CA DataMinder

Reports Integration Guide

Release 14.5

CA Technologies Product References

This document references the following CA Technologies products:

- CA DataMinder
- CA Business Intelligence

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Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information that you need for your Home Office, Small Business, and Enterprise CA Technologies products. At http://ca.com/support, you can access the following resources:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
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Contents

Chapter 1: Introduction

This section contains the following topics:

BusinessObjects Reports for CA DataMinder

CA DataMinder can integrate with BusinessObjects Enterprise, allowing you to run and customize BusinessObjects reports for CA DataMinder.

Why Run BusinessObjects Reports?

CA DataMinder integration with BusinessObjects Enterprise has several advantages:

- A BusinessObjects report is generally faster than a corresponding standard CA DataMinder report. For example, the BusinessObjects version of the Issues By Status or Resolution report returns results much faster than the corresponding standard CA DataMinder report.
- BusinessObjects Enterprise is a leader in enterprise reporting systems. It enables users to create their own reports in a user-friendly interface and to specify the report output format (such as Excel or PDF). It also supports automated scheduling and distribution of reports.
- If you already use BusinessObjects Enterprise to run reports for other CA products such as SiteMinder or Identity Manager, your managers and administrators can use the BusinessObjects web portal, InfoView, to manage all their CA reports, including CA DataMinder reports, in a single customizable web interface.

How Do Users Run BusinessObjects Reports for CA DataMinder?

You can access BusinessObjects reports for CA DataMinder in the following ways:

- Directly from the iConsole. You can browse to CA DataMinder iConsole and run BusinessObjects reports directly from the Review tab.
- Launching InfoView from a link in the iConsole. You can then create, schedule and run CA DataMinder reports from the portal.
- Browsing directly to InfoView. As above, you can then create, schedule and run CA DataMinder reports from the portal.

Where Are Standard CA DataMinder Reports Described?

This guide only covers BusinessObjects reports for CA DataMinder. However, CA DataMinder also supports a series of standard iConsole reports. For details about the standard iConsole reports, see:

- *Platform Deployment Guide*

  The 'iConsole Standard Searches, Reports and Policies' chapter describes the available reports and includes installation instructions. This guide is aimed at administrators.

- *iConsole User Guide* and iConsole online help

  The 'Running Reports' sections describe how to run and customize the standard reports. This guide and the online help are aimed at reviewers.

Reporting Components

CA DataMinder integration with BusinessObjects Enterprise involves the components:

- CA Business Intelligence
- BusinessObjects Universe for CA DataMinder
- CA DataMinder Data Warehouse
- CA DataMinder BusinessObjects Integration Component

More information:

About CA Business Intelligence (see page 11)
About the BusinessObjects Universe (see page 11)
About the Data Warehouse (see page 12)
About the BusinessObjects Integration Component (see page 12)
About InfoView (see page 12)

About CA Business Intelligence

CA Business Intelligence is a set of reporting and analytic software that is utilized by a variety of CA Technologies products for the purposes of presenting information and supporting business decisions. CA Technologies products use CA Business Intelligence to integrate, analyze, and then present, through a variety of reporting options, vital information required for effective enterprise IT management.

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

Note: CA Business Intelligence 3.3 includes SAP BusinessObjects Enterprise XI 3.1 SP5, a suite of information management, reporting, and query and analysis tools.

About the BusinessObjects Universe

BusinessObjects reports for CA DataMinder are generated from source data in the CA DataMinder Central Management Server database. The connection between BusinessObjects Enterprise and the CA DataMinder Central Management Server database is provided through the BusinessObjects Universe.

A BusinessObjects Universe is a layer of metadata between the end user and the database containing the source data. A universe provides an abstracted, easy-to-understand view of the underlying database. It allows end users to design reports without understanding the technical complexities of the database. Also, because the universe only contains *read-only* metadata that maps to the source data, there is no risk that the source data can be inadvertently changed or deleted. The source data itself remains in the underlying database.

A universe is made up of *objects* that are mapped onto tables in a source database. Objects are displayed in the Universe interface. This interface provides an easy-to-understand representation of the source database. For example, object names use common business terms so that end users can easily understand them. End users can quickly create custom reports using drag-and-drop to select and organize the required objects. When a Universe object is used in a report, the Universe automatically sources the data from the correct underlying database column and adds any linkage necessary to join columns from different database tables.

For CA DataMinder, objects in the Universe are mapped onto tables in the CA DataMinder data warehouse. In the current release, the data warehouse is created within the CA DataMinder Central Management Server database.

About the Data Warehouse

The Data Warehouse is a set of database tables containing CA DataMinder event data that has been transformed into a format suitable for generating reports and iConsole dashboards.

For the current CA DataMinder release, the Data Warehouse tables are installed in the CA DataMinder Central Management Server database.

About the BusinessObjects Integration Component

The BOE Integration component enables the iConsole to log on to BusinessObjects Enterprise and retrieve available BusinessObjects reports for CA DataMinder. This feature also adds a hyperlink to the iConsole that links directly to your InfoView home page.

You install BOE Integration on your iConsole front-end web servers.

About InfoView

InfoView is the BusinessObjects web portal. InfoView enables you to manage all your BusinessObjects reports, including CA DataMinder reports, in a single personalizable web interface. You can: customize existing CA DataMinder reports; create new CA DataMinder reports based on the CA DataMinder Universe; and schedule CA DataMinder reports.

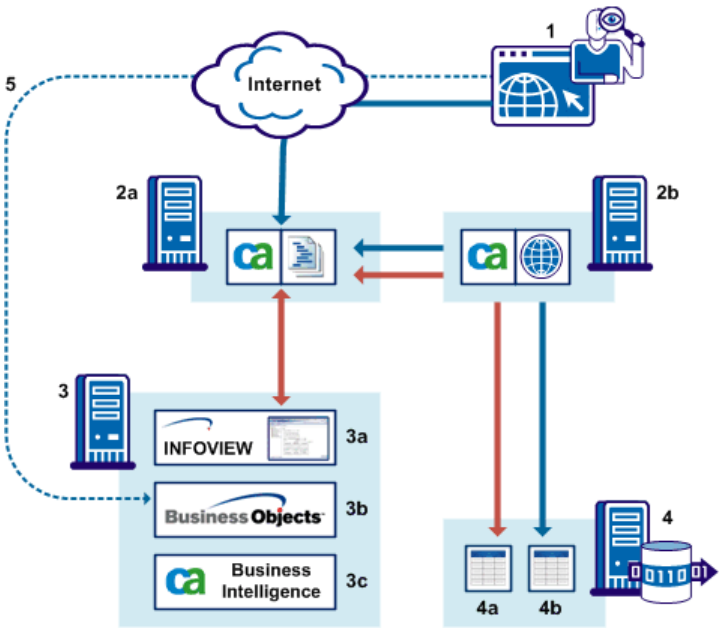
You can launch InfoView from the iConsole or you can browse to InfoView directly.

Deployment Architecture

CA DataMinder can integrate with BusinessObjects Enterprise. When integration is enabled, iConsole users can run BusinessObjects reports to view and understand activity detected by CA DataMinder.

Integration is provided through BusinessObjects Enterprise components on the iConsole front end web server and through CA components and BusinessObjects components on the reports server.

The diagram below shows an example integration.



A user logs on to the CA DataMinder iConsole (**1**). The iConsole URL points to the front-end Web server (**2a**).

The iConsole front-end web server (**2a**) generates the HTML for the iConsole's Review tab. This tab lists all the CA DataMinder reports and BusinessObjects Enterprise reports available to the user. It also displays a link to the BusinessObjects Enterprise portal, InfoView (**3a**). In order to display the BusinessObjects Enterprise reports and a link to InfoView, the front-end web server connects to BusinessObjects Enterprise (**3b**).

The front end server also connects to an iConsole application server (**2b**). The application server submits CA DataMinder standard reports to the CMS (**4**) and returns the results to the front-end web server.

For BusinessObjects reports, the application server submits report requests to BusinessObjects Enterprise (**3b**). BusinessObjects Enterprise directly queries the CA DataMinder CMS database (**4**) and renders the results. The results are displayed directly in the iConsole.

The reports server (**3**) hosts BusinessObjects Enterprise (**3b**). Compatibility with CA products is provided through CA Business Intelligence (**3c**). This is a wrapper that includes a BusinessObjects Enterprise installation. When you install CA Business Intelligence on this server, BusinessObjects Enterprise and its web portal, InfoView (**3a**), also get installed.

The CMS (**4**) services all report requests submitted by the iConsole application server. For BusinessObjects reports, BusinessObjects Enterprise queries a set of tables in the data warehouse (**4a**). For standard CA DataMinder reports, the CMS queries the normal set of user tables and event tables (**4b**).

Alternatively, a user can browse directly to the BusinessObjects Enterprise portal, InfoView (**5**). However, this means they must manually log in to BusinessObjects Enterprise. By contrast, if they launch the portal from the iConsole Review tab, single sign-on ensure that they do not need to separately log in to BusinessObjects Enterprise.

Reporting Process

When a reviewer runs an iConsole report, the reviewer's security model gets applied to the report. This ensures that the report only include events that the reviewer is permitted to see. All CA DataMinder users have a security model assigned to them.

But when a reviewer runs a BusinessObjects report for CA DataMinder, a BusinessObjects user runs the report. CA DataMinder therefore needs to map the correct security model to the BusinessObjects user. This section describes how CA DataMinder and BusinessObjects Enterprise interact to ensure that BusinessObjects reports always contain the correct information.

How do CA DataMinder and BusinessObjects Enterprise interact to generate reports?

1. A reviewer (in this example, *unipraxis**srimmel*) logs on to the iConsole.
2. The reviewer browses to the Review tab and runs a BusinessObjects report for CA DataMinder.
3. The iConsole logs on to BusinessObjects Enterprise.

   This logon is normally automatic. However, your reviewers may have to enter their BusinessObjects user name and password when they first run a BusinessObjects report. This requirement to enter BusinessObjects credentials depends on the method used to map CA DataMinder reviewers to BusinessObjects accounts and whether Trusted Authentication is enabled between BusinessObjects Enterprise and the iConsole.
4. BusinessObjects Enterprise connects to the CA DataMinder data warehouse using the Reporting User database account.
5. BusinessObjects Enterprise submits to CA DataMinder the database query associated with the report plus the reviewer's BusinessObjects logon name.
6. Before executing the database query, CA DataMinder runs an initialization routine to identify the reviewer.

   Specifically, CA DataMinder runs a stored procedure to map the reviewer's BusinessObjects account back to their CA DataMinder account.

7. The stored procedure returns the security model assigned to the reviewer's CA DataMinder account.

   Security models ensure that reviewers can only see events they are permitted to see when running CA DataMinder reports, including BusinessObjects reports for CA DataMinder. See the *Database Guide* for details about security models.

8. The Reporting User inherits the database views assigned to the Search User.

   In effect, CA DataMinder applies the reviewer's security model to the BusinessObjects report.

9. CA DataMinder executes the report query submitted by the Reporting User.

   The reviewer's security model ensures that the report only include events that the reviewer is permitted to see.

10. The report results are passed back to BusinessObjects Enterprise which performs any necessary processing (for example, generating charts).

    BusinessObjects Enterprise then displays the report in InfoView

Chapter 2: Deployment

This section contains the following topics:

How to Deploy BusinessObjects Enterprise Integration

Setting up CA DataMinder to integrate with BusinessObjects Enterprise involves the following steps. These steps are described in detail in the following sections.

1. **Consider the deployment and sizing guidelines**

   This guide contains useful guidelines to help size your BusinessObjects Enterprise server and CA DataMinder data warehouse. Read these guidelines before you start the deployment.

2. **Install CA Business Intelligence**

   The first deployment step depends on whether BusinessObjects Enterprise is already installed on your network.

   - If BusinessObjects Enterprise is *not* already installed, you must install CA Business Intelligence. When you install CA Business Intelligence, BusinessObjects Enterprise and its web portal, InfoView, also get installed.
   - If BusinessObjects Enterprise *is* already installed for use with other CA products, go directly to step 3.

3. **Install the CA DataMinder data warehouse**

   For the current CA DataMinder release, the Data Warehouse tables are installed in the CMS database.

4. **Install BOE Integration for the iConsole**

   Install this component on all of your iConsole front-end web servers.

   When you install this component, you must also supply a shared secret.

5. **Install the BusinessObjects Universe for CA DataMinder**

   The Universe enables your users to design complex CA DataMinder reports without understanding the technical complexities of the CA DataMinder database.

   Run InstallUniverse.bat to install the Universe. Find this file in the \BusinessObjects folder of your CA DataMinder distribution image.

6. **Map CA DataMinder Reviewers to BusinessObject Accounts**

   Trusted authentication between CA DataMinder and BusinessObjects Enterprise only works *if each iConsole reviewer has their own, unique BusinessObjects user account*. Therefore, after installing CA Business Intelligence, you must create a unique BusinessObjects account for each of your iConsole reviewers.

7. **Set up trusted authentication between the iConsole and BusinessObjects Enterprise**

   In step 5, you supplied the iConsole with a shared secret (that is, an authentication password). In step 6, you created unique BusinessObjects accounts for your iConsole reviewers. To complete the setup for trusted authentication, configure the BusinessObjects server to use the same shared secret.

8. **(Optional) Perform any required post-installation configuration tasks**

   You may need to set up BusinessObjects Enterprise auditing or make configuration changes to your Tomcat web application server.

Deployment Procedure

CA Business Intelligence (see page 25)
Data Warehouse (see page 38)
BOE Integration for the iConsole (see page 47)
BusinessObjects Universe (see page 50)
Map CA DataMinder Reviewers to BusinessObjects Accounts (see page 55)
Set up Trusted Authentication (see page 61)
Post-installation Configuration (see page 67)

Deployment and Sizing Guidelines

Platform Considerations (see page 21)
Sizing Guidelines (see page 97)

Deployment Guidelines

CA Business Intelligence

CA Business Intelligence is a branded installation wrapper for SAP BusinessObjects Enterprise XI (BOXI). CA Business Intelligence can optionally also install supporting software (MySQL database and a Tomcat web application server) if you do not have preferred equivalents already available.

CA Business Intelligence is supplied as a 6GB Winzip file. You must unzip this file before starting the CA Business Intelligence installation. We recommend that you unzip it to a local disk for performance reasons. The unzipped files require 7GB of disk space. The installed application files require a further 8GB.

BusinessObjects Enterprise XI

BOXI is a complete enterprise reporting infrastructure with many components, most of which CA DataMinder does not use. CA DataMinder uses core BOXI elements, especially the WebIntelligence reporting component. WebIntelligence is a web-based client for end users. The WebIntelligence client queries tables in the CA DataMinder database to produce its reports.

ODBC Connections

BOXI requires an ODBC connection to a BusinessObjects Enterprise (BOE) database to hold the BOXI repository.

BOXI optionally requires an ODBC connection to a BOE audit database if you want to enable auditing of BOXI usage. The BOE audit database can be on the same database server as the main BOE database. However, we recommend that you locate the audit database in a separate schema, which means that the audit database also needs a separate ODBC connection.

We Do Not Recommend SQL Anywhere

If you install a SQL Anywhere database when you install CABI 3.3, the installer automatically creates ODBC connections to SQL Anywhere and configures BOXI to use those ODBC connections. Howerver, we do not recommend SQL Anywhere for heavily used production systems.

We *do* recommend a SQL Server database. We also recommend Oracle and DB2, but SQL Server offers a simpler backup and recovery process.

Note: We do not recommend SQL Server Express because of its sleep mode.

Can I Use an Existing Database Server?

Yes. The BOXI repository database requirements are not excessive. For example, a 100MB of database disk space can store around 30,000 objects (where an 'object' is a single report instance).

If required, you can therefore co-locate the BOXI repository database on an existing database server, providing that the existing server is not already overloaded.

Web Application Server

BOXI uses a web application server.

