EMC® Documentum® D2

Version 4.0

Installation Guide

EMC Corporation
Corporate Headquarters:
Hopkinton, MA 01748-9103
1-508-435-1000
www.EMC.com

Legal Notice

EMC believes the information in this publication is accurate as of its publication date. The information is subject to change without notice.

THE INFORMATION IN THIS PUBLICATION IS PROVIDED "AS IS." EMC CORPORATION MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WITH RESPECT TO THE INFORMATION IN THIS PUBLICATION, AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Use, copying, and distribution of any EMC software described in this publication requires an applicable software license.

For the most up-to-date listing of EMC product names, see EMC Corporation Trademarks on EMC.com. Adobe and Adobe PDF Library are trademarks or registered trademarks of Adobe Systems Inc. in the U.S. and other countries. All other trademarks used herein are the property of their respective owners.

Documentation Feedback

Your opinion matters. We want to hear from you regarding our product documentation. If you have feedback about how we can make our documentation better or easier to use, please send us your feedback directly at IIGDocumentationFeedback@emc.com.

Table of Contents

Chapter 1 Installing D2 9

Know before you start 9

Preparing for installation 9

Upgrading D2 13

Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1 14

Instructions for installing D2 with only D2 Client 4.0 16

Instructions for installing D2 with only D2 Client 3.1 18

Chapter 2 Installing D2 on the Content Server 21

Installing D2 Core on a Documentum Content Server using Microsoft Windows 21

Installing D2 Core on a Documentum Content Server using UNIX Sun Solaris 22

Configuring compatibility with Documentum Process Engine on Microsoft Windows 24

Configuring compatibility with Documentum Process Engine on UNIX Sun Solaris 25

Chapter 3 Deploying DAR or DocApp files 27

Deploying DAR files 27

Installing the D2 DocApp for deployments when not deploying D2 DARs 28

Chapter 4 Installing D2 Config and Client 3.1 on the web application server 29

Creating D2 Config and D2 Client 3.1 WAR files on a web application server using Microsoft Windows 29

Creating D2 Config and D2 Client 3.1 WAR files on a web application server using UNIX Sun Solaris 31

Installing D2 Config and D2 Client 3.1 on Apache Tomcat for Microsoft Windows 32

Installing D2 Config and D2 Client 3.1 on Apache Tomcat for UNIX Sun Solaris 33

Installing D2 Config and D2 Client 3.1 on IBM WebSphere 7.0.0.19 34

Installing D2 Config and D2 Client 3.1 on Oracle WebLogic 35

Installing D2 Config and D2 Client 3.1 on Redhat JBOSS 5.1.1 36

Chapter 5 Installing D2 Config without D2 Client 3.1 on the web application server 37
Creating only D2 Config WAR file on a web application server using Microsoft Windows 37
Creating only D2 Config WAR file on a web application server using UNIX Sun Solaris 39
Installing only D2 Config on Apache Tomcat for Microsoft Windows 40
Installing only D2 Config on Apache Tomcat for UNIX Sun Solaris 42
Installing only D2 Config on IBM WebSphere 7.0.0.19 43
Installing only D2 Config on Oracle WebLogic 43
Installing only D2 Config on Redhat JBOSS 5.1.1 44
Chapter 6 Installing D2 Client 4.0 on the web application server 45
Installing D2 Client 4.0 on Apache Tomcat for Microsoft Windows 45
Installing D2 Client 4.0 on Apache Tomcat for UNIX Sun Solaris 46
Installing D2 Client 4.0 and D2FS WAR files on IBM WebSphere 7.0.0.19 47
Installing D2 Client 4.0 and D2FS WAR files on Oracle WebLogic 49
Installing D2 Client 4.0 and D2FS WAR files on Redhat JBOSS 5.1.1 50
Chapter 7 Configuring D2 53
Locations of configuration files 53
Configuring D2 Config 54
Configuring D2 Client 3.1 56
Configuring D2 Client 4.0 59
Configuring D2FS 61
Installing language packs 62
Configuring logback.xml for the Content Server 62
Configuring Documentum Content Server server.ini 63
Configuring D2 Auditing 64
Configuring Microsoft SQL Server 2008 64
Configuring application server pooling session 65
Importing a configuration 65
Chapter 8 Configuring authentication 67
Configuring Microsoft Windows NT Unified Logon (NTLM) 67
Configuring Kerberos 68
Chapter 9 Troubleshooting the installation 73
Unable to access D2 using Internet Explorer 73
Unable to open a new window or new connection. No resource available. 74
DfRegistryWin32.DLL is already loaded in another classloader 74
Tomcat 6.0 PermGen Space error 75
IBM AIX and Apache Tomcat 6.0 crashing the server 75

