

CA Business Service Insight

Installation Guide

8.3



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Chapter 1: Package Contents

Verify that you have all the required folders as listed in this table before you install CA Business Service Insight.

Folder Name	Description
Server	Server installation folder.
Client	Client installation folder.
Prerequisites	Folder containing files required before installing or upgrading to CA Business Service Insight.
Setup database	Folder containing files for the installation or upgrade of CA Business Service Insight database instance, and other database tools. Refer to the Setup folder.
Silent	Folder containing the examples of silent installation answer files.

Chapter 2: CA Business Service Insight Installation Prerequisites

This section contains the following topics:

[Hardware Prerequisites](#) (see page 11)

[Server Software Prerequisites](#) (see page 12)

Hardware Prerequisites

The following table shows the minimum and recommended hardware requirements for CA Business Service Insight servers and the required network connectivity:

Component	Minimum	Recommended
Processors	Two 2.4 GHz Intel cores or equivalent	Four 2.4 GHz Intel cores or equivalent
Memory	4 GB RAM	8 GB RAM
Network	100 Mbps Fast Ethernet connection	1 Gbps Fast Ethernet

The following table shows the minimum and recommended storages requirements for CA Business Service Insight servers.

Component	Minimum	Recommended
Database Server	40 GB	120 GB*
Application Server	18 GB	40 GB*
Web Server	18 GB	40 GB*

Notes:

- We recommend a RAID 5 controller or a comparable high-availability/high-throughput disk configuration.
- The database capacity varies based on several parameters, such as the number of metrics, the volume of raw data, and the period you keep historical data.

Server Software Prerequisites

The following sections list the software prerequisites for the database, application, and web servers. Specific Windows roles are required for the application servers and web server. Verify that all servers meet all prerequisites.

CA Business Service Insight requires a dedicated account with the following properties for all services and entities:

- The account is a domain account.
- The account is a member of the local administrator group.
Note: The account does not require domain administrator rights.
- Use the same account for all CA Business Service Insight servers.
- Record the user name and password.

Database Server Prerequisites

Verify the following prerequisites on the database server before installation:

Important! CA Business Service Insight does not support consolidated databases. Consolidated databases cause future upgrades and some functions to fail.

CA Business Service Insight supports installation on the following Oracle database versions for the Standard and Enterprise editions:

- 11.2.0.4
- 11.2.0.3

Note: CA Business Service Insight supports Oracle DB 11.2.0.3 only if the Oracle client is version 11.2.0.4.

The database installation scripts were tested on the following platforms:

- Microsoft Windows 2003 (32-bit and 64-bit).
- Microsoft Windows 2008 (32-bit and 64-bit).
- Microsoft Windows 2008 R2 Enterprise edition SP1 (64-bit).
- Unix-Sun Solaris 10.5.
- Linux

Important! For single-tier installations, use the 32-bit version of the database Server and Oracle database.

- Before you install CA Business Service Insight, verify that the Oracle server, the Oracle client, and the database connection configuration components are installed and configured correctly. Then establish a connection to the database using OLEDB, and verify that the listener is configured to recognize the instance.
 - TNSnames.ora must be present on all CA Business Service Insight servers
 - Listener.ora must be present on the CA Business Service Insight DB server.
- For new databases, you can select AL32UTF8 or WE8MSWIN1252.

Note: The AL32UTF8 character set enables you to store non-Western European characters but requires more space.

- For Oracle version 11, verify that the `_optimizer_group_by_placement` parameter is FALSE.

Note: The following commands require SYS user privileges:

- To retrieve the current value, run the following query:

```
SELECT a.kspinm Param , c.kspstvl InstanceVal
FROM x$kspai a , x$kspsv c
WHERE a.kspinm = '_optimizer_group_by_placement'
AND a.indx = c.indx
```

- To set the parameter to false, run the following command:

```
alter system set "_optimizer_group_by_placement" = FALSE
```

Installation on a RAC Database

CA Business Service Insight is compatible with RAC, but the RAC is not created as part of the installation. To use RAC, select one of the following options:

- Install the product using our InstallDB scripts. Reconfigure the instance to support RAC, and add another instance to create the RAC database.
- Create your own RAC, and run our scripts without creating an instance. Our scripts perform only CA Business Service Insight related actions.

For more information about Oracle supported platforms, see the Oracle documentation.

Application Server Prerequisites

Verify the following prerequisites on the application server before installation:

Operating System

The following table lists the supported operating systems and related requirements:

OS Version	Patch Level	Bitness
Windows Server 2003 Standard or Enterprise edition	SP2	32-bit
Windows Server 2008 Standard or Enterprise edition	SP2	32-bit or 64-bit
Windows Server 2008 R2 Enterprise edition	SP1	64-bit
Windows Server 2012		64-bit

Note: Windows 2008 and Windows 2012 platforms require configuration roles and features. For more information, see [Required Windows Roles and Features](#) (see page 17).

- ASP.NET must be installed.
 - Note: CA Business Service Insight does not support .Net Framework 4.5. For Windows 2012, .Net 4.5 is the default. Update the .Net Framework to 4.5.1 or 4.5.2.
- Before you install CA Business Service Insight, install and configure Microsoft Message Queuing (MSMQ).
 - MSMQ uses the following ports:
 - TCP: 1801
 - RPC: 135, 2101/2112, 2103/2114, 2105/2116
 - UDP: 3527, 1801
- JDK 1.7.0.25 Environment (32-bit) is installed automatically.
- (Optional) For systems that use ACE2, CA Business Service Insight uses JBoss as an application server. Verify that the following ACE2 ports are available to accommodate the servers that JBoss runs on: 4073, 1298, 1299, 8283, 4744, 4645, 3728, 19201, 1361, 1363, 8293, 8280, 1300, 5546, 4657.
- (Optional) RawDataTools requires Microsoft Visual C + + 2010 Runtime Libraries (x86). Download this component from Microsoft.

For Multi-tier Installations

- All application servers and the web server must exist in the same Windows domain.
- Install MSMQ in Active Directory Integration mode, also known as domain mode.
- Time-synchronize the application and web servers.

Required Windows Roles and Features

The Application Server Windows role is required on the application server.

The following Windows features are required on the Application Server role for the application server:

- Application Server Foundation (only on Windows 2008 SP2)
- .NET Framework 3.5.1 (only on Windows 2008 R2)
- Windows Process Activation Service Support
 - Message Queuing Activation
 - HTTP Activation
- Distributed Transactions
 - WS-Atomic Transactions

For multi-tier installations, install MSMQ and all the subcomponents under MSMQ on the primary application server. This configuration installs MSMQ in AD or domain mode. This process may require domain rights.

Note: If you do not select the "Web Server (IIS) Support" feature, a warning screen appears during the installation. Ignore the warning, and continue the installation.

Web Server Prerequisites

Verify the following prerequisites on the web server before installation:

Operating System

The following table lists the supported operating systems and related requirements:

OS Version	Patch Level	Bitness	Web Server	Additional Settings
Windows Server 2003 Standard and Enterprise edition	SP2	32-bit	IIS 6.0	IIS (web server)

Windows Server 2008 Standard and Enterprise edition	SP2	32-bit or 64-bit	IIS 7.0 or 7.5	IIS (web server); IIS 6 compatible mode
Windows Server 2008 Server R2 Enterprise edition	SP2	64-bit	IIS 7.0 or 7.5	IIS (web server); IIS 6 compatible mode
Windows Server 2012		64-bit	IIS 8.0	IIS (web server); IIS 6 compatible mode

Note: Windows 2008 and Windows 2012 platforms require configuration roles and features. For more information, see [Required Windows Roles and Features](#) (see page 17).

- In Microsoft Windows 2008 Server R2, set the Active Server Pages extension to Allow on the web server.
- This product is IP Version 6.0 tolerant.
- ASP.NET must be installed.

Note: CA Business Service Insight does not support .Net Framework 4.5. For Windows 2012, .Net 4.5 is the default. Update the .Net Framework to 4.5.1 or 4.5.2.

- Before you install CA Business Service Insight, install and configure Microsoft Message Queuing (MSMQ).

MSMQ uses the following ports:

- TCP: 1801
- RPC: 135, 2101/2112, 2103/2114, 2105/2116
- UDP: 3527, 1801
- JDK 1.7.0.25 Environment (32-bit) is installed automatically.
- JBoss 7 is installed automatically and includes the following components:
 - JBoss Messaging 1.4.5
 - JBoss Remoting 2.2.3 SP1

Note: Content Transfer uses the following ports on the JBoss application server: 1198, 1199, 1200, 1201, 1261, 1262, 3628, 3973, 4544, 4545, 4548, 5546, 4557, 8180, 8183, 8193, 19101.

- Install ODAC 11.2 Release 4 32 bit (ODAC112040Xcopy_32bit).

To install ODAC, use the following command:

```
Install.bat all c:\unique_installation_path\odac myhome true
```

For Multi-tier Installations

- If the application and web server are different machines, each server must exist in the same Windows domain.
- Install MSMQ in Active Directory Integration mode, also known as domain mode.
- Time-synchronize the application and web servers.

Required Windows Roles and Features

The following Windows roles are required on the web server:

- Application Server
- Web Server (IIS)

The following Windows features are required on the Application Server role for the web server:

- Web Server (IIS) Support
- COM+ Network Access
- Windows Process Activation Service Support
 - Message Queuing Activation
 - HTTP Activation
- Distributed Transactions
 - WS-Atomic Transactions

For multi-tier installations, install MSMQ and all the subcomponents under MSMQ on the primary application server. This configuration installs MSMQ in AD or domain mode. This process may require domain rights.

The following Windows features are required on the Web Server (IIS) role for the web server:

- All services for "Common HTTP Features" group
- All services for "Application Development" group
- Health and Diagnostics
 - HTTP Logging
 - Logging Tools
 - Request Monitor
 - Tracing

- Security
 - Digest Authentication
 - Client Certificate Mapping Authentication
 - IIS Client Certificate Mapping Authentication
 - URL Authorization
 - Request Filtering
 - IP and Domain Restrictions
- All services in the Performance group
- All services in the Management Tools group

Windows 2012 requires the following additional features:

- ASP.NET 4.5
- WCF Services

Oracle Configuration

For One-Tier Installations:

- Before you install CA Business Service Insight, install and configure the Oracle server and the database connection configuration components, such as, TNSnames.ora, listener.ora. Then, establish a connection to the database using OLEDB and verify that the Listener is configured to recognize the instance you are creating.
 - TNSnames.ora and Listener.ora must be present on the database server.
 - On Windows 32-bit systems, the TNS_ADMIN key must be present in the following registry path:
`HKLM\SOFTWARE\`
 - On Windows 64-bit systems, use the following path:
`HKLM\SOFTWARE\Wow6432Node\`

For Environments with a Dedicated Database Server

- Before you install CA Business Service Insight, install the Oracle Client and Oracle OLEDB driver.
- The Oracle client must be 32-bit.

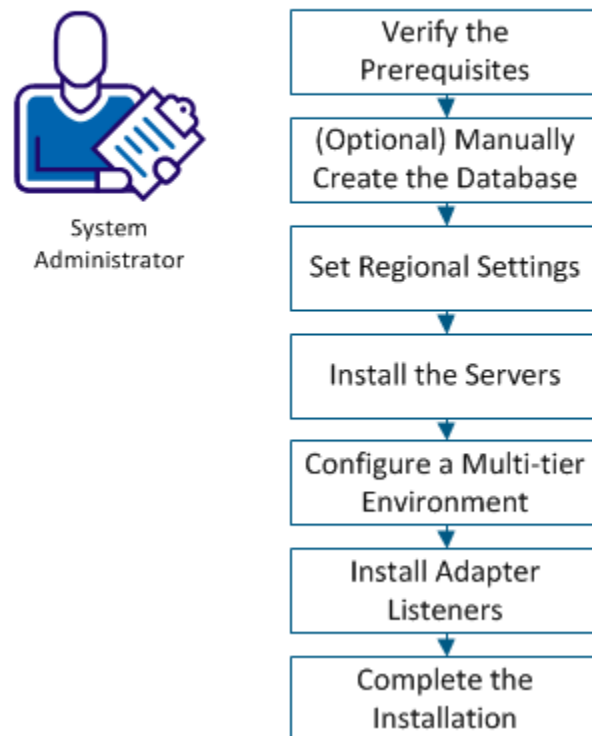
- Configure the Oracle client and the database connection configuration components, and establish a connection to the database using OLEDB.
 - TNSnames.ora must be present on all servers, and the BSI database TNSname must be defined in the file.
 - Listener.ora must be present on the database server.
 - On Windows 32-bit systems, the TNS_ADMIN key must be present in the registry path HKLM\SOFTWARE\
On Windows 64-bit systems, the path is HKLM\SOFTWARE\Wow6432Node\.
- Oracle OLEDB Provider must be installed on the application server. The version must be the same or a later version of the Oracle database software.
 - If you are adding the Oracle OLEDB Provider to an existing Oracle client, install it to the existing Oracle home. For assistance with the Oracle OLEDB Provider installation, contact the CA Technologies support team.
 - The CA Business Service Insight application server NLS_LANG settings must be identical to the database NLS_LANG settings.
 - CA Business Service Insight supports the following Oracle 11 Standard or Enterprise edition version 11.2.0.3.

