Installing
ADOBE® COLDFUSION (2016 release)

Adobe

Legal notices

For legal notices, see http://help.adobe.com/en_US/legalnotices/index.html.

Contents

Understanding ColdFusion Server Profiles

To develop and deploy ColdFusion applications, you can use one of the multiple server profiles available when you install ColdFusion. The ColdFusion installer allows you to install the ColdFusion Server in the following profiles (modes):

1 Development profile

2 Production profile

3 Production profile (secure)
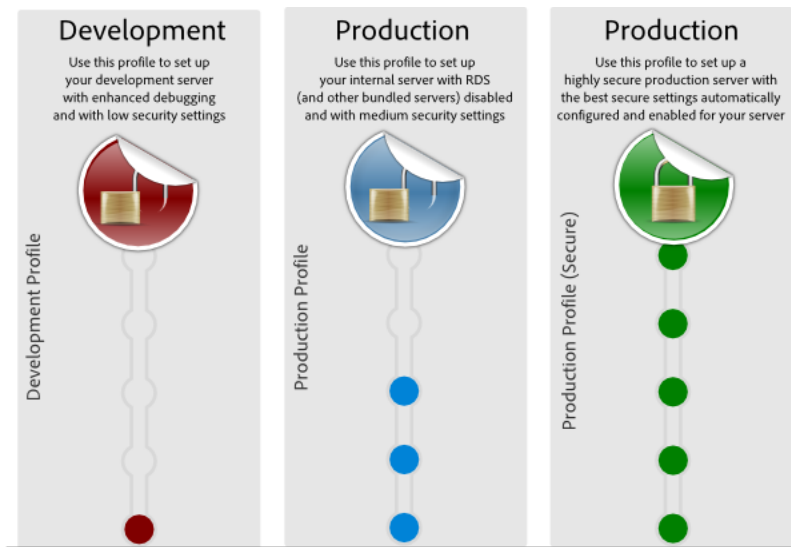
Depending on the type of profile selected during the installation, the server will be automatically configured with the appropriate settings. Choose the right profile in the installer:

Once you install the Server using a particular profile, you can't change the profile later.

The following table shows the difference between the 3 supported Server profiles:

Feature	Development Profile	Production Profile	Production Profile (Secure)
Support for all types of debugging	Yes	No	No
Support for remote inspection	Yes	No	No
Support for strict enforcement of complex passwords	No	Yes	Yes
Support for remote start/stop	Yes	No	No
Support for Weinre and other bundled servers (For instance, Node.js)	Yes	No	No
Support for enabling unused servlets	Yes	No	No
Support for Secure Profile .	No	No	Yes

Depending upon the option selected, a few settings will be pre-configured in the Administrator. You have no choice to change these settings during installation. However, you can modify these settings later from the Administrator (NOT RECOMMENDED).

Note: For the Production Profile, only the basic security settings are pre-configured by the installer. If you need a highly secure producture server, use the Production Profile (Secure) or manually configure the security settings.

Preparing to Install ColdFusion

> **Note:** Understand the various ColdFusion Server Profiles. Understanding ColdFusion Server Profiles.

Preparing to Install ColdFusion

Just before installing Adobe ColdFusion, review the ColdFusion product editions, system requirements, and other high-level considerations.

About the ColdFusion installation

ColdFusion provides a powerful and flexible installation and upgrade process. The ColdFusion installation process includes the following phases:

1 Plan the installation by determining your installation, configuration, and upgrade options.

2 Run the ColdFusion installer.

3 (JEE configuration only) Deploy and configure ColdFusion on your JEE application server. The ColdFusion installation process supports the following scenarios:

* **New installation** Install ColdFusion on a computer with no earlier ColdFusion installation.

* **Upgrade installation** You can upgrade from ColdFusion 11 or ColdFusion 10. When upgrading, the installer preserves the existing settings and installs in a new directory, automatically assigning ports that do not conflict with the existing installation.You can install ColdFusion 2016 in any of the following configurations:

  * **Server configuration** Lets you install ColdFusion with an embedded JEE server. This was formerly known as the stand-alone configuration. For enterprise and developer licenses, you can create and manage new ColdFusion instances. For information on installing the server configuration, see Installing the Server Configuration.

> **Note:** ColdFusion does not offer a separate multi-server mode of installation.

  * **JEE configuration (Enterprise Edition only)** Lets you deploy ColdFusion 2016 as a Java application running on a Java Enterprise Edition (JEE) application server, using a third-party JEE server, such as IBM WebSphere or Oracle WebLogic. When you use the JEE configuration, you can deploy ColdFusion multiple times on a single computer. For information on installing the JEE configuration, see Installing the JEE Configuration.

Installing ColdFusion

ColdFusion product editions

The ColdFusion product editions are available on the Adobe website. To view the product editions, go to www.adobe.com/go/learn_cfu_cfeditions_en.

System requirements

The ColdFusion system requirements are available on the Adobe website. To view the system requirements, including a list of supported JEE application servers, see www.adobe.com/go/learn_cfu_cfsysreqs_en.

Installation considerations

Before installing ColdFusion, review the considerations for installing or upgrading on your platforms.

> **Note:** To use VisiBroker for CORBA connections in ColdFusion, see Enabling CORBA support (refer to Configuring your System) .

* Adobe ColdFusion (2016 release), ColdFusion 11, ColdFusion 10, and ColdFusion 9 can co-exist on the same system.

- In the case of ColdFusion cluster setup, any changes to the cluster settings, for example, adding a new member, or changing member port (in the ColdFusion Administrator) causes web server restart. This may result in page time-out.Refresh the page to resolve this issue.

- If ColdFusion uninstaller is not able to remove the connector for Apache (for example, in the case of Mac OS X), do the following to manually remove it:

1 Delete the mod_jk.conf found in {apache_install_location}/conf/ directory.

2 Delete {cfroot}/config/wsconfig/<magic_number> folder which has the Apache connector file, mod_jk.so.

3 Remove the following line from {apache_install_location}/conf/httpd.conf file:Include "{apache_install_location}\conf\mod_jk.conf".

4 From the ColdFusion Administrator, when you wish to start multiple instances, start the cfusion instance first, and then start the other instances..

5 When you run the ColdFusion uninstaller, the logs folder (ColdFusion_Home/cfusion/) is deleted.

6 When you install ColdFusion, you can install the Administrator Component to start and stop remote server. Use the Remote Instance Administrator Component credentials to remotely start/stop the server from applications such as Server Manager, Instance Manager in ColdFusion Administrator, or ColdFusion Builder.

7 JEE deployment of ColdFusion EAR or WAR on JRun is not supported. The EWS.jar }}must be present in the {{systemclasspath while deploying on a JEE server.

Installation considerations for all platforms

The following are installation considerations for all platforms:

Installation considerations for Windows

The following installation considerations are for Windows systems only:

- Do not configure the server running ColdFusion as a Primary Domain Controller (PDC) or Backup Domain Controller (BDC). Adobe follows the Microsoft network model, in which the first level is the PDC or BDC. These systems only manage the network or domain and are not designed to run application servers. ColdFusion should reside on the second level of Microsoft Windows stand-alone systems. Stand-alone servers can participate in a network or domain.

- Microsoft Windows XP handles only ten incoming TCP/IP connections concurrently. Therefore, Adobe does not recommend using this operating system in a production environment; use Microsoft Windows 2003 Server and Windows 2008 Server instead.

Installation considerations for UNIX

The following are installation considerations for UNIX systems only:

- For troubleshooting purposes, the installer creates the following log file during an installation or upgrade in UNIX: cf_root/Adobe_ColdFusion_2016_InstallLog.log. If you contact AdobeTechnical Support for installation support, send them this file.

- If you are deploying the JEE configuration on a platform other than Linux or Solaris, use the ColdFusion_2016_WWEJ_java.jar. This Java-only installer does not include features that require platform-specific binary files, such as C++ CFX support.

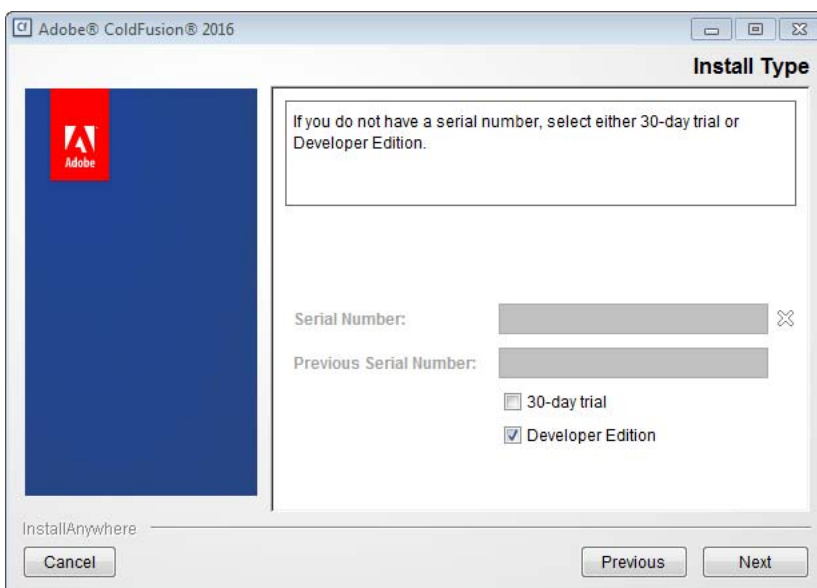# Installing the Server Configuration

Installing the Server configuration

The ColdFusion server configuration contains an embedded copy of Tomcat and is most similar to earlier versions of ColdFusion.

Note : The cf_root directory refers to your installation directory. By default, this directory is C:\ColdFusion2016 in Windows, and /opt/ColdFusion 2016 in UNIX.

Although the Adobe ColdFusion (2016 release) installer provides an intuitive interface, it helps to plan your answers to the questions asked by the installer. Use the steps below to install the server configuration of Adobe ColdFusion (2016 release).

Accept the license agreement.

Enter the serial number.

Choose the type of installation:

- Server configuration
- JEE configuration
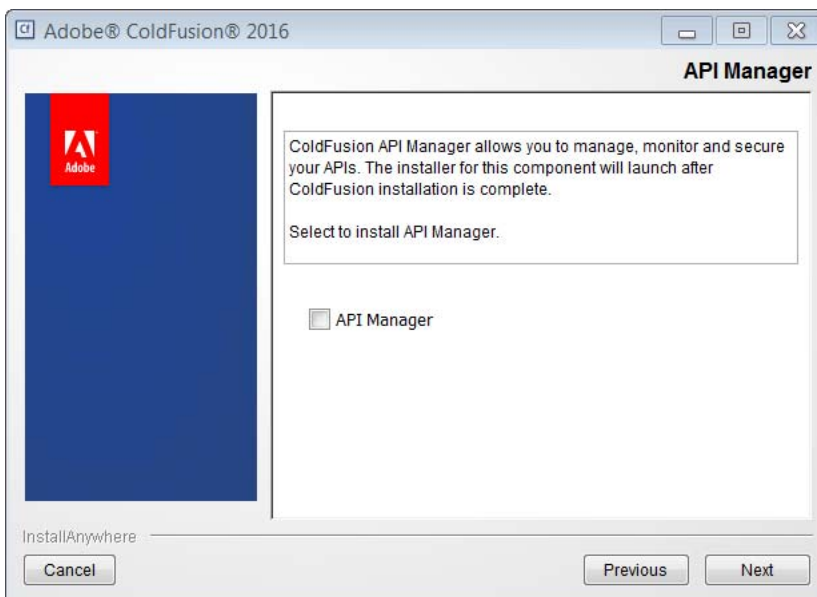
Enable the **API Manager** check-box and continue with the installation process.

You can view this option only if you have entered a valid serial number or chosen 30-day trial.

Select one of the supported Server profiles. For more information on the profiles, see Understanding ColdFusion Server Profiles.

Select the sub-components to install.
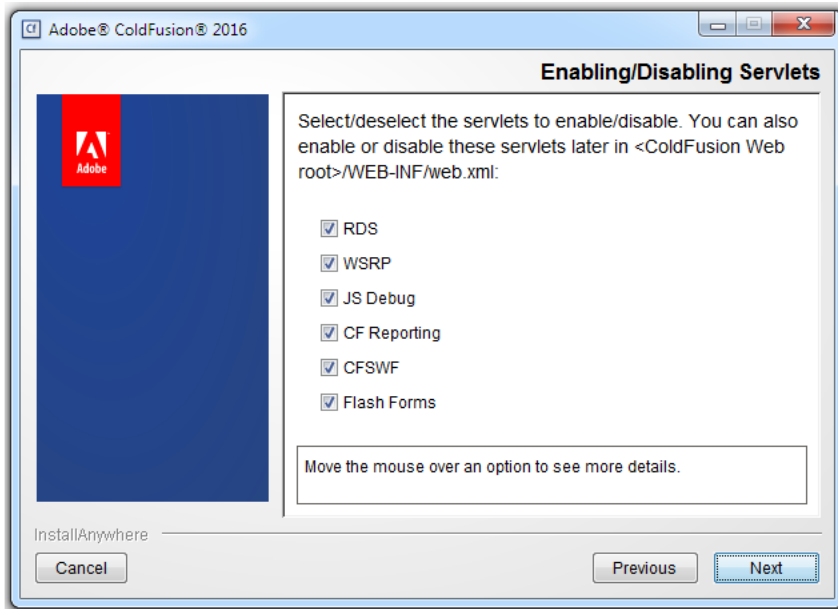
Enable/disable the servlets to use.

Note: this option is valid only for the following profiles:

- Production profile
- Production + Secure Profile
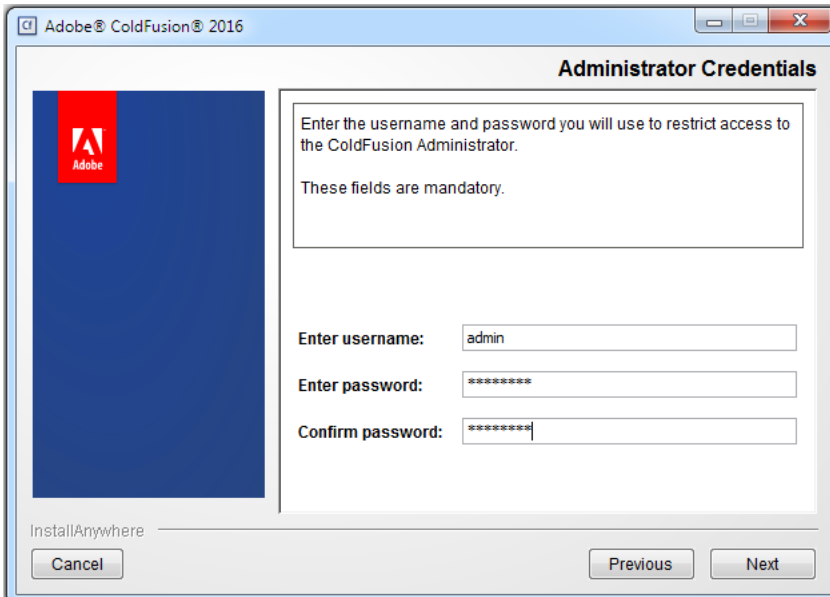
Specify the credentials to log in to ColdFusion administrator.

Note: For the Production Profile and Production + Secure Profile, there is a certain amount of password strength that is expected. If the password is not string enough, you get the following warning message:
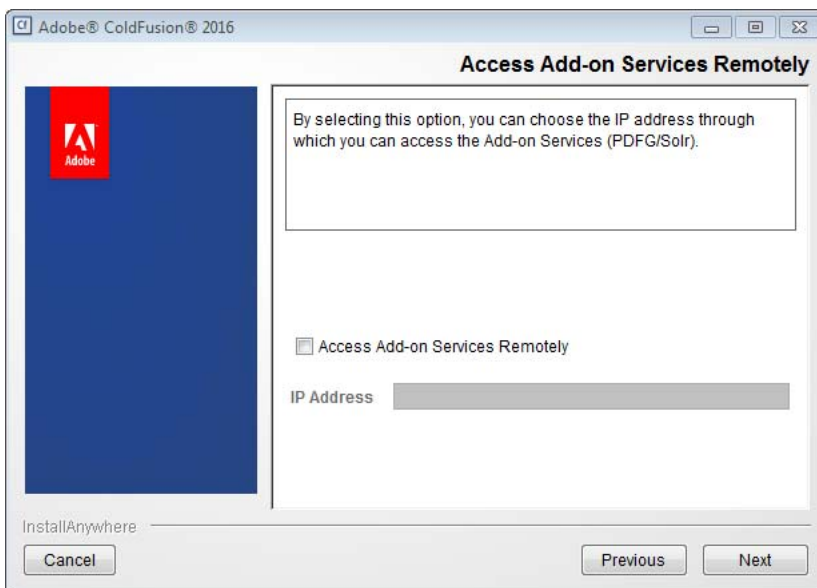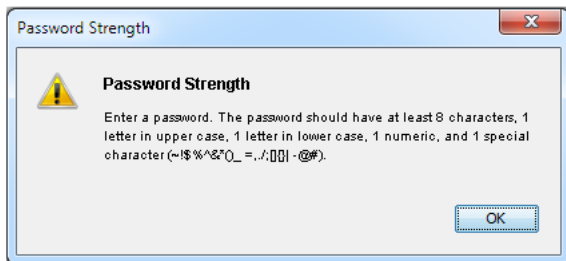
Access add-on services remotely by allowed certain IP addresses.
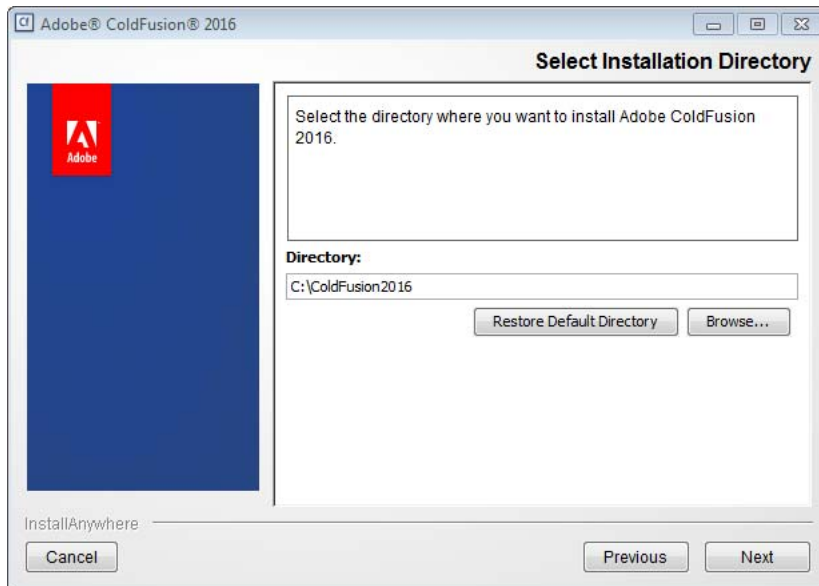
Enter the installation folder for ColdFusion.
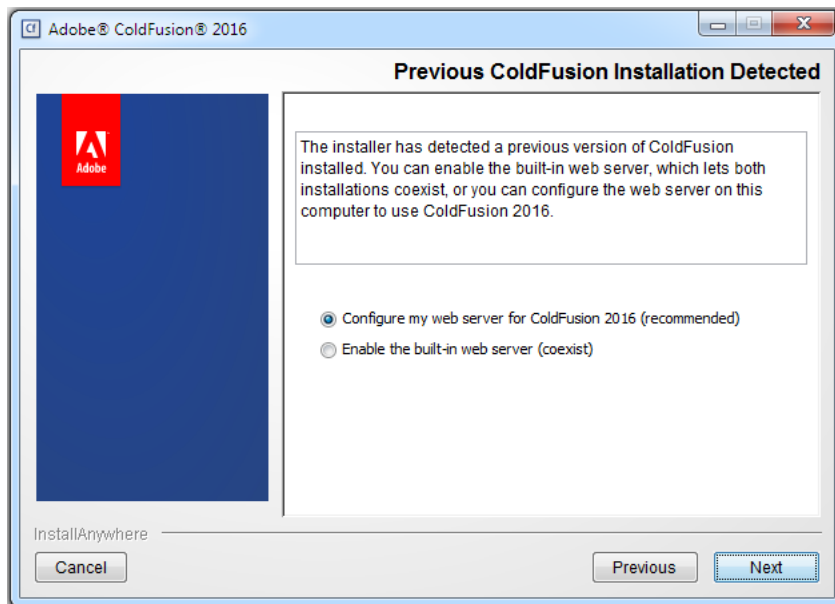
Choose an option if there is a previous version of ColdFusion in your server.
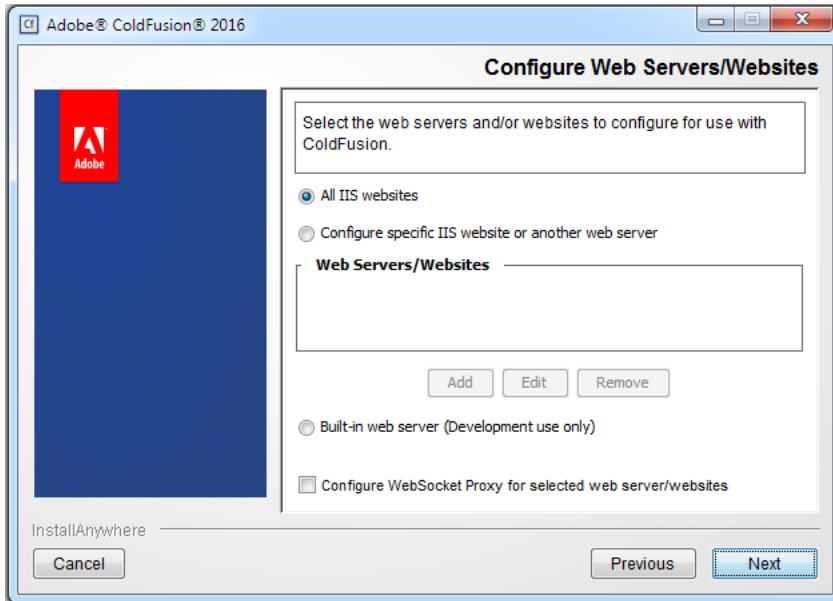
- Configure web server for ColdFusion

