ColdFusion 11 Migration Guide

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Contents

Overview

There are various ways to migrate your ColdFusion 9/10 Server to ColdFusion 11. After you decided to upgrade your ColdFusion 9/10 Server environment to ColdFusion 11, follow the migration paths specified in this guide for a quick and seamless migration. As always, contact the Adobe Support Team, if you need clarifications on any particular step. The support team provides guidance and assistance through this migration process.

Migration process

The two critical paths involved in migrating your server from ColdFusion 9/10 to ColdFusion 11 are as follows:

1. Migrating the server environment (Server along with the user-defined configurations)
   - Installing latest version of ColdFusion
   - Migrating the ColdFusion Settings

2. Migrating the deployed applications (user-defined applications)or the web repository

Migrating the server environment involves upgrading your production server to the latest version of ColdFusion. In this step, your production server gets migrated along with other server configurations like web services, data sources, scheduled task (see What will be migrated?). For migrating the server, you have to run the latest ColdFusion installer.
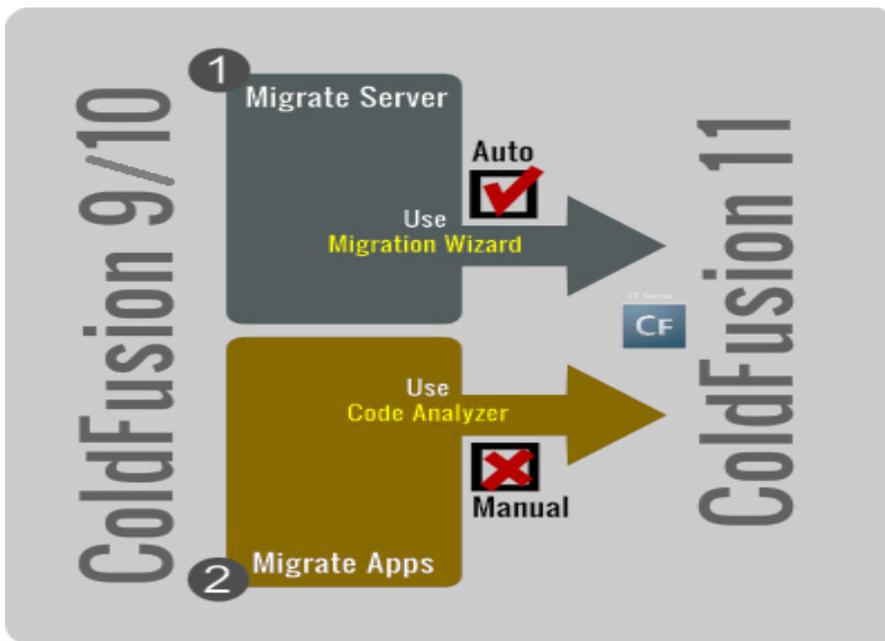
After you have migrated the server, you can analyze, refactor, and redeploy your applications on the new ColdFusion server. You can use the built-in ColdFusion Code Analyzer tool to analyze your application code for refactoring. See Using the Code Analyzer.

# Migrating the server (installing latest version of ColdFusion)

This section describes the process to migrate your server using the **ColdFusion Migration Wizard** provided by the ColdFusion installer.

During the installation, do not configure the connector with the production website (if they both are on the same server). There could be a conflict, as there would be two different connectors (one from the previous ColdFusion installation and another from the new ColdFusion server) configured to the same website. So, you can configure it with the built-in server (co-exists) and complete the installation. Once your installation is complete, you can remove the existing connector with previous ColdFusion installation and disable the built-in server, which was enabled during the installation. And then, re-create the connector between ColdFusion and the web server, say IIS, Apache, and so on, which are running on the Production site.

To migrate your server, perform the following steps:

1. Stop the earlier version of ColdFusion server.
2. Take a backup of all *neo-*.xml* files available under *<CF_INSTALLDIR_>*/lib from the previous installation.
3. Run the ColdFusion 11 installer and follow the installation steps.
4. While you are installing ColdFusion 11, you are guided through the migration steps involving migrating your existing services like .NET service:
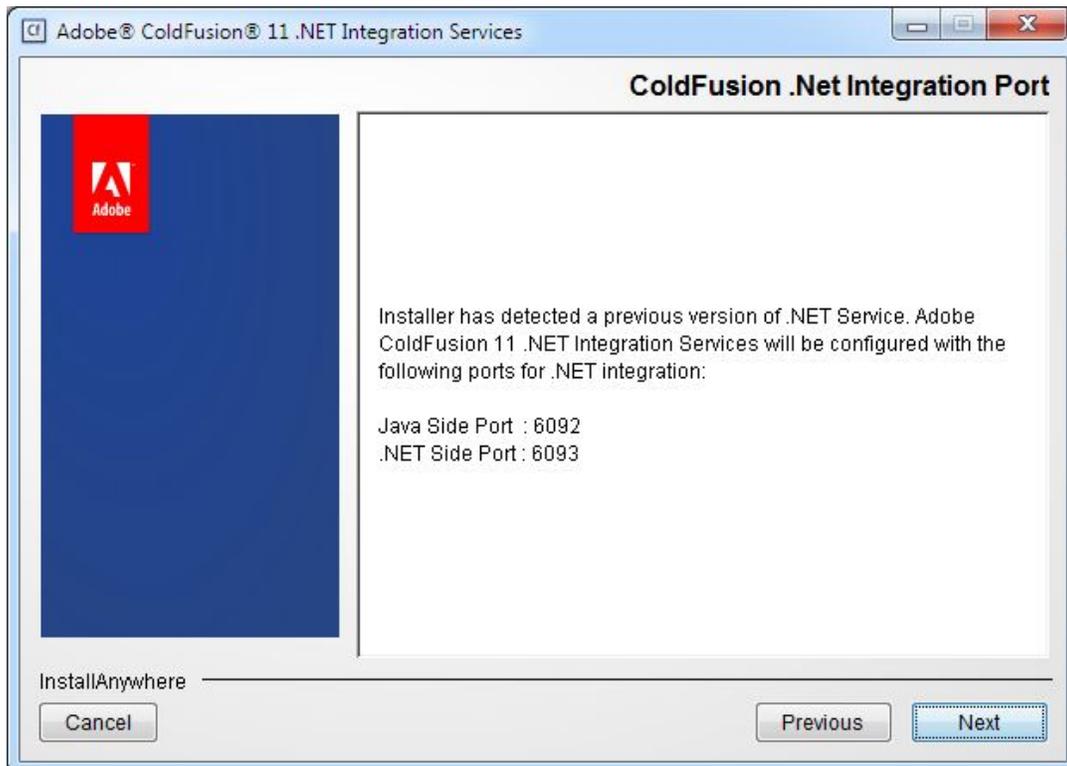
5. Click Next to continue.
6. While you are installing ColdFusion 11, you have two options:
   a. Allow ColdFusion 11 server to co-exist with ColdFusion 10/ ColdFusion 9 server.