Chapter 3: How to Install CA Business Service Insight

As a system administrator, you are responsible for deploying CA Business Service Insight. You can deploy CA Business Service Insight to a multi-tier or single-tier environment.

Use this scenario to guide you through the process:

How to Install CA Business Service Insight



1. [Verify the Prerequisites](#) (see page 22)
2. (Optional) [Manually Create the Database](#) (see page 22)
3. [Set Regional Settings](#) (see page 24)
4. [Install the Servers](#) (see page 24)
5. [Configure a Multi-tier Deployment](#) (see page 30)
6. [Install Adapter Listeners](#) (see page 32)
7. [Complete the Installation](#) (see page 33)

Verify the Prerequisites

To ensure a successful installation, verify the relevant prerequisites. For complete information about the prerequisites, see [CA Business Service Insight Installation Prerequisites](#) (see page 11).

Manually Create the Database

To set up the CA Business Service Insight database on a non-Windows server, manually create the database.

If you are not planning on using the CA default configuration, print [The CA Technologies Naming Conventions Policy for Database Objects](#) (see page 93). Complete the form and consult CA Support before the installation if your database naming convention differs from the CA Technologies policy.

Follow these steps:

1. Locate installation file on the installation CD in Server\program files\CA\Cloud Insight\Setup\InstallDB, and copy the file to %OBLICORE_ROOT%\Setup\InstallDB:
 - (Windows) Main.bat
 - (Unix) Main.sh
2. Update the parameters in start_parameter.ini locate in %OBLICORE_ROOT%\Setup\InstallDB:

OBLICORE_ROOT

Specifies a location for the database where the setup creates a folder with the database name.

Important! Create the root folder before you run the database creation script.

DB_NAME

Specifies the name of the database instance.

Limit: 1-8 characters

ORACLE_HOME

Specifies the location of Oracle Home.

Note: If the server has multiple homes, use the home that references an Oracle server installation and not a client installation.

SYS_PASS

Specifies the SYS user password.

OBLICORE_USER

Specifies the name of the schema user that holds the CA Business Service Insight database entities.

OBLICORE_PASS

Specifies the password of the schema user.

OBLIDBADMIN_PASS

Specifies the password of the Oracle user oblidbadmin that is used during database installation and migrations.

DB_CHARSET

Specifies the database character set, UTF-8 or MSWIN1252.

DB_SYNONYM

Specifies public or private synonym.

Example:

```
[DataBaseDetails]
OBLICORE_ROOT=c:\oblicore
DB_NAME=oblicore
ORACLE_HOME=c:\oracle\product\11.1.0\db_1
SYS_PASS=sys
OBLICORE_USER=oblicore
OBLICORE_PASS=oblicore
OBLIDBADMIN_PASS=oblidbadmin
DB_CHARSET=utf8
DB_SYNONYM=public
```

3. Run the script.
4. Verify that the parameters are correct.
5. Follow the on-screen instructions.
6. Check the log file for errors.

The database is set up and you can install the CA Business Service Insight servers.

Installation and Regional Settings

To ensure a successful installation, change the regional settings of the server to English. Non-English settings may cause problems after installation.

Use the following process when you install CA Business Service Insight servers.

1. Change the regional settings of your server to English (USA).
2. Install and restart the server.
3. Revert to your local regional settings.
4. Restart the server.

Install the CA Business Service Insight Servers

To create your [set to your product name] system, install the server components.

- If you are not going to create a database automatically, see [Manually Create the Database](#) (see page 22).
- Use the typical installation procedure unless want to distribute your system to four or more servers or if CA Support recommends this option.

If your server topology includes multiple servers, install the server components according to the following table:

Topology Type (Number of Servers)	Description	Installation Sequence (for each server)
One server	The database, application, and web components are installed on the same server.	Run Cloud_Insight_Server_8.3.exe on this server.
Two servers	Distributed on two servers: <ul style="list-style-type: none">■ Database component■ Application and web components	Installation from scratch: <ul style="list-style-type: none">■ Create the database on the database server.■ Install the application and web servers.
Three servers	Distributed on three servers: <ul style="list-style-type: none">■ Database component■ Application component■ Web component	Installation from scratch: <ul style="list-style-type: none">■ Create the database on database server.■ Install the application server.■ Install the web server.

Topology Type (Number of Servers)	Description	Installation Sequence (for each server)
Four or more servers	Distributed on four or more servers: <ul style="list-style-type: none"> ■ Database component ■ Application component ■ Web component ■ Additional application components 	Installation from scratch: <ul style="list-style-type: none"> ■ Create the database on database server. ■ Install the application servers. ■ Install the web server. ■ Install additional application servers.

Follow these steps:

1. Copy the contents of the installation folder from the installation CD to the Installation folder.

Default: C:\Program Files\CA \Cloud Insight\Setup or %ProgramFiles%\CA \Cloud Insight\Setup

Important! Do not include & or . in the installation directory name.

2. Run Cloud_Insight_Server_8.3.exe from the server directory.
3. Select the installation language, and click OK.
4. To install the prerequisite component automatically, click Install.

Note: This dialog does not open if all the required components are already installed.

The installation wizard opens.

5. Follow the wizard through the installation.
 - If your organization name contains special characters (for instance, &), add the ^ character before each special character.
For example: AB&C is referred to as AB^&C.
 - For the Setup Type, select Typical.
Note: If this server is an additional application server, select Custom, and select only the relevant services. For more information, see [Install Additional Application Server](#) (see page 29)s.
 - Select the server components require based on your topology.

6. Complete the installation dialogs.

Note: Only the dialogs that are related to the features you select open. For more information, see [Installation Dialogs](#) (see page 26).

The Setup Status window opens and the installation begins.

Note: For Windows Server 2008 R2 installations, ignore the DocumentLoader error that may occur.

7. When the installation wizard finishes, restart the computer.

Note: Windows Server 2008 R2 requires additional configuration before you restart the server. For more information, see [Windows Server 2008 R2 Server Configuration](#) (see page 30).

If necessary, install the other server components.

Installation Dialogs

During the installation, relevant dialogs open in the wizard. The following table lists the dialogs that appear based on the server components that you select.

Servers Selected	Related Dialog Boxes
Database + Application + Web	Logon Information, Database Creation
Application + Web	Logon Information, Database Connection
Database	Database Creation
Application	Logon Information, Database Connection
Web	Logon Information, Log Server Configuration, Database Connection

The following table lists the installation dialogs and related parameters and values.

Important! Do not use double-byte characters for entries that are marked with a double dagger (‡).

Note: Oracle does not support the use of certain characters in its naming conventions. Refer to the Oracle literature for their specific requirements, such as ASCII, and limitations, such as special characters and double-byte characters.

Name	Parameters	Values	Notes
Database Creation	Oracle Version ‡	Default: Server default	
	DB File Location ‡		

Name	Parameters	Values	Notes
	DB server name ‡		
	Character Set	UTF8 or MSWIN	
	Synonym	Public or Private	
Database Connection	Oracle Version	10 or 11	
	CA Business Service Insight Database Instance TNS Name ‡	The TNS name of the database instance.	Specify the TNS name of CA Business Service Insight in the TNSNAMES.ORA file.
Login Information	User Name ‡	The name of user. Default: The user account that you used for installation.	We recommend that you change the user and password to a dedicated domain account. To create a new user, click New User. To select a user from a list, click Select User.
	Password ‡	User password	
New User Information	Domain or server		This dialog enables you to create a new CA Business Service Insight user.
	Group		
	User Name ‡		
	Password ‡		
	Confirm Password ‡		
Select User	Object types		The user must be a member of the Administrator Local Group.
	Location		

Name	Parameters	Values	Notes
Log Server Configuration	Log server Network Address	Default: localhost	<p>Localhost is valid for any server that includes the web server.</p> <p>If the log server is not on the localhost, change the address to the correct server.</p> <p>Note: The address must be the address of the log server installation.</p>
	Log server Network Port	Default: 4040	
Enter Network Password	User Name		The standard Microsoft Enter Network Password dialog opens at various times if you are not currently logged on to the Domain. If necessary, enter a valid domain user and password to access the domain.
	Password		
Services Startup Type	Services Startup Type	Automatic or Manual Default: Manual	The log server service is always set to Automatic.
Website Configuration	WWWRootfolder ‡	The location of the WWWRoot folder Default: The current folder where website is installed	
	SessionDataFolder ‡	The location of SessionDatafolder Default: Installation directory	
	SessionTimeout	Default: 300	

Install Additional Application Servers

To optimize performance for multi-tier environments, divide services onto several application servers.

Note: To ensure optimal performance with additional application servers, open the operating system Services dialogs, and clear or stop unnecessary components.

Component	Description
Adapter	Installs the Adapter services options (Text File, SQL, Manager, Expression Checker).
Adapter Listener	Installs the Adapter Listener. Note: The Adapter Listener can be installed only once.
Alerts	Installs the Alert service. Note: Do not install the Alert more than once.
Dashboard Engine	Installs the Dashboard Engine service. Note: The Dashboard Engine service can be installed only once.
Log Server	Installs the Log Server service.
Penalty Writer	Installs the Penalty service.
PSL Writer	Installs one instance of the Calculation Engine service.
Report Scheduler	Installs the Report Scheduler service.
ACE Engine on JBoss Application Server	The JEE Application Server that runs the ACE2 Manager.
Tomcat 6	Apache Tomcat 6.0.32 Server For more information, see http://tomcat.apache.org .
Oblisync on JBoss Application Server	Enables the Content Transfer feature to run.
ScriptHost	Installs the Script Host service. Note: The Script Host can be installed only once.
Tasks Host	Installs the Task Host service. Note: The Task Host can be installed only once.

Windows Server 2008 R2 Server Configuration

To configure installations on Windows Server 2008 R2, perform the following tasks on all servers that include an Application server or Web server component.

Follow these steps:

1. When the installation wizard prompts you to restart, open a command prompt:

- a. Click Start, Run.
- b. Enter the following command in the Run window:

```
C:\Windows\SysWOW64\cmd.exe
```

The command prompt opens.

2. Execute one of the following commands:

- The server contains a Web server component:

```
cd %OG_HOME%\bin
StringsLoader.exe -a <Path to language strings xml files>
cd %OG_HOME%\Setup\Migration\
DocumentLoader.exe

Default path: C:\inetpub\wwwroot\Oblicore\App_Data\Resources
```

- The server contains only an Application server component:

```
cd %OG_HOME%\bin
```

3. Restart the server.

Configure a Multi-tier Environment

To use a multi-tier topology, configure the servers.

Follow these steps:

Application server and Web server

1. verify that the local naming configuration file contains the service alias with the correct host name and port.

Filename: \$ORACLE_HOME\network\admin\TNSNAMES.ORA

Default Port: 1521

Example:

```
OBLICORE =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = server12.ca.com)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = oblicore)
    )
  )
)
```

Web Server

1. Start the Distributed Transaction Coordinator service.
2. Start the World Wide Web Publishing service.
3. Install and configure the Oracle client and the database connection configuration components correctly to establish a connection to the database through OLEDB.
 - a. Install and configure TNSnames.ora on all servers.
 - b. Install and configure Listener.ora on the Database server.

Database Server

1. Verify that the listener configuration file is configured correctly and that the file recognizes the instance to be created.

