

HP OpenView DecisionCenter

For the Windows® Operating System

Software Version:1.00

Installation Guide

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1 Introduction

HP OpenView DecisionCenter is a business intelligence application that enhances your ability to make better decisions about your IT infrastructure.

IT Performance Analytics (ITPA) shows performance trends for Service Level Management, Asset Management, Help Desk, Incident, and Service Management. It can display analytics in a dashboard for quick access and supports an integrated BusinessObjects Enterprise XI suite of reporting tools. ITPA is the baseline component of DecisionCenter.

Business Intelligence Analytics (BIA) is an additional tier that adds more detailed analytics, views, an Impact Calculator, as well as the Data Mining tool and History Builder.

DecisionCenter Optimization enables you to analyze historical performance and predict future performance when impacted by enterprise-wide changes to business services. Optimization adds the Scenario Manager and Optimization engine to enable predictive analysis.

Related Products

DecisionCenter 1.0 supports data produced by the following products.

Table 1.1 Supported versions

Product Name	Product Version	Connect-It Version
ServiceCenter	5.1*, 6.0*, 6.1, 6.2	3.6, 3.7
AssetCenter	4.3, 4.4, 5.0*	3.6

* Make sure that you complete the customization steps during installation if you use data from any version marked with an asterisk (*).

Installation Guide Overview

This guide has separate chapters for each major installation step. The chapters are in the suggested order of installation, but it is possible to change the installation order of the major components.

Table 1 Document Map

Chapter	Describes
Chapter 1, Introduction	DecisionCenter
Chapter 2, DecisionCenter Components	DecisionCenter packaging
Chapter 3, ITPA Installation and Configuration	Installation steps for DecisionCenter IT Performance Analytics
Chapter 4, BIA Planning and Installation	Installation steps for DecisionCenter Business Impact Analytics
Chapter 5, Optimization Installation	Installation steps for DecisionCenter Optimization
Chapter 6, Migration	Migrating BI Portal installations to DecisionCenter 1.00
Chapter 7, Security	Configuring LDAP
Appendix A, Troubleshooting	Tips for solving problems during installation
Appendix B, Configuring a Remote Tomcat Server	Instructions to configure a remote application server

Hardware Requirements

The following table describes the minimum hardware requirements for DecisionCenter. For more information, see the DecisionCenter Support Matrix on the **HP Software Support** web site.

Table 2 Hardware Requirements

Item	Minimum Requirement
Processor	Windows: Pentium3 with 700MHz
Operating System	BusinessObjects Enterprise XI in a Windows environment requires a 32-bit AMD/Intel chipset.
RAM	ITPA only: The minimum recommended RAM is 2 GB for the Tomcat server 4 GB for the BusinessObjects server. BIA and Optimization: The minimum recommended RAM is 2 GB for the Optimization engine server, 2 GB for the Tomcat server, and 4 GB for the BusinessObjects server. The minimum recommended RAM is 4 GB if the Optimization engine and Tomcat are on the same server. Multiple instances of the application server, or very large databases may require more than the minimum amount of memory.
Disk Space	5 GB for BusinessObjects Enterprise XI R2 1.5 GB for BusinessObjects Enterprise XI Performance Manager 5 GB for any database server 200 MB for DecisionCenter application
Heap Size	The heap size setting on the Web server that hosts the DecisionCenter application must be at least 512 MB. The recommended setting is 1024 MB.

Software and Platform Requirements

For complete information about required software that must be installed and configured before you install DecisionCenter, see the DecisionCenter Support Matrix on the **HP Software Support** web site.

Server Configuration

DecisionCenter can run in a single or multi-server environment. In a single server configuration, all software resides on the same server. The most common configuration for an enterprise organization is a multi-server environment with five different servers.



DecisionCenter 1.0
Business Intelligence Portal
Apache 2.0.43/Tomcat 5.0.27



MS SQL or Oracle
RDBMS



MSIE 6.0 SP2 Browser
SVG Viewer



DecisionCenter
Optimization engine



DecisionCenter Data Warehouse
HP OV Connect-It 3.6
Data Mining tool



BusinessObjects XI
Release 2 server

DecisionCenter and Third Party Software

Before you begin the DecisionCenter installation process:

- Ensure that you have all required licenses for third-party database products that interact with DecisionCenter.
- Ensure that the users who will log onto the BusinessObjects Enterprise XI server have appropriate rights.
- Ensure that you install and configure BusinessObjects Enterprise XI correctly using the BusinessObjects Enterprise XI installation instructions.

DecisionCenter and Other OpenView Products

There are additional considerations as you continue the DecisionCenter installation process:

- OpenView ServiceCenter and AssetCenter applications must reside on servers that are separate from installed DecisionCenter components.
- The ServiceCenter data warehouse and AssetCenter data warehouse should reside on a server that is different from the server hosting the ServiceCenter and AssetCenter applications.
- Install OpenView Connect-It on the same server where you install the ServiceCenter or AssetCenter data warehouse.

For more information, see [Server Configuration](#) on page 14.

Installation Media

The HP OpenView DecisionCenter installation media contains the following applications on separate CD-ROMs. They contain the following information.

Table 3 Installation Media

CD-ROM	Number of Disks	Contents	Required?
HP OpenView DecisionCenter 1.00	1	Application ServiceCenter data warehouse AssetCenter data warehouse Business Impact Analytic (BIA) tools, Connect-It scenarios, and related Analytics Optimization engine	Yes
BusinessObjects XI R2 SP1	3	BusinessObjects Enterprise XI application	Yes
BusinessObjects XI R2 Supplement	1	File to repair the command line import tool (bexir2_60080.zip) Performance Management Deployment Tool (PMDT)	Yes
HP OpenView Connect-It 3.6	1	Integration application	Yes

License Information

DecisionCenter packaging includes licenses for BusinessObjects Enterprise XI R2 and HP OpenView Connect-It 3.6. Other applications require separate licenses. You can obtain DecisionCenter licenses by contacting your HP sales representative or visiting the **HP Software Support** web site. The following table describes all of the licenses and passwords that you should have available when you begin the installation.

Table 4 Required Licenses

Application	Included?	Notes
HP OpenView DecisionCenter IT Performance Analytics (ITPA) (baseline tier)	Yes	Authorization Code required during installation; unique product key required to unzip each ITPA analytic package
HP OpenView DecisionCenter Business Impact Analytics (BIA) (optional tier)	Yes	Authorization Code required during installation; unique product key required to unzip the BIA analytic package
HP OpenView DecisionCenter Optimization (optional tier)	Yes	Authorization Code required during installation; unique product key required to unzip the Optimization analytic package
BusinessObjects Enterprise XI	Yes	License keys required; HP Service Agreement ID required to download BusinessObjects Critical Hot Fix
HP OpenView Connect-It	Yes	License key included with DecisionCenter

Table 4 Required Licenses

Application	Included?	Notes
HP OpenView AssetCenter	No	Separately licensed application
HP OpenView ServiceCenter	No	Separately licensed application
One of the following: <ul style="list-style-type: none">• Oracle 10g• Microsoft SQL Server 2000	No	Separately licensed application
JDBC drivers	No	Separately licensed applications

If you choose Microsoft SQL Server 2000, you must purchase two sets of licenses. Microsoft SQL Server connections require that you purchase four or more licenses from Microsoft.

If you are using the Sprinta driver, you must purchase three Sprinta driver licenses from i-net Software.

Oracle is supported only for DecisionCenter ITPA installations. Only Microsoft SQL Server 2000 is supported if you add BIA and Optimization.

2 DecisionCenter Components

DecisionCenter is a suite of components that support three tiers of packaging to address user needs. The packaging levels are:

- DecisionCenter with IT Performance Analytics (ITPA)
- DecisionCenter with ITPA and Business Impact Analytics (BIA)
- DecisionCenter with ITPA, BIA, and DecisionCenter Optimization

DecisionCenter with ITPA

This tier includes:

- Dashboards
- Analytics: Service Level Management, Asset Management, Help Desk, Incident, and Service Management
- The BusinessObjects Enterprise XI suite of tools
- Data warehouse schema for ServiceCenter and AssetCenter

DecisionCenter with ITPA and BIA

This tier includes:

- Dashboards
- Analytics: Service Level Management, Asset Management, Help Desk, Incident, and Service Management
- The BusinessObjects Enterprise XI suite of tools

- Data warehouse schema for ServiceCenter, AssetCenter, and DecisionCenter
- Business Intelligence Analytics and views
- Impact Calculator
- Impact definition
- Business and Environment models
- Data Mining tool
- History Builder

DecisionCenter with ITPA, BIA, and Optimization

This tier includes all DecisionCenter components:

- Dashboards
- Analytics: Service Level Management, Asset Management, Help Desk, Incident, and Service Management
- The BusinessObjects Enterprise XI suite of tools
- Data warehouse schema for ServiceCenter, AssetCenter, and DecisionCenter
- Business Intelligence Analytics and views
- Impact Calculator
- Impact definition
- Business and Environment models
- Data Mining tool
- History Builder
- Scenario Manager
- The Optimization engine

3 ITPA Installation and Configuration

The chapter includes the software installation and configuration preparation needed to install and run the DecisionCenter ITPA tier.

Before You Begin

Consider the following information before you begin:

- There are several tasks required to create a complete DecisionCenter installation where you can access and customize Analytics, perform Business Impact analysis, and run the Optimization engine to predict future IT performance. The tasks involve setting up a database, populating it with relevant data, and installing the DecisionCenter software components. The number of tasks depends on the DecisionCenter tier that you select.
- The baseline for all DecisionCenter activities is the ITPA tier. The ITPA installation lays the foundation for basic functionality and tiered enhancements.
- Because the ITPA installation has multiple tasks and steps that require configuration information, ensure that you correctly record the case-sensitive values for each step. You can print a copy of the installation steps to record the information for future reference.
- Ensure that you complete each task in sequential order and the steps within each task in sequential order.
- It is assumed that you have an existing installation of a supported database product.
- Review the DecisionCenter Support Matrix before you begin to ensure that you have the required environment. For more information, see the DecisionCenter Support Matrix on the **HP Software Support** web site.

- **ServiceCenter 5.1:** If you are customizing the installation to use ServiceCenter 5.1 data, your HP Support representative provided download instructions for supplemental installation files. Store these files locally. You must reference them as you proceed through the normal installation steps.

Obtain the BusinessObjects Critical Hot Fix Files

BusinessObjects Enterprise XI produces patch releases, called Critical Hot Fixes (CHF), at regular intervals. DecisionCenter requires you install only those Critical Hot Fixes that are recommended by HP to ensure that BusinessObjects Enterprise XI integrates seamlessly with DecisionCenter. These recommended CHF's are required for full functionality.

Before you begin the ITPA installation, it is recommended that you download the BusinessObjects XI Release 2 July 5th Critical Hot Fix and have it available on the BusinessObjects server when you are directed to install this CHF.

- 1 Start a Windows Internet Explorer browser session and point to this URL:
<http://support.openview.hp.com/patches>
- 2 If you do not already have an HP Passport, click **New user registration**.
- 3 Follow the instructions to register with HP.
- 4 Select **DecisionCenter** from the drop-down product list.
- 5 Click the **Search** icon.
- 6 An error page appears; however, you can use your Support ID Agreement (SAID) number to access the patch site. Type the SAID number in the **System Handle or SAID** text box at the bottom of the screen.
- 7 Click **Product** patches in the **HP-Peregrine links** section.
- 8 Click **DecisionCenter** and look for the **BusinessObjects XI Release 2 July 5th Critical Hot Fix**.
- 9 Download `boXIr2win_chf.zip` and unzip it to a temporary directory.

Installation Checklist

Print this checklist to use during the installation process. As you complete each task, mark it as completed. You can install all components on the same server, but if you want to install these components across multiple networked servers, you can refer to this server configuration diagram as you complete installation tasks.



**DecisionCenter 1.0
Business Intelligence Portal
Apache 2.0.43/Tomcat 5.0.27**



**MS SQL or Oracle
RDBMS**



**MSIE 6.0 SP2 Browser
SVG Viewer**



**DecisionCenter
Optimization engine**



**DecisionCenter Data Warehouse
HP OV Connect-It 3.6
Data Mining tool**



**BusinessObjects XI
Release 2 server**

- ▶ Complete Task 1 on the RDBMS server.
 - Task 1: Configure Database Servers and Connectors on page 26.
 - Step 1a: Run the Oracle Configuration Script File on page 27.
 - Step 1b: Configure the Oracle Database Client on page 28.
 - Step 2a: Run the SQL Server Configuration Script File on page 30.
 - Step 2b: Configure the SQL Server on page 30.
 - Step 3: Collect the User Information on page 31.

- ▶ Complete Task 2 on the DecisionCenter data warehouse server and the Business Objects server.
 - Task 2: Install and Configure Database Clients on page 32.
 - Step 1: Verify All Required Client Installations on page 32.
 - Step 2: Configure the SQL Server Client on page 32.

- ▶ Complete Task 3 on the Business Objects server.
 - Task 3: Install BusinessObjects Enterprise XI on page 33.
 - Step 1: Use These Installation Tips on page 34.
 - Step 2: Install the Required Critical Hot Fixes on page 34.
 - Step 3: Install the Performance Management Deployment Tool on page 37.
 - Step 4: Customize BusinessObjects Enterprise XI Files on page 37.
 - Step 5: Verify the Business Objects Enterprise XI Installation on page 39.
 - Step 6: Configure BusinessObjects Enterprise XI on page 40.

- ▶ Complete Task 4 on the DecisionCenter data warehouse server.
 - Task 4: Install Connect-It on page 44.

- ▶ Complete Task 5 on the ServiceCenter or AssetCenter server.
 - Task 5: Prepare ServiceCenter or AssetCenter on page 45.
 - Step 1: Verify That the ServiceCenter Client Is Installed and Available on page 45.
 - Step 2: Import ServiceCenter Unload Files on page 46.
 - Step 3: Import AssetCenter Script Files on page 47.
- ▶ Complete Task 6 on the DecisionCenter data warehouse server.
 - Task 6: Install the Data Warehouse on page 47.
 - Step 1: Install and Configure JDBC Drivers on page 48.
 - Step 2. Copy the Configuration File on page 48.
 - Step 3: Install the Data Warehouse on page 49.
 - Step 4: Run the HP OpenView Connect-It Scenario on page 52.
- ▶ Complete Task 7 on the DecisionCenter server.
 - Task 7: Install DecisionCenter on page 53.
 - Step 1: Install the DecisionCenter Application on page 53.
 - Step 2: Configure LDAP on page 54
 - Step 3: Configure JNDI for Tomcat on page 55.
- ▶ Complete Task 8 on the Business Objects server.
 - Task 8: Install ITPA Content on page 57.
 - Step 1: Install the AssetCenter Universes, Reports, and Views on page 57.
 - Step 2: Install the ServiceCenter Universes, Reports, and Views on page 59.
 - Step 3: Configure Reports for ServiceCenter 5.1 on page 67.
- ▶ Complete Task 9 on the workstation that is network connected to the DecisionCenter application server.

- Task 9: Verify the DecisionCenter Installation on page 69.

Task 1: Configure Database Servers and Connectors

DecisionCenter supports Oracle or SQL Server 2000 for ITPA installations. These instructions assume that you have a licensed database server installed before you begin the DecisionCenter installation.

Always consult your database administrator before installing and configuring the database.

HP strongly recommends that your data warehouse be case-sensitive.

Configuration Scripts

You can configure the database server manually or run prepared scripts to configure the database. There is a script for each supported database type in this folder on the DecisionCenter data warehouse installation media:

```
\\ITPA\ITPA-SM\SupportFiles\DatabaseFiles
```

```
    crtusers_oracle.sql (for Oracle users)
```

```
    crtusers_sqlsrvr.sql (for SQL Server users)
```

There are three types of users and three tablespaces:

- A data warehouse user and a data warehouse tablespace for DecisionCenter.
- A Central Management Console user and a CMS tablespace for BusinessObjects Enterprise XI R2.
- A Performance Management user and a PM tablespace.

Database Connectors

With most databases, you can access the database server from different clients with different names. Because DecisionCenter has multiple components and servers, you must reference the database server with the same name. The following table lists the database and the terminology for client configuration.

Table 5 Client Configuration

Database Type	Client Configuration
Oracle	TNS Alias
SQL Server	ODBC SYSTEM DSN

To simplify the names, the client configuration in this document is called the **database connector**.

Step 1a: Run the Oracle Configuration Script File

Follow these steps to configure the Oracle database server:

- 1 Using a text editor, open the Oracle database script file that you copied from the DecisionCenter installation media to the database server.
`\\ITPA\ITPA-SM\SupportFiles\DatabaseFiles\crtusers_oracle.sql`
- 2 Verify that the settings are appropriate for your installation.
- 3 If necessary, change the settings.
- 4 Save the file locally.
- 5 Run the script.

Step 1b: Configure the Oracle Database Client

To configure the Oracle client, create a net service (TNS) name for the Oracle database server where DecisionCenter components reside. When prompted, select settings that correspond with your database type. You can disregard any value that does not apply to your database environment. Record the settings that you specify for future reference.

Table 6 Oracle Values


Oracle	Default Value	Your Value
Hostname	<i>physical_device_name</i>	
Port	1521	
Database service name	orcl	
JDBC URL	jdbc:oracle:thin:@dbsrv:1521:orcl	
Data warehouse tablespace name	rdsts	
CMS database tablespace name	cmsts	
PM database tablespace name	pmts	

- 1 Click **Start > Programs > Oracle OraHome<version> > Configuration and Migration Tools > Net Configuration Assistant** to open the Oracle Net Configuration Assistant.
- 2 Select **Local Net Service Name** configuration.
- 3 Click **Next**.
- 4 Select **Add** and click **Next**.
- 5 Type the Service Name and click **Next**. You can find the Oracle Service name in your Windows services.
- 6 Select **TCP** and click **Next**.
- 7 Type the Host name of the Oracle service, confirm the port number, and click **Next**.

- 8 Select the **Yes, perform a test** radio button and click **Next**.
- 9 Do one of the following:
 - If the `Test successful` message appears, click **Next**.
 - If you receive an error message, click **Change Login**. Type the new login information, click **OK**, and click **Next**. If you continue to receive an error message, contact your database administrator.
- 10 Type a TNS name. Record the TNS information that you specify for the Oracle client. Click **Next**.

Table 7 TNS Information

Oracle	Default Value	Your Value
Data warehouse db	rdsts	
CMS db	cmsts	
PM db	pmts	

 Repeat Step 2 through Step 12 for each server. To adhere to best practices, use the data warehouse tablespace name.

- 11 Click **Next**.
- 12 Click **Next**.
- 13 Click **Finish**.