CA DataMinder uses integration functionality that is only supported by BOXI in its Java stack. Therefore CA DataMinder does not use.NET Framework . Instead, CA DataMinder requires a Java application server such as Apache Tomcat. The CA Business Intelligence installer includes an embedded version of Tomcat that you can optionally install.

Does Integration with BOXI Create extra Workload on the iConsole?

Integration with BOXI puts no additional workload on the iConsole. All the processing is performed by BOXI.

CA DataMinder integration with BOXI enables single sign-on when:

- CA DataMinder passes an iConsole user's reporting request to BOXI.
- BOXI presents the report results back to the iConsole user.

Platform Considerations

For details about all supported platforms for BOXI, please refer to SAP documentation.

More information:

32-bit or 64-bit Platforms? (see page 22)
Virtual Machines (see page 22)
Tomcat Web Application Server (see page 23)

32-bit or 64-bit Platforms?

CA Business Intelligence 3.2 and CA Business Intelligence 3.2 + SP4 generally support both 32-bit and 64-bit editions of Windows. In addition, we recommend using a 64-bit platform. Specifically, we recommend Windows Server 2008 R2 system, which is only available as a 64-bit edition. This is because:

- The future upgrade path for CA Business Intelligence 3.2 will be to SAP Business Objects BI4, which does not support 32-bit platforms.
- Installing CA Business Intelligence 3.2 on a 64-bit platform avoids potential memory limitations associated with JVMs.

The following table summarizes the current CA Business Intelligence 3.2 support for Windows Server:

	32-bit Edition	**64-bit Edition**
Windows Server 2003	Yes	Yes
Windows Server 2003 R2	Yes	Yes
Windows Server 2008	Yes	Yes
Windows Server 2008 R2	No	Yes

Virtual Machines

BOXI is certified to run under VMWare. There are significant advantages to running BOXI on a virtual machine (VM):

- Running BOXI on a VM allows flexibility when allocating resources. This is very useful because it is extremely difficult to estimate sizing requirements accurately for an ad-hoc reporting system.
- VM snapshots can also be used in disaster recovery scenarios (a clean CA Business Intelligence installation can take several hours to run.)
- By isolating BOXI's complex application stack from other applications, you reduce the risk of 'application collisions' (for example, over port numbers). In turn, this reduces potential complexities for support staff.
- BOXI is resource hungry. Therefore, you must not install a production BOXI system on a production iConsole server. However, you could run BOXI and the iConsole within a resource-governed VM on a large capacity shared host server.

Tomcat Web Application Server

In a typical BOXI deployment, customers use Tomcat as the web application server. CA Business Intelligence 3.3 includes Apache Tomcat 6.

Note: If required, you can use IIS as your web server and Tomcat as your web application server. This architecture is covered in the *BOXI 3.1 Pattern Book for Windows.* .

LDAP Integration

You can populate a subset of BOXI user accounts from an LDAP directory.

However, there are limitations with the LDAP functionality. For example, you cannot schedule automatic synchronization with your LDAP source. If your CA DataMinder login naming convention is not readily available as an LDAP attribute, you must set up mappings between CA DataMinder user accounts and the corresponding BOXI user accounts.

Be aware that configuring integration between BOXI and LDAP integration can be problematic, despite both SAP and CA providing detailed documentation. Our experience in the field indicates the effort required to set up LDAP integration is only justifiable if you have 25 or more reviewers (that is, BOXI users running CA DataMinder reports), or if your pool of reviewers is constantly changing.

Note: Details about integrating BOXI with an LDAP directory are available in the following guides:

- The 'LDAP Authentication' section in the *Business Intelligence Platform Administrator Guide (Platform 4.0 Support Package 2)*
- The 'Using LDAP Authentication' section in the SAP BusinessObjects Enterprise *Administrator's Guide (BOXI 3.1 Servce Pack 3)*

Download a BusinessObjects Enterprise Document

BusinessObjects Enterprise provides access to various product documents on their company's 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 from the drop-down lists:
   - Language: English
   - Product: BusinessObjects Enterprise
   - Version: (blank)

   You can identify BusinessObjects Enterprise XI 3.1 SP3 documents under the Version Number column.
5. Right-click the PDF icon on the document that you want to download, click Save Target As, then click OK.

Note: Help system updates are not available from the Business Objects website. They are provided in fixpack updates.

What's Included in the Image?

The CA DataMinder distribution image includes:

\BusinessObjects folder

This folder contains the InstallUniverse.bat. Run this file to install the CA DataMinder Universe into an existing CA Business Intelligence installation.

\Lib subfolder

This subfolder contains various .jar files that are used when installing the BusinessObjects Universe for CA DataMinder and the BusinessObjects reports for CA DataMinder.

\MSSQL and Oracle subfolders

These subfolders contain various .biar files.

A .biar file is a deployable BusinessObjects package. These files are used to easily deploy BusinessObjects content in a single operation. In this case, the .biar files contain the CA DataMinder Universe and various CA DataMinder reports.

\Redist folder

This folder contains redistributables.

\boenetsdk subfolder

This subfolder contains the BusinessObjects .NET SDK Runtime. The SDK enables the iConsole to connect to BusinessObjects Enterprise.

Install this SDK on each iConsole front-end web server before you install the iConsole.

Note: CA Business Intelligence is not included in the CA DataMinder distribution image. Instead, CA Business Intelligence is available for download on the CA Support site, under CA DataMinder product downloads.

CA Business Intelligence

The following sections describe how to install CA Business Intelligence on a Windows server.

CA Business Intelligence Requirements

Note the following requirements before you install CA Business Intelligence.

BusinessObjects Enterprise

For the current CA DataMinder release, your reports server must be running BusinessObjects XI 3.1 SP5.

InfoView Browser

InfoView is the BusinessObjects web portal. You can launch InfoView from the iConsole or you can browse to InfoView directly.

In BusinessObjects XI 3.1 SP5, InfoView is supported in:

- Mozilla Firefox
- Microsoft Internet Explorer 8 and 9 (in Compatibility View only)

CA Business Intelligence

Compatibility with CA products is provided through CA Business Intelligence. CA Business Intelligence is a wrapper that includes a BusinessObjects Enterprise installation.

The current CA DataMinder release supports CA Business Intelligence 3.3. When you install CA Business Intelligence 3.3 on your reports server, BusinessObjects XI 3.1 SP5 and its InfoView web portal also get installed.

CA Business Intelligence version details are in version.txt. Find this file in:

- The \Disk1\cabi\biek subfolder on your CA Business Intelligence distribution media.
- The \CommonReporting3 subfolder below the CA Business Intelligence installation folder.

For full details, see the *CA Business Intelligence Implementation Guide*, included in your CA Business Intelligence distribution image.

Reports Server host computer

Note the following requirements for your reports server.

Operating System

CA DataMinder integration with CA Business Intelligence has been tested on Windows Server 2003.

CA also supports CA Business Intelligence on the following Windows systems:

- Windows Server 2003 SP2, 32-bit and 64-bit editions
- Windows Server 2003 R2 SP2, 32-bit and 64-bit editions
- Windows Server 2008, including SP2, 32-bit and 64-bit editions
- Windows Server 2008 R2, including SP1, 64-bit edition only

Note: The current CA DataMinder release does not support integration with a CA Business Intelligence deployment hosted on a non-Windows system.

Windows KB925336 Patch

(Needed for Windows Server 2003 SP2 only)

The CA Business Intelligence distribution image is very large. Consequently, you need to install the KB925336 patch onto your target reports server. This patch fixes an error message when installing very large Windows Installer packages. The CA Business Intelligence installer prompts for this patch if it is not already installed.

RAM

2GB RAM.

Note: Although CA Business Intelligence is supported on systems with 2GB RAM, we recommend a minimum of 3GB.

BusinessObjects Repository Database

CA Business Intelligence 3.3 supports the BusinessObjects repository database on the following platforms:

- Microsoft SQL Server:

  SQL Server 2005, including SP3 and SP4
  SQL Server 2008
  SQL Server 2008 R2

  See further SQL Server requirements below.

- Oracle 10.2, 11.1, and 11.2.

  See further Oracle requirements below.

- IBM DB2/UDB 9.1, 9.5, or 9.7
- Sybase Adaptive Server Enterprise 15, 15.5, 15.7
- Sybase SQL Anywhere 12.0.1

  This DBMS is embedded in CA Business Intelligence 3.3. However, we do not recommend SQL Anywhere for use in production systems. See below for details.

- MySQL 5.0

  This DBMS is embedded in CA Business Intelligence 3.2. We strongly recommend upgrading to MySQL 5.1.

Note: CA DataMinder integration with CA Business Intelligence has been tested using SQL Anywhere 12.0.1.

BusinessObjects Audit Database

The audit database is supported on the same platforms as the repository database, with one exception. Sybase Adaptive Server Enterprise 15.7 is not supported.

We Do Not Recommend SQL Anywhere

If you install a SQL Anywhere database when you install CABI 3.3, the installer automatically creates ODBC connections to SQL Anywhere and configures BOXI to use those ODBC connections. Howerver, we do not recommend SQL Anywhere for heavily used production systems.

We *do* recommend a SQL Server database. We also recommend Oracle and DB2, but SQL Server offers a simpler backup and recovery process.

Note: We do not recommend SQL Server Express because of its sleep mode.

SQL Server

Before installing CA Business Intelligence, you must:

- Create an empty database for BusinessObjects to use.
- Create a SQL Server login to be the owner of the new database.
- Install the relevant SQL Server client tools on the host server.

  These client tools are available from your database vendor and include the drivers (that is, the OLE DB Providers) that the universe uses to access the CA DataMinder central management server. These drivers are essential. Without them, CA DataMinder cannot apply row level security (RLs) to report results.
- (On 64-bit systems only) Specify a 32-bit ODBC System DSN to connect to SQL Server. Find odbcad32.exe in the \Windows\SysWOW64 directory.

Oracle

Before installing CA Business Intelligence, you must:

- Install the relevant Oracle client tools.

  These client tools are available from your database vendor and include the drivers (that is, the OLE DB Providers) that the universe uses to access the CA DataMinder CMS. These drivers are essential. Without them, CA DataMinder cannot apply row level security (RLs) to report results.
- Specify a 32-bit ODBC System DSN to connect to Oracle.

  (On 64-bit systems only) The 32-bit ODBC driver is available to download as part of Oracle 32-bit Oracle Data Access Components on the Oracle web site. After installing the driver, you can create the 32-bit ODBC System DSN using the Data Sources (ODBC) applet in Administrative Tools.
- Add the CA DataMinder CMS to tnsnames.ora.

  (On 64-bit systems only) An Oracle CA DataMinder CMS must use a 32-bit ODBC System DNS to connect to your BusinessObjects CMS. To allow the CA DataMinder CMS to connect using 32-bit Oracle client software, the tnsnames.ora file must include an entry for the CA DataMinder CMS database. You must also specify the location of tnsnames.ora in the registry.

  See the reference below for details.

BusinessObjects Administrator Credentials

The installer creates a default BusinessObjects administrator account (name: administrator). This account is used to import CA DataMinder report templates and to access BusinessObjects InfoView.

You must supply the password for this account when you install CA Business Intelligence.

Apache Tomcat application server

The CA Business Intelligence installer includes an embedded version of Apache Tomcat. If you use this version of Tomcat as your application server, the CA Business Intelligence installer requires the following information:

Connection port

Tomcat connects to this port.

The default port is 8080.

Redirect port

Tomcat redirects requests to this port.

The default port is 8443.

Shutdown port

Tomcat issues SHUTDOWN commands to this port.

The default port is 8005.

More information:

Add a CA DataMinder CMS Entry to Tnsnames.ora (see page 30)

Add a CA DataMinder CMS Entry to Tnsnames.ora

(Oracle CA DataMinder CMSs only)

An Oracle CA DataMinder CMS must use a 32-bit ODBC System DNS to connect to your BusinessObjects CMS. To allow the CA DataMinder CMS to connect using 32-bit Oracle client software, the tnsnames.ora file must include an entry for the CA DataMinder CMS database. You must also specify the location of tnsnames.ora in the registry.

To specify the location of Tnsnames.ora

1. On your BusinessObjects server, create a TNS_ADMIN registry value in the following registry key:
   `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ORACLE\KEY_OraClient11g_home1`

   Where 'KEY_OraClient11g_home1' is the registry key for your Oracle 32-bit client software installation.

2. Set the key data to be the full path to the \Network\Admin folder. For example:
   `C:\app\ora11gclient\product\11.2.0\client_1\Network\Admin`

   Where 'C:\app\ora11gclient\product\11.2.0\client_1' is the ORACLE_HOME folder for your Oracle 32-bit client software installation.

To edit Tnsnames.ora

1. Create and edit a tnsnames.ora file In the \Network\Admin folder.
2. Add an entry to tnsnames.ora that specifies the CA DataMinder database. For example:

```
ORCLPL11 =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = DB_SRVR. unipraxis.com)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = ORCLPL11)
    )
  )
```

Install CA Business Intelligence

For the current CA DataMinder release, your reports server must be running BusinessObjects XI 3.1 SP5. When you install CA Business Intelligence 3.3 on your reports server, BusinessObjects XI 3.1 SP5 and its InfoView web portal also get installed.

The following sections describe how to install a new SAP BusinessObjects Enterprise System. If you want a Custom Or Expand install or a Web Tier install, please refer to chapters 5 and 6 in the *CA Business Intelligence Implementation Guide*. Find this guide in the \Docs folder of your CA Business Intelligence distribution image.

How to prepare your reports server for a CA Business Intelligence installation

1. Download CA Business Intelligence from the CA Support site, under CA DataMinder product downloads.
2. Extract the CA Business Intelligence distribution image onto your target reports server.
3. Review the CA Business Intelligence requirements, especially the requirements for the BusinessObjects administrator account, Apache Tomcat, and MySQL.
4. Exit all applications that are running.
5. (Recommended) Create an empty database (see page 32) for BusinessObjects to use.
6. (Recommended) Create an ODBC data source (see page 33) to connect to the new database.
7. Run the CA Business Intelligence installer (see page 33).

Troubleshooting:

CA Business Intelligence: I Cannot Choose an Existing Database Server (see page 82)

More information:

Create an Empty SQL Server Database (see page 32)
Create an ODBC Data Source for SQL Server (see page 33)
Run the CA Business Intelligence Installer (see page 33)

Create an Empty SQL Server Database

Although the CA Business Intelligence installer allows you to create a SQL Anywhere database, we do not recommend this option for a production system.

We recommend that CA Business Intelligence uses an existing database for the BusinessObjects repository. If you choose this option, you must create the database before running the CA Business Intelligence installer. This section briefly describes how to create a SQL Server 2008 database.

To create an empty SQL Server database

1. In SQL Server Management Studio, add a new login (for example, BOUSER).

   This login will be the owner of the new database. It *must* use SQL Server Authentication.

2. Create a new database (for example, BOREPOS).

   The owner of this database must be the new login (BOUSER in this example). We recommend that you also reset the initial database size and enable autogrowth.

   Note: For performance reasons, create this BusinessObjects database on a different server server from your CA DataMinder CMS database.

Create an ODBC Data Source for SQL Server

If you created a new BusinessObjects database, you must also create a new ODBC data source. BusinessObjects uses this data source to connect to the new database. This section describes how to create an ODBC data source to connect to a SQL Server database.

To create an ODBC data source for SQL Server

1. On the BusinessObjects Enterprise host server, run odbcad32.exe.

   To find this file, launch Administrative Tools from the Control Panel. Then open DataSources.

   Note: On 64-bit systems, you must specify a **32-bit** ODBC System DSN to connect to SQL Server. Find odbcad32.exe in the following \Windows\SysWOW64 directory.

2. In the ODBC Data Source Administrator dialog, go to the System DSN tab.
3. Add a new data source.
4. In the Create New Data Source dialog, add the SQL Server driver that matches your version of SQL Server.
5. Specify the remaining details for the new data source. In particular:
   a. Specify the SQL Server database and instance that contains the BusinessObects database that you created previously (BOREPOS).
   b. Specify SQL Server authentication.
   c. Specify that the new data source uses the SQL Server login that you created previously (BOUSER).
   d. Change the default database to the BusinessObects database that you created previously (BOREPOS).