b. Configure your server for ColdFusion 11 only.
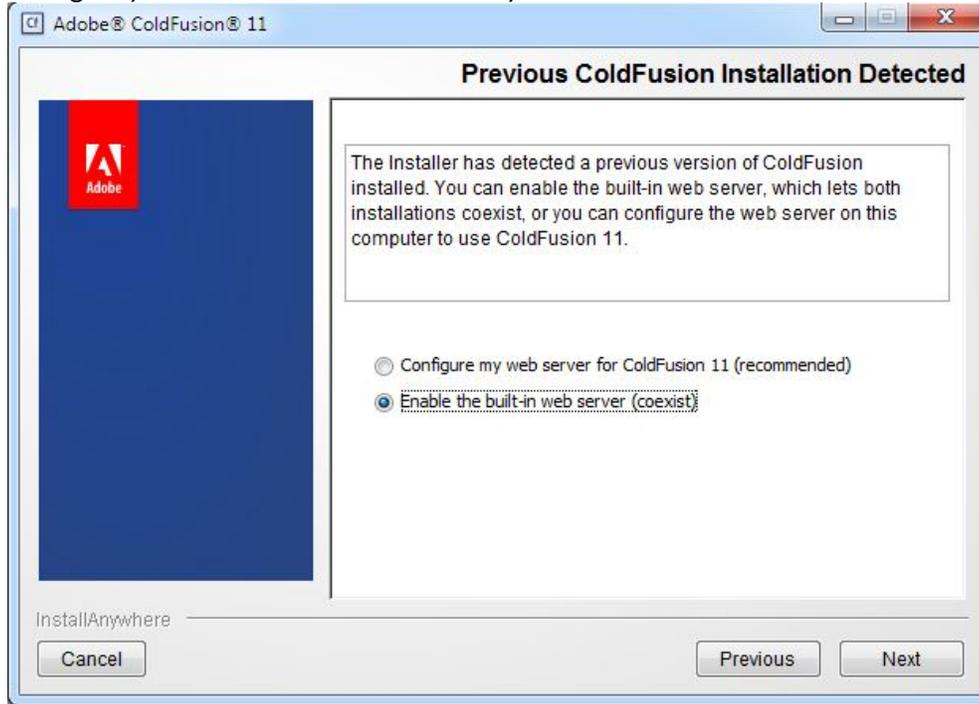
The option you choose, is dependent on your production requirements.