Filename: \$ORACLE_HOME\network\admin\LISTENER.ORA

Example:

```
SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME = OBLICORE)
      (ORACLE_HOME = C:\app\Administrator\product\11.2.0\dbhome_1)
      (SID_NAME = oblicore)
    )
  )

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = server12.ca.com)(PORT = 1521))
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC1521))
    )
  )
)
```

2. Open a command-prompt window, and run the following command:

```
lsnrctl status
```

A list of services summary appears.

Note: If the list does not appear, run the following command:

```
lsnrctl start
```

A confirmation message appears.

3. Verify that \$ORACLE_HOME\network\admin\SQLNET.ORA contains the following line:

```
SQLNET.AUTHENTICATION_SERVICES = (NTS)
```

4. To test communication between the Oracle client and the Listener, run the following command:

```
Tnsping <tns_entry_name>
```

The system responds with "OK" followed by the response time.

Install Adapter Listeners

To enable the adapters, install adapter listeners on each server with adapters.

Important! Do not start the adapter listener on the adapter server. Verify that one of the additional application servers includes the adapter listener.

Follow these steps:

1. Start a Custom Web Server installation.
2. Go to the Select Features window; clear the Website, Services, Administration Tools, and Database features.
3. Complete the installation.

Complete the Installation

To complete the installation, perform the following tasks.

Important! Log in as `sadmin` after you install CA Business Service Insight. The default password is `sadmin`.

Follow these steps:

1. Verify that the services you selected were installed correctly:
 - a. Click Start, Run.
 - b. Type `services.msc`, and click OK.
 - c. Verify that the services corresponding to the components you selected during the installation were installed properly.

Note: By default, ACE is the default calculation engine. ACE2 services do not appear.

For a complete list of services, see [CA Business Service Insight Services](#) (see page 34).

2. Log in to the CA Business Service Insight website.
3. Verify that the hours offset matches the time zone that you select.
4. Verify that the dates for daylight savings match your location.
5. (Optional) To support requests that the reverse proxy forwards to the CA website, enter the prefix string as the `ProxyPrefix` key value in the `web.config` file in `AppSettings` section. The prefix string is configured to route the request to the CA website in the proxy configuration.
 - a. Verify that the website is routed correctly to the reverse proxy. Verify that the proxy value is spelled correctly and is entered between the two slashes (`"/prefix/"`).

For example, if the prefix mapped to the CA website is `"ca"` update `web.config` as follows:

```
<appSettings>
<add key="ProxyPrefix" value="/ca/" />
</appSettings>
```

If the `ProxyPrefix` key does not exist, or if its value is an empty string, the website functions in normal mode.

- b. Add a header to the proxy configuration. Use the following header key:
`"X-Forwarded-CA-Oblicore-Proxy"`

6. (Optional) On 3-tier installations, update the settings on the CA Business Service Insight website.
 - a. Click Administration, Site Settings, Advances.
 - b. Click Queues.
 - c. Update the Current Status MSMQ Machine, the Default MSMQ machine, and the Dashboard MSMQ Machine with the application server IP or address.

Note: Windows Server 2008 R2 requires additional configuration. Update the following parameters:

- Select ACE2, and update ACE2 Server.
- Select Dashboard, Addresses, and update the Dashboard Service Url.
- Select Dashboard, Current Status related settings, and update Url of the remote current status listener and Dashboard Engine listener address.

CA Business Service Insight is ready for use.

CA Business Service Insight Services

Service Name <i>/ Server</i>	Service Description	Service Catalog Modeling	Service Level Calculations	Enterprise Impact Analysis
ACE Transition Service <i>/ Application Server</i>	Detects and sets recalculation date requests that arrive when assigning a metric from the ACE1 engine to the ACE2 engine. The ACE Transition Service is an installed service in version 8.2 and later.			
Adapter Listener (Adapters) <i>/ Application Server</i>	Reads data from the adapters and stores it in the CA Business Service Insight database. This service communicates with adapters through a TCP/IP socket.	No	Yes	No
Adapter Deployment (Adapters) <i>/ Application Server</i>	Receives requests to create, update, or delete adapters from the adapter wizard. This service communicates through a web service interface.	No	Yes	Yes

Service Name / Server	Service Description	Service Catalog Modeling	Service Level Calculations	Enterprise Impact Analysis
Alerts (Events) / Application Server	Receives events from various parts of the system and compares data in those events to the set of system Alert Profiles. When an event matches an Alert Profile, the service generates an alert. The service receives events from a database queue.	No	Yes	Yes
Current Status Engine (Dashboard) / Application Server	Calculates the Current Status indicators on the Dashboard.	No	No	Yes
Dashboard Engine (Dashboard) / Application Server	Calculates the severity of each dashboard entity.	No	No	Yes
Log Server (Logs) / Application Server	Writes log messages from various parts of the system into the database. Each CA Business Service Insight component communicates with the Log server through a TCP/IP socket to log a message.	Yes	Yes	Yes
Penalty Writer / Application Server	Provides backward compatibility. Note: The deprecated penalty writer functions are now done using metrics.	No	No	Yes
PSL Writer (PSL) / Application Server	Calculates the service level of each metric in each contract in the system. This service is the old main calculation engine. To scale up, install more than one PSL Writer service on an application server. The services are then typically named "PSL Writer N", where N is a unique ID given to each service.	No	Yes	Yes

Service Name / Server	Service Description	Service Catalog Modeling	Service Level Calculations	Enterprise Impact Analysis
Reports Scheduler (reports)	Runs scheduled reports.	No	No	Yes
<i>/ Application Server</i>				
PSLWorker <number> (ACE2)	Calculates the provided service level for ACE2 metrics.	No	Yes	Yes
<i>/ Application Server</i>				
ScriptHost	Hosts engine tasks.	Yes	Yes	Yes
<i>/ Application Server</i>				
Oblisync on JBoss Application Server (Content Transfer)	Enables the Content Transfer feature to run.	No	Yes	No
<i>/ Web Server</i>				
ACE on JBoss Application Server	Runs the ACE2 Manager on the JEE Application Server.	No	Yes	Yes
<i>/ Application Server</i>				
Tomcat 6	Apache Tomcat 6.0.32 Server For more information, see http://tomcat.apache.org .	Yes	Yes	No
<i>/ Application Server & / Web Server</i>				
Tasks Host	Performs asynchronous, system maintenance operations including the following: <ul style="list-style-type: none"> ■ Changes the status of a contract when it expires ■ Analyzes raw data to for missing events ■ Calculates indicators that verify if a contract is up-to-date. You can the see the data when you view the contract. ■ Runs "Translation Scripts". 	Yes	Yes	Yes
<i>/ Application Server</i>				

Chapter 4: CA Business Service Insight Client Pack Installation

Some features of the CA Business Service Insight website require the installation of third-party applications on the end-user browser. To install all required applications, install the CA Business Service Insight client installation pack.

The CloudInsight8.3_Client.exe file is included in the DVD .iso file.

Components

The following table lists required components and the related CA Business Service Insight features:

Component Name	Third Party Application	Features
Time Slot Editor	Applet	Design, Foundation Entities, Timeslots Templates, View always timeslot
TeeChart Pro	ActiveX	Reports, Report Wizard, Generate
Flowchart	ActiveX	Service Level Management, Contracts Navigator
Script Editor	ActiveX	Catalog, Template Library, Business Logic Templates, Add Business Logic Template
DataSourceAnalyzerAX	ActiveX	Design, Data Acquisition, Adapters, Add New, Text File/SQL Adapter
ActiveQueryBuilderXControls	ActiveX	Design, Data Acquisition, Adapters, Add New, Add New SQL Adapter

Client Software Prerequisites

The client installer supports the following operations systems:

- Microsoft Windows XP SP3 (32-bit version only)
- Microsoft Windows Vista (32-bit version and 64-bit versions)
- Microsoft Windows 7 (32-bit version and 64-bit versions)

The client requires the following software to operate:

Component	Version	Notes
Microsoft .NET Framework	4 Runtime	This .NET framework is required to create booklets using the Microsoft Word 2010 add-on. For more information about .Net 4, see the Microsoft website.
Microsoft Office web Components 2003	10 or higher	For more information about Microsoft Office Web Components, see the Microsoft website.
Microsoft Silverlight	3.5 sp1 or higher	Microsoft Silverlight is a free .NET Framework plug-in for creating interactive user experiences. For more information about Silverlight and its installation, see the Microsoft website.
Adobe Flash Player	8 or higher	For more information, see the Adobe website.
JRE (Java Runtime Environment)	1.4.2.3 or higher	For more information about Java Runtime environment, see http://java.com/en/download/help/sysreq.xml .

The client supports the following versions of Internet Explorer:

- 7.0
- 8.0
- 9.0

The client requires the following security settings:

- Client Scripts Executing (Allowed)
- IIS Session State Availability (Enabled)
- Session Cookies (Enabled)
- Persistent Browser Cookies (Enabled)
- Pop-up Blocking (Disabled). CA Business Service Insight is defined as a trusted site or no pop-up blocker is installed or enabled.
- ActiveX Executing (Allowed).

Note: If your company policy does not allow you to set this item, it is not required.

- Java Applets Enabled (Enabled)

Install the CA Business Service Insight Client

To enable full functionality on the CA Business Service Insight website, install the client installation package.

Note: Installation requires administrator privileges on the client workstation.

Follow these steps:

1. Run CloudInsight8.3_Client.exe.
2. Follow the on-screen instructions.

The wizard installs the required components.

Silent Installation

Silent installation allows you to install the client pack on multiple workstations without responding to requests for user inputs. The installation uses an .iss answer file that is similar to an .ini file.

Record the Client Answer File

To prepare for silent installation, record an answer file.

Follow these steps:

1. Execute the following command from the command line:

```
CloudInsight8.3_Client.exe /r /f1"<location/filename.iss>"  
/f1 "location/filename>.iss"
```

(Optional) Specifies a non-default filename and location for the answer file.

Example:

```
CloudInsight8.3_Client.exe/r /f1"c:\Silent\client.iss"
```

Note: The default filename is Setup.iss, and the default location is the Windows folder.

InstallShield records your setup selections.

2. (Optional) Change the destination path.
 - a. Open the answer file and go to the following section:

```
[{8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdAskDestPath-0]  
szDir=C:\Program Files\CA\Cloud Insight\Client\  
Result=1
```

- b. Change the path.

The answer file is ready for use.

Client Answer File Example

```
[{8052F2E0-6031-4985-A87A-E10E388AF1AF}-DlgOrder]
Dlg0={8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdWelcome-0
Dlg1={8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdLicense2-0
Dlg2={8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdAskDestPath-0
Dlg3={8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdFinish-0
Count=4
[{8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdWelcome-0]
Result=1
[{8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdLicense2-0]
Result=1
[{8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdAskDestPath-0]
szDir=C:\Program Files\CA\Cloud Insight\Client\
Result=1
[{8052F2E0-6031-4985-A87A-E10E388AF1AF}-SdFinish-0]
Result=1
bOpt1=0
bOpt2=0
```

Note: For more examples, see the Server/Silent sample files folder.

Run the Client Installation in Silent Mode

To install the client installation pack without user input, perform a silent installation. Repeat this procedure on each client workstation.

Follow these steps:

1. Copy the answer file to the target workstation.
2. Execute the following command from the command line:

```
Cloud_Insight_Server_8.3/s /f1"<location/filename.iss> command
/f1"<location/filename.iss>"
```

Specifies the location and name of the answer file.

The installation runs and generates a log file named setup.log.

3. Verify that the installation was successful.

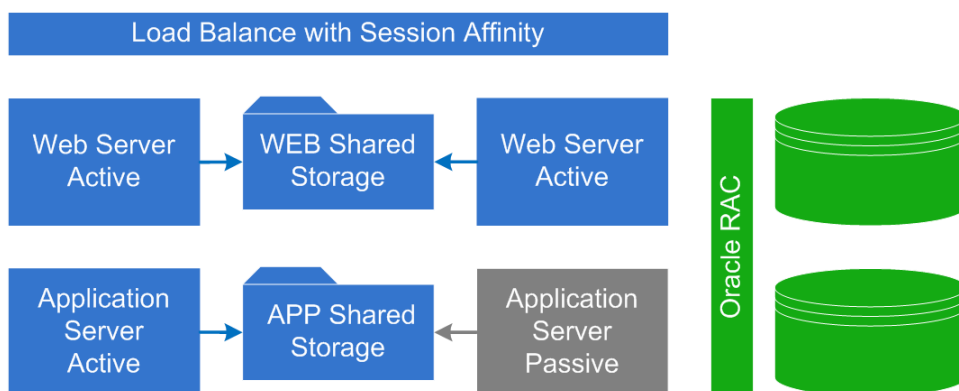
Full functionality of the CA Business Service Insight website is enabled on the workstation.

