Crystal Reports Server 2008 Installation Guide for Windows

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Introduction to Crystal Reports Server 2008

What is Crystal Reports Server 2008?

Crystal Reports Server 2008 is a complete reporting solution to create, manage, and deliver Crystal reports over the web. It is built on BusinessObjects Enterprise technology. It includes a report publisher and a web portal interface that is used to view reports. It also includes Software Developer Kits (SDKs) that allow you to customize Crystal Reports Server 2008 and integrate it with your custom applications.

Crystal Reports Server 2008 may be installed on a single machine for up to 20 end users to concurrently access, view, and interact with reports on the web without having Crystal Reports installed on their computers. It allows you to store reports in a central database for security and data integrity. Users can access the reports through the web portal.

With Crystal Reports Server 2008, you can set up security to control which end users can access specific folders and reports. You can also specify the rights for users, or groups such as who can schedule reports versus export reports.

Who is Crystal Reports Server 2008 for?

Crystal Reports Server 2008 is ideal for organizations that need to deliver reports over the web to smaller audiences. It does not require that you deal with multiple servers and complicated configurations. All components are installed on a single server. This feature enables you to install and set up the solution quickly.

The quick setup allows you to start using the software to increase the report development productivity and data security immediately.

About this documentation

This documentation provides you with information and procedures for installing Crystal Reports Server 2008. It also includes an overview of Crystal Reports Server 2008 with details about how it is built on the proven Business Intelligence platform, BusinessObjects Enterprise.

This documentation is required to perform new installation of Crystal Reports Server 2008.

Who should read this documentation

This documentation is intended for system administrators, IT professionals, or database administrators who need to install Crystal Reports Server 2008. Familiarity with the database environment and web server software is especially beneficial.

BusinessObjects Enterprise guides

Crystal Reports Server 2008 is built on the BusinessObjects Enterprise framework. Therefore, after you have finished installing Crystal Reports Server 2008, it is suggested that you begin consulting the BusinessObjects Enterprise guides at the Business Objects support site at: *http://support.businessobjects.com/documentation/product_guides/default.asp*

Preparing to install Crystal Reports Server 2008

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Crystal Reports Server 2008 is a server-side installation. This means that you install it on one central server rather than on each user's machine. Users then access Crystal Reports Server from their individual machines through the web portal interface, known as InfoView.

Before you begin, see *System requirements* on page 12 to ensure that you have the necessary components installed and configured correctly.

If you want to perform basic installation, go to *Performing new installation* on page 24.

If you want to configure a database separately for Crystal Reports Server 2008 before you begin your installation, see *Setting up a database account for Crystal Reports Server 2008* on page 16.

System requirements

The following components must be installed and configured correctly on the server, before you install Crystal Reports Server 2008:

- Windows operating system
- Internet Explorer or Firefox
- Web server software

For a detailed list of tested environments, see the Platforms.txt file included with your product distribution. This file includes information about specific version and Service Pack requirements for web servers, web browsers, web application servers, databases, and operating systems.

For more information pertaining to deployment, see the *Crystal Reports Server 2008 Release Notes* included with the product distribution (`re lease.pdf`, `release.htm`, or `release.rtf`).

Installing on a non-system drive

You can install Crystal Reports Server 2008 on any drive on your machine. The installation program targets the folder or directory that you specify.

There is one exception to this rule. If you previously installed another Business Objects product of the same version, then the Crystal Reports Server 2008 Setup program automatically uses the existing common directory

to add any shared Business Objects product files. If this common directory is on the system drive--the drive containing your operating system files--Crystal Reports Server 2008 automatically installs the shared files in this directory.

Note: If the previously installed product is the same version as the one you are about to install, maintenance mode is evoked.

To install several Business Objects products on a non-system drive, you must first install Crystal Reports Server 2008. All Business Objects products that you subsequently install will use the same non-system drive for shared files.

Installation scenarios

Before you install Crystal Reports Server 2008, consider which of these is your intended scenario:

- New installation
- Silent installation
- Client Tools installation

New installation

Performing a new installation is the easiest way to deploy Crystal Reports Server 2008, because all the required client, server, and optional components are installed by default on a single machine.

Note:

After the installation, you can easily disable any components you do not require.

You may want to choose a new installation if:

- You have not installed Crystal Reports Server 2008 before.
- You want to install all the components on the same machine.
- You do not have stringent disk space limitations.
- You do want to specify the components to be installed.

Related Topics
- *Performing new installation* on page 24

Silent installation

You can run a silent installation to install Crystal Reports Server 2008 from the command line using a response file that contains the installation setup parameters. This method is particularly useful if you want to perform multiple installations, or you do not want to interrupt users who are working on machines in your system.

You can also incorporate the silent installation command into your own build scripts. For example, if your organization uses scripts to install software on machines, you can add the silent Crystal Reports Server 2008 installation command to those scripts.

You may want to choose a silent installation if:

- You are already familiar with the Crystal Reports Server 2008 installation program.

- You need an automated method to perform similar installations on several machines.

- You do not want to run the Crystal Reports Server 2008 Setup program.

Note:

Crystal Reports Server 2008 does not support silent installation when the installation contents are on multiple CDs. If the installation source files are on multiple CDs, you must first copy the contents from all the CDs to a central location, such as a hard-drive, and then run the silent installation command from the location that contains the contents from all the CDs.

Client Tools installation

The following Crystal Reports Server 2008 Client Tools are available for installation:

Component	Description
Business View Manager	Enables you to design relational views of information that provides a wide range of capabilities for creating and modifying Data Connections, Dynamic Data Connections, Data Foundations, Business Elements, and Business Views.
Data Source Migration Wizard	Allows you to migrate reports that are based on Crystal queries, dictionaries, and InfoViews to a Crystal Reports Server 2008 deployment.
Diagnostic Tool	The Deployment Diagnostic Tool is a Java-based application designed to verify basic operating functionality of a Crystal Reports Server 2008 installation. It is an open-framework utility that allows for the development of additional test drivers through the use of various SDKs provided by Business Objects.
Import Wizard	Allows you to import and export content from previous and current versions of Crystal Reports Server.
Publishing Wizard	Enables you to add reports to Crystal Reports Server.

Note: The client applications must be installed on Windows.

Install these applications for particular users who are responsible for managing Crystal Reports Server contents, developing applications, or migrating system data. These client tools are not needed by users who access InfoView or the Central Management Console (CMC) administrative web applications. Some of these tools are used for migrating documents from earlier product versions, or creating new documents.

CMS database requirements and preparation

Crystal Reports Server 2008 requires a database to store information about the system and its users. The following sections discuss the required settings and how to test settings for:

• DB2

• MySQL

• Microsoft SQL Server (ODBC)

- Oracle

- Sybase

Before installing Crystal Reports Server 2008, you must review this information. For more information on database requirements, see the "Databases in BusinessObjects Enterprise" section in the *BusinessObjects Enterprise Deployment Planning Guide*.

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

Installing MySQL as the system database

MySQL database server is an open-source database that provides local data storage. The Crystal Reports Server 2008 Setup program installs and configures MySQL as the database server for a Crystal Reports Server 2008 installation. If you already have MySQL installed, then the installation program is used to configure the CMS database using your existing database engine. During the installation of Crystal Reports Server 2008, specify what database server you will use and enter the required parameters for authentication.

Setting up a database account for Crystal Reports Server 2008

To administer the CMS database, set up a database account. If you choose to install MySQL as a part of the Crystal Reports Server 2008 installation, you will be prompted during installation to set up this account. If you plan to use your own database, you must complete the following steps before installing Crystal Reports Server 2008:

1. Create or select a user account that provides Crystal Reports Server 2008 with the appropriate privileges on your database server.
2. Verify that you can log into your database and carry out the administrative tasks using this account.

Setting up an empty database for the CMS

If you want to use an existing database server, create a new database on your database server before installing Crystal Reports Server 2008.

The following database servers are supported by the CMS system:

- Oracle
- DB2
- Sybase
- MySQL
- Microsoft SQL Server (ODBC)

Note:

Review the online BusinessObjects Enterprise supported platforms document for information related to supported database software and version requirements at the BusinessObjects support site at the link: *http://sup port.businessobjects.com/documentation/product_guides/default.asp*

To integrate your existing database with Crystal Reports Server 2008, you must prepare it. Follow the steps mentioned below to set up the database:

- Create a new database.

- Create a new user account and password for the database, to be used by Crystal Reports Server 2008.

- Specify that the new user account requires permissions to create, modify, and delete tables, and create procedures so that database can be modified as required.

- Record the name of the database, the user account, and the password when you run the Crystal Reports Server 2008 installation setup program

During installation, you can choose to reinitialize the existing database. This will cause new tables to be created in your existing database to store Crystal Reports Server 2008 data. Consult your specific database server documentation, if you are unsure of the procedure for creating a new database. Ensure that the database server is set up to use Unicode character encoding (such as UTF-8).

Caution: You cannot use the database from a previous version of Crystal Reports Server. You must create a new database for this release. If you use a database from a previous version, the existing data is destroyed. Create a new database instead. After you have completed the installation Crystal Reports Server 2008, you can migrate your old content to the new version's database.

DB2 database setup requirements

If you are using a DB2 database with your Crystal Reports Server 2008 deployment, there are specific settings you need to select when the database is created. It is not sufficient to modify these settings after the database is created.

When you create the database to use with Crystal Reports Server 2008:

• Ensure that the CMS database is not partitioned.

If your DB2 CMS database is partitioned, you will have problems creating the CMS database.

• Create the database with the following specific settings:

```
Collating Sequence = "Identity"
Codeset = "UTF-8"
Territory = "XX"
```

If the DB2 database does not have the correct collating sequence settings, the users and usergroup objects may not be sorted properly in the Central Management Console (CMC). Replace xx with the code that is appropriate to the code set and codepage for the location. Consult the DB2 documentation for more information.

Note: If you are using DB2 8.1, you require a C compiler that is installed and configured to build SQL stored procedures. DB2 8.2 through version 9.1 do not have this requirement. SQL stored procedures are used in Crystal Reports Server 2008 when users are added to groups in the CMS. See the DB2 documentation for details on how to configure the C compiler for SQL stored procedures, and for determining what version of the C compiler is supported on your platform.

Once the database is created, you will need to prepare it for the Crystal Reports Server 2008 installation.

Oracle database setup requirements

There are no specific parameters for an Oracle database, that are crucial for Crystal Reports Server 2008 to work, other than UTF-8.

Once the database is created, set it up for the Crystal Reports Server 2008 installation.

Sybase database setup requirements

If you are using Sybase, when you create the database for the CMS, ensure that the page size is set to 8 KB.

Note: The default page size of Sybase database is 2 KB, which is too small for the CMS system database. For the CMS to run optimally, the page size must be 8 KB. The page size must be set during the database creation, and it cannot be changed after the database is set up.

Once the database is created, prepare it for the Crystal Reports Server 2008 installation.

MySQL database setup requirements

There are no specific parameters for an existing MySQL database, that are crucial for Crystal Reports Server 2008 to work, other than UTF-8. If you select the option to install and configure MySQL that is available with the installation, the installation creates a MySQL database with the default settings for the CMS database.

Once the database is created, prepare it for the Crystal Reports Server 2008 installation.

Related Topics

Microsoft SQL Server database setup requirements

There are no specific parameters for a Microsoft SQL Server database, other than UTF-8, that are crucial for Crystal Reports Server 2008 to work.

Once the database is created, prepare it for the Crystal Reports Server 2008 installation.

Related Topics

Preparing the existing database server

After you have created the database, set up the database client, and before you install Crystal Reports Server 2008, set up the database server so that the CMS can connect to it.

During the installation, you will be prompted if you want to install MySQL or use an existing database. If you specify that you want use an existing database, you will be prompted for details about the existing database.

The following table summarizes the information required for configuring your existing database during the installation setup:

Database type	Information required at install time
MySQL	• Database: MySQL database name • Server: MySQL server name • Port: default port is 3306 • Login credentials used to access database

Database type	Information required at install time
Sybase	• Server: Sybase Server Name • Login credentials used to access database **Note:** The Sybase server name is a combination of the host name and the port number, which is set by your database administrator in the file `sql.ini.`
DB2	• Server: DB2 database alias • Login credentials used to access database
Oracle	• Server: tnsnames connect identifier • Login credentials used to access database
Microsoft SQL Server	• ODBC DSN

Note: If you are using a 64-bit operating system, then create a 64-bit DSN from the `SysWOW64` folder, to proceed with the installation process of Crystal Reports Server 2008.

New installation of Crystal Reports Server 2008

Performing new installation

Performing new installation is the simplest way to deploy Crystal Reports Server 2008 because all the required and optional components are installed by default on one machine.

The setup of a new installation of Crystal Reports Server 2008 requires the following inputs:

1. Providing information to the system administrator for the new installation.
2. Configuring the system database. You can either install and configure MySQL, or configure the existing database.
3. Providing information about the Server Intelligence Agent (SIA).
4. Configuring the Java Application Server. You can either install and configure Tomcat, or configure the existing Java application server.

Performing new installation of Crystal Reports Server 2008

To perform new installation of Crystal Reports Server 2008:

1. Unless Autorun is enabled for your CD-ROM drive, run `setup.exe` from the root folder of the product distribution.

   The "Open file: Security Warning" dialog box appears with the message "Do you want to run this file?"

2. Click **Run**.

   The "Crystal Report Server 2008 Setup" window appears.

3. Choose English as the language from the drop-down list, and click **OK**.

   The " Welcome to the Crystal Reports Server 2008 Installation Wizard" screen appears.

4. Click **Next**.

   The "License Agreement" screen appears.

5. Select **I accept the License Agreement**, and click **Next**.

   The "User Information" screen appears.

6. Enter the "Full Name" and the "Product Keycode", and click **Next**.

Note: Organization field is optional.

The "Choose Language Packs" screen appears.

7. Select the language packs you want to install and click **Next**.

   Note: You can select **All Languages**, if you want to install all the available language packs.

   The "Install Type" screen appears.

8. Select one of the following options:

   • **Install MySQL Database Server**, if you do not have a database server, and move to Step 9.

   • **Use an existing database server**, if you want to use the existing database server.
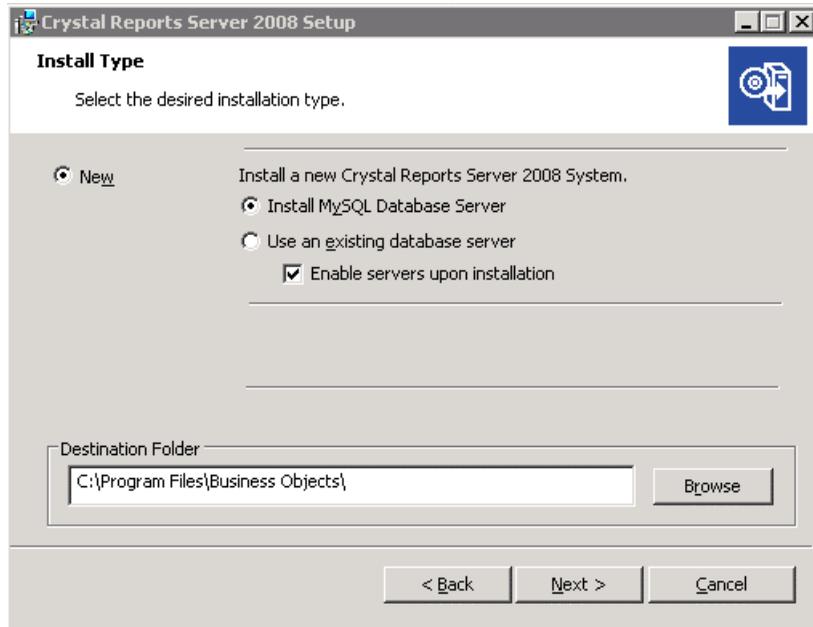
For information and instructions on how to use an existing database server, see *Configuring the existing database server* on page 29.

9. Select **Enable servers upon installation**, if you want to automatically launch the Crystal Reports Server 2008 once the installation process is complete. Use **Browse** to specify the "Destination Folder"

10. Click **Next** to continue with the installation.

   Note: If you have chosen to configure existing database server as CMS for the new installation of Crystal Reports Server 2008, see the section *Configuring the existing database server* on page 29. After performing the steps mentioned in "Configuring the existing Database Server", return to this procedure and continue the installation.

