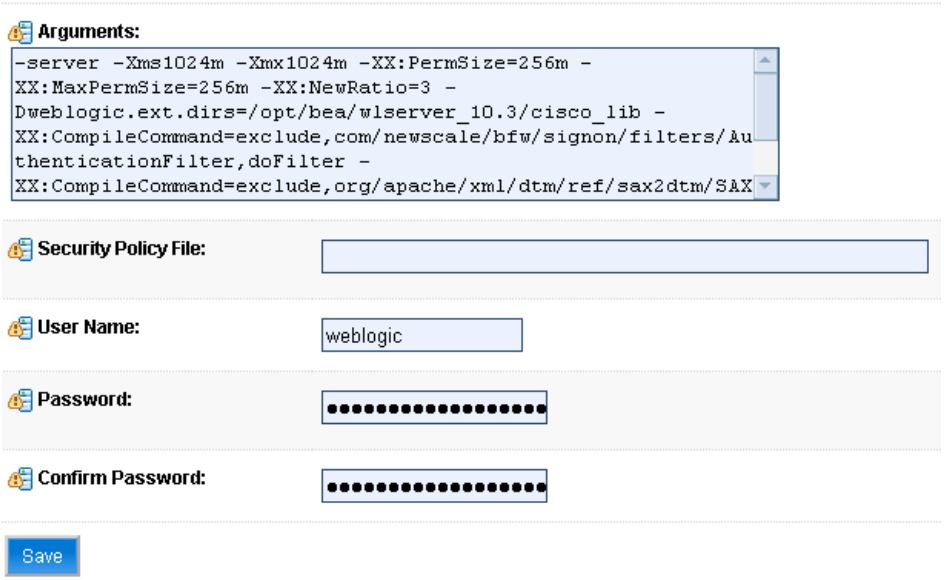
Step 12 In the Keystores drop-down list, choose **Custom Identity and Java Standard Trust**.

Step 13 Click **Save**.

Setting the Arguments for Java Virtual Machine

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

Figure 2-5 Server Start – Arguments



Step 2 Enter values for the following parameter:

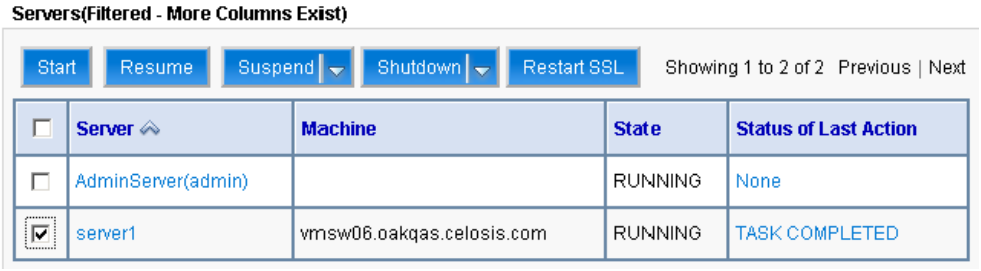
- **Arguments** = -server -Xms1024m -Xmx1024m -XX:PermSize=256m
  -XX:MaxPermSize=256m
  -XX:NewRatio=3 -Dweblogic.ext.dirs=<*WL_HOME*>/cisco_lib
  -XX:CompileCommand=exclude,com/newscale/bfw/signon/filters/AuthenticationFilter,doFilter
  -XX:CompileCommand=exclude,org/apache/xml/dtm/ref/sax2dtm/SAX2DTM,startElement
  -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 is the directory described in the "Installing Custom Java Libraries" section on page 2-31).
- **User Name** = weblogic
- **Password** = <*the password for "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.

Figure 2-6 Start Weblogic Server



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 Sun JDK 6 and the custom java libraries that you installed in this section.

Configurations for WebLogic Cluster

The Service Portal product is comprised of two enterprise applications named "RequestCenter" and "ServiceLink". However, the Service Portal 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 Portal 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 "Application Server Information Worksheet" section on page 2-27 and "Installing Custom Java Libraries" section on page 2-31 on each node (that is, each computer) in the Cluster.

