

CA Business Intelligence

Implementation Guide

Release 03.3.00



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Chapter 1: Introduction

CA Business Intelligence is a set of reporting and analytic software that various CA Technologies products use to present information and support business decisions. CA Technologies products use CA Business Intelligence to integrate, analyze, and then present, through various reporting options, vital information that is required for effective enterprise IT management.

CA Business Intelligence Release 03.3.00 includes SAP BusinessObjects Enterprise XI 3.1 SP5, a complete suite of information management, reporting, query and analysis tools.

Note: CA Business Intelligence Release 03.3.00 is the official version of CA Business Intelligence, packaged with SAP BusinessObjects Enterprise XI 3.1 SP5. If there is no existing installation of CA Business Intelligence, BusinessObjects Enterprise XI 3.1 SP5 is installed. If CA Business Intelligence Release 3.2 is already installed, only the SP5 patch is installed. For more information about the SAP BusinessObjects Enterprise XI 3.1 SP5 features, see the guide *What's New in SAP BusinessObjects XI 3.1 Service Pack 5* (http://help.sap.com/businessobject/product_guides/boexir31SP5/en/xi31_sp5_whats_new_en.pdf).

CA Business Intelligence installs SAP BusinessObjects Enterprise XI as a stand-alone component. The installation runs independently of any CA Technologies products, allowing various CA Technologies products to share Business Intelligence services. The installation of CA Business Intelligence is a distinct and separate activity within the overall CA Technologies product installation process.

This section contains the following topics:

[Intended Audience](#) (see page 13)

[About this Guide](#) (see page 14)

[About BusinessObjects Enterprise](#) (see page 14)

Intended Audience

This documentation is intended for the system administrator who must install CA Business Intelligence on a Microsoft Windows or UNIX/Linux operating system. Familiarity with your overall network environment, port usage conventions, database environment, and application server software is essential.

As a system administrator, you are faced with many choices when installing CA Business Intelligence. This documentation helps you make the right decisions to create a reliable and powerful business intelligence reporting system for your organization.

About this Guide

This documentation provides information, procedures, and options for installing and removing BusinessObjects Enterprise, client tools, and language packs.

Sample deployment procedures are also provided that contain detailed steps on how to install CA Business Intelligence in both a Windows and UNIX environment.

Note: For detailed information regarding the specific components that are supported and delivered for each CA Technologies product, see your CA Technologies product documentation.

About BusinessObjects Enterprise

CA Business Intelligence packages and delivers BusinessObjects Enterprise XI 3.1 SP5. BusinessObjects Enterprise is a flexible, scalable, and reliable business intelligence reporting system that can be tightly integrated into your information technology infrastructure.

CA Technologies products leverage an extensive set of business intelligence capabilities including reporting, query, and analysis using BusinessObjects Enterprise technology. Crystal Reports® software (an enterprise reporting framework from BusinessObjects Enterprise) lets CA Technologies products deliver reports through BusinessObjects Enterprise Crystal Reports Viewer, with BusinessObjects Web Intelligence® software. This software is a powerful on demand query and analysis tool for easy data access, exploration, and interaction. CA Technologies enables business users with additional self-service on demand power capabilities.

Download a BusinessObjects Enterprise Document

BusinessObjects Enterprise provides access to various product documents on their company website.

To download a BusinessObjects Enterprise document

1. Open your web browser and go to the SAP Help Portal:
<http://help.sap.com/>
2. At the top of the page, click the SAP BusinessObjects tab.
3. Click All Products in the left pane.

4. Select the following options from the drop-down lists:

- Language: English
- Product: BusinessObjects Enterprise
- Version: (blank)

You can identify BusinessObjects Enterprise XI 3.1 SP5 documents under the Version Number column.

5. Right-click the PDF icon on the document, click Save Target As, then click OK.

Chapter 2: Prepare to Install

Before you install BusinessObjects Enterprise, perform the following actions:

- Obtain a general understanding of the installation process and the different options available. See the sections [Deployment Checklist](#) (see page 65) and [Installation Order](#) (see page 67).
- Review your system to ensure that it meets the basic requirements for a CA Business Intelligence installation. See [System Requirements](#) (see page 36).
- Ensure that all computers that your BusinessObjects Enterprise deployment uses can communicate with one another across your network. See [Network Requirements](#) (see page 36).
- Decide which BusinessObjects Enterprise components to install, and which of your own components to integrate. For more information about determining your needs and planning requirements, see the Architecture section of this [guide](#) (see page 26) and your CA Technologies product documentation.
- Determine the location of the components that you want to install. These components include the specific subnet, computer, database, security, or cluster systems that are required to run your system.
- Decide which installation method to use. See Installation Types.
- Review the [installation checklists](#) (see page 69).

This section contains the following topics:

[Assess Your Organization's Environment](#) (see page 18)

[Plan Your Deployment](#) (see page 25)

[Installation Overview](#) (see page 35)

[Installation Types](#) (see page 46)

[Installation Modes](#) (see page 49)

[Install Client Tools Only on Windows](#) (see page 49)

[Central Management Server Database Requirements and Preparation](#) (see page 50)

[Prepare an Existing Database Server](#) (see page 63)

[Before Deploying Web Applications](#) (see page 64)

[Determine the Currently Installed Version of CA Business Intelligence](#) (see page 65)

[Deployment Checklist](#) (see page 65)

[Installation Order](#) (see page 67)

Assess Your Organization's Environment

The resources and conventions used in your existing network environment affect how you deploy BusinessObjects Enterprise. This section serves as a checklist of criteria to help you plan your deployment, with resources provided for areas that you need to investigate further.

Different deployment options are available to you, depending on the operating systems, web application servers, database servers, and authentication method you plan to use. Other conventions used in your current environment can also affect how you deploy BusinessObjects Enterprise, such as security, performance monitoring, and design for high availability. This section provides a high-level overview for assessing your environment before deployment.

Network Configuration

BusinessObjects Enterprise is deployed in a networked environment. Verify connectivity between all computers and verify that DNS names can be resolved correctly. Use the ping command to verify network connectivity and DNS name resolution.

Note: Internet Protocol version 6 (IPv6) is supported in BusinessObjects Enterprise XI 3.1. For information about IPv6 networking, see [IPv6 Networking](#) (see page 384).

Operating Systems

BusinessObjects Enterprise runs on Microsoft Windows and UNIX (including Linux) operating systems. An Administrator account must be used to install BusinessObjects Enterprise on Windows operating systems.

If CA Utilities have not been installed previously and the shared components directory has not been set up, then CA Business Intelligence requires root access on UNIX operating systems.

For a complete list of required system privileges, see [Windows Permissions](#) (see page 37) or [UNIX Permissions](#) (see page 37).

Note: See the various *Supported Platforms* documents on the CA Business Intelligence DVD for a detailed list of supported environments and hardware requirements. These documents include specific version and patch-level requirements for databases, web application servers, web browsers, and operating systems. However, remember that your CA Technologies product's supported platforms take precedence over BusinessObjects Enterprise supported platforms.

Deployment on Windows

Ensure your hosts do not use any of the following characters in their name:

- An underscore
- A period
- A slash

You must have Administrator rights to install BusinessObjects Enterprise on a Windows platform.

BusinessObjects Enterprise supports both 32- and 64-bit Windows operating systems.

BusinessObjects Enterprise Suite products that are compiled as 32-bit native binary are designed to use 32-bit data source middleware connectivity.

To open ports and run daemon processes or services, BusinessObjects Enterprise must have the appropriate operating system account privileges.

Deployment on UNIX

Ensure your hosts use none of the following characters in their name:

- An underscore
- A period
- A slash

If CA Utilities have not previously been installed and the shared components directory has not been set up, then CA Business Intelligence requires root access for installation.

To run the setup program correctly, the following commands and utilities must be installed on your UNIX system and available on the PATH for the account being used to install BusinessObjects Enterprise:

- /bin/sh
- uname
- awk
- tar
- stty
- pwd
- expr
- chown

- id
- ulimit
- read
- hostname
- grep
- dirname
- which
- touch
- sed
- tail
- gzip

These commands and utilities should be available on all UNIX distributions. However, if one of them is not available on your system, download and install a version appropriate to your UNIX system. It is recommended that you obtain any required files from your UNIX vendor when possible.

Note: On Solaris and AIX, ensure that the PATH environment variable of the account being used to install or run BusinessObjects Enterprise does not include GNU or third-party replacements for core system command-line tools (for example, the GNU coreutils package, or an individually downloaded and compiled version of a tool). While the GNU versions of these tools offer enhanced functionality, their output can differ significantly from the native UNIX tools, and can cause problems with the BusinessObjects Enterprise installation or server scripts.

Your operating system locale must be set to a UTF-8 encoding variant, such as en_US.UTF-8 (for other languages, use the appropriate localized UTF-8 encoding, such as de_DE.UTF-8 for German UTF-8). See the BusinessObjects Enterprise *Supported Platforms* documents on the CA Business Intelligence DVD for detailed information about locales.

BusinessObjects Enterprise supports both 32- and 64-bit UNIX operating systems.

BusinessObjects Enterprise Suite products that are compiled as 32-bit native binary are designed to use 32-bit data source middleware connectivity. Unless otherwise specified in the PAR, 64-bit middleware connectivity is not supported.

Deployment in a Virtualized Environment

BusinessObjects Enterprise can also be installed in the following supported virtualized environments:

- VMware
- AIX LPAR
- Solaris 10 Containers

Databases in BusinessObjects Enterprise

In BusinessObjects Enterprise, a database can be defined as a data repository that organizes a collection of information into structures (tables) for rapid search and information retrieval.

Databases allow tables to be grouped together into collections of logically related tables that are named *tablespaces*. Tables are grouped into tablespaces within a database system in the same way that files are grouped into a directory within a file system.

Note: This documentation uses the terms "tablespace" and "database" interchangeably.

The following database systems are supported for the Central Management System (CMS) database:

- Oracle Database
- SQL Anywhere
- MySQL
- Microsoft SQL Server
- IBM DB2
- Sybase

See the BusinessObjects Enterprise *Supported Platforms* documents on the CA Business Intelligence DVD for a full list of database systems that are supported for each component of BusinessObjects Enterprise.

You can use any database system with BusinessObjects Enterprise as long as the CA Technologies product implementing BusinessObjects Enterprise supports the database system (see your CA Technologies product documentation). If you do not have a database system ready, the BusinessObjects Enterprise installer can create and configure a SQL Anywhere database system as part of the installation process.

Notes:

- If you use your own database system, first configure the system and confirm that the system is operational. The BusinessObjects Enterprise installer attempts to verify the database connection.
- Ensure that any third-party database servers and clients are set up to use Unicode character encoding (UTF-8). See your database documentation to determine how to enable Unicode support.
- Reports can only be generated from a CA Technologies product database. A CA Technologies product must configure the data source for the usage of that specific product.

BusinessObjects Enterprise uses several databases to store internal system information. They can be configured as several tablespaces within a single database system, or as tablespaces distributed across several database systems.

The following table details the different database or tablespace repositories that BusinessObjects Enterprise uses.

Repository	Description	Mandatory for Installation?
CMS	Main repository that stores BusinessObjects Enterprise user, group, security, content, and service information. If you do not have a CMS database from a previous installation, objects in this database are initialized by the BusinessObjects Enterprise installer.	Yes
Auditing	Activity tracking repository that allows administrators to view system usage information, such as the number of report generation or login events. Auditing can be enabled and configured during the installation process.	No

BusinessObjects Enterprise scripts require database user privileges that permit the creation and deletion of database objects, including tables, indexes, and temporary data. Rather than assign administrative privileges to the account that BusinessObjects Enterprise uses, this table summarizes the required privileges for each supported database system.

Database	Required Account or Role Privileges
IBM DB/2	User with <i>Connect to database</i> , <i>Create tables</i> , and <i>Create schemas implicitly</i> enabled
Oracle Database	User with the following privileges enabled: <ul style="list-style-type: none"> ■ create session ■ create table ■ create procedure Alternatively, a user with the <i>CONNECT</i> and <i>RESOURCE</i> roles enabled, and the Admin Option setting disabled for both roles.
SQL Anywhere	User with the following privileges enabled: <ul style="list-style-type: none"> ■ create table ■ RESOURCE, VALIDATE, PROFILE, READFILE privileges

Database	Required Account or Role Privileges
MySQL	Default database owner (DBO) account permissions
Microsoft SQL Server	Default database owner (DBO) account permissions
Sybase ASE	Default database owner (DBO) account permissions

Databases can require specific configuration to function best with BusinessObjects Enterprise. The following table provides a list of additional configuration settings.

Database	Additional Required Settings
IBM DB/2	DB2CODEPAGE=1208
Oracle	<i>NLS_LANG</i> must be set to a valid UTF-8 setting, such as AMERICAN_AMERICA.WE8MSWIN1252 or AMERICAN_AMERICA.AL32UTF8. The <i>FORCE</i> setting must be enabled.
Sybase	<i>LC_ALL</i> must be set to a valid locale, as found in the configuration file <i>SYBASE_HOME/locales/locales.dat</i> .

More information:

- [Auditing Database](#) (see page 33)
- [Central Management Server Database Requirements and Preparation](#) (see page 50)
- [Databases](#) (see page 32)
- [DB2 Database Requirements](#) (see page 57)
- [Microsoft SQL Server Database Requirements \(Windows Only\)](#) (see page 54)
- [Oracle Database Requirements](#) (see page 54)
- [SQL Anywhere Database Requirements](#) (see page 62)
- [Sybase Database Requirements](#) (see page 60)

Web Application Servers

BusinessObjects Enterprise requires a Java or .NET web application server to process the server-side scripts that make up web applications. You can install the Tomcat application server during the BusinessObjects Enterprise installation, use the Internet Information Services (IIS) server included with Windows operating systems, or use a supported third-party web application server and Java Development Kit (JDK).

Note: Review the BusinessObjects Enterprise *Supported Platforms* documents on the CA Business Intelligence DVD for information related to supported web application server and JDK release versions and patch levels, and be sure to review your CA Technologies product documentation to determine its supported application servers.

If you use a third-party server, it must be installed and configured before BusinessObjects Enterprise, as the installer will attempt to verify the location of your web application server, and can deploy your web applications directly.

Java web application servers

The BusinessObjects Enterprise installation program can deploy to supported Java web application servers running on the local system during installation.

.NET web application servers

The BusinessObjects Enterprise installation program can deploy to active IIS 6,7 or 7.5 web sites on the local Windows Server system during installation.

Note: The BusinessObjects Enterprise installer does not deploy web applications for the following web application servers:

- JBoss 4.04
- SAP Application Server 7.0
- IBM WebSphere Community Edition 2.0
- Sun Java Application Server 8.2

These web application servers must have web applications deployed manually through the web application server administrative console or on the command line with the wdeploy tool included with BusinessObjects Enterprise.

Plan Your Deployment

This section provides guidelines to assess your organization's needs and suggested deployment scenarios. By evaluating your needs before you deploy your BusinessObjects Enterprise system, you can keep troubleshooting to a minimum. Deployment examples are suggested, but it is important to note that each deployment is unique. The flexibility of the BusinessObjects Enterprise service-based architecture allows you to tailor your deployment to serve your organization's requirements.

Planning your deployment involves the following steps:

1. See your CA Technologies product documentation and the BusinessObjects Enterprise *Supported Platforms* documents on the CA Business Intelligence DVD to identify system requirements.
2. Review the key concepts you must consider for your deployment including operating system, database, and application server considerations, security, performance and scalability, and high availability.

BusinessObjects Enterprise Architecture

This section outlines the overall platform architecture, system, and service components that make up the BusinessObjects Enterprise Business Intelligence (BI) platform. This information can help administrators understand the system essentials, and help to form a plan for the deployment, management, and maintenance of a BusinessObjects Enterprise installation.

BusinessObjects Enterprise includes specialized services such as Web Intelligence and Crystal Reports components.

Note: Desktop Intelligence is not supported by CA Technologies. Web Intelligence and Crystal Reports are the *only* analytic tools that are supported to create CA Technologies reports.

CA Technologies product end users can access, create, edit, and interact with reports using specialized tools and applications that include:

- Crystal Reports (view only)
- Web Intelligence (create, edit, and interact with reports)

IT departments can use data and system management tools that include:

- Central Management Console
- Central Configuration Manager
- Import Wizard
- Publishing Wizard
- Universe Designer
- Repository Diagnostic Tool

To provide flexibility, reliability, and scalability, the components that make up BusinessObjects Enterprise can be installed on one or many computers. You can even install two BusinessObjects Enterprise deployments simultaneously on the same hardware, although this configuration is recommended only for upgrade or testing purposes.

Server-Side Architecture

Server Classifications

The Central Management Console (CMC) web application provides the ability to add, remove, enable, or disable, BusinessObjects Enterprise servers. These processes are grouped into two categories: Framework servers and Processing servers.

Framework Servers

Framework servers provide back-end core system services that form the foundation of the BusinessObjects Enterprise Business Intelligence platform.

Server Type	Description	Server Instance(s) Managed by CMC
Central Management Server	<p>Primary server process that provides services for all other servers in the Business Intelligence (BI) platform, including management of:</p> <ul style="list-style-type: none"> ■ Security ■ Objects ■ Servers ■ Auditing 	CentralManagementServer
Event Server	Responsible for monitoring file based events, and notifying the CMS of these events	EventServer
File Repository Servers	Responsible for the creation of file system objects, such as exported reports, and imported files in non-native formats	InputFileRepository, OutputFileRepository
Adaptive Processing Servers	Generic server that hosts multiple services responsible for processing requests from various sources. It can host services like the Publishing Service and the Client Auditing Proxy Service.	AdaptiveProcessingServer

Processing Servers

Processing servers are the back-end components that handle requests from Web Intelligence and Crystal Reports.

The Desktop Intelligence servers are required for processing Crystal Report queries and returning data to the Crystal Reports cache server. A Desktop Intelligence processing server hosts the following services:

Desktop Intelligence Processing Service

Processes viewing requests for Desktop Intelligence documents, and generates Desktop Intelligence documents

Single Sign-On Service

Allows users to sign on to BusinessObjects Enterprise with credentials from a common authentication system.

Server Type	Description	Server Instance(s) Managed by CMC
Connection Server	Responsible for handling connection and interaction with the various data sources and providing a common feature set to its clients, by emulating the missing features (if necessary)	ConnectionServer
Crystal Reports Cache Server	Caches recently executed Crystal Reports to reduce database requests	CrystalReportsCacheServer

Server Type	Description	Server Instance(s) Managed by CMC
Crystal Reports Processing Server	Runs Crystal Reports queries and returns data to Crystal Reports Cache Server	CrystalReportsProcessingServer
Desktop Intelligence Cache Server	Caches recently executed Desktop Intelligence reports to reduce database requests Note: Desktop Intelligence is not supported by CA Technologies.	DesktopIntelligenceCacheServer
Desktop Intelligence Processing Server	Runs Crystal Reports queries and returns data to Crystal Reports Cache Server	DesktopIntelligenceProcessingServer
Job Servers	Processes scheduled actions on objects at the request of the CMS. When you add a Job server to the BusinessObjects Enterprise system, you can configure the Job server to: <ul style="list-style-type: none"> ■ Process report and document objects ■ Process program objects ■ Process publication objects ■ Send objects or instances to specified destinations 	AdaptiveJobServer CrystalReportsJobServer DesktopIntelligenceJobServer DestinationJobServer ListOfValuesJobServer ProgramJobServer PublicationJobServer
Report Application Server	Responsible for responding to page requests by processing reports and generating Encapsulated Page Format (EPF) pages	ReportApplicationServer
Web Intelligence Processing Server	Runs Web Intelligence queries and returns data to the user	WebIntelligenceProcessingServer

Client-Side Architecture

Browser-based Web Application Clients

Browser-based web application clients reside on a web application server, and run in a web browser. Web applications are automatically deployed by the setup program when you install BusinessObjects Enterprise.

Standalone mode

All web application resources are deployed together on a web application server that serves both dynamic and static content.

Central Management Console

The CMC is a web-based tool to perform regular administrative tasks, including user, content, and server management. It also allows you to publish, organize, and set security levels for all of your BusinessObjects Enterprise content. Because the CMC is a web-based application, you can perform all of these administrative tasks through a web browser on any computer that can connect to the server.

All users can log in to the CMC to change their user preference settings. Only members of the *Administrators* group can change management settings, unless explicitly granted the rights to do so.

More information:

[Use the CMC](#) (see page 195)

[Log in to the CMC](#) (see page 196)

BusinessObjects Enterprise InfoView

InfoView is a web-based interface that end users access to view, schedule, and keep track of published reports.

InfoView allows users to manage:

- Business Intelligence catalog browsing and searching
- Business Intelligence content access (creating, editing, and viewing)
- Business Intelligence content scheduling and publishing

Log in to InfoView

To log in to InfoView

1. Open a web browser.
2. Enter the name of the computer you are accessing directly into your browser:

`http://servername:port/InfoViewApp`

servername

Identifies the server hosting InfoView.

port

Identifies the server port.

Crystal Reports Viewer

Crystal Reports can be viewed in InfoView which allows users to open reports in read-only mode.

Web Intelligence Rich Client

Web Intelligence Rich Client allows you to continue to work with Web Intelligence documents when you are unable to connect to a CMS, when you want to perform calculations locally rather than on the server, or when you want to work with Web Intelligence documents without installing a CMS or application server.

Web Intelligence Rich Client can also be used when connected to a CMS.

Universe Builder

A universe is a semantic layer of abstraction that exists between BusinessObjects Enterprise and the data in your organization's database. Universe Builder allows you to create universes from XML metadata and Oracle Analytic Services.

Universe data sources can be multi-dimensional objects (dimensions, measures, details), enabling the end user to analyze the data without needing to know the details of the underlying database structure.

Once you start Universe Builder, you connect to a metadata source, then using a universe creation wizard, map metadata structures to equivalent classes, objects, dimensions, and details, used in a standard BusinessObjects universe.

You can create universes from metadata sources with both Universe Builder and Designer. Universe Builder is a stand-alone product that provides an independent user interface for universe creation from metadata sources. Designer is used for the universe generation at the end of the creation process.

Universe Designer

Universe Designer provides a connection wizard that allows you to connect to your database. You can create multiple connections with Universe Designer, but only one connection can be defined for each universe. This database connection is saved with the universe.

The objects (such as filters) set row-level security. This semantic layer is the foundation for empowering end users to customize query and analysis. It abstracts the complexity of data by using business language rather than data language to access, manipulate, and organize data.

Universe Designer provides a graphical interface to select and view tables in a database. The database tables are represented as table symbols in a schema diagram. You can use this interface to manipulate tables, create joins between tables, create alias tables, create contexts, and solve loops in your schema. Web Intelligence users do not see this schema.

Review your CA Technologies product documentation for more information about the out-of-the-box product-specific universes and reports. BusinessObjects Enterprise client tools can only be used with CA Technologies products' reports and data.

Databases

BusinessObjects Enterprise uses two different types of database:

System database

An internal database that stores configuration, authentication, user, auditing, and other information related to BusinessObjects Enterprise. System databases can be created and used on a wide variety of database platforms.

Reporting database

Your CA Technologies product database is used to create reports, generate statistics, and collect business intelligence.

See the various *Supported Platforms* documents on the CA Business Intelligence DVD for a detailed list of supported environments and hardware requirements. These documents include specific version and patch-level requirements for databases, web application servers, web browsers, and operating systems. However, remember that your CA Technologies product's supported platforms take precedence over BusinessObjects Enterprise supported platforms.

System Databases

Central Management System Database

The Central Management System (CMS) server is the only server that accesses the CMS system database. The CMS can also maintain an optional auditing database of information about user actions with the Enterprise system.

The data stored inside the CMS system database allows the CMS to perform the following tasks:

- Maintaining security

The CMS enforces the application of all rights at the global, folder, and object level, and supports inheritance at the user and group level.

- Managing objects

The CMS keeps track of the object location and maintains the folder hierarchy. InfoObjects are system metadata objects that contain index information. The actual documents/objects are stored in the FRS. The separation of the object definition (metadata) from the actual document allows the system to retrieve only the required information from the system database, thus providing faster object processing.

- Managing servers

The CMS handles load balancing to help avoid bottlenecks and maximizes hardware efficiency.

You provide the CMS with database connectivity and credentials when you install BusinessObjects Enterprise, so the CMS can create the CMS database using your organization's preferred database servers.

Important! Before you install and connect the CMS to your own database server, you must create a new, empty database on your database server.

Notes:

- It is strongly recommended that you back up the CMS database and audit the database frequently.
- The CMS database cannot be accessed or modified directly. You should only make changes to the system database through BusinessObjects Enterprise interfaces such as the CMC that interact with the CMS.
- Administrators can access the audit database directly to create custom audit reports.

Auditing Database

The CMS acts as the system *auditor*; the BusinessObjects Enterprise server that you monitor is the *auditee*.

As the auditor, the CMS controls the overall audit process. Each server writes audit records to a log file local to the server. At regular intervals, the CMS communicates with the auditee servers to request copies of records from the auditee's local log files. When the CMS receives these records it writes data from the log files to the central auditing database.

The CMS also controls the synchronization of audit actions that occur on different computers. Each auditee provides a time stamp for the audit actions that it records in its log file. To ensure that the time stamps of actions on different servers are consistent, the CMS periodically broadcasts its system time to the auditees. The auditees then compare this time to their internal clocks. If differences exist, the auditees correct the time stamps that are recorded in their log files for subsequent audit actions.

Notes:

- You must configure the auditing database on the CMS before you can begin to audit.
- The CMS acts as both an auditor and as an auditee when you configure it to audit an action that the CMS controls.
- In a CMS cluster, the cluster assigns the first CMS to start to act as a system auditor. If the computer that is running this CMS fails, another CMS from the cluster takes over and begins acting as the auditor.

Auditing Options for the CMS

You can enable the following auditing for the following actions:

- Concurrent user logon succeeds
- Named user logon succeeds
- User logon fails
- User logs off
- User's password is changed
- Object is created
- Object is deleted
- Object is modified
- Object rights are modified
- Communication with a running report is lost
- Custom access level is modified

Reporting Databases

Universes

The universe abstracts the data complexity by using business language rather than data language to access, manipulate, and organize data. This business language is stored as objects in a universe file. Web Intelligence and Crystal Reports use universes to simplify the user creation process required for simple to complex end-user query and analysis. Universes are a core component of BusinessObjects Enterprise. All universe objects and connections are stored and secured in the central repository by the Connection Server. Universe designers need to log in to BusinessObjects Enterprise to access the system and create universes. Universe access and row-level security can also be managed at the group or individual user level from within the design environment.

The semantic layer is used to create Web Intelligence documents and Crystal Reports.

Note: Reports and universes can only be generated from a CA Technologies product's database. A CA Technologies product must configure the data source for the usage of that specific product. See your CA Technologies product documentation for more information.

Installation Overview

Before you install BusinessObjects Enterprise, perform the following actions:

- See the section [Plan Your Deployment](#) (see page 25) to gain a general understanding of the installation process and the different options and components available.
- Review your systems to ensure that it meets the basic requirements for a BusinessObjects Enterprise installation. See [System Requirements](#) (see page 36).
- Ensure that all computers that your BusinessObjects Enterprise deployment uses can communicate with one another across your network. See [Network Requirements](#) (see page 36).
- Determine the location of the components that you want to install. These components include the specific subnet, computer, database, security, or cluster systems that you use to run your system.
- Decide which installation method to use.

The following sections list the core software requirements, the choices available to you within the core requirements, and the installation methods that you can use when you install BusinessObjects Enterprise. An installation checklist is provided to help ensure that you are prepared before you begin your installation of BusinessObjects Enterprise.

More information:

[Installation Checklist](#) (see page 69)

System Requirements

See the various *Supported Platforms* documents on the CA Business Intelligence DVD for a detailed list of supported environments and hardware requirements. These documents include specific version and patch-level requirements for databases, web application servers, web browsers, and operating systems.

Important! Your CA Technologies product supported platforms take precedence over the platforms that BusinessObjects Enterprise supports. Certain platforms that BusinessObjects Enterprise supports may not be supported by CA Technologies. Conversely, certain platforms that CA Technologies supports may not be supported by BusinessObjects Enterprise. Review your CA Technologies product-specific requirements before beginning the CA Business Intelligence installation.

Ensure that you read the *CA Business Intelligence Release Notes* before installation. The *Release Notes* contain known issues for the supported platforms that are not included in the *Supported Platforms* documents from BusinessObjects Enterprise, and other CA Business Intelligence known issues.

BusinessObjects Enterprise ships with the Tomcat web application server and SQL Anywhere database server. If you are planning to use a different web application or database server, install the server and configure the server before you install BusinessObjects Enterprise.

Network Requirements

When installing BusinessObjects Enterprise on multiple computers, ensure that each computer can communicate over TCP/IP with the computer running the CMS, and all other computers in the deployment. A dedicated web server must be able to communicate with the web application server. All web desktop clients must be able to access the web server. For more information about the communication between components, see [BusinessObjects Enterprise Architecture](#) (see page 26).

Notes:

- If you are installing BusinessObjects Enterprise in a firewalled environment, see [Firewalls](#) (see page 335).
- If you are installing on a VMware virtual machine, ensure the computer name does not include underscore (_), period (.), or slash (/ or \) characters.

Permissions

The following sections describe the required permissions for both a Windows and UNIX environment.

Windows

To install BusinessObjects Enterprise on Windows, the user running the setup program must have the permissions listed in the following table:

Category	Required Permissions
Operating System	Administrative privileges on the local computer
Network	Network connectivity to all computers in the deployment, as well access to as the appropriate ports on each of the computers
Databases	Rights to create and drop tables, plus rights to read, write, and edit rows. For more information about the database privileges required, see Databases (see page 32).
Web application server	Use the same user account for installing both BusinessObjects Enterprise and your web application server, to reduce the likelihood of encountering a problem with access control settings.

Note: The following scenarios are not supported:

- Installation on a domain controller
- Installation on a Windows computer where the default local Administrator group security settings have been modified

UNIX

To perform either a user or system installation on UNIX, the user account under which the install is run must have read, write, and execute permissions to the directory where BusinessObjects Enterprise will be installed. However, if you run a system installation, you require root authority to run the system-level initialization script. This script (called `setupinit.sh`) is run after the installation completes. This script creates entries into the run control scripts for the operating system that start up the BusinessObjects Enterprise servers when the UNIX server is brought up, and stops the servers when a computer is shut down.

The following table summarizes all the required permissions for installing BusinessObjects Enterprise.

Category	Required Permissions
Operating System	Read, write, and execute permissions to the directory where BusinessObjects Enterprise will be installed. Root access if performing a system installation.
Network	Access to all computers via TCP/IP - all specified ports must be available.
Databases	Rights to add and drop tables to or from the database, plus rights to read, write, and edit table rows.
Web Application Server	Read and write permissions to the Web Application Server bin directory.

Set up Your UNIX System

BusinessObjects Enterprise integrates with your existing database and web server software components, so the installation script must collect certain information about your current system. Because UNIX systems can vary significantly from site to site, the following sections detail the key tasks that you must perform prior to installing BusinessObjects Enterprise.

Set the Locale

Before you install BusinessObjects Enterprise, set your operating system to use one of the locales that BusinessObjects Enterprise supports for your version of UNIX. See the Supported Platforms documents on the CA Business Intelligence DVD for a detailed list of supported UNIX environments.

Note: You must ensure that the character encoding on your terminal is set to utf8 on Linux and UTF-8 on other platforms. For example, a en_US.UTF-8 locale would be:

- **Linux:** en_US.utf8
- **AIX:** EN_US.UTF-8
- **Solaris:** en_US.UTF-8

Locale setting is an operating system-dependent task. For example, to set an en_US.UTF-8 locale on Solaris, you must install only two packages, but installing only these two packages does not set up other locales on which en_US.UTF-8 is dependent. To do that, you must install some other packages from the operating system CD. All of them must be installed to make this particular locale work properly. One way to ensure that the locale is set properly is to check that the LANG and LC_ALL environment variables are set to the desired local; all other locale variables which show up with the "locale" command should then get set automatically.

If you are working through the console of a UNIX computer, you can select your locale directly from the logon screen when you log in with the account from which you will install BusinessObjects Enterprise. However, to ensure that your operating system uses the correct locale whenever BusinessObjects Enterprise runs, set the LC_ALL and LANG environment variables to your preferred locale in your login environment. (For example, if you are using a C shell, set these environment variables in the .login file).

Check for Required Commands and Utilities

In order for the install setup program to run correctly, the following commands and utilities must be installed on your UNIX system:

- /bin/sh
- pwd
- read
- touch
- uname
- expr
- hostname
- sed
- awk

- chown
- grep
- tail
- tar
- id
- dirname
- gzip
- stty
- ulimit
- which

These relatively standard commands and utilities should be available on most UNIX distributions. However, if for any reason one of them is not available on your system, download and install a version appropriate to your UNIX system. It is recommended that you obtain any required files from your UNIX vendor.

Additionally, these commands and utilities must be accessible in the PATH environment variable of the user account that you use when installing BusinessObjects Enterprise. For details, see [Create an Account, a Home Directory, and a Login Environment](#) (see page 40).

Create an Account, a Home Directory, and a Login Environment

Create a specific user account and group under which the BusinessObjects Enterprise background processes can run. Although you require root privileges to set up this account, the account itself does not require root privileges. Neither the installation scripts or BusinessObjects Enterprise itself needs to run as root. You only need to run the CA Business Intelligence installer as root if the CA shared components installation path (CASHCOMP) is not set. To set the CASHCOMP path, the installation script has to write to the /etc/profile file for which it needs root privileges.

Use your usual administrative procedures to perform these recommended tasks.

Set up an Account for Installing BusinessObjects Enterprise

To set up an account for installing BusinessObjects Enterprise

1. Create a new user account, and set this user's primary group to the new group. Assign a secure password to the new user account.
2. Ensure that the account you created has read, write, and execute permissions on the new installation directory. Permissions are also required for the non-root user home directory.

3. Assign the new user a default login shell, and create or modify the appropriate login script(s) for the user account. In particular, ensure that the login script(s) set up a default login environment that meets these requirements:
 - All of the commands and utilities required by the install setup program must be accessible in the PATH environment variable.
 - The user's login environment must set up the database environment such that the install setup program can access your database client software.
 - The user's login environment must set up a default locale that is supported by your UNIX system and BusinessObjects Enterprise.
4. The CA Business Intelligence installer takes the default installation path from the environment variable CASHCOMP. If CASHCOMP is not set, the installer asks for CASHCOMP, with the default being /opt/CA/SharedComponents (which you can change). The default installation path is taken from CASHCOMP after it has been set. You can overwrite it however, and make the default directory your choice.

Note: The directory that you specify for the installation is referred to as *INSTALLDIR* throughout this document.
5. Create a new user or use an existing user that meets all of the requirements mentioned in the previous steps.

Examples

On Linux:

To add a group:

```
groupadd groupname
```

To create user home directory:

```
mkdir -p /home/dir_name
```

To add a user:

```
useradd -g groupname -d /home/dir_name -p password username
```

To change the owner for the directory:

```
chown -R /home/dir_name username:groupname
```

To change the permission for home directory:

```
chmod -R 777 /home/dir_name
```

More information:

[Check for Required Commands and Utilities](#) (see page 39)

Meeting the Host Name and Network Requirements

Your UNIX server must have a fixed host name before you run the installation script. You must have root privileges to set or modify this information about your system. If you are unfamiliar with these procedures, see your UNIX system documentation.

Your UNIX server host IP should be properly configured in `/etc/hosts` file so that there is no IP resolution problem. You should check `/etc/hosts` before running the installation. The follow entries should occur once:

IP-Address Full-Qualified-Hostname Short-Hostname

For example, if the hostname is `abc0008`, the domain is `myhost.com`, and the IP is `141.0.0.0`, the following entries display:

```
141.0.0.0      abc0008.myhost.com      abc0008
127.0.0.1      localhost.myhost.com    localhost
```

Ensure there are no duplicate entries for each of the host names. Once you have configured the file, restart the network.

Important! If `/etc/hosts` is not configured properly, the installation fails.

When installing BusinessObjects Enterprise on multiple computers, ensure that each target computer is able to communicate over TCP/IP with the computer that is running as your Central Management Server (CMS).

Note: If you are installing BusinessObjects Enterprise in a firewall environment, you must be aware of additional configuration details. See [Firewalls](#) (see page 335).

Differences Between User and System Installations

When you perform a new installation, on UNIX, you can choose between a user and a system installation.

- When you choose a user installation, all of the required components are installed.
- When you choose a system installation, all of the required components are installed, In addition, the installation creates a system-level initiation script that must be run manually by the user.

This script creates entries into the run control scripts for the operating system that start up the BusinessObjects Enterprise servers when the UNIX server is brought up and stops the BusinessObjects Enterprise servers when a computer is shut down.

Note: To perform a system installation, you do not require root-level authority. However, to run the system-level initiation, script root-level authority is required.

Installing on a Non-System Drive on Windows

You can use the setup program to install BusinessObjects Enterprise on any local drive. When installing to a directory on the same partition as the operating system, ensure that there is enough room for both the operating system and BusinessObjects Enterprise to expand as updates and new features are added.

If you previously installed another Business Objects product of the same version, the BusinessObjects Enterprise setup program automatically uses that installation's common directory to add new Business Objects products.

To install several Business Objects products on a non-system drive, you must first install BusinessObjects Enterprise. All Business Objects products subsequently installed will use the same drive for shared files.

Note: If a non-CA Technologies version of a BusinessObjects Enterprise is installed, the CA Business Intelligence installation exits.

Set up Server Communication

Windows

BusinessObjects Enterprise requires that you install and configure a database server and web application server software if you want to use an existing database or web application server. You can also install a database server and a Web application server during your installation of BusinessObjects Enterprise.

Note the following items about setting up server communication on Windows:

- Each BusinessObjects Enterprise computer must be able to communicate over TCP/IP with the computer that runs your [CMS](#) (see page 33).
- If the host computer has more than one network interface card (NIC), the CMS can automatically bind to a primary NIC. If the primary NIC is not routable, you may have to configure your servers after installation. Alternatively, you could make the primary NIC routable before installing BusinessObjects Enterprise. For more information about how to reconfigure to bind to routable NICs see the Managing and Configuring Servers chapter in the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

- Servers that run BusinessObjects Enterprise must have a fixed hostname. Administrative privileges are required to set a fixed hostname. You can use fully qualified domain names to specify the location of the CMS.
Note: Ensure that the host name you use does not include any of the following characters: an underscore (_), a period (.), a backslash (\), or a forward-slash (/).
- Ensure that your database client and server are set up to use Unicode character encoding, such as UTF-8. See your database documentation to determine the settings that are required for a Unicode configuration.
- If you are installing BusinessObjects Enterprise in a firewall environment, you need additional configuration details. See [Firewalls](#) (see page 335).
- If you are clustering multiple file repository servers on separate computers, ensure that each server has read and write permissions to the folder used to store data.
- If you connect BusinessObjects Enterprise to a web application server, the web application server must be able to communicate with all BusinessObjects Enterprise computers. The BusinessObjects Enterprise Software Development Kit (SDK) enables this communication. The SDK is installed as part of the Web Tier components. If you plan to use a Java application server and your existing application server does not include a version of the Java Development Kit (JDK) that BusinessObjects Enterprise supports, install the supported version.

Note: See the various *Supported Platforms* documents on the CA Business Intelligence DVD for a detailed list of supported environments and hardware requirements. These documents include specific version and patch-level requirements for databases, web application servers, web browsers, and operating systems. However, remember that your CA Technologies product's supported platforms take precedence over BusinessObjects Enterprise supported platforms.

UNIX

BusinessObjects Enterprise requires that you install and configure a database server and web application server software if you want to use an existing database or web application server. You can also install a database server and a Web application server during your installation of BusinessObjects Enterprise.

Verify that all BusinessObjects Enterprise computers can communicate properly with one another:

- Each BusinessObjects Enterprise computer must be able to communicate over TCP/IP with the computer that runs your [CMS](#) (see page 33).
- If the host computer has more than one network interface card (NIC), the CMS can automatically bind to a primary NIC. If the primary NIC is not routable, you may have to reconfigure your servers after installation. Alternatively, you could make the primary NIC routable before installing BusinessObjects Enterprise. For more information about how to reconfigure to bind to routable NICs, see the Managing and Configuring Servers chapter in the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

- UNIX servers that run BusinessObjects Enterprise must have a fixed host name. You must have root privileges to set or modify a fixed host name on your system. You must have root privileges to install CA Utilities to set up the CASHCOMP environment. However, you do not require root privileges to perform a user installation of BusinessObjects Enterprise. If you are unfamiliar with these procedures, see your UNIX system documentation.

Note: Ensure that the host name you use does not include any of the following characters: an underscore, a period, or a slash.

- Ensure that your database client and server are set up to use Unicode character encoding (such as UTF-8). See your database documentation to determine the settings that are required for a Unicode configuration.
- If you are installing BusinessObjects Enterprise in a firewall environment, you need additional configuration details. See [Firewalls](#) (see page 335).
- If you connect BusinessObjects Enterprise to a web application server, the web application server must be able to communicate with all BusinessObjects Enterprise computers. The BusinessObjects Enterprise Software Development Kit (SDK) enables this communication. The SDK is installed as part of the Web Tier components. If you plan to use a Java application server and your existing application server does not include a version of the Java Development Kit (JDK) that BusinessObjects Enterprise supports, install the supported version.

Note: See the various *Supported Platforms* documents on the CA Business Intelligence DVD for a detailed list of supported environments and hardware requirements. These documents include specific version and patch-level requirements for databases, web application servers, web browsers, and operating systems. However, remember that your CA Technologies product's supported platforms take precedence over BusinessObjects Enterprise supported platforms.

Installation Types

You can select one of the following installation types. Consider which of these types is best suited for your intended deployment.

Note: This information reflects a generic BusinessObjects Enterprise configuration; see the CA Technologies product documentation for the type of configuration that your product supports.

New

Installs all components on one computer. Select this installation type to set up a complete deployment quickly, with all server and client components on a single computer.

Custom or Expand

Installs the components that you select on the computer. Select this installation type to specify which components to install when performing a distributed deployment, or when adding servers to an existing deployment.

Web Tier

Installs only the components that a web application server uses to run web applications. Select this installation type to set up Java or .NET web application components when performing a distributed deployment.

More information:

[Upgrade from BusinessObjects Enterprise XI Release 2 to BusinessObjects Enterprise XI 3.1 SP5](#) (see page 275)

New

Installing a New installation puts all of the required client, server, and optional components onto one computer. This configuration can be useful for small, trial, or tested installations. Components can be disabled after the installation if they are not required.

You may want to choose a New installation if you want to install all the components on the same computer, which is a typical installation for a CA Technologies product.

Custom Or Expand

The Custom or Expand installation option allows you to select individual components. It is recommended that you run this type of installation only after you are familiar with specific BusinessObjects Enterprise components and their roles, otherwise you may inadvertently fail to install a required component. You should perform a Custom or Expand installation if you plan to use BusinessObjects Enterprise in a distributed environment.

After setting up one BusinessObjects Enterprise server, you can run a Custom or Expand installation on a second computer to add server components, create a CMS cluster, increase available resources, and distribute the processing workload over both computers.

The Custom or Expand install features consist of:

- Client Components
- Web Tier Components
- Server Components
- Database Access
- Export Support
- Samples
- Help Files

You may choose to install all, some, or parts of these components.

You may want to choose a Custom or Expand installation if:

- You have an existing installation of BusinessObjects Enterprise and you would like to deploy additional components to another computer.
- Your deployment of BusinessObjects Enterprise will be distributed across multiple computers.
- You have resource limitations and need to consider disk space constraints.

Web Tier

The Web Tier option installs all of the components used by the web application server to run BusinessObjects Enterprise web applications. These components include:

BI Platform Java Web Components

Installs the Java version of BusinessObjects Enterprise applications including CMC, InfoView, and Dashboards and Analytics.

BI Platform .NET Web Components

Installs the .NET version of BusinessObjects Enterprise applications including CMC, InfoView, and Dashboards and Analytics.

Note: Most CA products do not support .NET Web components, but see your CA Technologies product documentation for specific requirements.

BusinessObjects Enterprise Web Services

An implementation of web services that provides an API/WSDL to simplify the process of developing web applications.

Note: If you are using JBoss as your application server, web services must be deployed manually.

Tomcat

An open-source, standards-based, Java web application server. If you do not have an existing web application server, you can choose to install Apache Tomcat 6.0.

You may want to choose a Web Tier installation if:

- If you want to install the web applications separately from the server components.
- You completed your initial installation of BusinessObjects Enterprise, and you want to configure an additional web application server on a separate computer.

Note: If you deploy BusinessObjects Enterprise on a different web application server than default web application server delivered by BusinessObjects Enterprise, the shortcut to InfoView and other applications will not be created.

Installation Modes

There are two methods that you can use to install BusinessObjects Enterprise:

- Running the installation setup program (for console and GUI mode installations)

The installation set up program provides a number of options that allow to select an installation type, specify the details for your CMS database, and to deploy web applications to a supported application server.

- Running a silent or scripted installation

A silent installation uses configuration information that has been stored in an .ini response file during a previous CA Business Intelligence installation. This method is useful when you need to perform multiple installations, or you want to install without the setup program prompting for configuration information.

You can also incorporate the silent installation command into your own build scripts. For example, if your organization uses scripts to install software on computers, you can add the silent BusinessObjects Enterprise installation command to those scripts.

You may want to choose a silent installation if:

- You need an automated method for performing identical or similar installations on several computers.
- You do not want to manually run the BusinessObjects Enterprise setup program.

More information:

[Silent Installation](#) (see page 145)

Install Client Tools Only on Windows

The client tools are applications that can only be installed on the component that is used by your CA Technologies product on Windows, with the Windows Client Tools installation package.

If you install the BusinessObjects Enterprise servers on a UNIX computer, you can connect remotely to BusinessObjects Enterprise with the client tools installed on a Windows computer.

The available tools are:

Desktop Intelligence

An integrated query, reporting, and analysis tool to access your organization's data for presentation and analysis in a Desktop Intelligence document.

Note: CA Technologies does not support Desktop Intelligence.

Web Intelligence Rich Client

Provides business users an interactive and flexible interface for building and analyzing reports from your organization's data over the web, through a secured intra- or extranet.

Import Wizard

Imports user, group, object, or folder content from previous and current Crystal or BusinessObjects Enterprise deployments.

Note: See your CA Technologies product documentation for details about how the CA Technologies product content can be delivered and used in your environment.

Universe Designer

Creates universe connections for Web Intelligence documents and Crystal Reports.

Developer Components

Software Development Kits (SDK) with wizards and templates for integrating BusinessObjects Enterprise functionality into your interactive web applications:

- BusinessObjects Enterprise .NET SDK
- BusinessObjects Enterprise Java SDK

Translation Manager

Defines translations for multilingual documents and prompts. Supports Universe Designer universes.

Install these applications for users responsible for managing BusinessObjects Enterprise content, developing applications, or importing system data. Client tools are not needed by users who access InfoView or the [CMC administrative web applications](#) (see page 195).

Central Management Server Database Requirements and Preparation

BusinessObjects Enterprise requires a database to store CMS information about the system and its users. This database is referred to as the CMS, or system, database.

The following sections detail required settings and how to test settings for the following databases:

- DB2
- SQL Anywhere
- MySQL
- Microsoft SQL Server (Windows only)
- Oracle
- Sybase

Before you install BusinessObjects Enterprise, review this information to prepare your CMS system and auditing database.

Note: Regardless of the database type, set up the database to use Unicode character encoding, such as UTF-8.

More information:

[Central Management System Database](#) (see page 33)

Use a Supported Database Server

The CMS supports a number of third-party database servers, so you can connect BusinessObjects Enterprise to your existing database infrastructure. If you have not installed a database on your computer, you can install and configure SQL Anywhere as your CMS database through the BusinessObjects Enterprise installation setup program. SQL Anywhere is installed as the default CMS database by CA Business Intelligence.

See the various *Supported Platforms* documents on the CA Business Intelligence DVD for a detailed list of supported environments and hardware requirements. These documents include specific version and patch-level requirements for databases, web application servers, web browsers, and operating systems. However, remember that your CA Technologies product's supported platforms take precedence over BusinessObjects Enterprise supported platforms.

Using SQL Anywhere as the CMS Database

SQL Anywhere is included with BusinessObjects Enterprise and can be automatically installed and configured for use as the CMS, or system database. If you want to use an existing supported database server, you can enter connection and authentication parameters during the BusinessObjects Enterprise installation process.

Source the Script that Identifies the Database Environment Variables (UNIX Only)

If you are using an existing database, you need a method to connect to it from within BusinessObjects Enterprise. This is done through your database client. In this document, the terminology used for this operation is to source the script that identifies the database environment variables.

If you are integrating BusinessObjects Enterprise with a different web application server than the version of Tomcat that can be configured with your installation, you may need to source the environment script. This sets up the required variables for BusinessObjects Enterprise.

Technically, sourcing your environment script involves running a script in your current environment. When your database client is sourced from within BusinessObjects Enterprise, all the required environment variables for your database are set up and exported.

Your database client or the BusinessObjects Enterprise environment script can be sourced from the command line, entered into a profile, or entered into another script.

- To source your database client from the command line, you would execute the script that sets up the variables required by your database client to access your database. For example, in the bash shell, type:

```
source ora10env.sh
```

- To source the BusinessObjects Enterprise environment script, you would execute the script that sets up the variables required. For example, you could add this to the Tomcat setenv.sh or the WebSphere startup script:

```
source <INSTALLDIR>/bobje/setup/env.sh
```

Note: The syntax used to source a script varies based on the type of shell you are using. Some UNIX shells use source as the syntax for this operation; some UNIX shells use the .(dot operator). See the documentation for your shell to determine the appropriate syntax.

Shell Name	Source	.(dot operator)
Bourne shell (sh)	No	Yes
Korn shell (ksh)	No	Yes
Bourne Again Shell (bash)	Yes	Yes
C shell (csh)	Yes	No
Turbo C shell (tcsh)	Yes	No

Set up a Database Account for BusinessObjects Enterprise

The CMS uses a database to store system information. If you install SQL Anywhere as part of your BusinessObjects Enterprise installation, a SQL Anywhere CMS database is created for you. If you plan to use your own database, complete the following steps before installing BusinessObjects Enterprise.

To create tables and write data to your new CMS database, the installation program must establish a connection to the database server. When you log in to the account being used to install BusinessObjects Enterprise, the environment must include the appropriate variables and database drivers to access your chosen database. Only then can the installation program access the CMS database using your database client software.

1. Create or select a user account that has enough privileges to set up and access your Business objects Enterprise database.
2. Verify that you can log in to your database. Also verify that you have rights to add or remove database tables and to add, delete, or edit table rows with the user account.

Set up an Empty Database for the CMS

If you want to use an existing database server as the CMS or auditing database, create a tablespace or database before installing BusinessObjects Enterprise.

If you use your own database during the installation of BusinessObjects Enterprise, the installer prompts for the connection and authentication details. The following database servers are supported for the CMS system and audit databases:

- Microsoft SQL Server (ODBC) (Windows only)
- Oracle
- DB2
- SQL Anywhere
- MySQL
- Sybase

To integrate your existing database with BusinessObjects Enterprise, prepare it. Here is a summary of the steps to prepare your database:

1. Create a tablespace, schema, or database (the exact terminology depends on the database platform you are using) to act as the CMS database. Create another database for the auditing database, if you plan to enable auditing (or you can use the same database for auditing purposes).
2. Create a user account and password that BusinessObjects Enterprise can use to access the CMS database. Create another username and password if you plan to enable auditing.

3. Grant privileges to the user to create, modify, and delete tables and create procedures.
4. Record the names of the databases, the user accounts, and the passwords that you created. Then you can enter the details when you run the BusinessObjects Enterprise installer.

During the installation, you can reinitialize the existing database. This action creates tables in your existing database. See your specific database server documentation if you are unsure of the procedure for creating a tablespace, schema, or database. Ensure that your database server is set up to use Unicode character encoding (such as UTF-8).

Important! You cannot use a database from a previous release for BusinessObjects Enterprise. With custom installation, you must create a database, or the existing data from the previous release is destroyed. To migrate from a previous release, create a database before the installation of CA Business Intelligence. The installer can manage the migration (if you select the option) or you can perform the migration manually after installation.

Microsoft SQL Server Database Requirements (Windows Only)

If you are using Microsoft SQL Server for the CMS or auditing database, use a Unicode character set (such as UTF-8). After the database is created, prepare the database for the BusinessObjects Enterprise installation.

More information:

[Prepare an Existing Database Server](#) (see page 63)

Oracle Database Requirements

If you are using Oracle for the CMS or auditing database, use a Unicode character set (such as UTF-8). After the database is created, prepare the database for the BusinessObjects Enterprise installation.

More information:

[Prepare an Existing Database Server](#) (see page 63)

Test Oracle Environment Variables (UNIX Only)

If you choose to connect to Oracle through a native connection, the installation searches the current shell for the ORACLE_HOME environment variable. This standard Oracle environment variable must be set in order for the install script to utilize the Oracle client software.

If you are using an existing database, you must source your database client.

Sourcing your database client can be done in one of two ways:

- The user who performs a system installation can modify the BusinessObjects Enterprise script `setupint.sh` to add the command to source your database client. However, root access is required to execute this script. This script can be found at the following location:

```
<INSTALLDIR>/bobje/init/setupint.sh
```

This method will source the database for all users.

- Each person with a user installation can modify their profile and add the command to source their database environment. This method can be done anytime.

For example, if an Oracle database was required, an entry would be made in the user profile to source the environment script used by Oracle (`oraXXenv.csh` or `oraXXenv.sh` where `XX` is replaced with the version number). See your database documentation for the name of its environment script.

Notes:

- Instead of sourcing the script that identifies the database environment variables, you can manually set the environment variables required by your database. However, if you manually set the environment variables, you will need to set them again if the system is restarted.
- See your database documentation and/or your database administrator if the account shell environment from which you will install BusinessObjects Enterprise has not yet been set up for your database client software, or if you are unable to connect successfully to the database.

More information:

[Source the Script that Identifies the Database Environment Variables \(UNIX Only\)](#) (see page 52)

Verify Oracle Native Connectivity Through a TNS (UNIX Only)

To verify Oracle native connectivity through a TNS

1. Log in to the UNIX server with the user account and password which you will use to do your install.

Note: This account should already be set up. See [Create an Account, a Home Directory, and a Login Environment](#) (see page 40) for more information about setting up a UNIX account to use when you install BusinessObjects Enterprise.

2. Echo the following environment variables and ensure that their values correspond to your database client software installation.

ORACLE_HOME

This variable contains the path to the root directory of your Oracle client installation (one level above the Oracle bin and lib directories).

library path

The library search path (LD_LIBRARY_PATH on Solaris and Linux, and LIBPATH on AIX) must include the lib32 directory of your Oracle client installation.

PATH

The search path must include the bin directory of your Oracle client installation.

This example checks the required variables and shows sample output values.

```
$ echo $ORACLE_HOME
/home/dbclient/oracle/10.1.0.3
$ echo $LD_LIBRARY_PATH
/home/dbclient/oracle/10.1.0.3/lib32
$ echo $PATH
/usr/local/bin:/home/dbclient/oracle/10.1.0.3/bin
```

3. Issue the following command to run the Oracle SQL tool and connect to the appropriate service name:

```
sqlplus accountname/password@tnsname
```

Replace *accountname*, *password* and *tnsname* with the appropriate values. If the shell environment has been configured correctly, you are connected to Oracle.

Note: The first time you log in with SQL Plus, use sys as the user, then create a new database user. Supply this new user to the BusinessObjects Enterprise installer when it ask for the oracle username, password and tnsname.

4. Issue the following command to ensure that account has permission to create tables:

```
create table sampletable (field1 char(10));
```

5. Issue the following command to ensure that the account has permission to delete tables:

```
drop table sampletable;
```

6. Issue the following command to ensure that the account has permission to create procedures:

```
CREATE PROCEDURE test_proc (foo_in VARCHAR, bar_in VARCHAR)
IS
BEGIN
INSERT INTO test_table (foo, bar) VALUES (foo_in, bar_in);
END;
```

7. Issue the following command to ensure that the account has permission to drop procedures:

```
DROP PROCEDURE TEST_PROC;
```

8. Type exit.

DB2 Database Requirements

If you are using DB2 for the CMS or auditing database:

- Ensure that the CMS database is not partitioned.

Note: The auditing database can be partitioned.

- Create the database with these settings:

Collating Sequence = "Identity"

Codeset = "UTF-8"

Territory = "XX"

If your DB2 database does not have the correct Collating Sequence setting, the user and usergroup objects may not sort properly in the CMC.

Replace *XX* with the code that is appropriate for your location. See your DB2 documentation for more information.

- If you are using DB2 8.1, install and configure a C compiler to build SQL stored procedures. DB2 8.2 through version 9.1 do not have this requirement. BusinessObjects Enterprise uses stored procedures when users are added to groups. See the DB2 documentation for details about how to configure the C compiler for SQL stored procedures.

After the database is created, prepare the database for the BusinessObjects Enterprise installation.

More information:

[Prepare an Existing Database Server](#) (see page 63)

Test DB2 Environment Variables (UNIX Only)

If you choose to connect to DB2 through a native connection, the installation searches the current shell for the DB2INSTANCE environment variable. This standard DB2 environment variable must be set in order for the install script to utilize the DB2 client software.

If you are using an existing database, you must source your database client.

Sourcing the script that identifies the database environment variables can be done in one of two ways:

- The user who performs a system installation can modify the BusinessObjects Enterprise script `setupint.sh` to add the command to source your database client. However, root access is required to execute this script. This script can be found at the following location:

```
<INSTALLDIR>/bobje/init/setupint.sh
```

This method will source the database for all users.

- Each person with a user installation can modify their profile and add the command to source their database environment. This method can be done anytime.

For example, if a DB2 database was required, an entry would be made in the user profile to source the environment script used by DB2 (db2profile). See your database documentation for the name of its environment script.

Note: Instead of sourcing the script that identifies the database environment variables, you can manually set the environment variables required by your database. However, if you manually set the environment variables, you will need to set them again if the system is restarted.

See your database documentation and/or your database administrator if the account shell environment from which you will install BusinessObjects Enterprise has not yet been set up for your database client software, or if you are unable to connect successfully to the database.

More information:

[Source the Script that Identifies the Database Environment Variables \(UNIX Only\)](#) (see page 52)

Verify DB2 Native Connectivity Through a Database Alias (UNIX Only)

To verify DB2 native connectivity through a database alias

1. Log in to the UNIX server with the user account and password which you will use to do your install.

Note: This account should already be set up. See [Create an Account, a Home Directory, and a Login Environment](#) (see page 40) for more information about setting up a UNIX account to use when you install BusinessObjects Enterprise.

2. Echo the following environment variables and ensure that their values correspond to your database client software installation.

DB2INSTANCE

This variable defines the current DB2INSTANCE DB2 database instance.

INSTHOME

This variable contains the path to the root directory of your DB2 client installation.

DB2DIR

This variable contains the path to the root directory of your DB2 installation (one level above the DB2 bin and lib directories).

library path

The library search path (LD_LIBRARY_PATH on Solaris and Linux, and LIBPATH on AIX) must include the lib directory of your DB2 client installation.

PATH

The search path must include the bin directory of your DB2 client installation.