Files corrupting during export 76
D2 caching and file-cleaning services fail to operate 76
Null pointer exception when using reverse-proxy IIS 7 to import a file larger than 25 MB 77
Slow file transfer when using a Linux-based operating system 78

Preface

EMC® Documentum® D2 consists of two components:

- D2 Configuration: The web-based application, hereafter known as D2 Config, for administrators to use to configure settings such as automated content-handling processes and background settings for D2 Client.
- D2 Client: The web-based application for users that provides the ability to interact with content in one or more repositories. The 4.0 release of D2 includes two versions of D2 Client: 3.1 and 4.0. The *D2 4.0 Release Notes* contain further information on their respective features. You can install either or both versions for use with no conflicts.

This guide describes how to install the D2 4.0 release.

Intended audience

The information in this guide is for system administrators who install and administer Documentum software.

Revision history

The following table lists changes in this guide.

Revision Date	Description
May 2013	Updated install procedures for D2 Config and D2 Client on Oracle WebLogic running on Red Hat Enterprise Linux.
January 2013	Added troubleshooting for UNIX random number generator issue.
	Added steps for `D2-Widget-Install.jar` on non-Tomcat web application servers.
November 2012	Restructured guide for clarification.
	Clarified content of archives and install paths.
June 2012	Initial publication.

Chapter 1

Installing D2

This chapter contains the following topics:

- **Know before you start**
- **Preparing for installation**
- **Upgrading D2**
- **Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1**
- **Instructions for installing D2 with only D2 Client 4.0**
- **Instructions for installing D2 with only D2 Client 3.1**

Know before you start

Before installing, make sure you know:

- How to set CLASSPATH env.
- The install paths for Documentum, Content Server, Java Method Server on both machines, and your web application server.
- How to set variable parameters for the Java Virtual Machine.

Preparing for installation

1. Read the *EMC Documentum D2 Release Notes* for your corresponding version for compatibility matrices and updated installation procedures.
2. Make sure you have installed:
   - Documentum Content Server and have configured your repositories and docbrokers.
   - A J2EE web application server as per your enterprise setup.
   - Documentum Composer with a DAR Installer for .dar deployment or Documentum Headless Composer for headless deployment of .dar files.
3. You must have administrator privileges on the local system to perform installation.
4. On the Documentum Content Server and Java Method Server machine:
   a. Navigate to and open `server.ini` as described in the following table:

Operating system	Path
Microsoft Windows	*<install path of Documentum>*dba\config*<repository name>*
UNIX Sun Solaris	*<install path of Documentum>*dba/config/*<repository name>*

b. Enable mail notifications for queue work items or events for the Content Server:

   Set the value **mail_notification** to `TRUE`. If the parameter is missing you do not need to add it as the default value is `TRUE`.