Step 2 Follow the instructions in the "Creating a Managed WebLogic Server" section on page 2-32 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
```

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 "Application Server Information Worksheet" section on page 2-27 and "Installing Custom Java Libraries" section on page 2-31 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 the JMS Queues that will be used by Service Portal.

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" page 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**, and click **JMS Servers**.

Step 2 Click **New**. The "Create a New JMS Server" page 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**, and click **JMS Modules**.

Step 2 Click **New**. The Create JMS System Module page appears.

Step 3 In the Name field, enter **CiscoJMSModule**.

Step 4 Click **Next**.

Step 5 Choose your WebLogic Server as the target. (If you have a WebLogic Cluster environment, choose **Service Link WebLogic Server**.)

Step 6 Click **Next**.

Step 7 Click **Finish**.

Step 8 Click the newly created JMS Module named **CiscoJMSModule** to open its properties.

Step 9 Open the **Subdeployments** tab.

Step 10 Click **New**.

Step 11 In the Subdeployment Name field, enter **CiscoSubdeployment**.

Step 12 Click **Next**.

Step 13 Choose the JMS Server named **CiscoJMSServer**.

Step 14 Click **Finish**.

Creating Connection Factory

Step 1 On the WebLogic Administration Console, choose **Services > Messaging**, and click **JMS Modules**.

Step 2 Click the JMS Module named **CiscoJMSModule** to open its properties.

Step 3 Open the **Configuration** tab.

Step 4 Click **New**.

Step 5 Choose the **Connection Factory** option.

Step 6 Click **Next**.

Step 7 In the Name and JNDI Name fields, enter **NSConnectionFactory**.

Step 8 Click **Next**.

Step 9 Click **Advanced Targeting**.

Step 10 In the Subdeployments drop-down list, choose **CiscoSubdeployment**. The screen is refreshed to show that the JMS Server named “CiscoJMSServer” is already selected.

Step 11 Click **Finish**.

Creating JMS Templates

Step 1 On the WebLogic Administration Console, choose **Services > Messaging**, and click **JMS Modules**.

Step 2 Click the JMS Module named **CiscoJMSModule** to open its properties.

Step 3 Open the **Configuration** tab.

Step 4 Click **New**.

Step 5 Choose the **JMS Template** option.

Step 6 Click **Next**.

Step 7 In the Name field, enter **ISEEInboundQueueTemplate**.

Step 8 Click **OK**.

Step 9 Repeat Steps 4–8 four more times to create four more JMS Templates with the following names:

- ISEEOutboundQueueTemplate
- BEEERequisitionsQueueTemplate
- BEEEAuthorizationsQueueTemplate
- BEEEInboundQueueTemplate

Creating Queues

Step 1 On the WebLogic Administration Console, choose **Services > Messaging**, and click **JMS Modules**.

Step 2 Click the JMS Module named **CiscoJMSModule** to open its properties.

Step 3 Open the **Configuration** tab.

Step 4 Click **New**.

Step 5 Choose the **Queue** option.

Step 6 Click **Next**.

Step 7 In the Name and JNDI Name fields, enter **ISEEInboundQueue**.

Step 8 In the Template drop-down list, choose the **ISEEInboundQueueTemplate** that you created.

Step 9 Click **Next**.

Step 10 In the Subdeployments drop-down list, choose **CiscoSubdeployment**. The screen is refreshed to show that the JMS Server named "CiscoJMSServer" is already selected.

Step 11 Click **Finish**.

Step 12 Repeat Steps 4–11 four more times to create four more JMS Queues with the following names:

Name & JNDI Name	Template	Subdeployments
ISEEOutboundQueue	ISEEOutboundQueueTemplate	CiscoSubdeployment
BEEERequisitionsQueue	BEEERequisitionsQueueTemplate	CiscoSubdeployment
BEEEAuthorizationsQueue	BEEEAuthorizationsQueueTemplate	CiscoSubdeployment
BEEEInboundQueue	BEEEInboundQueueTemplate	CiscoSubdeployment

Step 13 If your WebLogic was installed in PRODUCTION mode, click **Activate Changes**. Otherwise, you can skip this step.

Configuring JDBC Data Sources

In this section, you will configure two JDBC Data Sources to point to the RequestCenter database and Datamart database that you created in the "Configuring Databases" section on page 2-9.

Use the worksheet that you filled out at the end of the "Configuring Databases" section on page 2-9 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 > JDBC**, and click **Data Sources**.

Step 4 Click **New**.

Step 5 In the Name field, enter **REQUESTCENTERDS**.

Step 6 In the JNDI Name field, enter **eis/REQUESTCENTERDS**.

Step 7 In the Database Type drop-down list, choose **Other**.

Step 8 Click **Next**.

Step 9 On the next page, just click **Next**.

Step 10 In the Database Name field, enter the name of the RequestCenter database you created in the "Configuring Databases" section on page 2-9.

Step 11 In the Host Name field, enter the database server name.

Step 12 In the Port field, enter the database port number.

Step 13 In the Database User Name field, enter the name of the db_owner (or schema user) of the RequestCenter database (for example, enter **RCUser**).

Step 14 In the Password and Confirm Password fields, enter the password for the Database User Name.

Step 15 Click **Next**.

Step 16 In the Driver Class Name field, enter the following value (one string):

com.newscale.jdbc.UnifiedDriver

Step 17 In the URL field, enter the following value (one string):

For SQL Server:

jdbc:newscale:sqlserver://<*db_server*>:<*db_port*>

(For example, jdbc:newscale:sqlserver://stan.celosis.com:1433)

For Oracle:

jdbc:newscale:oracle://<*db_server*>:<*db_port*>;SID=<*oracle_sid*>

(For example, jdbc:newscale:oracle://sam.celosis.com:1521;SID=rosewood)

Step 18 In the Database User Name field, enter the name of the db_owner (or schema user) of the RequestCenter database (for example, enter **RCUser**).

Step 19 In the Password and Confirm Password fields, enter the password for the Database User Name.

Step 20 In the Properties field, enter the following name-value pairs (one per line):

For SQL Server:

user=<*database_user_name*>

DatabaseName=<*database_name*>

selectMethod=direct

alwaysReportTriggerResults=true

insensitiveResultSetBufferSize=16384

useServerSideUpdatableCursors=false

maxPooledStatements=0

SendStringParametersAsUnicode=true

For Oracle:

user=<*database_user_name*>

SendStringParametersAsUnicode=true

Step 21 (Do not click the Test Configuration button.) Click **Next**.

Step 22 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 23 Click **Finish**.

Step 24 The newly created data source named "REQUESTCENTERDS" should appear on the Summary of JDBC Data Sources page.Verify that the JNDI Name and Target information for this data source is correct.

Step 25 Click **REQUESTCENTERDS** to open its properties.

Step 26 Choose **Configuration > Connection Pool**.

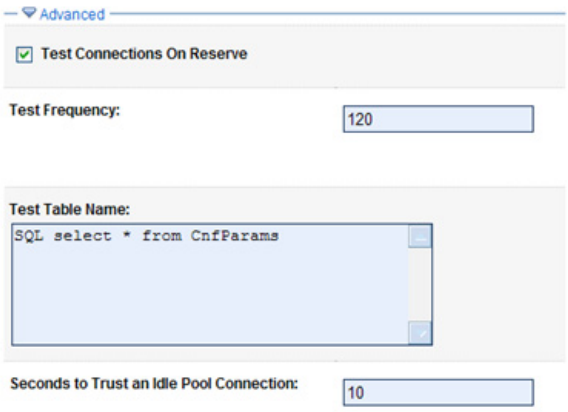
Step 27 Change the values for the following parameters on the screen:

- **Initial Capacity = 20**
- **Maximum Capacity = 80**

Step 28 Click **Save**.

Step 29 Still on the Connection Pool tab, at the bottom of the page, choose **Advanced**.

Figure 2-7 Connection Pool – Advanced Settings



Step 30 Choose the **Test Connections On Reserve** option.

Step 31 In the Test Table Name field, enter the following value (one string):

SQL select * from CnfParams

Step 32 Click **Save**.

Step 33 Create another Data Source for the Datamart database, by repeating Steps 4–32, but set the applicable values for the Datamart database instead of the RequestCenter database:

- **Name = DATAMARTDS**
- **JNDI Name = eis/DATAMARTDS**
- **Target** = <*If you have a clustered WebLogic environment, you only need to choose the Cluster name as the Target for this data source. You do not need to include the "Service Link WebLogic Server" as a target.*>
- **Initial Capacity = 2**
- **Maximum Capacity = 20**
- **Test Table name = SQL select * from DM_DIRPERSON**

Step 34 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.

Figure 2-8 JNDI Tree

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> DATAMARTDS

eis> REQUESTCENTERDS

BEEEAuthorizationsQueue

BEEEInboundQueue

BEEERequisitionsQueue

ISEEInboundQueue

ISEEOutboundQueue

NSConnectionFactory

Step 5 If you have a clustered WebLogic environment, then the JNDI Tree for your WebLogic Cluster should contain only 2 of the entries:

eis> DATAMARTDS

eis> REQUESTCENTERDS

And the JNDI Tree for the “Service Link WebLogic Server” should contain the following entries:

eis> REQUESTCENTERDS

BEEEAuthorizationsQueue

BEEEInboundQueue

BEEERequisitionsQueue

ISEEInboundQueue

ISEEOutboundQueue

NSConnectionFactory

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 Portal Installation Wizard.

Table 2-6 Application Server Information Worksheet for WebLogic

Field	Description	Value
Application Server Configuration		
AppServer hostname	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.	
AppServer HTTP port	The Listen Port of the WebLogic Server. Valid port numbers are from 1 to 65535. The default value is 7001.	
AppServer JNDI port	The JNDI Port of the WebLogic Server. Valid port numbers are from 1 to 65535. The default value is 7001.	
AppServer protocol	The web protocol for the WebLogic Application Server. Choose **http** or **https** from the drop-down menu. The default is http.	
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. This setting must have the prefix "**eis/**". The default name is "eis/REQUESTCENTERDS".	
DataMart JNDI name	The datasource JNDI name for the Datamart database. This setting must have the prefix "**eis/**". The default name "eis/DATAMARTDS".	
Application Server Configuration Advanced Options		
Enable clustering	Check the check box to enable a Clustered Application Server environment with multiple nodes. This is unchecked by default.	
Multicast address	If you checked "Enable clustering" above, enter the multicast address.	
Use local DTD?	Check the check box to use local DTD. Enter the DTD hostname below. This is unchecked by default.	
DTD hostname	If you checked "Use local DTD?" above, enter the DTD hostname.	
Custom content?	Check the check box to use Custom content. You must enter the path to the Custom content archive below.	
Custom content archive	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.	
Service Link Configuration (Note: These settings will only be prompted if you choose the "Advanced" installation option.)		
AppServer hostname	The Hostname or IP address of the computer where the "Service Link WebLogic Server" is running. For a nonclustered environment, this value is the same as the AppServer hostname for the Application Server.	
AppServer HTTP port	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.	

Table 2-6 Application Server Information Worksheet for WebLogic (continued)

Field	Description	Value
AppServer JNDI port	The JNDI 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.	
AppServer protocol	The web protocol for the Service Link WebLogic Server. Choose **http** or **https** from the drop-down menu. The default is http.	
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. This setting must have the prefix "**eis/**". The default name is "eis/REQUESTCENTERDS".	
Messaging Configuration (Note: These settings will only be prompted if you choose the "Advanced" installation option.)		
Queue hostname	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.	
Queue port	Port Number used by your JMS service. Valid port numbers are from 1 to 65535. The default value is 7001.	
Queue username	The username of the JMS Queue User. This field is mandatory.	
Queue password	The password for the JMS Queue User. This field is mandatory.	
Connection factory	The name of the JMS Queue Connection Factory. The default name is NSConnectionFactory	
Messaging Queues Configuration		
Authorizations queue	The name of the Authorizations Queue. The default is BEEEAuthorizationsQueue.	
Requisitions queue	The name of the Requisitions Queue. The default is BEEERequisitionsQueue.	
Portal inbound queue	The name of the Business Engine Inbound Queue. The default is BEEEInboundQueue	
ISEE inbound queue	The name of the Service Link Inbound Queue. The default is ISEEInboundQueue.	
ISEE outbound queue	The name of the Service Link Outbound Queue. The default is ISEEOutboundQueue.	
Service Portal 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.	
Cisco Service Portal Administrator: Password	Password of the Cisco Service Portal administrator, required only for a new installation.	
Cisco Service Portal Administrator: Confirm password	Re-enter your Administrator password to confirm.	

What's Next?

Your WebLogic environment is ready. You can proceed to the "Running the Service Portal Installer" section on page 2-64.

Preinstallation Configuration for WebSphere

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

This release of Cisco Service Portal supports WebSphere Application Server on the following operating systems and Java Development Kit.

Table 2-7 Supported Operating System and Java

IBM WebSphere Application Server	Operating System	Java
Version 7.0.0 FixPack 21 (or higher FixPack)	Windows Server 2008 R2 (64-bit) with SP1	IBM Java SDK 1.6.0 (SR9) (or higher SR)
Version 7.0.0 FixPack 21 (or higher FixPack)	IBM AIX 7.1	IBM Java SDK 1.6.0 (SR9) (or higher SR)
Version 7.0.0 FixPack 21 (or higher FixPack)	Red Hat Enterprise Linux Server 5.6	IBM Java SDK 1.6.0 (SR9) (or higher SR)

It is assumed that you have already installed WebSphere Application Server 7.0.0 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 Service Portal application.

Downloading Service Portal Software Image

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

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 portal solution you have purchased. (Navigation: **Products > Network Management and Automation > Data Center Management and Automation > Intelligent Automation**).

Step 3 Choose **Product Install** and click the link for the appropriate operating system.

Step 4 You are presented with a list of folders for the different releases available. Locate Release **9.4** and click it.

Step 5 Download file **CSP_9.4.0_win.zip** for the Windows operating system, or file **CSP_9.4.0_unix.tar.gz** for the UNIX/Linux operating system.

Step 6 The installer program is common across all the products within the portal product family. If you have purchased Reporting or Demand Center in addition to Cloud or Workplace Portal, you do not need to download the installer again.

Step 7 Extract the software image to a directory on your application server machine. If you have Clustered WebSphere environment, then extract the Cisco Service Portal software on the machine where the WebSphere Deployment Manager server is running. For example, extract the software to C:\CSP_Download (for Windows) or /opt/CSP_Download (for UNIX/Linux). For the rest of this section, this directory is referred to as the **<***ServicePortal_Software_Dir***>**.

Note The CSP_9.4.0_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 **<***ServicePortal_Software_Dir***>** to the ***<WAS_INSTALL_ROOT>*** directory, where <*ServicePortal_Software_Dir*> is where you extracted the electronic software distribution for Cisco Service Portal (for example, C:\CSP_Download or /opt/CSP_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 Copy the following files from the "<*ServicePortal_Software_Dir*>/preinstall/websphere/lib_ext" directory to the "<*WAS_INSTALL_ROOT*>/lib/ext" directory:

- geronimo-ccpp_1.0_spec-1.0-beta.jar
- newscale_drivers.jar
- newscale_ws_jdbc_provider.jar
- pluto-container-api-2.0.2.jar
- pluto-container-driver-api-2.0.2.jar
- pluto-taglib-2.0.2.jar

Step 2 Copy the following files from the "<*ServicePortal_Software_Dir*>/preinstall/websphere/java_jre_lib_ext" directory to the "<*WAS_INSTALL_ROOT*>/java/jre/lib/ext" directory:

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

Step 3 Restart the WebSphere Deployment Manager server and WebSphere Node Manager. You must restart all WebSphere servers for them to pick up the custom Java Library that you have installed.

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.

Creating a WebSphere Server

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

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" page 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 (that is, **server1**), and open the **Configuration** tab.

Step 2 Under the **Server Infrastructure** section in the right pane, choose **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 Click **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 Portal 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 Xvfp (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, **server1**), and open the **Configuration** tab.

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

Step 3 Under the Additional Properties section in the right pane, click **Environment Entries**.

Step 4 Click **New**.

Step 5 Enter the following values:

- **Name = DISPLAY**
- **Value = localhost:0.0**

Step 6 Click **OK**.

Step 7 Click **Save** directly to the master configuration.

Getting Port Numbers

Step 1 Click the newly created WebSphere Server (that is, **server1**), and open the **Configuration** tab.

Step 2 Under the Communication section in the right pane, choose **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.

- **BOOTSTRAP_ADDRESS** =?
- **WC_defaulthost** =?

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 page.

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 Portal product is comprised of two enterprise applications named “Request Center” and “Service Link.” However, the Service Portal 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 Portal 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 Library" section on page 2-47 on each node (that is, each computer) in the Cluster.

Step 2 Follow the instructions in the "Creating a WebSphere Server" section on page 2-48 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" section on page 2-49 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 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 2-47 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" page appears.

Step 4 In the Name field, enter **ns_host**.

Step 5 Click **OK**.

Step 6 Click **Save** directly to the master configuration.

Step 7 Click the newly created **ns_host** to open its properties page.

Step 8 Under Additional Properties, click the **Host Aliases** link.

Step 9 Click **New**.

Step 10 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 11 Click **OK**.

Step 12 Click **New** again to add another entry.

Step 13 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 14 Click **OK**.

Step 15 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 10 (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 Portal.

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 page" 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 page.

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" page, do not make any changes. Click **Next**.

Step 14 On the "Tune performance parameters" page, do not make any changes. Click **Next**.

Step 15 On the Summary page, click **Finish**.

Step 16 Click **Save** directly to the master configuration.

Step 17 Click **nsbus** again to reopen its Configuration page.

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 page, choose the bus member that you created in the previous steps. Click **Next**.

Step 23 Click **Finish**.

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" page 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 = 25**

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 page 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 Databases" section on page 2-9, you created two database users, one as the schema owner of the RequestCenter database (that is, RCUser), and the other one as the schema owner of the Datamart database (that is, DMUser). In this section, you will add these database users 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 **New** again to create another entry.

Step 8 Enter the following values on the screen (replace "DMUser" with the actual ID that you created as the schema owner for the Datamart database):

- **Alias = DMUser**
- **User ID = DMUser**
- **Password** = *<Enter the password for the database user DMUser.>*

Step 9 Click **OK**.

Step 10 Click **Save** directly to the master configuration.

Configuring JDBC Data Sources

In this section, you will configure two JDBC Data Sources—one for the RequestCenter database, and one for the Datamart database.

Use the worksheet that you filled out at the end of the "Configuring Databases" section on page 2-9 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" page appears.

Step 4 Enter the following values on the screen:

- **Database Type = User-defined**
- **Implementation class name** = <*enter one of the following values:*>
  - (*For Oracle:*) **com.newscale.jdbcx.oracle.OracleDataSource**
  - (*For SQL Server:*) **com.newscale.jdbcx.sqlserver.SQLServerDataSource**
- **Name = Cisco JDBC Driver for <*database_type*>**
- **Description = Cisco JDBC Driver for <*database_type*>**

Step 5 Click **Next**. The "Enter database class path information" page appears.

Step 6 Replace the "**Class path**" with the following two lines:

${WAS_INSTALL_ROOT}/lib/ext/newscale_ws_jdbc_provider.jar

${WAS_INSTALL_ROOT}/lib/ext/newscale_drivers.jar

Step 7 Click **Next**. The Summary page appears.

Step 8 Review the information on the Summary page. 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 page.

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

Step 3 Click **New**. The "Enter basic data source information" page 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:

com.newscale.jdbc.websphere.NSDataStoreHelper

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 page. 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 page.

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 page that shows about 50 properties appears (the properties may span over several pages).

Step 17 Click the **Select All icon** (,) in order to choose all of the property entries on the current page. Then click **Delete**. Repeat this step until all property entries are deleted completely.

Step 18 Now, click **New** to add a new property entry.

Step 19 Enter the following on the screen (see the "Database Information Worksheet"):

- **Name = serverName**
- **Value = <*Database Server*>**
- **Type = java.lang.String**

Step 20 Click **OK**.

Step 21 Click **New** to add another entry.

Step 22 Enter the following on the screen (see the Database Information Worksheet):

- **Name = portNumber**
- **Value = <*Database Port*>**
- **Type = java.lang.String**

Step 23 Click **OK**.

Step 24 If your database is Oracle: Repeat Steps 21–23 to add the following entries (see the Database Information Worksheet):

Name	Value	Type
SID	*<ORACLE_SID>*	java.lang.String

After you are done, the list of Custom properties for your Oracle Data Source should look similar to the following screenshot:

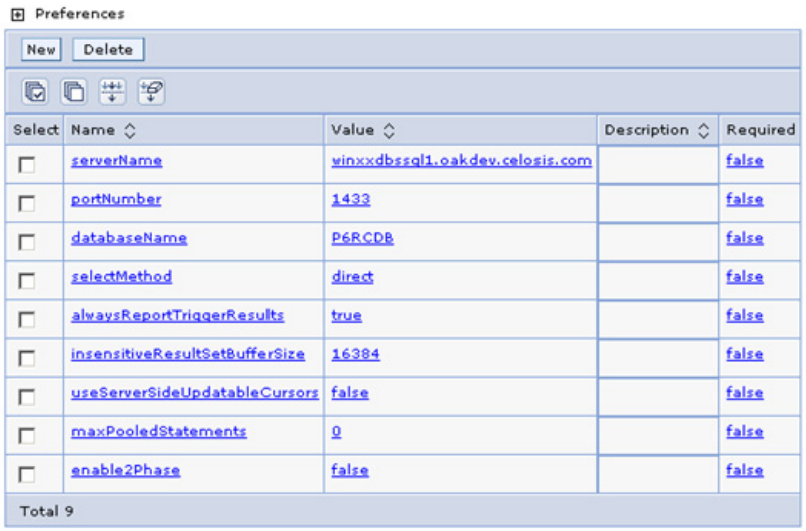
Figure 2-9 Oracle Data Source – Custom Properties

Step 25 If your database is SQL Server: Repeat Steps 21–23 to add the following entries (see the Database Information Worksheet):

Name	Value	Type
databaseName	*<The name of your RequestCenter database on SQL Server.>*	java.lang.String
selectMethod	direct	java.lang.String
alwaysReportTriggerResults	true	java.lang.String
insensitiveResultSetBufferSize	16384	java.lang.String
useServerSideUpdatableCursors	false	java.lang.String
maxPooledStatements	0	java.lang.String
enable2Phase	false	java.lang.String

After you are done, the list of **Custom properties** for your SQL Server Data Source should look similar to the following screenshot:

Figure 2-10 SQL Server Data Source – Custom Properties



Step 26 Click **Save** directly to the master configuration.

Note If you have a WebSphere Cluster environment, then you should have created two JDBC Providers, one for Scope=<Cluster>, and another one for Scope=<Service Link WebSphere Server>. If you just completed the REQUESTCENTERDS data source for the JDBC Provider where Scope=<Cluster>, then you must repeat the same procedure to create the REQUESTCENTERDS data source for the JDBC Provider where Scope=<Service Link WebSphere Server>. This is because the Service Link application, that is running on the stand-alone <Service Link WebSphere Server>, also needs a JDBC connection to the RequestCenter database at runtime.

Step 27 To test your REQUESTCENTERDS data source:

a. Click the newly created data source named **REQUESTCENTERDS** to open its General Properties page.

b. Click **Test Connection**.

c. The following message should appear at the top of the page:

Figure 2-11 REQUESTCENTERDS Connection Successful Message

Creating DATAMARTDS Data Source

Step 1 Click the newly created JDBC Provider to open its Configuration page. You will create a second data source in the same JDBC Provider.

Note If you have a WebSphere Cluster environment, then choose the JDBC Providers for Scope=<Cluster>. The data source that you are about to create for the Datamart database is only needed for the WebSphere Cluster. It is not needed for the <Service Link WebSphere Server>.

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

Step 3 Click **New**. The "Enter basic data source information" page appears.

Step 4 Enter the following values on the screen:

- **Data source name = DATAMARTDS**
- **JNDI name = eis/DATAMARTDS**

Step 5 Click **Next**.

Step 6 Enter the following value in the "Data store helper class name" field:

com.newscale.jdbc.websphere.NSDataStoreHelper

Step 7 Click **Next**.

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

Step 9 Click **Next**.

Step 10 Review the information on the Summary page. 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 **DATAMARTDS** to open its General Properties page.

Step 13 Under the Additional Properties section, click the **Connection pool properties** link.

Step 14 Enter the following values on the screen:

- **Maximum connections = 20**
- **Minimum connections = 5**

Step 15 Click **OK**.

Step 16 (Do not click **Save** yet.) Under the Additional Properties section, click the **Custom properties** link. A page that shows about 50 properties appears (the properties may span over several pages).

Step 17 Click the **Select All icon** (,)in order to choose all of the property entries on the current page. Then click **Delete**. Repeat this step until all property entries are deleted completely.

Step 18 Now, click **New** to add a new property entry.

Step 19 Enter the following on the screen (see the Database Information Worksheet):

- **Name = serverName**
- **Value = <*Database Server*>**
- **Type = java.lang.String**

Step 20 Click **OK**.

Step 21 Click **New** to add another entry.

Step 22 Enter the following on the screen (see the Database Information Worksheet):

- **Name = portNumber**
- **Value = <*Database Port*>**
- **Type = java.lang.String**

Step 23 Click **OK**.

Step 24 If your database is Oracle: Repeat Steps 21–23 to add the following entries (see the Database Information Worksheet).

Name	Value	Type
SID	<*ORACLE_SID*>	java.lang.String

After you are done, the list of Custom properties for your Oracle Data Source should look similar to the following screenshot:

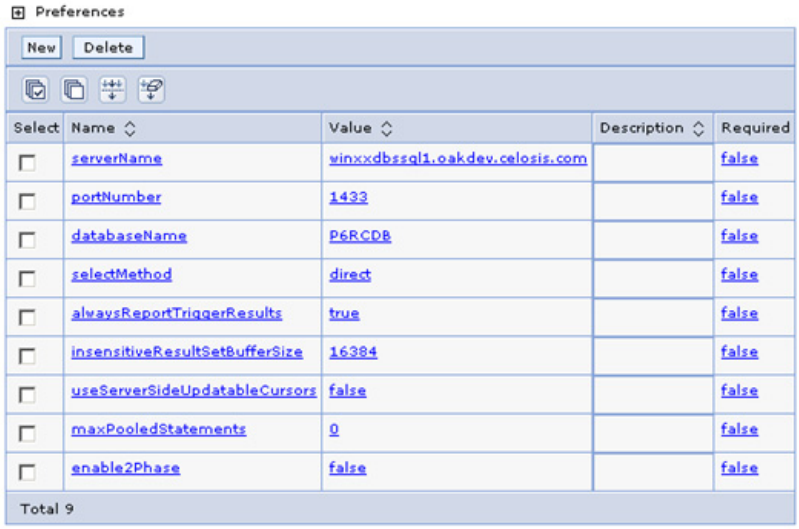
Figure 2-12 Oracle DATAMARTDS – Custom Properties

Step 25 If your database is SQL Server: Repeat Steps 21–23 to add the following entries (see the Database Information Worksheet):

Name	Value	Type
databaseName	<*The name of your Datamart database on SQL Server.*>	java.lang.String
selectMethod	direct	java.lang.String
alwaysReportTriggerResults	true	java.lang.String
insensitiveResultSetBufferSize	16384	java.lang.String
useServerSideUpdatableCursors	false	java.lang.String
maxPooledStatements	0	java.lang.String
enable2Phase	false	java.lang.String

After you are done, the list of Custom properties for your SQL Server Data Source should look similar to the following screenshot:

Figure 2-13 SQL Server DATAMARTDS – Custom Properties



Step 26 Click **Save** directly to the master configuration.

Step 27 To test your DATAMARTDS data source:

a. Click the newly created data source named **DATAMARTDS** to open its General Properties page.

b. Click **Test Connection**.

c. A message that looks similar to the following should appear:

Figure 2-14 DATAMARTDS Connection Successful Message

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.

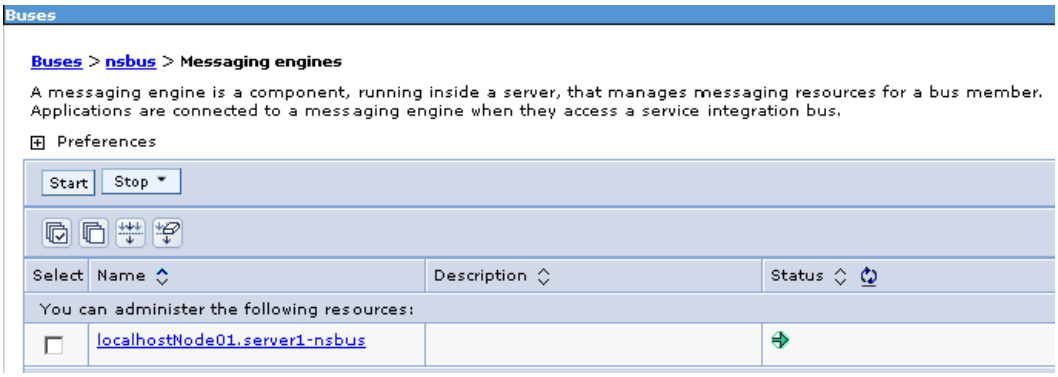
Step 2 Choose **Service integration > Buses**.

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

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).

Figure 2-15 Messaging Engine Status



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 Portal Installation Wizard.

Table 2-8 Application Server Information Worksheet for WebSphere

Field	Description	Value
Application Server Configuration		
AppServer hostname	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".	
AppServer HTTP port	The WC_defaulthost port number used by the WebSphere Server. Valid port numbers are from 1 to 65535. The default value is 9080.	
AppServer JNDI port	The BOOTSTRAP_ ADDRESS port number used by the WebSphere Server. Valid port numbers are from 1 to 65535. The default value is 2809.	
AppServer protocol	The web protocol for the WebSphere Application Server. Choose **http** or **https** from the drop-down menu. The default is http.	
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. This setting must have the prefix "**eis/**". The default name is "eis/REQUESTCENTERDS".	
DataMart JNDI name	The datasource JNDI name for the Datamart database. This setting must have the prefix "**eis/**". The default name "eis/DATAMARTDS".	
Advanced Options		
Enable clustering	Check the check box to enable a Clustered Application Server environment with multiple nodes. This is unchecked by default.	
Multicast address	If you checked "Enable clustering" above, enter the multicast address.	

Table 2-8 Application Server Information Worksheet for WebSphere (continued)

Field	Description	Value
Use local DTD?	Check the check box to use local DTD. Enter the DTD hostname below. This is unchecked by default.	
DTD hostname	If you checked "Use local DTD?" above, enter the DTD hostname.	
Custom content?	Check the check box to use Custom content. You must enter the path to the Custom content archive below.	
Custom content archive	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.	
Service Link Configuration (Note: These settings will only be prompted if you choose the "Advanced" installation option.)		
AppServer hostname	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.	
AppServer HTTP port	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.	
AppServer JNDI port	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.	
AppServer protocol	The web protocol for the Service Link WebSphere Application Server. Choose **http** or **https** from the drop-down menu. The default is http.	
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. This setting must have the prefix "**eis/**". The default name is "eis/REQUESTCENTERDS".	
Messaging Configuration (Note: These settings will only be prompted if you choose the "Advanced" installation option.)		
Queue hostname	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.	
Queue port	Port Number used by your JMS service. Valid port numbers are from 1 to 65535. The default value is 2809.	
Queue username	The username of the JMS Queue User. For WebSphere, this value can be set to "guest".	
Queue password	The password for the JMS Queue User. For WebSphere, this value can be set to "guest".	
Connection factory	The name of the JMS Queue Connection Factory. The default name is NSConnectionFactory	
Messaging Queues Configuration		
Authorizations queue	The name of the Authorizations Queue. The default is BEEEAuthorizationsQueue.	
Requisitions queue	The name of the Requisitions Queue. The default is BEEERequisitionsQueue.	

Table 2-8 Application Server Information Worksheet for WebSphere (continued)

Field	Description	Value
Portal inbound queue	The name of the Business Engine Inbound Queue. The default is BEEEInboundQueue.	
ISEE inbound queue	The name of the Service Link Inbound Queue. The default is ISEEInboundQueue.	
ISEE outbound queue	The name of the Service Link Outbound Queue. The default is ISEEOutboundQueue.	
Service Portal 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.	
Cisco Service Portal Administrator: Password	Password of the Cisco Service Portal administrator, required only for a new installation.	
Cisco Service Portal Administrator: Confirm password	Re-enter your Administrator password to confirm.	

What's Next?

Your WebSphere environment is ready. You can proceed to the Running the Service Portal Installer section below.

Running the Service Portal Installer

This section provides instructions for executing the Service Portal installer.

Two modes of installation are provided—Typical and Advanced. 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. Typical installation is commonly used when setting up sandbox environments.

The Advanced installation allows you to configure a different deployment topology and to apply custom changes to the application. Use the Advanced 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
- Have separate tablespaces for definitional data, transactional data and indexes (Oracle only)
- Need to add custom content to the RequestCenter.war
- Need to recreate the RequestCenter.war or ISEE.war files without executing any database scripts

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

- "Scenario 1: New Typical Installation" section on page 2-66
- "Scenario 2: New Advanced Installation" section on page 2-79