This example checks the required variables and shows sample output values.

```
$ echo $DB2INSTANCE
db2inst1
$ echo $DB2DIR
/opt/IBMDb2/V7.1
$ echo $LD_LIBRARY_PATH
/export/home/db2inst1/sqllib/lib
$ echo $PATH
/usr/bin:/usr/ucb:/etc:./export/home/db2inst1/sqllib/adm:/export/home/db2inst1/sqllib/misc
```

3. Issue the following command to run the DB2 SQL tool:

```
db2
```

4. Issue the following command to connect to the desired database alias:

```
connect to db_alias user accountname using password
```

Replace db_alias and password with the appropriate values. If the shell environment has been configured correctly, you are connected to DB2.

5. Issue the following command to ensure that the account has permission to create tables:

```
create table sampletable (col_fld char(10) not null)
```

6. Issue the following command to ensure that the account has permission to delete tables:

```
drop table sampletable
```

7. Type terminate.

MySQL Database Requirements

If you are using your own MySQL installation for the CMS or auditing database, use a Unicode character set, such as UTF-8. After the database is created, prepare the database for the BusinessObjects Enterprise installation.

More information:

[Prepare an Existing Database Server](#) (see page 63)

Test MySQL Environment Variables (UNIX Only)

If you are using an existing MySQL database, ensure the `MYSQL_HOME` variable is set up for the user who will install BusinessObjects Enterprise. If this variable is not set up, and you have specified that you are using an existing MySQL database, the installation will not proceed and you will receive an error message. See the documentation for MySQL for information about how to configure the MySQL.

Sybase Database Requirements

If you are using Sybase for the CMS or auditing database:

- Create a database with a page size of 8 KB. The Sybase database default page size is 2KB, which is too small for the CMS system database to run efficiently. The page size is set up during the database creation and cannot be changed after the database is created.
- Use a Unicode character set, such as UTF-8.

Once the database is created, you must prepare it for the BusinessObjects Enterprise installation.

Test Sybase Environment Variables (UNIX Only)

If you choose to connect to Sybase through a native connection, the installation searches the current shell for the `SYBASE` and `SYBASE_OCS` environment variables. These standard Sybase environment variables must be set in order for the install script to utilize the Sybase client software.

If you are using an existing database, you must source the script that identifies the database environment variables.

Sourcing the script that identifies the database environment variables can be done in one of two ways:

- The user who performs a system installation can modify the BusinessObjects Enterprise script `setupint.sh` to add the command to source your database client. However, root access is required to execute this script. This script can be found at the following location:

```
<INSTALLDIR>/bobje/init/setupint.sh
```

This method will source the database for all users.

- Each person with a user installation can modify their profile and add the command to source their database environment. This method can be done anytime.

For example, if a Sybase database was required, an entry would be made in the user profile to source the environment script used by Sybase (`SYBASE.sh` or `SYBASE.csh`). See your database documentation for the name of its environment script.

Notes:

- Instead of sourcing the script that identifies the database environment variables, you can manually set the environment variables required by your database. However, if you manually set the environment variables, you will need to set them again if the system is restarted.
- See your database documentation and/or your database administrator if the account shell environment from which you will install BusinessObjects Enterprise has not yet been set up for your database client software, or if you are unable to connect successfully to the database.

Verify Sybase Native Connectivity Through a Server Name (UNIX Only)

To verify Sybase native connectivity through a server name

1. Log in to the UNIX server with the user account and password which you will use to do your install.

Note: This account should already be set up. See [Create an Account, a Home Directory, and a Login Environment](#) (see page 40) for more information about setting up a UNIX account to use when you install BusinessObjects Enterprise.

2. Echo the following environment variables and ensure that their values correspond to your database client software installation.

SYBASE

This variable contains the path to the root directory of your Sybase client installation (one level above the SYBASE_OCS version directory).

SYBASE_OCS

This variable contains the name of the Sybase version directory (one level above the Sybase bin and lib directories).

library path

The library search path (LD_LIBRARY_PATH on Solaris and Linux, LIBPATH on AIX) must include the lib directory of your Sybase client installation.

PATH

The search path must include the bin directory of your Sybase client installation.

This example checks the required variables, and shows sample output values:

```
$ echo $SYBASE
/opt/sybase/12.0
$ echo $SYBASE_OCS
OCS-12_0
$ echo $LD_LIBRARY_PATH
/export/home/sybase/12.0/OCS-12_0/lib
$ echo $PATH
/usr/bin:/usr/ucb:/etc:./export/home/sybase/12.0/OCS-12_0/bin
```

3. Issue the following command to run the Sybase SQL tool and connect to the database server:

```
isql -U user -P password -S servername
```

Replace *user*, *password*, and *servername* with the appropriate values. If the shell environment has been configured correctly, you are connected to Sybase.

4. Issue the following command to ensure that the account has permission to create tables:

```
use aps
go
create table sampletable (def_field char(10))
go
sp_help sampletable
go
```

5. Issue the following command to ensure that the account has permission to delete tables:

```
drop table sampletable
go
sp_help sampletable
go
```

6. Type quit.

SQL Anywhere Database Requirements

If you are using SQL Anywhere for the CMS Repository or Audit database, install the SQL Anywhere client. Restart the system after installing the client. Verify that the SQLANY12 variable is set up before installing BusinessObjects Enterprise.

Prepare an Existing Database Server

After you have created your database, set up the database client, and before you install BusinessObjects Enterprise, ensure that the CMS can connect to it. During your installation, you are asked whether you want to install SQL Anywhere or you want to use an existing database. If you opt to use an existing database, you are asked for the connection and authentication details by the BusinessObjects Enterprise installer:

Existing Database	Information Required by Installer
SQL Anywhere	<ul style="list-style-type: none"> ■ Data Source name ■ Database name ■ Server name ■ Port number (default is 2638) ■ Login credentials to access the database
MySQL	<ul style="list-style-type: none"> ■ Database name ■ Server name ■ Port number (default is 3306) ■ Login credentials to access the database
Sybase	<ul style="list-style-type: none"> ■ Server name ■ Login credentials to access the database <p>Note:</p> <ul style="list-style-type: none"> ■ The Sybase server name is a combination of the host name and the port number, which your database administrator sets in the file sql.ini interfaces file. ■ BusinessObjects Enterprise connects to the default database for the user you specify. The database administrator sets this default.
DB2	<ul style="list-style-type: none"> ■ Server: DB2 database alias ■ Login credentials to access the database
Oracle	<ul style="list-style-type: none"> ■ Server: TNSNAMES connect identifier ■ Login credentials to access the database
Microsoft SQL Server	<ul style="list-style-type: none"> ■ ODBC DSN name from the Windows System DSN

Before Deploying Web Applications

Your web application server must be installed and working before you attempt to install BusinessObjects Enterprise.

To deploy and run the CMC and InfoView web applications, your web application server should have at least 2 GB of free disk space, in addition to any other requirements for other software installed on the computer.

Windows

Before Deployment to IIS

If you are using the 64-bit version of IIS 7, you must ensure that:

- ASP.NET is enabled.
- The advanced IIS setting Enable 32-bit Applications is set to "True."
- The advanced IIS setting .NET Application Pool is set to "Classic" mode.

Notes:

- Most CA Technologies products do not use IIS, but see your CA Technologies product documentation for specific requirements.
- If the IIS Web Application Server option is not selectable, ASP.NET v1.1 and the IIS (Control Panel, Add or Remove Programs, Windows Components, Application Server) must be installed.

UNIX

Before Deployment to a Java Web Application Server

It is recommended that you change the heapsize and maximum perm size settings of your Java Virtual Machine (JVM) to:

```
-Xmx1024m -XX:MaxPermSize=256m
```

For example, Tomcat uses the `JAVA_OPTS` environment variable to configure its JVM:

```
JAVA_OPTS="$JAVA_OPTS -Xmx1024m -XX:MaxPermSize=256m"
```

See your JVM documentation for more information about changing your Java memory settings.

Before you begin the deployment process, ensure that the web application server is running correctly by launching its administrative console at:

`http://<WAS_HOSTNAME>:<PortNumber>`

Replace `<WAS_HOSTNAME>` with the hostname or IP address of your web application server, and `<PortNumber>` with the port number, if required.

Determine the Currently Installed Version of CA Business Intelligence

Version information is contained in the CA Business Intelligence properties file.

Windows

To locate the properties file and identify your release information

1. Navigate to the `<INSTALLDIR>` of the BusinessObjects Enterprise installation.
2. Open `version.txt` to determine the version of CA Business Intelligence used during the installation.

UNIX

To locate the properties file and identify your release information

1. Navigate to the `<INSTALLDIR>` of the BusinessObjects Enterprise installation.
The default location is `$CASHCOMP/CommonReporting3`.
2. Open the `version.txt` file in a text editor.
3. The first line in the `version.txt` file is the current version.

Example: 3.3.0.0

Deployment Checklist

This section provides a checklist of the major tasks that you complete during the planning phase of your BusinessObjects Enterprise deployment.

Checklist Item	Reference	Complete? Y/N
Understand the tiers that make up the BusinessObjects Enterprise architecture.	Access Your Organization's Environment	Y__/N__
Understand the components and how they communicate with each other. Additional information about BusinessObjects Enterprise architecture, such as workflows, can be found in the <i>BusinessObjects Enterprise Administrator's Guide</i> (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).	BusinessObjects Enterprise Architecture (see page 26)	Y__/N__
Identify the operating system that you are deploying the system on.	Operating Systems (see page 18)	Y__/N__
Select the database servers that you are accessing.	Databases in BusinessObjects Enterprise (see page 21)	Y__/N__
Select a web application server.	Web Application Servers	Y__/N__
If you are using third-party authentication, secure sockets layer, firewalls, or reverse proxy, ensure that you have reviewed the pertinent sections in this guide and the <i>BusinessObjects Enterprise Administrator's Guide</i> (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).	<ul style="list-style-type: none"> ■ Security ■ Firewalls (see page 335) ■ <i>BusinessObjects Enterprise Administrator's Guide</i> (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf) 	Y__/N__
Identify potential performance problems.	Performance and Scalability (see page 385)	Y__/N__
Decide whether to design for high availability and failover support.	Design for High Availability (see page 386)	Y__/N__
Review the installation order for BusinessObjects Enterprise.	Installation Order (see page 67)	Y__/N__

Installation Order

The following table lists the recommended order for installing the BusinessObjects Enterprise system components. The actual order can vary depending on whether your system included preexisting systems to incorporate into the new BusinessObjects Enterprise deployment.

1. Database server

To use your own database server to store BusinessObjects Enterprise data, rather than the version of SQL Anywhere that the installer provides, at least one database server must be available for the CMS. A second database can be used to enable auditing, or BusinessObjects Enterprise can use the same database for both the CMS and auditing. In addition, BusinessObjects Enterprise requires a connection to your organizational database, to act as source material against which to run reports.

2. Database firewall

To protect your database behind a firewall, install the firewall after the databases are configured and verified to be working. Ensure that access through the firewall is working in both directions.

3. a. BusinessObjects Enterprise database drivers

Install the appropriate database drivers on your BusinessObjects Enterprise server systems and ensure that the database servers can be accessed through the firewall.

b. BusinessObjects Enterprise server or cluster

Install your BusinessObjects Enterprise server or cluster using the BusinessObjects Enterprise installer. Enter connection information for all databases during the install.

4. Server firewall

To protect your BusinessObjects Enterprise server or cluster behind a firewall, install the firewall after the servers are configured and verified to be working. Ensure that access through the firewall is working in both directions.

5. a. Web application server or cluster

You can use your own web application server instead of the version of Tomcat that the installer provides. Install the web application server or cluster and verify network connectivity between the server and the BusinessObjects Enterprise server.

b. Web application files

When your web application server is verified to be working, deploy the BusinessObjects Enterprise web application files.

6. **Web application server firewall**

To protect your web application server or cluster behind a firewall, install the firewall after the servers are configured and verified to be working. Ensure that access through the firewall is working in both directions.

7. **Web server or cluster**

You can use split web and web application servers so that server static content can be off-loaded from the web application servers. Configure your web server or cluster and ensure connectivity to the web application server. When using a load balancer, configure the load balancer after the web servers or cluster are verified to be working.

8. **Web server firewall**

To protect your web server behind a firewall, install the firewall after the servers are configured and verified to be working. Ensure that access through the firewall is working in both directions.

9. **Reverse proxy**

When using a reverse proxy server, configure the reverse proxy to once access through the web or web application server firewall has been verified.

10. **External firewall**

To protect your entire deployment behind a firewall, install the firewall after the entire system is configured and verified to be working. Ensure that access through the firewall is working in both directions.

More information:

[Firewalls](#) (see page 335)

[Databases in BusinessObjects Enterprise](#) (see page 21)

Chapter 3: Begin the Installation of CA Business Intelligence

This section contains the following topics:

[Installation Checklist](#) (see page 69)

[Begin on Windows](#) (see page 71)

[Begin on UNIX](#) (see page 74)

Installation Checklist

Ensure that you review the appropriate checklist before beginning your installation.

Windows

Prior to installing BusinessObjects Enterprise, review the following checklist.

- Have you verified appropriate network connectivity between all computers that will be part of your deployment?
- If you are using your own database server:
 - Have you created a database for the CMS?
 - Have you created an auditing database, if required?
 - Have you created a user ID and password with access to your existing database (if you are integrating your existing database server software), so that the installation can access your database to configure the CMS database?
 - Have you made sure you can log in to the database with your login ID and password?
 - Have you tested the database connection between the computer hosting the database servers and the CMS?
 - If you are using DB2 or Sybase, have you verified that your database was created with the correct settings? (Some settings cannot be modified after the database has been created.)
 - Has the database client software been properly configured?

- If you are using your own web application server:
 - Have you decided on which web application server to use?
 - Has the server already been installed and configured?
 - Have you ensured that your existing web application server has the required JDK installed?
- If you are installing on a VMware virtual machine, ensure the computer name does not include underscore (_), period(.), or slash (/ or \) characters.
- If you are installing on Windows Server 2003 Service Pack 1 or Windows Server 2003 Service Pack 2, have you ensured the [Update for Windows Server 2003 \(KB925336\)](#) is installed on your computer?
- If you are installing on Windows XP, have you prepared the computer with the [workaround](#) provided by Microsoft (under the Workaround section)?

UNIX

Prior to installing BusinessObjects Enterprise, review the following checklist.

- Have you tested that all computers that will run BusinessObjects Enterprise can communicate properly?
- Have you tested the database connection between the computer where your CMS database will reside and where the CMS will be installed?
- Have you decided which database to use with BusinessObjects Enterprise?
- If you are using your own database server, have you created a database for the CMS?
- If you plan to connect remotely to install, have you ensured your terminal setting is set to VT100 before beginning the installation?
- If you are using your own database server and plan to use Auditor, have you decided if you will create an auditing database, or use the same one for both the CMS and auditing purposes?
- If you are using your own database server, have you created a user ID and password with access to your existing database (if you are integrating your existing database server software), so that the installation can access your database to configure the CMS database?
- If you are using your own database server, have you made sure you can log in to the database with the ID and setup tables?
- Have you ensured that any existing database you will be connecting to has been configured correctly?
- Does your BusinessObjects Enterprise user have write permissions in the database directory?

- Have you verified you are using a supported locale?
- Have you decided whether or not you will develop custom applications?
- Have you decided what web application server to use?
- If you are not using Tomcat, have you made sure your existing web application server has the JDK installed?
- If you are not using Tomcat, is your web application server already installed and configured?
- If you are using an web application server from a previous installation, have you ensured that you have cleaned up all previous deployed applications from it?
- Does your user have write permissions in the web application server directory?
- Do the BusinessObjects Enterprise system requirements match your UNIX setup?
- If you are installing on a VMware virtual machine, ensure the computer name does not include underscore (_), period(.), or slash (/ or \) characters.
- Does the UNIX user account under which the install is run have read, write, and execute permissions to the directory where BusinessObjects Enterprise will be installed?
- Have you sourced your database client so that all the required environment variables are set up properly?
- If you are using DB2 or Sybase, have you verified that your database was created with the correct settings? (Some settings cannot be modified after the database has been created.)
- Does the /etc/hosts file have the proper IP address configured?

Begin on Windows

The following instructions lead you through the initial steps of setting up your BusinessObjects Enterprise installation on Windows. In this stage you do the following:

- Choose the language for the installation setup.
- Agree to the license terms.
- Select which language packs to install.
- Select where to install BusinessObjects Enterprise.
- Select an installation type and installation directory.

When you perform the following installation, all the components you selected are installed on the local computer. Default user and group accounts are created, and sample reports are published to the system.

Run the CA Business Intelligence Installer

Important! If you are installing on Windows Server 2003 Service Pack 1 or Windows Server 2003 Service Pack 2, ensure that the [Update for Windows Server 2003 \(KB925336\)](#) is installed on your computer before beginning the CA Business Intelligence installation.

Also, if you are installing on Windows XP, ensure that you have prepared the computer with the [workaround](#) provided by Microsoft (under the Workaround section).

To run the CA Business Intelligence installer

1. If you are installing from a DVD and the Windows Autoplay setting is enabled, the installer will start automatically. If Autoplay is not enabled, or you are installing from a hard drive, run `cabiinstall.exe` from the root directory of the CA Business Intelligence DVD.

Note: If CA Business Intelligence detects that BusinessObjects Enterprise XI 3.x is already installed on the computer, an error message displays. Click OK to exit the program. The installer program does not continue if it finds a preexisting version of a non-CA Technologies version of BusinessObjects Enterprise XI 3.x.

The Please Choose Setup Language screen displays.

2. Choose the language as English, then click OK.
3. Click Next at the Introduction screen.
4. Accept the CA Technologies License Agreement, then click Next.
5. Click Yes to install the CA Technologies report templates, then click Next.
6. If you want to save the CA Business Intelligence response file, click Yes.

Enter the response file name and the directory where the response file should be created, then click Next.

Note: The default locations are:

- For windows 32bit computers: `C:\Program Files\CA\SC\CommonReporting3`
- For x64 computers: `C:\Program Files X(86)\CA\SC\CommonReporting3`

7. Click Install at the Review Settings screen.

The CA Business Intelligence installation wizard begins.

8. At the CA Business Intelligence installation wizard welcome screen, click Next to proceed with the installation.
9. Accept the BusinessObjects Enterprise License Agreement, then click OK.

The Choose Language Packs screen displays.

Install Language Packs

You can choose to install specific or all available language packs on the Choose Language Packs screen. These languages can be used by administrators and users in BusinessObjects Enterprise products.

Note: English is mandatory because it is used as a back-up language if a problem with a language pack is detected. English cannot be deselected.

1. Select the language packs you want to install.

The language packs currently available for installation include:

- Chinese Simplified
- Chinese Traditional
- Danish
- Dutch
- English
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazil)
- Russian
- Spanish
- Swedish
- Thai

Note: This setting is only used by the setup program for the duration of the installation. You can select languages to be installed on your new BusinessObjects Enterprise server later.

2. Click Next.

The Install Type screen displays.

More information:

[Install Language Packs](#) (see page 262)

Select an Installation Type

The Install Type screen is used to select an installation method and to specify an installation directory.

1. Select one of the following installation type options:
 - **New**

This option installs all the required BusinessObjects Enterprise server and client components onto your computer.
 - **Custom or Expand Install**

This option enables experienced users to select client and server components to install.
 - **Web Tier**

This option installs only web application server components.
2. Specify where to install the BusinessObjects Enterprise components in the Destination Folder field.

If you have installed Business Objects products on your computer, the Destination Folder field is disabled and path to the existing Business Objects product folder displays.
3. Click Next to continue with the installation.

Proceed to the chapter related to the installation type you selected.

More information:

[Installing on a Non-System Drive on Windows](#) (see page 43)

[Custom Or Expand](#) (see page 47)

[Perform a Web Tier Installation](#) (see page 134)

[Perform a New Installation](#) (see page 81)

Begin on UNIX

BusinessObjects Enterprise allows you to run all server components on a UNIX server. Users then connect to BusinessObjects Enterprise over the Web with a supported web browser. The installation can place the necessary run control scripts in the relevant directories for automated startup (requires root privileges), or you can confine the installation to a particular directory.

After you finish the installation and setup procedures, the various core server components run as background processes. You can then deploy the BusinessObjects Enterprise web applications. When you install the BusinessObjects Enterprise server components on a UNIX computer, you can connect remotely to BusinessObjects Enterprise with the Publishing Wizard and the Import Wizard. However, these client applications must be installed on Windows.

Note: Before you run the interactive installation setup program (`./cabiinstall.sh`), it is strongly recommended that you read through the details and procedures provided in the previous chapter.

Set up Product Distribution

This section shows how to distribute BusinessObjects Enterprise so that you can perform an installation. You can perform this installation remotely through a telnet session, or locally through a terminal window. If you connect remotely to install BusinessObjects Enterprise, be sure to set your terminal settings to VT100 before beginning the installation.

Before following this procedure, ensure that you have set up your UNIX system appropriately.

More information:

[Set up Your UNIX System](#) (see page 38)

Run the Product Distribution Directly from a DVD

To run the CA Business Intelligence installer directly from the DVD

1. Insert the DVD to your drive.
2. Mount it to a folder if it does not automatically mount.
Note: Ensure that the locale has been set before starting the installation.
3. From the `<INSTALLDIR>`, run:

```
cabiinstall.sh.
```

The CA Business Intelligence installer begins the installation.

More information

[Set the Locale](#) (see page 39)

Begin Your Installation

To begin your installation

1. Mount the device that contains the installation files.
2. Change to the directory where the installer is located using the command:
`"cd <mountdir>"`
3. Type `./cabiinstall.sh` in the command line and press Enter.
The installation setup program is launched and you are prompted to select a language for the installation.
4. Select a language for the installation and press Enter.

You can select from one of the following languages:

- English
- German
- French
- Chinese
- Japanese
- Korean
- Italian
- Spanish
- Portuguese (ptb)

The License Agreements display.

Accept the License Agreement

To install CA Business Intelligence on UNIX, you must accept the Business Objects and CA Technologies license agreements.

1. Press Enter at the Introduction screen.
2. Accept the CA Technologies License Agreement, then press Y.
If you are installing as root, the Non-root Credentials screen displays.
3. Enter a non-root user name and the group of that user doing the BusinessObjects Enterprise installation. This user will have the ownership for the BusinessObjects Enterprise installation.
4. Type Y to install the CA Technologies report templates, and press Enter.
5. If you want to save the CA Business Intelligence response file, type Y.
6. Enter the response file name and the directory where the response file should be created, then press Enter.

Note: The default location is:

`/opt/CA/SharedComponents/CommonReporting3/cabiresponse.ini`

7. Press Enter at the Review Settings screen.
The CA Business Intelligence installation begins, and the Business Object License Agreement displays.
8. Enter Y to agree to the terms and continue with the setup program.

More information:

[Create an Account, a Home Directory, and a Login Environment](#) (see page 40)

Specify the Installation Directory

Note: If you are installing BusinessObjects Enterprise on a computer that has an earlier version of BusinessObjects Enterprise installed, you must specify a different directory for the new installation.

To specify an installation directory

1. To accept the default installation directory press Enter.
2. To create your own directory, use the Backspace key to remove the current directory and replace it with your own path to the desired installation directory and press Enter.

You are prompted to select which language packs to install.

Install Language Packs

You can choose to install language packs when running the installation setup program on UNIX.

1. Select any additional language packs you want to install.

The following languages are available:

- Chinese Simplified
- Chinese Traditional
- Danish
- Dutch
- English
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazil)
- Russian
- Spanish
- Swedish
- Thai

2. Press Enter.

Note: You can also add language packs after installing BusinessObjects Enterprise on UNIX. You are prompted to select either a user or system installation.

More information:

[Install Language Packs](#) (see page 262)

Select a User or System Installation

To select user or system installation

1. Select the type of installation you want to perform.
 - User
 - System

Note: To perform a System installation, you do not require root-level authority. However, to run the system-level initiation script root-level authority is required. After you perform a System installation, there are a few additional steps you must perform.

2. Press Enter.

The Installation Type screen displays.

More information:

[Differences Between User and System Installations](#) (see page 42)

Select an Installation Type

You can select from one of the following three installation types: New, Custom, or Web Tier.

1. Select the installation type.
 - **New**

Performing a new installation is the simplest way to deploy BusinessObjects Enterprise because all the required components are installed by default onto one computer.
 - **Custom or Expand**

The custom installation allows you to select the components to install. You can perform a custom installation if you plan to use BusinessObjects Enterprise in a distributed environment. This installation is recommended for advanced users.

- **Install Web Tier features**

Perform a web applications installation if you want to install web application server components. This option installs the Web application components only. This option is useful for a distributed deployment.

- You can deselect Enable servers after installation. This action prevents communication between the CMS and other servers after the installation is complete. For more information about starting, stopping, disabling, and enabling servers, see the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

2. Press Enter.

More information:

[Perform a Web Tier Installation](#) (see page 134)

[Perform a New Installation](#) (see page 91)

[Perform a Custom or Expand Installation](#) (see page 121)

Chapter 4: New Installation

This section contains the following topics:

[Windows](#) (see page 81)

[UNIX](#) (see page 91)

Windows

Perform a New Installation

Performing a new installation deploys all of the required and optional components onto one computer. A new installation:

1. Requires you to enter a password to use for the BusinessObjects Enterprise system administrator account.
2. Prompts for system database connection and authentication details.
3. Allows you to install and configure a new SQL Anywhere database or use an existing database.
4. Requires you to enter a name for the Server Intelligence Agent (SIA).
5. Prompts you to select one of the following installation options:
 - Use a Java web application server. You can install and configure Tomcat, or use an existing Java web application server.
 - Use the IIS web application server included with your Windows operating system.
 - Use both Java and IIS web application servers.

The Install Type screen displays once you complete the initial setup of the BusinessObjects Enterprise installation.

To perform a new BusinessObjects Enterprise installation

1. Select New in the Install Type screen.
2. Select one of the following options:
 - Install SQL Anywhere Database Server if you do not have a system database server and you want to install SQL Anywhere on the current computer.
 - Use an existing database server if you want to use an existing database server.

3. Select the Enable servers upon installation check box if you want to launch BusinessObjects Enterprise when the installation process finishes. If you do not select this option, manually enable and run the BusinessObjects Enterprise application server from the CCM after installation.
4. Specify where to install the BusinessObjects Enterprise components in the Destination Folder field (verify that enough disk space is available).

The defaults are:

- C:\Program Files\CA\SC\CommonReporting3 (for 32-bit computers)
 - C:\Program Files X(86)\CA\SC\CommonReporting3 (for x64 computers)
5. Click Next to continue with the installation.

The Server Components Configuration screen displays.

More information:

[Begin on Windows](#) (see page 71)

Enter Information About Your New CMS

The Server Components Configuration screen is used to enter the port number and an administrator password for the new CMS.

To enter information about your new CMS

1. Specify a port number in the CMS port field.

The default CMS port number is 6400.

The CMS communicates with other BusinessObjects Enterprise servers through the specified port.

2. Specify a password for the CMS administrator account in the Password and Confirm password fields.

Note: Select the Configure the BusinessObjects Enterprise Administrator password at a later time check box if you want to configure the Administrator password after the installation is complete. If you select this option, you must log in to the CMC with blank password for the first time to be able to change the Administrator password.

3. Click Next to continue with the installation.

The Server Intelligence Agent screen displays.

Note: If the port you specified in step 1 is unavailable or already occupied by some other service, you will be requested to specify another port number.

More information:

[Log in to the CMC](#) (see page 196)

Enter Server Intelligence Agent Information

A Server Intelligence Agent (SIA) node is automatically created during installation of BusinessObjects Enterprise. The Server Intelligence Agent screen is used to name and designate a port address for the SIA.

To enter SIA information

1. Provide a unique name to identify the SIA node in the Node Name field.
Note: Do not use spaces or nonalphanumeric characters in a SIA node name. By default, the node name is same as the system host name.
2. Specify a port number for the SIA in the Port field (default is 6410). The SIA uses this port to communicate with the CMS.
3. Click Next to continue with the installation. Once the SIA information is entered, the port number is validated before you can proceed to configure the CMS database for your installation. A warning displays if the port you specified is not available.

More information:

[Configure Your SQL Anywhere Database Server](#) (see page 84)

[Configure an Existing Database Server](#) (see page 85)

What is Server Intelligence?

Server Intelligence is the underlying server management architecture that simplifies the administration and deployment of BusinessObjects Enterprise servers and services. Instead of manually administering servers via the Central Configuration Manager (CCM), you can now handle most server administration tasks online using the CMC.

Server Intelligence allows you to use the CMC for all daily maintenance tasks, such as adding and configuring new servers, or starting and stopping existing servers. And it also allows you to automate certain server processes, such as restarting or shutting down servers that stop unexpectedly. If a CMS system database becomes unavailable, it is automatically reconnected. Server Intelligence also manages server configuration information, storing it in the CMS so you can easily restore default server settings or create duplicate clone servers with the same settings. All of these features make it easier to fine-tune your system's performance and fault tolerance.

Note: Server Intelligence simplifies many procedures that you needed to perform manually in earlier versions of BusinessObjects Enterprise. Many of the tasks that used to be carried out in the CCM are now managed in the [CMC](#) (see page 195).

About the Server Intelligence Agent

Server Intelligence is managed via the Server Intelligence Agent (SIA), the component that processes the server management tasks. An SIA is deployed on each node within your BusinessObjects Enterprise deployment. A node is a collection of BusinessObjects Enterprise servers, running on the same host and managed by a single SIA.

The SIA maintains server status according to the settings you specify in the CMC. It processes the CMC's requests to start, stop, monitor, and manage all servers on the node, and it also monitors potential problems and automatically restarts servers that have shut down unexpectedly. The SIA ensures optimal performance by continually monitoring server status information, which is stored in the CMS database. When you change a server's settings or add a new server in the CMC, the CMS notifies the SIA, and the SIA performs the task.

The SIA is automatically configured during installation, but you can change these default settings through the CCM.

CMS Database Configuration

Configure Your SQL Anywhere Database Server

The SQL Anywhere Database Server Configuration screen displays if you chose to install SQL Anywhere as part of the BusinessObjects Enterprise installation.

To configure your SQL Anywhere database server

1. Specify the Data Source Name for the SQL Anywhere database server. The default name is BOE120.
2. Specify the port number for the SQL Anywhere database server in the SQL Anywhere Port Number field. The default port number is 2638. Use this number unless the port is unavailable.
3. Specify and confirm a password for the SQL Anywhere DBA user account in the SQL Anywhere DBA User Account area.
4. Confirm the user name and specify a password for the SQL Anywhere BusinessObjects database user account in the SQL Anywhere BusinessObjects User Account area; then click Next.

Note: The user name must be unique on the network.

The Select Web Application Server screen displays.

More information:

[Perform a New Installation](#) (see page 81)

[Select a Web Application Server Configuration Option](#) (see page 87)

Configure an Existing Database Server

The CMS Database Information screen displays if you chose to use an existing database server to hold the BusinessObjects Enterprise CMS database. Use this screen to enter connection and authentication details for the database.

To configure an existing database server

1. Select a database type from the Select existing CMS database drop-down list in the CMS Database pane.

Depending on your database server selection, corresponding input fields are displayed in the CMS Database pane.

2. Provide all the required information for the database in the fields provided in the CMS Database pane.

The following information summarizes all the information that is required for each database type:

Microsoft SQL Server (ODBC)

- ODBC DSN (Specified in Control Panel Data Sources (ODBC) applet)

Oracle

- Server: tnsnames connect identifier
- Login credentials

DB2

- Server: DB2 database alias
- Login credentials

SQL Anywhere

- Data Source Name
- Database Name
- Server Name
- Port
- Login Credentials

MySQL

- Database: MySQL database name
- Server: MYSQL server name
- Port: Default port is 3306
- Login credentials

Sybase

- Server: Sybase Server Name
- Login credentials

Note: The Sybase server name is a combination of the host name and the port number, which your database administrator sets in the file sql.ini.

3. To provide an ODBC DSN for a Microsoft SQL Server:
 - a. Click the Browse button in the CMS Database area.
 - b. Use the SQL Server Logon screen to select a data source, database, and to provide user credentials.
 - c. If you are installing on a 64-bit version of Windows, select the Consume DSN created under WOW64 check box. This selection enables you to use 32-bit DSN. In addition, use `odbcad32.exe` (found under `C:\Windows\SysWOW64`) to create a system DSN.
 - d. Click OK to submit your settings.

The SQL Server Logon screen is closed and an ODBC DSN entry displays in the ODBC DSN field.

- e. Select the Auditing Database check box to set up an existing auditing database. If you do not want to specify an auditing database for your new installation, skip to step 6.

The input fields under the Auditing Database check box are activated.

4. Select a database type from the Select existing Auditing database drop-down list in the Auditing Database pane.

Depending on your database server selection, corresponding input fields are displayed in the Auditing Database pane.

5. Provide all the required information for the database in the fields provided in the Auditing Database pane.
6. Select the Reset existing database check box to delete all current tables and entries in existing database CMS and auditing databases.
7. Click Next to continue with the installation.

The Select Web Application Server screen displays. This screen only displays if a connection is established with the database configuration you provided.

Select a Web Application Server Configuration Option

The web application server runs BusinessObjects Enterprise web applications such as InfoView, the CMC, and custom web applications. Use the Select Web Application Server screen to choose to:

- Install and/or deploy to a Java web application server, such as the Tomcat web application server included with BusinessObjects Enterprise.
- Install and deploy to the IIS web application server installed as part of your Windows operating system.

Note: If you are using the 64-bit version of IIS 7, you must ensure that:

- ASP.NET is enabled.
- The advanced IIS setting Enable 32-bit Applications is set to True.
- The advanced IIS setting .NET Application Pool is set to Classic mode.
- If the IIS Web Application Server option is not selectable, ASP.NET v1.1 and the IIS (Control Panel, Add or Remove Programs, Windows Components, Application Server) must be installed.

To configure a Java web application server for BusinessObjects Enterprise you will need the web application server administrator account name and password, as well as the listener port number.

To select a web application server configuration option

1. To use a Java web application server, select Java Web Application Server and choose one of the following options:
 - Install Tomcat application server and deploy to it. This automatically installs and configures Tomcat.
 - Automatically deploy to a preinstalled Web Application Server.This prompts you to enter the configuration and authentication information on the next screen.
2. To use the IIS web application server included as part of your Windows operating system, choose IIS Web Application Server, then select the website to use for deployment from the drop-down list.
3. Click Next. Depending on your selection, you can now proceed to either configure your web application server, or start the installation process.

Note: If you want to use IIS web application server, the Microsoft .Net Framework and Microsoft IIS must be installed before the beginning the installation of CA Business Intelligence.

Configure a New Tomcat Web Application Server

The Configure Tomcat screen displays during installation if you choose to install Tomcat as the web application server for your BusinessObjects Enterprise installation. Use this screen to configure Tomcat.

To configure a new Tomcat web application server

1. Accept the default values or specify new port numbers for Connection port, Shutdown port, and Redirect port.
2. Click Next to continue with the installation.

Note: If the port numbers you specified are in use, a warning message displays. To continue you must specify unused and valid port numbers.

The Start Installation screen displays.

Configure Your Existing Web Application Server

The Configure Web Application Server screen displays during installation after you specify an existing server in the Select Web Application Server screen. To install web components on your web application server, provide specific configuration information about your existing web application server.

To configure your existing web application server

1. Select your existing web application server from the drop-down list of web application server types.
2. Click Next to continue with the installation.

The following list summarizes the information that is required for supported web application servers.

Note: If you are using an application server version that is not listed in the drop-down list of web application server types, we recommend that you deploy the web applications after installation.

Tomcat 6

- Server Instance: Name of the current web application server instance (for example, localhost)
- Service Name: Name of the Windows service if you are installing the application server as a Windows service (for example, "Tomcat6")
- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\wdeploy\appserver\Tomcat6)

WebLogic 10/10.3

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights to the application server

- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The WebLogic domain root directory (for example, c:\bea\weblogic10\user_projects\domains\base_domain)

Note: If you are using WebLogic 10.3.x, deploy applications after installation. For deployment, use weblogic11 as the configuration file. For example, to deploy all applications for WebLogic 10.3.3, edit the config.weblogic11 file and then run the command "wdeploy weblogic11 deployall".

WebLogic 9.2

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights to the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The directory where the web application server is installed (for example, c:\bea\user_projects\domains\base_domain)

WebSphere 6.1/7

- SOAP Port: The SOAP Connector Port of the application server (for example, 8880)
- Username: User name with administration rights to the WebSphere application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, server1)
- Virtual Host: The virtual host to which the application must be bound

- Admin is Secure?: Select this option to enable security requiring administrative access credentials to the application.

Notes:

- Set the values for the username and password parameters when Admin is Secure is enabled.
- If the Admin is Secure option is selected, enable the security in WebSphere too.
- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\Program Files\IBM\WebSphere\AppServer)

Oracle Application Server 10g R3

- Admin is Secure?: Select this option to use Secure Sockets Layer (SSL) encryption for authentication.
- Port: Administration port of the application server (for example, 6003)
This port is the request port of the <notification-server> element in the open.xml file.
- Username: User with administration rights to the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the Oracle Application Server application server instance (for example, home)
- Server Name: Name of the target application server (for example, myserver.domain.com)
- Group ID: Name of the server group to which the target application belongs (for example, Default_group)
- Application Server Installation Directory: The directory where the web application server is installed (for example, c:\product\10.1.3\OracleAS_1)

The Start Installation screen displays. Remember your credentials for the web application server as they can be required to install add-ons such as ProcessTracker or additional language packs.

Enter a Web Application Container Server HTTP Port Number

The Web Application Container Server (WACS) is a container that provides CMC services for .NET installations. If you are not using a Java web application server in your deployment, the Web Application Container Server Configuration screen displays.

This screen allows you to either accept the default HTTP port number, 6405, or to specify a different port. This is the HTTP port number on which you access the CMC through WACS.

To enter a Web Application Container Server (WACS) HTTP port number

1. If you want to change the HTTP port number for the WACS server, enter a new value in the HTTP Port field.
2. Click Next to continue.

Start the Installation

The Start Installation screen is the final screen in the installation.

Click Next to start the installation process.

Finish the Installation

Once the installation is complete, the Installation Complete screen displays. Click Finish to complete the BusinessObjects Enterprise installation. After the post-installations are performed, the CA Business Intelligence Completion screen displays with a summary of the installation.

After the installation is finished, the Restart Machine option is selected by default. If you do not wish to restart the system immediately, select Restart the machine later, then click Done.

UNIX

Perform a New Installation

Performing a new installation is the simplest way to deploy BusinessObjects Enterprise because all the required and optional components are installed on one computer.

Note: A GUI-based CA Business Intelligence installation is not supported on UNIX. Only console and silent installation of CA Business Intelligence is supported on UNIX.

The setup of a new installation of BusinessObjects Enterprise requires the following input.

1. Providing information about the system administrator for the new installation.
2. Setting up the system and auditing database. You can install and configure SQL Anywhere or you can configure your existing database.
3. Configuring the SIA.
4. Setting up the web application server. You can install and configure Tomcat or you can configure your existing web application server.
5. Confirming the installation directory.

Select a New Installation

The Installation Type screen in the following procedure displays after you have completed the initial setup of the BusinessObjects Enterprise installation.

To select a new installation

1. Select or deselect Enable servers after installation. This option is selected by default. Scroll down and use the spacebar to deselect the field.
2. Select New and press Enter.

The Enter the information for your new CMS screen displays.

More information:

[Begin on UNIX](#) (see page 74)

Configure the New CMS

Use the Enter the information for your new CMS screen to specify the CMS port number and password for the BusinessObjects Enterprise Administrator.

To configure the new CMS

1. Enter a valid port number in CMS Port Number or accept the default number - 6400.
2. Enter the same password under Administrator Password and Confirm Password and press Enter.

Note: You can also leave the passwords fields blank and configure the password at a later time. Your password must be at least six characters long and should contain two of the following options:

- Upper-case character
- Lower-case character
- Number
- Punctuation

Specify a System Database Option

Select a system database option. You can install SQL Anywhere or you can use your current database.

To specify a system database option

1. Select one of the following options:
 - Use an existing database (Oracle/DB2/Sybase/MySQL/SQL Anywhere)
 - Install SQL Anywhere.
2. Press Enter.

Depending on your selection, you either select and configure your existing database or you configure your SQL Anywhere installation.

More information:

[Configure an Existing Database](#) (see page 93)

[Install a New SQL Anywhere Database](#) (see page 95)

Configure an Existing Database

If you specified to use an existing database for the CMS, use the Select the database type for your new CMS screen to select your existing database type. You then configure the database.

To select and configure the database

1. Select your database type from the following options:
 - SQL Anywhere
 - MySQL
 - Oracle
 - DB2
 - Sybase

A new screen displays containing fields for configuring your database.

2. Provide information about your database and press Enter.

The information that is required for each database type is as follows:

SQL Anywhere

- Host Name
- User ID for the CMS database
- Password for the CMS database
- SQL Anywhere port number
- Database name for CMS
- Data Source Name

MySQL

- Host Name
- User ID for the CMS database
- Password for the CMS database
- MySQL port number
- Database name for CMS

Oracle

- TNS name
- User ID for the CMS database
- Password for the CMS database
- CMS port number

DB2

- Alias name
- User ID for the CMS database
- Password for the CMS database

Sybase

- Sybase Service name
- User ID for the CMS database
- Password for the CMS database

3. To enable an auditing database, type an x in the field provided.

Provide information about your new auditing database.

Auditing

- Auditing database name
- User ID
- Password

Note: If you are using Sybase as the auditing database, provide the Auditing database port number.

4. Decide if you want to reinitialize the database and press Enter.

Important! Re-initialization of the BusinessObjects Enterprise database erases all previous content in that particular database.

After you configure your CMS and auditing database, you are prompted for information about the [Server Intelligence Agent](#) (see page 96).

If you are using an existing database, you must source your database environment variable so that the CMS can access the variable after a system reboot. You can perform this action in one of two ways:

- Someone with root access can modify the BusinessObjects Enterprise script BobjEnterprise120 and can add the command to source your database environment. This script can be found at the following location:

```
<INSTALLDIR>/bobje/setup/env.sh
```

This method will source the database environment variable for all users.

- Users can modify their own profiles and can add the command to source their database environment. Each user performs this method.

More information:

[Central Management Server Database Requirements and Preparation](#) (see page 50)

Install a New SQL Anywhere Database

Provide configuration details for the new SQL Anywhere database. The setup program provides two screens to configure the new database.

To enter configuration details for a new SQL Anywhere database installation

1. Provide the following information for your new SQL Anywhere database and press Enter.

- SQL Anywhere Port Number (default=2638)
- Database administrator password

The second SQL Anywhere configuration screen displays.

2. Provide the following information for your new SQL Anywhere database and press Enter.

- SQL Anywhere CMS Database Name
- SQL Anywhere Audit Database Name
- User ID

Note: This item is the BusinessObjects Enterprise user account.

- Password for the user account

3. Press Enter to continue with the installation setup.

The Enter Server Intelligence Agent information screen displays.

Enter Server Intelligence Agent Information

The SIA simplifies the deployment and management of the BusinessObjects Enterprise servers. The SIA is automatically created during installation of BusinessObjects Enterprise. Use the installation setup program to configure the SIA.

To enter SIA information

1. Enter a name in Server Intelligence Agent Node.

Note: Do not use spaces or non-alphanumeric characters in a SIA node name.

This node name serves as an identifier for the SIA.

2. Enter a valid port number under Server Intelligence Agent Port or accept the default port number -6410, and press Enter.

New information:

[What is Server Intelligence?](#) (see page 83)

Select a Web Application Server Configuration Option

As part of the installation setup, you must provide information about the web application server that will work with your BusinessObjects Enterprise applications such as InfoView and the CMC. Use the installation program to specify to install Tomcat as your application server, or choose to work with your existing web application server.

Select one of the options listed below and press Enter:

Deployment Option	When to Use
Install Tomcat, deploy web applications	If you do not have an existing web application server.
Use existing Java application server, deploy web applications	If you have an existing supported web application server and you want to automatically deploy the web applications.
Use existing Java application server, do not deploy web applications	If you have an existing supported web application server and you want to manually deploy the web applications.

If you have selected either the first or second option, your next step is to configure the existing web application server. If you have selected the third option, you can start the installation process.

Configure the Tomcat Installation

If you chose to install the Tomcat application server, the Please enter port numbers for the Tomcat installation screen displays. You must configure the server to use InfoView, the CMC, and other web application servers.

To configure the Tomcat installation

1. You can either choose to accept the default port numbers or provide new values for the following:

Required port numbers

- Receive HTTP requests
- Redirect jsp requests
- Shutdown hook

2. Press Enter.

You can now start the installation process.

More information:

[Start the Installation](#) (see page 100)

Configure Your Existing Web Application Server

Select the Use existing Java application server, deploy web applications option to view the Select a Web Application Server to deploy to screen.

Select the server type before configuring your web application server.

To configure your existing web application server

1. Select your existing web application server from one of the following options and press Enter.

- Tomcat 6
- WebLogic 10
- WebLogic 9.2
- WebSphere 6.1
- Oracle Application Server 10g R3

If your existing web application server is SAP Application Server 7.0 or JBoss 4.04, select Use existing Java application server, do not deploy web applications.

If you select Other, you can begin the installation. If you selected one of the supported servers, you can now configure the server on a separate screen.

Note: If you are using an application server version that is not listed in the drop-down list of web application server types, we recommend that you deploy the web applications after installation.

2. Provide the requested configuration details for your web application server and press Enter.

The following list contains the information that is required for each supported web application server:

Apache Tomcat 6

- Instance to install to: Name of the current web application server instance (for example, localhost)
- Application server Installation directory: The directory where the web application server is installed (for example, `<INSTALLDIR>/wdeploy/appserver/Tomcat6`)

WebLogic 9.2

- Admin port: Administration port of the application server - mandatory for WebLogic (for example, "7001")
- Admin login: User name with administration rights to the application server - mandatory for WebLogic
- Admin password: Password for the account with administration rights to the application server - mandatory for WebLogic
- Instance to install to: Name of the current web application server instance (for example, "mserver1")
- Application server domain root directory: The WebLogic domain root directory (for example, `/bea/user_projects/domains/base_domain`)

WebLogic 10

- Admin port: Administration port of the application server - mandatory for WebLogic (for example, "7001")
- Admin login: User name with administration rights to the application server - mandatory for WebLogic
- Admin password: Password for the account with administration rights to the application server - mandatory for WebLogic
- Instance to install to: Name of the current web application server instance (for example, "mserver1")
- Application server domain root directory: The WebLogic domain root directory (for example, `/bea/weblogic10/user_projects/domains/base_domain`)

WebSphere 6.1

- SOAP port: The SOAP Connector Port of the application server (for example, 8880)
- Admin login: User name with administration rights to the WebSphere application server
- Admin password: Password for the account with administration rights to the application server
- Instance to install to: Name of the current web application server instance (for example, server1)
- Virtual host: The virtual host to which the application must be bound
- Admin is secure?: Select this option to enable security requiring administrative access credentials to the application.

Note: Set the values for the username and password parameters when Admin is Secure is enabled.

- Application server installation directory: The directory where the web application server is installed (for example, /IBM/Web Sphere/AppServer)

Oracle Application Server 10g R3

- Admin port: Administration port of the application server - mandatory for Oracle 10g R3 (for example, 6003). This port is the Request port of the <notification-server> element in the opmn.xml file.
- Admin login: User name with administration rights to the application server - mandatory for Oracle 10g R3
- Admin password: Password for the account with administration rights to the application server - mandatory for Oracle 10g R3
- Admin is secure?: Select this option only if you want Secure Sockets Layer (SSL) as part of the deployment.

Note: If Admin is secure is not selected, you still have to specify the username and password to access the server.

- Instance to install to: Name of the current web application server instance (for example, home)
- Application server Installation directory: The directory where the web application server is installed (for example, /product/10.1.3/OracleAS_1)
- Server Name: Name of the target application server (for example, myserver.domain.com)
- Group Id: Name of the server group to which the target application belongs (for example, Default_group)

Start the Installation

You are now ready to start the installation.

To start the installation

1. Review the installation directory specified on the screen.

Note: To modify the directory, press [Ctrl + B] several times until you reach the screen where you specify the installation directory.

2. Press Enter to start the installation.

The installation program validates your system and installs BusinessObjects Enterprise in the specified directory.

When the new installation is finished, the setup program starts the servers as daemons and then enables each server that is registered with the CMS. To control the servers manually, use the `ccm.sh` script.

Finish a System Installation

If you chose to perform a system installation, the setup program script prompts you to run the `setupinit.sh` script after it is finished. The `setupinit.sh` script copies the run control scripts to your runlevel (usually `/etc/rc#`) directories.

When implemented, these run control scripts start/stop the BusinessObjects Enterprise servers on system startup/shutdown.

Note: To run the system installation, you can log in using a normal account. After installation, however, you must have root privileges to run the `setupinit.sh` script.

Chapter 5: Custom or Expand Installations

The Custom or Expand option allows you to install individual components. It is recommended that you run this type of installation only after you are familiar with specific BusinessObjects Enterprise components and their roles, otherwise you may inadvertently fail to install a required component.

After setting up one BusinessObjects Enterprise server, you can run a Custom or Expand installation on a second computer to add server components, create a CMS cluster, increase available resources, and distribute the processing workload over both computers.

The Custom or Expand install features consist of:

- Client Components
- Web Tier Components
- Server Components
- Database Access
- Export Support
- Samples
- Help Files

You may choose to install all, some, or parts of the previous components.

This section contains the following topics:

[Windows](#) (see page 101)

[UNIX](#) (see page 118)

Windows

Select or Deselect Features

Use the Select Features screen to select BusinessObjects Enterprise components when running a Custom and Expand installation. All the available features are listed in the feature tree under the BusinessObjects Enterprise root node. Each node has a corresponding installation icon.

To select or deselect features

1. Click and hold the installation icon to select your installation preference:
 - Specify that the selected feature will be installed to the local hard drive.
 - Specify that the selected feature and its subfeatures will be installed on the local hard drive.
 - Specify that a selected feature and its subfeatures will not be installed.



- The feature and some subfeatures will be installed on the local hard drive.



- The feature and all subfeatures will be installed on the local hard drive.



- The feature is either unavailable or will not be installed.

- a. Click Disk Cost to calculate the amount of disk space required for the selected features.

A separate screen displays indicating storage space available on the local computer and mapped network drives. Drives that do not have enough disk space for the currently selected features are highlighted.

Click OK to return to the Select Features screen.

2. Click Next.

Client Components

The client components are rich client tools that provide end users with access to BusinessObjects Enterprise server functions. Client component tools are only available for Windows operating systems, but do connect to servers running non-Windows operating systems.

To install client components on a BusinessObjects Enterprise server system, you must use the BusinessObjects Enterprise setup program Custom or Expand install option.

The available tools are:

Desktop Intelligence

An integrated query, reporting, and analysis tool to access your organization's data for presentation and analysis in a Desktop Intelligence document.

Note: CA does not support Desktop Intelligence.

Web Intelligence Rich Client

Provides business users an interactive and flexible interface for building and analyzing reports from your organization's data over the web, through a secured intra- or extranet.

Import Wizard

Imports user, group, object, or folder content from previous and current Crystal or BusinessObjects Enterprise deployments.

Note: See your CA product documentation for details on how the CA product content can be delivered and used in your environment.

Universe Designer

Creates universe connections for Web Intelligence documents.

Developer Components

Software Development Kits (SDK) with wizards and templates for integrating BusinessObjects Enterprise functionality into your interactive web applications:

- BusinessObjects Enterprise .NET SDK
- BusinessObjects Enterprise Java SDK

Translation Manager

Defines translations for multilingual documents and prompts; supports Universe Designer universes.

Web Tier Components

The Web Tier option installs all of components used by the web application server to run BusinessObjects Enterprise web applications. These components include:

BI Platform Web Components

Used to run BusinessObjects Enterprise applications, including the CMC, InfoView, and Dashboard and Analytics.

BusinessObjects Enterprise Web Services

An implementation of web services that provides an API/WSDL to simplify the process of developing web applications. The Web Services consumer API is provided for both Java and .NET with a full set of documentation and samples.

Tomcat

An open-source, standards-based, Java web application server. If you do not have an existing web application server, you can choose to install Apache Tomcat 6.0.

Server Components

The following BusinessObjects Enterprise Server Components can be installed by running a Custom or Expand installation. For more information about these servers, see the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

- Central Configuration Manager

This application starts and stops services, such as Tomcat and the SIA.

When you select the Manage Servers icon on the toolbar, you can also start, stop, restart, disable, enable and force termination of the Enterprise servers. This tool is also used after installation to change which data source is used for either the CMS or the auditing database, and to update objects after a migration.

- Mapping Support

Installs the necessary components for building interactive geographic maps in Crystal Reports.

- Enterprise Servers

- CMS
- SQL Anywhere Database Server
- Auditor

- Event Server

- Input File Repository Server

- Output File Repository Server

- Crystal Reports Cache Server

- Crystal Reports Processing Server

- Publication Job Server

- Web Intelligence Processing Server

- Desktop Intelligence Servers

- Adaptive Processing Server

- Crystal Reports Job Server

- Program Job Server

- Destination Job Server

- List of Values Job Server

- Desktop Intelligence Job Server

- Adaptive Job Server
- Report Application Server
- Multi-Dimensional Analysis Services Server
- Dashboard and Analytics Servers
- Web Application Container Server (WACS)

Database Access

BusinessObjects Enterprise supports business intelligence gathering from many different databases.

The database access feature installs support for access to the following data sources:

- Data Federator
- HP Neoview
- MySQL
- SQL Anywhere
- Generic ODBC, JDBC
- Salesforce.com Driver
- Netezza
- Microsoft
- IBM Informix (includes Redbrick)
- Progress OpenEdge
- Oracle
- NCR Teradata

Note: Reports and universes can only be generated from a CA product database. A CA product must configure the data source for the usage of that specific product. See your CA product documentation for more information.

Export Support

The Export Support feature provides drivers and files to enable export to a variety of industry standard file formats.

- Character Separated Format (CSV)
- Disk File Destination

- Rich Text Format (RTF)
- Word for Windows Format
- Acrobat PDF Format
- Text Format
- Excel Format
- Crystal Reports Format
- XML Format
- Legacy XML Format

Samples

Select the Samples feature to include sample reports in your BusinessObjects Enterprise installation. These reports are found in the Report Samples folder.

Included are sample reports for Crystal Reports and a BIAR file that includes Web Intelligence reports (as well as the Universe for those sample reports).

Note: Only English samples are installed.

Help Files

Select the Help files feature to install the HTML help for the products you are installing as well as the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf) and the BusinessObjects Enterprise *InfoView User's Guide*. These guides can be accessed after installation from Start, BusinessObjects XI 3.1, BusinessObjects Enterprise, Documentation.

Note: The specific help related to an individual component is bundled with the component. For example, if you install the Publishing Wizard or the Import Wizard you will get the appropriate .chm help.

Perform a Custom or Expand Installation

The Install Type screen displays after beginning the installation.

To perform a custom or expand installation

1. Choose Custom or Expand in the Install Type screen.
2. Specify where to install the BusinessObjects Enterprise components in the Destination Folder field.

3. Click Next.
4. The Select Features screen displays.

More information:

[Select or Deselect Features](#) (see page 101)

Install Only the Client Components

Use the following procedure when running a Custom or Expand installation to install BusinessObjects Enterprise client components.

To install only the client components

1. Click the icon beside BusinessObjects Enterprise in the Select Features screen.
2. Select Entire feature will be unavailable.
All the icons under BusinessObjects Enterprise change.
3. Click the Client Components icon.
4. Select Entire feature will be installed on local hard drive.

The Client Components icon displays.

5. Click Next to continue with the installation.

The installation setup program displays the following error message:

You are installing one or more features without any Database Access drivers. Without these, installed features may not function properly. Do you wish to continue?

6. Click Yes.

The Start Installation screen displays.


7. Click Next to start the installation.

Install Only the Server Components


Use the following procedure to install BusinessObjects Enterprise server components. When you perform this installation, server components are installed, the default user and group accounts are created, and sample reports are published to the system. When the installation is complete, the servers are started.

To install the server components

1. Click the icon near Client Components in the Select Features screen and select Entire feature will be unavailable.

The Client Components icon changes to .

2. Click the icon near Web Tier Components and select Entire feature will be unavailable.

The Web Tier Components icon changes to .

3. If you want to install SQL Anywhere, skip to step 4.
Expand Server Components.

Note: Do not install SQL Anywhere if you want to use an existing database server. Do not install SQL Anywhere if you only want to add server components to an existing CMS cluster.

- a. Expand Central Management Server.
 - b. Click the icon near Auditor and select Entire Feature will be unavailable.
 - c. Click the icon near SQL Anywhere and select Entire Feature will be unavailable.
4. Deselect the Database Access, Export Support, Samples, and Help Files options if they are not required.
 5. Click Next to continue with the installation.

If you chose to install SQL Anywhere, enter information about your new CMS. If you did not choose to install SQL Anywhere, specify whether this is your first CMS cluster.

Enter CMS Clustering Information

If you chose not to install SQL Anywhere and you are installing server components through a Custom or Expand installation, provide information in the CMS Clustering screen.

To enter CMS clustering information

1. If this installation is the first CMS in your deployment, select:

If Yes, enter the information for the new CMS.

You can now do one of the following options:

- In the fields on the right of the screen, enter the CMS port number and administrator password.

- Select:

Configure the BusinessObjects Enterprise Administrator password at a later time.

2. If this server installation is *not* the first CMS in your deployment, select:

If no, enter the new CMS port and details for a CMS with which to cluster.

New information entry fields are displayed on the right side of the screen:

- a. Specify a port number for your new CMS installation.
- b. Provide the CMS hostname, port number, and password for the cluster to which you want to add the CMS of your installation.

Before the next screen appears, the installation setup program tests the connectivity to your existing CMS cluster based on the information you provided.

3. Click Next to continue with the installation.

The Server Intelligence Agent screen displays.

More information:

[Enter Server Intelligence Agent Information](#) (see page 110)

Enter Information About Your New CMS

The Server Components Configuration screen is used to enter the port number and an administrator password for the new CMS.

To enter information about your new CMS

1. Specify a port number in the CMS port field.

The default CMS port number is 6400.

The CMS communicates with other BusinessObjects Enterprise servers through the specified port.

2. Specify a password for the CMS administrator account in the Password and Confirm password fields.

You can opt to skip this step - click the Configure the BusinessObjects Enterprise Administrator password at a later time check box.

3. Click Next to continue with the installation.

The Server Intelligence Agent screen displays.

Note: If the port you specified in step 1 is unavailable, you will be requested to specify another port number.

Enter Server Intelligence Agent Information

A Server Intelligence Agent (SIA) node is automatically created during installation of BusinessObjects Enterprise. The Server Intelligence Agent screen is used to name and designate a port address for the SIA.

To enter SIA information

1. Provide a unique name to identify the SIA node in the Node Name field.

Note: Do not use spaces or non-alphanumeric characters in a SIA node name.

2. Specify a port number for the SIA in the Port field (default is 6410).

This port is used by the SIA to communicate with the CMS.

3. Click Next to continue with the installation.

Once the SIA information is entered, the port number will be validated before you can proceed to configure the CMS database for your installation. A warning will display if the port you specified is not available.