- Enable ColdFusion in-built web server
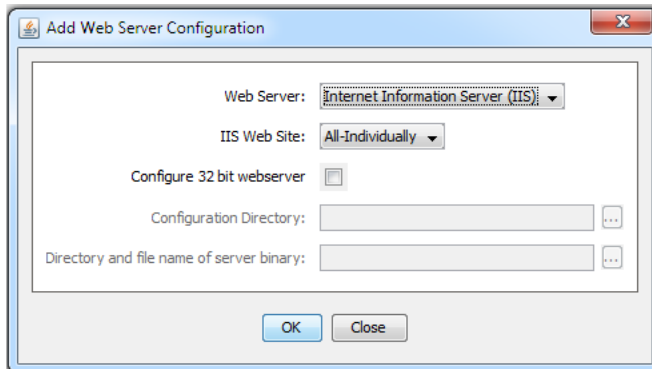
Configure the IIS web server.
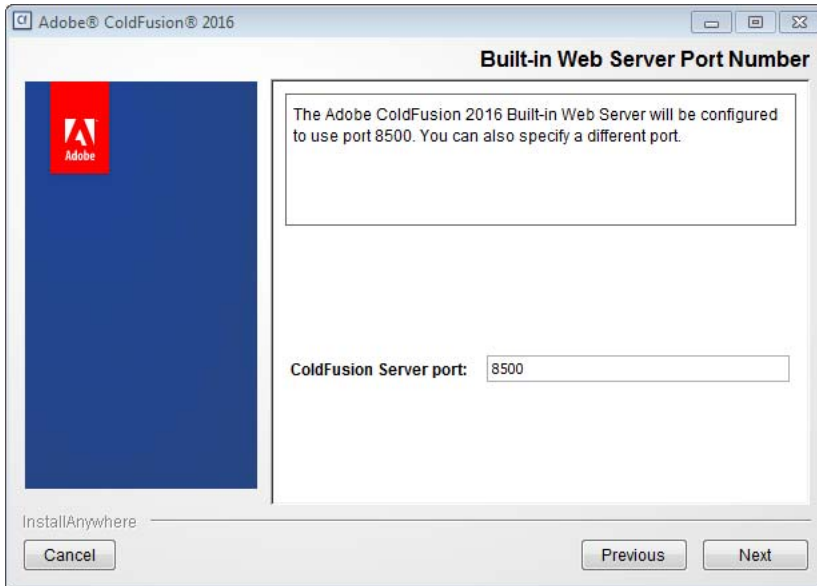
Specify the port of the built-in web server.
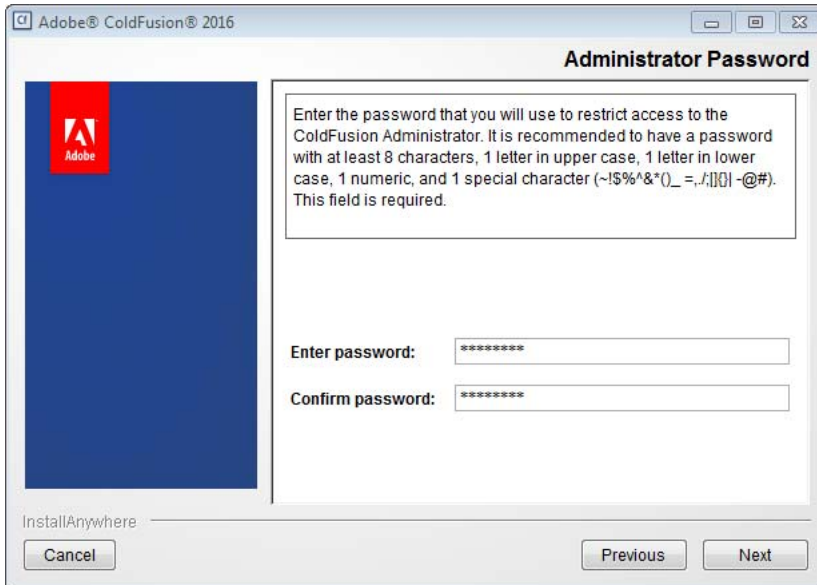
Confirm the administrator password.
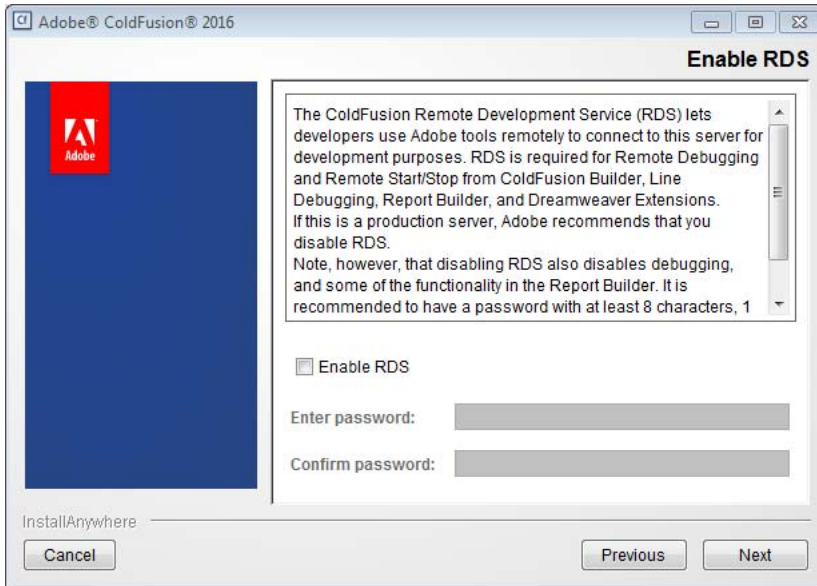
Enable or disable RDS.

RDS allows the server to interact with remotely connected developers. Adobe recommends that you disable RDS for production servers.Disabling RDS also disables the directory browsing applets in the ColdFusion Administrator.
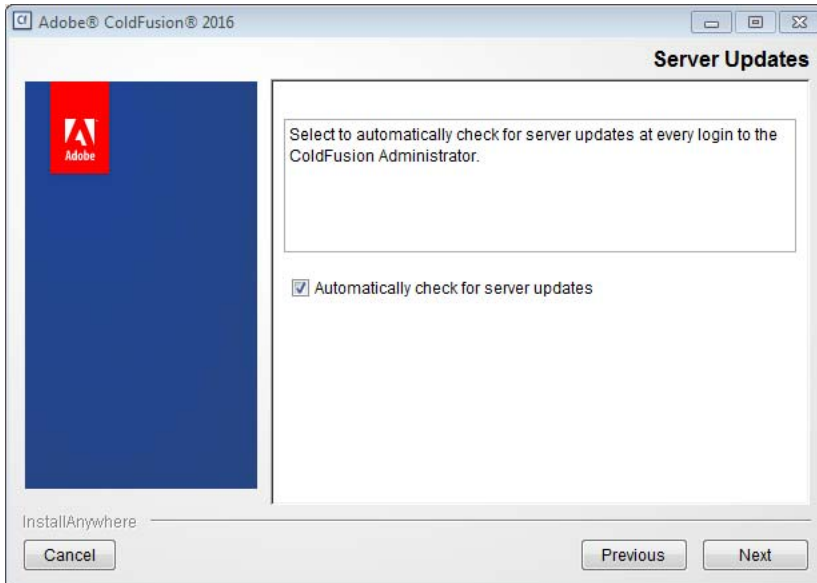
Specify if you want to check for server updates.
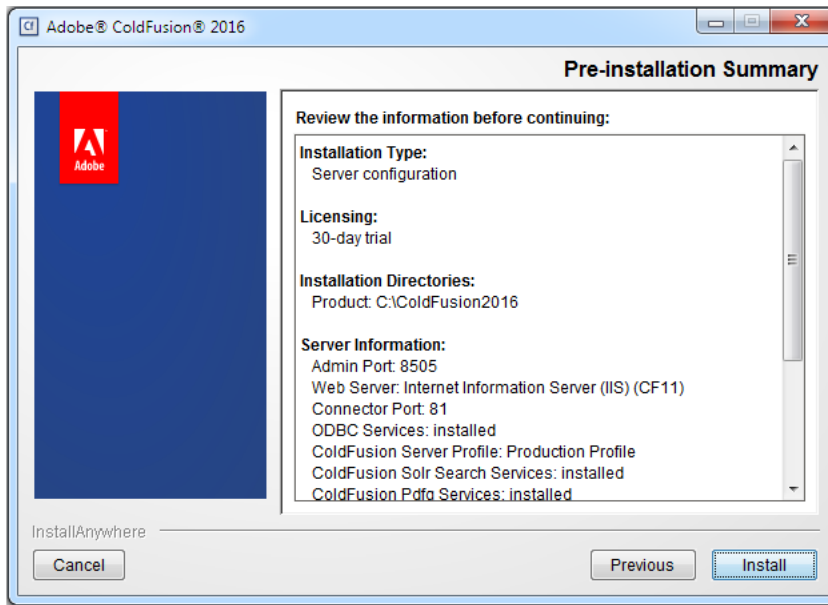
View the pre-installation details.
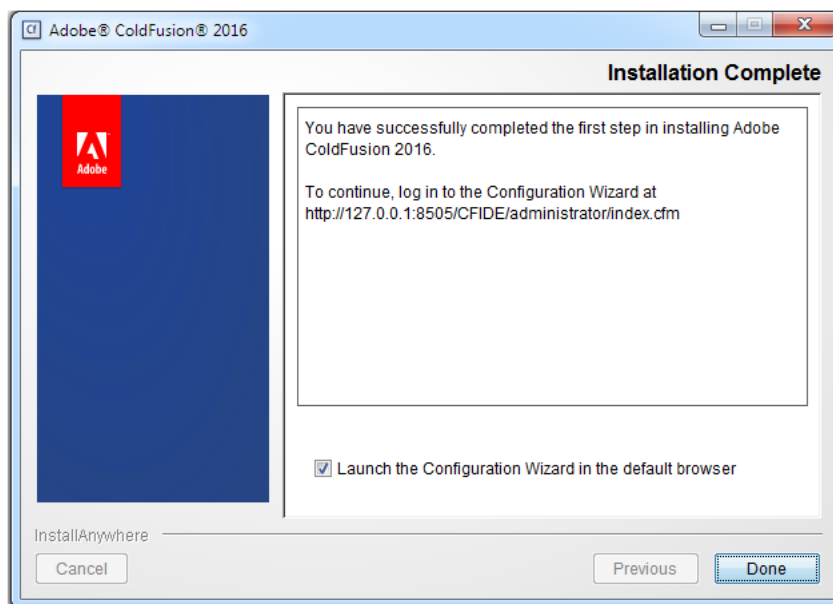
Exit the installation and verify the installation by logging in to the administrator.

Installing ColdFusion using the server configuration

Once you have determined the answers to the questions in the above section Gathering information necessary to install the server configuration, you can install the ColdFusion server configuration in Windows or UNIX, as applicable.

Installing ColdFusion server configuration in Windows or MAC

> **Note: (Windows only)** The Windows installer requires a computer that supports at least 256 colors.

Install ColdFusion in Windows or MAC

1. Read the online version of the Release Notes for any late-breaking information or updates. For more information, see www.adobe.com/go/learn_cfu_releasenote_en.

2. Ensure that your operating system meets the system requirements described on the Adobe website at www.adobe.com/go/learn_cfu_cfsysreqs_en.

3. Review Installation considerations for Windows and Installation considerations for all platforms (Refer to the Installing Adobe ColdFusion).

4. Determine the answers to the questions in the above table in "Gathering information necessary to install the server configuration" section.

5. Close any applications that are currently running on your computer.

6. If you plan to configure an external web server, ensure that the web server is running.

7. Insert the DVD or download the setup file from the Adobe website.

8. If the installation wizard does not start automatically when you insert the DVD, locate the appropriate installer file on the DVD and double-click it. If you are installing from a network or a downloaded file, locate the ColdFusion installer ***Windows only**:* coldfusion_2016_WWEJ_win32.exe/coldfusion_2016_WWEJ_win64.exe and double-click it.*MAC only:*Extract the coldfusion_2016_WWEJ_osx2016.dmg file and double-click the installer.

9. Follow the instructions in the installation wizard, and let it run to completion.

10. Click OK to open the ColdFusion Administrator and configure the server.

11. To install any other integrated Adobe or third-party technologies, see Installing Integrated Technologies.

12. Configure and manage your system, as described in Configuring your Systemyour System.

13. To learn about ColdFusion, read the documentation, which is accessible through the Documentation link on the Resources page of the ColdFusion Administrator.

Installing the ColdFusion server configuration in UNIX

By default, ColdFusion installs into the /opt/coldfusion2016 directory. You can also choose to install ColdFusion in a different directory.

> **Note:** The default user is nobody for the UNIX installer running ColdFusion.

Install the ColdFusion server configuration in UNIX

1. Read the online version of the Release Notes for any late-breaking information or updates. For more information, see www.adobe.com/go/learn_cfu_releasenote_en.

2. Ensure that your operating system meets the system requirements described on the Adobe website at www.adobe.com/go/learn_cfu_cfsysreqs_en.

3. Review Installation considerations for UNIX and Installation considerations for all platforms (Refer to the Installing Adobe ColdFusion).

4. Determine the answers to the questions in the above section "Gathering information necessary to install the server configuration".

5. If you plan to configure an external web server, ensure that the web server is running.

6 Log in as root. Copy the installation file that is appropriate for your platform and locale from the DVD or Adobe website, and save it to a directory on your local disk. The following installation files are those for the supported server configuration platforms:

Platform	File
Linux	• ColdFusion_2016_WWEJ_linux32.bin (for 32-bit systems)

• ColdFusion_2016_WWEJ_linux64.bin (64-bit systems)

Solaris	ColdFusion_2016_WWEJ_solaris64.bin

1 Using the cd command, go to the directory that contains the installation file.

2 Ensure that you have executable permission for the installation file. You can change permissions on the file by using the following command:

```
chmod 777 ColdFusion_2016_WWEJ_solaris64.bin
```

3 Start the installation with the following command:

```
./<filename>
```

> **Note:** To run the Linux installer in GUI mode, type ./<filename> -i gui.

4 Follow the prompts in the installation program, and let it run to completion.

> **Note:** For security reasons, it is crucial that you do not use root for the runtime user.

5 Start ColdFusion with the following command:

```
/cf_root/cfusion/bin/coldfusion start
```

If you specified the use of an external web server when you ran the installer, ColdFusion automatically runs the cf_root/cfusion/bin/cf-connectors.sh script when it starts the first time. This shell script runs the Web Server Configuration Tool by using the settings that you specified during the installation. If there are problems running this script, review the configuration and bin directory specifications, modify as necessary, and rerun the script. You can also configure your web server by using the scripts in cf_root/cfusion/bin/connectors, as appropriate. To stop ColdFusion, use the following command:

```
/cf_root/cfusion/bin/coldfusion stop
```

For more information on managing processes, see Managing the ColdFusion process in UNIX.

6 Open ColdFusion Administrator to run the Configuration wizard.

7 Configure and manage your system, as described in Configuring your System.

8 To install any other integrated Adobe or third-party technologies, see Installing Integrated Technologies.

9 To learn about ColdFusion, read the documentation, which is accessible through the Documentation link on the Resources page of the ColdFusion Administrator.

10

ColdFusion installation directory structure

By default, ColdFusion2016 is your installation directory. The following table describes the directory structure:

Directory	Description

cfusion	Contains the following directories:
	• bin: Programs for starting, stopping, and viewing information for ColdFusion, and to run Crystal Reports (Windows only). It also contains the password reset scripts for server administrator and Admin Component for remote server start and stop.
	• cache: Repository for temporary files from ColdFusion.
	• cfx: Sample C++ and Java CFX files with their supporting files. You can also store your CFX files in this directory (although you can put them in any location that is defined in your classpath).
	• charting: Files for the ColdFusion graphing and charting engine.
	• CustomTags: Repository for your custom tags
	• db: The sample Apache Derby databases for all platforms.
	• gateway: Files for ColdFusion event gateways.
	• jetty: Solr configuration files and files related to remote instance start and stop.
	• jintegra: (Applies only to Windows) JIntegra programs, libraries, and other supporting files (for example, to integrate Java and COM code; manage access to ActiveX controls (OCXs) that are hosted in a graphical user interface (GUI) container; and register the JVM and type libraries). (Applicable only for Windows.)
	• jnbridge: Files for .NET Integration Services.
	• lib: JAR, XML, property, and other files that are the foundation of ColdFusion, for functionality such as queries, charting, mail, security, Solr, and system probes.
	• logs: Repository for ColdFusion log files. JRE-specific log files are in the runtime/logs directory. Console outputs are logged in to coldfusion-out.log instead of cfserver.log.
	• Mail: Repository for spooled mail and mail that cannot be delivered.
	• META-INF: XML metadata for the ColdFusion Administrator.
	• MonitoringServer: Contains {{crossdomain.xml }}used for multi-server monitoring.
	• registry: (UNIX only) Flat file to store registry settings
	• runtime: Programs and supporting files for the ColdFusion runtime. Also, contains the Tomcat libraries. The conf directory in runtime contains all Tomcat configuration files.
	• stubs: web services.

config	Contains instances.xml and connector configuration files. Also, contains cluster configuration file, cluster.xml.
jre	Java runtime files.
uninstall	Files to uninstall ColdFusion.

Note: The ColdFusion_install\cfusion\bin directory contains the Jvm.config file.

Using the built-in web server

ColdFusion provides in-built Tomcat application server that you can use to develop ColdFusion applications.

Note that the version of Tomcat application server bundled with Sdobe ColdFusion (2016 release) is 8.0.27.

During the ColdFusion installation, choose a web server. If you select the built-in web server, your web root directory is located in the cfroot/wwwroot directory. By default, the web server runs on port 8500. It means that to display a page in your application, append:8500 to the host name or IP address in the URL; for example, http://localhost:8500/YourApp1/index.cfm. If the page does not appear, ensure that the document is located in the built-in web server's web root directory; for example, C:\ColdFusion2016\cfusion\wwwroot\YourApp1\index.cfm.

Note: If port 8500 is in use, the installer checks up to 100 ports (starting with 8501) to find a port that is not used. ColdFusion uses that port and displays a message to indicate the selected port.

If you select an external web server during installation, the built-in web server is deactivated.

Change the port of the built-in web server

1 Back up the server.xml file. This file is in the cfroot\cfusion\runtime\conf directory.

2 Open the original server.xml file for editing.

3 Search for internal webserver start.Update the port number.

```
port="8500" protocol="org.apache.coyote.http11.Http11Protocol" connectionTimeout="20000" redirectPort="8445" compression="on"
useSendfile="no" compressableMimeType="text/html,text/xml"/>
```

4 Save the file and then restart ColdFusion.

Configuring the built-in web server (Tomcat)

While installing, if you have configured ColdFusion on an external web server, do the following to configure ColdFusion on in-built Tomcat:

1 Open the cfroot\cfusion\runtime\conf\server.xml file.

2 Search for internal webserver start.Uncomment the following connector XML.

```
port="8500" protocol="org.apache.coyote.http11.Http11Protocol" connectionTimeout="20000" redirectPort="8445"/>
```

Save the file, and then restart ColdFusion.

> To enable OS Symbolic links after switching to Tomcat, edit the context.xml file found in /cfusion/runtime/conf/ to add allowLinking="true" attribute to the context element.

Starting, stopping, and restarting ColdFusion

On Windows

? At prompt, go to the directory cfroot\cfusion\bin and run the following command: coldfusion.exe -start -console. To stop ColdFusion, use the command coldfusion.exe -stop -console. To restart, use the command coldfusion.exe -restart -console.Alternatively, you could also start, stop, and restart ColdFusion server using Windows Services.

> **Note:** Paused tasks misfire when restarting ColdFusion.

> **Note:** As possible in previous versions of ColdFusion, you can also use the cfstart script to start/stop the ColdFusion sever.