For information about performing an upgrade installation, see Chapter 4, "Upgrade Guide".

Before You Begin

Carefully review the "Prerequisites and Installation Overview" section on page 2-2 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 Databases" section on page 2-9, 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 Service Portal 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 Service Portal installer is a GUI program. On Unix or Linux operating system, you will need a graphical display, such as X-window.

Executing Setup

Service Portal is installed by running a setup program which installs and launches an installation wizard. If you are on a Windows operating system, you need to have administrative rights to the machine.

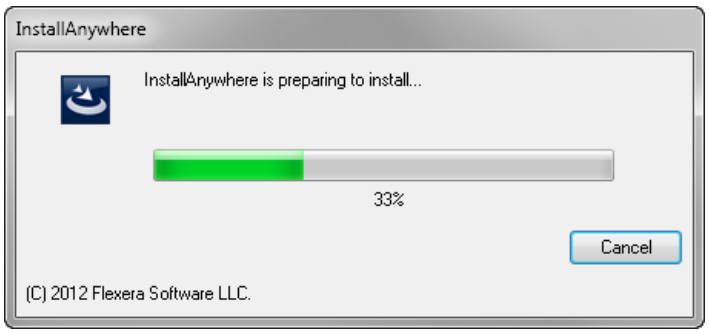
To execute the setup program:

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.exe** to launch the GUI installation wizard. For a UNIX or Linux operating system, run **./setup.bin** from a graphical interface, such as X-window.

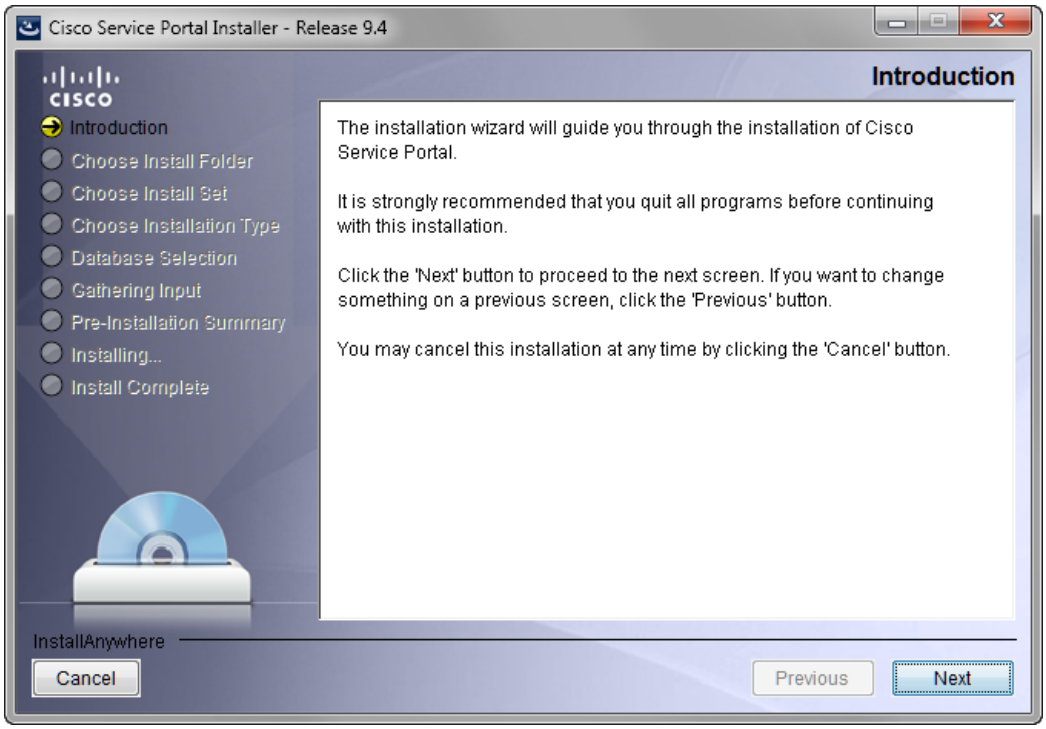
A progress bar appears, as shown in Figure 2-16 below.

Figure 2-16 Setup Progress Bar



When complete, the first page of the installation wizard appears (Introduction), as shown in Figure 2-17 below.

Figure 2-17 Introduction



How to Use the Installation Wizard

The installation wizard guides you through the installation of Cisco Service Portal 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 installation. At any time, you may click **Cancel** to exit the installation wizard without installing Service Portal.

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

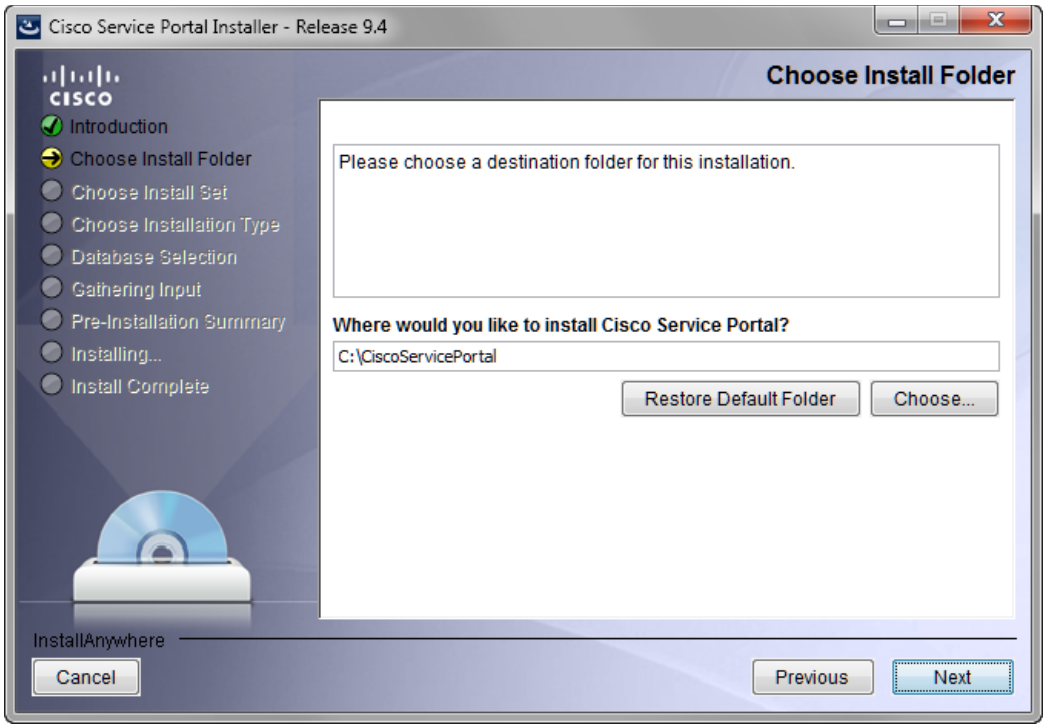
In this scenario, a new (empty) database schema is created for a new Service Portal installation. A “Typical” installation type is chosen in the installation wizard which performs a streamlined installation using default settings.

Step 1 Launch the installation wizard (see the “Executing Setup” section on page 2-65).

Step 2 On the first page of the installation wizard (Introduction, Figure 2-17), click **Next** to begin.

The Choose Install Folder page of the installation wizard appears, as shown in Figure 2-18 below.

Figure 2-18 Choose Install Folder



Step 3 Choose a destination folder for the installation. For a Windows environment, "C:\CiscoServicePortal" is entered as the default destination folder. For Linux/Unix, the default destination folder is "/opt/CiscoServicePortal". If desired, enter a different destination folder, or click **Choose** to locate and choose a folder (or create a new one). The destination folder cannot be blank.

Do not enter the installation folder of your application server. It is recommended that the destination folder is created outside of your application server directory. In other words, do not create the destination folder under <*JBOSS_DIR*>, <*WL_HOME*>, or <*WAS_ROOT*>.

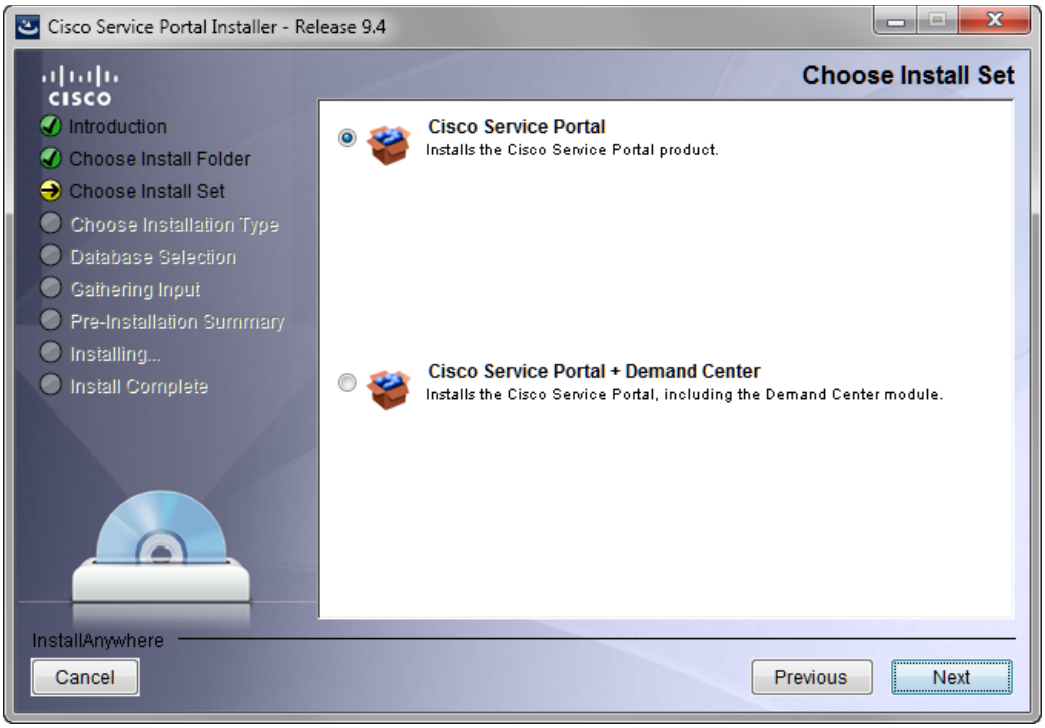
Note **Important!** The path name for the destination folder must not contain any spaces.

Throughout this document, this destination folder is referred to as <*ServicePortal_Install_Dir*>. For all application servers, this directory is where the Service Portal installation wizard creates the generated WAR files for the Service Portal application.

Step 4 Click **Next** to proceed to the next page of the wizard.

The Choose Install Set page of the installation wizard appears, as shown in Figure 2-19 below.

Figure 2-19 Choose Install Set

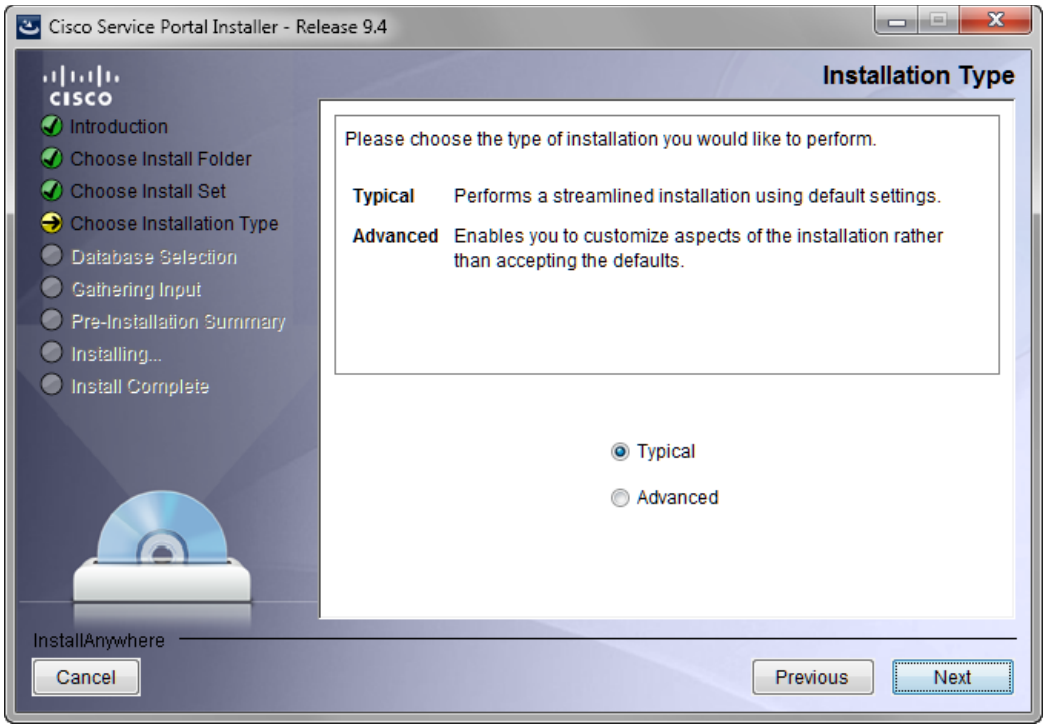


Step 5 Choose the Install Set you want by clicking its radio button. You can install just Cisco Service Portal or Cisco Service Portal with the Demand Center module. The default install set is Cisco Service Portal.

Step 6 Click **Next** to proceed to the next page of the wizard.

The Choose Installation Type page of the installation wizard appears, as shown in Figure 2-20 below.

Figure 2-20 Choose Installation Type

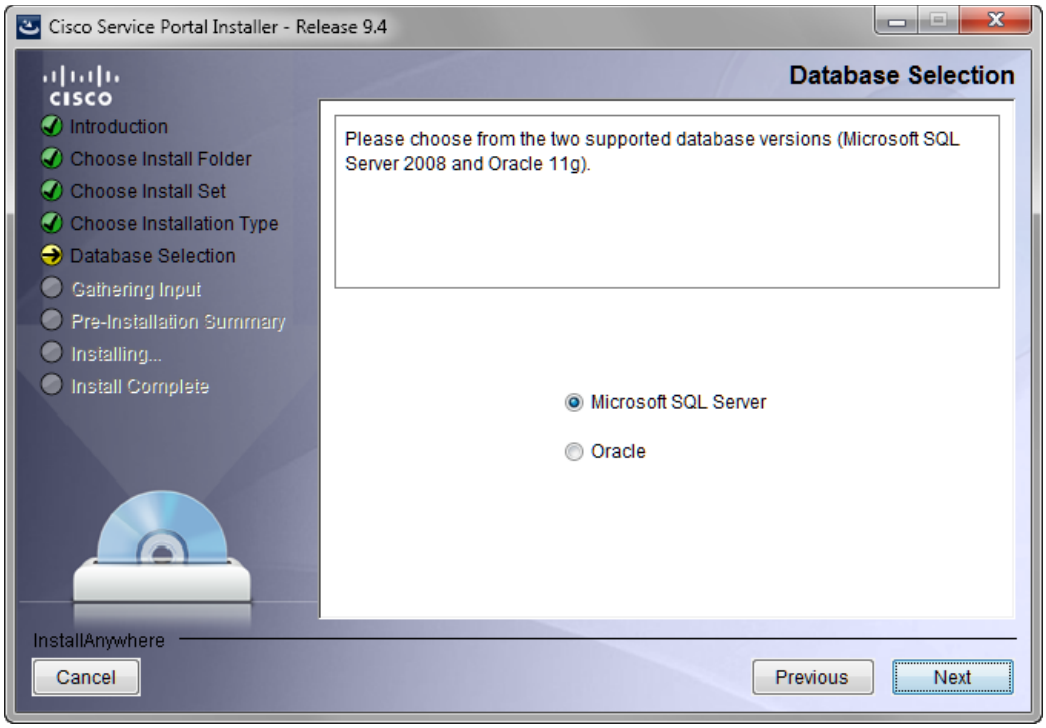


The default installation type is **Typical** which is what we want.

Step 7 Click **Next** to proceed to the next page of the wizard.

The Database Selection page of the installation wizard appears, as shown in Figure 2-21 below.

Figure 2-21 Database Selection



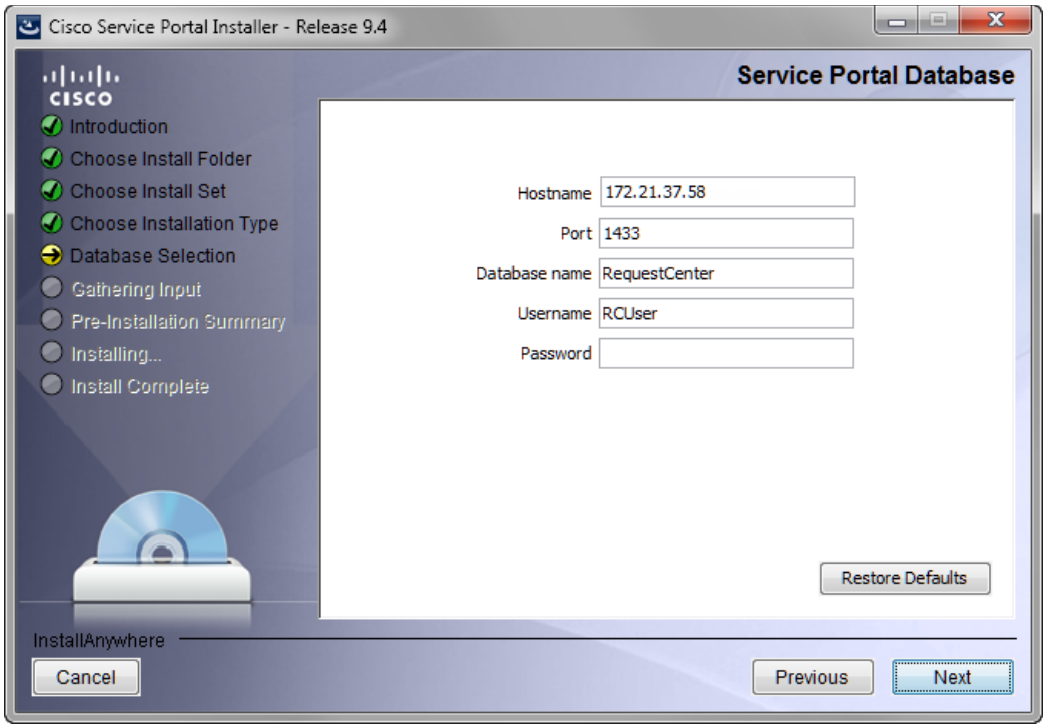
Step 8 Choose the database platform (**Microsoft SQL Server** or **Oracle**) you want by clicking its radio button. The default database platform is Microsoft SQL Server.

Use your Database Information Worksheet (Table 2-2 on page 2-12) that you filled out to determine your database platform.

Step 9 Click **Next** to proceed to the next page of the wizard.

The Service Portal Database page of the installation wizard appears, as shown in Figure 2-22 below.

Figure 2-22 Service Portal Database (Typical and Microsoft SQL Server)



Step 10 Enter your Service Portal database configuration values. Use your Database Information Worksheet (see Table 2-2 on page 2-12) that you filled out to help you determine what configuration values to enter.

Hostname	The Hostname or IP address of the Database Server for the Service Portal database. For example, servername.domain.com. The default value is the full qualified domain name (FQDN) of the machine you are currently on.
Port	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.
Database name	**For Microsoft SQL Server only**: The name of the RequestCenter database. By default this is RequestCenter.
Database SID	**For Oracle only:** The SID of the Oracle server where the RequestCenter database resides. By default this is ORCL.
Username	The username that the Service Portal application uses to authenticate with the RequestCenter database at runtime. The default username is RCUser.
Password	The password for the Database User.

All fields are validated when you enter the Tab key to go to the next field, or when you click Next to proceed. All fields are mandatory.

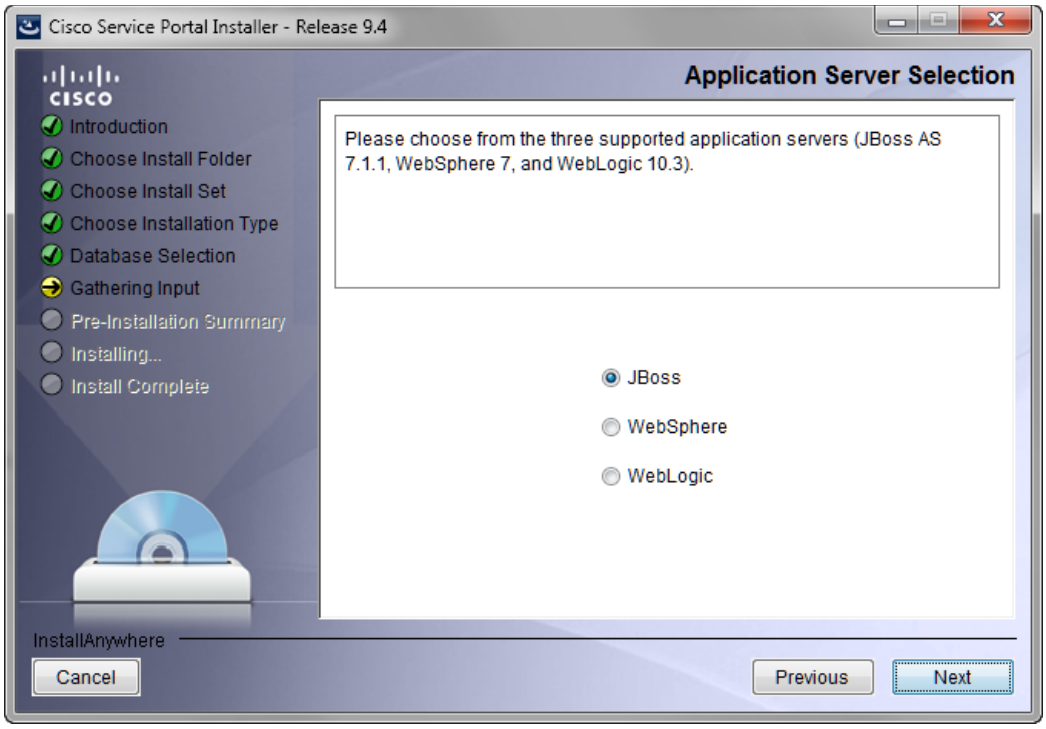
Step 11 Click **Next** to proceed to the next page of the wizard.

The installation wizard performs a connection test to your RequestCenter database using the configuration values you entered and checks that the prerequisites for your database platform have been fulfilled. If a 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 database information on the Service Portal Database page. If you want to abort the installation wizard at this point, click **Cancel**.

If the database connection test passes, the Application Server Selection page of the installation wizard appears, as shown in Figure 2-23 below.

Figure 2-23 Application Server Selection



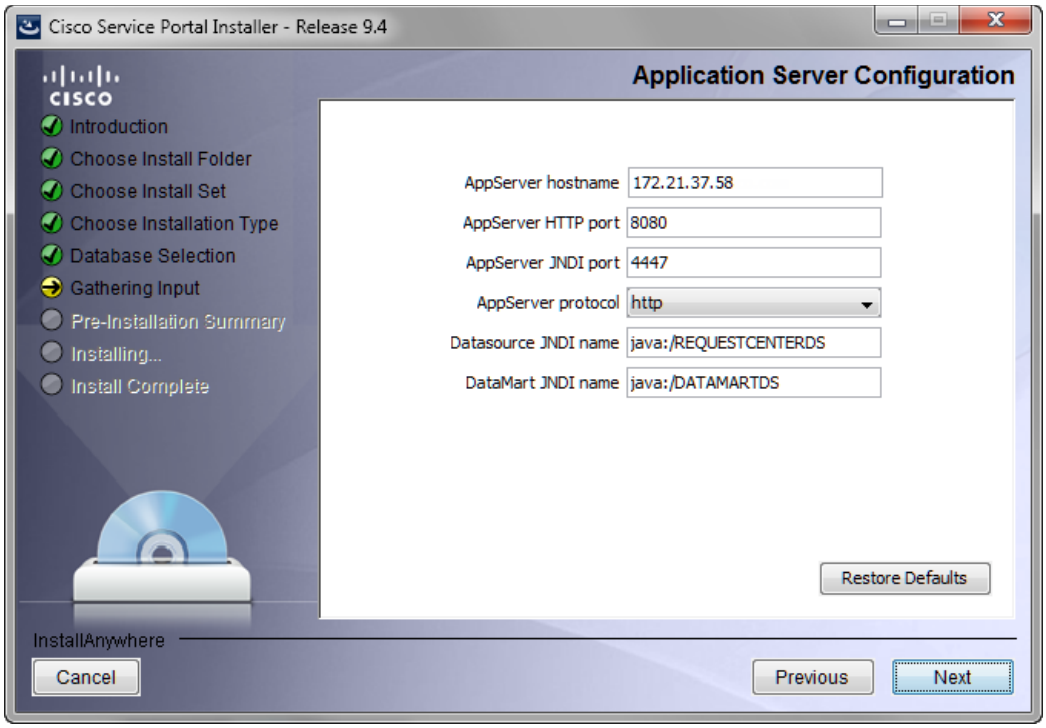
Step 12 Choose the application server (**JBoss**, **WebSphere**, or **WebLogic**) you want by clicking its radio button. JBoss is selected as the default.

Use your Application Server Information Worksheet that you filled out to determine your application server.

Step 13 Click **Next** to proceed to the next page of the wizard.

The Application Server Configuration page of the installation wizard appears, as shown in Figure 2-24 below.

Figure 2-24 Application Server Configuration (JBoss)



Step 14 Enter your Application Server Configuration values. Use your Application Server Information Worksheet that you filled out to help you determine what configuration values to enter.

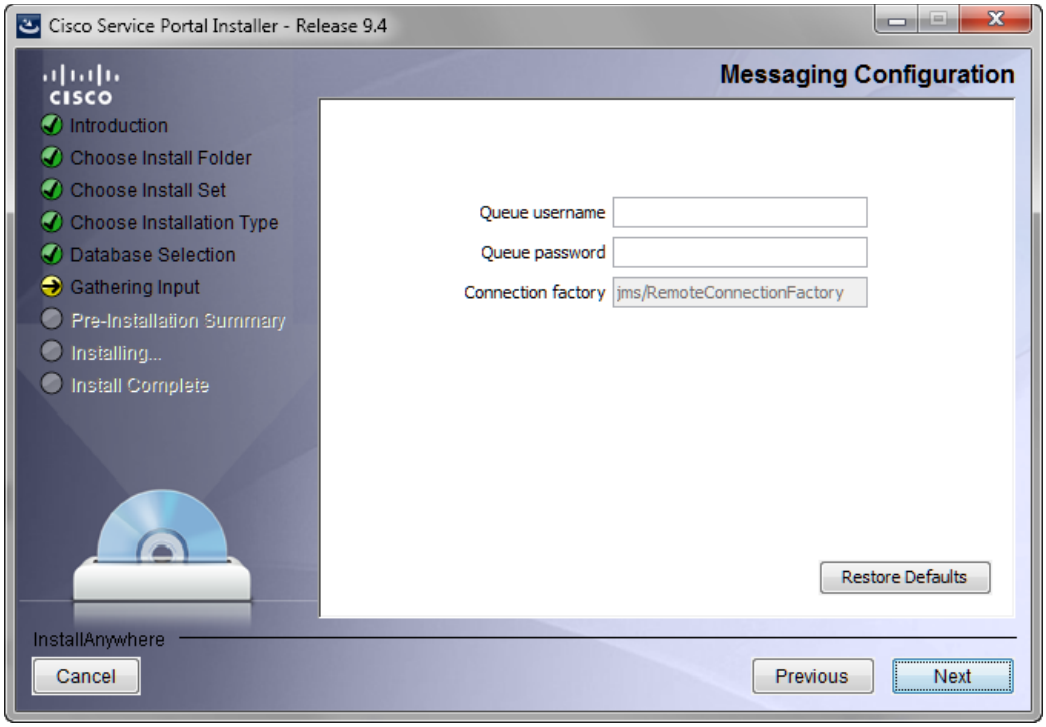
AppServer hostname	The hostname or IP address of the computer where the Application Server is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on.
AppServer HTTP port	The HTTP Port Number used by your Application Server. The default value for JBoss is 8080. For WebLogic, it is 7001. For WebSphere, it is 9080.
AppServer JNDI port	The JNDI Port of the Application Server. The default value for JBoss is 4447. For WebLogic, it is 7001. For WebSphere, it is 2809.
AppServer protocol	The web protocol for the Application Server. Choose **http** or **https** from the drop-down menu. The default is http.
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. • For JBoss, this setting must have the prefix "**java:/**". The default name is "java:/REQUESTCENTERDS". • For WebLogic or WebSphere, this setting must have the prefix "**eis/**". The default name is "eis/REQUESTCENTERDS".
DataMart JNDI name	The datasource JNDI name for the Datamart database. • For JBoss, this setting must have the prefix "**java:/**". The default name is "java:/DATAMARTDS". • For WebLogic or WebSphere, this setting must have the prefix "**eis/**". The default name "eis/DATAMARTDS".

All fields are mandatory except DataMart JNDI name.

Step 15 Click **Next** to proceed to the next page of the wizard.

The Messaging Configuration page of the installation wizard appears, as shown in Figure 2-25 below.

Figure 2-25 Messaging Configuration



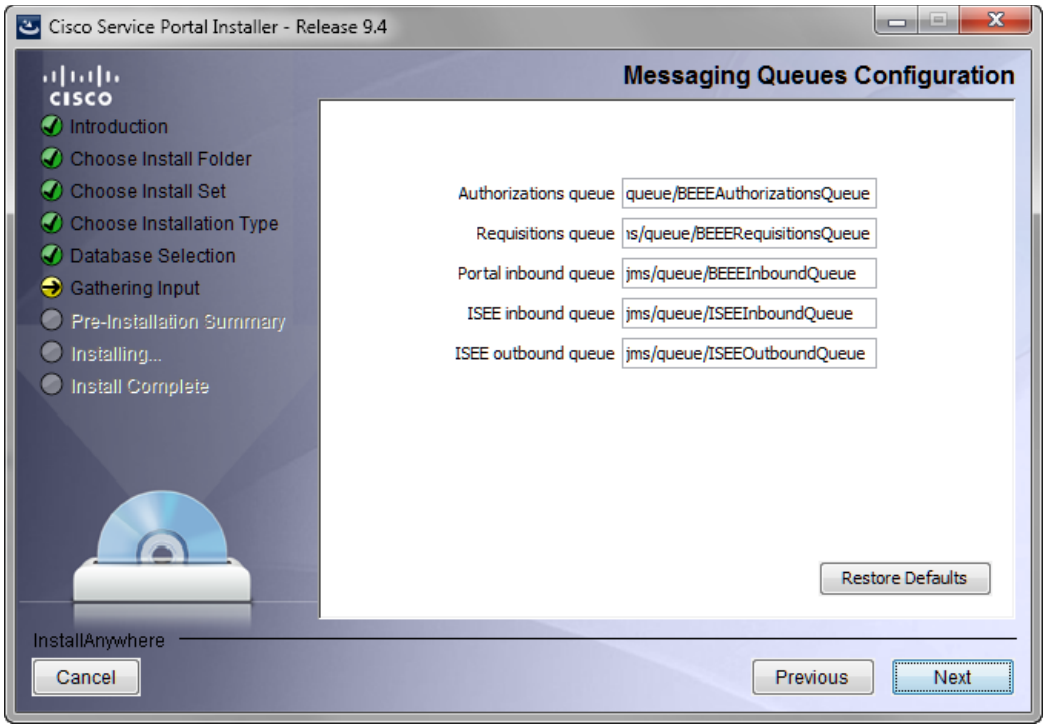
Step 16 Enter your JMS Messaging Configuration values. Use your Application Server Information Worksheet that you filled out to help you determine what configuration values to enter.

Queue username	The username of the JMS Queue User. A username is mandatory for JBoss and WebLogic. • For WebSphere, this value can be set to “guest”, which is the default.
Queue password	The password for the JMS Queue User. A password is mandatory for JBoss and WebLogic. • For WebSphere, this value can be set to “guest”.
Connection factory	The name of the JMS Queue Connection Factory. A name is mandatory. • For JBOSS, the name cannot be changed. • For WebSphere and WebLogic, the default name is NSConnectionFactory.

Step 17 Click **Next** to proceed to the next page of the wizard.

The Messaging Queues Configuration page of the installation wizard appears, as shown in Figure 2-26 below.

Figure 2-26 Messaging Queues Configuration (JBoss)



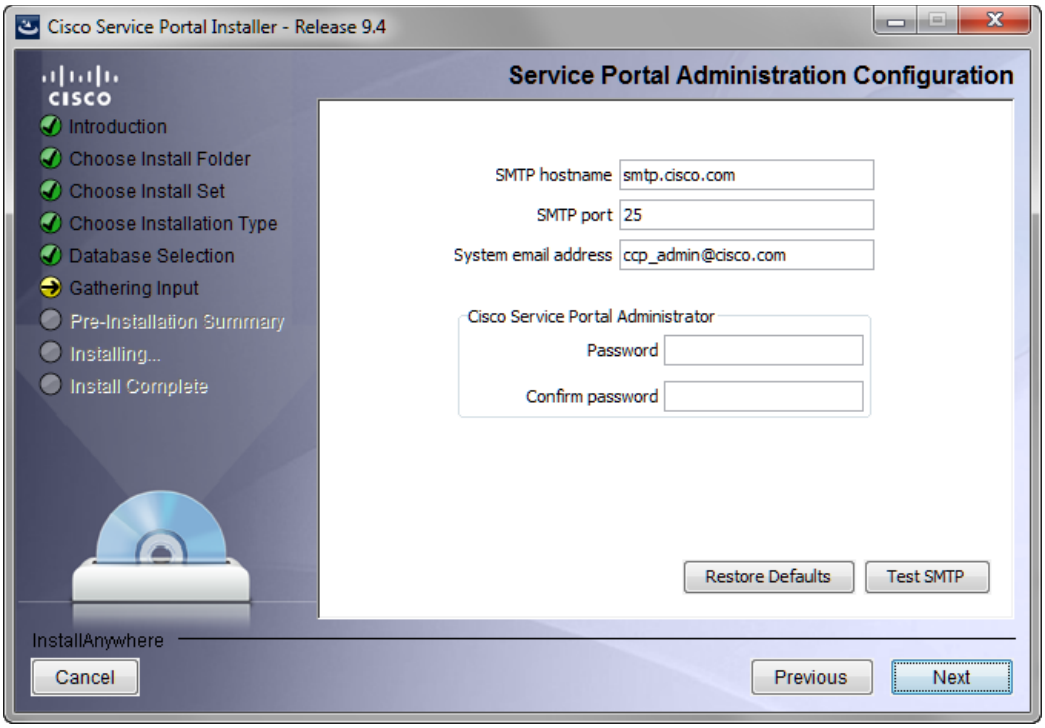
Step 18 Enter your Messaging Queues Configuration names. All names are mandatory. Use your Application Server Information Worksheet that you filled out to help you determine what configuration names to enter.

Authorizations queue	The name of the Authorizations Queue. For JBoss, the default is jms/queue/BEEEAuthorizationsQueue. For WebLogic and WebSphere, the default is BEEEAuthorizationsQueue.
Requisitions queue	The name of the Requisitions Queue. For JBoss, the default is jms/queue/BEEERequisitionsQueue. For WebLogic and WebSphere, the default is BEEERequisitionsQueue.
Portal inbound queue	The name of the Inbound Queue for the Business Engine. For JBoss, the default is jms/queue/BEEEInboundQueue. For WebLogic and WebSphere, the default is BEEEInboundQueue.
ISEE inbound queue	The name of the Service Link Inbound Queue. For JBoss, the default is jms/queue/ISEEInboundQueue. For WebLogic and WebSphere, the default is ISEEInboundQueue.
ISEE outbound queue	The name of the Service Link Outbound Queue. For JBoss, the default is jms/queue/ISEEOutboundQueue. For WebLogic and WebSphere, the default is ISEEOutboundQueue.

Step 19 Click **Next** to proceed to the next page of the wizard.

The Service Portal Administration Configuration page of the installation wizard appears, as shown in Figure 2-27 below.

Figure 2-27 Service Portal Administration Configuration



Step 20 Enter your Service Portal Administration Configuration values. All fields are mandatory.

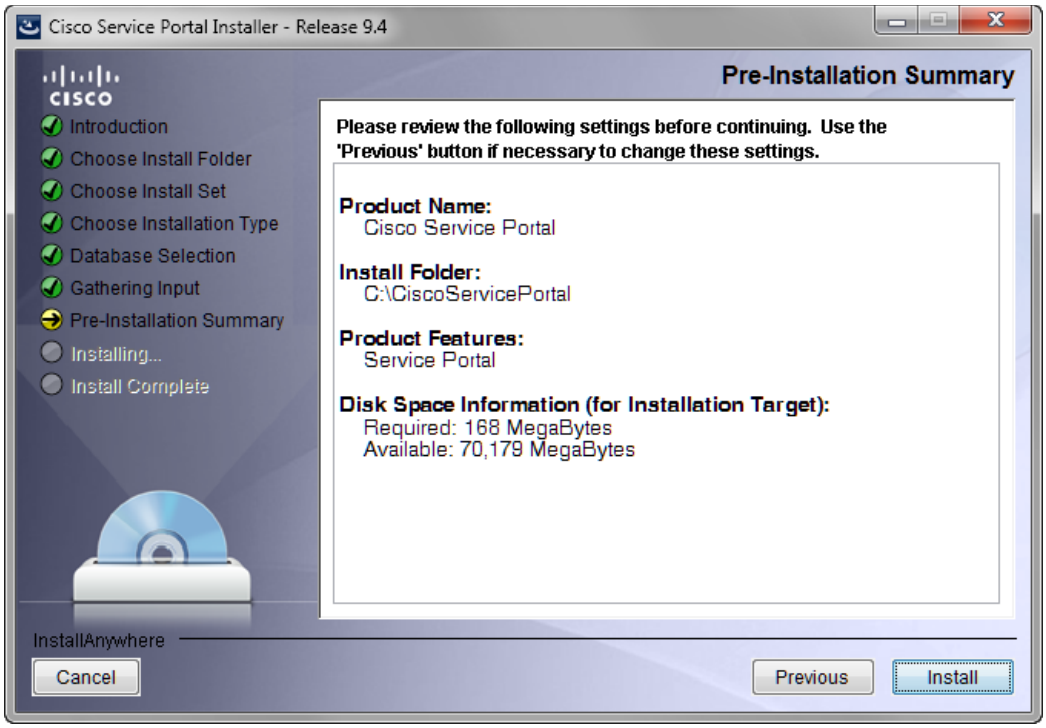
SMTP hostname	The hostname or IP address of the SMTP Server. The default is smtp.cisco.com.
SMTP port	The SMTP Port Number used by your SMTP Server. Valid port numbers are from 1 to 65535. The default value is 25.
System email address	The sender email address to be used for system generated notifications.
Cisco Service Portal Administrator: Password	The password of the Cisco Service Portal administrator, required only for a new installation.
Cisco Service Portal Administrator: Confirm password	Re-enter the administrator password.

Click **Test SMTP** to test the connection to the SMTP server.

Step 21 Click **Next** to proceed to the next page of the wizard.

The Pre-Installation Summary page of the installation wizard appears, as shown in Figure 2-28 below.

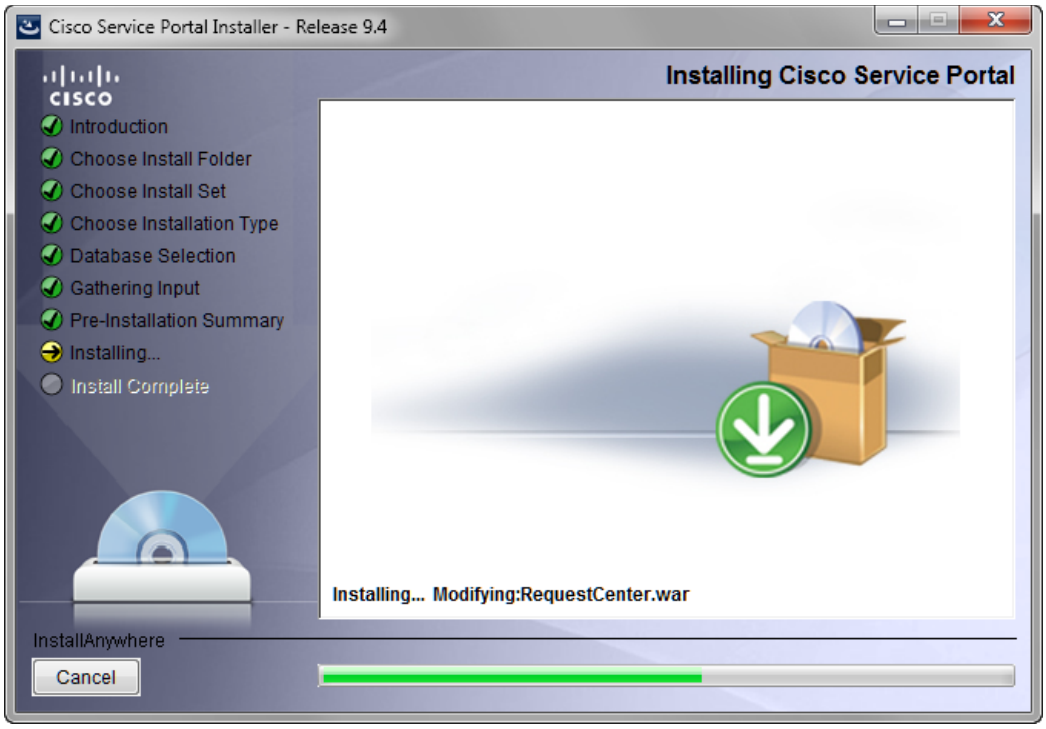
Figure 2-28 Pre-Installation Summary



Step 22 The installation wizard has enough information to start the installation 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 installation of Service Portal.

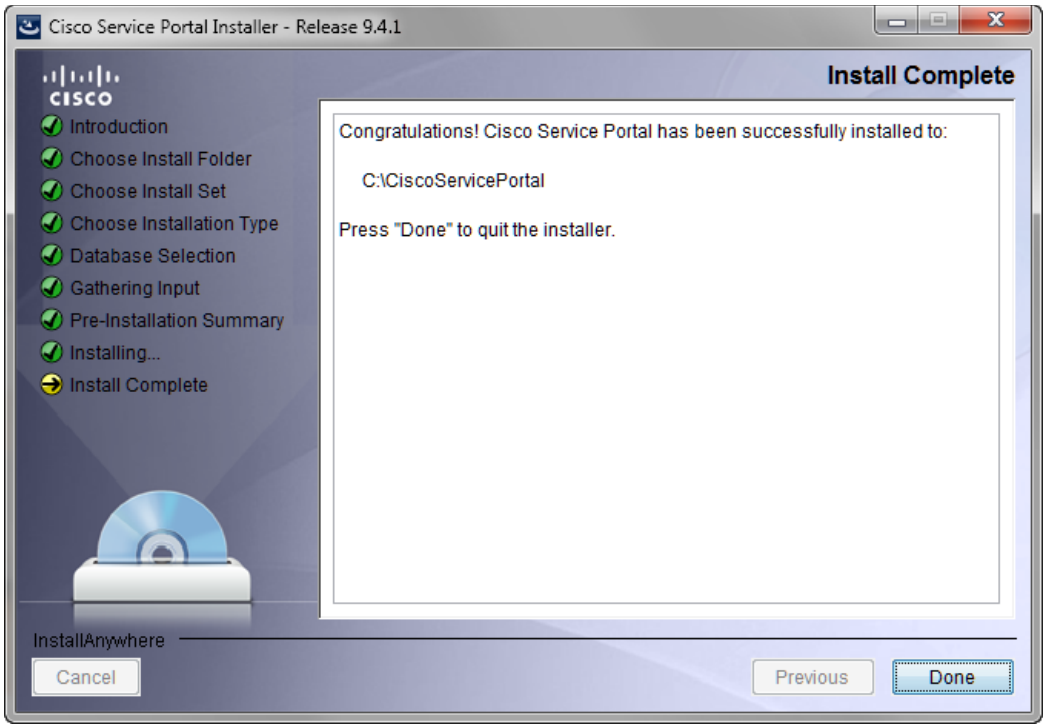
The Installing Cisco Service Portal page of the installation wizard appears, as shown in Figure 2-29 below.

Figure 2-29 Installing Cisco Service Portal (Installing Application)



This 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 page of the installation wizard appears, as shown in Figure 2-30 below.

Figure 2-30 Install Complete



Step 23 Click **Done** to exit the installation wizard.

Step 24 Make a backup of the following directories:

- *<ServicePortal_Software_Dir>* – This is the location where you extracted the electronic distribution of the Service Portal software.
- *<ServicePortal_Install_Dir>* – This is the destination directory for your Service Portal software. It contains the generated WAR files for the application, the installation log files, as well as the properties files that contain the installation options that you have chosen during the installation.

Scenario 2: New Advanced Installation

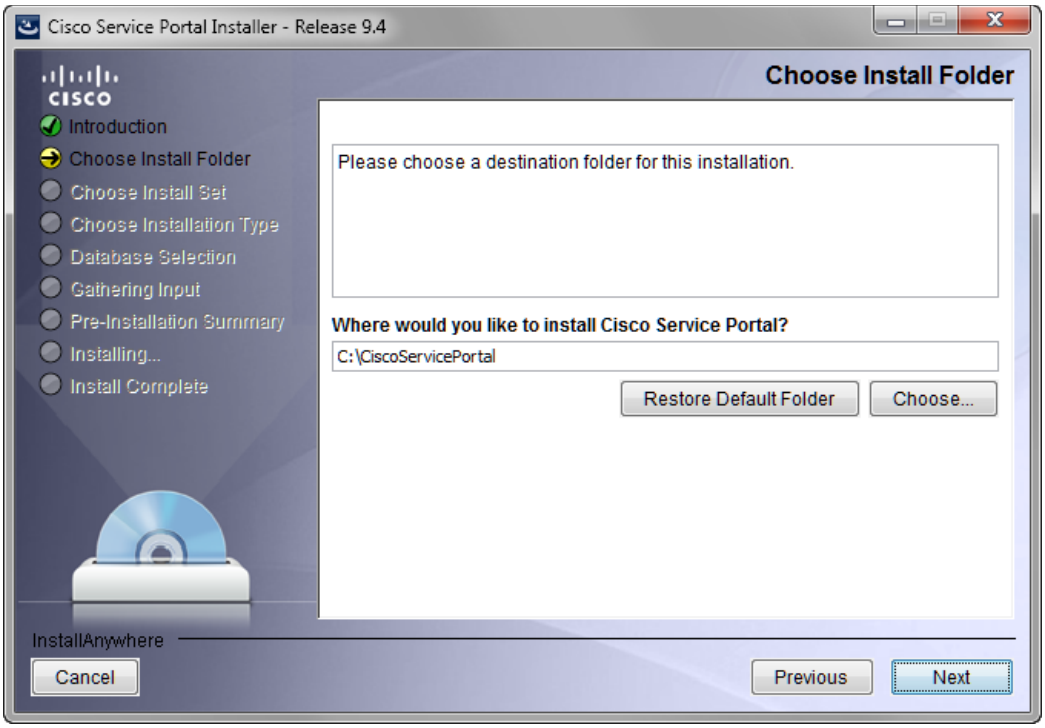
In this scenario, a new (empty) database schema is created for a new Service Portal installation. An Advanced installation type is chosen in the installation wizard which enables you to customize aspects of the installation rather than accepting the defaults.

Step 1 Launch the installation wizard (see the "Executing Setup" section on page 2-65).

Step 2 On the first page of the installation wizard (Introduction, Figure 2-17), click **Next** to begin.

The Choose Install Folder page of the installation wizard appears, as shown in Figure 2-31 below.

Figure 2-31 Choose Install Folder



Step 3 Choose a destination folder for the installation. For a Windows environment, "C:\CiscoServicePortal" is entered as the default destination folder. For Linux/Unix, the default destination folder is "/opt/CiscoServicePortal". If desired, enter a different destination folder, or click **Choose** to locate and choose a folder (or create a new one). The destination folder cannot be blank.

Do not enter the installation folder of your application server. It is recommended that the destination folder is created outside of your application server directory. In other words, do not create the destination folder under <*JBOSS_DIR*>, <*WL_HOME*>, or <*WAS_ROOT*>.

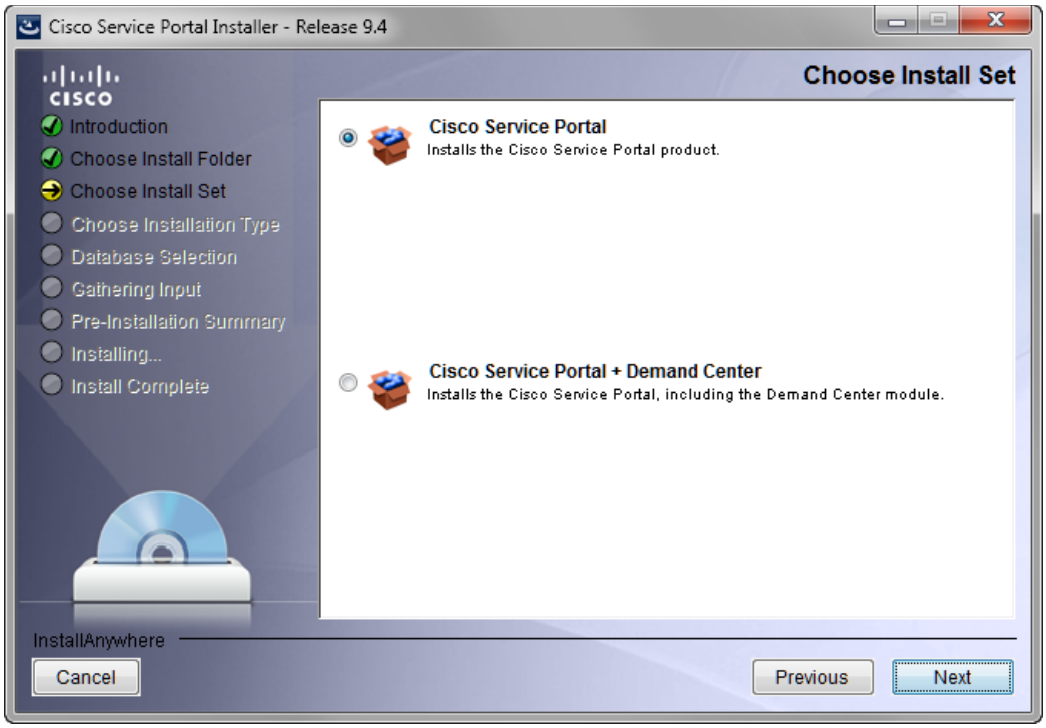
Note **Important!** The path name for the destination folder must not contain any spaces.

Throughout this document, this destination folder is referred to as <*ServicePortal_Install_Dir*>. For all application servers, this directory is where the Service Portal installation wizard creates the generated WAR files for the Service Portal application.

Step 4 Click **Next** to proceed to the next page of the wizard.

The Choose Install Set page of the installation wizard appears, as shown in Figure 2-32 below.

Figure 2-32 Choose Install Set

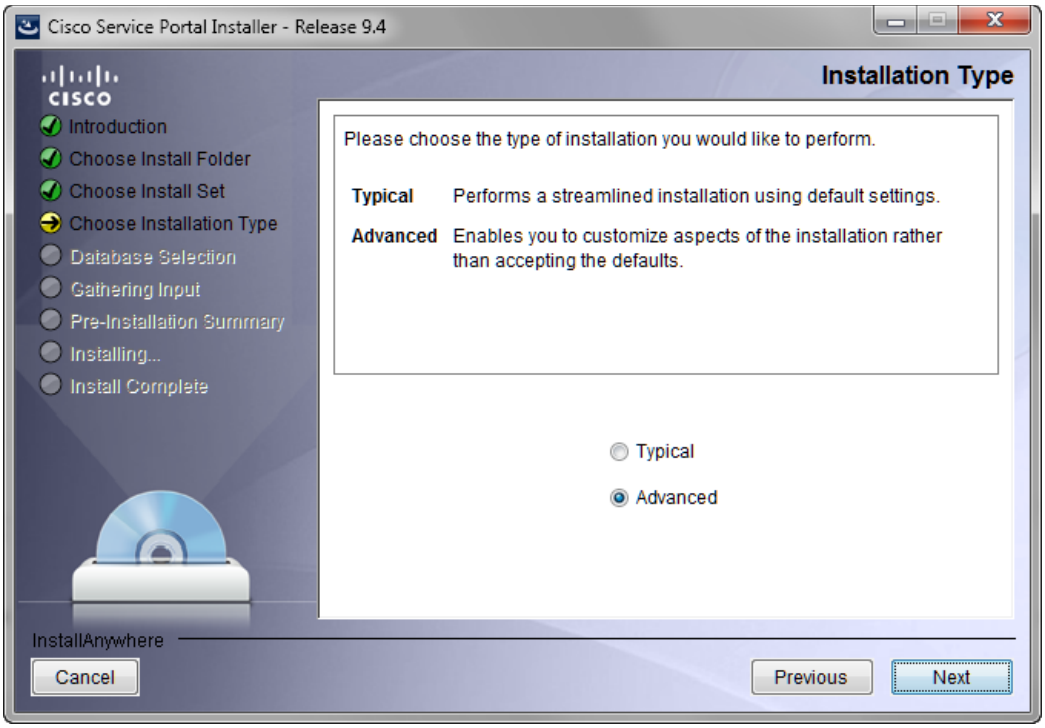


Step 5 Choose the Install Set you want by clicking its radio button. You can install just Cisco Service Portal or Cisco Service Portal with the Demand Center module. The default install set is Cisco Service Portal.

Step 6 Click **Next** to proceed to the next page of the wizard.

The Choose Installation Type page of the installation wizard appears, as shown in Figure 2-33 below.

Figure 2-33 Choose Installation Type

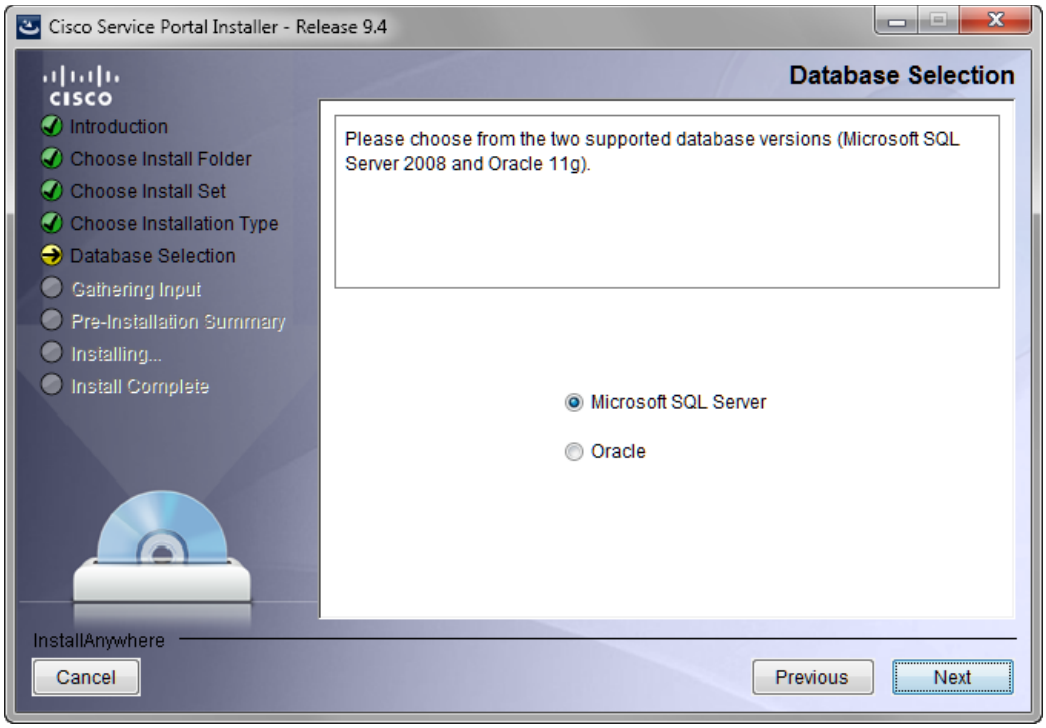


Step 7 Choose **Advanced** by clicking its radio button.

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

The Database Selection page of the installation wizard appears, as shown in Figure 2-34 below.

Figure 2-34 Database Selection



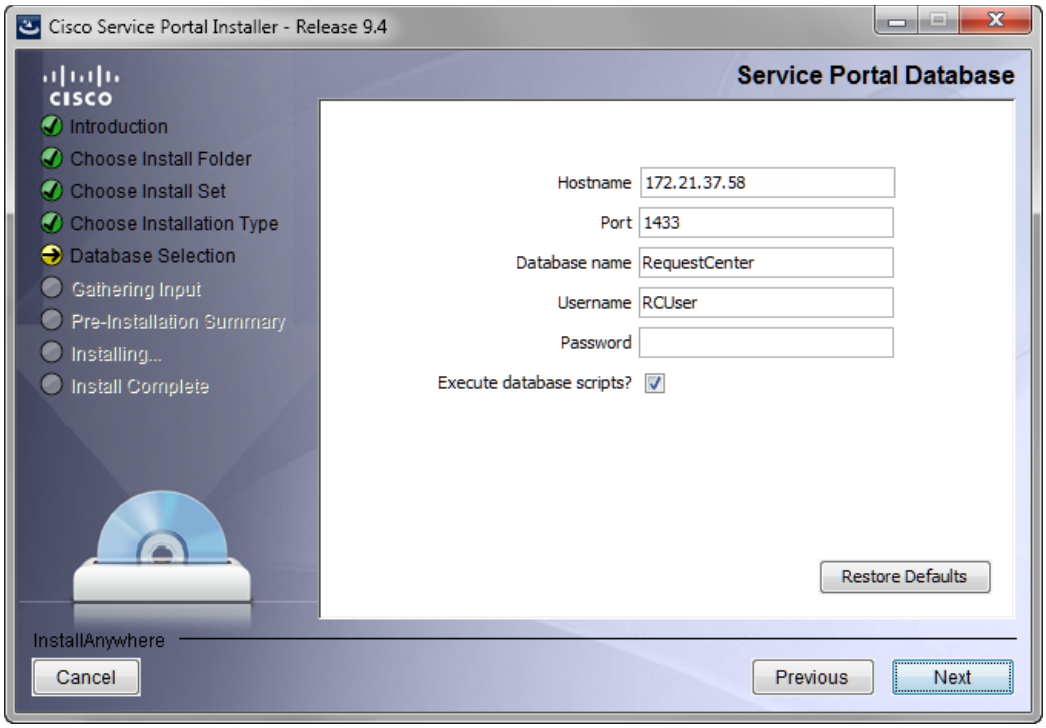
Step 9 Choose the database platform (**Microsoft SQL Server** or **Oracle**) you want by clicking its radio button. The default database platform is Microsoft SQL Server.

Use your Database Information Worksheet (Table 2-2 on page 2-12) that you filled out to determine your database platform.

Step 10 Click **Next** to proceed to the next page of the wizard.

The Service Portal Database page of the installation wizard appears, as shown in Figure 2-35 below.

Figure 2-35 Service Portal Database (Advanced and Microsoft SQL Server)



Step 11 Enter your Service Portal database configuration values. Use your Database Information Worksheet (see Table 2-2 on page 2-12) that you filled out to help you determine what configuration values to enter.

Hostname	The Hostname or IP address of the Database Server for the Service Portal database. For example, servername.domain.com. The default value is the full qualified domain name (FQDN) of the machine you are currently on.
Port	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.
Database name	**For Microsoft SQL Server only**: The name of the RequestCenter database. By default this is RequestCenter.
Database SID	**For Oracle only:** The SID of the Oracle server where the RequestCenter database resides. By default this is ORCL.
Username	The username that the Service Portal application uses to authenticate with the RequestCenter database at runtime. The default username is RCUser.
Password	The password for the Database User.
Execute database scripts?	Check the check box to execute all database scripts. This is checked by default.
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.

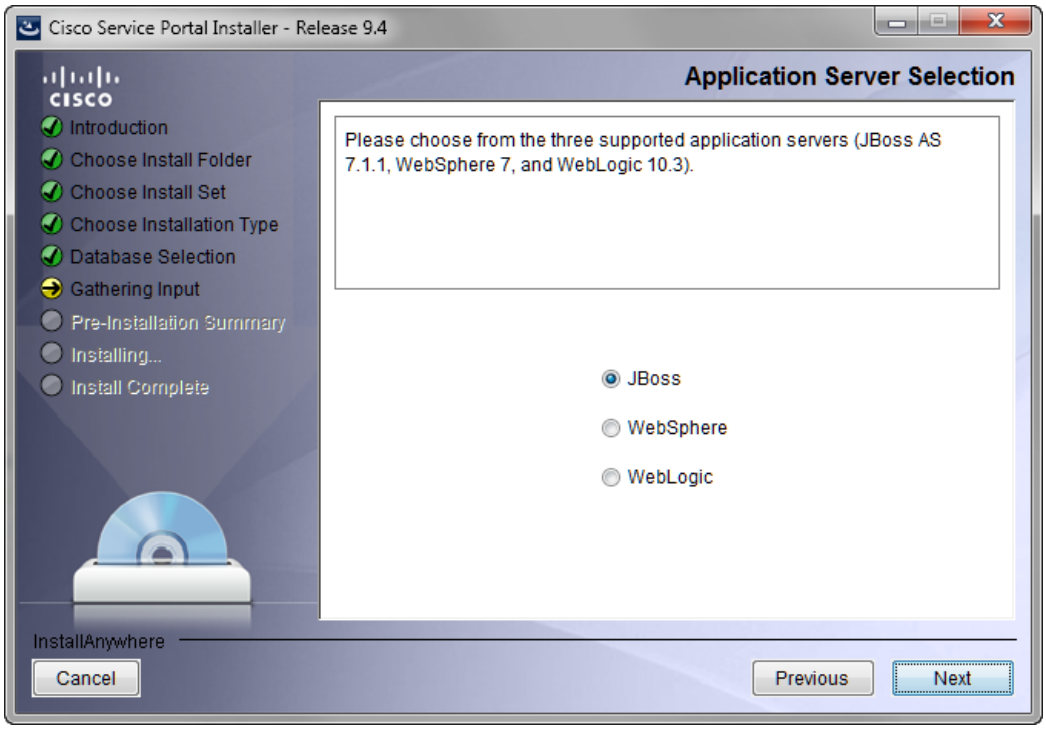
All fields are validated when you enter the Tab key to go to the next field, or when you click Next to proceed. All fields are mandatory.

Step 12 Click **Next** to proceed to the next page of the wizard.

The installation wizard performs a connection test to your RequestCenter database using the configuration values you entered and checks that the prerequisites for your database platform have been fulfilled. If a 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 database information on the Service Portal Database page. If you want to abort the installation wizard at this point, click **Cancel**.

If the database connection test passes, the Application Server Selection page of the installation wizard appears, as shown in Figure 2-36 below.

Figure 2-36 Application Server Selection



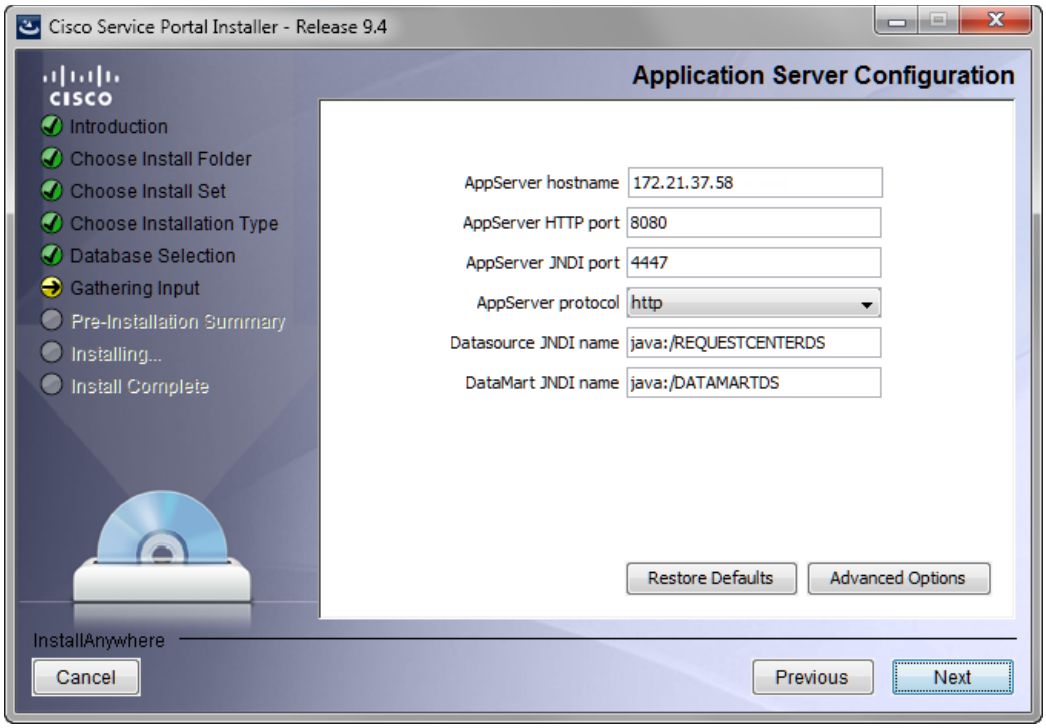
Step 13 Choose the application server (**JBoss**, **WebSphere**, or **WebLogic**) you want by clicking its radio button. JBoss is selected as the default.

Use your Application Server Information Worksheet that you filled out to determine your application server.

Step 14 Click **Next** to proceed to the next page of the wizard.

The Application Server Configuration page of the installation wizard appears, as shown in Figure 2-37 below.

Figure 2-37 Application Server Configuration (JBoss)



Step 15 Enter your Application Server configuration values. Use your Application Server Information Worksheet that you filled out to help you determine what configuration values to enter.

AppServer hostname	The hostname or IP address of the computer where the Application Server is running.The default value is the full qualified domain name (FQDN) of the machine you are currently on.
AppServer HTTP port	The HTTP Port Number used by your Application Server. The default value for JBoss is 8080. For WebLogic, it is 7001. For WebSphere, it is 9080.
AppServer JNDI port	The JNDI Port of the Application Server. The default value for JBoss is 4447. For WebLogic, it is 7001. For WebSphere, it is 2809.
AppServer protocol	Choose **http** or **https** from the drop-down menu. The default is http.

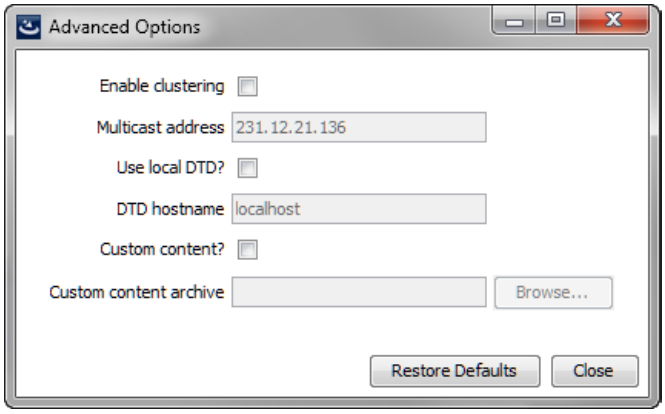
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. • For JBoss, this setting must have the prefix "**java:/**". The default name is "java:/REQUESTCENTERDS". • For WebLogic or WebSphere, this setting must have the prefix "**eis/**". The default name is "eis/REQUESTCENTERDS".
DataMart JNDI name	The datasource JNDI name for the DataMart database. • For JBoss, this setting must have the prefix "**java:/**". The default name is "java:/DATAMARTDS". • For WebLogic or WebSphere, this setting must have the prefix "**eis/**". The default name "eis/DATAMARTDS".

All fields are mandatory except the DataMart JNDI name.

Step 16 Click **Advanced Options**.

The Advanced Options dialog box appears, as shown in Figure 2-38 below.

Figure 2-38 Advanced Options



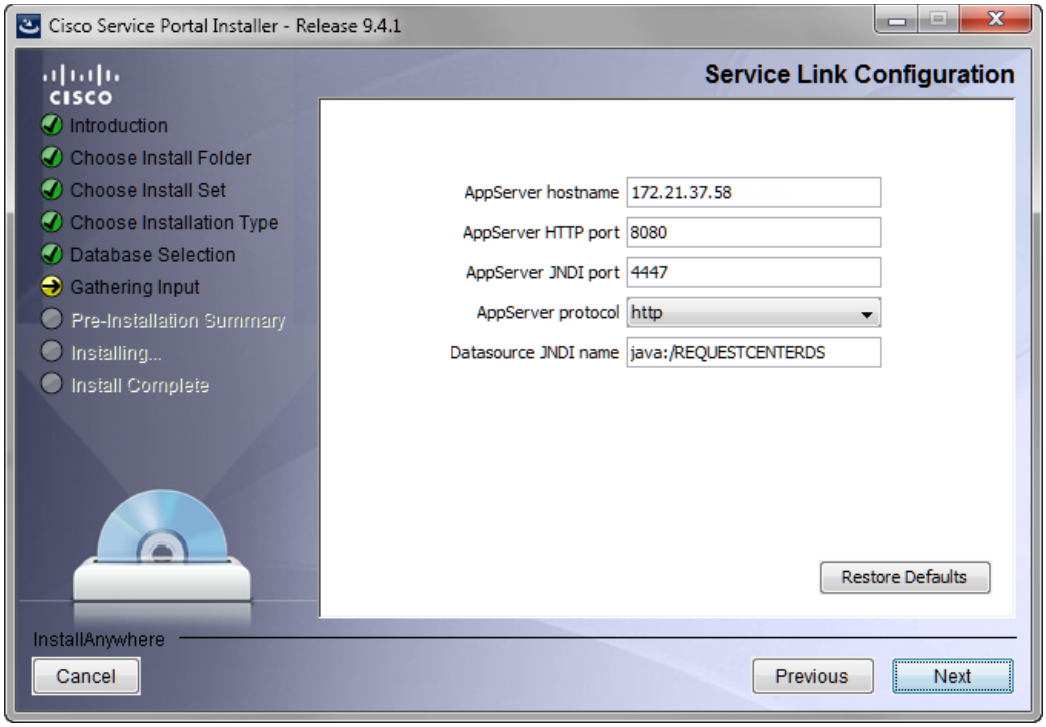
Step 17 Enter your Advanced Options preferences as described below. Click **Close** to close the dialog box when done.

Enable clustering	Check the check box to enable a Clustered Application Server environment with multiple nodes. DO NOT CHOOSE THIS OPTION FOR JBOSS. Clustered JBoss is NOT supported in this release of Cisco Service Portal. This is unchecked by default.
Multicast address	If you checked "Enable clustering" above, enter the Multicast address.
Use local DTD?	Check the check box to use local DTD. Enter the DTD hostname below. This is unchecked by default.
DTD hostname	If you checked "Use local DTD?" above, enter the DTD hostname.
Custom content?	Check the check box to use Custom content. You must enter the path to the Custom content archive below.
Custom content archive	If you checked "Custom content?" above, enter the full 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 must be in the Zip format.

Step 18 Click **Next** to proceed to the next page of the wizard.

The Service Link Configuration page of the installation wizard appears, as shown in Figure 2-39 below.

Figure 2-39 Service Link Configuration (JBoss)



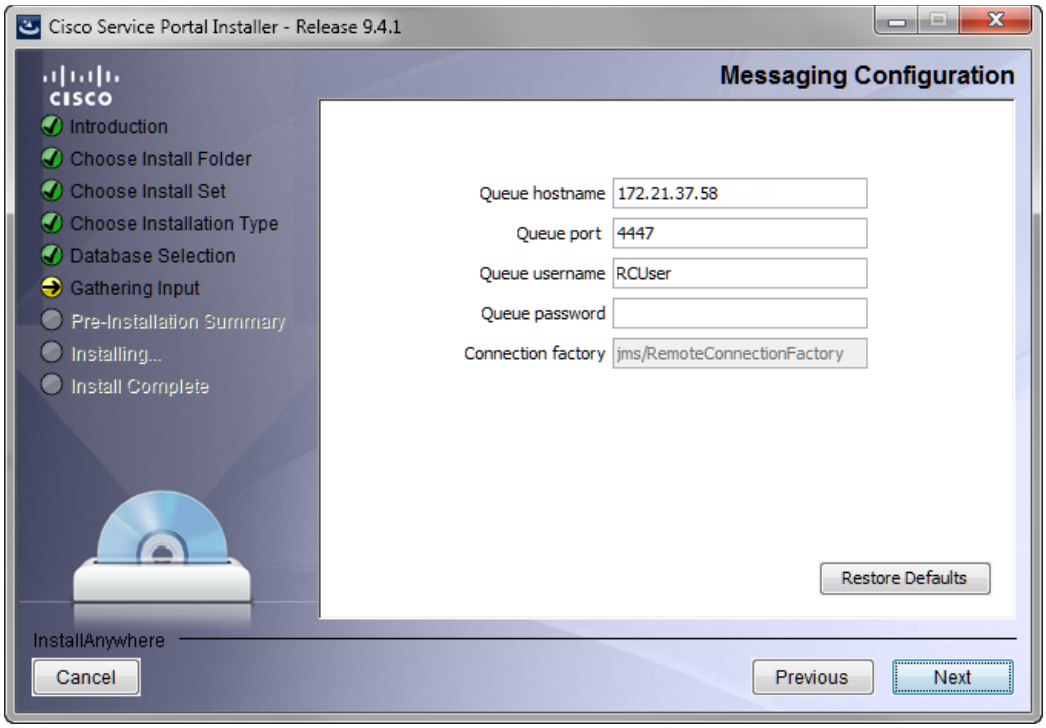
Step 19 Enter your Service Link configuration values. Use your Application Server Information Worksheet that you filled out to help you determine what configuration values to enter.

AppServer hostname	The name of the computer where the "Service Link Application Server" is running. For a nonclustered environment, this value is the same as the AppServer hostname for the Application Server. The default value is the full qualified domain name (FQDN) of the machine you are currently on.
AppServer HTTP port	The HTTP port of the "Service Link Application Server". For a nonclustered environment, this value is the same as the AppServer HTTP port.
AppServer JNDI port	The JNDI port of the "Service Link Application Server". For a nonclustered environment, this value is the same as the AppServer JNDI port.
AppServer protocol	Choose **http** or **https** from the drop-down menu. The default is http.
Datasource JNDI name	The datasource JNDI name for the RequestCenter database. • For JBoss, this setting must have the prefix "**java:/**". The default name is "java:/REQUESTCENTERDS". • For WebLogic or WebSphere, this setting must have the prefix "**eis/**". The default name is "eis/REQUESTCENTERDS".

Step 20 Click **Next** to proceed to the next page of the wizard.

The Messaging Configuration page of the installation wizard appears, as shown in Figure 2-40 below.

Figure 2-40 Messaging Configuration



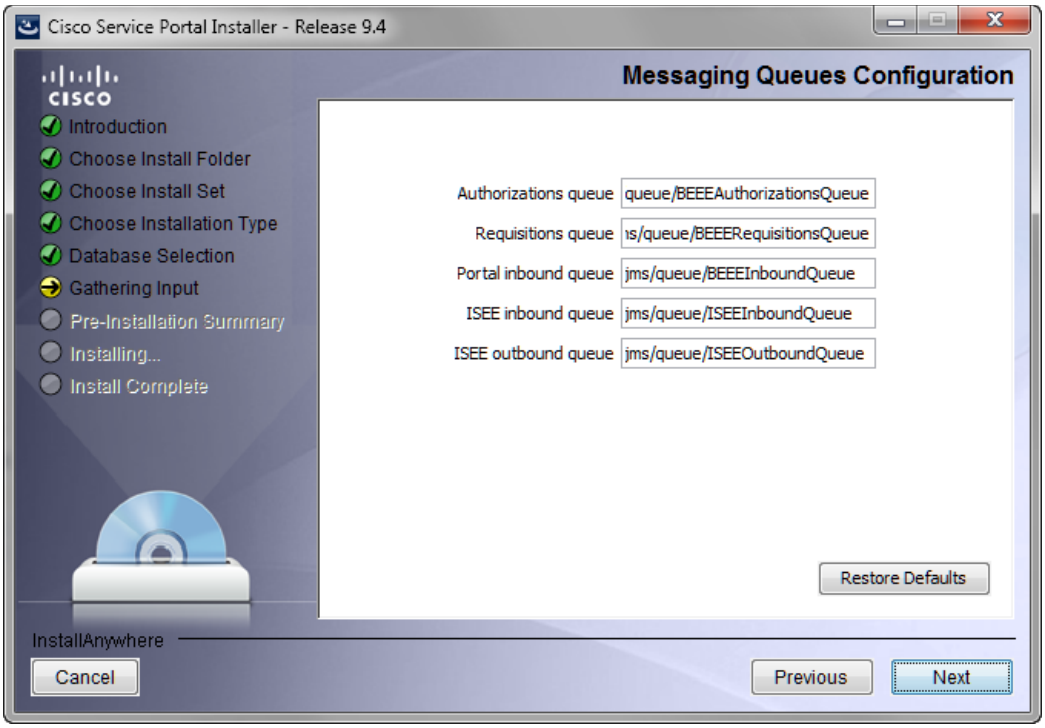
Step 21 Enter your Messaging configuration values. Use your Application Server Information Worksheet that you filled out to help you determine what configuration values to enter.

Queue hostname	The hostname of the computer where the JMS Messaging server is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on.
Queue port	Port Number used by your JMS Messaging Server. The default value for JBoss is 4447. For WebLogic, it is 7001. For WebSphere, it is 2809.
Queue username	The username of the JMS Queue User. A username is mandatory for JBoss and WebLogic. • For WebSphere, this value can be set to “guest”, which is the default.
Queue password	The password for the JMS Queue User. A password is mandatory for JBoss and WebLogic. • For WebSphere, this value can be set to “guest”.
Connection factory	The name of the JMS Queue Connection Factory. A name is mandatory. • For JBOSS, the name cannot be changed. • For WebSphere and WebLogic, the default name is NSConnectionFactory.

Step 22 Click **Next** to proceed to the next page of the wizard.

The Messaging Queues Configuration page of the installation wizard appears, as shown in Figure 2-41 below.

Figure 2-41 Messaging Queues Configuration



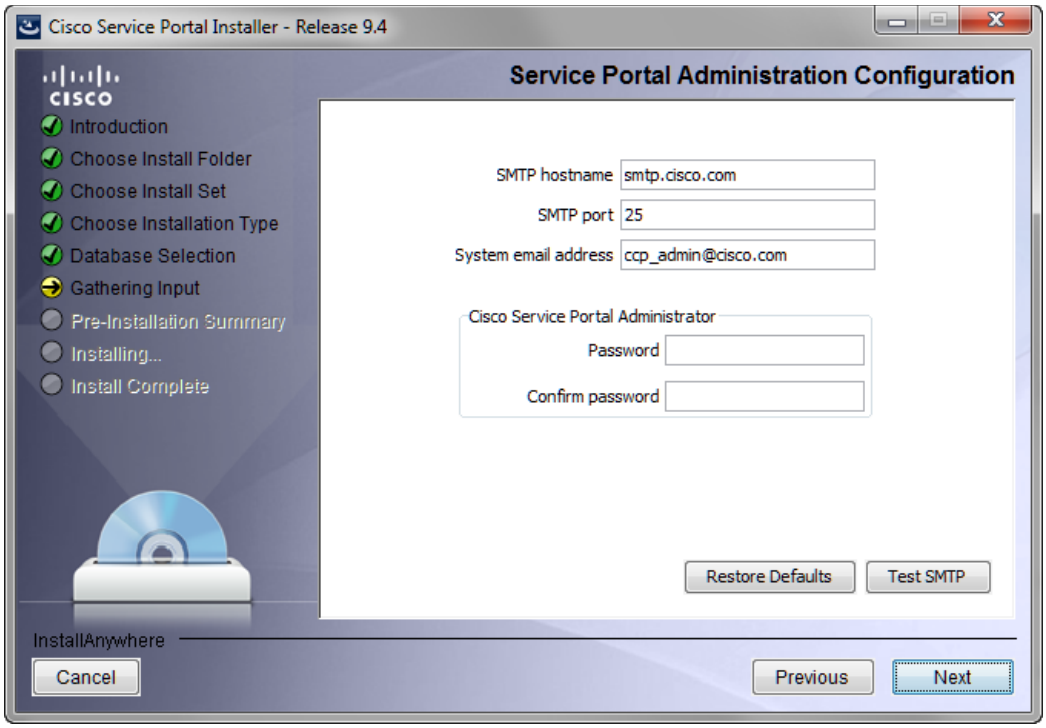
Step 23 Enter your Messaging Queues configuration names. All names are mandatory. Use your Application Server Information Worksheet that you filled out to help you determine what configuration names to enter.

Authorizations queue	The name of the Authorizations Queue. For JBoss, the default is jms/queue/BEEEAuthorizationsQueue. For WebLogic and WebSphere, the default is BEEEAuthorizationsQueue.
Requisitions queue	The name of the Requisitions Queue. For JBoss, the default is jms/queue/BEEERequisitionsQueue. For WebLogic and WebSphere, the default is BEEERequisitionsQueue.
Portal inbound queue	The name of the Inbound Queue for the Business Engine. For JBoss, the default is jms/queue/BEEEInboundQueue. For WebLogic and WebSphere, the default is BEEEInboundQueue.
ISEE inbound queue	The name of the Service Link Inbound Queue. For JBoss, the default is jms/queue/ISEEInboundQueue. For WebLogic and WebSphere, the default is ISEEInboundQueue.
ISEE Outbound queue	The name of the Service Link Outbound Queue. For JBoss, the default is jms/queue/ISEEOutboundQueue. For WebLogic and WebSphere, the default is ISEEOutboundQueue.

Step 24 Click **Next** to proceed to the next page of the wizard.

The Service Portal Administration Configuration page of the installation wizard appears, as shown in Figure 2-42 below.

Figure 2-42 Service Portal Administration Configuration



Step 25 Enter your Service Portal Administration configuration values. All fields area mandatory.

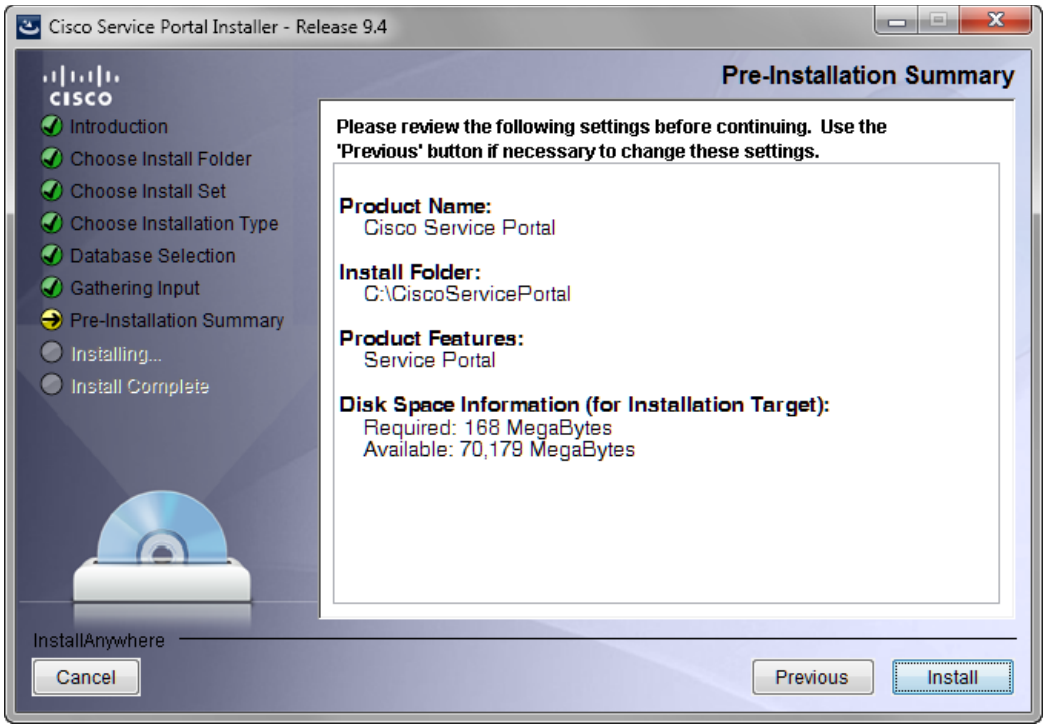
SMTP hostname	The hostname or IP address of the SMTP server. The default is smtp.cisco.com.
SMTP port	The SMTP Port Number used by your SMTP Server. Valid port numbers are from 1 to 65535. The default value is 25.
System email address	The sender email address to be used for system generated notifications.
Cisco Service Portal Administrator: Password	The password of the Cisco Service Portal administrator, required only for a new installation.
Cisco Service Portal Administrator: Confirm password	Re-enter the administrator password.

Click **Test SMTP** to test the connection to the SMTP server.

Step 26 Click **Next** to proceed to the next page of the wizard.

The Pre-Installation Summary page of the installation wizard appears, as shown in Figure 2-43 below.

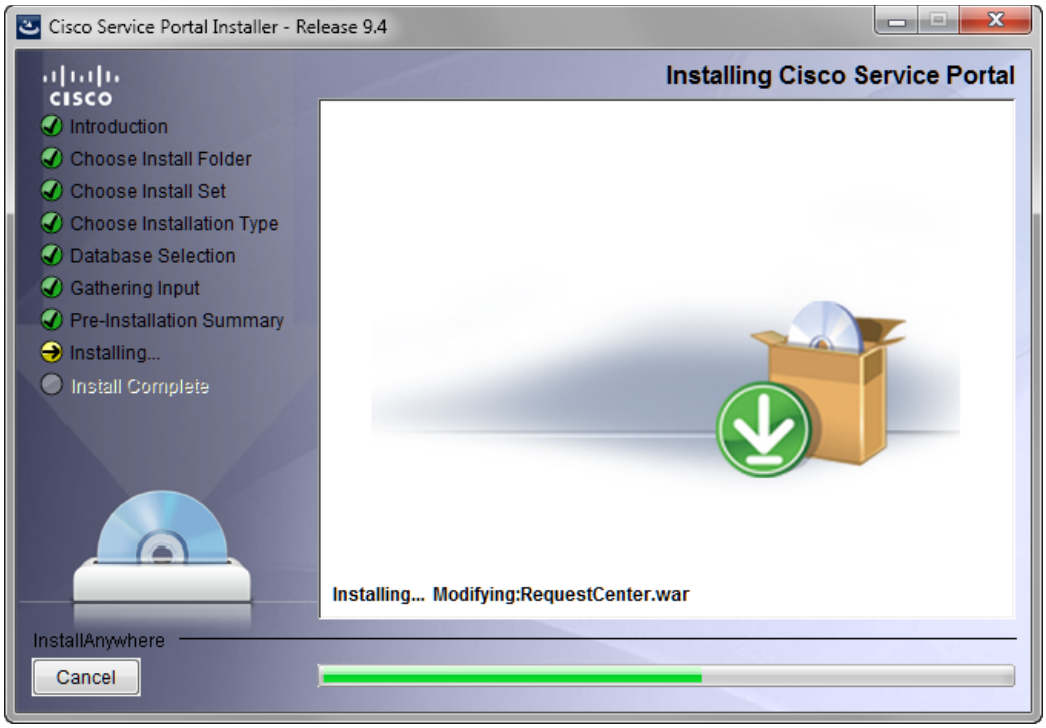
Figure 2-43 Pre-Installation Summary



Step 27 The installation wizard has enough information to start the installation 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 installation of Service Portal.

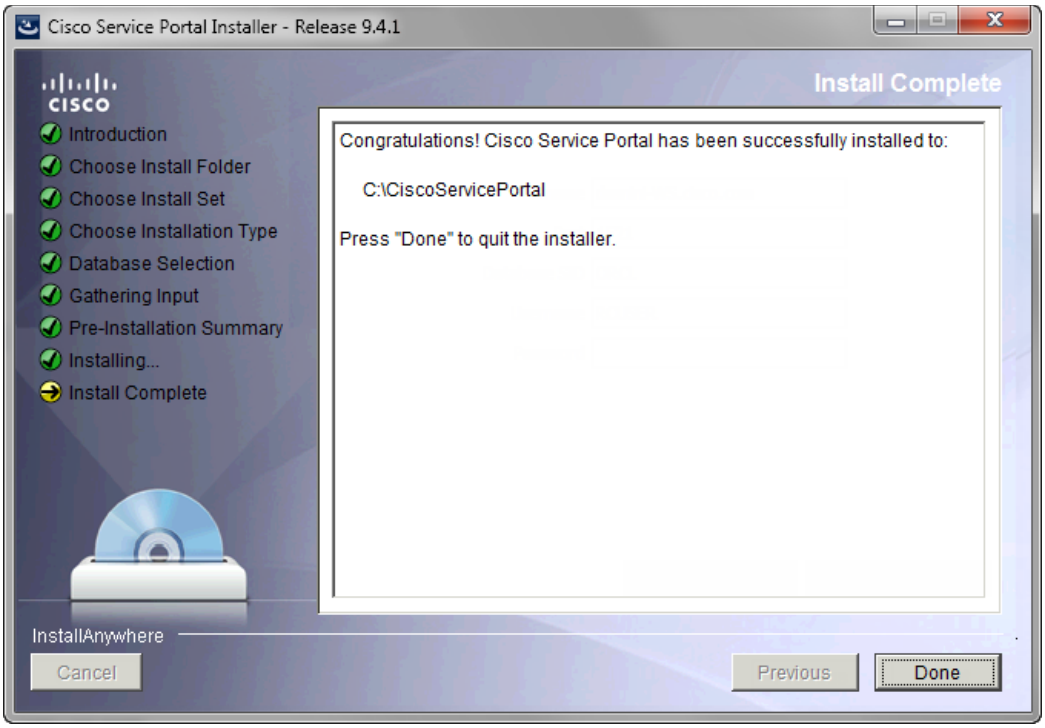
The Installing Cisco Service Portal page of the installation wizard appears, as shown in Figure 2-44 below.

Figure 2-44 Installing Cisco Service Portal (Installing Application)



This 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 page of the installation wizard appears, as shown in Figure 2-45 below.

Figure 2-45 Install Complete



Step 28 Click **Done** to exit the installation wizard.

Step 29 Make a backup of the following directories:

- <*ServicePortal_Software_Dir*> – This is the location where you extracted the electronic distribution of the Service Portal software.
- <*ServicePortal_Install_Dir*> – This is the destination directory for your Service Portal software. It contains the generated WAR files for the application, the installation log files, as well as the properties files that contain the installation options that you have chosen during the installation.

Postinstallation Configuration for JBoss

In this section, you are going to deploy the Request Center and Service Link applications on JBoss. The Request Center and Service Link applications must be deployed in extracted WAR format.

Step 1 Locate the following WAR files under the "<*CSP_Install_Dir*>/dist" directory:

- RequestCenter.war
- ISEE.war

Step 2 Under "<*CSP_Install_Dir*>/dist", create the following subdirectories:

- <*CSP_Install_Dir*>\dist\extracted\RequestCenter.war
- <*CSP_Install_Dir*>\dist\extracted\ServiceLink.war

Step 3 Extract the contents of file “RequestCenter.war” into the directory “<*CSP_Install_Dir*>/dist/extracted/RequestCenter.war/”.

Step 4 Extract the contents of file “ISEE.war” into the directory “<*CSP_Install_Dir*>/dist/extracted/ServiceLink.war/”.

Deploying RequestCenter.war

Step 1 If the JBoss server for Request Center is not running, start it.

Step 2 Copy the entire folder “<*CSP_Install_Dir*>/dist/extracted/RequestCenter.war” to the directory “<*JBOSS_DIR_RC*>/standalone/deployments”. Note: If you have a “One-JBoss-server topology”, then <*JBOSS_DIR_RC*> is the same as <*JBOSS_DIR*>. If you have a “Two-JBoss-server topology”, then <*JBOSS_DIR_RC*> is the root directory of the first JBoss server.

Step 3 Go to the directory “<*JBOSS_DIR_RC*>/standalone/deployments”. Create an empty text file named **RequestCenter.war.dodeploy**. (Hint: Use either Notepad on Windows or the **“**vi**”** command on Linux to create an empty text file named “RequestCenter.war.dodeploy” which does not contain any characters. The file size should have 0 byte.)

JBoss server will automatically deploy RequestCenter.war.

While deploying, a text file named “RequestCenter.war.isdeploying” appears under the directory “<*JBOSS_DIR_RC*>/standalone/deployments” briefly.

If the deployment was successful, the files “RequestCenter.war.dodeploy” and “RequestCenter.war.isdeploying” disappear, and a file named “RequestCenter.war.deployed” appears. If the deployment failed, you will see the file “RequestCenter.war.failed” instead.

Step 4 Verify that the RequestCenter application is running by connecting to the RequestCenter URL = http://<hostname>:8080/RequestCenter.

Deploying ServiceLink.war

Step 1 If the JBoss server for ServiceLink is not running, start it.

Step 2 Copy the entire folder “<*CSP_Install_Dir*>/dist/extracted/ServiceLink.war” to the directory “<*JBOSS_DIR_SL*>/standalone/deployments”. Note: If you have a “One-JBoss-server topology”, then <*JBOSS_DIR_SL*> is the same as <*JBOSS_DIR*>. If you have a “Two-JBoss-server topology”, then <*JBOSS_DIR_SL*> is the root directory of the second JBoss server.

Step 3 Go to the directory “<*JBOSS_DIR_SL*>/standalone/deployments”. Create an empty text file named **ServiceLink.war.dodeploy**. (Hint: Use either Notepad on Windows or the **“**vi**”** command on Linux to create an empty text file named “ServiceLink.war.dodeploy” which does not contain any characters. The file size should have 0 byte.)

JBoss server will automatically deploy ServiceLink.war.

While deploying, a text file named “ServiceLink.war.isdeploying” appears under the directory “<*JBOSS_DIR_SL*>/standalone/deployments” briefly.

If the deployment was successful, the files "ServiceLink.war.dodeploy" and "ServiceLink.war.isdeploying" disappear, and a file named "ServiceLink.war.deployed" appears. If the deployment failed, you will see the file "ServiceLink.war.failed" instead.

Step 4 Verify that the ServiceLink application is running by connecting to the RequestCenter URL = http://<hostname>:8080/RequestCenter.

Step 5 Navigate to the Service Link module. Verify that the connection status for Service Link is green.

What's Next?

Your have completed the installation of Service Portal Release 9.4 for JBoss 7.1.1.Final application server. Starting with this release, the Service Portal installer no longer configures the ISAPI plugin for the IIS web server automatically on the Windows operating system. You can connect to the RequestCenter URL by connecting directly to port 8080 used by the JBoss server; that is, http://<hostname>:8080/RequestCenter.

Postinstallation Configuration for WebLogic

When the Service Portal installation wizard completes, it creates the following WAR files underneath the "<*ServicePortal_Install_Dir*>\dist" directory:

- RequestCenter.war
- ISEE.war

The Service Portal 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

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 Portal 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 Choose the **Copy this application onto every target for me** option, then click **Next**.

Step 11 In the Name field, enter **RequestCenter**, then click **Next**.

Step 12 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 13 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 **Active 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 Choose the **Copy this application onto every target for me** option, then click **Next**.

Step 11 In the Name field, enter **ServiceLink**, then click **Next**.

Step 12 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 13 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 **Active 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 administrator user (for a new installation of Service Portal, the default username for the administrator user is "admin" and the default password is "admin"). The My Services home page should appear.

Step 3 Choose the **Service Link** menu in the Module drop-down list. The Service Link home page should appear.

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

You have completed the installation for Cisco Service Portal 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 2.2
- 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 Portal 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 2.2 Web Server**. Add the following entries to the end of file **httpd.conf**:

```
LoadModuleweblogic_module modules/mod_wl_22.so

<IfModulemod_weblogic.c>
WebLogicHostm1.mydomain.com
WebLogicPort 8001
</IfModule>

<Location /RequestCenter>
SetHandlerweblogic-handler
PathTrim /
</Location>
```

The following are examples for the settings for **IIS 7.5 Web Server**. Add the following entries to file **iisproxy.ini**:

```
WebLogicHost=m1.mydomain.com
WebLogicPort=8001
ConnectTimeoutSecs=20
ConnectRetrySecs=5
KeepAliveEnabled=true
KeepAliveSecs=20
WlForwardPath=/RequestCenter
```

After you complete the Plugin configuration, you need to restart both the Web Server and the WebLogic Application Server.

Repeat the steps described in the "Verifying Your Installation" section on page 2-98 to verify that your Web Server plugin is configured correctly to point to your WebLogic Server. However, this time connect to the following URL =

http://<*WebServer_Host*>:<*WebServer_Port*>/RequestCenter

where <*WebServer_Host*> = the host name of your Web Server, and <*WebServer_Port*> = the port number used by your Web Server (omit the port number if it is set to 80).

For example,

http://webserver.cisco.com/RequestCenter

Postinstallation Configuration for WebSphere

When the Service Portal installation wizard completes, it creates WAR files underneath the <*ServicePortal_Install_Dir*>/dist directory:

- RequestCenter.war
- ISEE.war

The Service Portal 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

Step 1 Log on to the WebSphere Administration Console.

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

Step 3 Choose **Applications > Application Types**, and click **WebSphere enterprise applications**.

Step 4 In the right pane, click **Install**. The "Path to the new application" page appears.

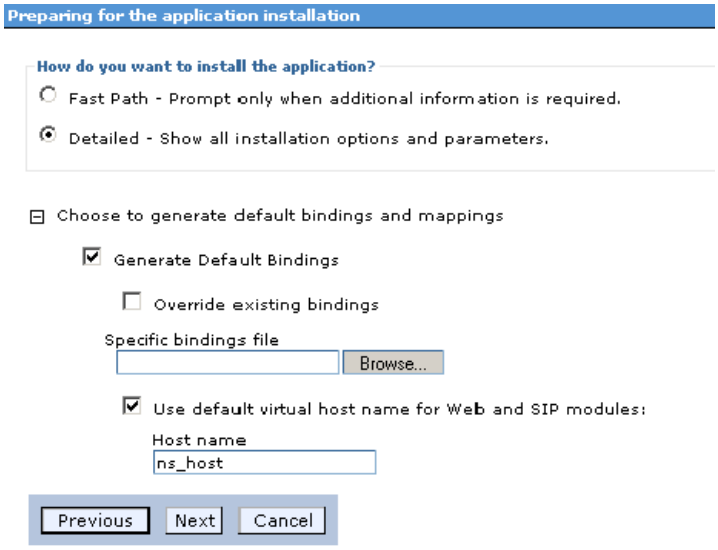
Step 5 If your browser is running on the same machine where <*ServicePortal_Install_Dir*> resides, then choose the **Local file system** option. Otherwise, choose the **Remote file system** option.

Step 6 Click **Browse**, and navigate to the "<*ServicePortal_Install_Dir*>/dist" directory.

Step 7 Choose **RequestCenter.war** and click **OK**.

Step 8 Click **Next**. The "How do you want to install the application?" page appears.

Figure 2-46 Generate Default Bindings



Step 9 Perform the following tasks on this page:

a. Choose the **Detailed** option.

b. Click **Choose to generate default bindings and mappings**.

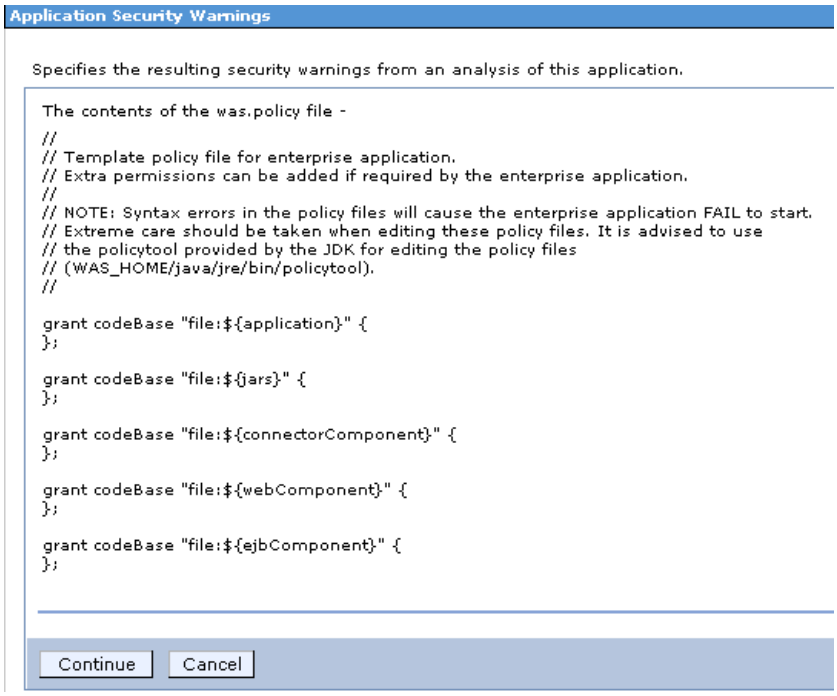
c. Choose the **Generate Default Bindings** option.

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 the following Application Security Warnings page appears, you can safely ignore it and click **Continue**.

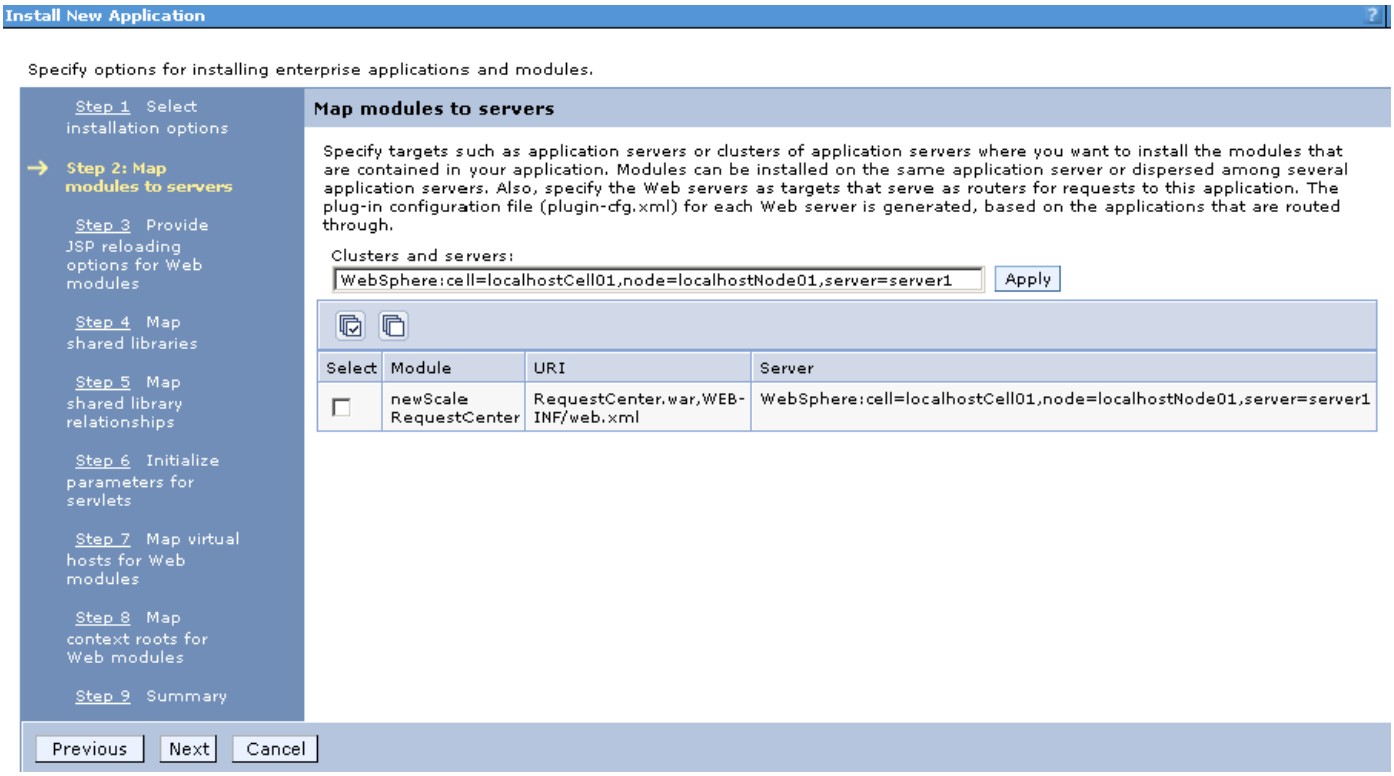
Figure 2-47 Application Security Warnings



Step 11 Click **Next**. The "Step 1: Select installation options" page appears.

Step 12 Do not make any changes. Click **Next**. The "Step 2: Map modules to servers" page appears.

Figure 2-48 Map Modules to Servers



Step 13 Perform the following tasks on this page:

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

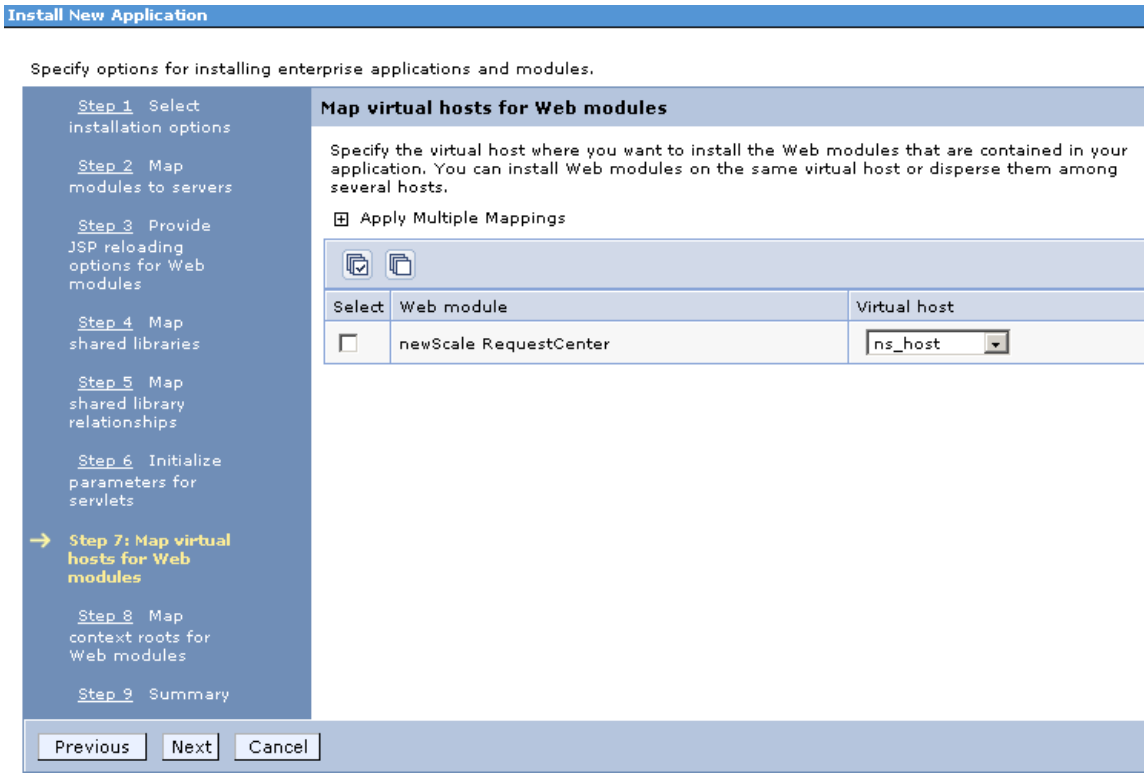
b. Next, click the **Select All** icon in the table header. This will automatically select all of the rows in the table.

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 2-49 Map Virtual Hosts for Web Modules



Step 16 Choose **ns_host** in the "Virtual host" drop-down list.

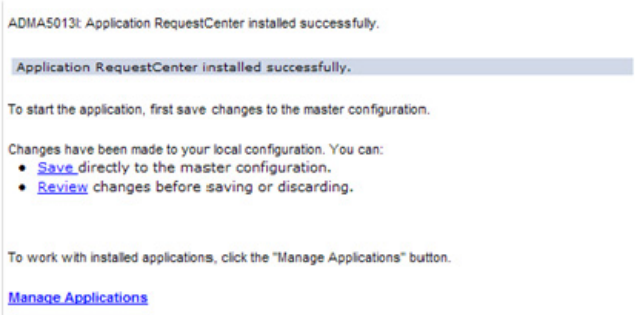
Step 17 Click **Next**.

Step 18 On the "Step 8: Map context roots for Web modules" page, enter **/RequestCente**r in the Context Root field. Do not make any changes on this page. Then, click **Next**.

Step 19 On the "Step 9: Summary" page, 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.

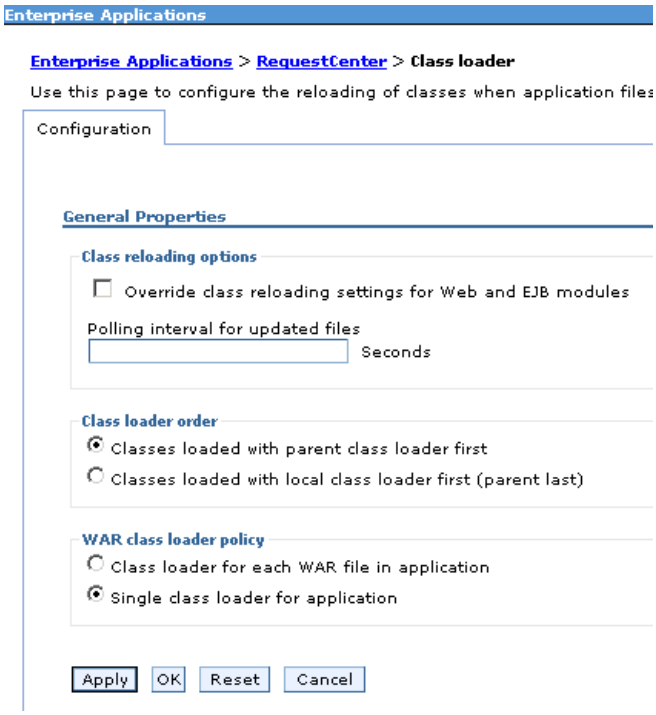
Figure 2-50 Application Installed Successfully



Step 21 On the Enterprise Applications page, click the newly created **RequestCenter** link to open its Configuration page.

Step 22 Under the Detail Properties section, click the **Class loading and update detection** link. The "RequestCenter > Class loader" page appears.

Figure 2-51 Class Loader



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" page appears.

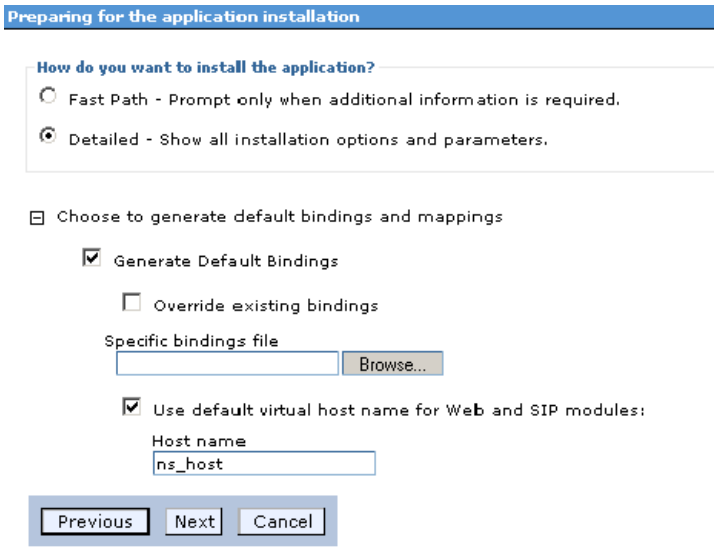
Step 4 If your browser is running on the same machine where <*ServicePortal_Install_Dir*> resides, then choose the **Local file system** option. Otherwise, choose the **Remote file system** option.

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?" page appears.

Figure 2-52 Generate Default Bindings



Step 8 Perform the following tasks on this page:

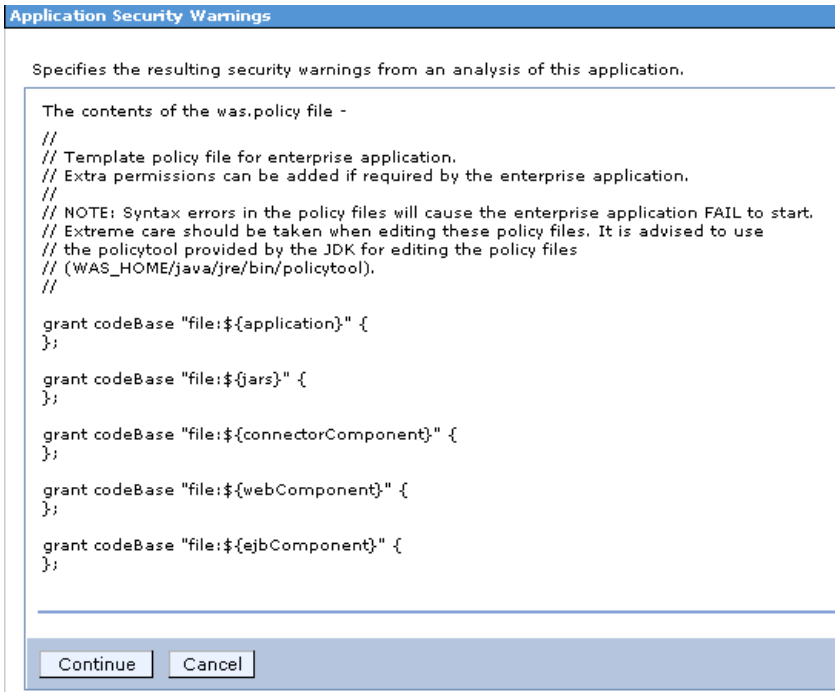
- Choose the **Detailed** option.
- Click **Choose to generate default bindings and mappings**.
- Choose the **Generate Default Bindings** option.
- Choose the **Use default virtual host name for Web and SIP modules** option.
- In the Host Name field, enter **ns_host**.

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 the following Application Security Warnings page appears, you can safely ignore it and click **Continue**.

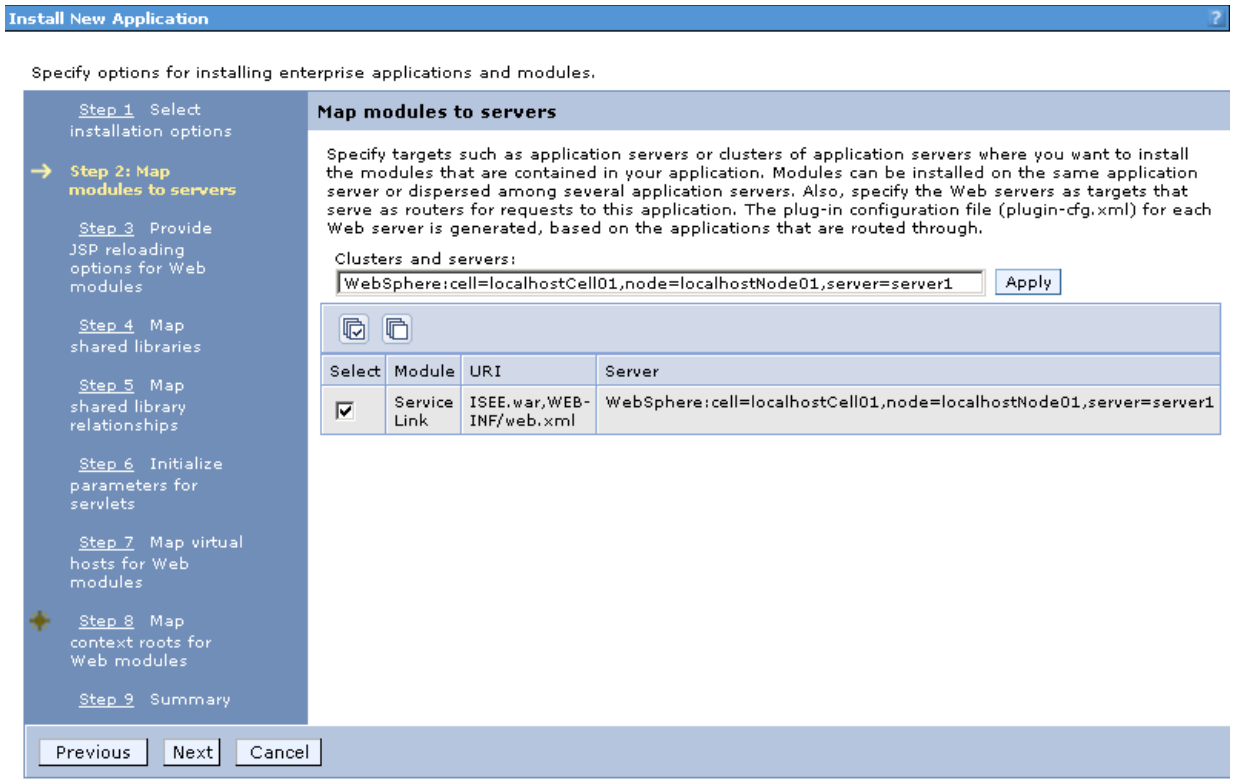
Figure 2-53 Application Security Warnings



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

Step 12 Click **Next**. The “Step 2: Map modules to servers” page appears.

Figure 2-54 Map Modules to Servers



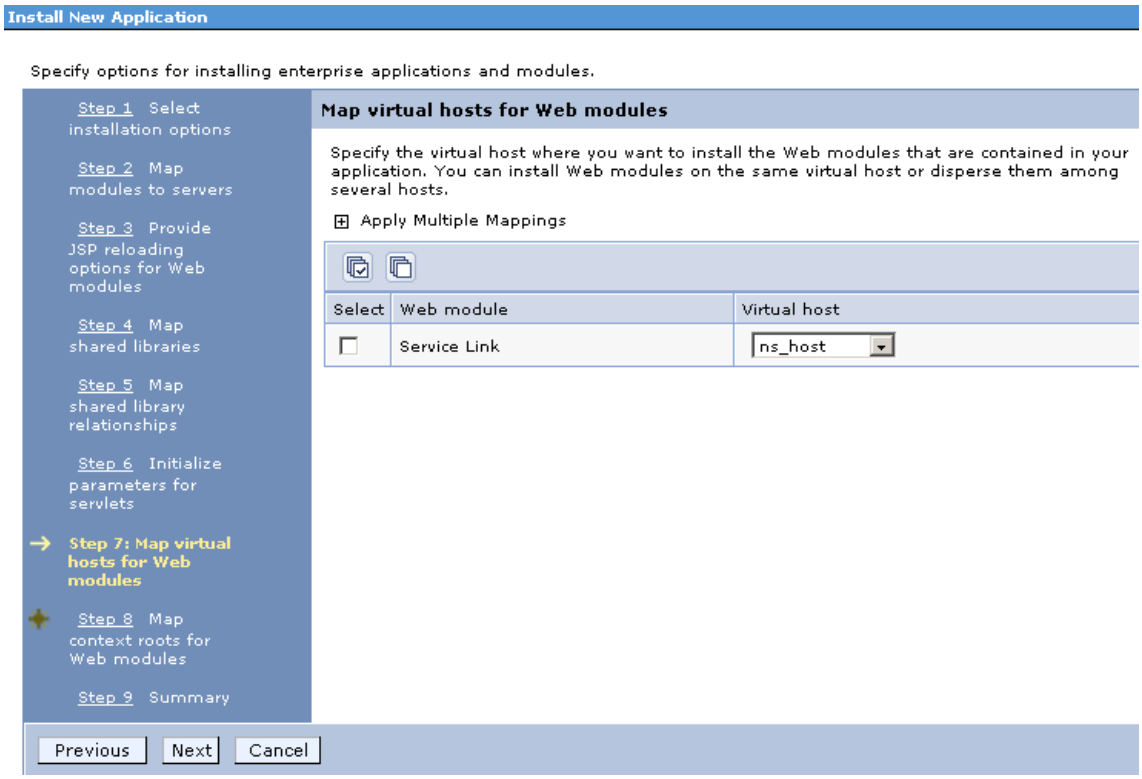
Step 13 Perform the following tasks on this page:

- 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.

Figure 2-55 Map Virtual Hosts for Web Modules



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".

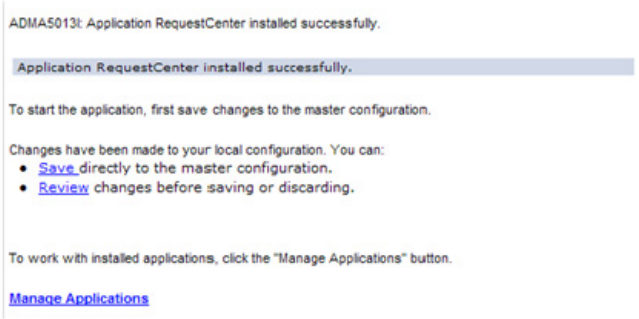
Step 17 Click **Next**.

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

Step 19 On the "Step 9: Summary" page, 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.

Figure 2-56 Application Installed Successfully



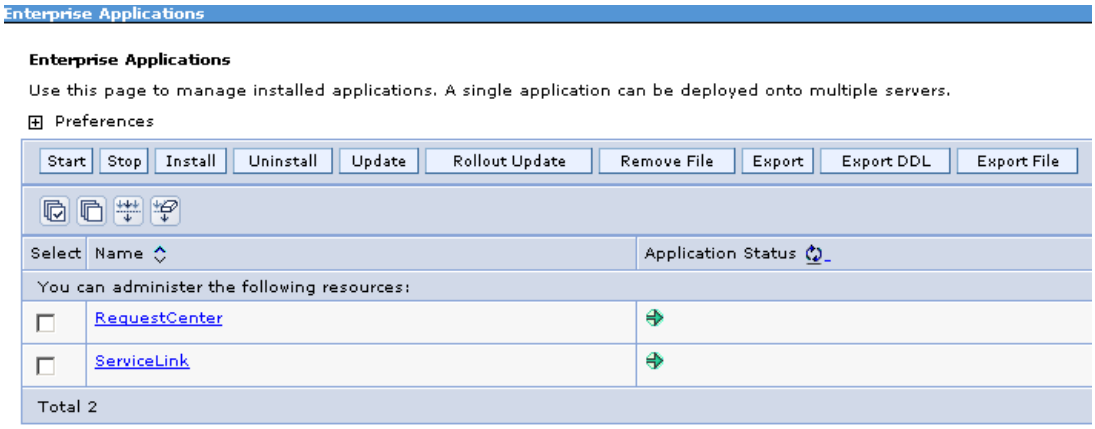
Starting Service Portal Applications

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 2-57 Start Enterprise Applications



Step 4 Verify that the **Application Status** for both applications is green.

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 Service Portal administrator user (for a brand new installation of Service Portal, the default username for the administrator user is "admin", and the default password is "admin"). The My Services home page should appear.

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

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

You have completed the installation for Cisco Service Portal 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
- Apache 2.2
- 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 WebSphere are not handled by the Service Portal 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**:

```
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 Portal.

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" section on page 2-109 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.

CHAPTER 3

Reporting Guide

- Overview, page 3-1
- Cognos Application Server Requirements, page 3-2
- Cognos Database Server Requirements, page 3-4
- Installing Cognos Software, page 3-7
- Installing Reporting, page 3-10
- Configuring the Time Zone, page 3-29

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 Service Portal 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 Service Portal application.
- A database server is the computer where the ContentStore 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 Portal products. This chapter assumes familiarity with the installation and configuration of Cognos and related components.