More information:

[What is Server Intelligence?](#) (see page 83)

Configure Your SQL Anywhere Database Server

The SQL Anywhere Database Server Configuration screen displays if you chose to install SQL Anywhere as the database server for your Custom or Expand installation.

To configure your SQL Anywhere database server

1. Specify the port number for the SQL Anywhere database server in the SQL Anywhere Port Number field.
The default port number is 2638. Use this number unless this port is unavailable.
2. Specify the Data Source Name in the Data Source Name field.
3. Specify and confirm a password for the SQL Anywhere DBA user account in the SQL Anywhere DBA User Account pane.
4. Specify and confirm a password for the SQL Anywhere BusinessObjects user account in the SQL Anywhere BusinessObjects User Account pane.
Note: The user name must be unique on the network.
5. Click Next to continue the installation.
The Start Installation screen displays.

Configure an Existing Database Server

The CMS Database Information screen displays if you chose to use an existing database server as your CMS for your Custom or Expand installation.

To configure an existing database server

1. Select a database type from the Select existing CMS database drop-down list in CMS Database.
Depending on your database server selection, corresponding input fields are displayed in CMS Database.
2. Provide all the required information for the database in the fields provided in CMS Database.

The following list summarizes the information that is required for each database type:

SQL Anywhere

Data Source Name

MySQL

Data Source Name

Sybase

Sybase Server Name

DB2

DB2 database alias

Oracle

tnsnames connect identifier

Microsoft SQL Server

ODBC DSN

- a. To provide an ODBC DSN for a Microsoft SQL Server, click the Browse button in CMS Database.

The SQL Server Logon screen displays.

Note: If you are running the installation on a Windows 64-bit computer an additional check box - Consume DSN created under WOW64 - displays, which must be selected to use 32-bit DSN.

- b. Use the SQL Server Logon screen to select a data source, database, and to provide user credentials.
- c. Click OK to submit your settings.

The SQL Server Logon screen is closed and an ODBC DSN entry displays in CMS Database.

If you do not want to specify an auditing database for your new installation skip to step 6.

3. Select the Auditing Database check box to specify an auditing database for your new installation.

The input fields under the Auditing Database check box are activated.

4. Select a database type from the Select existing Auditing database drop-down list in Auditing Database.

Depending on your database server selection, corresponding input fields are displayed in Auditing Database.

5. Provide all the required information for the database in the fields provided in Auditing Database.

The following list summarizes the information that is required for each database type:

SQL Anywhere

Data Source Name

MySQL

Data Source Name

Sybase

Sybase Server Name

DB2

DB2 database alias

Oracle

tnsnames connect identifier

Microsoft SQL Server

ODBC DSN

6. Select the Reset existing database check box to delete all current tables and entries in the existing database.
7. Click Next to continue with the installation.

The Start Installation screen displays. This screen only displays if a connection is established with the database configuration you provided.

Start the Installation

The Start Installation screen is the final screen in the installation.

To start the installation, click Next.

Install Only the Web Tier Components


Use the following procedure when running a Custom or Expand installation type to only install the BusinessObjects Enterprise Web Tier components.

To install only the Web Tier components

1. Click the icon beside BusinessObjects Enterprise in the Select Features screen.
2. Select Entire feature is unavailable.

All the icons under BusinessObjects Enterprise change to .

3. Click the Web Tier components icon.
4. Select Will be installed on local hard drive.

The Web Tier components icon displays as .

5. If you want to install Apache Tomcat as your web application server skip to step 6. Expand Web Tier components if you want to use your existing web application server.
 - a. Click the icon beside Tomcat.
 - b. Select Entire Feature is unavailable.
6. Click Next to continue with the installation.

The CMS Clustering screen displays.

Specify CMS Cluster Information

When you only install Web Tier components as part of a custom or expand installation, you must specify an existing CMS. Use the CMS Clustering screen to provide information about the CMS to which you want to cluster your web tier components.

To specify CMS cluster information

1. Enter information about your existing CMS in the fields provided.
 - Existing CMS Hostname
 - Existing CMS Port
 - CMS Administrator Password

Note: The CMS Hostname defaults to your local computer name.

2. Click Next to continue.

The installation program attempts to communicate with your existing CMS cluster using the information you provided.

You now need to configure your web application server.

Select a Web Application Server Configuration Option

The web application server runs BusinessObjects Enterprise web applications such as InfoView, the CMC, and custom web applications. Use the Select Web Application Server screen to choose to:

- Install and/or deploy to a Java web application server, such as the Tomcat web application server included with BusinessObjects Enterprise.
- Install and deploy to the IIS web application server installed as part of your Windows operating system.

Note:

If you are using the 64-bit version of IIS 7, you must ensure that:

- ASP.NET is enabled.
- The advanced IIS setting Enable 32-bit Applications is set to True.
- The advanced IIS setting .NET Application Pool is set to Classic mode.
- If the IIS Web Application Server option is not selectable, ASP.NET v1.1 and the IIS (Control Panel, Add or Remove Programs, Windows Components, Application Server) must be installed.

To configure a Java web application server for BusinessObjects Enterprise you need the web application server administrator account name and password, as well as the listener port number.

To configure a Java web application server

1. To use a Java web application server, select Java Web Application Server and choose one of the following options:
 - Install Tomcat application server and deploy to it. This automatically installs and configures Tomcat.
 - Automatically deploy to a preinstalled Web Application Server.

This prompts you to enter the configuration and authentication information on the next screen.

2. To use the IIS web application server included as part of your Windows operating system, choose IIS Web Application Server, then select the website to use for deployment from the drop-down list.
3. Click Next.

Depending on your selection, you can now proceed to either configure your web application server, or start the installation process.

Enter a Web Application Container Service HTTP Port Number

A Web Application Container Server (WACS) is automatically installed if the setup program determines that no Java web application server will be used.

You must enter a port number for the HTTP listener.

To enter a port number for the HTTP listener, enter the port number into the HTTP Port field. The default port number is 6405.

The WACS will listen for HTTP requests on the port you enter.

Configure a New Tomcat Web Application Server

The Configure Tomcat screen displays during installation if you choose to install Tomcat as the web application server for your BusinessObjects Enterprise installation. Use this screen to configure Tomcat.

To configure a new Tomcat web application server

1. Accept the default values or specify new port numbers for Connection port, Shutdown port, and Redirect port.
2. Click Next to continue with the installation.

Note: If the port numbers you specified are in use, a warning message displays. To continue you must specify unused and valid port numbers.

The Start Installation screen displays.

Configure Your Existing Web Application Server

The Configure Web Application Server screen displays during installation after you specify an existing server in the Select Web Application Server screen. To install web components on your web application server, provide specific configuration information about your existing web application server.

To configure your existing web application server

1. Select your existing web application server from the drop-down list of web application server types.
2. Click Next to continue with the installation.

The following list contains the information that is required for supported web application servers:

Note: If you are using an application server version that is not listed in the drop-down list of web application server types, we recommend that you deploy the web applications after installation.

Tomcat 6

- Server Instance: Name of the current web application server instance (for example, localhost)
- Service Name: Name of the Windows service if the application server is installed as a windows service (for example, Tomcat6)
- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\wdeploy\appserver\Tomcat6)

WebLogic 10

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights in the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The WebLogic domain root directory (for example, c:\bea\weblogic10\user_projects\domains\base_domain)

WebLogic 9.2

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights in the application server

- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The WebLogic domain root directory (for example, c:\bea\user_projects\domains\base_domain)

WebSphere 6.1

- SOAP Port: The SOAP Connector Port of the application server (for example, 8880)
- Username: User name with administration rights to the WebSphere application server
- Password: Password for the account with administration rights to the application server
- Server instance: Name of the current web application server instance (for example, server1)
- Virtual Host: The virtual host to which the application must be bound
- Admin is Secure? Select this option to enable security requiring administrative access credentials to the application.

Note: Set the values for the username and password parameters when Admin is Secure is enabled.

- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\Program Files\IBM\WebSphere\AppServer)

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- Admin is Secure? Select this option to use Secure Sockets Layer (SSL) encryption for authentication.
- Port: Administration port of the application server (for example, 6003)
This port is the request port of the <notification-server> element in the open.xml file.
- Username: User with administration rights to the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the Oracle Application Server instance (for example, home)
- Server Name: Name of the target application server (for example, myserver.domain.com)

- Group ID: Name of the server group to which the default application group belongs (for example, Default group)
- Application Server Installation Directory: The directory where the web application server is installed (for example, c:\product\10.1.3\OracleAS_1)

The Start Installation screen displays. Remember your credentials for the web application server as they may be required to install add-ons such as ProcessTracker or additional language packs.

Start the Installation

The Start Installation screen is the final screen in the installation.

To start the installation, click Next.

UNIX

The Custom or Expand installation option allows you to install specific features. You can perform a custom installation if you plan to use BusinessObjects Enterprise in a distributed (split) environment. For example, your existing web application server resides on a different computer than the one hosting the BusinessObjects Enterprise core components.

You customize the installation in the setup program Features screen.

The Features screen contains a tree of features that are divided into the following top-level features:

- Client Components
- Web Tier Components
- Server Components
- Database Access
- Export Support
- Samples
- Help Files

The markers in the tree indicate whether the feature and its subfeatures will be installed:

- [X] means that the feature and all its subfeatures will be installed.
- [~] means that the feature and some of its subfeatures will be installed.
- [] means the feature will not be installed.
- To select a feature or subfeature, select its corresponding marker and type X.

Client Components

This feature contains the Developer Components which has two subfeatures:

BusinessObjects Enterprise Java SDK

The development kit for Java applications.

BusinessObjects Enterprise Web Services SDK

The development kit for web services.

Web Tier Components

This feature contains the following subfeatures:

BI Platform Web Components:

Includes all components that are used to run BusinessObjects Enterprise applications, including the CMC, InfoView, and Dashboard and Analytics.

BusinessObjects Enterprise Web Services

A component of BusinessObjects Enterprise built for developers. This component is composed of an implementation of web services that can be deployed with BusinessObjects Enterprise.

Tomcat

If you do not have an existing web application server, you can install Apache Tomcat 6.

Server Components

For more information about these servers, see the BusinessObjects Enterprise Architecture chapter of the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf). Server Components contains the following subfeatures:

- CMS
 - Contains the following subfeatures:
 - Auditor
 - SQL Anywhere
- Event Server
- Input File Repository Server
- Output File Repository Server
- Crystal Reports Cache Server
- Crystal Reports Processing Server
- Publication Job Server

- Report Application Server
- Crystal Reports Job Server
- Destination Job Server
- List of Values Job Server
- Desktop Intelligence Job Server
- Program Job Server
- Adaptive Job Server
- Adaptive Processing Server
- Web Intelligence Report Server
- Desktop Intelligence Servers
- Dashboards and Analytics Servers
- Auditing Reports and Universes
- Multi-Dimensional Analysis Services Server

Database Access

This feature installs the necessary drivers and files to provide access to a broad range of data sources. This feature contains the following subfeatures:

- Data Federator
- SQL Anywhere
- Generic ODBC, JDBC
- Salesfore.com Driver
- NETEZZA
- ALL IBM Database Drivers contain the following subfeatures:
 - IBM DB2
 - Informix
- Progress OpenEdge
- Oracle
- Sybase

- NCR Teradata
- HP Neoview (for Linux only)

Export Support

This feature contains drivers and files to enable export to various industry standard file formats. This feature includes the following subfeatures:

- Character Separated
- Disk File
- Rich Text Format
- Word for Windows
- Acrobat PDF
- Text
- Excel Format
- Crystal Reports
- XML Format
- Legacy XML Format

Note: Reports and universes can only be generated from a CA Technologies product database. A CA Technologies product must configure the data source for the usage of that specific product. See your CA Technologies product documentation for more information.

Samples

Included are samples for Crystal Reports, a BIAR file that includes Web Intelligence reports and the universe used to create these reports.

Sample reports are located in the Report Samples folder. Only English samples are installed.

Help Files

Select the Help files feature to install the HTML online help for the products you are installing including the *BusinessObjects Enterprise Administrator's Guide* and the *BusinessObjects Enterprise InfoView User's Guide*.

Perform a Custom or Expand Installation

The Installation Type screen in the following procedure displays after you have completed the initial setup of the BusinessObjects Enterprise installation.

To perform a Custom or Expand installation

1. Select or deselect Enable servers after installation. This option is selected by default. Scroll down and use the spacebar to clear the field.
2. Select Custom or Expand and press Enter.

The Features screen displays with seven top-level features. Expand any displayed features to drill down to display available sub features.

3. Deselect any features that you do not want to install.
 - a. Deselect the Tomcat subfeature under Web Tier Components if you want to use your existing web application server.
 - b. Deselect Auditor under Server Components > Central Management Server if you do not want to configure an auditing database.
 - c. Deselect SQL Anywhere under Server Components > Central Management Server if you want to use your existing database server.
4. After you select the components you want to install, press Enter.

More information:

[Install Only the Server Components](#) (see page 122)

[Install Only the Web Tier Components](#) (see page 128)

Install Only the Server Components

You would typically only install the server components onto a computer that you have set aside for use by BusinessObjects Enterprise. When you perform this installation scenario, the server components are installed, the default user and group accounts are created, and the sample reports are published to the system. When the installation is complete, the servers are automatically started.

The Installation Type screen in the following procedure displays after you have completed the initial setup of the BusinessObjects Enterprise installation.

To install only the server components

1. On the Installation Type screen, select Custom or Expand.
2. Select the Server top-level feature under BusinessObjects Enterprise.
3. Deselect the Client Components and Web Tier Component features.
4. Deselect SQL Anywhere under Central Management Server if you plan to use an existing database server.
5. Deselect Auditor under Central Management Server if you do not want to configure an auditing database.
6. Press Enter to submit your selections.

If you deselected the CMS feature, you must cluster the installed servers to an existing CMS. If you only deselected SQL Anywhere, specify the CMS clustering information. If you chose to Install SQL Anywhere, configure your new database.

More information:

[Cluster Servers to an Existing CMS](#) (see page 126)

[Configure SQL Anywhere in a Custom or Expand Installation](#) (see page 123)

[Specify CMS Clustering Information](#) (see page 124)

Configure the New CMS

Use the Enter the information for your new CMS screen to specify the CMS port number and password for the BusinessObjects Enterprise Administrator.

To configure the new CMS

1. Enter a valid port number in CMS Port Number or accept the default number - 6400.
2. Enter the same password under Administrator Password and Confirm Password and press Enter.

Note: You can also leave the passwords fields blank and configure the password at a later time. Your password must be at least six characters long and should contain two of the following options:

- Upper-case character
- Lower-case character
- Number
- Punctuation

Configure SQL Anywhere in a Custom or Expand Installation

The Enter the information for your new SQL Anywhere Database screens allow you to provide configuration details for the new SQL Anywhere database.

To configure SQL Anywhere in a custom or expand installation

1. On the first Enter the information for your new SQL Anywhere Database screen, provide the following information for your new SQL Anywhere database, and press Enter.
 - SQL Anywhere Port Number
 - Database administrator password

The second SQL Anywhere configuration screen displays.

2. Provide the following information for your new SQL Anywhere database and press Enter.
 - SQL Anywhere CMS Database Name
 - SQL Anywhere Audit Database Name
 - User ID
 - Note:** This user ID is the BusinessObjects Enterprise user account.
 - Password for the user account

The Enter Server Intelligence Agent information screen displays.

More information:

[Enter Server Intelligence Agent Information](#) (see page 127)

Specify CMS Clustering Information

If you deselected SQL Anywhere in the Features screen, but you want to install a CMS, provide more information about CMS clustering on your deployment.

To specify CMS clustering information

1. Select one of the following options and press Enter.
 - Yes - The first CMS in this deployment
 - Note:** If you select this option, provide information about your new CMS.
 - No - Cluster this CMS with an existing CMS
 - Note:** If you select this option, provide information about the existing CMS on which you are going to cluster the servers.
2. If you selected Yes in step 1:
 - a. Enter a valid port number in CMS Port Number or accept the default number - 6400.
 - b. Enter the same password under Administrator Password and Confirm Password and press Enter.
 - Note:** You can also leave the passwords fields blank and configure the password at a later time. Your password must be at least six characters long and must contain two of the following options:
 - Uppercase character
 - Lowercase character

- Number
 - Punctuation
- c. Select and configure your database server. Skip to step 4.
3. If you selected No in step 1:
 - a. Specify a valid unused port for the new CMS in New CMS Port.
 - b. Enter the system name of the CMS to which you are clustering in Existing CMS Hostname.
 - c. Accept the default value -6400- or else enter the port number in Existing CMS Port.
 - d. Enter the password or leave Existing CMS Administrator Password blank and press Enter.

Select and configure your existing database server.
 4. Select your database type from the following types:
 - SQL Anywhere
 - MySQL
 - Oracle
 - DB2
 - Sybase

A new screen displays containing fields for configuring your database.

5. Provide information about your database and press Enter. The following list contains the information that is required for each database type:

SQL Anywhere

- Host Name
- User ID for the CMS database
- Password for the CMS database
- SQL Anywhere port number
- Database name for CMS

MySQL

- Host Name
- User ID for the CMS database
- Password for the CMS database
- MySQL port number
- Database name for CMS

Oracle

- TNS name
- User ID for the CMS database
- Password for the CMS database

DB2

- Alias name
- User ID for the CMS database
- Password for the CMS database

Sybase

- Sybase Service name
- User ID for the CMS database
- Password for the CMS database

6. If you deselected Auditor in the Features screen, skip to step 7. Otherwise, provide the following information about your new auditing database:

Auditing

- Auditing database name
- User ID
- Password

Note: If you are using Sybase as the auditing database, provide the Auditing database port number.

7. Decide if you want to reinitialize the database and press Enter.

Note: Re-initialization of the BusinessObjects Enterprise database erases all previous content in that particular database. After you configure your CMS and auditing database, you are prompted for information about the SIA.

Cluster Servers to an Existing CMS

If you deselected the Central Management Server feature, you are prompted to cluster the servers you are installing to an existing CMS.

To cluster servers to an existing CMS

1. Provide the following information about the CMS to which you are clustering:

CMS Hostname

The system name of the computer on which the CMS is installed.

Port

Accept the default value -6400- or else type the port number used by the CMS.

Existing CMS Administrator Password

Provide the password by the CMS Administrator.

2. Press Enter.

You now have to configure a SIA for your installation.

Enter Server Intelligence Agent Information

The SIA simplifies the deployment and management of the BusinessObjects Enterprise servers. The SIA is automatically created during installation of BusinessObjects Enterprise. Use the installation setup program to configure the SIA.

To enter SIA information

1. Enter a name in Server Intelligence Agent Node.
Note: Do not use spaces or non-alphanumeric characters in a SIA node name. This node name serves as an identifier for the SIA.
2. Enter a valid port number under Server Intelligence Agent Port or accept the default port number -6410, and press Enter.

More information:

[What is Server Intelligence?](#) (see page 83)

Start the Installation

You are now ready to start the installation.

To start the installation

1. Review the installation directory specified on the screen.
Note: To modify the directory, press [Ctrl + B] several times until you reach the screen where you specify the installation directory.
2. Press Enter to start the installation.

The installation program validates your system and installs BusinessObjects Enterprise in the specified directory. When the new installation is finished, the setup program starts the servers as daemons and then enables each server that is registered with the CMS. To control the servers manually, use the `ccm.sh` script.

Install Only the Web Tier Components

You can choose to only install the Web Tier components while running a Custom or Expand installation. You typically only install the Web Tier components on the computer running your web application server.

If you only want to only install Web Tier components, to save time and avoid installing unnecessary components, run a Web Applications installation.

The Installation Type screen in the following procedure displays after you have completed the initial setup of the BusinessObjects Enterprise installation.

To install only the Web Tier Components

1. On the Installation Type screen, choose Custom or Expand.
The Features screen displays.
2. Select the Web Tier Components option under BusinessObjects Enterprise.
3. Deselect all the other top-level features by typing X in all the corresponding markers. Ensure that all the markers for the other top-level features appear as [].
4. Deselect the Tomcat subfeature if you want to use your existing web application server and press Enter.
5. You are prompted to cluster your selected web tier components to an existing CMS.

More information:

[Perform a Web Tier Installation](#) (see page 134)

Cluster Web Tier Features to a CMS

Connect to a running CMS. After selecting what web tier features to install, you must provide information about the CMS to which the feature will be clustered.

To cluster web tier features to a CMS

1. Specify the computer name where the CMS is installed in CMS Hostname.
2. Accept 6400 as the Port if that is number used by the CMS. Modify the value if your CMS is using another port.
3. Specify the password required for Administrator access to the CMS in Existing CMS Administrator Password. Press Enter.

Note: If no password is required, leave the field empty.

Depending on your selection in the Features screen, you now either configure the Tomcat application server, or specify a deployment option.

Select a Web Application Server Configuration Option

As part of the installation setup, you must provide information about the web application server that will work with your BusinessObjects Enterprise applications such as InfoView and the CMC. Use the installation program to specify to install Tomcat as your application server, or choose to work with your existing web application server.

Select one of the options listed below and press Enter.

Install Tomcat, deploy web applications

Select this option if you do not have an existing web application server.

Use existing Java application server, deploy web applications

Select this option if you have an existing supported web application server and you want to automatically deploy the web applications.

Use existing Java application server, do not deploy web applications

Select this option if you have an existing supported web application server and you want to manually deploy the web applications.

If you have selected either the first or second option, you now configure the web application server. If you have selected the third option, you can start the installation process.

More information:

[Configure the Tomcat Installation](#) (see page 129)

[Start the Installation](#) (see page 132)

Configure the Tomcat Installation

If you chose to install the Tomcat application server, the Please enter port numbers for the Tomcat installation screen displays. You must configure the server to use InfoView, the CMC, and other web application servers.

To configure the Tomcat installation

1. You can either choose to accept the default port numbers or provide new values for the following:
 - Receive HTTP requests
 - Redirect jsp requests
 - Shutdown hook
2. Press Enter.

You can now [start the installation process](#) (see page 132).

Configure Your Existing Web Application Server

Select the Use existing Java application server, deploy web applications option to view the Select a Web Application Server to deploy to screen. Select the server type before configuring your web application server.

To configure your existing web application server

1. Select your existing web application server from one of the following options and press Enter.

- Tomcat 6
- WebLogic 10
- WebLogic 9.2
- WebSphere 6.1
- Oracle Application Server 10g R3

If your existing web application server is SAP Application Server 7.0 or JBoss 4.04, select Use existing Java application server, do not deploy web applications.

Note: If you are using an application server version that is not listed in the drop-down list of web application server types, we recommend that you deploy the web applications after installation.

Provide the requested configuration details for your web application server and press Enter. The following list contains the information that is required for each supported web application server:

Apache Tomcat 6

- Instance to install to: Name of the current web application server instance (for example, localhost)
- Application server installation directory: The directory where the web application server is installed (for example, `<INSTALLDIR>/wdeploy/appserver/Tomcat6`)

WebLogic 9.2

- Admin port: Administration port of the application server - mandatory for WebLogic (for example, 7001)
- Admin login: User name with administration rights to the application server - mandatory for WebLogic
- Admin password: Password for the account with administration rights to the application server - mandatory for WebLogic
- Instance to install to: Name of the current web application server instance (for example, mserver1)
- Application server domain root directory: The WebLogic domain root directory (for example, `/bea/user_projects/domains/base_domain`)

WebLogic 10

- Admin port: Administration port of the application server - mandatory for WebLogic (for example, 7001)
- Admin login: User name with administration rights to the application server - mandatory for WebLogic
- Admin password: Password for the account with administration rights to the application server - mandatory for WebLogic
- Instance to install to: Name of the current web application server instance (for example, mserver1)
- Application server domain root directory: The WebLogic domain root directory (for example, /bea/user_projects/domains/base_domain)

WebSphere 6.1

- SOAP port: The SOAP Connector Port of the application server (for example, 8880)
- Admin login: User name with administration rights to the WebSphere application server
- Admin password: Password for the account with administration rights to the application server
- Instance to install to: Name of the current web application server instance (for example, server1)
- Virtual host: The virtual host to which the application must be bound
- Admin is secure?: Select this option to enable security requiring administrative access credentials to the application.

Note: Set the values for the username and password parameters when Admin is Secure is enabled.

- Application server installation directory: The directory where the web application server is installed (for example, /IGBM Web Sphere/AppServer)

Oracle Application Server 10g R3

- Admin port: Administration port of the application server - mandatory for Oracle 10g R3 (for example, 6003)

This port is in the Request port of the <notification-server> element in the opmn.xml file.
- Admin login: User name with administration rights to the application server - mandatory for Oracle 10g R3
- Admin password: Password for the account with administration rights to the application server - mandatory for Oracle 10g R3

- Admin is secure: Select this option only if you want Secure Sockets Layer (SSL) as part of the deployment.

Note: If Admin is secure is not selected, you still must specify the username and password to access the server.

- Instance to install to: Name of the current web application server instance (for example, home)
- Application server installation directory: The directory where the web application server is installed (for example, /product/10.1.3/OracleAS_1)
- Server Name: Name of the target application server (for example, myserver.domain.com)
- Group ID: Name of the server group to which the target application belongs (for example, Default_group)

Start the Installation

You are now ready to start the installation.

To start the installation

1. Review the installation directory specified on the screen.

Note: To modify the directory, press [Ctrl + B] several times until you reach the screen where you specify the installation directory.

2. Press Enter to start the installation.

The installation program validates your system and installs BusinessObjects Enterprise in the specified directory.

When the new installation is finished, the setup program starts the servers as daemons and then enables each server that is registered with the CMS. To control the servers manually, use the ccm.sh script.

Finish a System Installation

If you chose to perform a system installation, the setup program script prompts you to run the setupinit.sh script after it is finished. The setupinit.sh script copies the run control scripts to your runlevel (usually /etc/rc#) directories.

Chapter 6: Web Applications Installation

The web tier installation type installs the appropriate web tier components on the computer running your web application server. You require user account and port information to configure your web application server through the BusinessObjects Enterprise setup program.

The web application server processes scripts, communicates with report and cache servers, translates cached files to DHTML, facilitates OLAP view requests, and manages session state information for users.

A distributed installation has two stages. The first step is completed on the computer where the BusinessObjects Enterprise components will reside. The second step is to install the Web Tier Components on the computer where the web server is installed.

Notes:

- It is best practice to install the server and client components to verify connectivity.
- Java SDK 1.5 is installed by default when you install the Web Tier Components.

This section contains the following topics:

[Features Available in a Web Tier Installation](#) (see page 133)

[Perform a Web Tier Installation](#) (see page 134)

[Select and Deselect Web Tier Components \(Windows Only\)](#) (see page 134)

[Specify an Existing CMS for Web Tier Components \(Windows Only\)](#) (see page 135)

[Cluster Web Tier Features to a CMS \(UNIX Only\)](#) (see page 136)

[Select a Web Application Server Configuration Option](#) (see page 137)

Features Available in a Web Tier Installation

Features available in a web tier installation include:

BI Platform Web Components

This includes all components used to run BusinessObjects Enterprise applications including CMC, InfoView, and Dashboard and Analytics.

BusinessObjects Enterprise Web Services

This is a component of BusinessObjects Enterprise built for developers. It is composed of an implementation of web services that can be deployed with BusinessObjects Enterprise. This web service implementation provides an API/WSDL which simplifies the process of developing applications.

Tomcat

An open-source, standards-based, Java web application server. If you do not have an existing web application server, you can choose to install Apache Tomcat 6.0.

Perform a Web Tier Installation

The Installation Type screen in the following procedure displays after you have completed the initial setup of the BusinessObjects Enterprise installation.

To perform a web tier installation

1. Choose Web Tier in the Install Type screen.
2. Specify where to install the BusinessObjects Enterprise components in the Destination Folder field.
3. Click Next to continue with the installation.

The Select Features screen displays.

More information:

[Begin on Windows](#) (see page 71)

[Begin on UNIX](#) (see page 74)

Select and Deselect Web Tier Components (Windows Only)

Use the Select Features screen to select and deselect web tier components when running a Web Tier installation. All the available web tier components are listed in the feature tree under the BusinessObjects Enterprise node.

Each feature and subfeature has a corresponding icon.

Select and deselect web tier components

1. Click the icon for a feature you want to select or deselect.

You can do any of the following:

- Specify that the selected feature will be installed on the local hard drive.
- Specify that the selected feature and its subfeatures will be installed on the local hard drive.
- Specify that a selected feature and its subfeatures will not be installed.



The feature and only the subfeatures you select will be installed on the local hard drive you specified in the Setup program.



The feature and all its subfeatures will be installed on the local hard drive you specified earlier.



The feature or subfeature is either unavailable or will not be installed.

- a. Click Disk Cost to calculate if sufficient disk space is available for your selected features.

A separate screen displays indicating storage space available on the local computer and mapped network drives. Drives that do not have enough disk space for the currently selected features are highlighted.

Click OK to close and return to the Select Features page.

2. Click Next to continue with the installation.

The CMS Clustering screen displays.

Specify an Existing CMS for Web Tier Components (Windows Only)

The web tier components need to be associated with an existing CMS. Use the CMS Clustering screen to provide information about the CMS that will manage the web tier components you are installing.

To specify an existing CMS for web tier components

1. Specify the host name for the CMS in the Existing CMS Hostname field.
2. Specify the port number used to communicate with the CMS in the Existing CMS Port field.

The default port number used by the CMS is 6400.

3. Specify the password used by CMS Administrator in the CMS Administrator Password field.
4. Click Next to continue with the installation.

The information about the CMS is verified. Once the verification is complete, the Select Web Application Server screen displays.

Cluster Web Tier Features to a CMS (UNIX Only)

If you are only installing the web tier components, you must be able to connect to a running CMS. After selecting what web tier features to install, you must provide information about the CMS to which the feature will be clustered.

To cluster web tier features to a CMS

1. Specify the computer name where the CMS is installed in CMS Hostname.
2. Accept 6400 as the Port if that is number used by the CMS. Modify the value if your CMS is using another port.
3. Specify the password required for Administrator access to the CMS in Existing CMS Administrator Password. Press Enter.

Note: If no password is required, leave the field empty.

Depending on your selection in the Features screen, you now either configure the Tomcat application server, or specify a deployment option.

Select a Web Application Server Configuration Option

Windows

The web application server runs BusinessObjects Enterprise web applications such as InfoView, the CMC, and custom web applications. Use the Select Web Application Server screen to choose to:

- Install and/or deploy to a Java web application server, such as the Tomcat web application server included with BusinessObjects Enterprise.
- Install and deploy to the IIS web application server installed as part of your Windows operating system.

Notes:

- If you are using the 64-bit version of IIS 7, you must ensure that:
 - ASP.NET is enabled.
 - The advanced IIS setting Enable 32-bit Applications is set to True.
 - The advanced IIS setting .NET Application Pool is set to Classic mode.
- If the IIS Web Application Server option is not selectable, ASP.NET v1.1 and the IIS (Control Panel, Add or Remove Programs, Windows Components, Application Server) must be installed.

To configure a Java web application server for BusinessObjects Enterprise you need the web application server administrator account name and password, as well as the listener port number.

To select a web application server configuration option

1. To use a Java web application server, select Java Web Application Server and choose one of the following options:
 - Install Tomcat application server and deploy to it. This automatically installs and configures Tomcat.
 - Automatically deploy to a preinstalled Web Application Server. This prompts you to enter the configuration and authentication information on the next screen.
2. To use the IIS web application server included as part of your Windows operating system, choose IIS Web Application Server, then select the website to use for deployment from the drop-down list.
3. Click Next.

Depending on your selection, you can now proceed to either configure your web application server, or start the installation process.

Configure a New Tomcat Web Application Server

The Configure Tomcat screen displays during installation if you choose to install Tomcat as the web application server for your BusinessObjects Enterprise installation. Use this screen to configure Tomcat.

To configure a new Tomcat web application server

1. Accept the default values or specify new port numbers for Connection port, Shutdown port, and Redirect port.
2. Click Next to continue with the installation.

Note: If the port numbers you specified are in use, a warning message displays. To continue, you must specify unused and valid port numbers.

The Start Installation screen displays.

Configure Your Existing Web Application Server

The Configure Web Application Server screen displays during installation after you specify an existing server in the Select Web Application Server screen. To install web components on your web application server, provide specific configuration information about your existing web application server.

To configure your existing web application server

1. Select your existing web application server from the drop-down list of web application server types.
2. Click Next to continue with the installation.

The following list contains the information that is required for supported web application servers:

Tomcat 6

- Server Instance: Name of the current web application server instance (for example, localhost)
- Service Name: Name of the Windows service if the application server is installed as a Windows service (for example, Tomcat6)
- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\wdeploy\appserver\Tomcat6)

WebLogic 10

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights to the application server
- Password: Password for the account with administration rights to the application server

- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The WebLogic domain root directory (for example, C:\bea\weblogic10\user_projects\domains\base_domain)

WebLogic 9.2

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights to the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The directory where the web application server is installed (for example, C:\bea\user_projects\domains\base_domain)

WebSphere 6.1

- SOAP Port: The SOAP Connector Port of the application server (for example, 8880)
- Username: User name with administration rights to the WebSphere application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, server1)
- Virtual Host: The virtual host to which the application must be bound
- Admin is Secure?: Select this option to enable security requiring administrative access credentials to the application.
Note: Set the values for the username and password parameters when Admin is Secure is enabled.
- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\Program Files\IBM\WebSphere\AppServer)

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- Admin is Secure?: Select this option to use Secure Sockets Layer (SSL) encryption for authentication.
Note: If this option is not selected, you still have to specify the username and password to access the server.
- Port: Administration port of the application server (for example, 6003)
This port is the request port of the <notification-server> element in the opmn.xml file.
- Username: User with administration rights to the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the Oracle Application Server application server instance (for example, home)
- Server Name: Name of the target application server (for example, myserver.domain.com)
- Group Id: Name of the server group to which the target application belongs (for example, Default_group)
- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\product\10.1.3\OracleAS_1)

The Start Installation screen displays.

Remember your credentials for the web application server as they can be required to install add-ons such as ProcessTracker or additional language packs.

Start the Installation

The Start Installation screen is the final screen in the installation.

Click the Next button to start the installation process.

UNIX

As part of the installation setup, you must provide information about the web application server that will work with your BusinessObjects Enterprise applications such as InfoView and the CMC. Use the installation program to specify to install Tomcat as your application server, or choose to work with your existing web application server.

Select one of the following options and press Enter.

Deployment Option	When to Use
Install Tomcat, deploy web applications	If you do not have an existing web application server.
Use existing Java application server, deploy web applications	If you have an existing supported web application server and you want to automatically deploy the web applications.
Use existing Java application server, do not deploy web applications	If you have an existing supported web application server and you want to manually deploy the web applications.

If you have selected either the first or second option, you will now have to configure the web application server. If you have selected the third option, you can start the installation process.

Configure the Tomcat Installation

If you chose to install the Tomcat application server, the Please enter port numbers for the Tomcat installation screen displays. You must configure the server to use InfoView, the CMC and other web application servers.

To configure the Tomcat installation

1. You can either choose to accept the default port numbers or provide new values for the following:

Required port numbers

- Receive HTTP requests
- Redirect jsp requests
- Shutdown hook

2. Press Enter.

You can now start the installation process.

Configure your Existing Web Application Server

Select the Use existing Java application server, deploy web applications option to view the Select a Web Application Server to deploy to screen. Select the server type before configuring your web application server.

To configure your existing web application server

1. Select your existing web application server from one of the following options and press Enter.

- Tomcat 6
- WebLogic 10
- WebLogic 9.2
- WebSphere 6.1
- Oracle Application Server 10g R3

If your existing web application server is SAP Application Server 7.0 or JBoss 4.04, select Use existing Java application server, do not deploy web applications.

2. Provide the requested configuration details for your web application server and press Enter.

The following list contains the information that is required for each supported web application server:

Tomcat 6

- Instance to install to: Name of the current web application server instance (for example, localhost)
- Application server Installation directory: The directory where the web application server is installed (for example, <INSTALLDIR>/wdeploy/appserver/Tomcat6)

WebLogic 10

- Admin Port: Administration port of the application server - mandatory for WebLogic (for example, 7001)
- Admin login: User name with administration rights to the application server - mandatory for WebLogic
- Admin password: Password for the account with administration rights to the application server - mandatory for WebLogic
- Instance to install to: Name of the current web application server instance (for example, mserver1)
- Application server domain root directory: The WebLogic domain root directory (for example, /bea/weblogic10/user_projects/domains/base_domain)

WebLogic 9.2

- Admin port: Administration port of the application server - mandatory for WebLogic (for example, 7001)
- Admin login: User name with administration rights to the application server - mandatory for WebLogic
- Admin password: Password for the account with administration rights to the application server - mandatory for WebLogic
- Instance to install to: Name of the current web application server instance (for example, mserver1)
- Application server domain root directory: The WebLogic domain root directory (for example, /bea/user_projects/domains/base_domain)

WebSphere 6.1

- SOAP Port: The SOAP Connector Port of the application server (for example, 8880)
- Admin login: User name with administration rights to the WebSphere application server
- Admin password: Password for the account with administration rights to the application server
- Instance to install to: Name of the current web application server instance (for example, server1)
- Virtual host: The virtual host to which the application must be bound
- Admin is secure?: Select this option to enable security requiring administrative access credentials to the application.
Note: Set the values for the username and password parameters when Admin is Secure is enabled.
- Application server installation directory: The directory where the web application server is installed (for example, /IBM/WebSphere/AppServer)

Oracle Application Server 10g R3

- Admin port: Administration port of the application server - mandatory for Oracle 10g R3 (for example, 6003)
This port should be the Request port of the <notification-server> element in the opmn.xml file.
- Admin login: User name with administration rights to the application server - mandatory for Oracle 10g R3
- Admin password: Password for the account with administration rights to the application server - mandatory for Oracle 10g R3

- Admin is secure (y/n): Select this option only if you want Secure Sockets Layer (SSL) as part of the deployment.

Note: If Admin is Secure is not selected, you still have to specify the username and password to access the server.

- Instance to install to: Name of the current web application server instance (for example, home)
- Application server Installation directory: The directory where the web application server is installed (for example, /product/10.1.3/OracleAS_1)
- Server Name: Name of the target application server (for example, myserver.domain.com)
- Group Id: Name of the server group to which the target application belongs (for example, Default_group)

Start the Installation

You are now ready to start the installation.

To start the installation

1. Review the installation directory specified on the screen.

Note: To modify the directory, press [Ctrl + B] several times until you reach the screen where you specify the installation directory.

2. Press Enter to start the installation.

The installation program validates your system and installs BusinessObjects Enterprise in the specified directory.

When the new installation is finished, the setup program starts the servers as daemons and then enables each server that is registered with the CMS. To control the servers manually, use the ccm.sh script.

Finish the Installation

If you chose to perform a system installation, the setup program script prompts you to run the setupinit.sh script after it is finished. The setupinit.sh script copies the run control scripts to your runlevel (usually /etc/rc#) directories.

When implemented, these run control scripts start/stop the BusinessObjects Enterprise servers on system startup/shutdown.

Note: To run the system installation, you can log in using a normal account. After installation, however, you must have root privileges to run the setupinit.sh script.

Chapter 7: Silent Installation

This section contains the following topics:

[Windows](#) (see page 145)

[UNIX](#) (see page 160)

[Modify a Response File](#) (see page 184)

Windows

The method for running BusinessObjects Enterprise installations on Windows directly from the command line is through a silent installation using a response file.

This method can be used to automate installations across multiple computers. The silent installation method requires a response file.

This installation method is particularly useful when you must quickly perform multiple installations. You can also integrate the scripts and commands into your own installation scripts.

Silent installations include a series of parameters including installation settings and directory paths to system resources.

Specific Response File Parameter For `cabiinstall.exe`

The parameter used in conjunction with the response file and can be used when running `cabiinstall.exe` on the command line is:

```
cabiinstall.exe silent <PATH\CONFIGURATION_FILE.ini>
```

where

<PATH\CONFIGURATION_FILE>

The full or relative path to the response file. If you provide only the file name, the file is searched for in the current directory.

The response file location can also be relative to the current directory where `cabininstall.exe` is present.

Important! `silent` is case-sensitive.

Create a Response File

To create a response file

1. Run the following command:

```
cabiinstall.exe
```

2. Click Yes on the Generate Response File dialog to create a response file, and enter the directory where the response file should be created.

The file is created once the installation is complete.

User-defined and default parameters from installation setup are written to the response file. The default file name is cabiresponse.ini and it is saved in the directory that you specify. If you do not specify a directory, the default location C:\Program Files\CA\SC\CommonReporting3 is used.

Sample Response File: Windows Typical Installation

The following example response file was generated for a new BusinessObjects Enterprise installation in which SQL Anywhere and Tomcat were selected.

Note: You can use the following response file only if you do not have an existing CA Business Intelligence installed on your computer.

```
[OTHER]
QUIET=/qn
[INSTALL]
AS_ADMIN_IS_SECURE=""
AS_ADMIN_PASSWORD=""
AS_ADMIN_PORT="8080"
AS_ADMIN_USERNAME="admin"
AS_DIR="C:\Program Files (x86)\CA\SC\CommonReporting3\Tomcat6"
AS_INSTANCE="localhost"
AS_SERVER="tomcat6"
AS_SERVICE_NAME="BOE120Tomcat"
AS_VIRTUAL_HOST=""
CADNODE="cabitest"
CADPORT="6410"
CLIENTAUDITINGPORT="6420"
CLIENTLANGUAGE="EN"
CLUSTERCMS="False"
CMSPASSWORD=""
```

Important! We do not recommend using a blank password for this CMSPASSWORD. This note applies to all platforms.

```
DATABASEAUDITDRIVER="SQLAnywhereDatabaseSubSystem"
DATABASECONNECT=""
DATABASEEDB="BOE120"
DATABASEEDB_AUDIT="BOE120_AUDIT"
DATABASEDRIVER="SQLAnywhereDatabaseSubSystem"
DATABASEDSN="BOE120"
DATABASEDSN_AUDIT="BOE120_AUDIT"
DATABASENWLAYER_AUDIT="ODBC"
DATABASEPORT="2638"
DATABASEPORT_AUDIT="2638"
DATABASEPWD="sa"
DATABASEPWD_AUDIT="sa"
DATABASEPWD_MYSQLROOT=""
DATABASEPWD_SQLANYWHEREEROOT="sa"
DATABASERDS_AUDIT="MySQL 5"
DATABASESERVER_AUDIT="localhost"
DATABASEUID="cabi"
DATABASEUID_AUDIT="cabi"
DATABASE_AUDIT_CONNSVR="connsvr"
ENABLELOGFILE="1"
ENABLESERVERS="1"
INSTALL.LP.EN.SELECTED="1"
INSTALLDBTYPE="SQL"
INSTALLDIR="C:\\Program Files (x86)\\CA\\SC\\CommonReporting3\\"
INSTALLLEVEL="6"
INSTALLMODE="New"
INSTALL_DB_TYPE="InstallSQLANYWHERE"
MYSQLPORT="3306"
MYSQL_REMOTE_ACCESS=""
NEWCMSPASSWORD="admin@123"
NSPORT="6400"
SINGLESERVER=""
SKIP_DEPLOYMENT=""
SQLANYWHEREPORT="2638"
SQLANYWHERE_REMOTE_ACCESS=""
TOMCAT_CONNECTION_PORT="8080"
TOMCAT_REDIRECT_PORT="8443"
TOMCAT_SHUTDOWN_PORT="8005"
WCADOTNETINSTALL="True"
WCAEXISTINGINSTALL="False"
WCAJAVAINSTALL="True"
WCATOMCATINSTALL="True"
WDEPLOY_LANGUAGES="en"
WDEPLOY_LATER=""
WEBSITE_METABASE_NUMBER="1"
WEBSITE_NAME="Default Web Site"
WEBSITE_PORT="80"
NAMESERVER="cabi-test"
```

```
[FEATURES]
REMOVE="WebApplicationContainer"
ADDLOCAL="Tomcat,Universe,qaaws,Complete,DotNET2SDK,
WCADotNet,DotNETSDK,ImportWizard,VSDesigner,AlwaysInstall,
BeforeInstall,VBA62,Reporter,Clients,WRC,DataSourceMigrationWizard,
CrystalBVM,MetaDataDesigner,ConversionTool,PubWiz,Designer,
DotNetRASDK,DotNetViewersSDK,VSHELP,RenetSDK,DevelopersFiles,
JavaRASDK,BOEJavaSDK,JavaViewersSDK,RebeanSDK,WebServicesSDK,
UnivTransMgr,wdeploy,BIPWebComp,WebTierComp,CEReportSource,
COMViewerServerControl,BOEWebServices,CCM,ServerComponents,
Mapping,Repository,CRPE,MetaData,CMS,Auditor,MySQL,EventServer,
InputFRS,OutputFRS,CacheServer,PageServer,PublicationServer,
DotNETOnly,ReportAppServer,MDASS,CRJobServer,DestJobServer,
LOVJobServer,DeskIJobServer,ProgramJobServer,WebIJobServer,
AdaptiveJobServer,PublishingService,AdaptiveProcessingServer,
SearchingService,CrystalReportDataProvider,AuditProxyService,
Webi,RAS21,DAS,AuditRptUnvEN,DADataFederator,DataAccess,
HPNeoview,OLAP,MyCube,Sofa,DAMySQL,DAGenericODBC,SFORCE,
XML,BDE,dBase,FileSystem,DANETEZZA,DAMicrosoft,DAIBMDB2,IBM,
Redbrick,DAIBMInformix,OLE_DB_Data,DAProgressOpenEdge,DAOacle,
SybaseAnywhere,DASybase,SybaseASE,SybaseIQ,SymantecACT,
DANCRTeradata,TextDA,Btrieve,CharacterSeparated,ExportSupport,
ExpDiskFile,ExpRichTextFormat,ExpWordforWindows,PDF,ExpText,
ExpExcel,ExpCrystalReports,XMLExport,LegacyXMLExport,SamplesEN,
UserHelp,LanguagePackCostingFeatureen,LanguagePackCostingFeature"
ExpRichTextFormat,ExpWordforWindows,PDF,ExpText,ExpExcel,
ExpCrystalReports,XMLExport,LegacyXMLExport,SamplesEN,
UserHelp,LanguagePackCostingFeatureen,LanguagePackCostingFeature"
ADDSOURCE=""
ADVERTISE=""

[BIEK]
BIEK_INSTALL_SAMPLES="1"
SUPPRESS_REBOOT=1
[DataConnection1]
Description=This is the data connection for Access Control
NetworkLayer=ODBC
Rdms=MS SQL Server 2005
UserName=user
Password=password
DataSource=acr125
Server=acr125DSN
```

```
[DataConnection2]
Description=This is a data connection of Spectrum universe
NetworkLayer=Oracle OCI
Rdms=Oracle 10
UserName=user
Password=userPassword
DataSource=SPECTRUM
Server=
```

Silent Installation Parameters

The following table lists common parameters that are used for silent installations of BusinessObjects Enterprise on Windows.

Important! If you pass a parameter directly in the command line, the setting overrides any setting specified in the response file.

/qn+ -QUIET="/qn+"

Displays the completion dialog at the end of the installation.

/qb -QUIET="/qb"

Displays a pop-up dialog indicating the progress of the installation.

/qn -QUIET="/qn"

Specifies a silent installation.

ADDLOCAL

Specifies the client, server, web tier, and other BusinessObjects Enterprise components to install. To change this setting, it is recommended that you create a response file.

```
ADDLOCAL="Tomcat,Universe,Complete,BIPWebComp,Designer,AlwaysInstall,BeforeInstall,VBA62,Reporter,Clients,WRC,DataSourceMigrationWizard,CrystalBVM,MetaDat
aDesigner,ConversionTool,ImportWizard,PubWiz,qaaws,JavaRASSDK,BOEJavaSDK,JavaViewersSDK,RebeanSDK,DevelopersFiles,WebServicesSDK,UnivTransMgr,wdeploy,WebT
ierComp,BOEWebServices,CCM,ServerComponents,Mapping,Repository,CRPE,MetaData,CMS,Auditor"
```

AS_ADMIN_IS_SECURE

Specifies that an administrator credential must be passed to access the web application server. This setting is only valid for WebSphere 6 and Oracle.

```
AS_ADMIN_IS_SECURE="true"
```

AS_ADMIN_PASSWORD

Password for the administrator account to access the web application server.

```
AS_ADMIN_PASSWORD="pass"
```

AS_ADMIN_PORT

Specifies the port for the web application server.

```
AS_ADMIN_PORT="8080"
```

AS_ADMIN_USERNAME

Specifies the account name for the administrator to access the web application server.

```
AS_ADMIN_USERNAME="admin"
```

AS_DIR

Specifies the installation directory for the web application server.

```
AS_DIR="<INSTALLDIR>/Tomcat6"
```

AS_INSTANCE

Specifies the name of the current web application server instance.

```
AS_INSTANCE="localhost"
```

AS_SERVER

Java web application server:

- Use Tomcat6 for Tomcat
- Use oas1013 for Oracle Application Server 10g R3
- Use weblogic9 for WebLogic 9
- Use weblogic10 for WebLogic 10
- Use websphere6 for WebSphere 6.1

```
AS_SERVER="tomcat6"
```

Note: This parameter is blank when installing to a .NET web application server.

AS_SERVICE_NAME

Specifies the name of the Windows service if the application server is installed as a service on Windows.

```
AS_SERVICE_NAME="B0E120Tomcat"
```

AS_VIRTUAL_HOST

Specifies virtual host to which the application must be bound.

```
AS_VIRTUAL_HOST="hostname"
```

CADNODE

Specifies the node name for the SIA.

```
CADNODE="SIA1"
```

Note: Do not use spaces or nonalphanumeric characters in an SIA node name.

CADPORT

Specifies the port for the SIA.

```
CADPORT="6410"
```

CLIENTLANGUAGE

Specifies the language for the installer:

- en=English
- chs=Simplified Chinese
- cht=Traditional Chinese
- de=German
- es=Spanish
- ko=Korean
- nl=Dutch
- jp=Japanese
- pt=Portuguese
- sv=Swedish
- ru=Russian
- fr=French
- it=Italian
- th=Thai
- pl=Polish
- da=Danish
- no=Norwegian

Note: If this parameter is not specified, you are prompted to select a language when the installation begins.

```
CLIENTLANGUAGE="EN"
```

CLUSTERCMS

Specifies if you are adding servers to an existing CMS. To change this setting, it is recommended that you create a response file.

```
CLUSTERCMS="False"
```

CMSPASSWORD

Specifies the administrator password for an existing CMS to use in either a custom or web tier installation.

```
CMSPASSWORD="password"
```

COMPANYNAME

The company name specified when setting user credentials in the installation.

COMPANYNAME="MyCompanyName"

DATABASEAUDITINGDRIVER

Specifies which driver to use for the auditing database. To change this setting, it is recommended that you create a response file.

DATABASEAUDITDRIVER="MySQLDatabaseSubSystem"

DATABASEDB

Name of the CMS database on the database server.

DATABASEDB="BOE120"

DATABASEDB_AUDIT

Name of the auditing database on the database server.

DATABASEDB_AUDIT="BOE120_AUDIT"

DATABASEDRIVER

Specifies which driver to use for the CMS database. To change this setting, it is recommended that you create a response file.

DATABASEDRIVER="SQLAnywhereDatabaseSubSystem"

DATABASEDSN

Specifies the ODBC connection to connect to the CMS database.

DATABASEDSN="Business Objects CMS"

DATABASEDSN_AUDIT

Specifies the ODBC connection to connect to the auditing database.

DATABASEDSN_AUDIT="Business Objects AuditServer"

DATABASENLAYER_AUDIT

Specifies auditing database type. To change this setting, it is recommended that you create a response file.

DATABASENLAYER_AUDIT="ODBC"

DATABASEPWD

Specifies the password to access the database server.

DATABASEPWD="password"

DATABASEPWD_AUDIT

Specifies the password to access the auditing database server.

DATABASEPWD_AUDIT="password"

DATABASEPWD_SQLANYWHEREROOT

The password for the DBA account for access if you are installing the SQL Anywhere database server.

```
DATABASEPWD_SQLANYWHEREROOT="password"
```

DATABASERDMS_AUDIT

Specifies the auditing database type. To change this setting, it is recommended that you create a response file.

```
DATABASERDMS_AUDIT="MySQL 5"
```

DATABASESERVER

Specifies the CMS database server name.

```
DATABASESERVER="localhost"
```

DATABASESERVER_AUDIT

Specifies the auditing database server name.

```
DATABASESERVER_AUDIT="localhost"
```

DATABASEUID

Specifies the username to access the CMS database.

```
DATABASEUID="servername"
```

DATABASEUID_AUDIT

Specifies the username to access the auditing database.

```
DATABASEUID_AUDIT="auditname"
```

ENABLELOGFILE

Specifies if a log file will be created for the installation.

```
ENABLELOGFILE="1"
```

ENABLESERVERS

Specifies if servers are enabled after the installation is complete.

```
ENABLESERVERS="1"
```

INSTALL.LP.<LANGUAGE_CODE>.SELECTED

Specifies which language pack to install. The following options are available:

- en=English
- chs=Simplified Chinese
- cht=Traditional Chinese
- de=German

- es=Spanish
- ko=Korean
- nl=Dutch
- jp=Japanese
- pt=Portuguese
- sv=Swedish
- ru=Russian
- fr=French
- it=Italian
- th=Thai
- pl=Polish
- da=Danish
- no=Norwegian
- sv=Swedish
- pt=Portuguese

Note: The English language pack is always selected by default.

```
INSTALL.LP.EN.SELECTED="1"
```

```
INSTALL.LP.JA.SELECTED="1"
```

INSTALLDIR

Specifies the directory where you want to install the BusinessObjects Enterprise components.

```
INSTALLDIR="C:\Program Files\CA\SC\CommonReporting3\"
```

INSTALLMODE

Specifies the installation method from one of the following options:

- New
- Custom
- Web Tier

```
INSTALLMODE="New"
```

SQLANYWHEREPORT

Specifies the port if you are installing the SQL Anywhere database server.

```
SQLANYWHEREPORT="2638"
```

MYSQL_REMOTE_ACCESS

Specifies whether to enable remote access if you are installing the MySQL database server.

```
MYSQL_REMOTE_ACCESS="1"
```

NSPORT

Specifies the port for the CMS.

```
NSPORT="6400"
```

PIDKEY

Specifies your product license key code.

```
PIDKEY="xxxxx-xxxxxx-xxxxxx-xxxx"
```

REMOVE

Specifies the client, server, web tier, and other BusinessObjects Enterprise components that will not be installed.

To change this setting, it is recommended that you create a response file.

```
REMOVE="Tomcat,BIPWebComp,Designer,Reporter,Clients,WRC,DataSourceMigrationWizard,MetaDataDesigner,ConversionTool,ImportWizard,PubWiz,qaaws,BOEJavaSDK,DevelopersFiles,WebServicesSDK,UnivTransMgr,WebTierComp,BOEWebServices"
```

SUPPRESS_REBOOT

Specifies whether the computer reboots after installation.

Values are as follows:

- 1 = Prevents a reboot after installation, even if the installer requires the reboot.

```
SUPPRESS_REBOOT="1"
```

- 0 = Allows a reboot after installation, if the installer requires a reboot. Otherwise, a reboot does not occur.

```
SUPPRESS_REBOOT="0"
```

TOMCAT_CONNECTION_PORT

Specifies the port number that Tomcat uses to connect.

```
TOMCAT_CONNECTION_PORT="8080"
```

TOMCAT_REDIRECT_PORT

Specifies the port number that Tomcat uses to redirect.

```
TOMCAT_REDIRECT_PORT="8443"
```

TOMCAT_SHUTDOWN_PORT

Specifies the port number that Tomcat uses to shut down.

```
TOMCAT_SHUTDOWN_PORT="8005"
```

USERNAME

The username specified in the installation when providing the license key code.

USERNAME="Licensed User"

WCADOTNETINSTALL

Option to install .NET web application components to the IIS web application server.

WCADOTNETINSTALL="True"

WDEPLOY_LATER

Specifies not to deploy the web application automatically on the target web application server. This parameter is automatically generated and should not be modified.

WDEPLOY_LATER="1"

WEBSITE_NAME

Specifies the name of the IIS website.

WEBSITE_NAME="Default Web Site"

More information:

[Create a Response File](#) (see page 146)

Other Automatically-Generated Parameters

The following parameters are automatically generated and should not be modified.

Parameter name:

- DATABASECONNECT
- DATABASE_AUDIT_CONNSVR
- INSTALLDBTYPE
- INSTALL_DB_TYPE
- INSTALLLEVEL
- INSTALLSWITCH
- NEWCMSPASSWORD
- Privileged
- SINGLESERVER
- SKIP_DEPLOYMENT
- WCADOTNETINSTALL

- WCAJAVAINSTALL
- WCATOMCATINSTALL
- WDEPLOY_LANGUAGES
- WEBSITE_METABASE_NUMBER
- WEBSITE_PORT
- ADDSOURCE
- ADVERTISE

CA Business Intelligence-Specific Parameters

The CA Business Intelligence installer for the BusinessObjects Enterprise installation uses the tags under the [BIEK] section of the response file for its pre-installation phase.

These values are read before control is transferred to the BusinessObjects Enterprise installer:

BIEK_INSTALL_SAMPLES

This value can be set to either 0 or 1:

- 0 = Do not install sample templates.
- 1 = Install sample templates

DataConnectionX

Where *X* is the index number of data connections. This parameter is automatically generated and should not be modified.

Description

The description of the data connection.

The following parameters can be modified:

NetworkLayer

The layer of the data connection.

You can find the valid values for the NetworkLayer in the registry at the following locations:

HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite
12.0\default\Shared\ConnectionServer\Network Layers
Client Access AS400
DB2 CAE
Essbase
Informix CLI
ODBC
OLE DB
OLE DB OLAP
Oracle OCI
SAP BAPI
Sybase CTL
Teradata

Rdms

The Relational Database Management System (RDMS) name of the data connection.

The supported RDBMS values for each network layer can be found in the cscheck.xml file found in:

<INSTALLDIR>\CommonReporting3\BusinessObjects Enterprise
12.0\win32_x86\dataAccess\connectionServer\tools

Example of some of the entries in this file:

MySQL 5
MS SQL Server 2000
MS SQL Server 2005
Oracle 10
Oracle 9
Sybase Adaptive Server 12
Sybase Adaptive Server 15
DB2 UDB v8
DB2 UDB v7

UserName

The user of the data connection.

Password

The user password of the data connection.

DataSource

The data source of the data connection.

Server

The server name of the data connection.

Some possible combinations include:

Database Engine	Network Layer	RDMS	User-name	Pass-word	Data Source	Server
SQL Anywhere	ODBC	Sybase SQL Anywhere 12	X	X	Data Source Name (for Windows, this name is the ODBC system DSN name)	X
MySQL	ODBC	MySQL 5	X	X	Database name	X Note: The server for MySQL is in the format of: servername:port number For example: localhost:3306.
MS Access 2002	ODBC					
MS SQL Server	ODBC	MS SQL Server 2000 MS SQL Server 2005	X	X	ODBC System DSN name	X
Oracle	Oracle OCI	Oracle 9 Oracle 10	X	X	TNS name	

Database Engine	Network Layer	RDMS	User-name	Pass-word	Data Source	Server
Sybase	Sybase CTL	Sybase Adaptive Server 12 Sybase Adaptive Server 15	X	X	Database alias	
DB2	DB2 CAE	DB2 UDB v7 DB2 UDB v8	X	X	Database alias	

Note: X = Required

Perform a Silent Installation

To perform a silent installation

1. Open a DOS command prompt.
2. Change the directory to the base or root directory of the installation package.
3. Enter the following command:

```
cabiinstall.exe silent <path to response file>
```

where

<path to response file>

The path to the response file. The response file does not have to be in the same directory; it can be located anywhere and it can be named anything. If you provide only the file name, the file is searched in the current directory.