5. In UNIX, set the graphical environment, either by:
   - Adding the variable `java.awt.headless=true` to the environment system properties of the account running the application server.
   - Adding the parameter `-Djava.awt.headless=true` to the JMS startup script.
6. Download the following files to the Content Server and web application server machines:

File	Description	Content
`emc-dfs-sdk-6.x.zip`	Documentum Foundation Services (DFS) Software Development Kit (SDK) Download the DFS SDK zip file for the version of Documentum Content Server you are using. To locate the file, use the search feature for `DFS SDK 6.x SPx` For example, if you use Documentum Content Server 6.7, search for `DFS SDK 6.7`. If you use Documentum Content Server 6.7 SP1, search for `DFS SDK 6.7 SP1`	All content within this archive are needed for installation.
`DDS.jar`	Obtain a copy of `DDS.jar` from a Documentum Composer installation. For example, `C:\Composer67SP1\plugins\com.emc.ide.external.dfc_1.0.0\lib` Use this file for importing configurations in DocApp format and for including data files when exporting configurations.	`DDS.jar`

File	Description	Content
D2_4.0.0_*xxx*.zip	Contains core D2 components along with D2 Client 3.1 and D2 Config. The archive contains files output by the installer. To avoid confusion, use only the files produced by the installer.	Use only the following files during installation: • D2-Core_4.0.0_*xxx*-install.jar: this file is run to produce the WAR and DAR files as well as to deploy the API files to the Content Server and the web application server as needed. • D2.war: the file is used for installing D2 on the web application server. Do not use the following files during installation: • DocApp (folder): the folder contains D2-DAR.dar, but the file is downloaded separately. Use the file downloaded separately, as the version in the archive may be out of date. • Web Application (folder): the folder contains D2-Config.war, but the file is also produced by the installer. Use the file produced by the installer, as the version in the archive may be out of date. • D2-API-Install.jar: the file is not used during installation. • D2-Client-LanguagePack_en_4.0.0_*xxx*.jar: the localization file is downloaded separately for localization installation. Use the file downloaded separately in the case of a localization install, as the version in the archive may be out of date.
D2-DAR.dar	DAR file for D2.	D2-DAR.dar

File	Description	Content
D2FS_4.0.1_*xxx*.zip	D2FS allows D2 Client to communicate with the Content Server.	Use only the following file during installation: • D2FS.war: the file is required for installing D2 Client 4.0. Do not use the following files during installation: • D2FS-remote.jar: the file is not used during installation. • D2FS4DCTM-LanguagePack_fr.zip: the localization file is downloaded separately for localization installation. Use the file downloaded separately in the case of a localization install, as the version in the archive may be out of date. • D2FS4DCTM-LanguagePack_en_4.0.1_*xxx*.jar: the localization file is downloaded separately for localization installation. Use the file downloaded separately in the case of a localization install, as the version in the archive may be out of date.
D2-Widget_4.0.0_*xxx*.zip	Contains installer for D2 Client 4.0. The archive contains files output by the installer. To avoid confusion, use only the files produced by the installer.	Use only the following files during installation: • D2-Widget-Install.jar: this file is run to produce the .jar and DAR files for deploying D2 Client 4.0. Do not use the following files during installation: • D2-Widget.jar: the file is produced by the installer. Use the file produced by the installer, as the version in the archive may be out of date. • D2-Widget-DAR.dar: this file can be downloaded separately. Use the file downloaded separately, as the version in the archive may be out of date.

File	Description	Content
		• D2-Constants.jar: the file is produced by the installer. Use the file produced by the installer, as the version in the archive may be out of date. • D2-Widget-API.jar: the file is produced by the installer. Use the file produced by the installer, as the version in the archive may be out of date. • D2-Widget-Plugin.jar: the file is produced by the installer. Use the file produced by the installer, as the version in the archive may be out of date.
D2-Widget-DAR.dar	File is used for deploying D2 Client 4.0.	D2-Widget-DAR.dar
HR Config D2 4.0 — Export-Config.zip	Contains the sample application to import after installing D2. The application returns an error when certain configurations do not exist. If you are importing a separate application configuration, you do not need to import the provided sample.	All content within this archive are needed for installation.