Ensure that the `tnsnames.ora` file is configured correctly. The file is in this directory:

```
\\Oracle\product\version_#\server_directory\network\admin\
```

For example:

```
rdsts =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = dbsrv) (PORT = 1521))
    )
    (CONNECT_DATA =
      (SID = orcl)
    )
  )
```

Step 2a: Run the SQL Server Configuration Script File

You can change the default values for the database user name, password, and database name. Use any text editor to change these values in the script file that configures the SQL Server database server. Follow these steps to configure the SQL Server database server:

- 1 From the DecisionCenter installation media, browse to:
 \\ITPA\ITPA-SM\SupportFiles\DatabaseFiles\crtusers_sqlsrvr.sql
- 2 Open the file with a text editor and verify that the settings are appropriate for your installation. If necessary, change the settings.
- 3 Save the file to a new location.
- 4 Follow these steps to run the script.
 - a Copy the contents of the modified `crtusers_sqlsrvr.sql` script.
 - b Click **Start > Programs > Microsoft SQL Server > Query Analyzer**.
 - c Paste the contents in the Query window.
 - d Click **Query > Execute**.

Step 2b: Configure the SQL Server

If necessary, configure the SQL Server server. Select the values that correspond with your database type. You can disregard the values that do not apply to your database environment.

Table 8 SQL Server Values

SQL Server	Default Value	Your Value
Hostname	<i>physical_device_name</i>	
Port	1433	
JDBC URL for data warehouse using Sprinta driver (ITPA only)	jdbc:inetdae7:dbsrv: 1433?database=rdsdb	

Table 8 SQL Server Values

SQL Server	Default Value	Your Value
Data warehouse name	rdsdb	
CMS database name	cmsdb	
PM database name	pmdb	

Step 3: Collect the User Information

Define the user information for the data warehouse, Central Management Server (CMS), and Performance Management (PM).

Table 9 User Information

Oracle or SQL Server Information	Default Value		Your Value
	SQL Server	Oracle	
Data warehouse user name	rds_dba	rds_dba	
Data warehouse password	passw0rd	passw0rd	
Data warehouse information	rdsdb	rdsts	
CMS user name	cms_dba	cms_dba	
CMS password	passw0rd	passw0rd	
CMS database information	cmsdb	cmsts	
PM user name	pm_dba	pm_dba	
PM password	passw0rd	passw0rd	
PM database information	pmdb	pmts	

Task 2: Install and Configure Database Clients

Ensure that the database client that you intend to use is installed on all required servers in a multi-server environment.

Step 1: Verify All Required Client Installations

The following table shows where the database client must be installed. If any installations are missing, correct the omissions.

Table 10 Database Servers

Database Client	Data Warehouse Server	BusinessObjects Enterprise XI server
Oracle	Required	Required
SQL Server	Required	Required

Step 2: Configure the SQL Server Client

Configuring the SQL Server database client, means creating a DSN ODBC connection for each database on each server that hosts a SQL Server client. To create a create a DSN ODBC connection:

- 1 Click **Start > Settings > Control Panel > Administrative Tools > Data Sources**.
- 2 Click the **System DSN** tab in the ODBC Data Source Administrator dialog.
- 3 Click **Add**.
- 4 Select **SQL Server**.
- 5 Collect the SQL Server database connector (ODBC DSN) information for future reference.
- 6 Click **Finish**.
- 7 In the **Name** field, type **rdssdb**. The name you type in this field comes from the SQL Server database name you recorded in Step 1a: Run the Oracle Configuration Script File on page 27, or Step 2a: Run the SQL Server Configuration Script File on page 30.

- 8 From the Server drop-down menu, select the SQL Server you are using, then click **Next**.
- 9 Select **With SQL Server authentication using a login ID and password entered by the user**.
 - a Type **rds_dba** and the password provided in the script (or by your database administrator) in the login ID and password fields.
 - b Click **Next**.
- 10 Ensure that the **Change Default Database to** check box is clear and that the DSN name appears.
- 11 Click **Next**.
- 12 Click **Finish**.
- 13 Click **Test Data Source** to test the connection. If the connection is valid, a confirmation message appears.
- 14 Click **OK**.
- 15 Click **OK** again to see the new entry in the System Data Source list.
- 16 Click **OK** to exit the ODBC Data Source Administrator.
- 17 Repeat Step 1 – Step 16 to create a DSN ODBC connection for the **cmsdb** and **pmdb** databases.

Task 3: Install BusinessObjects Enterprise XI

BusinessObjects Enterprise XI is a third-party product that integrates with DecisionCenter to produce Analytics. BusinessObjects Enterprise XI requires a separate BusinessObjects Enterprise XI license and it has its own installation instructions that accompany the DecisionCenter installation media.

HP recommends that you follow the “Full Java Installation” scenario described in the *BusinessObjects Enterprise XI Installation Guide*. This scenario guides you through these critical steps:

- Creating a Tomcat application server. If you already have a Tomcat instance, or you want Tomcat to reside on a different server, see [Appendix B, Configuring a Remote Tomcat Server](#) before you proceed.

- Choosing which components to install.
- Deploying InfoView.

Step 1: Use These Installation Tips

Ensure that you log on to the server as an administrator before you begin the BusinessObjects Enterprise XI R2 installation. You must make choices during the installation that will affect your DecisionCenter configuration later. The following table lists the critical decisions and the recommended choices.

Table 11 BusinessObjects Enterprise XI Installation Tips

On This Dialog	Use These Values
Select Client or Server Installation	Perform Server Installation
User Information	Install Performance Management Use the same HP-supplied Product Keycode for Performance Management
Install Type	Use an existing database server
Windows Logon Information	Leave it blank
CMS Database Information	Clear the Auditing Database check box after you specify the CMS Database information
SQL Server Login (for your CMS database)	Use the cmsdb name that you defined when you created the database
Choose Web Component Adapter Type	Java application server

Step 2: Install the Required Critical Hot Fixes

Follow these steps to install the required HP-supplied CHF's to a full BusinessObjects Enterprise XI R2 SP1 installation. For more information about downloading the first CHF, see Obtain the BusinessObjects Critical Hot Fix Files on page 22. For more information about installing the first CHF, refer to the Business Objects readme.txt file in the zip file.

Install the Downloaded CHF

- 1 From the Windows **Start** menu, click **Control Panel > Services** and stop these services:
 - Microsoft SQL Server or Oracle RDBMS services
 - Antivirus services
- 2 Delete all the cached files in this directory:
\\Program Files\BusinessObjects Enterprise 11.5\Tomcat\work
- 3 Create a backup directory. For example: \\BOXML_backup.
- 4 Move all files except webcompadapterwar.xml from this directory:
\\Program Files\BusinessObjects Enterprise 11.5\Tomcat\conf\Catalina\localhost
to the backup directory that you created in Step 3.
- 5 Move this file:
\\Program Files\BusinessObjects Enterprise 11.5\Web Services\en\dswsbobje.war
to the backup directory that you created in Step 3.
- 6 Navigate to the directory where you stored the downloaded CHF zip file.
- 7 Run **setup.exe**.
- 8 When you are prompted to restart the server, click **No**.
- 9 Delete the following applications in this directory:
\\Program Files\BusinessObjects Enterprise 11.5\Tomcat\webapps:
 - analysisishelp
 - businessobjects
 - dswsbobje
 - jsfadmin
 - styles

- 10 From the Windows **Start** menu, click **Control Panel** > **Services** and start the Apache Tomcat service. Ensure that it creates this directory:
`\\Program Files\BusinessObjects Enterprise 11.5\Tomcat\webapps\businessobjects\WEB-INF`
- 11 From the Windows **Start** menu, click **Control Panel** > **Services** and stop the Apache Tomcat service.
- 12 Restore the xml files that you backed up in [Step 4](#) on page 35 to:
`\\Program Files\BusinessObjects Enterprise 11.5\Tomcat\conf\Catalina\localhost`
- 13 Restore the `dswsbobje.war` file that you backed up in [Step 5](#) on page 35 to:
`\\Program Files\BusinessObjects Enterprise 11.5\Web Services\en`

Install the Supplemental CHF

- 1 Rename the current `cexsd.jar` file in
`\\Program Files\Business Objects\Common\3.5\java\lib\`
to `cexsd.bak`
- 2 Insert the BusinessObjects XI R2 Supplement media into your CD-ROM drive.
- 3 Unzip the `bexir2_600804.zip` file to a local directory and copy the `cexsd.jar` file to:
`\\Program Files\Business Objects\Common\3.5\java\lib\`

Restart the Server

- 1 Restart the server.
- 2 Ensure that these Windows services restarted:
 - RDBMS services
 - Antivirus services
 - Apache Tomcat service
 - Other related BusinessObjects Enterprise XI services

Step 3: Install the Performance Management Deployment Tool

When you deploy the analytics for ITPA Incident and Help Desk, and ITPA Service Level Management, you must import the related metrics. To import the metrics, you should have the Performance Management Deployment Tool (PMDT) installed on the target machine.

- 1 Extract `pmdt.zip` from the BusinessObjects XI R2 Supplement media to the BusinessObjects server.
- 2 Verify that the server has a supported JDK (jdk1.4.2).
- 3 Verify that the `JAVA_HOME` Environment Variable points to the supported JDK version. If the `CLASSPATH` or the `PATH` environment variables reference an earlier version, you must remove that reference to run the batch files correctly.
- 4 If necessary, you can change the default heap size to the recommended values by modifying the `run_DeploymentTool.bat` file. For more information about recommended heap size, see [Table 2](#) on page 13.

Step 4: Customize BusinessObjects Enterprise XI Files

BusinessObjects Enterprise XI R2 requires a moderate amount of customization to integrate successfully with DecisionCenter.

Add the Drill Icon

- 1 From the DecisionCenter installation media, copy this file:
`\\ITPA\ITPA-SM\BOCustomization\images\drill.gif` file
- 2 Paste it into the BusinessObjects Enterprise XI image directory.
For example:
`\\...\Business Objects\BusinessObjects Enterprise 11.5\Images`

Change the ODBC Settings for Outer Joins

- 1 Back up this file before you complete the next step:
`\\Business Objects\BusinessObjects Enterprise 11.5\win32_x86\dataAccess\connectionServer\odbc\sqlsrv.prm`

- 2 Open `sqlsrv.prm` with a text editor.
- 3 Locate this parameter:

```
<Parameter Name="OUTERJOINS_GENERATION">....
```
- 4 Replace **USUAL** with **FULL_ODBC**.
- 5 Add a new parameter:

```
<Parameter Name="OUTERJOINS_COMPLEX">Y</Parameter>
```
- 6 Save and close the file.

Customize Tomcat

- 1 From the DecisionCenter installation media, copy the following files and replace them in your Tomcat installation directory. These files enable DecisionCenter to integrate and host BusinessObjects Enterprise XI functionality within the DecisionCenter framework.

Table 12 Customized Files

Copy From:	Copy to:
\\BOCustomization \desktoplaunch	\\Program Files\BusinessObjects \Tomcat\webapps \businessobjects\enterprise115 \desktoplaunch
\jsp\ce\cestartpage.jsp	\jsp\ce\...
\scripting\aa-linkbar.js	\scripting\...
\InfoView\main\home.jsp	\InfoView\main\...
\InfoView\utils\utils.jsp	\InfoView\utils\...

Table 12 Customized Files

Copy From:	Copy to:
\\BOCustomization \\desktoplaunch	\\Program Files\BusinessObjects \Tomcat\webapps \businessobjects\enterprise115 \desktoplaunch
<code>\jsp\aa-promptcontent.jsp</code> <code>\jsp\appsContentFrame.jsp</code> <code>\jsp\headerPlusAF.jsp</code> <code>\jsp\</code> <code>performanceManagementHome.jsp</code> <code>\jsp\workspaceHeaderAF.jsp</code>	<code>\jsp\...</code>
<code>\viewers\cdz_adv\...</code> <code>viewCDZDocument.jsp</code> <code>viewReport.jsp</code>	<code>\viewers\cdz_adv\...</code>

- 2 From the Windows **Start** menu, click **Control Panel > Services** and start the Apache Tomcat service.

Step 5: Verify the Business Objects Enterprise XI Installation

Verify that you can log on to Central Configuration Management and Performance Manager.

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Central Configuration Manager**.
- 2 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 3 Close each application.

Step 6: Configure BusinessObjects Enterprise XI

Complete these configuration steps to ensure that BusinessObjects Enterprise XI R2 integrates correctly with DecisionCenter.

Add the License Key

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java Administration Launchpad**.
- 2 Click **Central Management Console**.
- 3 Log on as **Administrator** with no password.
- 4 In the **Manage** section, click **License Keys**.
- 5 Type the HP-supplied license key in the **Add Key** text box and click **Add**.

Verify System User Information

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Go to Performance Management**.
- 4 Click **Setup** on the Toolbar.
- 5 Click the **System Setup** tab.
- 6 Click **System User**.
- 7 Verify that the **User Name** in the **System User** and **Initialization User** sections is **Administrator**. If necessary, type **Administrator** into each **User Name** text box and click **Apply** in each section.
- 8 When InfoView returns a verification message, click **OK**.
- 9 Follow these steps to restart the Central Management Server.
 - a From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Central Configuration Manager**.

- b Select the **Central Management Server** service.
- c Click **Restart**.

Configure the Performance Management Database Connections

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Designer**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Tools > Connections**. BusinessObjects Enterprise XI displays a list of connections.
- 4 Click **Add**.
- 5 The New Connection Wizard appears. Click **Next**.
- 6 For MS SQL Server, expand the database middleware node for **Microsoft** and click **MS SQL Server 2000 > ODBC Drivers**.
For Oracle, expand the database middleware node for **Oracle** and click **Oracle 10 > Oracle Client**.

- 7 Click **Next**.
- 8 Select or type the following values:

Table 13 Connection Wizard Settings

Parameter	MS SQL Server 2000	Oracle 10
Type:	Secured	Secured
Name:	pmdb	pmdb
User name:	pm_dba	pm_dba
Password:	passw0rd	passw0rd
Data source name:	pmdb	pmts

- 9 Click **Next**.
- 10 Click **Test Connection** to ensure the server is responding. If the connection fails, click **Back** to verify that you specified the correct values. If the connection works, click **Next**.

- 11 Accept the advanced parameter default values, or change them to suit your environment. Click **Next**.
- 12 Add any optional custom parameters to suit your environment. Click **Finish**.
- 13 To repeat the process for the rdsdb, click **Add**.
- 14 The New Connection Wizard appears. Click **Next**.
- 15 For MS SQL Server, expand the database middleware node for **Microsoft** and click **MS SQL Server 2000 > ODBC Drivers**.
For Oracle, expand the database middleware node for **Oracle** and click **Oracle 10 > Oracle Client**.
- 16 Click **Next**.
- 17 Select or type the following values.

Table 14 Connection Wizard Settings

Parameter	MS SQL Server 2000	Oracle 10
Type:	Secured	Secured
Name:	rdsdb	rdsdb
User name:	rds_dba	rds_dba
Password:	passw0rd	passw0rd
Data source name:	rdsdb	rdssts

- 18 Click **Next**.
- 19 Click **Test Connection** to ensure the server is responding. If the connection fails, click **Back** to verify that you specified the correct values. If the connection works, click **Next**.
- 20 Accept the advanced parameter default values, or change them to suit your environment. Click **Next**.

- 21 Add any optional custom parameters to suit your environment. Click **Finish**.



For more information about configuring connections, click **Help > Designer Help** in the BusinessObjects Enterprise XI Designer application.

Configure the Repository

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Go to Performance Management**.
- 4 Click **Setup** on the Toolbar.
- 5 Click the **System Setup** tab.
- 6 In the **Repository Information** section, click **Change**.
- 7 If necessary, select **pmdb** from the drop-down list in the **Ensure the Choose repository connection** dialog box. Click **OK**.
- 8 In the **Repository Information** section, click **Check**.
- 9 When the verification message appears, click **OK**.
- 10 Click **Set Up Repository**.
- 11 Accept the defaults and click **Next**.
- 12 Click **Execute**, then click **OK**.

Update Fonts on the BusinessObjects Enterprise XI Server

Decision Center 1.00 uses the Verdana and Lucida Console fonts. You must change the configuration file to add these fonts to the report editor.

- 1 Back up the `fontalias.xml` file. The default path is:
 `\\Business Objects\BusinessObjects Enterprise 11.5\win32_x86\fonts`
- 2 Open `fontalias.xml` with a text editor.
- 3 Locate ``.

- 4 Open this file on the DecisionCenter installation media with a text editor:
\\ITPA\ITPA-SM\BOCustomization\xml\fonts.xml
- 5 Copy the contents of `fonts.xml` and paste them above this line in `fontalias.xml`:

```
<FONT NAME="default">
```
- 6 Save and close `fontalias.xml`.

Task 4: Install Connect-It

HP OpenView Connect-It is a software product that integrates HP OpenView applications, such as DecisionCenter, with other HP OpenView applications, such as AssetCenter or ServiceCenter. You must install Connect-It on the same dedicated server where you plan to install the AssetCenter or ServiceCenter data warehouse. Follow these steps to install Connect-It:

- 1 Insert the Connect-It installation CD into the CD-ROM. If the Connect-It installer does not start automatically, click **Start > Run** and type **setup.exe**.
- 2 At the Welcome screen, click **Next**.
- 3 Accept the License Agreement and click **Next**.
- 4 Provide your customer information and click **Next**.
- 5 Choose the **Typical** option in the Connect-It setup screen and click **Next**.
- 6 Click **Next** to install to the default location, or click **Change** to install to a different directory.
- 7 Click **Install**.
- 8 Click **Finish** to complete the installation.
- 9 Copy the authorization code file to the Connect-It installation directory.

HP Support provides a text file that contains an authorization code for Connect-It when you purchase DecisionCenter. If you receive an out-of-date license message, copy the contents of `license.text` and paste it in the **Authorization Certificate** dialog box.

ServiceCenter 5.1: Connect-It requires some customization to support ServiceCenter 5.1. To customize Connect-It, follow these steps:

- 1 Rename this file in the Connect-It directory:
 \\Programs\Peregrine\Connect-It 3.6.0en\config\sc\scdb51.cfg
- 2 Copy this file from the supplemental ServiceCenter 5.1 installation files:
 DCscdb51.cfg.
- 3 Rename DCscdb51.cfg to scdb51.cfg.
- 4 Rename this file in the DecisionCenter directory:
 \\Programs\HP OpenView\DC\RDS_SC\cit\rds_sc.scn
- 5 Copy this file from the supplemental ServiceCenter 5.1 installation files:
 51rds_sc.scn.
- 6 Rename 51rds_sc.scn to rds_sc.scn.

Task 5: Prepare ServiceCenter or AssetCenter

Ensure that there is a ServiceCenter client on the same server where you install the ServiceCenter data warehouse. The following instructions are for ServiceCenter 6.1.

Step 1: Verify That the ServiceCenter Client Is Installed and Available

- 1 From the Windows **Start** menu of the server where you will install the ServiceCenter data warehouse, click **My Computer**.
- 2 Verify that there is a **ServiceCenter Client** entry and that you can start the ServiceCenter client.
- 3 The ServiceCenter client should have a configured connection to a ServiceCenter server, which may reside on a remote server. Click **File > Connect > Connections** to view the configured client/server connections.

- 4 Locate the client/server connection information for the target ServiceCenter server. Click **Connect** to test the client/server connection. Record the host name and password for future reference.