The installation begins.

UNIX

Silent installation types are particularly useful when you must perform multiple installations, as you can save time and avoid being prompted for information by the installation setup program. You can also integrate the scripts and commands into your own installation scripts.

While setting up an installation process on UNIX, you can write installation settings to a specified response file. The file is generated once the installation is complete.

The response file supports all three BusinessObjects Enterprise installation types available for UNIX:

- New
- Custom or Expand
- Web Tier

Create a Response File

To create a response file on UNIX, run the following command:

```
./cabiinstall.sh
```

When prompted, specify the response file name and location. The file is created once the installation is complete.

The default file name is cabiresponse.ini and it is saved in the directory that you specify. If you do not specify a directory, the default location `$CASHCOMP/CommonReporting3` is used.

Sample Response File: UNIX Typical Installation

The following example installation response file was generated for a new BusinessObjects Enterprise installation in which SQL Anywhere and Tomcat were selected. The French language pack was added to the English default.

```
# Installation Response File
# ----- #
[Manual Settings]
# The name of the local server. This feature overrides the local
server name
# to the machine name specified. It must be manually set within
the response file
# or it will be defaulted to the local machine name.
MACHINENAME= <mymachine>
[Paths]
# The path of the bobje directory. This feature is automatically
set by
# the installation directory specified as a command line
argument followed
# by /bobje/.
```

```
BOBJEDIR="/net/home/businessobjectsenterprise/bobje/"
# The path of the DISK_1 directory on the CD. This path defaults
# to the cd directory
# pertaining to the install which has created the response
# file. It may be overwritten
# by specifying the cd directory as an argument on the command
# line.
CDDIR="/net/home/temp"
# The path of the license directory.
LICENSEDIR=
[Product Information]
# The current language with the following exceptions:
# 1) "jp" if the current language is "ja"
#    (Japanese)
# 2) "chs" if the current language is "zh_CN"
#    (Chinese - China)
# 3) "cht" if the current language is "zh_TW"
#    (Chinese - Taiwan)
BOBJELANG="en"
# The name of the product being installed.
PRODUCTID_NAME="BusinessObjects"
# The version of Business Objects Enterprise.
BOBJEVERSION="12.0"
# The version of the product being installed.
PRODUCTID_VER="12.0"
# The license key to install Business Objects Enterprise.
BOBJELICENSEKEY=XXXXX-XXXXXXX-XXXXXXX-XXXX
# The product id key. ( The product id is usually the same as
# the BOBJELICENSEKEY )
PIDKEY=XXXXX-XXXXXXX-XXXXXXX-XXXX
```

```
[Installation Information]
# The installation function to perform. (i.e. install)
FUNCTION=install
# The type of installation. (i.e. new / custom / webtier)
INSTALLTYPE="new"
# A comma-delimited list of flags that describe the operating
mode of the Installer
# The following flags are supported:
# install - running a new install of the product
# modify - running a modify install on a previously
installed product
# remove - running an uninstall of a previously
installed product
# integrated - the current install is running from
within another installed (ie. integrated langpacks)
# interactive - UI is enabled and can prompt for user response
INSTALLMODE=interactive,install
# The name of the local server.
LOCALNAMESERVER="<servername>"
# Whether to perform a user or system install.
BOBJEINSTALLLOCAL="user"

# The language packs to install.
# Each language is specified using the short format and
is separated by a space.
# Example: LANGPACKS_TO_INSTALL=en fr
LANGPACKS_TO_INSTALL=fr
# List of all languages included in the product.
# Each language is specified using the short format and
is separate by a comma.
# Example: LANGUAGES_TO_INSTALL=en,fr
LANGUAGES_TO_INSTALL=en,fr,is,ja
# The Business Objects Enterprise username.
BOBJEUSERNAME="Administrator"
# Specified servers to add.
EXPANDSERVERS=
[Tomcat]
# Whether or not to install Tomcat.
INSTALLTOMCAT=yes
# The connection port.
CONNECTORPORT="8080"
# The redirection port.
REDIRECTPORT="8443"
# The shutdown port.
SHUTDOWNPORT="8005"
```

```
[Application Server]
# The path of the Application Server directory (If an
Application Server
# is being installed). This path is automatically set
using the installation
# directory.
AS_DIR=/net/home/businessobjectsenprise/bobje/tomcat/
# The Application Server name.
# Defaults to tomcat6 if Tomcat is to be installed.
AS_SERVER=tomcat6
# The instance of the Application Server. (e.g. local host)
# Defaults to localhost if Tomcat is to be installed.
AS_INSTANCE=localhost
# The Application Server virtual host.
AS_VIRTUAL_HOST=
# The Application Server port.
AS_ADMIN_PORT=
# The Application Server's Administrator Username.
AS_ADMIN_USERNAME=
# The Application Server's Administrator Password.
AS_ADMIN_PASSWORD=

# Whether or not the Application Server's Administrator
is secure.
AS_ADMIN_IS_SECURE=
# The Application Server's Name (Oracle AS only).
AS_APPSERVER_ID=
# The Application Server's Group Id (Oracle AS only).
AS_GROUP_ID=
# The Application Server deployment action. (i.e. deploy
or predeploy)
WDEPLOYACTION=deploy
[CMS Cluster]
# Whether or not to cluster the CMS.
CMSCLUSTER="no"
# The CMS name to cluster to.
CLUSTER_NAMESERVER=""
# The CMS port number to cluster to.
CLUSTERPORTNUMBER="6400"
[CMS]
```

```
# The type of database. (e.g. SQL Anywhere, DB2, Oracle)
DBTYPE="SQLANYWHERE"
# The service name of the CMS.
SERVICENAME="BOE120"
# The username to connect to the database.
DATABASEUID="Administrator"
# The password to connect to the database.
DATABASEPWD=<password>
# The name of the CMS server.
CMSNAMESEVER="<servername>"
# The port number used to communicate with the CMS.
CMSPORTNUMBER="6400"
# The password used to connect to the CMS.
CMSPASSWORD=<password>
```

Important! It is not recommended to use a blank password for this CMSPASSWORD. This applies to all platforms.

```
# The server intelligence agent node name.
SIANODENAME="MyNode"
# The port used to communicate with the server intelligence
agent.
SIAPORTNUMBER="6410"
# Whether or not to reinitialize the database.
REINIT="yes"
[SQLANYWHERE]
# Whether or not to install SQL Anywhere
INSTALLSQLANYWHERE="yes"
# The port number used to communicate with the SQL
Anywhere database.
SERVICEPORT="2638"
# The name of the server hosting the SQL Anywhere
database.
SQLANYWHEREHOSTNAME="<servername>"
# The root password for the SQL Anywhere database.
SQLANYWHEREROOTPWD=<password>
[Audit]
# Whether or not auditing is enabled.
AUDITINGENABLED=yes
# The service audit name of the CMS.
SERVICENAME_AUDIT="BOE120_AUDIT"
```

```
# The port number used to communicate with the SQL
Anywhere database.
SERVICEPORT_AUDIT="2638"
# The name of the server hosting the SQL Anywhere
database.
SQLANYWHEREHOSTNAME_AUDIT="<servername>"
# The audit username to connect to the database.
DATABASEUID_AUDIT=Administrator
# The audit password to connect to the database.
DATABASEPWD_AUDIT=<password>
[Marketing Products]
# This feature manually enables specified marketing
products. Each marketing product
# specified must be separated by a comma.
# For a custom install this field is used to enable those
products which are different from a default new installation.
# Example: ENABLEMP=BusinessObjects.SQLANYWHERE,
BusinessObjects.WebTierComponents
ENABLEMP=

# This feature manually disables specified marketing
products. Each marketing product
# specified must be separated by a comma.
# For a custom install this field is used to disable
those products which are different from a default new
installation.
# Example: DISABLEMP=BusinessObjects.SQLANYWHERE,BusinessObjects.
WebTierComponents
DISABLEMP=
[New Settings]
# All uncommented settings are added here.
DBTYPE_AUDIT="SQLANYWHERE"

[BIEK]
BIEK_INSTALL_USER=bobje
BIEK_INSTALL_GROUP=bobje
BIEK_CASHCOMP=/opt/CA/SharedComponents
BIEK_INSTALL_SAMPLES=1
BIEK_MIGRATE_CMS_DATA=0
BIEK_SOURCE_CMS_PASSWORD=
```

```
[DataConnection1]
Description=This is the data connection for Access Control
NetworkLayer=Oracle OCI
Rdms=Oracle 9
UserName=user
Password=password
DataSource=acr125
Server=
```

```
[DataConnection2]
Description=This is a data connection of Spectrum universe
NetworkLayer=Oracle OCI
Rdms=Oracle 10
UserName=user
Password=userPassword
DataSource=SPECTRUM
Server=
```

Note: Do not use spaces or nonalphanumeric characters in a SIA node name.

Sample Response File: UNIX Custom Installation

The following example is a sample response file for a UNIX custom installation using WebSphere as the application server.

```
# Installation Response File
# ----- #
[Manual Settings]
# The name of the local server. This feature overrides the local
server name
# to the machine name specified. It must be manually set within
the response file
# or it will be defaulted to the local machine name.
MACHINENAME= <mymachine>
[Paths]
# The path of the bobje directory. This feature is automatically
set by
# the installation directory specified as a command line
argument followed
# by /bobje/.
BOBJEDIR="/net/home/businessobjectsenterprise/bobje/"
```

```
# The path of the DISK_1 directory on the CD. This path defaults
to the cd directory
# pertaining to the install which has created the response
file. It may be overwritten
# by specifying the cd directory as an argument on the command
line.
CDDIR=/net/home/temp
# The path of the license directory.
LICENSEDIR=
[Product Information]
# The current language with the following exceptions:
# 1) "jp" if the current language is "ja"
(Japanese)
# 2) "chs" if the current language is "zh_CN"
(Chinese - China)
# 3) "cht" if the current language is "zh_TW"
(Chinese - Taiwan)
BOBJELANG="en"
# The name of the product being installed.
PRODUCTID_NAME="BusinessObjects"
# The version of Business Objects Enterprise.
BOBJEVERSION="12.0"
# The version of the product being installed.
PRODUCTID_VER="12.0"
# The license key to install Business Objects Enterprise.
BOBJELICENSEKEY=XXXXX-XXXXXXX-XXXXXXX-XXXX
# The product id key. ( The product id is usually the same as
the BOBJELICENSEKEY )
PIDKEY=XXXXX-XXXXXXX-XXXXXXX-XXXX
[Installation Information]
# The installation function to perform. (i.e. install)
FUNCTION=install
# The type of installation. (i.e. new / custom / webtier)
INSTALLTYPE="new"
```



```
# A comma-delimited list of flags that describe the operating
mode of the Installer
# The following flags are supported:
# install - running a new install of the product
# modify - running a modify install on a previously
installed product
# remove - running an uninstall of a previously
installed product
# integrated - the current install is running from
within another installed (ie. integrated langpacks)
# interactive - UI is enabled and can prompt for user response
INSTALLMODE=interactive,install
# The name of the local server.
LOCALNAMESERVER="<servername>"
# Whether to perform a user or system install.
BOBJEINSTALLLOCAL="user"
# The language packs to install.
# Each language is specified using the short format and
is separated by a space.
# Example: LANGPACKS_TO_INSTALL=en fr
LANGPACKS_TO_INSTALL=fr
# List of all languages included in the product.
# Each language is specified using the short format and
is separate by a comma.
# Example: LANGUAGES_TO_INSTALL=en,fr
LANGUAGES_TO_INSTALL=en,fr,is,ja
# The Business Objects Enterprise username.
BOBJEUSERNAME="Administrator"
# Specified servers to add.
EXPANDSERVERS=
[Tomcat]
# Whether or not to install Tomcat.
INSTALLTOMCAT=yes
# The connection port.
CONNECTORPORT="8080"
# The redirection port.
REDIRECTPORT="8443"
# The shutdown port.
SHUTDOWNPORT="8005"
```

```
[Application Server]
# The path of the Application Server directory (If an
Application Server
# is being installed). This path is automatically set
using the installation
# directory.
AS_DIR=/opt/IBM/WebSphere/AppServer
# The Application Server name.
# Defaults to tomcat6 if Tomcat is to be installed.
AS_SERVER=serverx
# The instance of the Application Server. (e.g. local host)
# Defaults to localhost if Tomcat is to be installed.
AS_INSTANCE=server1
# The Application Server virtual host.
AS_VIRTUAL_HOST=default_host
# The Application Server port.
AS_ADMIN_PORT=8880
# The Application Server's Administrator Username.
AS_ADMIN_USERNAME=username
# The Application Server's Administrator Password.
AS_ADMIN_PASSWORD=password
# Whether or not the Application Server's Administrator
is secure.
AS_ADMIN_IS_SECURE=true
# The Application Server's Name (Oracle AS only).
AS_APPSERVER_ID=
# The Application Server's Group Id (Oracle AS only).
AS_GROUP_ID=
# The Application Server deployment action. (i.e. deploy
or predeploy)
WDEPLOYACTION=deploy
REDEPLOYWEBAPPS=true
[CMS Cluster]
# Whether or not to cluster the CMS.
CMSCLUSTER="no"
# The CMS name to cluster to.
CLUSTER_NAMESERVER=""
# The CMS port number to cluster to.
CLUSTERPORTNUMBER="6400"
[CMS]
# The type of database. (e.g. SQL Anywhere, DB2, Oracle)
DBTYPE="SQLANYWHERE"
# The service name of the CMS.
SERVICENAME="BOE120"
```

```
# The username to connect to the database.
DATABASEUID="Administrator"
# The password to connect to the database.
DATABASEPWD=<password>
# The name of the CMS server.
CMSNAMESEVER="<servername>"
# The port number used to communicate with the CMS.
CMSPORTNUMBER="6400"
# The password used to connect to the CMS.
CMSPASSWORD=<password>
```

Important! We do not recommend using a blank password for this CMSPASSWORD. This note applies to all platforms.

```
# The server intelligence agent node name.
SIANODENAME="MyNode"
# The port used to communicate with the server intelligence
agent.
SIAPORTNUMBER="6410"
# Whether or not to reinitialize the database.
REINIT="yes"
[SQLANYWHERE]
# Whether or not to install SQL Anywhere
INSTALLSQLANYWHERE="yes"
# The port number used to communicate with the SQL
Anywhere database.
SERVICEPORT="2638"
# The name of the server hosting the SQL Anywhere
database.
SQLANYWHEREHOSTNAME="<servername>"
# The root password for the SQL Anywhere database.
SQLANYWHEREROOTPWD=<password>
[Audit]
# Whether or not auditing is enabled.
AUDITINGENABLED=yes
# The service audit name of the CMS.
SERVICENAME_AUDIT="BOE120_AUDIT"
# The port number used to communicate with the SQL
Anywhere database.
SERVICEPORT_AUDIT="2638"
# The name of the server hosting the SQL Anywhere
database.
SQLANYWHEREHOSTNAME_AUDIT="<servername>"
```

```
# The audit username to connect to the database.
DATABASEUID_AUDIT=Administrator
# The audit password to connect to the database.
DATABASEPWD_AUDIT=<password>
[Marketing Products]
# This feature manually enables specified marketing
products. Each marketing product
# specified must be separated by a comma.
# For a custom install this field is used to enable those
products which are different from a default new installation.
# Example: ENABLEMP=BusinessObjects.SQLANYWHERE,
BusinessObjects.WebTierComponents
ENABLEMP=
# This feature manually disables specified marketing
products. Each marketing product
# specified must be separated by a comma.
# For a custom install this field is used to disable
those products which are different from a default new
installation.
# Example: DISABLEMP=BusinessObjects.SQLANYWHERE,Busines
sObjects.WebTierComponents
DISABLEMP=
[New Settings]
# All uncommented settings are added here.
DBTYPE_AUDIT="SQLANYWHERE"
[BIEK]
BIEK_INSTALL_USER=bobje
BIEK_INSTALL_GROUP=bobje
BIEK_CASHCOMP=/opt/CA/SharedComponents
BIEK_INSTALL_SAMPLES=1
BIEK_MIGRATE_CMS_DATA=0
BIEK_SOURCE_CMS_PASSWORD=
[DataConnection1]
Description=This is the data connection for Access Control
NetworkLayer=Oracle OCI
Rdms=Oracle 9
UserName=user
Password=password
DataSource=acr125
Server=
```

```
[DataConnection2]
Description=This is a data connection of Spectrum universe
NetworkLayer=Oracle OCI
Rdms=Oracle 10
UserName=user
Password=userPassword
DataSource=SPECTRUM
Server=
```

Note: Do not use spaces or nonalphanumeric characters in a SIA node name.

More information:

[Create a Response File](#) (see page 161)

Silent Installation Parameters

The common parameters used in BusinessObjects Enterprise installation scripts are listed as follows. These parameters are saved in a file which is used to run scripted installations of BusinessObjects Enterprise on UNIX. To change the listed parameters, we recommend that you create a response file using `./cabiinstall.sh`.

MACHINENAME

Name of the computer on which to run the scripted installation. The setting overrides the local server name. If not specified, the local computer name is used.

```
MACHINENAME="mymachine"
```

BOBJEDIR

Path of the bobje directory that is automatically set up in the installation directory.

```
BOBJEDIR="<INSTALLDIR>/bobje/"
```

CDDIR

Path to the Disk1 directory on the distribution DVD. This path defaults to the DVD directory.

```
CDDIR="<CD>/Disk1"
```

LICENSEDIR

Path to the directory containing the product license.

```
LICENSEDIR="<INSTALLDIR>/<LICENSEDIR>/"
```

BOBJELANG

The language setting for the installation setup.

- en=English
- chs=Simplified Chinese
- cht=Traditional Chinese
- de=German
- es=Spanish
- ko=Korean
- nl=Dutch
- jp=Japanese
- pt=Portuguese
- sv=Swedish
- ru=Russian
- fr=French
- it=Italian
- th=Thai
- pl=Polish
- da=Danish
- no=Norwegian
- sv=Swedish
- pt=Portuguese

BOBJELANG="en"

BOBJELICENSEKEY

Specifies the product activation keycode for the product to be installed.

BOBJELICENSEKEY=XXXXX-XXXXXXXXXXXXXXXX

PIDKEY

The product id key - same as the BOBJELICENSEKEY

PIDKEY=XXXXX-XXXXXXX-XXXXXXX

INSTALLTYPE

Specifies the type of installation to perform.

This parameter supports the following options:

- new
- custom
- webtier

INSTALLTYPE="new"

INSTALLMODE

Specifies a comma-delimited list for the BusinessObjects Enterprise installation program operating modes. This parameter supports the following options:

- install
- modify
- remove
- integrated
- interactive

INSTALLMODE=interactive,install

LOCALNAMESERVER

Specifies the name of the local server.

LOCALNAMESERVER LOCALNAMESERVER="myservername"

BOBJEINSTALLOCAL

Specifies to perform either a user or system installation.

BOBJEINSTALLOCAL="user"

LANGPACKS_TO_INSTALL

Specifies the language packs to install.

Each language pack is specified in the short format and separated by a space.

- en=English
- zh_CN=Simplified Chinese
- zh_TW=Traditional Chinese
- de=German
- es=Spanish
- ko=Korean
- nl=Dutch
- jp=Japanese

- pt=Portuguese
- sv=Swedish
- ru=Russian
- fr=French
- it=Italian
- th=Thai
- pl=Polish
- da=Danish
- no=Norwegian
- sv=Swedish
- pt=Portuguese

LANGPACKS_TO_INSTALL="en fr"

BOBJEUSERNAME

Specifies the BusinessObjects Enterprise username.

BOBJEUSERNAME="username"

INSTALLTOMCAT

Specifies to either install or not to install Tomcat.

INSTALLTOMCAT="yes"

CONNECTORPORT

Specifies the connection port for the Tomcat server.

CONNECTORPORT="15037"

REDIRECTPORT

Specifies the redirection port for the Tomcat server.

REDIRECTPORT="15034"

SHUTDOWNPORT

Specifies the shutdown port for the Tomcat server.

SHUTDOWNPORT="15024"

AS_DIR

Specifies the path of the application server directory if the server is being installed. The path is automatically set using the installation directory.

AS_DIR="<INSTALLDIR>/bobje/tomcat/"

AS_SERVER

Specifies the name of the application server being installed.

- Use tomcat6 for Tomcat
- Use oas1013 for Oracle Application Server 10g R3
- Use weblogic9 for WebLogic 9.2
- Use weblogic10 for WebLogic 10
- Use websphere6 for WebSphere 6.1

```
AS_SERVER="tomcat6"
```

AS_INSTANCE

Specifies the name of the current web application server instance.

```
AS_INSTANCE="localhost"
```

AS_VIRTUAL_HOST

Specifies virtual host to which the application must be bound.

```
AS_VIRTUAL_HOST="hostname"
```

AS_ADMIN_PORT

Specifies the port for the web application server.

```
AS_ADMIN_PORT="8080"
```

AS_ADMIN_USERNAME

Specifies the account name for the administrator to access the web application server.

```
AS_ADMIN_USERNAME="admin"
```

AS_ADMIN_PASSWORD

Password for the administrator account to access the web application server.

```
AS_ADMIN_PASSWORD="pass"
```

AS_ADMIN_IS_SECURE

Specifies that an administrator credential must be passed to access the web application server. This setting only valid for WebSphere 6 and Oracle.

```
AS_ADMIN_IS_SECURE="true"
```

WDEPLOYACTION

Specifies the action to perform on the application server. The available options are:

- deploy
- predeploy
- none

WDEPLOYACTION="deploy"

CMSCLUSTER

Specifies whether to cluster to an existing CMS.

CMSCLUSTER="no"

CLUSTER_NAMESERVER

If clustering to a CMS, specifies the name of the CMS.

CLUSTER_NAMESERVER="name"

CLUSTERPORTNUMBER

If clustering to a CMS, specifies the port number for the CMS.

CLUSTERPORTNUMBER="6400"

DBTYPE

Specifies the type of database for the CMS. The available options are:

- SQL Anywhere
- MySQL
- DB2
- Oracle
- Sybase

DBTYPE="MySQL"

SERVICENAME

Specifies the service name for the CMS.

SERVICENAME="B0E953"

DATABASEUID

Specifies the username to connect to the database.

DATABASEUID="username"

DATABASEPWD

Specifies the password to connect to the database.

DATABASEPWD="password"

CMSNAMESERVER

Specifies the name of the CMS server.

CMSNAMESERVER="servername"

CMSPORTNUMBER

Specifies the port number to communicate with the CMS.

CMSPORTNUMBER="14000"

CMSPASSWORD

Specifies the password to connect to the CMS.

CMSPASSWORD="password"

SIANODENAME

Specifies the node name for the SIA.

SIANODENAME="name"

Note: Do not use spaces or nonalphanumeric characters in a SIA node name.

SIAPORTNUMBER

Specifies the port for the SIA.

SIAPORTNUMBER="14090"

REINIT

Specifies to or not to reinitialize the database.

REINIT="yes"

INSTALLSQLANYWHERE

Specifies whether to install or not to install SQL Anywhere as the system database.

INSTALLSQLANYWHERE="yes"

SERVICEPORT

Specifies the port number to communicate with the SQL Anywhere database.

SERVICEPORT="15036"

SQLANYWHEREHOSTNAME

Specifies the name of the server hosting the SQL Anywhere database.

SQLANYWHEREHOSTNAME="servername"

SQLANYWHEREROOTPWD

Specifies the root password for the SQL Anywhere database.

SQLANYWHEREROOTPWD="password"

AUDITINGENABLED

Specifies if auditing is or is not enabled for the CMS.

AUDITINGENABLED="yes"

SERVICENAME_AUDIT

Specifies the service audit name for the CMS.

SERVICENAME_AUDIT="servicename"

SERVICEPORT_AUDIT

Specifies the port number to communicate with the auditing database.

SERVICEPORT_AUDIT="12133"

SQLANYWHEREHOSTNAME_AUDIT

Specifies the name of the server hosting the SQL Anywhere auditing database.

SQLANYWHEREHOSTNAME_AUDIT="servername"

DATABASEUID_AUDIT

Specifies the user name to connect to the auditing database.

DATABASEUID_AUDIT="username"

DATABASEPWD_AUDIT

Specifies the password to connect to the auditing database.

DATABASEPWD_AUDIT="password"

-ENABLEMP

Specifies which specific products to enable manually. Separate each product with a comma. For a custom installation, this setting enables those products typically not installed in a new installation.

ENABLEMP=BusinessObjects.WebTierComponents

-DISABLEMP

Specifies which specific products to disable manually. Separate each product with a comma. For a custom installation, this setting disables those products typically not installed in a new installation.

DISABLEMP=ENABLEMP=BusinessObjects.WebTierComponents

Other Automatically-Generated Parameters

The following parameters are automatically generated and should not be modified in the response file.

Parameter name:

- PRODUCTID_NAME
- BOBJEVERSION
- PRODUCTID_VER
- FUNCTION
- LANGUAGES_TO_INSTALL
- EXPANDSERVERS

CA Business Intelligence-Specific Parameters

The CA Business Intelligence installer for the BusinessObjects Enterprise installation uses the tags under the [BIEK] section of the response file for its pre-installation phase.

These values are read before control is transferred to the BusinessObjects Enterprise installer:

BIEK_INSTALL_USER

Specifies the nonroot user used to install BusinessObjects Enterprise.

BIEK_INSTALL_GROUP

Specifies the group of the user (BIEK_INSTALL_USER) who installs BusinessObjects Enterprise.

BIEK_CASHCOMP

The full path of the CA Shared Components Directory (CASHCOMP), if CASHCOMP has not been set. If CASHCOMP has already been set, this value is ignored. This tag is allowed only on UNIX platforms.

BIEK_INSTALL_SAMPLES

This value can be set to either 0 or 1:

- 0 = Do not install sample templates.
- 1 = Install sample templates

BIEK_MIGRATE_CMS_DATA

This tag is used only for upgrades. This value can be set to either 0 or 1:

- 0 = Do not migrate data.
- 1 = Migrate data from the previous (already installed) version to the upgraded version (for example, CA Business Intelligence 2.x to CA Business Intelligence 3.x). If this tag is set to 1, provide the source CMS password in the BIEK_SOURCE_CMS_PASSWORD tag.

This tag is allowed only on UNIX platforms.

BIEK_SOURCE_CMS_PASSWORD

This tag is used only for upgrades. The user must specify the password of the source CMS from which data has to be migrated. The CA Business Intelligence installer uses this password to log in to the source CMS and begin the data-migration process.

Specify this value only after the BIEK_MIGRATE_CMS_DATA has been set to 1. If BIEK_MIGRATE_CMS_DATA is set to 0, this tag is ignored.

This tag is allowed only on UNIX platforms.

DataConnectionx

Where *x* is the index number of data connections. This parameter is automatically generated and should not be modified.

Description

The description of the data connection.

The following parameters can be modified:

NetworkLayer

The layer of the data connection.

Examples of valid values for the NetworkLayer are:

Client Access AS400

DB2 CAE

Essbase

Informix CLI

ODBC

OLE DB

OLE DB OLAP

Oracle OCI

SAP BAPI

Sybase CTL

Teradata

Rdms

The Relational Database Management System (RDMS) name of the data connection.

The supported RDBMS values for each network layer can be found in the cscheck.xml file found in:

```
<INSTALLDIR>/bobje/enterprise120/<platform>_x86/dataAccess/RDBMS/connectionServer/tools
```

Example of some of the entries in this file:

```
MySQL 4
MySQL 5
Oracle 10
Oracle 9
Sybase Adaptive Server 12
Sybase Adaptive Server 15
DB2 UDB v8
DB2 UDB v7
```

UserName

The user of the data connection.

Password

The user password of the data connection.

DataSource

The data source of the data connection.

Server

The server name of the data connection.

Some possible combinations include:

Database Engine	Network Layer	RDMS	User Name	Pass-word	Data Source	Server
SQL Anywhere	ODBC	Sybase SQL Anywhere 12	X	X	Data Source Name (for Windows, this name is the ODBC system DSN name)	X
MySQL	ODBC	MySQL 4 MySQL 5	X	X	Database name	X Note: The server for MySQL is in the format of: servername:port number For example: localhost:3306.
Oracle	Oracle OCI	Oracle 9 Oracle 10	X	X	TNS name	

Database Engine	Network Layer	RDMS	User Name	Pass-word	Data Source	Server
Sybase	Sybase CTL	Sybase Adaptive Server 12 Sybase Adaptive Server 15	X	X	Database alias	
DB2	DB2 CAE	DB2 UDB v7 DB2 UDB v8	X	X	Database alias	

Note: X = Required

Perform a Silent Installation

To perform a silent installation on UNIX, enter the following command:

```
./cabininstall.sh silent <PATH/CONFIGURATION.ini>
```

where

<PATH/CONFIGURATION.ini>

is the location where the response file is created. The response file location can also be relative to the current directory where `cabininstall.exe` is present.

The installation begins.

Modify a Response File

Once a response file has been created, you can modify its settings using a text editor. The default parameters in the file reflect the information you entered during the initial installation via the installation wizard. For each system configuration, the response file has different parameters defined (for example, directory paths for UNIX/Linux and Windows). Change the default values to best suit your environment.

Note: Changing the response file does not affect the current installation in any way. The response file is for use with a new installation on another computer.

Follow these guidelines when editing a response file:

- Before modifying this file, back up the original for safekeeping.
- Make changes according to the current system settings and comments provided in the response file.
- Save the file after you make changes.

Include a Dashboard

A dashboard feature is included in the response file that is provided with the installer image for a default installation.

However, if you are using a different application server and database, add "DAS" to the "ADDLOCAL" key in the response file that you created. Then use the file for the silent installation.

Chapter 8: After Installing CA Business Intelligence

This section contains the following topics:

[Fix Packs/Service Packs](#) (see page 187)

[Windows](#) (see page 188)

[UNIX](#) (see page 190)

[The Installation Log File](#) (see page 191)

Fix Packs/Service Packs

The standalone program, `biekpatch`, is used to install patches that are downloaded *after* installation of CA Business Intelligence. Additional BusinessObjects Enterprise fix packs/service packs can be found at support.ca.com.

To run the stand-alone patch utility on Windows

1. Download and unzip the patch from [CA Support](#).
2. Navigate to the patch location.
3. Click `biekpatch.exe` to run the utility and install the patch or perform one of the following actions:

- Run the following command:

```
biekpatch
```

- Run the following command to install the patch in silent mode:

```
biekpatch -cp CMS_password -ap application_server_password
```

Note: The `-ap` argument is not required if the application server is Tomcat. For more information, see the patch installer readme document.

To run the stand-alone patch utility on UNIX

1. Download and unzip the patch from [CA Support](#).
2. Navigate to the patch location.
3. Perform one of the following actions:
 - Run the following command:

```
./biekpatch
```
 - Run the following command to install the patch in silent mode:

```
./biekpatch -cp CMS_password -ap application_server_password
```

Note: The `-ap` argument is not required if the application server is Tomcat. For more information, see the patch installer readme document.

Windows

Launching the Central Management Console (CMC)

The BusinessObjects Enterprise Central Management Console (CMC) Logon screen displays if you selected the Launch BusinessObjects Administration Console option on the last screen of the installation program.

You can also launch the CMC by going to: Start, Programs, BusinessObjects XI 3.1, BusinessObjects Enterprise, BusinessObjects Enterprise Central Management Console.

It is recommended that you verify your installation by logging into the CMC. Once you access the CMC you can create users and groups, set up security policies, and define rights.

More information:

[The Central Management Console](#) (see page 195)

Log in to the CMC

To log in to the CMC

1. Enter the name of your CMS and the port number in the System field.
2. Enter your User Name and Password.

If you are using LDAP or Windows NT authentication, you can log in using an account that has been mapped to the BusinessObjects Enterprise Administrators group.

Note: If this is the first time an administrator from your organization is accessing the CMC, enter Administrator as the User Name. This Enterprise account by default does not have a password unless you specified one during installation.

3. Select Enterprise in the Authentication Type list.

Windows AD, Windows NT, and LDAP authentication also appear in the list; however, third-party user accounts and groups must be mapped to BusinessObjects Enterprise before you can use these types of authentication.

4. Click Log On.

The CMC Home page displays.

Troubleshoot CMS Log In Issues

If you are unable to log in to the CMS, consider the following options:

1. Did you provide the correct name for the CMS in the System field?
2. Did you provide the correct user credentials in the User Name and Password fields?
3. Is the correct method specified in the Authentication field?
4. Verify that the SIA is running. Go to Start, BusinessObjects XI 3.1, BusinessObjects Enterprise, Central Configuration Manager. If the SIA is not running, start or enable it.
5. If you did not install SQL Anywhere as part of your installation, use the database client to connect to the database server. See your database documentation for more information.
6. Are you attempting to connect to a CMS cluster using the `@<clustername>` format? If this attempt is your first attempt to connect to this cluster, the CMC does not know which CMS servers belong to the cluster. In this case, specify a list of CMS servers in the web.xml which is found in the WEBINF folder of the CMC web application WAR file. Follow the instructions in the *cms.clusters* section of the web.xml file for more details. You can also specify CMS cluster information for InfoView by modifying the corresponding web.xml file.

If none of these solutions work, consider reinstalling BusinessObjects Enterprise.

UNIX

Use ccm.Sh to Start the BusinessObjects Enterprise Servers

The ccm.sh script provides you with a command-line interface to the various BusinessObjects Enterprise server components. For more information about this script and others that are installed on your system, see UNIX Tools in the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

Note: The installation setup program starts and enables servers automatically. The following information is included only as a reference.

View Additional Help About Ccm.Sh

The ccm.sh script provides a detailed description of its command-line options. To see the help, issue the following command:

```
<INSTALLDIR>/bobje/ccm.sh -help | more
```

Manually Start and Enable Servers

To manually start and enable servers

1. Go to the bobje directory that was created by the installation:

```
cd <INSTALLDIR>/bobje
```
2. Start the SIA by typing the following command:

```
./ccm.sh -start sia
```
3. Open a web browser to the URL of your CMC deployment on your web application server. For example:

```
http://<SERVERNAME>:<PORTNUMBER>/CmcApp
```
4. Log in to the CMC by providing your BusinessObjects Enterprise Administrator credentials.
5. Navigate to the Servers page.
6. Select the server you want to start.
7. Select Start Server.
The server should now start.

Check if the CMS is Running

After installing BusinessObjects Enterprise, you can validate if the CMS is running.

To check if the CMS is running

1. CD to the bobje directory in your installation.
2. Enter:

```
./ccm.sh -display -cms <hostname>:<portnumber>.
```

Note: It is not necessary to provide the CMS hostname and port if you have specified the default port during installation.

A list of running servers displays. Ensure that the CMS is running.

Post-Installation Component Deployment

When you install Tomcat as part of your BusinessObjects Enterprise installation, BusinessObjects Enterprise web applications (for example, InfoView, CMC) and the BusinessObjects Enterprise SDK are installed, configured, and deployed for you.

If you do not install Tomcat when you install BusinessObjects Enterprise, these components must be configured and deployed before you use them.

You can either deploy the components manually or use the wdeploy tool.

Note: If you have a firewall between the computer running your web application server and your other BusinessObjects Enterprise servers, you must perform additional system configuration.

More information:

[Firewalls](#) (see page 335)

The Installation Log File

The installation log files contains information about all the parameter settings used in a BusinessObjects Enterprise installation. The log files can be used as a reference or to troubleshoot installation errors.

Log File Location

If an installation fails, check the log file for further information. The log file contains error codes, presented as return values from certain functions.

The CA Business Intelligence log files (ca-install.log, CA_Business_Intelligence_InstallLog.log) are located at the top level of the CA Business Intelligence installation directory.

BusinessObjects Enterprise log files are located in the following directory:

Windows

<INSTALLDIR>\CommonReporting3\BusinessObjects Enterprise 12.0\logging

UNIX

<INSTALLDIR>\CommonReporting3\boje\logging

During the installation process, they are located in a temporary location, determined by the TEMP environment property on the system. If the installation fails, you can locate the log file in this temporary location.

If you encounter a problem, open ca-install.log first to see if any errors are reported. To determine the status of your installation, scroll down to the bottom of the file and search for:

BIEK_GetExitCode

If the BIEK_Exitcode is not 0, then an error has occurred during installation. To further determine the cause of the failure, search the log for keywords such as Error, Warning, CMS or InfoStore.

Common Error Codes

Common error codes seen in the CA Business Intelligence log file include the following:

16000

- If a non-CA Technologies version of BusinessObjects Enterprise is installed, (or)
- If CASHCOMP is not set during upgrade in a UNIX environment, (or)
- If reading the contents of the file biek.properties fails.

16001

Error because of File-IO.

16002

Unexpected error.

16003

Invalid directory or file paths.

16004

Invalid language code has been specified.

16005

Invalid parameter provided. For example, an invalid database, or application server, and so on.

16006

Invalid value provided.

16007

Failed to install CA-Utills or failed to update CASHCOMP in profile.CA.

16008

The user does not have permission to perform a given task.

16009

The user installing CA Business Intelligence is not set correctly.

16010

The user of the existing CA Business Intelligence installation and current CA Business Intelligence installation is not the same.

16011

CASHCOMP is already set.

16012

CA Business Intelligence is already installed.

16013

Shared libraries required to connect to the database are not found.

16014

Failed to connect to the database.

16015

Not a valid or supported database.

16016

A given service is not running.

16017

Failed to stop a service on Windows.

16018

Failed to start a service on Windows.

16019

Failed to connect to the CMS server.

16020

Error deploying the BIAR file to the BusinessObjects Enterprise system using the BIconfig tool.

16021

Failed to obtain the patch command to install the patch.

16022

The current patch level is less than the patch level required for installation.

16023

The patch level is zero.

16024

Failed to find the CA Business Intelligence installation.

16025

Failed to connect to the CMS.

16026

Invalid arguments or argument count.

Chapter 9: The Central Management Console

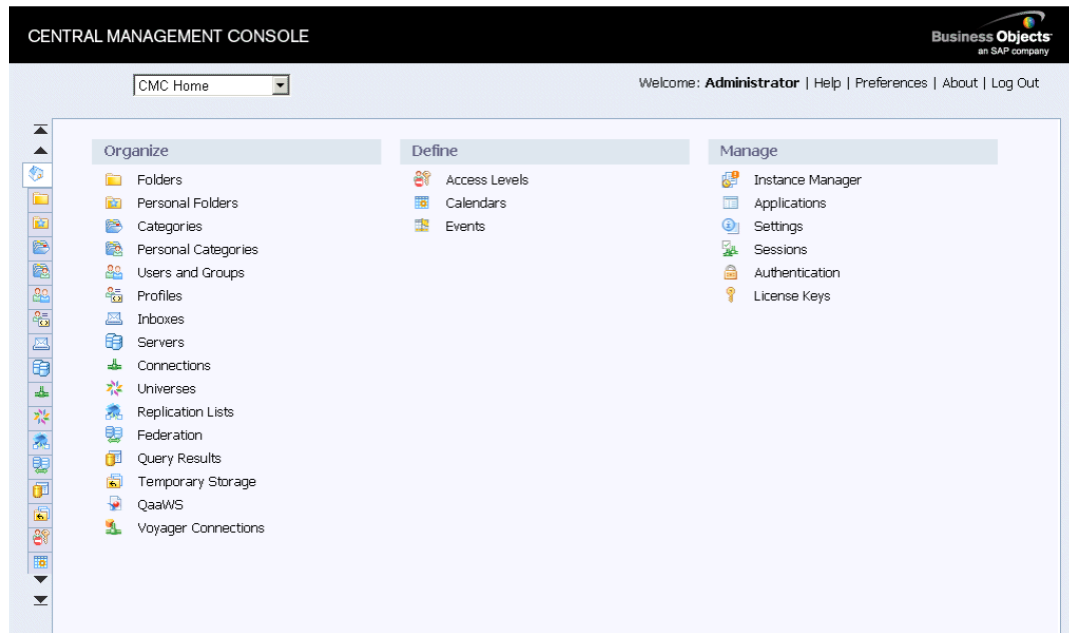
This chapter provides a general description of system administration as it relates to BusinessObjects Enterprise. It also introduces the administration tools that allow you to manage and configure BusinessObjects Enterprise, and it shows how to make some common changes to the system's default security settings.

This section contains the following topics:

[Use the CMC](#) (see page 195)

Use the CMC

The CMC is a web-based tool which offers a single interface through which you can perform almost every day-to-day administrative task, including user management, content management, and server management.



Any user with valid credentials to BusinessObjects Enterprise can log in to the CMC and set personal preferences. However, users who are not members of the Administrators group cannot perform any of the available management tasks unless they have been granted rights to do so.

More information:

[How Rights Work in BusinessObjects Enterprise](#) (see page 201)

Log in to the CMC

There are two ways to access the CMC:

- If you are trying to access the BusinessObjects Enterprise server remotely from client computer, enter the name of the computer you are accessing directly into your browser:

`http://<ComputerName>:<PortNumber>/CmcApp`

Use the Administrator account and password that you specified during the installation.

If you changed the default virtual directory on the web server, you must enter your URL accordingly.

<ComputerName>

The hostname of the machine, where the web server is installed.

<PortNumber>

The port on which the web server is listening on. If necessary, change the default *PortNumber* to the number you provided during the BusinessObjects Enterprise installation.

- Select BusinessObjects Enterprise Central Management Console from the Program group on the Windows Start menu on the server where you have installed BusinessObjects Enterprise.

Important! This option is only available if Tomcat was selected as your default application server during installation. If you did not install Tomcat as the default application server, the links to the CMC do not show up in the Start menu. You must enter the specific application server information directly into your browser.

When you have finished using the CMC, end the session by logging off. The Log Out button is located in the upper-right corner of the console.

Log in to the CMC from Your Browser

To log in to the CMC from your browser

1. Enter the appropriate URL:

`http://<ComputerName>:<PortNumber>/CmcApp`

Use the Administrator account and password that you specified during the installation

If you changed this default virtual directory on the web server, you must enter your URL accordingly. *ComputerName* is hostname of the computer (where the web server is installed), and *PortNumber* is the port on which the web server is listening on.

If necessary, change the default *PortNumber* to the number you provided when you installed BusinessObjects Enterprise.

Notes:

On Windows, you can click Start, Programs, BusinessObjects XI 3.1, BusinessObjects Enterprise, Central Management Console.

If your CMC is hosted on a Web Application Container Server (WACS), you can click Start, Programs, BusinessObjects XI 3.1, BusinessObjects Enterprise, Central Management Console on WACS.

2. Enter the name of your CMS in the System field.
3. Enter your user name and password.

If you are using LDAP or Windows NT authentication, you may log in using an account that has been mapped to the BusinessObjects Enterprise Administrators group.

Note: If this is the first time an administrator from your organization is accessing the CMC, enter Administrator as the user name. This default Enterprise account does not have a password unless you create one during the installation.

4. Select Enterprise in the Authentication Type list.

Windows AD, Windows NT and LDAP authentication also appear in the list; however, third-party user accounts and groups must be mapped to BusinessObjects Enterprise before you can use these types of authentication.

5. Click Log On.

The CMC Home page displays.

Navigate Within the CMC

Because the CMC is a web-based application, you can navigate through it in a number of ways:

- Click the links on the home page or tabs on the left of your screen to go to specific management areas.
- Select the same management areas from the Navigation list.

Note: When you are navigating among objects that have many child objects, there may be too many children to display in the tree view. When this happens, you can use the paginated object listing to navigate to the child objects with which you are concerned.

Set CMC Preferences

Set the Console Preference

The Preferences area of the CMC allows you to customize your administrative view of BusinessObjects Enterprise.

To set CMC preferences

1. Log in to the CMC.
2. Click Preferences in the upper-right corner of the CMC.
3. Set the preference as required.

The Web Intelligence, Crystal Reports, Dashboard and Analytics, and Change Password preferences work exactly the way they do in InfoView, though they affect the behavior of objects in the CMC as well. For a full explanation of those settings, refer to Setting Preferences in the *BusinessObjects Enterprise InfoView User's Guide*.

4. Click OK.

More information:

[Log in to the CMC](#) (see page 196)

CMC Preference Options

Product Locale

This list sets the default language options for BusinessObjects Enterprise.

Preferred Viewing Locale

This list sets the default formatting options Preferred Viewing Locale for date, time, and numbers in the CMC.

Maximum number of objects per page

This option limits the number of objects listed on any page or tab in the CMC.

Note: This setting does not limit the number of objects displayed, simply the number displayed per page.

Time Zone

If you are managing BusinessObjects Enterprise remotely, use this list to specify your time zone. BusinessObjects Enterprise synchronizes scheduling patterns and events appropriately. For instance, if you select Eastern Time (US & Canada), and you schedule a report to run at 5:00 a.m. every day on a server that is located in San Francisco, then the server will run the report at 2:00 a.m. Pacific Time.

Prompt for Unsaved Data

This setting controls whether you are prompted for confirmation when you close a dialog without saving your work by clicking Cancel or by clicking the Close button in the top right-hand corner.

You have the following options:

- On: The prompt behavior is enabled.
- Off: The prompt behavior is disabled.
- Default: The prompt behavior is determined by settings configured in the web.xml file that is located in C:\Program Files\Business Objects\Tomcat6\webapps\CmcApp\WEB-INF.

Make Initial Security Settings

Before you publish content or provide users with access to BusinessObjects Enterprise, the default system settings should be changed. The following sections provide procedures for setting the Administrator password, disabling a user account, and modifying the default security level.

Set the Administrator Password

As part of the installation, BusinessObjects Enterprise creates an Administrator account and a Guest account.

Use the following procedure to create a secure password for the Administrator account.

Note: Do not create a password for the Guest account if you plan to use the anonymous single sign-on or the Sign Up features available in BusinessObjects Enterprise.

Change the Administrator Password

To change the administrator password

1. In the User Name field in the CMC login page, enter Administrator.
Note: This default account does not have a password until you create one.
2. Click OK.
3. Go to the Users and Groups management area of the CMC.
4. Click User List.
5. Select the Administrator account.
6. Click Manage, Properties.
7. In the Enterprise Password Settings area, enter and confirm the new password.
8. If it is selected, clear the User must change password at next logon check box.
9. Click Save.

Disable a User Account

You can disable any user account through the CMC. For example, you may want to disable the Guest account to ensure that no one can log in to BusinessObjects Enterprise with this account.

Note: If you disable the Guest account, you also disable the anonymous single sign-on functionality of BusinessObjects Enterprise.

To disable a user account

1. Go to the Users and Groups management area of the CMC.
2. Click User List.
3. In the Title column, select the user account you want to disable and click Manage and then Properties.
4. Select the Account is disabled check box.
5. Click Save.

Chapter 10: Set Rights

This section contains the following topics:

[How Rights Work in BusinessObjects Enterprise](#) (see page 201)

How Rights Work in BusinessObjects Enterprise

Rights are the base units for controlling user access to the objects, users, applications, servers, and other features in BusinessObjects Enterprise. They play an important role in securing the system by specifying the individual actions that users can perform on objects. Besides allowing you to control access to your BusinessObjects Enterprise content, rights enable you to delegate user and group management to different departments, and to provide your IT people with administrative access to servers and server groups.

It is important to note that rights are set on objects such as reports and folders rather than on the principals (the users and groups) who access them. For example, to give a manager access to a particular folder, in the Folders area, you add the manager to the access control list (the list of principals who have access to an object) for the folder. You cannot give the manager access by configuring the manager's rights settings in the Users and Groups area. The rights settings for the manager in the Users and Groups area are used to grant other principals (such as delegated administrators) access to the manager as an object in the system. In this way, principals are themselves like objects for others with greater rights to manage.

Each right on an object can be granted, denied, or unspecified. The BusinessObjects Enterprise security model is designed such that, if a right is left unspecified, the right is denied. Additionally, if settings result in a right being both granted and denied to a user or group, the right is denied. This denial-based design helps ensure that users and groups do not automatically acquire rights that are not explicitly granted. There is an important exception to this rule. If a right is explicitly set on a child object that contradicts the rights inherited from the parent object, the right set on the child object overrides the inherited rights. This exception applies to users who are members of groups as well. If a user is explicitly granted a right that the user's group is denied, the right set on the user overrides the inherited rights.

Access Levels






Access levels are groups of rights that users frequently need. They allow administrators to set common security levels quickly and uniformly rather than requiring that individual rights be set one by one.

BusinessObjects Enterprise comes with several predefined access levels. These predefined access levels are based on a model of increasing rights: Beginning with View and ending with Full Control, each access level builds upon the rights granted by the previous level. However, you can also create and customize your own access levels; this can greatly reduce administrative and maintenance costs associated with security. Consider a situation in which an administrator must manage two groups: sales managers and sales employees. Both groups need to access five reports in the BusinessObjects Enterprise system, but sales managers require more rights than sales employees. The predefined access levels do not meet the needs of either group. Instead of adding groups to each report as principals and modifying their rights in five different places, the administrator can create two new access levels: Sales Managers and Sales Employees. The administrator then adds both groups as principals to the reports and assigns the groups their respective access levels. When rights must be modified, the administrator can modify the access levels. Because the access levels apply to both groups across all five reports, the rights those groups have to the reports are quickly updated.

Advanced Rights Settings

To provide you with full control over object security, the CMC allows you to set advanced rights. These advanced rights provide increased flexibility as you define security for objects at a granular level. Use advanced rights settings, for instance, if you must customize a principal's rights to a particular object or set of objects. Most importantly, use advanced rights to explicitly deny a user or group any right that should not be permitted to change when, in the future, you make changes to group memberships or folder security levels.

The following table summarizes the options that you have when you set advanced rights.

Icon	Rights Option	Description
	Granted	The right is granted to a principal.
	Denied	The right is denied to a principal.
	Not Specified	The right is unspecified for a principal. By default, rights set to Not Specified are denied.
	Apply to Object	The right applies to the object. This option becomes available when you click Granted or Denied.
	Apply to Sub Object	The right applies to subobjects. This option becomes available when you click Granted or Denied.

Inheritance

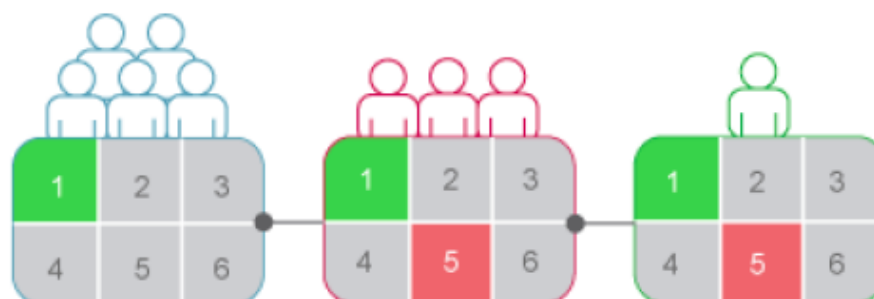
Rights are set on an object for a principal in order to control access to the object; however, it is impractical to set the explicit value of every possible right for every principal on every object. Consider a system with 100 rights, 1000 users, and 10,000 objects: to set rights explicitly on each object would require the CMS store billions of rights in its memory, and, importantly, require that an administrator manually set each one. Inheritance patterns resolve this impracticality. With inheritance, the rights that users have to objects in the system come from a combination of their memberships in different groups and subgroups and from objects which have inherited rights from parent folders and subfolders. These users can inherit rights as the result of group membership; subgroups can inherit rights from parent groups; and both users and groups can inherit rights from parent folders.

By default, users or groups who have rights to a folder inherit the same rights for any objects that are subsequently published to that folder. Consequently, the best strategy is to set the appropriate rights for users and groups at the folder level first, then publish objects to that folder. BusinessObjects Enterprise recognizes two types of inheritance: group inheritance and folder inheritance.

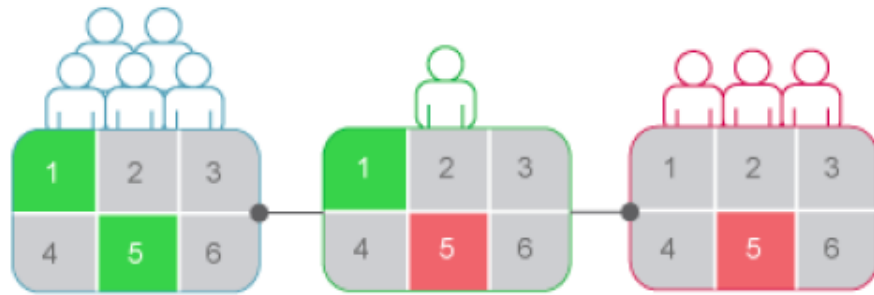
Group Inheritance

Group inheritance allows principals to inherit rights as the result of group membership. Group inheritance proves especially useful when you organize all of your users into groups that coincide with your organization's current security conventions.

In Group inheritance example 1, you can see how group inheritance works. Red Group is a subgroup of Blue Group, so it inherits Blue Group's rights. In this case, it inherits right 1 as granted, and the rest of the rights as unspecified. Every member of Red Group inherits these rights. In addition, any other rights that are set on the subgroup are inherited by its members. In this example, Green User is a member of Red Group, and thus inherits right 1 as granted, rights 2, 3, 4, and 6 as not specified, and Right 5 as denied.



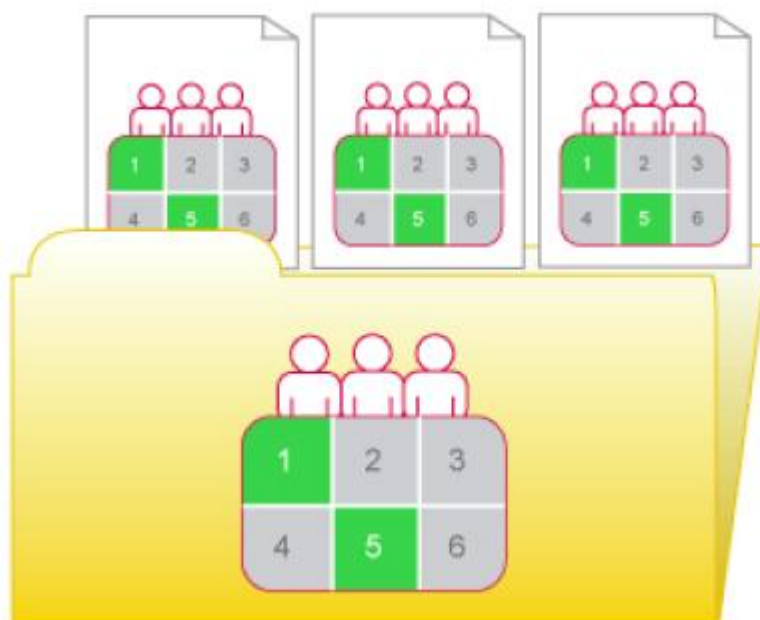
When group inheritance is enabled for a user who belongs to more than one group, the rights of all parent groups are considered when the system checks credentials. The user is denied any right that is explicitly denied in any parent group, and the user is denied any right that remains completely not specified; thus, the user is granted only those rights that are granted in one or more groups (explicitly or through access levels) and never explicitly denied. In Group inheritance example 2, Green User is a member of two unrelated groups. From Blue Group, he inherits rights 1 and 5 as granted and the rest as not specified; however, because Green User also belongs to Red Group, and Red Group has been explicitly denied right 5, Green User's inheritance to right 5 from Blue Group is overridden.



Folder Inheritance

Folder inheritance allows principals to inherit any rights that they have been granted on an object's parent folder. Folder inheritance proves especially useful when you organize BusinessObjects Enterprise content into a folder hierarchy that reflects your organization's current security conventions. For example, suppose that you create a folder called Sales Reports, and you provide your Sales group with View On Demand access to this folder. By default, every user that has rights to the Sales Reports folder inherits the same rights to the reports that you subsequently publish to this folder.

Consequently, the Sales group will have View On Demand access to all of the reports, and you need set the object rights only once, at the folder level. In Folder inheritance example, rights have been set for Red Group on a folder. Rights 1 and 5 have been granted, while the rest have been left unspecified. With folder inheritance enabled, members of Red Group have rights on the object level identical to the rights of the group on the folder level. Rights 1 and 5 are inherited as granted, while the rest have been left unspecified.

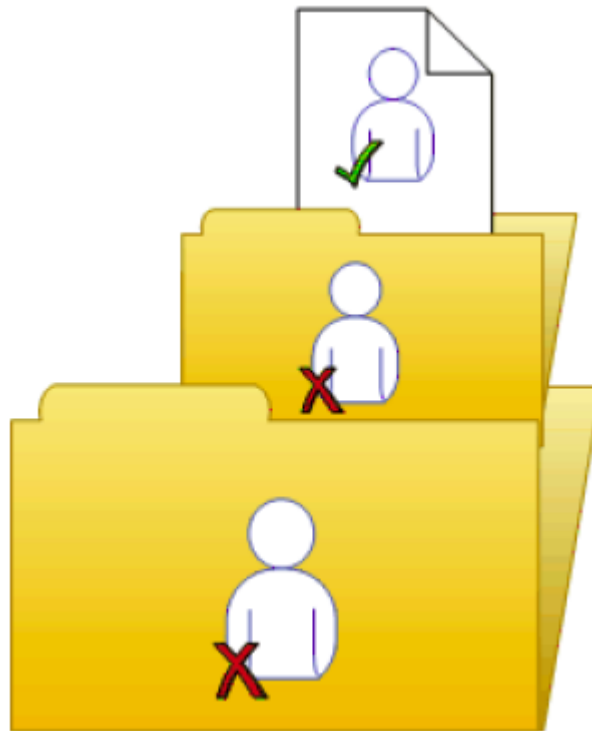


Rights Override

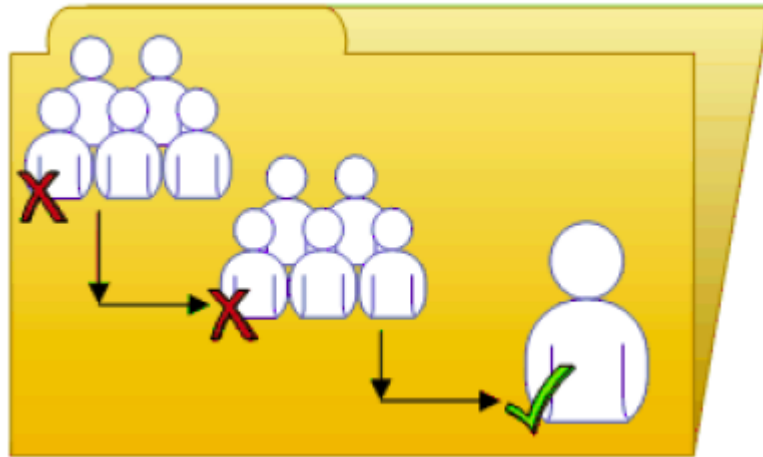
Rights override is a rights behavior in which rights that are set on child objects override the rights set on parent objects. Rights override occurs under the following circumstances:

- In general, the rights that are set on child objects override the corresponding rights that are set on parent objects.
- In general, the rights that are set on subgroups or members of groups override the corresponding rights that are set on groups.