Cognos Application Server Requirements

Operating Systems

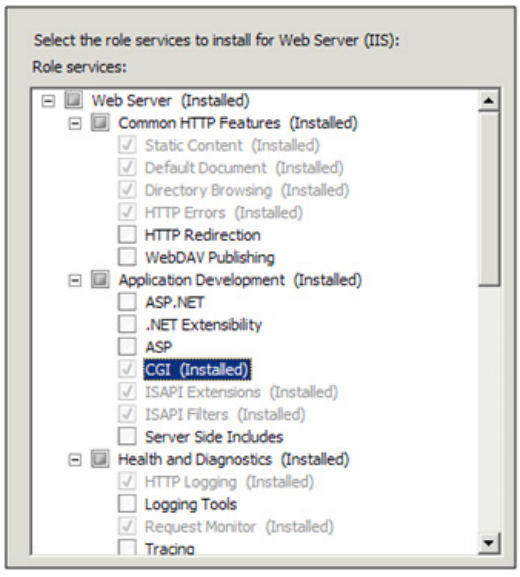
- IBM Cognos version 8.4.1 software must be installed on a computer that runs Windows Server 2008 R2 (64-bit) operating system.
- It is recommended but not required that the Cognos application server is a separate computer from the Cisco Service Portal application. However, if the Cisco Service Portal 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 2 GB 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

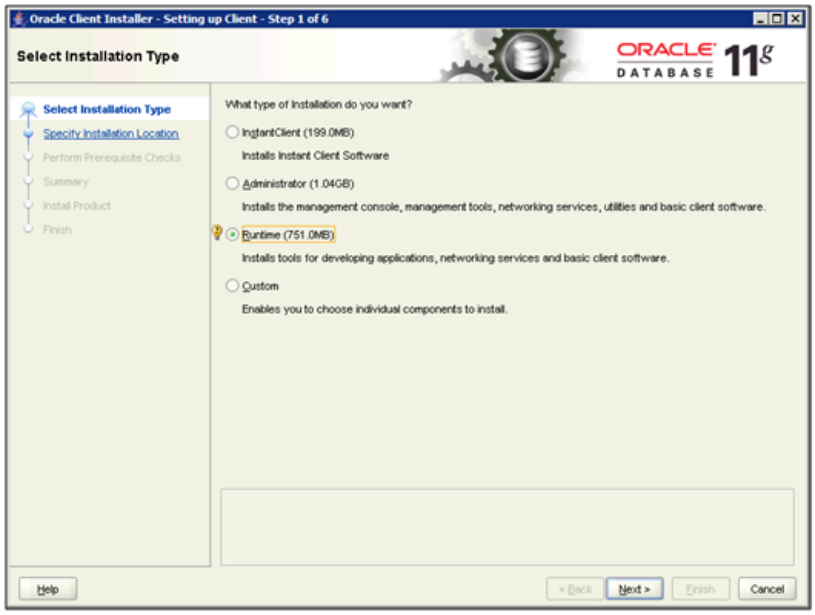


Internet Explorer

- Only Microsoft Internet Explorer version 7 (IE7) or version 8 (IE8) is supported. Use an IE7 or IE8 browser when accessing the Cognos UI or the "Advanced Reporting" module inside of the Cisco Service Portal 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: RequestCenter database, Datamart database, and ContentStore 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 ContentStore 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:



After installing Oracle Client software, you must launch the Net Configuration Assistant program, and configure the "Local Net Service Name" for the Oracle server where the ContentStore database resides. Furthermore, conduct a test using SQL*Plus to verify that you are able to connect to all three databases: RequestCenter, Datamart, and ContentStore.

- **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 Service Portal application server
  - The Cognos application server
  - The database server where the following databases reside: RequestCenter, Datamart, and ContentStore
- If Symantec Antivirus is installed on the application server, it must be at version 10.0.2.2000 or later.
- 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 Portal application server and the Cognos application server must belong in the same domain. For example, if the Service Portal 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 Portal, you must also enter the fully qualified domain name in the URL, for example, *http://ciscoserviceportal.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 RequestCenter database
- The Datamart database
- The ContentStore database

The RequestCenter and Datamart databases have already been created prior to running the Service Portal installer. The ContentStore database is required exclusively for the Cognos software. The next section describes how to create the ContentStore database on either Oracle 11g or SQL Server 2008 R2.

The ContentStore database must be on the same type and version of RDBMS as the RequestCenter database. For example, if the RequestCenter database is on Oracle 11g, then the ContentStore database must also be created on Oracle 11g. If the RequestCenter database is on SQL Server 2008 R2, then the ContentStore database 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 ContentStore database regularly because it contains all of the Cognos data, including custom reports and views as well as saved reports. To ensure the security and integrity of the ContentStore database, it is also important to protect the database from unauthorized or inappropriate access.

Creating ContentStore Database for Oracle 11g

1. Ensure that the Oracle SID value does not contain the underscore character. Also ensure that the Oracle Service Name and Oracle SID have the same value.
2. 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:

   ```
   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.
3. 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:

   ```
   SHOW PARAMETER CURSOR_SHARING;
   ```

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

   ```
   ALTER SYSTEM SET CURSOR_SHARING=EXACT SCOPE=BOTH SID='*';
   ```
4. The schema for ContentStore must be separate from the schema for the RequestCenter database or the Datamart database. However, it is OK for the ContentStore schema to reside on the same Oracle instance as the RequestCenter schema.
5. Create a database user account called “CSUser”, which is used by the Cognos application server to access the ContentStore database at runtime.
6. Grant the following permissions to the database user account “CSUser”:
   - CONNECT to the database
   - CREATE/ALTER/DROP tables, triggers, views, procedures, and sequences
   - INSERT/UPDATE/DELETE data in the ContentStore tables

Creating ContentStore Database for Microsoft SQL Server 2008 R2

1. SQL Server must be installed as “Default Instance”. It cannot be a “Named Instance”.
2. SQL Server must be configured with mixed-mode authentication (that is, allows both SQL Server authentication and Windows authentication).
3. Create a database named ContentStore (database name must not contain space). ContentStore must be a separate database from the RequestCenter database or the Datamart database. However it is OK for the ContentStore database to reside on the same SQL Server instance as the RequestCenter database.
4. Ensure that the database collating sequence is case-insensitive.
5. Create a database user account called “CSUser”, which is used by the Cognos application server to access the ContentStore database at runtime.

Note CSUser must be a SQL Server login account that authenticates to the SQL Server using SQL Server authentication method, and not Windows authentication method.

6. Assign the database user account “CSUser” as the db_owner of the “ContentStore” database. Verify your setting to ensure that a) the user name “CSUser” in the ContentStore database is mapped to the login name “CSUser” in the SQL Server, b) the default schema is “dbo”, and c) the user name “CSUser” has the “db_owner” database role membership.

Sizing the ContentStore Database

The size of the ContentStore 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.

ContentStore 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 ContentStore 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 ContentStore.

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

- 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 the Cognos 8.4.1 Software.

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

Downloading Cognos Software

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

Step 2 Search for the product name "Cisco Request Center Reporting", or navigate within the product selector to locate the Cognos Business Intelligence installer and fixed packs. (Navigation: **Products > Network Management and Automation > Data Center Management and Automation > Intelligent Automation > Cisco Request Center Reporting**).

Step 3 Choose **Business Intelligence Install** and download the following files under version 8.4.1 to your Cognos application server machine:

File to download	Description
CZA87ML.tar.gz	Cognos 8.4.1 Business Intelligence Server (64-bit)
CZAH6EN.tar.gz	Cognos 8.4.1 Data Manager (64-bit)
C8_BI_8_4_1_Win64_FP004.tar.gz	Fix Pack 4 for Cognos 8.4.1

Step 4 Extract all three zip files in a temporary directory, such as C:\CognosSoftware, on the Cognos application server.

Step 5 Delete the JAVA_HOME environment variable, if it exists on the Cognos machine. This is because Cognos installation program will use its embedded Java, which may conflict with the version of Java defined for JAVA_HOME environment variable.

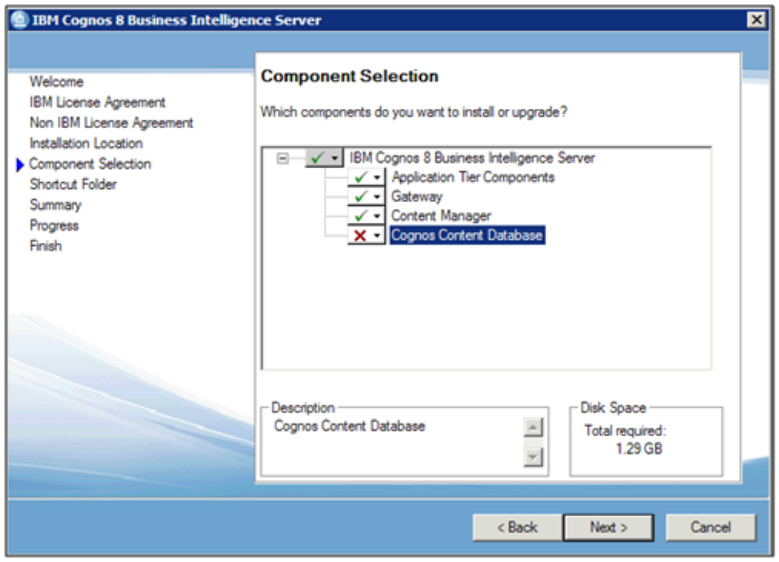
Installing Cognos Business Intelligence Server

Step 1 (Assuming that you extracted the Cognos software under the C:\CognosSoftware directory) Open the folder C:\CognosSoftware\CZA87ML\winx64.

Step 2 Double-click **issetup.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 components as shown below with the green check marks:



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 (Assuming that you extracted the Cognos software under the C:\CognosSoftware directory) Open the folder C:\CognosSoftware\CZAH6EN\winx64.

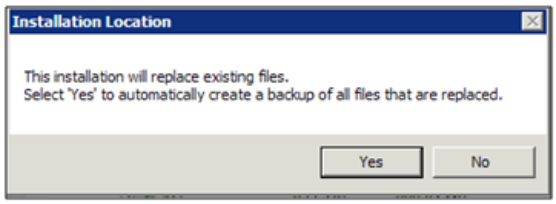
Step 2 Double-click **issetup.exe** to launch the Cognos Setup program.

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

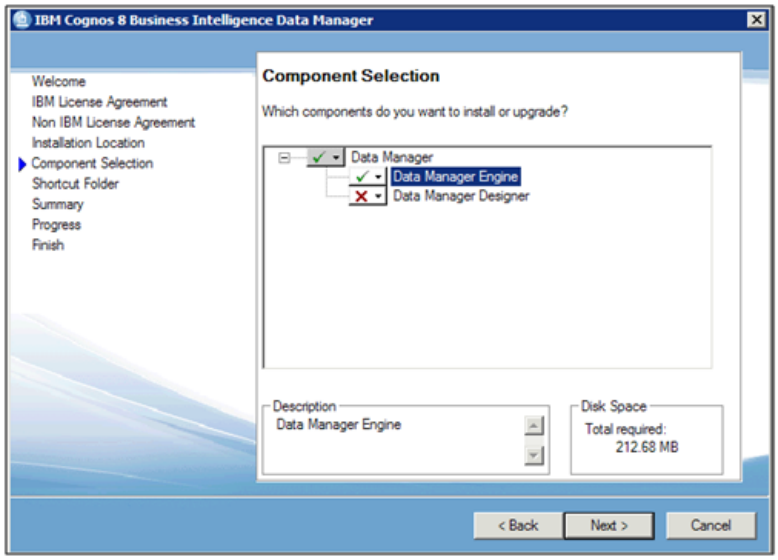
Step 4 Enter the same folder name where you have installed the Cognos Business Intelligence Server (for example, C:\Program Files (x86)\cognos\c8_64). Then click **Next**.

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:



Step 7 When the Component Selection screen appears, choose only the component as shown below with the green check mark:



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 4

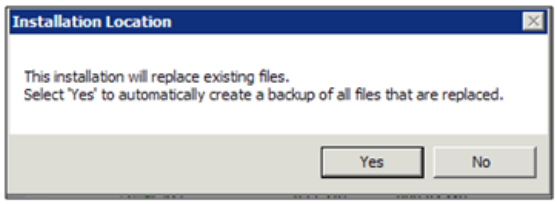
Step 1 (Assuming that you extracted the Cognos software under the C:\CognosSoftware directory) Open the folder "C:\CognosSoftware\C8_BI_8_4_1_Win64_FP004\winx64".

Step 2 Double-click **issetup.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 (x86)\cognos\c8_64). Then click **Next**.

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



Step 6 Click **Next** and proceed with the rest of the installation wizard, until you get to the Finish screen.

Step 7 Click **Finish**.

Copying Oracle JDBC Driver

Perform the following step only for Oracle database:

Step 1 Copy file **ojdbc5.jar** from the <ORACLE_HOME>\JDBC\lib directory to the <COGNOS_HOME>\webapps\p2pd\WEB-INF\lib directory on the Cognos application server.

<ORACLE_HOME> is where you installed the Oracle Client 11.2.0.1 (32-bit) software.

<COGNOS_HOME> is where you installed the Cognos Business Intelligence Server (for example, C:\Program Files (x86)\cognos\c8_64).

Installing Reporting

This section describes how to install and configure Cisco Service Portal 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:

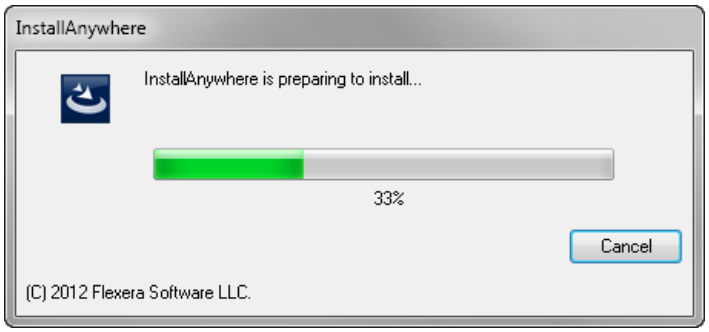
Step 1 On the Cognos machine, set the JAVA_HOME environment variable to <COGNOS_HOME>\bin64\jre\1.5.0. Then, add %JAVA_HOME%\bin to the PATH environment variable.

Step 2 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 3 Double-click **reporting_setup.exe** to install the installation wizard.

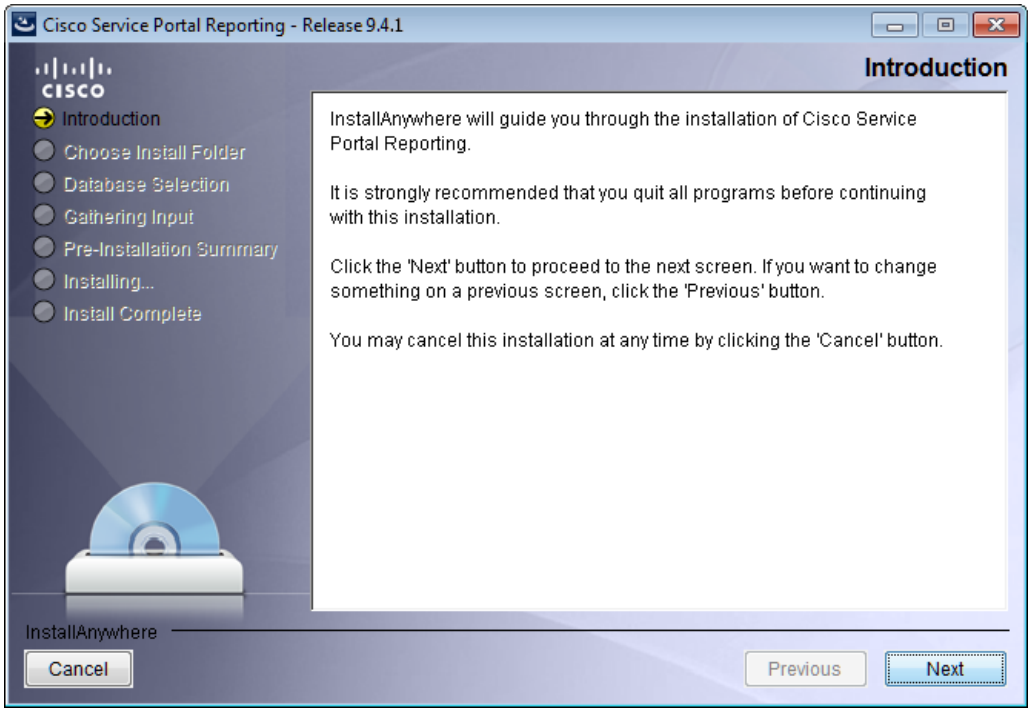
A progress bar appears, as shown in Figure 3-1 below.

Figure 3-1 Setup Progress Bar



When complete, the first page of the installation wizard appears (Introduction), as shown in Figure 3-2 below.

Figure 3-2 Introduction



How to Use the Installation Wizard

The installation wizard guides you through the reporting installation 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 installation. At any time, you may click **Cancel** to exit the installation wizard without installing.

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

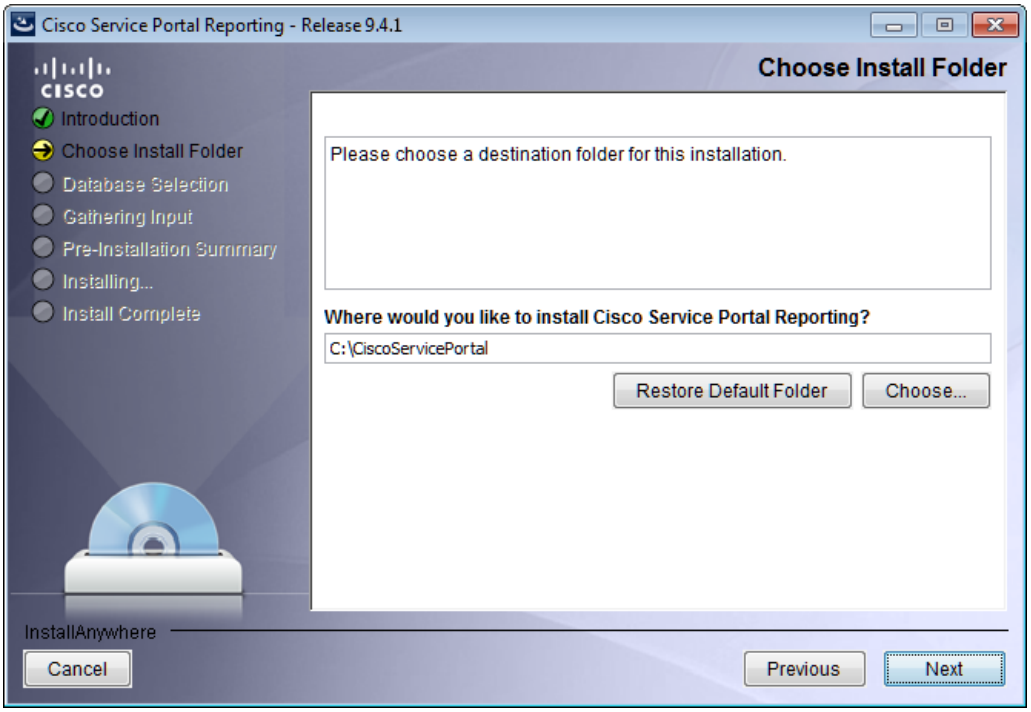
This section provides instructions for running the Reporting installation wizard.

Step 1 Launch the installation wizard (see "Executing Reporting Setup" section on page 3-10).

Step 2 On the first page of the installation wizard (Introduction, Figure 3-2), click **Next** to begin.

The Choose Install Folder page of the installation wizard appears, as shown in Figure 3-3 below.

Figure 3-3 Choose Install Folder



Step 3 Choose a destination folder for the installation. The default destination folder is "C:\CiscoServicePortal". If desired, enter a different destination folder, or click **Choose** to locate and choose a folder (or create a new one). The destination folder cannot be blank.

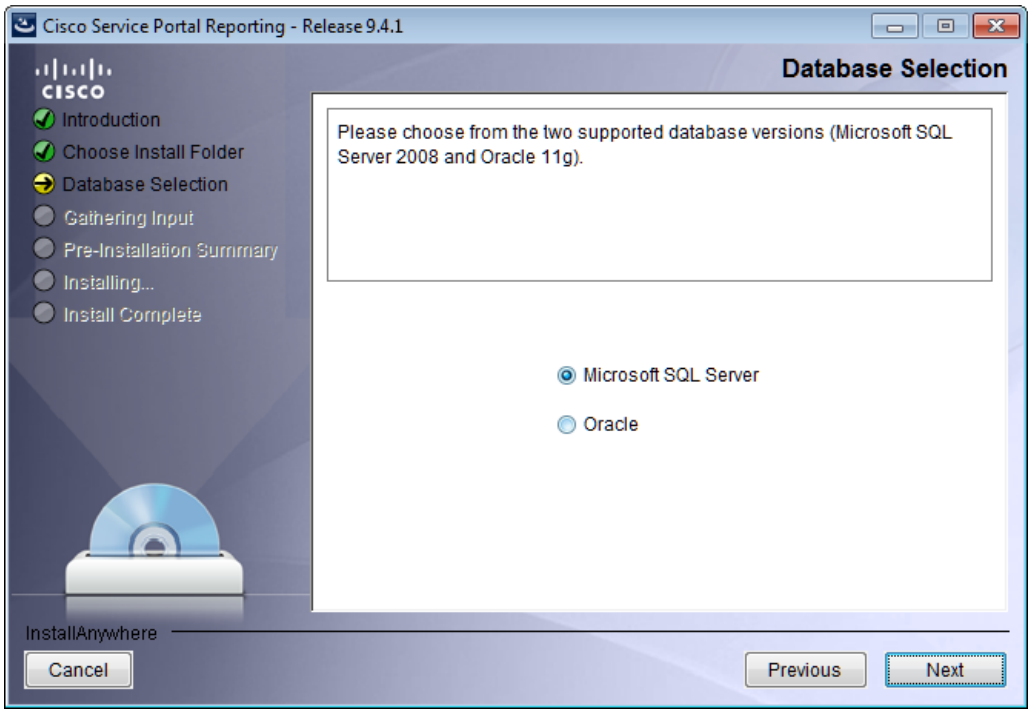
Note **Important!** The path name for the destination folder must not contain any spaces.

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

Step 4 Click **Next** to proceed to the next page of the wizard.

The Database Selection page of the installation wizard appears, as shown in Figure 3-4 below.

Figure 3-4 Database Selection



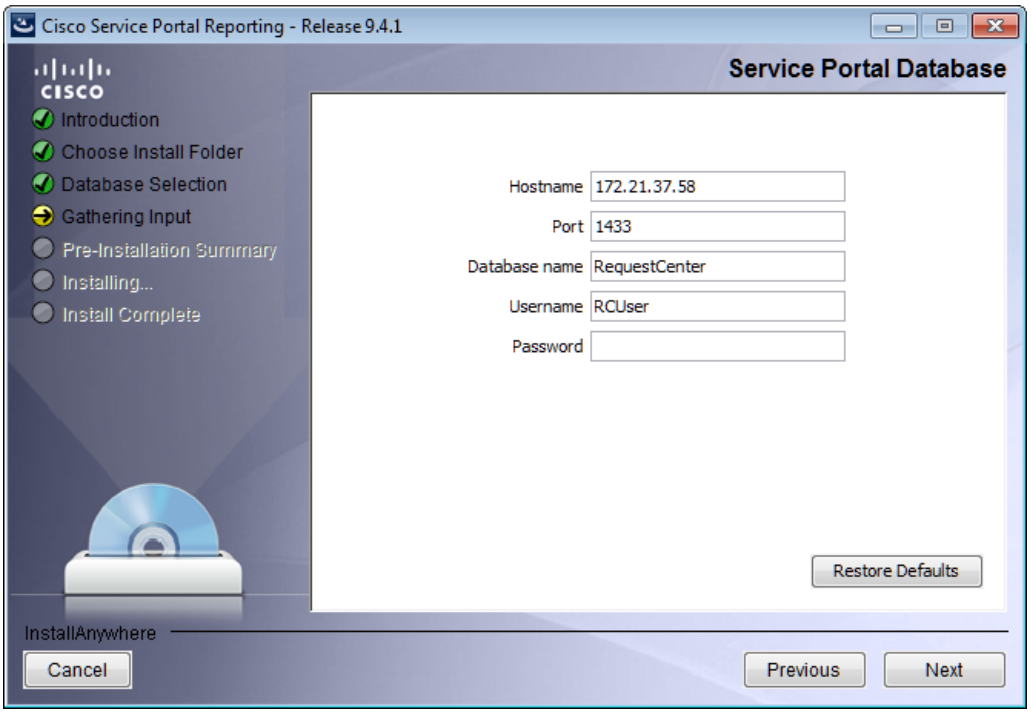
Step 5 Choose the database platform (**Microsoft SQL Server** or **Oracle**) you want by clicking its radio button. The default database platform is Microsoft SQL Server.

Use your Database Information Worksheet (see Table 2-2 on page 2-12) that you filled out to determine your database platform.

Step 6 Click **Next** to proceed to the next page of the wizard.

The Service Portal Database page of the installation wizard appears, as shown in Figure 3-5 below.

Figure 3-5 Service Portal Database (Microsoft SQL Server)



Step 7 Enter your Service Portal database configuration values. Use your Database Information Worksheet (see Table 2-2 on page 2-12) that you filled out to help you determine what configuration values to enter.

Hostname	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.
Port	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.
Database name	**For Microsoft SQL Server only**: The name of the RequestCenter database. By default this is RequestCenter.
Database SID	**For Oracle only:** The SID of the Oracle server where the RequestCenter database resides. By default this is ORCL.
Username	The username that the Service Portal application uses to authenticate with the RequestCenter database at runtime. The default username is RCUser.
Password	The password for the Database User.

All fields are validated when you enter the Tab key to go to the next field, or when you click Next to proceed. All fields are mandatory.

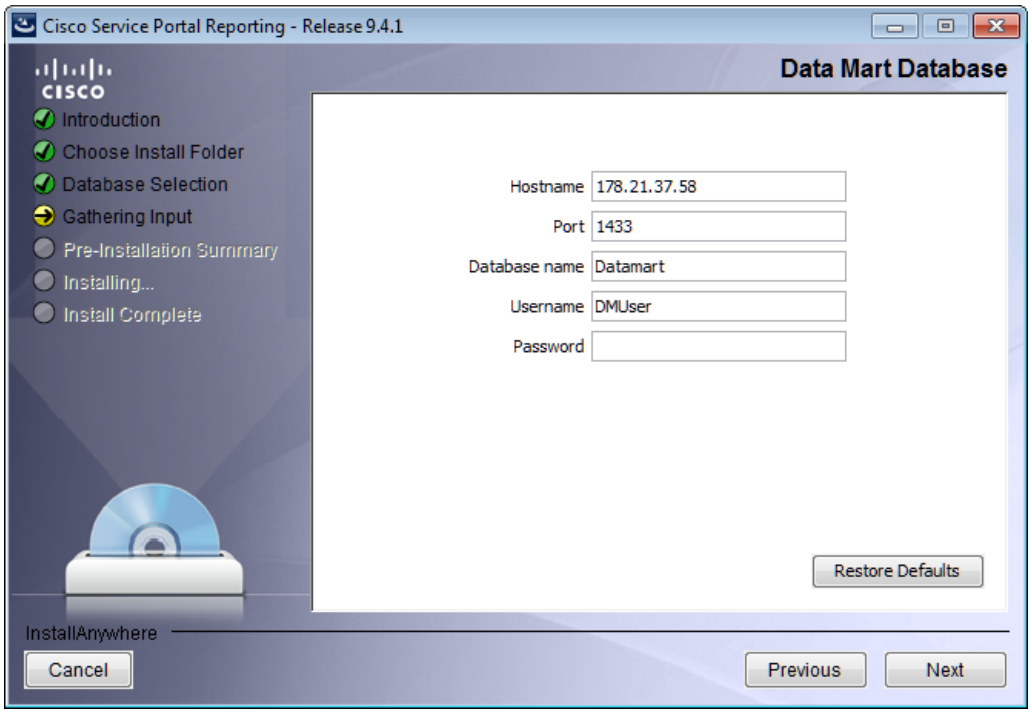
Step 8 Click **Next** to proceed to the next page of the wizard.

The installation wizard performs a connection test to your RequestCenter database using the configuration values you entered and checks that the prerequisites for your database platform have been fulfilled. If a 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 database information on the Service Portal Database page. If you want to abort the installation wizard at this point, click **Cancel**.

If the database connection test passes, the Data Mart Database page of the installation wizard appears, as shown in Figure 3-6 below.

Figure 3-6 Data Mart Database



Step 9 Enter your Data Mart database configuration values. Use your Database Information Worksheet (see Table 2-2 on page 2-12) that you filled out to help you determine what configuration values to enter.

Hostname	The Hostname or IP address of the Database Server for the Datamart database. For example, servername.domain.com. The default value is the full qualified domain name (FQDN) of the machine you are currently on.
Port	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.
Database name	**For Microsoft SQL Server only**: The name of the Datamart database. By default this is Datamart.
Database SID	**For Oracle only:** The SID of the Oracle server where the Datamart database resides. By default this is ORCL.
Username	The username that the Service Portal application uses to authenticate with the Datamart database at runtime. The default username is DMUser.
Password	The password for the Database User.

All fields are validated when you enter the Tab key to go to the next field, or when you click Next to proceed. All fields are mandatory.

Step 10 Click **Next** to proceed to the next page of the wizard.

The installation wizard performs a connection test to your Datamart database using the configuration values you entered and checks that the prerequisites for your database platform have been fulfilled. If a 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 database information on the Data Mart Database page. If you want to abort the installation wizard at this point, click **Cancel**.

If the database connection test passes, the Content Store Database page of the installation wizard appears, as shown in Figure 3-7 below.

Figure 3-7 Content Store Database

Step 11 Enter your Content Store database configuration values.

Hostname	The Hostname or IP address of the Database Server for the ContentStore database. For example, servername.domain.com. The default value is the full qualified domain name (FQDN) of the machine you are currently on.
Port	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.
Database name	**For Microsoft SQL Server only**: The name of the ContentStore database. By default this is ContentStore.
Database SID	**For Oracle only:** The SID of the Oracle server where the ContentStore database resides. By default this is ORCL.
Username	The username that the Cognos Server uses to authenticate with the ContentStore database at runtime. The default username is CSUser.
Password	The password for the Database User.

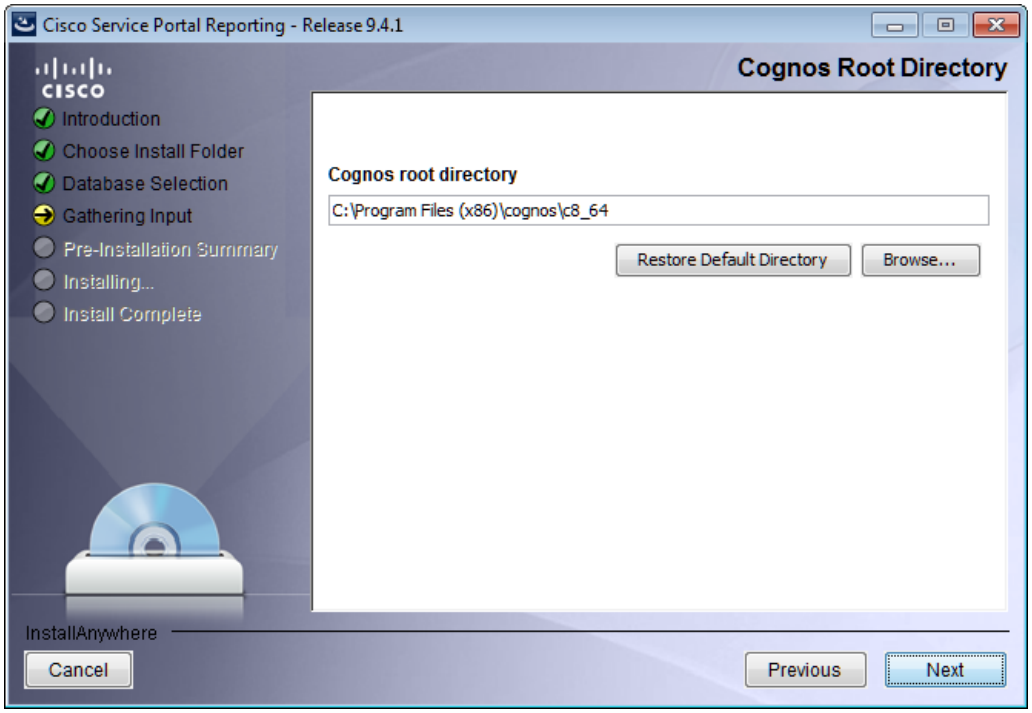
All fields are validated when you enter the Tab key to go to the next field, or when you click Next to proceed. All fields are mandatory.

Step 12 Click **Next** to proceed to the next page of the wizard.

The installation wizard performs a connection test to your ContentStore database using the configuration values you entered and checks that the prerequisites for your database platform have been fulfilled. If a 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 database information on the Content Store Database page. If you want to abort the installation wizard at this point, click **Cancel**.

If the database connection test passes, the Cognos Root Directory page of the installation wizard appears, as shown in Figure 3-8 below.

Figure 3-8 Cognos Root Directory

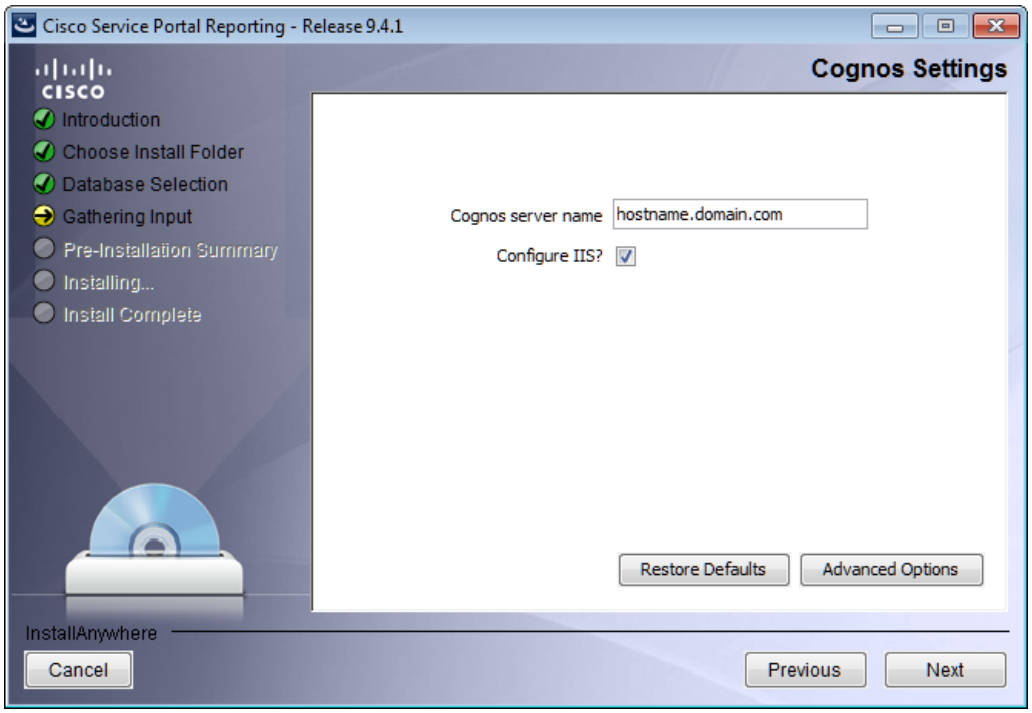


Step 13 Enter the Cognos root directory for the installation. This is where you installed Cognos 8.4.1 software. The default root directory is "C:\Program Files (x86)\cognos\c8_64". If needed, enter a different root directory, or click **Browse** to locate and choose the directory. The directory cannot be blank.

Step 14 Click **Next** to proceed to the next page of the wizard.

The Cognos Settings page of the installation wizard appears, as shown in Figure 3-9 below.

Figure 3-9 Cognos Settings (Microsoft SQL Server)



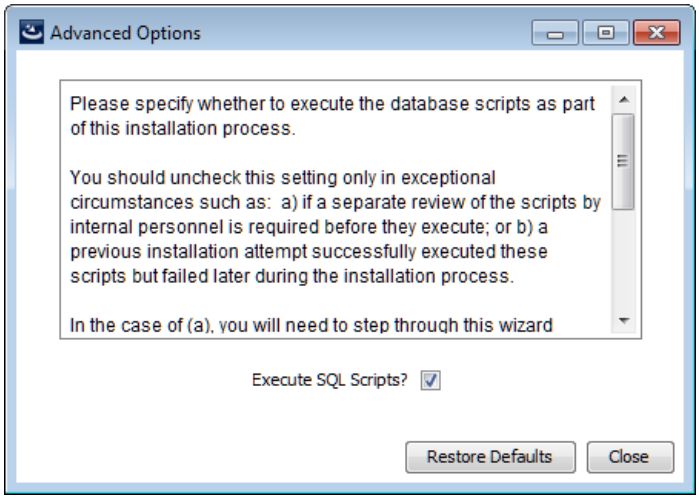
Step 15 In the Cognos server name field, enter the hostname of the computer where Cognos is running. The default value is the full qualified domain name (FQDN) of the machine you are currently on. You must enter a fully qualified domain hostname, not an IP address.

Step 16 The check box next to "Configure IIS?" is checked by default to configure IIS web server. This should be left checked.

Step 17 Click **Advanced Options**.

The Advanced Options dialog box appears, as shown in Figure 3-10 below.

Figure 3-10 Advanced Options



Specify if you want to execute the database scripts as part of the installation by checking **Execute SQL Scripts**. This is checked by default.

You should uncheck this setting only in exceptional circumstances such as: a) if a separate review of the scripts by internal personnel is required before they execute; or b) a previous installation attempt successfully executed these scripts but failed later during the installation process.

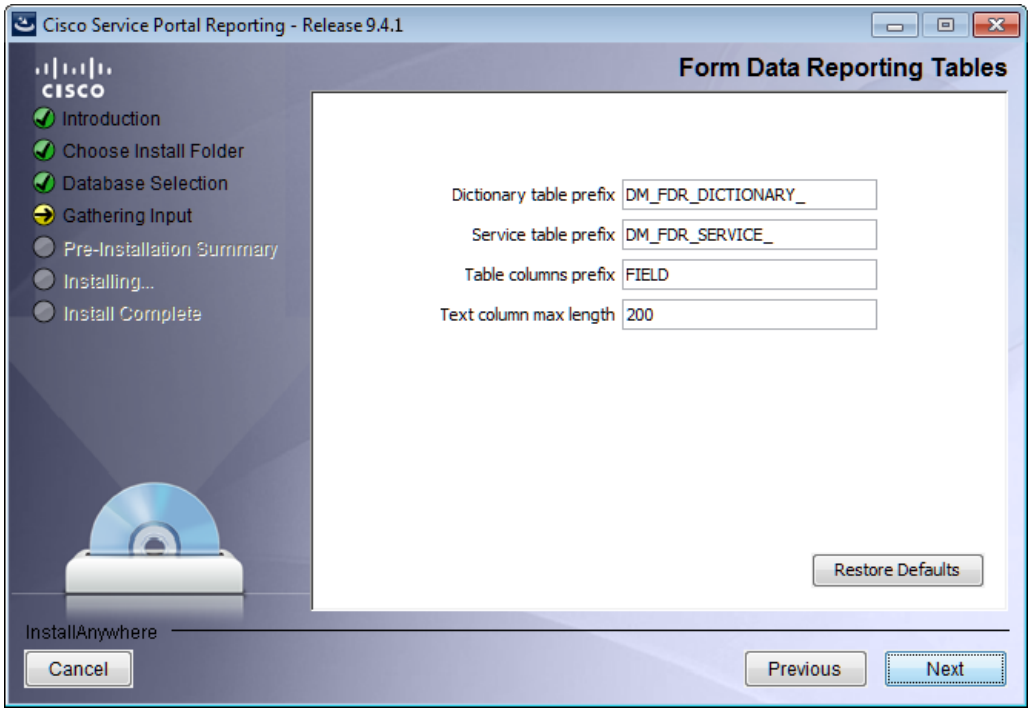
In the case of (a), you will need to step through this wizard again, this time checking the check box, in order to execute the scripts and complete the installation.

In the case of (b), you can save time during the installation process the second time through by unchecking the check box, since execution of the scripts takes some time and if they have already executed, there is no need to do so again.

Step 18 Click **Next** to proceed to the next page of the wizard.

The Form Data Reporting Tables page of the installation wizard appears, as shown in Figure 3-11 below.

Figure 3-11 Form Data Reporting Tables



Step 19 Enter your Form Data Reporting Tables settings as described in Table 3-1 below. Should you decide that you need to modify some of these settings after the installation, there are instructions and utilities for you to do so. See the "Increasing the Number of Reportable Dictionaries and Services" section on page 5-7 for more information.

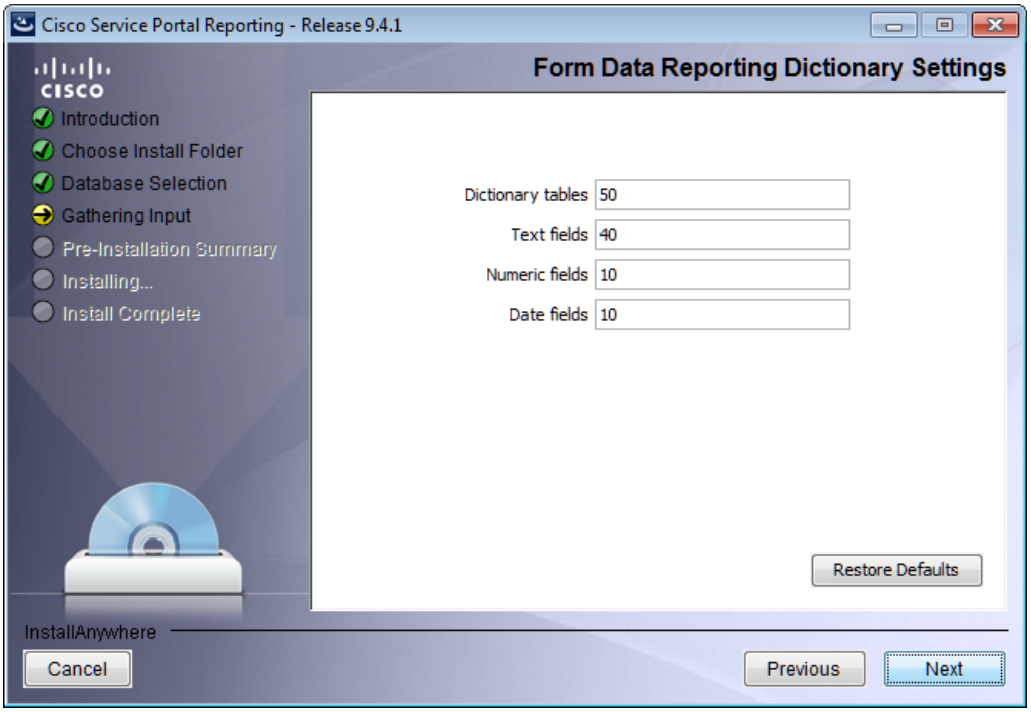
Table 3-1 Form Data Reporting Tables

Option	Description
Dictionary table prefix	The prefix for the names of the Dictionary Tables. Default value is "DM_FDR_DICTIONARY_." 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.
Service table prefix	The prefix for the names of the Service Tables. Default value is "DM_FDR_SERVICE_." 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.
Table columns prefix	The prefix for the field names in each table. Default value is "FIELD." It is recommended to use the default value unless there is absolute necessity to change it. This name is used create tables with field name like FIELD1, FIELD2, …, FIELDn.
Text column max length	This parameter indicates the maximum size of dictionary and service table object varchar field size. Default value is 200.

Step 20 Click **Next** to proceed to the next page of the wizard.

The Form Data Reporting Dictionary Settings page of the installation wizard appears, as shown in Figure 3-12 below.

Figure 3-12 Form Data Reporting Dictionary Settings



Step 21 Enter your Form Data Reporting Dictionary Settings as described in Table 3-2.

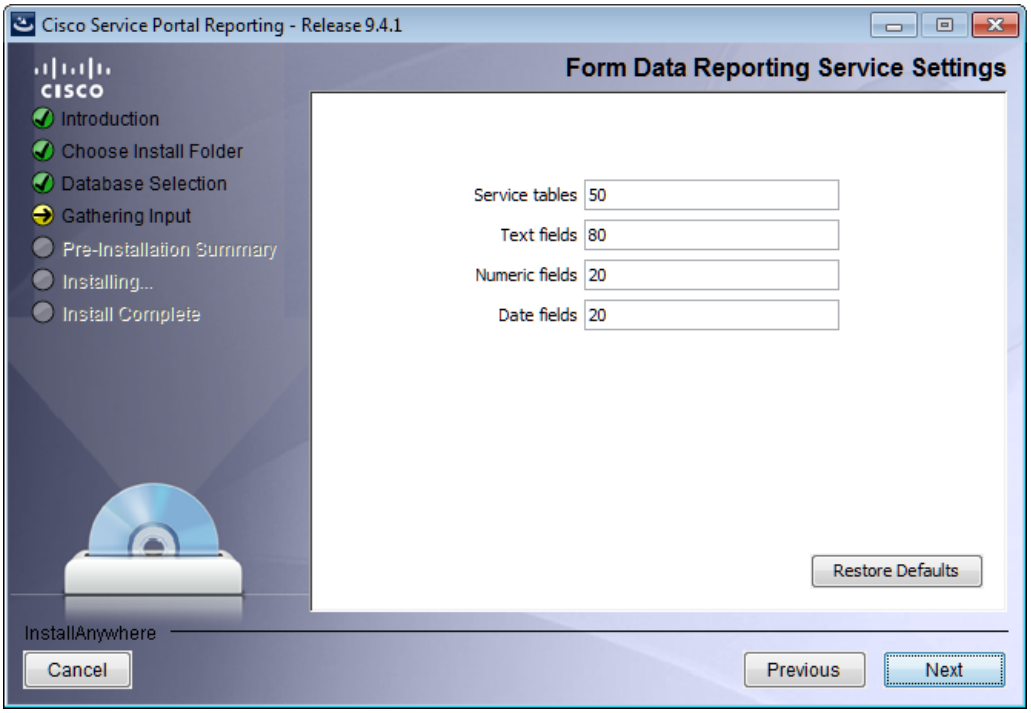
Table 3-2 Form Data Reporting Dictionary Settings

Option	Description
Dictionary tables	Number of tables required in the Data Mart database to store the data for reportable dictionaries. One table is needed per reportable dictionary. Default value is 50, which is also the minimum value allowed.
Text fields	Number of Text type fields that are used in dictionaries based on the customer form reporting analysis. Default value is 40.
Numeric fields	Number of Numeric fields that are used in dictionaries based on the customer form reporting analysis. Default value is 10.
Date fields	Number of Date fields that are used in dictionaries based on the customer form reporting analysis. Default value is 10.

Step 22 Click **Next** to proceed to the next page of the wizard.

The Form Data Reporting Service Settings page of the installation wizard appears, as shown in Figure 3-13 below.

Figure 3-13 Form Data Reporting Service Settings



Step 23 Enter your Form Data Reporting Service Settings as described in Table 3-3.

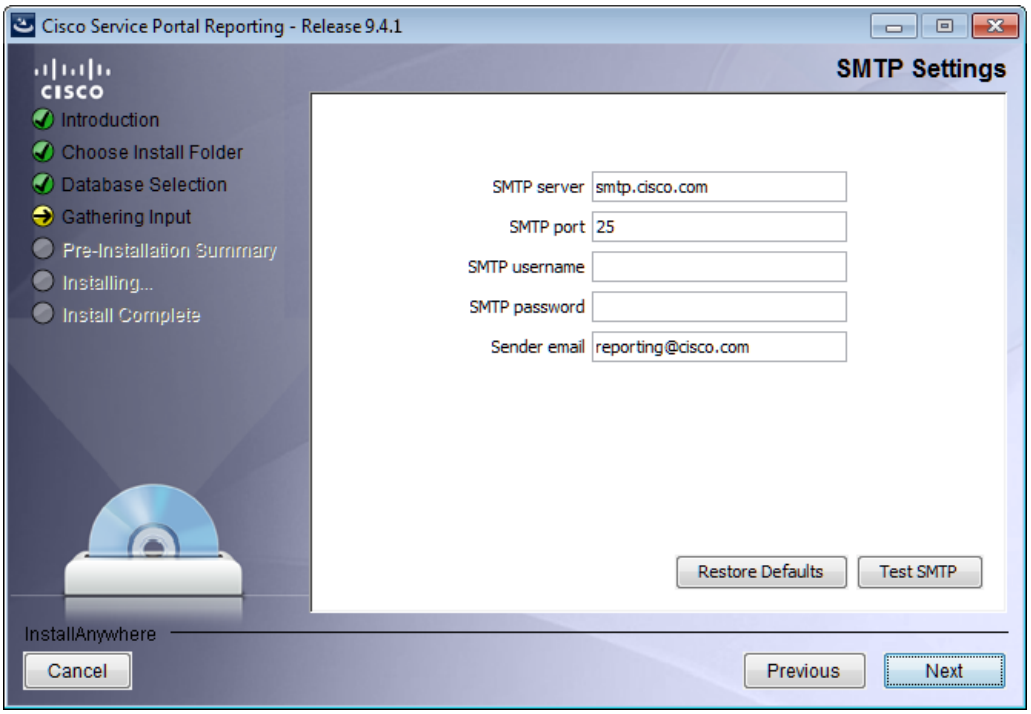
Table 3-3 Form Data Reporting Service Settings

Option	Description
Service tables	Number of tables required in the Data Mart database to store the data for reportable services. One table is needed per reportable service. Default value is 50, which is also the minimum value allowed.
Text fields	Number of Text type fields that are used in services based on the customer form reporting analysis. Default value is 80.
Numeric fields	Number of Numeric fields that are used in services based on the customer form reporting analysis. Default value is 20.
Date fields	Number of Date fields that are used in services based on the customer form reporting analysis. Default value is 20.

Step 24 Click **Next** to proceed to the next page of the wizard.

The SMTP Settings page of the installation wizard appears, as shown in Figure 3-14 below.

Figure 3-14 SMTP Settings



Step 25 Enter your SMTP settings.

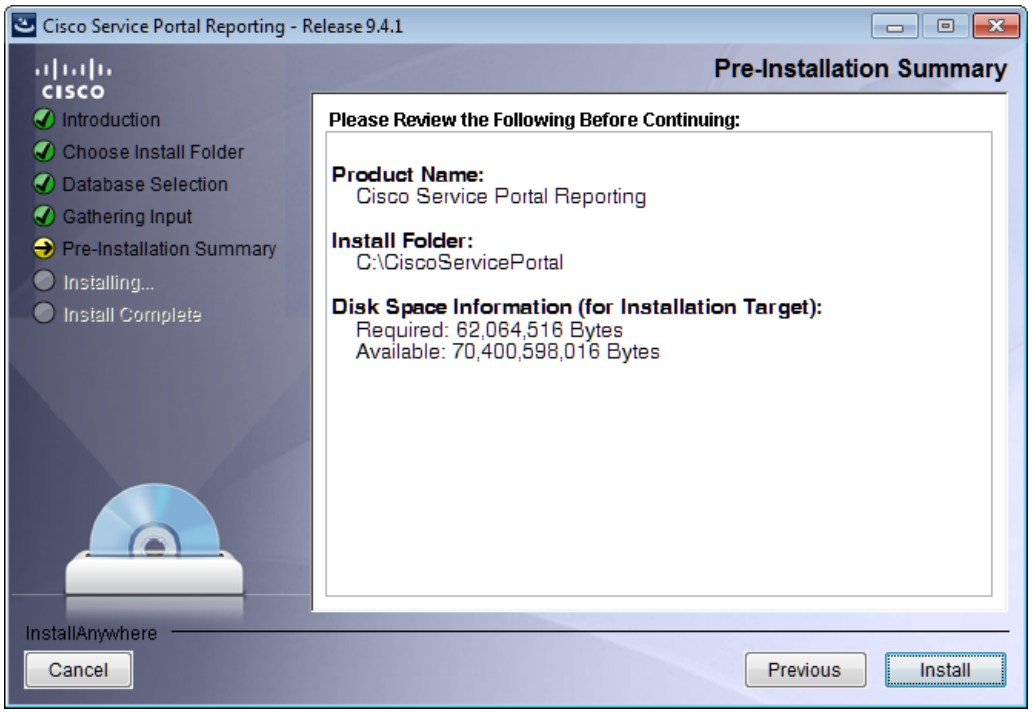
SMTP server	The hostname or IP address of the SMTP Server. The default is smtp.cisco.com.
SMTP port	The SMTP Port Number used by your SMTP Server. Valid port numbers are from 1 to 65535. The default value is 25.
SMTP username	The username to authenticate to the SMTP server. This is only needed if your SMTP server requires authentication; otherwise, it can be left blank.
SMTP password	The password of the SMTP username.
Sender email	The sender email address to be used for Cognos generated notifications.

Click **Test SMTP** to test the connection to the SMTP server.

Step 26 Click **Next** to proceed to the next page of the wizard.

The Pre-Installation Summary page of the installation wizard appears, as shown in Figure 3-15 below.

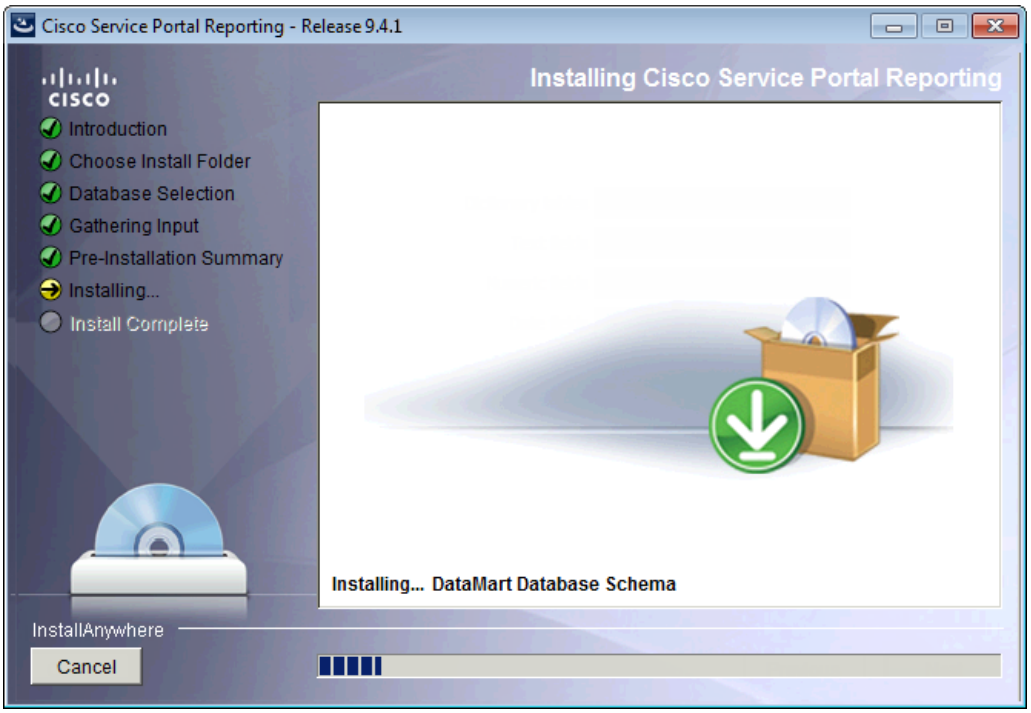
Figure 3-15 Pre-Installation Summary



Step 27 The installation wizard has enough information to start the installation 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 installation of Reporting.

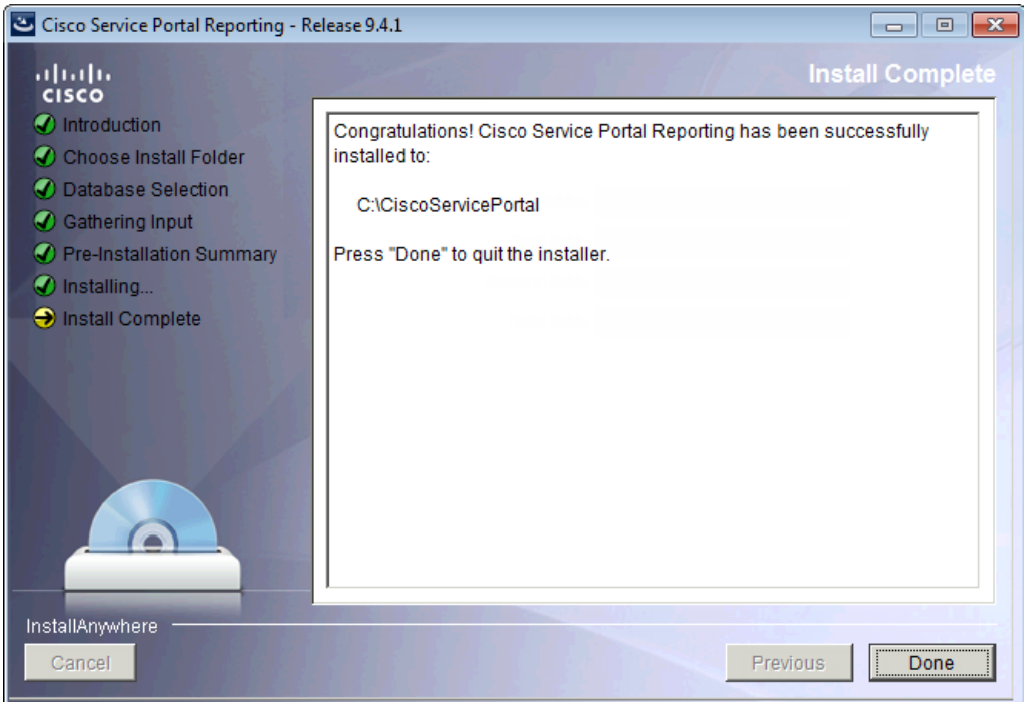
The Installing Cisco Service Portal Reporting page of the installation wizard appears, as shown in Figure 3-16 below.

Figure 3-16 Installing Cisco Service Portal Reporting



This 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 page of the installation wizard appears, as shown in Figure 3-17 below.

Figure 3-17 Install Complete



Step 28 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/cognos8**.

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

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

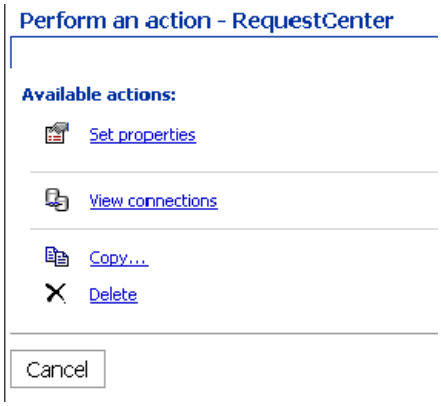
Step 6 In the top right corner of the UI, click the **Launch** link, and click the **IBM Cognos Administration** drop-down menu.

Step 7 Click the **Configuration** tab.

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

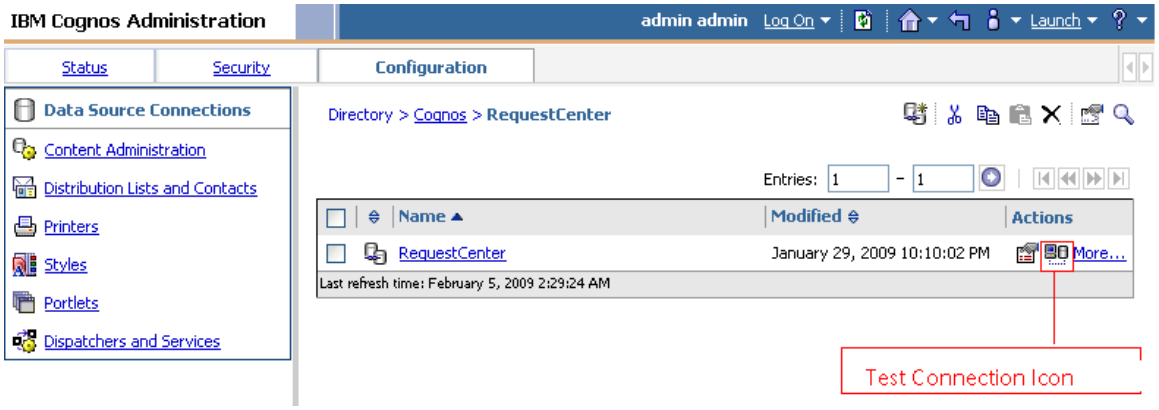
Step 9 In the right pane, you should see a data source entry called **RequestCenter**.

Step 10 Under the Actions column, click the **More** link. The "Perform an Action – RequestCenter" page appears.



Step 11 Click **View connections**.

Step 12 The Configuration tab reappears, and a new (*Test the connection*) icon shows up next to the **More** link.



Step 13 Click this (*Test the connection*) icon.

Step 14 Click **Test**.

Step 15 Verify that the connection test shows the Status of "Succeeded". You can now proceed to the next section.

Importing Service Portal Reports

Perform the following tasks to configure and import the Service Portal 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 Portal Application

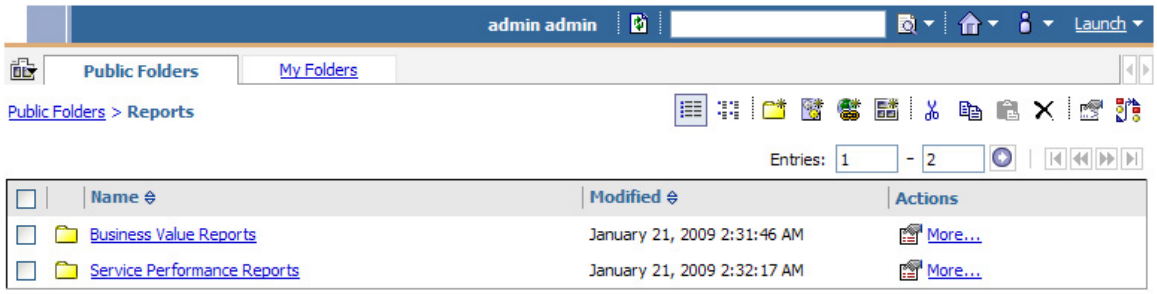
Step 1 **Restart the Service Portal application**. This will allow the Service Portal application server to pick up the new configuration which enables it to integrate with the Cognos application server. Restart the entire application server where the Request Center application is running.

Step 2 Once the application server is started, log in as the Service Portal administrative user.

Step 3 Choose the **Reporting** module.

Step 4 Click the **Reports** tab.

Step 5 Verify that the Public Folders tab appears with two folders named "Business Value Reports" and "Service Performance Reports". This is a good indication that the Reporting module of Service Portal is integrated successfully with the Cognos application server.



Step 6 Proceed to the next section "Configuring Advanced 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" section on page 3-28.

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**.

Note This script may take several minutes to complete.

Step 3 Execute **create_model.cmd**.

Step 4 Execute **publish_fdr_pkg.cmd**.

Note This script may take several minutes to complete.

Step 5 Execute **publish_serviceportfolioreporting_pkg.cmd**.

Note This script may take several minutes to complete.

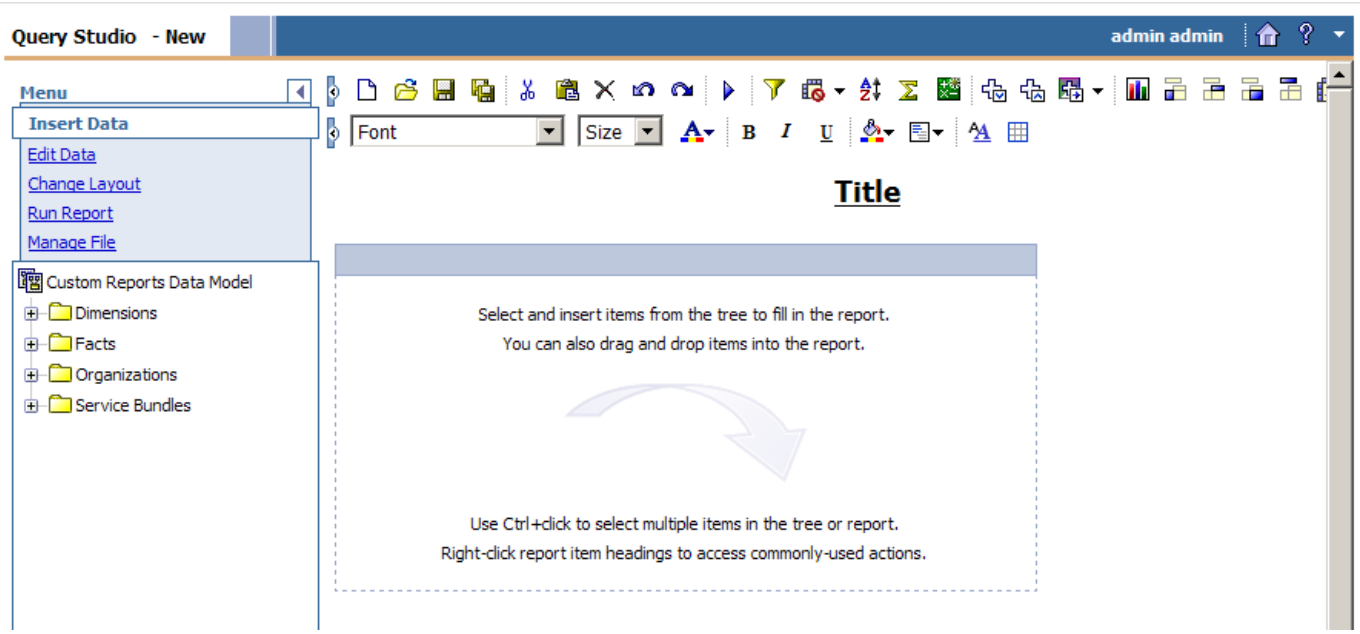
Step 6 Log out, and then log back in to Service Portal as the administrative user.

Step 7 Choose the **Advanced Reporting** module.

Step 8 Click the **Ad-Hoc Reports** tab.

Step 9 Click the **Custom Report Data Models** link.

Step 10 If you see the Query Studio window (similar to the image below), then it is a good indication that the Advanced Reporting module of Service Portal is integrated successfully with the Cognos application server.



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 RequestCenter database which must be extracted and transmitted to the Datamart 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.

Standard Report Script	Description
update_datamart_std.cmd	This script extracts the data from the RequestCenter database and transmits it to the Datamart database. This data is used to refresh the Service Portal 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.

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.

Advanced Report Scripts	Description
update_datamart.cmd	This script updates fact tables and dimensions in the Datamart database.
create_model.cmd	This script creates the framework model used by the Cognos reporting tools (Query Studio and Report Studio).
publish_fdr_pkg.cmd	This script publishes the Cognos framework for the Request Center module of Service Portal.
publish_serviceportfolioreporting_pkg.cmd	This script publishes the Cognos framework for the Demand Center module of Service Portal.

Note We recommend scheduling the advanced report scripts in the table above to run once daily during off-peak hours. The data in the Datamart database is 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 publish_serviceportfolioreporting_pkg script can be scheduled to run at the same time or a few minutes after the publish_fdr_pkg.cmd script.

Except for publish_serviceportfolioreporting_pkg, the other scripts must be run without overlapping. If the scripts overlap, you may encounter data inconsistency.

Configuring the Time Zone

The Cisco Service Portal Reporting installer automatically sets the time zone of the Cognos server to match the time zone of the Service Portal application. The following table shows the supported time zones for the Service Portal application. The installer will map the Service Portal time zone to an equivalent Cognos time zone value (that is, same GMT offset).

Time Zone Name	Computer Time Zone Description (GMT)
Etc/GMT+12	(GMT-12:00) International Date Line West
Pacific/Apia	(GMT-11:00) Samoa
US/Hawaii	(GMT-10:00) Hawaii
US/Aleutian	(GMT-10:00) Hawaii Aleutian Daylight Time
US/Alaska	(GMT-09:00) Alaska
America/Tijuana	(GMT-08:00) Pacific Time (US and Canada); Tijuana
America/Chihuahua	(GMT-07:00) Chihuahua, La Paz, Mazatlan
US/Arizona	(GMT-07:00) Arizona
Canada/Mountain	(GMT-07:00) Mountain Time (US and Canada)
Canada/Saskatchewan	(GMT-06:00) Saskatchewan

Time Zone Name	Computer Time Zone Description (GMT)
US/Central	(GMT-06:00) Central America
Canada/Central	(GMT-06:00) Central Time (US and Canada)
America/Mexico_City	(GMT-06:00) Guadalajara, Mexico City, Monterrey
America/Bogota	(GMT-05:00) Bogota, Lima, Quito
Canada/Eastern	(GMT-05:00) Eastern Daylight Time (US and Canada)
America/Jamaica	(GMT-05:00) Eastern Time (US and Canada)
US/East-Indiana	(GMT-05:00) Indiana (East)
America/Antigua	(GMT-04:00) Atlantic Time (Canada)
Canada/Atlantic	(GMT-04:00) Atlantic Daylight Time (Canada)
America/Manaus	(GMT-04:00) Manaus
America/Santiago	(GMT-04:00) Santiago
America/Caracas	(GMT-04:30) Caracas
America/La_Paz	(GMT-04:00) La Paz (Bolivia)
America/Sao_Paulo	(GMT-03:00) Brasilia
America/Godthab	(GMT-03:00) Greenland
America/Argentina/Buenos_Aires	(GMT-03:00) Buenos Aires
America/Guyana	(GMT-04:00) Georgetown
America/St_Johns	(GMT-03:30) Newfoundland and Labrador
Atlantic/South_Georgia	(GMT-02:00) Mid-Atlantic
Atlantic/Azores	(GMT-01:00) Azores
Atlantic/Cape_Verde	(GMT-01:00) Cape Verde Islands
Etc/Greenwich	(GMT) Greenwich Mean Time: Dublin, Edinburgh,
Africa/Casablanca	(GMT) Casablanca, Monrovia
Europe/Sarajevo	(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb
Europe/Brussels	(GMT+01:00) Brussels, Copenhagen, Madrid, Paris
Africa/Brazzaville	(GMT+01:00) West Central Africa
Europe/Amsterdam	(GMT+01:00) Amsterdam, Berlin, Bern, Rome,
Europe/Belgrade	(GMT+01:00) Belgrade, Bratislava, Budapest,
Africa/Cairo	(GMT+02:00) Cairo
Europe/Helsinki	(GMT+02:00) Helsinki, Kiev, Riga, Sofia, Tallinn,
Europe/Minsk	(GMT+02:00) Minsk
Europe/Athens	(GMT+02:00) Athens, Bucharest, Istanbul
Asia/Jerusalem	(GMT+02:00) Jerusalem
Africa/Windhoek	(GMT+02:00) Windhoek
Africa/Harare	(GMT+02:00) Harare, Pretoria
Asia/Baghdad	(GMT+03:00) Baghdad
Africa/Nairob	(GMT+03:00) Nairobi
Europe/Moscow	(GMT+03:00) Moscow, St. Petersburg, Volgograd
Asia/Kuwait	(GMT+03:00) Kuwait, Riyadh
Asia/Tehran	(GMT+03:30) Tehran
Asia/Baku	(GMT+04:00) Baku

Time Zone Name	Computer Time Zone Description (GMT)
Asia/Muscat	(GMT+04:00) Abu Dhabi, Muscat
Asia/Yerevan	(GMT+04:00) Yerevan
Asia/Tbilisi	(GMT+04:00) Tbilisi
Asia/Kabul	(GMT+04:30) Kabul
Asia/Karachi	(GMT+05:00) Islamabad, Karachi, Tashkent
Asia/Yekaterinburg	(GMT+05:00) Ekaterinburg
Asia/Kolkata	(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi
Asia/Kathmandu	(GMT+05:45) Kathmandu
Asia/Dhaka	(GMT+06:00) Astana, Dhaka
Asia/Novosibirsk	(GMT+07:00) Novosibirsk
Asia/Colombo	(GMT+05:30) Sri Jayawardenepura
Asia/Rangoon	(GMT+06:30) Yangon (Rangoon)
Asia/Bangkok	(GMT+07:00) Bangkok, Hanoi, Jakarta
Asia/Krasnoyarsk	(GMT+08:00) Krasnoyarsk
Asia/Irkutsk	(GMT+09:00) Irkutsk
Asia/Kuala_Lumpur	(GMT+08:00) Kuala Lumpur, Singapore
Asia/Taipei	(GMT+08:00) Taipei
Australia/Perth	(GMT+08:00) Perth
Asia/Chongqing	(GMT+08:00) Beijing, Chongqing, Hong Kong SAR,
Asia/Seoul	(GMT+09:00) Seoul
Asia/Tokyo	(GMT+09:00) Osaka, Sapporo, Tokyo
Asia/Yakutsk	(GMT+09:00) Yakutsk
Australia/Darwin	(GMT+09:30) Darwin
Australia/Adelaide	(GMT+09:30) Adelaide
Australia/Hobart	(GMT+10:00) Hobart
Australia/Canberra	(GMT+10:00) Canberra, Melbourne, Sydney
Australia/Brisbane	(GMT+10:00) Brisbane
Asia/Vladivostok	(GMT+10:00) Vladivostok
Pacific/Guam	(GMT+10:00) Guam, Port Moresby
Pacific/Guadalcanal	(GMT+11:00) Solomon Islands, New Caledonia
Pacific/Auckland	(GMT+12:00) Auckland, Wellington
Pacific/Fiji	(GMT+12:00) Fiji Islands
Pacific/Tongatapu	(GMT+13:00) Nuku alofa

Note The Europe/Moscow, Pacific/Fiji, Pacific/Apia, 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).

CHAPTER 4

Upgrade Guide

- Overview, page 4-1
- Upgrading Service Portal, page 4-1
- Upgrading Reporting, page 4-20

Overview

This chapter describes how to perform an application upgrade from Cisco Service Portal Release 2008.3 or above to Release 9.4.

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 Portal

Overview

Release Upgrade Path

This upgrade process supports direct database component upgrade from Service Portal Release 2008.3 SP9 or above to Release 9.4. 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 4-1 below, has to be executed against the database.

Table 4-1 Direct Upgrade Paths

From Release Version	To Release Version
2008.3 SP9	9.4
9.1 SP3	9.4
9.2 (limited release)	9.4
9.3 GA	9.4
9.3 R2	9.4
9.3.1	9.4
9.3.2	9.4

If your existing installation is prior to 2008.3 SP9, 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 4-2 Multistep Upgrade Paths

From Release Version	Step 1 – Upgrade to Release Version	Step 2 – Upgrade to Release Version	Step 3 – Upgrade to Release Version
2006.0.7, 2006.0.8, 2006.0.9	2008.3	2008.3 SP9	9.4
2007.1 with any SP	2008.3	2008.3 SP9	9.4
2008.1 with any SP	2008.3	2008.3 SP9	9.4
2008.3 with any SP prior to SP9	2008.3 SP9	9.4	—
9.1 with any SP prior to SP3	9.1 SP3	9.4	—

Limitations and Notes

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

New Platform Support

JBoss 7.1.1 is now a supported platform for the Cisco Service Portal, replacing JBoss 4.2.3. Also JBoss application server and IIS plugin are no longer bundled with the product software.

Catalog Deployer is now supported on Internet Explorer 8 only.

See Chapter 1, “Platform Support Matrix” for more information.

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 9.4, 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 9.4.

What is Upgraded

The upgrade process outlined in this chapter upgrades Service Portal software as well as the online transactional processing (OLTP) database to support new capabilities provided in Service Portal. These capabilities include more stringent control over data and referential integrity, ensuring enhanced data quality of the Service Portal 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 Portal tables. For examples, the following objects (if they exist) will be dropped:
  - An unrecognized index on a Service Portal table.
  - An unrecognized trigger on a Service Portal table.
  - An unrecognized constraint on a Service Portal table.
  - An unrecognized foreign key constraint that points to a Service Portal table.
- All other types of unrecognized objects that do not interact with Service Portal 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 Portal tables, constraints that do not affect Service Portal 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 2008.3 SP9 or later. See the "Release Upgrade Path" section on page 4-1.

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 Databases" section on page 2-9.

High-Level Upgrade Methodology

Your organization most likely has already developed an upgrade methodology for Service Portal 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 Portal 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:

Step 1 Back up the current production databases and restore them 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 Create a sandbox environment that has all the prerequisites for Release 9.4. This is the environment where you will be executing the upgrade program from the Release 9.4 package and needs to be configured to connect to the copy of production databases.

Step 3 Run the Service Portal installation wizard as described in the "Running the Service Portal Installer" section on page 2-64. On the Service Portal Database page, enter the values for the copy of the production database.

Step 4 Clicking **Next**.

Step 5 Click **Upgrade Existing Database**.

Step 6 Click **Validate Schema**.

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 Portal 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 Portal Release 9.4

Overview

Several platforms have been desupported since Release 9.3.1. Therefore, review Table 4-2 on page 4-2 to find out whether you need to upgrade the versions of the application server, web server, or operating system, prior to upgrading Cisco Service Portal.

If the platform that your existing Service Portal 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 2, “Installation and Configuration Guide”.

For example, your Service Portal system is running on WebLogic 10.3 on Windows Server 2003 operating system. WebLogic 10.3 is still supported for Release 9.4 of Service Portal. However, because Windows Server 2003 is no longer supported, you will need to install WebLogic 10.3 on a brand new computer that has Windows Server 2008 R2 operating system.

For another example, your Service Portal 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 9.4 of Service Portal, you may have to prepare another computer that has WebSphere 7.0 on AIX 7.1 operating system.

Upgrading Service Portal 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 Portal Release 9.4 installation
- Running the Service Portal installation wizard and selecting Upgrade Existing Database.
- Validating the integrity of preupgrade database, and repairing any schema or data issues found
- Performing postupgrade tasks

Upgrading Service Portal consists of the following nine sections:

- I. Performing Preupgrade Tasks, page 4-6
- II. Preparing the Upgrade Environment, page 4-7
- III. Run the Installation Wizard to the Validation Page, page 4-8
- IV. Understanding Validations, page 4-10
- V. Validating Schema, page 4-13
- VI. Validating Data, page 4-15
- VII. Repairing the Database, page 4-17
- VIII. Completing Installation, page 4-18
- IX. Performing Postupgrade Tasks, page 4-19

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" section on page 4-20. 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, messages in the JMS queues for Service Link and JMS adapters 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 Portal. Therefore, prior to upgrade, ensure 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 9.4. 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 Portal 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 Portal services on the application server.

Step 6 Back up all Service Portal databases. Make sure that you back up all Service Portal-related databases if you have more than one. For example, in addition to the RequestCenter database, you may have a separate Datamart database or ContentStore 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 Portal 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 Review the list of supported platforms and the prerequisite information for Release 9.4 as described in Chapter 1, “Platform Support Matrix” and Chapter 2, “Installation and Configuration Guide”. 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 5 Proceed to the III. Run the Installation Wizard to the Validation Page section below.

III. Run the Installation Wizard to the Validation Page

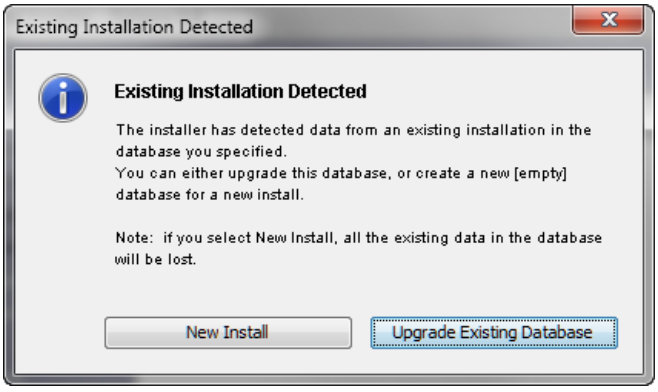
Step 1 Run the Service Portal installation wizard as described in the "Running the Service Portal Installer" section on page 2-64. Choose a **Typical** or **Advanced** installation type and follow the corresponding scenario (Scenario 1: New Typical Installation, page 2-66, or Scenario 2: New Advanced Installation, page 2-79).

Step 2 On the Service Portal Database page, 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 4-1 below.

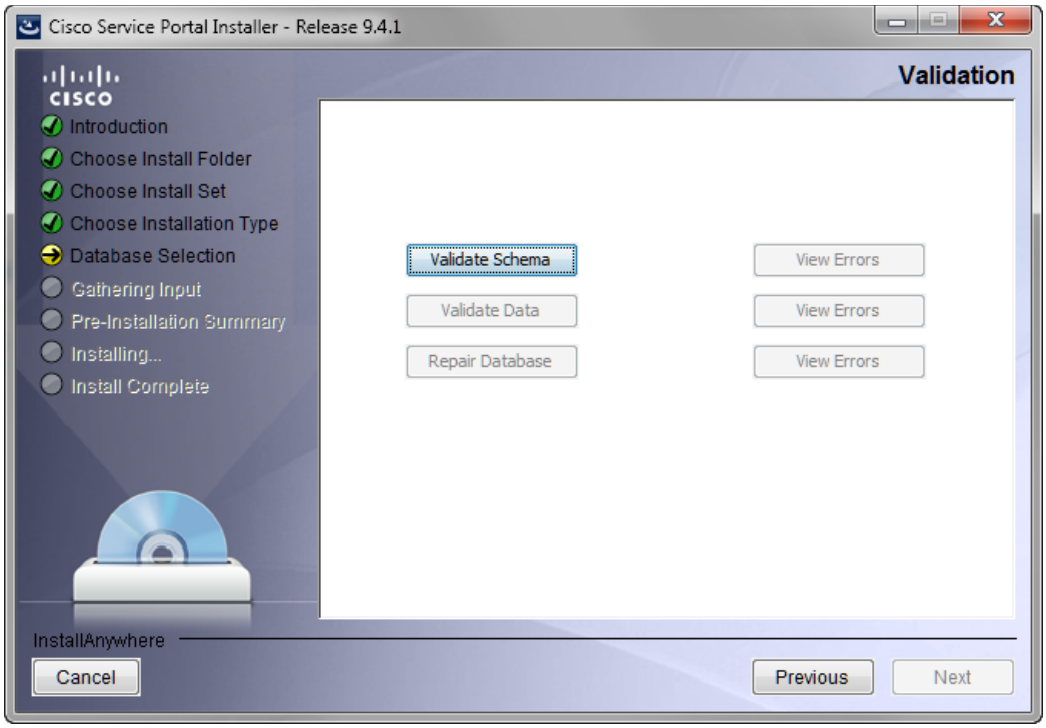
Figure 4-1 Existing Installation Detected



Step 4 Click **Upgrade Existing Database**.

The Validation page of the installation wizard appears, as shown in Figure 4-2 below.

Figure 4-2 Validation



The Service Portal 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 on page 4-13 section if you are already familiar with the database validation process during the Cisco Service Portal 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" section on page 4-11 for instructions to view this log file. All possible validation entry ErrorLevels and their descriptions are shown in Table 4-3 below.

Table 4-3 Validation ErrorLevels

ErrorLevel	Description
inform	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 Portal 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 Portal 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.
inform: auto-repairable	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.
inform: auto-repaired	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.
inform: pending-repair	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.

Table 4-3 Validation ErrorLevels (continued)

ErrorLevel	Description
inform: pending-removal	The validation test detected an unrecognized database object that touches a Service Portal 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 Portal table, b) an unrecognized trigger on a Service Portal table, c) an unrecognized constraint on a Service Portal table, and d) an unrecognized foreign key constraint that points to a Service Portal table. These objects are automatically deleted. No action is required on your part.
error	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.

As described in Table 4-3 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 strongly 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.

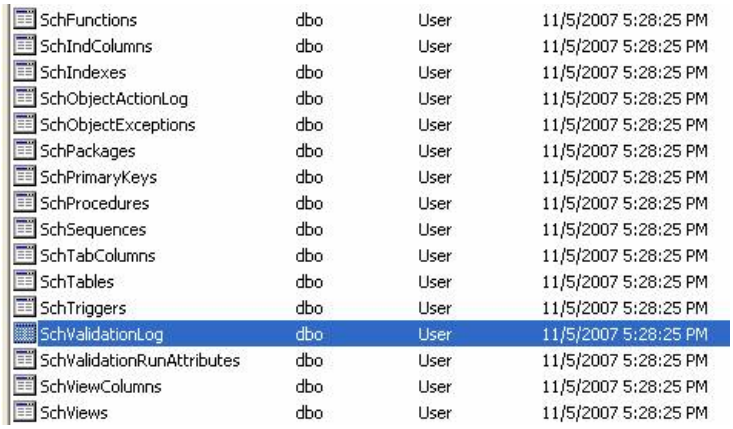
SchValidationLog Table

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 4-3) or SQL*Plus to connect to your database.

Figure 4-3 Browse SchValidationLog Table



SchFunctions	dbo	User	11/5/2007 5:28:25 PM
SchIndColumns	dbo	User	11/5/2007 5:28:25 PM
SchIndexes	dbo	User	11/5/2007 5:28:25 PM
SchObjectActionLog	dbo	User	11/5/2007 5:28:25 PM
SchObjectExceptions	dbo	User	11/5/2007 5:28:25 PM
SchPackages	dbo	User	11/5/2007 5:28:25 PM
SchPrimaryKeys	dbo	User	11/5/2007 5:28:25 PM
SchProcedures	dbo	User	11/5/2007 5:28:25 PM
SchSequences	dbo	User	11/5/2007 5:28:25 PM
SchTabColumns	dbo	User	11/5/2007 5:28:25 PM
SchTables	dbo	User	11/5/2007 5:28:25 PM
SchTriggers	dbo	User	11/5/2007 5:28:25 PM
SchValidationLog	dbo	User	11/5/2007 5:28:25 PM
SchValidationRunAttributes	dbo	User	11/5/2007 5:28:25 PM
SchViewColumns	dbo	User	11/5/2007 5:28:25 PM
SchViews	dbo	User	11/5/2007 5:28:25 PM

Step 2 Open the SchValidationLog table to view its contents (Figure 4-4).

Figure 4-4 SchValidationLog Contents

RunType	TestType	ObjectType	ObjectName	ObjectShortName	ErrorLevel	TestDetail
Check Schema	Table column ty...	Column	DirProject.Perce...	DirProject.Perce...	inform	Expected type: ...
Check Schema	Table column siz...	Column	DirPerson.SSN	DirPerson.SSN	inform	Expected type: ...
Check Schema	Unexpected tabl...	Table	CUSTOMER_TAB...	CUSTOMER_TAB...	inform	*NULL*
Check Schema	Unexpected tabl...	Table	CUSTOMER_TAB...	CUSTOMER_TAB...	inform	*NULL*
Check Schema	Unexpected tabl...	Table Column	DirPermission.C...	DirPermission.C...	inform	*NULL*
Check Schema	Unexpected tabl...	Table Column	DirPerson.CUST...	DirPerson.CUST...	inform	*NULL*
Check Schema	Unexpected FK ...	FK	FK_CUSTOMER_...	Table name: CU...	pending removal	*NULL*
Check Schema	Expected index ...	Index	TxInvocationAtt...	TxInvocationAtt...	inform:pending-r...	*NULL*
Check Schema	Expected index ...	Index	TxObjectRelatio...	TxObjectRelation3	inform:pending-r...	*NULL*
Check Schema	Expected index ...	Index	TxSatisfaction.T...	TxSatisfaction1	inform:pending-r...	*NULL*
Check Schema	Expected index ...	Index	XtrAgent.XtrAge...	XtrAgent3	inform:pending-r...	*NULL*

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 4-3 for more information) if you want to view other entries in the SchValidationLog table.

Notes about the RunType column in the SchValidationLog table:

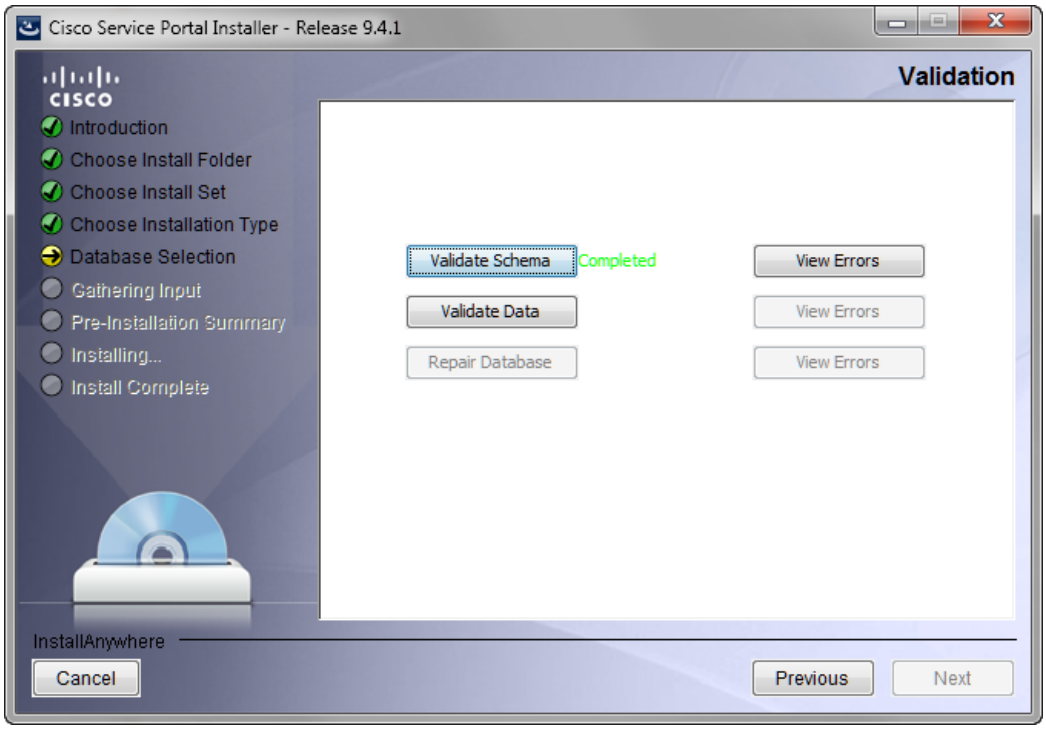
- Validate Schema inserts entries with RunType= “Check Schema”.
- Validate Data inserts entries with RunType= “Check Data”.
- Repair Database updates all entries with ErrorLevel= “inform: auto-repairable” to ErrorLevel= “inform: auto-repaired”, and at the same type, changes the RunType to “Fix Data”.

V. Validating Schema

Step 1 Click **Validate Schema**.

If the schema validation test completes without validation errors, a “Completed” message appears, as shown below (Figure 4-5).

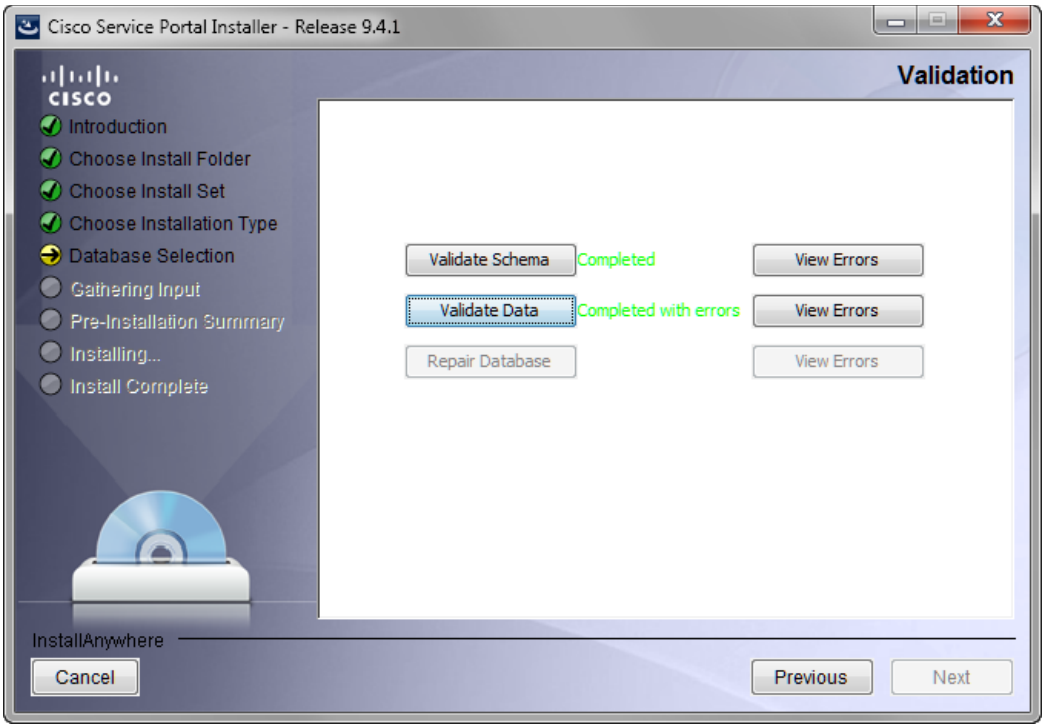
Figure 4-5 Schema Validation Completed (No Errors)



If no errors are reported, proceed to the “VI. Validating Data” section on page 4-15.

If the schema validation test completes with validation errors, a “Completed with errors” message appears, as shown below (Figure 4-6).

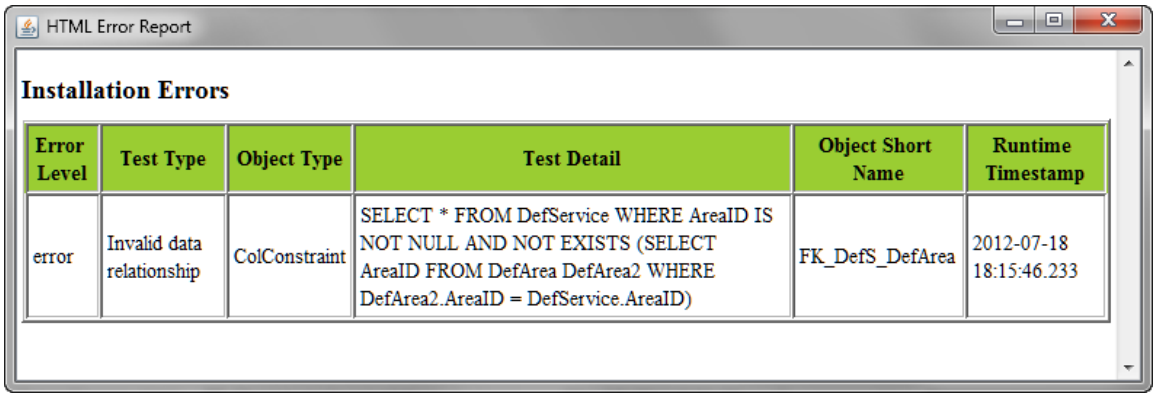
Figure 4-6 Schema Validation Completed (With Errors)



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 4-7).

Figure 4-7 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" section on page 4-10 for more information.

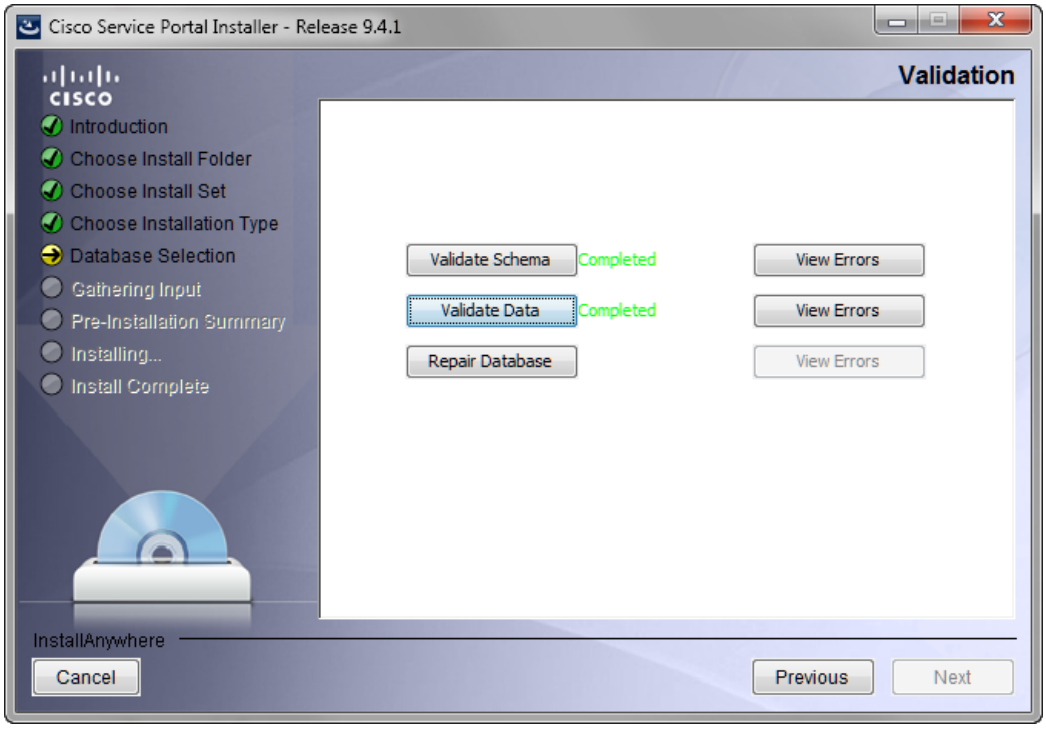
Step 4 When all validation errors have been fixed iteratively, proceed to the VI. Validating Data section below.

VI. Validating Data

Step 1 Click **Validate Data**.

If the data validation test completes without validation errors, a "Completed" message appears, as shown below (Figure 4-8).

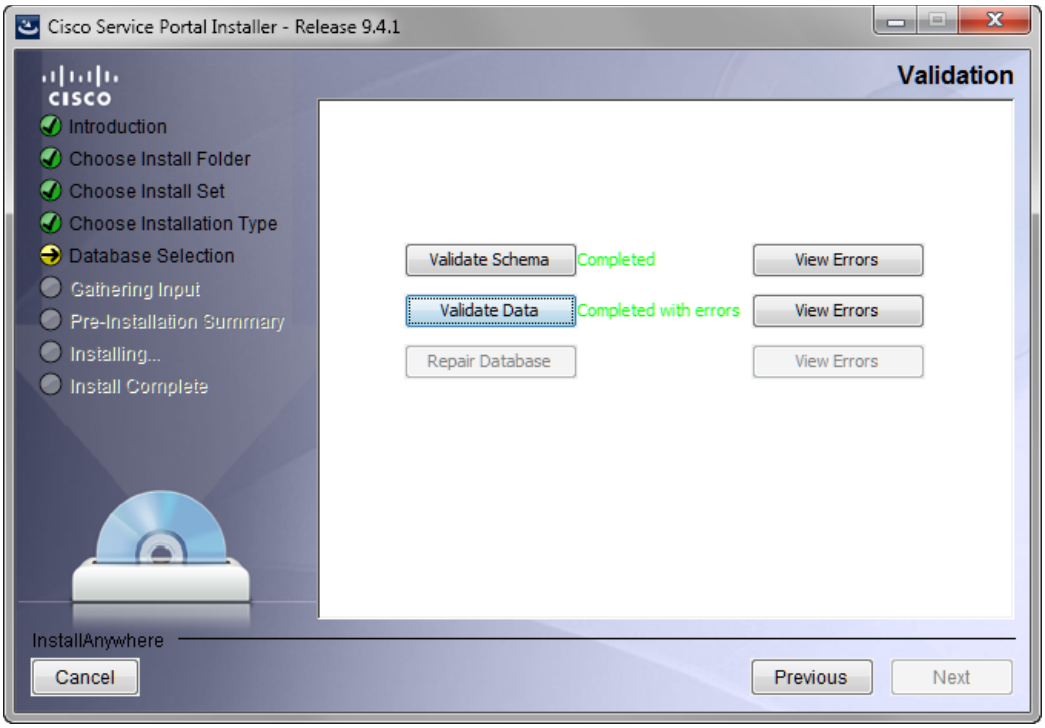
Figure 4-8 Data Validation Completed (No Errors)



If no errors are reported, proceed to the "VII. Repairing the Database" section on page 4-17.

If the data validation encounters validation errors, then a "Completed with errors" message appears, as shown below (Figure 4-9).

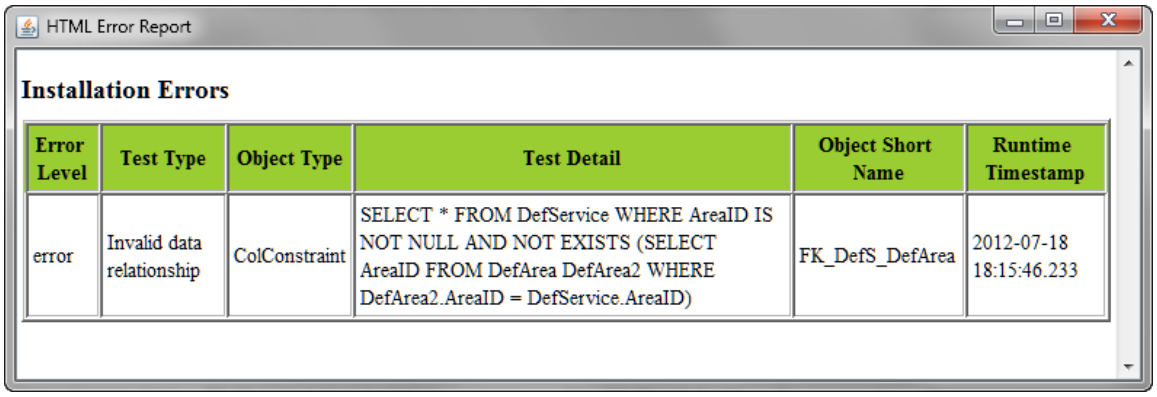
Figure 4-9 Data Validation Completed (With Errors)



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 4-10).

Figure 4-10 Validation Errors (Validate Data)



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" section on page 4-10 for more information.

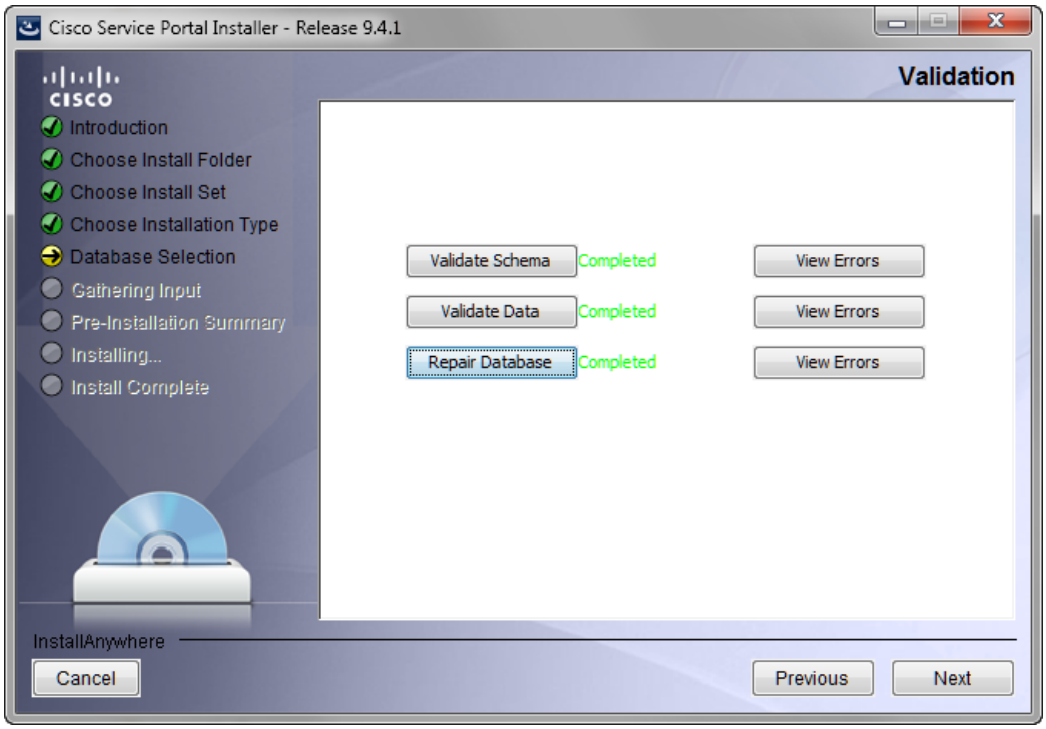
Step 4 When all validation errors have been fixed iteratively, proceed to the VII. Repairing the Database section below.

VII. Repairing the Database

Step 1 Click **Repair Database**.

When the database has been repaired a "Completed" message appears, as shown below (Figure 4-11).

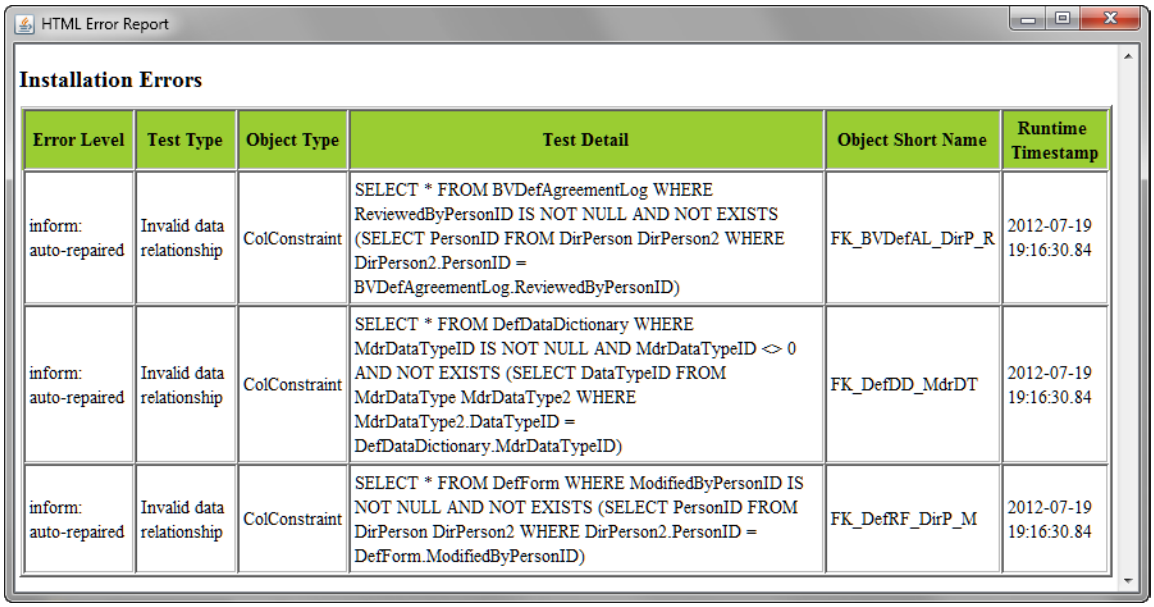
Figure 4-11 Data Validation Completed (No Errors)



Step 2 (Optional) Click **View Errors**.

The Validation Errors window appears. Resize the window to see the complete table, as shown in the example below (Figure 4-12).

Figure 4-12 Validation Errors (Repair Database)


HTML Error Report

Installation Errors

Error Level	Test Type	Object Type	Test Detail	Object Short Name	Runtime Timestamp
inform: auto-repaired	Invalid data relationship	ColConstraint	SELECT * FROM BVDefAgreementLog WHERE ReviewedByPersonID IS NOT NULL AND NOT EXISTS (SELECT PersonID FROM DirPerson DirPerson2 WHERE DirPerson2.PersonID = BVDefAgreementLog.ReviewedByPersonID)	FK_BVDefAL_DirP_R	2012-07-19 19:16:30.84
inform: auto-repaired	Invalid data relationship	ColConstraint	SELECT * FROM DefDataDictionary WHERE MdrDataTypeID IS NOT NULL AND MdrDataTypeID <> 0 AND NOT EXISTS (SELECT DataTypeID FROM MdrDataType MdrDataType2 WHERE MdrDataType2.DataTypeID = DefDataDictionary.MdrDataTypeID)	FK_DefDD_MdrDT	2012-07-19 19:16:30.84
inform: auto-repaired	Invalid data relationship	ColConstraint	SELECT * FROM DefForm WHERE ModifiedByPersonID IS NOT NULL AND NOT EXISTS (SELECT PersonID FROM DirPerson DirPerson2 WHERE DirPerson2.PersonID = DefForm.ModifiedByPersonID)	FK_DefRF_DirP_M	2012-07-19 19:16:30.84

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 Portal installation wizard.

Step 2 Continue to run the installation wizard as described in the “Running the Service Portal Installer” section on page 2-64 and your chosen scenario (Scenario 1: New Typical Installation, page 2-66, or Scenario 2: New Advanced Installation, page 2-79).

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 2, “Installation and Configuration Guide” to deploy the WAR files for the Service Portal 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 Portal application is now at Release 9.4. 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:

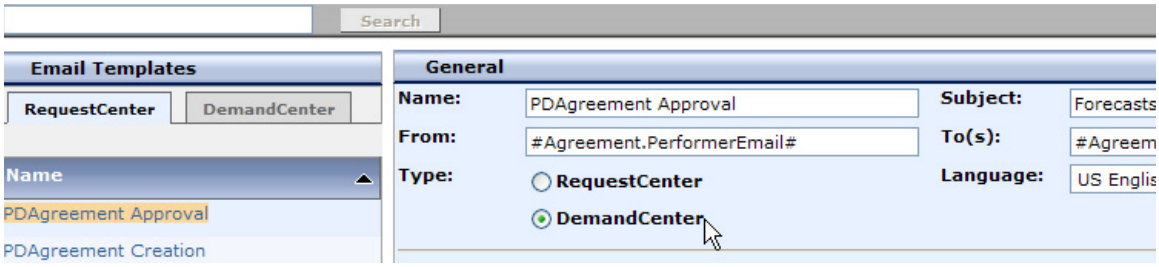
- Service Link custom adapters must be replaced with Release 9.4 versions.
- Custom adapters and any custom Java code developed at the customer site must be rebuilt using the new JDK.
- Any enterprise portal into which Request Center Portlets are deployed must be at JDK version 1.6.

Step 3 Service Import/Export is not backward compatible with previous releases. Services exported in prior releases cannot be imported into Release 9.4. 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 9.4.

Step 4 Follow procedures your organization has used in the past to reimplement all customizations for the application.

Step 5 If you use custom email templates for the Demand Center Agreement Notifications feature that was made available since Release 2008.1, you need to identify the corresponding email templates and set the template type to "DemandCenter" in the Administration module.

Figure 4-13 Configuring Email Templates



Step 6 Connect to the Service Portal 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 4-14).

Figure 4-14 Enable Browser Cache Setting

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 Portal URL for the first time after the Service Portal system is upgraded.

The next section describes the procedures for upgrading the Cognos component of the Advanced Reporting module. If your preupgrade Service Portal system included the Advanced Reporting module, then you must continue with the next section to complete the upgrade process for the Cognos component so that the Advanced Reporting module will work for Release 9.4.

Upgrading Reporting

Performing Preupgrade Tasks for Reporting

Backing Up Data Mart and Content Store Artifacts

To back up the Data Mart and Content Store artifacts:

Step 1 Back up the Datamart database (If there are any custom Datamart tables, they can be referred from this backup) and the ContentStore database.

Step 2 Back up all custom-defined views that are used by Advanced Reporting from the RequestCenter 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. Components

If you are currently running Cognos 8.4, follow the steps below to uninstall all Cognos 8.4 components:

Step 1 From your system Start button, choose **Programs > IBM Cognos8 > Uninstall IBM Cognos8 > Uninstall IBM Cognos8**.

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 8.4.1

See the "Installing Cognos Software" section on page 3-7 for more details on how to install Cognos 8.4.1.

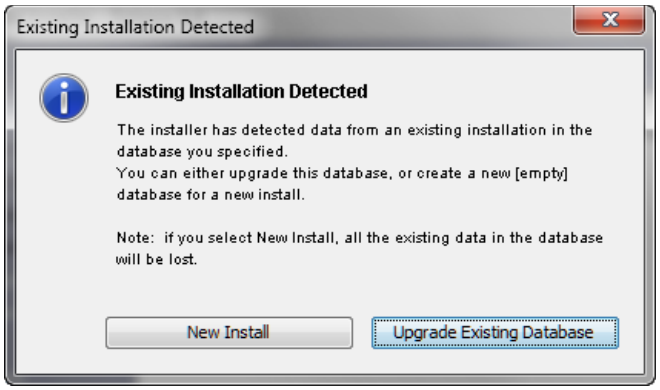
Running the Reporting Installer for Upgrade

Step 1 Run the Reporting installation wizard as described in the "Installing Reporting" section on page 3-10.

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, as shown in Figure 4-1 below.

Figure 4-15 Existing Installation Detected



Step 3 Click **Upgrade Existing Database**.

Step 4 Continue with the Reporting installation wizard as described in the "Running the Reporting Installation Wizard" section on page 3-12. 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 are instructions and utilities for you to do so. See the "Increasing the Number of Reportable Dictionaries and Services" section on page 5-7 for more information.

Performing Postupgrade Tasks for Advanced Reporting

Perform the tasks described in the "Postinstallation Tasks" section on page 3-28.

CHAPTER 5

Advanced Configuration and Troubleshooting Tips for Cognos

- Overview, page 5-1
- Miscellaneous Configuration, page 5-1
- Understanding Roles, page 5-3
- Moving Reports from Development to Production Environments, page 5-5
- Increasing the Number of Reportable Dictionaries and Services, page 5-7
- Configuring HTTPS for Cognos, page 5-8
- Troubleshooting, page 5-13

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**.

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 8 service.

Step 2 Open the **startup.bat** located under the C:\Program Files (x86)\cognos\c8_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 8 service.

Setting the Timeout Interval on IBM Cognos 8 Server

The IBM Cognos 8 session timeout setting should match that of Service Portal to allow Single Sign-On to work seamlessly.

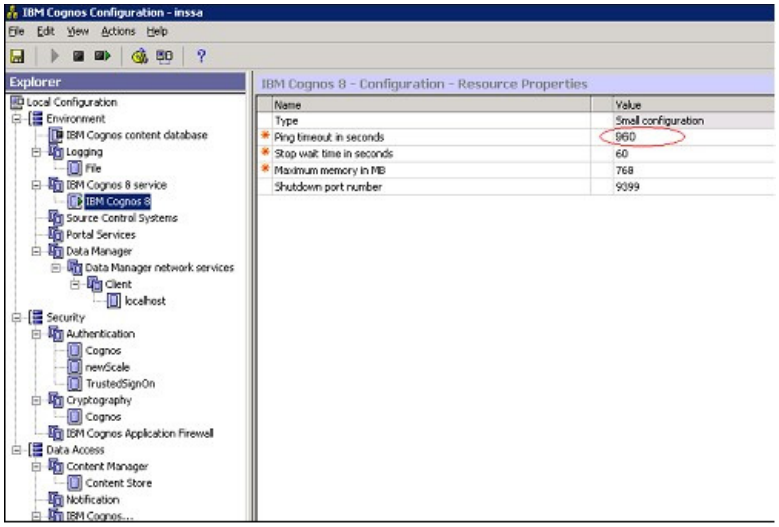
To set the timeout interval:

Step 1 Choose **Start > All Programs > IBM Cognos 8 - 64 > IBM Cognos Configuration**.

Step 2 Choose **Environment > IBM Cognos 8 service**.

Step 3 Click **IBM Cognos 8**.

Step 4 Under Resource Properties, choose **Ping timeout in seconds**. Enter **960** as the timeout interval in seconds. 960 is the maximum possible value.



Step 5 Save the configuration (by clicking the **Save** icon).

Step 6 Restart the IBM Cognos 8 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
DC = Demand Center
RC = Request Center

Role	Capabilities	Description
Service Operations Report User	• View RC Reports	Module: Reporting • Ability to view the KPI dashboard and run RC (Service Performance) reports

Service Strategy and Design Report user	• View DC Reports	Module: Reporting • Ability to view the KPI dashboard and run DC (Business Value) reports
Advanced Reporting – BusinessAuthor	• View RC Reports • View DC 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 • View DC Reports • Ad-Hoc Reports • Report Designer	Modules: Reporting and Advanced Reporting • Ability to view the KPI dashboard (DC /RC) • Access to the Ad-Hoc Reports tab in the Advanced Reporting module • Access to Report Designer
Reporting Administrator	• View RC Reports • View DC Reports	Modules: Reporting and Advanced Reporting • Access to Reports in the Advanced Reporting module
Relationship Manager	• View RC Reports • View DC Reports	Module: Reporting • Access to all reports (DC /RC)
Service Level Manager	• View RC Reports • View DC Reports	Module: Reporting • Access to all reports (DC /RC)
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
Portfolio Designer and Administrator	• View DC Reports	Module: Reporting • Ability to view the KPI dashboard and run DC (Business Value) reports
Portfolio Manager	• View DC Reports	Module: Reporting • Ability to view the KPI dashboard and run DC (Business Value) reports
Analytics Administrator	• View RC Reports • View DC Reports • Ad-Hoc Reports • Report Designer • KPI Administrator • Report Administrator	Modules: Reporting and Advanced Reporting • Access to the reports (DC /RC) • Ability to view the KPI dashboard (DC /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 Portal 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.

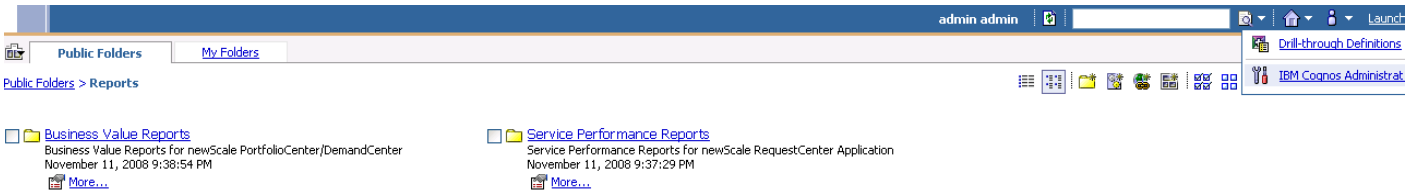
Creating an Export File

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 Portal as a user with the Report Administrator capability.

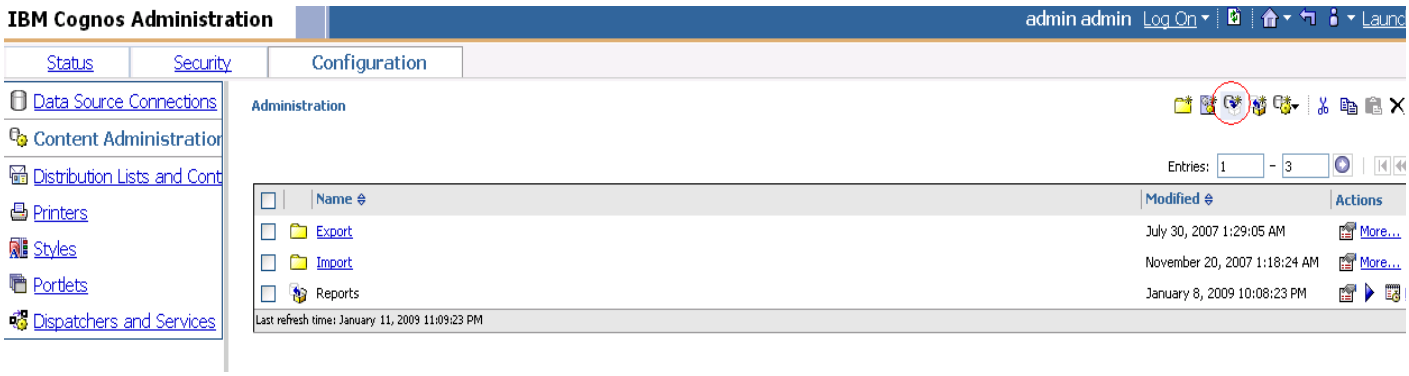
Step 4 Choose the Reporting **Deployment** option as shown below.



Step 5 Go to Launch on the right hand side top corner and click **IBM Cognos Administration**.

Step 6 Click the **Configuration** tab.

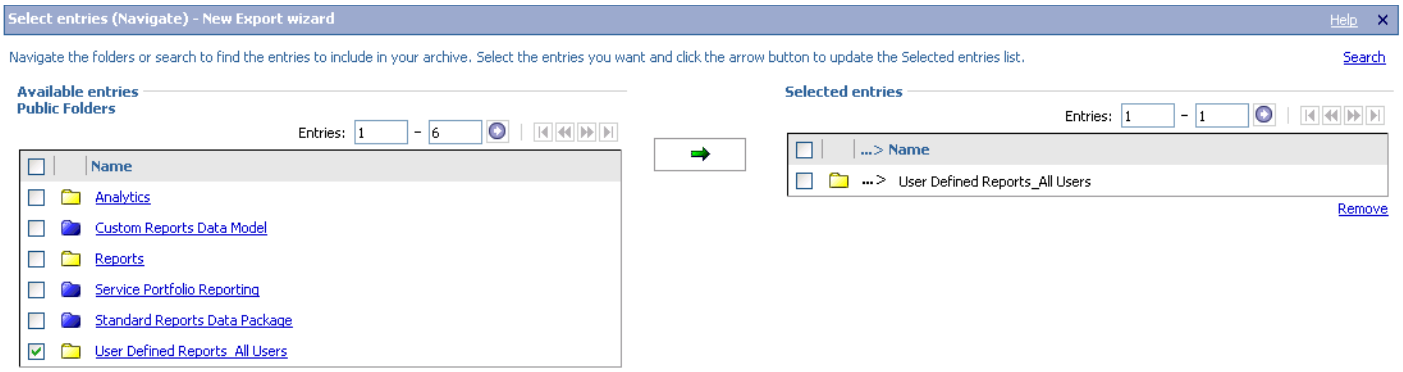
Step 7 Go to Content Administration, and in the top-right corner of the screen click the **New Export** icon.



Step 8 Provide a name (for example, CustomReports) and other details for the export, and then click **Next**.

Step 9 On the Deployment Method page, choose **Select public folders and directory content**, and then click **Next**.

Step 10 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 11 Deselect **Disable after import,** and then click **Next**.

Step 12 Click **Next**.

Step 13 In the "Select the directory content" section, choose **Include Cognos groups and roles** and **Replace existing entries**, and click **Next**.

Step 14 In the "Specify the general options" section, choose **Include access permissions** and **Apply to new and existing entries**.

Step 15 Under External namespaces, choose **Include references to external namespaces**.

Step 16 In the "Entry ownership" section, choose **The user performing the import**, and click **Next** in the "Specify the general options" section.

Step 17 In the "Specify a deployment archive" section, click **Next**.

Step 18 In the "Review the summary" section, click **Next**.

Step 19 In the "Select an action" section, click **Finish**.

Step 20 Choose **Now,** and in "Run with options" section click **Run**.

This process creates **CustomReports.zip** in the <CognosHome>\c8\deployment folder of Cognos SOURCE machine.

Import the Exported File

Step 1 Copy the exported file **CustomReports.zip** to the <CognosHome>\c8\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.

Step 5 Choose **CustomReports**, and click **Next**.

Step 6 Choose **CustomReports,** and in the "Select the public folders content" section, click **Next**.

Step 7 In the "Select the directory content" section, click **Next**.

Step 8 In the "Specify the general options" section, click **Next**.

Step 9 In the "Review the summary" section, click **Next**.

Step 10 In the "Select an action" section, click **Finish**.

Step 11 The new report folder **CustomReports** appears in the in public folders area of the production machine.

Increasing the Number of Reportable Dictionaries and Services

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.

Increasing the Number of Dictionary or Service Tables

To increase the number of the FDR dictionary/service tables:

Step 1 Use a text editor to open the file **cognos.properties** in the <*requestcenter.destination*>/cognos/config directory.

Step 2 Edit the values for following parameters in the cognos.properties file:

DM.IncrementOfDictionaryTables=n

DM.IncrementOfServiceTables=n

where *n* = the number of tables you would like to add to the data mart.

For example, if you start with 50 dictionary and service tables, and then enter 20 for *n* for each parameter, then you are configuring the setting to add twenty more tables for a total of 70 dictionary tables and 70 service tables. In other words, DM_FDR_DICTIONARY_50 changes to DM_FDR_DICTIONARY_70 and DM_FDR_SERVICE_50 changes to DM_FDR_SERVICE_70.

Step 3 Open a Command Prompt window, and execute the script **create_fdr_tables.cmd** in the <*requestcenter.destination*>/cognos/bin directory.

This script increases the number of tables according to the values you entered in the **cognos.properties** file.

Note The number of columns (numeric, character (text) and date types) will be the same for the newly created tables as was configured during the installation of the Ad-Hoc Reporting module.

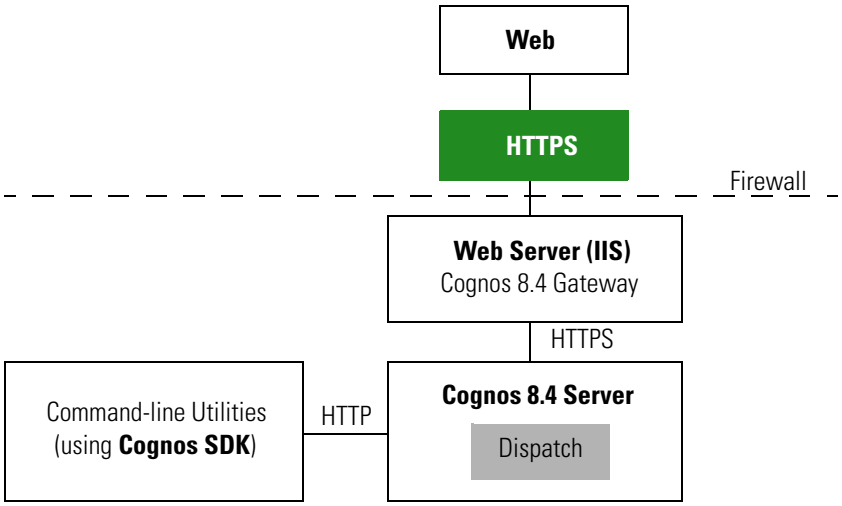
Verification Procedure

To verify the addition of the new tables, log on to the Datamart database and check the number of dictionary/service (DM_FDR_DICTIONARY_N/DM_FDR_SERVICE_N) tables.

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 using this instruction: http://inservice/QA/kb/?View=entry&EntryID=4.
2. In addition to the above instruction, one needs to 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

Step 1 The Server Certificate used for IIS should be copied to a secure location on the Cognos 8.4 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 (x86)\cognos\c8_64\bin".

Step 3 Set JAVA_HOME=C:\Program Files (x86)\cognos\c8_64\bin\jre\1.5.0.

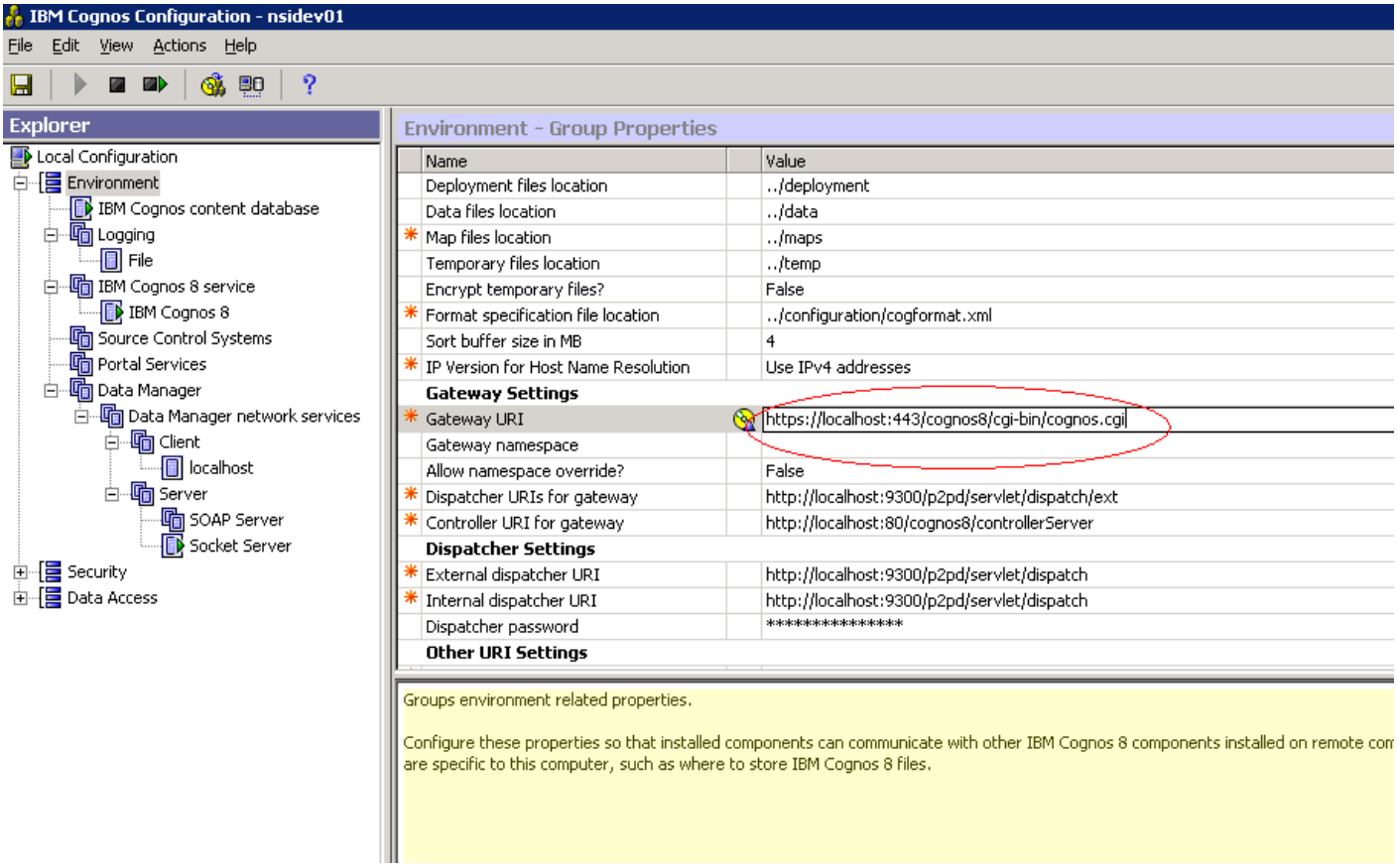
Step 4 Import the IIS Server certificate into Cognos 8.4's JCA Keystore by typing the following command:

```
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\c8\configuration\signkeypair\jCAKeystore" -p NoPassWordSet)
```

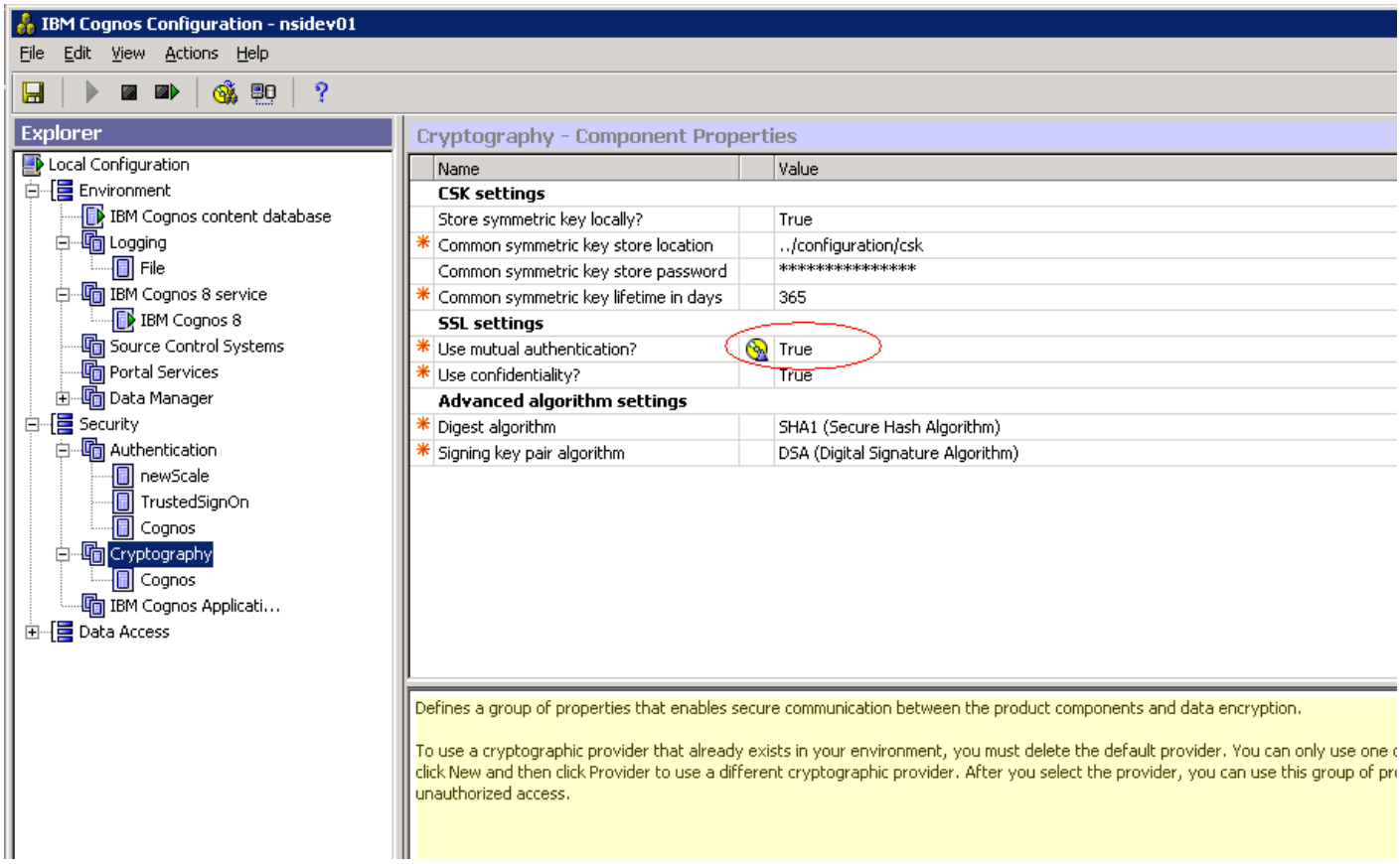
Configuring Cognos 8.4 for SSL

Step 1 Choose **Program Files > IBM Cognos 8 > IBM Cognos Configuration**.

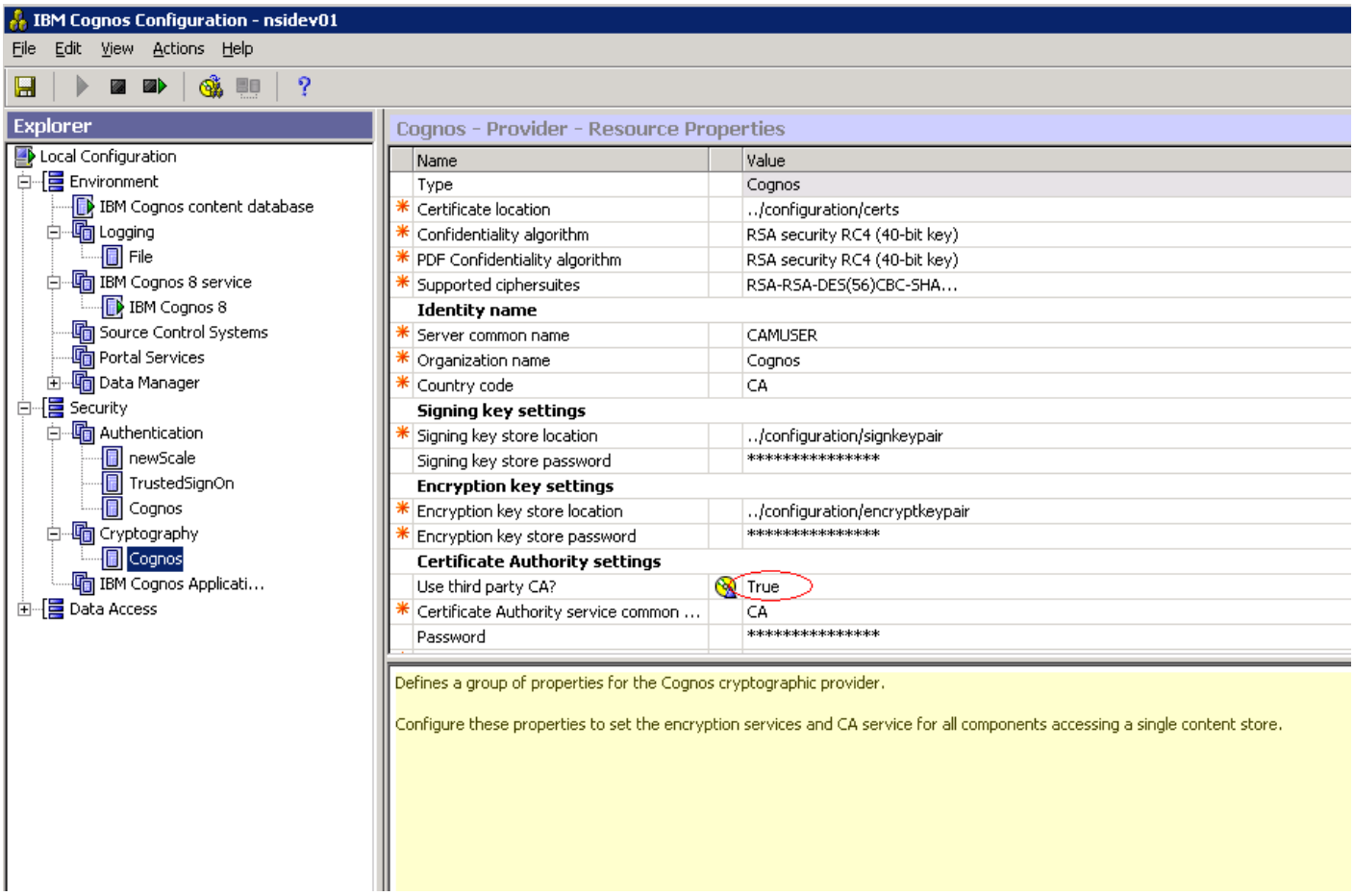
Step 2 Choose **Environment > Gateway URI**. Change http to **https**, and port default 80 to **443**.



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 8.4 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/cognos8, 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.

create_model.cmd failed (for Oracle DB)

Error

The root cause for this issue would be:

- Unspecified datamart schema user name for the parameter datamart.db.schema in the setup.properties during configuration.