11. In the "Server Components Configuration" screen, specify a port number in the "CMS port" field.

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

   Tip: You can opt to skip this step - select the Configure the Crystal Reports Server 2008 Administrator password at a later time.

13. Click **Next** to continue with the installation setup.

The "Server Intelligence Agent" screen appears.

14. Specify the node name and the port number in "Node Name" and "Port" fields.

15. Click **Next** to continue with installation setup.

The "MySQL Database Server Configuration" screen appears.

16. Specify the port number for the MySQL database server in the "MySQL Port Number" field.

The default CMS port number is 6400.

The default port number is 3306. Use this port number unless this port is unavailable.

17. Specify a password for the MySQL root user account in the "Password" and "Confirm password" fields in the "MySQL root User Account"pane.

18. Select **Enable remote root access** to activate remote root access to the database server.

19. Specify a password for the MySQL BusinessObjects user account in the Password and " Confirm password" fields in the "MySQL BusinessObjects User Account" pane, and click **Next**.

The "Select Web Application Server" screen appears.

20. Select one of the following options:
    - **Use a pre-installed Web Application Server**, if you choose to use a pre-installed Tomcat Application Server.
    - **Install Tomcat application server**, if you choose to install Tomcat application server, and proceed to next step.
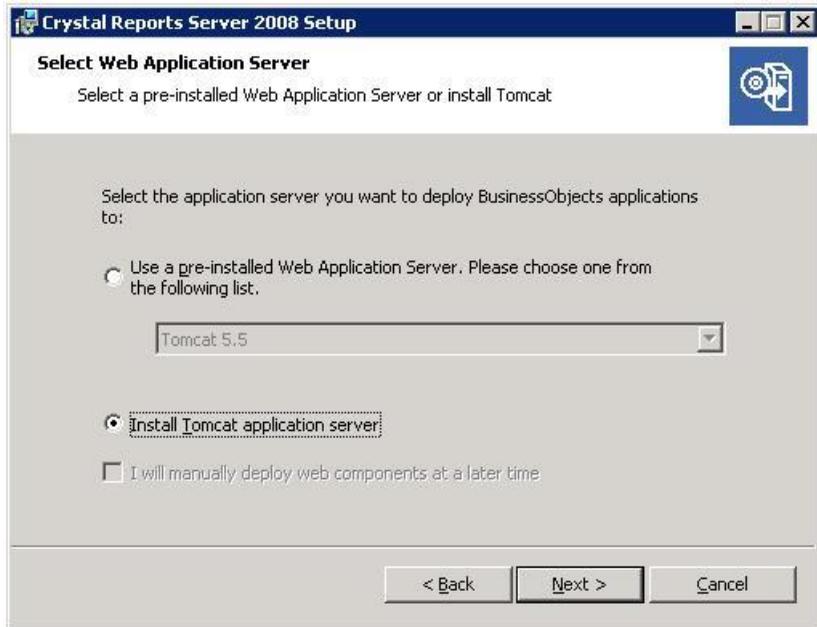
If you have chosen to use a pre-installed Web Application Server, see the section *Selecting the Tomcat Application Server configuration option* on page 31

Note: If you choose to use a pre-installed Web Application Server, then enter valid Application Server credentials, otherwise the validation will fail.

21. Click **Next**.

    The "Configure Tomcat" screen appears.

22. Accept the default values, or specify new port numbers for **Connection port**, **Shutdown port**, and **Redirect port**.

23. Click **Next** to continue with the installation.

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

The "Start Installation" screen appears.

24. Click **Next**.

The installation of Crystal Reports Server 2008 begins. Wait till the installation is complete.

25. Click **Finish**.

The new installation of Crystal Reports Server 2008 is complete.

Configuring the existing database server

The "CMS Database Information" screen appears if you choose to use an existing database server as the CMS for the new installation of Crystal Reports Server 2008.

To configure the existing database server, follow the steps mentioned below:

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

Depending on the database server you selected, the corresponding input fields are displayed in the "CMS Database" pane.

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

The table below summarizes all the information required for each database type:

Database type	Information required at install time
MySQL	• Database: MySQL database name • Server: MySQL server name • Port: default port is 3306 • Login credentials used to access database
Sybase	• Server: Sybase Server Name • Login credentials used to access database **Note:** The Sybase server name is a combination of the hostname and the port number which is set by your database administrator in the file sql.ini.
DB2	• Server: DB2 database alias • Login credentials used to access database
Oracle	• Server: tnsnames connect identifier • Login credentials used to access database
Microsoft SQL Server	• ODBC DSN

3. Select **Reset existing database** to delete all current tables and entries in the existing database.

4. Click **Next** to continue with the installation setup.

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

After performing all the above mentioned steps, go back to *Performing new installation of Crystal Reports Server 2008* on page 24, and continue the installation procedure.

Selecting the Tomcat Application Server configuration option

If you are using pre-installed Tomcat Application Server, follow the steps mentioned below to configure it:

1. In the "Select Web Application Server" screen, select **Use a pre-installed Web Application Server**.
2. Click **Next**.

    The "Configure Web Application Server" screen appears.

3. Enter the "Server Instance" and "Service Name".
4. Navigate to the location of the folder where the Tomcat Application Server is installed.
5. Click **Next**.

    The "Start Installation" screen appears.

6. Click **Next**.
7. Click **Finish**.

    The new installation of Crystal Reports Server 2008 is complete.

Silent installation of Crystal Reports Server 2008

Overview of silent installation

There are two methods for running Crystal Reports Server 2008 installation for Windows directly from the command line:

- Silent installation with a response file, referred to as a scripted installation in this guide
- Silent installation by specifying parameters directly on the command line

Both methods can be used to automate installations across multiple machines. The scripted installation method requires that you to specify an `.ini` file. The silent installation allows you to specify parameters for running `setup.exe`.

Note: If you pass a parameter directly in the command line, then the new setting overrides any setting specified in the `.ini` file.

These installation methods are particularly useful when you need to perform multiple installations quickly. You can also integrate the scripts, and commands into your own installation scripts.

Silent installation include a series of parameters including installation settings and directory paths to system resources. You can also specify settings that control the level of prompts during an installation.

Note: Crystal Reports Server 2008 does not support silent installation when the install contents are on multiple CDs. If the install contents are on multiple CDs, you must first copy the contents from all the CDs to a central location, such as the local hard-drive, and then run the silent install from the location that contains the contents from all the CDs.

Related Topics

Specific ini file parameters for setup.exe

The following three parameters are used in conjunction with the `.ini` file while running `setup.exe` from the command line:

Parameter	Description
`-w<`*`filepath/file name.ini`*`>`	Writes all the installation settings to an `.ini` file to the specified filepath. If a filepath is not specified, the file is stored in the system default `%TEMP%` folder.
`-r <`*`filepath/file name.ini`*`>`	Reads the specified `.ini` file and passes the settings to the installer as settings. **Note:** If you pass a parameter directly from the command line, the new setting overrides any setting specified in the `.ini` file.
`-l <`*`filepath/file name.ini`*`>`	Creates an installation log file in the specified filepath. If a filepath is not specified, the system default `%TEMP%` folder is used. This parameter can be used only if `-r` is also specified.

Related Topics

• *Silent and scripted installation parameters* on page 39

Creating an installation .ini file

Access the directory containing the `setup.exe` file.

1. Open the command-line console.
2. Navigate to the directory containing the Crystal Reports Server 2008 `setup.exe`.
3. At the command line, type the following: `setup.exe -w response filepath:\filename`

   Note:

   While specifying `responseFilePath`, make sure you include the name of the file you want to generate.

4. Press **Enter** to launch the installation setup program.
5. Follow the on-screen instructions to enter the preferred installation settings until you reach the final screen of the setup program.

   These settings are recorded in the response file. Click **Cancel** to terminate the installation setup.

All the parameters--user-defined and default--from installation setup are passed to the `.ini file`, which is stored in the directory specified in step 3.

Note: If a filepath is not specified, the file is stored in the system default `%TEMP%` folder.

Sample .ini script file

The following installation script was generated for a new Crystal Reports Server 2008 installation, in which MySQL and Tomcat were installed. The German language pack was added to the default English language pack.

[OTHER]

QUIET=/qa

[INSTALL]

ALLUSERS="1"

AS_ADMIN_IS_SECURE=""

AS_ADMIN_PASSWORD=""

AS_ADMIN_PORT="8080"

AS_ADMIN_USERNAME="admin"

AS_DIR="C:\Program Files (x86)\Business Objects\Tomcat55"

AS_INSTANCE="localhost"

AS_SERVER="tomcat55"

AS_SERVICE_NAME="BOE120Tomcat"

AS_VIRTUAL_HOST=""

ApplicationUsers="AllUsers"

CADNODE="BNGAMISHRAVM2"

CADPORT="6410"

CLIENTAUDITINGPORT="6420"

CLIENTLANGUAGE="EN"

CLUSTERCMS="False"

CMSPASSWORD=""

COMPANYNAME="Business Objects"

DATABASEAUDITDRIVER="MySQLDatabaseSubSystem"

DATABASECONNECT=""

DATABASEDB="BOE120"

DATABASEDB_AUDIT="BOE120_AUDIT"

DATABASEDRIVER="MySQLDatabaseSubSystem"

DATABASEDSN="Business Objects CMS"

DATABASEDSN_AUDIT="Business Objects Audit Server"

DATABASENWLAYER_AUDIT="ODBC"

DATABASEPORT="3306"

DATABASEPORT_AUDIT="3306"

DATABASEPWD="sa"

DATABASEPWD_AUDIT="sa"

DATABASEPWD_MYSQLROOT="sa"

DATABASERDMS_AUDIT="MySQL 5"

DATABASESERVER_AUDIT="localhost"

DATABASEUID="sa"

DATABASEUID_AUDIT="sa"

DATABASE_AUDIT_CONNSVR="connsvr"

ENABLELOGFILE="1"

ENABLESERVERS="1"

INSTALL.LP.EN.SELECTED="1"

INSTALLDBTYPE="SQL"

INSTALLDIR="C:\Program Files (x86)\Business Objects\"

INSTALLLEVEL="6"

INSTALLMODE="New"

INSTALLSWITCH="Server"

INSTALL_DB_TYPE="InstallMySQL"

MYSQLPORT="3306"

MYSQL_REMOTE_ACCESS="1"

NEWCMSPASSWORD=""

NSPORT="6400"

PIDKEY="00000-0000000-0000000-0000"

Privileged="1"

SINGLESERVER=""

SKIP_DEPLOYMENT=""

TOMCAT_CONNECTION_PORT="8080"

TOMCAT_REDIRECT_PORT="8443"

TOMCAT_SHUTDOWN_PORT="8005"

USERNAME="BO"

WCADOTNETINSTALL=""

WCAJAVAINSTALL="True"

WCATOMCATINSTALL="True"

WDEPLOY_LANGUAGES="en"

WDEPLOY_LATER=""

WEBSITE_METABASE_NUMBER="1"

WEBSITE_PORT="80"

[FEATURES]

REMOVE=""

ADDLOCAL="All"

ADDSOURCE=""

ADVERTISE=""

This script can now be used for future silent installations by including the file name and path in the command line as shown below:

```
setup.exe -r FILEPATH
```

Silent and scripted installation parameters

The following table lists the common parameters that are used for both silent and scripted installations of Crystal Reports Server 2008 on Windows:

Parameter	Description
/qn+	Specifies to prompt when the installation is complete. **Note:** You must also enter the CLIENTLANGUAGE parameter as part of the silent install string, or the language selection screen appears at the beginning of the installation.
CADNODE	Specifies the node name for the Server Intelligence Agent. `CADNODE="SIA1"`
CADPORT	Specifies the port used by Server Intelligence Agent. `CADPORT="6410"`
CLIENT LANGUAGE	Specifies the language used by the installer: • EN=English • ZH_CN=Simplified Chinese • ZH_TW=Traditional Chinese • DE=German • ES=Spanish • KO=Korean • NL=Dutch • JA=Japanese • PT=Portuguese • SV=Swedish • RU=Russian • FR=French **Note:** If this parameter not specified, you are prompted to select a language when the installation setup begins. `CLIENTLANGUAGE="EN"`
CMSPASSWORD	Specifies the administrator password for an existing CMS. `CMSPASSWORD="password"`
DATABASEDRIVER	Specifies which driver to use for the CMS database. To change this setting, you must create a new `.ini` file. `DATABASEDRIVER="MySQLDatabaseSubSystem"`

Parameter	Description
DATABASEPWD	Specifies the password used to access the database server. `DATABASEPWD="password"`
DATABASESERVER	Specifies the CMS database server name. `DATABASESERVER="localhost"`
DATABASEUID	Specifies the user name used to access the CMS database. `DATABASEUID="servername"`
ENABLELOGFILE	Specifies if a log file will be created for the installation. `ENABLELOGFILE="1"`
ENABLESERVERS	Specifies if servers must be enabled once the installation is complete. `ENABLESERVERS="1"`

INSTALL.LP.< >.SELECTED	Specifies which language pack to install. The following options are available :
	
	• EN=English
	• ZH_CN=Simplified Chinese
	• ZH_TW=Traditional Chinese
	• DE=German
	• ES=Spanish
	• KO=Korean
	• NL=Dutch
	• JA=Japanese
	• PT=Portuguese
	• SV=Swedish
	• RU=Russian
	• FR=French
	
	Note: The English language pack is always selected by default.
	
	`INSTALL.LP.EN.SELECTED="1"`
	`INSTALL.LP.JA.SELECTED="1"`

Parameter	Description
INSTALLDIR	Specifies the directory where you want to install the Crystal Reports Server 2008 components. `INSTALLDIR="C:\Program Files\Business Objects\"`
INSTALLMODE	Specifies the installation method as: New `INSTALLMODE="New"`
NSPORT	Specifies the port used by the CMS. `NSPORT="6400"`
PIDKEY	Specifies your product license key code. `PIDKEY="xxxxx-xxxxxx-xxxxxx-xxxx"`
TOMCAT_CONNECTION_PORT	Specifies the port number that Tomcat uses to connect. `TOMCAT_CONNECTION_PORT="8080"`
TOMCAT_REDIRECT_PORT	Specifies the port number that Tomcat uses to redirect. `TOMCAT_REDIRECT_PORT="8443"`

Parameter	Description
TOMCAT_SHUT DOWN_PORT	Specifies the port number that Tomcat uses to shut down `TOMCAT_SHUTDOWN_PORT="8005"`

ADDLOCAL	Specifies which client, server, and other Crystal Reports Server components will be installed. To change this setting, you must create a new `.ini` file.
	`ADDLOCAL="Tomcat,Universe,Complete,BIPWeb`
	`Comp,Designer,AlwaysInstall,`
	`    BeforeInstall,VBA62,Re`
	`porter,Clients,WRC,DataSourceMigrationWizard,`
	
	`    CrystalBVM,MetaDataDesigner,Conversion`
	`Tool,ImportWizard,PubWiz,qaaws,`
	`    JavaRASSDK,BOEJavaSDK,JavaViewersSDK,Re`
	`beanSDK,DevelopersFiles,`
	`    WebServicesSDK,UnivTransMgr,wde`
	`ploy,WebTierComp,BOEWebServices,`
	`    CCM,ServerComponents,Mapping,Reposito`
	`ry,CRPE,MetaData,CMS,Auditor"`

LAUNCHCR SPORTAL	Specifies to mention the launch page URL. 0 - means no launch 1 - means launch `LAUNCHCRSPORTAL = 0/1` **Note:** This command has to be manually added to the response file if you do not want the launch page.

Other automatically generated parameters

The following parameters are automatically generated and must not be modified in the `.ini` file:

Parameter name
DATABASECONNECT
DATABASE_AUDIT_CONNSVR
INSTALLDBTYPE
INSTALL_DB_TYPE
INSTALLLEVEL
INSTALLSWITCH
NEWCMSPASSWORD
Privileged
SINGLESERVER
SKIP_DEPLOYMENT
WCADOTNETINSTALL
WCAJAVAINSTALL
WCATOMCATINSTALL
WDEPLOY_LANGUAGES
WEBSITE_METABASE_NUMBER
WEBSITE_PORT
ADDSOURCE
ADVERTISE

Caution: If you pass a parameter directly at the command line, the new setting overrides any setting specified in the `.ini` file.