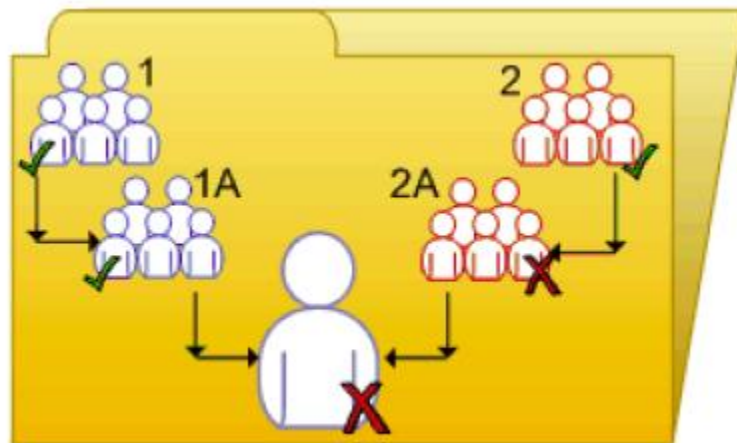
You do not need to disable inheritance to set customized rights on an object. The child object inherits the rights settings of the parent object except for the rights that are explicitly set on the child object. Also, any changes to rights settings on the parent object apply to the child object. Rights override example 1 illustrates how rights override works on parent and child objects. Blue User is denied the right to edit a folder's contents; the rights setting is inherited by the subfolder. However, an administrator grants Blue User Edit rights to a document in the subfolder. The Edit right that Blue User receives on the document overrides the inherited rights that come from the folder and subfolder.



Rights override example 2 illustrates how rights override works on members and groups. Blue Group is denied the right to edit a folder; Blue Subgroup inherits this rights setting. However, an administrator grants Blue User, who is a member of Blue Group and Blue Subgroup, Edit rights on the folder. The Edit rights that Blue User receives on the folder override the inherited rights that come from Blue Group and Blue Subgroup.



Complex rights override illustrates a situation where the effects of rights override are less obvious. Purple User is a member of subgroups 1A and 2A, which are in Groups 1 and 2, respectively. Groups 1 and 2 both have Edit rights on the folder. 1A inherits the Edit rights that Group 1 has, but an administrator denies Edit rights to 2A. The rights settings on 2A override the rights settings on Group 2 because of rights override. Therefore, Purple User inherits contradictory rights settings from 1A and 2A. 1A and 2A do not have a parent-child relationship, so rights override does not occur; that is, one sub-group's rights settings do not override another's because they have equal status. In the end, Purple User is denied Edit rights because of the denial-based rights model in BusinessObjects Enterprise.



Rights override lets you make minor adjustments to the rights settings on a child object without discarding all inherited rights settings. Consider a situation in which a sales manager must view confidential reports in the Confidential folder. The sales manager is part of the Sales group, which is denied access to the folder and its contents. The administrator grants the manager View rights on the Confidential folder and continues to deny the Sales group access. In this case, the View rights granted to the sales manager override the denied access that the manager inherits from membership in the Sales group.

Scope of Rights

Scope of rights refers to the ability to control the extent of rights inheritance. To define the scope of a right, you decide whether the right applies to the object, its sub-objects, or both. By default, the scope of a right extends to both objects and sub-objects.

Scope of rights can be used to protect personal content in shared locations. Consider a situation in which the finance department has a shared Expense Claims folder that contains Personal Expense Claims subfolders for each employee. The employees want to be able to view the Expense Claims folder and add objects to it, but they also want to protect the contents of their Personal Expense Claims subfolders. The administrator grants all employees View and Add rights on the Expense Claims folder, and limits the scope of these rights to the Expense Claims folder only. This means that the View and Add rights do not apply to sub-objects in the Expense Claims folder. The administrator then grants employees View and Add rights on their own Personal Expense Claims subfolders.

Scope of rights can also limit the effective rights that a delegated administrator has. For example, a delegated administrator may have Securely Modify Rights and Edit rights on a folder, but the scope of these rights is limited to the folder only and does not apply to its sub-objects. The delegated administrator cannot grant these rights to another user on one of the folder's sub-objects.

Type-Specific Rights

Type-specific rights are rights that affect specific object types only, such as Crystal Reports, folders, or access levels.

Type-specific rights consist of the following:

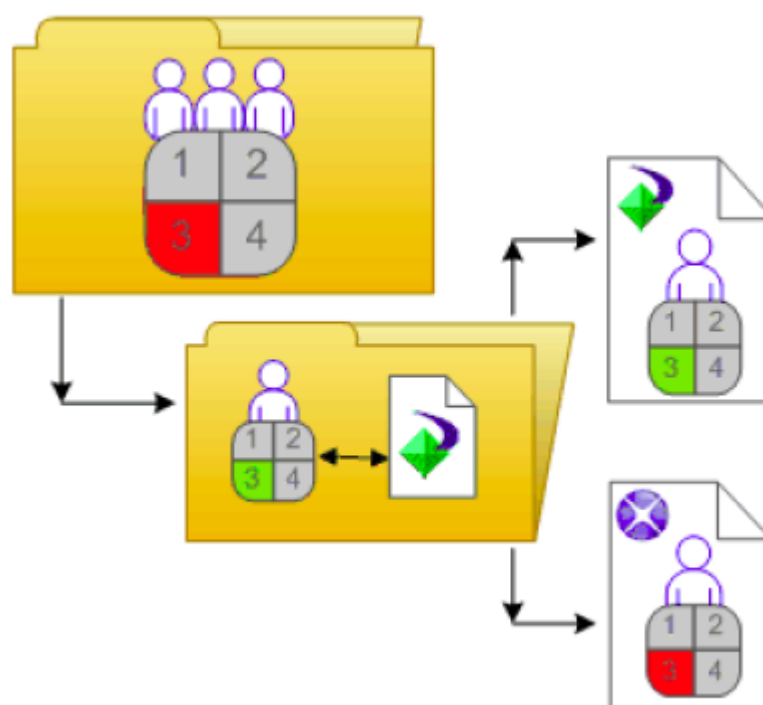
General rights for the object type

These rights are identical to general global rights (for example, the right to add, delete, or edit an object), but you set them on specific object types to override the general global rights settings.

Specific rights for the object type

These rights are available for specific object types only. For example, the right to export a report's data appears for Crystal Reports but not for Word documents.

The diagram Type-specific rights example illustrates how type-specific rights work. Here right 3 represents the right to edit an object. Blue Group is denied Edit rights on the top-level folder and granted Edit rights for Crystal Reports in the folder and subfolder. These Edit rights are specific to Crystal Reports and override the rights settings on a general global level. As a result, members of Blue Group have Edit rights for Crystal Reports but not the other object type in the subfolder.



Type-specific rights are useful because they let you limit the rights of principals based on object type. Consider a situation in which an administrator wants employees to be able to add objects to a folder but not create subfolders. The administrator grants Add rights at the general global level for the folder, and then denies Add rights for the folder object type.

Rights are divided into the following collections based on the object types they apply to:

General

These rights affect all objects.

Content

These rights are divided according to particular content object types. Examples of content object types include Crystal Reports, Adobe Acrobat PDFs, and Desktop Intelligence documents.

Application

These rights are divided according to which BusinessObjects Enterprise application they affect. Examples of applications include the CMC and InfoView.

System

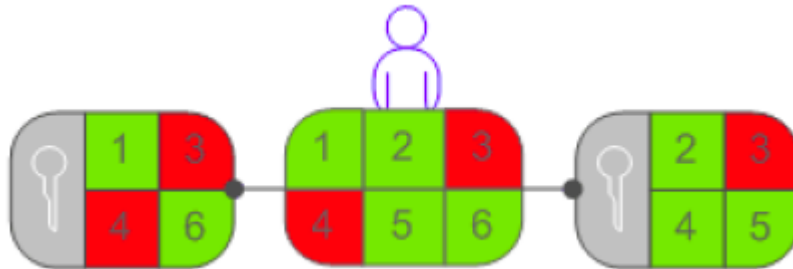
These rights are divided according to which core system component they affect. Examples of core system components include Calendars, Events, and Users and Groups.

Type-specific rights are in the Content, Application, and System collections. In each collection, they are further divided into categories based on object type.

Determine Effective Rights

Keep these considerations in mind when you set rights on an object:

- Each access level grants some rights, denies some rights, and leaves the other rights unspecified. When a user is granted several access levels, the system aggregates the effective rights and denies any unspecified rights by default.
- When you assign multiple access levels to a principal on an object, the principal has the combination of each access level's rights. The user in "Multiple access levels" is assigned two access levels. One access level grants the user rights 3 and 4, while the other access level grants right 3 only. The effective rights for the user are 3 and 4.



- Advanced rights can be combined with access levels to customize the rights settings for a principal on an object. For example, if an advanced right and an access level are both assigned explicitly to a principal on an object, and the advanced right contradicts a right in the access level, the advanced right will override the right in the access level.

Advanced rights can override their identical counterparts in access levels only when they are set on the same object for the same principal. For example, an advanced Add right set at the general global level can override the general Add right setting in an access level; it cannot override a type-specific Add right setting in an access level.

However, advanced rights do not always override access levels. For example, a principal is denied an Edit right on a parent object. On the child object, the principal is assigned an access level that grants him the Edit right. In the end, the principal has Edit rights on the child object because the rights set on the child object override rights that are set on the parent object.

- Rights override makes it possible for rights set on a child object to override rights that are inherited from the parent object.

Chapter 11: Manage Users and Groups

Note that your CA Technologies product documentation precedes the information in this chapter about user/group setup and authentication. Ensure that you review your CA Technologies product documentation to identify specific user setup requirements for your product's integration with CA Business Intelligence.

This section contains the following topics:

[Account Management Overview](#) (see page 213)

[Manage Enterprise and General Accounts](#) (see page 216)

[Manage Aliases](#) (see page 225)

[CA Business Intelligence Default User Groups](#) (see page 229)

Account Management Overview

Account management can be thought of as all of the tasks related to creating, mapping, changing, and organizing user and group information. The Users and Groups management area of the CMC provides you with a central place to perform these tasks. After the user accounts and groups have been created, you can add objects and specify rights to them. When the users log in, they can view the objects using InfoView or their custom web application.

User Management

In the Users and Groups area, you can specify everything required for a user to access BusinessObjects Enterprise.

You can also view the two default user accounts summarized as follows:

Administrator

This user belongs to the Administrators and Everyone groups. An administrator can perform all tasks in all BusinessObjects Enterprise applications (for example, the CMC, CCM, Publishing Wizard, and InfoView).

Guest

This user belongs to the Everyone group. This account is enabled by default, and is not assigned a password by the system. If you assign it a password, the single sign-on to InfoView will be broken.

Group Management

Groups are collections of users who share the same account privileges; therefore, you may create groups that are based on department, role, or location. Groups enable you to change the rights for users in one place (a group) instead of modifying the rights for each user account individually. Also, you can assign object rights to a group or groups. In the Users and Groups area, you can create groups that give a number of people access to the report or folder. This enables you to make changes in one place instead of modifying each user account individually. You can also view the several default group accounts summarized below.

To view available groups in the CMC, click Group List in the Tree panel. Alternatively, you can click Group Hierarchy to display a hierarchal list of all available groups.

Administrators

Members of this group can perform all tasks in all of the BusinessObjects Enterprise applications (CMC, CCM, Publishing Wizard, and InfoView). By default, the Administrators group contains only the Administrator user.

Everyone

Each user is a member of the Everyone group QaaWS Group Designer. Members of this group have access to Query as a Web Service.

Report Conversion Tool Users

Members of this group have access to the Report Conversion Tool application.

Translators

Members of this group have access to the Translation Manager application.

Universe Designer Users

Users who belong to this group are granted access to the Universe Designer folder and the Connections folder. They can control who has access rights to the Designer application.

Note: You must add users to this group as needed. By default, no user belongs to this group.

Available Authentication Types

Before setting up user accounts and groups within BusinessObjects Enterprise, decide which type of authentication you want to use. The following information summarizes the authentication options which may be available to you, depending on the security tools your organization uses.

Enterprise

Use the system default Enterprise Authentication if you prefer to create distinct accounts and groups for use with BusinessObjects Enterprise, or if you have not already set up a hierarchy of users and groups in a Windows NT user database, an LDAP directory server, or a Windows AD server.

Windows NT

If you are working in a Windows NT environment, you can use existing NT user accounts and groups in BusinessObjects Enterprise. When you map NT accounts to BusinessObjects Enterprise, users are able to log in to BusinessObjects Enterprise applications with their NT user name and password. This can reduce the need to recreate individual user and group accounts within BusinessObjects Enterprise.

LDAP

If you set up an LDAP directory server, you can use existing LDAP user accounts and groups in BusinessObjects Enterprise. When you map LDAP accounts to BusinessObjects Enterprise, users are able to access BusinessObjects Enterprise applications with their LDAP user name and password. This eliminates the need to recreate individual user and group accounts within BusinessObjects Enterprise.

Windows AD

If you are working in a Windows 2000 environment, you can use existing AD user accounts and groups in BusinessObjects Enterprise. When you map AD accounts to BusinessObjects Enterprise, users are able to log in to BusinessObjects Enterprise applications with their AD user name and password. This eliminates the need to recreate individual user and group accounts within BusinessObjects Enterprise.

Notes:

- You can use Enterprise Authentication in conjunction with either NT, LDAP, or AD authentication, or with all of the three authentication plug-ins.
- For more information about authentication for your CA Technologies product's integrated reports, see your CA Technologies product documentation.

Manage Enterprise and General Accounts

Because Enterprise authentication is the default authentication method for BusinessObjects Enterprise, it is automatically enabled when you first install the system. When you add and manage users and groups, BusinessObjects Enterprise maintains the user and group information within its database.

Notes:

- In many cases, these procedures also apply to NT, LDAP, and AD account management.
- When a user logs off their web session on BusinessObjects Enterprise by navigating to a non-BusinessObjects Enterprise page or closing their web browser, their Enterprise session is not logged off and they still hold a license. The Enterprise session will time out after approximately 24 hours. To end the user's Enterprise session and free the license for use by others, the user must log out of BusinessObjects Enterprise.

Create an Enterprise User Account

When you create a new user, you specify the user's properties and select the group or groups for the user.

To create an enterprise user account

1. Go to the Users and Groups management area of the CMC.
2. Click Manage, New, New User.
The New User dialog displays.
3. Select Enterprise from the Authentication Type list.
4. Enter the account name, full name, email, and description information.
Tip: Use the description area to include extra information about the user or account.
5. Specify the password information and settings.
6. Select the connection type.
For CA Technologies deployment of BusinessObjects Enterprise, keep the default value, choose Concurrent User.
7. Click Create & Close.

The user is added to the system and is automatically added to the Everyone group. An inbox is automatically created for the user, as is an Enterprise alias. You can now add the user to a group or specify rights for the user.

Modify a User Account

Use this procedure to modify a user's properties or group membership.

Note: The user is affected if he or she is logged on when you are making the change(s).

To modify a user account

1. Go to the Users and Groups management area of the CMC.
2. Select the user whose properties you want to change.
3. Click Manage, Properties.

The Properties dialog for the user displays.

4. Modify the properties for the user.

In addition to all of the options that were available when you initially created the account, you now can disable the account by selecting the Account is disabled check box.

Note: Any changes you make to the user account do not appear until the next time the user logs in.

5. Click Save & Close.

Delete a User Account

Use this procedure to delete a user's account. The user might receive an error if they are logged on when their account is deleted. When you delete a user account, the Favorites folder, personal categories, and inbox for that user are deleted as well. If you think the user might require access to the account again in the future, select the Account is disabled check box in the Properties dialog of the selected user (instead of deleting the account).

Note: Deleting a user account does not necessarily prevent the user from being able to log in to BusinessObjects Enterprise again. If the user account also exists in a third-party system, and if the account belongs to a third-party group that is mapped to BusinessObjects Enterprise, the user may still be able to log in.

To delete a user account

1. Go to the Users and Groups management area of the CMC.
2. Select the user you want to delete.
3. Click Manage, Delete.

The delete confirmation dialog displays.

4. Click OK.

The user account is deleted.

Create a New Group

To create a new group

1. Go to the Users and Groups management area of the CMC.
2. Click Manage, New, New Group.
The Create New User Group dialog displays.
3. Enter the group name and description.
4. Click OK.

After creating a new group, you can add users, add subgroups, or specify group membership so that the new group is actually a subgroup. Because subgroups provide you with additional levels of organization, they are useful when you set object rights to control users' access to your BusinessObjects Enterprise content.

Modify a Group's Properties

You can modify group properties by making changes to any of the settings.

Note: The users who belong to the group are affected by the modification the next time they log in.

To modify group properties

1. In the Users and Groups management area of the CMC, select the group.
2. Click Manage, Properties.
The Properties dialog displays.
3. Modify the properties for the group.
Click the links from the navigation list to access different dialogs and modify different properties.
 - If you want to change the title or description for the group, click Properties.
 - If you want to modify the rights that principals have to the group, click User Security.
 - If you want to modify profile values for group members, click Profile Values.
 - If you want to add the group as a subgroup to another group, click Member Of.
4. Click Save.

View Group Members

You can use this procedure to view the users who belong to a specific group.

To view group members

1. Go to the Users and Groups management area of the CMC.
2. Expand Group Hierarchy in the Tree panel.
3. Select the group in the Tree panel.

Note: It may take a few minutes for your list to display if you have a large number of users in the group or if your group is mapped to an NT user database, LDAP user directory, or AD user directory. The list of users who belong to the group displays.

Add Subgroups

You can add a group to another group. When you do this, the group that you added becomes a subgroup.

Note: Adding a subgroup is similar to specifying group membership.

To add subgroups

1. In the Users and Groups management area of the CMC, select the group that you want to add as a subgroup to another group.
2. Click Actions, Join Group.
The Join Group dialog displays.
3. Move the group that you want to add the first group to from the AvailableGroups list to the Destination Group(s) list.
4. Click OK.

Specify Group Membership

You can make a group a member of another group. The group that becomes a member is referred to as a subgroup. The group that you add the subgroup to is the parent group. A subgroup inherits the rights of the parent group.

To specify group membership

1. In the Users and Groups management area of the CMC, click the group that you want to add to another group.
2. Click Actions, Member Of.

The Member Of dialog displays.

3. Click Join Group.

The Join Group dialog displays.

4. Move the group that you want to add the first group to from the Available Groups to the Destination Group(s) list.

Any rights associated with the parent group are inherited by the new group you have created.

5. Click OK.

You return to the Member Of dialog, and the parent group displays in the parent groups list.

Delete a Group

You can delete a group when that group is no longer required. You cannot delete the default groups Administrator and Everyone.

Notes:

- The users who belong to the deleted group are affected by the change the next time they log in.
- The users who belong to the deleted group lose any rights they inherited from the group.

To delete a third-party authentication group, such as the BusinessObjects Enterprise NT Users group, use the Authentication management area in CMC.

To delete a group

1. Go to the Users and Groups management area of the CMC.
2. Select the group you want to delete.
3. Click Manage, Delete.

The delete confirmation dialog displays.

4. Click OK.

The group is deleted.

Enable the Guest Account

The Guest account is disabled by default to ensure that no one can log in to BusinessObjects Enterprise with this account. This default setting also disables the anonymous single sign-on functionality of BusinessObjects Enterprise, so users are unable to access InfoView without providing a valid user name and password. Perform this task if you want to enable the Guest account so that users do not require their own accounts to access InfoView.

To enable the guest account

1. Go to the Users and Groups management area of the CMC.
2. Click User List in the Navigation panel.
3. Select Guest.
4. Click Manage, Properties.

The Properties dialog displays.

5. Clear the Account is disabled check box.
6. Click Save & Close.

Add Users to Groups

You can add users to groups in the following ways:

- Select the group, and then click Actions > Add Members to Group.
- Select the user, and then click Actions > Member Of.
- Select the user, and then click Actions > Join Group.

The following procedures describe how to add users to groups using these methods.

Add a User to One or More Groups

To add a user to one or more groups

1. Go to the Users and Groups management area of the CMC.
2. Select the user that you want to add to a group.
3. Click Actions, Join Group.

Note: All BusinessObjects Enterprise users of the system are part of the Everyone group.

The Join Group dialog displays.

4. Move the group that you want to add the user to from the Available Groups list to the Destination Group(s) list.

Note: Use Shift + (click) or Ctrl + (click) to select multiple groups.

5. Click OK.

Add One or More Users to a Group

To add one or more users to a group

1. In the Users and Groups management area of the CMC, select the group.
2. Click Actions, Add Members to Group.

The Add dialog displays.

3. Click User list.

The Available users/groups list refreshes and displays all user accounts in the system.

4. Move the user that you want to add to the group from the Available users/groups list to the Selected users/groups list.

Notes:

- To select multiple users, use the Shift + (click) or Ctrl + (click) combination.
- To search for a specific user, use the search field.
- If there are many users on your system, click the Previous and Next buttons to navigate through the list of users.

5. Click OK.

Change Password Settings

Change User Password Settings

To change user password settings

1. Go to the Users and Groups management area of the CMC.
2. Select the user whose password settings you want to change.
3. Click Manage, Properties.

The Properties dialog displays.

4. Select or clear the check box associated with the password setting you want to change.

The available options are:

- Password never expires
 - User must change password at next logon
 - User cannot change password
5. Click Save & Close.

Change General Password Settings

To change general password settings

1. Go to the Authentication management area of the CMC.
2. Double-click Enterprise.

The Enterprise dialog displays.

3. Select the check box for each password setting that you want to use, and provide a value if necessary.

The following information identifies the minimum and maximum values for each of the settings you can configure.

Password Setting	Minimum	Recommended Maximum
Enforce mixed-cased password	N/A	N/A
Must contain at least N characters	0 characters	64 characters
Must change password every N day(s)	1 day	100 days
Cannot reuse the N most recent password(s)	1 password	100 passwords
Must wait N minutes to change password(s)	0 minutes	100 minutes
Disable account after N failed attempts to log in	1 failed	100 failed
Reset failed logon count after N minutes	1 minute	100 minutes
Reenable account after N minutes	0 minutes	100 minutes

4. Click Update.

Enable Trusted Authentication

Note: Trusted Authentication is supported for InfoView only; it is unavailable for the CMC.

Users prefer to log in to the system once, without needing to provide passwords several times during a session. Trusted Authentication provides a single sign-on solution for integrating your BusinessObjects Enterprise authentication solution with third-party authentication solutions. Applications that have established trust with the CMS can use Trusted Authentication to allow users to log in without providing their passwords.

To enable Trusted Authentication, you must configure both the server and the client.

Notes:

- See the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf) to learn more about configuring the different types of third-party authentication (such as NT, LDAP, and so on), as well as security concepts.
- See your CA Technologies product documentation for more information about the supported integrations.

Configure the Server to use Trusted Authentication

To configure the server to use Trusted Authentication

1. Go to the Authentication management area of the CMC.
2. Double-click Enterprise.
The Enterprise dialog displays.
3. Select Trusted Authentication is enabled.
4. Create a shared secret for your users.

Note: The shared secret is used by the client and the CMS to create a trusted authentication password. This password is used to establish trust.

5. Enter a time-out value for your trusted authentication requests.

Note: The time-out value determines how long the CMS waits for the `IEnterpriseSession.logon()` call from the client application.

6. Click Update.

Configure the Client to use Trusted Authentication

To configure the client to use Trusted Authentication

1. Create a valid configuration file on the client computer.

The following conditions apply for the configuration file:

- The name of the file must be TrustedPrincipal.conf.
 - The file must be located at businessobjects_root/win32_x86/.
 - The file must contain SharedSecret=secretPassword, where secret Password is the trusted authentication password.
2. Use the session manager to create a trusted principal and log in to the CMS:
 - `ISessionMgr sessionMgr = CrystalEnterprise.getSessionMgr();`
 - `ITrustedPrincipal trustedPrincipal = sessionMgr.createTrustedPrincipal(userName, cmsName);`
 - `IEnterpriseSession enterpriseSession = sessionMgr.logon(trustedPrincipal);`

Grant Access to Users and Groups

You can grant users and groups administrative access to other users and groups. Administrative rights include: viewing, editing, and deleting objects; viewing and deleting object instances; and pausing object instances. For example, for troubleshooting and system maintenance, you may want to grant your IT department access to edit and delete objects.

Control Access to User Inboxes

When you add a user, the system automatically creates an inbox for that user. The inbox has the same name as the user. By default, only the user and the administrator have the right to access a user's inbox.

Manage Aliases

If a user has multiple accounts in BusinessObjects Enterprise, you can link the accounts using the Assign Alias feature. This is useful when a user has a third-party account that is mapped to Enterprise and an Enterprise account. By assigning an alias to the user, the user can log in using either a third-party user name and password or an Enterprise user name and password. Thus, an alias enables a user to log in via more than one authentication type. In the CMC, the alias information displays at the bottom of the Properties dialog for a user. A user can have any combination of BusinessObjects Enterprise, LDAP, AD, or NT aliases.

Create a User and Add a Third-Party Alias

When you create a user and select an authentication type other than Enterprise, the system creates the new user in BusinessObjects Enterprise and creates a third-party alias for the user.

Note: For the system to create the third-party alias, the following criteria must be met:

- The authentication tool needs to have been enabled in the CMC.
- The format of the account name must agree with the format required for the authentication type.
- The user account must exist in the third-party authentication tool, and it must belong to a group that is already mapped to BusinessObjects Enterprise.

To create a user and add a third-party alias

1. Go to the Users and Groups management area of the CMC.
2. Click Manage, New, New User.
The New User dialog displays.
3. Select the authentication type for the user (for example, Windows NT).
4. Enter the third-party account name for the user (for example, bsmith).
5. Select the connection type for the user.
6. Click Create & Close.

The user is added to BusinessObjects Enterprise and is assigned an alias for the authentication type you selected. For example: secWindowsNT:ENTERPRISE:bsmith. If required, you can add, assign, and reassign aliases to users.

Create a New Alias for an Existing User

You can create aliases for existing BusinessObjects Enterprise users. The alias can be an Enterprise alias, or an alias for a third-party authentication tool.

Note: For the system to create the third-party alias, the following criteria must be met:

- The authentication tool must be enabled in the CMC.
- The format of the account name must agree with the format required for the authentication type.
- The user account must exist in the third-party authentication tool, and it must belong to a group that is mapped to BusinessObjects Enterprise.

To create a new alias for an existing user

1. Go to the Users and Groups management area of the CMC.
2. Select the user that you want to add an alias to.
3. Click Manage, Properties.
The Properties dialog displays.
4. Click New Alias.
5. Select the authentication type.
6. Enter the account name for the user.
7. Click Update.

An alias is created for the user. When you view the user in CMC, at least two aliases are shown: the one that was already assigned to the user and the one you just created.

8. Click Save & Close to exit the Properties dialog.

Assign an Alias from Another User

When you assign an alias to a user, you move a third-party alias from another user to the user you are currently viewing. You cannot assign or reassign Enterprise aliases.

Note: If a user has only one alias and you assign that last alias to another user, the system will delete the user account, and the Favorites folder, personal categories, and inbox for that account.

To assign an alias from another user

1. Go to the Users and Groups management area of the CMC.
2. Select the user you want to assign an alias to.
3. Click Manage, Properties.
The Properties dialog displays.
4. Click Assign Alias.
5. Enter the user account that has the alias you want to assign, then click Find Now.
6. Move the alias you want to assign from the Available aliases list to the Aliases to be added to Username list.

Here, Username represents the name of the user you are assigning an alias to.

Note: To select multiple aliases, use the SHIFT + click or CTRL + click combination.

7. Click OK.

Delete an Alias

When you delete an alias, the alias is removed from the system. If a user has only one alias and you delete that alias, the system automatically deletes the user account and the Favorites folder, personal categories, and inbox for that account.

Note: Deleting a user's alias does not necessarily prevent the user from being able to log in to BusinessObjects Enterprise again. If the user account still exists in the third-party system, and if the account belongs to a group that is mapped to BusinessObjects Enterprise, then BusinessObjects Enterprise will still allow the user to log in. Whether the system creates a new user or assigns the alias to an existing user, depends on which update options you have selected for the authentication tool in the Authentication management area of CMC.

To delete an alias

1. Go to the Users and Groups management area of the CMC.
2. Select the user whose alias you want to delete.
3. Click Manage, Properties.
The Properties dialog displays.
4. Click the Delete Alias button next to the alias that you want to delete.
5. If prompted for confirmation, click OK.
The alias is deleted.
6. Click Save & Close to exit the Properties dialog.

Disable an Alias

You can prevent a user from logging in to BusinessObjects Enterprise using a particular authentication method by disabling the user's alias associated with that method. To prevent a user from accessing BusinessObjects Enterprise altogether, disable all aliases for that user.

Note: Deleting a user from BusinessObjects Enterprise does not necessarily prevent the user from being able to log in to BusinessObjects Enterprise again. If the user account still exists in the third-party system, and if the account belongs to a group that is mapped to BusinessObjects Enterprise, then BusinessObjects Enterprise will still allow the user to log in. To ensure a user can no longer use one of his or her aliases to log in to BusinessObjects Enterprise, it is best to disable the alias.

To disable an alias

1. Go to the Users and Groups management area of the CMC.
2. Select the user whose alias you want to disable.

3. Click Manage, Properties.
The Properties dialog displays.
4. Clear the Enabled check box for the alias you want disable.
Repeat this step for each alias you want to disable.
5. Click Save & Close.

The user can no longer log in using the type of authentication that you just disabled.

CA Business Intelligence Default User Groups

To provide customer flexibility to create and assign users and for effective and easier security maintenance, CA Business Intelligence provides the following default user groups with a default set of permissions.

Note: If a user is part of more than one group, then the group having the lower permission level gets preference.

CA Reports Admin

Users in this group are the administrators for the CA Reports and CA Universes folders, explicitly granted all the rights on these folders.

CA Reports Author

Users in this group are granted rights to access, create, edit, copy, move, or schedule any of the objects in the CA Reports folder. This group does not have rights to delete any of the existing objects and instances except those objects that the user created and owns in the CA Reports folder.

CA Reports Viewer

Users in this group are granted rights to view and schedule any of the objects in the CA Reports folder. This group does not have access to create, edit, or delete any of the existing objects or instances in the CA Reports folder.

CA Reports Instance Viewer

This group is granted rights to access only the scheduled instances objects in the CA Reports folder. Users in this group cannot access the reports on-demand or create, edit, delete, or schedule any of the existing objects or instances in the CA Reports folder.

CA Universe Developer

This group is specifically for Universe development. Users in this group have full control to the CA Universes folder.

Those users who develop both reports and Universes must be part of both this group and CA Reports Author group.

The following table provides the explicitly granted and denied permissions (at granular level) for the default groups for the CA Reports folder:

Access Rights	CA Reports Admin	CA Reports Author	CA Reports Viewer	CA Reports Instance Viewer
Securely modify rights users have to objects that the user owns.	√	√	×	×
Schedule to destinations	√	√	√	×
Schedule document that the user owns to run	√	√	√	×
Delete instances that the user owns	√	√	×	×
Copy objects to another folder	√	√	×	×
Delete objects that the user owns	√	√	×	×
Use access level for security assignment	√	√	×	×
View objects that the user owns	√	√	√	×
Add objects to the folder	√	√	×	×
Replicate content	√	√	×	×
Pause and Resume document instances	√	√	√	×
View document instances	√	√	√	√
Securely modify right inheritance settings	√	√	×	×
Schedule objects that the user owns to destinations	√	√	√	×
Use access level that user owns for security assignment	√	√	×	×
Edit objects that the user owns	√	√	×	×
Delete instances	√	×	×	×
View objects	√	√	√	×
Define server groups to process jobs	√	√	×	×
Add objects to folders that the user owns	√	√	×	×
Define server groups to process jobs for objects that the user owns	√	√	×	×
Reschedule instances that the user owns	√	√	√	×
Schedule document to run	√	√	√	×
Schedule on behalf of other users that the user owns	√	√	√	×

Access Rights	CA Reports Admin	CA Reports Author	CA Reports Viewer	CA Reports Instance Viewer
View document instances that the user owns	√	√	√	√
Delete objects	√	×	×	×
Securely modify right inheritance settings for objects that the user owns	√	√	×	×
Schedule on behalf of other users	√	√	√	×
Modify the rights users have to objects that the user owns	√	√	×	×
Edit objects	√	√	×	×
Pause and Resume document instances that the user owns	√	√	√	×
Modify the rights users have to objects	√	√	×	×
Reschedule instances	√	√	√	×
Securely modify rights users have to objects.	√	√	×	×
Copy objects that the user owns to another folder	√	√	×	×

Note: CA Reports is a high-level folder. Users assigned to the default groups inherit access to the subfolders inside the CA Reports folder. To overwrite the inheritance feature on a specific subfolder inside the CA Reports folder, a new group must be created that includes specific access rights per the requirements. Users must be assigned to this newly created group, rather than the default user group created for the CA Reports folder.

Chapter 12: Schedule Objects

This chapter provides information about scheduling objects. It provides detailed instructions for scheduling objects individually and in batches, and scheduling with events. It also describes distributing objects, specifying schedule notifications, and managing instances.

This section contains the following topics:

[About Scheduling](#) (see page 233)

[Set General Scheduling Options](#) (see page 238)

[Manage Events](#) (see page 259)

[Run Objects Now](#) (see page 259)

About Scheduling

Scheduling is a process which allows you to run an object automatically at specified times. When you schedule an object, you choose the recurrence pattern that you want and specify additional parameters to control exactly when and how often the object is run.

At the time you schedule an object, the system creates a scheduled instance. Although a scheduled instance appears in the History dialog of a respective object (with a status of Recurring or Pending), it contains solely object and schedule information—it does not contain any data.

When the system runs the object, it creates an output instance for the object (for example, a report or program instance). A report instance contains actual data from the database. A program instance is a text file that contains the standard output and standard error produced when the program object was run. Output instances also appear in the History dialog of an object and have a status of Success or Failed.

For end users to schedule and run objects, they must use a web-based client such as InfoView or a custom web application. InfoView is designed primarily to schedule objects and view reports, whereas the CMC enables you to manage and administer objects in addition to scheduling objects and viewing reports.

About the Recurrence Options and Parameters

When you schedule an object, you choose the recurrence pattern that you want. For example, you select Daily or Weekly, and then the run option (for example, indicating the days of the week on which you want the object to run). You then specify additional parameters to control exactly when and how often the object is run.

Which run options and parameters are available depends on the recurrence pattern you selected. In many cases the same parameters appear, such as start and end dates.

Recurrence Patterns

When scheduling an object, you can choose from the following recurrence patterns:

Now

The object runs as soon as the user clicks Schedule.

Once

The object runs only once. It can run now or in the future, or when a specified event has occurred.

Hourly

The object runs every hour. You specify at what time it will start, as well as a start and end date.

Daily

The object runs every day. It can run once or several times a day. You can specify at what time it will run, as well as a start and end date.

Weekly

The object runs every week. It can run once a week or several times a week. You can specify on which days and at what time it will run, as well as a start and end date.

Monthly

The object runs every month or every several months. You can specify on which days of the month and at what time it will run, as well as a start and end date.

Day of Month

The object runs on a certain day of every month. You can specify the day it will run, as well as a start and end date.

First Monday of Month

The object runs on the first Monday of every month. You can specify a start and end date.

Last Day of Month

The object runs on the last day of every month. You can specify a start and end date.

Day of Week of Month

The object runs on a particular day of a particular week every month. You can specify the day and the week, as well as the start and end date.

Calendar

The object runs on the dates specified in a calendar that has previously been created.

Run Options and Parameters

This section describes the Run parameters for scheduling an object. Not all parameters apply in all cases, but when they apply, their function is the same.

X and N variables

Applies to certain Daily and Monthly recurrence patterns only. When you select a Run option that contains these variables, the system displays their default values. You can then change these values as needed.

For example, if you select the Daily recurrence pattern and the Every N hour(s) and X minute(s) Run option, you could specify to run the report every 4 (N) hours and 30 (X) minutes. If you do not change the X or N value, the system will run the report every hour.

Run Days

These options appear if you select the Weekly recurrence pattern. You can choose the days of the week on which you want your job to run by deleting the check boxes of the appropriate days.

Start Time

Applies to most, but not all recurrence patterns and Run options. The default is the current date and time. The system runs the object according to the schedule that you specified, as soon as it can, after the Start Time has passed.

For example, if you specify a start time that is three months into the future, the system will not run the object until the start date has passed, even if all the other criteria are met. After that, the system will run the report at the specified time.

End Time

Applies to most, but not all, recurrence patterns and Run options. The default is the current time and a date in the distant future, to ensure that an object runs indefinitely. Specify a different End Time if required. Once the End Time has passed, the system no longer runs the object.

Number of retries allowed

This parameter always applies. The number of times the system attempts to process an object if the first attempt is not successful. By default, the number is zero.

Retry interval in seconds

This parameter always applies. The period, in seconds, that the system waits before it attempts to process the object again if the first attempt is unsuccessful.

Schedule an Object

To schedule an object

1. In the Folders management area of the CMC, select an object.

Note: To change the default schedule settings for the object, click Default Settings when you open the Schedule dialog. Set the scheduling settings and click Save.

2. Click Actions, Schedule.

The Schedule dialog displays, showing the default settings for the object.

3. Enter an appropriate instance title.

4. Click Recurrence and select the recurrence pattern you want.

For example, select Weekly.

5. Specify the Run option and parameters that you want.

For example, select Weekly and then specify Monday, Wednesday, and Friday.

6. Set any of the other schedule options and parameters as required.

7. Click Schedule.

The system creates a scheduled instance and runs it according to the schedule information you specified. You can view the scheduled instance on the History page for the object.

Schedule Objects Using Object Packages

You can schedule objects in batches using the object packages feature. Object packages are distinct objects in BusinessObjects Enterprise. They can contain any combination of objects that can be scheduled, such as reports, program objects, and Web Intelligence documents. Using object packages simplifies authentication, and allows users to view synchronized data across instances for different objects.

To schedule objects using object packages, first create an object package. Then copy existing objects into the object package. Finally, schedule the object package as you would any object. Alternatively, you can add objects to an object package using the Import Wizard.

Note: You must configure the processing information of each of the components of an object package individually. For example, if you want a report object in an object package to print when scheduled, you must configure it by clicking Components in the Schedule dialog and clicking the title of the component you want to print. You can then expand Print Settings for the component and set it to print as you would when scheduling the component on its own.

Schedule an Object with Events

When you schedule an object with events, the object is run only when the additional condition (that is, the event) occurs. You can schedule objects to wait for any or all of the three event types: file-based, custom, and schedule-based. If you want a scheduled object to trigger an event, you must choose a schedule-based event.

Note: A file-based event is triggered upon the existence of a specified file. A custom event is triggered manually. A schedule-based event is triggered by another object being run.

Scheduling objects based on an event

When you schedule an object that waits for a specified event, the object runs only when the event is triggered, and only when the rest of the schedule conditions are met. If the event is triggered before the start date of the object, the object does not run. If you have specified an end date for this object, and if the event is not triggered before the end date occurs, the object does not run because not all of the conditions have been met. Also, if you choose a weekly, monthly, or calendar schedule, the object will have a specified time frame in which it can be processed. The event must be triggered within this specified time for the object to run. For example, if you schedule a weekly report object that runs every Tuesday, the event must be triggered before the end date of the instance (the end of Monday, in this example).

Scheduling objects to trigger an event

You can also schedule an object which triggers a schedule-based event upon completion of the object being run. When the object is run, BusinessObjects Enterprise triggers the specified event. For a schedule-based event, if the event is based on the instance being run successfully, for example, the event is not triggered if the instance fails.

Note: To schedule an object with events, you must first ensure that you have created the event.

Schedule an Object to Run Based on Events

To schedule an object to run based on events

1. In the Folders management area of the CMC, select an object.
2. Click Actions, Schedule.
3. From the Run object list on the left of the page, select a recurrence pattern: Once, Daily, Weekly, Monthly, or by Calendar.
4. Select a run option.
5. Select and complete the schedule parameters for your object (scheduling option, Start Date, End Date, and so on).
6. Click Events, select from the list of Available Events, and click > to add the event(s) to the list of Events to wait for.
Note: Click >> to add all the available events.
7. Click the Schedule button to schedule the object.

Schedule an Object to Trigger an Event

To schedule an object to trigger an event

1. In the Folders management area of the CMC, select an object.
2. Click Actions, Schedule.
3. From the Run object list on the left of the page, select a recurrence pattern: Once, Daily, Weekly, Monthly, or by Calendar.
4. Select and complete the schedule parameters for your object (scheduling option, Start Date, End Date, and so on).
5. In the Events area, select from the list of Available Schedule Events, then click > to add the events(s) to the list of Events to trigger on completion.
Notes:
You can only select schedule-based events in this list.
Click >> to add all the available events.
6. Click the Schedule button to schedule the object.

Set General Scheduling Options

BusinessObjects Enterprise allows you to control the process and schedule settings for an object.

Set Notification for the Success or Failure of a Scheduling Job

You can set scheduling options that automatically send notification when an object instance succeeds or fails. You can send notification using audit or email notification. You can also combine multiple notification methods, and provide different notification settings for successful and failed instances.

For example, you may have a large number of reports that run every day. You need to check each instance to ensure that it ran properly, and then send out emails to the users who must know that the new report is available. With thousands of reports, it would take too much time to manually check the reports and contact the users who need the information. Using notification settings in BusinessObjects Enterprise, you can set each object to notify you automatically when the report fails to run properly, and you can automatically inform users when new report instances run successfully.

Determine the Success or Failure of a Scheduling Job

When you schedule an object, the scheduled instance either succeeds or fails. The conditions required for an instance's success or failure depend on the type of object you schedule:

- Report objects and Web Intelligence document objects
A report instance or document object instance runs successfully if it does not encounter any errors while processing the object or accessing the database. An instance may fail if the user does not provide the correct parameters or log in information.
- Program objects
For program objects, the program must run in order to succeed. If the program does not run, the instance is considered a failure. If the program runs, but does not perform the tasks it is supposed to, it is still considered a successful instance because the program object ran. BusinessObjects Enterprise does not monitor problems with the program object's code.

About Notification

You can set notification at the object level. You can select unique notification options for each object, sending different types of notification for different conditions. For object packages, you can set only event notification, which will trigger an event based on success or failure of the object package. To monitor object successes and failures from a more general perspective, use the auditing functionality within BusinessObjects Enterprise.

If notification fails, then the object instance fails. For example, if an email notification sends a message to an invalid email address, then the notification fails and the object instance is recorded as a failure in the object's history.

You can choose to notify using:

Audit notification

To use audit notification, you must configure the auditing database and enable auditing for the servers. If you use auditing to monitor your BusinessObjects Enterprise system, you can use audit notification. For more information about configuring the auditing database and enabling auditing, see the *BusinessObjects Enterprise Administrator's Guide*

(http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

When you select audit notification, information about the scheduled object is written to the auditing database. You can choose to have a notification sent to the auditing database when the job runs successfully, when it fails to run, or both.

Email notification

You can send an email as a notification of an object instance's success or failure. You can choose the sender and recipients of the email message. You can send an email when the instance fails and when it succeeds. For example, you could send your administrator an email if the report fails, but when the report succeeds you can automatically send a notification to everyone who needs the report to let them know it is now available.

Notes:

- To enable email notification, you must have the Email SMTP destination enabled and configured on the job servers.
- Notification of a scheduled object's success or failure is not the same as alert notification. Alert notification must be built into the design of the report. For example, alert notification can send an email to you whenever a specific value in the report exceeds \$1,000,000. In this case, the notification has nothing to do with the contents of the report — it is just about whether or not the report object instance has failed or succeeded.

Set the Notification for an Instance's Success or Failure

To set notification for an instance success or failure

1. Select an object in the Folders management area of the CMC.
2. Click Actions, Schedule.
3. On the navigation list, expand Notification.
4. Click the notification type (or types) you want to use.

Note: If the notification type is already being used, it will be labeled Enabled. If not, it will be labeled Not in use.

5. Choose specific settings for the notification and click Update.

Audit

To send a record to the auditing database when the job succeeds, select A job has been run successfully.

To send a record when the job fails, select A job has failed to run.

Email

Choose whether you want to send a notification when the job fails or when it succeeds.

To specify the contents and recipients of the email notification, expand the notification option(s) you have enabled, select Set the values to be used here, and provide the From and To email addresses, the email subject line, and the message.

Note: Separate multiple addresses or distribution lists by using semicolons.

Note: By default, the notification is sent to the server's default email destination.

Specify Alert Notification

Note: This feature does not apply to Web Intelligence document objects.

Alerts are custom messages, created in Crystal Reports, that appear when certain conditions are met by data in a report. Alerts may indicate actions to be taken by the user or information about report data. If the alert condition (as defined in Crystal Reports) is true, the alert is triggered and its message displays.

In BusinessObjects Enterprise, you can choose to send alert notification when scheduling a report. If you enable alert notification, messages are sent through an SMTP server. You can configure email delivery options, specify the To, Cc, and From fields for the email, add subject and message information, set a URL for the viewer you want the email recipient to use, and set the maximum number of alert records to send.

Notes:

- The Alert Notification link is available only if the report object contains alerts.
- Alerts are triggered in the report object even if you disable alert notification.
- To enable alert notification, you must have the Email SMTP destination enabled and configured on the job servers.

Set Alert Notification

To set alert notification

1. In the Folders management area of the CMC, select a report object.
2. Click Actions, Schedule.
3. On the navigation list, click Alert Notification.
4. Select the Enable alert notification check box if you want to send an alert notification.
5. Select either Use default settings or Custom settings.

If you select the first option, BusinessObjects Enterprise will deliver the alert notification using the Job Server's default settings. You can change these settings in the Servers management area.

If you select the second option, you can specify the email settings in the software.

6. Enter the URL for the viewer in which you want the email recipient to view the report. Alternatively, you can select the default viewer by clicking Use default.

The viewer URL displays in the hyperlink that is sent in the alert notification email. You can set the default URL by selecting the CMC application in the Applications management area of the CMC and clicking Manage and Properties.

Note: You must use World Wide Web Consortium (W3C) URL encoding when typing the viewer URL. For example, replace spaces in the path with %20. For more information, see <http://www.w3.org/>.

7. Enter the maximum number of alert records to be included in the alert notification.

The hyperlink in the alert notification displays a report page that contains the records that triggered the alert. Use this field to limit the number of records displayed.

Note: The Alert Name and Status fields are set in Crystal Reports.

8. When you have finished setting all your scheduling options, click Schedule.

Select a Destination

Using BusinessObjects Enterprise, you can configure an object or instance or output to a destination other than the default Output File Repository Server (FRS). When the system runs an object, it always stores the output instance on the Output FRS. Being able to choose an additional destination gives you the flexibility to deliver instances across your enterprise system or to destinations outside your enterprise system.

For example, you can set an object to have its output automatically delivered by email to other users.

Note: You can also configure object instances to be printed after they have been run.

When you specify a destination other than Default, BusinessObjects Enterprise generates a unique name for the output file or files. To generate a file name, you can use a combination of ID, name or title of the object, owner information, or the date and time information. The available destinations are file locations, FTP, email, and BusinessObjects Enterprise inboxes.

The following destinations are available:

- Default destination location
- File Location
- FTP Location
- Email
- Inbox

Note: You can change the destination setting for an object or instance either in the CMC or in InfoView. When you specify the destination settings through the CMC, these settings are also reflected in the default scheduling settings for InfoView.

Default Destination Support

By default, object instances are saved to the Output File Repository Server (FRS). If you want to save instances to the FRS only and not to any other destinations, select that option.

Set Your Destination to Default

To set your destination to default

1. In the Folders management area of the CMC, select an object.
2. Click Actions, Schedule and access the Destination page.
 - If you are scheduling a Crystal Report or object package, click Destination.
 - If you are scheduling a Web Intelligence document, click Formats and Destinations.
3. Ensure that Default Enterprise Location is set as the destination.
 - If you are scheduling a Crystal Report or object package, select Default Enterprise Location from the Destination list.
 - If you are scheduling a Web Intelligence document, ensure that no check boxes are selected under Output Format Details.
4. Set the rest of your scheduling options and click Schedule.

Unmanaged Disk Destination Support

When scheduling objects, you can configure the objects for output to an unmanaged disk. In that case, the system saves an output instance to both the Output File Repository Server and the specified destination.

If the object is a Web Intelligence document or an object package, you cannot specify Unmanaged Disk as a destination. However, for an object package you can configure the individual objects in the object package for output to Unmanaged Disk.

Notes:

- To use a destination, you must have the destination enabled and configured on the job servers.
- The location must be a local or mapped directory on the processing server. For servers using Windows, the location can also be a Universal Naming Convention (UNC) path.
- The processing server must have sufficient rights to the specified location.

Set Your Destination to File Location

To set your destination to file location

1. In the Folders management area of the CMC, select an object.
2. Click Actions, Schedule and access the Destination page.
 - If you are scheduling a Crystal Report or object package, click Destination.
 - If you are scheduling a Web Intelligence document, click Formats and Destinations.
3. Select File location as the destination.
 - If you are scheduling a Crystal Report or object package, select File Location from the Destination list.
 - If you are scheduling a Web Intelligence document, select File Location under Output Format Details, then click Destination Options and Settings.
4. If you are scheduling a Web Intelligence document, select or deselect Use the Job Server's defaults.

Notes:

- You can change the default Job Server settings in the Servers management area of the CMC.
- You can specify a user name and password only for servers using Windows.

5. Choose whether to enable instance cleanup.
 - If you are scheduling a Web Intelligence document, select or deselect the Clean up instance after scheduling option.
 - If you are scheduling another type of object, select or deselect Keep an instance in the history.

When that option is selected, the system automatically deletes the report or program instance from the Output File Repository Server to keep the number of instances on the server to a minimum.

Note: These instances are needed for auditing the event, so this setting is overruled if auditing is activated for the scheduled object.

6. Set other scheduling options as needed.
7. Click Schedule.

The following identify the file name properties and user information you can set to be used at schedule time.

Destination directory

Enter a local location, mapped location, or a UNC path. If you are scheduling a Web Intelligence document and would like to create folders based on variables (such as the Title of the instance, the owner, date and time, or users names), you can insert a variable by selecting it from the list. The variable is inserted at the end of the text in the text box.

File Name

To let BusinessObjects Enterprise generate a file name, select Automatically generated.

To choose a file name, select Specific name and enter the name you want to use. If you are scheduling a Web Intelligence document, you can include the same variables in the file name as you could in the destination directory. If you would like to add the file extension to your indicated file name, ensure that Add file extension is selected.

User Name

Specify a user who has permission to write files to the destination directory.

Password

Enter the password for the user.

FTP Support

When scheduling objects, you can configure the objects for output to a File Transfer Protocol (FTP) server. To connect to the FTP server, you must specify a user who has the necessary rights to upload files to the server. If you specify an FTP destination, the system will save an output instance to both the Output File Repository Server and the specified destination.

Note: To use a destination, you must have the destination enabled and configured on the job servers.

Set an FTP Server as the Destination

To set an FTP server as the destination

1. In the Folders management area of the CMC, select an object.
2. Click Actions, Schedule, and access the Destination page.
 - If you are scheduling a Crystal Report or object package, click Destination.
 - If you are scheduling a Web Intelligence document, click Formats and Destinations.
3. Select FTP Server as the destination.
 - If you are scheduling a Crystal Report or object package, select FTP Server from the Destination list.
 - If you are scheduling a Web Intelligence document, select FTP Server under Output Format Details and then click Destination Options and Settings.
4. If you are scheduling a Web Intelligence document, select or deselect Use the Job Server's defaults.

If you select this option, BusinessObjects Enterprise will schedule an object using the Job Server's default settings. You can change these settings in the Servers management area.

If you deselect this option, you can set the FTP and file name properties:

Host

Enter the FTP host information.

Port

Enter the FTP port number (the default is 21).

User Name

Specify a user who has the necessary rights to upload an object to the FTP server.

Password

Enter the user's password.

Account

Enter the FTP account information, if required. Account is part of the standard FTP protocol, but it is rarely implemented. Provide the appropriate account only if your FTP server requires it.

Directory

Enter the FTP directory that you want the object to be saved to. To add a variable, choose a placeholder for a variable property from the list.

File Name

To let BusinessObjects Enterprise generate a random file name, select Automatically generated. To enter a file name, select Specific name. You can also add a variable to the file name by choosing a placeholder for a variable property from the list. If you would like to include the file extension, ensure that you select Add file extension.

5. Choose whether to enable instance cleanup.
 - If you are scheduling a Web Intelligence document, select or deselect the Clean up instance after scheduling option.
 - If you are scheduling another type of object, select or deselect Keep an instance in the history.

When that option is selected, the system automatically deletes the report or program instance from the Output File Repository Server to keep the number of instances on the server to a minimum.

6. Set your other scheduling options, then click Schedule.

Email (SMTP) Support

With Simple Mail Transfer Protocol (SMTP) mail support, you can choose to send the instances of an object, for example, a report instance, to one or more email destinations. After it has run the object, the system sends a copy of the output instance as an attachment to the email addresses you specified.

When you select the Email (SMTP) destination, the system saves the instance to the Output File Repository Server and emails it to the specified destinations. BusinessObjects Enterprise supports Multipurpose Internet Mail Extensions (MIME) encoding.

Note: A mail daemon must be set up prior to utilizing email as a destination for scheduled reports, or any other pertinent information. To use a destination, you must have the destination enabled and configured on the job servers.

Schedule an Object to an Email Destination

To schedule an object to an email destination

1. In the Folders management area of the CMC, select an object.
2. Click Actions, Schedule and access the Destination page.
 - If you are scheduling a Crystal Report or object package, click Destination.
 - If you are scheduling a Web Intelligence document, click Formats and Destinations.
3. Select Email Recipients as the destination.
 - If you are scheduling a Crystal Report or object package, select Email Recipients from the Destination list.
 - If you are scheduling a Web Intelligence document, select Email Recipients under Output Format Details and then click Destination Options and Settings.
4. If you are scheduling a Web Intelligence document, select or deselect Use the Job Server's defaults.

If you select this option, BusinessObjects Enterprise will schedule an object using the Job Server's default settings. You can change these settings in the Servers management area.

If you deselect this option, you can specify the email settings and the file name properties.

Email settings for scheduled objects are as follows:

From

Enter a return address.

To

Enter an address to which you want the object to be sent. If you want to send the object to multiple addresses, use semicolons to separate them.

Cc

Enter an address to which you want to send a copy of the object. If you want to send the object to multiple addresses, use semicolons to separate them.

Subject

Complete the Subject field. You can choose variables to include in the Subject field by choosing them from the list beside the text box.

Message

Enter a short message, if required. You can choose variables to include in the message by choosing them from the list beside the text box.

Attach object instance to email message

Select this check box if you want a copy of the instance attached to the email.

Default File Name (randomly generated)

Select this option if you want BusinessObjects Enterprise to generate a random file name.

Specified File Name

Select this option if you want to enter a file name. You can choose variables to include in the Specified File Name field by choosing them from the list beside the text box. If you would like to add the file extension, ensure that Add file extension is selected.

5. Choose whether to enable instance cleanup.
 - If you are scheduling a Web Intelligence document, select or deselect the Clean up instance after scheduling option.
 - If you are scheduling another type of object, select or deselect Keep an instance in the history.

When that option is selected, the system automatically deletes the report or program instance from the Output File Repository Server to keep the number of instances on the server to a minimum.

6. Set your other scheduling options, then click Schedule.

Inbox Support

When scheduling objects, you can configure objects for output to the inboxes of users. In this case, the system saves the instance to both the Output File Repository Server and the inboxes you specified. Instead of sending the actual file to the inboxes, you can choose to send a shortcut.

Note: To use a destination, you must have the destination enabled and configured on the job servers.

Schedule an Object to an Inbox Destination**To schedule an object to an inbox destination**

1. In the Folders management area of the CMC, select an object.
2. Click Actions, Schedule and access the Destination page.
 - If you are scheduling a Crystal Report or object package, click Destination.
 - If you are scheduling a Web Intelligence document, click Formats and Destinations.
3. Destination:
 - If you are scheduling a Crystal Report or object package, select Business Objects Inbox from the drop-down menu.
 - If you are scheduling a Web Intelligence document, click Inbox under Output Format Details and then click Destination Options and Settings.

4. Choose whether to enable instance cleanup.
 - If you are scheduling a Web Intelligence document, select or deselect the Clean up instance after scheduling option.
 - If you are scheduling another type of object, select or deselect Keep an instance in the history.

When that option is selected, the system automatically deletes the report or program instance from the Output File Repository Server to keep the number of instances on the server to a minimum.

5. If you are scheduling a Web Intelligence document, select or deselect Use the Job Server's defaults.

If you select this option, BusinessObjects Enterprise will schedule an object using the Job Server's default settings. You can change these settings in the Servers management area.

6. If you did not select Use the Job Server's defaults, set the following parameters; otherwise, skip this step.

- a. Navigate to and select the users or groups from the Available Recipients panel and click > to add them to the Selected Recipients.

Note: You can click >> to add all the available recipients, and < or << to remove the selected or all recipients.

- b. To let BusinessObjects Enterprise to generate a name for the instance file, select Automatically generated.

To choose a name, select Specific name and enter the name in the text box. To include variables, select them from the list beside the box.

- c. To send a shortcut to the instance, select Shortcut. If you would like to send a copy of the instance, select Copy.

7. Set your other scheduling options and click Schedule.

Choose a Format

You can select the format that the document or report instance is saved in when it is generated. This format is saved to the destination you have selected. You can select from the following formats:

Web Intelligence

- Web Intelligence
- Microsoft Excel
- Adobe Acrobat
- Plain text
- Rich text

Crystal Reports

- Crystal Reports
- Microsoft Excel
- Microsoft Excel (Data Only)
- Microsoft Word (RTF)
- PDF
- Rich Text
- Microsoft Word - Editable (RTF)
- Plain Text
- Paginated Text
- Tab-separated Text
- Separated Values
- XML

Notes:

- The difference between Excel and Excel (Data only) is that Excel attempts to preserve the look and feel of your original report, while Excel (Data only) saves only the data, with each cell representing a field.
- The Tab-separated Values format places a tab character between values; the Separated Values format places a specified character between values.
- If you choose to print the report when it is scheduled (by checking the Print in Crystal Reports format using the selected printer when scheduling check box on the Print Setup page), the report instance is automatically sent to the printer in Crystal Reports format. This does not conflict with the format you select when scheduling the report.
- For Excel, Paginated Text, Tab-separated Values, and Character-separated Values, you specify certain formatting properties for the report. For example, if you select Character-separated Values, you can enter characters for the separator and delimiter; you can also select the two check boxes: Same number formats as in report and Same date formats as in report.

Select a Format for the Report

To select a format for the report

1. In the Folders management area of the CMC, select a report object.
2. Click Actions, Schedule and access the Format page.
 - If you are scheduling a Crystal Report, click Format.
 - If you are scheduling a Web Intelligence document, click Formats and Destinations.
3. Select the appropriate format.
 - If you are scheduling a Crystal Report, choose the format from the list and click Switch. Some Crystal Reports formats have other parameters that you can set when you schedule them.
 - If you are scheduling a Web Intelligence document, select your preferred format under Output Format.
4. Set the rest of your scheduling options, then click Schedule.

Additional Formatting Options for Crystal Reports

When you schedule a Crystal Report to some formats, you may be required to set additional options. The following sections detail the additional options for each format to which they apply.