> **Note:** The -console argument is optional. If it is not provided, the logs are saved in the cfroot\cfusion\logs directory.

On UNIX/Linux/Solaris/MAC OSX

? At prompt, go to the directory cfroot\cfusion\bin and run the following command: ./coldfusion start}}To stop ColdFusion, use the command ./{{coldfusion stop. }}To restart, use the command {{./coldfusion restart.

> **Note:** Paused tasks misfire when restarting ColdFusion.

> **Note:** Use the status command to find the status of ColdFusion server.

Editing the JVM settings

To edit the JVM settings, open the cfroot\cfusion\bin\jvm.config file and update the following details:

- java.home: Java home. If not set, ColdFusion verifies the default JRE in the cfroot\jre folder, in the registry, or in the J{{AVA_HOME}} environment variable.
- java.args: Settings for -Xmx, ColdFusion classpath, and so on.
- java.library.path: Settings for library path.
- java.class.path: Additional classpath settings in a comma-separated list.
- application.home: Default is cfroot\cfusion

-

Creating and editing a new ColdFusion instance

After installing ColdFusion in stand-alone mode, create an instance of ColdFusion using the ColdFusion Administrator.

1 In the ColdFusion Administrator, go to Enterprise Manager > Instance Manager.

2 Click Add New Instance.

3 Enter the server name and server directory.

4 (Optional) Check Create Windows Service.

5 Click Submit. In the Instance Manager, start, stop, restart, delete, access website, or access administrator.

6 Click the Edit icon to edit the instance manager.

7 Edit the internal webserver port and load balancing factor.Load balancing factor represents the load the instance takes up. Load balancing factor is applicable only if the instance is part of the cluster. For example, the load balancing factor for the first instance is 1 and that of the second instance is 2. The second instance receives two times more requests.

8 Click Submit.

Registering a remote instance

Register a new remote instance of ColdFusion using the ColdFusion Administrator.

1 In the ColdFusion Administrator, click Enterprise Manager > Instance Manager > Register Remote Instance.

2 Specify the details such as instance name, remote host, remote port, http port, and JVM route. Instance name is a string that is used to identify the instance. Remote port and HTTP port are displayed in the Instance Manager page. These ports are provided in the server.xml file available in the runtime\conf folder of the instance. Remote port is the AJP port and the instance port is the connector port.JVM route is the remote instance name. The JVM route is an attribute that acts as an identifier for a particular Tomcat worker. JVM route is provided in the server.xml file available in the runtime\conf folder of the instance. For more information on JVM route, see http://tomcat.apache.org/tomcat-8.0-doc/cluster-howto.html.

> **Note:** A remote instance and a local instance cannot have the same JVM route if they are added in a cluster with sticky session enabled.

3 If you want remote start and stop functionality over HTTP, enter Admin Component port, Admin Component user name, and Admin Component password. The default Admin Component port is 8985.

> **Note:** To enable this feature, install admin component on the remote host.

   a In the remote host, open the ColdFusion_installtion\cfusion\jetty\etc\jetty.xml.

   b Search for the string, org.mortbay.jetty.bio.SocketConnector.

   c Update the host with the IP address of the remote host.

   d Restart the jetty server.

4 Click Submit.

Adding start and stop functionality to a remote instance over HTTPS

You can start and stop a remote instance over HTTPS or HTTP. To enable this feature, install admin component while installing ColdFusion. You can install Solr, admin component, or both while installing ColdFusion.

1 Do the following in the remote host.

    1 In the remote host, generate a private key in a keystore file. Provide the details at prompt.

```
cfroot\jre\bin\keytool -genkeypair -alias certificatekey -keyalg RSA -validity 7 -keystore keystore.jks
```

    2 Export the certificate. You can have a self-signed certificate or a certificate from a Certificate Authority.

```
cfroot\jre\bin\keytool -export -alias certificatekey -keystore keystore.jks -rfc -file selfsignedcert.cer
```

    3 Copy the jks file created in the jetty\etc directory.

    4 Open the jetty\etc\jetty.xml file.

    5 Search for the string, To add an HTTPS SSL Listenerand add the following entry:

```
<Arg> <New class="org.mortbay.jetty.security.SslSocketConnector"> <Set name="Port">8443</Set> <Set
name="maxIdleTime">30000</Set> <Set name="keystore"><SystemProperty name="jetty.home" default="." />/etc/jks-file.jks</Set>
<Set name="password">changeit</Set> <Set name="keyPassword">changeit</Set> <Set name="truststore"><SystemProperty
name="jetty.home" default="." />/etc/jks-file.jks</Set> <Set name="trustPassword">changeit</Set> </New> </Arg> </Call>
```

    6 Update the keystore name, password, key password, and jks file in the entry.

    7 Search for the string org.mortbay.jetty.bio.SocketConnector.

    8 Update the host with the IP address of the remote host.

    9 Restart the jetty server.

> **Note:** If the remote server is running on Windows Vista, Windows 7, or Windows Server 2008, start the jetty sever with admin privileges.

10 Do the following in the local host from where you add the remote instance:

    1 Copy the .cer file created in the remote host to any of the locations.

    2 Import the certificate.

```
cfroot\jre\bin\keytool.exe -importcert -keystore "cfroot\jre\lib\security\cacerts" -file selfsignedcert.cer -storepass password
```

    3 Register the remote instance using the ColdFusion Administrator. For more information, see Registering a remote instance section in this document.

    4 In the Register Remote Instance page, enter the admin component port, admin component user name, and admin component password (user name and password. These details you specified while installing the Remote Instance Administrator). The default https port is 8443.

    5 Select the HTTPS check box.

    6 Click Submit.

Setting up remote start and stop functionality using HTTPS in Server Manager

You can set up start and stop remote instance functionality in Server Manager. To enable this feature, install Remote Instance Administrator while installing ColdFusion.

1 Do the following in the remote host.

    1 In the remote host, generate a private key in a keystore file. Provide the details at prompt.

```
cfroot\jre\bin\keytool -genkeypair -alias certificatekey -keyalg RSA -validity 7 -keystore keystore.jks
```

    2 Export the certificate. You can have a self-signed certificate or a certificate from a Certificate Authority.

```
cfroot\jre\bin\keytool -export -alias certificatekey -keystore keystore.jks -rfc -file selfsignedcert.cer
```

    3 Copy the .jks file created in the remote host to the jetty\etc directory.

    4 Open the jetty\etc\jetty.xml file.

    5 Search for the string, To add a HTTPS SSL Listenerand then add the following entry:

```
<Arg> <New class="org.mortbay.jetty.security.SslSocketConnector"> <Set name="Port">8443</Set> <Set
name="maxIdleTime">30000</Set> <Set name="keystore"><SystemProperty name="jetty.home" default="." />/etc/server.jks</Set>
<Set name="password">changeit</Set> <Set name="keyPassword">changeit</Set> <Set name="truststore"><SystemProperty
name="jetty.home" default="." />/etc/server.jks</Set> <Set name="trustPassword">changeit</Set> </New> </Arg> </Call>
```

    6 Update the keystore name, password, key password, and jks file in the entry.

    7 Search for the string, org.mortbay.jetty.bio.SocketConnector.

    8 Update the host with the port number of the remote host.

    9 Restart the jetty server.

> **Note:** If the remote server is running on Windows Vista, Windows 7, or Windows Server 2008, start the jetty sever with admin privileges.

10 Do the following in the local host from where you add remote instance:

    1 Copy the .cer file created in the remote host to any of the locations.

    2 Import the certificate.

```
cfroot\jre\bin\keytool.exe -importcert -keystore "cfroot\jre\lib\security\cacerts" -file selfsignedcert.cer -storepass password
```

    3 Open wwwroot\CFIDE\ServerManager\ServerManager.air on the local host.

    4 Specify the connection details.

    5 Click Start/Stop Details.

    6 Select HTTPS.

7   Provide the following information:

- **App Server Username:** User name for the admin component that you specified while installing ColdFusion. Default value is admin.

- **App Server Password:** Password for the admin component.

- **Port:** ColdFusion remote instances HTTPS port.

- **Server:** ColdFusion remote instance name.

- **ColdFusion Version:** For 2016 version of ColdFusion.

- **Admin Server Port:** Default https port is 8443. Port of the Jetty server.

- **Context Root:** Value is AdminServlet.

8   Click Apply.

Setting up remote start and stop functionality using HTTP in Server Manager

You can set up start and stop remote instance functionality in Server Manager. To enable this feature, install Remote Instance Administrator while installing ColdFusion.

1   Do the following in the remote host:

   1   In the remote host, open the ColdFusion_installation\cfusion\jetty\etc\jetty.xml.

   2   Search for the string, org.mortbay.jetty.bio.SocketConnector.

   3   Update the host with the IP address of the remote host.

   4   Start the jetty server. Go to the ColdFusion_installation\cfusion\jetty directory and use jetty.exe. You can also use the jetty services in the Windows services.

5   Open wwwroot\CFIDE\ServerManager\ServerManager.air on the local host.

6   Specify the connection details.

7   Click Start / Stop Details.

8   Select HTTP.

9   Provide the following information:

- **App Server Username:** User name for the admin component that you specified while installing ColdFusion. The default value is admin.

- **App Server Password:** Password for the admin component.

- **Port:** ColdFusion remote instance's HTTP port.

- **Server:** ColdFusion remote instance name.

- **ColdFusion Version:** For ColdFusion (2016 release), the value 2016.

- **Admin Server Port:** Default https port is 8985. Port of the Jetty server.

- **Context Root:** Value is AdminServlet.

10 Click Apply.

Managing clusters

Manage clusters using the ColdFusion Administrator.

1 In the ColdFusion Administrator, click Enterprise Manager > Cluster Manager.

2 Enter a cluster name and then click Add.

3 Click the cluster name and move the servers to the cluster based on the requirement.

4 (If necessary) Edit the multicast port.Multicast port is used to group the cluster members together. Default value of multicast port is 45564. After you create a cluster, the port is added in the cfroot\config\cluster.xml file. For more information on multicast port, see http://tomcat.apache.org/tomcat-8.0-doc/config/cluster-membership.html.

5 Specify if you need sticky session.Sticky session ensures that after a session is established on an instance, all future requests from the client are mapped to that instance. Click Submit.

> **Note:** Restart the web server if cluster instances are modified.

Adding a remote instance to a cluster

To add a remote instance to a cluster, add the cluster block to the remote instance's server.xml. Then, register the remote instance and add the instance to the cluster. For more information on configuring clusters on Tomcat, see http://tomcat.apache.org/tomcat-8.0-doc/cluster-howto.html.

1 Register the remote instance to the local machine.

2 Create a cluster in the local machine.

3 Open the cfroot_instance-name_runtime\conf\server.xml file of the remote instance.

4 Add the following block between the entries </host> }}and {{</engine>:

```
 <Manager notifyListenersOnReplication="true" expireSessionsOnShutdown="false"
className="org.apache.catalina.ha.session.DeltaManager"> </Manager> <Channel
className="org.apache.catalina.tribes.group.GroupChannel"> <Membership port="45565" dropTime="3000" address="228.0.0.4"
className="org.apache.catalina.tribes.membership.McastService" frequency="500"> </Membership> <Receiver port="4003"
autoBind="100" address="auto" selectorTimeout="5000" maxThreads="6"
className="org.apache.catalina.tribes.transport.nio.NioReceiver"> </Receiver> <Sender
className="org.apache.catalina.tribes.transport.ReplicationTransmitter"> <Transport
className="org.apache.catalina.tribes.transport.nio.PooledParallelSender"> </Transport> </Sender> <Interceptor
className="org.apache.catalina.tribes. group.interceptors.TcpFailureDetector"> </Interceptor> <Interceptor
className="org.apache.catalina.tribes.group. interceptors.MessageDispatch15Interceptor"> </Interceptor> </Channel> <Valve
className="org.apache.catalina.ha.tcp.ReplicationValve" filter=""> </Valve> <Valve
className="org.apache.catalina.ha.session.JvmRouteBinderValve"> </Valve> <ClusterListener
className="org.apache.catalina.ha.session. JvmRouteSessionIDBinderListener"> </ClusterListener> <ClusterListener
className="org.apache.catalina.ha.session.ClusterSessionListener"> </ClusterListener> </Cluster>
```

5 In the entry, update the membership port with the multicast port of the cluster.

6 Using the ColdFusion Administrator of the local host, add the local instance and the remote instance to the cluster.

> **Note:** If you enable sticky session, the JVM route of the remote instance and local instance must not be the same.

7 Restart all the instances.

> **Note:** When adding a remote instance in a cluster, ensure that you comment out <Manager pathname="" /> in content.xml file located in <cf_home>\runtime\conf directory.

Configuring other web servers

Use the Web Server Configuration Tool to configure other web servers.

? Run cfroot\runtime\bin\wsconfig.exe. You can also configure web servers using the command-line interface as follows. Configuring IIS

```
wsconfig.exe -ws iis -site <site_no>
```

or

```
wsconfig.exe -ws iis -site <site_name>
```

Configuring cluster

```
wsconfig.exe -ws iis -site <site_no> -cluster <cluster-name>
```

Configuring Apache

```
(Linux or MAC only) ./wsconfig ws apache dir <apache_conf_directory>
```

or

```
(Windows only) wsconfig.exe ws apache dir <apache_conf_directory> bin <apache_bin_directory>/httpd script
<apache_bin_directory>/apachectl (Linux or Mac only) ./wsconfig ws apache dir <apache_conf_directory> bin
<apache_bin_directory>/httpd script <apache_bin_directory>/apachectl
```

Configuring cluster

```
(Linux or MAC only) ./wsconfig -ws apache dir <apache_conf_directory> -cluster <cluster-name>
```

Unconfiguring IIS

```
wsconfig.exe -remove -ws iis -site <site_no>
```

or

```
wsconfig.exe -remove iis -site <site_name>
```

Unconfiguring Apache

```
./wsconfig -remove ws apache dir <apache_conf_directory>
```

or

```
./wsconfig -remove ws apache dir <apache_conf_directory> bin <apache_bin directory>/httpd script <apache_bin_directory>/apachectl
```

Unconfiguring all webservers

```
./wsconfig -uninstall
```

Seeing the list of webservers

```
./wsconfig -list
```

Configuring Secured Socket Layer (SSL)

SSL allows the browser and the server to communicate over a secured connection. Data that is sent is encrypted at one side, transmitted, and then decrypted at the other end. For more information about SSL configuration on Tomcat, see http://tomcat.apache.org/tomcat-8.0-doc/ssl-howto.html. To configure SSL for ColdFusion using the keytool utility, do the following:

1 Create a certificate file:

    1 Run the following command:cfroot\jre\bin\keytool -genkey -alias tomcat -keyalg RSA

    2 Type the details as per the instruction.

> If you do not provide a password, the default password for keystore and key is changeit. If you don't want to use the default password, ensure that you provide the same password for the keystore and the key.

    Running this command creates a certificate.keystore in the following location:

- Windows: C:\Documents and Settings_user's_director_y
- Linux: usr/home

3 Open the cfroot\cfusion\runtime\conf\server.xml file and search for the string Define a SSL HTTP/1.1.

4 Uncomment the connector details and update the section as follows:

```
<Connector port="8443" protocol="HTTP/1.1" SSLEnabled="true" maxThreads="150" scheme="https" secure="true"
keystoreFile="<certificate_location>\.keystore" keystorePass="<password>" keyAlias="tomcat" clientAuth="false" sslProtocol="TLS" />
```

5 Restart ColdFusion.

6 Access ColdFusion using the following URL: https://<ip-address>:8443/CFIDE/administrator

7

Changing virtual directory and the doc root

Do the following to change the virtual directory and doc root:

1 Open CFInstallation\cfusion\runtime\conf\server.xml.

2 Under host block, search for the string, "To add virtual directory."

3 Uncomment the entry context path below.

4 To add a virtual directory, add the aliases attribute as shown below:

```
<Context path="/" docBase="<absolute_path_to_cfrootectory>\wwwroot" WorkDir="<cf_home>\runtime\conf\Catalina\localhost\tmp"
aliases="/path1=<absolute_path_to_directory1>,/path2=<absolute_path_to_directory2>"></Context>
```

> **Note:** Alias path must include a leading /.

5 To change the doc root, change the docBase value in the above entry.For more details on the Context attributes, see
http://tomcat.apache.org/tomcat-8.0-doc/config/context.html.

Changing the connector port for cfstat

You can use the connector output for logging cfstat metric. The cfconnector port is defined in the
CFInstallation/cfusion/lib/neo-metric.xml file. If you have configured a connector, update the port with the connector
port. The connector port (AJP port) is provided in the CFInstallation/cfusion/runtime/conf/server.xml. To update the
connector port using the Administrator console:

1 Login ColdFusion Administrator.

2 Click Debugging & Logging > Debug Output.

3 Update the connector port and click Submit Changes.

Enabling Search Engine Safe URLs

Search Engine Safe URL (SES) helps the search engines to index dynamic web pages. SES URLs pass parameters using
slashes instead of default URL pattern. By default, SES is enabled for stand-alone installation of ColdFusion on Tomcat.

> **Note:** SES is applicable only for stand-alone installation of Tomcat. It does not work if ColdFusion is deployed as a WAR file on Tomcat.

> **Note:** If you wish to use custom SES URLs, also add the URL entry to the uriworkermap.properties file found in the wsconfig folder for your web
> server.

Enabling Secure Profile

ColdFusion allows you to secure ColdFusion server furthermore by enabling or disabling certain settings. When
installing ColdFusion, you can enable Secure Profile by selecting the option when prompted on the Secure Profile
screen. Further, you could provide a comma separate list of IP addresses that may be allowed to access the ColdFusion
Administrator. In ColdFusion, IP address restriction is supported at the connector-level. For more information,
Installing the Server Configuration.

Changing the log rotation settings

You can change the log rotation settings such as maximum number of backup files and the size of the backup files.

1 Specify log file settings in the neo-logging.xml, located in the <ColdFusion_Home>\lib directory.

2 The size of coldfusion-out.log and coldfusion-error.log is set to 20MB by default. You can change the size of the log
in the neo-logging.xml file by changing the maxOutLogSize setting.

3 You can also change the maximum number of backups of coldfusion-out.log and coldfusion-error.log that
ColdFusion takes during log rotation within the neo-logging.xml file. Change the maxOutFileBackup setting.

You can change the settings of the remaining files in the ColdFusion Administrator by going to the Debugging and Logging > Logging Settings section. Change the Maximum file size and Maximum number of Archives settings accordingly.

Enabling persistent session

To persist a session after a Tomcat restart, do the following:

? Open the cfroot\cfusion\runtime\conf\context.xml file.

Uncomment the Manager pathname node.

Note: Flex sessions are not persisted after a Tomcat restart.

Updating from an earlier version

If you have skipped the migration or you have to make modifications to the previous installation that has to be migrated, do the following:

1 Stop the server.

2 Save settings by copying the files cf_webapp_root/WEB-INF/cfusion/lib/neo-*.xml (of previous installation) to a directory named cf_X_settings (in which X is the earlier version of ColdFusion) in the cf_webapp_new_installation_root_directory/WEB-INF/cfusion/lib directory.

3 Edit the ColdFusion cfusion/lib/adminconfig.xml file by setting the value of the runmigrationwizard and the {{migratecf}}X (in which X is the earlier version of ColdFusion) switch to true.

4 Restart the ColdFusion application.

5 Browse to ColdFusion Administrator to run the migration wizard.

6

Uninstalling ColdFusion

Uninstalling ColdFusion deletes all program files and related components from your computer.

Uninstall ColdFusion from Windows

1 Select Start > Settings > Control Panel > Add/Remove Programs > Adobe ColdFusion 2016.

2 Click Change/Remove.

3 When the program completes, remove any remaining files and directories in the cf_root directory.

4 In some cases, the uninstall program may require you to restart the computer. ColdFusion is deleted from your server.

Uninstall ColdFusion from UNIX

1 Log in as root.

2 Enter the following command to go to the cf_root/uninstall directory:

```
cd cf_root/uninstall
```

3 Enter the following command:

```
./uninstall.sh
```

4 When the program completes, remove any remaining files and directories in the cf_root directory. ColdFusion is deleted from your server.

Installing the JEE Configuration

One of the main advantages of ColdFusion is that you can install it as an integrated server (the server configuration) or deploy it as a Java application on a standards-based Java Enterprise Edition (JEE, formerly termed, J2EE) application server, using the JEE configuration option offered in the ColdFusion Installer. In addition to greater flexibility, this allows your ColdFusion applications to leverage features of the JEE architecture, such as support for multiple application instances and multiple-instance clustering.

Installing the JEE Configuration

Gathering information necessary to install the JEE configuration

Although the ColdFusion 11 installer provides an intuitive interface, it helps to plan your answers to the questions asked by the installer. Use the following tables to help plan for installing the JEE configuration of ColdFusion 11.