Related Topics

• *Specific ini file parameters for setup.exe* on page 34

After installing Crystal Reports Server 2008

Launching the Central Management Console

The Central Management Console (CMC) can be launched as follows: Start > Programs > Crystal Reports Server 2008 > Crystal Reports Server 2008 > Central Management Console. Business Objects recommends that you verify the installation by logging into the CMC. Once you access the CMC, you can create users and groups, set up security policies, and define rights. For more information on using the CMC, see the *BusinessObjects Enterprise Administrator's Guide*.

Logging into CMC

1. Enter the name of your Central Management Server (CMS) in the "System" field.

2. Enter the user name and password in the "User Name" and "Password" fields.

   If you are using LDAP or Windows NT authentication, you can log in using an account that is mapped to the Crystal Reports Server 2008 Administrators group.

   Note: If this is the first time an administrator from your organization is accessing CMC, then log in using "Administrator" as the "User Name". This Enterprise account by default does not have a password, unless you specified one during installation.

3. Select **Enterprise** in the **Authentication Type** list.

   Windows AD, Windows NT, and LDAP authentication also appear in the list; however, third-party user accounts and groups must be mapped to Crystal Reports Server 2008 before you can use these types of authentication.

4. Click **Log On**.

   The CMC Home page is displayed.

Troubleshooting CMC logon issues

If you are unable to log in to CMC, consider the following solutions:

1. Did you provide the correct name for the Central Management Server in the System field?
2. Did you provide the correct user credentials in the User Name and Password fields?
3. Is the correct method specified in the Authentication field?
4. Check if the Server Intelligence Agent (SIA) is running. Go to Start > Programs > Crystal Reports Server 2008 > Crystal Reports Server 2008 > Central Configuration Manager. If the SIA is not running, start or enable it.
5. If you did not install MySQL as part of your installation, use the database client to connect to the database server. See your database documentation for more information.
6. Are you attempting to connect to a CMS cluster using the @<clustername> format? If this is your first attempt to connect to this cluster, CMC cannot determine which CMS servers belong to the cluster. In this case, you need to specify a list of CMS servers in `web.xml`, which is found in the `WEB-INF` folder of the CMC web application war file. Follow the instructions in the `cms.clusters` section of the `web.xml file` for more details. You can also specify the CMS cluster information for InfoView by modifying its corresponding `web.xml` file.
7. Run the diagnostic tool to verify your deployment. To launch the diagnostic tool, go to Start > Programs > Crystal Reports Server 2008 > Crystal Reports Server 2008 > Diagnostic Tool.

If none of these solutions work, consider repairing or reinstalling Crystal Reports Server 2008.

Related Topics
- *Running diagnostic tests in Windows* on page 48

Registering the installed product

After installing Crystal Reports Server 2008, you can register the product. The installation on Windows includes the Business Objects Registration

Wizard, a tool designed to ease the process of obtaining registration credentials.

Once registered, you can access Business Objects support programs and services. The Registration Wizard also provides links for resources to help you evaluate or purchase Business Objects products.

To access the wizard, go to Start > Programs > Crystal Reports Server 2008 > Registration Wizard.

Diagnostic tool

Deployment Diagnostic tool

The Deployment Diagnostic tool is a Java-based application designed to verify basic operating functionality of a Crystal Reports Server 2008 installation. It is an open-framework utility that allows for the development of additional test drivers through the use of various SDKs provided by Business Objects.

Note: This tool is intended only for deployment validation purposes; any other uses are not supported by Business Objects.

The following software is required to use the Diagnostic Tool:

- JDK 1.5 (included with your Crystal Reports Server 2008 installation)

- Crystal Reports Server 2008 installation

Running diagnostic tests in Windows

1. Go to **Start > Programs > Crystal Reports Server 2008 > Crystal Reports Server 2008 > Diagnostic Tool**.

   The "user logon" screen appears.

2. In the "System" field, enter the hostname of the machine you want to connect to. Information about the local machine is displayed by default.

3. Enter the user name and password in the "User Name" and "Password"fields, select the appropriate authentication type, and click **Logon**.

If you are an authenticated user, the "Deployment Diagnostic Tool" screen appears.

The top pane of the tool contains a list of the test drivers that are loaded into memory. This list is determined by the contents of the configuration file.

The bottom pane displays the console output and provides status updates while the tests are running. These updates remain on display even after the tests are complete.

4. To initiate a diagnostic test, select **Run All Tests** from the **Test** menu.

The diagnostic test is performed in the sequence that it appears in the test driver's pane, and a status update is provided in the console pane.

Note: Some tests may take several minutes.

Upon completion of the diagnostic test, the console displays 'Finished Testing' and provides a file path to the results log file. All test drivers conclude the result with a either 'pass' or a 'fail' status. Double-click the result to view further details. These details are also recorded in the log file.

To view the log file, either go to the location specified in the console pane, or select the View menu and then select Log File.

Diagnostic options

The following sections describes some of the option settings for the diagnostic tool.

Configuration files

Configuration files are used to determine which tests to run, the order in which to run them, and any parameters for those tests.

Setting configuration files

1. Launch Diagnostic Tool and login with your credentials.

The "Deployment Diagnostic Tool" screen appears.

2. Select **Set Config File** from the **Test** menu.

A file dialog box used to select the configuration XML is displayed. The default XML name is 'TestClasses.xml'.

3. Navigate to the XML file you want to set and select it.

4. Click **Open**, and then click **OK**.

This will set the configuration XML for the tool.

Log files

Log files provide a permanent record of the results of the tests run by the diagnostic tool. The following procedure shows you how to set the location for a log file.

Setting a custom log file location

1. Launch Diagnostic Tool and login with your credentials.

The "Deployment Diagnostic Tool" screen appears.

2. Choose **Set Log File** from the **Test** menu.

The "Set Log File" window appears.

3. Browse to the location where you want to store the log file.

4. Enter a name for the log file, and click **Open**.

Log files for tests will now appear in the directory you selected.

Language packs on Windows

About language packs

A language pack is a resource package that gives a Crystal Reports Server 2008 system the ability to interact with users in a specific language. An individual language is known as a locale.

You can install as many different language packs as you want. The English language pack is installed by default.

English language fall-back

In the event of a localization error, such as a missing, corrupted, or uninstalled language pack, Crystal Reports Server products fall back to using the default English language. If a preferred language is not set in the Product Locale drop-down, Crystal Reports Server defaults to using the locale of the installed operating system. If a language pack corresponding to the locale of the operating system is not found, the default English language pack is used.

Product locale changes

Product locale changes are immediately reflected in the current product's interface, reports, and help. Where multiple client applications are installed, the selected product locale is displayed only when the client is started next. For example, setting the Crystal Report Designer product locale to Japanese causes the Business Intelligence Modeler client to display in Japanese. However, if the Business Intelligence Modeler is running at the time of the change, it must be restarted for the change to take effect.

Selecting a language

Once installed, Crystal Reports Server products detect the existence of the language packs, and users can choose a language from a list of installed language packs found in the Product Locale drop-down list of the CMC Preferences section of the CMC Preferences, or under the Options dialog box on the toolbar or application menu in other Crystal Reports Server products. Command-line utilities use the $LANG$ environment variable to determine which language to use.

Each language listed in the Product Locale drop-down is displayed in its native localization, rather than the currently employed language. For example, the German language pack is always displayed as Deutsch, rather than as German in English or Allemand in French.

Note: Application shortcut keys are language neutral and do not change, regardless of which language is in use. For example, `Ctrl+S` is always mapped to the Save command, regardless of the localized name for the Save function.

Installing language packs on Windows systems

Language packs can be installed either during the initial installation of Crystal Reports Server, or after installation by using a dedicated language pack installer. The installer is a single executable that adds the localized language resources to your Crystal Reports Server software deployment.

English is the default option during the installation of Crystal Reports Server. However, administrators can opt to install any or all other supported languages. Additional languages can also be installed on an existing system by downloading the appropriate language pack from the Business Objects support website at: *http://technicalsupport.businessobjects.com*

In the event of an operational problem with a language pack, Crystal Reports Server defaults to English localization. Hence, English cannot be deselected as an installable option during the installation of Crystal Reports Server 2008.

Note: An error message is displayed if a language pack detects that it is incompatible with a previously installed version of Crystal Reports Server.

Locating language packs

Language packs can be found in the `langs` folder of the Crystal Reports Server for Windows distribution package.

Alternatively, language packs can be downloaded from the Business Objects technical support site at: *http://technicalsupport.businessobjects.com*

Installing language packs

Before installing a language pack, ensure that Crystal Reports Server is running and patched to the required revision level. You are prompted for CMS administrator credentials. If any part of the Crystal Reports Server deployment is not patched to the required software version, the language pack installation terminates. You can install the language pack after the system is patched to the correct level. Review the requirements for language packs at the Business Objects customer support site: *http://support.busines sobjects.com/documentation/supported_platforms*

Note: Language packs do not require a keycode.

1. Open the Central Management Console (CMC) and ensure that the server processes are running.
2. Locate the language pack to install under `BUSINESS_OBJECTS_IN STALL_CD_DIR\langs\LANGUAGE\`.
3. Run the `setup.exe` installer.

   Replace LANGUAGE with the ISO code of the language you are installing. The Microsoft Windows installer searches for all installed Crystal Reports Server applications.
4. Click **Next**.
5. Select **I accept the License Agreement**, and then click **Next**.
6. Enter values for the **CMS**, **CMS Port**, **User Name**, **Password**, and **Authentication** fields. Click **Next**.
7. Enter values for the **Port**, **Username**, **Password**, **Server Instance**, and **Virtual Host**, and **Application Server Installation Directory** fields. If your web application server uses a password for the administrator account, select the **Admin is Secure** check-box. Click **Next**.
8. Click **Next** to begin the installation.

The language pack installation begins.

Once the installation is complete, you can select the installed language from the Options dialog window in Crystal Reports Server applications.

Note:

- All fix packs or other updates to Crystal Reports Server released on a date after the language pack release date must be re-applied to ensure that updated functionality is maintained.

- Language packs must be re-installed after you have added or removed a component from the Crystal Reports Server deployment.

Installing language packs across a Crystal Reports Server deployment

You can install language packs with one command by specifying parameters on the command-line. This is referred to as a silent installation. When parameters are supplied at the command-line, the installation does not prompt for information.

The command-line syntax for a silent install is as follows:

```
setup.exe CRYSTAL_REPORTS_SERVER_HOME_DIR
INSTALLMODE=silent
CMSNAMESERVER=CMS_HOSTNAME
CMSPORTNUMBER=PORT_NUMBER
CMSPASSWORD=CMS_PASSWORD
```

`CRYSTAL_REPORTS_SERVER_HOME_DIR` is the full path of your Crystal Reports Server installation. The following table discusses each of the other parameters used by `setup.exe`:

Table 6-1: Command-line parameters description

Parameter	Expected argument	Description
INSTALLMODE	silent	Switch to enable silent install mode
CMSNAMESERVER	CMS Hostname	Enter the name of your CMS machine

Parameter	Expected argument	Description
CMSPORTNUMBER	Port number for CMS	CMS port number
CMSPASSWORD	CMS admin password	The password for your CMS server

For example:

```
setup.exe
"C:\Program Files\Business Objects\BusinessObjects Enter
prise 12.0"
INSTALLMODE=silent
CMSNAMESERVER=myserver1
CMSPORTNUMBER=6400
CMSPASSWORD=mypassword
```

To uninstall language packs in silent mode, use the `wdeploy undeployall` command to remove all web applications, then `wdeploy deployall` to re-deploy web applications without the language packs.

For example, the following command runs `undeployall` for a WebLogic 10 server:

```
wdeploy.bat weblogic10
-Das_dir=C:\bea\user_projects\domains\base_domain
-Das_admin_port=7001
-Das_instance=AdminServer
-Das_admin_username=weblogic
-Das_admin_password=weblogic
undeployall
```

Followed by:

```
wdeploy.bat weblogic10
-Das_dir=C:\bea\user_projects\domains\base_domain
-Das_admin_port=7001
-Das_instance=AdminServer
-Das_admin_username=weblogic
-Das_admin_password=weblogic
deployall
```

For more information on using wdeploy, see the "How to use wdeploy" section.

Uninstalling language packs

1. Open the Central Management Server (CMS) and ensure that all servers are running.
2. In Windows, click **Start**, point to **Settings**, and then select **Control Panel**.
3. Double-click **Add/Remove Programs**.
4. Select **Crystal Reports Server 2008 LANGUAGE_NAME Language Pack,** and click **Remove.**

   The "Add/Remove Programs" prompts you to confirm that you want to remove the language pack from your computer.
5. Click **Yes**.

   The appropriate files are removed, and the necessary configuration is completed.
6. Click **Finish**.

   The language pack is uninstalled and you are returned to the **Add/Remove Programs** list.

Client Tools installation for Crystal Reports Server 2008

7

Overview of Client Tools installation

The Crystal Reports Server 2008 client applications are available for installation through a separate installation program. You can use this stand-alone installer to add client tools and their related components to an existing installation.

The Client Tools installation program enables you to select which client tools to install and to assess disk space costs.

Crystal Reports Server 2008 client components

The following Crystal Reports Server 2008 client components are available for installation:

Component	Description
Business View Manager	Enables you to design relational views of information that provides a wide range of capabilities for creating and modifying Data Connections, Dynamic Data Connections, Data Foundations, Business Elements, and Business Views.
Data Source Migration Wizard	Allows you to migrate reports that are based on Crystal queries, dictionaries, and InfoViews to a Crystal Reports Server 2008 deployment.
Diagnostic Tool	The Deployment Diagnostic Tool is a Java-based application designed to verify basic operating functionality of a Crystal Reports Server 2008 installation. It is an open-framework utility that allows for the development of additional test drivers through the use of various SDKs provided by Business Objects.
Import Wizard	Allows you to import and export content from previous and current versions of Crystal Reports Server.
Publishing Wizard	Enables users to add reports to Crystal Reports Server 2008.

Performing client tools installation

To perform Crystal Reports Server 2008 Client Tools installation:

1. Unless Autorun is enabled for the CD-ROM drive, run `setup.exe` from the root folder of the product distribution.

   The "Open file: Security Warning" dialog box appears with the message: "Do you want to run this file?"

2. Click **Run**.

   The "Crystal Report Server 2008 Client Tools Setup" window appears.

3. Select the language for the installation setup from the drop-down list.

   The "Welcome to the Crystal Reports Server 2008 Client Tools Installation Wizard" screen appears.

4. Click **Next** to proceed with the installation.

   Note: Click **Cancel** to terminate the installation.

   The "License Agreement" screen is displayed.

5. Select **I accept the License Agreement**, and click **Next**.

The "Choose Language Packs" screen is displayed.

6. Select the Language Packs you want to install with the client tools, and click **Next**.

The language packs currently available for installation include:

- English
- French
- Japanese
- German
- Spanish
- Italian
- Chinese Simplified
- Chinese Traditional
- Korean
- Dutch
- Swedish
- Portuguese (Brazil)

Note: English is a required language and is automatically selected.

Tip: Select the **All Languages** box to select all the available language packs.

The "Directory Selection" screen is displayed.
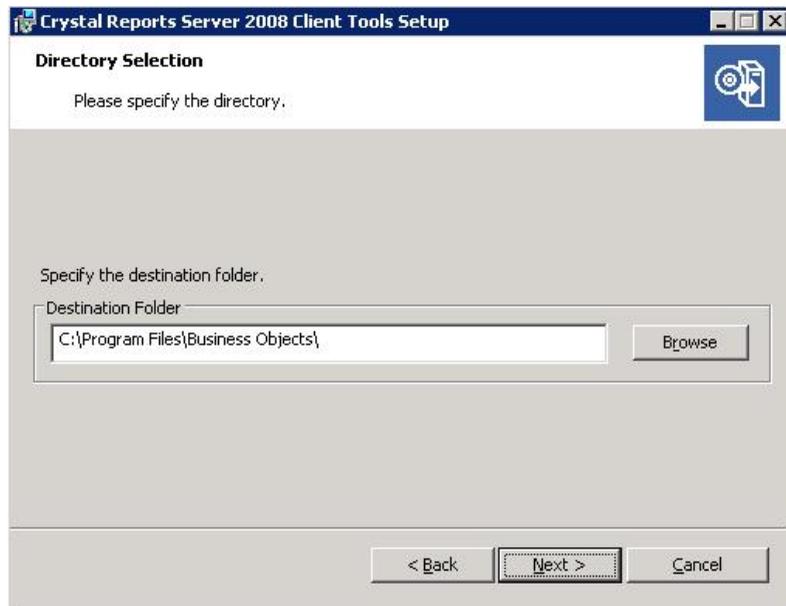
7. Specify the installation directory for the client tools in **Destination Folder**, and click **Next**.