7. If you are upgrading D2, follow the instructions in Upgrading D2, page 13.
8. Follow the instructions for installing D2 based on the setup you want, as described in the following table:

Setup	Instructions
D2 with D2 Client 4.0 and D2 Client 3.1	Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
D2 with D2 Client 4.0	Instructions for installing D2 with only D2 Client 4.0, page 16
D2 with D2 Client 3.1	Instructions for installing D2 with only D2 Client 3.1, page 18

Upgrading D2

Follow the same procedures as installation to upgrade D2 to a new version.

1. Delete the cookies and cache of the web browsers.
2. Delete existing user preferences with the DQL query `delete d2c_preferences objects;`
3. Back up configuration files. Locations of configuration files, page 53 contains the locations of configuration files.

Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1

1. On the Documentum Content Server machine:
   a. Extract the contents of `emc-dfs-sdk-6.x.zip`. Remember the paths to the created folders, as the D2 installation requires you to reference content from the archive.
   b. Stop the Documentum Content Server repository and Java Method Server (JMS) services.
   c. Follow the instructions for installing the D2 API libraries and extracting `D2-DAR.dar` as described in the following table:

Operating system of your Documentum Content Server machine	Instructions
Microsoft Windows	Installing D2 Core on a Documentum Content Server using Microsoft Windows, page 21
UNIX Sun Solaris	Installing D2 Core on a Documentum Content Server using UNIX Sun Solaris, page 22

   d. If you want to add compatibility with Documentum Process Engine, follow the instructions for your operating system as described in the following table:

Operating system of your Documentum Content Server machine	Instructions
Microsoft Windows	Configuring compatibility with Documentum Process Engine on Microsoft Windows, page 24
UNIX Sun Solaris	Configuring compatibility with Documentum Process Engine on UNIX Sun Solaris, page 25

   e. Restart Documentum Content Server and JMS.
2. On a system with Documentum Composer, follow the instructions for deploying either the DocApp or DAR extracted from the installer as described in the following table:

File format	Instructions
DAR	Deploy `D2-DAR.dar` and `D2-Widget-DAR.dar`.Installing D2 DAR, page 27 contains further instructions.
DocApp	Installing the D2 DocApp for deployments when not deploying D2 DARs, page 28

3. On the web application server:
   a. Stop web application server services.
   b. Follow the instructions for creating the D2 Config and D2 Client 3.1 WAR files for deployment as described in the following table:

Operating system of your web application server machine	Instructions
Microsoft Windows	Creating D2 Config and D2 Client 3.1 WAR files on a web application server using Microsoft Windows, page 29
UNIX Sun Solaris	Creating D2 Config and D2 Client 3.1 WAR files on a web application server using UNIX Sun Solaris, page 31

c. Follow the instructions for deploying the D2 Config and D2 Client 3.1 WAR files to the web application server as described in the following table:

Web application server	Instructions
Apache Tomcat for Microsoft Windows	Installing D2 Config and D2 Client 3.1 on Apache Tomcat for Microsoft Windows, page 32
Apache Tomcat for UNIX Sun Solaris	Installing D2 Config and D2 Client 3.1 on Apache Tomcat for UNIX Sun Solaris, page 33
IBM WebSphere 7.0.0.19	Installing D2 Config and D2 Client 3.1 on IBM WebSphere 7.0.0.19, page 34
BEA WebLogic	Installing D2 Config and D2 Client 3.1 on BEA WebLogic, page 35
Redhat JBOSS 5.1.1	Installing D2 Config and D2 Client 3.1 on Redhat JBOSS 5.1.1, page 36

d. Follow the instructions for deploying the D2 Client 4.0 WAR files to the web application server as described in the following table:

Web application server	Instructions
Apache Tomcat for Microsoft Windows	Installing D2 Client 4.0 on Apache Tomcat for Microsoft Windows, page 45
Apache Tomcat for UNIX Sun Solaris	Installing D2 Client 4.0 on Apache Tomcat for UNIX Sun Solaris, page 46
IBM WebSphere 7.0.0.19	Installing D2 Client 4.0 and D2FS WAR files on IBM WebSphere 7.0.0.19, page 47
BEA WebLogic	Installing D2 Client 4.0 and D2FS WAR files on BEA WebLogic, page 49
Redhat JBOSS 5.1.1	Installing D2 Client 4.0 and D2FS WAR files on Redhat JBOSS 5.1.1, page 50

e. Start application server services.