User name: falcon (out-of-box user)
Server host name: *server_name*
Server port number: 99999

If you cannot locate server connection information, contact your ServiceCenter administrator.

Step 2: Import ServiceCenter Unload Files

Unload files contain records that you need to use ServiceCenter with DecisionCenter. The Data Warehouse for ServiceCenter media contains one required unload file. Your ServiceCenter user profile must have system administration rights to complete this procedure.

- 1 Navigate to this folder on the DecisionCenter installation media:
\\ITPA\ITPA-SM\SupportFiles\unload\
2 Copy DCA10.unl to your local hard drive.
ServiceCenter 5.1: If your version of ServiceCenter 5.1 cannot read DCA10.unl, copy BI51.unl, which is in the downloaded supplemental installation files, to your hard drive.
- 3 Start the ServiceCenter client that connects to the server where ServiceCenter is running.
- 4 From the ServiceCenter navigation pane, click **Toolkit > Database Manager**.
- 5 Right-click anywhere on the screen to open the pop-up menu.
- 6 Select **Import/Load**.
- 7 Click **Browse** to locate the files you copied to your local hard drive.
- 8 Select DCA10.unl to import.
- 9 Click **Open**.
- 10 Click **Load FG** on the toolbar. ServiceCenter displays a confirmation message.
- 11 Close the ServiceCenter client.

Step 3: Import AssetCenter Script Files

Script files contain records that you need to use for AssetCenter with DecisionCenter. The DecisionCenter installation media has one script file: `dca.lst`. The path to the script file is:

```
\\ITPA\ITPA-AM\SupportFiles\import
```

Your user profile in AssetCenter must have system administration rights to perform the following procedure. The instructions are for the supported versions of AssetCenter.

To import AssetCenter script files:

- 1 From the DecisionCenter installation media, copy this folder to your local hard drive:

```
\\ITPA\ITPA-AM\SupportFiles\import
```

- 2 Start the AssetCenter client that connects to the AssetCenter server.
- 3 Click **File > Import**.
- 4 Click **Execute a Script**.
- 5 Click **Browse** to locate the folder you copied to your local hard drive.
- 6 Change the Files of Type drop-down to **All Files (*.*)**.
- 7 Select the `dca.lst` file.
- 8 Click **Import**.
- 9 Close the AssetCenter client.

Task 6: Install the Data Warehouse

Before you begin, ensure that HP OpenView Connect-It and the ServiceCenter or AssetCenter data warehouse are on the same server.

Step 1: Install and Configure JDBC Drivers

You need JDBC drivers on the data warehouse and DecisionCenter application servers for the ITPA and BIA installations. You also need JDBC drivers on the server that hosts the DecisionCenter Optimization engine for the Optimization installation. Oracle JDBC drivers are embedded in the client software installation. You can download the JDBC drivers for SQL Server from the Microsoft web site. JDBC drivers should reside in the following paths.

Table 15 JDBC Driver Paths

Database Driver Type	Default Path
Oracle JDBC	c:\oracle\product\10.2.0\db_1\jdbc\lib\ojdbc14.jar
Microsoft SQL Server JDBC	c:\program files\Microsoft SqlServer\....
Microsoft SQL Server JDBC Sprinta (ITPA only)	c:\inet\Sprinta2000.jar

DecisionCenter detects the location of the JDBC driver during the installation process.

If you do not have a database client installed on the DecisionCenter server, you can copy the JDBC drivers from the data warehouse server to the DecisionCenter server and store them in this directory:

```
\\...\Tomcat\common\lib
```

Check your database vendor licensing policies.

Sprinta is supported only for ITPA. For more information about JDBC drivers and Sprinta licenses, visit the **Inetsoftware** web site.

Step 2. Copy the Configuration File

Connect-it requires a ServiceCenter configuration to run ServiceCenter scenarios. From the DecisionCenter installation media, copy:

```
\\ITPA\ITPA-SM\SupportFiles\CIT\scdb61.cfg
```


to your Connect-It installation directory:

\\Program Files\Peregrine\Connect-It 3.6.0 en\config\sc\config

Step 3: Install the Data Warehouse

Follow these steps to install the data warehouse:

- 1 Insert the data warehouse media in the CD-ROM drive. If the DecisionCenter installer does not start automatically, run `setup.exe` from the installation directory.
- 2 From the **ITPA** tab, click **ITPA for SM**.
- 3 Click **Install Data Warehouse for ServiceCenter**.
- 4 From the Welcome screen, click **Next**.
- 5 Accept the terms in the license agreement and click **Next**.
- 6 Do one of the following:
 - Accept the default destination folder and click **Next**.
 - Click **Change** to choose another folder. then click **OK**, and click **Next**. The installer searches for a Java Runtime Environment (JRE). If the installer locates a JRE, you can accept the JRE in that location. Or, click **Change**, choose another JRE, and click **Next**.
- 7 Choose the type of database server for the data warehouse to use and click **Next**.
- 8 If you are using Microsoft SQL Server, you must specify the database driver. For more information about JDBC drivers, see Step 1: Install and Configure JDBC Drivers on page 48. Click **Next**.
- 9 Accept the default folder where the JDBC driver jar files reside, or click **Change** and specify another folder.
- 10 Click **Next**.
- 11 Confirm or change the configuration information for the data warehouse and its user. You recorded this information in the Installation checklist:
 - Step 1a: Run the Oracle Configuration Script File on page 27.
 - Step 2b: Configure the SQL Server on page 30.
 - Step 3: Collect the User Information on page 31.

- 12 Click **Next**.
- 13 The installer displays the database configuration information. Click **Next**.
- 14 To accept the default JDBC configuration parameters, click **Next**.
- 15 Accept or change the date parameters for your data warehouse server. These include the start year and stop year that the data warehouse uses for populating tables with data, and the month in which the fiscal year begins.
- 16 Click **Next**.
- 17 Accept or change the name of the data warehouse log file.
 - a Enable or disable the **Cascade Delete** feature.
 - b If your database is Microsoft SQL Server, choose **Case Sensitive**.
- 18 Click **Next**.
- 19 Specify the following parameters:
 - The hostname of the ServiceCenter server and its port number.
 - The ServiceCenter connection user name: **bi-connector**. This is the out-of-box database connection user name, not a ServiceCenter operator name.
 - Omit a ServiceCenter connection password. The out-of-box database connection has no password.

For more information, see Step 1: Verify That the ServiceCenter Client Is Installed and Available on page 45.
- 20 The installer displays the ServiceCenter configuration information. To accept these values and continue with the installation, click **Next**. To change any of these values, click **Back**.
- 21 Click **Install** to begin the installation process. The installer reminds you that you must install the correct ServiceCenter unload files prior to beginning the data warehouse installation process. For more information, see Step 2: Import ServiceCenter Unload Files on page 46.
- 22 Click **OK**.
- 23 The installation process can take several minutes. The installer displays its progress.
- 24 Click **Finish**.

Update AssetCenter 5.0 Files

Before you complete the next step, you must update two out-of-box DecisionCenter files to support changes in AssetCenter 5.0. If you do not have AssetCenter 5.0 installed, you can proceed to Step 4: Run the HP OpenView Connect-It Scenario.

- 1 Contact HP OpenView support for instructions to download a replacement file: 50ac_bi.mpt.
- 2 Rename 50ac_bi.mpt to ac_bi.mpt.
- 3 Copy ac_bi.mpt.
- 4 Navigate to:
\\Program Files\HP OpenView\DC\RDS_AC\cit
- 5 Paste ac_bi.mpt into the cit folder to replace the original file.

To verify the rds_ac scenario is using the appropriate mactable, follow these steps:

- 1 Click **Start > Programs > Peregrine > Connect-It 3.6 > Connect-It 3.6 Scenario Builder**.
- 2 To open the rds_ac scenario, click **File > Open** and browse to:
\\Program Files\HP OpenView\DC\RDS_AC\cit\rds_ac.scn
- 3 To verify the Mactable location, click **Scenario > Maptables**. If you do not see the ac_bi.mpt file listed, click the **Add File** icon.
- 4 Browse to :
\\Program Files\HP OpenView\DC\RDS_AC\cit
- 5 Select the ac_bi.mpt file.

You must update the rdsac_etl.xml schema file to increase the size of the VALUE field in the AMITEMLISTVAL table to 80.

- 1 Open this file with a text editor:
\\Program Files\HP OpenView\DC\RDS_AC\conf\rdsac_etl.xml
- 2 Change
<dimensionTableField name="VALUE" type="char" size="nn"/>
to
<dimensionTableField name="VALUE" type="char" size="80"/>

- 3 Open your SQL Server or Oracle database.
- 4 Edit the VALUE field in the AMITEMLISTVAL table, and change the Size/Length to a value of 80.

Step 4: Run the HP OpenView Connect-It Scenario

ServiceCenter 5.1: Before you run the scenario, open the new scenario in Connect.It Scenario Builder.

- 1 Configure the ServiceCenter and RDS connectors appropriate to your system.
- 2 Select **Tools > Open All Connectors**. No error messages should appear.
- 3 Save the scenario.

DecisionCenter relies on ServiceCenter data; however, this data requires some customization and mapping into new tables that DecisionCenter needs. DecisionCenter relies on HP OpenView Connect-It to extract required ServiceCenter data and map it into these new tables.

The rds_sc.scn scenario collects ServiceCenter data and synchronizes it with the data warehouse. It can take several hours to execute when there is a large quantity of data. If you have a large amount of ServiceCenter data, enable the RDS connector setting “Enable on initial import” before you run the Connect-It scenario. It is important that you do not change the connector names defined in data warehouse Connect-It scenarios. Follow these steps to run the scenario:

- 1 From the Windows **Start** menu, click **Programs > Peregrine > Connect-it 3.6.0 en > Service Console**.
- 2 The Service Console should be pointing to this scenario file:
`\\Program Files\HP OpenView\DC\RDS_SC\cit\rds_sc.scn`
- 3 Click **Start**.

Immediately after the initial data synchronization completes, it is recommended that you back up your database. This can be crucial when the synchronization takes a long time, and you need to restore the data.

Step 5: Populate the OPERATOR_ADDL Table

You must populate this table manually with data for each of these fields:

- OPERATOR_ADDL_ID
- NAME
- TERMINATION_DATE

Ensure that the NAME field is unique.

Task 7: Install DecisionCenter

The DecisionCenter application provides the basic tier functionality for DecisionCenter IT Performance Analytics.

Step 1: Install the DecisionCenter Application

The DecisionCenter application is a web archive (WAR) file on the DecisionCenter installation media. The installation process prompts you to store the WAR file in the appropriate web server directory. The web application server, Apache Tomcat, will deploy the file. Before you begin, ensure that you have a valid authorization code. If necessary, contact **HP Software Support**. Follow these steps to install the DecisionCenter application:

- 1 Insert the DecisionCenter installation media into your CD-ROM drive.
- 2 The installation begins automatically. If necessary, you can start the installation from **Autorun.exe** on the DecisionCenter installation media.
- 3 From the ITPA tab, click **Web Application**.
- 4 Click **Download DecisionCenter Web Interface**.
- 5 Copy `decisionCenter.war` and paste it into your web server deployment folder. The web server deploys the WAR file automatically when you start the application. For example, you might paste it into:

```
\\Program Files\BusinessObjects\Tomcat 5.x\webapps
```

- 6 Back up this directory before you proceed to the next step:
\\Program Files\BusinessObjects\Tomcat 5.x\conf\Catalina\localhost

Step 2: Configure LDAP

- 1 From the Windows **Start** menu, click **Control Panel** > **Services** and stop the Apache Tomcat service.
- 2 Navigate to this file:
\\...\Tomcat\webapps\decisionCenter\WEB-INF\jaas.config
- 3 Change the following settings to reflect your LDAP configuration:
 - user.provider.url
 - security.principal
 - security.credentials
 - group.provider.url

For example:

```
dpJndi {  
    com.peregrine.shared.security.jaas.JndiLoginModule required  
    user.provider.url="ldap://cmldap01.labs.peregrine.com:60339/  
        ou=people,dc=labs,dc=peregrine,dc=com"  
    security.principal="uid=admin,ou=administrators,  
        ou=topologymanagement,o=netscaperoot"  
    security.credentials="falcoN"  
  
    group.provider.url="ldap://cmldap01.labs.peregrine.com:60339/  
        ou=groups,dc=labs,dc=peregrine,dc=com"  
    group.search.objectClass="groupOfUniqueNames";  
};
```

- 4 Save and close the file.

Step 3: Configure JNDI for Tomcat

- 1 Navigate to this directory:
\\Program Files\BusinessObjects\Tomcat 5.x\conf
- 2 Open `tomcat-users.xml` with a text editor. Verify that Tomcat has an entry to configure admin and manager user roles. If necessary, edit the file to include these lines:

```
<role rolename="admin"/>
<role rolename="manager"/>
<user username="admin" password="admin" roles="admin"/>
<user username="manager" password="manager" roles="manager"/>
```
- 3 Save `tomcat-users.xml`.
- 4 From the Windows **Start** menu, click **Control Panel** > **Services** and start the Apache Tomcat service.
- 5 Start a Microsoft Internet Explorer browser session.
- 6 Type `http://host-name:port_number` in a browser to display the Tomcat Home page. For example, you might type `http://server_name:8080`.
- 7 In the **Administration** section, click **Tomcat Administration**.
- 8 Type the **User Name** and **Password** for the admin user that you configured in Step 2. In this example, the **User Name** would be admin and the **Password** would be admin.
- 9 Expand the **Tomcat Server** > **Service (Catalina)** > **Host** > **Context (/decisionCenter)** > **Resources** nodes.
- 10 Click **Data Sources** to view the configured JNDI entries for the decisionCenter context.
- 11 From the drop-down **Available Actions** list, select **Create New Data Source**.

- 12 Type values for the JNDI parameters. The following table shows examples; however, they must match your local configuration. For exact values, see your database administrator.

Table 16 JNDI Parameters

Parameter	Suggested Value
JNDI Name:	jdbc/dc (This is a required value)
Data Source URL:	Examples (verify your local URLs):
<ul style="list-style-type: none"> • SQL Server: • Oracle: 	<ul style="list-style-type: none"> • jdbc:microsoft:sqlserver://sqlserverHost:1433 • jdbc:oracle:thin:@server_name:1521:ORCL
JDBC Driver Class:	Examples (verify your local URLs):
<ul style="list-style-type: none"> • SQL Server: • Oracle: 	<ul style="list-style-type: none"> • com.microsoft.jdbc.sqlserver.SQLServerDriver • oracle.jdbc.driver.OracleDriver
User Name:	rds_dba
Password:	passw0rd
Max. Active Connections:	50
Max. Idle Connections:	10
Max. Wait for Connection:	10000
Validation Query: (Optional)	

- 13 Click **Save**.
- 14 Click **Commit Changes**. The Tomcat server saves the changes and redeploys the DecisionCenter application.
- 15 Click **Log Out**.
- 16 To verify that the DecisionCenter application deploys correctly, return to the Tomcat Home page (http://host-name:port_number) using the same browser session.
- 17 Click **Tomcat Manager**.

- 18 Type the **User Name** and **Password** for the manager user that you configured in Step 2. In this example, the **User Name** would be manager and the **Password** would be manager.
- 19 Verify that the DecisionCenter application listed in Applications has a value of **true** in the **Running** column. If not, click **Start** in the **Command** column.

Task 8: Install ITPA Content

Before you begin, ensure that you install BusinessObjects Enterprise XI R2, configure the BusinessObjects Enterprise XI Central Management Server database (cmsdb), and install and configure the AssetCenter data warehouse. The following steps describe how to install HP OpenView AssetCenter and HP OpenView ServiceCenter content.

Step 1: Install the AssetCenter Universes, Reports, and Views

If you have only HP OpenView ServiceCenter, you can skip this step and proceed to Step 2: Install the ServiceCenter Universes, Reports, and Views on page 59.

Import the AssetCenter Reports and Universes

- 1 Create a local directory where you can copy the import files. For example, create a new root directory named DecisionCenter_files.
- 2 From the DecisionCenter installation media, navigate to this folder:
`\\ITPA\ITPA-AM\ITPA_Asset_Management`
- 3 Copy the contents of `\\ITPA_Asset_Management` to the local directory you created in Step 1. For example, your local folders would look like this:
`\\DecisionCenter_files\ITPA_Asset_Management`
- 4 Unzip this file into the AssetCenter directory using the provided authorization code:
`\\DecisionCenter_files\ITPA_Asset_Management\AssetCenter\AssetCenter.zip`

- 5 Open this file with a text editor:
`\\DecisionCenter_files\ITPA_Asset_Management\itpa_am.bat`
- 6 Replace these variables with the values that are correct for the device where you installed BusinessObjects Enterprise XI R2. Save the file.

Table 17 AssetCenter Variables

Variable	Example
BUSOBJ_HOME=	C:\Programs\BusinessObjects\
DC_HOME	C:\DecisionCenter_files\
CMS_NAME_PORT	<i>host_name</i> :6400 6400 is the default BusinessObjects Enterprise XI port number
CMS_USER	Administrator
CMS_PASSWORD	<blank>
JAVA_HOME	%BUSOBJ_HOME%\j2sdk1.4.2_08

- 7 Run the batch program using Windows Explorer or from a Windows command prompt. Follow the instructions.

Update the AssetCenter Universe Database Connections

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Designer**.
- 2 Log on as **Administrator** with no password.
- 3 Create a new connection, as necessary, to your data warehouse.
- 4 Click **File > Import**.
- 5 Click the **Universes** folder from the **Folder** drop-down list.
- 6 Select the **ITPA Asset Management** universe to import.
- 7 Click **OK**.
- 8 When a success message appears, click **OK**.

- 9 Click **File > Export**.
- 10 Verify that any exported universe has the same directory destination.

Step 2: Install the ServiceCenter Universes, Reports, and Views

This section describes how to install the Service Management, Incident and Help Desk, and Service Level Management reports and universes. If you have only AssetCenter and you do not plan to use DecisionCenter Business Impact Analysis or DecisionCenter Optimization, you can skip this step.

Verify that the ServiceCenter Views are Configured

- 1 Identify a local directory where you can copy the import files. For example, `DecisionCenter_files`.
- 2 From the DecisionCenter installation media, copy
`\\ITPA\ITPA-SM\SupportFiles\DatabaseFiles\itpa_dcviews_oracle.sql`
or
`\\ITPA\ITPA-SM\SupportFiles\DatabaseFiles\itpa_dcviews_sqlsrvr.sql`
to a folder on your local hard drive.
- 3 Save the file and run the script. For example, to run the script using SQL Server Query Analyzer:
 - a Copy the contents of the modified script.
 - b Click **Start > Programs > Microsoft SQL Server > Query Analyzer**.
 - c Log on with the **User name** `rds_dba`.
 - d Paste the contents in the Query window.
 - e Click **Query > Execute**.


Define the Calendars

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Go to Performance Management > Performance Management > Setup > Time Config > Calendar**.

- 4 Click **Add** to create new calendars called Monthly Calendar, Scenario Daily Calendar, and Quarterly Calendar.