   The "Select Features" screen is displayed.

8. Select the feature you want to install, under the "Crystal Reports Server 2008 Client Tools" node.

   Note: Click '**+**' to expand the node.

   You can do any of the following:

   • Specify that the selected feature must installed on the local hard drive.
   • Specify that the selected feature and its subfeatures must installed on the local hard drive.
   • Specify that a selected feature and its subfeatures must not be installed.

Icon	Description
▣▾	The feature and only the subfeatures you select will be installed on the local hard drive you specified in the Setup program.
▣▾	The feature and all its subfeatures will be installed on the local hard drive you specified.
✖▾	The feature or subfeature is either unavailable or will not be installed.

The following steps are optional:

a. Click **Disk Cost** to calculate if sufficient disk space is available for the selected features.

A screen is displayed indicating storage space available on the local machine and mapped network drives. Drives that do not have enough disk space for the currently selected features are highlighted. Click **OK** to return to the "Select Features" screen.

b. Click **Reset** to revert to the original configuration of the feature list.

9. Click **Next**.

The "Start Installation" screen is displayed.

10. Click **Next**.

The installation process begins.

11. Click **Finish** when the installation is complete.

Client Tools silent installation

You can run the Crystal Reports Server 2008 Client Tools installation directly from the command line in one of the following ways:

• Scripted installation
• Silent installation

Both methods can be used to automate installations across multiple machines. The scripted installation method requires that you specify the `.ini` file. The silent installation allows you to specify parameters for running `set up.exe`. These installation methods are particularly useful when you need to perform multiple installations quickly. You can also integrate the scripts and commands into the installation scripts.

Note: If you pass a parameter directly at the command line, the new setting overrides any setting specified in the `.ini` file.

Related Topics

Sample client tools .ini file

The following installation script was generated for Crystal Reports Server 2008 Client Tools installation. The Dutch language pack was added to the default English language pack.

[OTHER]

QUIET=/qa

[INSTALL]

CLIENTLANGUAGE="EN"

DATABASEAUDITDRIVER="MySQLDatabaseSubSystem"

DATABASEDRIVER="MySQLDatabaseSubSystem"

ENABLELOGFILE="1"

INSTALL.LP.EN.SELECTED="1"

INSTALLDIR="C:\Program Files\Business Objects\"

INSTALLLEVEL="4"

WDEPLOY_LANGUAGES="en"

[FEATURES]

REMOVE=""

ADDLOCAL="All"

ADDSOURCE=""

ADVERTISE=""

This script can now be used for future silent installations by including the file name and path in the command line, as shown below:

```
setup.exe -r FILEPATH
```

Upgrading to Crystal Reports Server 2008

Upgrade scenario

If you are trying to install Crystal Reports Server 2008 on top of a previous version of Crystal Reports Server, then read through the section.

During the installation process, the "Crystal Reports Server Upgrade" screen appears after entering the product keycode. If you select:

- Yes, Perform an upgrade installation, it proceeds with upgradation of Crystal Reports Server 2008.
- No, do not Perform an upgrade installation, it proceeds with side-by-side installation of Crystal Reports Server 2008.

Note: Upgrading to Crystal Reports Server 2008 from any of the following products is not supported:

- BusinessObjects Enterprise XI

- BusinessObjects Enterprise XI R2

- BusinessObjects Edge Series XI R2

If you try to upgrade Crystal Reports Server 2008 on top of any of these products, the installation might fail, or might not function as expected

For more information on upgrading to Crystal Reports Server 2008, see the *BusinessObjects Enterprise XI 3.0 Upgrade Guide*.

Maintaining the installation

Crystal Reports Server maintenance operations

You can perform two maintenance operations on the installation of Crystal Reports Server:

- Repair: This operation replaces missing or corrupt files, registry keys, and shortcuts. Preferences in the registry are restored to default values.
- Remove: This operation uninstalls Crystal Reports Server 2008. All language packs and patches are also removed.

Note: You cannot perform Modify operation on Crystal Reports Server 2008.

Entering the maintenance mode

There are two methods for evoking the maintenance mode for Crystal Reports Server 2008 on Windows:

- Go to Start > Settings > Control Panel > Add or Remove Programs.
    1. Select Crystal Reports Server 2008.
    2. Click Change.
- Run the `setup.exe` program you originally used to install the Crystal Reports Server 2008 product.

Uninstalling Crystal Reports Server 2008 from Windows

It is recommended that you back up reports, documents and system information before uninstalling Crystal Reports Server 2008. For more information on backing up your system see "Managing and Configuring Servers" in the *BusinessObjects Enterprise Administrator's Guide*.

To uninstall Crystal Reports Server 2008 from your system:

1. Go to **Start** > **Programs** > **Crystal Reports Server 2008** > **Crystal Reports Server 2008** > **Central Configuration Manager**.

    The CCM console is displayed.

2. Right-click to highlight the listed servers, and select **Stop**.

For more information on stopping servers, see "Managing and Configuring Servers" in the *BusinessObjects Enterprise Administrator's Guide.*

3. Go to **Start** > **Settings** > **Control Panel** > **Add or Remove Programs**.

4. Select **Crystal Reports Server 2008**.

5. Click **Remove**.

The "Add or Remove Programs" dialog prompts to confirm that you want to remove Crystal Reports Server 2008.

6. Click **Yes**.

Wait while files are removed and your system is reconfigured. You are prompted once the configuration process is complete.

7. Click **Finish**.

The Crystal Reports Server 2008 installation includes an installation of the Apache TomcatJava application server. By default, Tomcat is installed in the `C:\Program Files\BusinessObjects\Tomcat\` directory. When Crystal Reports Server 2008 is uninstalled, the contents of the `Tomcat` subfolder are removed.

Note: Only web applications deployed on a Tomcat server installed through the Crystal Reports Server 2008 installer are automatically removed. You must manually remove the web applications deployed on other servers.

The installer removes only the files that it originally installed. Folders or files created after the installation, for example, log or report files, are not uninstalled during the uninstallation process.

Silent uninstallation

If the installation source is available, you can use the command-line console to uninstall Crystal Reports Server 2008. In the command line, specify the following method:

```
setup.exe REMOVE=ALL
```

The installation log file

The installation log file contains information on all the parameter settings used in a Crystal Reports Server 2008 installation. The log file can be used as a reference or to troubleshoot installation errors. The name of the initial log file is `CRS2008Install_0.log`, and it is saved under the following directory: `<INSTALLDIR>\BusinessObjects Enterprise 12.0\Logging`. Each time you run the Crystal Reports Server 2008 installer, a new log file is generated. For example, after the initial installation, if you install French language pack, and once the process is completed, `CRS2008Install_fr0.log` is stored in the `Logging` directory.

Information specific to web application deployment is also included in the log file.

Post-installation web application deployment

10

Overview of post-install deployment

You can deploy web applications for Crystal Reports Server 2008 installation by running the supported installation type. The installation setup program guides you through an automated process for deploying the web applications and their required components only if you specify and configure your web application server during the installation setup.

You can also configure your web application servers and deploy web application components after installing Crystal Reports Server. You can choose either of the following methods.

*   Use the wdeploy program to automatically deploy the required components to the applications server. For detailed information on wdeploy see *Deploying BusinessObjects Enterprise Web Applications using wdeploy*.

*   Manually configure and deploy the required components to the applications server.

The following table lists which deployment method is available for supported Web application server.

	Installation set-up program	wdeploy	Manual deployment
WebSphere 6.1	Yes	Yes	Yes
WebSphere Community Edition 2.0	No	No	Yes
WebLogic 10	Yes	Yes	Yes
WebLogic 9.2	Yes	Yes	Yes
Tomcat 5.5	Yes	Yes	Yes

	Installation set-up program	**wdeploy**	**Manual deployment**
SAP Application Server 7.0	No	Yes	Yes
Oracle Application Server 10G R3	Yes	Yes	Yes
JBoss 4.04	No	Yes	Yes

Before you deploy web applications

Your web application server must be installed and working before you attempt to install Crystal Reports Server. Consult your web application server documentation for installation instructions.

To deploy and run the CMC and InfoView applications, your web application server should have at least 1.2 GB of free disk space, in addition to any other requirements specified by other software installed on the machine.

It is recommended that you change the heapsize and maximum perm size settings of your JVM to 1024m and 256m respectively. If using Tomcat for example, your modified settings would look like:

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

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

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

```
http://<HOSTNAME>:<PORT>
```

Replace `<HOSTNAME>` with the host name, and `<PORT>` with the port number used for HTTP. Consult your web application server documentation for installation instructions.

Deploying with wdeploy

Prerequisites for using wdeploy

Where to find wdeploy

The wdeploy command-line tool is included with the Crystal Reports Server 2008 installation to assist you in the command-line deployment of web applications to the web application server. It is located in the following directory: `<INSTALLDIR>\deployment\`. In addition to the `wdeploy.bat` the folder contains all the required configuration files for running the tool.

Note: The wdeploy tool is also available as a stand-alone package on the product distribution media under the following directory: `Collater als\Tools\wdeploy`.

Prerequisites for using wdeploy

To deploy Crystal Reports Server web applications to a web application server, you must have Crystal Reports Server installed, including all the required WAR files. If the target web application server is on the same machine on which Crystal Reports Server is installed, you can proceed to run the wdeploy script.

If the target web application server is hosted on a remote machine you will have to follow specific steps for preparing the wdeploy environment.

Overview for using wdeploy

The wdeploy command-line tool is included with Crystal Reports Server 2008 to assist you in the command-line deployment of WAR files to your web application server. You can choose to deploy all web application resources together on a single web application server (standalone mode), or to separate dynamic and static content for deployment onto de-paired web and web

application servers (distributed mode). For detailed information on wdeploy
see *Deploying BusinessObjects Enterprise Web Applications using wdeploy*.
This document is available at *http://support.businessobjects.com*

How to use wdeploy

To use wdeploy tool, you must configure a specific configuration file for your
web application server. This file is located in `<INSTALLDIR>\deployment\`.
For example, the configuration file for weblogic 9.2 is `config.weblogic9`.

It is recommended that you use the same user account for installing Crystal
Reports Server 2008 and your web application server. Ensure that you have
the minimum user rights for the web application server.

The following table lists the required wdeploy configuration file details that
must be specified for each supported web application server.

Note: Parameters specified on the command-line override parameters in
the wdeploy configuration file.

Web application server	Required Configuration details
WebSphere 6.1	• as_admin_port: The SOAP Connector Port of the application server (for example "8880"). • as_admin_username: WebSphere administrator account username (for example "administrator"). **Note:** If as_admin_is_secure is false, a value for as_admin_username does not need to be specified. • as_admin_password: WebSphere administrator account password (for example "password"). **Note:** If as_admin_is_secure is false, a value for as_admin_password does not need to be specified. • as_instance: The name of your WebSphere application server instance (for example "server1"). • as_virtual_host: The virtual host to which the application must be bound (for example "default_host"). • as_admin_is_secure: Instructs `wdeploy` that WebSphere security is enabled (for example "false"). **Note:** Values for as_admin_username and as_admin_password must be set when as_admin_is_secure is true"). • as_dir: WebSphere installation directory (for example `C:\Program Files\IBM\WebSphere\AppServer`). • ws_instance: The name of the web server where the application is installed, in distributed mode (for example "server1"). • enforce_file_limit: Indicates to `wdeploy` whether or not the web application server may encounter issues loading applications that contain more than 65 535 files ("True" by default).
WebLogic 10	

Web application server	Required Configuration details
	• as_admin_port: Administration port of the application server (for example "7001"). • as_admin_username: WebLogic administrator account username (for example "weblogic"). • as_admin_password: WebLogic administrator account password (for example "weblogic"). • as_instance: The name of your WebLogic application server instance (for example "AdminServer"). • as_dir: Weblogic domain directory (for example `C:\bea\weblogic10\user_projects\do mains\base_domain`).
WebLogic 9.2	• as_admin_port: Administration port of the application server (for example "7001"). • as_admin_username: WebLogic administrator account username (for example "weblogic"). • as_admin_password: WebLogic administrator account password (for example "weblogic"). • as_instance: The name of your WebLogic application server instance (for example "AdminServer"). • as_dir: Weblogic domain directory (for example `C:\bea\user_projects\domains\base_domain`).
Tomcat 5.5	

Web application server	Required Configuration details
	• as_instance : Name of the web application server instance currently used (for example "localhost"). • as_service_name : The name of the Windows service (when the application server is installed as a Windows service) (for example "Tomcat5"). • as_dir : Installation directory of the web application server (for example "C:\wdeploy\appserver\Tomcat5520"). • as_service_key: Name of the Windows registry key used by Tomcat to specify Java parameters (for example `HKLM\SOFTWARE\Apache Software Foundation\Procrun 2.0\$as_service_name\Parameters\Java`). • as_service_key_value: Tomcat's Java parameters, and the value of the registry key as_server_key.

Web application server	Required Configuration details
SAP Application Server 7.0	• as_dir: The location of your application server (for example `C:\Program Files\SAP`). • as_sid: the SAP system ID of the target instance. (for example "AS2"). • as_instance: The name of your application server instance (for example "JC01"). • as_admin port: the port number used by the server (for example "50104"). • as_admin_username: the administrator username (for example "Administrator"). • as_admin_password: the administrator password (for example "password").
Oracle Application Server 10 G R3	

Web application server	Required Configuration details
	• as_admin_port: Administration port of the application server. This is the request port of the notification server, found in the `<notification-server>` section of configuration file `opmn.xml` (for example "6003"). • as_admin_username: Oracle Application Server administrator account username (for example "ocjadmin"). • as_admin_password: Oracle Application Server administrator account password (for example "oracle10g"). • as_instance: The name of your Oracle Application Server application server instance (for example "home"). • as_admin_is_secure: Instructs `wdeploy` that Oracle Application Server SSL security is enabled (for example "false"). **Note:** If as_admin_is_secure is not enabled, you will still have to specify the username and password to access the server. • as_dir: Oracle Application Server installation directory (for example `C:\product\10.1.3\OracleAS_1`). • as_appserver_name: Name of the target application server (for example "oracle10g.BO-AMIT.product.businessobjects.com"). • as_group_id: Name of the server group to which the target application belongs (for example "Default_group").
JBoss 4	• as_dir: The location of the JBoss application server (for example "C:\Program Files\jboss-4.0.4.GA"). • as_instance: The name of the JBoss application server instance (for example "default").

Note:

Run the wdeploy script by opening command line console and typing the following:

```
<INSTALLDIR>\deployment\wdeploy.bat
    <appserver> deployall >> <logfilename>.log
```

For example:

```
wdeploy.bat weblogic9 deployall >> C:\mylog.log
```

Note: The <appserver> must be same as the web application server used in the configuration filename (for example, config.weblogic9).

Tip: You can drop the deployable WAR files to a non-default location by passing the parameter -Dwork_dir=your desired location, as part of the wdeploy command.

For more detailed information on wdeploy see *Deploying BusinessObjects Enterprise Web Applications using wdeploy*.

Related Topics

Options for using wdeploy

The several actions that can be performed with the wdeploy tool to control the web application deployment process are given below:

- `predeploy/predeployall`: Predeploy web applications.
- `deployonly/depolyonlyall`: Deploy web applications.
- `deploy/deployall`: Predeploy and then deploy web applications.
- `undeploy/undeployall`: Undeploy web applications.

Note: If you use the `undeploy` and `undeployall` commands, only web applications deployed through the installer or wdeploy will be undeployed. All other web applications must be manually removed using the web application server's administrative console.

For information on all options available for wdeploy see *Deploying BusinessObjects Enterprise Web Applications using wdeploy*.

Note: The `wdeploy` command does not create a log file. To persist the output generated by wdeploy, redirect its output to a file using the `greater-than` redirect operator (>).

After deploying web applications

To verify the web application server configuration, make sure that InfoView and the Central Management Console be launched in a web browser. For example:

- `http://WAS_HOSTNAME:PORT/INFOVIEW_CONTEXT`
- `http://WAS_HOSTNAME:PORT/CMC_CONTEXT`

Replace `WAS_HOSTNAME` with the hostname, and `PORT` with the port number used for either HTTP or HTTPS communication. The default root context used for InfoView is `InfoViewApp`; the default context used for the CMC is `CmcApp`.