Run the CA Business Intelligence Installer

This section describes how to install BusinessObjects Enterprise on your reports server.

To run the CA Business Intelligence installer

1. Navigate to the root of your CA Business Intelligence distribution image on your reports server and run cabiinstall.exe.

   After a short delay (possibly several minutes), the CA Business Intelligence installer starts and prompts you for a locale.

2. Select English from the locale list and click OK.
3. Navigate through the installer introduction and license agreement screens.

4. When the installer prompts you to install CA sample templates, click Yes or No.

   - Click Yes if you plan to create custom BusinessObjects reports for CA DataMinder
   - Click No if you do not plan to create custom reports.

   CA sample templates include example reports that demonstrate BusinessObjects reporting capabilities. You can customize these sample reports.

5. When the installer prompts you to save a response file, click Yes or No.

   - Click Yes if you plan to rerun this CA Business Intelligence installation, either on the current computer or other computers.
   - Click No if you do not need to rerun this CA Business Intelligence installation.

   The response file, cabireponse.ini, records your choices when you run the CA Business Intelligence installer. You can use the response file to automate any subsequent installations. For example, you may want to rerun the installation on a production system after evaluating CA Business Intelligence on a test system.

6. When the CA Business Intelligence installer displays the summary screen, click Install.

   There may be a short delay while the CA Business Intelligence Setup wizard starts.

   Note: If the wizard does not appear, check that it is not hidden behind the installer window.

7. Accept the license agreement and select any language packs that you need to install.

8. Specify a new installation in the Install Type screen.
   a. Click New to install a new SAP BusinessObjects Enterprise System.
   b. Select one of the following options:
      - Install SQL Anywhere Database Server if you do not have a system database server and want to install SQL Anywhere on the current computer.

        We do not recommend using SQL Anywhere in production systems.
      - (Recommended) Use an existing database server.

        For example, click this option if you prefer to use SQL Server for your BusinessObjects databases.
   c. Select the Enable Servers Upon Installation check box if you want to launch BusinessObjects Enterprise when the installation process finishes.

      If you do not check this option, you must manually enable and run the BusinessObjects Enterprise application server from the Central Configuration Manager (CCM) after installation.
   d. Specify where to install the BusinessObjects Enterprise components in the Destination Folder field (make sure 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)
9. Specify the BusinessObjects CMS port and password details in the Server Components Configuration screen.

   Note: The 'CMS' in these instructions is the BusinessObjects Central Management Server, which manages the entire BusinessObjects Enterprise system. Do not confuse this BusinessObjects CMS with the CA DataMinder Central Management Server.
   a. Specify a port number in the CMS port field.

      The BusinessObjects CMS communicates with other BusinessObjects Enterprise servers through the specified port. The default CMS port number is 6400.
   b. Specify a password for the CMS administrator account in the Password and Confirm password fields.

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

10. Enter a node name and port in the Server Intelligence Agent screen.

    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.

    a. Enter a unique name to identify the SIA node in the Node Name field. Do not use spaces or non-alphanumeric characters.

       By default, the node name is same as the system host name, but excluding any unsupported characters**.**

    b. Specify a port number for the SIA in the Port field.

       This port is used by the SIA to communicate with the BusinessObjects CMS. The default port number is 6410.

       The wizard validates the port number and warns you if the specified port is not available.

    Note: Server Intelligence is the underlying management architecture that simplifies the BusinessObjects Enterprise administration and deployment. Server Intelligence enables you to use the CMC for all daily maintenance tasks, such as configuring new servers, or starting and stopping existing servers. For details about Server Intelligence, see the *CA Business Intelligence Implementation Guide*.

11. In step 8, if you chose to:

    - Install SQL Anywhere as your database server, go to step 12.
    - Use an existing database server such as SQL Server, go to step 13.

12. Specify the port number and database user account details in the SQL Anywhere Database Server Configuration screen. Then go to step 14.

13. Specify the required details in the CMS Database Information screen.

    Select the DBMS that you want to use for the BusinessObjects CMS and Auditing databases. If you select:

    SQL Server

    Select the ODBC data source that you created previously. BusinessObjects uses this data source to connect to the database that you created previously (BOREPOS in the earlier example).

    Oracle

    On 64-bit systems, you must specify a **32-bit** ODBC System DSN to connect to Oracle.

    Note: If the ODBC connection that you need is not listed, you may need to correct a new ODBC System DSN. Alternatively, your ODBC System DSN may be configured incorrectly. For more details, see Troubleshooting (see page 82).

14. Specify the required details in the Select Web Application Server screen.

    The web application server runs BusinessObjects Enterprise web applications such as InfoView, the CMC, and custom web applications. For integration with CA DataMinder, you *must* deploy BusinessObjects applications to a Java-based web application server (a Tomcat web application server is included with BusinessObjects Enterprise).

    Note: Do not deploy these applications to the IIS web application server included in your Windows operating system. CA DataMinder does not support IIS web application servers.

    Deploy to a Java web application server

    a. Click Java Web Application Server.

    b. Click one of the following:

    - (Strongly recommended) Install Tomcat application server and deploy to it.

      The wizard automatically installs and configures Tomcat.

    - Automatically deploy to a preinstalled Web Application Server.

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

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

15. (Applicable only if you chose to install Tomcat as the web application server for your BusinessObjects Enterprise installation) Specify the Tomcat ports in the Configure Tomcat screen.

    a. Specify the port numbers for the Connection port, Shutdown port, and Redirect port. The defaults are 8080, 8005, and 8443 respectively.

       See the CA Business Intelligence Requirements section for details about these ports.

    b. Click Next to continue.

       Wait while the installer configures CA Business Intelligence for your reports server. This configuration can take several minutes.

16. Click Next in the Start Installation screen to start the installation process.

    If the progress window does not appear, check that it is not hidden behind the installer window.

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

    Note: The installation can take a long time, up to an hour.

17. Click Finish to complete the BusinessObjects Enterprise main installation.

    When this main installation completes, the CA Business Intelligence installer installs any required BusinessObjects service packs or fixes plus the CA Report templates (if that option was selected).

    After the post-installations are performed, the CA Business Intelligence Completion screen displays with a summary of the installation.

18. Restart the host computer to finalize the CA Business Intelligence installation.

Backup and Recovery

For information on backup and recovery, please refer to your BusinessObjects Enterprise XI documentation. For example, the *BusinessObjects Enterprise XI 3.1 Backup and Recovery Best Practices* article provides useful information in this area. This article is currently available at:
`http://scn.sap.com/docs/DOC-10653`

Data Warehouse

The following sections describe how to deploy the CA DataMinder data warehouse.

Note: For full details, see the Data Warehouse chapter in the *Platform Deployment Guide*.

About this component:

About the Data Warehouse (see page 12)

Data Warehouse Requirements

Note the following requirements before you install the CA DataMinder data warehouse.

CMS Database Accounts

When you install the Data Warehouse, you must supply credentials for two accounts for the CMS database.

Reporting User

External reporting applications (such as BusinessObjects Enterprise) use this database account to connect to the Data Warehouse and CMS database.

This database account inherits the security model of the CA DataMinder user who is running the report. For example, if the user running the report has been assigned to the Management Group security model, then the report results are also subject to RLS restrictions based on the user's management group. Conversely, if the user has been assigned to the Unrestricted security model, the report results are not subject to any RLS restrictions.

Unrestricted Search User

This database account corresponds to the 'Unrestricted' security model. CA DataMinder consoles and external reporting tools can use this database account when searching the CA DataMinder Data Warehouse and CMS database for events. Unlike normal Search User database accounts, the Unrestricted Search User is *not* subject to row level security (RLS) when searching the database. If a reviewer has 'Unrestricted' security model, the reviewer can see any events when they run a search or report. Search results or reports are not restricted by policy class or the reviewer's management group.

This account is useful if, for example, an external auditor requires unrestricted (view-only) access to captured events in your CMS database.

Size Considerations

Installing the Data Warehouse tables can increase the size of the existing CMS database by up to 50%. Therefore, ensure you have sufficient disk space for the volume of data that you want to keep in the Data Warehouse. To ensure sufficient disk space, you may need to modify the default parameters governing data age to prevent the Data Warehouse expanding excessively.

Details are in the 'Data Warehouse Configuration Parameters' section of the *Platform Deployment Guide*.

Competition for Memory, CPU and Disk Resources on the CMS Host Server

The data warehouse tables are stored in the CMS database. Consequently, any memory, CPU and disk resources consumed by data warehouse queries are not available to the CMS database and can result in performance issues. For example, large sort or join operations and increased buffer cache requirements can exert pressure on memory resources. Likewise, insufficient CPU threads can exert pressure on the CPU and overloaded disks can increase disk response times.

We therefore recommend that you set up low impact monitoring of these resources on the CMS host server to detect any performance issues.

Also, configuration changes on the host server may ease some performance issues. For example, you can add more memory or increase the number of CPUs. You can also reduce CPU parallelism. You can uninstall other applications from the host server. You can spread the disk workload or isolate different types of disk activity.

Whatever configuration changes you make, we recommend that investigate the performance issue first to identify the genuine cause. Sometimes, the symptoms of a problem may obscure the underlying cause. For example, a memory shortage may result in a very small buffer cache, in turn causing an excessive number of physical disks reads.

Enable the Data Warehouse at Install Time

The Data Warehouse is installed automatically when you install a new CA DataMinder CMS, but you must explicitly enable the data warehouse if you want to use the iConsole dashboard or run BusinessObjects reports for CA DataMinder.

To enable the Data Warehouse

1. Follow the standard instructions for installing a CA DataMinder CMS and navigate the installer screens to the Data Warehouse Configuration screen.

   See the reference below for details about installing a CMS.

2. Fill in the following fields. Then click Next.

   Enable data warehousing for this CMS

   Select this check box enable the data warehouse.

   Collect event participant data

   Select this check box to collect event participant data.

   Important! You must collect event participant data if you intend to run BusinessObjects reports.

3. In the Data Warehouse Database Account screen, define the following database accounts.

   In all cases, click the ... button to specify the account credentials. In the resulting User Credentials dialog, specify the username and password for the database account. If this account is a new account, select the Create User check box.

   Reporting User

   External reporting applications (such as BusinessObjects Enterprise) use this database account to connect to the Data Warehouse and CMS database.

   Unrestricted Search User

   This database account corresponds to the 'Unrestricted' security model. CA DataMinder consoles and external reporting tools can use this database account when searching the CA DataMinder Data Warehouse and CMS database for events. Unlike normal Search User database accounts, the Unrestricted Search User is *not* subject to row level security (RLS) when searching the database. If a reviewer has 'Unrestricted' security model, the reviewer can see any events when they run a search or report. Search results or reports are not restricted by policy class or the reviewer's management group.

   Database Administrator User

   If either of the database accounts specified above are new, specify the Database Administrator User that the installation wizard can use to log in to SQL Server or Oracle to create these new accounts.

   For Oracle databases, this Database Administrator account *must* have the following system privileges:

   ```
   CREATE SESSION
   RESOURCE
   DBA
   SYSDBA
   ```

4. Continue to the final wizard screen and click Install.

5. (Only applicable to SQL Server Express CMSs) If your data warehouse is hosted in a SQL Server Express database, you must manually enable and schedule the processing jobs that populate the data warehouse.

Retrospectively Enable the Data Warehouse

(Applies only if you did not enable the data warehouse when you installed the CMS.)

A data warehouse is installed automatically when you install a CMS. But if you chose not to enable the data warehouse when you installed the CMS, the data warehouse remains disabled until you enable it.

How to Retrospectively Enable the Data Warehouse

1. Set credentials for the Reporting User database account.
2. Set credentials for the Unrestricted Search User database account.
3. Enable the Data Warehouse in the Administration console.
4. Configure the Data Warehouse to support BusinessObjects reports.

More information:

Set Credentials for the Reporting User (see page 42)
Set Credentials for the Unrestricted Search User (see page 43)
Enable the Data Warehouse After Installing (see page 45)
Configure Support for BusinessObjects Reports (see page 46)

Set Credentials for the Reporting User

You must specify a Reporting User database account if you enable data warehousing. External reporting applications (such as BusinessObjects Enterprise) use this database account to connect to the Data Warehouse and CMS database.

You can use the Administration console to add or modify credentials for the Reporting User database account. For example, if the password has been changed on the database server (for example, for security reasons), you can supply CA DataMinder with the new password.

To set credentials for the Reporting User

1. Log on to the Administration console using an account that has the 'Admin: Manage security models' privilege.
2. Click Tools, Set Reporting User Credentials.
3. Enter the user name and password in the Set Reporting User Credentials dialog.
4. (Optional) If necessary, provide credentials for an existing Database Administrator account. See below for details.

   For Oracle CMS databases, this Database Administrator account *must* have the following system privileges:
   CREATE SESSION
   RESOURCE
   DBA
   SYSDBA

When must I provide Database Administrator details?

Credentials for the Reporting User are securely stored in the CMS database and in the CMS internal file system. The two sets of credentials must be in sync.

You do *not* need to provide Database Administrator details if a DBA has already updated the Reporting User credentials in the CMS database. In this situation, CA DataMinder only needs to update the Reporting User credentials stored in the CMS internal file system.

You *do* need to provide Database Administrator details if the CMS database has not been updated yet. In this situation, CA DataMinder simultaneously adds the Reporting User credentials to the CMS internal file system and the CMS database. CA DataMinder uses the Database Administrator account to log in to SQL Server or Oracle and update the CMS database.

Set Credentials for the Unrestricted Search User

Before you enable the Data Warehouse, you may need to specify the Unrestricted Search User database account.

This database account corresponds to the 'Unrestricted' security model. CA DataMinder consoles and external reporting tools can use this database account when searching the CA DataMinder Data Warehouse and CMS database for events. Unlike normal Search User database accounts, the Unrestricted Search User is *not* subject to row level security (RLS) when searching the database. If a reviewer has 'Unrestricted' security model, the reviewer can see any events when they run a search or report. Search results or reports are not restricted by policy class or the reviewer's management group.

You can use the Administration console to add or modify credentials for the Unrestricted Search User database account.

To set credentials for the Unrestricted Search User

1. Log on to the Administration console using an account that has the 'Admin: Manage security models' privilege.
2. Click Tools, Manage Security Models.
3. In the Manage Security Models dialog, select the Unrestricted model and click Modify.
4. In the Modify Security Model dialog, click Set Credentials.
5. In the Set Model Credentials dialog, enter the user name and password.
6. (Optional) If necessary, provide credentials for an existing Database Administrator account. See below for details.

   For Oracle CMS databases, this Database Administrator account *must* have the following system privileges:
   `CREATE SESSION`
   `RESOURCE`
   `DBA`
   `SYSDBA`

When must I provide Database Administrator details?

Credentials for the Unrestricted Search User are securely stored in the CMS database and in the CMS internal file system. The two sets of credentials must be in sync.

You do *not* need to provide Database Administrator details if a DBA has already updated the Unrestricted Search User credentials in the CMS database. In this situation, CA DataMinder only needs to update the Unrestricted Search credentials stored in the CMS internal file system.

You *do* need to provide Database Administrator details if the CMS database has not been updated yet. In this situation, CA DataMinder simultaneously adds the Unrestricted Search User credentials to the CMS internal file system and the CMS database. CA DataMinder uses the Database Administrator account to log in to SQL Server or Oracle and update the CMS database.

Enable the Data Warehouse After Installing

The Data Warehouse is installed automatically when you install a new CA DataMinder CMS, but you must explicitly enable the data warehouse if you want to use the iConsole dashboard or run BusinessObjects reports for CA DataMinder.

To enable the Data Warehouse

1. Log on to the Administration console using an account that has the 'Admin: Manage security models' privilege.
2. Click Tools, Configure Data Warehouse.
3. In the General Options section, select the 'Enable Data Warehouse population' check box.
4. (Optional) Configure other Data Warehouse settings (see page 47) as required.