Chapter 5: How to Install CA Business Service Insight to Provide High Availability

As a system administrator, you are responsible for ensuring continuous availability of CA Business Service Insight. CA Business Service Insight provides a high availability installation that is based on Windows Cluster Technology and Windows Network Load Balance (NLB) Technology.

CA Business Service Insight uses the following options to provide high availability:

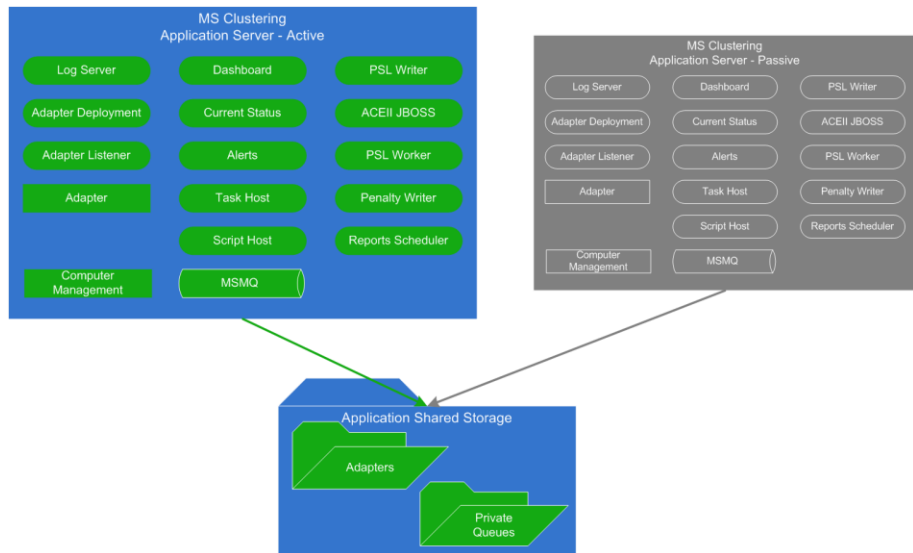
- The database uses an Oracle RAC deployment.
- Deploy the application server as Active/Passive.
- Deploy the web server as Active/Active, and use load balancing with web session affinity.



Both the web servers and application servers require a High Availability shared file system to share files between the nodes. Use any storage operating environment that complies with High Availability requirements.

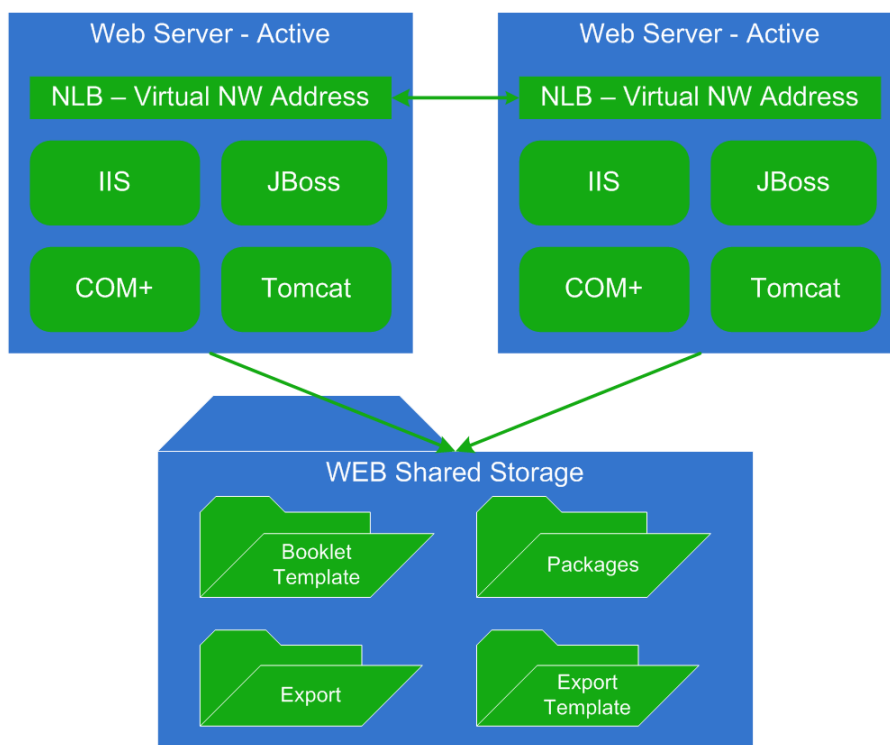
Application Server

The application server is deployed in an active/passive mode. The services on the application server run on only one of the servers at a time. The underlying High Availability infrastructure is configured to perform failover of the services from the active server to the passive server. The shared data in the application server consists of the Adapter configuration, state files, and the MSMQ data files.



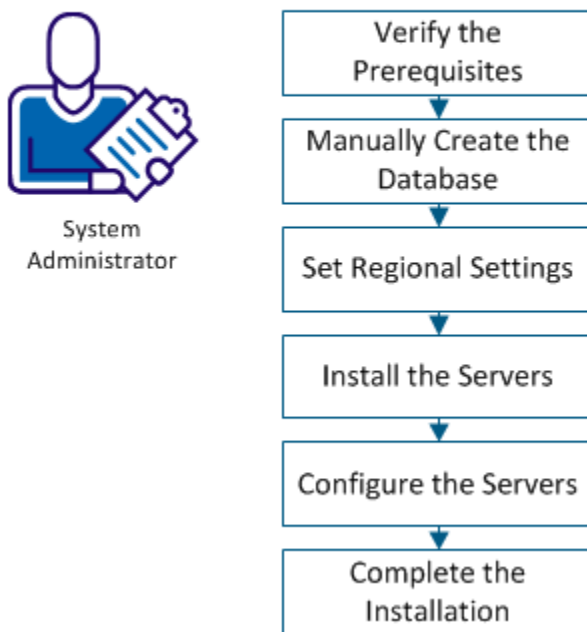
Web Server

The web server is deployed as Active/Active. All web servers are active simultaneously and serve clients as needed. Because the web server stores data in the IIS session, the NW load balancing must use affinity when assigning a web server to the client. Most load balancers support this functionality. The SMI GUI components that run under Tomcat use some of the states that the legacy Oblicore Web Server used.



Use this scenario to guide you through the process:

How to Install CA Business Service Insight to Provide High Availability



1. [Verify the Prerequisites](#) (see page 46)
2. [Manually Create the Database](#) (see page 22)
3. [Set Regional Settings](#) (see page 24)
4. [Install the CA Business Service Insight Servers](#) (see page 49)
5. [Configure the Servers](#) (see page 53)
6. [Complete the Installation](#) (see page 57)

Verify the Prerequisites

To ensure a successful installation, verify the prerequisites. Use the CA Business Service Insight, Installation Prerequisites with the following exceptions:

- Use a domain account with Administrator privileges for installation.
- High availability requires a Windows 2008 operating environment.
- Create an Oracle database with RAC. For more information, see [Manually Create the Database](#) (see page 22).

Important! Do not use RAC with ASM.

- Prepare four static IP addresses with assigned DNS names.
- For complete information about the prerequisites, see [CA Business Service Insight Installation Prerequisites](#) (see page 11).

Manually Create the Database

To set up the CA Business Service Insight database on a non-Windows server, manually create the database.

If you are not planning on using the CA default configuration, print [The CA Technologies Naming Conventions Policy for Database Objects](#) (see page 93). Complete the form and consult CA Support before the installation if your database naming convention differs from the CA Technologies policy.

Follow these steps:

1. Locate installation file on the installation CD in Server\program files\CA\Cloud Insight\Setup\InstallDB, and copy the file to %OBLICORE_ROOT%\Setup\InstallDB:
 - (Windows) Main.bat
 - (Unix) Main.sh
2. Update the parameters in start_parameter.ini locate in %OBLICORE_ROOT%\Setup\InstallDB:

OBLICORE_ROOT

Specifies a location for the database where the setup creates a folder with the database name.

Important! Create the root folder before you run the database creation script.

DB_NAME

Specifies the name of the database instance.

Limit: 1-8 characters

ORACLE_HOME

Specifies the location of Oracle Home.

Note: If the server has multiple homes, use the home that references an Oracle server installation and not a client installation.

SYS_PASS

Specifies the SYS user password.

OBLICORE_USER

Specifies the name of the schema user that holds the CA Business Service Insight database entities.

OBLICORE_PASS

Specifies the password of the schema user.

OBLIDBADMIN_PASS

Specifies the password of the Oracle user oblidbadmin that is used during database installation and migrations.

DB_CHARSET

Specifies the database character set, UTF-8 or MSWIN1252.

DB_SYNONYM

Specifies public or private synonym.

Example:

```
[DataBaseDetails]
OBLICORE_ROOT=c:\oblicore
DB_NAME=oblicore
ORACLE_HOME=c:\oracle\product\11.1.0\db_1
SYS_PASS=sys
OBLICORE_USER=oblicore
OBLICORE_PASS=oblicore
OBLIDBADMIN_PASS=oblidbadmin
DB_CHARSET=utf8
DB_SYNONYM=public
```

3. Run the script.
4. Verify that the parameters are correct.
5. Follow the on-screen instructions.
6. Check the log file for errors.

The database is set up and you can install the CA Business Service Insight servers.

Installation and Regional Settings

To ensure a successful installation, change the regional settings of the server to English. Non-English settings may cause problems after installation.

Use the following process when you install CA Business Service Insight servers.

1. Change the regional settings of your server to English (USA).
2. Install and restart the server.
3. Revert to your local regional settings.
4. Restart the server.

Install the CA Business Service Insight Servers

To create your [set to your product name] system, install the server components. To provide high availability, install the servers in the following order:

1. Application Servers
2. Web Servers
3. Adapter Servers

Use the following process to run the installation on each server node:

1. Connect to the node.
2. Install the server component.
3. Restart the server node.
4. Repeat for each node in the cluster.

Follow these steps:

1. Copy the contents of the installation folder from the installation CD to the Installation folder.

Default: C:\Program Files\CA \Cloud Insight\Setup or %ProgramFiles%\CA \Cloud Insight\Setup

Important! Do not include & or . in the installation directory name.

2. Run Cloud_Insight_Server_8.3.exe from the server directory.
3. Select the installation language, and click OK.
4. To install the prerequisite component automatically, click Install.

Note: This dialog does not open if all the required components are already installed.

The installation wizard opens.

5. Follow the wizard through the installation.
 - If your organization name contains special characters (for instance, &), add the ^ character before each special character.
For example: AB&C is referred to as AB^&C.
 - For the Setup Type, select Typical.
 - Select the server components require based on your topology.

6. Complete the installation dialogs.

Note: Only the dialogs that are related to the features you select open. For more information, see [Installation Dialogs](#) (see page 26).

The Setup Status window opens and the installation begins.

Note: For Windows Server 2008 R2 installations, ignore the DocumentLoader error that may occur.

7. When the installation wizard finishes, restart the computer.

Note: Windows Server 2008 R2 requires additional configuration before you restart the server. For more information, see [Windows Server 2008 R2 Server Configuration](#) (see page 30).

If necessary, install the other server components.

Installation Dialogs

During the installation, relevant dialogs open in the wizard. The following table lists the dialogs that appear based on the server components that you select.

Servers Selected	Related Dialog Boxes
Database + Application + Web	Logon Information, Database Creation
Application + Web	Logon Information, Database Connection
Database	Database Creation
Application	Logon Information, Database Connection
Web	Logon Information, Log Server Configuration, Database Connection

The following table lists the installation dialogs and related parameters and values.

Important! Do not use double-byte characters for entries that are marked with a double dagger (‡).

Note: Oracle does not support the use of certain characters in its naming conventions. Refer to the Oracle literature for their specific requirements, such as ASCII, and limitations, such as special characters and double-byte characters.