Deploying to web application servers with wdeploy

Deploying to WebSphere with wdeploy

Using predeploy and predeployall

The `predeploy` command creates resources and configuration files for a specific web application, then copies the web application to `<INSTALLDIR>\deployment\workdir\WebAppServer_VERSION`, but does not deploy the web application to the web application server. The `predeployall` command performs the `predeploy` command for all web applications.

Example: Using `wdeploy predeploy` to predeploy InfoView to WebSphere

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
-Das_virtual_host=default_host
-Das_admin_port=8880
```

```
-DAPP=InfoViewApp
predeploy
```

Example: Using `wdeploy predeployall` to predeploy all web applications to WebSphere.

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
-Das_virtual_host=default_host
-Das_admin_port=8880
predeployall
```

Using `deployonly` and `deployonlyall`

The `deployonly` command deploys a web application that is specifically configured for the target web application server. The `deployonlyall` command performs the `deployonly` command for all web applications.

Example: Using `wdeploy deployonly` to deploy a predeployed InfoView to WebSphere.

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
-Das_virtual_host=default_host
-Das_admin_port=8880
-DAPP=InfoViewApp
deployonly
```

Example: using `wdeploy deployonlyall` to deploy all predeployed web applications to WebSphere.

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
-Das_virtual_host=default_host
-Das_admin_port=8880
deployonlyall
```

Using `deploy` and `deployall`

The `deploy` command creates resources and configuration files for a specific web application, which is then deployed to the web application server. The `deployall` command performs the `deploy` command for all web applications. Running `deploy` is equivalent to running a `predeploy` command followed by a `deployonly` command. Running `deployall` is equivalent to running a `predeployall` command followed by a `deployonlyall` command.

Example: Using `wdeploy deploy` to predeploy, then deploy InfoView to WebSphere.

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
-Das_virtual_host=default_host
-Das_admin_port=8880
-DAPP=InfoViewApp
deploy
```

Example: Using `wdeploy deployall` to predeploy, then deploy all web applications to WebSphere.

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
-Das_virtual_host=default_host
-Das_admin_port=8880
deployall
```

Using `undeploy` and `undeployall`

The `undeploy` command uninstalls a previously deployed web application from the web application server. The `undeployall` command performs the undeploy command for all web applications.

Example: Using `wdeploy undeploy` to undeploy InfoView from WebSphere.

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
```

```
-Das_virtual_host=default_host
-Das_admin_port=8880
-DAPP=InfoViewApp
undeploy
```

Example: Using `wdeploy undeployall` to undeploy all web applications from WebSphere.

```
wdeploy.bat websphere6
-Das_dir=C:\IBM\WebSphere\AppServer
-Das_instance=server1
-Das_virtual_host=default_host
-Das_admin_port=8880
undeployall
```

Deploying to separate IHS web and WebSphere web application servers

To reduce the load on a web application server, you can set up a separate, dedicated, web server to serve static content. All static content will be served by the web server, while dynamic content will be served by the web application server.

Note: This configuration requires that you use the wdeploy command to split web application resources into static and dynamic content that can be deployed to separate web and web application servers.

1. Set up an IBM HTTP Server (IHS) web server and ensure that it is working correctly. Load a web page, such as the IHS default test page, to verify that the web server is serving content correctly.

   Open a web browser and enter the IP address or hostname of the web server, and a port number if the server is not listening on port 80. For example: `http://mywebserver.mycompany.com:80`.

2. Ensure that your WebSphere web application server is working correctly.

   Open a web browser and enter the IP address or hostname of the web application server, and a port number. For example: `http://myappserver.mycompany.com:9080`.

   Note: If you have any existing Crystal Reports Server web applications running on the server, they must be undeployed before continuing.

3. Run the web server plug-in installation wizard to install the plug-in that bridges WebSphere with IHS, and follow the directions to enter information about your IHS web server.

4. Follow the plug-in configuration instructions on the WebSphere web site for configuring the bridge between IHS and WebSphere.

   Requests for dynamic resources are now forwarded to WebSphere when the requests are received by IHS.

5. Ensure that the bridge between the web server and web application server is working by pointing a browser to the web server and verifying that dynamic content from the web application server is served correctly.

   For example, visit the URL: `http://mywebserver.mycompa ny.com:80/snoop/`.

6. If the web application server is installed on the same machine as Crystal Reports Server, run wdeploy locally on that machine. If the web application server runs on a different machine, you must copy the wdeploy command and environment to the web application server. See *To deploy web applications on a remote machine*.

7. Configure wdeploy environment to separate content between the web server and the web application server. This is known as "distributed" mode.

   The wdeploy configuration files for IHS and WebSphere are located in `<INSTALLDIR>\deployment`.

   • Edit `config.apache`. For example:

   ```
   #Business Objects Configuration Utility
   ws_dir=C:\Program Files\Apache Software Foundation\Apache
    2.2
   connector_type=websphere6
   deployment_dir=C:\Program Files\Apache Software Founda
   tion\Apache 2.2\htdocs
   ```

   • Edit `config.websphere6`. For example:

   ```
   #Business Objects Configuration Utility
   as_admin_port=8880
   as_admin_username=admin
   as_admin_password=password
   as_dir=C:\Program Files\IBM\WebSphere\AppServer
   as_instance=server1
   as_virtual_host=default_host
   as_admin_is_secure=false
   enforce_file_limit=true
   ```

8. Use wdeploy predeploy in distributed mode to split source web applications into separate static and dynamic resources.

   For example:
   - Run the following command to extract static content for the IHS web server.
     ```
     wdeploy.bat websphere6 -Das_mode=distributed
         -Dws_type=apache predeployall >> wdeploy.log
     ```

   The dynamic content of web applications is located in: `<INSTALLDIR>\de ployment\workdir\websphere6\application`.

   The static content is located in: `<INSTALLDIR>\deployment\workdir\web sphere6\resources`.

9. Run `wdeploy deployonlyall` command to deploy the dynamic content to WebSphere application server and static content to IHS.

   If IHS and WebSphere are on the same machine, static and dynamic content will be automatically deployed to servers by the following command:
   ```
   wdeploy.bat websphere6 -Das_mode=distributed
       -Dws_type=apache deployonlyall >> wdeploy.log
   ```

   Note: If your dynamic and static content are in a custom location, use the -Dwork_dir parameter.

   If IHS and WebSphere are on different machines, dynamic content will be automatically deployed to WebSphere by the following command. Static content must be manually deployed to the remote IHS machine afterwards.
   ```
   wdeploy.bat websphere6 -Das_mode=distributed
       -deployonlyall  >> wdeploy.log
   ```

   Note: If your dynamic and static content are in a custom location, use the -Dwork_dir parameter.

   Copy static content to the `htdocs` directory on the web server:
   - Extract the zip files on the web application server under `<IN STALLDIR>\deployment\workdir\websphere6\resources`.
   - Copy these folders from the WebSphere web application server to the IHS `<WS_DIR>\htdocs` folder on the IHS server.
   - Copy the `bobj.<application>.conf` files from the WebSphere web application server to the IHS `<WS_DIR>\conf` folder on the IHS server.

- Update IHS `httpd.conf` under `<WS_DIR>\conf` with the application config files. For each web application, you must include an entry in `httpd.conf`. For example, to include AnalyticalReporting, you would enter:

   ```
   Include conf\bobj.AnalyticalReporting.conf
   ```

10. Propagate the `plugin-cfg.xml` file from the application server to the web server using the administrative console. Click **Servers** > **Web server**. Select the web server, then click **Propagate Plug-in**. Web servers other than IHS require manual propagation.

    - For IHS, click **Servers** > **Web server**. Select the web server, then click **Propagate Plug-in**.
    - For all other web servers, copy `plugin-cfg.xml` from the `<pro file_root>/con fig/cells/<cell_name>/nodes/node_name/servers/<Web_serv er_name>` directory on the WebSphere web application server to the `<plugins_root>/config/<Web_server_name>` directory on the IHS web server.

11. Ensure that both static and dynamic content are correctly configured by trying to access a web application through the web server. For example, create a URL that includes the address of the web server with the root context of a web application deployed to the web application server: `http://mywebserver.mycompany.com:80/CmcApp/`. In this example, `mywebserver.mycompany.com:80` is the web server, and `/CmcApp/` is a deployed web application.

Static content is now served by a dedicated web server, and dynamic content is served by a dedicated web application server.

Related Topics
- *Deploying web applications on a remote machine*

Deploying to WebLogic with wdeploy

Using predeploy and predeployall

The `predeploy` command creates resources and configuration files for a specific web application, then copies the WAR application to `<IN STALLDIR>\deployment\workdir\WebAppServer_VERSION`, but does not

deploy the web application to the web application server. The `predeployall`
command performs the `predeploy` command for all web applications.

Example 1: using `wdeploy predeploy` to predeploy InfoView to WebLogic.

```
wdeploy.bat weblogic9
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
  -Das_instance=AdminServer
  -Das_admin_username=weblogic
  -Das_admin_password=weblogic
  -DAPP=InfoViewApp
  predeploy
```

Example 2: using `wdeploy predeployall` to predeploy all web applications
to WebLogic.

```
wdeploy.bat weblogic10
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
  -Das_instance=AdminServer
  -Das_admin_username=weblogic
  -Das_admin_password=weblogic
  predeployall
```

Using deployonly and deployonlyall

The `deployonly` command deploys a web application that is specifically
configured for the target web application server. The `deployonlyall`
command performs the `deployonly` command for all web applications.

Example 1: using `wdeploy deployonly` to deploy a predeployed InfoView
to WebLogic.

```
wdeploy.bat weblogic9
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
  -Das_instance=AdminServer
  -Das_admin_username=weblogic
  -Das_admin_password=weblogic
  -DAPP=InfoViewApp
  deployonly
```

Example 2: using `wdeploy deployonlyall` to deploy all predeployed web
applications to WebLogic.

```
wdeploy.bat weblogic10
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
```

```
-Das_instance=AdminServer
-Das_admin_username=weblogic
-Das_admin_password=weblogic
deployonlyall
```

Using `deploy` and `deployall`

The `deploy` command creates resources and configuration files for a specific web application, which is then deployed to the web application server. The `deployall` command performs the `deploy` command for all web applications.

Running `deploy` is equivalent to running a `predeploy` command followed by a `deployonly` command. Running `deployall` is equivalent to running a `predeployall` command followed by a `deployonlyall` command.

Example 1: using `wdeploy deploy` to predeploy, then deploy, InfoView to WebLogic.

```
wdeploy.bat weblogic9
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
  -Das_instance=AdminServer
  -Das_admin_username=weblogic
  -Das_admin_password=weblogic
  -DAPP=InfoViewApp
  deploy
```

Example 2: using `wdeploy deployall` to predeploy, then deploy, all web applications to WebLogic.

```
wdeploy.bat weblogic10
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
  -Das_instance=AdminServer
  -Das_admin_username=weblogic
  -Das_admin_password=weblogic
  deployall
```

Using `undeploy` and `undeployall`

The `undeploy` command uninstalls a previously deployed web application from the web application server. The `undeployall` command performs the `undeploy` command for all web applications.

Example 1: using `wdeploy undeploy` to undeploy InfoView from WebLogic.

```
wdeploy.bat weblogic9
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
  -Das_instance=AdminServer
  -Das_admin_username=weblogic
  -Das_admin_password=weblogic
  -DAPP=InfoViewApp
  undeploy
```

Example 2: using `wdeploy undeployall` to undeploy all web applications from WebLogic.

```
wdeploy.bat weblogic10
  -Das_dir=C:\bea\user_projects\domains\base_domain
  -Das_admin_port=7001
  -Das_instance=AdminServer
  -Das_admin_username=weblogic
  -Das_admin_password=weblogic
  undeployall
```

Related Topics
- *After deploying web applications* on page 121

Deploying to separate Apache web and WebLogic web application servers

To reduce the load on a web application server, you can set up a separate, dedicated, web server to serve static content. All static content will be served by the web server, while dynamic content will be served by the web application server.

Note: This configuration requires that you use the wdeploy command to split web application resources into static and dynamic content that can be deployed to separate web and web application servers.

1. Set up the Apache web server and ensure that it is working correctly. Load a web page, such as Apache's default test page, to verify that the web server is serving content correctly.

   Open a web browser and enter the IP address or hostname of the web server, and a port number if the server is not listening on port 80. For example: `http://mywebserver.mycompany.com:80`.

2. Ensure that your WebLogic web application server is working correctly.

   Open a web browser and enter the IP address or hostname of the web application server, and a port number. For example: `http://myappserver.mycompany.com:7001`.

> **Note:** If you have any existing Crystal Reports Server web applications running on the server, they must be undeployed before continuing.

3. Download the WebLogic Apache HTTP Server Plug-In from the BEA web site. The plug-in allows you to connect an Apache web server with a WebLogic web application server, so Apache can forward requests for dynamic resources to WebLogic.

4. Follow the plug-in configuration instructions on the BEA web site for configuring the bridge between Apache web server and WebLogic.

   Requests for dynamic resources are now forwarded to WebLogic when received by Apache.

5. Ensure that the bridge between the web server and web application server is working by pointing a browser to the web server and verifying that dynamic content from the web application server is served correctly.

   For example, visit the URL: `http://mywebserver.mycompa ny.com:80/jsp-examples/`.

6. If the web application server is installed on the same machine as Crystal Reports Server, run wdeploy locally on that machine. If the web application server runs on a different machine, you must copy the wdeploy command and environment to the web application server. See *To deploy web applications on a remote machine*.

7. Configure wdeploy environment to separate content between the web server and the web application server. This is known as "distributed" mode.

   The wdeploy configuration files for Apache and WebLogic are located in `<INSTALLDIR>\deployment`.

   • Edit `config.weblogic9` or `config.weblogic10`. For example:

   ```
   #Business Objects Configuration Utility
   as_admin_port=7001
   as_admin_username=weblogic
   as_admin_password=weblogic
   as_instance=AdminServer
   as_dir=C:\bea\user_projects\domains\base_domain
   ```

   • Edit `config.apache`. For example:

   ```
   #Business Objects Configuration Utility
   ws_dir=C:\Webserver\Apache224
   connector_type=weblogic9
   deployment_dir=C:\Webserver\Apache224\htdocs
   ```

8. Use wdeploy predeploy in distributed mode to split source web applications into separate static and dynamic resources.

   For example:

   • Run the following command to extract static content for the Apache web server and dynamic content for Weblogic application server.

   ```
   wdeploy.bat weblogic9 -Das_mode=distributed
       -Dws_type=apache predeployall >> wdeploy.log
   ```

   The dynamic content in: `<INSTALLDIR>\deployment\workdir\weblog ic9\application`. Static content is located in: `<INSTALLDIR>\deploy ment\workdir\weblogic9\resources`.

9. Run wdeploy deployonlyall command to deploy the dynamic content to WebLogic application server and static content to Apache.

   If Apache and WebLogic are on the same machine, static and dynamic content will be automatically deployed to the servers by the following command:

   ```
   wdeploy.bat weblogic9 -Das_mode=distributed
       -Dws_type=apache deployonlyall >> wdeploy.log
   ```

   Note: If your dynamic and static content are in a custom location, use the -Dwork_dir parameter.

   If Apache and WebLogic are on different machines, dynamic content will be automatically deployed to WebLogic by the following command. Static content must be manually deployed to the remote Apache machine afterwards.

   ```
   wdeploy.bat weblogic9 -Das_mode=distributed
       -deployonlyall >> wdeploy.log
   ```

   Note: If your dynamic and static content are in a custom location, use the -Dwork_dir parameter.

   Copy static content to the `htdocs` directory on the web server:

   • Extract the zip files on the web application server under `<IN STALLDIR>\deployment\workdir\WebLogic6\resources`.
   • Copy these folders from the WebLogic web application server to the Apache `<WS_DIR>\htdocs` folder on the Apache server.
   • Copy the `bobj.<application>.conf` files from the WebLogic web application server to the Apache `<WS_DIR>\conf` folder on the Apache server.

- Update Apache `httpd.conf` under `<WS_DIR>\conf` with the application config files. For each web application, you must include an entry in `httpd.conf`. For example, to include AnalyticalReporting, you would enter:

```
Include conf\bobj.AnalyticalReporting.conf
```

Static content is now served by a dedicated web server, and dynamic content is served by a dedicated web application server.

Related Topics

- *Deploying web applications on a remote machine* on page 112

Deploying to Tomcat with `wdeploy`

Using predeploy and predeployall

The `predeploy` command creates resources and configuration files for a specific web application, then copies the WAR application to `<IN STALLDIR>\deployment\workdir\tomcat55`, but does not deploy the web application to the web application server. The `predeployall` command performs the `predeploy` command for all web applications.

Example 1: using `wdeploy predeploy` to predeploy InfoView to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -Das_service_name=Tomcat5
  -DAPP=InfoViewApp
  predeploy
```

Example 2: using `wdeploy predeployall` to predeploy all web applications to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -Das_service_name=Tomcat5
  predeployall
```

Using deployonly and deployonlyall

The `deployonly` command deploys a web application that is specifically configured for the target web application server. The `deployonlyall` command performs the `deployonly` command for all web applications.

Example 1: using `wdeploy deployonly` to deploy a InfoView to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -Das_service_name=Tomcat5
  -DAPP=InfoViewApp
  deployonly
```

Example 2: using `wdeploy deployonlyall` to deploy all predeployed web applications to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -Das_service_name=Tomcat5
  deployonlyall
```

Using deploy and deployall

The `deploy` command creates resources and configuration files for a specific web application, which is then deployed to the web application server. The `deployall` command performs the `deploy` command for all web applications.

Running `deploy` is equivalent to running a `predeploy` command followed by a `deployonly` command. Running `deployall` is equivalent to running a `predeployall` command followed by a `deployonlyall` command.

Example 1: using `wdeploy deploy` to predeploy, then deploy, InfoView to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -Das_service_name=Tomcat5
  -DAPP=InfoViewApp
  deploy
```

Example 2: using `wdeploy deployall` to predeploy, then deploy, all web applications to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -Das_service_name=Tomcat5
  deployall
```

Using `undeploy` and `undeployall`

The `undeploy` command uninstalls a previously deployed web application from the web application server. The `undeployall` command performs the `undeploy` command for all web applications.

Example 1: using `wdeploy undeploy` to undeploy InfoView from Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -DAPP=InfoViewApp
  -Das_service_name=Tomcat5
  undeploy
```

Example 2: using `wdeploy undeployall` to undeploy all web applications from Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5
  -Das_instance=localhost
  -Das_service_name=Tomcat5
  undeployall
```

Related Topics

• *After deploying web applications* on page 121

Deploying to separate Apache web and Tomcat web application servers

To reduce the load on a web application server, you can set up a separate, dedicated, web server to serve static content. All static content will be served by the web server, while dynamic content will be served by the web application server.

Note: This configuration requires that you use the wdeploy command to split web application resources into static and dynamic content that can be deployed to separate web and web application servers.

1. Set up the Apache web server and ensure that it is working correctly. Load a web page, such as Apache's default test page, to verify that the web server is serving content correctly.

   Open a web browser and enter the IP address or hostname of the web server, and a port number if the server is not listening on port 80. For example: `http://mywebserver.mycompany.com:80`.

2. Ensure that your Tomcat web application server is working correctly.

   Open a web browser and enter the IP address or hostname of the web application server, and a port number. For example: `http://myappserver.mycompany.com:8080`.

   Note: If you have any existing Crystal Reports Server web applications running on the server, they must be undeployed before continuing.

3. Download the Apache Tomcat connector from the Tomcat web site. The Apache Tomcat connector allows you to connect an Apache web server with a Tomcat web application server, so Apache can forward requests for dynamic resources to Tomcat.

4. Follow the plug-in configuration instructions on the Apache web site for configuring the bridge between Apache web server and Tomcat web application server.

   Requests for dynamic resources are now forwarded to Tomcat when received by Apache.

5. Ensure that the bridge between the web server and web application server is working by pointing a browser to the web server and verifying that dynamic content from the web application server is served correctly.

   For example, visit the URL: `http://mywebserver.mycompany.com:80/jsp-examples/`.

6. If the web application server is installed on the same machine as Crystal Reports Server, run wdeploy locally on that machine. If the web application server runs on a different machine, you must copy the wdeploy command and environment to the web application server. See *To deploy web applications on a remote machine*.

7. Configure wdeploy environment to separate content between the web server and the web application server. This is known as "distributed" mode.

   The wdeploy configuration files for Apache and Tomcat are located in `<INSTALLDIR>\deployment`.

- Edit `config.tomcat55`. **For example:**

```
#Business Objects Configuration Utility
as_dir=C:\Appserver\Tomcat5520
as_instance=localhost
as_service_name=Tomcat5
as_service_key=HKLM\SOFTWARE\Apache Software Foundation\

                Procrun 2.0\Tomcat5\Parameters\Java
as_service_key_value=Options
```

- Edit `config.apache`. **For example:**

```
#Business Objects Configuration Utility
ws_dir=C:\Webserver\Apache224
connector_type=tomcat55
deployment_dir=C:\Webserver\Apache224\htdocs
```

8. Use wdeploy predeploy in distributed mode to split source web applications into separate static and dynamic resources.

   For example:

   - Run the following command to extract static content for the Apache web server.

   ```
   wdeploy.bat tomcat55 -Das_mode=distributed
       -Dws_type=apache predeployall >> wdeploy.log
   ```

9. Run wdeploy deployonlyall command to deploy the dynamic content to Tomcat application server and static content to Apache.

   If Apache and Tomcat are on the same machine, static and dynamic content will be automatically deployed to servers by the following command:

   ```
   wdeploy.bat tomcat55 -Das_mode=distributed
       -Dws_type=apache deployonlyall >> wdeploy.log
   ```

   Note: If your dynamic and static content are in a custom location, use the -Dwork_dir parameter.

   If Apache and Tomcat are on different machines, dynamic content will be automatically deployed to Tomcat by the following command. Static content must be manually deployed to the remote Apache machine afterwards.

   ```
   wdeploy.bat tomcat55 -Das_mode=distributed
       -deployonlyall  >> wdeploy.log
   ```

   Note: If your dynamic and static content are in a custom location, use the -Dwork_dir parameter.

Copy static content to the `htdocs` directory on the web server:
- Extract the zip files on the web application server under `<IN STALLDIR>\deployment\workdir\Tomcat55\resources`.
- Copy these folders from the Tomcat web application server to the Apache `<WS_DIR>\htdocs` folder on the Apache server.
- Copy the `bobj.<application>.conf` files from the Tomcat web application server to the Apache `<WS_DIR>\conf` folder on the Apache server.
- Update Apache `httpd.conf` under `<WS_DIR>\conf` with the application config files. For each web application, you must include an entry in `httpd.conf`. For example, to include AnalyticalReporting, you would enter:

  ```
  Include conf\bobj.AnalyticalReporting.conf
  ```

Static content is now served by a dedicated web server, and dynamic content is served by a dedicated web application server.

Related Topics
- *Deploying web applications on a remote machine* on page 112

Deploying to SAP Application Server with `wdeploy`

Using predeploy and predeployall

The `predeploy` command creates resources and configuration files for a specific web application, then copies the WAR application to `<IN STALLDIR>\deployment\workdir\nw2004`, but does not deploy the web application to the web application server. The `predeployall` command performs the `predeploy` command for all web applications.

Example 1: using `wdeploy predeploy` to predeploy InfoView to SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
```

```
  -DAPP=InfoViewApp
  predeploy
```

Example 2: using `wdeploy predeployall` to predeploy all web applications to SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
  predeployall
```

Using deployonly and deployonlyall

The `deployonly` command deploys a web application that is specifically configured for the target web application server. The `deployonlyall` command performs the `deployonly` command for all web applications.

Example 1: using `wdeploy deployonly` to deploy a predeployed InfoView to SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
  -DAPP=InfoViewApp
  deployonly
```

Example 2: using `wdeploy deployonlyall` to deploy all predeployed web applications to SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
  deployonlyall
```

Using deploy and deployall

The `deploy` command creates resources and configuration files for a specific web application, which is then deployed to the web application server. The `deployall` command performs the `deploy` command for all web applications.

Running `deploy` is equivalent to running a `predeploy` command followed by a `deployonly` command. Running `deployall` is equivalent to running a `predeployall` command followed by a `deployonlyall` command.

Example 1: using `wdeploy deploy` to predeploy, then deploy, InfoView to SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
  -DAPP=InfoViewApp
  deploy
```

Example 2: using `wdeploy deployall` to predeploy, then deploy, all web applications to SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
  deployall
```

Using `undeploy` and `undeployall`

The `undeploy` command uninstalls a previously deployed web application from the web application server. The `undeployall` command performs the `undeploy` command for all web applications.

Example 1: using `wdeploy undeploy` to undeploy InfoView from SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
```

```
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
  -DAPP=InfoViewApp
  undeploy
```

Example 2: using `wdeploy undeployall` to undeploy all web applications from SAP Application Server.

```
wdeploy.bat nw2004
  -Das_dir=C:\SAP
  -Das_instance=server1
  -Das_sid=AS2
  -Das_admin_username=Administrator
  -Das_admin_password=password1
  -Das_admin_port=50000
  undeployall
```

Related Topics
- *After deploying web applications* on page 121

Deploying to Oracle with `wdeploy`

Using predeploy and predeployall

The `predeploy` command creates resources and configuration files for a specific web application, then copies the WAR application to `<IN STALLDIR>\deployment\workdir\oas1013`, but does not deploy the web application to the web application server. The `predeployall` command performs the `predeploy` command for all web applications.

Example 1: using `wdeploy predeploy` to predeploy InfoView to Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
  -Das_instance=home
  -Das_appserver_name=oc4j_inst1
  -Das_group_id=default_group
  -Das_admin_port=6003
  -Das_admin_username=oc4jadmin
  -Das_admin_password=oracle12
  -DAPP=InfoViewApp
  predeploy
```

Example 2: using `wdeploy predeployall` to predeploy all web applications to Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
  -Das_instance=home
  -Das_appserver_name=oc4j_inst1
  -Das_group_id=default_group
  -Das_admin_port=6003
  -Das_admin_username=oc4jadmin
  -Das_admin_password=oracle12
  predeployall
```

Using deployonly and deployonlyall

The `deployonly` command deploys a web application that is specifically configured for the target web application server. The `deployonlyall` command performs the `deployonly` command for all web applications.

Example 1: using `wdeploy deployonly` to deploy a predeployed InfoView to Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
  -Das_instance=home
  -Das_appserver_name=oc4j_inst1
  -Das_group_id=default_group
  -Das_admin_port=6003
  -Das_admin_username=oc4jadmin
  -Das_admin_password=oracle12
  -DAPP=InfoViewApp
  deployonly
```

Example 2: using `wdeploy deployonlyall` to deploy all predeployed web applications to Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
  -Das_instance=home
  -Das_appserver_name=oc4j_inst1
  -Das_group_id=default_group
  -Das_admin_port=6003
  -Das_admin_username=oc4jadmin
  -Das_admin_password=oracle12
  deployonlyall
```

Using deploy and deployall

The deploy command creates resources and configuration files for a specific web application, which is then deployed to the web application server. The deployall command performs the deploy command for all web applications.

Running deploy is equivalent to running a predeploy command followed by a deployonly command. Running deployall is equivalent to running a predeployall command followed by a deployonlyall command.

Example 1: using wdeploy deploy to predeploy, then deploy, InfoView to Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
  -Das_instance=home
  -Das_appserver_name=oc4j_inst1
  -Das_group_id=default_group
  -Das_admin_port=6003
  -Das_admin_username=oc4jadmin
  -Das_admin_password=oracle12
  -DAPP=InfoViewApp
  deploy
```

Example 2: using wdeploy deployall to predeploy, then deploy, all web applications to Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
  -Das_instance=home
  -Das_appserver_name=oc4j_inst1
  -Das_group_id=default_group
  -Das_admin_port=6003
  -Das_admin_username=oc4jadmin
  -Das_admin_password=oracle12
  deployall
```

Using undeploy and undeployall

The undeploy command uninstalls a previously deployed web application from the web application server. The undeployall command performs the undeploy command for all web applications.

Example 1: using wdeploy undeploy to undeploy InfoView from Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
```

```
-Das_instance=home
-Das_appserver_name=oc4j_inst1
-Das_group_id=default_group
-Das_admin_port=6003
-Das_admin_username=oc4jadmin
-Das_admin_password=oracle12
-DAPP=InfoViewApp
undeploy
```

Example 2: using `wdeploy undeployall` to undeploy all web applications from Oracle Application Server.

```
wdeploy.bat oas1013
  -Das_dir=C:\Oracle10gASR3\OracleAS_1
  -Das_instance=home
  -Das_appserver_name=oc4j_inst1
  -Das_group_id=default_group
  -Das_admin_port=6003
  -Das_admin_username=oc4jadmin
  -Das_admin_password=oracle12
  undeployall
```

Related Topics
- *After deploying web applications* on page 121

Deploying to JBoss with wdeploy

The Java Server Faces (JSF) bundled with the JBoss web application servers must be disabled for the Central Management Console (CMC) and InfoView web clients to work correctly.

To disable JSF, the following directories must be removed and JBoss restarted:

- *JBOSS_HOME*\server\default\deploy\jbossweb-tomcat55.sar\jsf-libs
- *JBOSS_HOME*\server\default\tmp
- *JBOSS_HOME*\server\default\work

Note: To use the Java log4j logging included with Crystal Reports Server 2008, refer to section 10.3.7 *Using your own log4j.properties file - class loader scoping* in the *JBoss Development Process Guide*: *http://docs.jboss.org/process-guide/en/html/logging.html#d0e3341*

Using `predeploy` and `predeployall`

The `predeploy` command creates resources and configuration files for a specific web application, then copies the WAR application to `<IN STALLDIR>\deployment\workdir\jboss404`, but does not deploy the web application to the web application server. The `predeployall` command performs the `predeploy` command for all web applications.

Example 1: using `wdeploy predeploy` to predeploy InfoView to JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
  -Das_instance=default
  -DAPP=InfoViewApp
  predeploy
```

Example 2: using `wdeploy predeployall` to predeploy all web applications to JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
  -Das_instance=default
  predeployall
```

Using deployonly and deployonlyall

The `deployonly` command deploys a web application that is specifically configured for the target web application server. The `deployonlyall` command performs the `deployonly` command for all web applications.

Example 1: using `wdeploy deployonly` to deploy a predeployed InfoView to JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
  -Das_instance=default
  -DAPP=InfoViewApp
  deployonly
```

Example 2: using `wdeploy deployonlyall` to deploy all predeployed web applications to JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
  -Das_instance=default
  deployonlyall
```

Using `deploy` and `deployall`

The `deploy` command creates resources and configuration files for a specific web application, which is then deployed to the web application server. The `deployall` command performs the `deploy` command for all web applications.

Running `deploy` is equivalent to running a `predeploy` command followed by a `deployonly` command. Running `deployall` is equivalent to running a `predeployall` command followed by a `deployonlyall` command.

Example 1: using `wdeploy deploy` to predeploy, then deploy, InfoView to JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
  -Das_instance=default
  -DAPP=InfoViewApp
  deploy
```

Example 2: using `wdeploy deployall` to predeploy, then deploy, all web applications to JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
  -Das_instance=default
  deployall
```

Using `undeploy` and `undeployall`

The `undeploy` command uninstalls a previously deployed web application from the web application server. The `undeployall` command performs the `undeploy` command for all web applications.

Example 1: using `wdeploy undeploy` to undeploy InfoView from JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
  -Das_instance=default
  -DAPP=InfoViewApp
  undeploy
```

Example 2: using `wdeploy undeployall` to undeploy all web applications from JBoss.

```
wdeploy.bat jboss404
  -Das_dir=C:\jboss-4.0.4.GA
```

```
  -Das_instance=default
  undeployall
```

Related Topics

- *After deploying web applications* on page 121

Deploying to WebSphere Community Edition with wdeploy

Using `predeploy` and `predeployall`

The `predeploy` command creates resources and configuration files for a specific web application, then copies the WAR application to `<IN STALLDIR>\deployment\workdir\wasce20`, but does not deploy the web application to the web application server. The `predeployall` command performs the `predeploy` command for all web applications.

Example 1: using `wdeploy predeploy` to predeploy InfoView to WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
  -Das_instance=server1
  -Das_admin_port=1099
  -DAPP=InfoViewApp
  predeploy
```

Example 2: using `wdeploy predeployall` to predeploy all web applications to WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
  -Das_instance=server1
  -Das_admin_port=1099
  predeployall
```

Using deployonly and deployonlyall

The `deployonly` command deploys a web application that is specifically configured for the target web application server. The `deployonlyall` command performs the `deployonly` command for all web applications.