Microsoft Excel

Use the export options defined in the report

To use the export options already defined in the report, select this option. You cannot set any of the other additional formatting options.

Set Column Width

To set the widths of Excel columns based on objects in the report, select Column width based on objects in the report and choose a report area from which to take the column widths.

To set a constant column width, select Constant column width (in points) and type the width.

Export page header and page footer

To include the page headers and footers in your instance, choose whether you would like to export them Once Per Report, or On Each Page.

To exclude the page headers and footers from your instance, choose None.

Create page breaks for each page

Select this option to create page breaks.

Convert date values to strings

Select this option to export date values as text strings.

Show gridlines

Select this option to see gridlines in your exported document.

Page range

To include all pages of the report, select All.

To include a page range, select from: and type the first page you want to include, and type the last page you want to include in the to: field.

Microsoft Excel (97-2003) (Data Only)

Use the export options defined in the report

To use the export options already defined in the report, select this option. You cannot set any of the other additional formatting options.

Set Column Width

To set the widths of Excel columns based on objects in the report, select Column with based on objects in the report and choose a report area from which to take the column widths.

To set a constant column width, select Constant column width (in points) and type the width.

Export object formatting

Select this option if you want to preserve the object formatting.

Export images

Select this option to export the images in your report.

Use worksheet functions for summaries

Select this option to use summaries in the report to create worksheet functions in Excel.

Maintain relative object position

Select this option to maintain the positioning of objects relative to one another.

Maintain column alignment

Select this option to preserve the alignment of text within columns of your report.

Export page header and page footer

Select this option to include the header and footer in your instance.

Simplify page headers

Select this option to simplify page headers.

Show group outlines

Select this option to show group outlines.

Microsoft Word

Page Range

To include all pages of the report, select All.

To include a page range, select from: and enter the first page you want to include. Enter the last page you want to include in the to: field.

PDF

Use the export options defined in the report

To use the export options already defined in the report, select this option. You are not able to set any of the other additional formatting options.

Page Range

To include all pages of the report, select All.

To include a page range, select from: and enter the first page you want to include. Enter the last page you want to include in the to: field.

Create bookmarks from group tree

Select this option to create bookmarks in your PDF file based on the tree structure of the report. This makes the report easier to navigate.

Page Range

To include all pages of the report, select All.

To include a page range, select from: and enter the first page you want to include. Enter the last page you want to include in the to: field.

Microsoft Word - Editable (RTF)

Use the export options defined in the report

To use the export options already defined in the report, select this option. You cannot set any of the other additional formatting options.

Page Range

To include all pages of the report, select All.

To include a page range, select from: and enter the first page you want to include. Enter the last page you want to include in the to: field.

Insert page break after each report page

Select this option to insert page breaks in your RTF file after each page of the report.

Plain Text

Number of characters per inch

Enter a value between 8 and 16 for the number of characters to include per inch. This setting controls how the text file displays and is formatted.

Paginated Text

Use the export options defined in the report

To use the export options already defined in the report, select this option. You cannot set any of the other additional formatting options.

Number of lines per page

Enter the number of lines of text to include between page breaks.

Number of characters per inch

Enter a value between 8 and 16 for the number of characters to include per inch. This setting controls how the text file displays and is formatted.

Separated Values (CSV)

Use the export options defined in the report

To use the export options already defined in the report, select this option. You cannot set any of the other additional formatting options.

Delimiter

Enter the character you want to use as the delimiter.

Separator

Enter a character to use to separate values, or select Tab.

Mode

Select either standard or legacy mode. In standard mode, you can choose report, page, and group sections to include in your instance. In legacy mode, you cannot set those options.

Report and page sections

If you selected standard mode, indicate whether you want to export report and page sections, and if so, whether or not you want to isolate them.

Group sections

If you selected standard mode, indicate whether you want to export group sections, and if so, whether or not you want to isolate them.

XML

XML Exporting formats

Select the XML exporting format you want to use.

Select Cache Options for Web Intelligence Documents

When the system runs a scheduled Web Intelligence document, it stores the instance it generates on the Output File Repository Server. In addition, you can choose to have the system cache the report on the appropriate Report Server by selecting a cache format for the document. If you do not select a cache format, then the system will not cache the document when it runs the document.

Notes:

- Desktop Intelligence is not supported by CA. Web Intelligence and Crystal Reports are the only analytic tools that are supported to create CA reports.
- To select a cache option, the output format you specified for the object must be Web Intelligence. If you select a different format, the cache options you specify will have no effect.

To select cache options for Web Intelligence documents

1. In the Folders management area of the CMC, select a Web Intelligence object.
2. Click Actions, Schedule and click Caching.
3. Select the format you want to preload the cache with.

4. Select the locale(s) with which to preload the cache if you are scheduling a Web Intelligence document.

When you schedule the Web Intelligence document, BusinessObjects Enterprise generates cached versions of the document in the locale(s) that you specify.

5. Set the rest of your scheduling options and click Schedule.

Schedule an Object for a User or Group

The Schedule For feature allows you to generate reports that contain data for specific users only. It is intended to be used for Web Intelligence documents that use Universes.

Using the Schedule For feature you can schedule an object and specify for which users you want the system to run the object. The system runs the object and generate multiple instances of the report or document. Each instance contains data that is relevant to the individual user only.

For example, you can schedule a sales report and on the Schedule For page you can specify the user names of all of your sales representatives. At the specified time, the system runs the report object and generates the individual report instances. Each instance would contain sales information for the individual sales representative only.

Change the Schedule For Settings for an Object

To change the schedule for object settings

1. In the Folders management area of the CMC, select a report object.
2. Click Actions, Schedule.
3. On the navigation list, click Schedule For.
4. Select who you want to schedule the object for.
 - Schedule only for myself
 - Schedule for specified users and user groups
5. If you selected Schedule for specified users and user groups, navigate to and select the users and groups you would like to schedule for and click > to add them to the Selected list.

Note: To remove users or groups from Selected list, select them and click <.

6. Set the rest of your scheduling options and click Schedule.

Select Server Group Settings

You can indicate a specific server on which scheduling runs. This gives you more control over load balancing; for instance, you may wish to run program jobs on a specific server group so that they do not monopolize system resources.

You can also choose a server group for BusinessObjects Enterprise to use when a user refreshes a Crystal Report or Web Intelligence instance while viewing it. These settings are accessed from the Schedule or Default Settings dialogs. For Crystal Reports, click Viewing Server Group. For Web Intelligence documents, click Webi Process Settings.

Select a Server for Your Scheduling Job

To select a server for your scheduling job

1. In the Folders management area of the CMC, select the object you want to schedule.
2. Click Actions, Schedule.
3. On the navigation list, click Scheduling Server Group.
4. Select the appropriate option:
 - Choose Use the first available server to run the object as quickly as possible, regardless of server groups.
 - Choose Give preference to servers belonging to selected group if you want to use a specific server group over another in the event that both are available.
 - Choose Only use servers belonging to the selected group to ensure that the job runs on the specified server group.

Note: If you are scheduling a program object that requires access to files stored locally on a Program Job Server, but you have multiple Program Job Servers, you must specify which server to use to run the program.

5. Select or deselect Run at origin site to run the object where it is located.
6. Set the rest of your scheduling options, then click Schedule.

Manage Events

Event-based scheduling provides you with additional control over scheduling objects: you can set up events so that objects are processed only after a specified event occurs. Working with events consists of two steps:

- Creating an event
- Scheduling an object with events

Once you create an event, you can select it as a dependency when you schedule an object. The scheduled job is then processed only when the event occurs.

For more information, see the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

Run Objects Now

You can run objects in bulk from the Folders management area of the CMC using Run Now. When you run objects now, they are automatically scheduled to run right away using their default scheduling settings.

To run objects now

1. Go to the Folders management area of the CMC.
2. Navigate to the object(s) that you want run and select them.
3. Click Actions and Run Now.

Chapter 13: Language Packs

A language pack is a resource package that gives a BusinessObjects Enterprise system the ability to interact with users in a specific language. An individual language is known as a locale.

You can install as many different language packs as you want. The default language pack, English, is always installed.

This section contains the following topics:

[English Language Fall-Back](#) (see page 261)

[Product Locale Changes](#) (see page 261)

[Install Language Packs with Complex Deployments](#) (see page 261)

[Install Language Packs](#) (see page 262)

[Select a Language](#) (see page 267)

[Uninstall Language Packs](#) (see page 268)

English Language Fall-Back

In the event of a localization error, such as a missing, corrupted, or uninstalled language pack, BusinessObjects Enterprise products fall back to using the default English language. If a preferred language has not been set in the Product Locale drop-down, BusinessObjects Enterprise defaults to using the locale of the installed operating system. If a language pack corresponding to the locale of the operating system is not found, the default English is used.

Product Locale Changes

Product Locale changes are immediately reflected in the current product's interface, reports, and help. Where multiple client applications are installed, the selected Product Locale is only displayed when client is next started.

For example, setting the Crystal Report Designer product locale to Japanese causes the Business Intelligence Modeler client to also display in Japanese. However, if the Business Intelligence Modeler is running at the time of the change, it must be restarted in order for the change to take effect.

Install Language Packs with Complex Deployments

If your organization uses a BusinessObjects Enterprise deployment with more than one server, you must deploy language packs to each server individually.

Install Language Packs

Language packs can be installed either during the initial installation of BusinessObjects Enterprise, or post-install using a dedicated language pack installer. The installer is a single executable that adds the localized language resources to your Business Objects software deployment. English is the default option during the installation of BusinessObjects Enterprise.

In the event of an operational problem with a language pack, BusinessObjects Enterprise will default back to English localization. Because of this fall-back system, English cannot be deselected as an installable option during the installation of BusinessObjects Enterprise.

Note: An error message displays if a language pack detects that it is incompatible with a previously installed version of BusinessObjects Enterprise.

Locating Language Packs

Windows

Language packs can be found in the langs folder of the BusinessObjects Enterprise for the Windows distribution package.

UNIX

Language packs can be found in the langs folder of the BusinessObjects Enterprise for the UNIX distribution package.

Before You Install Language Packs

Before installing a language pack, your BusinessObjects Enterprise server must be running and patched to the required revision level.

Note: If you are using Tomcat as your web application server, ensure that Tomcat is shut down before installing language packs.

You will be asked for CMS administrator credentials. If any part of your BusinessObjects Enterprise deployment is not patched to the required software version, the language pack installation will abort and must be reapplied after the system has been patched to the correct level. Review the requirements for language packs in the *Supported Platforms* documents on the CA Business Intelligence DVD.

Notes:

- Language packs do not require a keycode.
- All fix packs or other updates to BusinessObjects Enterprise released on a date after the language pack release date must be reapplied to ensure that updated functionality is maintained.
- Language packs must be reinstalled after you have added or removed a component from your BusinessObjects Enterprise deployment.

Windows

To install language packs on Windows

1. Open the CMC and ensure that the server processes are running.
2. Locate the language pack to install under:
CA Business Intelligence Disk1\cabi\package\langs
3. Change the directory to *LANGUAGE*\DISK_1_1, where *LANGUAGE* is language of your preference.
4. Run the setup (msi) file (BusinessObjects_*LANGCODE*.msi), where *LANGCODE* is the two-letter language code of your preference.

The Microsoft Windows installer searches for all installed Business Objects applications.

5. Click Next.
6. Check I accept the License Agreement, and then click Next.
7. Enter values for the CMS, CMS Port, User Name, Password, and Authentication fields.
8. Click Next.
9. Enter values for the Port, Username, Password, Server Instance, and Virtual Host, and Application Server Installation Directory fields. If your web application server uses a password for the administrator account, select the Admin is Secure check box. Click Next.
10. Click Next to begin the installation.

The language pack begins the installation process.

Once the installation is complete, you can choose the installed language from the Options dialog in BusinessObjects Enterprise applications.

UNIX

To install language packs on UNIX

1. Open the CMC and ensure that the server processes are running.
2. Locate the language pack to install under:
Disk1\cabi\Disk1\langs
3. Change the directory to *LANGUAGE/DISK_1_1*, where *LANGUAGE* is language of your preference.
4. Run the `install.sh` script with the first argument set to the location of the BusinessObjects Enterprise installation directory.
5. Press `y` to accept the license agreement.
6. Enter the CMS hostname, port number, and administrator password into the labeled fields and press Enter.
7. Press Enter after you have confirmed the location of the BusinessObjects Enterprise install directory.

Once the installation is complete, you can choose the installed language from the Options dialog in BusinessObjects Enterprise applications.

Install Language Packs Across a BusinessObjects Enterprise Deployment

Windows

You can install language packs with one command by specifying parameters on the command line (a silent installation). When parameters are supplied on the command line the installation does not prompt for information.

The command-line syntax for a silent install is as follows:

```
setup.exe BUSINESS_OBJECTS_HOME_DIR  
INSTALLMODE=silent  
CMSNAMESERVER=CMS_HOSTNAME  
CMSPORTNUMBER=PORT_NUMBER  
CMSPASSWORD=CMS_PASSWORD
```

Replace *BUSINESS_OBJECTS_HOME_DIR* with the full path of your BusinessObjects Enterprise installation.

The other parameters used by setup.exe are as follows:

INSTALLMODE

Switch to enable silent install mode

Extended argument: silent

CMSNAMESERVER

Enter the name of your CMS.

Extended argument: CMS Hostname

CMSPORTNUMBER

CMS port number.

Extended argument: Port number for CMS

CMSPASSWORD

The password for your CMS server.

Extended argument: CMS admin password

For example:

```
setup.exe
"C:\Program Files\Business Objects\BusinessObjects Enterprise 12.0"
INSTALLMODE=silent
CMSNAMESERVER=myserver1
CMSPORTNUMBER=6400
CMSPASSWORD=mypassword
```

To uninstall language packs in silent mode, use the wdeploy undeployall command to remove all web applications, then wdeploy deployall to redeploy web applications without the language packs.

For example, the following command runs undeployall for a WebLogic 10 server:

```
wdeploy.bat weblogic10
-Das_dir=C:\bea\user_projects\domains\base_domain
-Das_admin_port=7001
-Das_instance=AdminServer
-Das_admin_username=weblogic
-Das_admin_password=weblogic
undeployall
```

Followed by:

```
wdeploy.bat weblogic10
-Das_dir=C:\bea\user_projects\domains\base_domain
-Das_admin_port=7001
-Das_instance=AdminServer
-Das_admin_username=weblogic
-Das_admin_password=weblogic
deployall
```

UNIX

You can install language packs with one command by specifying parameters on the command line (a silent installation). When parameters are supplied on the command line the installation does not prompt for information.

The command-line syntax for a silent install is as follows:

```
install.sh BUSINESS_OBJECTS_HOME_DIR
INSTALLMODE=silent,install
CMSNAMESEVER=CMS_HOSTNAME
CMSPORTNUMBER=PORT_NUMBER
CMSPASSWORD=CMS_PASSWORD
```

Replace *BUSINESS_OBJECTS_HOME_DIR* with the full path of your BusinessObjects Enterprise installation.

The parameters used by install.sh are as follows:

INSTALLMODE

Switch to enable silent install mode

Extended argument: silent

CMSNAMESEVER

Enter the name of your CMS computer.

Extended argument: CMS Hostname

CMSPORTNUMBER

CMS port number.

Extended argument: Port number for CMS

CMSPASSWORD

The password for your CMS server.

Extended argument: CMS admin password

You must also specify parameters for your web application server. The specific parameters that you must use depend on the web application server that you use.

For example, on WebLogic 9.2:

```
$ ./install.sh /opt/bobje
INSTALLMODE=silent,install
CMSNAMESEVER=myserver1
CMSPORTNUMBER=6400
CMSPASSWORD=mypassword
AS_SERVER=weblogic9
AS_DIR=/opt/bea/user_projects/domains/base_domain
AS_INSTANCE=AdminServer
AS_ADMIN_PORT=7001
AS_ADMIN_USERNAME=weblogic
AS_ADMIN_PASSWORD=weblogic
```

To uninstall language packs, use the `wdeploy undeployall` command to remove all web applications, then `wdeploy deployall` to redeploy web applications without the language packs.

For example, the following command runs `undeployall` for a WebLogic 10 server:

```
wdeploy.sh weblogic10
-Das_dir=/opt/bea/user_projects/domains/base_domain
-Das_admin_port=7001
-Das_instance=AdminServer
-Das_admin_username=weblogic
-Das_admin_password=weblogic
undeployall
```

Followed by:

```
wdeploy.sh weblogic10
-Das_dir=/opt/bea/user_projects/domains/base_domain
-Das_admin_port=7001
-Das_instance=AdminServer
-Das_admin_username=weblogic
-Das_admin_password=weblogic
deployall
```

Select a Language

Once installed, BusinessObjects Enterprise products detect the existence of the language pack, and users can choose a language from a list of installed languages found in the Product Locale drop-down list of the CMC Preferences section of the CMC Preferences, or under the Options dialog on the toolbar or application menu in other BusinessObjects Enterprise products. Command-line utilities use the `LANG` environment variable to determine which language to use.

Each language listed in the Product Locale drop-down displays in its native localization, rather than the currently employed language. For example, the German language pack is always displayed as Deutsch, rather than as German in English or Allemand in French.

Note: Application shortcut keys are language neutral and do not change, regardless of which language is in use. For example, Ctrl+S is always mapped to the Save command, regardless of the localized name for the Save function.

Uninstall Language Packs

Windows

To uninstall language packs

1. Open the CMS and ensure that all servers are running.
2. In Windows, click Start, Settings, Control Panel.
3. Double-click Add/Remove Programs.
4. Select the BusinessObjects Enterprise Language Pack to remove, then click Remove.

The Add/Remove Programs prompts you to confirm that you want to remove the language pack from your computer.

5. Click Yes.

The appropriate files are removed and the necessary configuration is completed.

6. Click Finish.

The language pack has been uninstalled and you are returned to the Add/Remove Programs list.

UNIX

To uninstall language packs

1. Run the `./AddOrRemoveProcdacts.sh` script.
2. On the Choose Product to Modify screen, select the language pack that you want to uninstall, and press Enter.
3. On the Enter information for existing CMS screen, specify the CMS Hostname, CMS Port, and Existing CMS Administrator Password, then press Enter.
4. Press Enter to confirm the removal of the language pack.

Chapter 14: Client Tools (Windows Only)

BusinessObjects Enterprise client applications are available for installation as a separate installation program. You can use the same stand-alone installer to add client tools and their related components to an existing server installation. Client tools can be installed by selecting the BusinessObjects Enterprise Custom or Expand install option.

The Client Tools installation program enables you to select which client tools to install and to assess disk space costs.

This section contains the following topics:

[Client Components Used by CA Business Intelligence](#) (see page 269)

[Install Client Tools](#) (see page 269)

[Client Tools Silent Installations](#) (see page 272)

Client Components Used by CA Business Intelligence

The client components are rich client tools that provide end users with access to BusinessObjects Enterprise server functions. Client component tools are only available for Windows operating systems, but do connect to servers running non-Windows operating systems.

To install client components on a BusinessObjects Enterprise server system, you must use the BusinessObjects Enterprise setup program Custom or Expand install option. Do not attempt to install client components on a server system by installing the stand-alone client tool installer, which is intended to install on client systems only.

More information:

[Client Components](#) (see page 102)

Install Client Tools

To install Client Tools

1. Run `cabiinstall.exe` from the root directory of your product distribution.
2. Accept the license agreement and continue.
3. Select Y to install samples or N to not install samples, then continue.
4. Select the location to store the response file, or skip the option by choosing N.

5. Click Install to launch the installation program.

Note: If you are installing from a DVD and the Autoplay is enabled for your DVD-ROM drive, the Autorun program will start automatically. The Please Choose Setup Language displays.

6. Select the language for the installation from the pull-down list provided.

You have a choice of the following languages for setup:

- Chinese Simplified
- Chinese Traditional
- Danish
- Dutch
- English
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazil)
- Russian
- Spanish
- Swedish
- Thai

7. Click the Create log file during installation check box if you want to create an installation log file.

The log file is saved under the following directory:

<INSTALLDIR>\BusinessObjects Enterprise 12.0\Logging.

8. Click OK.

The Welcome to the BusinessObjects Enterprise Installation Wizard displays after you specify a language for the installation.

9. Click Next to proceed with the installation.

Note: Click Cancel to abort the installation

If you are installing BusinessObjects Enterprise on Windows XP Service Pack 2 or higher, a message displays. Click OK to continue with the installation.

The License Agreement screen displays.

10. Select I accept the License Agreement and click Next.

The Choose Language Packs screen displays.

11. Select the Language Packs you want to install with the client tools click Next.

The language packs currently available for installation include:

- English
- French
- Japanese
- German
- Spanish
- Italian
- Chinese Simplified
- Chinese Traditional
- Korean
- Dutch
- Swedish
- Portuguese (Brazil)

Note: English is a required language and is automatically selected. Click the All Languages check box to select all the available language packs.

The Directory Selection screen displays.

12. Enter the installation directory for the client tools in Destination Folder or accept the default selection and click Next.

The Select Features screen displays.

13. Click the icon for a feature you want to select or deselect under the BusinessObjects Enterprise Client Tools node. When you have finished making your selections click Next.

You can do any of the following:

- Specify that the selected feature are installed on the local hard drive.
- Specify that the selected feature and its subfeatures are installed on the local hard drive.
- Specify that a selected feature and its subfeatures are not installed.



The feature and only the subfeatures you select are installed on the local hard drive you specified in the Setup program.



The feature and all its subfeatures are installed on the local hard drive you specified earlier.



The feature or subfeature is either unavailable or will not be installed.

- a. Click Disk Cost to calculate if sufficient disk space is available for your selected features.

A separate screen displays indicating storage space available on the local computer and mapped network drives. Drives that do not have enough disk space for the currently selected features are highlighted. Click OK to close to return to the Select Features screen. The Start Installation screen displays.

14. Click Next.

The installation process begins and is complete when the following screen displays:

BusinessObjects Enterprise XI Client Tools have been successfully installed.

15. Click Finish to exit the installation.

Client Tools Silent Installations

Two methods are available for running BusinessObjects Enterprise Client Tools installations directly from the command line:

- Scripted installations
- Silent installations

Both methods can be used to automate installations across multiple computers. The scripted installation method requires that you specify an .ini file. The silent installation allows you to specify parameters for running setup.exe. The same parameters are used for both methods. It is recommended that you use the scripted installation method to run custom installations, so that you avoid having to pass a large number of parameter settings directly through the command line. These installation methods are particularly useful when you need to quickly perform multiple installations. You can also integrate the scripts and commands into your own installation scripts.

Note: If you pass a parameter directly in the command line, the setting will override any setting specified in the .ini file.

Chapter 15: Upgrade from BusinessObjects Enterprise XI Release 2 to BusinessObjects Enterprise XI 3.1 SP5

This chapter helps you in upgrading your Business Intelligence content and system data from versions of BusinessObjects Enterprise XI Release 2 to BusinessObjects Enterprise XI 3.1 SP5.

Before you begin, it is important to understand the difference between upgrading and other software update options such as migration and importing.

- Upgrading consists of replacing components and files from BusinessObjects Enterprise XI Release 2 with components and files from BusinessObjects Enterprise XI 3.1 SP5.
- Importing consists of copying reports, report instances, users, groups, universes, universe connections, and other objects from one BusinessObjects Enterprise deployment to another.

The upgrade options that are available to you depend on your current deployment and your preferred method of updating.

Important! Before you upgrade, be sure to back up your system.

This section contains the following topics:

[Upgrade and Migration Scenarios](#) (see page 276)

[Prepare for Upgrades](#) (see page 276)

[Perform a Simple Upgrade on Windows](#) (see page 278)

[Perform a Simple Upgrade on UNIX](#) (see page 294)

[Perform a Complex Upgrade on Windows](#) (see page 295)

[Perform a Complex Upgrade on UNIX](#) (see page 302)

[Update Imported Events](#) (see page 309)

[Configure the Auditing Database](#) (see page 310)

[Migration of Report Content](#) (see page 310)

Upgrade and Migration Scenarios

You can perform a simple or complex upgrade from BusinessObjects Enterprise XI Release 2 or higher. You can perform these upgrades with both releases of CA Business Intelligence 2.0 and CA Business Intelligence BI 2.1. The following list provides definitions:

- Upgrade—Move from a previous release (for example, XI Release 2) to the current release (for example, XI 3.1 SP5).
- Modify—Update from a previous patch level (for example, XI 3.1 SP3) to the current patch level (for example, XI 3.1 SP5).

Prepare for Upgrades

System Requirements

See the various *Supported Platforms* documents on the CA Business Intelligence DVD for a detailed list of supported environments and hardware requirements. These documents include specific version and patch-level requirements for databases, web application servers, web browsers, and operating systems. However, remember that your CA Technologies product's supported platforms take precedence over BusinessObjects Enterprise supported platforms.

See [Prepare to Install](#) (see page 17) before upgrading to identify the appropriate requirements and preparation necessary for CA Business Intelligence.

User Permissions for Installing BusinessObjects Enterprise

To install BusinessObjects Enterprise on Windows, the user running the setup program must have the permissions listed as follows:

Operating System

Administrative privileges on the local computer.

Network

Network connectivity to all computers in the deployment, as well access to as the appropriate ports on each of the computers.

Database

Rights to create and drop tables, plus rights to read, write, and edit rows. For more information about the database privileges required, see Databases in BusinessObjects Enterprise.

Web application server

Use the same user account for installing both BusinessObjects Enterprise and your web application server, to reduce the likelihood of encountering a problem with access control settings.

Note: The following scenarios are not supported:

- Installation on a domain controller.
- Installation on a Windows computer where the default local Administrator group security settings have been modified.

Choose a Web Application Server

When you install BusinessObjects Enterprise, you can install Tomcat or you can use a pre-existing Java application server that is supported for the release. You can also use Microsoft Internet Information Service (IIS) to host the InfoView. The InfoView can be deployed to IIS 6, or to either the 32-bit and 64-bit versions of IIS 7.

Before selecting a web server to use with BusinessObjects Enterprise, assess your current environment and determine the platform on which to deploy BusinessObjects Enterprise. Determine whether you plan to develop custom applications and, if so, which web development environment to use. If you select a pre-existing web application server, install the server and verify that the server is working before you attempt to install BusinessObjects Enterprise.

BusinessObjects Enterprise XI 3.1 SP5 also includes a Web Application Container Server that can host the CMC. WACS provides an easier way to deploy, configure, and maintain the CMC, and removes the need for Java application server administration skills. You can install WACS using one of the following methods:

- If you are performing a simple upgrade and you decide not to deploy BusinessObjects Enterprise web applications to a Java application server, the installation program automatically creates a WACS server and then adds a CMC service to the server. The CMC is ready to use after you complete the installation.
- If you are performing a complex upgrade on a Windows computer and you select a Custom or Expand install, you can install WACS on the Select Features screen by expanding Server Components and selecting Web Application Container Server.

Important! BusinessObjects Enterprise regulations do not allow you to use the same web application server instance for BusinessObjects Enterprise Release 2 and BusinessObjects Enterprise 3.1 SP5.

CMS Database Requirements and Preparation

See [Central Management Server Database Requirements and Preparation](#) (see page 50) and its subsections to identify the requirements and preparation for the CMS database.

Important! Due to BusinessObjects Enterprise regulations, you must have a different database instance for BusinessObjects Enterprise Release 2 and 3.1 SP5.

Perform a Simple Upgrade on Windows

If the BusinessObjects Enterprise XI 3.1 installation program detects a simple deployment (that is, an entire product line was installed on a single computer), you can perform a simple upgrade to BusinessObjects Enterprise XI 3.1. In a simple upgrade to BusinessObjects Enterprise XI 3.1, the installation program performs the following steps:

- Installs BusinessObjects Enterprise XI 3.1 SP5.
- Points the BusinessObjects Enterprise XI 3.1 Input and Output File Repository Servers (FRS) to the location of the existing BusinessObjects Enterprise XI Release 2 FRSs.
- Creates a BusinessObjects Enterprise XI 3.1 CMS database, and then copies the contents of your existing CMS database to the BusinessObjects Enterprise XI 3.1 database.
- Updates all of the objects in the newly copied CMS database to BusinessObjects Enterprise XI 3.1 objects.
- Stops your existing BusinessObjects Enterprise XI Release 2 CMS database. This means that your existing deployment is not available during the upgrade process, and users cannot access BusinessObjects Enterprise.

If you perform a simple upgrade to BusinessObjects Enterprise XI 3.1, the installation program automatically disables the previous BusinessObjects Enterprise XI system. After the upgrade is complete, the BusinessObjects Enterprise XI 3.1 installation program asks you whether to uninstall the previous system. We recommend that you uninstall the previous version of the system as soon as you verify that BusinessObjects Enterprise XI 3.1 SP5 has been successfully installed. If you uninstall the previous version of BusinessObjects Enterprise later, verify that the previous version servers are not re-enabled and are not restarted. In particular, enabling the older version of the CMS and File Repository Servers conflicts with the BusinessObjects Enterprise XI 3.1 system.

If the installation program does not detect a simple deployment, perform a complex upgrade. This upgrade includes the scenario where your deployment web and application servers are on separate computers.

The BusinessObjects Enterprise XI 3.1 installation program writes the details of your existing deployment to a log file. The name of the file is boe_upgrade_output.xml; the boe_upgrade.xsl file provides formatting when you open boe_upgrade_output.xml. You can use this log file as a reference when you are configuring the servers and server clusters in your BusinessObjects Enterprise XI 3.1 deployment.

More information:

[Log File Location](#) (see page 192)

Run the Installer

To run the CA Business Intelligence installer

1. If you are installing from a DVD and the Windows Autoplay setting is enabled, the installer will start automatically. If Autoplay is not enabled, or you are installing from a hard drive, run setup.exe from the root directory of the CA Business Intelligence DVD.

Note: If CA Business Intelligence detects that BusinessObjects Enterprise XI 3.x is already installed on the computer, an error message displays. Click OK to exit the program. The installer program does not continue if it finds a preexisting version of BusinessObjects Enterprise XI 3.x.

The CA Technologies License Agreement displays.

2. Accept the CA Technologies license agreement, then click Next.
3. Click Y to install samples or N not to on the Sample Database and Templates screen.
4. Click Install to proceed with the upgrade.

Note: If you are installing BusinessObjects Enterprise on Windows XP Service Pack 2 or higher, an Internet Connection Firewall warning message displays. Click OK to continue.

The BusinessObjects Enterprise License Agreement displays.

5. Review the agreement.
6. Select I accept the License Agreement and click Next.

The Language Packs screen displays.

Install Language Packs

You can choose to install specific or all available language packs. These languages can be used by administrators and users in BusinessObjects Enterprise products.

Note: English is mandatory because it is used as a back-up language if a problem with a language pack is detected. English cannot be deselected.

1. Select the language packs you want to install.

The language packs currently available for installation include:

- Chinese Simplified
- Chinese Traditional
- Danish
- Dutch
- English
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazil)
- Russian
- Spanish
- Swedish
- Thai

Note: You can also add language packs after installing BusinessObjects Enterprise.

2. Click Next.

The Install Type screen displays.

Select a Simple Upgrade

If the CA Business Intelligence installer detects a version of BusinessObjects Enterprise XI Release 2 on the computer where you are installing XI 3.1, the BusinessObjects Enterprise Upgrade screen displays.

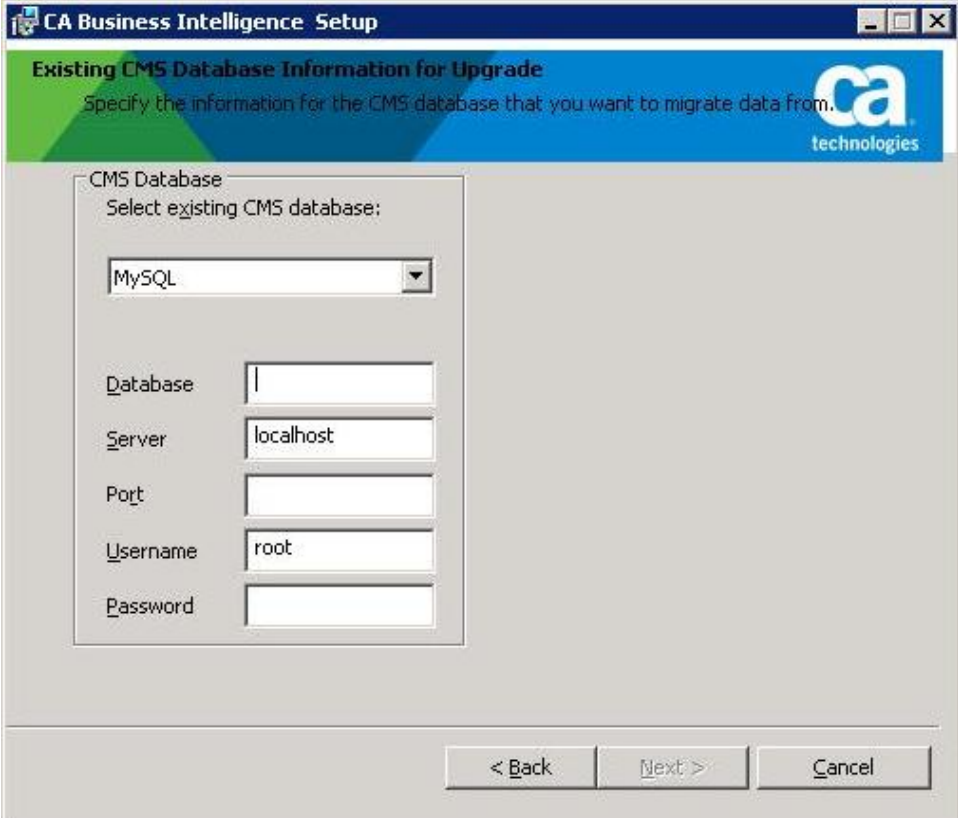
To select a simple upgrade

1. Select whether you want to perform an upgrade or not.
 - If you want to perform an upgrade, select Yes, perform an upgrade installation.
If you perform a simple upgrade, the installation program performs the following steps:
 - Installs BusinessObjects Enterprise XI 3.1 SP5.
 - Points the BusinessObjects Enterprise XI 3.1 Input and Output File Repository Servers (FRS) to the location of the existing BusinessObjects Enterprise XI Release 2 FRSs.
 - Creates a BusinessObjects Enterprise XI 3.1 CMS database, and then copies the contents of your existing CMS database to the BusinessObjects Enterprise XI 3.1 database.
 - Updates all of the objects in the newly copied CMS database to BusinessObjects Enterprise XI 3.1 objects.
 - Disables the existing BusinessObjects Enterprise XI Release 2 system.
 - If you want to perform a side-by-side deployment or a deployment that is distributed across multiple servers, select No, do not perform an upgrade installation. On a later screen, you can specify to perform a New, Custom, or Web Tier installation.
2. Click Next to continue.

The Existing CMS Database Information for Upgrade screen displays.

Specify the Existing CMS Database

The Existing CMS Database Information for Upgrade page allows you to specify the existing CMS database that you want to copy the data from.



The screenshot shows a Windows dialog box titled "CA Business Intelligence Setup". The main heading is "Existing CMS Database Information for Upgrade" with a sub-instruction: "Specify the information for the CMS database that you want to migrate data from." The CA Technologies logo is in the top right corner. The dialog contains a "CMS Database" section with the instruction "Select existing CMS database:". Below this is a dropdown menu currently set to "MySQL". Further down are several text input fields: "Database" (empty), "Server" (containing "localhost"), "Port" (empty), "Username" (containing "root"), and "Password" (empty). At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

Important! The information that you enter on this page is not verified by the BusinessObjects Enterprise installer. Incorrect information can lead to upgrade failure. Take extreme care to verify that the values entered on this screen are correct.

To specify the existing database

1. From the Select existing CMS database list, select the database type of your existing CMS database.
2. Enter the necessary information, depending on the type of your existing database.

If you are copying data from the following databases:

SQL Server:

- a. From the CMS Database list, select SQL Server (ODBC).
- b. Click the Browse tab.
- c. Select the Data Source Name.
- d. Enter the Login ID and Password for the database, select the database, then click Next.

Oracle:

- a. From the CMS Database list, select Oracle.
- b. Enter the Oracle tnsnames connect identifier in the Server field.
- c. Enter the credentials for the server in the Username and Password fields, then click Next.

DB2:

- a. From the CMS Database list, select DB2.
- b. Enter the DB2 database alias in the Server field.
- c. Enter the credentials for the server in the Username and Password fields, then click Next.

MySQL:

- a. From the CMS Database list, select MySQL.
- b. Enter the name of the database in the Database field.
- c. Enter localhost as the host name in the Server field.

Note: The host name should not be your host name, or the IP address of the host.

- d. Enter the port that the database uses in the Port field.
- e. Enter the credentials for the server in the Username and Password fields, then click Next.

Note: If you are migrating from a version of MySQL that was previously installed by BusinessObjects Enterprise, use root for the Username (not the name that you see in the DSN).

Sybase:

- a. From the CMS Database list, select Sybase.
- b. Enter the Sybase Server Name in the Server field.
- c. Enter the credentials for the server in the Username and Password fields, then click Next.

The Install Type screen displays.

Specify an Installation Directory

The Install Type screen is used to select an installation method and to specify an installation directory.

Note: If you chose to perform a simple upgrade on the BusinessObjects Enterprise Upgrade page, you can only select a New install type. The Custom or Expand Install and Web Tier options are disabled.

To specify an installation directory

1. Specify whether you want to install a SQL Anywhere database server, or if you want BusinessObjects Enterprise to use an existing database server.
2. In the Destination Folder field, specify where to install the BusinessObjects Enterprise components.

Select a different installation directory for BusinessObjects Enterprise XI 3.1 than the directory for your previous BusinessObjects Enterprise deployment. The installation program validates the directory that you specify, and prevents you from installing BusinessObjects Enterprise XI 3.1 in the same directory as your existing deployment.

3. Click Next to continue with the installation setup.

The Server Components Configuration screen displays.

Enter Information About Your Existing CMS

The Server Components Configuration screen is used to specify the port number and administrator password for the BusinessObjects Enterprise XI Release 2 CMS. The CMS role is to communicate with the other BusinessObjects Enterprise servers and services and manage the system and audit databases.

To enter information about your existing CMS

1. Specify the port number of your existing BusinessObjects Enterprise CMS in the CMS port field.
2. Specify the password for the CMS administrator account in the Password and Confirm password fields.
3. Click Next to continue with the installation setup.

The Server Intelligence Agent screen displays.

Specify Server Intelligence Information

The Server Intelligence Agent screen is used to name and designate a port address for the SIA for the current installation.

The SIA is a component of the CMC that simplifies administrative procedures that were previously performed by the CCM, such as the management of CMC server processes. A SIA is automatically created during the installation of BusinessObjects Enterprise XI 3.1.

1. Provide a name to identify the SIA node in the Node Name field.
2. Specify a port number for the SIA in the Port field. The SIA uses this port to communicate with the CMS.
3. Click Next to continue with the installation setup.

Once the SIA information is entered, the port number is validated. A warning displays if the port you specified is not available before you can proceed to configure the CMS database for your installation.

Depending on whether you are using SQL Anywhere as the CMS database or an existing database server, the SQL Anywhere Database Server Configuration screen or CMS Database Information screen displays.

More information:

[What is Server Intelligence?](#) (see page 83)

CMS Database Configuration

Configure Your SQL Anywhere Database Server

The SQL Anywhere Database Server Configuration screen displays if you chose to install SQL Anywhere as the database server for your new BusinessObjects Enterprise XI 3.1 deployment.

To configure your SQL Anywhere database server

1. Specify the port number for the SQL Anywhere database server in the SQL Anywhere Port Number field.
2. Specify the Data Source Name in the Data Source Name field.
3. Specify and confirm a password for the SQL Anywhere DBA user account in the SQL Anywhere DBA User Account pane.

Note: The default port number is 2638. Use this number unless this port is unavailable.

4. Specify and confirm a password for the SQL Anywhere BusinessObjects Enterprise user account in the SQL Anywhere BusinessObjects User Account pane.

Note: This user account name must be unique on the network.

5. Click Next to continue the installation setup.

The Select Web Application Server screen displays.

Configure an Existing Database Server

The CMS Database Information screen displays if you chose to use an existing database server as your CMS for the new BusinessObjects Enterprise installation. Use this screen to configure the database server.

If you are using an existing database, ensure that you have the connection details for the database server that you select and login credential information for the account to connect to the database instance. The database account requires permissions to add and drop tables and to insert, delete, and update data in those tables.

To configure an existing database server

1. Select a database type from the Select existing CMS database drop-down list in the CMS Database pane.

Depending on your database server selection, corresponding input fields are displayed in the CMS Database pane.

2. Provide all the required information for the database in the fields provided in the CMS Database pane.

The following list contains the information that is required for each database type:

SQL Anywhere

- Data Source Name
- Database Name
- Server Name
- Port
- Login Credentials

MySQL

- Database: MySQL database name
- Server: MySQL server name
- Port: Default port is 3306
- Login credentials to access the database

Sybase

- Server: Sybase Server Name
- Login credentials to access the database

Note: The Sybase server name is a combination of the host name and the port number which your database administrator sets in the file sql.ini.

DB2

- Server: DB2 database alias
- Login credentials to access the database

Oracle

- Server: tnsnames connect identifier
- Login credentials to access the database

Microsoft SQL Server

- ODBC DSN

If you do not want to specify an auditing database for your new installation, skip to step 6.

3. Select the Auditing Database check box to specify an auditing database for your new installation.

The input fields under the Auditing Database check box are activated.

Note: If you select a BusinessObjects Enterprise XI Release 2 auditing database for BusinessObjects Enterprise XI 3.1, the installation program permanently deletes any existing auditing data from that database. This means that the data will not be available after the upgrade is complete. If you want to keep auditing data from BusinessObjects Enterprise XI Release 2, select a *new* database for BusinessObjects Enterprise XI 3.1.

4. Select a database type from the Select existing Auditing database drop-down list in the Auditing Database pane.

Depending on your database server selection, corresponding input fields are displayed in the Auditing Database pane.

5. Provide all the required information for the database in the fields provided in the Auditing Database pane.

The following list contains the information that is required for each database type:

SQL Anywhere

- Data Source Name
- Database Name
- Server Name
- Port
- Login Credentials

MySQL

- Database: MySQL database name
- Server: MySQL server name
- Port: Default port is 3306
- Login credentials to access the database

Sybase

- Server: Sybase Server Name
- Login credentials to access the database

Note: The Sybase server name is a combination of the host name and the port number which your database administrator sets in the file sql.ini.

DB2

- Server: DB2 database alias
- Login credentials to access the database

Oracle

- Server: tnsnames connect identifier
- Login credentials to access the database

Microsoft SQL Server

- ODBC DSN

6. Select the Reset existing database check box to delete all current tables and entries in the existing database.

Note: This option permanently deletes all of the contents of the existing database that you select.

7. Click Next to continue with the installation setup.

The Select Web Application Server screen displays. This screen only displays if a connection is established with the database configuration you provided.

Select a Web Application Server Configuration Option

The web application server runs BusinessObjects Enterprise web applications such as InfoView, the CMC, and custom web applications. Use the Select Web Application Server screen to choose to:

- Install and/or deploy to a Java web application server, such as the Tomcat web application server included with BusinessObjects Enterprise.
- Install and deploy to the IIS web application server installed as part of your Windows operating system. If you are using the 64-bit version of IIS 7, you must ensure that:
 - ASP.NET is enabled.
 - The advanced IIS setting Enable 32-bit Applications is set to True.
 - The advanced IIS setting .NET Application Pool is set to Classic mode.
 - If the IIS Web Application Server option is not selectable, ASP.NET v1.1 and the IIS (Control Panel, Add or Remove Programs, Windows Components, Application Server) must be installed. To configure a Java web application server for BusinessObjects Enterprise you need the web application server administrator account name and password, as well as the listener port number.

To select a web application server configuration option

1. To use a Java web application server, select Java Web Application Server and choose one of the following options:
 - Install Tomcat application server and deploy to it. This automatically installs and configures Tomcat.
 - Automatically deploy to a preinstalled Web Application Server. This prompts you to enter the configuration and authentication information about the next screen.
2. To use the IIS web application server included as part of your Windows operating system, choose IIS Web Application Server, then select the website to use for deployment from the drop-down list.
3. Click Next.

Depending on your selection, you can now proceed to either configure your existing web application server, or configure a new Tomcat web application server.

Configure a New Tomcat Web Application Server

The Configure Tomcat screen displays during installation if you choose to install Tomcat as the web application server for your BusinessObjects Enterprise installation. Use this screen to configure Tomcat.

To configure a new Tomcat web application server

1. Accept the default values or specify new port numbers for Connection port, Shutdown port, and Redirect port.
2. Click Next to continue with the installation.

Note: If the port numbers you specified are in use, a warning message displays. To continue you must specify unused and valid port numbers.

The Start Installation screen displays.

Configure Your Existing Web Application Server

The Configure Web Application Server screen displays during installation after you specify an existing server in the Select Web Application Server screen. To install web components on your web application server, provide specific configuration information about your existing web application server.

To configure your existing web application server

1. Select your existing web application server from the drop-down list of web application server types.
2. Click Next to continue with the installation.

The following list contains the information that is required for supported web application servers:

Tomcat 6

- Server Instance: Name of the current web application server instance (for example, localhost)
- Service Name: Name of the Windows service if the application server will be installed as a windows service (for example, Tomcat6)
- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\wdeploy\appserver\Tomcat6)

WebLogic 10

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights to the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The WebLogic domain root directory (for example, C:\bea\weblogic10\user_projects\domains\base_domain)

WebLogic 9.2

- Port: Administration port of the application server (for example, 7001)
- Username: User name with administration rights to the application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, mserver1)
- Application Server Domain Root Directory: The directory where the web application server is installed (for example, C:\bea\user_projects\domains\base_domain)

WebSphere 6.1

- SOAP Port: The SOAP Connector Port of the application server (for example, 8880)
- Username: User name with administration rights to the WebSphere application server
- Password: Password for the account with administration rights to the application server
- Server Instance: Name of the current web application server instance (for example, server1)
- Virtual Host: The virtual host to which the application must be bound
- Admin is Secure?: Select this option to enable security requiring administrative access credentials to the application.

Note: Set the values for the username and password parameters when Admin is Secure is enabled.

- Application Server Installation Directory: The directory where the web application server is installed (for example, C:\Program Files\IBM\WebSphere\AppServer)

Oracle Application Server 10g R3

- Admin is Secure?: Select this option to use Secure Sockets Layer (SSL) encryption for authentication.

Note: If Admin is Secure? is not selected, you still have to specify the username and password to access the server.

- Port: Administration port of the application server (for example, 6003)
This port is the request port of the <notification-server> element in the opmn.xml file.
- Username: User with administration rights to the application server
- Password: Password for the account with administration rights to the application server

- **Server Instance:** Name of the Oracle Application Server application server instance (for example, home)
- **Server Name:** Name of the target application server (for example, myserver.domain.com)
- **Group Id:** Name of the server group to which the target application belongs (for example, Default_group)
- **Application Server Installation Directory:** The directory where the web application server is installed (for example, C:\product\10.1.3\OracleAS_1)

The Start Installation screen displays.

Note: Remember your credentials for the web application server as they can be required to install add-ons such as additional language packs.

Enter a Web Application Container Server HTTP Port Number

The Web Application Container Server (WACS) is a container that provides CMC services for .NET installations. If you are not using a Java web application server in your deployment, the Web Application Container Server Configuration screen displays.

This screen allows you to either accept the default HTTP port number, 6405, or to specify a different port. This is the HTTP port number on which you access the CMC through WACS.

To enter a Web Application Container Server (WACS) HTTP port number

1. If you want to change the HTTP port number for the WACS server, enter a new value in the HTTP Port field.
2. Click Next to continue.

Start the Upgrade Installation

The Start Installation screen is the final screen in the installation setup.

Click the Next button to start the installation process.

Perform a Simple Upgrade on UNIX

If the CA Business Intelligence installation program detects a simple deployment (for example, an entire product line has been installed on a single computer), you can perform a simple upgrade to BusinessObjects Enterprise XI 3.1. In a simple upgrade to BusinessObjects Enterprise XI 3.1, the installation program performs the following steps:

- Installs BusinessObjects Enterprise XI 3.1 SP5.
- Copies the contents of the existing CMS database to the BusinessObjects Enterprise XI 3.1 database.
- Copies the data in the Input and the Output File Repository Servers (FRS) to the BusinessObjects Enterprise XI 3.1 FRS.
- Recreates the SIA information of BusinessObjects Enterprise XI 3.1.
- Reinstalls BusinessObjects Enterprise XI 3.1 CAF jars.
- Enables all the BusinessObjects Enterprise XI 3.1 servers.
- Updates all the objects in the newly copied CMS database to BusinessObjects Enterprise XI 3.1 objects.

Note: The previous version of BusinessObjects Enterprise is not disabled and both the versions can coexist and run simultaneously.

The simple upgrade process on UNIX acts the same as a new installation, with the exception of two additional screens that prompt the user for data migration and CMS password information.

If the installation program does not detect a simple deployment, perform a complex upgrade. This upgrade includes the scenario where your deployment web and application servers are on separate computers.

Begin the Upgrade

Remember that a simple upgrade process on UNIX acts the same as a new installation, so to start the upgrade process, you must invoke a new installation.

Note: A GUI-based CA Business Intelligence upgrade is not supported on UNIX. Only a console upgrade of CA Business Intelligence is supported on UNIX.

Data Migration

If the installer detects that another version of BusinessObjects Enterprise XI Release 2 is installed, the Data Migration screen displays. Enter Y to migrate the previous version's data; otherwise, enter N, then press Enter.

CMS Password

The BusinessObjects Enterprise XI Administrator Password screen displays only if you entered Y on the Data Migration screen to migrate the previous version's data.

Enter and confirm the administrator password of the existing BusinessObjects Enterprise installation.

Note: After a simple upgrade on UNIX, the CMS password changes to the new password specified on this screen. If a new CMS password is not specified for BusinessObjects Enterprise XI 3.1, then the previous version's CMS password is retained.

Continue with the Upgrade

Once the data migration and CMS password information (if applicable) is specified, the BusinessObjects Enterprise installer continues in the same manner as a new installation.

Follow the instructions in Perform a New Installation in the chapter "New Installation" to continue with the upgrade.

Perform a Complex Upgrade on Windows

In a complex upgrade, you install a new deployment of BusinessObjects Enterprise XI 3.1, either on the same computer as your previous BusinessObjects Enterprise deployment or on another computer. You can copy the data from your previous deployment to the new one.

After BusinessObjects Enterprise XI 3.1 is installed, both deployments can run at the same time. You can uninstall your BusinessObjects Enterprise XI Release 2 deployment when you are ready to do so.

After you install BusinessObjects Enterprise XI 3.1, perform the following steps:

1. Copy the content from your BusinessObjects Enterprise XI Release 2 deployment to your XI 3.1 deployment, either through the CCM or through the Import Wizard.
2. Manually add and configure any necessary servers and server clusters.
3. Enable your BusinessObjects Enterprise XI 3.1 services.
4. Add the Search Indexing Program.
5. Update any events that you copied to the BusinessObjects Enterprise XI 3.1 deployment from your existing BusinessObjects Enterprise deployment.
6. Configure the BusinessObjects Enterprise XI 3.1 auditing database.

Important!

- When you are copying content to your BusinessObjects Enterprise XI 3.1 deployment, users can still access the existing BusinessObjects Enterprise XI Release 2 deployment. However, any new content that is added to the existing deployment after the process of copying data has started is not copied to the new deployment. Therefore, it is recommended that you prevent users from accessing your existing BusinessObjects Enterprise XI Release 2 deployment once the process of copying your data has started. The default CMS port number is 6400. If you are installing BusinessObjects Enterprise XI 3.1 on a computer with an existing BusinessObjects Enterprise XI Release 2 deployment, and you want to import content from the existing deployment to the BusinessObjects Enterprise XI 3.1 deployment, select a different port number than the port that the existing deployment uses.
- If you are installing BusinessObjects Enterprise XI 3.1 on a computer with an existing BusinessObjects Enterprise XI Release 2 deployment, specify a different port number for the BusinessObjects Enterprise XI 3.1 CMS database.

Copy Data to your BusinessObjects Enterprise XI 3.1 Deployment

When you perform a complex upgrade to BusinessObjects Enterprise XI 3.1, the CA Business Intelligence installer provides the option to create a CMS database for the deployment or to specify an existing database as the CMS database. If you are performing a complex upgrade to BusinessObjects Enterprise XI 3.1, copy your Business Intelligence content from your existing BusinessObjects Enterprise XI Release 2 CMS database to your BusinessObjects Enterprise XI 3.1 CMS database. You can copy this content through the CCM or by using the Import Wizard.

If you copy the CMS data through the CCM, all the objects of the CMS are copied at once. This method is the simplest and quickest solution if you want to copy your entire CMS database content.

The Import Wizard allows you to select and copy specific objects from a CMS. This method is the best option if you want to import only a subset of the source objects into the BusinessObjects Enterprise XI 3.1 system.

Note: When you use the CCM to copy the contents of a database, it reinitializes the destination database. This means that any data in the destination database is deleted. If you are copying data from a source database and you want to preserve data that exists in the destination database, use the Import Wizard.

If you are using the CCM to copy your content to your BusinessObjects Enterprise XI 3.1 deployment, perform the following steps.

- Use the CCM to copy the data from your existing CMS database to your BusinessObjects Enterprise XI 3.1 CMS database.
- Repoint the BusinessObjects Enterprise XI 3.1 Input and Output File Repositories to the locations of the existing repositories, or copy the files in the existing file repositories to the BusinessObjects Enterprise XI 3.1 file repositories.
- Use the CCM to update the objects in your CMS repository. This step adds the properties to the objects copied from the CMS that BusinessObjects Enterprise XI 3.1 requires.

Note: If you have performed a simple upgrade, the installation program automatically copies your content to your BusinessObjects Enterprise XI 3.1 deployment.

Copy Data from your Existing CMS System Database

If you install a new BusinessObjects Enterprise system with your original installation, whether on the same computer or on another computer, you can use the CCM to copy system data from the existing BusinessObjects Enterprise XI Release 2 CMS database to your BusinessObjects Enterprise XI 3.1 CMS database.

The destination database is initialized before the new data is copied in, so any existing contents of the destination database are permanently deleted (all BusinessObjects Enterprise tables are destroyed permanently and then recreated). Once the data has been copied, the destination database is established as the current database for the CMS.

Note: If you want to import users, groups, folders, and reports from one system database to another, without deleting the contents of the current CMS database, use the Import Wizard. For more information, click the online help in the Import Wizard.

Notes:

- If you performed a simple upgrade, the installation program performs this step automatically.
- If you are using the Import Wizard to import content from your existing deployment, it is not necessary to perform these steps.

Copy Data from a CMS Installed on Windows

Before you copy the contents of the CMS database, ensure that you can log in to the destination database with an account that has permissions to add or drop tables, and to add, drop, or modify data in those tables.

Note: If you are copying a CMS database from a BusinessObjects Enterprise XI 3.1 source destination to a BusinessObjects Enterprise XI 3.1 target destination, you can change the CMS location, name, and database type. However, you cannot change the BusinessObjects Enterprise installation path, operating system, and computer name.

To copy a CMS system database on Windows

1. Open the CCM and stop the SIA.
2. Right-click the SIA and choose Properties.
3. Click the Configuration tab, and then click Specify.
4. Choose Copy, then click OK.
5. Choose the version information for the source CMS database.
6. Select the database type for the source CMS database, and then specify its database information (including host name, user name, and password).
7. Select the database type for the destination CMS database.
8. Specify its database information (including host name, user name, and password).
9. When the CMS database has finished copying, click OK.
10. If you are upgrading from an earlier version than BusinessObjects Enterprise XI 3.1, you will be prompted to build an SIA.
 - a. Click OK.
 - b. Specify the administrator password, and then click OK.
 - c. When the SIA is built, click OK.
11. Proceed to Copy File Repository Server Data.

Copy File Repository Server Data

When you install BusinessObjects Enterprise XI 3.1, new Input and Output File Repositories are created. For your BusinessObjects Enterprise XI 3.1 deployment to access the content in your existing file repositories, you must either redirect the BusinessObjects Enterprise XI 3.1 file repositories to the XI Release 2 repositories, or copy the contents of the XI Release 2 repository folders to the BusinessObjects Enterprise XI 3.1 repository folders.

Notes:

- If you performed a simple upgrade, the installation program performs this step automatically.
- If you are using the Import Wizard to import content from your existing deployment, it is not necessary to perform these steps.

Repoint the File Repository Servers

To repoint the file repository servers

1. Log in to the CMC at:
`http://<ComputerName>:<PortNumber>/CmcApp`
Use the Administrator account and password that you specified during the installation.
2. Browse to the Servers page, select the Input File Repository Server, and click Manage, Properties.
3. In the File Store Directory field, type the path to the location of the existing Input File Repository directory, and click Save & Close.
4. On the Servers page, select the Output File Repository Server, click Manage, Properties, and specify the path to the location of the existing Output File Repository.
5. Proceed to Update the CMS Repository Objects.

Copy File Repository Server Data

To copy file repository server data

1. Log in to the CMC of the BusinessObjects Enterprise XI 3.1 deployment at:
`http://<ComputerName>:<PortNumber>/CmcApp`
Use the Administrator account and password that you specified during the installation.
2. Browse to the Servers page, and stop the BusinessObjects Enterprise XI 3.1 Input and Output File repository Servers.
3. Delete the contents of the following folders:
 - `<INSTALLDIR>/BusinessObjects Enterprise12.0/FileStore/Input`
 - `<INSTALLDIR>/BusinessObjects Enterprise12.0/FileStore/Output`
4. Copy the contents of the BusinessObjects Enterprise XI Release 2 Input and Output folders to the BusinessObjects Enterprise XI 3.1 Input and Output folders.
5. Proceed to Update the CMS Repository Objects.

Update the CMS Repository Objects

After you complete copying the contents of your existing database to your BusinessObjects Enterprise XI 3.1 database, you must update the CMS repository objects. This step adds the properties to the objects copied from the CMS that BusinessObjects Enterprise XI 3.1 requires.

Notes:

- If you performed a simple upgrade, the installation program performs this step automatically.
- If you are using the Import Wizard to import content from your existing deployment, it is not necessary to perform these steps.

Update the CMS Repository Objects on Windows

To update the CMS repository objects on Windows

1. Open the BusinessObjects Enterprise XI 3.1 CCM and start the SIA.
2. Open an internet browser, and log in to the CMC:
`http://<ComputerName>:<PortNumber>/CmcApp`
Use the Administrator account and password that you specified during installation.
3. Browse to the Servers page, and start the Input and Output File Repository Servers.
4. In the CCM, click Update Objects.
The Log On dialog displays.
5. Enter the information for the BusinessObjects Enterprise XI 3.1 CMS repository.
The CCM retrieves a list of objects that require updating.
6. When the CCM is ready, click Update.
A status bar displays that shows the progress of the update.
7. When the update is complete, click OK.

Use the Import Wizard

The Import Wizard is a locally installed Windows application that allows you to import existing user accounts, groups, folders, and reports, and other Business Intelligence content to your new BusinessObjects Enterprise system.

The Import Wizard runs only on Windows, but you can use it to import information from a source environment that is running on Windows or UNIX to a new BusinessObjects Enterprise XI 3.1 system that is running on Windows or on UNIX.