Table 18 New Calendars

Calendar Name	Interval	Duration Display Show Format	Calendar Span
Monthly Calendar	Monthly	First Day of Period Sep-06	<i>User-defined</i>
Scenario Daily Calendar	Daily	First Day of Period 9/21/04	<i>User-defined</i>
Quarterly Calendar	Quarterly	First Day of Period Q3-04	<i>User-defined</i>

-  The calendar start date and end date in the Calendar Span dialog box must reflect the time periods for which you have data.

Define the ServiceCenter Reports and Universes

- 1 Create a local directory where you can copy the import files. For example, create a new root directory named DecisionCenter_files.
- 2 From the DecisionCenter installation media, navigate to this folder:
`\\ITPA\ITPA-SM\ITPA_Service_Management`
- 3 Copy the contents of `\\ITPA_Service_Management` to the local directory you created in Step 1. For example, your local folder would look like this:
`\\DecisionCenter_files\ITPA_Service_Management`
- 4 DecisionCenter offers multiple analytic packages that are require authorization codes. For each analytic package that you purchased, unzip the file into the `ITPA_Service_Management\...` directory using the applicable authorization code. The complete set contains these zip files:
`\\...\ITPA_Service_Management\Help_Desk\Help_Desk.zip`
`\\...\ITPA_Service_Management\Incident\Incident.zip`
`\\...\ITPA_Service_Management\Service_Level_Management\Service_Level_Management.zip`
`\\...\ITPA_Service_Management\ServiceCenter\ServiceCenter.zip`

- 5 Open this file with a text editor:
 \\...\ITPA_Service_Management\itpa_sm.bat
- 6 Replace these variables with the values that are correct for the device where you installed BusinessObjects Enterprise XI R2.

Table 19 ServiceCenter Variables

Variable	Example
BUSOBJ_HOME=	C:\Programs\BusinessObjects\
DC_HOME	C:\DecisionCenter_files\
CMS_NAME_PORT	<i>host_name</i> :6400 6400 is the default BusinessObjects Enterprise XI port number
CMS_USER	Administrator
CMS_PASSWORD	<blank>
JAVA_HOME	%BUSOBJ_HOME%\j2sdk1.4.2_08

- 7 Save the file.
- 8 Run the batch program using Windows Explorer or from a Windows command prompt. Follow the instructions.

Update the ServiceCenter Universe Database Connections

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Designer**.
- 2 Log on as **Administrator** with no password.
- 3 Create a new connection, as necessary, to your data warehouse.
- 4 Click **File > Import**.
- 5 Click the **Universes** folder from the **Folder** drop-down list.
- 6 For each analytic package that you purchased, click **Browse** and select the universes to import.

For Help Desk, select:

- ITPM Helpdesk Analysis
- ITPM Helpdesk Metrics

For Incident, select:

- ITPM Incident Analysis
- ITPM Incident Metrics

For Service Level Management, select:

- Alignment Analysis
- Alignment Metrics

For ServiceCenter

- ITPA Service Management

- 7 Click **OK**.
- 8 For each universe, do the following:
 - a Click **File > Parameters**.
 - b On the **Definition** tab, select your database connection from the drop-down **Connection** list. For example, select **rdsdb**.
 - c Click the **Parameter** tab.
 - d Select the **ANSI92** parameter and change **No** to **Yes**.
 - e Click **Replace**.
- 9 Click **File > Export**.
- 10 Verify that any exported universe has the same directory destination.

Add and Update the Metric Universes in Performance Management

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Go to Performance Management**.
- 4 Click **Setup** on the Toolbar.

- 5 Click the **System Setup** tab.
- 6 Click **Universes**.
- 7 Click **Add Universe**.
- 8 From the drop-down **Measure Universe** list, select each metric universe and click **OK**.
 - ITPM Helpdesk Metrics
 - ITPM Incident Metrics
 - Alignment Metrics

Each metric universe should appear in the Universe Definition window.

- 9 For each new metric universe, click the universe name and select the **Update Metrics and Control Charts Definitions** check box.
- 10 Click **Update**. You should see a list of **Available Objects** in the lower left corner.



If you do not see a connection name listed next to your universe:

- a Log onto Designer.
- b Verify that the universe has the correct connection parameters.
- c Export the universe.

Run the PMDT Tool

This step extracts the XML source file of metrics to the target machine.

- 1 Use the Windows command line to locate and run this batch file:
`run_DeploymentTool_PSO.bat`
- 2 When the Performance Management Deployment Tool appears, click **Next**.
- 3 Click the Source File radio button and click **Browse**.
- 4 Navigate to the ITPA metrics file:
`\\ITPA_Service_Management\itpa_sm_metrics.xml`
- 5 For each analytic package that you purchased, select the appropriate metrics. Ensure that you do not select the metrics for uninstalled packages.

For Help Desk, select:

Check UNIVERSE: ITPM Helpdesk Metrics

For Incident, select:

Check UNIVERSE: ITPM Incident Metrics

For Service Level Management, select:

Check UNIVERSE: Alignment Metrics

- 6 On the Export screen, click **Target Repository** and specify the Target CMS repository, the username, and password.
- 7 Click **Export**. The Check Screen returns success messages for the assets that added to the target repository.
- 8 Click **Close**.
- 9 Return to the command window. Follow the instructions to complete the session and close the window.

Set the Database ID at 6000

This is an important step, but you can do it only once. Omit this step in the future if you run the PMDT again to extract an XML file.

It is important to reserve the 5000 series IDs tagged for each metric. This step sets the cursor ID in your database at 6000. Future metrics will use numbers 6000 and above.

- 1 Use the Windows command line to locate and run this batch file:
run_DeploymentTool_PSO.bat
- 2 When the Performance Management Deployment Tool appears, click **Next**.
- 3 Type your **host_name:6400** in the **CMS** text box.
- 4 Click **ID Reservation**.
- 5 Select **Increment Manually**.
- 6 Change the value for each of these cursors to begin at **6000**:
 - **New Metric Cursor**
 - **New Probe Dimension Cursor**
 - **New Goal Cursor**

- **New Goal Type Cursor**
 - **New Metric Tree Cursor**
- 7 Click **Apply**.
 - 8 Exit the Performance Management Deployment Tool.

Refresh the Data

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Go to Performance Management**.
- 4 Click **Setup** on the toolbar.
- 5 Click the **System Setup** tab.
- 6 Click **Dimensions**.
- 7 Select an existing Dimension in the upper text box and click **Edit Dimension**.
- 8 Click **Next**.
- 9 Click **Refresh**.
- 10 Click **Next**.
- 11 Click **END**.
- 12 Repeat Step 7 – Step 11 for all dimensions.
- 13 Click **Go To Performance Management**.
- 14 Click **Dashboard Manager**.
- 15 Click the **Metrics** tab.
- 16 Click the **Refresh** icon next to the Available Metrics to refresh the list of metrics.
- 17 Select **Call Metrics and Dimensions** from the **Available Metrics** drop-down list.
- 18 For each category listed, select the metric.
- 19 Click the **Purge** icon, then the **Refresh** icon.

- 20 When this warning appears, “This operation can be very long. Do you want to continue,” click **OK**.
- 21 Repeat Step 17 – Step 20 to refresh other metrics in the list.

Each metric will refresh and when the process is complete, you can see a Last Refresh Date in the Metric History section.

Verify the Installation Success

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Central Management Console**.
- 2 Navigate to **Folders**. You should see a list of the DecisionCenter folders and objects:
 - ITPA Service Level Management
 - ITPA Asset Management
 - ITPA Help Desk
 - ITPA Incident
 - ITPA Service Management
- 3 Expand each folder to see the list of available objects. For example, if you expand ITPA Help Desk, you should see:
 - Average Call Volume by Day
 - Average Call Volume by Hour
 - Call Receiving Summary
 - First Call Resolution
 - First Call Resolution Details
 - Staff Turnover
- 4 From the Central Management Console Home page, navigate to **Universes** to view the data warehouse and ITPM universes.

Step 3: Configure Reports for ServiceCenter 5.1

DecisionCenter 1.0 out-of-box reports expect ServiceCenter 6.1 data. They display no results when you have ServiceCenter 5.1 data. When your Connect-It scenario finishes running, you should review and refresh all reports. The following reports will return no data:

- Alignment Reports
 - Variable Service Costs by SLA and CI
 - Variable Service Costs by SLA, CI, and Cost Category
- ITPA Service Management
 - Configuration Items by Age
 - Economic Impact of SLA Failure
 - Recurrent Outages
 - SLA Availability Successes
 - SLA Response Time Successes

Recurrent Outages and SLA Response Time Success reports can produce results if you implement the following workaround.

ServiceCenter 5.1 Workaround for Recurrent Outages

The links between the `outage` and `outagedetail` tables changed in ServiceCenter 6.x. Follow these steps to create a workaround.

- 1 Edit the report using BusinessObjects InfoView.
- 2 Select the **Edit Query** tab.
- 3 Click **View SQL**.
- 4 Select **Use Custom SQL**.
- 5 Edit the following SQL statements to remove the boldface text.

```
SELECT
    DEVICE_D.LOGICAL_NAME,
    DEVICE_D.TYPEPRGN,
    DEVICE_D.MODEL,
    DEVICE_D.SUBTYPE,
    DEVICE_D.VENDOR,
```

```

    DEVICE_D.ASSET_TAG,
    DEVICE_D.MANUFACTURER,
    RDS_TIMEDIM_D.MONTH,
    RDS_TIMEDIM_D.WEEK,
    count(distinct(OUTAGE_F.Z_RDSOUTAGE_DID)),
    OUTAGE_D.OUTAGE_START
FROM
    DEVICE_D,
    RDS_TIMEDIM_D,
    OUTAGE_F,
    (
        Select OUTAGEDETAIL.* , SLOAVAIL_D.SLO_ID AS SLO_ID2 from
OUTAGEDETAIL,SLOAVAIL_Dwhere OUTAGEDETAIL.SLO_ID =
SLOAVAIL_D.SLO_ID
    ) OUTAGEDETAIL_DR,
    OUTAGE_D,
    DEVICE_F
WHERE
    ( DEVICE_F.Z_RDSDEVICE_DID=DEVICE_D.Z_RDSDEVICE_DID )
    AND ( OUTAGEDETAIL_DR.OUTAGE_ID=OUTAGE_D.OUTAGE_ID )
    AND ( OUTAGE_D.Z_RDSOUTAGE_DID=OUTAGE_F.Z_RDSOUTAGE_DID )
    AND (
        DEVICE_F.INSTALL_DATEID=RDS_TIMEDIM_D.RDS_TIMEDIM_DID )
    AND ( OUTAGE_F.Z_RDSDEVICE_DID=DEVICE_D.Z_RDSDEVICE_DID )
    AND ( OUTAGE_F.Z_RDSOBSOLETEIND = 'N' AND
OUTAGEDETAIL_DR.LOGICAL_NAME = DEVICE_D.LOGICAL_NAME )
GROUP BY
    DEVICE_D.LOGICAL_NAME,
    DEVICE_D.TYPEPRGN,
    DEVICE_D.MODEL,
    DEVICE_D.SUBTYPE,
    DEVICE_D.VENDOR,
    DEVICE_D.ASSET_TAG,
    DEVICE_D.MANUFACTURER,
    RDS_TIMEDIM_D.MONTH,
    RDS_TIMEDIM_D.WEEK,
    OUTAGE_D.OUTAGE_START

```

- 6 Save the report.

ServiceCenter 5.1 Workaround for SLA Response Time Successes

The response time average is a decimal value in ServiceCenter 5.x. Therefore, the chart values are 1/100th of the correct value. Follow these steps to create a workaround.

- 1 Edit the report using BusinessObjects InfoView.
- 2 Edit the properties of the chart.
- 3 Edit the property **Y-Axis > Values > Format**.
- 4 Select type **Number** and use the percentage format.
- 5 Edit the property **Y-Axis > Scale > Max Value**.
- 6 Set the value to 1.
- 7 Save the report.

Task 9: Verify the DecisionCenter Installation

- 1 Start a second browser session and type `http://host-name:port_number/decisionCenter` to verify that DecisionCenter starts successfully.



The information in the URL is case-sensitive.

- 2 Log in with your user name and password.
- 3 Expand any of the following nodes in the navigation tree:
 - **Asset Management**
 - **Help Desk**
 - **Incident**
 - **Service Level Management**
 - **Service Management**
- 4 Click any report name to establish a BusinessObjects connection and view the ITPA analytic.

Refreshing the Data

HP OpenView Connect-It automatically schedules the data synchronization scenario to run daily on a 24-hour schedule. The amount of time required to synchronize the data depends on the volume of data to be processed and the capacity of your server. Ensure that you schedule the synchronization to occur during off-peak hours when the server has no other demands.

4 BIA Planning and Installation

There are two possible user scenarios when you install the DecisionCenter Business Impact Analytics (BIA) tier. In the first case, your objective is to add Business Impact Analytics and views to enrich your reporting resources. The BIA tier provides more analytics that enrich your business analysis capabilities. These new analytics provide information about:

- Business service downtime impact
- CI type downtime impact
- Downtime Impact by business service and value center

If this is your *only* objective, you can safely skip many of the tasks and steps in this chapter and complete the installation quickly. These tasks are clearly marked as Optimization Only tasks.

In the second case, your objective is to add the Optimization tier, create an historical incident cost baseline, and run new what-if scenarios to project the cost of new business services and resource allocation. In addition to the ITPA and BIA analytics, you will add these BIA features that position you to run full optimization scenarios when you install Optimization:

- Data Mining tool
- Business and Environment models
- Impact definition
- Impact Calculator
- History Builder

If this is your objective, ensure that you complete every task and step in this chapter, including those marked Optimization Only.

Prerequisites

Before you begin, ensure that you complete all the installation tasks in [Chapter 3, ITPA Installation and Configuration](#). The data mining tasks assume that you have some ServiceCenter Administration knowledge and that you are skilled at running SQL queries.

DecisionCenter supports both Microsoft SQL Server and Oracle for ITPA installations. DecisionCenter supports only Microsoft SQL Server if you add BIA and Optimization. Ensure that you consult the DecisionCenter Support Matrix on the **HP Software Support** web site for the supported versions of these products.

Data Analysis

The most time-consuming steps to prepare for DecisionCenter BIA and Optimization are the preparation activities for existing data, and decisions required to populate new tables and fields with new data. For example, DecisionCenter requires that each incident be associated with a business service or value center. Existing incident data may not have those association built into each incident record. For BIA and Optimization, you must create those associations.

Here is checklist of decisions and data preparation decisions. You may require the combined expertise of a ServiceCenter Administrator, Database Administrator, and Professional Services personnel to arrive at the decisions and complete the required actions.

Business Services and Value Centers

DecisionCenter BIA and Optimization relies heavily on the concepts of business services and value centers. Ensure that you understand how they impact your organization and daily activities.

Business Services

A business service is the combination of one or more business applications plus the supporting Configuration Items that enable delivery of the business service to the customer. The products that IT offers its customers are internal and external business services. Business services often have one or more associated value centers. A Claims service is an example of a business service; Claims entry, Claims processing, and Claims arbitration are examples of value centers that support the Claims business service.

Enterprise resource planning (ERP) is a good example of a business service. ERP is a business management system that integrates all facets of the business, including planning, manufacturing, sales, and marketing. There can be many component business applications such as inventory control, order tracking, customer service, finance, and human resources.

Value Centers

A value center is that part of your business that provides a product or service to an internal or external customer. It can be an entire business unit, a cost or profit center, or a functional department. It is an entity that adds value directly, or indirectly, to your customer community. An enterprise business service can have multiple associated value centers. A Claims service is an example of a business service; Claims entry, Claims processing, and Claims arbitration are examples of value centers that support the Claims business service.

It is easy to see that any revenue producing business unit can be described as a value center. However, cost centers also affect corporate value. For example, a finance department is a value center. It does not sell a product to an external customer, but its forecasts, balance sheets, public statements and other outputs affect the profitability of the enterprise.

IT is another example of a value center. How effectively it meets its Service Level Agreements obligations affects the performance and profitability of the customers that it serves.

Data Analysis Checklist

Gathering this information may be the most difficult aspect of preparing for the actual installation. These are business decisions that require a broad range of business expertise at the operational and executive levels. It is advisable to consult these experts before you translate these decisions into physical data.

- What is the range of data that I want to work with? Should it extend over a month, a quarter, or a year?
- What is the beginning date of relevant incidents?
- What are your identifiable business services? This needs to be a specific list, preferably in a database table. You may need to import this information into the DecisionCenter data warehouse.
- Which Configuration Items impact each business service when an outage occurs?
- What are your identifiable value centers? This needs to be a specific list, preferably in a database table. You may need to import this information into the DecisionCenter data warehouse.

The answers to these questions will help you customize the ETL and data analysis processes for your organization.

BIA Installation Checklist

Print this checklist to use during the installation process. As you complete each task, check it as completed.



Complete Tasks 1–8 on the DecisionCenter data warehouse server. For more information, see the distributed server configuration diagram on page 23.

- Task 1: Back Up the Data Warehouse on page 77.
- Task 2: Create BIA Tables and Views on page 77.
 - Step 1: Gather the Database Connection Information on page 77.
 - Step 2: Run the SQL Server Configuration Script File on page 78.
- Task 3: Install BIA Component Files on page 79.
 - Step 1: Run the Installer on page 79.
 - Step 2: Verify the BIA Installation on page 79.
- Task 4: Extract the ServiceCenter Data on page 80.
 - Step 1: Customize the ServiceCenter-to-DC Scenario on page 81.
 - Step 2: Run the ServiceCenter-to-DC Scenario on page 82.
- Task 5: Prepare the Data on page 82.
 - Step 1: Identify the Target Range for Your Data on page 83.
 - Step 2: Create the Problem PREP View on page 84.
 - Step 3: Populate the Assignment Group PREP Table on page 84.
 - Step 4: Populate the Operator PREP Table on page 86.
 - Step 5: Populate the Assignment Transition PREP Table on page 88.
 - Step 6: Populate the Business Service CI PREP Table on page 91.
 - Step 7: Populate the Business Service Incident PREP Table on page 91.

- Step 8: Populate the Incident Exclusion PREP Table (Optimization Only) on page 92.
- Step 9: Populate the Assignment Shift PREP Table (Optimization Only) on page 92.
- Task 6: Compute Time-to-Next-Incident (Optimization Only) on page 94.
- Task 7: Customize the Data Mapping on page 95.
 - Step 1: Customize Business Services Mapping on page 95.
 - Step 2: Customize Organization Mapping on page 97.
 - Step 3: Customize Value Center Mappings on page 98.
 - Step 4: Customize Labor Cost Information on page 99.
 - Step 5: Customize Incident Mapping on page 100.
 - Step 6: Customize SLO Mapping on page 100.
- Task 8: Load the DecisionCenter Tables on page 102.
 - Step 1: Create Business Service and CI Types on page 102.
 - Step 2: Load Data into the DecisionCenter Tables on page 102.
 - Step 3: Run the Data Cleanup SQL Script File on page 103.



Complete Task 9 on the BusinessObjects Enterprise XI server.