Configure Support for BusinessObjects Reports

(Applies only if you want to run BusinessObjects reports for CA DataMinder.)

BusinessObjects reports for CA DataMinder show results by user and group. These reports therefore require event participant data. Before reviewers can run these reports, you must populate the Data Warehouse with this data.

To configure the Data Warehouse to support BusinessObjects reports

1. Log on to the Administration console using an account that has the 'Admin: Manage security models' privilege.
2. Click Tools, Configure Data Warehouse.

   The Configure Data Warehouse dialog displays.
3. In the General Options section, select the 'Collect event particpant data' check box.
4. (Applies only if you already use the iConsole dashboard). Resynchronize, or empty and repopulate, the Data Warehouse.

   If you already use the iConsole dashboard, your Data Warehouse already contains event and audit data. However, it does not contain event participant data. You must now add this data to the Data Warehouse. Do *one* of the following:

   - Go to the Advanced Options section and select the 'Resynchronize Data Warehouse data on next run' check box.

     Use this method if you have never purged events from the CMS database. Events in the CMS already correspond with events in the data warehouse. This operation is relatively fast.
   - Go to the Advanced Options section and select the 'Purge all Data Warehouse data and repopulate on next run' check box.

     Use this method if you regularly purge events from the CMS database. The Data Warehouse probably contains data for events that no longer exist in the CMS. You must eliminate this discrepancy before you run BusinessObjects reports. Specifically, you must empty and then repopulate the entire Data Warehouse so that it only contains events that currently exist in the CMS database. This operation takes longer than a resync.

Reconfigure the Data Warehouse

You can reconfigure the Data Warehouse at any time. For example, you may want to change the settings for off-peak processing jobs or data purges.

To reconfigure the Data Warehouse

1. Log on to the Administration console using an account that has the 'Admin: Manage security models' privilege.
2. Click Tools, Configure Data Warehouse.
3. Configure the following settings:

   General Options

   These settings enable or disable the Data Warehouse. They also specify which data gets copied into the Data Warehouse. In particular, they specify whether to include event participant data. Other settings enable regular purges of older data from the Data Warehouse.

   Important! You must collect event participant data if you intend to run BusinessObjects reports..

   Additional Population and Maintenance

   These settings configure off-peak processing jobs for the Data Warehouse.

   If purging is enabled, the purges are performed by the off-peak processing job.

   By default, these jobs run at midnight for 300 minutes, but you can reschedule them. Be aware that the data processing associated with these data warehousing jobs can generate a heavy workload on the CMS. We strongly recommend that you run these jobs during offpeak times.

   Advanced Options

   These settings configure batch sizes for data warehousing jobs. Other settings enable you to resynchronize the Data Warehouse with data in the CMS database or to purge and repopulate the entire Data Warehouse.

Note: For details about the available settings, see the online help.

BOE Integration for the iConsole

The following sections describe how to install the BOE Integration component on your CA DataMinder iConsole front-end web servers.

About this component:

About the BusinessObjects Integration Component (see page 12)

BOE Integration Requirements

Note the following requirements before you install the BOE Integration feature.

CA DataMinder Host Server

Install BOE Integration on each iConsole front-end web server.

Software Requirements for Host Server

Before installing BOE Integration, ensure that the following packages are also installed on each iConsole front-end web server:

Web Services Enhancements (WSE) 3.0 for Microsoft .NET

This package is available for download from the Microsoft web site.

BusinessObjects .NET SDK Runtime

This package is available for download from the SAP web site.

Find this package in the \Redist\boenetsdk subfolder of the CA DataMinder distribution image.

iConsole Browser

The BOE Integration feature enables the iConsole to display a BusinessObjects page as part of the Review tab. The iConsole runs in the following browsers:

- Microsoft Internet Explorer 7, 8, or 9.
- Firefox, up to version 12.

InfoView Browser

InfoView is the BusinessObjects web portal. You can launch InfoView from the iConsole or you can browse to InfoView directly.

In BusinessObjects XI 3.1 SP5, InfoView is supported in:

- Mozilla Firefox
- Microsoft Internet Explorer 8 and 9 (in Compatibility View only)

Install BOE Integration for the iConsole

You install BOE Integration using the CA DataMinder iConsole installation wizard.

To install the BOE Integration feature

1. Find setup.exe in the root of your CA DataMinder distribution image. Run setup.exe to launch the CA DataMinder installation wizard.

   The Installation Type screen opens.

2. Click Advanced Installation.

3. In the Advanced Install Options screen, select iConsole Web Server and then click Install.

   The CA DataMinder iConsole installation wizard launches in a separate window.

4. In the iConsole installation wizard, navigate to the Custom Setup screen.

5. In the Custom Setup screen, select the Front-End Web Server and BOE Integration features.

6. Complete the Configuration and Virtual Directory wizard screens as normal.

   Note: These installation steps are described in the iConsole chapter of the *Platform Deployment Guide*.

7. In the BOE Reporting Integration Settings screen, specify the following:

   Server

   Specify the FQDN (fully qualified domain name) or IP address of the server hosting BusinessObjects Enterprise.

   Port

   Specify the TCP port used by the iConsole to log on to BusinessObjects Enterprise.

   This setting defaults to port 6400. You do not typically need to change this port number. But if your BusinessObjects Enterprise installation uses a different port number, specify that number here.

Web Service Port

Specify the TCP port used by the iConsole to connect to the BusinessObjects Enterprise web service.

The iConsole calls this web service to display the available BusinessObjects reports, retrieve report results, and access the InfoView web portal.

This setting defaults to port 8080. Normally, you do not need to change this port number. But if the BusinessObjects Enterprise web service uses a different port number, specify that number here.

Shared Secret

Enter and confirm the password used to establish trusted authentication between the iConsole and BusinessObjects Enterprise.

You must specify the same password when you configure BusinessObjects to use trusted authentication.

More information

Set up Trusted Authentication (see page 61)

BusinessObjects Universe

The following sections describe how to deploy the BusinessObjects universe for CA DataMinder.

About this component:

About the BusinessObjects Universe (see page 11)

Universe Requirements

Universe

The BusinessObjects Universe for CA DataMinder is installed on your BusinessObjects reports server. See the CA Business Intelligence Requirements section for details about this server.

The Universe itself has no special requirements.

Universe Installer

Java Runtime Environment (JRE)

JRE 1.5 or later must be installed on your BusinessObjects reports server.

Note: JRE 1.6 is installed automatically when you install CA Business Intelligence 3.2.

JAVA_HOME Environment Variable

Set the JAVE_HOME environment variable to identify the JRE folder.

On reports servers with a 32-bit operating system, run this command:

```
SET JAVA_HOME=C:\Program Files\CA\SC\CommonReporting3\jre
```

On reports servers with a 64-bit operating system, run this command:

```
SET JAVA_HOME=C:\Program Files (x86)\CA\SC\CommonReporting3\jre
```

These commands assume the JRE folder is in its default location. See the following section for details about JAVA_HOME.

'Start In' Folder

Run the installation batch file, InstallUniverse.bat, from the correct location.

Copy the \BusinessObjects parent folder from the CA DataMinder distribution image to a computer on your network. Then run InstallUniverse.bat from the \BusinessObjects folder on the target computer.

Note: We strongly recommend that you copy the \BusinessObjects folder to your BusinessObjects Enterprise server. Doing so avoids potential firewall problems when installing the universe.

Specify the JAVA_HOME Environment Variable

Before you install the BusinessObjects Universe for CA DataMinder, the JAVA_HOME environment variable must be *in scope* and set to the correct JRE path:

- JAVA_HOME is in scope if it already exists as a system variable or a user variable for the current user.
- JAVA_HOME must specify the top level folder of JRE installation.

  For default CA Business Intelligence installations on 32-bit Windows Servers, the JRE path is:

  `C:\Program Files\CA\SC\CommonReporting3\jre`

  For default CA Business Intelligence installations on 64-bit Windows Servers, the JRE path is:

  `C:\Program Files (x86)\CA\SC\CommonReporting3\jre`

To Test If JAVA_HOME is Specified

Run the following command to test whether JAVA_HOME exists and is in scope:

```
SET JAVA_HOME
```

If JAVA_HOME already exists, this command displays the path that JAVA_HOME is set to. If JAVA_HOME does not exist, this command returns a 'Not Defined' message.

To Add JAVA_HOME

If JAVA_HOME does not already exist as a system variable or a user variable, do one of the following:

- Add JAVA_HOME in the Environment variables dialog:
  a. From the Control Panel, click System.
  b. Click the Advanced tab.
  c. Click the Environment Variables button.
- Create and set JAVA_HOME from a command prompt directly before installing the universe.

  For details, see step 4 of s'Install the BusinessObjects Universe.

Install the BusinessObjects Universe

You install the BusinessObjects Universe for CA DataMinder by running a batch file, InstallUniverse.bat. This batch file installs the universe on your BusinessObjects Enterprise server.

To install the Universe and standard BusinessObjects reports for CA DataMinder

1. Locate the \BusinessObjects folder on your CA DataMinder distribution media.
2. Copy this folder and its contents to a computer on your network.

   Note: We strongly recommend that you copy the \BusinessObjects folder to your BusinessObjects Enterprise server. Doing so avoids potential firewall problems when installing the universe.
3. Open the \BusinessObjects folder on the target computer that you specified in step 2.

   This folder contains InstallUniverse.bat.

   To set the JAVA_HOME environment variable before installing the universe, go to step 4.

   To install the universe directly, go to step 5.
4. (Applicable only if the JAVA_HOME environment variable does not exist or is set incorrectly).

   a. Open a command prompt (DOS box) and change to the \BusinessObjects folder

   b. Run the following command:
   `SET JAVA_HOME=<PathToJRE>`

   Where <PathToJRE> identifies the local JRE folder. See the previous section for details.

   c. Run the following command:
   `InstallUniverse.bat`

   Important! Do not close the DOS box between steps b. and c! You must run both commands in the same DOS session to ensure that JAVA_HOME is correctly in scope. See the previous section for details.
5. (Applicable only if the JAVA_HOME environment variable already exists and is correctly specified).

   Run InstallUniverse.bat directly.

6. Enter the following BusinessObject details:

   BusinessObjects (BOXI) server

   Enter the name of the BusinessObjects Enterprise host server.

   BusinessObjects (BOXI) server port

   Enter the number of the port that BusinessObjects Enterprise CMS listens on. The default port number is 6400.

   BusinessObjects (BOXI) user name

   Enter the name of the user that CA DataMinder uses to connect to BusinessObjects Enterprise, for example, Administrator.

   BusinessObjects (BOXI) password

   Enter the password for the BusinessObjects user.

   Database type

   Specify which database CA DataMinder uses, for example, SQL Server 2008 or Oracle 11g.

   Database name and instance

   For SQL Server, provide the server name and instance plus the database name (for example, TACADLP\SQL2008 and WGN_TACADLP).

   For Oracle, provide the server and database name (for example, TACADLP and TACADLP).

   Database user name

   Enter the database account name for the Reporting User (for example, WgnReporting). This database account is created when you install the CA DataMinder data warehouse.

   Database user password

   Enter the password for the Reporting User. You specify the password for this user when you install the CA DataMinder data warehouse.

7. When the installation completes, check BIConfig.log for any errors.

   Find this log file in the \BusinessObjects folder on the target computer that you specified in step 2.

Map CA DataMinder Reviewers to BusinessObjects Accounts

The iConsole and BusinessObjects Enterprise use trusted authentication to communicate with each other. Using trusted authentication allows users to log on to a system once, without needing to provide passwords several times during a session. In the case of CA DataMinder and BusinessObjects Enterprise, it means that users do not need to log on separately to BusinessObjects when they run a BusinessObjects report or launch InfoView from the iConsole. However, trusted authentication only works *if each iConsole reviewer has their own, unique BusinessObjects user account*. Therefore, after installing CA Business Intelligence, you must ensure that each of your CA DataMinder reviewers has their own, unique BusinessObjects account.

Note: You set up trusted authentication when you install the BOE Integration for the iConsole (see the later section for details).

Why Is Account Mapping Necessary?

When a reviewer runs a BusinessObjects report or launches InfoView from the iConsole, the reviewer's CA DataMinder account is mapped to a unique BusinessObjects account. This account mapping is performed in the background and serves two purposes:

- First, the mapping allows the iConsole connect to BusinessObjects using the reviewer's BusinessObjects account.
- Second, the mapping allows BusinessObjects Enterprise to apply the reviewer's CA DataMinder security model to the report results. Security models ensure that reviewers can only see events they are permitted to see when running CA DataMinder reports, including BusinessObjects reports for CA DataMinder.

How Do I Set Up Account Mapping?

There are two approaches to enable the account mapping:

- You can manually create the required BusinessObjects accounts.
- You can set up LDAP authentication, whereby BusinessObjects uses an LDAP directory to validate logon attempts by CA DataMinder reviewers.

Both approaches are described below.

Manually Create BusinessObjects Accounts

We recommend this approach if you have only a small number of reviewers. After installing CA Business Intelligence:

1. Manually create a unique BusinessObjects account for each of your iConsole reviewers.

   Note: An acknowledged problem in BusinessObjects Enterprise means that the BusinessObjects account name must not contain a '\' backslash character. There are two workarounds:

   - Specify a new name without a backslash, or
   - Apply a CA fix to permit backslashes in account names. Find the instructions in the next section.

   Example: For user *unipraxis**srimmel*, create a BusinessObjects account *unipraxis_srimmel*.
   For user *lsteel*, create a BusinessObjects account under the same name, *lsteel*.

2. Assign these new BusinessObjects accounts to an appropriate BusinessObjects user group. These groups are 'CA DataMinder Reports Administrator', 'CA DataMinder Reports Author', and 'CA DataMinder Reports Viewer'.

3. Do the following for all accounts whose BOE account name is not identical to their CA DataMinder account name:

   a. Provide each of your iConsole reviewers with the name and password of their new BusinessObjects account.

   b. When a reviewer first runs a BusinessObjects report or launches InfoView from the iConsole, the iConsole prompts them for their BusinessObjects user name and password. The reviewer must enter these credentials once only. Thereafter, CA DataMinder remembers the credentials. The reviewer is not prompted for them again in any future iConsole sessions.

      If the reviewer enters incorrect credentials, or enters credentials that have already been used by another CA DataMinder reviewer, the logon fails. The iConsole fails to connect to BusinessObjects Enterprise and the reviewer is unable to run a BusinessObjects report or launch InfoView.

CA Fix to Permit Backslashes in BusinessObjects User Names

This workaround only applies to BOXI 3.1 SP4 (version 12.4.0.966).

To apply the user name fix

1. Acquire the fix for BOXI 3.1 SP4 from CA. This fix is available here:
   `ftp://ftp.ca.com/CAproducts/CABI/CABI-3.x/Fixes/20410765/`

   The fix is in a zip file:

   SP4: 20410765_SP4.zip

   Contact CA Technical Support if you cannot access this location.
2. Use the Central Configuration Manager (CCM) to stop the Server Intelligence Agent.
3. Browse to the \BusinessObjects Enterprise 12.0\win32_x86 subfolder below the CA Business Intelligence installation folder. By default, the full path is:
   `C:\Program Files\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0\win32_x86`
4. Back up the existing QT.dll file.
5. Replace the existing QT.dll with the replacement QT.dll extracted from the zip file.
6. Use the CCM to restart the Server Intelligence Agent.

Use LDAP Authentication to Validate CA DataMinder Reviewers

You can use LDAP authentication to validate your MCA DataMinder reviewers to BusinessObjects Enterprise. This approach is appropriate if you have many reviewers or a constantly changing pool of reviewers.

After you set up LDAP authentication, the iConsole permits reviewers to run BusinessObjects reports or launch InfoView seamlessly. That is, the iConsole does not prompt the reviewers for their BusinessObjects account details.

Full details about setting up LDAP authentication are the *BusinessObjects Enterprise Administrator's Guide.* See the 'Using LDAP Authentication' section in the Configuring Third-Party Authentication chapter. An augmented version of the LDAP Host Configuration instructions is included below.