If your BusinessObjects Enterprise XI 3.1 server runs on UNIX, you must install the Import Wizard on a separate Windows computer.

Reconfigure and Add Servers

If your BusinessObjects Enterprise XI Release 2 is distributed across a number of servers or server clusters, and you want to reproduce this environment for your BusinessObjects Enterprise XI 3.1 deployment, add the servers manually using the CMC.

Enable BusinessObjects Enterprise XI 3.1 Servers

After you have copied the content from your previous version of BusinessObjects Enterprise, enable the BusinessObjects Enterprise XI 3.1 services through the CCM.

To enable BusinessObjects Enterprise XI 3.1 servers

1. Open the CCM, and start the SIA and web application server.
2. Open a browser and log in to the CMC:
`http://<ComputerName>:<PortNumber>/CmcApp`
Use the Administrator account and password that you specified during installation.
3. Browse to the Servers page, select all the servers, then click Enable.

Add the Search Index Program

For the CMS's Content Search to return results, you must index the CMS by adding the Search Index Program. The Search Index Program indexes the documents in the CMS repository in order to make them searchable.

Note: If you are performing a simple upgrade to BusinessObjects Enterprise XI 3.1, the installation program performs this step automatically.

To add the search index program

1. Log in to the CMC with an administrator username and password.
2. Go to Public Folders, Search Program, and delete the Search Indexing Program.
3. Use the Import Wizard to import the BusinessObjects Enterprise XI 3.1 Search Indexing Program.

More information:

[Log in to the CMC](#) (see page 196)

Perform a Complex Upgrade on UNIX

If the BusinessObjects Enterprise XI 3.1 installation program does not detect a simple deployment, or if you want to install XI 3.1 across multiple servers, perform a complex upgrade. In complex upgrades, you install a new BusinessObjects Enterprise XI 3.1 deployment, and then copy your content and system data from your existing BusinessObjects Enterprise XI deployment to the BusinessObjects Enterprise XI 3.1 deployment.

You can install BusinessObjects Enterprise XI 3.1 on the same computer as your existing XI Release 2 system or on a separate computer.

If you are performing a complex upgrade, perform the following steps manually after you have finished installing BusinessObjects Enterprise XI 3.1:

1. Import your existing BusinessObjects Enterprise XI Release 2 Business Intelligence content to your BusinessObjects Enterprise XI 3.1 deployment, either by using the CCM or by using the Import Wizard.

Note: If you chose to import content through the CCM, repoint your BusinessObjects Enterprise XI 3.1 Input and Output File Repository Servers to the location of your existing repositories, or copy the contents of your existing repositories to the BusinessObjects Enterprise XI 3.1 repositories.

2. Reconfigure and add the BusinessObjects Enterprise XI 3.1 servers to the CMS.
3. Add the Search Index Program.
4. Update any events that you copied to the BusinessObjects Enterprise XI 3.1 deployment from your existing BusinessObjects Enterprise deployment.
5. Configure the BusinessObjects Enterprise XI 3.1 auditing database.

The upgrade process does not copy server and server cluster settings to your new deployment. If your existing deployment is distributed across several servers or clusters, and you want to replicate the same environment for your BusinessObjects Enterprise XI 3.1 deployment, add the servers and clusters manually using the CMS. For more information, see the Managing and Configuring Servers chapter of the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

Your BusinessObjects Enterprise XI 3.1 system can operate at the same time as your existing BusinessObjects Enterprise XI Release 2 system, whether the deployments are on the same computers or not. When you are ready to, you can uninstall the BusinessObjects Enterprise XI Release 2 system.

Side-by-Side Deployments

When you perform a side-by-side installation, ensure that your BusinessObjects Enterprise XI 3.1 installation does not clash with your preexisting BusinessObjects Enterprise version by:

- Specifying a unique CMS cluster name for the BusinessObjects Enterprise XI 3.1 installation.
- Specifying unique port numbers for the BusinessObjects Enterprise XI 3.1 installation.

Copy Data to your BusinessObjects Enterprise XI 3.1 Deployment

When you perform a complex upgrade to BusinessObjects Enterprise XI 3.1, the CA Business Intelligence installer provides the option to create a CMS database for the deployment or to specify an existing database as the CMS database. If you are performing a complex upgrade to BusinessObjects Enterprise XI 3.1, copy your Business Intelligence content from your existing BusinessObjects Enterprise XI Release 2 CMS database to your BusinessObjects Enterprise XI 3.1 CMS database. You can do this copy through the CCM or by using the Import Wizard.

When you copy the CMS data through the CCM, all the objects of the CMS are copied at once. This method is the simplest and quickest solution if you want to copy your entire CMS database content.

The Import Wizard allows you to select and copy specific objects from a CMS. This method is the best option if you want to only import a subset of the source objects into the BusinessObjects Enterprise XI 3.1 system.

Note: When you use the CCM to copy the contents of a database, it reinitializes the destination database. This means that any data in the destination database is deleted. If you are copying data from a source database, and you want to preserve data that exists in the destination database, use the Import Wizard.

If you are using the CCM to copy your content to your BusinessObjects Enterprise XI 3.1 deployment, perform the following steps.

- Use the CCM to copy the data from your existing CMS database to your BusinessObjects Enterprise XI 3.1 CMS database.
- Repoint the BusinessObjects Enterprise XI 3.1 Input and Output File Repositories to the locations of the existing repositories, or copy the files in the existing file repositories to the BusinessObjects Enterprise XI 3.1 file repositories.
- Use the CCM to update the objects in your CMS repository. This step adds the properties to the objects copied from the CMS that BusinessObjects Enterprise XI 3.1 requires.

Note: If you have performed a simple upgrade, the installation program automatically copies your content to your BusinessObjects Enterprise XI 3.1 deployment.

Copy Data from your Existing CMS System Database

If you install a new BusinessObjects Enterprise system with your original installation, whether on the same computer or on another computer, you can use the CCM to copy system data from the existing BusinessObjects Enterprise XI Release 2 CMS database into your BusinessObjects Enterprise XI 3.1 CMS database.

The destination database is initialized before the new data is copied in, so any existing contents of the destination database are permanently deleted (all BusinessObjects Enterprise tables are destroyed permanently and then recreated). Once the data has been copied, the destination database is established as the current database for the CMS.

Note: If you want to import users, groups, folders, and reports from one system database to another, without deleting the contents of the current CMS database, use the Import Wizard. For more information, click the online help in the Import Wizard.

Notes:

- If you performed a simple upgrade, the installation program performs this step automatically.
- If you are using the Import Wizard to import content from your existing deployment, it is not necessary to perform these steps.

Copy Data from a CMS Installed on UNIX

Use this procedure if your CMS is installed on UNIX and you are copying data from BusinessObjects Enterprise XI Release 2. Before you copy the contents of the CMS database, ensure that you can log in to the destination database with an account that has permissions to add or drop tables and to add, drop, or modify data in those tables.

Note: On the UNIX system, you cannot migrate directly from a source environment that uses an ODBC connection to the CMS database. If your source CMS database uses ODBC, first upgrade that system to a supported native driver.

To copy data from a CMS installed on UNIX

1. Stop the BusinessObjects Enterprise XI 3.1 CMS by typing the following command:

```
./ccm.sh -stop sia
```

2. Run cmsdbsetup.sh (located in <INSTALLDIR>/bobje/, by default).
3. Select the copy option (option 4), then confirm your choice.
4. Select the version information for the source CMS database.
5. Select the database type for the source CMS database, then specify its database information (including host name, user name, and password).
6. Select the database type for the destination CMS database, and then specify its database information (including host name, user name, and password).

The CMS database is copied to the destination computer. A message displays when the copy is complete.

7. If you are upgrading from an earlier version than BusinessObjects Enterprise XI 3.1, you are prompted to build a SIA. Specify the administrator password.

A message displays when the SIA is built.

8. Proceed to Copy File Repository Server Data.

Copy File Repository Server Data

When you install BusinessObjects Enterprise XI 3.1, new Input and Output File Repositories are created. For your BusinessObjects Enterprise XI 3.1 deployment to access the content in your existing file repositories, you must either redirect the BusinessObjects Enterprise XI 3.1 file repositories to the XI Release 2 repositories, or copy the contents of the XI Release 2 repository folders to the BusinessObjects Enterprise XI 3.1 repository folders.

Notes:

- If you performed a simple upgrade, the installation program performs this step automatically.
- If you are using the Import Wizard to import content from your existing deployment, it is not necessary to perform these steps.

Repoint the File Repository Servers

To repoint the file repository servers

1. Log in to the CMC at:

`http://<ComputerName>:<PortNumber>/CmcApp`

Use the Administrator account and password that you specified during the installation.
2. Browse to the Servers page, select the Input File Repository Server, and click Manage, Properties.
3. In the File Store Directory field, type the path to the location of the existing Input File Repository directory, and click Save & Close.
4. On the Servers page, select the Output File Repository Server, click Manage, Properties, and specify the path to the location of the existing Output File Repository.
5. Proceed to Update the CMS Repository Objects.

Copy File Repository Server Data

To copy file repository server data

1. Log in to the CMC of the BusinessObjects Enterprise XI 3.1 deployment at:

`http://<ComputerName>:<PortNumber>/CmcApp`

Use the Administrator account and password that you specified during the installation.
2. Browse to the Servers page, and stop the BusinessObjects Enterprise XI 3.1 Input and Output File repository Servers.
3. Delete the contents of the following folders:
 - `<INSTALLDIR>/BusinessObjects Enterprise12.0/FileStore/Input`
 - `<INSTALLDIR>/BusinessObjects Enterprise12.0/FileStore/Output`
4. Copy the contents of the BusinessObjects Enterprise XI Release 2 Input and Output folders to the BusinessObjects Enterprise XI 3.1 Input and Output folders.
5. Proceed to Update the CMS Repository Objects.

Update the CMS Repository Objects

After you complete copying the contents of your existing database to your BusinessObjects Enterprise XI 3.1 database, you must update the CMS repository objects. This step adds the properties to the objects copied from the CMS that BusinessObjects Enterprise XI 3.1 requires.

Notes:

- If you performed a simple upgrade, the installation program performs this step automatically.
- If you are using the Import Wizard to import content from your existing deployment, it is not necessary to perform these steps.

Update CMS Repository Objects on UNIX

To update CMS repository objects on UNIX

1. Start the BusinessObjects Enterprise XI 3.1 SIA.
2. Open an internet browser.
3. Log in to the CMC at:

```
http://<ComputerName>:<PortNumber>/CmcApp
```

Use the Administrator account and password that you specified during the install.

4. Browse to the Servers page. and start the Input and Output File Repository Servers.
5. In a UNIX terminal, run the following command:

```
<INSTALLDIR XI 3.1>/ccm.sh -updateobjects -cms<CMS name> -username  
<administrator user name> -password <administratorpassword>
```

Use the Import Wizard

The Import Wizard is a locally installed Windows application that allows you to import existing user accounts, groups, folders, and reports, and other Business Intelligence content to your new BusinessObjects Enterprise system.

The Import Wizard runs only on Windows, but you can use it to import information from a source environment that is running on Windows or UNIX to a new BusinessObjects Enterprise XI 3.1 system that is running on Windows or on UNIX.

If your BusinessObjects Enterprise XI 3.1 server runs on UNIX, you must install the Import Wizard on a separate Windows computer.

Reconfigure and Add Servers

If your BusinessObjects Enterprise XI Release 2 is distributed across a number of servers or server clusters, and you want to reproduce this environment for your BusinessObjects Enterprise XI 3.1 deployment, add the servers manually using the CMC.

Enable BusinessObjects Enterprise XI 3.1 Servers

After you have copied the content from your previous version of BusinessObjects Enterprise, enable the BusinessObjects Enterprise XI 3.1 services through the CCM.

To enable BusinessObjects Enterprise XI 3.1 servers

1. Open the CCM, and start the SIA and web application server.
2. Open a browser and log in to the CMC:

`http://<ComputerName>:<PortNumber>/CmcApp`

Use the Administrator account and password that you specified during installation.
3. Browse to the Servers page, select all the servers, then click Enable.

Add the Search Index Program

For the CMS's Content Search to return results, you must index the CMS by adding the Search Index Program. The Search Index Program indexes the documents in the CMS repository in order to make them searchable.

Note: If you are performing a simple upgrade to BusinessObjects Enterprise XI 3.1, the installation program performs this step automatically.

To add the search index program

1. Log in to the CMC with an administrator username and password.
2. Go to Public Folders, Search Program, and delete the Search Indexing Program.
3. Use the Import Wizard to import the BusinessObjects Enterprise XI 3.1 Search Indexing Program.

More information:

[Log in to the CMC](#) (see page 196)

Update Imported Events

After you import events to a destination CMS, run the EventUpdater script. This script updates the imported events by associating them with the BusinessObjects Enterprise XI 3.x event servers that they are to run on.

If you do not run this script, reassociate the events with event servers manually by navigating to every imported event and associating it with an event server.

If you are importing events from more than one event server, run the script once for each event server from which you are importing the events.

On a Windows computer, the script is named EventUpdater.bat and is located in the following folder by default:

```
CA Business Intelligence_installation_directory\BusinessObjects Enterprise  
12.0\win32_x86\scripts\
```

On a UNIX computer, the script is named eventupdater.sh and is located in the following folder:

```
CA Business Intelligence_installation_directory/bobje/
```

The following list describes the parameters for the script.

-oldeventserver

The friendly name of the event server on the system that the event was exported from.

-neweventserver

The name of the event server on the BusinessObjects Enterprise XI 3.x system that you want to associate the event with.

-cms

The name of any CMS on the BusinessObjects Enterprise XI 3.x destination system.

-user

The username for a BusinessObjects Enterprise administrator account.

-password

The password for the BusinessObjects Enterprise administrator account.

-authentication

The authentication method. The accepted values are secEnterprise, secWinAd, and secLdap.

To update imported events

1. Locate the appropriate script, depending on your platform.
2. Run the script with the necessary parameters.

- On Windows, run:

```
CA Business Intelligence_installation_directory\BusinessObjects Enterprise
12.0\win32_x86\scripts\eventupdater.bat" -oldeventserver <old event server
friendly name> -neweventserver <new event server name> [-cms <cms>] [-user
<username>][-password <password>] [-authentication secAuthType]
```

- On UNIX, run:

```
CA Business Intelligence_installation_directory/bobje/eventupdater.sh
-oldeventserver <old eventserver friendly name> -neweventserver <new event
servername> [-cms <cms>] [-user <username>] [-password <password>]
[-authentication secAuthType]
```

Configure the Auditing Database

Using the existing BusinessObjects Enterprise XI auditing database with the BusinessObjects Enterprise XI 3.1 auditing database is not supported. When you perform an upgrade to BusinessObjects Enterprise XI 3.1, the installation program does not copy the contents of your existing auditing database. If you want to keep the contents of the previous auditing database intact, specify a new database for the BusinessObjects Enterprise XI 3.1 auditing database. You must recreate all settings for the XI 3.1 version of the auditing database.

For more information about configuring the auditing database, see the Managing Auditing chapter of the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

Migration of Report Content

Report content can be migrated on Windows using the Import Wizard. The Import Wizard is a locally installed Windows application that guides administrators through the process of importing users, groups, and folders into BusinessObjects Enterprise.

The Import Wizard runs on the Windows platform, but can be used to import information into BusinessObjects Enterprise systems running any supported Windows or UNIX operating system.

The Import Wizard provides a series of screens that guide you through the process of importing and exporting CA Business Intelligence content, such as user accounts, groups, folders, reports, universes, security, servers, and other objects. Various dialogs can appear depending on the source environment and the types of information that you select to import.

You can use the Import Wizard to import content from BusinessObjects Enterprise into your current BusinessObjects Enterprise deployment. You can also export content from a BusinessObjects Enterprise XI 3.x deployment to a Business Intelligence Archive Resource (BIAR) file, or import content from a BIAR file to your BusinessObjects Enterprise XI 3.x deployment.

You can select to merge the contents of the source repository into the destination repository, or you can update the destination with the contents of the source CMS. You can also select to import from or export to BIAR files.

You can also use the Import Wizard to back up XI 3.x server configuration settings to a BIAR file and restore server settings from a BusinessObjects Enterprise XI 3.x BIAR file to a BusinessObjects Enterprise XI 3.x deployment.

Note: Business Objects does not support moving Business Intelligence (BI) content from a recent version of BusinessObjects Enterprise to an earlier version of BusinessObjects Enterprise using BIAR files, the Import Wizard, or any other Business Objects Life Cycle Management (LCM) tool. For example, reports, documents, and any other content from a BusinessObjects Enterprise XI Release 2 SP2 system cannot be moved to a BusinessObjects Enterprise XI 3.1 SP5 environment.

Before you start this procedure, ensure that you have the Administrator account credentials for both the source and the destination environments. You can use a Delegated Administrator account for a BusinessObjects Enterprise XI 3.x source or destination environment.

The overall process is divided into the following general procedures:

1. Specify the source environment.
2. Specify the destination environment.
3. Select the types of objects to import.
4. Select an Import Scenario. This selection determines whether to merge or update the objects that you import.
5. Select the specific objects to import.

Import a Report from BusinessObjects Enterprise XI Release 2 to BusinessObjects Enterprise XI 3.1

To import a report from BusinessObjects Enterprise XI Release 2 to BusinessObjects Enterprise XI 3.1

1. Start the BusinessObjects Enterprise XI 3.1 Import Wizard.
2. On the Source environment screen, use the Source drop-down menu to select the Business Intelligence Archive Resource (BIAR) File, then click Next.
3. Log in to BusinessObjects Enterprise XI 3.1 with Enterprise authentication and proceed with the Import Wizard.
4. In the Select objects to import screen, select the objects from the source environment that you want to import into the destination environment, then click Next.
5. After selecting the objects to import, click Finish on the Ready to import screen to begin importing information to the destination environment.
6. After the import has finished, click Done.
7. Check the CMC/InfoView to ensure that the objects/reports were successfully imported.

Chapter 16: Modify Your CA Business Intelligence r3.2 Installation to CA Business Intelligence Release 03.3.00

This chapter helps you modify your CA Business Intelligence content and system data from versions of CA Business Intelligence r3.2 to CA Business Intelligence Release 03.3.00.

This section contains the following topics:

[Modify Mode](#) (see page 313)

[Migration from MySQL to SQL Anywhere Database](#) (see page 316)

Modify Mode

If the CA Business Intelligence installer detects CA Business Intelligence r3.2 (or CA Business Intelligence r3.2 SP4) on your computer, the installer runs in Modify mode and installs CA Business Intelligence Release 03.3.00.

If the CA Business Intelligence installer detects CA Business Intelligence r3.0/r3.1 with BusinessObjects Enterprise XI 3.1 FP1_5 on your computer, the installer does not proceed and displays the following message:

To install CA Business Intelligence 3.3, the existing BusinessObjects Enterprise should be upgraded to SP3 level. Please install CA Business Intelligence 3.2 and then continue with the installation.

Windows

To run the CA Business Intelligence installer

1. If you are installing from a DVD and the Windows Autoplay setting is enabled, the installer starts automatically. If Autoplay is not enabled, or you are installing from a hard drive, run cabiinstall.exe from the root directory of the CA Business Intelligence DVD.

The Please Choose Setup Language screen displays.

2. Select English as the language, then click OK.

3. Click Next at the Introduction screen.
4. Accept the CA License Agreement, then click Next.
5. The CA Business Intelligence installer detects that CA Business Intelligence r3.2 is installed and the following message displays:

CA Business Intelligence is installed on this machine. The installer will install the required patches.

Click OK.
6. Enter the BusinessObjects Enterprise Administrator password, then click Next.
7. Select the desired option for installing samples.

These sample reports can be found in the Report Samples folder.
8. Click Install to proceed with the installation.

The BusinessObjects Enterprise XI SP5 patch installer begins.
9. Enter the existing CMS and Administrator login information for your existing deployment:
 - Existing CMS Hostname
 - Existing CMS Port
 - CMS Administrator Password
10. Click Next.

The Configure Web Application Server screen displays.
11. Enter the connection and authentication details for your existing web application server, then click Next.

The BusinessObjects Enterprise XI SP5 patch installs.
12. Click Finish to complete the installation.

UNIX

To begin your installation

1. Mount the device that contains the installation files.
2. Enter the following command in the command line:


```
./cabiinstall.sh
```


Press Enter.

The installation setup program launches and prompts you to select a language for the installation.
3. Select a language for the installation and press Enter.

The License Agreements display.

4. Read the software license agreement for CA Technologies.
5. Enter `y` to agree to the terms.
6. The CA Business Intelligence installer detects that CA Business Intelligence r3.2 is installed and the following message displays:

CA Business Intelligence is installed on this machine. The installer will install the required patches.

Press Enter.
7. Enter the BusinessObjects Enterprise Administrator password, then press Enter.
8. Select the desired option for installing samples.

These sample reports can be found in the Report Samples folder.
9. Select Install to proceed with the installation.

The BusinessObjects Enterprise XI SP5 patch installer begins.
10. Enter the existing CMS and Administrator login information for your existing deployment:
 - Existing CMS Hostname
 - Existing CMS Port
 - CMS Administrator Password
11. Press Enter.

The Configure Web Application Server screen displays.
12. Enter the connection and authentication details for your existing web application server, then press Enter.

The BusinessObjects Enterprise XI SP5 patch installs.
13. Select Finish to complete the installation.

Migration from MySQL to SQL Anywhere Database

Overview

BusinessObjects Enterprise XI 3.1 SP5 uses SQL Anywhere 12 for the default CMS Repository and Audit databases (previous SP versions of BusinessObjects Enterprise XI 3.1 used the MySQL 5.0 database). A new installation of CA Business Intelligence 3.3 (on a computer that does not already have CA Business Intelligence) creates the CMS Repository and Audit databases using SQL Anywhere 12 automatically. An upgrade installation (for example, installing CA Business Intelligence 3.3 in an environment with CA Business Intelligence 2.x) also creates the SQL Anywhere database automatically (if you decide to migrate). However, update installations (for example, using the patch installer to update from SP3 to SP5) do not automatically create the SQL Anywhere database. For an explanation of update and upgrade installations, see [Upgrade and Migration Scenarios](#) (see page 276).

The upgrade installations include the following scenarios:

Current Environment	To Upgrade to CA Business Intelligence 3.3
CA Business Intelligence 3.2 or CA Business Intelligence 3.2 SP4	Install CA Business Intelligence 3.3. CA Business Intelligence installs the SP5 patch, but does not create a SQL Anywhere database.
CA Business Intelligence 3.0/3.1	Upgrade to CA Business Intelligence 3.2 or the SP3 patch level using the CA Business Intelligence 3.2 installer or SP3 patch installer. Then upgrade to CA Business Intelligence 3.3. CA Business Intelligence installs the SP5 patch, but does not create a SQL Anywhere database.

If you use the patch installer and you perform an update installation, you update the SP patch level of your BusinessObjects Enterprise (for example, from SP3 to SP5). The update installations do not automatically create the SQL Anywhere database. Therefore, you can decide to create and migrate from the MySQL database to the SQL Anywhere database after your update installation is completed. You can perform this database migration by manually completing the individual migration steps or by executing a migration script.

Note: This release of CA Business Intelligence is delivered as a full product (which includes the database migration automation script) and also as an SP5 patch installer (which does not include the database migration script). If you do not have the database migration script in your release, follow the manual procedures for migrating from MySQL to SQL Anywhere.

How to Migrate from MySQL to SQL Anywhere Database

You use the following process to perform a database migration from MySQL to SQL Anywhere:

- Create the SQL Anywhere CMS Repository and Audit databases.
Note: Use the database preparation automation script if your CA Business Intelligence release includes the script. If your release does not include the script, use the manual procedures to create the databases.
- Copy the content from the MySQL CMS Repository and Audit databases to the SQL Anywhere CMS Repository and Audit databases.
- Move to the SQL Anywhere Audit database (for logging audit-specific data).

SQL Anywhere Database Preparation Using the Automation Script

The database preparation automation script (ssawdbcreate.bat) automates the manual steps involved in preparing the SQL Anywhere CMS Repository and Audit databases. The ssawdbcreate.bat script performs the following functions:

- Creates the CMS Repository and Audit databases.
- Sets up the Administrative and BusinessObjects Enterprise Account users.
- Creates and registers the service to start and stop the database.
- Creates the DSN for the CMS Repository and Audit databases.

Note: If you do not have the database migration script in your CA Business Intelligence release, follow the manual procedures for migrating from MySQL to SQL Anywhere.

Create Databases with the Automation Script

Use the automation script to create the CMS Repository and Audit databases, create and register the service to start and stop the databases, and create the DSN for the databases. On Windows, run the script as a user with administrative privileges. On UNIX, run the script as the CA Business Intelligence operating system user account that was specified during the installation of CA Business Intelligence.

Note: To display online help for the script command usage, execute one of the following commands:

(Windows): `ssawdbcreate.bat -help`

(UNIX): `ssawdbcreate.sh`

Follow these steps:

1. Locate the `ssawdbcreate.bat` (Windows) or `ssawdbcreate.sh` (UNIX) script file in the following location:

CA Business Intelligence_media\Disk1\cabi\scripts\SQLAW

Note: This location is shown in Windows system notation. The UNIX system notation uses forward slashes instead of backward slashes.

2. Copy the `ssawdbcreate` script file to a location on the computer where CA Business Intelligence is installed (for example, `C:\ssaw`) and navigate to that location.
3. Execute the following command. Arrange all parameters (shown in curly braces) in the order shown in the following command. All parameters are required.

```
ssawdbcreate_command {CABI Install Dir} {SQLAW Server Name} {SQLAW Host Name}  
{SQLAW Port} {Database Name} {Administrator User} {Administrator Password} {BO  
User Account} {BO User Account Password}
```

Note: For `ssawdbcreate_command`, use the command that applies to your environment (`ssawdbcreate.bat` or `ssawdbcreate.sh`).

CABI Install Dir

Points to the location where CA Business Intelligence is installed (this directory typically includes up to the `CommonReporting3` folder). You create the SQL Anywhere databases (CMS and Audit) in the following folder:

(Windows): `CABI Install Dir\SQLAnywhere12\bin`

(UNIX): `CABI Install Dir/bobje/SQLAW/bin`

If the directory name contains spaces, enclose them in quotation marks. Verify that the directory name has no trailing slash (/ or \).

Example (Windows): `"C:\Program Files (x86)\CA\SC\CommonReporting3"`

Example (UNIX): `/opt/CA/SharedComponents/CommonReporting3`

SQLAW Server Name

Indicates the SQL Anywhere Service Name. Spaces are not allowed.

Example: BOE120SQLAW

SQLAW Host Name

Points to the host name where the SQL Anywhere database is hosted. Typically, this host is the same host where CA Business Intelligence is installed. Spaces are not allowed.

Example: localhost

SQLAW Port

Points to the port on which the SQL Anywhere database runs. The default port is 2638.

Database Name

Identifies the database name for the CMS Repository database. For the audit database, the script suffix is `_AUDIT`.

Example: If the value for {Database Name} is BOE120, the name for the Audit database would be BOE120_AUDIT.

Administrator User

Specifies the SQL Anywhere database administrator User Account (for both CMS and Audit databases).

Example: root (or dba)

Administrator Password

Specifies the password for the SQL Anywhere database administrator User Account.

BO User Account

Specifies the SQL Anywhere BusinessObjects Enterprise User Account (for both CMS and Audit databases).

Example: Boe

BO User Account Password

Specifies the password for the SQL Anywhere BusinessObjects Enterprise User Account.

SQL Anywhere Database Preparation Using Manual Procedures

Perform the procedures to prepare the CMS Repository and Audit databases for migration after you have completed a successful update to SP5. Perform these procedures on the computer where CA Business Intelligence is installed.

During the database preparation, you execute several command utilities. These command utilities require you to specify details about your database environment. In the command line syntax presented in this section, variables represent these details. These variables are explained in [Command Line Syntax Variables](#) (see page 320). Before you execute a command, replace each variable with the actual value that applies to your environment.

Command Line Syntax Variables

The variable names described in the following table represent the details that you supply in the database preparation commands. Before you execute a particular command, replace each variable with the actual value that applies to your environment.

As an alternate method, you can create environment variables for any of these variable names. Then when you create your command statements, you can insert the environment variables instead of the actual values.

Variable Name	Description
DATABASE_DIR	Folder location where the SQL Anywhere databases for CMS and Audit reside. If the directory name contains spaces, enclose them in quotation marks. Verify that the directory name has no trailing slash (\). Example: "C:\Program Files (x86)\CA\SC\ CommonReporting3\SQLAnywhere12\bin"
SQLANYWHERE_DIR	SQL Anywhere folder where the binaries reside. This folder is typically found in the <i>CABI_Install_Dir\SQLAnywhere12\bin</i> folder. If the directory name contains spaces, enclose them in quotation marks. Verify that the directory name has no trailing slash (\). Example: "C:\Program Files (x86)\CA\SC\ CommonReporting3\SQLAnywhere12\bin"
SQLANYWHERE_SERVER	SQL Anywhere Server Name. A service with this name is registered in the Windows control panel and allows users to start or stop the SQL Anywhere databases. Example: BOE120SQLAW

Variable Name	Description
SQLANYWHERE_HOST	SQL Anywhere Host Name. This name is typically the same as the name of the computer on which CA Business Intelligence is installed. Example: localhost
SQLANYWHERE_PORT	SQL Anywhere Port Number. The default port number is 2638. Example: 2638
DATABASE_NAME	Database name for the CMS Repository database Example: BOE120
AUDIT_DATABASE_NAME	Database name for the Audit database Example: BOE120_AUDIT
ADMIN_UID	SQL Anywhere database administrator User Account Example: root
ADMIN_PWD	Password for SQL Anywhere database administrator User Account Example: abc123
BOE_UID	SQL Anywhere BusinessObjects Enterprise User Account Example: boe
BOE_PWD	Password for SQL Anywhere BusinessObjects Enterprise User Account Example: def123

Create CMS Repository and Audit Databases

Use the commands that apply to your environment to create CMS Repository and Audit databases.

Note: The command line syntax in this procedure contains the variables that are defined in [Command Line Syntax Variables](#) (see page 320). Replace these variables (in italics) with the values that are appropriate for your environment.

Follow these steps:

1. Open a command prompt window.
2. (Windows) Execute the following command to create the database for the CMS Repository.

```
SQLANYWHERE_DIR\dbinit.exe -o DATABASE_DIR\DATABASE_NAME_check.log
-dba ADMIN_UID,ADMIN_PWD DATABASE_DIR\DATABASE_NAME.db
```

3. (UNIX) Execute the following command to create the database for the CMS Repository.

```
$SQLANYWHERE_DIR/dbinit -o $DATABASE_DIR/$DATABASE_NAME_check.log  
-dba $ADMIN_UID,$ADMIN_PWD $DATABASE_DIR/$DATABASE_NAME.db
```

4. (Windows) Execute the following command to create the Audit database.

```
SQLANYWHERE_DIR\dbinit.exe -o DATABASE_DIR\AUDIT_DATABASE_NAME_check.log  
-dba ADMIN_UID,ADMIN_PWD DATABASE_DIR\AUDIT_DATABASE_NAME.db
```

5. (UNIX) Execute the following command to create the Audit database.

```
$SQLANYWHERE_DIR/dbinit -o $DATABASE_DIR/$AUDIT_DATABASE_NAME_check.log  
-dba $ADMIN_UID,$ADMIN_PWD $DATABASE_DIR/$AUDIT_DATABASE_NAME.db
```

Create a Service to Start and Stop the SQL Anywhere Database

Use the commands that apply to your environment to create a service to start and stop the SQL Anywhere databases.

Note: The command line syntax in this procedure contains the variables that are defined in [Command Line Syntax Variables](#) (see page 320). Replace these variables (in italics) with the values that are appropriate for your environment.

Follow these steps:

1. Open a command prompt window.
2. (Windows) Execute the following command to create the SQL Anywhere service.

```
SQLANYWHERE_DIR\dbsvc.exe -t Network -s Automatic -as -i -sn SQLANYWHERE_SERVER  
-y -w SQLANYWHERE_SERVER SQLANYWHERE_DIR\dbsrv12.exe -n SQLANYWHERE_SERVER -x  
tcpip(PORT=SQLANYWHERE_PORT) DATABASE_DIR\DATABASE_NAME.db  
DATABASE_DIR\AUDIT_DATABASE_NAME.db
```

3. (UNIX) Execute the following command to create the SQL Anywhere service.

```
$SQLANYWHERE_DIR/dbspawn $SQLANYWHERE_DIR/dbsrv12 -n "$SQLANYWHERE_SERVER" -x  
\"tcpip(port=$SQLANYWHERE_PORT) \" \"$DATABASE_DIR/$DATABASE_NAME.db"  
"$DATABASE_DIR/$AUDIT_DATABASE_NAME.db"
```

4. (Windows) Execute the following command to start the new SQL Anywhere service.

```
SQLANYWHERE_DIR\dbsvc.exe -u SQLANYWHERE_SERVER
```

Create BusinessObjects Enterprise User Accounts and Set Database Options

Use the commands that apply to your environment to create BusinessObjects Enterprise User Accounts, assign the proper privileges to the accounts, and set the database options.

Note: The command line syntax in this procedure contains the variables that are defined in [Command Line Syntax Variables](#) (see page 320). Replace these variables (in italics) with the values that are appropriate for your environment.

Follow these steps:

1. Open a command prompt window.
2. (Windows) Execute the following command to create a BusinessObjects Enterprise User Account in the CMS Repository database.

```
SQLANYWHERE_DIR\dbisqlc.exe -q -c "uid=ADMIN_UID;pwd=ADMIN_PWD;
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;
dbn=DATABASE_NAME" CREATE USER BOE_UID IDENTIFIED BY BOE_PWD
```

3. (UNIX) Execute the following command to create a BusinessObjects Enterprise User Account in the CMS Repository database.

```
$SQLANYWHERE_DIR/dbisqlc -q -c "uid=$ADMIN_UID;pwd=$ADMIN_PWD;
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;
dbn=$DATABASE_NAME" CREATE USER "$BOE_UID" IDENTIFIED BY "$BOE_PWD"
```

4. (Windows) Execute the following command to assign proper privileges for the BusinessObjects Enterprise User Account in the CMS Repository database.

```
SQLANYWHERE_DIR\dbisqlc.exe -q -c "uid=ADMIN_UID;pwd=ADMIN_PWD;
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;
dbn=DATABASE_NAME" GRANT RESOURCE, VALIDATE, PROFILE, READFILE TO BOE_UID
```

5. (UNIX) Execute the following command to assign proper privileges for the BusinessObjects Enterprise User Account in the CMS Repository database.

```
$SQLANYWHERE_DIR/dbisqlc -q -c "uid=$ADMIN_UID;pwd=$ADMIN_PWD;
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;
dbn=$DATABASE_NAME" GRANT RESOURCE, VALIDATE, PROFILE, READFILE TO "$BOE_UID"
```

6. (Windows) Execute the following command to create the BusinessObjects Enterprise User Account in the Audit database.

```
SQLANYWHERE_DIR\dbisqlc.exe -q -c "uid=ADMIN_UID;pwd=ADMIN_PWD;
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;
dbn=AUDIT_DATABASE_NAME" CREATE USER BOE_UID IDENTIFIED BY BOE_PWD
```

7. (UNIX) Execute the following command to create the BusinessObjects Enterprise User Account in the Audit database.

```
$SQLANYWHERE_DIR/dbisqlc -q -c "uid=$ADMIN_UID;pwd=$ADMIN_PWD;  
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;  
dbn=$AUDIT_DATABASE_NAME" CREATE USER "$BOE_UID" IDENTIFIED BY "$BOE_PWD"
```

8. (Windows) Execute the following command to assign the proper privileges for the BusinessObjects Enterprise User Account in the Audit database.

```
SQLANYWHERE_DIR\dbisqlc.exe -q -c "uid=ADMIN_UID;pwd=ADMIN_PWD;  
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;  
dbn=AUDIT_DATABASE_NAME" GRANT RESOURCE, VALIDATE, PROFILE, READFILE TO BOE_UID
```

9. (UNIX) Execute the following command to assign the proper privileges for the BusinessObjects Enterprise User Account in the Audit database.

```
$SQLANYWHERE_DIR/dbisqlc -q -c "uid=$ADMIN_UID;pwd=$ADMIN_PWD;  
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;  
dbn=$AUDIT_DATABASE_NAME" GRANT RESOURCE, VALIDATE, PROFILE, READFILE TO  
"$BOE_UID"
```

Create User-Level ODBC Entries for CMS Repository and Audit Databases

Use the commands that apply to your environment to create the user-level ODBC entries for the CMS Repository and Audit databases.

Note: The command line syntax in this procedure contains the variables that are defined in [Command Line Syntax Variables](#) (see page 320). Replace these variables (in italics) with the values that are appropriate for your environment.

Follow these steps:

1. Open a command prompt window.
2. (Windows) Execute the following command to create the DSN for the CMS Repository database.

```
SQLANYWHERE_DIR\dbdsn.exe -y -ws DATABASE_NAME -c "uid=BOE_UID;  
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;  
dbn=DATABASE_NAME"
```

3. (UNIX) Execute the following command to create the DSN for the CMS Repository database.

```
$SQLANYWHERE_DIR/dbdsn -y -w $DATABASE_NAME -c "uid=$BOE_UID;  
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;  
dbn=$DATABASE_NAME"
```

4. (Windows) Execute the following command to create the DSN for the Audit database.

```
SQLANYWHERE_DIR\dbdsn.exe -y -ws AUDIT_DATABASE_NAME -c "uid=BOE_UID;
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;
dbn=AUDIT_DATABASE_NAME"
```

5. (UNIX) Execute the following command to create the DSN for the Audit database.

```
$SQLANYWHERE_DIR/dbdsn -y -w $AUDIT_DATABASE_NAME -c "uid=$BOE_UID;
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;
dbn=$AUDIT_DATABASE_NAME"
```

Test the ODBC Connections

Use the commands that apply to your environment to test the ODBC connections.

Note: The command line syntax in this procedure contains the variables that are defined in [Command Line Syntax Variables](#) (see page 320). Replace these variables (in italics) with the values that are appropriate for your environment.

Follow these steps:

1. Open a command prompt window.
2. (Windows) Execute the following command to test the connection to DSN for the CMS Repository database.

```
SQLANYWHERE_DIR\dbping.exe -c "uid=BOE_UID;pwd=BOE_PWD;
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;
dbn=DATABASE_NAME" -d
```

3. (UNIX) Execute the following command to test the connection to DSN for the CMS Repository database.

```
$SQLANYWHERE_DIR/dbping -c "uid=$BOE_UID;pwd=$BOE_PWD;
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;
dbn=$DATABASE_NAME" -d
```

4. (Windows) Execute the following command to test the connection to DSN for the Audit database.

```
SQLANYWHERE_DIR\dbping.exe -c "uid=BOE_UID;pwd=BOE_PWD;
server=SQLANYWHERE_SERVER;host=SQLANYWHERE_HOST:SQLANYWHERE_PORT;
dbn=AUDIT_DATABASE_NAME" -d
```

5. (UNIX) Execute the following command to test the connection to DSN for the Audit database.

```
$SQLANYWHERE_DIR/dbping -c "uid=$BOE_UID;pwd=$BOE_PWD;
server=$SQLANYWHERE_SERVER;host=$SQLANYWHERE_HOST:$SQLANYWHERE_PORT;
dbn=$AUDIT_DATABASE_NAME" -d
```

Content Migration from MySQL to SQL Anywhere CMS Repository

Perform content migration only after the SQL Anywhere CMS Repository and Audit databases are ready.

Note: The following procedures provide the steps for the Windows and UNIX system environments.

Migrate Content from MySQL to SQL Anywhere CMS Repository Using Windows

After your databases are ready, migrate the content from the MySQL database to the SQL Anywhere database.

Note: The following procedure applies to the Windows environment only.

Follow these steps:

1. From the Central Configuration Manager window, stop the Server Intelligence Agent (SIA) by performing the following actions:
 - a. Select the Server Intelligence Agent from the Display Name list.
 - b. Click the Stop button in the toolbar.
2. Open the Server Intelligence Agent Properties dialog by selecting the Server Intelligence Agent service and clicking the Properties button in the toolbar.
3. Navigate to the Configuration tab and, in the CMS System Database Configuration area, click the Specify button to open the CMS Database Setup dialog.
4. Select the option Copy data from another Data Source and click OK.

Note: You select this option because you want to migrate the content from the MySQL CMS Repository to the SQL Anywhere CMS Repository.

The Specify Data Source dialog opens.

5. Verify that Autodetect is selected in the drop-down that is labeled Source contains data from version.
6. Click the Specify button to specify the source of the CMS Repository content.
The Select Database Driver dialog opens.
7. Select the option MySQL driver (because the source CMS Repository database is MySQL) and click OK.

The MySQL Database dialog opens. This dialog captures the information that pertains to the source CMS Repository database.

8. Verify the information in the dialog, specify the password, and click OK.
You return to the Specify Data Source dialog. The next step is to specify the destination CMS Repository database details.
9. Click the Browse button to open the Select Database Driver dialog.

10. Select the option SQL Anywhere (ODBC) because the target database is SQL Anywhere and click OK.

The Select Data Source dialog opens.

11. Navigate to the Machine Data Source tab, select the SQL Anywhere CMS Repository database, and click OK.

The Connect to SQL Anywhere dialog opens.

12. Specify the password for the BusinessObjects Enterprise Account User (that you created in previous procedures) and click OK.

You return to the Specify Data Source dialog.

13. Click OK.

You are prompted for confirmation.

14. Click Yes.

The migration process starts.

Upon successful completion, CCM displays the message "CMS database setup completed!".

Migrate Content from MySQL to SQL Anywhere CMS Repository Using UNIX

After your databases are ready, migrate the content from the MySQL database to the SQL Anywhere database.

Note: The following procedure applies to the UNIX environment only.

Follow these steps:

1. On the UNIX system computer, navigate to the bobje directory under the CA Business Intelligence installation directory.

Example: /opt/CompanyA/SharedComponents/CommonReporting3/bobje

2. Execute the following command:

```
./cmsdbsetup.sh
```

You are prompted to enter the Server Intelligence Agent (SIA) name.

3. Enter the SIA name and press Enter.

Note: This name corresponds to the SIANodeName property value in the `biek.properties` file. You can find the `biek.properties` file in the CA Business Intelligence installation directory.

Details about the current CMS Repository and audit databases display. In addition, Data Source setting configuration options appear.

4. Enter 4 for the "copy" option and press Enter.

You are prompted for confirmation that you want to proceed with the copy operation.

5. Enter 3 for the "yes" option and press Enter.

You are asked to identify the version of SAP BusinessObjects Enterprise from which you are migrating.

6. Enter 2 for the "autodetect" option and press Enter.

The current CMS Repository database details display and you are asked if this database is the destination database.

7. Enter 2 for the "no" option and press Enter.

You are asked to select the database type.

8. Enter 2 for the "SQL Anywhere" option and press Enter.

You are asked to specify the ODBC Data Source Name for the CMS Repository database.

9. Enter the ODBC Data Source Name and press Enter.

Note: This Data Source Name is the name that you specified when you created the SQL Anywhere CMS Repository and Audit databases.

You are asked to enter the user name to connect to the SQL Anywhere CMS Repository database.

10. Enter the user name and press Enter.

Note: This user name is the name that you specified when you created the SQL Anywhere CMS Repository and Audit databases.

You are asked to enter the user password to connect to the SQL Anywhere CMS Repository database.

11. Enter the user password and press Enter.

Note: This user password is the password that you specified when you created the SQL Anywhere CMS Repository and Audit databases.

You are asked to specify the source database type.

12. Enter 3 for the "MySQL" option and press Enter.

You are asked to enter the host name for the MySQL database.

13. Enter the host name to connect to the MySQL database and press Enter.

Note: This host name is the name that is specified in the cabiresponse.ini file.

You are asked to enter the port number for the MySQL database. The default port number (3306) displays.

14. Enter the MySQL port number or accept the default and press Enter.

You are asked to enter the MySQL database name. The default name (BOE120) displays.

15. Enter the MySQL database name or accept the default and press Enter.

You are asked to enter the user name to connect to the MySQL database.

16. Enter the user name and press Enter.

You are asked to enter the user password to connect to the MySQL database.

17. Enter the user password and press Enter.

The copy (content migration) operation begins. When the operation is finished, you receive successful completion messages.

Content Migration from MySQL to SQL Anywhere Audit Database

The Sybase SQL Anywhere Administrative tool, Sybase Central, allows you to migrate data between any supported data sources. Sybase Central is not included with SP5, but you can access Sybase Central from the SQL Anywhere 12 Client installation. In addition, install the latest version of the MySQL5 ODBC drivers so that you can connect to the MySQL data sources.

Note: We recommend that you migrate with Sybase Central for Audit data sources. For CMS data, we recommend using the CCM method.

Perform content migration only after the SQL Anywhere CMS Repository and Audit databases are ready.

Install MySQL ODBC Drivers

Sybase Central requires at least version 5.1 of the MySQL 32-bit ODBC drivers to connect to MySQL 5 data sources.

Follow these steps:

1. Download and install the latest Windows 32-bit MySQL 5.1 ODBC drivers (MSI Installer).

Note: You can find these drivers by accessing the MySQL web home page and navigating to the Downloads for the MySQL Connector/ODBC.

2. Create an ODBC connection to the MySQL Audit database with the new MySQL 5.1 ODBC drivers by executing the following command:

```
odbcad32.exe
```

3. Assign the following name to this ODBC connection:

```
MySQL5-AUDIT
```

Install the Sybase SQL Anywhere 12 Client

The SQL Anywhere 12 client includes the Sybase Central Administration tool.

Follow these steps:

1. Access the main Sybase web page and navigate to the Downloads page.
2. Download and install the Windows x86 SQL Anywhere 12 client.

Migrate Content from MySQL to SQL Anywhere Audit Database

After you install the latest MySQL ODBC drivers and the Sybase Central client tool, migrate the content from the MySQL Audit database to the SQL Anywhere Audit database. Perform content migration only after the SQL Anywhere Audit database is ready.

Note: The following procedure applies to the Windows environment.

Follow these steps:

1. From the Sybase Central client tool, select Connections, Connect with SQL Anywhere 12.
2. Complete the connection information, including entries for the following fields, and click Connect.

User ID

Specifies the SQL Anywhere database administrator User Account (for the Audit database).

Example: root (or dba)

Password

Specifies the password for the SQL Anywhere database administrator User Account.

Server Name

Indicates the SQL Anywhere Service Name.

Example: BOE120SQLAW

Database Name

Identifies the database name for the Audit database.

Example: BOE120_AUDIT

A connection with the SQL Anywhere database is established.

3. Select Tools, SQL Anywhere 12, Migrate Database and click Next.
4. Select the destination database BOE120_AUDIT and click Next.
5. Enter the name of the remote database that you want to migrate (boe120_audit) and click Create Remote Server Now.

Important! The remote database name is required. The migration fails if you do not specify this name.

6. Assign a name to the new remote server and click Next.
7. Select MySQL from the remote server type list and click Next.
8. Select Open database connectivity (ODBC) for the connection type.
9. Enter the name of the ODBC connection that was created with the latest MySQL5.1 ODBC drivers and click Next.
10. Select the option "Make this remote server a read-only data source" and click Next.
11. (Optional) Select the check box for "Create an external login for the current user" and provide the Login Name and Password information.

Note: An external login is required if the SQLAnywhere 12 administrative user has a different user ID and password than the remote MySQL5 server.

12. Select Test Connection, verify that the connection works, and click Next.

A summary displays the changes that you want to make to the database.

13. Select Finish.
14. Select the remote server that you created and click Next.

Important! The remote server selection is required. If you do not specify this server, the migration can fail.

15. Select the tables to migrate from the Available tables list, click Add to move them to the Selected tables list, and click Next.
16. Select the BusinessObjects Enterprise user that you created during the database creation and click Next.
Note: You can also create a user for this step by clicking Create User Now.
17. Select the migration options that you want and click Next.
A summary displays with the generated SQL.
18. Select Finish.
A completion message displays when the migration is finished.
19. From the Universe Designer, update the Activity Universe connection settings to point to the SQL Anywhere connection.

Move from MySQL to SQL Anywhere Audit Database on Windows

You complete the following steps to move from a MySQL database to a SQL Anywhere database.

Note: The following procedure applies to the Windows environment.

Follow these steps:

1. From the Central Configuration Manager window, stop the SIA, and open the SIA Properties dialog.
2. Navigate to the Configuration tab.
3. In the Audit Database Configuration area, verify that the check box labeled "Write server audit information to specified data source" is selected.
4. Click the Specify button to open the Select Database Driver dialog.
5. Select the option SQL Anywhere (ODBC) because you want to point to the SQL Anywhere Audit database that you created previously.
6. Click OK.
The Select Data Source dialog opens.
7. Navigate to the Machine Data Source tab and select the SQL Anywhere Audit database that you want to use as the source for writing the BusinessObjects Enterprise server audit information.
8. Click OK.
The Connect to SQL Anywhere dialog opens.
9. Specify the password for the BusinessObjects Enterprise Account User (that you created in previous procedures).

10. Click OK.

The BusinessObjects Enterprise environment is updated to point to the new Audit database.

Upon successful completion, CCM displays the message "Auditing database setup completed!".

11. Click OK.

You return to the Server Intelligence Agent Properties dialog.

12. Click OK.

You return to the Central Configuration Manager window.

13. Start the SIA by clicking the Start button in the toolbar.

Move from MySQL to SQL Anywhere Audit Database on UNIX

You complete the following steps to move from a MySQL database to a SQL Anywhere database.

Note: The following procedure applies to the UNIX environment.

Follow these steps:

1. On the UNIX system computer, navigate to the bobje directory under the CA Business Intelligence installation directory.

Example: /opt/CompanyA/SharedComponents/CommonReporting3/bobje

2. Execute the following command:

```
./cmsdbsetup.sh
```

You are prompted to enter the Server Intelligence Agent (SIA) name.

3. Enter the SIA name and press Enter.

Note: This name corresponds to the SIA nodeName property value in the biek.properties file. You can find the biek.properties file in the CA Business Intelligence installation directory.

Details about the current CMS Repository and Audit databases display. In addition, Data Source setting configuration options appear.

4. Enter 2 for the "selectaudit" option and press Enter.

You are asked to select the database type.

5. Enter 2 for the "SQL Anywhere" option and press Enter.

You are asked to specify the ODBC Data Source Name for the Audit database.

6. Enter the ODBC Data Source Name and press Enter.

Note: This Data Source Name is the name that you specified when you created the SQL Anywhere CMS Repository and Audit databases.

You are asked to enter the user name to connect to the SQL Anywhere Audit database.

7. Enter the user name and press Enter.

Note: This user name is the name that you specified when you created the SQL Anywhere CMS Repository and Audit databases.

You are asked to enter the user password to connect to the SQL Anywhere Audit database.

8. Enter the user password and press Enter.

Note: This user password is the password that you specified when you created the SQL Anywhere CMS Repository and Audit databases.

You are asked if you want to enable auditing.

9. Enter 3 for the "yes" option and press Enter.

The Audit data source settings are updated to the SQL Anywhere Audit database, and successful completion messages display.

10. Navigate to the bobje directory under the CA Business Intelligence installation directory.

11. Execute the following command to start the servers:

```
./startservers
```

Chapter 17: Firewalls

This section contains the following topics:

[Understand Communication Between BusinessObjects Enterprise Components](#) (see page 335)

[Configure BusinessObjects Enterprise for Firewalls](#) (see page 341)

[Examples of Typical Firewall Scenarios](#) (see page 345)

Understand Communication Between BusinessObjects Enterprise Components

If your BusinessObjects Enterprise system is deployed entirely on the same subnet, there is no need to perform any special configuration of your firewalls. However, you might choose to deploy some BusinessObjects Enterprise components on different subnets separated by one or more firewalls.

It is important to understand the communication between BusinessObjects Enterprise servers, rich clients, and the web application server hosting the BusinessObjects Enterprise SDK before configuring your BusinessObjects Enterprise system to work with firewalls.

Overview of BusinessObjects Enterprise Servers and Communication Ports

It is important to understand BusinessObjects Enterprise servers and their communication ports if the BusinessObjects Enterprise system is deployed with firewalls.

Each BusinessObjects Enterprise Server Binds to a Request Port

A BusinessObjects Enterprise server, such as the Input File Repository Server, binds to a Request Port when it starts. Other BusinessObjects Enterprise components including BusinessObjects Enterprise servers, Business Objects rich clients, and the BusinessObjects Enterprise SDK hosted in the web application server can use this Request Port to communicate with the server.

A server selects its Request Port number dynamically unless it is configured with a specific port number. A specific Request Port number must be configured for servers that communicate with other BusinessObjects Enterprise components across a firewall.

Each BusinessObjects Enterprise Server Registers with the CMS

BusinessObjects Enterprise servers register with the CMS when they start. When a server registers, the CMS records:

- The hostname (or IP address) of the server's host computer
- The server's Request Port number

The CMS Uses Two Ports

The CMS uses two ports:

- Request Port (selected dynamically by default)
- Name Server Port (6400 by default)

Other BusinessObjects Enterprise servers initially contact the CMS on its Name Server port. The CMS responds to this initial contact by returning the value of its Request Port. The BusinessObjects Enterprise servers use this Request Port for subsequent communication with the CMS.

The CMS Provides a Directory of Registered Servers

The CMS provides a directory of the BusinessObjects Enterprise servers that have registered with it. Other BusinessObjects Enterprise components such as BusinessObjects Enterprise servers, Business Objects rich clients, and the BusinessObjects Enterprise SDK hosted in the web application server can contact the CMS and request a reference to a particular server. A server's reference contains the server's Request Port number and the host name (or IP address) of the server's host computer.

BusinessObjects Enterprise components might reside on a different subnet than the server they are using. The host name (or IP address) contained in the server reference must be routable from the component's computer.

Note: The reference to a BusinessObjects Enterprise server contains the server computer's host name by default. (If a computer has more than one hostname, the primary hostname is chosen.) You can configure a server so that its reference contains the IP address instead.

Server Intelligence Agents (SIA) Communicate with the CMS

Your deployment will fail if the SIA and CMS cannot communicate with each other. Ensure that your firewall ports are configured to allow communication between the SIA and the CMS.

Job Server Child Processes Communicate with the Data Tier and the CMS

Most job servers create a child process to handle a task such as generating a report. The job server creates one or more child processes. Each child process has its own Request Port.

By default, a job server dynamically selects a Request Port for each child process. You can specify a range of port numbers that the job server can select from.

All child processes communicate with the CMS. If this communication crosses a firewall, you must:

- Specify the range of port numbers that the job server can select from. Note that the port range should be large enough to allow the maximum number of child processes as specified by `-maxJobs`.
- Open the specified port range on the firewall.

Many child processes communicate with the data tier. For example, a child process might connect to a reporting database, extract data, and calculate values for a report. If the job server child process communicates with the data tier across a firewall, you must open a communicate path on the firewall from any port on the job server computer to the database listen port on the database server computer.

Communication Between BusinessObjects Enterprise Components

BusinessObjects Enterprise components, such as browser clients, rich clients, servers, and the BusinessObjects Enterprise SDK hosted in the web application server, communicate with each other across the network during typical workflows. You must understand these workflows to deploy Business Objects products across different subnets that are separated by a firewall.

Requirements for Communication Between BusinessObjects Enterprise Components

Deployments of BusinessObjects Enterprise must conform to these general requirements.

1. Every BusinessObjects Enterprise server must be able to initiate communication with every other BusinessObjects Enterprise server on that server's Request Port.
2. The CMS uses two ports. Every BusinessObjects Enterprise server, BusinessObjects Enterprise rich client, and the web application server that hosts the BusinessObjects Enterprise SDK must be able to initiate communication with the CMS on both of its ports.
3. Every job server child process must be able to initiate communication with the CMS on both of its ports.
4. Rich clients must be able to initiate communication with the Request Port of the Input and Output File Repository Servers.

5. If Web Intelligence rich clients use Auditing, they must be able to initiate communication with the Request Port of the Adaptive Processing Servers that hosts the Client Auditing Proxy Service.
6. In general, the web application server that hosts the BusinessObjects Enterprise SDK must be able to initiate communication with the Request Port of every BusinessObjects Enterprise server.

Note: The web application server only needs to communicate with BusinessObjects Enterprise servers that are used in the deployment. For example, if Crystal Reports is not being used, the web application server does not need to communicate with the Crystal Reports Processing Servers.

7. Job Servers use the port numbers that are specified with the `-requestJSChildPorts <port range>` command. If no numbers are specified in the command line, the servers use random port numbers. To allow a job server to communicate with an FTP or mail server on another computer either open all of the ports in the range specified by `-requestJSChildPorts` on your firewall, or add the job server child process as an exception for your firewall.
8. The CMS must be able to initiate communication with the CMS database listen port.
9. The Connection Server, most Job Server child process, and every Processing Server must be able to initiate communication with the reporting database listen port. Each database vendor uses a different listen port. For example, MySQL uses 3306 by default.

BusinessObjects Enterprise Port Requirements

This section lists the communication ports used by BusinessObjects Enterprise servers, BusinessObjects Enterprise rich clients, the web application server hosting the BusinessObjects Enterprise SDK, and third-party software applications. If you deploy BusinessObjects Enterprise with firewalls, you can use this information to open the minimum number of ports in those firewalls.

Port Requirements for Business Objects Applications

This table lists the servers and port numbers used by BusinessObjects Enterprise applications.

Product	Client Application	Associated Servers	Server Port Requirements
BusinessObjects Enterprise	Web Intelligence Rich Client	<ul style="list-style-type: none"> ■ CMS ■ Input FRS 	<ul style="list-style-type: none"> ■ CMS Name Server Port (6400 by default) ■ CMS Request Port ■ Input FRS Request Port
BusinessObjects Enterprise	Universe Designer	<ul style="list-style-type: none"> ■ CMS ■ Input FRS ■ Connection Server 	<ul style="list-style-type: none"> ■ CMS Name Server Port (6400 by default) ■ CMS Request Port ■ Input FRS Request Port ■ Connection Server Port
BusinessObjects Enterprise	CCM	<ul style="list-style-type: none"> ■ CMS ■ SIA 	<p>The following ports must be open to allow CCM to manage remote BusinessObjects Enterprise servers:</p> <ul style="list-style-type: none"> ■ CMS Name Server Port (6400 by default) ■ CMS Request Port <p>The following ports must be open to allow CCM to manage remote SIA processes:</p> <ul style="list-style-type: none"> ■ Microsoft Directory Services (TCP port 445) ■ NetBIOS Session Service (TCP port 139) ■ NetBIOS Datagram Service (UDP port 138) ■ NetBIOS Name Service (UDP port 137) ■ DNS (TCP/UDP port 53) <p>Note: Some ports listed above may not be required. See your Windows administrator.</p>

Product	Client Application	Associated Servers	Server Port Requirements
BusinessObjects Enterprise	SIA	Every BusinessObjects Enterprise server including the CMS	<ul style="list-style-type: none"> ■ SIA Request Port (6410 by default) ■ CMS Name Server Port (6400 by default) ■ CMS Request Port ■ Request Port for each server that is managed by the SIA
BusinessObjects Enterprise	Import Wizard	<ul style="list-style-type: none"> ■ CMS ■ Input FRS ■ Output FRS 	<ul style="list-style-type: none"> ■ CMS Name Server Port (6400 by default) ■ CMS Request Port ■ Input FRS Request Port ■ Output FRS Request Port

Port Requirements for Third-Party Applications

This table lists third-party software that Business Objects products use. The table includes specific examples from some software vendors, but different vendors have different port requirements.