- Task 9: Install BIA Content on page 103.
 - Step 1: Define the Calendars on page 104.
 - Step 2: Define the BIA Reports and Universes on page 104.
 - Step 3: Update the BIA Universe Database Connections on page 105.
 - Step 4: Add and Update the Metric Universes on page 106.
 - Step 5: Run the PMDT Tool on page 107.
 - Step 6: Refresh the BIA Metrics on page 108.



Complete Task 10 on the workstation that is network connected to the DecisionCenter application server.

- Task 10: Verify the BIA Installation on page 109.

Task 1: Back Up the Data Warehouse

Before you begin the BIA installation process, ensure that you back up the data warehouse that you installed and configured on the data warehouse server.

Task 2: Create BIA Tables and Views

Complete this task on the data warehouse server to create the additional tables and views for BIA.

Step 1: Gather the Database Connection Information

During the installation, you must provide information about the data warehouse that you built during the ITPA installation. The following table lists the configuration information and user identification that you must provide during the BIA installation.

Table 20 Required BIA Installation Information

Required Information	MS SQL Default Value	Your Value
Host name of the RDBMS server	None	<i>your_machine_name</i>
RDBMS server port number	1433	
Database name	rdsdb	
DSN Alias	rdsdb	
User name	rds_dba	
Password	passwd	
Host name of the ServiceCenter server	None	<i>your_machine_name</i>

Table 20 Required BIA Installation Information

Required Information	MS SQL Default Value	Your Value
ServiceCenter server port number	12670	
ServiceCenter connector user name	bi_connector	
ServiceCenter connector password	None	

Step 2: Run the SQL Server Configuration Script File

Follow these steps to create BIA tables and views on the Microsoft SQL Server data warehouse server:

- 1 Identify a local directory where you can copy the script file. For example, DecisionCenter_files.
- 2 From the DecisionCenter installation media, copy the following file from this folder on your local hard drive:
`\\BIA\SupportFiles\DatabaseFiles\rds_bia_mssql.sql`
- 3 The BIA installation process populates the business_service_type and configuration_item_type tables with sample data. If your ServiceCenter environment already has content in these tables, you should edit the configuration script to remove the SQL statements that populate these tables. Otherwise, the demo data will replace your real data. To modify the script, remove any statements for the business_service_type and configuration_item_type tables.
- 4 Save the file.
- 5 Run the script. For example, to run the script using SQL Server Query Analyzer:
 - a Copy the contents of the rds_bia_mssql.sql script.
 - b Click **Start > Programs > Microsoft SQL Server > Query Analyzer**.

- c Ensure that you log in with the DecisionCenter user name that enables you to access the DecisionCenter schema and that the current database is the DecisionCenter database. The script will populate the tables in that schema.
- d Paste the contents in the Query window.
- e Click **Query > Execute**.

Task 3: Install BIA Component Files

The BIA installation provides the files to create HP OpenView Connect-It services for BIA scenarios, and configure the scenario connections. It also installs the Data Mining tool and the History Builder.

Step 1: Run the Installer

Before you begin, ensure that you have a valid authorization code. If necessary, contact **HP Software Support**.

- 1 Insert the DecisionCenter installation media into your CD-ROM drive.
- 2 The installation begins automatically. If necessary, you can start the installation from Autorun.exe on the DecisionCenter installation media.
- 3 Click the **BIA** tab.
- 4 Click **Install BIA Component Files**.
- 5 Follow the installation prompts to install the BIA components.

Step 2: Verify the BIA Installation

You can verify the results by checking the installation directory. The default path is:

```
\\Program Files\HP OpenView\DC\BIA
```

If you customized the installation path, navigate to the HP OpenView\DC\BIA folder. Ensure that you have these folders:

- cit
- DataMining
- logs

Task 4: Extract the ServiceCenter Data

When you installed ITPA, HP OpenView Connect-It extracted the ServiceCenter data required for the ITPA tier. When you add the BIA tier, you must use Connect-It again to extract the additional data required for the BIA tier.

Most of the incident-related data that DecisionCenter uses comes from the following ServiceCenter tables.

Table 21 ServiceCenter Data Sources

ServiceCenter Table Name	Type of Information	Description
assignment	Work groups	Identifies the names of and members of work (assignment) groups.
calholidays	Holiday schedules	Identifies the days that are designated holidays.
calduyhours	Work schedules	Identifies the start and stop times for defined work schedules.
clocks	Time zone	Identifies available time zones.
contacts	Contact	Lists the name, address, and related contact information of all ServiceCenter customers and users.

Table 21 ServiceCenter Data Sources

ServiceCenter Table Name	Type of Information	Description
dept	Department	Lists all of the departments in the organization. These departments define Service Level Agreements (SLAs), Service Level Objectives (SLOs), and can map to business services. Department data is used to directly populate the value center table with default values.
device	Configuration Items	Lists the hardware and software components managed by IT.
operator	Authorized users	Lists all authorized ServiceCenter technicians, administrators, and operators and their permission levels.
probsummary	Incidents	Contains all the information about incidents and outages.
problem	Problems	Contains all the information about known problems, workarounds, and resolution.
sla	Service Level Agreements	Contains the information about SLAs and associated SLOs.
slo	Service Level Objectives	Contains the information about each SLO and associated SLAs.

Step 1: Customize the ServiceCenter-to-DC Scenario

If you make any customization to the `dco_sc.scn` scenario file, use HP InfoView Connect-It to change the mappings in the scenario before you proceed to the next step.

Step 2: Run the ServiceCenter-to-DC Scenario

This scenario collects the additional ServiceCenter data and synchronizes it with the data warehouse.

- 1 From the Windows **Start** menu, click **Programs > Peregrine > Connect-it 3.6.0 en > Service Console**.
- 2 The Service Console should point to this scenario file:
`\\Program Files\HP OpenView\DC\BIA\cit\dco_sc.scn`
- 3 Click **Start**.

It can take several hours to execute if there is a large quantity of data. You may want to edit the dco_sc scenario to focus only on a range of data instead of all incident data. Immediately after the initial data synchronization completes, it is recommended that you back up your database. This can be crucial when the synchronization takes a long time, and you need to restore the data.

Task 5: Prepare the Data

There are several steps to follow in this preparation phase that load data into DecisionCenter PREP tables. These are new tables that contain specialized ServiceCenter data that has a specific purpose in BIA and Optimization. Each of the new tables contains data that is essential to advanced analysis, simulation, and optimization activities. In some cases, you will extract data from a native ServiceCenter field and populate a new field in a PREP table. In other cases, you will collect certain data from diverse ServiceCenter tables into a single new PREP table.

The DecisionCenter Data Mining Tool

The Data Mining tool helps you extract some of the required data and populate the new BIA tables. If you have a large volume of legacy data, or other complexities, you may require assistance from HP Professional Services.

The BIA installation creates a DataMining folder with four sub-folders:

- bin contains the batch files that start the data mining utilities.
- config contains the database and application configuration files.
- lib contains the Java libraries used by the data mining utilities.
- sql contains template files for SQL statements.

Step 1: Identify the Target Range for Your Data

This is a business decision. Evaluate the time period that you want to see represented in the results. DecisionCenter will use all the ServiceCenter data related to an incident, such as clock time, problem records, service level agreements, and so on.

For BIA, you must choose a start date for the period of time included in the historical impact analysis. For Optimization, you must choose a start date that encompasses incidents representing your current incident workflow. For example, if you made process or workflow changes that affect the elapsed time until an incident closes, you might want to use only incidents opened after the process or workflow changes occurred.

If the BIA starting date and the Optimization starting dates are different, and you plan to run Optimization simulations, choose the most recent as the single start date.

The resulting incident pool must contain one or more months of meaningful data to produce reliable results. It must also include the following attributes to calculate a meaningful historical impact analysis.

- The PROBSUMM_D table must contain all the incidents:
 - Open *on* or *after* the selected date.
 - Open *before* and *on* the selected date.
- The PROBLEM and CLOCK_EVENTS tables must contain complete information about these incidents.

You must set this date in the SQL script that extracts the relevant data.

Step 2: Create the Problem PREP View

You can create the PREP_PROBSUMM_V view using SQL statements that you can find in the SQL templates file.

- 1 Locate the appropriate SQL template file for your environment on the DecisionCenter installation media.

For MicroSoft SQL Server, open:

```
\\BIA\SupportFiles\DatabaseFiles\mssql-templates.sql
```

- 2 Search for the **General Settings** section that begins with **\$NAME=CREATE_VIEW**.
- 3 Change the @startSet variable to the date that you chose in Step 1: Identify the Target Range for Your Data on page 83. For example:
SET @startSet = '2005-01-01';
where the date format is *yyyy-mm-dd*.
- 4 Run the SQL statements to create the PREP_PROBSUMM_V view.

Step 3: Populate the Assignment Group PREP Table

The PREP_ASSIGNMENT_GROUP table is populated using SQL statements that you can find in the SQL templates file.

- 1 Locate the appropriate SQL template file for your environment on the DecisionCenter installation media.
For MicroSoft SQL Server, open:
\\BIA\SupportFiles\DatabaseFiles\mssql-templates.sql
- 2 Search for the **Updating PREP_ASSIGNMENT_GROUP** section that begins with **\$NAME=AG_ADD**.
- 3 Run the SQL statements to populate the PREP_ASSIGNMENT_GROUP table.

Validate Assignment Groups

After you populate the PREP_ASSIGNMENT_GROUP table, you must ensure that the assignment groups in the table are valid groups that were part of the ServiceCenter assignment table. Records with valid groups will have a value of 1 in the VALID field.

Invalid assignment groups can occur when the name was mis-typed by an operator, the group was deleted, the group was renamed, or the group was split into multiple groups.

- 1 To run a query for invalid assignment groups, search for the **Updating PREP_ASSIGNMENT_GROUP** section in the SQL template file.
- 2 Run the query statements that begin with **\$NAME=AG_VALID_NULL**.
- 3 Examine the resulting record where VALID is 0 and do the following:
 - a If the name was mis-typed and you know what it should be, set VALID to 1 and ALIAS_FOR to the correct group name.
 - b If the name was mis-typed and you do not know what it should be, leave the VALID value at 0.
 - c If the group name was deleted from the current assignment table, but was once valid, set VALID to 1.
Best practice: Update the REASON_DROPPED field with the value **deleted** for future reference.
 - d If the group name was changed to another name, set VALID to 1 and ALIAS_FOR to the new assignment group name.
Best practice: Update the REASON_DROPPED field with the value **renamed** for future reference.
 - e If the group was split into multiple sub-groups, set VALID to 1.
Best practice: Update the REASON_DROPPED field with the value **split** for future reference.
 - f If the group name contains non-assignment group information, leave the VALID value at 0.

Step 4: Populate the Operator PREP Table

The purpose of this step is to populate an operator table and collect information from other ServiceCenter records about operator interaction with incidents.

Populate the Operator Table

The PREP_OPERATOR table is populated with a query in the following SQL script.

- 1 Locate the appropriate SQL template file for your environment on the DecisionCenter installation media.

For Microsoft SQL Server, open:

```
\\BIA\SupportFiles\DatabaseFiles\mssql-templates.sql
```

- 2 Search for the **Updating PREP_OPERATOR** section that begins with **\$NAME=OP_ADD**.
- 3 Run the query to populate the PREP_OPERATOR table.

Optionally, on a data refresh, you might want to refresh the FOUND field to reflect whether the user is still in the operator table or not.

- 1 From the SQL template file, search for the **Updating PREP_OPERATOR** section.
- 2 Run the query statements that begin with **\$NAME=OP_SET_FOUND**.

Validate Operators

After you populate the PREP_OPERATOR table, you must ensure that the operators in the table are valid operators that were part of the ServiceCenter operator table. If the operator name is valid, the VALID field will have a value of 1 in the VALID field. If the operator name is invalid, the VALID field should contain 0. If the VALID field contains a null value, it is assumed to be 1.

Best Practice: It is important that all VALID fields contain 1 or 0.

Invalid operators can occur when the operator name is mis-typed or part of an automated process. For validation purposes, if the same operator name appears in the SYSMODUSER field in a related table, you can assume it is a

valid operator. The following steps check the operator name against the SYSMODUSER field in other tables and reduce the number of VALID fields that contain null values.

- 1 From the SQL template file, search for the **Updating PREP_OPERATOR** section.
- 2 To validate operators found in the SYSMODUSER column of the PROBSUMM_D table, run the query statements that begin with **\$NAME=OP_SET_VALID_PROBSUMM**.
- 3 To validate operators found in the SYSMODUSER column of the PROBLEM table, run the query statements that begin with **\$NAME=OP_SET_VALID_PROBLEM**.
- 4 To validate operators found in the SYSMODUSER column of the CLOCK_D table, run the query statements that begin with **\$NAME=OP_SET_VALID_CLOCK**.
- 5 To verify these operator names from other related tables (such as ACTIVITY), run the query statements that begin with **\$NAME=OP_SET_VALID_ACTIVITY**.
- 6 To find the remaining VALID fields with no value, run the query statements that begin with **\$NAME=OP_VALID_NULL**.
- 7 When the number of remaining records is manageable, you should be able to examine them individually and set the VALID value to 1 or 0.

Identify Automated Process Operators

The AUTOMATIC_PROCESS flag value must be 1 if the operator is part of a ServiceCenter automatic process. It can be an internal process, a background process, or an external process that involves other HP OpenView software. Automatic process operators should be omitted from DecisionCenter calculations and simulation activities because these operators do not have incident assignments. If the AUTOMATIC_PROCESS field contains a null value, it is assumed to be 0.

Best Practice: It is important that all AUTOMATIC_PROCESS fields contain 1 or 0. You should run a query to identify any AUTOMATIC_PROCESS fields that contain null values.

Determine Whether an Operator is an Individual or Group

DecisionCenter produces the best results when each operator works independently and ServiceCenter captures the amount of time spent on each incident. You should run a query to identify any INDIVIDUAL fields that contain null values. Valid values are 1 for individual operators or 0 for an operator group.

Best Practice: Create unique operator IDs for each operator in ServiceCenter; do not assign a single operator name to a group of operators.

Identify Operators with Multiple Operator Names

One ServiceCenter user may have multiple operator names because they have multiple user roles. For any user with more than one operator name, you must choose which is to be the primary operator name. In all other records for this user, ensure that the primary name is the value in the ALIAS_FOR field. One of these methods can identify operators with multiple operator names.

- 1 For Microsoft SQL Server, open:

```
\\BIA\SupportFiles\DatabaseFiles\mssql-templates.sql
```
- 2 To run a query on the FULL_NAME field in the OPERATOR_D table to find individual operators with duplicate FULL_NAMES:
 - a Search for the **FULL_NAME** section.
 - b Run the query statements that begin with **\$NAME=OP_DUP_FULLNAME**.
- 3 To run a query on the CONTACT_NAME field in the CONTACT_D table to find individual operators with duplicate FULL_NAMES:
 - a Search for the **CONTACT_NAME** section.
 - b Run the query statements that begin with **\$NAME=OP_DUP_CONTACT**.

Step 5: Populate the Assignment Transition PREP Table

You can populate the PREP_ASSIGNMENT_TRANSITION table with a Java utility after you configure two properties files.

Configure the Database Properties File

- 1 If you use the default installation path, open this file with a text editor:
`C:\Program Files\HP OpenView\DC\BIA\DataMining\config\database.properties`
- 2 Uncomment the section that describes your database software and driver.
- 3 Save the file.
- 4 Copy your JDBC driver files to:
`\\Program Files\HP OpenView\DC\BIA\DataMining\lib`
- 5 From the Windows **Start** menu, click **Run**, and type **CMD** to open a command window.
- 6 Change directories to:
`\\Program Files\HP OpenView\DC\BIA\DataMining\bin\`
- 7 Type this command:
`data_mining TestDatabaseConnection`
You can change this path to match your installation; however, ensure that you specify the exact location of the executable.
- 8 Press **Enter**. The server should return your database connection information and this message: "Connection to Database Successful."

Configure the Process Properties File

- 1 If you use the default installation path, open this file with a text editor:
`\\Program Files\HP OpenView\DC\BIA\DataMining\config\process.properties`

- 2 Verify (or change) the following values.

Table 22 Parameters in process.properties

Parameter	Description
rds.database.timezone	Set this parameter to a time zone value that matches the time zone of the date and time fields in the data warehouse. You can express this as <i>GMT</i> , <i>GMT+HH:MM</i> , or <i>GMT-HH:MM</i> where the <i>HH:MM</i> value is the offset from <i>GMT</i> .
global.defaultUserTimeZone	This value must be a valid Java time zone name. From the command line, you can run <code>data_mining ListTimeZones</code> to obtain a list of valid time zones. It should represent the time zone of the technician's default location, which takes daylight savings into account.

Populate the Table

- 1 From the Windows **Start** menu, click **Run**, and type **CMD** to open a command window.
- 2 Change directories to:

```
\\Program Files\HP OpenView\DC\BIA\DataMining\bin\
```
- 3 Type this command:

```
data_mining GenerateIncidentTransitions
```
- 4 Press **Enter**. The amount of time that the process takes depends on your configuration and the amount of data. It may take from a few seconds to as long as an hour to run.



If you get an out of memory error, you may need to change the default memory limits temporarily. You can change the settings for the `DATA_MINING_OPTS` variable in the `data_mining.bat` file to this value:

```
SET DATA_MINING_OPTS=-Xms128m -Xms1024m
```

Step 6: Populate the Business Service CI PREP Table

The PREP_BS_CI table creates relationships between the business service and the Configuration Items that support the business service. ServiceCenter 6.1.x and earlier versions do not capture business service relationship; however, DecisionCenter impact calculations and optimization tasks require business service data.

You can manually identify logical business services and assign them by mapping business service values to the appropriate fields in the PREP_BS_CI table. For example, the ServiceCenter department field could be the logical filter to identify business services.

The out-of-box HP OpenView Connect-It scenario maps business services from the DEVICE-D table. In this case, you could populate PREP_BS_CI using the device parent-child relationship that exists in the BI_DEVICE table.

Step 7: Populate the Business Service Incident PREP Table

ServiceCenter 6.1.x and earlier versions do not capture business service relationships; however, DecisionCenter impact calculations and optimization tasks require business service data. The PREP_BS_INCIDENT table creates relationships between a business service and an incident through the device connected to the incident.

By default, DecisionCenter assumes an affected device maps to a business service. Or, you can improve the granularity of business service assignment by manually mapping more sophisticated business service values to the appropriate fields in the PREP_BS_INCIDENT table.

You need to populate the PREP_BS_INCIDENT table if:

- There is no device associated with the incident.
- The device is not associated with a business service in the PREP_BS_CI table.
- The device is associated with a business service, but another business service is affected by the incident.
- The device is associated with more than one business service and not all those business services are affected by the incident.

Step 8: Populate the Incident Exclusion PREP Table (Optimization Only)

The PREP_PROBSUM_EXT table captures incidents that are not relevant for simulation scenarios. You should identify incidents that were opened against obsolete devices, or incidents reported by a customer who no longer exists, or is not actively reporting incidents. This can be a manual process or a data mining exercise that creates one record for each incident that meets this criteria. Ensure that the incident number is recorded in the NUMBERPRGN field and a value of 1 in the OMIT_FROM_SIMULATION field.