Name	Parameters	Values	Notes
Database Creation	Oracle Version ‡	Default: Server default	
	DB File Location ‡		

Name	Parameters	Values	Notes
	DB server name ‡		
	Character Set	UTF8 or MSWIN	
	Synonym	Public or Private	
Database Connection	Oracle Version	10 or 11	
	CA Business Service Insight Database Instance TNS Name ‡	The TNS name of the database instance.	Specify the TNS name of CA Business Service Insight in the TNSNAMES.ORA file.
Login Information	User Name ‡	The name of user. Default: The user account that you used for installation.	We recommend that you change the user and password to a dedicated domain account. To create a new user, click New User. To select a user from a list, click Select User.
	Password ‡	User password	
New User Information	Domain or server		This dialog enables you to create a new CA Business Service Insight user.
	Group		
	User Name ‡		
	Password ‡		
	Confirm Password ‡		
Select User	Object types		The user must be a member of the Administrator Local Group.
	Location		

Name	Parameters	Values	Notes
Log Server Configuration	Log server Network Address	Default: localhost	<p>Localhost is valid for any server that includes the web server.</p> <p>If the log server is not on the localhost, change the address to the correct server.</p> <p>Note: The address must be the address of the log server installation.</p>
	Log server Network Port	Default: 4040	
Enter Network Password	User Name		The standard Microsoft Enter Network Password dialog opens at various times if you are not currently logged on to the Domain. If necessary, enter a valid domain user and password to access the domain.
	Password		
Services Startup Type	Services Startup Type	Automatic or Manual Default: Manual	The log server service is always set to Automatic.
Website Configuration	WWWRootfolder ‡	The location of the WWWRoot folder Default: The current folder where website is installed	
	SessionDataFolder ‡	The location of SessionDatafolder Default: Installation directory	
	SessionTimeout	Default: 300	

Windows Server 2008 R2 Server Configuration

To configure installations on Windows Server 2008 R2, perform the following tasks on all servers that include an Application server or Web server component.

Follow these steps:

1. When the installation wizard prompts you to restart, open a command prompt:

- a. Click Start, Run.
- b. Enter the following command in the Run window:

```
C:\Windows\SysWOW64\cmd.exe
```

The command prompt opens.

2. Execute one of the following commands:

- The server contains a Web server component:

```
cd %OG_HOME%\bin
StringsLoader.exe -a <Path to language strings xml files>
cd %OG_HOME%\Setup\Migration\
DocumentLoader.exe

Default path: C:\inetpub\wwwroot\Oblicore\App_Data\Resources
```

- The server contains only an Application server component:

```
cd %OG_HOME%\bin
```

3. Restart the server.

Configure the Servers

To provide high availability, configure the servers.

Important! Log in to the CA Business Service Insight website as `sadmin` after you install CA Business Service Insight. The default password is `sadmin`.

For each server, verify the follow for the services:

- All services are set to Startup Type: Manual.
- Ace 2 on JBOSS Application Server and Oblicore - Tomcat 6 are set to Log On As: `Local System`.
- All other services are set to Log On As: `<domain user>`

Configure the Application Servers

Follow these steps:

Create Service Groups

1. Open the Failover Cluster Management program.
2. Click Service and Applications in the console tree.
3. Click More Actions, Create Empty Service or Application.
4. Create the following Groups:
 - CA Business Service Insight, Services
 - CA Business Service Insight, Current Status
 - CA Business Service Insight, ACE1 Writer
 - CA Business Service Insight, ACE2 Worker

Note: You can use a single group for all services.

Add Services to Service Groups

1. Click the CA Business Service Insight Services Group.
2. Go to Add a resource, Generic Service, and add the following resources from the drop-down list. Select the resource, click next, and click finish.
 - Oblicore - Tomcat 6
 - Oblicore - ACE2 on JBoss Application Server
 - Oblicore - Adapter Listener
 - Oblicore - Alerts
 - Oblicore - Dashboard Engine
 - Oblicore - Log Server
 - Oblicore - PenaltyWriter
 - Oblicore - ScriptHost
 - Oblicore - Tasks Host
 - Oblicore - Reports Scheduler
3. Click the CA Business Service Insight Services Group.
4. Go to Add a resource, Client Access Point, Enter Network Name and IP address. This action may take a few minutes. Do not exit until the configuration is complete.
5. Click Next, Next, Finish.

Set Resource Dependencies

Perform these steps for each resource in the following list:

- Oblicore - Tomcat 6
- Oblicore - ACE2 on JBoss Application Server
- Oblicore - Adapter Listener
- Oblicore - Dashboard Engine

1. Double-click the resource.
2. Go to the Dependencies tab.
3. Select access point network name and Click OK.

Add Resources to the Cluster Group

1. Add Oblicore - Current_Status_Engine resource to CA Business Service Insight-Current Status Group.
2. Add an Oblicore - PSLWriter resource to CA Business Service Insight - ACE1 Writer Group.
3. Create a resource for each additional PSLWriter service, and add the services to the CA Business Service Insight ACE1 Writer Group.
4. Add the Oblicore - PslWorker1 resource to CA Business Service Insight - ACE2 Worker Group.

Add the Message Queuing Service

1. Open the Failover Cluster Management program.
2. Go to the console tree, and click Service and Applications.
3. Click Configure a Service or Application.
4. The High Availability Wizard opens.
5. Select Message Queuing, and click Next.
6. Follow the Wizard through configuration.
7. Open the Server Manager. Go to Features, Messages, Private Queues. On each Application server node, delete all queues in the Private Queues storage folder.

8. Open the Failover Cluster Management program. Right-click the Message Queuing service, Message Queuing, Private Queues. On each Application server node, delete all queues in the Private Queues storage folder.
9. Right-click the Message Queuing service, and click Manage MSMQ, Message Queuing, Private Queues, and create the following queues:
 - OG Alerts
 - OG Adapter Listener
 - OG Dashboard
 - OG Current Status

Start Resources

1. Bring all resources online.

Configure the Web Servers

Follow these steps:

1. Set up Network Load Balancing.
Follow the instructions in the Microsoft TechNet guide:
[http://technet.microsoft.com/en-us/library/cc754833\(W.S.10\).aspx](http://technet.microsoft.com/en-us/library/cc754833(W.S.10).aspx).
2. Navigate to Program Files\Oblicore.
3. Copy the Booklet Templates, Export Templates, and Packages folders to the Web shared folder.

Configure the Adapter Servers

Follow these steps:

1. Connect to the first CA Business Service Insight Adapter cluster server node.
2. Open the Failover Cluster Management program.
3. In the console tree, click Service and Applications.
4. Click More Actions, Create Empty Service or Application.
5. Click Oblicore - Adapter Deployment.
6. Click More Actions, Add a resource, Generic Service, and add Oblicore – AdapterDeployment resource.
7. Go to \Program Files\Oblicore\Adapters, and copy the deployed adapter folders to the Adapters folder on the clustered shared folder (Disk S).

Note: Verify that the adapter paths point to the correct adapter folder paths on the cluster drive.

8. On each Adapter cluster server node, open the Registry Editor, and go to HKEY_LOCAL_MACHINE, SOFTWARE, Oblicore, Adapters. Verify that the AdaptersDir string has the value S:\Adapters.
9. Right-click the resource, and click Bring this resource online.

Complete the Installation

To ensure that CA Business Service Insight operates without errors, complete the installation.

Follow these steps:

1. Log in to the CA Business Service Insight website.
2. Verify that the hours offset matches the time zone that you select.
3. Verify that the dates for daylight savings match your location.
4. Click Administration, Site Settings, Advances, and update the following parameters:

Configuration Folder	Parameter	Value
ACE2	ACE2 Server	The shared address of the application server. Default: bsiapp
Adapter Wizard	Adapter Listener Address	The shared address of the application server. Default: bsiapp
Dashboard, Addresses	Dashboard Service URL	The shared address of the application server. Default: bsiapp
Dashboard, Current Status related settings	<ul style="list-style-type: none"> ■ URL of the remote current status listener ■ Dashboard Engine listener address <p>Note: Update these parameters on Windows Server 2008 R2 only.</p>	The shared address of the application server. Default: bsiapp

Queues	<ul style="list-style-type: none"> ■ Current status MSMQ machine ■ Dashboard MSMQ machine ■ Default MSMQ machine 	The shared address of the application server. Default: bsiapp
Reports	Booklet Path Note: By default, you cannot edit the Booklet Path in the GUI. Update the parameter in t_system_configurations or set Changeable_in_gui to Y.	Location of shared storage folder/Booklet Path
SMI Application Server	SMI Application Server Host	The shared Tomcat network IP Address on application server.
System	Web Server	The Web NLB address.

(Optional) Update the Proxy Prefix

To support requests that the reverse proxy forwards to the CA website, enter the prefix string as the ProxyPrefix key value in the web.config file in AppSettings section. The prefix string is configured to route the request to the CA website in the proxy configuration.

1. Verify that the website is routed correctly to the reverse proxy. Verify that the proxy value is spelled correctly and is entered between the two slashes ("/prefix/").

For example, if the prefix mapped to the CA website is "ca" update web.config as follows:

```
<appSettings>
<add key="ProxyPrefix" value="/ca/" />
</appSettings>
```

If the ProxyPrefix key does not exist, or if its value is an empty string, the website functions in normal mode.

2. Add a header to the proxy configuration. Use the following header key:

```
"X-Forwarded-CA-Oblicore-Proxy"
```

Chapter 6: How to Upgrade CA Business Service Insight

As a system administrator, it is important to regularly update CA Business Service Insight. Upgrading ensures that you can take advantage of all new features and bug fixes.

The upgrade file recognizes which server is running the program and it updates the necessary files. First, upgrade the application server that contains the Alerts service. The migration script automatically runs on the application server that includes the Alerts service.

To upgrade to a multiserver environment, perform the upgrade process on the application server first. Then, perform the upgrade on the web server. The upgrade on the application server automatically performs the database migration.

Use this scenario to guide you through the process:

How to Upgrade CA Business Service Insight



System Administrator



1. [Verify the Prerequisites](#) (see page 61).
2. [Back Up Files and Folders](#) (see page 61).
3. [Prepare for the Upgrade](#) (see page 62).
4. [Verify the Presence of the Website](#) (see page 62).
5. [Upgrade CA Business Service Insight](#) (see page 63).
6. [Complete the Upgrade](#) (see page 66).
7. (Optional) [Update the Proxy String](#) (see page 67).
8. (Optional) [Update the API](#) (see page 68).

Verify the Prerequisites

To ensure that you can complete the upgrade, verify the following prerequisites:

- CA Business Service Insight version 7.0 SP1 or later is installed.
- You have SYSDBA access rights.
- At least 15 percent of each table space in the database is unallocated.
Note: If autoextend is on, the datafile maxsize is at least 15 percent more than the current size of the datafile.
- The unallocated space on each physical device that contains database tablespaces is at least 15 percent of the total size of all tablespaces on the device.
- The Oracle OLEDB Provider is installed on the application server and web servers.
- Install ODAC 11.2 Release 4 32 bit (ODAC112040Xcopy_32bit) on the web server.

To install ODAC, use the following command:

```
Install.bat all c:\unique_installation_path\odac myhome true
```

Back Up Files and Folders

To ensure that you do not lose any information during an upgrade, back up the following files and folders.

Note: To perform a rollback, uninstall all versions, install the previous version, and import the backup data.

Follow these steps:

1. Perform a database dump.
2. Back up all customized files. The following files are customizable:
 - LoginCommon.asp
 - RedirectToLogin.asp
 - SilentLogin.asp
 - AcceptLogin.asp
 - Web.config
 - Registry.xml
 - Index.asp (for single sign-on)
 - logo.jpg
 - logo.gif

- logobg.gif
 - logout1.gif
 - logout2.gif
 - Reportlogo (and other logos, such as dash or report export)
3. (Optional) Back up the Language package.

Prepare for the Upgrade

To ensure a successful upgrade, perform the following tasks before you begin the upgrade.

Follow these steps:

1. If you use a regional language setting that is not English, change it to English (USA).
Note: The use of a different language setting for the upgrade may cause errors.
2. Stop all Oblicore services.
3. In IIS Manager, stop the web server.
Important! Do not stop the WWW service or the IIS Admin service.
4. Start the Distributed Transaction Coordinator service.
Note: This service is required only for the upgrade.
5. Run oblicore_privs.sql. The script is on the Installation CD in the SetupDB\Migration folder.
Note: If the db owner account is not oblicore, update the .sql file to grant privileges to your db owner account.
6. Ensure that the job_queue_processes parameter is set to 2 in the Init.ora file.