Product	Client Application	Associated Servers	Server Port Requirements
CMS database	CMS	Database server listen port For example, SQL Anywhere uses port 2638.	SQL Anywhere is installed with BusinessObjects Enterprise. The CMS is the only server that communicates with the CMS database.
Reporting database	<ul style="list-style-type: none"> ■ Connection server ■ Every job server child process ■ Every processing server 	Database server listen Port For example, MySQL uses port 3306.	These servers retrieve information from the reporting database.

Product	Client Application	Associated Servers	Server Port Requirements
Web application server	<ul style="list-style-type: none"> ■ Live Office Rich Client ■ All BusinessObjects Enterprise portals including InfoView and CMC 	<p>HTTP port and HTTPS port.</p> <p>For example, on Tomcat the default HTTP port is 8080 and the default HTTPS port is 443.</p>	The HTTPS port is only required if secure HTTP communication is used.
FTP server	Every job server	<ul style="list-style-type: none"> ■ FTP In (port 21) ■ FTP Out (port 22) 	The job servers use the FTP ports to allow send to FTP.
Email server	Every job server	SMTP (port 25)	The job servers use the SMTP port to allow send to email.
UNIX servers to which the job servers can send content	Every job server	<ul style="list-style-type: none"> ■ rexec out (port 512) ■ (UNIX only) rsh out (port 514) 	(UNIX only) The job servers use these ports to allow send to disk.
Authentication server	<ul style="list-style-type: none"> ■ CMS ■ Web application server that hosts the BusinessObjects Enterprise SDK ■ Every Rich Client, except Live Office and Desktop Intelligence in three-tier "Zabo" mode 	<p>Connection port for third-party authentication.</p> <p>For example, the connection server for the Oracle LDAP server is defined by the user in the file ldap.ora.</p>	<p>User credentials are stored in the third-party authentication server.</p> <p>The CMS, BusinessObjects Enterprise SDK, and the Rich Clients that are listed communicate with the third-party authentication server when a user logs in.</p>

Configure BusinessObjects Enterprise for Firewalls

This section gives step-by-step instructions for configuring your BusinessObjects Enterprise system to work in a firewalled environment.

Configure the System for Firewalls

To configure the system for firewalls

1. Determine which BusinessObjects Enterprise servers must communicate across a firewall. See [Communication Between BusinessObjects Enterprise Components](#) (see page 337).
2. Configure the Request Port for each BusinessObjects Enterprise server that must communicate across a firewall. See Configuring port numbers in the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).
3. Configure a port range for any Job Server children that must communicate across a firewall. See Job servers in the *BusinessObjects Enterprise Administrator's Guide*.
4. Configure the firewall to allow communication to the Request Ports on the BusinessObjects Enterprise servers that you configured in the previous step. See [Specify the firewall rules](#) (see page 342).
5. (Optional) Configure the hosts file on each computer that hosts a BusinessObjects Enterprise server that must communicate across a firewall. See [Configure the Hosts File for Firewalls that Use NAT](#) (see page 343).

Specify the Firewall Rules

You must configure the firewall to allow the necessary traffic between Business Objects components. See your firewall documentation for details of how to specify these rules.

Specify one inbound access rule for each communication path that crosses the firewall. You might not need to specify an access rule for every Business Objects server behind the firewall.

Use the port number you specify in the server Port text box. Remember that each server on a computer must use a unique port number. Some Business Objects servers use more than one port.

Note: If BusinessObjects Enterprise is deployed across firewalls that use NAT, every BusinessObjects Enterprise server on all computers needs a unique Request Port number. That is, no two servers in the entire deployment can share the same Request Port.

Note: You do not need to specify any outbound access rules. BusinessObjects Enterprise servers do not initiate communication to the web application server, or to any client applications.

Example:

This example shows the inbound access rules for a firewall between the web application server and the BusinessObjects Enterprise servers. In this case you open two ports for the CMS, one port for the Input File Repository Server (FRS), and one port for the Output FRS. The Request Port numbers are the port numbers you specify in the Port text box in the CMC configuration page for a server.

Source Computer	Port	Destination Computer	Port	Action
Web Application Server	Any	CMS	6400	Allow
Web Application Server	Any	CMS	<Request Port Number>	Allow
Web Application Server	Any	Input FRS	<Request Port Number>	Allow
Web Application Server	Any	Output FRS	<Request Port Number>	Allow
Any	Any	CMS	Any	Reject
Any	Any	Other BusinessObjects Enterprise servers	Any	Reject

Configure the Hosts File for Firewalls that use Network Address Translation

This step is required only if the BusinessObjects Enterprise servers must communicate across a firewall on which Network Address Translation (NAT) is enabled. This step allows the client computers to map a server's hostname to a routable IP address.

This step is required in addition to the steps described in To configure the system for firewalls.

Note: BusinessObjects Enterprise can be deployed on computers that use Domain Name System (DNS). In this case, the server computer host names can be mapped to externally routable IP address on the DNS server, instead of in each computer's hosts file.

Understand Network Address Translation

A firewall is deployed to protect an internal network from unauthorized access. Firewalls that use NAT map the IP addresses from the internal network to a different address that is used by the external network. This address translation improves security by hiding the internal IP addresses from the external network.

BusinessObjects Enterprise components such as servers, rich clients, and the web application server hosting the BusinessObjects Enterprise SDK use a server reference to contact a server. The server reference contains the hostname of the server's computer. This hostname must be routable from the BusinessObjects Enterprise component's computer. This means the hosts file on the BusinessObjects Enterprise component's computer must map the server computer's hostname to the server computer's external IP address.

The server computer's external IP address is routable from external side of the firewall, whereas the internal IP address is not. The procedure for configuring the hosts file is different for Windows and UNIX.

Windows

To configure the hosts file on Windows

1. Locate every computer that runs a BusinessObjects Enterprise component that must communicate across a firewall on which Network Address Translation (NAT) is enabled.
2. On each computer located in the previous step, open the hosts file using a text editor (like Notepad). The hosts file is located at `\WINNT\system32\drivers\etc\hosts`.
3. Follow the instructions in the hosts file to add an entry for each computer behind the firewall that is running a BusinessObjects Enterprise server or servers. Map the server computer's hostname or fully qualified domain name to its external IP address.
4. Save the hosts file.

UNIX

Note: Your UNIX operating system must be configured to first consult the hosts file to resolve domain names before consulting DNS. See your UNIX systems documentation for details.

To configure the hosts file on UNIX

1. Locate every computer that runs a BusinessObjects Enterprise component that must communicate across a firewall on which Network Address Translation (NAT) is enabled.
2. Open the hosts file using an editor like vi. The hosts file is located in the following directory \etc.
3. Follow the instructions in the hosts file to add an entry for each computer behind the firewall that is running a BusinessObjects Enterprise server or servers. Map the server computer's hostname or fully qualified domain name to its external IP address.
4. Save the hosts file.

Examples of Typical Firewall Scenarios

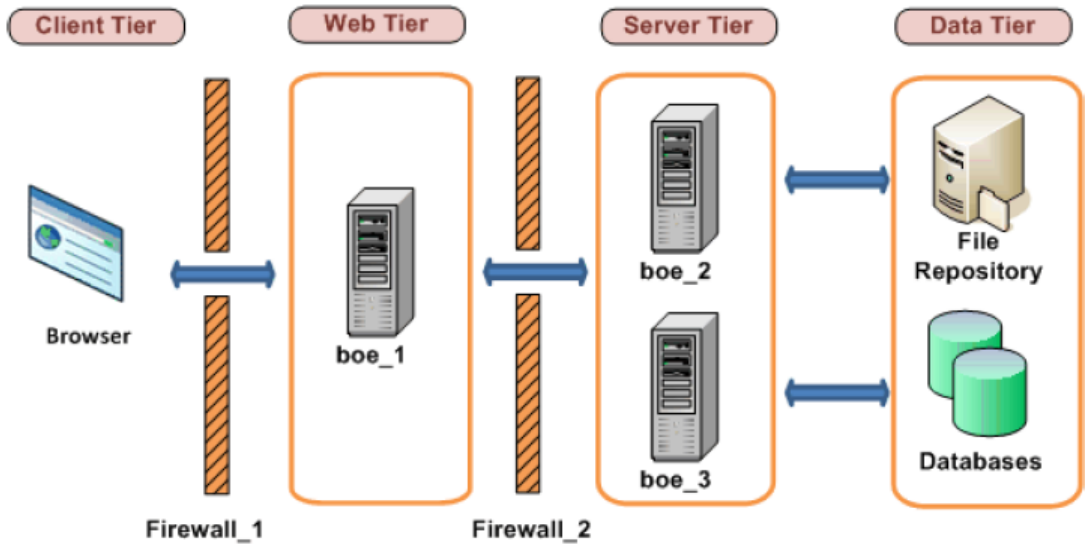
This section provides examples of typical firewall deployment scenarios.

Example - Application Tier deployed on a Separate Network

This example shows how to configure a firewall and BusinessObjects Enterprise to work together in a deployment where the firewall separates the web application server from other BusinessObjects Enterprise servers.

In this example, BusinessObjects Enterprise components are deployed across these computers:

- Computer boe_1 hosts the web application server and the BusinessObjects Enterprise SDK.
- Computer boe_2 hosts the Intelligence tier servers, including the CMS, the Input File Repository server, the Output File Repository server, and the Event server.
- Computer boe_3 hosts the Processing tier servers, including the Crystal Reports job server, the Program job server, the Destination job server, the List of Values job Server, the Web Intelligence job server, the Web Intelligence report server, the Report Application server, and the Crystal Reports Page server.



Configure an Application Tier Deployed on a Separate Network

To configure an application tier deployed on a separate network

1. These communication requirements apply to this example:
 - The web application server that hosts the BusinessObjects Enterprise SDK must be able to initiate communication with the CMS on both of its ports.
 - The web application server that hosts the BusinessObjects Enterprise SDK must be able to initiate communication with every BusinessObjects Enterprise server.
 - The browser must have access to the http or the https Request Port on the Web Application Server.
2. The web application server must communicate with all Business Objects Enterprise servers on computer boe_2 and boe_3. Configure the port numbers for each server on these computers. Note that you can use any free port between 1,025 and 65,535.

The port numbers chosen for this example are listed here:

Central Management Server

6411

Input File Repository Server

6415

Output File Repository Server

6420

Event Server

6425

Crystal Reports Job Server

6435

Program Job Server

6440

Destination Job Server

6445

List of Values Job Server

6450

Web Intelligence Job Server

6455

Web Intelligence Report Server

6460

Report Application Server

6465

Crystal Reports Page Server

6470

- Configure the firewalls Firewall_1 and Firewall_2 to allow communication to the fixed ports on the BusinessObjects Enterprise servers and the web application server that you configured in the previous step. Note that port 6400 is the default port number for the CMS Name Server Port and did not need to be explicitly configured.

In this example we are opening the HTTP Port for the Tomcat Application server.

Configuration for Firewall_1:

Port	Destination Computer	Port	Action
Any	boe_1	8080	Allow

Configuration for Firewall_2:

Source Computer	Port	Destination Computer	Port	Action
boe_1	Any	boe_2	6400	Allow
boe_1	Any	boe_2	6411	Allow
boe_1	Any	boe_2	6415	Allow
boe_1	Any	boe_2	6420	Allow
boe_1	Any	boe_2	6425	Allow
boe_1	Any	boe_3	6435	Allow
boe_1	Any	boe_3	6440	Allow
boe_1	Any	boe_3	6445	Allow
boe_1	Any	boe_3	6450	Allow
boe_1	Any	boe_3	6455	Allow
boe_1	Any	boe_3	6460	Allow
boe_1	Any	boe_3	6465	Allow
boe_1	Any	boe_3	6470	Allow

- This firewall is not NAT-enabled, so the hosts file does not need to be configured.

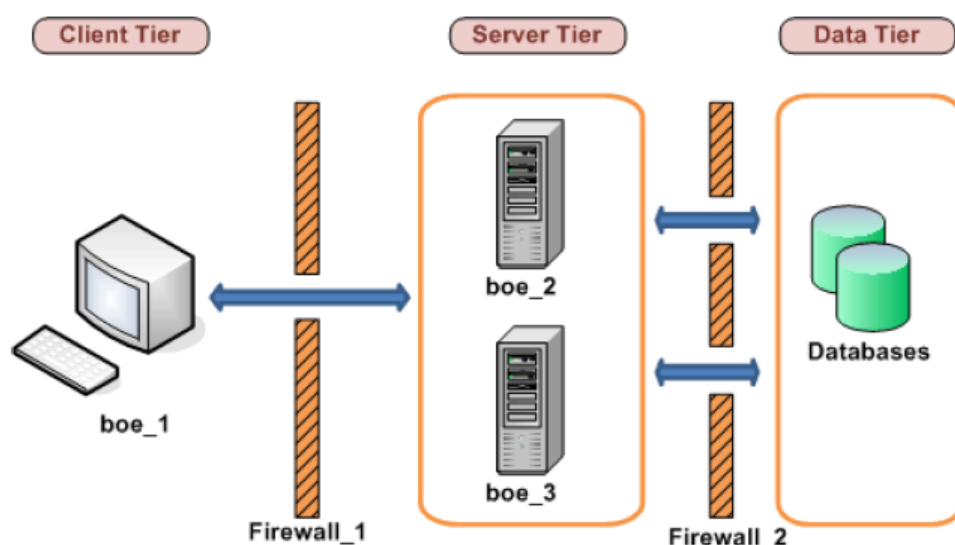
Example - Rich Client and Database Tier Separated From BusinessObjects Enterprise Servers by a Firewall

This example shows how to configure a firewall and BusinessObjects Enterprise to work together in a deployment scenario where:

- One firewall separates a rich client from BusinessObjects Enterprise servers.
- One firewall separates BusinessObjects Enterprise servers from the database tier.

In this example, BusinessObjects Enterprise components are deployed across these computers:

- Computer boe_1 hosts the Publishing Wizard. Publishing Wizard is a BusinessObjects Enterprise rich client.
- Computer boe_2 hosts the Intelligence tier servers, including the CMS, the Input File Repository Server, the Output File Repository Server, and the Event server.
- Computer boe_3 hosts the Processing tier servers, including: Crystal Reports Job Server, Program Job Server, Destination Job Server, List of Values Job Server, Web Intelligence Job Server, Web Intelligence Report Server, Report Application Server, and the Crystal Reports Page Server.
- Computer Databases hosts the CMS database and the reporting database. Notice that you can deploy both databases on the same database server, or you can deploy each database on its own database server. In this example, both the CMS database and the reporting database are deployed on the same database server. The database server listen port is 2638, which is the default listen port for the SQL Anywhere server.



Configure Tiers Separated from BusinessObjects Enterprise Servers by a Firewall

To configure tiers separated from BusinessObjects Enterprise servers by a firewall

1. Apply the following communication requirements to this example:
 - The Publishing Wizard must be able to initiate communication with the CMS on both of its ports.
 - The Publishing Wizard must be able to initiate communication with the Input File Repository Server and the Output File Repository Server.
 - The Connection Server, every Job Server child process, and every Processing Server must have access to the listen port on the reporting database server.
 - The CMS must have access to the database listen port on the CMS database server.
2. Configure a specific port for the CMS, the Input FRS, and the Output FRS. Note that you can use any free port between 1,025 and 65,535.

The port numbers chosen for this example are listed here:

Central Management Server

6411

Input File Repository Server

6415

Output File Repository Server

6416

3. We do not need to configure a port range for the Job Server children because the firewall between the job servers and the database servers is configured to allow any port to initiate communication.
4. Configure Firewall_1 to allow communication to the fixed ports on the BusinessObjects Enterprise servers that you configured in the previous step. Note that port 6400 is the default port number for the CMS Name Server Port and did not need to be explicitly configured in the previous step.

Port	Destination Computer	Port	Action
Any	boe_2	6400	Allow
Any	boe_2	6411	Allow

Port	Destination Computer	Port	Action
Any	boe_2	6415	Allow
Any	boe_2	6416	Allow

Configure Firewall_2 to allow communication to the database server listen port. The CMS (on boe_2) must have access to the CMS database and the Job Servers (on boe_3) must have access to the reporting database. Note that we did not have configure a port range for job server child processes because their communication with the CMS did not cross a firewall.

Source Computer	Port	Destination Computer	Port	Action
boe_2	Any	Databases	3306	Allow
boe_3	Any	Databases	3306	Allow

- This firewall is not NAT-enabled, so the hosts file does not need to be configured.

Chapter 18: Uninstall CA Business Intelligence

This section contains the following topics:

[Windows](#) (see page 353)

[UNIX](#) (see page 354)

[Uninstall a Previous Version of CA Business Intelligence](#) (see page 358)

Windows

To uninstall CA Business Intelligence from Windows

1. Click Start, Settings, Control Panel, Add or Remove Programs.
2. Select CA Business Intelligence 3.x from the list of programs and click Change/Remove.

The CA Business Intelligence uninstaller displays.

Note: If CA Business Intelligence 3.x was installed through a silent installation, then skip step 3 and 5.

3. Click Uninstall.

The uninstallation process begins.

4. Click Done once the uninstallation completes.

5. Verify the following:

- All the shortcut menu items related to CA Business Intelligence or BusinessObjects Enterprise are removed from the Start, Programs menu.
- You cannot log in to the CMC or InfoView.

Note: After a successful uninstallation, the Commonreporting3 folder remains in the installation directory.

Uninstall a Fix Pack/Service Pack from Windows

The proper way to uninstall a fix pack/service pack from CA Business Intelligence is to use the biekpatch utility.

To locate the patches installed on your system, open the biek.properties file located in `<INSTALLDIR>\CommonReporting3`, and find the [Patches] section. It contains the list of patches have been installed. For example:

```
[Patches]
Level=1
Patches=1
Patch1=FP1_5
```

To uninstall a fix pack/service pack from Windows

1. Navigate to the biekpatch utility:
`<INSTALLDIR>/Uninstall CA Business Intelligence`
2. From a DOS prompt, run:
`biekpatch -u <patch_name>`
The specific fix pack/service pack is uninstalled.

To uninstall all the fix packs/service packs for the installation

1. Navigate to the biekpatch utility:
`<INSTALLDIR>/Uninstall CA Business Intelligence`
2. From a DOS prompt, run:
`biekpatch -u ALL`
All the fix packs/service packs are uninstalled.

UNIX

To uninstall CA Business Intelligence from UNIX through the console

1. Navigate to the installation location.
2. Run:
`./Uninstall_CA_Business_Intelligence`
3. Select to uninstall the full installation.

4. Select the Remove option, then press Enter, to proceed with the uninstallation.
The uninstallation proceeds.
5. Verify the following:
 - All folders inside the parent directory should be deleted.
 - You cannot log in to the CMC or InfoView.

Manual Uninstallation

Important! Attempting to uninstall BusinessObjects Enterprise manually is not recommended as it can result in instability of other CA Technologies products. A manual uninstallation can invalidate the reference counting used to keep BusinessObjects Enterprise from being uninstalled prematurely. Only use this uninstallation procedure if you have terminated the installation process and you want to clean the computer for the next successful installation.

To manually remove CA Business Intelligence from UNIX

1. To manually uninstall BusinessObjects Enterprise, you must stop all of its associated processes. This can be accomplished by rebooting the computer.

Or, the BusinessObjects Enterprise processes can be stopped manually.

If two versions of BusinessObjects Enterprise are installed on a computer, and you want to view the associated processes for both, run:

```
ps -ef |grep bobje
```

If you want to view the processes for just CA Business Intelligence r3.2 (BusinessObjects Enterprise XI 3.1), run:

```
ps -aef |grep CommonReporting3
```

To kill the associated processes, run:

```
kill -9 <process id>
```

2. Delete the CommonReporting3 folder. Run:

```
$ cd $CASHCOMP  
$ rm -rf CommonReporting3
```

3. Go to /var and delete the hidden file .com.zerog.registry.xml. Run:

```
$ cd /var  
Command>> rm -rf .com.zerog.registry.xml
```

4. Navigate to the /tmp folder and delete all CA Business Intelligence-related log files.

Note: This step is not mandatory, as the next installation will overwrite all the files.

5. Navigate to the *<installer media>/Disk1/InstData/VM* folder and delete the *installer.properties* file (if present). Run:

```
Command>> cd <installer media>/ Disk1/InstData/VM
Command>> rm -rf installer.properties
```

6. Navigate to the BusinessObjects Enterprise user home directory, then delete any BusinessObjects Enterprise-related files inside of it.

Manually Remove Files Left After Uninstallation on UNIX

On UNIX, installation of BusinessObjects Enterprise adds root-level initialization scripts in the *etc* directory. After an uninstallation, you must remove these scripts manually. Otherwise, for subsequent user installations on the same computer, these scripts are invoked and the servers are automatically started each time the computer is rebooted, which is a feature of the system installation and not normal user installation.

Browse to the *etc* directory and search for files that contain the name "BobjEnterprise120" and delete them:

```
$ cd /etc
$ grep -R BobjEnterprise120*
```

For a typical system installation on Linux, the following sample file list results from the *grep* command.

Note: These files may vary from platform to platform.

```
init.d/BobjEnterprise120:
rc0.d/K01BobjEnterprise120
rc1.d/K01BobjEnterprise120:
rc2.d/K01BobjEnterprise120:
rc3.d/S99BobjEnterprise120:
rc4.d/K01BobjEnterprise120
rc5.d/S99BobjEnterprise120
rc6.d/K01BobjEnterprise120:
rc.d/rc6.d/K01BobjEnterprise120:
rc.d/rc3.d/S99BobjEnterprise120
rc.d/rc4.d/K01BobjEnterprise120:
rc.d/rc0.d/K01BobjEnterprise120:
rc.d/init.d/BobjEnterprise120:
rc.d/rc2.d/K01BobjEnterprise120:
rc.d/rc5.d/S99BobjEnterprise120:
rc.d/rc1.d/K01BobjEnterprise120:
```

Uninstall a Fix Pack/Service Pack from UNIX

The proper way to uninstall a fix pack/service pack from CA Business Intelligence is to use the `biekpatch` utility.

To locate the patches installed on your system, open the `biek.properties` file located in `<INSTALLDIR>\CommonReporting3`, and find the `[Patches]` section. It contains the list of patches have been installed. For example:

```
[Patches]
Level=1
Patches=1
Patch1=FP1_5
```

To uninstall a fix pack/service pack from UNIX

1. Navigate to the `biekpatch` utility:
`<INSTALLDIR>/Uninstall`
2. Run the following command:
`biekpatch -u <patch_name>`
The BusinessObjects Enterprise installer displays.
3. Select the fix pack/service pack that you want to uninstall.

To uninstall all the fix packs/service packs for the installation from UNIX

1. Navigate to the `biekpatch` utility:
`<INSTALLDIR>/Uninstall`
2. Run the following command:
`biekpatch -u <patch_name | ALL>`
The BusinessObjects Enterprise installer displays.
3. Select the fix packs/service packs to uninstall in the reverse order that they were installed.

Uninstall a Previous Version of CA Business Intelligence

Uninstall CA Business Intelligence 2.x from Windows

Do not use the CA Business Intelligence installer to uninstall a previous version of BusinessObjects Enterprise. After you have completed the CA Business Intelligence r3.3 installation, use Add/Remove Programs in Windows to remove the previous version to ensure a clean uninstallation.

To uninstall CA Business Intelligence 2.x from Windows

1. Click Start, Settings, Control Panel, Add or Remove Programs.
2. Select CA Business Intelligence from the list of programs, then click Change/Remove.

Note: If CA Business Intelligence 2.x was installed through a silent installation, then skip steps 3, 4, and 6.

3. The CA Business Intelligence uninstaller begins. Click Next.
4. Select Complete Uninstall option, then click Next.
5. The uninstall process begins.

Note: If CA Business Intelligence 2.x was installed through a silent installation, then you can use the Task Manager to monitor the uninstall process. If there is no more msixec process running, then the uninstallation is complete.

6. Click Done once the uninstallation completes.

Note: Do not manually delete or remove any of the directories or files from the previous installation of CA Business Intelligence. The uninstallation process does not remove the file repository; instead, the previously installed file repository is used for the upgrade installation. For example, if you install CA Business Intelligence in the default directory, the files and directory under the Program Files\CA\Sc\commonReporting directory cannot be removed after the uninstallation is complete.

Uninstall CA Business Intelligence 2.x from UNIX

If you installed BusinessObjects Enterprise XI 3 in a side-by-side deployment with a previous version of BusinessObjects Enterprise, the previous version is still running.

Note: The following features are uninstalled:

- The contents of your XI Release 2 File Repository Servers
- CMS database tables
- Auditing database tables

To uninstall the previous version of CA Business Intelligence on UNIX

1. Navigate to the installation location.
2. From the \$CASHCOMP/CommonReporting3/Uninstall folder, invoke the following command:

```
./Uninstall_CA_Business_Intelligence
```

3. Provide the Administrator password and database details for the previous installation, then press Enter.

The uninstallation proceeds.

4. Once the uninstallation is complete, verify that:
 - Version.txt, biek.properties, and patch.properties files no longer exist in <INSTALLDIR>/CommonReporting
 - <INSTALLDIR>/CommonReporting/bobje/serverpids is empty
5. To view any of the remaining processes that are associated with CA Business Intelligence 2.x, run:

```
ps -aef |grep CommonReporting\[^3]
```

The 2.x processes are listed; you can then kill any of the 2.x processes.

Appendix A: Sample Deployment: Install BusinessObjects Enterprise Using CA Business Intelligence on Windows with SQL Anywhere

The following step-by-step instructions describe how to install CA Business Intelligence using the default SQL Anywhere database and the WebSphere application server.

This section provides all necessary configuration steps for installing CA Business Intelligence when an application server other than the default Tomcat is used. Skip the installation steps for WebSphere if this application server is already installed in your environment.

See the *Supported Platforms* documents on the DVD for detailed information about all of the supported versions of WebSphere.

System prerequisites for the installation include the Microsoft Windows 2003 Server Enterprise Edition SP1 operating system and the IBM WebSphere Application Server Version 6.1 Fix Pack 7.

This section contains the following topics:

[WebSphere Version 6.1.0.7](#) (see page 361)

[Install CA Business Intelligence Using WebSphere 6.1.0.7 and the Default SQL Anywhere Database](#) (see page 365)

WebSphere Version 6.1.0.7

IBM WebSphere Application Server Version 6.1 Fix Pack 7 for Microsoft Windows is the web application server being installed in this deployment scenario.

WebSphere 6.1.0.7 is not available for download as a single package; to use version 6.1.0.7, you must install version 6.1 and update the install with Fix Pack 7.

Install WebSphere Application Server Version 6.1

To install WebSphere Application Server Version 6.1

1. Obtain WebSphere Application Server V6.1 for Windows 2000, Windows Server 2003, 32-bit installer image and extract it to a temporary location.
2. Navigate to the extracted content.
3. Under the WAS folder, run:

```
install.exe
```

The IBM WebSphere Application Server install wizard begins.

4. Click Next.
5. Check whether your system meets the prerequisites.
If the prerequisites check result is Failed, install the required operating system patches/fixes to ensure that the system is ready for setup.
6. Specify an installation directory with enough disk space, then click Next.
7. Click the Enable administrative security check box.
Note: BusinessObjects Enterprise does not allow its application to be deployed on WebSphere if administrative security is not enabled.
8. Enter the administrator User name and Password, then click Next.
9. Click Next to proceed with the installation.
Once the installation is complete, the First steps utility displays.

- Click the Installation verification link in the First steps utility to verify the successful install.

The result of the install verification displays as follows:



```

>
>ADMU0128I: Starting tool with the AppSrv01 profile
>
>ADMU3100I: Reading configuration for server: server1
>
>ADMU3200I: Server launched. Waiting for initialization status.
>
>ADMU3000I: Server server1 open for e-business; process id is 5800
>
IVTL0015I: WebSphere Application Server xxxxx.xx.com is running on port: 9080 for profile AppSrv01
Testing server using the following URL:http://xxxxx.xx.com:9080/ivtserver?parm2=ivtservlet
IVTL0050I: Servlet engine verification status: Passed
Testing server using the following URL:http://xxxxx.xx.com:9080/ivtserver?parm2=ivtAddition.jsp
IVTL0055I: JavaServer Pages files verification status: Passed
Testing server using the following URL:http://xxxxx.xx.com:9080/ivtserver?parm2=ivtejb
IVTL0060I: Enterprise bean verification status: Passed
IVTL0035I: The Installation Verification Tool is scanning the file C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\logs\server1\SystemOut.log for e
[3/30/09 9:10:42:921 EDT] 0000000a WSKeyStore W CWPKI0041W: One or more key stores are using the default password.
[3/30/09 9:10:47:750 EDT] 0000000a ThreadPooMgr W WSVR0626W: The ThreadPool setting on the ObjectRequestBroker service is deprecated.
IVTL0040I: 2 errors/warnings are detected in the file C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\logs\server1\SystemOut.log
IVTL0070I: The Installation Verification Tool verification succeeded.
IVTL0080I: The installation verification is complete.
  
```

Once the install is complete, you must upgrade from WebSphere version 6.1 to 6.1.0.7. To upgrade the existing WebSphere with Fix Pack 7, the upgrade installer must be installed on the computer (see the following section).

By default, the profile is created with the name server1. You can use the same profile or you can create another profile for BusinessObjects Enterprise application deployment.

Install the Upgrade Installer for WebSphere Application Server V6.1 Fix Pack 7

To install the upgrade installer for WebSphere Application Server Version 6.1 Fix Pack 7

- Obtain download.updii.61019.windows.ia32.zip (or the latest compatible update installer image) and extract to a temporary location.
- Navigate to the extracted content.
- Under the update installer folder, run:
`install.exe`
The install wizard begins.
- Click Next.
- Check whether your system meets the prerequisites.

If the prerequisites check result is Failed, install the required operating system patches/fixes to ensure that the system is ready for setup.

6. Specify an installation directory to install the update installer (preferably the same location where WebSphere is installed; for example: C:\Program Files\IBM\WebSphere\AppServer\).
7. After the install is complete, verify the successful install, then click Finish.

Install WebSphere Application Server V6.1 Fix Pack 7 with the Update Installer

Note: Ensure that you have stopped all WebSphere Application Server and related processes. The product to be updated must not be running while you apply maintenance. Also, ensure that you are using the latest version of the Update Installer program (6.1.0.19 in this case).

To install WebSphere Application Server V6.1 Fix Pack 7 with the Update Installer

1. Obtain the WebSphere Application Server V6.1 Fix Pack 7 installer package.
2. Rename the file from 6.1.0-WS-WAS-WinX32-FP0000007.pak.zip to 6.1.0-WS-WAS-WinX32-FP0000007.pak.
3. Place the file in the updateinstaller\maintenace folder (for example: C:\Program Files\IBM\WebSphere\UpdateInstaller\maintenace) if the install directory has not changed.
4. From the Update Installer directory, run:
`update.bat`
(for example: C:\Program Files\IBM\WebSphere\UpdateInstaller\).
5. Select the option Install maintenance package, then click Next.
6. Check the packages to install, then click Next.
7. Navigate to the Update Installer folder in the extracted files.
8. Run the following command:
`install.exe`
9. After the installation is complete (without any errors or warnings), click Finish to close the Update Installer.

By default, the application server profile is created as Node1, and the name as server1. You can create a different profile for CA Business Intelligence.

Install CA Business Intelligence Using WebSphere 6.1.0.7 and the Default SQL Anywhere Database

Note: Before you install CA Business Intelligence, verify that all [system requirements and prerequisites](#) (see page 36) are met.

To install CA Business Intelligence Using WebSphere 6.1.0.7 and the default SQL Anywhere database

1. If you are planning to install CA Business Intelligence on Windows Server 2003, install [Windows hotfix KB925336](#).
2. If you are running Query As A Web Service (QAAWS) from Business Objects, verify that .Net framework 2.0 is installed.
3. If you are installing from a DVD and the Windows Autoplay setting is enabled, the installer starts automatically. If Autoplay is not enabled, or you are installing from a hard drive, run cabiinstall.exe from the root directory of the CA Business Intelligence DVD.

Note: If CA Business Intelligence detects that BusinessObjects Enterprise XI 3.x is already installed on the computer, an error message displays. Click OK to exit the program. The installer program does not continue if it finds a pre-existing version of BusinessObjects Enterprise XI 3.x.

The Please Choose Setup Language screen displays.

4. Select English, then click OK.
5. Click Next at the Introduction screen.
6. Accept the CA Technologies License Agreement, then click Next.
7. Click Yes to install the sample Microsoft Access databases and reports or No to skip installing the samples, then click Next.
8. If you want to save the CA Business Intelligence response file, click Yes and enter the directory where you want to create the response file, then click Next.

The default locations are:

- For Windows 32-bit computers: C:\Program Files\CA\SC\CommonReporting3
- For x64 computers: C:\Program Files X(86)\CA\SC\CommonReporting3

9. Click Install at the Review Settings screen.

The CA Business Intelligence installation wizard begins.

10. At the CA Business Intelligence installer's Welcome screen, click Next to proceed with the installation.
11. Accept the BusinessObjects Enterprise License Agreement, then click OK.

The Choose Language Packs screen displays.

12. Select the language packs you want to install.

Note: The setup program uses this setting for the duration of the installation. You can select the languages that you want to install on your new BusinessObjects Enterprise server later.

13. Click Next.

The Install Type screen displays.

14. Click New.

15. Click Install SQL Anywhere Database Server.

This option enables CA Business Intelligence to install a new copy of the SQL Anywhere database.

16. Select the Enable servers upon installation check box if you want to launch BusinessObjects Enterprise when the installation process finishes. If you do not select this option, enable and run the BusinessObjects Enterprise application server manually from the CCM after installation.

17. Specify where to install the BusinessObjects Enterprise components in the Destination Folder field (ensure that enough disk space is available).

The defaults are:

- C:\Program Files\CA\Sc\CommonReporting3 (for 32-bit computers)
- C:\Program Files X(86)\CA\Sc\CommonReporting3 (for x64 computers)

18. Click Next to continue with the installation.

The Server Components Configuration screen displays.

19. Specify a port number in the CMS port field.

The default CMS port number is 6400.

The CMS communicates with other BusinessObjects Enterprise servers through the specified port.

Note: If the port you specified is unavailable or already used by some other service, you are asked to specify another port number.

20. Specify a password for the CMS administrator account in the Password and Confirm password fields.

Note: Select the Configure the BusinessObjects Enterprise Administrator password at a later time check box if you want to configure the Administrator password after the installation is complete. If you select this option, log in to the CMC with a blank password the first time to change the Administrator password.

21. Click Next to continue with the installation.

The Server Intelligence Agent screen displays.

Note: If the port you specified in step 19 is unavailable or already used by some other service, you are asked to specify another port number.

22. Provide a unique name to identify the SIA node in the Node Name field. By default, the node name is same as the system host name.

Note: Do not use spaces or nonalphanumeric characters in a SIA node name.

23. Specify a port number for the SIA in the Port field (the default is 6410). The SIA uses this port to communicate with the CMS.

24. Click Next to continue with the installation. Once the SIA information is entered, the port number is validated before you can proceed to configure the CMS database for your installation. A warning displays if the port you specified is not available.

The SQL Anywhere Database Server Configuration screen displays.

25. Specify the port number for the SQL Anywhere database server in the SQL Anywhere Port Number field. The default port number is 2638. Use this number unless the port is unavailable.

26. Specify the Data Source Name. The default name is BOE120. An ODBC DSN connection is created with this name.

27. Specify and confirm a password for the SQL Anywhere DBA user account in the SQL Anywhere DBA User Account area.

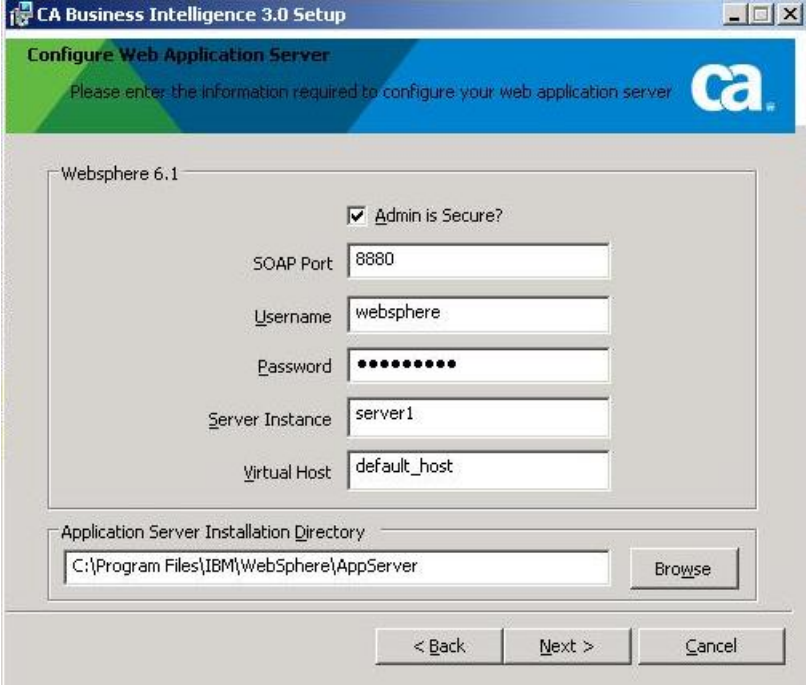
28. Confirm the user name and provide a password for the SQL Anywhere BusinessObjects database user account in the SQL Anywhere BusinessObjects User Account area.

29. Click Next.

The Select Web Application Server screen displays.

- 30. Select the WebSphere 6.1 web application server from the drop-down list, then click Next.

The Configure Web Application Server screen displays.



- 31. Select the Admin is Secure check box if you selected the option Enable administrative security during the WebSphere installation. This selection enables security requiring administrative access credentials to the application.

- 32. Enter the SOAP connector port for WebSphere (the default port is 8880).

To identify the SOAP Connector Port for WebSphere:

- a. Open the WebSphere administrative console (<https://localhost:9043/ibm/console/logon.jsp>).
- b. Log in to the application server with the Administrative user name and password.
- c. Enter the Password for the account with administration rights to the application server.
- d. Go to Servers, Application Servers, then click the application server profile which you want to use for the deployment (for example, server1).
- e. Under Communications, Ports, you can view the SOAP connector port that is assigned to the particular application server node.

33. Enter the WebSphere application server profile (server1) administrative Username and Password.
34. Enter the WebSphere application server profile name (server1, if you are using the default profile that WebSphere created and you have not changed the name) in the Server Instance field.
35. Enter the Virtual Host name (default_host or admin_host).
 - If you use default_host, your CMC/InfoView applications are deployed on port # 9060.
 - If you use admin_host, your CMC/InfoView applications are deployed on port # 9080.
36. Enter the installation location of WebSphere, then click Next.
37. Click Next to start the installation.
38. Once the installation is complete, the installation completion message displays. Click Done to finish the installation process.

More information:

[Log in to the CMC](#) (see page 196)

Appendix B: Sample Deployment: Install CA Business Intelligence on UNIX Using Oracle

The following step-by-step instructions describe how to install CA Business Intelligence using the Oracle 10g database 10.2.0.

This section provides all necessary configuration steps for installing CA Business Intelligence when a database other than the default SQL Anywhere is used for the CMS. Skip the installation steps for the Oracle if this database is already installed in your environment.

See the *Supported Platforms* documents on the DVD for detailed information about all of the supported versions of Oracle.

System prerequisites for the installation include the Red Hat Enterprise Linux AS release 4 (Nahant Update 2) operating system.

This section contains the following topics:

[Locale Installation Check](#) (see page 371)

[Disk Space](#) (see page 372)

[Create a CA Business Intelligence User and Group](#) (see page 372)

[Oracle 10g](#) (see page 372)

[Install CA Business Intelligence with Oracle 10g and Tomcat](#) (see page 377)

Locale Installation Check

In order to install BusinessObjects Enterprise on a Linux platform, the en_US.utf8 language locale is required. If it is not installed, this locale package can be found on the operation system installation disk.

To verify that the locales are installed, run:

```
$ locale -a | grep en_US.utf8
```

To set locale variables LC_ALL and LANG, run:

```
$ export LANG=en_US.utf8
$ export LC_ALL=en_US.utf8
```

To check that that all locale variables are set properly, run:

```
$ locale
```

The output should be:

```
LANG=en_US.utf8
LC_CTYPE="en_US.utf8"
LC_NUMERIC="en_US.utf8"
LC_TIME="en_US.utf8"
LC_COLLATE="en_US.utf8"
LC_MONETARY="en_US.utf8"
LC_MESSAGES="en_US.utf8"
LC_PAPER="en_US.utf8"
LC_NAME="en_US.utf8"
LC_ADDRESS="en_US.utf8"
LC_TELEPHONE="en_US.utf8"
LC_MEASUREMENT="en_US.utf8"
LC_IDENTIFICATION="en_US.utf8"
LC_ALL=en_US.utf8
```

Disk Space

See System Requirements to ensure that the proper amount of disk space is available on your computer. The minimum of required disk space is approximately 6-7 GB.

Verify the free disk space by using the following command:

```
$ df -h
```

Create a CA Business Intelligence User and Group

To create a UNIX group (for example: bobje) to be used by the CA Business Intelligence installer for administrators, run:

```
$ groupadd -g 400 bobje
```

To create a UNIX user (for example: bobje) to be used by the CA Business Intelligence installer for administrators, run:

```
$ mkdir /home/bobje
$ useradd -d /home/bobje -g bobje bobje
$ passwd bobje
$ chown -R bobje:bobje /home/bobje
```

Oracle 10g

These detailed steps must be followed for successful installation of Oracle 10g (Oracle 10g Database 10.2.0) server on all Linux platforms that support it.

Prerequisites

Before installing Oracle 10g on Linux, certain prerequisites must be followed.

Check Hardware Requirements

To check the amount of RAM and swap space available, run:

```
$ grep MemTotal /proc/meminfo
$ grep SwapTotal /proc/meminfo
```

The minimum RAM required is 1024MB, and the minimum required swap space is 1GB.

It is recommended swap space be:

- Twice the amount of RAM for systems with 2GB of RAM or less.
- Between one and two times the amount of RAM for systems with more than 2GB.

You also need the following:

- 2.5GB of available disk space for the Oracle Database 10g Release 2 software
- 1.2GB for the database
- At least 400MB of free space for the /tmp directory.

To check the available disk space on your system, run:

```
$ df -h
```

Check Operating System Software Requirements

To determine if you are using the correct system executables, run:

```
$ /usr/bin/which make
$ /usr/bin/which ar
$ /usr/bin/which ld
$ /usr/bin/which nm
```

Each of the four previous commands should point to the /usr/bin directory. If not, add /usr/bin to the beginning of the PATH environment variable in the current shell.

Set up Kernel Parameters

Unlike most other *NIX systems, Linux allows modification of most kernel parameters while the system is up and running. There is no need to reboot the system after making kernel parameter changes.

Oracle Database 10g Release 2 requires the following kernel parameter settings. The values given are minimums, so if your system uses a larger value, do not change it.

To set up kernel parameters, add these lines at the end of the file `/etc/sysctl.conf` if they are not present:

```
kernel.shmall = 2097152
kernel.shmmax = 536870912
kernel.shmni = 4096
kernel.sem = 250 32000 100 128
fs.file-max = 65536
net.ipv4.ip_local_port_range = 1024 65000
net.core.rmem_default=262144
net.core.wmem_default=262144
net.core.rmem_max=262144
net.core.wmem_max=262144
```

Create an Oracle User and Group

The next step is to create the Linux groups and user account that will be used to install and maintain the Oracle Database 10g Release 2 software. Use the following names:

- User account: oracle
- Groups: oinstall and dba

To create the Oracle user and group, execute the following commands as root:

```
$ /usr/sbin/groupadd oinstall
$ /usr/sbin/groupadd dba
$ /usr/sbin/useradd -m -g oinstall -G dba oracle
$ id oracle
uid=501(oracle) gid=502(oinstall) groups=502(oinstall),503(dba)
$ passwd oracle
```

Create Directories

Directories are created to store the Oracle Database 10g Release 2 software and the database files.

The following command assumes that the directories are being created in the root file system. This is done for the sake of simplicity and is not recommended as a general practice (these directories would normally be created as separate file systems).

To create directories, issue the following commands as root:

```
$ mkdir -p /u01/app/oracle
$ chown -R oracle:oinstall /u01/app/oracle
$ chmod -R 775 /u01/app/oracle
```

Uninstall Any Previous Versions of CA Business Intelligence

See [Uninstall a Previous Version of CA Business Intelligence](#) (see page 358) for instructions on how to uninstall any previous versions of CA Business Intelligence from your computer.

Note: If you do not know the previous BusinessObjects Enterprise installation details, or the previous installation gets corrupted, then you may need to remove it manually.

Install Oracle

To install Oracle 10g 10.2.0.1.0

1. After downloading the installation files, unzip them to a folder.
2. Run:

```
$ unzip 10201_database_linux32.zip
$ cd database
```

A database folder is created.
3. Before running the Oracle installer, log in as root and update the Oracle permissions to the Oracle home directory.
4. To begin the Oracle installer, run:

```
$ DISPLAY=<Any X-Window Host>:0.0
$ export DISPLAY
$ ./runInstaller
```

The installer begins.
5. The Select Installation Method screen displays.
6. Click Basic Installation.
7. Change the Oracle Home Location to the UNIX directory where you want Oracle to be installed.
8. Create a default database by creating a database password.
9. Click Next.
The Product-Specific Prerequisites Checks screen displays.
10. Run the checks. You must manually verify and confirm the items that are flagged with warnings and items that require manual checks.
Note: Generally, the Home Path check fails if ORACLE_HOME is not set.
11. Click Next.
The Summary screen displays.

12. Click Install to install Oracle 10g 10.2.0.1.0.
13. After installation, update the following Oracle system parameters in the file `/etc/profile`:
 - `ORACLE_HOME` (set to oracle home directory)
 - `ORACLE_SID` (set to default oracle database)
 - `PATH` (add `$ORACLE_HOME/bin`)

Install Oracle Client

To install Oracle Client 10.2.0.1

1. After downloading the installation files, unzip them to a folder.
2. Run:

```
$ unzip 10201_client_linux32.zip
$ cd client
```

A client folder is created.
3. To begin the Oracle Client installer, run:

```
$ DISPLAY=<<Any X-Window Host>>:0.0
$ export DISPLAY
$ ./runInstaller
```

The installer begins.
4. On the Select Installation Method screen, click Administration.
5. Change the Oracle Home Location to the UNIX directory where you want Oracle to be installed, then click Next.
The Summary screen displays.
6. Click Install to install Oracle client 10.2.0.1.0.
7. After installation, update the following Oracle system parameters in the file `/etc/profile`:

```
LD_LIBRARY_PATH (set it to $ORACLE_HOME/lib)
```


Create a Database

To create a CMS or audit database

1. Run:

```
$ DISPLAY=<Any X-Window Host>:0.0
$ export DISPLAY
$ cd $ORACLE_HOME/bin
$ ./dbca
```
2. Provide the SID name and password.
3. Select the utf8 character set, then click Next.
The Summary screen displays.
4. Click Install to install the database.

Create a User

After installing Oracle and the Oracle Client, you must create a database user and provide credentials.

To create a user

1. Log in to the new Oracle database through SQLPLUS using "system" as the user and a password that you provided when creating the database.
2. Create a user.
For example, create the user cabi.
For SQL, create user cabi (identified by cabi).
3. Grant permission to the user for dba and sysdba.
For example, for SQL, grant dba,sysdba to cabi.

Install CA Business Intelligence with Oracle 10g and Tomcat

Before you run the CA Business Intelligence installation:

- Verify that all system requirements are met.
- Before installing CA Business Intelligence with Oracle 10g and Tomcat, provide Write permission to the bobje user in the oracle directory.

- Set the following variables before you invoke the CA Business Intelligence installer:
 - ORACLE_HOME. Points to the Oracle installation directory (for example, /opt/oracle/products/10.2.0/client_1).
 - PATH. Set this variable as follows:
Export PATH=\$PATH:\$ORACLE_HOME/bin
 - LD_LIBRARY_PATH. Set this variable as follows:
Export LD_LIBRARY_PATH=\$LD_LIBRARY_PATH:\$ORACLE_HOME/lib
Note: If the Oracle client is 64 bit, the library path must point to lib32.
- Ensure that you are able to connect to the Oracle database using SQLPLUS.

Set the Locale

Set the locale to en_US.utf8 (or whatever is supported, depending on the platform).

Run:

```
$ export LC_ALL=en_US.utf8
$ export LANG=en_US.utf8
```

Run the CA Business Intelligence Installer

The following steps document a console installation.

To run the CA Business Intelligence installer

1. Start the installer. Run:
\$./cabiinstall.sh
2. Enter Y to accept the license agreement.
3. Enter:
 - Username: bobje
 - Password: bobje
4. Enter Yes to Install sample database and templates.
5. Enter Yes to save the response file.
6. Press Enter to save it at the default location, or provide a custom location.
7. Select your preferred installation language.
8. Enter the installation directory.

9. Select ENGLISH for the language packs that you want to install.
10. Select User - Regular BusinessObjects Enterprise installation.
11. Select New (Install a new Enterprise system).
12. Provide an Administrative password, then confirm it.
13. Change the CMS port if you do not want to install it on the default port 6400.
14. Select Use an existing database (Oracle/DB2/Sybase/MySQL/SQL Anywhere).
15. Select Oracle as the Database.
16. Provide the TNS name, Username and Password.
17. Enter a name for the Server Intelligence Agent Node (for example, cabi123). Use the default port 6410.
18. Select Install Tomcat, deploy web applications, then press Enter.
Important! Use the Enter key to select this option (do not enter the number 1).
19. Accept the default port. If a message indicates that the port is in use, change the port.
20. Press Enter to accept the installation directory.
The installation begins.
21. After the BusinessObjects Enterprise installation is complete, press Enter to exit.

Appendix C: Complex Installation

The following sections provide information relating to more complex configurations of BusinessObjects Enterprise.

This section contains the following topics:

[Deploy Web Applications Using the wdeploy Tool](#) (see page 381)

[Web Servers](#) (see page 382)

[Failover and Load Balancing](#) (see page 382)

[Multi-Homed Environment](#) (see page 383)

[Security](#) (see page 383)

[IPv6 Networking](#) (see page 384)

[Performance and Scalability](#) (see page 385)

[Design for High Availability](#) (see page 386)

Deploy Web Applications Using the wdeploy Tool

There are two different ways to deploy web applications using the wdeploy tool:

1. Standalone mode

All web application resources are deployed together on a web application server that serves both dynamic and static content.

2. Split mode

The application's dynamic and static resources are separated: static content is deployed to a web server; dynamic content is deployed to a web application server. Supported split combinations for BusinessObjects Enterprise:

- Apache HTTP Server 2.2 and Tomcat 5.5
- Apache HTTP Server 2.2 and WebLogic 9.2 MP2 or 10
- IBM HTTP Server 6.1 and WebSphere 6.1.07
- iPlanet and Sun Java Application Server 8.2

When deploying to a WebLogic and WebSphere web application server, the following points must be considered.

Web Application Server	Considerations
WebLogic	Minimum 1.5 gigabytes of free space on install partition used to hold /tmp or the user-defined temporary directory, with a minimum of one gigabyte of free disk space on the install partition (WebLogic 9) or two gigabytes for WebLogic 10. Also recommended to have one gigabyte of RAM (minimum: 512 MB).
WebSphere	It is recommended that you have at least 1.2 gigabytes of free space on the partition used to hold /tmp or the user-defined temporary directory specified by your TMPDIR environment variable. Also recommended to have one gigabyte of RAM (minimum: 512 MB).

Web Servers

Although web application servers come with built-in web server functionality, BusinessObjects Enterprise also supports the separation of web and web application servers into a de-paired configuration. In a de-paired configuration, the web server serves static and cached content to offset a portion of the requests sent to the web application server. A web server may also support a reverse proxy configuration to improve site security.

The BusinessObjects Enterprise installer does not automatically deploy the InfoView or CMC web applications to a de-paired environment. Web application tools must be configured manually using the bundled wdeploy utility to split the static and dynamic content so that each can be separately deployed to the web and web application servers.

Failover and Load Balancing

BusinessObjects Enterprise supports the clustering of your web application server. Hardware or software load balancers can be used as the entry-point for the web application servers to ensure that the processing is evenly distributed among servers.

The following hardware load balancers are currently supported:

- Cisco Content Services Switches (CSS)
- Cisco Content Switching Modules (CSM)
- The F5 BIG-IP family of load balancers

The following persistence types are currently supported:

- Source IP address persistence
- Cookie persistence Insert mode (ArrowPoint Cookie)

Note: Web services applications are currently not supported with cookie persistence. The CMC application does not support session failover. However, InfoView is fault-tolerant, and does support session failover, so users do not notice if a cluster node fails.

Multi-Homed Environment

BusinessObjects Enterprise supports multi-homed environments, in which a server has two or more network addresses. This allows servers to be configured to receive requests from one network and transmit requests to another.

For example, an environment may have web application servers and database servers on separate subnets. The server tier can be configured to accept requests from the web application servers on one subnet (for example, 192.168.0.0), and transmit database requests to database servers on another (for example, 10.50.0.0). Multihomed environments use multiple physical or logical network cards.

Security

Your organization's security policies affect how you deploy BusinessObjects Enterprise on your network. Do you plan to use the system's built-in authentication, or do you need it to work with existing LDAP or Windows Active Directory (AD) authentication? You also need to decide how your [firewalls are configured](#) (see page 335), and if you plan to use a reverse proxy.

To protect against unauthorized access, the BusinessObjects Enterprise architecture supports features such as: SSL encryption, reverse proxies, single sign-on, resource access security, object rights, and LDAP or Windows AD authentication.

Additional information about security can be found in the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

More information:

[Firewalls](#) (see page 335)

Authentication

Authentication verifies the identity of a user who attempts to access the system. Assess how authentication is handled by your existing environment before deciding how to manage security within BusinessObjects Enterprise.

The current release supports these methods of authentication:

- BusinessObjects Enterprise authentication
- LDAP authentication
- Windows AD authentication
- Trusted Authentication

To use any of the third-party methods of authentication or Trusted Authentication, you must configure them before you use them with BusinessObjects Enterprise. For detailed instructions, see the Configuring third-party authentication section of the *BusinessObjects Enterprise Administrator's Guide* (http://help.sap.com/businessobject/product_guides/boexir31SP3/en/xi31_sp3_bip_admin_en.pdf).

For information about how to configure primary authentication or single sign-on, see the Security concepts section of the *BusinessObjects Enterprise Administrator's Guide*.

Firewalls

For detailed information about firewalls, see the chapter [Firewalls](#) (see page 335).

IPv6 Networking

Internet Protocol version 6 (IPv6) is supported in BusinessObjects Enterprise. If you are planning to deploy to an IPv6 network environment, verify that the IPv6 stack on all computers is enabled, verify IPv6-based network connectivity between all computers in the deployment, and verify that all DNS names resolve to IPv6 addresses.

Note: To verify IPv6 network connectivity and DNS name resolution, use the command `ping -6 <FULL_DNS_NAME>` on Windows computers, or `ping6<FULL_DNS_NAME>` on UNIX. The command pings the localhost.

If it does not ping the local host on UNIX, add an IPv6 entry in the `/etc/hosts` file of that computer as follows:

<code><IPv6 address></code>	<code><full qualified hostname></code>	<code><hostname></code>
<code>::1</code>	<code>localhost.localdomain</code>	<code>localhost</code>

For example:

```
fe##:##:###:##ff:fe##:ac##:## abc00##.eg.com      abc00##
##:ac#f

::1                localhost.localdomain    localhost
```

Choosing a host type

BusinessObjects Enterprise can run on IPv6-only hosts (with only an IPv6 stack enabled), IPv4-only hosts (only an IPv4 stack enabled), or mixed hosts (with both IPv6 and IPv4 stacks enabled). A host with both IPv4 and IPv6 enabled can accept and send both IPv4 and IPv6 traffic. A host using only IPv6 can only accept and send IPv6 traffic. Determine which network protocol and the host type best fits your needs before deploying BusinessObjects Enterprise.

Connecting to third party software products

If you plan to use third-party software products in a BusinessObjects Enterprise IPv6 deployment (such as a database or LDAP server), verify that the products are also IPv6-compliant. To run non-IPv6-compliant products in an IPv6 BusinessObjects Enterprise deployment, use a mixed IPv6/IPv4 host.

If you are going to transition an existing BusinessObjects Enterprise deployment to an IPv6-only environment, consider the following recommendations:

- Your third-party software must be fully IPv6-compliant. See the documentation from the third-party software vendor for more information.
- Until your system is transitioned to supporting IPv6-only traffic, BusinessObjects Enterprise server and client components should run in mixed IPv6/IPv4 mode.

Performance and Scalability

Before deciding how to deploy your system, consider whether the demand on the system may change after it has been installed. This could be an increase in the number of concurrent users, the volume of business data, report complexity, or any other factor that could cause your BusinessObjects Enterprise system requirements to change.

Anticipate these changes before you deploy to save you time and money by making architectural choices that support a scalable solution. For example, if you are expecting an increase in the number of concurrent users accessing your system, you may consider deploying a small three-node cluster that can be expanded to five-nodes when demand increases.

By monitoring and regularly reevaluating your system's performance, schedule tuning or configuration changes before potential issues become performance problems.

Split Web and Web Application Servers

You may choose to split your web and web application server into two servers, separated by a reverse proxy and firewall. This arrangement improves the performance of your web applications by off-loading static content from the web application server onto the web server, as well as shielding your web application servers behind several network layers for improved security.

Design for High Availability

High availability refers to a system that is almost always operational. When designing a system for high availability, consider how much down-time is acceptable for the system. To minimize time down, consider a combination of failover processing, server or server process redundancy, and frequent back-ups:

- Failover processing

If a BusinessObjects Enterprise service fails, a fault-tolerant system allows for continuous processing of system requests with no loss of service. To achieve this level of availability, you should provision duplicate BusinessObjects Enterprise services. For example, if a Web Intelligence Job Server process fails, the duplicate Web Intelligence Job Server process immediately takes its place.

- Server redundancy

A disaster recovery plan can minimize the effects of a disaster on an organization so you can maintain or quickly resume important system functions. It is good practice to keep the backup system at a different geographic location.

The BusinessObjects Enterprise disaster recovery plan involves implementing redundant servers that mirror the primary system. If the primary system goes down, a backup system is still available and becomes the production system.

- Frequent data backups

Regular and frequent backups provide an easy, cost-effective, and reliable method of protecting your valuable data. During a catastrophic system failure, the entire system can be quickly restored to the last backup point without the need to recreate a lot of data.

Note: When you back up your primary system, you must back up:

- The CMS system database
- The content of the Input and Output File Repository Servers
- The user ID and password for the Administrator account
- The application code from the Web Application Server
- The registry settings (if manual changes were made)

You may not have the resources to implement a high degree of availability, but you can use best practices to provide the best possible availability for your system. These include vertical scaling (adding redundant server processes to a system in case the primary server process fails) and maintaining a regular back-up schedule.

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