7. Click Next to continue.
Built-in web server port number dialog appears.
Important: If you have not shutdown the previous version of ColdFusion server, the built-in Web Server is configured to use a non-default port. This action results in two instances of web server running on your machine, one from old server and another from ColdFusion 11. Click Next to continue.
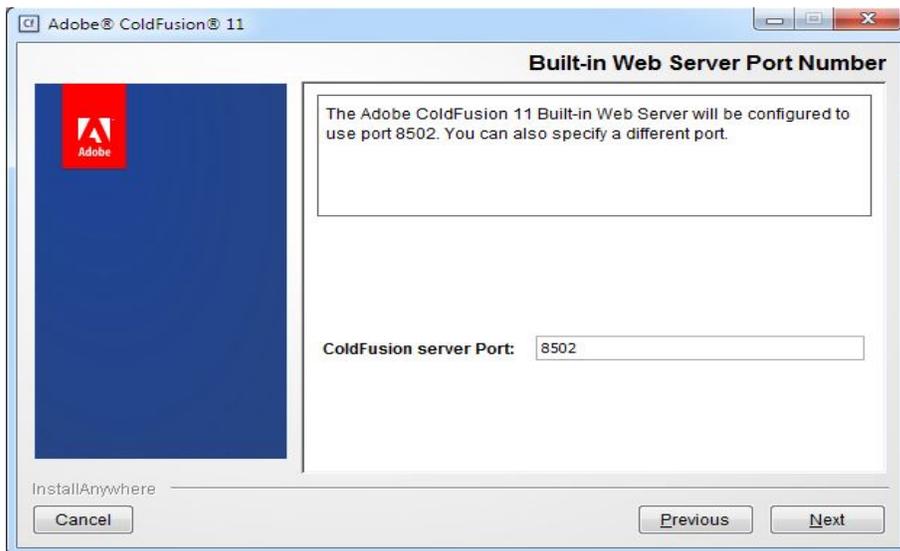
8. The last dialog displays the **Pre-installation summary.** Click Install.
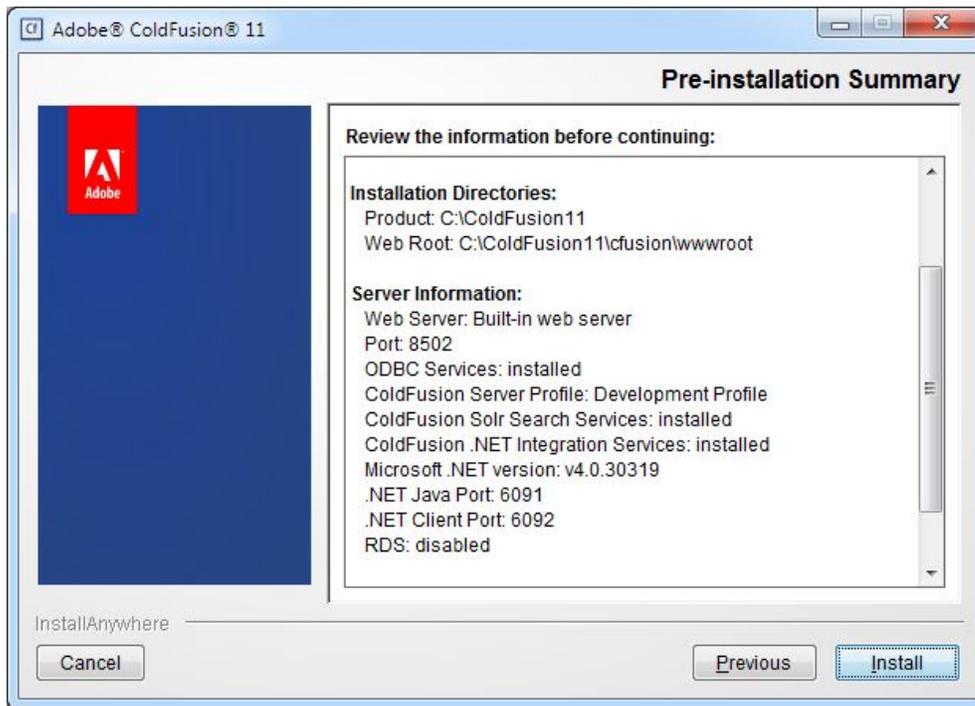
9. Now, the ColdFusion Migration wizard guides you in migrating your Server configuration to ColdFusion 11:

10. Follow the steps, confirm, and complete the migration.

What is migrated?

The ColdFusion Migration Wizard automatically migrates the following server configurations:

- ✓ Encryption
- ✓ Charting
- ✓ Client Store
- ✓ Datasources
- ✓ Debugging
- ✓ Event Gateways
- ✓ Fonts
- ✓ Logging
- ✓ Mail
- ✓ Solr Settings
- ✓ Monitoring
- ✓ Probes
- ✓ Runtime
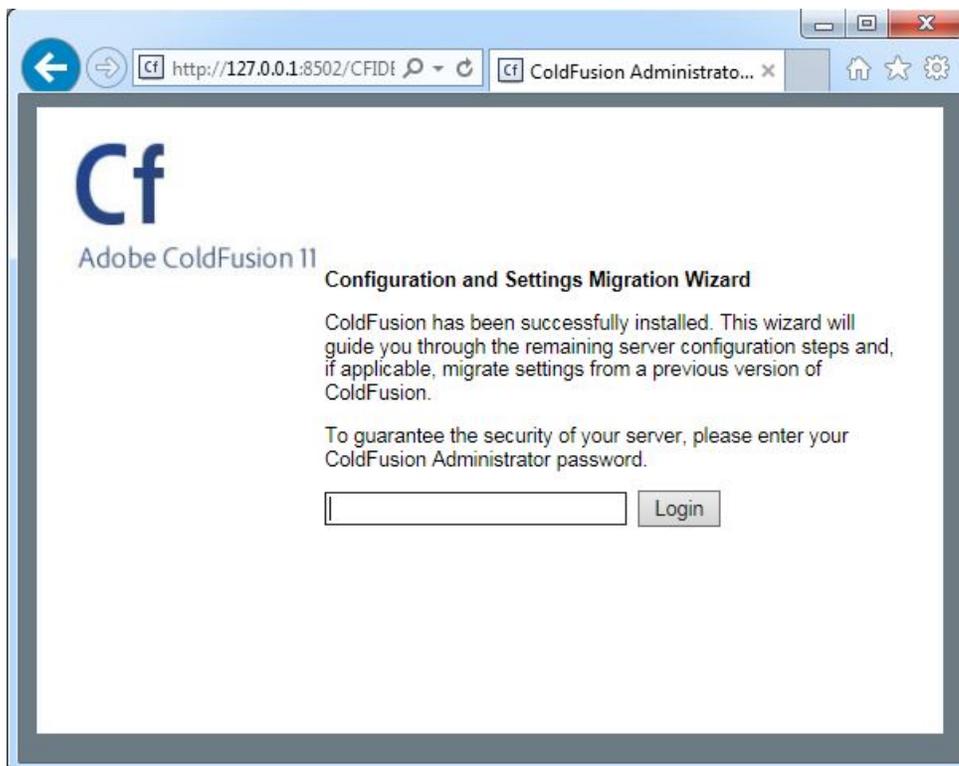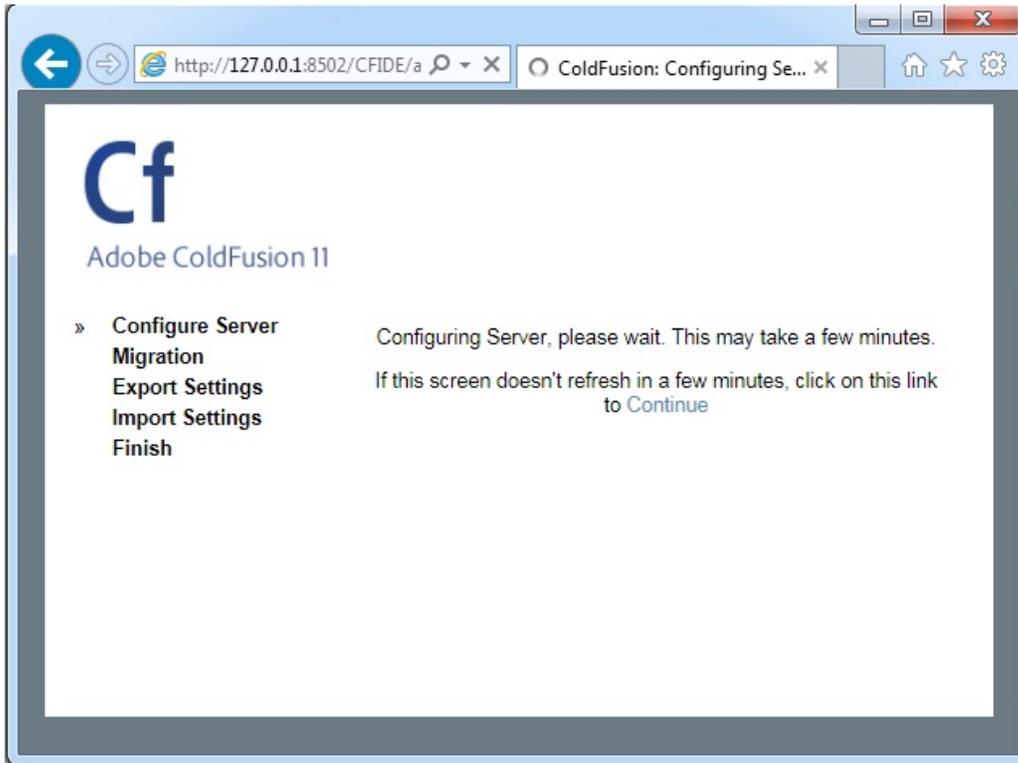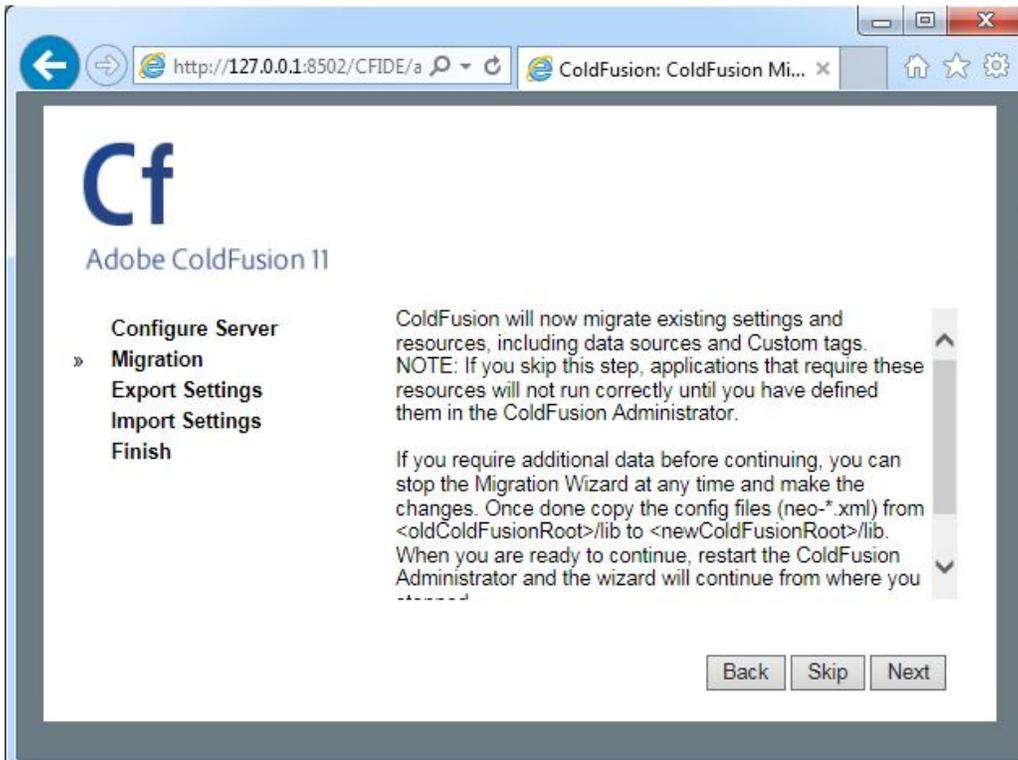- ✓ Scheduled Tasks
- ✓ Security Sandboxes
- ✓ Watcher Settings
- ✓ Web Services
- ✓ Rest Services
- ✓ WebSocket

Note: Value for Max Pooled Statements is set to 100 for following drivers - DB2, Informix, Oracle, Microsoft SQL Server, MySQL (DataDirect), Sybase.