Verify the Presence of the Website

To ensure that the website functions, verify the presence of the website on the server. Choose the option that applies to your server topology.

Follow these steps:

The server is designated solely as an application server:

1. Open the application server registry to the entry:
HKEY_LOCAL_MACHINE\SOFTWARE\Oblicore\Install Data.
2. Delete the WWWRootFolderLocation string value if it exists.

The server is not designated solely as an application server:

1. Open the web or web services server registry to the entry:
HKEY_LOCAL_MACHINE\SOFTWARE\Oblicore\Install Data.
2. Verify that the WWWRootFolderLocation string value exists.
3. Verify that the data for this string value contains the folder path for the web folder.

Note: On 64-bit systems, the entry is:

HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432node\Oblicore\Install Data.

Upgrade CA Business Service Insight

To take advantage of new features and functions in CA Business Service Insight, upgrade to the most current version.

Follow these steps:

1. Double-click Cloud_Insight_Server_8.3.exe in the server folder, and click Next.
2. Select the installation language, and click OK.
3. Click Install.
4. Click Next in the Installation wizard.
5. Accept the license agreement, and click Next.
6. Select the location of the Third-Party CD, and click Next.
7. (Optional) Select clean up, and click Next when the installer prompts you to clean up previous JBoss components.

Note: This prompt appears only if a previous version of JBoss is installed.

The upgrade dialog opens and displays the upgrade dialogs.

8. Type the value for each parameter in each dialog that opens, and click Next.

Note: See [Upgrade Dialogs](#) (see page 64) for more information.

9. Verify that the settings are correct, and click Next.

The installation begins.

If you selected Run Migration Script, follow the instructions.

10. Click Finish to confirm the upgrade.

The system restarts.

Upgrade Dialogs

The Install wizard includes dialogs that CA Business Service Insight uses to update information. Only dialogs that are related to the features you select open.

The following table lists the upgrade dialogs and related parameters and values:

Important! Do not use double-byte characters for entries marked with a double dagger (‡).

Note: Oracle does not support the use of certain characters in its naming conventions. Refer to the Oracle literature for their specific requirements (for example ASCII) and limitations (such as special characters and double-byte characters).

Dialog Name	Parameters	Values	Notes
Database Creation	Run Migration Script	Selected or deselected.	Automatically selected on the application server that includes the CA Business Service Insight Alerts service.
	Oblicore Database instance TNS name	Type the TNS name as it appears in the TNSNAMES.ORA file. ‡	CA Business Service Insight Database Instance TNS Name.
	Schema user name	Type the name of the schema user for the upgrade.	
	Schema password	Type the password of the schema user for the upgrade.	Default: Oblicore
	System password	Type the system user password.	
Login Information	User Name	Name of user. ‡	Default: The user account that you used for installation. Note: We recommend that you change the user and password to a dedicated domain account.
	Password	User password. ‡	
	New User Information button	See New User Information row.	

Dialog Name	Parameters	Values	Notes
New User Information	Domain or server	Name of the local server.	
	Group	Administrators	
	User Name	Name of user.	
	Password	User password.	Conforms to company policy.
	Confirm Password	Confirm password.	

The following table describes configuration files and related parameters.

Important! Do not assign any double-byte character to any of the entries in the following configuration table.

Note: The values for parameters marked with * must begin with a single quote and end with a backslash and a single quote, for example, 'C:\Temp\.'

Config File	Parameters	Default Values	Remarks
Config_Ini.ini	ORGANIZATION_NAME	The organization name	If your organization name contains special characters (for example, &), add the ^ character before each special character (for example, AB&C is written as AB^&C).
	TEMPLATE_PATH*	'<installation directory>\Export Templates\'	The location of the export templates folder.
	BOOKLET_TEMPLATE_PATH*	'<installation directory>\Booklet Templates\'	The location of the booklets templates folder.
	WEB_SERVER	The web server name	
	DB_NAME		
	OBLICORE_USER		

Config File	Parameters	Default Values	Remarks
	OBLICORE_PASS	Oblicore	The CA Business Service Insight user password in the database.
	MPX_CONFIGURATION_DIRECTORY*	'<installation directory>\Packages\Configuration\'	The location of the packages configuration folder.
	MPX_INPUT_DIRECTORY*	'<installation directory>\Packages\'	The location of the packages input folder.
	MPX_LOG_DIRECTORY*	'<installation directory>\Packages\Log\'	The location of the packages log folder.
	MPX_OUTPUT_DIRECTORY*	'<installation directory>\Packages\'	The location of the packages output folder.
	MPX_TEMP_DIRECTORY*	'<installation directory>\Packages\Temp\'	The location of the packages temporary folder.

Complete the Upgrade

To complete the upgrade, perform the following tasks.

Important! Log in as `sadmin` after upgrading CA Business Service Insight. The default password is `sadmin`.

Follow these steps:

1. Restart all servers.
2. In IIS Manager, start the web server.
3. (Optional) To change from a public to a private synonym, invoke one of the following procedures on the database:

```
begin
prc_recreate_all_synonyms ('YES');
end
or
exec prc_recreate_all_synonyms ('YES');
```

- (Optional) Lock the oblidbadmin account in the database. Run the following command while connected to the database:

```
alter user oblidbadmin account lock;
```
- (Optional) Change the oblidbadmin password. Run the following command while connected to the database:

```
alter user oblidbadmin identified by '<new_password>;'
```
- Verify that the hours offset matches the time zone that you select.
- Verify that the dates for daylight savings match your location.
You now have the most recent version of CA Business Service Insight.

Update the Proxy Prefix

To support requests that the reverse proxy forwards to the CA website, enter the prefix string as the ProxyPrefix key value in the web.config file in AppSettings section. The prefix string is configured to route the request to the CA website in the proxy configuration.

- Verify that the website is routed correctly to the reverse proxy. Verify that the proxy value is spelled correctly and is entered between the two slashes ("/prefix/").

For example, if the prefix mapped to the CA website is "ca" update web.config as follows:

```
<appSettings>  
<add key="ProxyPrefix" value="/ca/" />  
</appSettings>
```

If the ProxyPrefix key does not exist, or if its value is an empty string, the website functions in normal mode.

- Add a header to the proxy configuration. Use the following header key:
"X-Forwarded-CA-Oblicore-Proxy"

Update the API

To use the API code from versions previous to 8.1, update the API interface.

Note: For detailed information, see API Backwards Compatibility in the CA Business Service Insight SDK Guide

Follow these steps:

1. Use the WSDL from 8.3 to create the proxy classes for the Contract Service, Portfolio Service, and Repository Service. Use the WSDL from the last installation for versions previous to 8.0.
2. Recompile your API code.

Note: If there are compilation errors, locate the code that requires manual changes. Update the code according to the changes made to the new API (field order, type). Recompile your API code after these changes.

Chapter 7: Upgrade from Older Versions

The current upgrade for CA Business Service Insight supports upgrades from version 7.0 SP1 and later. For upgrades from version 7.0 and all previous versions, use the following process:

1. Perform a database dump and back up all customized files.
2. Install the new version with a clean installation.

For more information, see [How to Install CA Business Service Insight](#) (see page 21).

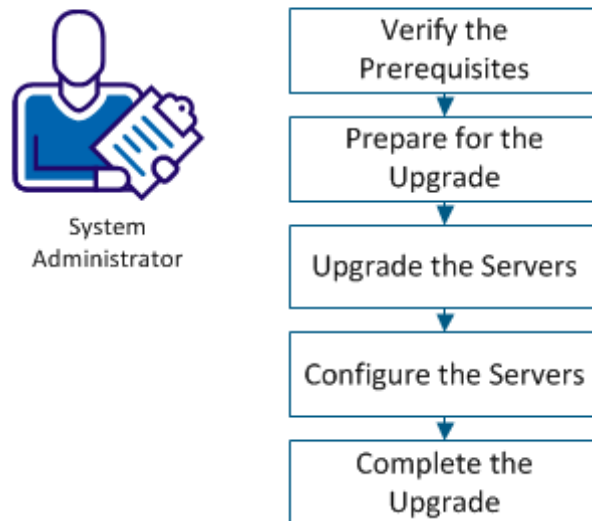
3. Migrate the database into the new installation.
4. (Optional) To import old booklets into the new database, execute bookletdocumentloader.exe.
 - a. Locate the executable file in the migration folder on the installation CD.
 - b. Execute the file.
 - c. Follow the on-screen instructions.

Chapter 8: How to Upgrade a High Availability Deployment

As a system administrator, you are responsible for the maintenance of your CA Business Service Insight installation. Update CA Business Service Insight to implement the latest enhancements and fixes.

Use this scenario to guide you through the process:

How to Upgrade a High Availability Deployment



1. [Verify the Prerequisites](#) (see page 71)
2. [Prepare for the Upgrade](#) (see page 62)
3. [Upgrade the Servers](#) (see page 72)
4. [Configure the Servers](#) (see page 74)
5. [Complete the Upgrade](#) (see page 66)

Verify the Prerequisites

To ensure that you can complete the upgrade, verify the following prerequisites:

- CA Business Service Insight version 7.0 SP1 or later is installed.
- You have SYSDBA access rights.

- At least 15 percent of each table space in the database is unallocated.
Note: If autoextend is on, the datafile maxsize is at least 15 percent more than the current size of the datafile.
- The unallocated space on each physical device that contains database tablespaces is at least 15 percent of the total size of all tablespaces on the device.
- The Oracle OLEDB Provider is installed on the application server and web server.
- Perform a database dump and back up all customized files.

Prepare for the Upgrade

To ensure a successful upgrade, perform the following tasks before you begin the upgrade.

Follow these steps:

1. If you use a regional language setting that is not English, change it to English (USA).
Note: The use of a different language setting for the upgrade may cause errors.
2. Stop all Oblicore services.
3. In IIS Manager, stop the web server.
Important! Do not stop the WWW service or the IIS Admin service.
4. Start the Distributed Transaction Coordinator service.
Note: This service is required only for the upgrade.
5. Run oblicore_privs.sql. The script is on the Installation CD in the SetupDB\Migration folder.
Note: If the db owner account is not oblicore, update the .sql file to grant privileges to your db owner account.
6. Ensure that the job_queue_processes parameter is set to 2 in the Init.ora file.

Upgrade the Servers

To upgrade CA Business Service Insight, copy Cloud_Insight_Server_8.3.exe to each server, and perform the required upgrade tasks.

Upgrade the Application Server

Follow these steps:

1. Connect to the first Application cluster server node.
2. Open the Cluster Administrator program.
3. In Action, select Open connection to cluster.
4. In Cluster or Server name, select the Application cluster name, and click OK.
5. Verify that the first Application cluster node is the owner of all Oblicore services, on Cluster Group and on Shared Folders.
6. For each CA Business Service Insight service clustered group, right-click and click Take Offline.
7. Right-click Shared Folders, and click Take Offline.
8. Verify that the Cluster Group is Online and the first Application cluster node is the owner.
9. Run Cloud_Insight_Server_8.3.exe, and follow the wizard through the upgrade.
Note: For more information, see [Upgrade CA Business Service Insight](#) (see page 63).
10. Restart the first Application cluster server node.
11. Repeat steps 5-10 for each Application cluster server node. Verify that the current cluster node is the owner.

Upgrade the Web Servers

Follow these steps:

1. Connect to the first web server node.
2. Run Cloud_Insight_Server_8.3.exe, and follow the wizard through the upgrade.
Note: For more information, see [Upgrade CA Business Service Insight](#) (see page 63).
3. Restart the first web server node.
4. Repeat steps 1-3 on each web server node.

Upgrade the Adapter Servers

This section explains how to upgrade the CA Business Service Insight adapter servers.

Follow these steps:

1. Connect to the first Adapter cluster server node.
2. Open the Cluster Administrator program.
3. In Action, Select Open Connection to Cluster.
4. In Cluster or Server Name, select the Adapter cluster name, and click OK.
5. Verify that the first Adapter cluster node is the owner of all Oblicore services, on Cluster Group and on Shared Folders.
6. Verify that Cluster Group and Shared Folders are online.
7. Take all adapter services offline.
8. Run Cloud_Insight_Server_8.3.exe, and follow the wizard through the upgrade.

Ignore the Distributed Transaction Coordinator service is not started message that may appear.

Note: For more information, see [Upgrade CA Business Service Insight](#) (see page 63).