Step 9: Populate the Assignment Shift PREP Table (Optimization Only)

The PREP_ASSIGNMENT_SHIFT must contain information about time zones and work schedules.

Create the Assignment Shift Records

Every assignment group in the PREP_ASSIGNMENT_TRANSITION table must have one or more assignment shifts.

You can run the following query to create default assignment shifts for the assignment groups.

- 1 Locate the appropriate SQL template file for your environment on the DecisionCenter installation media.

For Microsoft SQL Server, open:

```
\\BIA\SupportFiles\DatabaseFiles\mssql-templates.sql
```

- 2 Search for the section that begins with \$NAME= SHIFT_ADD.
- 3 Run the query to populate the PREP_ASSIGNMENT_SHIFT table.

You can add more shifts to the assignment groups as necessary. You can also rename them to meet your business requirements.

Set the Time Zone

The dates specified in a ServiceCenter calendar are in local time; however, DecisionCenter processes dates within a time zone. The TZ_NAME field in the PREP_ASSIGNMENT_SHIFT table must contain a valid time zone name. You can obtain a list of these names using the data_mining.bat utility.

1 From the Windows **Start** menu, click **Run**, and type **CMD** to open a command window.

2 Change directories to:

```
\\Program Files\HP OpenView\DC\BIA\DataMining\bin\
```

3 Type this command to list all valid time zones:

```
data_mining ListTimeZones
```

4 Press **Enter**.

5 To obtain a smaller list of time zone names where the standard time corresponds to a specific offset from GMT, type this command:

```
data_mining ListTimeZones GMT<s>NN
```

where <s> is a plus (+) or minus (-) sign, and NN is the offset in hours from GMT.

6 Update the TZ_NAME fields using the values you obtain from running these commands.

7 If there are TZ_NAME fields that are not set to a valid time zone name, run this SQL query:

```
UPDATE PREP_ASSIGNMENT_SHIFT SET TZ_NAME='Europe/Paris'  
WHERE TZ_NAME='<tb>'
```

You can replace the **Europe/Paris** with the relevant time zone name.

Set the FTE Field

DecisionCenter must know the number of Full Time Equivalent (FTE) employees for each shift. This is a manual step where you must estimate the number of FTEs assigned to a shift. This number is an integer greater than or equal to 1.

One method to estimate is to sum all the time worked on incidents by all employees in a shift for one month. Divide this number by the total work hours of one full time employee during a month. Usually, this number will be lower than the actual number of technicians assigned to a shift, due to tasks unrelated to working the ticket queues.

For example:

- There are five employees who work the 8 – 5 shift each day (an eight-hour work day).
- Each employee works on incidents about six hours a day.
- Their total hours spent on incidents for an entire month is 600 (5 employees x 30 hours per week x 4 weeks in a month).
- Total hours spent on incidents divided by the total work hours of one FTE is 3.75 FTEs (600/160). For fractional results, round up.

Populate the FTE column in the PREP_ASSIGNMENT_SHIFT table with the computed FTE value.

Assign Multiple Shifts

It is possible to set up an assignment group with more than one shift. For example, for an assignment group that works 24x7, with significant differences in staffing during different shifts, DecisionCenter can produce more accurate results if you define the different shifts and their FTEs.

You can remove the default assignment shift for the assignment group in the PREP_ASSIGNMENT_SHIFT table and create your own shifts records.

Task 6: Compute Time-to-Next-Incident (Optimization Only)

DecisionCenter Optimization requires a value for the average amount of time that elapses between the timestamp on incident records. This value varies depending on your organization and volume of incidents. A data mining utility can create this value for you.

- 1 From the Windows **Start** menu, click **Run**, and type **CMD** to open a command window.

2 Change directories to:

```
\\Program Files\HP OpenView\DC\BIA\DataMining\bin\
```

3 Type this command:

```
data_mining ComputeTTNI
```

Ensure that you run this utility before you attempt to start DecisionCenter and run simulation scenarios.

Task 7: Customize the Data Mapping

DecisionCenter requires historical data that contains information about:

- Business services
- The organization
- Value centers
- Labor cost
- Impact
- Service Level Objectives

There are assumptions made in the HP OpenView Connect-It scenarios to map data that adds required information to ordinary incident data. Because each organization runs differently, you may need to customize the mapping scenario to accurately reflect how your organization operates.

Step 1: Customize Business Services Mapping

A business service is the combination of one or more business applications plus the supporting Configuration Items that enable delivery of the business service to the customer. These can be internal or external business services. Business services often have one or more associated value centers. DecisionCenter uses these tables to add business service information to ServiceCenter incident data.

The `business_service` Table

Table name: `business_service`

Populated with data from this table: `DEVICE_D`

This scenario maps the data: `dco_rds.scn`

Mapping Action: Assumes that business service-related devices are those devices that begin with the letters `BS_`. You may need to customize the scenario to accurately reflect how your organization identifies business services.

The `business_service_type` Table

Table name: `business_service_type`

Populated with data from this table: `devtype`

This scenario maps the data: `dco_bs.scn`

Mapping Action: Creates business services based on device types. You may need to customize the scenario to accurately reflect how your organization identifies types of business services.

The `configuration_item` Table

Table name: `configuration_item`

Populated with data from this table: `DEVICE_D`

This scenario maps the data: `dco_rds.scn`

Mapping Action: Contains data for all devices that are not considered to be business services. The out-of-box mapping is for all device names that do not begin with `BS_`. You may need to customize the scenario to accurately reflect how your organization identifies Configuration Items.

The `businessservice_configitem` Table

Table name: `businessservice_configitem`

Populated with data from this table: `PREP_BS_CI`

This scenario maps the data: `dco_rds.scn`

Mapping Action: Links a Configuration Item (device) to a business service. When an outage occurs, this linkage connects the Configuration Item outage back to the affected business service. Customization should occur when you populate the PREP_BS_CI table in Step 6: Populate the Business Service CI PREP Table on page 91.

The incident_business_service Table

Table name: incident_business_service

Populated with data from this table: PREP_BS_INCIDENT

This scenario maps the data: dco_rds.scn

Mapping Action: Links an incident to a business service. If your data relates incidents to Configuration Items (devices) and your devices map to business services in the business_service_type table, it is possible to avoid directly mapping incidents to business services. If necessary, customization should occur when you populate the PREP_BS_CI table in Step 7: Populate the Business Service Incident PREP Table on page 91.

The valuecenter_businessservice Table

Table name: valuecenter_businessservice

Populated with data from this table: business_service and value_center tables

Scenario to map the data: dco_rds.scn

Mapping action: Links a business service to a value center. Customization should occur when you populate the business_service and value_center tables.

Step 2: Customize Organization Mapping

The organization table describes the internal (organizational) structure of the business.

Table name: organization

Populated with data from this table: DEPT_D

This scenario maps the data: dco_rds.scn

Mapping Action: The mapping concatenates the company name and the department name to produce an organization name. You may need to customize the scenario to accurately reflect how your organization identifies the organizational structure.

Step 3: Customize Value Center Mappings

A value center is that part of your business that provides a product or service to an internal or external customer. It is an entity that adds value directly, or indirectly, to your customer community. An enterprise business service can have multiple associated value centers. There are four tables that support the concept of a value center.

The value_center Table

Table name: value_center

Populated with data from this table: DEPT_D

Scenario to map the data: dco_rds.scn

Mapping action: A ServiceCenter department name maps directly to a value center. Compare this to the organization table that concatenates the company name to the department name. ServiceCenter departments are hierarchical where one department can have subordinate departments. You may need to customize the scenario to accurately reflect how your organization defines value centers. You can verify or create the hierarchical relationship among value centers through the DecisionCenter application.

There are two mappings that describe how to import value centers.

- Mapping 1: DEPT_DSrc1_1-value_centerDst1 creates value centers and updates their main attributes.
- Mapping 4: DEPT_DSrc4_1-value_centerDst4 connects a value center to its parent.

The value_center_type Table

Table name: value_center_type

Populated with data from this table: No ServiceCenter equivalent

Scenario to map the data: N/A

Mapping action: Populating this table is a manual process. Choosing value center types is a business decision that enables you to organize value centers into categories. For example, you might describe them as external or internal value centers, or identify them by business unit. How you populate this table depends on how you classify your business operations.

The valuecenter_businessservice Table

Table name: valuecenter_businessservice

Populated with data from this table: business_service and value_center tables

Scenario to map the data: dco_rds.scn

Mapping action: Links a business service to a value center. Customization should occur when you populate the business_service and value_center tables.

The incident_valuecenter Table

Table name: incident_valuecenter

Populated with data from this table: incident and value_center tables

Scenario to map the data: dco_rds.scn

Mapping action: Links an incident to a value center. Customization should occur when you populate the value_center and incident tables.

Step 4: Customize Labor Cost Information

Table name: ASSIGNMENT_GROUP

Populated with this data: No ServiceCenter equivalent

Scenario to map the data: dco_rds.scn

Mapping action: Maps an average hourly labor cost to close an incident. The default value is 10; however, you can customize dco_rds.scn to use a different value. This value is used in all labor cost calculations. There are no special considerations for currency unit or exchange rates. It is an absolute value used for computations and relative value comparisons.

Step 5: Customize Incident Mapping

Incident mapping adds additional data to ServiceCenter incident records. You can accept the default values used in the `dco_rds.scn` scenario, or you can customize the scenario to use other values.

The `impact_scope_type` Table

Table name: `impact_scope_type`

Populated with this data: incident table

Scenario to map the data: `dco_rds.scn`

Mapping action: Links each incident to an organizational unit. The default mapping is `Business_unit`. You may need to customize the scenario to accurately map impact scope type information. Other valid values are `Department`, `Enterprise`, or `Single_user`.

The `incident_impact_type` Table

Table name: `incident_impact_type`

Populated with this data: incident table

Scenario to map the data: `dco_rds.scn`

Mapping action: Describes the severity of the incident. The default mapping value is `Outage`, which categorizes each incident as a total loss of operation. You may need to customize the scenario to accurately map incident impact type information. Other valid values are `Capacity`, `Corruption`, `Inquiry`, or `Degradation`.

Step 6: Customize SLO Mapping

Incidents are associated with Service Level Objectives (SLOs) to measure how well an organization meets its response time and availability goals. If IT cannot meet the service levels described in the SLO, an SLO breach occurs that increases Mean Time to Repair (MTTR) metrics. SLOs have a built-in escalation and alert scheme that begins when someone opens an incident to report an outage. DecisionCenter imports response time and availability SLOs, but uses only response time SLOs for Optimization scenarios.

Priority

As an incident approaches the SLO breach point, the priority of the incident escalates in the assignment group queue. DecisionCenter Optimization assumes that an available technician will select on the highest priority incident in the assignment queue.

SLOs in DecisionCenter

For any incident, DecisionCenter first selects the Service Level Agreement (SLA) that is assigned to the department referenced in the incident. Next, DecisionCenter applies the Response Time SLOs that are associated with the selected SLA. Although ServiceCenter supports customization using RAD expressions to further restrict the association between an SLO and an incident, DecisionCenter does not support these customizations. DecisionCenter works only with severity and user priority selection criteria.

DecisionCenter uses these response time SLO states:

- Open
- Work in progress
- Resolved

When the HP OpenView Connect-It scenario imports SLOs, it converts a Closed state to a Resolved state. Thereafter, DecisionCenter ignores SLOs with any other state.

SLO Mapping

The out-of-box `dco_rds.scn` scenario imports SLO information with no conditions. Each SLO has a condition field. DecisionCenter selects incidents that have a matching *impact* and *urgency*. Impact and urgency correspond to *severity* and *user priority* in the ServiceCenter probsummary record. You must create a mapping that imports the SLO condition settings into the `incident_slo_condition` and `incident_impact_urg_slo_cond` tables.

There are two mapping examples in the `dco_rds.scn` that show how to import SLO condition information into the `incident_slo_condition` and `incident_impact_urg_slo_cond` tables. These are examples only; you must modify them to meet the format of your data.

Task 8: Load the DecisionCenter Tables

You need to run an HP OpenView Connect-It scenario to populate the appropriate tables with business service and Configuration Item information before you load the remaining DecisionCenter tables with prepared data.

Step 1: Create Business Service and CI Types

This scenario maps ServiceCenter device types to BIA business service types and Configuration Item types.

- 1 From the Windows **Start** menu, click **Programs > Peregrine > Connect-it 3.6.0 en > Service Console**.
- 2 The Service Console should point to this scenario file:
`\\Program Files\HP OpenView\DC\BIA\cit\dco_bs.scn`
- 3 Click **Start**.

Step 2: Load Data into the DecisionCenter Tables

This step uses another HP OpenView Connect-It scenario to extract data from both resources and load it into DecisionCenter tables. To run the `dco_rds` scenario:

- 1 From the Windows **Start** menu, click **Programs > Peregrine > Connect-it 3.6.0 en > Service Console**.
- 2 The Service Console should point to this scenario file:
`\\Program Files\HP OpenView\DC\BIA\cit\dco_rds.scn`
- 3 Click **Start**.

It can take several hours to execute if there is a large quantity of data. Immediately after the initial data synchronization finishes, it is recommended that you back up your database. This can be crucial when the synchronization takes a long time, and you need to restore the data.

Step 3: Run the Data Cleanup SQL Script File

The imported data may contain invalid characters with underscore and incidents without transitions. Run this script to replace the invalid characters with underscores and flag any incident without transition information.

- 1 Identify a local directory where you can copy the script file. For example, DecisionCenter_files.
- 2 From the DecisionCenter installation media, copy the following file from this folder on your local hard drive:

```
\\BIA\SupportFiles\DatabaseFiles\mssql-post_dco_rds_scn.sql
```
- 3 Run the script. For example, to run the script using SQL Server Query Analyzer:
 - a Copy the contents of the mssql-post_dco_rds_scn.sql script.
 - b Click **Start > Programs > Microsoft SQL Server > Query Analyzer**.
 - c Ensure that you log in with the DecisionCenter user name that enables you to access the DecisionCenter schema and that the current database is the DecisionCenter database. The script will populate the tables in that schema.
 - d Paste the contents in the **Query** window.
 - e Click **Query > Execute**.

Task 9: Install BIA Content

The following steps add BIA Analytics to the ITPA Analytics. Complete this task on the BusinessObjects server.

Step 1: Define the Calendars

If you defined the calendars during the ITPA installation, you can skip to the next step.

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Go to Performance Management > Performance Management > Setup > Time Config > Calendar**.
- 4 Click **Add** to create new calendars called Monthly Calendar, Scenario Daily Calendar, and Quarterly Calendar.

Table 23 New Calendars

Calendar Name	Interval	Duration Display Show	Format	Calendar Span
Monthly Calendar	Monthly	First Day of Period	Sep-06	<i>User-defined</i>
Scenario Daily Calendar	Daily	First Day of Period	9/21/04	<i>User-defined</i>
Quarterly Calendar	Quarterly	First Day of Period	Q3-04	<i>User-defined</i>



The calendar start date and end date in the Calendar Span dialog box must reflect the time periods for which you have data.

Step 2: Define the BIA Reports and Universes

- 1 Identify a local directory where you can copy the import files. For example, `DecisionCenter_files`.
- 2 Navigate to this folder on the DecisionCenter installation media:
`\\BIA`
- 3 From the DecisionCenter installation media, copy this folder to your local directory:
`\\BIA\Business_Impact_Analytics`

- 4 Use the password that you obtain from your installation materials to unzip this file into the DecisionCenter_BIA directory:

```
\\BIA\Business_Impact_Analytics\DecisionCenter_BIA
\DecisionCenter_BIA.zip
```

- 5 Open this file with a text editor:

```
\\BIA\Business_Impact_Analytics\business_impact.bat
```

- 6 Replace these variables with the values that are correct for the device where you installed BusinessObjects Enterprise XI R2. save the file.

Table 24 Variables

Variable	Example
BUSOBJ_HOME=	C:\Programs\BusinessObjects\
DC_HOME	C:\DecisionCenter_files\
CMS_NAME_PORT	<i>host_name</i> :6400 6400 is the default BusinessObjects Enterprise XI port number
CMS_USER	Administrator
CMS_PASSWORD	<blank>
JAVA_HOME	%BUSOBJ_HOME%/j2sdk1.4.2_08

- 7 Run the batch program using Windows Explorer or from a Windows command prompt. Follow the instructions in the batch program.

Step 3: Update the BIA Universe Database Connections

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Designer**.
- 2 Log on as **Administrator** with no password.
- 3 Create a new connection, as necessary, to your data warehouse.
- 4 Click **File > Import**.
- 5 Click the **Universes** folder from the **Folder** drop-down list.

- 6 Select the **Business Impact Metrics** universe and do the following:
 - a Click **File > Parameters**.
 - b In the **Connection** field, select the database connection to your data warehouse.
- 7 Click **OK**.
- 8 Click **File > Export**. Ensure that you save the universe before you export it.
- 9 Verify that the exported universe has the same directory destination.
- 10 Click **OK**.
- 11 Repeat Step 4 – Step 10 for the **Business Impact Analysis** universe.

Step 4: Add and Update the Metric Universes

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java InfoView**.
- 2 Log on as **Administrator** with no password.
- 3 Click **Go to Performance Management**.
- 4 Click **Setup** on the Toolbar.
- 5 Click the **System Setup** tab.
- 6 Click **Universes**.
- 7 Click **Add Universe**.
- 8 From the drop-down Measure Universe list, select **Business Impact Metrics**.
- 9 Click **OK**. The Business Impact Metrics universe should appear in the Universe Definition window.
- 10 Select the **Business Impact Metrics** universe name and click the **Update Metrics and Control Charts Definitions** check box.

- 11 Click **Update**. You should see a list of Available Objects in the lower left corner.



If you do not see a connection name listed next to your universe:

- a Log onto Designer.
- b Verify that the universe has the correct connection parameters.
- c Export the universe.

Step 5: Run the PMDT Tool

This step extracts the XML source file of metrics to the target machine.

- 1 Use the Windows command line to locate and run this batch file:
run_DeploymentTool_PSO.bat
- 2 When the Performance Management Deployment Tool appears, click **Next**.
- 3 Click the Source File radio button and click **Browse**.
- 4 Navigate to the BIA metrics file:
`\\Business_Impact_Analytics\business_impact_metrics.xml`
- 5 On the Filter screen, you can expand the probedimensions and metrics trees to see the values to be exported to your database. Notice that these items have a number appended at the end of their name. This is the ID number that the item will be stored under in your database. They should all be in the 5000 number range. Click **Next**.
- 6 On the Export screen, click **Target Repository** and specify the Target CMS repository, the username, and password.
- 7 Click **Export**. The Check Screen returns success messages for the assets that added to the target repository.
- 8 Click **Close**.
- 9 Return to the command window. Follow the instructions to complete the session and close the window.


Step 6: Refresh the BIA Metrics

You must use BusinessObjects Enterprise Performance Manager to refresh the metrics.