Example 1: using `wdeploy deployonly` to deploy a predeployed InfoView
to WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
  -Das_instance=server1
  -Das_admin_port=1099
  -DAPP=InfoViewApp
  deployonly
```

Example 2: using `wdeploy deployonlyall` to deploy all predeployed web
applications to WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
  -Das_instance=server1
  -Das_admin_port=1099
  deployonlyall
```

Using `deploy` and `deployall`

The `deploy` command creates resources and configuration files for a specific
web application, which is then deployed to the web application server. The
`deployall` command performs the `deploy` command for all web applications.

Running `deploy` is equivalent to running a `predeploy` command followed
by a `deployonly` command. Running `deployall` is equivalent to running a
`predeployall` command followed by a `deployonlyall` command.

Example 1: using `wdeploy deploy` to predeploy, then deploy, InfoView to
WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
  -Das_instance=server1
  -Das_admin_port=1099
  -DAPP=InfoViewApp
  deploy
```

Example 2: using `wdeploy deployall` to predeploy, then deploy, all web
applications to WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
```

```
-Das_instance=server1
-Das_admin_port=1099
deployall
```

Using undeploy and undeployall

The `undeploy` command uninstalls a previously deployed web application from the web application server. The `undeployall` command performs the `undeploy` command for all web applications.

Example 1: using `wdeploy undeploy` to undeploy InfoView from WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
  -Das_instance=server1
  -Das_admin_port=1099
  -DAPP=InfoViewApp
  undeploy
```

Example 2: using `wdeploy undeployall` to undeploy all web applications from WebSphere Community Edition.

```
wdeploy.bat wasce20
  -Das_dir=C:\Program Files\ibm\WebSphere\AppServerCommunityEdi
tion
  -Das_instance=server1
  -Das_admin_port=1099
  undeployall
```

Related Topics
*   *After deploying web applications* on page 121

Deploying web applications on a remote machine

Use the procedure below to deploy web applications to a remote machine. In this procedure Box 1 refers to the machine hosting your Crystal Reports Server 2008 installation, and Box 2 is the remote machine on which no Crystal Reports Server 2008 resources are currently installed.

1. Create on Box 2 the following directories.

- `<INSTALLDIR>\deployment\`: The wdeploy folder will contain the wdeploy scripts and configuration files.

- `<INSTALLDIR>\BusinessObjects Enterprise 12.0\java\applications\`

- `<INSTALLDIR>\caf\`

These directories reflect the default directory structure installed on Box 1.

Tip: Although you can customize the folder structure to meet your specific requirements, it is recommended that you maintain files within the same folder structure or hierarchy in Box 2 as in Box 1.

2. Copy the following files from Box 1 to Box 2.

- Copy all the contents under `<INSTALLDIR>\deployment\`

  Note: This content is also available on the product distribution media under the following directory:

  `Collaterals\Tools\wDeploy`

  Tip: Remove the contents under `<INSTALLDIR>/bobje/deploy ment/workdir` after the file copy if that folder is not empty.

- Copy all the contents under `<INSTALLDIR>\BusinessObjects Enterprise 12.0\java\applications`

- Copy the contents of `<INSTALLDIR>\caf\`.

3. Set the Java_Home environment variable to JDK 1.5 directory.

4. Configure the war file directory for each web application. If you keep all the war files in the same folder, you don't need to configure the war file directory for each web application, skip to step 5.

  a. Open the properties file under `<INSTALLDIR>\deployment\apps` and modify the properties file for each web application (e.g `CrystalRe ports.properties`).

  b. Enter the following parameter in a new line:

  `war_dir` The value of the parameter is the war file path name.

  If you are going to deploy `CrystalReports.war`, you must set the value of `war_dir` in `<INSTALLDIR>\deployment\apps\CrystalRe ports.properties` to:

```
war_dir=C:\Program Files\Business Objects\BusinessObjects
Enterprise 12.0\java\applications\CrystalReports.war
```

c. Repeat steps a-b for all the web applications you want to deploy to your web application server.

5. Modify the wdeploy configuration file for your web application server. You must provide all the required information to enable wdeploy to deploy the web application.

For example, to modify the configuration file for WebLogic 9, you would modify the file to:

```
as_dir=C:\bea92\user_projects\domains\base_domain
as_instance=AdminServer
as_admin_port=7001
as_admin_username=weblogic
as_admin_password=weblogic
```

The configuration file is located in the following directory:`<INSTALLDIR>\de ployment\config.<appserver>`.

6. Run the wdeploy script from its location in Box 2 by opening command line console and entering the following:

```
<INSTALLDIR>\deployment\wdeploy.bat
 <appserver> deployall -Dwar_dir="<INSTALLDIR>\
BusinessObjects Enterprise 12.0\java\ applications\" >>
<logfilename>.log
```

You can pass the `-Dwar_dir` (with the path to the WAR files) in the command line to specify the location from which wdeploy accesses non customized WAR files.

Tip: You can drop the deployable war files to non-default location by passing the parameter `-Dwork_dir=your desired location` as part of the wdeploy command.

Manually deploying to a web application

Crystal Reports Server WAR files

Crystal Reports Server separates web application functionality into several Web ARchive (WAR) files, making it easier to deploy only the web applications required by your organization.

Once you have installed Crystal Reports Server 2008 the source files are available in the following directory: `<INSTALLDIR>\BusinessObjects Enterprise 12.0\java\applications\`

The following table summarizes the relationship between the WAR files and specific web applications in a Crystal Reports Server 2008 deployment.

WAR file	Used by
`AdminTools`	Query Builder
`BusinessProcessBI`	Web services components
`CmcApp`	CMC (entry point)
`CmcAppActions`	CMC
`CrystalReports`	Crystal Reports, CMC, InfoView
`dswsbobje`	Web services components
`InfoViewApp`	InfoView (entry point)
`InfoViewAppActions`	InfoView
`OpenDocument`	Open Document
`PlatformServices`	CMC, InfoView

WAR file	Used by
PMC_Help	Performance Management
VoyagerClient	CMC, InfoView
XCelsius	Xcelsius data presentation

WAR file context roots

All WAR files, with the exception of InfoViewApp and CmcApp, can be deployed to fix context root locations on your web application server. The following table lists the context roots that must be used, unless otherwise noted.

WAR file	WAS context path (default)
AdminTools	/AdminTools
BusinessProcessBI	/BusinessProcessBI
CmcApp	/CmcApp **Note:** You may use a different root context for CmcApp as long as the root context matches the name of the WAR file. For example, a root context of /MyOrgCmc requires the WAR file to be named MyOrgCmc.war.
CmcAppActions	/CmcAppActions
CrystalReports	/CrystalReports
dswsbobje	/dswsbobje
InfoViewApp	/InfoViewApp **Note:** You may use a different root context for InfoViewApp as long as the root context matches the name of the WAR file. For example, a root context of /MyOrgInfo requires the WAR file to be named MyOrgInfo.war.

WAR file	WAS context path (default)
InfoViewAppActions	/InfoViewAppActions
OpenDocument	/OpenDocument
PlatformServices	/PlatformServices
PMC_Help	/PMC_Help
VoyagerClient	/VoyagerClient
XCelsius	/XCelsius

Guidelines for deploying WAR files

To successfully deploy the WAR files and to ensure your Crystal Reports Server web applications run properly, you should use the following guidelines.

1. Your web application server must be installed and running before you deploy any WAR file.
2. The order in which you deploy the WAR files for your web applications does not matter. However, if your deployment environment involves reverse proxy, there is a specific order you must follow. For more information see "Modifying Default Security Behavior " in the *BusinessObjects Enterprise Administrator's Guide*.
3. When deploying a web application with functionality shared between multiple WAR files, each WAR file must reside within the same level of the context path.
4. As a general rule, do not rename the WAR files.

   Note:

   • Only two web applications can be renamed: InfoViewApp and CmcApp. To rename InfoViewApp you can rename the application using the web application server administration console.
   • To rename CmcApp, you must update the appservice.url.default parameter in the web.xml file located in the WEB-INF directories of the

CmcApp.war and CmcAppActions.war. Change CmcApp in the <param-value> tag shown below, to the new application name.

```
<context-param>
 <param-name>appservice.url.default</param-name>
 <param-value>/NewCMC/App/appService.jsp</param-value>
</context-param>
```

Manually deploying web applications

Ensure that your web application server and CMS are both running.

The following steps will deploy a web application on a web application server using the application server's administrative console. If the application server is located on a machine other than your Crystal Reports Server 2008 machine, follow the steps in *To prepare a manual deployment on a remote machine*.

The wdeploy tool must be used to generate deployable WAR files before they can be deployed to your web application server.

1. Run the wdeploy predeploy command to prepare a single web application, or wdeploy predeployall to prepare all web applications.

Example 1: using wdeploy predeploy to prepare InfoViewApp for deployment to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5520
  -Das_instance=localhost
  -Das_service_name=Tomcat55
  -DAPP=InfoViewApp
  predeploy
```

Example 2: using wdeploy predeployall to prepare all web applications for deployment to Tomcat.

```
wdeploy.bat tomcat55
  -Das_dir=C:\Tomcat5520
  -Das_instance=localhost
  -Das_service_name=Tomcat55
  predeployall
```

The wdeploy command will prepare the web application files for deployment on the web application server.

The wdeploy command creates WAR or EAR files in `<INSTALLDIR>\de
ployment\workdir\<appserver>\application` unless you specify the
-Dwork_dir parameter.

2. Follow the manual deployment procedure specific to your web application
server.

Your web applications can now be manually deployed on your web application
server.

Repeat these steps for any other web applications that need to be installed.

Related Topics
- *Prerequisites for using wdeploy* on page 76
- *Preparing for manual deployment on a remote machine* on page 119

Preparing for manual deployment on a remote machine

Use the procedure below to manually deploy web applications to a remote
machine.

In this procedure Box 1 refers to the machine hosting your Crystal Reports
Server 2008 installation, and Box 2 is the remote machine on which no Crystal
Reports Server 2008 resources are currently installed.

1. Create on Box 2 the following directories.
- `<INSTALLDIR>\deployment\`: The wdeploy folder will contain the
  wdeploy scripts and configuration files.
- `<INSTALLDIR>\BusinessObjects Enterprise
  12.0\java\applications\`
- `<INSTALLDIR>\caf\`

These directories reflect the default directory structure installed on Box
1.

Tip: Although you can customize the folder structure to meet your specific
requirements, it is recommended that you maintain files within the same
folder structure or hierarchy in Box 2 as in Box 1.

2. Copy the following files from Box 1 to Box 2.
- Copy all the contents under `<INSTALLDIR>\deployment\`

Note: This content is also available on the product distribution media under the following directory:

```
Collaterals\Tools\wDeploy
```

Tip: Remove the contents under `<INSTALLDIR>/deployment/workdir` after the file copy if that folder is not empty.

- Copy all the contents under `<INSTALLDIR>\BusinessObjects Enterprise 12.0\java\applications`
- Copy the contents of `<INSTALLDIR>\caf\`

3. Set the Java_Home environment variable to JDK 1.5 directory.

4. Configure the war file directory for each web application. If you keep all the war files in the same folder, you don't need to configure the war file directory for each web application, skip to step 5.

   a. Open the properties file under `<INSTALLDIR>\deployment\apps` and modify the properties file for each web application (e.g `CrystalRe ports.properties`).

   b. Enter the following parameter in a new line:

   war_dir: The value of the parameter is the war file path name.

   If you are going to deploy `CrystalReports.war`, you must set the value of war_dir in `<INSTALLDIR>\deployment\apps\CrystalRe ports.properties` to

   ```
   war_dir=C:\Program Files\
   Business Objects\BusinessObjects Enterprise
   12.0\java\applications\CrystalReports.war
   ```

   c. Repeat steps a-b for all the web applications you want to deploy to your web application server.

5. Modify the wdeploy configuration file for your web application server. You must provide all the required information to enable wdeploy to prepare the WAR file for manual deployment.

   For example, to modify the configuration file for WebLogic 9, you must modify the file to:

   ```
   as_dir=C:\bea92\user_projects\domains\base_domain
   as_instance=AdminServer
   as_admin_port=7001
   as_admin_username=weblogic
   as_admin_password=weblogic
   ```

   The configuration file is located in the following directory:`<INSTALLDIR>\de ployment\config.<appserver>`.

6. Run the wdeploy script from its location in Box 2 by opening command line console and entering the following:

```
<INSTALLDIR>\deployment\wdeploy.bat
    <appserver> predeployall -Dwar_dir="<INSTALLDIR>\
    BusinessObjects Enterprise 12.0\java\
    applications\" >> <logfilename>.log
```

You can pass the -Dwar_dir (with the path to the WAR files) in the command line to specify the location from which wdeploy accesses non customized WAR files.

Tip: You can drop the deployable war files to non-default location by passing the parameter -Dwork_dir=your desired location as part of the wdeploy command.

7. The wdeploy command creates WAR or EAR files in `<INSTALLDIR>\de ployment\workdir\<appserver>\application` unless you specify the -Dwork_dir parameter. Follow the manual deployment steps for your web application server.

You are now prepared to manually deploy web applications on Box 2.

After deploying web applications

To verify the web application server configuration, make sure that InfoView and the Central Management Console can be launched in a web browser. For example:

• `http://WAS_HOSTNAME:PORT/INFOVIEW_CONTEXT`
• `http://WAS_HOSTNAME:PORT/CMC_CONTEXT`

Replace `WAS_HOSTNAME` with the hostname or IP address of your web application server, and `PORT` with the port number used for either HTTP or HTTPS communication. The default root context used for InfoView is `In foViewApp`; the default context used for the CMC is `CmcApp`.

Deploying with the Administration console

Deploying with the WebSphere administrative console

Ensure that your WebSphere web application server is installed, configured, and running before deploying WAR files.

Log in to the "WebSphere Application Server Administration" console using the following URL: `http://WAS_HOSTNAME:PORT/admin` The WebSphere admininstration console's default port number is 9060.

1. Under the **Applications** heading of the console navigation menu, click **Enterprise Applications** on the left navigational pane.
2. Click the **Install** button and navigate to the location of the WAR file to deploy.
3. Enter a context root for the WAR file (e.g. `CmcApp/` for `CmcApp.war`) and press the **Next** button, followed by **Continue**.
4. In the screen that appears, enter a unique name for the web application in the in "Step 1" field, and proceed to "Step 2".
5. Highlight the server you created (or highlight **server1** if you didn't create your own) from the **Clusters and Servers** and enable the **Select** checkbox. Proceed to "Step 3".
6. In the screen that appears, select the virtual host you created (or **default_host** if you didn't create your own) from the **Virtual Host** drop-down list. Proceed to "Step 4".
7. Review the summary page, and press **Finish** when done.
8. Click **Save to Master Configuration**.
9. Click the **Save** link, then the **Save** button.
10. Under the **Applications** heading of the console navigation menu, click **Enterprise Applications** on the left navigational pane.
11. Verify that the WAR file was deployed, then click the **Start** button.

    Repeat steps 1-11 for each WAR file to deploy.

Related Topics

Disabling WebSphere JSF implementation

If pages rendered by WebSphere do not show cached values correctly, it may be using its own version of the Java Server Faces (JSF) library, rather than the JSF implementation supplied with Crystal reports Server. To correct this problem, you must manually reconfigure WebSphere for each web application that uses JSF: CmcApp, CmcAppActions, and PlatformServices.

To disable the JSF implementation supplied with WebSphere, follow the instructions below.

1. Log in to the "WebSphere Application Server Administration" console using the following URL: `http://WAS_HOSTNAME:PORT/admin`. The WebSphere administration console's default port number is 9060.

2. Browse to **YOUR_WEB_APPLICATION** > **Manage Modules** > **YOUR_WEB_APPLICATION.war**

   Replace **YOUR_WEB_APPLICATION** in the example above with the name of your web application.

3. Stop the web application, so its settings can be modified.

4. Select **Classes loaded with application class loader first** from the combo box.

   Restart the web application.

5. Repeat these steps for all other web applications that use JSF.

Reload pages that display cached values. Cached values are now displayed correctly.

Deploying to a WebSphere cluster

To manually deploy Crystal Reports Server web applications to a WebSphere web application cluster distributed over multiple machines, you need to deploy the web applications to the machine hosting the WebSphere Deployment Manager. Once all the required web applications have been installed, you can use the WebSphere Integrated Solutions Console to separately deploy these applications to the cluster.