9. Restart the first Adapter cluster server node.
10. Repeat steps 2 -9 on each Adapter cluster server node. Verify that the current cluster node is the owner.

Configure the Servers

To continue operations, configure the servers.

Configure the Application Server

Follow these steps:

Configure MSMQ to Work in a Cluster

1. On each CA Business Service Insight Application server node, delete any queues in the Private Queues storage folder.
2. Verify that the MSTDC resource is clustered.
3. Create and configure an MSMQ resource and group (virtual server) by opening the Cluster Administrator program.
4. In Action, select Open connection to cluster.

5. In Cluster or server name, select the Application cluster name.
6. In the console tree, click Cluster Group.

Add MSMQ Resources

1. Click File, New, Resource.
The New Resource Wizard opens.
2. Type Clustered MSMW in Name.
3. Select Message Queuing, and click Next.
4. On the Possible Owners page, click Next.
5. On the Dependencies page, under Available resources, select the resource with Network Name as the type, and click Add.
6. Select Disk S (the resource of type Physical Disk) and click Add.
7. Click Finish.
8. Bring the Clustered MSMQ resource online.

Add General Resources

1. In the console tree, click Cluster Group.
2. Click File, New, Resource.
The New Resource Wizard opens.
3. Type Clustered Computer Management in Name.
4. Select Generic Application, and click Next.
5. On the Possible Owners page, click Next.
6. On the Dependencies page, under Available resources, select the resource with Network Name as the type, and click Add.
7. Select the Clustered MSMQ resource, and click Add.
8. Click Next.
9. Type `mmc compmgmt.msc` in Command Line.
10. Type `%windir%\system32` in Current Directory.
11. Select Use Network Name for the computer name and Allow Application to Interact with Desktop.
12. Click Next, and click Finish.
13. Bring the Clustered Computer Management resource online.

Note: For more information about MSMQ, see the Microsoft website.

Add Internal Resources

Note: Most of the resources are present, but the resources have the old group names. Revise your group so that they have same names as the installation from scratch names.

1. Click to File, New, Resource.
2. Add the following resources:
 - Oblicore - Tomcat 6
 - Oblicore - ACE2 on JBoss Application Server
 - Oblicore - Adapter Listener
 - Oblicore - Alerts
 - Oblicore - Dashboard
 - Oblicore - Log Server
 - CA Business Service Insight -Services FQDN
 - Oblicore - PenaltyWriter
 - Oblicore - ScriptHost
 - Oblicore - Tasks Host
 - CA Business Service Insight - Services Public Cluster IP
 - Oblicore - ReportsScheduler
3. Add Oblicore - Current_Status_Engine resource to CA Business Service Insight-Current Status Group.
4. Add Oblicore - PSLWriter resource to the CA Business Service Insight-ACE1 Writer Group.
5. Add Oblicore - Current_Status_Engine resource to CA Business Service Insight-ACE2 Worker.
6. Add Oblicore - PsiWorker1 resource to CA Business Service Insight - ACE2 Worker Group.
7. Bring all resources online.

Configure the Web Server

Note: To create Network Load Balancing, follow the instructions in the Microsoft TechNet guide: [http://technet.microsoft.com/en-us/library/cc754833\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc754833(WS.10).aspx).

Follow these steps:

1. Navigate to Program Files\Oblicore.
2. Copy the Booklet Templates, Export Templates, and Packages folders to the Web shared folder.
3. Update the Booklet Path.

Note: By default, you cannot edit the Booklet Path in the GUI. Update the parameter in `t_system_configurations` or set `Changeable_in_gui` to Y.

Configure the Adapter Servers

Follow these steps:

1. Connect to the first CA Business Service Insight Adapter cluster server node.
2. Open the Cluster Administrator program.
3. Change the Oblicore - AdapterDeployment service name in the Parameters tab to AdapterDeployment.
4. Go to \Program Files\Oblicore\Adapters, and copy the deployed adapter folders to the Adapters folder on the clustered shared folder (Disk S).

Note: Verify that the adapter paths point to the correct adapter folder paths on the cluster drive.

5. On each Adapter cluster server node, open the Registry Editor, and go to HKEY_LOCAL_MACHINE, SOFTWARE, Oblicore, Adapters. Verify that the AdaptersDir string has the value S:\Adapters.
6. Bring all adapter services online.

Complete the Upgrade

To complete the upgrade, perform the following tasks.

Important! Log in as `sadmin` after upgrading CA Business Service Insight. The default password is `sadmin`.

Follow these steps:

1. Restart all servers.
2. In IIS Manager, start the web server.

3. (Optional) To change from a public to a private synonym, invoke one of the following procedures on the database:

```
begin  
prc_recreate_all_synonyms ('YES');  
end
```

or

```
exec prc_recreate_all_synonyms ('YES');
```

4. (Optional) Lock the oblidbadmin account in the database. Run the following command while connected to the database:

```
alter user oblidbadmin account lock;
```

5. (Optional) Change the oblidbadmin password. Run the following command while connected to the database:

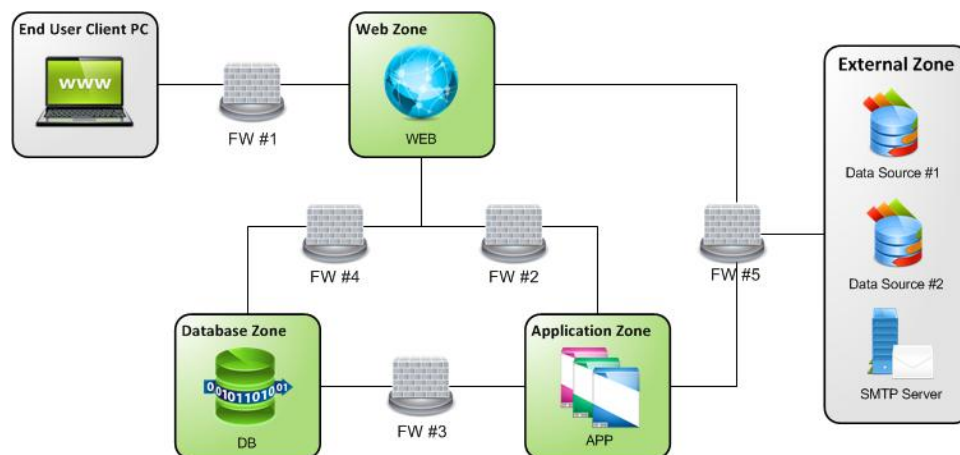
```
alter user oblidbadmin identified by '<new_password>';
```

6. Verify that the hours offset matches the time zone that you select.
7. Verify that the dates for daylight savings match your location.

You now have the most recent version of CA Business Service Insight.

Appendix A: Communication Protocols Overview

CA Business Service Insight is a multi-tier application that you can deploy on any number of servers. Most deployments use the standard 3-tier model, which often includes firewalls between the physical servers for various purposes. Configure the firewalls to allow communication between the CA Business Service Insight components.



Process/Components

The following table shows the processes and components that communicate between zones:

Zone	Process/Component	Notes
Web	IIS Web Server	Serves web content to the client browsers, and retrieves data from the Database.
	COM+ components	Performs actions on DB, retrieves data, and sends SMTP messages.

	API	Handles incoming web services requests
	Authentication Service (SSO/LDAP)	Handles external authentication requests.
Application	Adapters Listener Service	Handles incoming Adapter connections from Adapter instances.
	Adapter Deployment Service	Deploys and controls the locally deployed managed adapters
	Log Server	Logs all incoming messages from BSI COM+ components and Application Services, such as TaskHost and Alerts.
	Dashboard Service	Updates the status and results of the dashboard components.
	PSL Engine	Calculates all service level results and provides information for other dependant application services, such as Dashboard, Alerts.
	Report Scheduler Service Alerts Service (SMTP)	Sends SMTP messages from the Application server.
	Adapter Instance(s)	Connects to the data sources and handles the collection of raw data with the Adapter Listener Service.
Database	Oracle Database	Stores and manages all application data.
	Database Listener	Handles incoming connections to the database.
External	Adapter Instance(s)	Connects to the data sources and handles the collection of raw data with the Adapter Listener Service.

	Adapter Deployment Service	Deploys and controls the remotely deployed managed adapters. This service should on the same machine as each remotely deployed adapter.
--	----------------------------	---

Ports and Protocols

The following tables lists the ports and protocols for CA Business Service Insight processes and components:

PROCESS (SOURCE)	F W #	DESTINATION	PROTOCOL	DEFAULT PORT(S)	DIRECTIO N	CHANGEAB LE?
Web Zone Originating						
IIS Web Server	#2	Log Server (Application Server)	TCP	4040	Outgoing	Y
IIS Web Server	#2	Adapter Deployment Service (Application Server)	TCP	1008	Both	Y
IIS Web Server	#2	Dashboard Service (Application Server)	.Net Remoting	8004	Both	Y
IIS Web Server	#5	Authentication Service/Server (External)	SOAP/HTTP	4515	Both	Y
IIS Web Server Email	#5	SMTP Server (External)	SMTP	25	Outgoing	N
COM+ components	#4	Database Server	TCP (SQL *Net)	1521	Both	Y

Application Zone Originating						
Report Scheduler & Alerts Services	#5	SMTP Server (External)	SMTP	25	Outgoing	N
All Guarantee Services (Alert, Dashboard etc)	#3	Database Server	TCP (SQL *Net)	1521	Both	Y
Adapters (locally hosted)	#5	External Data Sources	TCP /File	App Defined**	Both	Y
Adapters (remotely hosted)	#5	External Data Sources	TCP	User Defined**	Both	Y
Adapter Listener	#5	Remote Adapter Instance	TCP	User Defined**	Both	Y
External Zone Originating						
Client PC (External)	#1	IIS (Web Server)	HTTP (or HTTPS)	80 (443)	Both	Y
Adapter Instance (remotely hosted)	#5	Adapter Listener (Application Server)	TCP	User Defined**	Both	Y
External Calling Application/ Machine	#5	API Service (Web Server)	SOAP/HTTP	80	Both	Y
Other						
MSMQ (Microsoft Messaging Queuing)			TCP	1801		
			RDP	135, 2101/2112, 2103/2114, 2105/2116		
			UDP	3527, 1801		

ACE II (Aggregation and Correlation Engine)				4073, 1298, 1299, 8283, 4744, 4645, 3728, 19201, 1361, 1363, 8293, 8280, 1300, 5546, 4657		
ACE II content transfer				3973, 1198, 1199, 8183, 4544, 4545, 1200, 1201, 4548, 3628, 19101, 1261, 1262, 8193, 8180, 5546, 4557		
Tomcat				8007 standard port		
SOI/SSA (Web Server with Tomcat)		SOI Server	TCP	7090		
Oblisync		CA Business Service Insight Installation	TCP	8180		

** Adapters must connect to external applications based on the requirements of the related data source, SQL or file-based access.

++ Adapters communicate according to ports defined in CA Business Service Insight. By default, the Adapter wizard automatically assigns ports starting upward from 6201. Configure the communication to initial from either the Adapter Instance or the Adapter Listener (Adapter->Listener, or Listener->Adapter). The ports may be important for Firewall configurations that use the Port Triggering feature.

The following table shows optional ports and communications that provide access for development and support, and enable the transfer of source data files:

PROCESS (SOURCE)	FW#	DESTINATION	PROTOCOL	DEFAULT PORT(S)	DIRECTION	CHANGEABLE ?
External Zone Originating						
Client PC (External) – Remote Desktop	#1	Web Server and Application Server	RDP	3389	Both	Y
Client PC (External) – File System / Sharing++	#1	Web Server and Application Server	Netbios/Samba over IP	137, 138, 139, 445	Both	Y
Client PC (External) – FTP / SFTP**	#1	Web Server and Application Server	FTP/SFTP	21/22	Both	Y

** FTP and SFTP require the installation of separate application software that CA Business Service Insight does not include. SFTP commonly runs over SSH on port 22.

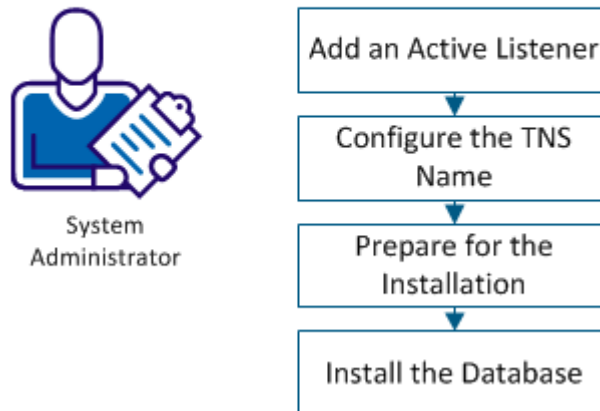
++ These ports enable file system access to the machines and must only be exposed to trusted areas, as they open potential security holes.