Your LDAP directory must use static group membership

Before you configure the LDAP host for BusinessObjects Enterprise, verify that your LDAP directory uses static group membership. When static group membership is used, a 'memberOf' attribute identifies members of each group.

To configure the LDAP host

(Amended from the Authentication chapter of the *BusinessObjects Enterprise Administrator's Guide*.)

Note: We recommend that your LDAP server is already installed and running before you configure the LDAP host for BusinessObjects Enterprise.

1. Log on to the Central Management Console (CMC) with administrative rights.
2. Go to the Management, Authentication area of the CMC.
3. Specify your LDAP hosts(s).
    a. Enter the hostname and port number of your LDAP hosts in the 'Add LDAP host (hostname:port)' field and then click Add. For example, enter uxtadc04:3268.
    b. If you want to add LDAP hosts that can act as failover servers, repeat this step to add more than one LDAP host of the same server type.
    c. If you want to remove an LDAP host, highlight the host name and click Delete.
    d. Click Next.
4. Choose the type of LDAP directory that are you are using from the LDAP Server Type list.

    If you want to view or change any of the LDAP server attribute mappings or LDAP default search attributes, click Show Attribute Mappings. (By default, these server attribute mappings and search attributes are already set for each LDAP server type.)

    Click Next.
5. Enter the distinguished name that you want to use in the Base LDAP Distinguished Name field (for example, o=SomeBase).

    Click Next.

6. Enter the LDAP Server Administration Credentials and Referral Credentials required by the LDAP host(s).

   a. In the LDAP Server Administration Credentials area, specify the distinguished name and password for a user account that has read access to the directory.

      Note: Administrator credentials are not required.

      Note: If your LDAP Server allows anonymous binding, skip this step. These user credentials are not needed. BusinessObjects Enterprise binds to the LDAP host via anonymous logon.

   b. If you have configured referrals on your LDAP host, specify a distinguished name and password in the LDAP Referrals Credentials area.

      Then enter the number of referral hops in the Maximum Referral Hops field. If you specify zero hops, no referrals are followed.

      Note: You must enter the LDAP Referral Credentials details if *all of the following items* apply:

      - The primary host has been configured to refer to another directory server that handles queries for entries under a specified base.
      - The host being referred to has been configured to not allow anonymous binding.
      - A group from the host being referred to will be mapped to BI platform.

      Note: Groups can be mapped from multiple hosts, but you can only one set of referral credentials. Therefore, if you have multiple referral hosts you must create a user account on each host that uses the same distinguished name and password.

   c. Click Next.

7. Choose the type of Secure Sockets Layer (SSL) authentication that you want to use. Then click Next.

   The options are: Basic (no SSL); Server Authentication; or Mutual Authentication.

8. Choose a method of LDAP single sign-on authentication. Then click Next.

   The options are Basic (No SSO) or SiteMinder.

9. Select how aliases and users are mapped to BusinessObjects Enterprise accounts.

   a. In New Alias Options, select how new aliases are mapped. You *must* choose this option:

      'Assign each added LDAP alias to an account with the same name'

      Choose this option because you need unique BusinessObjects user accounts in order for CA DataMinder to apply row level security when mapping individual BusinessObjects users to an individual CA DataMinder users.

   b. In 'Alias Update Options', select how to manage alias updates for BusinessObjects users. The options are:

      - 'New aliases will be added and new users will be created'
      - 'No new aliases will be added and new users will not be created'

      We recommend that you choose the first option. Users and aliases are created when you click Finish.

      Choose the second option if your LDAP directory contains many users but only a few are likely to use BusinessObjects Enterprise. The system only creates aliases (and accounts, if required) for users who log on to BusinessObjects Enterprise.

   c. Specify the type of new user accounts that get created. The options are:

      - 'New users are created as named users'
      - 'New users are created as concurrent users'

      Named user licenses are associated with specific users. These licenses allow users to access BusinessObjects Enterprise based on their user name and password, regardless of how many other users are connected to BusinessObjects Enterprise. If you choose this option, each user account that gets created must have a named user license.

      Concurrent user licenses specify the number of users that can connect to BusinessObjects Enterprise at the same time. This type of licensing is very flexible because a small concurrent license can support many users. For example, a 100 user concurrent user license could potentially support between 250 and 700 users, depending on how much your users use BusinessObjects Enterprise.

10. Click Finish.

11. You now need to do what? tbd

Set up Trusted Authentication

Trusted authentication allows users to log on to a system once, without needing to provide passwords several times during a session. In the case of CA DataMinder and BusinessObjects Enterprise, it means that users do not need to log on separately to BusinessObjects when they run a BusinessObjects report or launch InfoView from the iConsole.

To finish setting up trusted authentication between the iConsole and BusinessObjects Enterprise, you need to supply the BusinessObjects server and clients with the shared secret. This shared secret is the same one that you supplied when you installed BOE Integration on your iConsole front-end web servers.

Note: Trusted authentication between CA DataMinder and BusinessObjects Enterprise only works *if each iConsole reviewer has their own, unique BusinessObjects user account*. For details, see Map CA DataMinder Reviewers to BusinessObject Accounts.

To configure the BusinessObjects server to use Trusted Authentication

1. Log on to the Central Management Console (CMC) with administrative rights.
2. Go to the Management, Authentication area of the CMC.
3. Click the Enterprise tab.
4. Scroll down until you see Trusted Authentication.
5. Click 'Trusted Authentication is enabled'.

6. Enter a string in the Shared Secret field.

   This must be the same Shared Secret string that you supplied when you installed the BOE Integration feature.

   Note: The shared secret is used by the BusinessObjects CMS and its clients to establish trust. These clients are the InfoView web portal and OpenDoc client-side server processes.

7. Specify how many days the shared secret is valid for in the Shared Secret Validity Period field.

8. Specify a timeout value (in milliseconds) for your trusted authentication requests.

   Note: The timeout value is the maximum amount of time, in milliseconds, that the clocks on the iConsole and BusinessObjects server can differ. If you enter 0, the amount of time the two clock times can differ is unlimited. We do not recommend setting this value to 0 because this may increase your vulnerability to replay attacks.

9. Click Update.

10. Now configure the BusinessObjects clients.

To configure the BusinessObjects clients to use Trusted Authentication

Note: The 'CMS' in these instructions is the BusinessObjects Central Management Server, which manages the entire BusinessObjects Enterprise system. Do not confuse this BusinessObjects CMS with the CA DataMinder Central Management Server.

You can use the following procedure for both the InfoView and OpenDocument web applications.

1. Locate the 'BusinessObjects Enterprise 12.0' subfolder. The default locations are:

   32-bit Operating Systems

   C:\Program Files\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0

   64-bit Operating Systems

   C:\Program Files (x86)\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0

   If you have specified a non-default installation folder for BusinessObjects Enterprise, the subfolder is relative to that location. For example, if your installation folder is F:\BOXI, the subfolder is:

   F:\BOXI\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0

2. Open the configuration file from the deployed location on your web application server. The file name and default locations are:

   Java InfoView on Windows

   The file is web.xml. The default location is:

   C:\Program Files\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0\warfiles\WebApps\InfoViewApp\WEB-INF

OpenDocument

The file is web.xml. The default location is:

C:\Program Files\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0\warfiles\WebApps\OpenDocument\WEB-INF

Note: The following steps use InfoView as the chosen web application. Repeat steps 3 through 7 for each of the web.xml files.

3. Specify the BusinessObjects CMS server name and port number by editing the following lines in web.xml:

```
<context-param>
  <param-name>cms.default</param-name>
  <param-value>My_BOXI_CMS:6400</param-value>
</context-param>
```

4. Enable single sign-on by editing web.xml as shown below:

```
<context-param>
  <param-name>sso.enabled</param-name>
  <param-value>true</param-value>
</context-param>
```

5. Disable SiteMinder by editing web.xml as shown below:

```
<context-param>
  <param-name>siteminder.enabled</param-name>
  <param-value>false</param-value>
</context-param>
```

6. Specify the user retrieval method by editing web.xml as shown below:

```
<context-param>
  <param-name>trusted.auth.user.retrieval</param-name>
  <param-value>REMOTE_USER</param-value>
</context-param>
```

   Note: There are various mechanisms that populate the user name. Configure or set up your web application server so that your user names are exposed before you use this user retrieval name methods. For further information, see:

   http://java.sun.com/j2ee/1.4/docs/api/javax/servlet/http/HttpServletRequest.html

7. Specify the shared secret retrieval method. For integration with the iConsole, you must retrieve the shared secret from a configuration file:

   a. Go to the platform-specific directory of Business Objects. For Windows, this directory is:
      `C:\Program Files\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0\win32_x86`

   b. If a file called TrustedPrincipal.conf does not already exist in this directory, create the file.

   c. Enter the following line in TrustedPrincipal.conf:
      `SharedSecret=<secret>`

      Where <secret> is the shared secret string that you want to use.

   d. Save and close this file.

8. Restart your web application server:

   a. Stop the Server Intelligence Agent.

      Find the agent in the BusinessObjects Enterprise Central Configuration Manager.

   b. Restart IIS or Tomcat

   c. Restart the Server Intelligence Agent.

Note: For full details, please see the 'Configuring Third-Party Authentication' chapter in the *SAP BusinessObjects Enterprise Administrator's Guide*. BusinessObjects Enterprise guides are available for download from the SAP Help Portal.

Configure Integration with BusinessObjects

After installation, you can optionally configure CA DataMinder integration with BusinessObjects by editing the registry. Locate the following registry key on the iConsole front-end web server:

```
HKEY_LOCAL_MACHINE\SOFTWARE\ComputerAssociates\CA DataMinder
  \CurrentVersion\Web\BOE
```

Within this registry key, you can edit the following registry values:

Enabled

Type: REG_DWORD

Data: Defaults to zero. Set this value to 1 to enable CA DataMinder integration with BusinessObjects Enterprise.

if set to zero, CA DataMinder integration with BusinessObjects Enterprise is disabled.

This registry value is set automatically when you install the CABI Reporting Integration component through the iConsole installation wizard.

Server

Type: REG_SZ

Data: Specify the FQDN (fully qualified domain name) or IP address of the server hosting BusinessObjects Enterprise.

This registry value is set automatically when you install the CABI Reporting Integration component through the iConsole installation wizard.

Port

Type: REG_DWORD

Data: Specify the TCP port used by the iConsole to log on to BusinessObjects Enterprise.

This registry value defaults to port 6400. Normally, you do not need to change this port number. But if your BusinessObjects Enterprise installation uses a different port number, specify that number here.

WebServicePort

Type: REG_DWORD

Data: Specify the TCP port used by the iConsole to connect to the BusinessObjects Enterprise web service.

The iConsole calls this web service to display the available BusinessObjects reports, retrieve report results, and access the InfoView web portal.

This registry value defaults to port 8080. Normally, you do not need to change this port number. But if the BusinessObjects Enterprise web service uses a different port number, specify that number here.

CommonPath

Type: REG_SZ

Data: Specifies the location of the common CA DataMinder reports within the CA Business Intelligence system. In particular, this registry value is set to the name and path of the reports folder. For example: CA Reports/CA DataMinder.

This registry value is set automatically when you install the CABI Reporting Integration component through the iConsole installation wizard.

UserPath

Type: REG_SZ

Data: Specifies the location of the user's personal CA DataMinder reports within the CA Business Intelligence system. In particular, this registry value is set to the name and path of the reports folder, relative to the user's \Favorites folder.

This registry value is set automatically when you install the CABI Reporting Integration component through the iConsole installation wizard.

InfoView

Type: REG_DWORD

Data: Defaults to 1. Set this value to 1 to display an InfoView link in the BusinessObjects page of the iConsole Review tab.

If set to zero, the InfoView link is not displayed.

ReportAccess

Type: REG_DWORD

Data: Defaults to 1. Set this value to 1 to display BusinessObjects reports for CA DataMinder in the BOE page of the iConsole Review tab.

If set to zero, BusinessObjects reports are not displayed.

HomepageAccess

Type: REG_DWORD

Data: Defaults to 1. Set this value to 1 to list BusinessObjects reports for CA DataMinder on the iConsole home page.

If set to zero, BusinessObjects reports are not displayed.

DefaultFormat

Type: REG_SZ

Data: Defaults to HTML. Specifies the output format for CA DataMinder BusinessObjects reports. The supported formats are PDF and HTML.

This registry value is set automatically when you install the BOE Integration component through the iConsole installation wizard.

Post-installation Configuration

This section provides optional instructions for configuring Tomcat and BusinessObjects Enterprise auditing.

Configure Auditing for BusinessObjects Enterprise

If auditing is already set up for BusinessObjects Enterprise, you can configure auditing levels for individual applications (such as InfoView and Web Intelligence) in the Central Management Console (CMC). Click the Auditing tab for each application in the CMC. If auditing is not already set up, see the summary instructions below.

Note: For full details, see the 'Managing Auditing' section of the *BusinessObjects Enterprise Administrator's Guide*.

How Do I Set Up Auditing After Installing BusinessObjects Enterprise?

Follow these steps to configure your Server Intelligence Agent (SIA) to connect to an auditing database:

1. Launch the Central Configuration Manager (CCM).
2. Stop the SIA.
3. Click 'Specify Auditing Data Source'.
   a. Select a database driver.
   b. Specify the connection method and data source that you want to use as the auditing database.
4. Enter your database credentials for the auditing database.

   Do not enter the logon credentials for the CMS system database.
5. Restart the SIA.

   When the CMS starts, it populate the database with the required auditing tables.
6. Use the CMC to enable the Auditing service on all relevant servers.

Change the Tomcat Port

You specify the Tomcat port is when you install CA Business Intelligence. If required, you can the Tomcat port for CA Business Intelligence after the installation is complete by modifying the server.xml file.

To change the Tomcat port

1. On the CA Business Intelligence server, navigate to the installation folder. By default, this is:
   `C:\Program Files\CA\SC\CommonReporting3`
2. In Common Reporting, go to the \Tomcat\conf folder.
3. Make a copy of Server.xml for backup puposes.
4. Edit Server.xml file.
   a. Find the following line:
      `<!-- Define a non-SSL Coyote HTTP/1.1 Connector on port 8080 -->`
   b. In the Connector section, change the Tomcat port number as required. For example:

```
<Connector
   URIEncoding="UTF-8"
   acceptCount="100"
   connectionTimeout="20000"
   debug="0"
   disableUploadTimeout="true"
   enableLookups="false"
   maxSpareThreads="75"
   maxThreads="150"
   minSpareThreads="25"
   port="8070"
   redirectPort="8443"
/>
```

   c. Save the changes to Server.xml.
5. Start the BusinessObjects Central Configuration Manager (CCM)
6. Restart the Tomcat service.

   BusinessObjects Enterprise now uses the new port number.

Upgrade the Default Versions of Tomcat

The CA Business Intelligence installer includes an embedded version of Apache Tomcat. The current CA DataMinder release supports CA Business Intelligence 3.2. This version of CA Business Intelligence includes Tomcat 5.5.20.

If you want to upgrade to the latest version of Tomcat for security reasons, downloads are available from the following web site:

http://tomcat.apache.org/download-55.cgi

Note: Read the Tomcat release notes carefully. Our testing indicates that the Tomcat installer installs a *new* version of Tomcat instead of upgrading an existing version.

To verify your current version of Tomcat

1. Open the stdout.log file.

   Find this file in the \Tomcat55\logs subfolder below the CA Business Intelligence installation folder. By default, the full path is:
   `C:\Program Files\CA\SC\CommonReporting3\Tomcat55\logs`

2. Find entries such as:
   `INFO: Starting Servlet Engine: Apache Tomcat/5.5.20`

Optimize Tomcat

In some circumstances, we recommend that you set the Tomcat Minimum Memory Pool Size to be the same as the Maximum Memory Pool Size. Do this if the Java virtual machine (JVM) reliably takes up almost the maximum memory size or if the JVM has problems finding a contiguous block of memory when trying to grow in size.