```
2008-10-07 18:23:52,742 INFO  Executing ScriptPlayer...
2008-10-07 18:23:52,914 INFO  An existing project is being opened.
2008-10-07 18:23:57,414 INFO  Transaction count: 13
2008-10-07 18:23:57,414 INFO
2008-10-07 18:23:57,414 INFO
2008-10-07 18:23:57,414 INFO  Transaction: 1
2008-10-07 18:23:57,430 INFO  Action: SetDefaultLocale successful, continuing...
2008-10-07 18:23:57,430 INFO
2008-10-07 18:23:57,430 INFO  Transaction: 2
2008-10-07 18:23:57,430 INFO  Action: SetActiveLocale successful, continuing...
2008-10-07 18:23:57,430 INFO
2008-10-07 18:23:57,430 INFO  Transaction: 3
2008-10-07 18:23:57,805 INFO  Action: Modify successful, continuing...
2008-10-07 18:23:57,805 INFO
2008-10-07 18:23:57,805 INFO  Transaction: 4

2008-10-07 18:23:57,805 INFO  Action: Modify successful, continuing...
2008-10-07 18:23:57,805 INFO
2008-10-07 18:23:57,805 INFO  Transaction: 5
2008-10-07 18:23:58,305 INFO  Action: DBImport failed, skipping...
2008-10-07 18:23:58,305 INFO  Reason: BMT-MD-5002 The ImportSpec object 'DBO' of type
'schema' does not exist in the database.
2008-10-07 18:23:58,305 INFO
2008-10-07 18:23:58,305 INFO  Transaction: 5 failed, skipping...
```

Solution

- Open the cognos.properties file located under (<requestcenter.destination>/Cognos/Config).
- Edit the value for the datamart.db.schema as below:
  - datamart.db.schema=dbo (SQL Server database)
  - datamart.db.schema=<dm user name> (Oracle database)

Note Ensure you make the same change in the setup.properties file before running the configure.cmd in case of upgrades (<Cognos_temp_installer>/cognosinstaller).

- Save the cognos.properties file after editing the datamart.db.schema parameter.

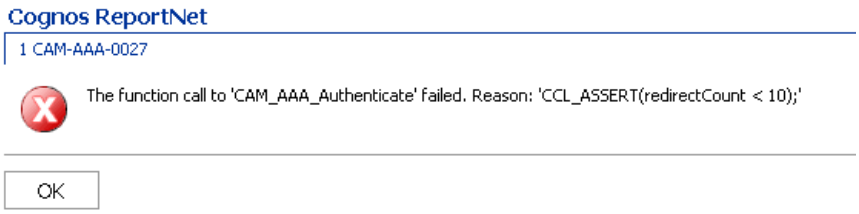
- Open a Command Prompt window, go to <requestcenter.destination>\Cognos\bin directory, and execute create_model.cmd and publish_fdr_pkg.cmd script.

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;Data
Source=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

Step 1 Open Internet Services Manager.

Step 2 In the left pane of Internet Information Services, expand the server name.

Step 3 Expand Default Web Site.

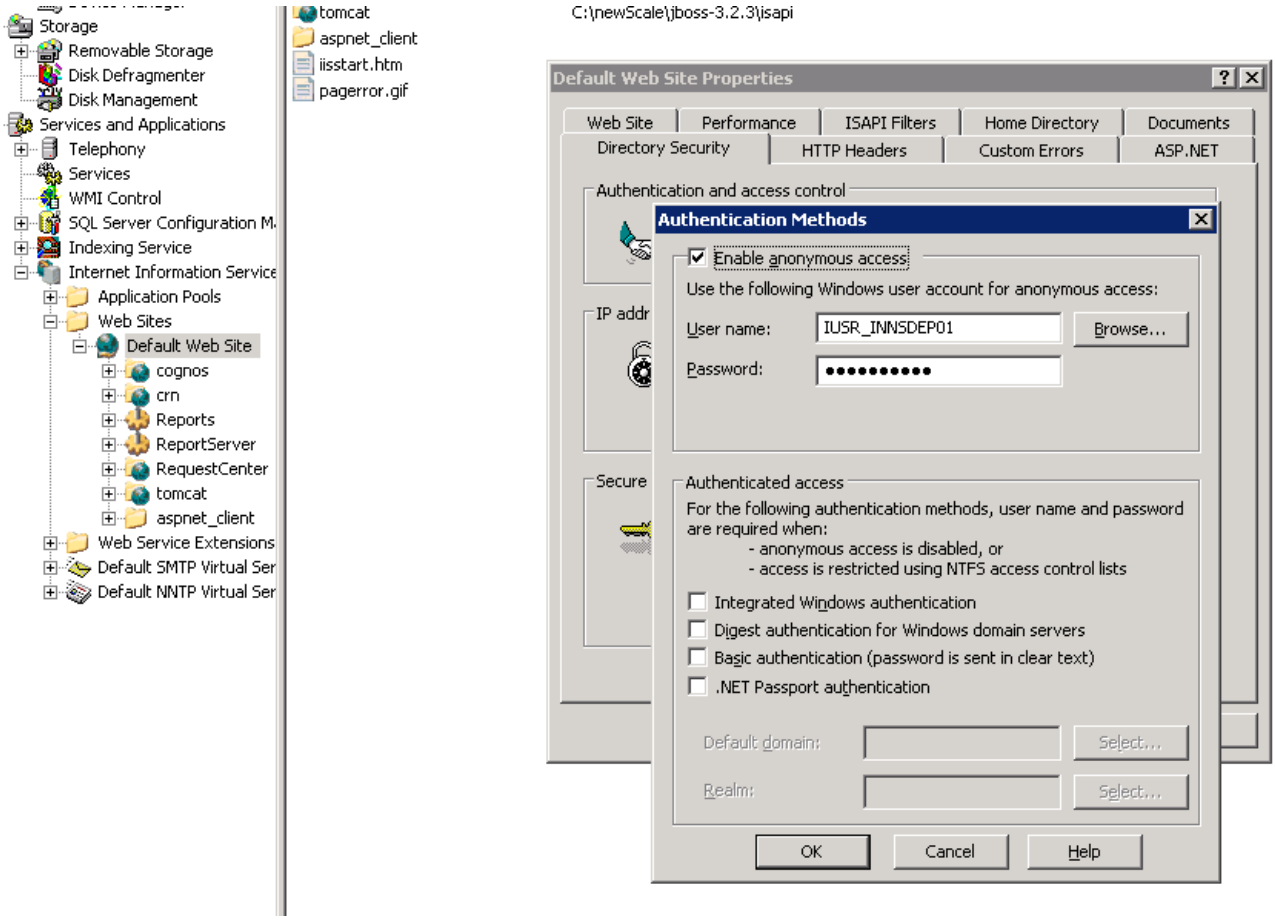
Step 4 Expand the c8 virtual directory.

Step 5 Click the **cgi-bin virtual** directory.

Step 6 In the right pane of Internet Information Services, right-click the **cognos.cgi** file and choose **Properties**. If the communication to Cognos is done through a gateway other than CGI, check the properties of the associated file.

Step 7 In the File Security tab, click **Edit**.

Step 8 Check the **Enable Anonymous access** check box.



Step 9 Restart IIS.

Step 10 Open a Command Prompt window, go to <requestcenter.destination>\Cognos\bin directory, and execute failed batch scripts.

Unable to log onto Service reporting modules

Error

The root causes for this issue would be:

- JAVA_HOME has been set the in the system variable.
- EncryptionMethod parameter value was missing in the CnfParams table on the Request Center database.

  The Log on page appears, even after supplying the correct user ID and password:

Solution 1

Step 1 Delete the JAVA_HOME variable from the System variables.

Step 2 Reboot the system.

Step 3 Log on to the application.

Solution 2

Step 1 Go to the Request Center database and open the SQLServer Management Studio or Oracle SQL*Plus.

Step 2 Run the query: SELECT * FROM CnfParams WHERE Name= “EncryptionMethod”.

Step 3 If no record is found from the above query, run the statement: INSERT INTO CnfParams (Name, Value) values (“EncryptionMethod”, “MD5”).

Step 4 Commit the inserted row.

Step 5 Go to Services and restart the IBM Cognos 8 service.

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 run publish_fdr_pkg.cmd successfully… (SQL Server DB)

Error

The root cause for this issue is:

- The Data Mart database name (**datamart.db.name**) specified in the setup.properties file during the configuration is not case sensitive.

```
RequestCenter] ConfUtil: ClassLoadersun.misc.Launcher$AppClassLoader@e80a59
[RequestCenter] ConfUtil: (via classloader) ConfigFile:null
Configuration not yet initialized
[RequestCenter] ConfUtil:(set explictly) ConfigFile:config/cognos.properties
[RequestCenter] ConfUtil:(set explictly) LogConfigFile:config/log4j.xml
[RequestCenter] ConfUtil: ClassLoadersun.misc.Launcher$AppClassLoader@e80a59
[RequestCenter] ConfUtil.init loaded properties from: config/cognos.properties
[RequestCenter] ConfUtil:(via classloader) LogConfigFile:config/log4j.xml
LogUtilFactory - using Impl: com.newscale.bfw.logging.LogUtilCommonsImpl
2007-10-15 10:58:33,744 INFO  Executing ScriptPlayer...
2007-10-15 10:58:33,853 INFO  A new project is being created.
2007-10-15 10:58:48,137 INFO  Transaction count: 834
2007-10-15 10:58:48,137 INFO
2007-10-15 10:58:48,137 INFO
2007-10-15 10:58:48,137 INFO  Transaction: 1
2007-10-15 10:58:48,137 INFO  Action: SetDefaultLocale successful, continuing...
2007-10-15 10:58:48,137 INFO
2007-10-15 10:58:48,137 INFO  Transaction: 2
2007-10-15 10:58:48,152 INFO  Action: SetActiveLocale successful, continuing...
2007-10-15 10:58:48,152 INFO
2007-10-15 10:58:48,152 INFO  Transaction: 3
2007-10-15 10:58:48,152 INFO  Action: Modify successful, continuing...
2007-10-15 10:58:48,152 INFO
2007-10-15 10:58:48,152 INFO  Transaction: 4
2007-10-15 10:58:48,152 INFO  Action: Modify successful, continuing...
2007-10-15 10:58:51,106 INFO  Action: DBImport failed, skipping...
2007-10-15 10:58:51,106 INFO  Reason: BMT-MD-5002 The ImportSpec object 'DatamartD' of
type 'catalog' does not exist in the database.
2007-10-15 10:58:51,106 INFO
2007-10-15 10:58:51,106 INFO  Transaction: 4 failed, skipping...
```

Note The ETL script **publish_fdr_pkg.cmd** produced the DBImport error "**ImportSpec object 'DatamartD**' of type 'catalog' does not exist in database".

Solution

Step 1 Open the cognos.properties file located under (<requestcenter.destination>/cognos/config).

Step 2 Find the parameter **datamart.db.name**. Specify the name of Data Mart database as it was given in the database; the name is case-sensitive.

Note Ensure you make the same change in the setup.properties file before running configure.cmd in case of upgrades (<Cognos_temp_installer>/cognosinstaller).

EXAMPLE: If the Data Mart database was specified as DataMart.

Inorrect: **datamart.db.name**=DataMart

Correct: **datamart.db.name**=Datamart

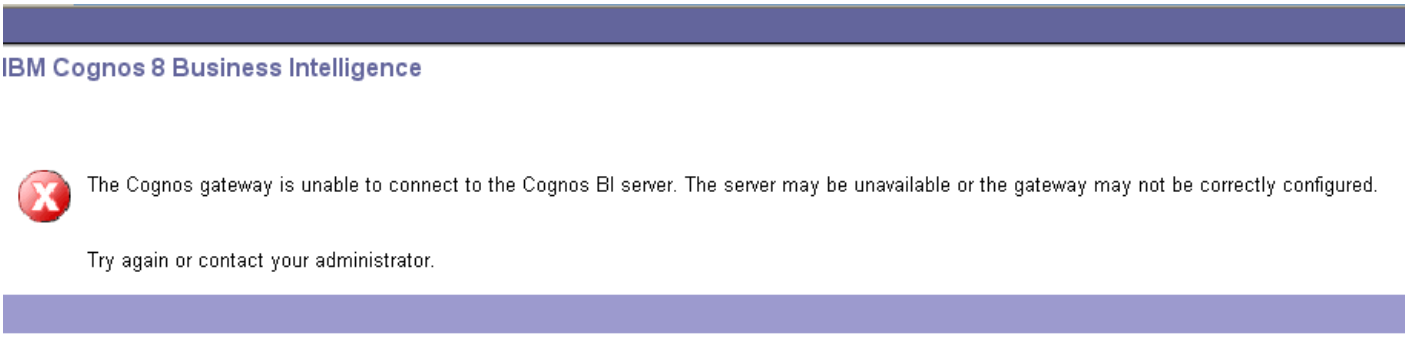
Step 3 Open the command prompt window, go to <requestcenter.destination>\Cognos\bin directory, and execute **create_model.cmd** and **publish_fdr_pkg.cmd** scripts.

Unable to Start Cognos 8 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/c8/logs> and capture the error codes and see the solutions below associated with each error code.



Error Codes

CFG-ERR-0103 Unable to start Cognos 8 service. Execution of the external process returns an error code value of '-1'.

The root causes for this issue would be:

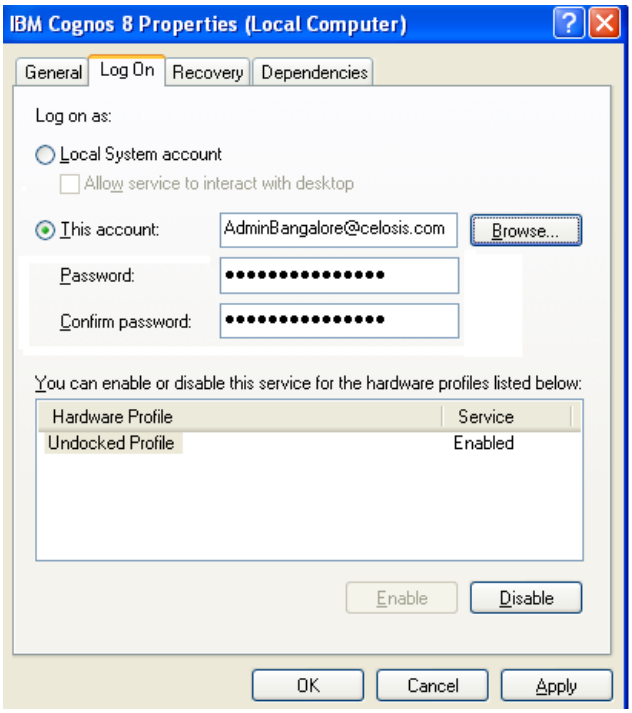
- The named account used to start the Cognos 8 service had an expired password or does not have admin privileges.
- The shutdown port number has a conflict.

Solution 1

Step 1 Go to the services.

Step 2 Go to **IBM Cognos8 Service**. Right-click and choose **properties**.

Step 3 Click the **Logon** tab as show below:



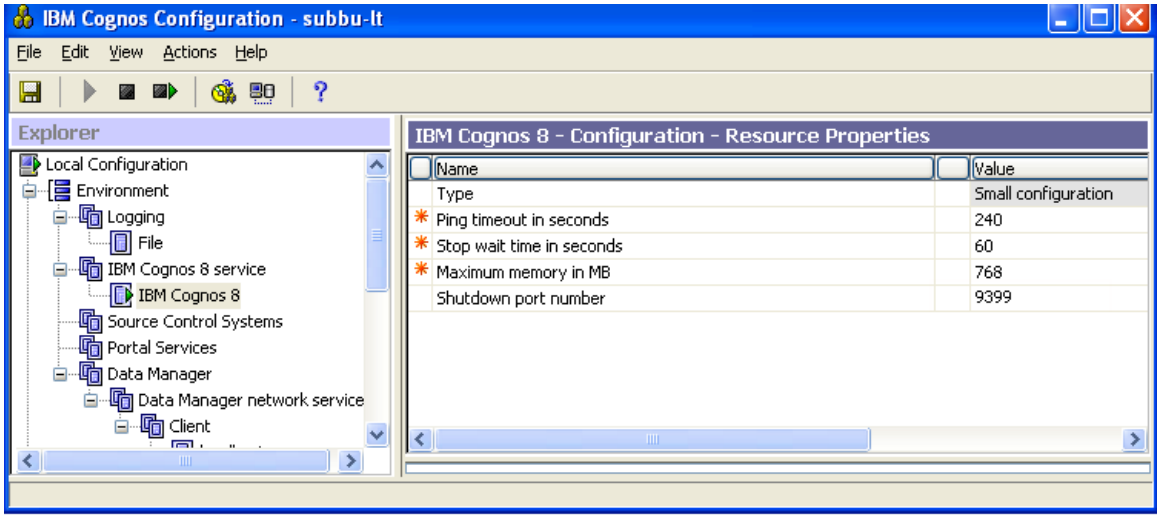
Step 4 Ensure that the user account provided has admin privileges and the given password has not expired.

Step 5 Go to the Services and restart the IBM Cognos8 Service.

Solution 2

Step 1 Choose **Start > Programs > IBM Cognos 8 > IBM Cognos8 Configuration**.

Step 2 Change the shut down port number from 9399 to **9410**.



Step 3 Save changes and restart the IBM Cognos 8 Service.

Error Codes

CAM-CRP-1114 Unable to find the Certificate Authority self-signed certificate with alias ‘ca’ in the keystore ‘C:/Program Files/cognos/c8/configuration/signkeypair\jCAKeystore’.

CAM-CRP-1085 an error occurred while verifying that the security provider classes were loaded. Reason: java.lang.ClassNotFoundException: org.bouncycastle134.jce.provider.

The root cause for this issue is:

- JAVA_HOME has been set in the system variable and pointing to the wrong JRE/JDK.

Solution

Step 1 Delete **JAVA_HOME** from the system variables.

Step 2 Reboot the system.

Step 3 Open the command prompt, go to (<Cognos_temp_installer>/cognosinstaller), and execute **configure.cmd**.

Error Codes

CM-CFG-5063 a Content Manager Configuration error was detected while connecting to the ContentStore.

The root cause for this is:

- The SID for the ContentStore database does not have a valid name or TNS is not registered with the SID name.

Solution

Step 1 Ensure sure both the SID and Service have the same name for the ContentStore database and the SID has no underscore in it.

Step 2 Register the TNS using the SID and not the SERVICE NAME.

Step 3 Make sure that you can connect to the Oracle instance through “tnsping <SID>”.

Step 4 Open the command prompt window, go to (<cognos_temp_intaller>/cognos installer), and execute **configure.cmd**.

ErrorCodes

[ERROR] Content Manager failed to start because it could not load driver “oracle.jdbc.OracleDriver”.

- The root cause for this issue would be ojdbc14.jar was missing in the cognos lib directory.

Solution

Step 1 Copy the **ojdbc14.jar** from //oracle/JDBC/lib to <cognos_install_dir> //cognos/c8/webapps/p2pd/WEB-INF/lib.

Step 2 Open the command prompt window, go to (<cognos_temp_intaller>/cognos installer), and execute **configure.cmd**.

Configuration of Cognos8 Service hangs and does not start up

Error

The root causes for this issue would be:

- DEP (Data Execution Prevention) settings (Windows 2003 and Windows XP) which might be blocking the cognos executables.
- JAVA_HOME has been set in the system variables and pointing to the wrong JRE/JDK.

Solution

Step 1 Delete **JAVA_HOME**, if it exists in the System variables.

Step 2 Right-click My Computer, choose **Properties**.

Step 3 Click the **Advanced** tab, and then click the first **Settings** button under Performance.

Step 4 Click the **Data Execution Prevention** tab.

Step 5 Choose the option: **Turn on DEP for all programs and services except those I select**.

Step 6 Click **Add**, and add the following executables files from the respective locations.

java.exe	path = C:\Program Files (x86)\cognos\c8_64\bin\jre\1.5.0\bin64
cogconfigw.exe	path = C:\Program Files (x86)\cognos\c8_64\bin64
cogbootstrapservice.exe	path = C:\Program Files (x86)\cognos\c8_64\bin64
BIBusTKServerMain.exe	path = C:\Program Files (x86)\cognos\c8_64\bin64

Step 7 Reboot the system.

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:

- Report archive file (Report. zip) got corrupted in the cognos server.

Solution

Step 1 Log on as administrator to Request Center.

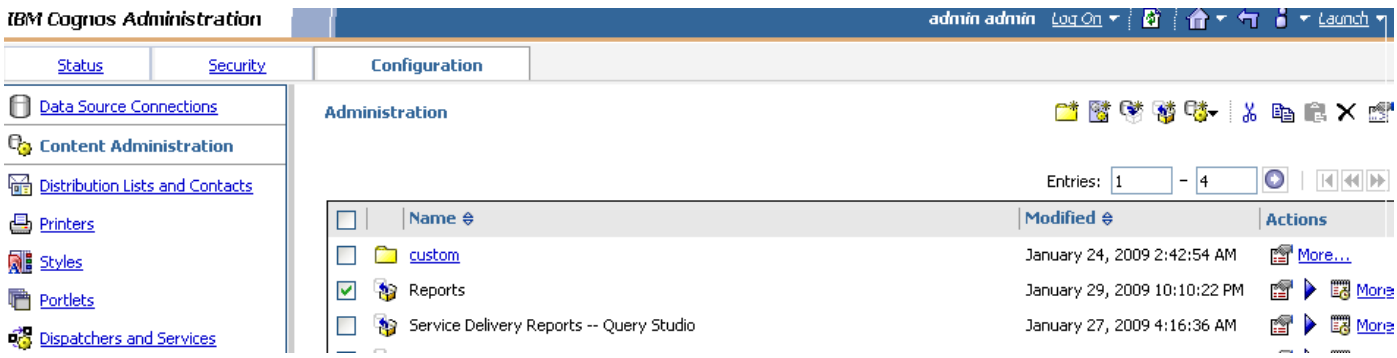
Step 2 Choose the **Reporting** module.

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** (see below).



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
2008-10-14 22:19:13,249 INFO  Transaction: 10 failed, skipping...
2008-10-14 22:19:13,249 INFO
2008-10-14 22:19:13,249 INFO  Transaction: 11
2008-10-14 22:19:13,264 INFO  Action: Modify failed, skipping...
2008-10-14 22:19:13,264 INFO  Reason: BME-SP-0023 Invalid property handle ID:
/O/name[0]/O/[FormETL].[RC_SERVICELOCATION].[FIELD1]
2008-10-14 22:19:13,264 INFO  Transaction: 11 failed, skipping...
2008-10-14 22:19:13,280 INFO
2008-10-14 22:19:13,280 INFO  Transaction: 12
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 **fdr/runETL.jsp**, then **create_model.cmd**, and then **publish_fdr_pkg.cmd**.

Note 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 Portal Application Server machine correctly, and the system clock of the Service Portal database machine correctly. Furthermore, the database clock for the RDBMS instance where the Service Portal 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 Portal 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.

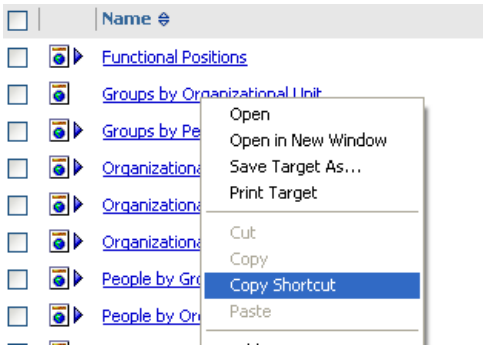
How to find the Report URL

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:



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

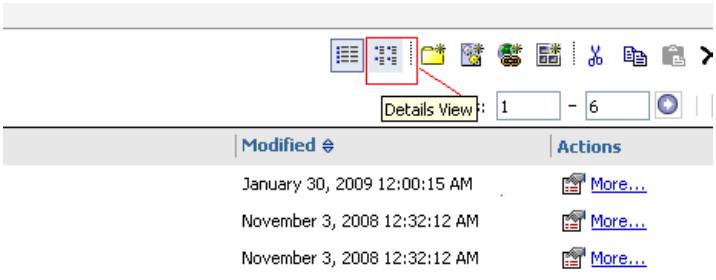
Solution

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:



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