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > Performance Management > Performance Management InfoView Java**.
- 2 Log on as Administrator with no password.
- 3 Click **Go to Performance Management**.
- 4 Click **Setup** on the toolbar.
- 5 Click the **System Setup** tab.
- 6 Click **Dimensions**.
- 7 Select an existing Dimension in the upper text box and click **Edit Dimension**.
- 8 Click **Next**.
- 9 Click **Refresh**.
- 10 Click **Next**.
- 11 Click **END**.
- 12 Repeat Step 7 – Step 11 for all dimensions.
- 13 Click **Go To Performance Management**.
- 14 Click **Dashboard Manager**.
- 15 Click the **Metrics** tab.
- 16 Click the **Refresh** icon next to the Available Metrics to refresh the list of metrics.
- 17 Select **Business Impact Metrics** from the **Available Metrics** drop-down list.
- 18 For each category listed, select the metric.
- 19 Click the **Purge** icon, then the **Refresh** icon.
- 20 When this warning appears, “This operation can be very long. Do you want to continue,” click **OK**.
- 21 Repeat Step 17 – Step 20 to refresh other metrics in the list.

Each metric will refresh and when the process is complete, you can see a Last Refresh Date in the Metric History section.

Task 10: Verify the BIA Installation

- 1 Start a second browser session and type `http://host-name:port_number/decisionCenter` to verify that DecisionCenter starts successfully.
 -  The information in the URL address is case-sensitive.
- 2 Log in with your user name and password.
- 3 Expand the **Business Impact** node in the navigation tree to establish a BusinessObjects connection and view any of these analytics:
 - Business Service Downtime Impact/Cost
 - Business Service Downtime Impact by Assignment Group
 - Business Service Downtime Impact by Category
 - CI Type Downtime Impact
 - CI Type Downtime Impact by Business Service
 - Downtime Impact by Top 5 Business Services Details
 - Downtime Impact by Top 5 Value Centers Details
 - Downtime Impact for Business Service by Value Center
 - Downtime Impact for Value Center by Business Service
 - IMT Downtime Gross Impact
 - IMT Downtime Impact by Top 5 Business Services
 - IMT Downtime Impact by Top 5 Value Centers
 - Value Center Downtime Impact/Cost

Refreshing the Data

HP OpenView Connect-It scenarios for BIA run only once. There is no automatic schedule defined. Mapping scenarios run once to synchronize all the data from identified resources. You may need to re-run the scenarios, data mining activities, and the History Builder if you have changes to your original source data.

If you schedule BIA scenarios to run periodically to re-synchronize the data, consult the HP OpenView Connect-It documentation for best practice guidelines.



If you schedule the `dco_rds.scn` scenario to run periodically, create the scheduling grouped by the order of data source connector sequences. For example, sequence `rds source 1`, `rds source 2`, `rds source 3`, and so on.

The amount of time required to synchronize the data depends on the volume of data to be processed and the capacity of your server. Ensure that you schedule the synchronization to occur during off-peak hours when the server has no other demands.

5 Optimization Installation

The chapter describes the software installation and configuration preparation needed to install and run the DecisionCenter Optimization tier.

DecisionCenter supports both Microsoft SQL Server and Oracle for ITPA installations. DecisionCenter supports only Microsoft SQL Server if you add BIA and Optimization. Ensure that you consult the DecisionCenter Support Matrix on the **HP Software Support** web site for the supported versions of these products.

Installation Checklist

Print this checklist to use during the installation process. As you complete each task, mark it as completed.



Complete Tasks 1 and 2 on the Optimization server. For more information, see the distributed server configuration diagram on page 23.

- Task 1: Install the Optimization Engine on page 112.
- Task 2: Configure the Optimization Engine on page 113.
 - Step 1: Configure database.properties on page 113.
 - Step 2: Configure the Port Number on page 113.
 - Step 3: Configure the Host URL on page 114.
 - Step 4: Configure the Optimization Engine Memory Allocation on page 115.
 - Step 5: Restart Tomcat on page 115.

- ▶ Complete Task 3 on the DecisionCenter data warehouse server.
 - Task 3: Install the Optimization Content on page 115.
 - Step 1: Install the Optimization Universes, Reports, and Views on page 116.
 - Step 2: Update the Universe Database Connection on page 117.
- ▶ Complete Task 4 on the workstation that is network connected to the DecisionCenter application server.
 - Task 4: Verify the Optimization Installation on page 117.

Task 1: Install the Optimization Engine

Before you begin, ensure that you have a valid authorization code. If necessary, contact **HP Software Support**.

- 1 Insert the DecisionCenter installation media into your CD-ROM drive.
- 2 The installation begins automatically. If necessary, you can start the installation from **Autorun.exe** on the DecisionCenter installation media.
- 3 Click the **Optimization** tab.
- 4 Click **Install Optimization**.
- 5 Follow the instructions to install the Optimization engine.

The default location for the DecisionCenter installation is:

\\Program Files\HP OpenView\DC\Optimization

There are three primary installation folders:

- bin
- config
- lib

Task 2: Configure the Optimization Engine

When you complete the installation, you must configure some installation files.

Step 1: Configure database.properties

- 1 Navigate to this installation directory:
`\\Program Files\HP OpenView\DC\Optimization\config`
- 2 Open the `database.properties` file with a text editor. This file contains typical configuration statements for Microsoft SQL Server and JDBC drivers.
- 3 Edit the configuration setting to refer to your database environment.
- 4 Save and close the file.

Step 2: Configure the Port Number

The port and URL settings in three properties file enable the DecisionCenter application to communicate with the DecisionCenter Optimization engine if they are installed on separate servers.

- 1 Open this file with a text editor:
`\Program Files\HP OpenView\DC\Optimization\config\jmx.properties`
to locate this parameter:
`jmx.serviceUrl=service:jmx:rmi:///jndi/rmi://localhost:9999/jmxServer`
- 2 Open this file with a text editor:
`\\...HP OpenView\DC\Optimization\config\optimizerJmxContext.xml`
to locate this parameter:
`<property name="port" value="9999" />`

- 3 From the Tomcat server, open this file with a text editor:
`\\...Tomcat\webapps\decisionCenter\WEB-INF\jmx.properties`

to locate this parameter:

```
jmx.jmxUrl=service:jmx:rmi:///jndi/rmi:  
//localhost:9999/jmxServer
```

The port value in each file must be an available port on the DecisionCenter optimization server and the port numbers must match.

- 4 Make the necessary port number changes.
- 5 Save the files.
- 6 Close only the `optimizerJmxContext.xml` file.

Step 3: Configure the Host URL

The host URL settings in two properties file enable the DecisionCenter application to communicate with the DecisionCenter Optimization engine if they are installed on separate servers.

- 1 From this file (already open):

```
\\...HP OpenView\DC\Optimization\config\jmx.properties
```

locate this parameter:

```
jmx.serviceUrl=service:jmx:rmi:///jndi/rmi:  
//localhost:9999/jmxServer
```

- 2 From the Tomcat server, open this file with a text editor:

```
\\...Tomcat\webapps\decisionCenter\WEB-INF\jmx.properties
```

to locate this parameter:

```
jmx.jmxUrl=service:jmx:rmi:///jndi/rmi:  
//localhost:9999/jmxServer
```

- 3 The host name and port number (**9999**) in each file must be the host name of the DecisionCenter Optimization engine server and available port on that server. The port number must be the same number that you specified in the `optimizerJmxContext.xml` file in Step 4 on page 114.

- 4 Make any necessary changes to ensure that these host name and port number values match in both properties files.
- 5 Save and close both files.

Step 4: Configure the Optimization Engine Memory Allocation

If you process large data sets, the Optimization engine will require more memory.

- 1 Open this file with a text editor:
`\\Program Files\HP OpenView\DC\Optimization
\bin\run_optimizer.bat`
- 2 Change this value:
`java -Xmx500m`
to
`java -Xmx1250m`
- 3 Save and close the file.

Step 5: Restart Tomcat

- 1 From the Windows **Start** menu, click **Control Panel** > **Services** and stop the Apache Tomcat service.
- 2 Clear the cache by deleting the files in this directory:
`\\Program Files\BusinessObjects Enterprise 11.5\Tomcat
\work\Catalina\localhost\DecisionCenter`
- 3 From the Windows **Start** menu, click **Control Panel** > **Services** and start the Apache Tomcat service.

Task 3: Install the Optimization Content

Before you begin, ensure that you complete the tasks in [Chapter 3, ITPA Installation and Configuration](#) and [Chapter 4, BIA Planning and Installation](#).

Step 1: Install the Optimization Universes, Reports, and Views

- 1 Create a local directory where you can copy the import files. For example, create a new root directory named DecisionCenter_files.
- 2 From the DecisionCenter installation media, navigate to this folder:
\\Optimization\ITPO
- 3 Copy the contents of the ITPO folder to the local directory you created in Step 1. For example, your local folders would look like this:
\\DecisionCenter_files\ITPO\DecisionCenter_Simulation
- 4 Unzip this file into the DecisionCenter_Simulation directory using the provided authorization code:
\\DecisionCenter_files\DecisionCenter_Simulation
\DecisionCenter_Simulation.zip
- 5 Open \\DecisionCenter_files\DecisionCenter_Simulation\itpo.bat with a text editor.
- 6 Replace these variables with the values that are correct for the device where you installed BusinessObjects Enterprise XI R2.

Table 25 Variables


Variable	Example
BUSOBJ_HOME=	C:\Programs\BusinessObjects\
DC_HOME	C:\DecisionCenter_files\
CMS_NAME_PORT	<i>host_name</i> :6400 6400 is the default BusinessObjects Enterprise XI port number
CMS_USER	Administrator
CMS_PASSWORD	<blank>
JAVA_HOME	%BUSOBJ_HOME%\j2sdk1.4.2_08

- 7 Save the file.
- 8 Run the batch program using Windows Explorer or from a Windows command prompt. Follow the Windows instructions.

Step 2: Update the Universe Database Connection

- 1 From the Windows **Start** menu, click **All Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > Designer**.
- 2 Log on as **Administrator** with no password.
- 3 Create a new connection, as necessary, to your data warehouse.
- 4 Click **File > Import**.
- 5 Click the **Universes** folder from the **Folder** drop-down list.
- 6 Click **Browse** and select the **Simulation Optimization Analysis** universe to import.
- 7 Click **OK**.
- 8 When a success message appears, click **OK**.
- 9 Click **File > Parameters**.
- 10 On the **Definition** tab, select your database connection from the drop-down **Connection** list. For example, select **rdsdb**.
- 11 Click **OK**.
- 12 Click **File > Export**.
- 13 Verify that any exported universe has the same directory destination.

Task 4: Verify the Optimization Installation

- 1 Start a second browser session and type `http://host-name:port_number/decisionCenter` to verify that DecisionCenter starts successfully.
 -  The information in the URL address is case-sensitive.
- 2 Log in with your user name and password.
- 3 Expand the **Simulation and Optimization** node in the navigation tree to establish a BusinessObjects connection and run a Simulation Optimization query.

6 Migration

Customers with certain existing BI Portal installations can migrate their environment and data warehouse to be compatible with a DecisionCenter 1.00 installation. If your installation meets the requirements, you can complete the migration tasks described in this chapter to ensure that your existing data warehouse is compatible with DecisionCenter.

If your data warehouse is customized, see the migration instructions in the *DecisionCenter Integration Guide*.

Migration Requirements

An HP OpenView BI Portal 5.2 or 5.2.1 is a candidate for migration if you can meet these requirements:

- BI Portal 5.2 or 5.2.1 data warehouse
- HP OpenView ServiceCenter 6.1 with one of the following schema conditions
 - An out-of-box schema
 - A well-migrated schema
 - A ServiceCenter schema customized only with additional files or fields

Ensure that you complete all ServiceCenter 6.1 migration steps before you begin migration. You must run the DecisionCenter 1.00 unload file for ServiceCenter that is in the Support files directory on the DecisionCenter installation media.

- HP OpenView AssetCenter 4.3.x or 4.4

Ensure that you complete all AssetCenter 4.3.x or 4.4 migration steps before you begin migration. You must run the DecisionCenter 1.00 script file for AssetCenter that is in the Support files directory on the DecisionCenter installation media.

Migration Environment

Ensure that you meet all of the requirements described in [Chapter 1, Introduction](#) and in the DecisionCenter Support Matrix on the **HP Software Support** web site.

Migration Notes

The following list describes the BusinessObjects resources that you can use during the migration process.

- 1 Install BusinessObjects Enterprise XI R2 using BusinessObjects Enterprise XI product installation documentation.
- 2 If you customized BI Portal 5.2.x reports and universes, you should install the DecisionCenter 1.00 reports and universes and re-apply the original customization.
- 3 If you added custom reports or universes to the default BI Portal installation, see the BusinessObjects 6.x to XI Release 2 Migration Guide. When you use the import wizard utility, you should import only the corporate categories, corporate documents, and universes.
- 4 Review the BusinessObjects documentation for any post-migration tasks that you might need to complete, and how to validate the migrated objects, such as universes and reports, in the new environment.

Migration Checklist

Print this checklist to use during the migration process. As you complete each task, mark it as completed.

- Task 1: Migrate Out-of-Box Data on page 121.
 - Step 1: Migrate BI Portal With Out-of-Box ServiceCenter Data on page 121.
 - Step 2: Migrate BI Portal With Out-of-Box AssetCenter Data on page 123.
- Task 2: Migrate Customized Data on page 123.

Task 1: Migrate Out-of-Box Data

Follow the steps in the next sections to migrate ServiceCenter or AssetCenter data.

Step 1: Migrate BI Portal With Out-of-Box ServiceCenter Data

Follow these steps to migrate BI Portal out-of-box ServiceCenter data.

- 1 Stop the data warehouse `rds_sc` and `rds_user` Connect-It scenarios from the Connect-It Service Console.
- 2 Back up the existing data warehouse and existing files, folders, and sub-folders in the original data warehouse location. For BI Portal with ServiceCenter, the default location is
 - `\\Program Files\Peregrine\RDS_SC`
- 3 Back up the data warehouse database.
- 4 Run the application to install the DecisionCenter data warehouse for ServiceCenter (or AssetCenter) from the installation media. The default installation directory is:

- `\\Program Files\HP\Openview\DC\RDS_SC`

- `\\Program Files\HP\Openview\DC\RDS_AC`

- 5 Restore this data warehouse system file:
\\Program Files\Peregrine\RDS_SC\cit*.ini
The rds_sc.ini contains synchronization information. If you want to use that *.ini file in the new installation, copy it to:
\\Program Files\HP\Openview\DC\RDS_SC\cit
- 6 For BI Portal SC 5.2.1 only, rename rds521_etl.xml to rds_etl.xml in
\\Program Files\HP\Openview\DC\RDS_SC\conf
- 7 Copy all files and sub-folders from
\\Program Files\Peregrine\RDS_SC\lib
to
\\Program Files\HP\Openview\DC\RDS_SC\lib
- 8 To migrate BI Portal for ServiceCenter:
 - a From the **Start** menu, click **Run**, type **CMD**, and click **OK** to open a command window.
 - b Change directories to:
\\Program Files\HP\Openview\DC\RDS_SC\common\bin
 - c Type this command:
rds_sc61_migrate.bat
- 9 From the DecisionCenter installation media, copy
SupportFiles\cit\scdb61.cfg
to
\\Program Files\Peregrine\Connect-It 3.6.0 en\config\sc\config
- 10 Navigate to this directory in the DOS command window:
\\Program Files\HP\Openview\DC\RDS_SC\common\bin
- 11 Type this command:
upd_rdssc.cmd

- 12 Type this command:

```
test_rdssc.cmd
```

Alternate Step: Use the Connect-It Service Console to modify the Connect-It data warehouse scenarios service properties and point to the new path for the scenarios.

- 13 Restart the scenarios services from the Connect-It Service Console.

Step 2: Migrate BI Portal With Out-of-Box AssetCenter Data

Follow the steps in [Step 1: Migrate BI Portal With Out-of-Box ServiceCenter Data](#) on page 121 using the following substitutions.

- For BI Portal with AssetCenter, the default location is
\\Program Files\Peregrine\RDS_AC
- For DecisionCenter with AssetCenter, the default location is
\\Program Files\HP\Openview\DC\RDS_AC

Task 2: Migrate Customized Data

Migrating customized data requires advice from HP Support and may require assistance from HP Professional Services personnel. For more information visit the HP Software Support web site at:

<http://support.openview.hp.com/>

7 Security

DecisionCenter security models use predefined access levels and security roles. Administrators must grant access rights to the groups and security roles using the BusinessObjects Enterprise XI Central Management Console (CMC).

DecisionCenter supports Lightweight Directory Access Protocol (LDAP) authentication. Administrators can configure the Common Web Client (CWC) to enable LDAP. The BI Authentication Processing filter validates users and groups.

After you set up an LDAP server, you must:

- Create DecisionCenter users and groups in the LDAP server.
- Configure LDAP authentication in BusinessObjects Enterprise XI.

For more information about configuring LDAP authentication, see your BusinessObjects Enterprise XI documentation.

Security Checklist

Print this checklist to use during the installation process. As you complete each task, mark it as completed.

- Task 1: Create DecisionCenter Users and Groups on page 126.
- Task 2: Configure LDAP on page 127.
 - Step 1: Configure the LDAP Host in BusinessObjects Enterprise XI on page 127.
 - Step 2: Configure the Secure Socket Layer Authentication for LDAP on page 128.
 - Step 3: Configure LDAP Mapping Options on page 128.
 - Step 4: Map LDAP groups on page 128.

Before You Begin

Before you set up and enable LDAP authentication, set up an LDAP server and ensure that your LDAP directory is valid. For more information, see your LDAP documentation.

Task 1: Create DecisionCenter Users and Groups

You must configure the LDAP host before you make configuration changes to BusinessObjects Enterprise XI. This includes adding DecisionCenter out-of-box groups and your own groups to the LDAP server. Changes to group names require changes to both the `web.xml` file and the LDAP server.

DecisionCenter provides the following out-of-box groups.

Table 26 DecisionCenter Out-Of-Box Groups

Analytic Type	General Manager Role	Advanced Analysis Role	Administration Role
Performance Analytics	ITPA_GM	ITPA_AA	ITPA_Admin
Business Impact Analytics	BIA_GM	BIA_AA	BIA_Admin
Performance Optimization	ITPO_GM	ITPO_AA	ITPO_Admin

Task 2: Configure LDAP

Complete the following steps to configure the host, Secure Socket Layer authentication, LDAP mapping options, and LDAP groups.

Step 1: Configure the LDAP Host in BusinessObjects Enterprise XI

- 1 Click **Start > Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java Administration Launchpad**.
- 2 Select the **Central Management Console**.
- 3 Log in with your user name and password.
- 4 Click **Authentication**, then click the **LDAP** tab.
- 5 Click **Start LDAP Configuration Wizard**.
- 6 In the **Add LDAP Host (hostname: port)** field, type your host and port information.
- 7 Click **Add**, then click **Next**.
- 8 In the **LDAP Server Type** drop-down list, select your server, and click **Next**.
- 9 In the **Base LDAP Distinguished Name** field, type the distinguished name and click **Next**.