Tip: It is recommended that you install and configure a hardware or software load balancer if running Crystal Reports Server web applications on a WebSphere web application cluster. To configure the load balancer and cluster setup please consult your WebSphere documentation.

To deploy your web applications to a WebSphere cluster use the following general workflow:

1. If Crystal Reports Server is installed to the same machine hosting the WebSphere Deployment Manager, skip to step 3. If Crystal Reports Server and the WebSphere Deployment Manager runs on different machines, you must first copy the wdeploy tool and environment to the machine hosting the WebSphere administration server.

2. Modify the `config.websphere6` file located in the following directory: `<INSTALLDIR>\deployment\.` You need to specify information for the server administrating the cluster as shown in the following example.

```
as_dir=C:\Program Files\IBM\WebSphere\AppServer
as_admin_port=8779
as_virtual_host=default_host
as_admin_is_secure=false
enforce_file_limit=true
```

3. Open a command-line console and run the following command:

```
 C:\Program Files\Business Objects\deployment>
wdeploy.bat websphere6 predeployall
```

4. Open the WebSphere Integrated Solutions Console.

5. Go to **Applications** > **Enterprise Applications** to separately install each web application you want to deploy from the following directory:

`:<INSTALLDIR>\deployment\workdir\websphere6\application\`

   Note: All web applications are stored as `EAR` modules.

6. Follow the Install new application steps in the console to install the web application

   Note: In "Map modules to servers", make sure that you highlight the target cluster and select the module to install before clicking **Apply**.

7. After installing the application, click **Save**.

8. Repeat steps 5-7 for each `EAR` file you want to install.

9. Go to **System administration** > **Nodes** and select the nodes in the cluster that are not indicated as synchronized.

10. Click **Synchronize**.

11. Go to **Applications** > **Enterprise Applications** to start the application you just installed.

Related Topics

- *Deploying web applications on a remote machine* on page 112

Deploying with the WebLogic administrative console

Ensure that your WebLogic web application server is installed, configured, and running before deploying WAR files. You must also have created a WebLogic domain in which to run Crystal Reports Server. See your WebLogic documentation for information about creating a new domain.

Note:

- Deployable web applications for WebLogic are in the following format in the wdeploy workdir folder:
  - WebServices (BusinessProcessBI and dswsbobje) are folders
  - Rest of WebApps are WAR files
- WebLogic deployments must use an extracted dswsbobje.war. See *Deploying dswsbobje.war to WebLogic* on page 127.

1. Open the "WebLogic Administrative Console" with a web browser at a `http://WAS_HOSTNAME:PORT/console` where `WAS_HOSTNAME` is the name of your WebLogic server and `PORT_NUMBER` is the port number on which the server listens.

   The "WebLogic Server Administration Console" web page is displayed.

2. In the left-hand navigation pane, click **base_domain** > **Deployments**.

   The "Summary of Deployments" page is displayed.

3. Click the **Lock and Edit** button in the left-hand pane.

   The domain is locked for editing.

4. Press the **Install** button and navigate to the WAR file you wish to deploy. When you've selected the file and specified any other parameters in the wizard, click the **Finish** button to deploy the file.

   The WAR file is deployed to the WebLogic server.

5. Press the **Activate Changes** button to apply you're the changes to the web application server.

   Your changes are saved.

6. When your WAR file has been deployed, you must press the **Start** button to initiate its execution.

The web application you deployed will now start.

Related Topics
- *After deploying web applications* on page 121

Deploying to a WebLogic cluster

To manually deploy Crystal Reports Server web applications to a WebLogic cluster distributed over multiple machines, you need to deploy the web applications to the machine hosting the WebLogic administration server. Once all the required web applications have been installed, you can use the WebLogic administration console to deploy these applications to the cluster.

Tip: It is recommended that you install and configure a hardware or software load balancer if running Crystal Reports Server web applications on a WebLogic web application cluster. To configure the load balancer and cluster setup please consult your WebLogic documentation.

To deploy to a WebLogic cluster use the following general workflow:

1. After installing and setting up the WebLogic cluster, you need to create a WebLogic XML registry using the following default settings and target it to all managed servers as shown below:

Property	Value
Name	*Registry name*
Document Builder Factory	weblogic.apache.xerces.jaxp.DocumentBuilderFactoryImpl
SAX Parser Factory	weblogic.apache.xerces.jaxp.SAXParserFactoryImpl
Transformer Factory	weblogic.apache.xalan.processor.TransformerFactoryImpl

2. If Crystal Reports Server is installed to the same machine hosting the WebLogic administration server, skip to step 6. If Crystal Reports Server and the WebLogic administration server run on different machines, you must first copy the wdeploy tool and environment to the machine hosting the WebLogic administration server.

3. Modify the `config.weblogic10` or the `config.weblogic9` located in the following directory:

`<INSTALLDIR>\deployment\.` You need to specify information for the server administrating the cluster as shown in the following example.

```
as_dir=c:\bea\user_projects\domains\base_domain
as_instance=AdminServer
as_admin_port=7001
as_admin_username=weblogic
as_admin_password=password
```

4. Modify the PersistentStoreType setting in the `weblogic.xml` file located in the following directory:

`<INSTALLDIR>\deployment\templates\weblogic.xml.` The modified `weblogic.xml` settings will look like the example below:

```
<weblogic-web-app>
    <session-descriptor>
            <session-param>
                <param-name>PersistentStoreType</param-name>

                    <param-value>replicated</param-value>

            </session-param>
    </session-descriptor>
```

5. Open a command-line console and run the following command:

```
 C:\Program Files\Business Objects\deployment>
wdeploy.bat weblogic10 predeployall
```

6. Use the WebLogic administration console to separately install each web application you want to deploy from the following directory:

`<INSTALLDIR>\deployment\workdir\weblogic10\application\.`

7. In the "Select deployment targets" workflow select the cluster name and **All servers in the cluster**.

8. After the "Select deployment targets" is complete, select all the installed applications and go to **Start** > **Servicing all requests**.

Deploying dswsbobje.war to WebLogic

Before deploying web services WAR file on a WebLogic application server, the user must extract `dswsbobje.war`. If the WAR file is not extracted and redeployed, web services applications may display the error message "An XSD Exception occurred".

1. Extract `dswsbobje.war` to a directory on the WebLogic web application server.

2. Log on to the "WebLogic Administration Console".

3. Click **Lock & Edit**.

4. Go to **Domain Structure** > **Deployments** and click **Install**.

5. Browse to the extracted dswsbobje.war directory.

6. Select the directory and click **Next**.

7. Select **Install this deployment as an application** and click **Next**.

8. Verify the settings and click **Finish**.

   A message will be displayed when the dswsbobje.war web application has been successfully deployed. The list of web applications contains the dswsbobje web application.

9. Select the dswsbobje web application and click **Start**.

10. Click **Activate Changes**.

11. Select the dswsbobje web application and click **Start**.

12. Press **OK** to confirm the changes.

    The dswsbobje web application is started.

13. Open the web application in a web browser to confirm that it now runs.

Related Topics

- *After deploying web applications* on page 121

Deploying with the Tomcat administrative console

Ensure that your Tomcat web application server is installed, configured, and running before deploying WAR files.

Log on to the "Tomcat Manager Console".

- `http://WAS_HOSTNAME:PORT/manager/html`

1. Set the **Context Path** for the web application to be deployed. The context path must be the name of the WAR file, but without its extension. For example, to deploy a web application packaged as `MyWebApplication.war`, the context path must be `MyWebApplication`.

2. Set the **XML Configuration File** setting to be an XML file that contains the context path and document base. For example: `<Context docBase="<M>/WEB_APPLICATION.war" path="<context_path>" crossContext="false" debug="0" reloadable="false" trusted="false"/>`

3. Enter the full path to the WAR file and press the **Deploy** button

The selected WAR file is deployed.

Related Topics

- *After deploying web applications* on page 121

Special considerations for deploying on Tomcat clusters

To manually deploy web applications to a Tomcat web application cluster distributed over multiple machines, you need to deploy the web applications on to each Tomcat instance. You can use the administrative console to deploy the Crystal Reports Server web applications to the `webapps` subfolder in the Tomcat home directory for each server instance.

Tip: It is recommended that you install and configure a hardware or software load balancer if running Crystal Reports Server web applications on a Tomcat web application cluster. To configure the load balancer and cluster setup please consult your Tomcat documentation.

Deploying with the Oracle Application Server administrative console

Ensure that your Oracle Application Server web application server is installed, configured, and running before deploying WAR files. You must also have created an Oracle container for Java (OC4J) container in which to run Crystal Reports Server.

1. Open the Oracle Application Server Enterprise Manager server page at `http://`*WAS_HOSTNAME*`:`*PORT*`/em`. Replace *WAS_HOSTNAME* with the hostname or IP address of your web application server, and *PORT* with the port number used for HTTP. The default port for Oracle Application Server is 7777.

   The Oracle Application Server Control page is displayed.

2. Click on the **home** OC4J container.

   The **home** group is displayed under the **Groups** heading.

3. In the **home** OC4J container, click on the **Applications** tab.

   The deployed web applications are displayed.

4. Click on the **Deploy** button.

   The "Deploy: Select Archive" window is displayed.

5. Ensure that the **Archive is present on local host option** is selected, unless the web application is already running on the server, in which case select **Archive is already present on the server where Application Server Control is running**.

6. Enter the full path, or browse to the WAR file in the **Archive Location** field.

7. Press the **Next** button to advance to the next step in the WAR deployment wizard.

   The "Deploy: Application Attributes" window is displayed.

8. Enter the application name and context root of the file you wish to deploy. By default, the context root will contain the application name. For example, for `InfoView.war`, the application name will be `InfoView`. When ready, press **Next** to proceed.

   The "Deploy: Deployment Settings" page is displayed.

9. Select the class loading options you want enabled for the WAR file and press **Next** to proceed.

   If your application requires any class libraries, click on **Configure Class Loading** from the **Deployment Tasks** section.

10. In the **Configure Web Module Class Loaders** field, specify the location of JAR file containing the libraries.

11. Click on the **Deploy** button to complete the deployment.

    Check the output of the Progress Messages log field, to ensure that the web application has been deployed.

Related Topics

• *After deploying web applications* on page 121

Deploying with the JBoss administrative console

Ensure that your JBoss web application server is installed, configured, and running before deploying WAR files.

The Java Server Faces (JSF) bundled with the JBoss web application servers must be disabled for the Central Management Console (CMC) and InfoView web clients to work correctly.

To disable JSF, the following directories must be removed and JBoss restarted:

- `JBOSS_HOME`\server\default\deploy\jbossweb-tomcat55.sar\jsf-libs
- `JBOSS_HOME`\server\default\tmp
- `JBOSS_HOME`\server\default\work

Note: To use the Java`log4j` logging included with Crystal Reports Server 2008, refer to section 10.3.7 *Using your own log4j.properties file - class loader scoping* in the *JBoss Development Process Guide*:
http://docs.jboss.org/process-guide/en/html/logging.html#d0e3341

The following deployment paths are based on the different levels of service:

- `JBOSS_HOME`\server\all\deploy
- `JBOSS_HOME`\server\default\deploy
- `JBOSS_HOME`\server\minimal\deploy

1. Copy your WAR files to the appropriate context root sub-directory under one of the above paths, based upon the level of service provided by JBoss for your deployment.

   The web application will be automatically deployed by JBoss when the file is copied to the appropriate directory.

2. Check the JBoss server log, and you should see a message similar to the one shown below to confirm that the WAR deployment succeeded.

   ```
   06:23:08,906 INFO;TomcatDeployer deploy,
   ctxPath=.../BusinessObjects Enterprise 12.0/adminlaunch,
   warUrl=.../tmp/deploy/tmp38470admin-exp.war/
   06:23:09,562 INFO; [ReportSourceBridge] Servlet viewrpt
   started.
   ```

Related Topics
- *After deploying web applications* on page 121

Deploying with the SAP Application Server console

Ensure that your SAP Application Server web application server is installed, configured, and running before deploying WAR files.

First, archive your web application server.

1. Start the "Visual Administrator" tool by running `go.bat` from `<SAP_HOME>\sap\J2E\JC01\j2ee\admin`. Connect to your J2EE engine using the Administrator account.

2. In the "Visual Administrator", select the **Cluster** tab and expand the **Server** > **Services** > **Deploy** node within the J2EE tree.

3. Click **Deploy & Start** in the **Runtime** tab of the right-hand pane. If you would like to start the web application manually later, click the **Deploy** button instead.

4. In the "Deploy & Start" dialog window that appears, select the EAR file archive you created earlier. Click **OK** when done.

5. In the "Deploy Dialog" window, verify the root context and display name properties. Press **OK** to deploy.

   The web application will now be deployed.

Related Topics

-

Deploying with the WebSphere Community Edition administrative console

Ensure that your WebSphere Community Edition web application server is installed, configured, and running before deploying web applications.

Note: The wdeploy command-line deployment tool currently does not support deployment to WebSphere Community Edition. You can only deploy web applications using the WebSphere Community Edition administrative console. To deploy Crystal Reports Server web applications with the administrative console, use the directory that contains the web application code directly:

```
<INSTALLDIR>\BusinessObjects Enterprise 12.0\java\applications
```

Log in to the WebSphere"Application Server Community Edition Administrative Console" using the following URL: `http://WAS_HOST NAME:PORT/console` The WebSphere Community Edition admin console's default port number is 8880.

1. Ensure the myfaces-deployer system module is turned off. Click on the **System Modules** link on the **Console Navigation** bar. Then click on the **Expert User** check box located at the top. Scroll down to find

org.apache.geronimo.configs/myfaces-deployer/2.0.1/car and click on the **Stop** link.

The myfaces-deployer module is turned off.

2. Add a `geronimo-web.xml` file to the WEB-INF directory of each web application file.

Here is a standard `geronimo-web.xml` file for use with CmcApp:

```
<web-app xmlns="http://geronimo.apache.org/xml/ns/j2ee/web-
1.2"
xmlns:nam="http://geronimo.apache.org/xml/ns/naming-1.2"
xmlns:sec="http://geronimo.apache.org/xml/ns/security-1.2"
xmlns:sys="http://geronimo.apache.org/xml/ns/deployment-1.2">

<sys:environment>
<sys:moduleId>
<sys:groupId>com.businessobjects</sys:groupId>
<sys:artifactId>CmcApp</sys:artifactId>
<sys:version>2.0.0.1</sys:version>
<sys:type>war</sys:type>
</sys:moduleId>
<sys:dependencies/>
<sys:hidden-classes>
<sys:filter>com.sun.faces</sys:filter>
<sys:filter>javax.faces</sys:filter>
</sys:hidden-classes>
<sys:non-overridable-classes/>
</sys:environment>
<context-root>/CmcApp</context-root>
</web-app>
```

Note: The `sys:artifactId` and `context-root` elements must be updated with the name of the web application being deployed. For example, to add geronimo-web.xml to InfoViewApp, use `<sys:artifac tId>InfoViewApp</sys:artifactId>` and `<context-root>/In foViewApp</context-root>`.

3. Under the **Applications** heading of the console navigation menu, click **Deploy New** in the left navigational pane.

4. Click the **Install New** button to view the "Install New Applications" screen.

5. Click the archive **Browse** button and navigate to the location of the directory that contains the web application to deploy.

```
<INSTALLDIR>\BusinessObjects Enterprise 12.0\java\applica
tions
```

6. Select any other options you want to use, such as **Start app after install** or **Redeploy application**.

7. Click **Install** to install the web application.

   After the web application is deployed, a list of installed web applications is displayed.

8. Verify that the web application was deployed. Repeat steps 2-5 for each application to deploy.

Related Topics

- *After deploying web applications* on page 121

Get More Help

appendix

A

Online documentation library

Business Objects offers a full documentation set covering all products and their deployment. The online documentation library has the most up-to-date version of the Business Objects product documentation. You can browse the library contents, do full-text searches, read guides on line, and download PDF versions. The library is updated regularly with new content as it becomes available.

http://help.sap.com/

Additional developer resources

https://boc.sdn.sap.com/developer/library/

Online customer support

The Business Objects Customer Support web site contains information about Customer Support programs and services. It also has links to a wide range of technical information including knowledgebase articles, downloads, and support forums.

http://www.businessobjects.com/support/

Looking for the best deployment solution for your company?

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Do you have a suggestion on how we can improve our documentation? Is there something you particularly like or have found useful? Drop us a line, and we will do our best to ensure that your suggestion is included in the next release of our documentation:

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