Question	Answer
Platform-specific installer name?	_____
Serial number for ColdFusion?	_____
Type of installation?	___ Server configuration_X_ JEE configuration
EAR or WAR file?	___ EAR___ WAR
Subcomponents to install?	___ ColdFusion 11 ODBC Services___ ColdFusion 11 Solr Services___ .NET Integration Services
Installation directory for ColdFusion and services?	_____
Context root for ColdFusion (EAR file only, default=cfusion)?	_____
ColdFusion Administrator password?	_____
Enable Secure Profile	__Yes__No Identify a list of IP addresses that will have access to the ColdFusion Administrator.
Configure OpenOffice	__Yes__No
Whether to enable RDS?	___ Yes___ No Note: RDS allows the server to interact with remotely connected developers. Adobe recommends that you disable RDS for production servers.Disabling RDS also disables the directory browsing applets in the ColdFusion Administrator.
RDS password?	_____
Automatically check for server updates?	___ Yes___ No

ColdFusion and JEE application servers

You can deploy ColdFusion in the JEE configuration by using a JEE application server, such IBM WebSphere. When you use the JEE configuration, you can use an existing JEE application server; the installation wizard creates a web application archive (WAR) or enterprise application archive (EAR) file, which you then deploy by using the tools provided by your application server.

Choosing EAR or WAR deployment

In the JEE environment, you deploy applications in one of the following formats:

- **Web application archive file** Contains the ColdFusion application. A web application archive (also called a WAR) uses a directory structure that contains a WEB-INF/web.xml deployment descriptor, which defines the servlets and context parameters it uses. JEE application servers can deploy web applications in this directory structures as-is or in compressed WAR files that contain these directory structures. However, ColdFusion must run from an expanded directory structure:

> WEB-INF web.xml CFIDE cfdocs CFIDE (rds.war) WEB-INF web.xml

  The cfusion.war file contains the ColdFusion web application. The rds.war file is a web application that redirects RDS requests from /CFIDE to /context-root/CFIDE. It forwards requests to the ColdFusion Administrator when ColdFusion uses a context root other than a forward slash.

- **Enterprise application archive file** Contains the ColdFusion and RDS redirector web applications. An enterprise application archive (also called an EAR) uses a directory structure that contains a META-INF/application.xml deployment descriptor, which defines the web applications that it contains. JEE application servers can deploy enterprise applications in these directory structures as-is or in compressed EAR files that contain these directory structures. However, ColdFusion must run from an expanded directory structure:

> META-INF application.xml cfusion-war WEB-INF web.xml CFIDE cfdocs rds.war WEB-INF web.xml

  If your JEE application server supports enterprise applications, install and deploy the EAR file. For more information, see Installing an EAR file or WAR files section in this page.

Context root

Because the JEE environment supports multiple, isolated web applications running in a server instance, JEE web applications running in a server are each rooted at a unique base URL, called a context root (or context path). The JEE application server uses this initial portion of the URL (that is, the portion immediately following http://_hostname_) to determine which web application services an incoming request. For example, if you are running ColdFusion with a context root of cf11, you display the ColdFusion Administrator using the URL http://localhost/_cf11_/CFIDE/administrator/index.cfm. Most JEE application servers allow one application in each server instance to use a forward slash for the context root. Setting the context root to / for the ColdFusion application is especially useful when serving CFM pages from the web server, because it supports the functionality most similar to earlier ColdFusion versions. In addition, the RDS web application is not required if you use a context root of /. When you deploy the ColdFusion EAR file, it uses the context root that you specified when you ran the installation wizard, which copied your specification to the context-root element of the META-INF/application.xml file. When you deploy ColdFusion as a WAR file, you use application-server-specific functionality to define the context root.

Multiple instances

When you use the JEE configuration, you can define multiple server instances on a single computer, each running ColdFusion. Running multiple instances of ColdFusion has the following advantages:

- **Application isolation** You deploy an independent application to each server instance. Each server instance has separate settings, and because each server instance runs in its own instance of the JVM, problems encountered by one application have no effect on other applications.

- **Load balancing and failover** You deploy the same application to each server instance and add the instances to a cluster. The web server connector optimizes performance and stability by automatically balancing load and by switching requests to another server instance when a server instance stops running.

Platforms

Full ColdFusion functionality is available for Windows, Macintosh, Linux, and Solaris, except that the following are Windows-specific: COM, .NET, and ODBC Services. AIX support is provided for WebSphere application server only. Functionality provided by platform-specific binary files. is not available on AIX. Additionally, you can install and deploy the all-Java ColdFusion JEE configuration on other platforms, although without the functionality provided by platform-specific binary files (C++ CFXs).

Preparing to install using the JEE configuration

Instead of JRun, Tomcat is embedded with a stand-alone ColdFusion 11 installation. Previous versions of ColdFusion installer allow you to create multi-server installations whereas ColdFusion 11 installer lets you only install stand-alone installation. After installing ColdFusion in stand-alone mode, you can create multiple instances and clusters, provided you have an Enterprise or Developer license.

> **Note:** This feature is not available in Standard Edition.

Installing an EAR file or WAR files

If your computer is already running a JEE application server, the installation wizard creates an EAR file or WAR files, which you deploy using application-server-specific tools. The ColdFusion JEE configuration must run from an expanded directory structure. Different JEE application servers have different functionality with regard to deployment and an expanded directory structure, as follows:

- **Deploy compressed archive to working directory.** On some JEE application servers (such as IBM WebSphere), the deployment process expands the EAR/WAR file into a working directory and, from that point forward, the expanded directory is considered to be the application. For these application servers, you deploy the compressed EAR/WAR file and work in the resulting directory structure. For more information, see ColdFusion JEE deployment and configuration section in this page.

- **Deploy expanded archive as working directory** On other application servers (such as Oracle WebLogic), the deployment process expands the EAR/WAR file into a temporary directory and (conceptually), the compressed EAR/WAR file is still considered to be the application. For these application servers, expand the EAR/WAR file manually, and then deploy the expanded directory structure, which becomes your working directory. For more information, see ColdFusion JEE deployment and configuration section in this page.

Installing an EAR file or WAR files in Windows

You can install the ColdFusion JEE configuration in Windows.

> **Note:** The Windows installer requires a computer that supports at least 256 colors.

Install ColdFusion in Windows (JEE configuration)

1 Read the online version of the Release Notes for any late-breaking information or updates. For more information, see www.adobe.com/go/learn_cfu_releasenote_en.

2 Ensure that your operating system meets the system requirements described on the Adobe website at www.adobe.com/go/learn_cfu_cfsysreqs_en.

3 Review the Installation considerations for Windows and Installation considerations for all platforms sections in the Preparing to Install ColdFusiondocument.

4 Determine and record environment information, as described in Preparing to install using the JEE configuration section of this document.

5 Determine the answers to the questions in the above section Gathering information necessary to install the JEE configuration

6 Close any applications that are currently running on your computer.

7 Insert the DVD or download the setup file from the Adobe website.

8 If the installation wizard does not start automatically when you insert the DVD, locate the appropriate installer on the DVD and double-click it. If you are installing from a network or a downloaded file, locate the ColdFusion installation executable file (ColdFusion_11_WWEJ_win32.exe (for 32-bit systems)/ColdFusion_11_WWEJ_win64.exe (for 64-bit systems)) and double-click it.

9 Follow the instructions in the installation wizard, and let it run to completion.

10 Deploy ColdFusion and configure Java settings, as required by your application server. For more information, see ColdFusion JEE deployment and configuration section of this document.

11 Open the ColdFusion Administrator to run the Configuration wizard.

12 To install any other integrated Adobe or third-party technologies, see Installing Integrated Technologies.

13 Configure and manage your system, as described in Configuring your System.

14 To learn about ColdFusion, read the documentation, which is accessible through the Documentation link on the Resources page of the ColdFusion Administrator.

15 Code ColdFusion CFM pages. Store CFM pages under the web application root (either cfusion-ear\cfusion-war or cfusion-war) and access these pages using a URL of the form http://_hostname_:_portnumber_/_context-root_/_filename_.cfm, as follows:

   • hostname: The machine name, IP address, or localhost.

   • portnumber: The port number used by your application server's web server.

   • contextroot: The context root for the ColdFusion web application. For more information, see Context root section in this page.

   • filename: The directory path and file to display. The path is relative to the cfusion-war directory.

Installing an EAR file or WAR files in UNIX

You can install the ColdFusion JEE configuration in UNIX. If you are updating an existing deployment of ColdFusion for JEE, see Updating from an earlier version for JEE section of this document before you continue.

Install ColdFusion in UNIX (JEE configuration)

1 Read the online version of the Release Notes for any late-breaking information or updates. For more information, see www.adobe.com/go/learn_cfu_releasenote_en.

2 Ensure that your operating system meets the system requirements described on the Adobe website at www.adobe.com/go/learn_cfu_cfsysreqs_en.

3   Review the Installation considerations for UNIX and Installation considerations for all platforms sections in the Preparing to Install ColdFusion document.

4   Determine and record environment information, as described in Preparing to install using the JEE configuration section of this document.

5   Determine the answers to the questions in the section Gathering information necessary to install the JEE configuration section of this document.

6   Log in as root.

7   Copy the installation file that is appropriate for your platform and locale from the DVD or Adobe website, and save it to a directory on your local disk. The following installation files are those for supported JEE configuration platforms:

Platform	File
Linux	• ColdFusion_11_WWEJ_linux32.bin (for 32-bit systems) • ColdFusion_11_WWEJ_linux64.bin (64-bit systems)
Solaris	ColdFusion_11_WWEJ_solaris64.bin
UNIX (other than Solaris or Linux)	ColdFusion_11_WWEJ_java.jar

8   Using the cd command, go to the directory with the installation file.

9   Start the installation with the following command:

```
./<filename> -i console
```

The installation program starts. To use the ColdFusion_11_WWEJ_java.jar file to install on a UNIX platform other than Solaris or Linux, enter the following command (for more information, see Installation considerations for UNIX in Preparing to Install ColdFusion page of this wiki):

```
java_home/bin/java -jar ColdFusion_11_WWEJ_java.jar -i console
```

Note: To run the Linux installer in GUI mode, type ./<filename> -i gui.

10 Follow the prompts, and let the installation program run to completion.

Note: For security reasons, it is crucial that you do not use root for the run-time user. Instead, use a non-privileged user that does not have a login shell, such as the default user account nobody, which exists for this type of situation.

11 Deploy ColdFusion and configure Java settings, as required by your application server. For more information, see ColdFusion JEE deployment and configuration section of this page.

Note: If you deployed the rds.war file, and an error message indicates that RDS is not installed or not enabled, edit the rds.properties file to match the ColdFusion context root, restart the application server, and re-open the ColdFusion Administrator.

12 Open the ColdFusion Administrator to run the Configuration wizard.

13 Configure and manage your system, as described in Configuring your System.

14 To learn about ColdFusion, read the documentation, which is accessible through the Documentation link on the Resources page of the ColdFusion Administrator.

15 Code and test ColdFusion CFM pages. Store CFM pages under the web application root (either cfusion-ear/cfusion-war or cfusion-war) and access these pages using a URL of the form http://_hostname_:_portnumber_/_context-root_/_filename_.cfm, as follows:

- hostname: The machine name, IP address, or localhost.

- portnumber: The port number used by your application server's web server.

- contextroot: The context root for the ColdFusion web application. For more information, see Context root section of this page.

- filename: The directory path and file to display. The path is relative to the cfusion-war directory.

Installing an EAR file or WAR files in Mac OS X

You can install the ColdFusion JEE configuration for Mac OS X. If you are updating an existing, earlier deployment of ColdFusion for JEE, see Updating from an earlier version for JEE section in this page before you continue.

Install ColdFusion in Mac OS X (JEE configuration)

1 Read the online version of the Release Notes for any late-breaking information or updates. For more information, see www.adobe.com/go/learn_cfu_releasenote_en.

2 Ensure that your operating system meets the system requirements described on the Adobe website at www.adobe.com/go/learn_cfu_cfsysreqs_en.

3 Review the Installation considerations for UNIX and Installation considerations for all platforms in the Preparing to Install ColdFusiondocument.

4 Determine and record environment information, as described in Preparing to install using the JEE configuration section of this page.

5 Determine the answers to the questions in the section Gathering information necessary to install the JEE configuration section of this page.

6 Log in as root.

7 Copy the installation file that is appropriate for your platform and locale from the DVD or Adobe website, and save it to a directory on your local disk. The following installation files are those for supported JEE configuration platforms:

- ColdFusion_11_WWEJ_osx11.dmg - To install in Mac OS X systems

8 Start the installation by double-clicking the installation file on the desktop. The file ColdFusion 11 Installer.app is installed in the same directory. Double click this APP file to start the installation in GUI mode.

9 Follow the prompts, and let the installation program run to completion.

> **Note:** For security reasons, it is crucial that you do not use root for the runtime user. Instead, use a nonprivileged user that does not have a login shell, such as the default user account nobody, which exists for this type of situation.

10 Deploy ColdFusion and configure Java settings, as required by your application server. For more information, see ColdFusion JEE deployment and configuration section in this page.

> **Note:** If you deployed the rds.war file, and an error message indicates that RDS is not installed or not enabled, edit the rds.properties file to match the ColdFusion context root, restart the application server, and reopen the ColdFusion Administrator.

11 Open the ColdFusion Administrator to run the Configuration wizard.

12 Configure and manage your system, as described in Configuring your System.

13 To learn about ColdFusion, read the documentation, which is accessible through the Documentation link on the Resources page of the ColdFusion Administrator.

14 Code and test ColdFusion CFM pages. Store CFM pages under the web application root (either cfusion-ear/cfusion-war or cfusion-war) and access these pages using a URL of the form http://_hostname_:_portnumber_/_context-root_/_filename_.cfm, as follows:

- hostname -The machine name, IP address, or localhost.

- portnumber-The port number used by your application server's web server.

- contextroot - The context root for the ColdFusion web application. For more information, see Context root section in this page.

- filename - The directory path and file to display. The path is relative to the cfusion-war directory.

Updating from an earlier version for JEE

If you previously deployed the ColdFusion JEE configuration on your application server, you must also perform the following steps as part of the installation procedure:

1 As appropriate for your application server, either stop the ColdFusion application and RDS application (if it is running), or stop the application server before you start the installation wizard.

2 (Windows only) If you installed the SequelLink ODBC Agent, stop the ODBC services before you start the installation wizard.

3 Copy application files to a backup directory.

4 Save settings by copying the files cf_webapp_root/WEB-INF/cfusion/lib/neo-*.xml to a backup directory.

5 Before you deploy ColdFusion 11, undeploy the previous ColdFusion application using your application-server-specific undeploy functionality.

6 Deploy ColdFusion 11 as described in Deploying ColdFusion 11 on IBM WebSphere, Deploying ColdFusion 11 on Oracle WebLogic, or Deploying ColdFusion 11 on JBoss Application Server sections of this page.

7 Create a directory named cf_X_settings (in which X is the earlier version of ColdFusion) in the cf_webapp_root/WEB-INF/cfusion/lib directory.

8 Copy the backed up settings files to the ColdFusion 11 cfusion/lib/cf_X_settings directory.

9 Edit the ColdFusion 11 cfusion/lib/adminconfig.xml file by setting the value of the runmigrationwizard and the migratecfX (in which X is the earlier version of ColdFusion) switch to true.

10 Restart the ColdFusion 11 application.

11 Browse to ColdFusion Administrator to run the migration wizard.

> **Note:** The migration wizard supports only the migration of settings from ColdFusion 9 and ColdFusion 11.

ColdFusion JEE deployment and configuration

The JEE specification allows application servers to handle compressed and expanded deployments in a server-dependent manner; each application server has its own deployment and configuration mechanism, as the following table shows:

Application server	Deployment mechanism	Expanded or compressed deployment
Apache Tomcat	Tomcat Deployment Manager	Expanded
IBM WebSphere	IBM WebSphere Administrative Console	Compressed
Oracle WebLogic	Weblogic Administration Console/Auto deploy to server domains	Expanded
JBOSS Application Server	Auto deploy to server root	Expanded
Oracle Weblogic Server	Oracle Weblogic Server Administration Console	Expanded

For basic deployment information, see your JEE application server documentation. ColdFusion deployment instructions differ for each JEE application server. For more information, see deployment instructions for the specific application server.

JEE directory structure

The following table describes the directories under the cf_webapp_root web application directory when you use the JEE configuration:

Directory	Description
cfdocs	Documentation for ColdFusion.
CFIDE	Files for the ColdFusion Administrator.
WEB-INF/cfclasses	Compiled ColdFusion templates in your ColdFusion applications.
WEB-INF/cfc-skeletons	Support for ColdFusion components that are exported as web services.
WEB-INF/cfform	Files that support Flash forms.
WEB-INF/cftags	Templates for ColdFusion.
WEB-ING/flex	Configuration and files for LiveCycle Data Services ES.
WEB-INF/gateway	Files that support event gateways.
WEB-INF/cfusion/bin	Executable files used by ColdFusion.
WEB-INF/cfusion/cfx	CFX tag include file and examples.
WEB-INF/cfusion/charting	Files for the ColdFusion graphing and charting engine.
WEB-INF/cfusion/Custom Tags	Repository for your custom tags.
WEB-INF/cfusion/db	Sample databases for all platforms. These databases are Apache Derby databases.
WEB-INF/cfusion/jintegra	JIntegra programs, libraries, and other supporting files (for example, to integrate Java and COM code; manage access to ActiveX controls (OCXs) that are hosted in a graphical user interface (GUI) container; and register the JVM and type libraries).

WEB-INF/cfusion/lib WEB-INF/lib andWEB-INF/cfusion/MonitoringServer	JAR, XML, property, and other files that are the foundation of ColdFusion, including functionality such as queries, charting, mail, security, Solr searches, and system probes.
WEB-INF/cfusion/logs	ColdFusion log files.
WEB-INF/cfusion/Mail	Files, including spool files, used by ColdFusion for mail.
WEB-INF/cfusion/registry	Used only in UNIX, by the cfregistry tag.
WEB-INF/cfusion/stubs	Compiled code for web services.
WEB-INF/cfusion/solr	Solr configuration and Jetty.

Deploying ColdFusion 11 on IBM WebSphere

The following instructions tell you how to deploy ColdFusion 11 on IBM WebSphere Application Server (AS) and Network Deployment (ND). The following terms refer to WebSphere and ColdFusion directories:

- **websphere_root** The directory in which IBM WebSphere Application Server is installed; for example, C:\Program Files\WebSphere in Windows, and /opt/WebSphere in UNIX.
- **cf_webapp_root** The directory to which the ColdFusion web application is deployed; for example, C:\Program Files\WebSphere\AppServer\installedApps_<My_Host>\cfusion.ear\cfusion.war in Windows, and /opt/WebSphere/AppServer/installedApps/<_My_Host>/cfusion.ear/cfusion.war in UNIX.
- **java_home** The root directory of your Java 2 software development kit (J2SDK); for example, C:\j2sdk1.6.0_29.

Expand the EAR file

1 Open a console window, navigate to the directory that contains the EAR file, and make a new directory named cfusion-ear:

```
md cfusion-ear (mkdir cfusion-ear on UNIX)
```

2 Change to the cfusion-ear directory and expand the cfusion.ear file with the jarcommand:

```
java_home/bin/jar -xvf ../cfusion.ear
```

This expands the cfusion.ear file into cfusion.war and rds.war (rds.war is not included if you specified a context root of / when you ran the installation wizard).

3 In cfusion-ear, make a new directory named cfusion-war.

```
md cfusion-war (mkdir cfusion-war on UNIX)
```

4 Change to the cfusion-war directory and expand the cfusion.war file with the jarcommand:

```
java_root/bin/jar -xvf ../cfusion.war
```

This expands the cfusion.war file.

5 (If rds.war exists) Go up one level to cfusion-ear, make a new directory named rds-war.

```
md rds-war (mkdir rds-war on UNIX)
```

6 (If rds.war exists) Change to the rds-war directory and expand rds.war with the jarcommand:

```
java_root/bin/jar -xvf ../rds.war
```

This expands rds.war.

7 Go up one level to the cfusion-ear file, and delete the cfusion.war and rds.war files:

```
del cfusion.war (rm cfusion.war on UNIX) del rds.war (rm rds.war on UNIX)
```

8 Open the cfusion-ear/META-INF/application.xml file in a text editor.

9 Change the web-uri element from cfusion.war to cfusion-war (or the name of the directory that contains the expanded cfusion.war file). Change the web-uri element for rds.war to rds-war. A directory name in the web-uri element cannot contain a dot.

10 Save the application.xml file. To use LiveCycle Data Services ES, you must be running WebSphere 5.1.1 Business Integration.

Deploy ColdFusion 11 on WebSphere 7 or 8 (AS)

1 Start the IBM WebSphere Application Server, if it is not running.

2 Open the IBM WebSphere Administrative Console, if it is not running.

3 Select Applications > Install New Application.

4 When the Preparing for the Application Installation page appears, in the text box for the local file system, enter the path to the EAR file that you installed when you installed ColdFusion; for example, C:\ColdFusion11\cfusion.ear. If you are running the Administrative console from a browser that is not on the same system on which WebSphere is running, that is, not from localhost, use the Remote file system option, which enables directory browsing on the server file system.

5 Leave the Context Root box empty and click Next.

6 Accept the default values on the second Select Installation Options page, if appropriate for your WebSphere configuration, and then click Next. WebSphere might display an Application Security Warnings page with a message at the bottom of the page that starts with "ADMA0080W: A template policy file without any permission set is included in the 1.2.x enterprise application." You can ignore this warning.