Note: Tomcat does not start if it cannot achieve the minimum memory pool size. If the minimum memory pool size is too big, this causes extra garbage collection which adversely effects performance.

Enable Support for BusinessObjects Reports

(Only applies to CA DataMinder customers who want to run BusinessObjects reports for CA DataMinder)

BusinessObjects reports for CA DataMinder are designed to show results by user and group. These reports *do* require event participant data. Before reviewers can run these reports, you must populate the data warehouse with these details. Specifically, you must enable and populate the Event Participant Fact table. There are two methods for populating the Event Participant Fact table:

Resync the Event Participant Fact table

Use this method if you have never purged events from the CMS database. Events in the CMS already correspond with events in the data warehouse. Specifically, you must:

a. Manually enable the Event Participant Fact table.

b. Run a database command to resync the Event Participant Fact table. This operation is relatively fast.

Truncate and repopulate the data warehouse

Use this method if you regularly purge events from the CMS database.

The data warehouse probably contains data for events that no longer exist in the CMS. You must eliminate this discrepancy before you run BusinessObjects reports. Specifically, you must empty and then repopulate the entire data warehouse so that it only contains events that currently exist in the CMS database. Specifically, you must:

a. Manually enable the Event Participant Fact table.

b. Run a database command to truncate and repopulate the data warehouse. This operation takes longer than a resync.

Note: If you want to use the iConsole dashboard but not run BusinessObjects reports, you do not need to populate the Event Participant Fact table. The iConsole dashboard has no dependency on the Event Participant Fact table and has no requirement for the table to be enabled.

More information:

Configure the Event Participant Fact Table (see page 72)
Truncate and Repopulate the Data Warehouse (see page 73)
Resync the Event Participant Fact Table (see page 74)

Configure the Event Participant Fact Table

Before you can populate the Event Participant Fact table, you must enable and configure the Event Participant table. Run the following commands to schedule a data warehousing job. The job performs the initial table configuration.

SQL Server Host Servers

Run this command:

```
EXEC WgnDW_Configure_DW
  @Is_EP_Fact_Enabled = 1,
  @offpeak_run_starttime_hour = <hour>,
  @offpeak_run_timeout_mins = <minutes>,
  @Fact_Expiry_Age_Months = 0,
  @no_older_than_date = null
```

Where:

Is_EP_Fact_Enabled

Set this parameter to 1 to enable the Event Participant Fact table.

offpeak_run_starttime_hour

Use this parameter to specify the starting hour for the job. It can be any value from 0 to 23. For example, 0 specifies a midnight start; 23 specifies an 11 pm start.

offpeak_run_timeout_mins

Use this parameter to specify the window duration (in minutes) for the job. For example, set this to 240 to specify a four hour window

Fact_Expiry_Age_Months

Use this parameter to specify the maximum age (in months) of events stored in the data warehouse. If an event is older than *n* months, it gets purged when the next data warehousing job runs.

For example, if you set this parameter to 60, the data warehouse retains events up to 5 years old. Event solder than 5 years are purged.

If you set this parameter to zero, no events are purged). We recommend that you set this parameter to zero if you want the data warehouse to be exactly synchronized with event tables in your CMS database.

no_older_than_date

Use this parameter to limit the age of events that get copied into the data warehouse. The parameter specifies a timestamp. Only events captured on or after this date are copied into the data warehouse. Events captured before this date are excluded and not copied to the data warehouse.

For example, to specify a date of 6:00 am, 1 April 2012:

```
@no_older_than_date='2012-04-01 06:00:00'
```

Set this parameter to *null* to include all events. If you omit this parameter, events older than 3 days are excluded.

Oracle Host Servers

Run this command:

```
BEGIN
  WgnDW_Configure_DW(
    Is_EP_Fact_Enabled => 1,
    offpeak_run_starttime_hour => <hour>,
    offpeak_run_timeout_mins => <minutes>,
    Fact_Expiry_Age_Months => 0,
    no_older_than_date => null );
END;
```

Where the parameters are as described above.

Truncate and Repopulate the Data Warehouse

If you regularly purge events from you CMS database, it is likely that your data warehouse contains events that no longer exist on the CMS. Specifically, the participant details for these events no longer exist in the CMS database and cannot be processed into the data warehouse Event Participant Fact table. In this situation, we recommend that you *truncate and repopulate* the entire data warehouse to avoid discrepancies in report results.

Run the following commands to truncate and repopulate the data warehouse tables.

SQL Server Host Servers

Run this command:

```
EXEC WgnDW_Configure_DW
  @Truncate_On_Next_Run = 1
```

Where:

Truncate_On_Next_Run

Truncates and repopulates the data warehouse tables. This operation ensures that events in the data warehouse, including the Event Participant Fact table, exactly correspond to the event tables in the CMS database.

Oracle Host Servers

Run this command:

```
BEGIN
  WgnDW_Configure_DW(
    Truncate_On_Next_Run = 1 );
END;
```

Where the Truncate_On_Next_Run parameter is as described above.

Resync the Event Participant Fact Table

.If you have not purged any events from your CMS database, events in your data warehouse already correspond to events on the CMS. To enable support for BusinessObjects reports, you just need to resync the Event Participant Fact table. This operation ensures that all event participant details are copied to the data warehouse.

Run the following commands to resync the Event Participant Fact table.

SQL Server Host Servers

Run this command:

```
EXEC WgnDW_Configure_DW
  @Resync_On_Next_Run = 1
```

Where:

Resync_On_Next_Run

Resynchronizes the Event Participant Fact table. This operation ensures that events and participant details in the Event Participant Fact table exactly correspond to the event tables in the CMS database.

Oracle Host Servers

Run this command:

```
BEGIN
  WgnDW_Configure_DW(
    Resync_On_Next_Run = 1 );
END;
```

Where the Resync_On_Next_Run parameter is as described above.

Backup and Recovery for BusinessObjects Enterprise

Please refer to your BusinessObjects Enterprise documentation for guidance on backup and recovery.

More information:

Download a BusinessObjects Enterprise Document (see page 23)

Chapter 3: Managing CA DataMinder Reports in InfoView

InfoView is the BusinessObjects web portal. InfoView enables you to manage all your BusinessObjects reports, including CA DataMinder reports, in a single personalizable web interface. You can: customize existing CA DataMinder reports; create new CA DataMinder reports based on the CA DataMinder Universe; and schedule CA DataMinder reports.

Note: You can also run BusinessObjects reports for CA DataMinder directly from the iConsole. See the iConsole help for details.

This section contains the following topics:

Launch InfoView

You can launch InfoView from the iConsole or you can browse to InfoView directly.

To launch InfoView from the CA DataMinder iConsole

1. Log on to the iConsole using an account that can connect to BusinessObjects Enterprise.
2. Go to the iConsole Review tab.
   - If trusted authentication *is* enabled and your CA DataMinder account matches an existing BusinessObjects account, the Review tab displays automatically.
   - If trusted authentication is *not* enabled or your CA DataMinder account does not match an existing BusinessObjects account, the BusinessObjects Enterprise Login dialog appears.

   Note: Trusted authentication allows users to log on to a system once, without needing to provide passwords several times during a session. In the case of CA DataMinder and BusinessObjects Enterprise, it means that users do not need to log on separately to BusinessObjects when they run a BusinessObjects report or launch InfoView from the iConsole.
3. (Applicable only if the BusinessObjects Enterprise Login dialog appears) Enter the user name and password of a BusinessObjects Enterprise account and click OK.
4. Go to the BusinessObjects page in the Review tab.

   The BusinessObjects page includes a link to InfoView.
5. Click the InfoView link.

   The InfoView home page displays.

To launch InfoView directly

Browse to the InfoView URL. This URL has the following format:
`http://<BOE Server>:<WebApp Port>/InfoViewApp`

Where <BOE Server> is the BusinessObjects Enterprise host server and <WebApp Port> is the connection port for the web application server that runs InfoView. The default port Is 8080. For example, if BusinessObjects Enterprise is hosted on UX-ReportsSvr-W2K8, the InfoView URL is:
`http://UX-ReportsSvr-W2K8:8080/InfoViewApp`

Creating Custom Reports

In InfoView, you can run CA DataMinder reports immediately or you can schedule them to run at regular intervals.

To run CA DataMinder reports in InfoView

1. Launch InfoView. Log on to the iConsole using an account that can connect to BusinessObjects Enterprise.

   The InfoView home page displays.

2. Click Document List and browse to All, Public Folders, CA Reports, CA DataMinder.

   Available CA DataMinder reports are listed in subfolders as Web Intelligence reports.

3. Right-click the report you want to run and click View.

   The Prompts dialog appears. This dialog allows you to change basic report parameters.

   Note: In Web Intelligence documents, parameters are called prompts.

4. Change the report parameters as required and click Run Query.

To schedule CA DataMinder reports in InfoView

1. In the Document List page in InfoView, browse to All, Public Folders, CA Reports, CA DataMinder.

2. Right-click the report you want to run and click Schedule.

   The Schedule page appears. This page allows you to specify when the report runs.

3. In the left pane, click Recurrence in the Schedule menu.

4. Specify the report frequency in the 'Run Object:' field.

5. Click the Schedule button.

   When the scheduled report completes, it appears in your InfoView inbox.

Customizing CA DataMinder Reports in InfoView

If your BusinessObjects account has report administrator or report author permissions, you can create custom CA DataMinder reports in InfoView.

You can customize existing CA DataMinder reports (for example, changing the results columns) or you can create new reports. The following sections give summary instructions. For full details, see the *SAP BusinessObjects Enterprise InfoView User's Guide*.

To customize an existing CA DataMinder report

1. Make a copy of the CA DataMinder report that you want to modify.

   This step is necessary to prevent your changes to the report being overwritten during a future CA DataMinder upgrade.

   a. In the Document List page, navigate to All, Public Folders, CA Reports, CA DataMinder.

   b. Right-click the CA DataMinder report you want to copy and click Organize, Copy.

   c. Navigate to the folder in which you want to keep the copy (for example, My Favorites).

   d. Right-click the target folder and click Organize, Paste.

2. Right-click the copy and click Modify.

   The Prompts dialog appears. This dialog allows you to change basic report parameters.

   Note: In Web Intelligence documents, parameters are named prompts.

3. Change the report parameters as required and click Refresh Data.

   The Web Intelligence report panel appears.

4. Edit the report as required. For example, you can remove or reorganize columns.

   For full instructions, see your BusinessObjects Enterprise documentation.

5. Click Save As to save the report.

   Note: If you want your customized reports to be listed in this 'My Favorites' folder in the iConsole, you must save them to the \All\My Favorites\CA reports\CA DataMinder folder in InfoView.

To create a new CA DataMinder report

1. In the Document List page in InfoView, browse to All, Public Folders, CA Reports, CA DataMinder.

2. Right-click the CA DataMinder folder click New, Web Intelligence Document.

   The 'Web Intelligence Document-New Document' page appears.

3. Click the CA DataMinder Universe in the left pane.

   The Web Intelligence report panel appears.

4. Build the report query by adding the objects and filters that you want to include in your report.

   For full instructions, see your BusinessObjects Enterprise documentation.

Report Diagnostics

View the report SQL

If you have the required permissions, you view the underlying SQL for BusinessObjects reports for CA DataMinder. In InfoView, run the report. Then click Edit Report, Edit Query, View SQL.

If you cannot edit these reports

If your BusinessObjects user account belongs to any of CA DataMinder user group, you cannot edit a report in the CA DataMinder Standard Reports folder (because the Edit button is not displayed). The workaround is to save the report to a different folder:

1. In InfoView, run a CA DataMinder standard report.
2. Save the report to a different folder, such as the Favorites folder.

   Note: Members of the CA DataMinder Reports Viewer group do not have permission to save reports to different folders.
3. Close the original report.
4. Open the report that you saved in the Favorites folder.

   The Edit Report button is now displayed.
5. Click the Edit Report button.

Note: The CA DataMinder user groups are *CA DLP Reports Administrator*, *CA DLP Reports Author*, and *CA DLP Reports Viewer*.

SQL Server CA DataMinder CMS: View Performance Metrics

Database administrators can monitor and analyze the data warehouse query performance by using a SQL Server Profiler trace, available from the Tools menu in SQL Management Studio.

When prompted, enter the server name of the CA DataMinder CMS database and the credentials for a user with 'ALTER TRACE' system privileges (typically the 'sa' user).

To prevent the trace capturing database activity that is unrelated to data warehouse queries, add a session login filter based on the Reporting User. In the Trace Properties dialog, go to the Events Selection tab and add a SessionLoginName filter. For example, if the database account name for your Reporting User is WgnReporting, edit the filter as follows:

```
SessionLoginName Like WGNREPORTING
```

When you add or remove events and data columns from the trace file, the following *events* are of particular interest:

- Errors and Warnings: Attention, Exception, and (possibly) Performance Warnings.
- Stored Procedure: RPC Start, RPC End, SP End
- TSQL: SQLBatchCompleted
- Performance: Showplan Statistics Profile or Showplan Statistics XML Profile

The following *data columns* are of particular interest:

- SPID
- EventSequence
- TextData
- CPU
- Duration
- Writes
- Reads
- RowCounts
- BinaryData (if performance plans are being collected)

Oracle CMS: View Performance Metrics

Oracle installations include trace functionality for BusinessObjects-data warehouse query performance problems. A sys user can use the following procedures to control tracing of these queries.

```
WGN_TRC.ENABLE_TRACE;
```

Enables a trace for all BusinessObjects users.

```
WGN_TRC.SET_USER(<CA DataMinder_User>>);
```

Enables a trace only for the specified CA DataMinder user name.

```
WGN_TRC.CLEAR_USER;
```

Trace all users.

```
WGN_TRC.DISABLE_TRACE;
```

Disable traces for all BusinessObjects users.

A single report run may create several traces, one for each query contributing to a BusinessObjects report for CA DataMinder. The trace file name contains the user name.

A sys user can query the folder path to the trace files by running this command in SQL*Plus:

```
SELECT * from V$PARAMETER WHERE name = 'user_dump_dest';
```

Chapter 4: Troubleshooting

This section provides useful information for troubleshooting problems with CA Business Intelligence, BusinessObjects Enterprise, the BusinessObjects Universe, and the CA DataMinder data warehouse.

This section contains the following topics:

Log Files

The following log files are available.

CA Business Intelligence Log Files and Version Details

Find the following log files in the CA Business Intelligence installation folder:

- ca-install.log
- CABIconfig.log

By default, the full path is:
`C:\Program Files\CA\SC\CommonReporting3`

CA Business Intelligence version details are in version.txt. Find this file in:

- The \Disk1\cabi\biek subfolder on your CA Business Intelligence distribution media.
- The \CommonReporting3 subfolder below the CA Business Intelligence installation folder.

BusinessObjects Enterprise Log Files

Find the following log files in the \BusinessObjects Enterprise 12.0\logging subfolder:

Main service

CMS_*_trace.log

Web Intelligence Report Processing

wireportserver_*_trace.log

Jobs and Scheduling

APS_<cmssrvname>.AdaptiveProcessingServer_*_stdout.log

By default, the full path is:
`C:\Program Files\CA\SC\CommonReporting3\BusinessObjects Enterprise 12.0\logging`

Tomcat Log Files and Version Details

Find useful log files in the \Tomcat55\logs subfolder below the CA Business Intelligence installation folder. By default, the full path is:
`C:\Program Files\CA\SC\CommonReporting3\Tomcat55\logs`

Find version details the stdout.log file. Look for entries such as:
`INFO: Starting Servlet Engine: Apache Tomcat/5.5.20`

MySQL

Log files are saved as <servername>.err. Find these logs the \MySQL\data subfolder below the CA Business Intelligence installation folder. By default, the full path is:
`C:\Program Files\CA\SC\CommonReporting3\MySQL5\data\<servername>.err`

CA Business Intelligence: I Cannot Choose an Existing Database Server

Symptom:

You want to use an existing database server. You do not want to install a new MySQL database server.