Appendix B: How to Install the CA Business Service Insight Database on a Linux Platform

As a system administrator, you are responsible for preparing a database for CA Business Service Insight. This scenario describes a standard Oracle server configuration. For specific configurations, such as RAC, this scenario provides an example. For more information, see the Oracle documentation or contact Oracle for assistance.

Use this procedure to guide you through the process:

How to Install the CA Business Service Insight Database on a Linux Platform



1. [Add an Active Listener](#) (see page 86)
2. [Configure the TNS Name](#) (see page 87)
3. [Prepare for the Installation](#) (see page 88)
4. [Install the Database](#) (see page 89)

Add an Active Listener

If there is not active listener, create and configure a listener.

Follow these steps:

1. Start the Oracle Net Configuration Assistant.
2. Select Listener configuration.
3. Select Add, and click Next.
4. Type LISTENER, and click Next.
5. Move TCP to Selected Protocols, and click Next.
6. Select Use the standard port number of 1521, and click Next.

The active listener is created.

7. Verify that the listener is active in the Oracle Net Manager.

Configure the TNS Name

To enable the creation of the CA Business Service Insight database, configure the local Net Service Name.

Follow these steps:

1. Start the Oracle Net Configuration Assistant.
2. Select Local Net Service Name configuration, and click Next.
3. Select Add, and click Next.
4. In Service Name, type oblicore, and click Next.
5. Select TCP for the communication, and click Next.
6. In Host name, specify the name of the Oracle server, select Use the standard port number of 1521, and click Next.
7. Select No, do not test, and click Next.
8. In Net Service Name, type oblicore, and click Next.
9. Click Next.

TNSname.ora is created under /opt/oracle/product/11.2/DB_1/network/admin.

10. To verify that the TNS Name is active, run the following command:

```
TNSping Oblicore
```

The following example shows the expected return:

```
TNS Ping Utility for Linux: Version 11.2.0.1.0 - Production on 21 - AUG - 2013  
15:31:07
```

```
Copyright (c) 1997, 2009, Oracle. All rights reserved.
```

```
Used parameter files:
```

```
/opt/oracle/product/11.2/DB_1/network/admin/sqlnet.ora
```

```
Used TNSNAMES adapter to resolve the alias
```

```
Attempting to contact (SESCRIPTION = (ADDRESS = (Protocol = TCP) (HOST = 6201 -  
lab350- sp) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = oblicore)))
```

```
OK (10 msec)
```

```
oracle@6201 - LAB350- SP:/Download/Setup/InstallDB>
```

Prepare for the Installation

To prepare the directory for installation, perform the following tasks.

Follow these steps:

1. Copy the directory SetupDB from \Server\program files\CA\Cloud insight\ on the installation CD to the Linux File System:/Software.

2. Execute the following commands:

- Create the directory for the logs:

```
Mkdir -p /Software/SetupDB/InstallDB/Log
```

- Grant the Oracle user permissions to access the installation script files:

```
Chown -R oracle:oinstall /Software/SetupDB
```

3. Convert the file from DOS format to UNIX:

- a. Create BSI-conv.sh in /InstallDB.

- b. Copy the following code

```
#!/bin/bash
dos2unix_recursive()
{
for file in "$1"/*; do
if [ ! -d "$file" ] ; then
if [ ! -L "$file" ] ; then
echo Convert $file to Unix format...
dos2unix $file $file
fi
else
if [ ! -L "$file" ] ; then
dos2unix_recursive $file
fi
fi
done
}
```

```
dos2unix_recursive "$PWD"
chmod -R +rx *.sh
```

- c. Run the bat file.

4. Verify that the directory /oracle/oblicore exists. If it does not exist, create it.

5. Edit start_parameters.ini in /Software/SetupDB/InstallDB/.

Example:

```
[DataBaseDetails]
OBLICORE_ROOT=/oracle/Oblicore
DB_NAME=oblicore
```

```
ORACLE_HOME=/opt/oracle/product/11.2/DB_1
ORACLE_VERSION =11
DB_SIZE= large
SYS_PASS=sys
OBLICORE_USER=oblicore
OBLICORE_PASS=oblicore
OBLIDBADMIN_PASS=oblidbadmin
DB_CHARSET=utf8
DB_SYNONYM=public
```

Install the Database

To provide a database for CA Business Service Insight, install the database.

Follow these steps:

1. Change to the directory with SetupDB\InstallDB, and execute the script file with the following command:

```
sh Main.sh
```

The Command Line Terminal opens.

2. Follow the instructions in the terminal. We recommend the following settings:
 - For the character set, use UTF8.
 - Set the database synonym to Public.
3. Verify the parameters of the database, continue with the creation of the database.

The creation of the TNSNAME and the Database oblicore begins. This process may take more than 10 minutes.
4. (Optional) To view the creation log, locate the files under /Softwar/SetupDB/InstallDB/Log.

The database is ready for use.

Appendix C: Install the MS Word Add-on

To use the features of the CA BSI tab in MS Word, install the MS Word add-on.

Notes: The installation wizard requires .NET 4.

Follow these steps:

1. Double click CA BSI Booklet Addon.exe in the CA Business Service Insight installation folder.
2. Follow the instructions to complete the installation.
3. Open Word.

The CA BSI tab appears on the ribbon.

Appendix D: The CA Technologies Naming Conventions Policy for Database Objects

The following table provides a checklist which specifies the CA Technologies naming convention policy. If your database naming convention is different from the CA Technologies policy, then fill in the appropriate row with the different naming convention. Consult the CA Support department before running the installation.

CA Naming Convention	Customer Naming Convention
Tablespace	
TBS_ACE_DATA_TAB_01	
TBS_ACE_INDEX_TAB_01	
TBS_CSL_DATA_TAB_01	
TBS_CSL_INDEX_TAB_01	
TBS_DASH_DATA_01	
TBS_DASH_INDEX_01	
TBS_LOB_DATA_01	
TBS_OBL_DATA_01	
TBS_OBL_INDEX_01	
TBS_PSL_DATA_TAB_01	
TBS_PSL_INDEX_TAB_01	
TBS_OBLIDBADMIN_01	
TBS_SLA_DATA_01	
TBS_SLA_DATA_02	
TBS_SLA_INDEX_01	
TBS_SLA_INDEX_02	
TBS_SMI_DATA_TAB_01	
TBS_SMI_INDEX_TAB_01	
TBS_SMIANA_DATA_TAB_01	
TBS_SMIANA_INDEX_TAB_01	
CA TECHNOLOGIES USERS	
OBLCORE	

CA Naming Convention	Customer Naming Convention
Tablespace	
OBLIDBADMIN	
OBLIDBADMIN PRIVILEGES	
CONNECT TO OBLIDBADMIN	
UNLIMITED TABLESPACE TO OBLIDBADMIN	
EXECUTE ON DBMS_LOCK TO OBLIDBADMIN	
SELECT ANY DICTIONARY TO OBLIDBADMIN	
CREATE PUBLIC SYNONYM TO OBLIDBADMIN	
DROP PUBLIC SYNONYM TO OBLIDBADMIN	
CREATE ANY SYNONYM TO OBLIDBADMIN	
DROP ANY SYNONYM TO OBLIDBADMIN	
CREATE TABLE TO OBLIDBADMIN	
CREATE VIEW TO OBLIDBADMIN	
CREATE SEQUENCE TO OBLIDBADMIN	
ROLE_USR_REG_PRIVS TO OBLIDBADMIN WITH ADMIN OPTION	
ALTER DATABASE TO OBLIDBADMIN	
ALTER SESSION TO OBLIDBADMIN	
EXECUTE ANY PROCEDURE TO OBLIDBADMIN	
SELECT ANY TABLE TO OBLIDBADMIN	
GRANT ANY OBJECT PRIVILEGE TO OBLIDBADMIN	
GRANT ANY PRIVILEGE TO OBLIDBADMIN	
CREATE TABLESPACE TO OBLIDBADMIN	
ALTER TABLESPACE TO OBLIDBADMIN	
DROP TABLESPACE TO OBLIDBADMIN	
CREATE USER TO OBLIDBADMIN	
ALTER USER TO OBLIDBADMIN	
DROP USER TO OBLIDBADMIN	

CA Naming Convention	Customer Naming Convention
Tablespace	
CREATE ROLE TO OBLIDBADMIN	
ALTER ANY ROLE TO OBLIDBADMIN	
DROP ANY ROLE TO OBLIDBADMIN	
CREATE ANY TABLE TO OBLIDBADMIN	
ALTER ANY TABLE TO OBLIDBADMIN	
DROP ANY TABLE TO OBLIDBADMIN	
CREATE ANY INDEX TO OBLIDBADMIN	
ALTER ANY INDEX TO OBLIDBADMIN	
DROP ANY INDEX TO OBLIDBADMIN	
CREATE ANY PROCEDURE TO OBLIDBADMIN	
ALTER ANY PROCEDURE TO OBLIDBADMIN	
DROP ANY PROCEDURE TO OBLIDBADMIN	
CREATE ANY SEQUENCE TO OBLIDBADMIN	
ALTER ANY SEQUENCE TO OBLIDBADMIN	
DROP ANY SEQUENCE TO OBLIDBADMIN	
CREATE ANY TRIGGER TO OBLIDBADMIN	
ALTER ANY TRIGGER TO OBLIDBADMIN	
DROP ANY TRIGGER TO OBLIDBADMIN	
CREATE ANY TYPE TO OBLIDBADMIN	
DROP ANY TYPE TO OBLIDBADMIN	
CREATE ANY VIEW TO OBLIDBADMIN	
DROP ANY VIEW TO OBLIDBADMIN	
USRACE	
USRCSL	
USRDASH	
USREDR	
USRMTN	
USRPSL	
USRRPT	

CA Naming Convention	Customer Naming Convention
Tablespace	
USRSLA	
OBLICORE PRIVILEGES	
CONNECT TO OBLICORE	
UNLIMITED TABLESPACE TO OBLICORE	
EXECUTE ON DBMS_LOCK TO OBLICORE	
SELECT ANY DICTIONARY TO OBLICORE	
CREATE PUBLIC SYNONYM TO OBLICORE	
DROP PUBLIC SYNONYM TO OBLICORE	
CREATE ANY SYNONYM TO OBLICORE	
DROP ANY SYNONYM TO OBLICORE	
CREATE TABLE TO OBLICORE	
CREATE VIEW TO OBLICORE	
CREATE SEQUENCE TO OBLICORE	
CREATE SESSION TO USRCSL	
ROLE_USR_REG_PRIVS TO USRCSL	
CREATE SESSION TO USRDASH	
ROLE_USR_REG_PRIVS TO USRDASH	
CREATE SESSION TO USREDR	
ROLE_USR_REG_PRIVS TO USREDR	
CREATE SESSION TO USRMTN	
ROLE_USR_REG_PRIVS TO USRMTN	
CREATE SESSION TO USRPSL	
ROLE_USR_REG_PRIVS TO USRPSL	
CREATE SESSION TO USRRPT	
ROLE_USR_REG_PRIVS TO USRRPT	
CREATE SESSION TO USRSLA	
ROLE_USR_REG_PRIVS TO USRSLA	
OBLICORE ROLE	
ROLE_USR_REG_PRIVS	

CA Naming Convention	Customer Naming Convention
Tablespace	
PART_MNG_PKG	For raw data partitioning. If this system does not use this feature, then it does not have to run.
DB_MNG_FORECAST_PKG -	Forecast calculations. If this system does not use this feature, then it does not have to run. This feature was developed for using partitioning on T_PSL (which was never activated), so currently it is not in use.
DB_MTN_PKG.LOG_PURGE -	Responsible for cleaning t_log table
DB_MTN_PKG.COLLECT_STATS -	Database statistics collection
PRC_T_INTER_REGISTRATIONS_FLAT -	Builds a table with all (direct and indirect) connections between metrics by the use of event reusability. Serves the raw data reports where there is a use of event reusability.