7 If you have multiple application servers, select the application server in which to install the ColdFusion application and RDS support, and then click Next.

8 When the Map Virtual Hosts for Web Modules panel appears, select the virtual host or hosts in which to install the ColdFusion 11 application and Remote Development Services (RDS) support, and then click Next.RDS must be on the same virtual host and port as ColdFusion 11.

9 When the Summary panel appears, review the installation configuration, and then click Finish.

10 When the Application Adobe ColdFusion 11 Installed Successfully message appears on the Installing page, select Save To Master Configuration, and then select Save on the Save page to save your workspace. If you changed the application name from the default, the message uses your application name.

11 Start the enterprise application named Adobe ColdFusion 11.

12 Browse to the ColdFusion Administrator to run the Configuration Wizard.

> **Note:** Copy the version of tools.jar that the application server uses to the cfusion/lib directory.

Deploy ColdFusion 11 on WebSphere 7 or 8 (ND)

1 Start the IBM WebSphere Application Server, if it is not running.

2 Open the IBM WebSphere Administrative Console, if it is not running.

3 Select Applications > Install New Application.

4 When the Preparing for the Application Installation page appears, in the text box for the local file system, enter the path to the EAR file that you installed when you installed ColdFusion; for example, C:\ColdFusion11\cfusion.ear. If you are running the Administrative console from a browser that is not on the same system on which WebSphere is running, that is, not from localhost, use the Remote file system option, which enables directory browsing on the server file system.

5 Leave the Context Root box empty and click Next.

6 Accept the default values on the second Select Installation Options page, if appropriate for your WebSphere configuration, and then click Next.WebSphere might display an Application Security Warnings page with a message at the bottom of the page that starts with "ADMA0080W: A template policy file without any permission set is included in the 1.2.x enterprise application." You can ignore this warning.

7 Select the cluster on which to install the ColdFusion application and RDS support, and then click Next.

8 When the Map Virtual Hosts for Web Modules panel appears, select the virtual host or hosts in which to install the ColdFusion 11 application and Remote Development Services (RDS) support, and then click Next.RDS must be on the same virtual host and port as ColdFusion 11.

9 When the Summary panel appears, review the installation configuration, and then click Finish.

10 When the Application Adobe ColdFusion 11 Installed Successfully message appears on the Installing page, select Save To Master Configuration, and then select Save on the Save page to save your workspace. If you changed the application name from the default, the message uses your application name.

11 Start the enterprise application named Adobe ColdFusion 11.

12 Browse to the ColdFusion Administrator to run the Configuration Wizard.

> **Note:** You must copy the version of tools.jar that the application server uses to the cfusion/lib directory.

On WebSphere ND, deploying multiple application server clones on a single computer is commonly referred to as vertical clustering. Vertical clustering leverages the computer's processing power to obtain a higher level of efficiency; however, if there is total computer failure, no application server instances are available. The applications deployed in a vertical cluster share the same file system. Deploying the multiple application servers on multiple computers is commonly referred as horizontal clustering; it provides the highest level of failover and scaling. The steps you perform to deploy ColdFusion 11 in a clustered environment are the same, regardless of clustering method, because the WebSphere Network Deployment Manager manages the cluster.

Enable sandbox security

1 Do the following to ensure that ColdFusion sandbox security secures Java access to files and network resources:

    1 On the WebSphere Administrative Console Security > Secure Administration panel, ensure that the Java 2 Security option is selected.

    2 Click Apply and then click Save.

3 Add the following lines to the **Standard Properties That Can Be Read By Anyone** section of the JVM's security policy file, java.policy. (For example, this file can be located in C:\Program Files\WebSphere\AppServer\java\jre\lib\security\java.policy):

```
permission java.security.AllPermission; };
```

Configure operating system-specific binary support in Windows

This process is required to support the following features that use binaries that are specific to your operating system:

- CFX tags written in C++
- Microsoft Access driver with Unicode support You do this by configuring the search paths to find the required binary files, which are located in the cf_webapp_root\WEB-INF\cfusion\lib directory.

Configure search paths

1 Make a backup copy of the setupCmdLine.bat file, located in the websphere_root\AppServer\bin directory.

2 Open the original file for editing and add the following on a single line before the line that starts with SET WAS_CLASSPATH:

```
SET CF_APPS_PATH=cf_webapp_root\WEB-INF\cfusion\lib
```

Replace cf_webapp_rootwith the path to your web application directory; for example, enter the following:

```
SET CF_APPS_PATH=%WAS_HOME%\installedApps\%WAS_CELL%\ Adobe_ColdFusion_11.ear\cfusion.war\WEB-
INF\cfusion\lib;%WAS_HOME%\installedApps\%WAS_CELL%\ Adobe_ColdFusion_11.ear\cfusion.war\WEB-INF\flex\jars
```

3 Add the CF_APPS_PATH variable to the WAS_CLASSPATH by appending the following text to the path statement:

```
;%CF_APPS_PATH%
```

The WAS_CLASSPATH line should look similar to the following:

```
SET WAS_CLASSPATH=%WAS_HOME%/properties;%WAS_HOME%/lib/bootstrap.jar;
%WAS_HOME%/lib/j2ee.jar;%WAS_HOME%/lib/lmproxy.jar;%WAS_HOME%/lib/ urlprotocols.jar;%CF_APPS_PATH%
```

4 Save the file.

5 Add the full path to the cf_webapp_root\WEB-INF\cfusion\lib directory to the WAS_PATH variable in the setupCmdLine.bat file. The WAS_PATH line should look similar to the following:

```
C:\Program Files\IBM\WebSphere MQ\bin;C:\Program Files\IBM\WebSphere MQ\java\bin;C:/Program Files/IBM/WebSphere
MQ/WEMPS\bin;%CF_APPS_PATH%;
```

6 Save the file.

Enable COM support for Windows

You enable Component Object Model (COM) support in Windows after installing ColdFusion 11 so that you can use the cfreport tag with Crystal Reports. COM support is not required for the ColdFusion Report Builder or any reports that you create with the ColdFusion reporting feature.

1 Make a backup copy of the setupCmdLine.bat file, which is located in the websphere_root\AppServer\bin directory.

2 Open the original file and add the following on a single line:

```
SET PATH=%PATH%;cf_webapp_root\WEB-INF\cfusion\jintegra\bin;cf_webapp_root\WEB-INF\cfusion\jintegra\bin\international
```

Replace cf_webapp_rootwith the path to your web application root directory, for example:

```
\cfusion.ear\cfusion.war\WEB-INF\cfusion\jintegra\ bin;%WAS_HOME%\installedApps\%WAS_CELL%\Adobe_ColdFusion_11.ear
\cfusion.war\WEB-INF\cfusion\jintegra\bin\international
```

3 Save the file. In some cases, you might also have to do the following to register the Microsoft Type viewer:

4 Open a console window and go to the cf_webapp_root\WEB-INF\cfusion\lib directory.

5 Register TypeViewer.dll by issuing the following command:

```
regsvr32 TypeViewer.dll
```

Configure operating system-specific binary support for Solaris and Linux

This process is required to support CFX tags written in C++ that use binaries that are specific to your operating system. You must configure the search paths to find the required binary files, which are located in the cf_webapp_root/WEB-INF/cfusion/lib directory.

Configure search path

1 Make a backup copy of the startServer.sh file, which is located in the websphere_root/AppServer/bin directory. The path specifications in these instructions assume that you deployed ColdFusion using the standard application name (Adobe ColdFusion 11) and did not rename the application.

2 Open the original file, and in the PLATFORM case block, just above the LD_LIBRARY_PATH or LIBPATH line, add the following entry on a single, long line: On Solaris:

```
CFUSION_APPS_PATH=cf_webapp_root/WEB-INF/cfusion/lib
```

Replace cf_webapp_rootwith the path to your web application root directory; for example:

```
CF_APPS_PATH="$WAS_HOME"/installedApps/"$WAS_CELL"/ Adobe_ColdFusion_11.ear/cfusion.war/WEB-INF/cfusion/lib
```

On Linux:

```
CF_APPS_PATH=cf_webapp_root/WEB-INF/cfusion/lib
```

Replace cf_webapp_rootwith the path to your web application root directory; for example:

```
CF_APPS_PATH="$WAS_HOME"/installedApps/"$WAS_CELL"/ Adobe_ColdFusion_11.ear/cfusion.war/WEB-INF/cfusion/lib
```

3 Append the CF_APPS_PATH environment variable to the LD_LIBRARY_PATH entry. The resulting line should be similar to the following:

```
LD_LIBRARY_PATH="$WAS_LIBPATH":$LD_LIBRARY_PATH:$CF_APPS_PATH
```

4 Save the file and restart your WebSphere Application Server.

Enable ColdFusion charting and graphing support for UNIX

1 Open the WebSphere Administrative Console.

2 In the left navigation bar, select Node_name > Servers > Application Servers.

3 Select your JEE application server; for example, Server1.

4 Under Java and Process Management, select Process Definition.

5 On the Process Definition page, select Java Virtual Machine in the Additional Properties box.

6 If you are running ColdFusion 11 on a system without a monitor, do the following:

　　1 In the Additional Properties box at the bottom of the page, select Custom Properties.

　　2 On the Custom Properties page, select New and add a system property, completing the fields as follows:

```
Value true
```

3 Click OK.

4 Save the master configuration file.

Disable RDS

For security reasons, Adobe recommends that you disable RDS on a production server. If you enable RDS when you install ColdFusion 11, you can disable it at a later time, as the following instructions describe. If you disable RDS, the following ColdFusion 11 features do not work:

• The Browse Server button in the ColdFusion Administrator (for example, on the ColdFusion Mappings page)

• The Query Builder and charting in the ColdFusion Report Builder

To disable RDS on UNIX,

1 Stop ColdFusion.

2 In the WebSphere Administrative Console, select the Applications > Enterprise Applications panel, select the Adobe ColdFusion 11 application, and then click Stop.

3 Do the following in both the cf_webapp_root\WEB-INF\web.xml and the websphere_root\AppServer\config\cells\NodeName\applications\cf_application_name.ear\ deployments\cf_application_name\cfusion.war\WEB-INF\web.xml files (or the equivalent paths in UNIX). For example, change the following files:

To disable RDS on Windows,

1 Back up the ColdFusion web module web.xml file (available in either C:\Program Files\WebSphere\AppServer\installedApps_<MY_NODE>\cfusion.ear\cfusion.war\WEB-INF\web.xml or C:\Program Files\WebSphere\AppServer\config\cells_<MY_NODE>\applications\cfusion.ear\deployments\Adobe ColdFusion 11\cfusion.war\ WEB-INF\web.xml).

2 Open the original web.xml file for editing.

3 Comment out the RDS Servlet definition, as follows:

```
<!-- <servlet id="coldfusion_servlet_8789"> <servlet-name>RDSServlet</servlet-name> <display-name>RDS Servlet</display-
name><servlet-class>coldfusion.bootstrap.BootstrapServlet</servlet-class> <init-param
id="InitParam_1134013111165856789"><param-name>servlet.class</param-name> <param-
value>coldfusion.rds.RdsFrontEndServlet</param-value></init-param> </servlet> -->
```

The text in the servlet definition might vary.

4 Comment out the RDS Servlet mapping, as the following example shows:

```
<servlet-mapping id="coldfusioon_mapping_9"> <servlet-name>RDSServlet</servlet-name> <url-
pattern>/CFIDE/main/ide.cfm</url-pattern> </servlet-mapping> -->
```

The servlet-mapping id value might vary.

5 Save the file.

6 Restart the ColdFusion 11 application.

7 If your ColdFusion 11 application context root is something other than /, disable or undeploy the RDS redirector web module by doing the following:

8 In the WebSphere Administrative Console, select cell_name > Applications > Enterprise Applications.

9 Stop the Adobe ColdFusion 11 application if it is running.

10 Select Adobe ColdFusion 11 Application, select Manage Modules and then select the check box for ColdFusion RDS application, and then click Remove.

Enable web services

To enable web services, copy the tools.jar file from Java home that WebSphere uses to the cfusion/lib directory.

Apply application server configuration

To apply application server configuration, restart the application server.

Configure ColdFusion 11

Ensure that the following settings and practices are in place before using WebSphere Application Server ND:

• **Event Gateway** Ensure that the startup mode of the Socket gateway instances is set to manual. In particular, do not set it to Automatic when using a vertical cluster. Select one of the instances in the vertical cluster and start the Socket gateway on that instance manually.

• **Session Replication**Either avoid ColdFusion-specific data types or serialize them to WDDX and store them in session scope as strings. ColdFusion Administrator:

   • In a vertical cluster environment, avoid concurrent changes to the same service.

   • In a horizontal cluster environment, each server has its own ColdFusion Administrator. You must make changes once per server.

- In a vertical cluster environment, the ColdFusion Administrator scheduled tasks are scheduled on all servers.

- **Solr Server** Only one Solr Search Server can run on each server computer.

- **Compilation** Use precompiled classes and ensure that the Trusted Cache setting is enabled.

Deploying ColdFusion 11 on Oracle WebLogic

The following instructions tell you how to deploy ColdFusion 11 on Oracle WebLogic 11g. You can deploy ColdFusion 11 on WebLogic using either an expanded EAR file or WAR files. The following terms refer to ColdFusion directories:

- **cfusion_install_directory** The directory that contains the files extracted by the ColdFusion install, for example, C:\cf11 or /opt/cf11.

- **wl_root** The directory that contains WebLogic, for example, C:\Oracle.

- **wldomain_root** The directory that contains the WebLogic domain into which you deployed ColdFusion.

- **cf_webapp_root** The directory into which you deployed the ColdFusion web application, for example, C:\Oracle\user_projects\cfdomain\applications\cfusion-war.

- **java_home** The root directory of your Java 2 software development kit (J2SDK); for example, C:\jdk1.6.0.

Install ColdFusion 11 on WebLogic

1 Run the ColdFusion installation wizard, choosing the JEE configuration. The installation wizard places the WAR files in the install directory.

2 Determine the WebLogic domain in which to deploy ColdFusion 11. Optionally, create a domain.

3 Because ColdFusion 11 must run from an expanded directory structure, expand the cfusion.war and rds.war files manually, and expand the web applications by doing the following:

   1 Open a console window, navigate to the directory that contains the WAR files, and create a directory for the ColdFusion WAR file (named whatever you want the context root to be) and the RDS WAR file (named CFIDE):

   ```
   md cfusion (Windows, mkdir cfusion on UNIX) md CFIDE (Windows, mkdir CFIDE on UNIX)
   ```

   2 Change to the cfusion directory and expand the cfusion.war file with the jar command:

   ```
   java_home/bin/jar -xvf ../cfusion.war
   ```

   3 Go up one level to the install directory:

   ```
   cd ..
   ```

   4 Go to the CFIDE directory and expand the rds.war file with the jar command:

   ```
   java_home/bin/jar -xvf ../rds.war
   ```

5 Open the weblogic.policy file. On WebLogic 11g, the file is located in the WebLogic_HOME/wlserver_11.0/server/lib/ directory. In a text editor, comment out the restrictive permissions, and add permission java.security.AllPermission; to the default permissions section, as the following example shows:

```
// default permissions granted to all domains grant { permission java.security.AllPermission; /* permission java.util.PropertyPermission
"java.version", "read"; permission java.util.PropertyPermission "java.vendor", "read"; ... permission java.util.PropertyPermission
"java.vm.name", "read"; */ }; ...
```

6 Deploy the cfusion and CFIDE directory structures using your site-specific WebLogic deployment method.

7 Ensure that the following jars are in the startup script's classpath.

```
WEB-INF/cfusion/lib/jintegra.jar WEB-INF/flex/jars/cfgatewayadapter.jar WEB-INF/flex/jars/concurrent.jar
```

8 Review the console messages and server log to ensure that ColdFusion 11 deployed successfully.

9 Start the ColdFusion Administrator, which runs the Configuration wizard.

10 To install any other integrated Adobe or third-party technologies, see Installing Integrated Technologies.

11 Configure and manage your system, as described in Configuring your System.

12 To learn about ColdFusion, read the documentation, which is accessible through the Documentation link on the Resources page of the ColdFusion Administrator.

> **Note:** You must copy the version of tools.jar that the application server uses to the cfusion/lib directory.

Configure operating system-specific binary support in Windows

1 Locate the startup script for the WebLogic domain, which is typically the startWebLogic cmd file, which is located in the wldomain_root\bin directory.

2 Make a backup copy of this file.

3 Open the startup script.

4 Establish the following basic variables at the beginning of the script:

- CF_WEB_INF

- CF_SHARED_LIB For example:

```
SET CF_SHARED_LIB=%CF_WEB_INF%\cfusion\lib
```

5 Save the startup script and restart the WebLogic Server.

Enable COM support for Windows

1 Open the startup script for the WebLogic domain, which is typically the startWebLogic cmd file, which is located in the wldomain_root\bin directory.

2 Establish the following variables:

- JINTEGRA_PATH

- PRE_CLASSPATH

- PRE_PATH For example:

```
SET PRE_CLASSPATH=%CF_SHARED_LIB%\jintegra.jar SET PRE_PATH=%CF_SHARED_LIB%;%JINTEGRA_PATH%
```

Configure operating system-specific binary support in UNIX

1 Locate the startup script for the WebLogic domain, which is typically the startWebLogic.sh file, which is located in the wldomain_root\bin directory.

2 Make a backup copy of this file.

3 Open the startup script.

4 Establish the following basic variables at the beginning of the script:

- CF_WEB_INF

• CF_SHARED_LIB For example:

```
CF_WEB_INF=cf_webapp_root/WEB-INF CF_SHARED_LIB=${CF_WEB_INF}/cfusion/lib
```

5 Save the startup script and restart the WebLogic Server.

Enable ColdFusion security in Windows

1 Open the startup script for the WebLogic domain, which is typically the startWebLogic cmd file, which is located in the wldomain_root\bin directory.

2 Establish or append to the following variable:

• CF_SECURITY_JVM_OPTIONS

• MEM_ARGS If you are not using JRockit, append -Xms32m -Xmx512m -Xss64k -XX:MaxPermSize=128m to the existing MEM_ARGS line of the startup script. If you are using JRockit, append -Xms32m -Xmx512m -Xss64k to the existing MEM_ARGS line of the startup script.

• JAVA_OPTIONS Append the CF_SECURITY_JVM_OPTIONS variable to the existing JAVA_OPTIONS line of the startup script) For example:

```
SET CF_SECURITY_JVM_OPTIONS="-Djava.security.manager" @rem You must append %CF_SECURITY_JVM_OPTIONS% to the existing
JAVA_OPTIONS value. set JAVA_OPTIONS=-Dweblogic.security.SSL.trustedCAKeyStore=C:\WebLogic_HOME\server\lib\ cacerts
%CF_SECURITY_JVM_OPTIONS% %CF_COM_JVM_OPTIONS% @rem You must append the following to the existing MEM_ARGS value.
@rem -Xms32m -Xmx512m -Xss64k -XX:MaxPermSize=128m
```

3 Save the startup script and restart the WebLogic Server.

Enable ColdFusion security and graphing support in UNIX

1 Open the startup script for the WebLogic domain, which is typically the startWebLogic.sh file, which is located in the wldomain_root\bin directory.

2 Establish or append to the following variables:

• CF_SECURITY_JVM_OPTIONS

• CF_GRAPHING_JVM_OPTIONS

• MEM_ARGS If you are not using JRockit, append -Xms32m -Xmx512m -Xss64k -XX:MaxPermSize=128m to the existing MEM_ARGS line of the startup script. If you are using JRockit, append -Xms32m -Xmx512m -Xss64k to the existing MEM_ARGS line of the startup script.

• JAVA_OPTIONS Append the CF_SECURITY_JVM_OPTIONS variable to the existing JAVA_OPTIONS line of the startup script) For example:

```
CF_SECURITY_JVM_OPTIONS="-Djava.security.manager" CF_GRAPHING_JVM_OPTIONS="-Djava.awt.headless=true" # You must
append ${CF_SECURITY_JVM_OPTIONS} and ${CF_GRAPHING_JVM_OPTIONS} # to the existing JAVA_OPTIONS value. #
JAVA_OPTIONS="default java options ${CF_SECURITY_JVM_OPTIONS} ${CF_GRAPHING_JVM_OPTIONS}" # You must append the
following to the MEM_ARGS variable coded # in the server startup file: # "-Xmx512m -XX:MaxPermSize=128m"
```

3 Save the startup script and restart the WebLogic Server.

Deploying ColdFusion 11 on Oracle Application Server 11g

The following instructions assume that you installed the JEE configuration of ColdFusion 11 and that the EAR file to deploy is under C:\ColdFusion_Jee\cfusion.ear. Before you deploy ColdFusion on Oracle 11g, ensure that the following is true:

• Oracle Application Server 11g is installed and running.

- You set up an OC4J JEE container for the ColdFusion installation. Adobe recommends that you create an OC4J instance for ColdFusion to avoid potential classpath issues with other applications.