> **Note:** ColdFusion has migrated all CORBA connectors. To ensure that ColdFusion restarts correctly, manually add CORBA ORB to the ColdFusion classpath if it is not already there.

What is NOT migrated?

The following server configurations available in the webroot of the previous installation are not migrated (automatically):

- ✓ Database
- ✓ Custom tags
- ✓ CFX tags
- ✓ Fonts

ColdFusion has updated the corresponding settings. However, any other data files (such as databases, Custom Tags, CFX Tags and fonts) under your old webroot have not been migrated. And the corresponding settings still point to their original locations. If you have such files, make sure that you move them and update the settings before deleting your old installation directory. The Solr Home is set corresponding to the default jetty location. If you have a different jetty installation, update this setting appropriately in SOLR Setting page in admin.

Installation directory structure

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. However, the ColdFusion 11 installer lets you install only a 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.

By default, ColdFusion 11 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. It also contains the password reset script for server administrator. • cfx: Sample C++ and Java CFX files with their supporting files. • charting: Files for the ColdFusion graphing and charting engine. • Custom Tags: 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 for windows) JIntegra programs, libraries, and other supporting files. • jnbridge: Files for .NET Integration Services. • lib: JAR, XML, property, and other files that are foundation for ColdFusion. • logs: Repository for ColdFusion 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. • 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, it contains the Tomcat libraries. The conf directory in runtime contains all Tomcat configuration files. • stubs: Web services files. • wwwroot: Default web root directory for built-in web server. Don't remove this directory. • cache: Repository for temporary files from ColdFusion.

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

Modifications to the directory structure

The following table shows the directories in ColdFusion 9 and the corresponding directories in ColdFusion 11:

ColdFusion9	ColdFusion11
ColdFusion9\runtime\lib\wsconfig	ColdFusion11\config\wsconfig
C:\ColdFusion9\wwwroot\	C:\ColdFusion11\[Instance Name]\wwwroot
ColdFusion9\runtime\jre	ColdFusion11\jre
C:\ColdFusion9\runtime\bin	C:\ColdFusion11\[Instance Name]\bin

Migrating the ColdFusion settings (manual migration)

This section refers to the ColdFusion settings within the ColdFusion Administrator, such as Data Sources, Scheduled Tasks, Web Services, and so on. If you are installing the new ColdFusion server on the same server (where you already have the previously installed ColdFusion server), then, you will be prompted to "Migrate" the settings during the installation itself. Follow these steps to manually migrate the ColdFusion settings from the earlier version of ColdFusion to ColdFusion 11.

- Stop the ColdFusion 11 Application Service.

- Take a backup of all neo-*.xml files available under <CF_INSTALLDIR_>/cfusion/lib.

- For ColdFusion 10.x, create a "cf10settings" directory under {Coldfusion11- Home}/ {instance_name}/lib or {Cfusion11-ear-home}/cfusion-war/WEB-INF/cfusion/lib directory. For ColdFusion 9.x, create a "cf9settings" directory.
- Copy all the neo-*.xml files from {Coldfusion-Home}/lib or {cfusion-ear-home}/cfusion-war/WEB-INF/cfusion/lib of the previous install to the respective cf10settings or cf9settings directory.
- Open the adminconfig.xml file at: {Coldfusion11-Home}/ {instance_name}/lib or {Cfusion11-ear-home}/cfusion-war/WEB-INF/cfusion/lib, and make necessary changes to the properties in the following example.
- Do not copy these properties to the "adminconfig.xml."
- Set "runmigrationwizard" value to "True," to force ColdFusion administrator to run the migration.
- Set "migratecf10" or "migratecf9" to "True", based on version of the previous installation. Keep all other settings in the adminconfig.xml the same.

```
<setupconfig>
        <runsetupwizard>false</runsetupwizard>
        <runmigrationwizard>false</runmigrationwizard>
        <runmxmigrationwizard>false</runmxmigrationwizard>
        <migratecf9>false</migratecf9>
        <migratecf10>false</migratecf10>
        <setupoptions>
                <sampleapps>false</sampleapps>
                <odbc>false</odbc>
                <enablerds>true</enablerds>
        </setupoptions>
</setupconfig>
```

- Save the file and close it.
- Start ColdFusion 11 Application Service.
- To complete the migration, launch ColdFusion 11 Administrator and follow the migration steps.

> **Note:** Another option to migrate the settings is to create a ".car" file for the previous ColdFusion install settings and deploy it to ColdFusion 11 instance, via the ColdFusion 11 Administrator. See

A note for customers who have obtained the license key for Enterprise Edition of ColdFusion 11 by choosing to upsell from Standard Editions of ColdFusion 10 or ColdFusion 9 to the Enterprise Edition of ColdFusion 11:

- ✓ When the ColdFusion 11 installer throws an error on attempting to install the Enterprise Edition of ColdFusion 11, it means that the installer fails to recognize the serial key that you have for standard editions of ColdFusion 10 or ColdFusion 9.