But when you run the CA Business Intelligence Setup wizard, the ODBC System DSN for your existing database server is not listed in the CMS Database Information screen.

Reason:

There are several possible reasons:

- There is no ODBC connection to your DBMS. You must specify a 32-bit ODBC System DSN to connect to your DBMS before you install CA Business Intelligence.
- The ODBC connection is using the default 64-bit ODBC, not a 32-bit ODBC.
- The ODBC connection is not defined as a System DSN.

Solution: 1

Specify a 32-bit ODBC System DSN to connect to your DBMS.

If you not running the CA Business Intelligence Setup wizard, create a new ODBC System DSN on your BusinessObjects reports server. This ODBC connection connects to the database server that you want to use. Then rerun the CA Business Intelligence Setup wizard.

If you already running the CA Business Intelligence Setup wizard:

1. Pause in the CMS Database Information screen.
2. Create a ODBC System DSN on your BusinessObjects reports server. This ODBC connection connects to the database server that you want to use.

   Note: For SQL Server, your ODBC connection must point to a new database, typically named BOE120. BusinessObjects Enterprise must connect to this database as the owner.
3. Force a refresh of the CMS Database Information screen so that it includes the ODBC connection you want.

   To refresh the screen, go back to the previous wizard screen (the Server Intelligence Agent screen). Then return to the CMS Database Information screen.

   The ODBC connection to your DBMS is now listed on the CMS Database Information screen.
4. Specify the ODBC connection to your DBMS and continue with the CA Business Intelligence installation.

Solution: 2

Verify the ODBC connection is correctly defined. On a 64-bit server:

- Verify that the ODBC connection is using a 32-bit ODBC, not the default 64-bit ODBC.

  The 32-bit ODBC is typically located in %SystemRoot%\SysWOW64\odbcad32.exe,
- Verify that the ODBC connection is defined as a System DSN.

Solution: 3

An Oracle CA DataMinder CMS must use a 32-bit ODBC System DNS to connect to your BusinessObjects CMS. To allow the CA DataMinder CMS to connect using 32-bit Oracle client software, the tnsnames.ora file must include an entry for the CA DataMinder CMS database. You must also specify the location of tnsnames.ora in the registry.

Details about tnsnames.ora are included in the Requirements section for CA Business Intelligence.

More information:

Add a CA DataMinder CMS Entry to Tnsnames.ora (see page 30)

BusinessObjects Enterprise: Users Cannot Run Reports or Connect to CMC

Symptom:

Reviewers and administrators cannot access BusinessObjects Enterprise. For example:

- Reviewers cannot launch InfoView or run BusinessObjects reports for CA DataMinder from the iConsole.
- Administrators cannot log on to the Central Management Console (CMC).

Solution:

Required BusinessObjects Enterprise services are not running.

1. Use the BusinessObjects Diagnostic Tool to identify which services are down and which are running.
2. Use the CMC to verify that services identified by the Diagnostic Tool as running are actually running.
3. Restart any services that are not running. Also, restart any services that the Diagnostic Tool identified as down.
4. If the CMS service does not restart:
   a. Stop the Server Intelligence Agent (SIA).

      Note: You specified the SIA node when you ran the CA Business Intelligence installer.

   b. Stop the web application server.

      Typically, this is the Tomcat web application server included with BusinessObjects Enterprise.

   c. Stop the web service associated with the web application server (for example, the World Wide Web Publishing Service).

   d. Restart these components in in reverse order.

   Note: The 'CMS' in these instructions is the BusinessObjects Central Management Server, which manages the entire BusinessObjects Enterprise system. Do not confuse this BusinessObjects CMS with the CA DataMinder Central Management Server.
5. If the CMS service still does not restart, reboot your reports server (that is, the server hosting BusinessObjects Enterprise).

BusinessObjects Enterprise: CMC Cannot Connect to BusinessObjects Database

Symptom:

Reviewers and administrators cannot connect to the BusinessObjects Enterprise database from the Central Management Console (CMC).

Solution:

Perform the following tests in sequence to diagnose the problem:

1. Start the 32-bit ODBC Connection Manager, odbcad32.exe.

   Find this utility here in C:\WINDOWS\SysWOW64\ on your reports server.

   a. Test the BusinessObjects CMS connection to verify that the database service is running.

   b. Verify that the database is contactable from reports server.

   c. Verify that the ODBC connection is using a valid user and password.

   If these tests are all successful, continue to step 2.

2. Test whether you can log in to the BusinessObjects CMS database directly. Use the account credentials that ODBC connection uses. For example, on a MySQL BusinessObjects CMS:

   a. Go to \Program Files\CA\SC\CommonReporting3\MySQL5\bin

   b. Run the following command and enter the password when prompted:
   `mysql –p –u sa`

   Note: Do not log in using a super user or impersonation command because you may bypass problems.

   If these tests are all successful, continue to step 3.

3. (MySQL databases only) Enter the following commands, one line at a time:

```
SHOW DATABASES;
USE boe120;
SHOW TABLES;
SELECT * from cms_relations6 LIMIT 0,1;
QUIT
```

   The first command lists the available databases.The next command connects to the BusinessObjects CMS database. The next command selects one row from a table (this is a simple test to determine whether you have permissions against that database). The final command quits from MySQL.

Universe: Administrators Cannot See CA DataMinder Folder in the CMC

Symptom:

When administrators browse documents in the Central Management Console (CMC), they can see the CA Reports folder, but they cannot see the CA DataMinder Reports subfolder.

Note: The full path is Documents/Public Folder/CA Reports/CA DataMinder Reports.

Reason:

The CA DataMinder-specific content for BusinessObjects Enterprise did not install successfully.

Solution:

Follow these steps to determine whether the Universe installed correctly.

1. Did you run InstallUniverse.bat run after installing CA Business Intelligence?

   InstallUninverse.bat installs the Universe.

2. If you did run InstallUniverse.bat, were any errors listed in the biconfig.log file?

   New entries are appended to the end of the log file, so inspect the final entries. Example errors in biconfig.log include the following:

   ```
   ERROR ReportingDeployUtility - Error connecting to the BusinessObjects system. Error: Server bo-srvr:6400 not found or server may be down (FWM 01003) – Check the BOXI server is up and the BOXI server name and port are correct
   ```

   ```
   ERROR ReportingDeployUtility - Error connecting to the BusinessObjects system. Error: Enterprise authentication could not log you on. Please make sure your logon information is correct. (FWB 00008) – BOXI users (e.g. Administrator) credentials may have been entered incorrectly
   ```

   ```
   ERROR BaseConfigurationHandler - Error setting the enterprise authentication properties. Error: Index: 0, Size: 0 – The BOXI user account used to install the universe and reports may not have enough privileges install.
   ```

   Note: Other errors relating to the database connection are not available in biconfig.log, because these errors are not verified during the installation. If the database connection is configured incorrectly, you see an error when you attempt to run a BusinessObject report for CA DataMinder (see step 4 below).

3. If you did run InstallUniverse.bat, did you supply:
   - The correct name or IP address of the BusinessObjects (BOXI) server?
   - The correct port number for the BusinessObjects (BOXI) server? This is the port that the BusinessObjects CMS listens on. The default port is 6400.

   Verify that you did supply the correct server and port details by logging on to the BusinessObjects CMC.
4. Do you see the error message 'CMS is not contactable' when you run a BusinessObject report for CA DataMinder?

   If you see this message, verify that the BusinessObjects CMS service is running. Log on to the BusinessObjects Central Configuration Manager (CCM). Then verify that the web server, application server, Server Intelligence Agent (SIA) and all sub-services are running.

   Note: The 'CMS' in these instructions is the BusinessObjects Central Management Server, which manages the entire BusinessObjects Enterprise system. Do not confuse this BusinessObjects CMS with the CA DataMinder Central Management Server.
5. Re-run InstallUniverse.bat. Ensure that you supply the correct configuration parameters.

Reports: Problems running BusinessObjects Reports for CA DataMinder

The following sections describe problems that reviewers may encounter when running BusinessObjects reports for CA DataMinder.

More information:

A Reviewer Cannot See the CA DataMinder Reports Subfolder (see page 89)
All Reviewers See a Specific Error Message (see page 90)
An Individual Reviewer Sees An Error Message When Running A Report From InfoView (see page 92)
Reviewers See the BusinessObjects Enterprise Login Dialog (see page 93)
Reviewers Do Not Have Rights to Schedule WebIntelligence Reports (see page 94)
Reviewers Cannot Save Reports Under the CA DataMinder Standard Reports Folder (see page 94)
BusinessObjects Reports in PDF Format Display in New Window Instead of Home Page Portlet (see page 95)

A Reviewer Cannot See the CA DataMinder Reports Subfolder

Symptom:

When an individual reviewer browses documents in InfoView, they cannot see the CA DataMinder Reports subfolder.

Note: The full path is Documents/Public Folder/CA Reports/CA DataMinder Reports.

Solution:

Verify that the reviewer's BusinessObjects user account is assigned to a BusinessObjects user group that allows access to the CA DataMinder reports. The groups are *CA DLP Reports Administrator*, *CA DLP Reports Author* and *CA DLP Reports Viewer*.

All Reviewers See a Specific Error Message

Symptom:

All iConsole reviewers see an error message similar to the examples below when they try to run a BusinessObjects report for CA DataMinder.

SQL Server CMS?

If you see this message, go to Solution 1:

```
CS:COM Provider CLSID not specified or erroneous
```

Note: You may also see this message in BOXI Designer when using a Universe connection.

If see messages such as these, go to Solution 2:

```
Login failed for user 'WGNREPORTING'. Database username or password is incorrect.
```

```
SQL Server Network Interfaces: Error Locating Server/Instance Specified [xFFFFFFFF]. Server name may be incorrect
```

```
Database 'wgn' does not exist. Make sure that the name is entered correctly. Database name may be incorrect
```

```
TCP Provider: No connection could be made because the target machine actively refused it. Database may be down
```

Oracle CMS?

If you see this message and a WIS 10901 error number, go to Solution 1:

```
DBDriver failed to load:
<BusinessObjectsInstallationFolder>\win32_x86\dataAccess\connectionServer
\dbd_oci.dl (%1 is not a valid Win32 application.)
```

Note: You may also see this message in BOXI Designer when using a Universe connection.

If see messages such as these, go to Solution 2:

```
ORA-01017: invalid username/password; logon denied. Database username or password is incorrect.
```

```
ORA-12154: TNS:could not resolve the connect identifier specified. DB Service name may be incorrect
```

```
ORA-12514: TNS:listener does not currently know of service requested in connect descriptor. Database may be down
```

Solution 1

Users cannot connect to a reporting database because the necessary database native client software to connect to that database type has not been installed on the BusinessObjects server.

Verify that the correct native client software (such as Oracle Net Client) is installed. The native client software enables the BusinessObjects CMS server (or any BOXI node servers) can communicate with the CA DataMinder database where the data warehouse is located.

If a user sees these messages while using BOXI Designer, verify that the native client software is installed on the BOXI Designer host computer.

We recommend that you use the latest stable service pack version for both your database and your native client software.

When you install the latest native client software, choose the x86 (32-bit) or x64 (64-bit) native client version as appropriate, depending on the hardware of the host computer.

SQL Server databases

Install the native client software as part of Management Studio or as part of the Microsoft 'Feature Pack' download.

Note: The SQL Server 2008 R2 native client *does* support SQL Server 2008. But the SQL Server 2008 native client does *not* support SQL Server 2008 R2.

Solution 2

These error messages indicate a failure to connect to the database or a failure to authenticate.

The BusinessObjects Universe connection that defines how to connect to the reporting database may be configured incorrectly. This happens if there a data entry error occurred when running InstallUniverse.bat.

Verify the Universe connection configuration details:

1. Start the BusinessObjects Designer.
2. Under Tools, Connections, edit the CA DataMinder connection. Amend any details that are incorrect,
3. Test the connection to verify that the details are now correct
4. Save the connection.

If you cannot connect to the Universe successfully, use a database native client to verify independently that you can access the database using the correct address and login credentials of a BusinessObjects user account.

Note: If your BusinessObjects deployment uses an Oracle databases, verify that tnsnames.ora includes an entry for the CA DataMinder CMS database. For details, see Add the CA DataMinder CMS to Tnsnames.ora (see page 30).

An Individual Reviewer Sees An Error Message When Running A Report From InfoView

Symptom:

An iConsole reviewer sees the following error message when they run a BusinessObjects report for CA DataMinder directly through Infoview (not after launching InfoView from the iConsole):

```
The SELECT permission was denied to the object <tablename> database <databasename>
```

Solution:

The most likely reason is that the BusinessObjects user account is not associated with any CA DataMinder user account. Therefore the BusinessObjects user does not have rights to see CA DataMinder data.

A BusinessObjects 'Administrator' account may see this error because the CA DataMinder ‘Administrator’ account is usually associated with a less privileged BusinessObjects ‘CADLPBOAdmin’ account. This account association ensures that the CA DataMinder administrator does not have administrative rights against aspects of BusinessObjects that are not related to CA DataMinder.

Reviewers See the BusinessObjects Enterprise Login Dialog

Symptom:

When an iConsole reviewer tries to log in to BusinessObjects Enterprise or run a BusinessObjects report for CA DataMinder, the BusinessObjects Enterprise Login dialog displays.

Solution:

There are several possible reasons. In particular:

- Trusted authentication may not be correctly configured between the iConsole and BusinessObjects Enterprise.

  If other reviewers *can* log in successfully, trusted authentication *is* correctly configured.

  If other reviewers *cannot* log in successfully, check the Trusted Authentication Setup (see page 61). Restart the iConsole and BusinessObjects Enterprise after you set up trusted authentication.

- The reviewer's CA DataMinder user account may not have a matching BusinessObjects account.

  By default, the iConsole assumes that trusted authentication is enabled. When trusted authentication is enabled, a reviewer does not need to log on separately to BusinessObjects when they run a BusinessObjects report or launch InfoView from the iConsole. However, if you enable trusted authentication, each of your CA DataMinder reviewers needs their own, unique BusinessObjects account.

  Therefore, you must map your CA DataMinder reviewers to BusinessObjects accounts (see page 55).

- The BusinessObjects server or some BusinessObjects services may not be running.

  Restart the server or services.

Reviewers Do Not Have Rights to Schedule WebIntelligence Reports

Symptom:

When a reviewer tries to schedule a WebIntelligence report to output results in Webintelligence format, they see this message:

```
Sorry, you do not have the right to 'Edit objects' (ID: <n>) for 'CA DataMinder Report <report name>' (ID:<n>). Please contact your administrator if you require this right.
```

Where <n> is an ID number.

Solution:

Your BusinessObjects user account inherits its privileges from the CA DataMinder Report Viewer user group. You do not have sufficient privileges to create a new WebIntelligence report. Instead, you must configure the report to output to your inbox in PDF or Excel format.

Reviewers Cannot Save Reports Under the CA DataMinder Standard Reports Folder

Symptom:

Reviewers cannot save reports under the CA DataMinder Standard Reports folder.

Solution:

This is deliberate and prevents users from overwriting any of the standard reports that ship with CA DataMinder. Reviewers must save custom reports in a different folder.

Note: The ability to save reports depends on which CA DataMinder group the user belongs to.

BusinessObjects Reports in PDF Format Display in New Window Instead of Home Page Portlet

Symptom:

The output format for BusinessObjects reports can be set to PDF, but when you add a PDF report to a portlet on the iConsole home page, the report displays in a new window.

Solution:

You can only display PDF reports in a home page portlet if the Acrobat PDF Reader add-on is enabled for your browser. If you are using a 32-bit browser, verify that this add-on is enabled.

However, this add-on is not supported in 64-bit browsers such as Internet Explorer (64-bit). If you are currently using a 64-bit browser, we recommend that you switch to a 32-bit version of the browser when using the iConsole.

For example, the Start menu in 64-bit editions of Windows 7 lists two versions of Internet Explorer:

- **32-bit version:** 'Internet Explorer'
- **64-bit version:** 'Internet Explorer (64 bit)'

Choose the 32-bit version when using the iConsole.