- (Recommended, but not required) You created an OC4J instance. To do so, connect to the Oracle Application Server using Enterprise Manager and create an OC4J instance. By default the HTTP URL is http://machineName:1811. If 1811 is unavailable, the next available port in sequential order is used.

- You increased the heap size to at least 256 MB (although 512 MB is preferred). To do so, select the OC4J instance in Enterprise Manager, and select Administration / Server Properties. Under the Command Line Options category, add -Xmx256M to the Java Options, and then restart the OC4J instance.

Deploy ColdFusion 11 on Oracle 11g

1 Ensure that the application server and the OC4J instance are running.

2 Open a Windows command prompt and go to the oracle_root/dcm/bin directory.

3 Deploy the ColdFusion 11 application by using the command-line tool dcmctl.bat, as follows:

```
Dcmctl deployapplication -application cf_app -file c:\ColdFusion_Jee\cfusion.ear -component oc4j_instance
```

4 Edit the oracle_root/j2ee/oc4j_instance/config/java2.policy file by adding the following to the end of the file:

```
grant { permission java.security.AllPermission; };
```

5 Start the ColdFusion Administrator, which runs the Configuration and Settings Migration wizard.

> **Note:** To enable Livecycle Data Services ES on Oracle AS, specify the following JVM argument in the ColdFusion Administrator: -Doc4j.jmx.security.proxy.off=true

You must perform some configuration steps to enable support for CFX tags written in C++, which binary files that are specific to your operating system.

Configure operating system-specific binary support for Windows

1 Connect to Oracle AS 11g using Enterprise Manager.

2 Go to oc4j_instance/Administration/Server Properties.

3 Under the Environment Variables category, select Add Environment Variable.

4 Enter PATH as the name.

5 Enter $ORACLE_HOME\j2ee\ oc4j_instance\applications\ cf_app\cfusion\WEB-INF\cfusion\lib; as the value.

6 Ensure that the Append option is selected.

7 Select Apply.

8 When the Enterprise Manager prompts you to restart, select the restart option.

Configure operating system-specific binary support for Solaris and Linux

1 Connect to Oracle AS 11g using Enterprise Manager.

2 Go to oc4j_instance/Administration/Server Properties.

3 Under the Environment Variables category, select Add Environment Variable.

4 Enter LD_LIBRARY_PATH as the name.

5 Enter $ORACLE_HOME/j2ee/oc4j_instance /applications/cf_app /cfusion/WEB-INF/cfusion/lib; as the value.

6 Ensure that the Append option is selected.

7 Select Apply.

8 When the Enterprise Manager prompts you to restart, select the restart option. You must enable Component Object Model (COM) support in Windows after installing ColdFusion 11 to use the cfreport tag with Crystal Reports. It is not required for the ColdFusion Report Builder or any reports that you create with the ColdFusion reporting feature.

Enable COM support

1 In Oracle AS 11g Enterprise Manager, go to oc4j_instance /Administration/Server Properties.

2 In the Environment Variables category, ensure that the entry PATH exists. If not, follow the instructions to enabling features with operating system-specific binaries.

3 Add {{$ORACLE_HOME\j2ee\oc4j_instance\applications\cf_app\cfusion\WEB-INF\cfusion\jintegra\bin; $ORACLE_HOME\j2ee\oc4j_instance\applications\cf_app \cfusion\WEB-INF\cfusion\jintegra\bin\international }}as the value.

4 Ensure that the Append option is enabled.

5 Select Apply.

6 When the Enterprise Manager prompts you to restart, select the restart option.

7 In some cases, you might also have to do the following to register the Microsoft Type viewer:

   1 Open a console window and go to cf_webapp_root\WEB-INF\cfusion\lib.

   2 Register TypeViewer.dll by issuing the following command:

```
regsvr32 TypeViewer.dll
```

The following steps configure your application server to useColdFusion 11 charting and graphing on AIX, Linux, and Solaris systems. This step is not required to enable charting and graphing in Windows.

Enable charting and graphing

1 In Oracle AS 11g Enterprise Manager, go to oc4j_instance/Administration/Server Properties.

2 If the following entry does not exist in the Java Option under the Command Line Options category, add it:

```
-Djava.awt.headless=true
```

3 Select Apply.

4 When the Enterprise Manager prompts you to restart, select the restart option.

Disable the RDS web module

If you installed ColdFusion 11 at a context root other than /, use the following procedure to disable the RDS redirector web module without undeploying it. If you disable (or undeploy) the RDS redirector and do not disable the RDS servlet, RDS services are still available using the ColdFusion application context root, but tools that use RDS and require a context root of /, such as Dreamweaver and earlier versions of HomeSite, do not work.

1 In the Oracle AS 11g Enterprise Manager, select oc4j_instance /Applications.

2 Select Adobe ColdFusion 11 application and select Edit.

3 In the Administration category, select Advanced Properties.

4 In the Configuration Files category, select orion-application.xml.

5 Comment out the RDS web module as the following example shows:

```
    <web-module id="rds" path="rds.war" /> -->
```

6 Apply the changes.

7 Restart the OC4J instance.You can enable the RDS web module by repeating this procedure and selecting the Enabled option.

Deploying ColdFusion 11 on JBoss Application Server

ColdFusion 11 supports JBoss with the following specifications:

• JBoss 5.1,6.x,7.0, 7.1

• JRE 1.5 or 1.6

ColdFusion 11 has not been tested using JBoss under the following conditions:

1 JBoss using a servlet container other than Tomcat

2 Deploying ColdFusion to a JBoss cluster

> **Note:** If you are already using an application with context root of /, use a context root other than / for the cfusion-ear file. If you specified / when you installed ColdFusion, you can change it by opening the cfusion-ear/META-INF/application.xml file in a text editor and modifying the context-root element. After you deploy the cfusion-ear file, you access ColdFusion pages by specifying http://hostname:portnumber/contextroot/pagename.cfm.

If you are updating an existing deployment of ColdFusion, undeploy it for JEE before you deploy ColdFusion 11. When you deploy ColdFusion on an existing version of JBoss, expand the EAR file or WAR files manually before deployment. This document uses the following conventions:

• **JBOSS_HOME** Directory where JBoss is installed, for example, C:\jboss-as-7.1.1.Final in Windows or /usr/local/jboss-as-7.1.1.Final on UNIX

• **JBOSS_DEPLOY_DIR** Application deployment directory in JBoss, for example, C:\jboss-as-7.1.1.Final\standalone\deployments in Windows

• **CF_WEBAPP_ROOT** Directory where ColdFusion is deployed, for example: C:\jboss-as-7.1.1.Final\standalone\deployments\cfusion.ear\cfusion.war

• **TEMP_LOCATION** Temporary location where you extract the cfusion.ear file.

Deploy ColdFusion on JBoss

1 Set JAVA_HOME to the appropriate JDK.

2 Install ColdFusion by using the JEE deployment option and selecting to create an EAR file (the default). The installation program creates the cfusion.ear file in the install directory.

3 Extract the cfusion.ear file into a TEMP_LOCATION\cfusion.ear folder. This step creates cfusion.war and rds.war files and a META-INF folder in the cfusion.ear folder.

4 In the cfusion.ear folder, extract the cfusion.war and rds.war files into folders named cfusion and rds, respectively.

5 Delete the compressed cfusion.war and rds.war files.

6 Rename the cfusion and rds folders to cfusion.war and rds.war, respectively.

7 Stop JBoss if it is running.

8　Copy or move the {{TEMP_LOCATION\cfusion.ear }}folder into the {{JBOSS_DEPLOY_DIR }}folder. For JBoss 7, place the exploded ear in the {{JBOSS_HOME/standalone/deployments }}directory and create an empty file cfusion.ear.dodeploy (if your EAR directory name is cfusion.ear.) The resulting directory structure will appear as follows:

```
server default deploy cfusion.ear cfusion.war META-INF rds.war JBoss 7.x standalone deployments cfusion.ear cfusion.war META-INF
rds.war cfusion.ear.dodeploy
```

9　**(Windows)**Edit the JBOSS_HOME\bin\run.bat file for JBoss 5.1 and 6.x and JBOSS_HOME\standalone.bat for JBoss 7.x by doing the following:

1　If not present, add the JVM (-Xmx512m) parameter to JAVA_OPTS.

2　Ensure that the permanent generation heap size is set by adding -XX:MaxPermSize=128m to JAVA_OPTS.Without this parameter, the JVM can generate a java.lang.OutOfMemoryError error.

3　Ensure that the jars available in WEB-INF/flex/jars are in the classpath.

4　Save the run.bat file.

5　Start the server by running the JBOSS_HOME\bin\run.bat file.

> **Note:** If you use Apache Derby database, add the following in run.bat: JAVA_OPTS=%JAVA_OPTS% -Djboss.platform.mbeanserver. This is to ensure that Apache Derby do not start a JMX management server that might conflict with JBoss.

6　(Linux) Edit the JBOSS_HOME/bin/run.conf file by doing the following:

1　In JAVA_OPTS, change -Xmx128m. to -Xmx512m.

2　Add -XX:MaxPermSize=128m to JAVA_OPTS.

3　Save the run.conf file.

4　Start the server by running the JBOSS_HOME/bin/run.sh file. To enable features with operating system-specific binaries, configure ColdFusion. This step is required to support the following features that use binaries that are specific to your operating system:

•　CFX tags written in C++

•　Microsoft Access driver with Unicode support (Windows only) Use the following procedure for your operating system to configure the search paths to find the required binary files. These files are located in the CF_WEBAPP_ROOT\WEB-INF\cfusion\lib directory.

> **Note:** If you use Apache Derby database, add the following in run.bat: JAVA_OPTS="$JAVA_OPTS -Djboss.platform.mbeanserver". This is to ensure that Apache Derby do not start a JMX management server that might conflict with JBoss.

> **Note: (JBoss 7.x only)** If cfusion.ear is not deployed before JBoss times out for deployment, you can change the deployment timeout of JBoss in JBOSS_HOME\standalone\configuration\standalone.xml file.{{<subsystem xmlns="urn:jboss:domain:deployment-scanner:1.0"> <deployment-scanner scan-interval="5000" relative-to="jboss.server.base.dir" path="deployments" deployment-timeout="120",/> </subsystem>}}

> **Note: (JBoss 7.x only)** After CF is deployed in JBoss 7.x, web services will not function. To resolve this, add <path name="javax/annotation/processing"/> in JBOSS_HOME\modules\sun\jdk\main\module.xml file. For more information, see https://community.jboss.org/message/627008

> **Note:** If you are running ColdFusion on MAC, documents and PDF functionality may fail with {{ClassNotFound for com.aqua.LookAndFeel }}error. To resolve this, add the following entry to JBOSS_HOME\modules\sun\jdk\main{color}module.xml file:<path name="com/apple/laf"/>

> **Note:** In JBOSS 7.x, if OpenOffice is not functioning, start JBoss with the following flag:
>
> Djava.ext.dirs=JBOSS_DEPLOY_DIR/cfusion.ear/cfusion.war/WEB-INF/cfusion/lib/oosdk/;<java-home>/lib/ext/
>
> Use ':' for Unix based machines and ';' for ColdFusion running on Windows.
>
> Also open the module.xml file in JBOSS_HOME\modules\sun\jdk\main\ and add the following line:
>
> <path name="com/sun/star/lib/loader"/>

Configure operating system-specific binary support for Windows

1 Ensure that JBoss Server is stopped.

2 Edit JBOSS_HOME\bin\run.bat by adding the following:

```
set PATH=%PATH%;%CF_LIB_PATH%
```

3 Edit the run.bat file that is located in the JBOSS_DEPLOY_DIR by doing the following:

? Locate the following text:

```
rem ---------------------------------------------- rem JBoss Bootstrap Script for Win32 rem ----------------------------------------------
```

4 Below this text, insert three lines and paste.

```
set PATH=%PATH%;%CF_LIB_PATH%
```

5 Save the file and start the server.

> **Note:** You must copy the version of tools.jar that the application server uses to the cfusion/lib directory.

Configure operating system-specific binary support for Linux

1 Ensure that JBoss Server is stopped.

2 Edit JBOSS_HOME/bin/run.sh by adding the following:

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:CF_WEBAPP_ROOT/WEB-INF/cfusion/lib
```

3 Save the file and start the server.

Enable COM support (Windows only)

1 Ensure that JBoss Server is stopped.

2 Edit JBOSS_HOME\bin\run.bat by adding the following:

```
set CF_LIB_PATH=%CF_LIB_PATH%;CF_WEBAPP_ROOT\WEB-INF\cfusion\jintegra\bin;CF_WEBAPP_ROOT\WEB-
INF\cfusion\jintegra\bin\international
```

3 Save the file and start the server.

Enable communication with Flex

When ColdFusion is configured to use RMI for LiveCycle Data Services ES, ColdFusion listens on port 1199 by default. However JBoss typically starts listening on this port before ColdFusion does; as a result, an exception is thrown. To configure ColdFusion to use a different RMI port, on the Java and JVM page of the ColdFusion Administrator, specify the following in the JVM arguments text area: -Dcoldfusion.rmiport=nnnn Replace nnn with the value of an unused port. If you try to connect from a LiveCycle Data Services ES server that is running in another JVM server to ColdFusion over RMI, the Flex server must start with the same JVM argument.

Disable RDS

1 Stop ColdFusion.

2 Edit JBOSS_DEPLOY_DIR\cfusion.ear\cfusion.war\WEB-INF\web.xml by commenting out the following:

```
<servlet-name>RDSServlet</servlet-name> <display-name>RDS Servlet</display-name> <servlet-
class>coldfusion.bootstrap.BootstrapServlet</servlet-class> <init-param id="InitParam_1134013111165856789"> <param-
name>servlet.class</param-name> <param-value>coldfusion.rds.RdsFrontEndServlet</param-value> </init-param> </servlet> --> <!--
<servlet-mapping id="macromedia_mapping_9"> <servlet-name>RDSServlet</servlet-name> <url-pattern>/CFIDE/main/ide.cfm</url-
pattern> </servlet-mapping> -->
```

3 Save the file and start ColdFusion.

Prevent security-based errors

If you notice security-based errors when JBOSS is starting (errors that mention Java and security), edit the run.bat file as follows:

1 Go to the line that contains the -Xmx512m parameter.

2 Change the text: -Dprogram.name=%PROGNAME% to be -Dcoldfusion.disablejsafe=true %JAVA_OPTS%. These security errors occur because some versions of JBOSS cannot handle additional encryption software that ColdFusion uses for higher security standards. Some features, such as EJB3, require JDK 1.5.

Deploying ColdFusion 11 on Tomcat server

ColdFusion 10 and ColdFusion 11 comes with an in-built modified version of Tomcat server. You can also deploy ColdFusion 10 and ColdFusion 11 as WAR file on a standard Tomcat server similar to any other JEE server deployment.

1 Create a WAR file of ColdFusion application. See deploying section for more information. For example, http://localhost:8080

2 Open the Tomcat admin console (http://hostname:portnumber)

3 Click the Manager app at the right side menu options. Alternatively, you can use: http://hostname:portnumber/manager/html.

    ? Tomcat Web Application Manager appears. You can see a list of applications already deployed in Tomcat server at the top followed by the WAR file deploy option.

4 Click Choose File to browse through your system and choose the WAR file.

5 Click Deploy.

After successful deployment you would receive a message on top of the page. The deployed ColdFusion application appears in the list of applications. You can start, stop, undeploy, and reload the application using the GUI options.

Access the ColdFusion application by using the application name that you provided while creating the WAR file. (http://hostname:portnumber/applicationname)

For a list of FAQ on ColdFusion deployment in Tomcat, see the blog post here

Undeploying ColdFusion

To undeploy ColdFusion in the JEE configuration, you use application-server specific undeploy tools and methods.

Undeploy ColdFusion in the JEE configuration

1 Remove all ColdFusion specifications from the java.args and java.library.path JVM arguments used by your application server.

2 (Windows only) If you installed ODBC support, remove the ODBC Windows services by navigating to the cf_webapp_root\WEB_INF\cfusion\db\SequeLink Setup directory and executing the RemoveSequeLink.bat file.

3 If necessary, copy and save CFM pages from the ColdFusion web application root.

4 Undeploy the ColdFusion web application using application-server-specific undeploy functionality.

    ? On WebLogic, open the WebLogic Administrator., open the WebLogic Administration Console (http://hostname:portnumber/console) and go to domainname > Deployments > Applications. Click the trash can to the right of the ColdFusion application, and then click Yes. Open the startup script for the WebLogic domain and remove ColdFusion-specific entries, as follows:

CF_SHARED_LIB_DIR (also remove CF_SHARED_LIB_DIR from PRE_PATH) LD_LIBRARY_PATH (UNIX only, remove ${CF_SHARED_LIBS}) (Windows only) JINTEGRA_PATH (also remove JINTEGRA_PATH from PRE_PATH) (Windows only) Remove jintegra.jar from PRE_CLASSPATH CF_SECURITY_JVM_OPTIONS CF_GRAPHING_JVM_OPTIONS Remove ColdFusion arguments from MEM_ARGS Remove CF_SECURITY_JVM_OPTIONS and CF_GRAPHING_JVM_OPTIONS from JAVA_OPTIONS

5 If necessary, restart the application server.

ColdFusion and API Manager

For ColdFusion installation in JEE and API manager in the same machine, if you want to run it in-VM, then add the flag -Dapim.home in the config file of JEE application server.

Installing ColdFusion Express

Note: This edition of ColdFusion **is not meant for production deployment**.

ColdFusion Express is a new deployment option for Adobe ColdFusion (2016 release) that enables you to quickly setup a development or demonstration instance of ColdFusion without running a full installer or following the complete installation procedure.

ColdFusion Express is a new 'lighter' version of the ColdFusion Server, which lacks some functionality that may not be needed in all deployments of ColdFusion, and which is ideally suited for developers to quickly setup and run a ColdFusion Server for testing and debugging purposes. (See below for more information on the differences between ColdFusion Express and full ColdFusion editions.)
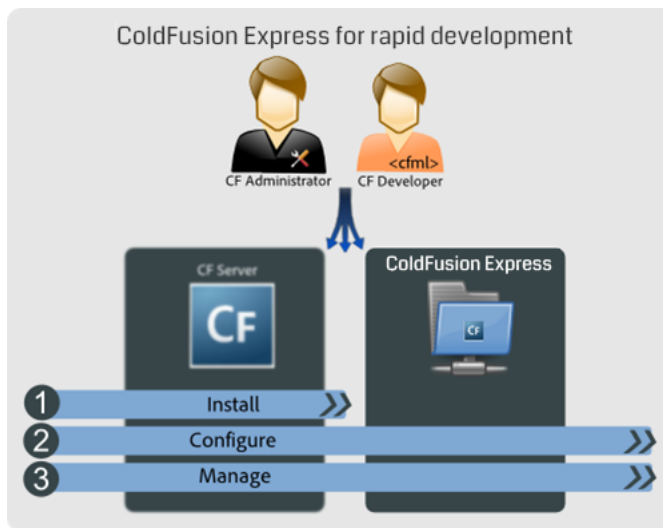
Getting started

You can quickly get your ColdFusion Express edition up and running by performing the following simple tasks.

To use ColdFusion Express, perform the following tasks:

1 Get the compressed archive for your platform.

- Links to the downloadable archive file for each platform's Express edition are available at the Adobe ColdFusion product trial downloads page. Login with an Adobe ID (or create a new one).

- On the ColdFusion trial downloads page shown, see links to the Express edition archive files offered after the drop-down of full trial installers. There are express edition archives for Windows (32 and 64 bit), and Linux (32 and 64 bit), and Mac OS X. Extract the archive. The location where you extract the archive is referred to hereafter as <ARCHIVE_ROOT>.

- There are also archives available for JEE WAR deployment (32 and 64 bit), which can be deployed on any ColdFusion-supported JEE application server. If you want to deploy on a 64-bit application server, deploy the 64-bit WAR with application server's Java set to 64-bit. Similarly, deploy a 32-bit WAR on a 32-bit application server. See your application server's instructions for WAR file deployment. the default context root is "cfusion". The location where you deploy the WAR file is referred to hereafter as <ARCHIVE_ROOT>.

2 (Optional) Go to <ARCHIVE_ROOT> and open the config.ini file for editing. Add valid values for the following parameters:

   1 **password_admin** – Enter a password for accessing the Administration Console.

   2 **password_rds** – Enter a password for the RDS access (if needed). Note that RDS is enabled by default for ColdFusion Express with default password. However, you can change the credentials.

   3 Save the file.

4 For zip (as oppposed to WAR file) deployments, go to <ARCHIVE_ROOT>/cfusion/bin and invoke the startup script for your platform.

   1 A compatible JRE is included along with this Server. However, if you wish to change the JRE, ensure:

      1 You have Java SE runtime installed and is available in the PATH

      2 You have the JAVA_HOME environment variable pointing to JRE 1.7 or later. If you don't want the Server to pick up the JRE details from the system variable, you can set it up in the jvm.config file that is under cfusion\bin. For instance, java.home= C:\Program Files (x86)\Java\jre . Note that it has to be the server JRE. For information on server JRE you can refer to this document.

   3 On Windows – Double-click the **cfstart.bat** file to start ColdFusion Express.

   4 On Linux – From a terminal window, run the **cfstart.sh** file as a privileged user.

5 Login to Administration Console at http://127.0.0.1:8500/CFIDE/administrator/ and start configuring your server.

   1 For zip file deployments, if this default port (8500) for the built-in web server is already in use, the Express edition will not start. To change the port see the <ARCHIVE_ROOT>\cfusion\runtime\conf\server.xml file and edit the port on the line starting with <Connector port="8500". Save the file and return to step 2.

   2 For WAR file deployments, the port to use is that of your application server.

> **Note:** If you are planning to use the server for development purpose only, step 2 is optional. For development purpose, just extract the archive and run the executable. The default admin password is 'admin'.

This edition of ColdFusion does not require a license key (and it does not support using one).

Directory structure

After you extract the compressed archive, you will see the sub-directories under the <ARCHIVE_ROOT>/cfusion directory. The following list describes what each sub directory contains:

- **bin:** Programs for starting, stopping, and viewing information for ColdFusion Express. It also contains the password reset script for server administrator.
- **cache:** Repository for temporary files.
- **cfx:** Sample C++ and Java CFX files with their supporting files.
- **charting:** Files for ColdFusion Express graphing and charting engine.
- **CustomTags:** Repository that will contain your custom tags.
- **db:** The sample Apache Derby databases for all platforms.
- **gateway:** Files for ColdFusion event gateways.
- **jintegra:** (Applies only for Windows) JIntegra programs, libraries, and other supporting files.
- **lib:** JAR, XML, property, and other files that are base libraries for ColdFusion Express.
- **logs:** Repository for the log files. JRE-specific log files are in the runtime/logs directory. Console outputs are logged in to start.log instead of cfserver.log.

- **Mail:** Repository for spooled mail and mail that cannot be delivered.
- **registry:** (UNIX only) Contains a file to store registry settings.
- **runtime:** Programs and supporting files for running the Server. Also, this directory contains the Tomcat libraries. The conf directory in runtime contains all Tomcat configuration files.
- **stubs:** Contains the web service files.
- **wwwroot:** The default web root directory for the built-in web server. Do not remove this directory.

Features not available with this edition

ColdFusion Express can be used for quickly evaluating the ColdFusion Server. You need to understand that not all the features of the ColdFusion Server are available in ColdFusion Express out-of-box.

The following limitations are applicable for the ColdFusion Express:

1 No support for SOLR service.
2 No support for the Microsoft .NET platform.
3 No support for remote administration.
4 No PDF generation support.

> **Note:** To configure any of these previously mentioned services with the server, you can download and install the standalone .NET installer and the Remote Admin component installer, which contains SOLR server/Remote admin component and has PDF Generation support.

<ARCHIVE_ROOT>

Installing Integrated Technologies

Adobe ColdFusion (2016 release) provides integration capabilities with several Adobe and third-party technologies. In some cases, you can install these components when you install ColdFusion 2016. In other cases, you might have to follow some steps outside the ColdFusion installation.

Integrated Adobe and third-party technologies

The 2016 release of provides integration capabilities with several Adobe and third-party technologies.

Installing Report Builder

ColdFusion reporting consists of server-side run-time processing and the ColdFusion Report Builder. The server-side processing is available on any platform, however, the ColdFusion Report Builder runs in Windows only.

Install the ColdFusion Report Builder

1 Access the ColdFusion Report Builder installer from one of the following locations:
   - DVD - Use the DVD browser to select the ColdFusion reporting option.
   - The Adobe website - Go to www.adobe.com/go/report_builder/.
2 Double-click the ColdFusion_2016_ReportBuilder_WWEJ.exe file.
3 Follow the instructions in the installation.

Installing Solr search server

By default, the installer installs the Solr search server on the same computer as ColdFusion.

Note: In the case of J2EE deployments, if you deploy ColdFusion multiple times, then the Solr Home path must be updated in the ColdFusion Administrator. To do this, go to Data & Services > Solr Server and then update the path in Solr Home in the Configure Solr Server section.

If you plan to install the Solr search server on a different computer from the one where you install ColdFusion, you must install it separately.

Install the Solr search server separately

? Download your platform-specific installer from the Adobe website or copy it from the ColdFusion 2016 DVD, as follows:

Platform	Installer
Windows	ColdFusion_2016_Jetty_Solr_win.exe
Linux	• ColdFusion_2016_Jetty_Solr_linux.bin

• ColdFusion_2016_Jetty_Solr_linux64.bin

Solaris	ColdFusion_2016_Solr_Jetty_solaris.bin
OSX	ColdFusion_2016_Solr_Jetty_osx2016.zip
AIX	ColdFusion_2016_Solr_Jetty_aix.bin

1 Close any applications that are currently running on your computer.

2 Run the platform-specific installer using the appropriate command.

Note: Only console installations are available for UNIX systems.

Using Solr Search Server

Use the following steps to start and stop Solr.

Non-Windows platforms

• Start Solr using the following command:sudo ./cfsolr start
• Stop Solr using the following command:sudo ./cfsolr stop

Windows platform

• Start or stop the Solr service ColdFusion 2016 Add-on Service using Microsoft Management Console.

Enabling Flash Remoting

To interact with ColdFusion pages and components from an Adobe Flash SWF file, you can use the Flash Remoting service in ColdFusion 2016. To develop applications that use Flash Remoting, install the Flash Remoting components in the Flash authoring environment. The Flash authoring environment or Adobe Flex is required to build applications that connect to and interact with the Flash Remoting service in ColdFusion 2016. By default, Adobe Flash Remoting cannot access web services through ColdFusion 2016.

Enable Flash Remoting to access web services through ColdFusion 2016

1   Open the cf_root/cfusion/wwwroot/WEB-INF/gateway-config.xml file in a text editor.

2   Locate the following line.