- 10 Type the LDAP host credentials:
 - In **LDAP Server Administration Credentials**, type the distinguished name and password for a user account that has rights to administer your LDAP server.
 - In **LDAP Referral Credentials**, type the same distinguished name and password you entered for LDAP Server Administration Credentials.
- 11 In the **Maximum Referral Hops** field, type the number of referral hops. If you set this field to zero, no referrals are followed.
- 12 Click **Next**.

Step 2: Configure the Secure Socket Layer Authentication for LDAP

- 1 From the **Type of SSL authentication** drop-down list, select **Basic (no SSL)** and click **Next**.
- 2 From the Authentication drop-down list, select **Basic (no SSO)** and click **Next**.

Step 3: Configure LDAP Mapping Options

- 1 Select the following LDAP mapping options:
 - **Create a new account for every added LDAP alias**
 - **No new aliases will be added and new users will not be created**
 - **New users are created as named users**
- 2 Click **Next**.
- 3 Click **Finish**.

Step 4: Map LDAP groups

- 1 Click **Start > Programs > BusinessObjects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java Administration Launchpad**.
- 2 Select the **Central Management Console**.
- 3 Log in with your user name and password.

- 4 Click **Authentication**, then click the **LDAP** tab.
- 5 In **Mapped LDAP Member Groups**, add the DecisionCenter out-of-box groups in the **Add LDAP group (by cn or dn)** field and click **Add**.
- 6 Repeat the previous step to add another group.
- 7 To remove a group, select the group and click **Delete**.
- 8 Click **Update**.

For more information, see the *BusinessObjects XI R2* documentation.

A Troubleshooting

Before you attempt to troubleshoot a problem, ensure that your environment complies with the requirements of the Support Matrix. If you do not have the correct platform, version, browser, or other required component, DecisionCenter cannot run successfully. For more information, see the DecisionCenter Support Matrix on the **HP Software Support** web site.

BusinessObjects Critical Hot Fix

If you deploy ITPA or BIA content before you apply the BusinessObjects Enterprise Critical Hot Fix (CHF), you cannot re-deploy the ITPA or BIA content successfully because the existing reports and universes cannot be overwritten. After you install the CHF, you must delete all the folders and the universes from the repository before you attempt to deploy the ITPA or BIA content again.

Best practice: Follow the steps in the order presented in [Chapter 3, ITPA Installation and Configuration](#).

Heap Size

The heap size setting on the Web application server hosting DecisionCenter must be at least 512 MB. The recommended setting is 1024 MB.

Log Files

DecisionCenter produces two log files that you can access to troubleshoot errors:

- The Optimization engine log is in this directory:
`\\Program Files\HP OpenView\DC\Optimization\bin\dc.log`
- The application log is in this directory:
`\\...\Tomcat\bin\dc.log`

Changing web.xml Default Parameters

You can change the default values in the web.xml file if necessary. Follow these instructions.

- 1 From the Windows **Start** menu, click **Control Panel** > **Services** and stop the Apache Tomcat service.
- 2 Open this file with a text editor:
`\\...\Tomcat\webapps\...\WEB-INF\web.xml`
- 3 Modify one or more parameters. Use the information in [Table 27](#) on page 133 as a reference.
- 4 Save and close the file.
- 5 From the Windows **Start** menu, click **Control Panel** > **Services** and start the Apache Tomcat service.

Table 27 Default web.xml Parameters

Name	Description	Default Values
folderPrefix	Display folders in Business Objects with the specified prefix in DecisionCenter navigation menu	ITPA, BIA, ITPO
boProgPath	Business Objects InfoView application installation path	/businessobjects/enterprise115/ /desktoplaunch
DCPackages	DecisionCenter application packages	ITPA, BIA, ITPO
ITPA	Groups defined for the ITPA tier	ITPA_GM, ITPA_AA, ITPA_Admin
BIA	Groups defined for the BIA tier	BIA_GM, BIA_AA, BIA_Admin
ITPO	Groups defined for the Optimization tier	ITPO_GM, ITPO_AA, ITPO_Admin

Session Timeout Value

To adhere to best practices, change the session timeout values of the Business Objects Connection Server and the Web_IntelligenceReportServer. Unless otherwise noted, the default value is in seconds. For more information, refer to the Business Objects documentation.

- 1 Click **Start > Programs > Business Objects XI Release 2 > BusinessObjects Enterprise > BusinessObjects Enterprise Java Administration Launchpad**.
- 2 Click **Central Management Console**.
- 3 Log on as Administrator.
- 4 Click **Servers**.
- 5 Click **Connection Server**.

- 6 From the Properties tab **Connection Pooling** section, select **No Timeout**.
- 7 In the **Connection Server Job** section, change the **Timeout for Inactive Jobs** to **120**.
- 8 Click **Apply**.
- 9 Click **Web_IntelligenceReportServer**.
- 10 From the Properties tab **Connection Time Out** field, change the value to **60** minutes.
- 11 Click **Apply**.

JDBC Connection Pool Errors

The `maxActive` property in the JNDI data source configuration defines the maximum number of active connections in the pool. You must evaluate the factors that drive how large your connection pool should be. If users close their browser sessions without logging out, the connections they use remain open until:

- The connection expires after being unused for the amount of time specified in the JNDI configuration. Some connections can become available automatically as the specified timeout occurs.
- The user session expires after the amount of time specified in the `web.xml` file.

For optimum results, this value can be as low as 10 or as high as 100, depending on the number of concurrent users and abandoned browser sessions. If you see JDBC connection pool errors, increase the number of connections to a value that works in your environment.

Broken Database Server Connections

When a database server reboots, or a network failure occurs that breaks your database server connection, you must restart Tomcat to re-establish the connection. You can configure Tomcat to re-create a broken connection automatically by editing the `decisioncenterContext.xml` file and adding the *validationQuery* parameter.

- 1 From the Windows **Start** menu, click **Control Panel > Services** and stop the Apache Tomcat service.

- 2 Open this file with a text editor:

```
\\...\\Tomcat\\conf\\Catalina\\localhost\\decisioncenterContext.xml
```

- 3 For Microsoft SQL Server, add the following parameter to the file.

```
<parameter>
  <name>validationQuery</name>
  <value>select 1</value>
</parameter>
```

- 4 For Oracle, add the following parameter to the file.

```
<parameter>
  <name>validationQuery</name>
  <value>select 1 from dual</value>
</parameter>
```

- 5 Save and close the file.

- 6 From the Windows **Start** menu, click **Control Panel > Services** and start the Apache Tomcat service.

B Configuring a Remote Tomcat Server

You can install DecisionCenter with Tomcat and BusinessObjects Enterprise XI on separate servers. Follow the directions in [Task 3: Install BusinessObjects Enterprise XI](#) on page 33 to install BusinessObjects Enterprise XI on an application server using the BusinessObjects Enterprise XI Installation guide. If you have an existing Tomcat installation that is compatible with BusinessObjects Enterprise XI R2, you can use that instance, or install the Tomcat server included in the BusinessObjects XI R2 installation media.

Task 1: Install the Web Component Adapter

You can install the BusinessObjects Enterprise XI Web Component Adapter (WCA) from the BusinessObjects installation media. However, ensure that you complete the installation of the recommended BusinessObjects Critical Hotfix before you begin the remote Tomcat installation. If you upgrade your BusinessObjects server installation, you must repeat the steps that require files to be copied from the BusinessObjects server.

- 1 Install BusinessObjects Enterprise XI Web Component Adapter (WCA) component on the same drive as the BusinessObjects Enterprise XI installation on the BusinessObjects Enterprise XI server. Follow the instructions in the BusinessObjects Enterprise XI installation documentation to install the WCA.

- 2 Deploy the BusinessObjects Enterprise XI WCA by copying `webcompadapter.war` from your BusinessObjects server:
`\\Programs\BusinessObjects\BusinessObjects Enterprise 11.5
\java\applications`
to your application server:
`\\Programs\BusinessObjects\BusinessObjects Enterprise 11.5
\java\applications`

Task 2: Modify `webcompadapterwar.xml`

- 1 Copy this file from your BusinessObjects server:
`\\Programs\BusinessObjects\Tomcat\conf\Catalina\localhost
\webcompadapterwar.xml`
to your application server:
`\\Tomcat\conf\Catalina\localhost\webcompadapterwar.xml`
- 2 Open `webcompadapterwar.xml` with a text editor.
- 3 Edit the file to ensure the `docBase` parameter points to the `webcompadapterwar.war` file. For example:

```
<Context docBase="C:\Program Files\Business  
Objects\BusinessObjects Enterprise  
11.5\java\applications\webcompadapter.war"  
path="/businessobjects" debug="0" reloadable="false"/>  
</Context>
```
- 4 Save `webcompadapterwar.xml`.

Task 3: Deploy the .war File

Follow these steps to deploy the .war file on the remote application server.

- 1 From the Windows **Start** menu, click **Control Panel** > **Services** and start the Apache Tomcat service.

- 2 Ensure that it creates this directory:
`\\...\Tomcat\webapps\businessobjects`

Task 4: Modify the Remaining Files

- 1 Copy the remaining .war files from this BusinessObjects Enterprise XI server directory:
`\\BusinessObjects Enterprise 11.5\java\applications`
to this remote application server BusinessObjects Enterprise XI directory:
`\\BusinessObjects Enterprise 11.5\java\applications`
- 2 Copy the remaining .xml files from this BusinessObjects Enterprise XI server directory:
`\\BusinessObjects\Tomcat\conf\Catalina\localhost`
to this remote application server BusinessObjects Enterprise XI directory:
`\\...\Tomcat\conf\Catalina\localhost`
- 3 Open each .xml file and ensure docBase is pointing to the appropriate .war file. For example:

```
<Context docBase="C:\Program Files\Business  
Objects\BusinessObjects Enterprise  
11.5\java\applications\webcompadapter.war"  
path="/businessobjects" debug="0" reloadable="false"/>  
  
</Context>
```

Task 5: Deploy the Remaining Files

Follow these steps to deploy the .war file on the remote application server.

- 1 From the Windows **Start** menu, click **Control Panel** > **Services** and start the Apache Tomcat service.

- 2 Verify that no error messages occur except this one:
CANNOT READ INITCONFIG.PROPERTIES af.configdir PROPERTY
SETTING.

This message is acceptable.

Task 6: Copy cewcanative.jar

- 1 From the Windows **Start** menu, click **Control Panel** > **Services** and stop the Apache Tomcat service.
- 2 Copy this file from the BusinessObjects Enterprise XI server:
\\BusinessObjects\Tomcat\shared\lib\cewcanative.jar
to this remote application server BusinessObjects Enterprise XI directory:
\\Tomcat\shared\lib

Task 7: Configure Performance Manager

- 1 Create a directory on the remote application server for the BusinessObjects Enterprise XI Performance Management application. For example:
\\Program Files\Business Objects\your_directory\
- 2 Copy all of the .properties files from this directory:
\\Business Objects\Performance Management 11.5\
to this new directory on your remote application server. For example:
\\Program Files\Business Objects\your_directory*.properties
- 3 Open the InitConfig.properties file with a text editor.
- 4 Ensure that the path to the Central Management Server points to the BusinessObjects Enterprise XI server.

Task 8: Configure Tomcat Java Options

Follow these steps on the remote application server.

- 1 From the Windows **Start** menu, click **Programs > Tomcat > Tomcat Configuration**.
- 2 Click the **Java** tab.
- 3 In the Java Options section, ensure that the following Java options exist and these paths reflect the correct locations on the remote application server. If necessary, modify the paths to these local directories for BusinessObjects Enterprise XI WCA and Performance Manager. For example:

```
-Djava.library.path=WINDIR\system32\;C:\Program Files  
\Business Objects\BusinessObjects Enterprise 11.5\win32_x86\  
-Daf.configdir=C:\Program Files\Business Objects  
\your_directory\  

```



If you use Cygwin-based `%CATALINA_HOME%\bin*.sh` scripts to start and stop your Tomcat server, you should omit spaces in any property settings. `JAVA_OPTS` errors can occur in a Windows installation when you try to pass multiple properties with spaces. Either omit spaces, or use non-Cygwin `%CATALINA_HOME%\bin*.sh` scripts to start and stop your Tomcat server. If you use `.bat` scripts, you can use spaces.

Task 9: Configure .properties, .wsdl, and .xml Files

- 1 If you have a `dswsbobje` application in this folder on the remote application server:

```
\\Business Objects\Tomcat\webapps
```

skip this step and proceed to [step 2](#) on page 142.

- a Copy this file on the BusinessObjects Enterprise XI server:

```
\\Business Objects\BusinessObjects Enterprise 11.5\Web  
Services\en\dswsbobje.war
```

to this remote application server directory:

```
\\Business Objects\BusinessObjects Enterprise 11.5\java  
\applications\dswsbobje.war
```

- b Copy this file on the BusinessObjects Enterprise XI server:

```
\\Business Objects\Tomcat\conf\Catalina\localhost  
\dswsbobje.xml
```

to this remote application server directory:

```
\\Business Objects\Tomcat\conf\Catalina\localhost\dswsbobje.xml
```

- c From the Windows **Start** menu, click **Control Panel > Services** and start the Apache Tomcat service.

- 2 Open this file with a text editor:

```
\\Business Objects\Tomcat\webapps\dswsbobje\WEB-INF\classes  
\dsws.properties
```

- 3 Change the **domain=** parameter to point to your BusinessObjects server. For example:

```
domain=server_name
```

- 4 Change the **report.server** parameter to point to your remote application server. For example:

```
report.server=remote_server_name
```

- 5 For each .wsdl file in this directory:

```
\\Business Objects\Tomcat\webapps\dswsbobje\WEB-INF\classes
```

do the following:

- a Open the file with a text editor.

- b Search for:

```
soap:address location="http://localhost:8080/dsws/services/bicatalog"
```

- c Change **localhost:8080** to your application server name and port number.

- d Save the file.

- 6 For each web.xml file in these directories on the application server:
\\Business Objects\Tomcat\webapps\...\WEB-INF\web.xml
do the following:
 - a Open the file with a text editor.
 - b Search for any parameter that points to the Central Management Server. The parameter value should point to the BusinessObjects server.
 - c Save any changed file.

Task 10: Customize the Tomcat Installation

Follow these steps to customize BusinessObjects InfoView on the remote application server. This task ensures that BusinessObjects InfoView will integrate with DecisionCenter.

- 1 From the Windows **Start** menu, click **Control Panel** > **Services** and stop the Apache Tomcat service.
- 2 Delete the Tomcat cache.
- 3 Copy this file on the installation media:
\\ITPA\ITPA-SM\BOCustomization\desktoplaunch\jsp\ce\cestartpage.jsp
and paste it into this directory on your remote application server:
\\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch\jsp\ce
- 4 Click **OK** to replace the existing file.
- 5 Copy this file on the installation media:
\\ITPA\ITPA-SM\BOCustomization\desktoplaunch\jsp\performanceManagementHome.jsp
and paste it into this directory on your remote application server:
\\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch\jsp
- 6 Click **OK** to replace the existing file.

- 7 Copy this file on the installation media:
\\ITPA\ITPA-SM\BOCustomization\desktoplaunch\scripting
\aa-linkbar.js
and paste it into this directory on your remote application server:
\\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch
\scripting
- 8 Click **OK** to replace the existing file.
- 9 Copy this file on the installation media:
\\ITPA\ITPA-SM\BOCustomization\desktoplaunch\jsp
\appsContentFrame.jsp
and paste it into this directory on your remote application server:
\\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch\jsp
- 10 Click **OK** to replace the existing file.
- 11 Copy this file on the installation media:
\\ITPA\ITPA-SM\BOCustomization\desktoplaunch\jsp
\headerPlusAF.jsp
and paste it into this directory on your remote application server:
\\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch\jsp
- 12 Click **OK** to replace the existing file.
- 13 Copy this file on the installation media:
\\ITPA\ITPA-SM\BOCustomization\desktoplaunch\jsp
\aa-promptconten.jsp
and paste it into this directory on your remote application server:
\\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch\jsp
- 14 Click **OK** to replace the existing file.

- 15 Copy this file on the installation media:
 \\ITPA\ITPA-SM\BOCustomization\desktoplaunch\jsp
 \workspaceHeaderAF.jsp
and paste it into this directory on your remote application server:
 \\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch\jsp
- 16 Click **OK** to replace the existing file.
- 17 Copy this file on the installation media:
 \\ITPA\ITPA-SM\BOCustomization\desktoplaunch\viewers
 \cdz_adv\viewCDZDocument.jsp
and paste it into this directory on your remote application server:
 \\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch
 \viewers\cdz_adv
- 18 Click **OK** to replace the existing file.
- 19 Copy this file on the installation media:
 \\ITPA\ITPA-SM\BOCustomization\desktoplaunch\viewers
 \cdz_adv\viewReport.jsp
and paste it into this directory on your remote application server:
 \\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch
 \viewers\cdz_adv
- 20 Click **OK** to replace the existing file.
- 21 Copy this file on the installation media:
 \\ITPA\ITPA-SM\BOCustomization\desktoplaunch\InfoView\main
 \home.jsp
and paste it into this directory on your remote application server:
 \\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch
 \InfoView\main

- 22 Copy this file on the installation media:
\\ITPA\ITPA-SM\BOCustomization\desktoplaunch\InfoView\utils\utils.jsp
and paste it into this directory on your remote application server:
\\Tomcat\webapps\businessobjects\enterprise115\desktoplaunch\InfoView\main
- 23 Restart Tomcat by running the startup.bat file in the Tomcat directory.
- 24 Start a browser session to test the application.
- 25 Type the following URL. Modify it to point to the BusinessObjects Enterprise XI web server provider name and the assigned port number:
http://your application server:port number/dswsbobje/services

Task 11: Install DecisionCenter

Follow these steps to install DecisionCenter on the remote application server.

- 1 Copy this file on the installation media:
\\ITPA\web-app\tomcat\decisionCenter.war
and paste it into this directory on your remote application server:
\\Tomcat\webapps
- 2 From the Windows **Start** menu, click **Control Panel > Services** and start the Apache Tomcat service.
- 3 Copy the JDBC driver file `jtds-1.2.jar`
and paste it into this directory on your remote application server:
\\Tomcat\common\lib
For more information about JDBC drivers, see [Step 1: Install and Configure JDBC Drivers](#) on page 48.
- 4 From the Windows **Start** menu, click **Control Panel > Services** and stop the Apache Tomcat service.

- 5 Clear the businessobjects and Catalina cache files.
- 6 From the Windows **Start** menu, click **Control Panel** > **Services** and start the Apache Tomcat service

Task 12: Test the DecisionCenter Installation

It is important to test the installation and verify if there is communication among the Business Objects Enterprise XI server, the remote Tomcat server, and the DecisionCenter application.

- 1 Type the following URL and modify it to point to the server and the assigned port number:
http://your application server:port number/decisionCenter
- 2 Log in with your user name and password.
- 3 Verify that you can expand the Navigation tree and view both the Analytic and Optimization nodes.