Appendix A: Sizing Guidelines

This section provides key information about platform choices and sizing for a basic SAP BusinessObjects Enterprise XI (BOXI) reporting system. More complex deployment architectures for high performance or redundancy are covered in the reading list at the end of this section.

This section contains the following topics:

Sizing Guidelines for the Web Application Server

Sizing recommendations vary according to your chosen web application server. The following guidelines refer to Tomcat.

Concurrent user sessions and requests

One Tomcat service using one CPU can typically support up to 400 concurrent user sessions, and between 50 and 75 concurrent requests (dependent on the complexity of workload.)

Memory requirements

Tomcat typically requires between 500MB and 1.5GB of memory, depending on load. We recommend that you allow at least 250MB of unused physical memory to help Tomcat use contiguous memory.

If Tomcat is running on a VM, all of this memory requirement must be dedicated to the VM.

We recommend that you use 64 bit hardware for better scalability.

JVM configuration tips

To configure the Tomcat JVM, click Start, Tomcat, Tomcat Configuration, Java.

MaxMemoryPool setting

For largescale production systems, you may need to increase this setting from the default level of 1024MB.

On 32 bit hardware, do not set MaxMemoryPool to more than 1.2GB to avoid potential issues. (You may be able to raise this setting to 1.4GB if you are using the most recent operating system and Java versions.)

On 64 bit hardware, you can set MaxMemoryPool to a higher level. But if the required heap size reaches 1.5GB, you may need to implement load balancing with extra Tomcat services.

ThreadStackSize setting

We recommend that you set this setting to 1024KB.

InitialMemoryPool setting

The JVM perfers to use contiguous blocks of memory. It can therefore help performance if you set the JVM InitialMemoryPool size to the observed average working size of the virtual machine.

Important: Only do this if that amount of memory is guaranteed to be always available. (If this memory Is not available, the WebIntelligence processing service cannot start.)

BOXI Sizing Guidelines

It is difficult to estimate BOXI sizing requirements in advance. We strongly recommend that you run pilot tests to determine the likely levels of BOXI report usage before you make final sizing estimates. User take-up can vary greatly between customers, and not all iConsole users will run BOXI reports.

SAP use two methods to estimate BOXI sizing requirements:

- *T-shirt Sizing* gives a rough initial size based solely on the number of BusinessObjects users, not the workload.
- *Expert Sizing* is based on monitoring an existing workload or predicting a future workload (which is particularly difficult for ad-hoc reporting).

T-shirt Sizing

For a BOXI infrastructure (that is, BusinessObjects Enterprise plus the web application server), SAP T-shirt sizing identifies the following CPU and memory requrements:

Size	Users	BOXI CPU SAPs	BOXI Memory
S	50	1800	4GB
M	200	2040	8GB
L	400	4090	12GB
XL	700	7160	16GB

Note: SAP provide a reference table that gives benchmark SAP ratings for specific hardware. For example, a HP ProLiant DL380 G7 X5650 (Dual 2.66 GHz Intel® Xeon® X5650, with 12 cores in total) rates as 25,980 SAPs. However, many ratings for smaller servers refer to hardware that is no longer available.

CA DataMinder datasets and reports are generally larger than average. When you apply a T-shirt sizing to your CA DataMinder deployment, we therefore recommend that you double SAP's suggested CPU requirement and add 25% to SAP's suggested memory requirement. For example, if you anticipate 50 BusinessObjects users running CA DataMinder reports, allow for 3600 CPU SAPs and 5GB memory.

The SAP T-shirt sizing does not take into account the type and size of reports being run. General CA testing indicates the following CPU and memory requirements for typical reports:

- 50 simultaneous WebIntelligence report requests require a dual CPU with 4GB memory.
- 100 simultaneous WebIntelligence report requests require a quad core CPU with 8GB memory.

However, CA DataMinder reports can make intensive use of resources. As a general guide:

- 75 concurrent WebIntelligence users require a 64-bit Xeon 6 core CPU, 8GB memory, and a minimum 80GB hard disk.

Sizing for the Reporting Database Host Server

BusinessObjects Enterprise reports for CA DataMinder are generated from tables in the CA DataMinder data warehouse.

The BOXI server does not host the data warehouse. Sizing requirements for the data warehouse are separate and depend on query complexity, database size (the number of raw data rows), and the frequency of the reporting queries. Therefore, we do not consider the SAP T-shirt sizing estimates for the data warehouse to be reliable.

In the current CA DataMinder release, the data warehouse tables are installed in the CA DataMinder CMS database. As a general rule, the host server supporting the CA DataMinder CMS and the data warehouse must be significantly more powerful than the BOXI server. This is because the database queries are the heaviest part of the workload.

Expert Sizing

BOXI CPU SAP Units

These Export Sizing guidelines refer to BOXI CPU SAP units. These are standardized units of CPU power used by SAP to rate hardware. CPU SAP Units are measured as 1 unit per single core CPU. For a multi-core CPU, they are measured as 1 for the first core and 0.5 for subsequent cores (so 2.5 for a 4 core CPU.)

Unallocated Process Core

When sizing the BOXI server, we recommend that you leave one processor core unallocated for use by the OS.

Server Intelligence Agent (SIA)

This is the parent host service visible as a Windows service

The SIA requires 350MB memory and negligible CPU.

BusinessObjects CMS Process

A single CMS supports up to 600 concurrent users and up to 500 concurrent object requests.

The CMS requires negligible CPU and 30-300MB of memory.

You can specify the maximum number of objects that the CMS stores in its memory cache by setting the *maxobjectsincache* command line parameter. See the *BOXI 3.1 Administrators Guide* for details.

Disk space requirements are associated with the BusinessObjects CMS database; see below.

BusinessObjects CMS Database

The workload on this database typically comprises individual Reads and Writes of metadata (such as pointer references to blob files). Therefore, this database typically has minimal CPU or I/O requirements unless you have a very large number of active concurrent CMS users.

The database size depends on the number of objects (such as users or documents). In general, 100MB of database disk space can store 30,000 objects. For example, 30,000 objects equates to 100 users each with 15 reports, and with each report having 20 historic instances.

File Repository Server (FRS) Process

The FRS requires negligible memory or CPU requirements. It does require disk Input/Output.

To calculate FRS disk space requirements, multiply the following:

*Average report size * Number of reports * Number of stored report history instances*

Note: Small, one page reports are typically around 100KB, while major 100 page reports can be around 20MB.

FRS directory locations must use SAN/NAS devices for performance and redundancy.

If you want high performance, you can physically separate the FRS Input and Output folders and use separate disk controllers. Alternatively, you can move the Output FRS process to a dedicated server.

Note: You can configure multiple FRS processes. This provides failover redundancy, but it does not yield performance gains.

Repository Search Engine

The repository search engine requires 500MB memory.

It supports 25 concurrent users per CPU unit. If you anticipate low concurrent usage, the CPU requirement is negligible.

Disk space requirements are approximately the same as for the FRS.

Audit Logging Services (Optional)

These services require 500MB memory and negligible CPU.

Disk space requirements are associated with the BusinessObjects audit database; see below.

BusinessObjects Audit Database

Audit log files are periodically batch loaded to the BusinessObjects audit database. There is minimal additional workload associated with loading the audit data.

The database size varies considerably. It depends on the auditing level, the number of users, and the frequency of auditing activity. For example, 6 months of rolling audit history for 100 users requires approximately 100MB of disk space.

Running audit reports against a very large historic audit database places inense load on the database in short bursts. As a reporting database, we recommend that you do not locate this database on the BOXI server.

WebIntelligence (WebI) service

Allow between 1.8GB and 2GB memory for each WebI service. If you anticipate very large reports (say, 1000 pages), we recommend that you allow 2GB.

Allow one BOXI CPU SAP unit per WebI service process.

A single WebI service process typically supports up to 25 WebI documents concurrently.

The WebI service is critical. If a several large reports are processed concurrently, the total memory requirements may overwhelm the 2GB limit for a single WebI service. You must therefore distribute the workload by adding more WebI services. Indeed, we recommend that you have a minimum of two WebI services running for redundancy puropses and to help throughput. You create new servers and services in the Servers section of the Central Management Console (CMC).

Note: If a WebI report is rendered to PDF or Excel format, the workload on the WebI service occurs when the report is rendered, not when the report is viewed. For this reason, we recommend that users schedule reports torun during off-peak periods.

Data Warehouse Guidelines

For the data warehouse, the key determinants are the size and complexity of the database queries. Conversely, for BOXI the key determinants are the number of data rows returned by a query and the number of pages of report results.

Estimate Future Levels of Report Usage

The main difficulty when sizing an ad-hoc reporting system is that you do not know in advance the mix of reports that your users will run, and how often they will run these reports. Bigger reports require more processing, while report frequency rises as the number of users increases.

We recommend that you use the current level of usage for iConsole standard reports as your baseline. However, a direct comparison with current usage levels may underestimate future usage levels. In particular:

Users Likely to Switch to BusinessObjects Enterprise Reports

Most BusinessObjects Enterprise reports for CA DataMinder are direct equivalents of iConsole standard reports. They generally run as fast as, or faster than, the iConsole standard reports. For this reason, your reviewers are likely to switch to BusinessObjects Enterprise reports and may run reports more frequently. In turn, this switch leads to an increase in the data warehouse workload.

Note: Certain BusinessObjects Enterprise reports for CA DataMinder are slower than their equivalent standard report, especially the Detailed Issue Report and the Compliance Audit Report. Such BusinessObjects Enterprise reports are slower because they run multiple queries to retrieve the necessary details.

Users May Create New Custom Reports

A key advantage of BusinessObjects Enterprise is the ease with which users can create and publish custom reports. Such activity causes an increase in the data warehouse workload.

We also strongly recommend that you review any new reports created by your users. Verify that the new report definitions are 'efficient' and do not adversely affect data warehouse performance. You may also want to limit the number of users who are permitted to save custom reports in the InfoView Public Folder.

Note: Only members of the *CA DLP Reports Author* and *CA DLP Reports Administrator* BusinessObjects user groups can create new reports. Members of the *CA DLP Reports Viewer* group are not permitted to create new reports. (These user groups are created when you install the BusinessObjects Universe for CA DataMinder.)

Distribution the Workload Over Time

Workload distribution over time is critical. We recommend that you limit the level of concurrent reporting activity during office hours to prevent other activity in the CA DataMinder CMS database from being adversely affected.

Database Query Performance is Critical

The optimum number of reports that can run concurrently at peak times depends on query performance.

The data warehouse handles most of the workload, so query performance is generally the limiting factor here.

Although the CA DataMinder data warehouse is fast for certain queries, significant workload is inevitable for queries that require complex row level security (RLS).

Encourage Users to Schedule Reports

Use the BOXI scheduling functionality to alleviate workload issues. Monitor patterns of report usage and encourage your users to schedule their reports to run overnight. Scheduling spreads the workload over time and reduces the impact on the CA DataMinder CMS database while other users are online.

Measure Data Warehouse Performance

When you measure data warehouse performance, we recommend that you run a set of reports concurrently which are representative of your users' reporting activity. Set up a BOXI object package containing multiple representative reports and create a schedule to run the package. While the reports are running, monitor the following items:

- Reporting database server I/O, CPU, and memory
- BOXI server CPU and memory

Data Warehouse Performance

Most of the workload for data warehouse queries is caused by scanning of large fact tables . However, these tables are relatively compact for the number of rows that they contain (for example, 10GB per 100 million rows). Therefore, the database can readily cache these tables, which further reduces the physical I/O for database queries.

Note: Reducing the I/O bottleneck generally leads to intensive CPU usage while database queries are running. Therefore, increasing the number of CPU threads will result in faster query response times.

iConsole Standard Reports May Be Slower

BusinessObjects reports for CA DataMinder are based on the CA DataMinder data warehouse. iConsole standard reports are not.

However, if your users run a mix of data warehouse reports and non-data warehouse reports, the database cache is shared between both sets of tables. In particular, non-data warehouse reports may be slower because of the tables required by these reports are in the cache. Specifically, you may see a corresponding increase in IO for standard iConsole reports. If you can increase the physical memory to increase the cache size, this will remove or mitigate this problem.

General Tips

WebI Service

- Increase the WebI ‘MaximumDocumentCacheSize’ setting from the default 1GB to at least 10GB. This reduces unnecessary processing. Leave free disk space equivalent to around 130% of this figure (13GB) to accommodate delayed cache cleanup processing.
- Increase the WebI 'DocumentCacheDuration' setting if you have any reports that are opened frequently but only refreshed periodically. By increasing the cache duration, these reports stay in cache longer. This also reduces the processing workload.
- Cap the maximum number of jobs that a JobServer (or AdaptiveJobServer) can run concurrently. This limits the impact of these queries on the database and spreads the query load over time.
- Add a new WebI service and a new JobServer service under a dedicated new server group. This allows users with sufficient privileges (typically administrators) to schedule tasks specifically to that JobServer and WebI service.

  If you schedule tasks to specific services and apply a cap to the main job queue, you prioritize specific jobs.

Report Publishing

- Administrator accounts can use the BOXI Publishing functionality to control large report runs to lists of users or to users in BOXI groups. If the administrator runs individual reports for each listed user, they each receive their own RLS report sent to their inbox.
- When publishing reports, we recommend that you schedule the reports to run during off-peak hours. Remember to cap the job queue to avoid overloading the database server with too many concurrent database queries.

Reading List

Implementation Architectures and Supported Platforms

See the following:

- SAP BOXI 3.1 Deployment Planning Guide
- SAP BOXI 3.1 Pattern Book for Windows
- SAP BOXI 3.1 Supported Platforms Guide

Sizing

See the following:

- SAP BOXI 3.1 Sizing Companion
- ASP BOXI 3.1 Sizing Guide

Configuring Services and LDAP Integration

See the SAP BOXI 3.1 Administrators Guide

Appendix B: Accessibility Features

CA Technologies is committed to ensuring that all customers, regardless of ability, can successfully use its products and supporting documentation to accomplish vital business tasks. This section outlines the accessibility features that are supported by CA DataMinder.

Display

To increase visibility on your computer display, you can adjust the following options:

Font style, color, and size of items

Defines font color, size, and other visual combinations.

The CA DataMinder iConsole also supports a High Visibility mode. This increases the size of text and images in the iConsole screens.

Screen resolution

Defines the pixel count to enlarge objects on the screen.

Cursor width and blink rate

Defines the cursor width or blink rate, which makes the cursor easier to find or minimize its blinking.

Icon size

Defines the size of icons. You can make icons larger for visibility or smaller for increased screen space.

High contrast schemes

Defines color combinations. You can select colors that are easier to see.

Sound

Use sound as a visual alternative or to make computer sounds easier to hear or distinguish by adjusting the following options:

Volume

Sets the computer sound up or down.

Text-to-Speech

Sets the computer's hear command options and text read aloud.

Warnings

Defines visual warnings.

Notices

Defines the aural or visual cues when accessibility features are turned on or off.

Schemes

Associates computer sounds with specific system events.

Captions

Displays captions for speech and sounds.

Keyboard

You can make the following keyboard adjustments:

Repeat Rate

Defines how quickly a character repeats when a key is struck.

Tones

Defines tones when pressing certain keys.

Sticky Keys

Defines the modifier key, such as Shift, Ctrl, Alt, or the Windows Logo key, for shortcut key combinations. Sticky keys remain active until another key is pressed.

Mouse

You can use the following options to make your mouse faster and easier to use:

Click Speed

Defines how fast to click the mouse button to make a selection.

Click Lock

Sets the mouse to highlight or drag without holding down the mouse button.

Reverse Action

Sets the reverse function controlled by the left and right mouse keys.

Blink Rate

Defines how fast the cursor blinks or if it blinks at all.

Pointer Options

Let you do the following:

- Hide the pointer while typing
- Show the location of the pointer
- Set the speed that the pointer moves on the screen
- Choose the pointer's size and color for increased visibility
- Move the pointer to a default location in a dialog box