```
<!--<adapter>coldfusion.flash.adapter.CFWSAdapter</adapter>-->
```

3   Remove the comments so that the line appears as follows.

```
<adapter>coldfusion.flash.adapter.CFWSAdapter</adapter>
```

4   Save the file.

5   Restart ColdFusion.

Installing Flash Remoting Update

Flash Remoting Update lets you create rich Internet applications by using Adobe Flash Builder, with the advanced data retrieval features of ColdFusion, such as the c{{fpop}}, cfldap, and cfquery tags. Also, you can use Flash Remoting Update to create Flash Forms and SWF applications that contain features, such as server callbacks and customized user interface.

Install Flash Remoting Update

1   Install ColdFusion (2016 release)

2   If your ColdFusion server uses something other than port 8500, do the following:

   1   Open the file <cf_root>\wwwroot\Web-INF\flex\services-config.xml. Change the following to specify the port that you are using in the endpoint URL:

```
<endpoint uri="http://localhost:8500/flex2gateway/" in flex-services.xml
```

   2   Save the file.

   3   Restart the ColdFusion server.

Installing the ColdFusion .NET Integration Services

You install Adobe ColdFusion 2016 .NET Integration Service to access .NET assemblies from ColdFusion. The .NET assemblies can exist either locally on the computer on which ColdFusion is running or on a remote machine. If the computer on which you are installing ColdFusion does not have Microsoft .NET framework installed, the .NET Integration Services option is disabled in the ColdFusion installer.

Installing ColdFusion .NET Integration Services with ColdFusion

If .NET assemblies exist locally, select the .NET Integration Services option when you install ColdFusion. Doing so installs the Adobe Coldfusion (2016 release) .NET Integration Services with ColdFusion. You can access .NET assemblies locally only if you are running ColdFusion on a Windows computer; on other operating systems, the .NET assemblies must be on a remote Windows computer. The ColdFusion installer puts the .NET Integration software in the cf_root\jnbridge directory. If you install the ColdFusion J2EE configuration, you can specify the directory in which to install the .NET Integration software. The installer automatically determines your Windows system .NET Framework version (1.x or 2.0) and installs the appropriate .NET integration software. Both 32-bit and 64-bit systems are supported. If you upgrade your .NET Framework, reinstall Adobe Coldfusion (2016 release) .NET Integration Servies. Proxies that you generate for .NET Framework 1.x work with .NET Framework 2.0 and .NET Framework 3.0, but proxies generated for .NET Framework 2.0 do not work with 1.x frameworks.

Installing ColdFusion .NET Service separately

If the .NET assemblies are on a remote computer, you use the .NET Service Installer (ColdFusion_2016_DotNetIntegration_WWEJ.exe) to install Adobe Coldfusion (2016 release) .NET Service. Similarly, to install the ColdFusion .NET Service when Coldfusion is already installed, you use the ColdFusion_2016_DotNetIntegration_WWEJ.exe.

Installing using the ColdFusion 2016 .NET Service installer

1 Open the installer.

2 Select the directory in which to install the .NET Service files.

3 Do one of the following:

   1 To install the .NET Service on the computer that is running ColdFusion, select the Install .NET Service With ColdFusion option and specify the ColdFusion root directory.

   2 To install the .NET Service remotely, select the Install .NET Service As Standalone option.

3 Review the Summary and click Install.

4 Restart ColdFusion.

Uninstall the ColdFusion 2016 .NET Service

1 Select Start > Settings > Control Panel > Add or Remove Programs.

2 Select Adobe Coldfusion 2016 .NET Service.

3 Click Uninstall. Alternatively, you can uninstall the Adobe Coldfusion 2016 .NET Service by running the Uninstall Adobe ColdFusion 2016 .NET Integration Services.exe program. The program is located in the cf_root\jnbridge\uninstall directory on ColdFusion server configurations. On J2EE configuration and on computers where you installed the Integration software without ColdFusion, it is in the C:\ColdFusionDotNetService\uninstall directory by default.

Installing ColdFusion Extensions for Eclipse

The ColdFusion Extensions for Eclipse include wizards that help generate code for common tasks and an extension that lets you connect to remote servers from Flash Builder and Eclipse. If you previously installed ColdFusion Extensions for Eclipse, you should uninstall them before installing a later version.

> **Note:** The Query Builder and some of the wizards in the ColdFusion Extensions for Eclipse are Windows-only.

Install the ColdFusion Extensions for Eclipse

1 In Eclipse, in the Update Sites to Visit dialog box, deselect the Ignore Features Not Applicable To This Environment option.

2 Download the ColdFusion Extensions for Eclipse from the Adobe website.

3 Select Help > Software Updates > Find and Install.

4 Select the Search For New Features To Install option, and then click Next.

5 Click New Archive Site.

6 Navigate to the location where you downloaded the ColdFusion_FlexBuilder_Feature.zip file, select the file, and then click Open.

7 When the Edit Local Site dialog box appears, click OK.

8 Ensure that the ColdFusion Flash Builder feature is selected, and then click Finish.

9 Select the check box next to ColdFusion_FlexBuilder_Feature.zip, and then click Next.

10 Select the I Accept The Terms In This License Agreement option, and then click Next.

11 Click Finish.

12 Click Install All.

13 When the installation is complete, click Yes to restart Flash Builder or Eclipse. To uninstall the ColdFusion Extensions for Eclipse, you must first disable them, and then uninstall them.

Uninstall the ColdFusion Extensions for Eclipse

1 Select Help > Software Updates > Manage Configuration.

2 Select the ColdFusion Plug-in feature.

3 Click Disable, and then click OK.

4 Click Yes to restart Flash Builder or Eclipse.

5 When Eclipse or Flash Builder restarts, select Help > Software Updates > Manage Configuration.

6 Ensure that the Show Disable Features button is selected, select the ColdFusion Flash Builder feature, and then click Uninstall.

7 Click Yes to confirm that you want to uninstall.

8 Click Yes and restart Flash Builder or Eclipse.

Configuring OpenOffice

Configuring OpenOffice with ColdFusion 2016 lets you use the cfdocument tag to convert Word documents to PDF and PowerPoint presentations to PDF/HTML.

Configuring OpenOffice for stand-alone

Download and install OpenOffice from http://download.openoffice.org/. When you install ColdFusion 2016 in a non-Windows platform, the installer prompts you with the directory path where OpenOffice is installed. If you want to specify a different installation path, you can specify the directory path as follows:

• For Macintosh platform:

```
/Applications/openoffice.org3
```

- For UNIX platform: Depends on the UNIX flavor. The location of OpenOffice installation might vary depending on the operating system that you use. In most cases, the location would be /usr/lib/openoffice.org3 or/usr/lib/ooo3.x. You can also specify the OpenOffice installation path in the ColdFusion Administrator as follows:

1 Log in to ColdFusion Administrator.

2 Navigate to Server Settings > Document, and enter the OpenOffice directory.

Configuring OpenOffice for J2EE servers

The following instructions are not applicable for stand-alone ColdFusion 2016.

1 Download and install OpenOffice from http://download.openoffice.org/.

2 For all other J2EE servers:

- Add the following classes and JAR files in the class path:

```
[cfusionhome]/lib/oosdk/classes [cfusionhome]/lib/oosdk/lib/juh.jar [cfusionhome]/lib/oosdk/lib/jurt.jar
[cfusionhome]/lib/oosdk/lib/ridl.jar [cfusionhome]/lib/oosdk/lib/unoil.jar
```

- For Windows platform, add the following directory to the library path (java.library.path):

```
[cfusionhome]/lib/oosdk/classes
```

Replace cfusionhome}}with the path to the cfusion directory. For example, for Jboss, {{/opt/jboss-7.1.GA/standalone/deployments/cfusion.ear/cfusion.war/WEB-INF/cfusion

Configuring OpenOffice remotely

1 Run the following command in the command prompt:

```
soffice -nologo -nodefault -norestore -nofirststartwizard -headless -accept="socket,host=<ip>,port=8900;urp;StarOffice.ServiceManager"
```

Specify the IP address (of the remote machine in which you want to configure OpenOffice) in the host attribute.

2 Log in to ColdFusion Administrator.

3 Navigate to Server Settings > Document, and enter the host, and port details.

Configuring OpenOffice post Adobe Coldfusion (2016 release) installation

If you have a version of ColdFusion 2016 already installed on your system, for all platforms, follow these instructions to configure OpenOffice:

1 Log in to ColdFusion Administrator.

2 Navigate to Server Settings > Document, and specify the OpenOffice directory.

3 Restart the ColdFusion server.

Configuring your System

You can manage ColdFusion services and processes, configure web servers manually, and change user accounts and configure databases for ColdFusion.

> **Note:** The term cf_root refers to your installation directory in the server configuration. By default, this directory is C:\ColdFusion2016 in Windows, /opt/coldfusion2016 in UNIX, and /Applications/ColdFusion2016 in OSX.

Overview of configuration tasks

Configuration task	When to do it
Managing ColdFusion services in Windows and Managing the ColdFusion process in UNIX	For your changes to take effect when you stop and restart ColdFusion, for example after you enable or disable security in the ColdFusion Administrator or change any of the Java and JVM settings. You can do this at any time after you install ColdFusion.
Configuring web servers	When moving to a production server or when the built-in web server no longer meets your needs.
Enabling CORBA support	If you must make CORBA invocations from ColdFusion. You can do this after you install ColdFusion and before you make a CORBA call from ColdFusion.
Disabling Remote Development Services	For security reasons, disable RDS when you move an application to the production environment.
Disabling JSP functionality (server configuration only)	When running ColdFusion Enterprise Edition in a hosted environment, you might want to disable JSP processing.
Changing the ColdFusion user account in Windows	Iif you discover that the account under which ColdFusion is running has inappropriate access rights; for example, to interact with remote data sources, other application pages, or COM objects. You must also do this to be able to print to a printer using the cfprint tag. You can do this after you install ColdFusion and before you deploy your application.

For information about additional configuration tasks, see the Configuring and Administering ColdFusion guide.

Managing ColdFusion services in Windows

The ColdFusion installation creates the following services in the configuration indicated:

Service	Purpose	Configuration
ColdFusion 2016 Application Server	The main ColdFusion service. ColdFusion pages cannot be processed if this service is not running.	Server
ColdFusion 2016 ODBC Agent	The service used to configure data sources for the ColdFusion 2016 ODBC Server.	All
ColdFusion 2016 ODBC Server	The middle-tier service for ODBC connections that use the DataDirect drivers for Microsoft Access and ODBC Socket.	All
ColdFusion 2016 Jetty Service	Provides support for the ColdFusion 2016 search tags.. You cannot use the ColdFusion 2016 search tags if this process is not running.	All
ColdFusion 2016 .NET Service	Lets you access local .NET assemblies on a Windows system that runs ColdFusion.	All

> **Note:** In the ColdFusion Administrator, if you enable or disable security or change any option in the Java and JVM Settings page, stop and restart ColdFusion 2016 for your changes to take effect.

Start or stop a ColdFusion service

1 Open the Services dialog box by selecting Start > Settings > Control Panel > Administrative Tools > Services. If a service is running, its status appears as Started in the Status column. If it is not running, no status appears for the service.

2 Right-click a service, and select Stop, Start, or Restart. The Services window refreshes.

Set ColdFusion (2016 release) to start automatically or manually

1 Open the Control Panel > Services dialog box.

2 Right-click the service to configure, and select Properties.

3 In the Properties dialog box, on the General tab, select one of the following options in the Startup Type frame or pop-up menu, and click OK:

- Automatic - Starts the service automatically when you start the computer.

- Manual - Requires a user or dependent service to manually start the service.

Managing the ColdFusion process in UNIX

The ColdFusion installation creates a single process in UNIX called coldfusion2016. To check whether it is running, use the following command:

```
ps -eaf | grep coldfusion2016
```

If it is running, your computer returns something similar to the following line:

```
nobody 4528 1 11 12:44 pts/0 00:00:07 /opt/coldfusion2016/bin/coldfusion2016
```

In the ColdFusion Administrator, if you enable or disable security or change any option in the Java and JVM Settings page, stop and restart the ColdFusion process for your changes to take effect. This applies to the server configuration only; in the J2EE configurations, you use application-server-specific methods to update Java settings.

Manage the ColdFusion process in UNIX

1 Log in as root, if you have not already done so.

2 Enter the following command:

```
cd cf_root/bin
```

3 Enter the appropriate command, as the following table describes:

Task	Command
Start ColdFusion (2016 release)	./coldfusion start
Stop ColdFusion (2016 release)	./coldfusion stop
Restart ColdFusion (2016 release)	./coldfusion restart
View status of ColdFusion server	./coldfusion status

Managing the ColdFusion process in Mac OS X

The ColdFusion installation creates a single process in UNIX called cfusion. To check whether it is running, use the following command:

```
ps -eaf | grep coldfusion2016
```

If it is running, your computer returns something similar to the following line:

```
nobody 4528 1 11 12:44 pts/0 00:00:07 /opt/coldfusion2016/bin/coldfusion2016
```

Note: This discussion applies to the ColdFusion (2016 release) server configuration only. With the J2EE configuration, you start and stop ColdFusion 2016 by starting the application server.

In the ColdFusion Administrator, if you enable or disable security or change any option in the Java and JVM Settings page, stop and restart the ColdFusion process for your changes to take effect. This applies to the server configuration only; in the J2EE configurations, you use application-server-specific methods to update Java settings.

Manage the ColdFusion process in UNIX

1 Log in as root, if you have not already done so.

2 Enter the following command:

```
cd cf_root/bin
```

3 Enter the appropriate command, as the following table describes:

Task	Command
Start ColdFusion (2016 release)	./coldfusion start
Stop ColdFusion (2016 release)	./coldfusion stop
Restart ColdFusion (2016 release)	./coldfusion restart
View performance information for ColdFusion (2016 release)	./coldfusion status

Configuring web servers

You configure an external web server connection by using the Web Server Configuration Tool, which you can run through a graphical user interface (GUI) or the command line. The Windows discussions describe GUI mode, and the UNIX instructions describe command-line mode; however, you can use GUI mode in UNIX if you have access to a graphical environment.

Note: Adobe ColdFusion (2016 release) provides batch files and shell scripts in the cf_root/cfusion/bin/connectors directory to help you get started with command-line usage.

For more information on the Web Server Configuration Tool, including information on multihoming and distributed usage, see the Configuring and Administering ColdFusion guide.

> **Note:** If you cannot verify your configuration, repeat the procedure. If the problem persists, contact Adobe Technical Support for assistance, or manually create the element that you cannot verify in the configuration (for example, manually add an entry to the Apache httpd.conf file, as described here.).

Configuring web servers in Windows

You configure web servers in Windows by doing the following:

- Configuring IIS in Windows

- Configuring Apache web server in Windows

Configuring IIS in Windows

You configure IIS using the Web Server Configuration Tool in GUI or command-line mode. This discussion describes how to use GUI mode.

> **Note:** (Server configuration only) To use the command line, open the batch files located in cf_root\cfusion\bin\connectors or by navigating to <ColdFusion_Home>\runtime\bin directory.

For more information, see the Web Server Management chapter in the Configuring and Administering ColdFusion guide.

Configure IIS for ColdFusion in Windows

> **Note:** If you are configuring IIS 7 or IIS 7.5, before you proceed, ensure that you have the options **ISAPI Extensions** (Internet Information Service > Web Management Tools > World Wide Web Services > Application Development Features), **ASP.NET** , and **CGI** selected in the Windows Features dialog box (Start > Control Panel > Programs and Features > Turn Windows features on or off).

1 Start the Web Server Configuration Tool by selecting Start > Programs > Adobe > ColdFusion 2016 > Web Server Configuration Tool.

2 Click Add.

3 In the Server pop-up menu, enter the host name and the cluster name to configure.

> **Note:** The server or cluster does not have to reside on the web server computer.

4 In the Web Server Properties area, select IIS and specify the website. For IIS, you typically specify All.

Verify your IIS configuration

1 Verify that the following folder was created: cf_root/config/wsconfig/number.

2 To set the connectionpooltimeout and reuseconnectioncount click on Advanced Setting tab. The option to enable buffering and verbose debugging is available on the same page.**Configuring IIS**:

- Creates a folder 1 in cfroot\config\wsconfig, that contains all connector-related files.

- Creates a virtual directory Jakarta in cfroot\config\wsconfig (in IIS).

- Adds an entry, tomcat, under the{{ ISAPI FILTERS}}. This points to cfroot\config\wsconfig\1\isapi_redirect.dll.

- Adds an entry, tomcat, to cfroot\config\wsconfig\1\isapi_redirect.dll with permission allowed under ISAPI and CGI Restrictions. It is applicable for global sites in IIS manager.

- Adds the following isapi handlers: cfcHandler, cfmHandler, cfmlHandler, cfrHandler, and cfswfHandler.

- For debugging issues, set the log level to debug, in the isapi_redirect.properties file present in the {{cfroot\config\wsconfig\1\ }}directory.

- To disable webserver buffer, change the is_buffer_enable to false in the cfroot\config\wsconfig\1\isapi_redirect.properties file. Disable webserver buffer if you want cfflush to work over an IIS connector. If your application does not use cfflush, set it to true for increase in the performance.

Configuring Apache web server in Windows

You configure Apache by using the Web Server Configuration Tool in GUI or command-line mode. This discussion describes how to use GUI mode.

> **Note:** To configure Apache connector in UNIX platforms, APXS installation is a prerequisite.

> **Note:** (Server configuration only) To use the command line, open the batch files located in cf_root\cfusion\bin\connectors.

For more information, see the Web Server Management topic in the Configuring and Administering ColdFusion guide.

Configure Apache for ColdFusion in Windows

1 Start the Web Server Configuration Tool by selecting Start > Programs > Adobe > ColdFusion 2016 > Web Server Configuration Tool.

2 Click Add.

3 In the Server pop-up menu, enter the host name and the cluster name to configure.

> **Note:** The server or cluster does not have to reside on the web server computer.

4 In the Web Server Properties area, select Apache and specify the path to the directory that contains the httpd.conf file.

Verify your Apache configuration

? Verify that one of the following files was created:

- cf_root\config\wsconfig_number_**Configuring Apache**:

> **Note:** To configure Apache connector in UNIX platforms, APXS installation is a prerequisite.

> **Note:** Configuring Apache is not supported on Mac 10.10.5.

- Creates a folder 1 in cfroot\config\wsconfig that contains all connector-related files.

- Creates a file mod_jk.conf in Apache_root_folder\conf. This file has paths to all files in the cfroot\config\wsconfig\1 directory.

- Adds an entry in the httpd.conf file of Apache to include mod_jk.conf.

- The following files are significant:

  - uriworkermap.properties: Mapped extensions based on which the connector forwards requests to Tomcat.

  - mod_jk.conf: Contains paths to all files in the \config\wsconfig\1 directory. Change the entry JKloglevel info to JKloglevel debugfor debugging purposes.

> **Note:** For virtual host configuration, add the following entry in each of the virtual blocks: JkMountFile "cfroot\config\wsconfig\1\uriworkermap.properties:".

Configure Apache virtual host for each ColdFusion instance: Assume that you have two instances: cfusion and server1.

1 Configure Apache webserver for cfusion instance using the wsconfig tool. This step creates the connector-related files in the cfroot\config\wsconfig\1 folder. It also creates the mod_jk.conf in the <Apacheroot>\conf folder. The mod_jk.conf file is included in the httpd.conf.

2 Configure Apache virtual hosts.

3 In workers.properties of cfroot\config\wsconfig\1, add server1 to workers.list. For example, worker.list=cfusion,server1.

4 Add the following block of code:

```
worker.server1.host=localhost worker.server1.port=8014
```

> **Note:** The port is the AJP port for server1 and that can be found in server1.server.xml in the cfroot\server1\runtime\conf\server.xml.

5 Copy the content of uriworkermap.properties in cfroot\config\wsconfig\1 to uriworkermap1.properties. Replace the cfusion with server1.

6 Now add the following line in each of the virtual host: For example, VH1 is the ColdFusion instance. It should have: JkMountFile "cfroot\config\wsconfig\1\uriworkermap.properties" VH2 is the server1 instance. It should have JkMountFile "cf_root\config\wsconfig\1".

Configuring web servers in UNIX

You configure web servers in UNIX by doing one of the following:

• Configuring Apache web server in UNIX

Configuring Apache web server in UNIX

You can configure and verify the Apache web server for ColdFusion in UNIX.

Configure the Apache web server for ColdFusion in UNIX

? Enter the following command on a single line:

```
./ wsconfig -ws Apache -dir <apache config directory> -v
```

> **Note:** You must enter the wsconfig command and all switches as a single (long) line.

The following is a sample command:

```
/opt/coldfusion2016/cfusion/runtime/bin/wsconfig -ws Apache -dir /etc/httpd/conf -v
```

> **Note:** For unique configurations (such as the preconfigured Apache web servers from Redhat or Sun), add the -bin and -script parameters, as described in the Configuring and Administering ColdFusion guide.

Verify your Apache configuration

1 Verify that one of the following files was created:

• cf_root/config/wsconfig/number

2 To set the connectionpooltimeout and reuseconnectioncount click on Advanced Setting tab. The option to enable verbose debugging also is available on this page.**Configuring Apache**:

> **Note:** To configure Apache connector in UNIX platforms, APXS installation is a prerequisite.

> **Note:** Configuring Apache is not supported on Mac 10.10.5.

- Creates a folder 1 in cfroot\config\wsconfig that contains all connector-related files.

- Creates a file mod_jk.conf in Apache_root_folder\conf. This file has paths to all files in the cfroot\config\wsconfig\1 directory.

- Adds an entry in the httpd.conf file of Apache to include mod_jk.conf.

- The following files are significant:

  - uriworkermap.properties: Mapped extensions based on which the connector forwards requests to Tomcat.

  - mod_jk.conf: Contains paths to all files in the \config\wsconfig\1 directory. Change the entry JKloglevel info to JKloglevel debugfor debugging purposes.

> **Note:** For virtual host configuration, add the following entry in each of the virtual blocks: JkMountFile "cfroot\config\wsconfig\1\uriworkermap.properties:".

Configuring Virtual Hosts to enable REST

To enable REST services in ColdFusion, add a line to each virtual host for which you want to enable REST. Add the following line, depending on the OS, to the file that defines the hosts.

On MAC OS X

JkMountFile "/Applications/<ColdFusion Installation Directory>/config/wsconfig/1/uriworkermap.properties"

On Windows

JkMountFile "C:\<ColdFusion Installation Directory>\config\wsconfig\1\uriworkermap.properties"

Save the include file and restart Apache server to enable REST on all hosts.

Enabling CORBA support

ColdFusion supports third-party Object Request Brokers (ORBs) through its integration with Borland Visibroker. However, you must acquire the Common Object Request Broker Architecture (CORBA) software separately from Borland.

System requirements

You must have all of the following components installed on your computer before you can make CORBA invocations from ColdFusion:

- Borland Visibroker 4.5.1 for Java

- Java Runtime Environment (JRE) 1.4 for the Visibroker Interface Repository

- JRE 1.6 or later for ColdFusion (2016 release)

Installing Visibroker for CORBA connections

1 Install Visibroker on the CORBA server side. For more information, see the Borland Visibroker documentation.

2 Add the vbjorb.jar file to the ColdFusion classpath, as follows:

  1 In the ColdFusion Administrator, select Server Settings > Java and JVM. When using the J2EE configuration, you add the vbjorb.jar file to the J2EE application server classpath, using the server-specific method.

2 On the Java and JVM Settings page, in the Class Path text box, enter the path to your vbjorb.jar file (for example, C:\Inprise\vbroker\lib\vbjorb.jar). Add Xbootclasspath/a:"C:/Inprise/vbroker/lib/vbjorb.jar", to the JVM Args text box. You require only the JAR file on the computer that is running ColdFusion; you do not need the full Visibroker installation.

3 Click Submit Changes.

4 Configure a Visibroker connector in ColdFusion, as follows:

1 In the ColdFusion Administrator, select Extensions > CORBA Connectors.

2 In the CORBA Connectors page, click Register CORBA Connector.

3 In the CORBA Connector page, enter information for the connector. The following is an example of a correctly configured connector:

Field	Value
ORB Name	visibroker
ORB Class Name	coldfusion.runtime.corba.VisibrokerConnector
Classpath	(none)
ORB Property File	C:\ColdFusion2016\lib\vbjorb.properties

The ORB Property File points to a Java properties file that contains the correct ORB settings for Visibroker. The contents of the vbjorb.properties file look like the following:

```
org.omg.CORBA.ORBSingletonClass=com.inprise.vbroker.orb.ORB SVCnameroot=namingroot
```

4 When you finish editing the page, click Submit. The CORBA Connectors page appears.

5 Select the radio button to the left of your new CORBA connector and click Select ORB Connector. This sets the new connector to be the default.

6 Prepare your CORBA server side, as follows:

1 Start your Visibroker osagent service or process, if it is not already running, by entering the following command:

```
osagent
```

Note: If you must connect to an osagent in another subnetwork, include the following lines in the vbjorb.properties file:

```
vbroker.agent.port=<port>
```

2 Start the Interface Repository and load it with the IDL file that you plan to use, by entering an irepcommand, as in the following example:

```
irep myir MyIDLFile.idl
```

3 (Optional) Start the Naming Service by entering a command like the following:

```
nameserv namingroot
```

Note: The name of the Naming Service (namingroot in the previous example) must match the value for SVCnameroot in the vbjorb.properties file.

4 Start Visibroker on your CORBA server.For more information, see the Borland Visibroker documentation.

5 Restart ColdFusion for your changes to take effect. For more information, see Managing ColdFusion services in Windows and Managing the ColdFusion process in UNIX. You can now make CORBA invocations from ColdFusion. For more information about integrating CORBA objects into ColdFusion, see the Developing ColdFusion Applications guide.

Disabling Remote Development Services

If you use Adobe Dreamweaver, Macromedia HomeSite, Adobe Flash Builder, or Eclipse to develop your applications, you can access a remote ColdFusion server using HTTP. However, you must configure Remote Development Services (RDS) in your integrated development environment (IDE), and RDS must be enabled in ColdFusion. Using RDS, IDE users can securely access remote files and data sources, build SQL queries from these data sources, and debug CFML code.

> **Note:** The ColdFusion Report Builder uses RDS for the Query Builder and for charting support.

However, for security reasons, Adobe recommends that you disable RDS on a production server. To disable it, disable the RDSServlet mapping.

Disable the RDSServlet mapping

1 Back up the web.xml file. This file is in the cf_root\cfusion\wwwroot\WEB-INF directory in Windows and in the _cf_root/_cfusion/wwwroot/WEB-INF directory in UNIX.

2 Open the original web.xml file for editing.

3 Comment out the RDSServlet mapping, as the following example shows:

```
<servlet id="coldfusion_servlet_8789"> <servlet-name>RDSServlet</servlet-name> <display-name>RDS Servlet</display-name>
<servlet-class>coldfusion.bootstrap.BootstrapServlet</servlet-class> <init-param id="InitParam_113401311165856789"> <param-
name>servlet.class</param-name> <param-value>coldfusion.rds.RdsFrontEndServlet</param-value> </init-param> </servlet> -->
```

4 Save the file.

5 Restart ColdFusion.RDS is disabled on the ColdFusion server. For more information, see Managing ColdFusion services in Windows, or Managing the ColdFusion process in UNIX.

Disabling JSP functionality (server configuration only)

ColdFusion Enterprise Edition provides support for JavaServer Pages (JSP) technology through the underlying J2EE application server on which it runs. Because JSP code runs outside the realm of the ColdFusion security framework and, therefore, is not subject to ColdFusion sandbox security, you do not typically deploy JSPs in a shared, hosted environment where more than one customer shares a single server.

Disable JSP functionality

1 Open cf_root/cfusion/runtime/conf/web.xml in a text editor.

2 Find the servlet-mapping entry for JspLicenseServlet.

3 Comment out this entry, as the following example shows:

```
<servlet-mapping> <servlet-name>jsp</servlet-name> <url-pattern>*.jsp</url-pattern> -->
```

4 Save and close the file.

5 Restart ColdFusion.

Changing the ColdFusion user account in Windows

The ColdFusion services, by default, run under the highly privileged system accounts. For an extra level of security, Adobe recommends that you create a Windows user under which you run the services and only give necessary privileges to run the web application (for example, folder permissions for the web root.)

Change the ColdFusion user account

1 Open the Services Control Panel. (For example, select Start > Settings > Control Panel > Administrative Tools > Services.)

2 Right-click ColdFusion 2016 Application Server, and select Properties. The ColdFusion 2016 Application Server Properties (Local Computer) dialog box appears.

3 On the Log On tab, select This account, and enter the account information.

4 Click OK. In the Services control panel, right-click ColdFusion 2016 Application Server, and select Restart.

> **Note:** Do not rename your Windows Administrator account. This causes problems with security policies and profiles.

Troubleshooting installation issues

Troubleshooting

If you encounter any of the common installation problems, you may be able to resolve the issue by following the steps indicated for that issue.

Common installation problems

Spaces in the TEMP or TMP environment variables (Windows only)

Problem:

A space in the path of the TMP or TEMP environment variables in Windows causes the installer to stop after extracting from the archive.

Solution:

Change the TEMP or TMP environment variable so it does not include spaces.

Incomplete download

Problem:

InstallAnywhere displays a message to choose another install location. No matter what location you choose, the install doesn't succeed.

Solution:

Ensure that you downloaded the complete installation file; if not, download the file again.

Problem:

When you try to download the ColdFusion installation file on an Apple Macintosh, the download stops before it is complete, but the browser indicates that the download is complete.

Solution:

If you are using Safari:

1 Start the download.

2 Open the download window (Option-Command-L).

3 When the download looks like it has stalled, click the Stop (X) button.

4 Click the Resume button.Safari continues the download from where it stalled.

5 Repeat Steps 3 and 4 as necessary

Server error

Problem:

When trying to access any CFM page either from the server itself, or remotely, the following error appears:

Server Error The server encountered an internal error and was unable to complete your request.

Solution:

Run the Web Server Configuration Tool to unconfigure and reconfigure your web server connectors, as described in Configuring web servers at Configuring your System.

Cannot start ColdFusion Server

Problem:

After installing Windows SP2 firewall, you cannot start ColdFusion services.

Solution:

After installing Windows XP Service Pack 2, the Windows Firewall is enabled by default. This prevents ColdFusion from functioning correctly. For more information, see the Tech Note at www.adobe.com/go/tn_19518.

Errors displaying Flash forms

Problem:

When you try to browse a ColdFusion page that contains a Flash form, the following errors appear:

Error /CFIDE/gettingstarted/community/webroot/index.cfm:-1 macromedia.css.LocatorParser Error /CFIDE/gettingstarted/community/webroot/inde.mxml:381 The class 'mx.rpc.RemoteClassRelayResponder' could not be loaded.

Solution:

If you are using an external web server, such as Apache or IIS, run the Web Server Configuration Tool by selecting Start > Programs > Adobe > ColdFusion 2016 > Web Server Configuration Tool; also, try using the built-in server, using port 8500. For more information, see Configuring web servers at Configuring your System.

Browsing a ColdFusion page displays a download window

Problem:

In earlier versions of ColdFusion, you used IIS to map the filename extension .cfm to ICSF.dll. In ColdFusion, you have not mapped the .cfm filename extension to any .dll file. As a result, ColdFusion pages do not execute running under IIS 5.0, but display a download window instead.

Solution:

Run the Web Server Configuration Tool by selecting Start > Programs > Adobe > ColdFusion 2016 > Web Server Configuration Tool. For more information, see Configuring web servers at Configuring your System.

ColdFusion Administrator displays as an encrypted page

Problem:

After you install ColdFusion, you install Windows XP SP2. When you start ColdFusion Administrator, the Administrator displays as an encrypted page.

Solution:

The Windows XP SP2 update may have undone the IIS mapping for ColdFusion. Run the batch scripts to uninstall, and then reinstall the IIS connectors. For more information, see Configuring web servers at Configuring your System.

ColdFusion doesn't start

Problem:

ColdFusion doesn't start when you have McAfee Privacy Service installed on system.

Solution:

Remove McAfee Privacy Service.----

Data source problems

Unable to add a Microsoft Access data source

Problem:

When you try to add a Microsoft Access data source, an error appears:

Solution:

Install and start up the ODBC service, or use the Microsoft Access with Unicode driver.

ODBC services do not install properly

Problem:

ODBC services do not install properly.

Solution:

Remove the existing ODBC services using the following code:

```
writeOutput("Installing ODBC Services...<br>"); returnValue = myObj.installODBCservice(); writeOutput("ODBC Services installed"); </cfscript>
```

You then reinstall the ODBC services using the following code:

```
writeOutput("Removing ODBC Services...<br>"); returnValue = myObj.removeODBCservice(); writeOutput("ODBC Services removed"); </cfscript>
```

Unable to INSERT or UPDATE an Oracle 11 database when there is a CLOB field

Problem:

Columns have a 4 KB size limit in Oracle. If a column is larger that the 4 KB size limit, when you try to use either the cfinsert or cfupdate tag, the following error is generated:

```
ORA-01704: string literal too long
```

Solution:

To avoid this error, use either the cfquery or cfqueryparam tag.----

Migration problems

Data sources not recognized

Problem:

When you migrate from an earlier version of ColdFusion to ColdFusion (2016 release), your application does not recognize data sources.

Solution:

Redefine the data sources.

CFCs not recognized in Dreamweaver

Problem:

When you migrate from an earlier version of ColdFusion to ColdFusion (2016 release), the CFCs do not appear in the Components panel of Dreamweaver.

Solution:

Check the mappings and update them as necessary.

Installation fails

Problem:

On UNIX and Linux systems, when you try to install ColdFusion on systems where the /tmp partition is mounted noexec, the installation fails.

Solution:

This is because the install attempts to use the /tmp directory for unpacking and running the installer runtime. To avoid this issue, set the IATEMPDIR environment variable to a directory on the system that has execute permissions before running the installer.

Problem:

When you try to install ColdFusion, the installation fails and generate the error:

```
"java.lang.OutOfMemoryError Invocation of this Java Application has caused an InvocationTargetException. This application will now exit.
(LAX)"
```

Solution:

You must clean up the directory to which the installer is trying to extract the JRE, for example, /tmp.----

J2EE configuration problems

Problem:

When you install ColdFusion on Red Hat Enterprise Linux 4, the installation script incorrectly report a warning regarding the C++ compatibility pack.

Solution:

If you plan to use C++ based custom CFX tags, you should interrogate your system for compat-libstdc++ and glibc packages and install them if necessary. Either query all packages and use the grep command as a filter or query the exact package name. For example, the command rpm -qa | grep compat-libstdc+ queries all packages and filters or greps on the string compat-libstdc. This command might produce two results, compat-libstdc-33-3.2.3-47.3 and compat-libstdc+-296-2.96-132.7.2. ----

Postinstallation problems

CLOB and data corruption

Problem:

You are using the Japanese version of ColdFusion and Oracle 8/9 with NLS_Characterset JA16SJJS, and encounter CLOB corruption and data corruption.

Solution:

Set codepageoverride=MS932 in the JDBC URL.

Unsupported keysize or algorithm parameters

Problem:

You are running ColdFusion on WebSphere 5.1 on IBM JVM 1.4.1 and encounter an "Unsupported keysize or algorithm parameters" exception.

Solution:

Install unlimited jurisdiction policy files, as follows:

1   Download and install Unrestricted JCE Policy files for IBM SDK 1.4 from
    https://www6.software.ibm.com/dl/jcesdk/jcesdk-p.

2   Unzip the file.

3   Copy files unzipped from this link to the jre/lib/security directory.

4   Restart WebSphere.

Virtual mapping resource path of /* does not work

Problem:

You add a virtual mapping resource path of /* which does not work{{.}}

Solution:

Do not map any directories to wildcard resource paths that contain WEB-INF as a virtual mapping. In ColdFusion MX 6.1, the fact that this worked was a side-effect of the particular way the classloader was configured. For ColdFusion MX 7 and later, the classloader is consistent across all editions; the ColdFusion classloader is no longer blended with the application server's classloader. This change was made to ensure that ColdFusion MX 7 worked consistently in stand-alone server as well as deployed as an EAR/WAR to any certified J2EE application server.----

Uninstall problems

COM disabled

Problem:

You have an earlier version of ColdFusion on the system. When you uninstall ColdFusion, COM is disabled.

Solution:

Re-register the typeviewer.dll file associated with the earlier version of ColdFusion.