Contact Adobe Support when you encounter this issue.

Packaging

The Packaging and Deployment section of the Administrator lets you create and deploy CAR files. You can also create J2EE EAR or WAR files that include an existing ColdFusion application and the ColdFusion runtime system.

ColdFusion archives page (CAR package)

The ColdFusion Archives page includes tools that let you archive and deploy ColdFusion applications, configuration settings, data source information, and other types of information to back up your files faster. If your new ColdFusion server installation is on a different server, then you can create CAR file. This feature is only available in Enterprise/Developer edition of ColdFusion, until version 10. ColdFusion 11 onward, it is available in all editions. The complete list of archival information includes the following:

- ✓ Archive Information
- ✓ Assoc. Files/Dirs
- ✓ Server Settings

- ✓ CF Mappings
- ✓ Data Sources
- ✓ CF Collections
- ✓ Scheduled Tasks
- ✓ Event Gateways
- ✓ Java Applets
- ✓ CFX Tags
- ✓ Web Services
- ✓ REST Services
- ✓ PDF Services
- ✓ Archive To Do List
- ✓ Archive Summary

After you archive the information, you can use the Administrator to deploy your web applications to the same ColdFusion server or to a ColdFusion server running on a different computer. Also, you can use these features to deploy and receive any ColdFusion archive file electronically.

The Archive Settings page lets you configure various archive system settings that apply to all archive and deployment operations. For more information, see the OnlineHelp.

Build an archive

To build an archive, perform the following steps:

1. To access the ColdFusion Archives page, select **Packaging and Deployment** > **ColdFusion Archives** in the left navigation pane of the ColdFusion Administrator.
2. On the ColdFusion Archives page, locate the name of the archive definition that you want to archive, and then click the **Build Archive** icon. The Archive Wizard appears.
3. In the Archive Wizard, review the archive summary information, and then click Next to continue. The Choose Archive File Location page appears.
4. In the Choose Archive File Location page, perform the following steps:
   a) In the File Name text box, specify the full path where you want to store the archive, followed by the name of the archive. The archive name must have a .car extension.
   b) For UNIX users only: If you must run this archive as a privileged user, select the **Run This Archive As A Specific User** option, and then enter any system account name and password in the User name and Password text fields. The user name and password must match the existing user name and password for this system. The archive process runs for that user. If the user name and password do not match the existing user name and password for this system account, the build process fails.
5. Click Next to create the archive.

When the archive operation completes, one of the following archive messages appears:

- **Build Successful:** The archive was successfully created and stored in the location that you specified in step 4. Click OK and then click Close on the wizard page.
- **Build Failed:** The archive was not created. To determine the cause of the problem, review the information appearing on the page, and click Details to further analyze the cause of the problem.

J2EE archives

ColdFusion lets you create an EAR or WAR file that contains an entire application. This archive file contains the ColdFusion web application, settings for ColdFusion (such as data source definitions), the CFM pages used by your application (text or compiled Java), and optionally, the ColdFusion Administrator. This feature lets you quickly create an archive file that a J2EE administrator can use to deploy your ColdFusion application.

J2EE archives are different from ColdFusion Archives (CAR) files.

Context root

Because the J2EE environment supports multiple, isolated web applications running in a server instance, each J2EE web application running in a server is rooted at a unique base URL, called a context root (or context path). The J2EE application server uses the initial portion of the URL (that is, the portion immediately following http://*hostname*) to determine which web application processes an incoming request. For example, if you are running ColdFusion with a context root of cfmx, you display the ColdFusion Administrator using the URL http://*hostname*/*cfmx*/CFIDE/administrator/index.cfm.
Most of the J2EE application servers allow one application in each server instance to use / (forward slash) for the context root. The Remote Development Services (RDS) web application is not required if you use a context root of /.

The J2EE Archives page lets you create an enterprise application archive (EAR) file or web application archive (WAR) file that contains the following items:

- The ColdFusion web application.
- Server settings, such as data sources and custom tag paths.

The CFML pages of your application are stored in the root directory of the ColdFusion web application. With this EAR or WAR file, a J2EE administrator can deploy your ColdFusion MX application to a J2EE application server.

If you are creating a cluster of server instances when running the multi-server configuration, use this page to create the WAR or EAR files required to create each of the servers in the cluster.
You can create a J2EE archive regardless of whether you are running ColdFusion MX in the server configuration or the J2EE configuration. However, you must be running the J2EE configuration to deploy an EAR or WAR file.

Option	Description
Archive Name	Specifies a name for the J2EE archive definition. This is also the name given to the EAR or WAR file.
Application	Specifies the location of the CFM files to be included beneath the webroot of ColdFusion web application.
Directory	Specifies the directory where ColdFusion places the EAR or WAR file.
Distribution Directory	ColdFusion uses the name archivename.ear or archivename.war, depending on the archive type.

Archive Type	Specifies whether ColdFusion creates a Web Application Archive (WAR) file or an Enterprise Application Archive (EAR) file.
Context Root (valid for EAR)	If you create an EAR file, you can optionally specify a context root for the ColdFusion web application. The default is an empty context root. If you create a WAR file, the context root is handled in an application-server-specific manner. In some application servers, the default context root is the name of the WAR file; in others, you specify the context root using the deploy tool or through a server-specific configuration file.
Serial Number	Specifies a valid serial number for ColdFusion Enterprise Edition.
Previous Serial Number (if Upgrade)	Specifies the serial number of the previous ColdFusion installation.
Include COM Support	Specifies whether to include the modules that provide COM support. Omitting COM support reduces the size of the archive by about12 MB.
Disable Debugging	Specifies whether to disable debugging in the ColdFusion web application.
Include CFML Source	Specifies whether to use the original CFM files or to convert the pages to Java bytecode.
Include CF Administrator	Specifies whether to include the modules and directories for the ColdFusion Administrator (the CFIDE directory structure). Omitting the ColdFusion Administrator reduces the size of the archive by about 2 MB.
Configure Data Sources to be Included in Archive	Specifies the data sources to include in the J2EE archive. Use the Right and Left Arrow buttons to select and remove data sources. Use the Double Arrow buttons to select and remove all data sources with one click.

Migrating the deployed applications

After installing the ColdFusion server and migrating the ColdFusion settings, you can then migrate your applications manually to the new server. This is the actual process of migrating your server repository or the website files. If the migration involves setting up of a new server/webserver, then the easiest way is to copy the web files from the older webroot to the new webroot, under the new website. You can also use any third party utility to migrate the files and the settings (if any, at the webserver level) provided, your webserver supports the utility. If the website resides on the same server and the installation only involves ColdFusion server upgrade/migration, then you can skip this section. You have to remove the connector from the previous ColdFusion server and create the connector to the new ColdFusion server.

Note: This Migration Guide is just to provide an overview about the migration process and as mentioned above, may vary from environment to environment. This is a strong recommendation to test your website on the testing/development environment, before moving it on to production.

Using the code analyzer

The Code Analyzer helps in migrating your applications to ColdFusion 11 from earlier versions of ColdFusion (i.e. ColdFusion 9 and ColdFusion 10).

The Code Analyzer reviews the CFML pages that you specify and informs you of any potential compatibility issues. It detects unsupported and deprecated CFML features, and outlines the required implementation changes that ensure a smooth migration.

The Code Analyzer has the following purposes:

- ✓ It can validate the CFML syntax of your application. To do so, the analyzer runs the ColdFusion compiler on your pages, but does not execute the compiled code. It reports errors that the compiler encounters.
- ✓ It provides information about the incompatibility (and its severity), and suggests a remedy wherever it is required.
- ✓ It can identify areas where ColdFusion behaves differently than previous versions. The analyzer identifies the following kinds of features:
    - o **No longer supported**: Their use results in errors. For example, the closableattribute is not supported for the tag cflayoutarea in border layout (cflayout with type="border").
    - o **Deprecated**: They are still available, but their use is not recommended and they are not available in future releases. Deprecated features might also behave differently now than in previous releases. For example, in cfcachetag the following attributes are deprecated: directory, cachedirectory, port, and protocol.
    - o **Modified behavior**: They behave differently than in previous versions. For example, if you use cfcachetag in ColdFusion 11 without end tag (</cfcache>), then instead of caching only the current page (which was the behavior in the previous releases), the entire request is cached.
    - o **New:** These are features newly added to ColdFusion 11. For example, if you use throwas a user-defined function in a CFM, analyzer informs that throw is a built-in ColdFusion function and suggests you to rename. If you use throw as a user-defined function in a CFC, analyzer informs that throw is a built-in function and suggests you to prefix it with object scope.

You can run the Code Analyzer from the ColdFusion Administrator. Select Code Analyzer from the list of Debugging & Logging pages.

> **Note:** The Code Analyzer does not execute the pages that it checks. Therefore, it cannot detect invalid attribute combinations if the attribute values are provided dynamically at runtime.

To run the Code Analyzer, perform the following tasks:

1. Go to the ColdFusion Administrator

2. Go to **Debugging & Logging** > **Code Analyzer**
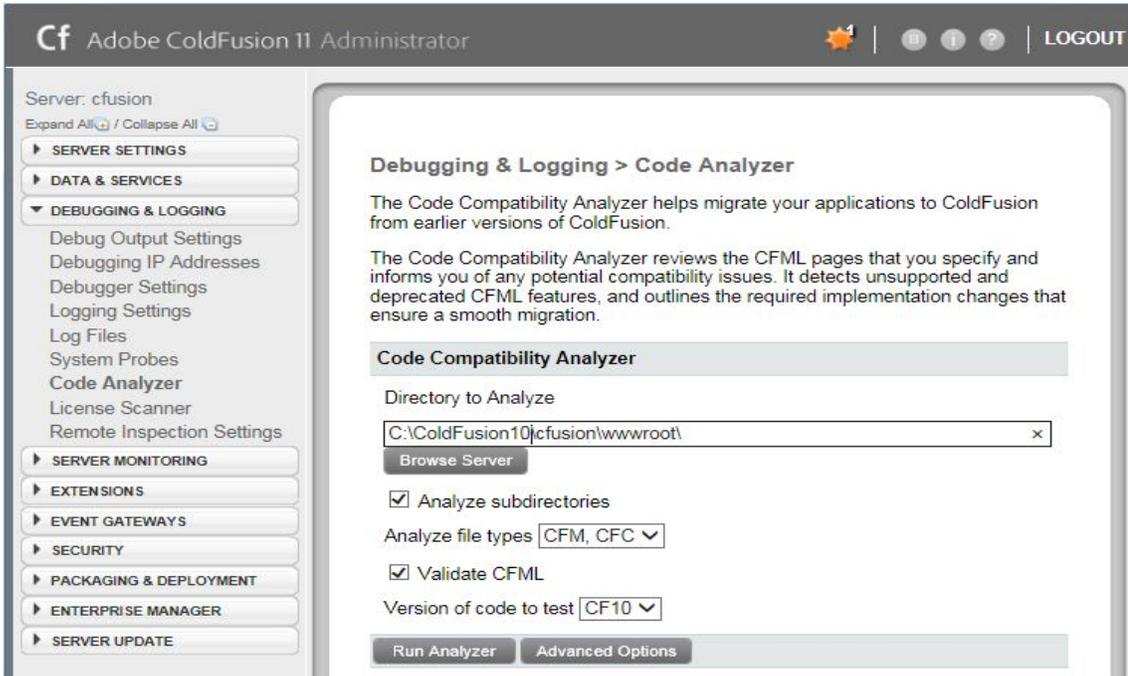
3. Browse and select the ColdFusion 10/ColdFusion 9 installation directory containing the ColdFusion applications.
4. (Optional) Click **Analyze subdirectories** to analyze CFML pages in the subdirectories.
5. (Optional) Click **Advanced Options** and manually select the tags and functions to analyze:
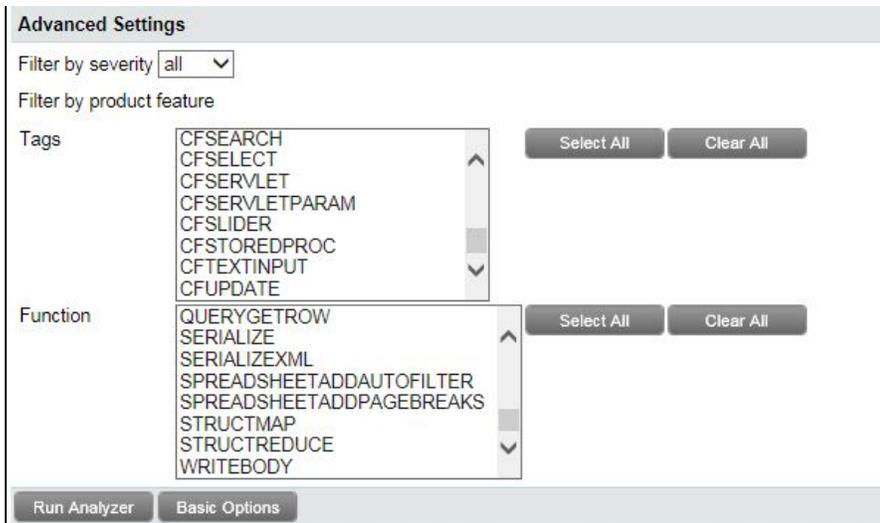
6. Click **Run Analyzer**
7. Review the results and fix your CFML code accordingly

Migration issues

The following section describes the most common migration issues.

CFCs not recognized in Dreamweaver
When you migrate from an earlier version of ColdFusion 9/10 to ColdFusion 11, the CFCs do not appear in the Components panel of Dreamweaver.

Solution
Check the mappings and update them, as necessary.

Installation fails
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.

Out of memory error
When you try to install ColdFusion, the installation fails and generates 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.

Error while verifying migrated ODBC data sources to CF11 from CF10/CF9.
This could be due to ODBC Socket port conflict.

Solution
Connection verification failed for data source: TestDSN
java.sql.SQLException: [Macromedia][SequeLink JDBC Driver]TCP/IP error, connection refused.
The root cause was that: java.sql.SQLException: [Macromedia][SequeLink JDBC Driver]TCP/IP error, connection refused.

1. Navigate to cf_root\[Instance name]\lib\ for CF10 and cf_root\lib\ for CF9 and open neo-drivers.xml with text editor, such as Notepad.
2. Check the ODBCSocket port. For e.g. 19998 or 20000 or 20002.
3. Navigate to cf_root\[Instance name]\lib\ for CF11 and open neo-drivers.xml with text editor.
4. Update the ODBCSocket port from 20000 to 20004 (next available port no, in the same series).
5. Restart the ColdFusion Services
6. Edit the data source and Re-Submit.

Data sources not recognized

When you migrate from an earlier version of ColdFusion 9/10 to ColdFusion 11, your application does not recognize data sources.

Solution

Redefine the data sources.

Help and tutorials

1. [A video by ColdFusion Product Team on ColdFusion archives](#)
2. [ColdFusion Product Help Page](#)
3. [ColdFusion 11 Documentation](#)
4. [ColdFusion 11 Support Matrix](#)
5. [ColdFusion 11 Installation Guide](#)
6. [ColdFusion 11 Lockdown Guide](#)

Note

You may have to check the code compatibility and deprecated tags (if any). You can refer to https://wikidocs.adobe.com/wiki/display/coldfusionen/Deprecated+Features & https://wikidocs.adobe.com/wiki/display/coldfusionen/Deprecated+tags,+attributes,+and+values. You can use the Code Analyzer to check the compatibility issues https://wikidocs.adobe.com/wiki/display/coldfusionen/Using+the+Code+Analyzer, before migrating your application.