4. Configure D2:

a. Configure the Content Server as described in the following table:

Configuration	Instructions
Configuring `logback.xml`	Configuring logback.xml for the Content Server, page 62
Configuring the display of tables	Configuring Content Server table display, page 63
Configuring D2 auditing	Configuring D2 Auditing, page 64

b. Configure the applications as described in the following table:

Application	Instructions
D2 Config	Configuring D2 Config, page 54
D2 Client 3.1	Configuring D2 Client 3.1, page 56
D2 Client 4.0	Configuring D2 Client 4.0, page 59
D2FS	Configuring D2FS, page 61

5. Configuring authentication protocols if you want to use NT Unified Logon (NTLM) or Kerberos as described in the following table:

Authentication	Instructions
NTLM	Configuring NT Unified Logon (NTLM), page 67
Kerberos	Configuring Kerberos, page 68

6. Install language packs. Installing language packs, page 62 contains further instructions.
7. Run the applications.
8. Import configurations. Importing a configuration, page 65 contains further information and instructions.

Instructions for installing D2 with only D2 Client 4.0

1. On the Documentum Content Server machine:
   a. Extract the contents of `emc-dfs-sdk-6.x.zip`. Remember the paths to the created folders, as the D2 installation requires you to reference content from the archive.
   b. Stop the Documentum Content Server repository and Java Method Server (JMS) services.
   c. Follow the instructions for installing the D2 API libraries and extracting `D2-DAR.dar` as described in the following table:

Operating system of your Documentum Content Server machine	Instructions
Microsoft Windows	Installing D2 Core on a Documentum Content Server using Microsoft Windows, page 21
UNIX Sun Solaris	Installing D2 Core on a Documentum Content Server using UNIX Sun Solaris, page 22

   d. If you want to add compatibility with Documentum Process Engine, follow the instructions for your operating system as described in the following table:

Operating system of your Documentum Content Server machine	Instructions
Microsoft Windows	Configuring compatibility with Documentum Process Engine on Microsoft Windows, page 24
UNIX Sun Solaris	Configuring compatibility with Documentum Process Engine on UNIX Sun Solaris, page 25

   e. Restart Documentum Content Server and JMS.

2. On a system with Documentum Composer, follow the instructions for deploying either the DocApp or DAR extracted from the installer as described in the following table:

File format	Instructions
DAR	Deploy `D2-DAR.dar` and `D2-Widget-DAR.dar`.Installing D2 DAR, page 27 contains further instructions.
DocApp	Installing the D2 DocApp for deployments when not deploying D2 DARs, page 28

3. On the web application server:
   a. Stop web application server services.
   b. Follow the instructions for creating the D2 Config WAR files for deployment as described in the following table:

Operating system of your web application server machine	Instructions
Microsoft Windows	Creating only D2 Config WAR file on a web application server using Microsoft Windows, page 37
UNIX Sun Solaris	Creating only D2 Config WAR file on a web application server using UNIX Sun Solaris, page 39

   c. Follow the instructions for deploying the D2 Config WAR files to the web application server as described in the following table:

Web application server	Instructions
Apache Tomcat for Microsoft Windows	Installing only D2 Config on Apache Tomcat for Microsoft Windows, page 40
Apache Tomcat for UNIX Sun Solaris	Installing only D2 Config on Apache Tomcat for UNIX Sun Solaris, page 42
IBM WebSphere 7.0.0.19	Installing only D2 Config on IBM WebSphere 7.0.0.19, page 43
BEA WebLogic	Installing only D2 Config on BEA WebLogic, page 43
Redhat JBOSS 5.1.1	Installing only D2 Config on Redhat JBOSS 5.1.1, page 44

   d. Follow the instructions for deploying the D2 Client 4.0 WAR files to the web application server as described in the following table:

Web application server	Instructions
Apache Tomcat for Microsoft Windows	Installing D2 Client 4.0 on Apache Tomcat for Microsoft Windows, page 45
Apache Tomcat for UNIX Sun Solaris	Installing D2 Client 4.0 on Apache Tomcat for UNIX Sun Solaris, page 46
IBM WebSphere 7.0.0.19	Installing D2 Client 4.0 and D2FS WAR files on IBM WebSphere 7.0.0.19, page 47

BEA WebLogic	Installing D2 Client 4.0 and D2FS WAR files on BEA WebLogic, page 49
Redhat JBOSS 5.1.1	Installing D2 Client 4.0 and D2FS WAR files on Redhat JBOSS 5.1.1, page 50

e. Start application server services.

4. Configure D2:

a. Configure the Content Server as described in the following table:

Configuration	Instructions
Configuring `logback.xml`	Configuring logback.xml for the Content Server, page 62
Configuring the display of tables	Configuring Content Server table display, page 63
Configuring D2 auditing	Configuring D2 Auditing, page 64

b. Configure the applications as described in the following table:

Application	Instructions
D2 Config	Configuring D2 Config, page 54
D2 Client 4.0	Configuring D2 Client 4.0, page 59
D2FS	Configuring D2FS, page 61

5. Configuring authentication protocols if you want to use NT Unified Logon (NTLM) or Kerberos as described in the following table:

Authentication	Instructions
NTLM	Configuring NT Unified Logon (NTLM), page 67
Kerberos	Configuring Kerberos, page 68

6. Install language packs. Installing language packs, page 62 contains further instructions.
7. Run the applications.
8. Import configurations. Importing a configuration, page 65 contains further information and instructions.

Instructions for installing D2 with only D2 Client 3.1

1. On the Documentum Content Server machine:

a. Extract the contents of `emc-dfs-sdk-6.x.zip`. Remember the paths to the created folders, as the D2 installation requires you to reference content from the archive.

b. Stop the Documentum Content Server repository and Java Method Server (JMS) services.

c. Follow the instructions for installing the D2 API libraries and extracting `D2-DAR.dar` as described in the following table:

Operating system of your Documentum Content Server machine	Instructions
Microsoft Windows	Installing D2 Core on a Documentum Content Server using Microsoft Windows, page 21
UNIX Sun Solaris	Installing D2 Core on a Documentum Content Server using UNIX Sun Solaris, page 22

d. If you want to add compatibility with Documentum Process Engine, follow the instructions for your operating system as described in the following table:

Operating system of your Documentum Content Server machine	Instructions
Microsoft Windows	Configuring compatibility with Documentum Process Engine on Microsoft Windows, page 24
UNIX Sun Solaris	Configuring compatibility with Documentum Process Engine on UNIX Sun Solaris, page 25

e. Restart Documentum Content Server and JMS.

2. On a system with Documentum Composer, follow the instructions for deploying either the DocApp or DAR extracted from the installer as described in the following table:

File format	Instructions
DAR	Deploy only `D2-DAR.dar`.Installing D2 DAR, page 27 contains further instructions.
DocApp	Installing the D2 DocApp for deployments when not deploying D2 DARs, page 28

3. On the web application server:
   a. Stop web application server services.
   b. Follow the instructions for creating the D2 Config and D2 Client 3.1 WAR files for deployment as described in the following table:

Operating system of your web application server machine	Instructions
Microsoft Windows	Creating D2 Config and D2 Client 3.1 WAR files on a web application server using Microsoft Windows, page 29
UNIX Sun Solaris	Creating D2 Config and D2 Client 3.1 WAR files on a web application server using UNIX Sun Solaris, page 31

   c. Follow the instructions for deploying the D2 Config and D2 Client 3.1 WAR files to the web application server as described in the following table:

Web application server	Instructions
Apache Tomcat for Microsoft Windows	Installing D2 Config and D2 Client 3.1 on Apache Tomcat for Microsoft Windows, page 32
Apache Tomcat for UNIX Sun Solaris	Installing D2 Config and D2 Client 3.1 on Apache Tomcat for UNIX Sun Solaris, page 33
IBM WebSphere 7.0.0.19	Installing D2 Config and D2 Client 3.1 on IBM WebSphere 7.0.0.19, page 34

BEA WebLogic	Installing D2 Config and D2 Client 3.1 on BEA WebLogic, page 35
Redhat JBOSS 5.1.1	Installing D2 Config and D2 Client 3.1 on Redhat JBOSS 5.1.1, page 36

d. Start application server services.

4. Configure D2:

a. Configure the Content Server as described in the following table:

Configuration	Instructions
Configuring `logback.xml`	Configuring logback.xml for the Content Server, page 62
Configuring the display of tables	Configuring Content Server table display, page 63
Configuring D2 auditing	Configuring D2 Auditing, page 64

b. Configure the applications as described in the following table:

Application	Instructions
D2 Config	Configuring D2 Config, page 54
D2 Client 3.1	Configuring D2 Client 3.1, page 56

5. Configuring authentication protocols if you want to use NT Unified Logon (NTLM) or Kerberos as described in the following table:

Authentication	Instructions
NTLM	Configuring NT Unified Logon (NTLM), page 67
Kerberos	Configuring Kerberos, page 68

6. Run the applications.
7. Import configurations. Importing a configuration, page 65 contains further information and instructions.

Chapter 2

Installing D2 on the Content Server

This chapter contains the following topics:

- **Installing D2 Core on a Documentum Content Server using Microsoft Windows**
- **Installing D2 Core on a Documentum Content Server using UNIX Sun Solaris**
- **Configuring compatibility with Documentum Process Engine on Microsoft Windows**
- **Configuring compatibility with Documentum Process Engine on UNIX Sun Solaris**

Installing D2 Core on a Documentum Content Server using Microsoft Windows

D2-API is a set of libraries for the Documentum Content Server and the JMS enabling D2 Methods to be run on the Content Server.

1. Right-click on `D2-Core_4.0.0_xxx-install.jar`, select **Open with**, and then select **Java(TM) Platform SE binary**.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

   `C:\Document and Settings\<user>\Local Settings\Temp\D2-Core_4.0.0_xxx`

   [user] is the user name of the account, and *X.y.z* is the version number.

   The temporary directory holds the installation logs.
2. On the **Select installation packages** page, select **D2-API for Content Server/JMS** and **DocApp/DAR**.
3. On the **D2 plugins installation** page, click **Add a plugin** and add the installer jar files to automatically package existing or updated plug-ins with the output D2 WAR files.

   This step is optional, as you can install new plug-ins and manually redeploy existing or updated plug-in files after completing the installation of D2.
4. Fill out the **D2-API extraction folders** page as described in the following table:

Field	Path
For Content Server	*<install path of Documentum>*\D2
For Java Method Server	For Content Server Version 6.7 SP1, use *<install path of Documentum>**<JBOSS version>*\server\DctmServer_MethodServer\deploy\ServerApps.ear For Content Server Version 6.7 and earlier, use *<install path of Documentum>**<JBOSS version>*\server\DctmServer_MethodServer\deploy\ServerApps.ear\APP-INF

5. On the **DAR extraction folder** page, select the path to extract the DAR files.
6. On the **Documentum dependencies** page, for **Path**, locate and select the folder to which you extracted the DFS SDK.

   Make sure you select the folder that contains the `lib` folder and other DFS SDK library directories. Selecting a folder without the `lib` folder results in deployment issues. The installer automatically includes necessary files in the extracted WAR files. You can delete the DFS SDK library files after inclusion in the D2 installation process.
7. Read the extraction summary and click **Next**.
8. Select the option **Do not install DocApp/DAR**.
9. Click **Done**.
10. Remove `itext-2.0.2.jar` from the folder as described in the following table:

Content Server 6.7 SPI and higher	Content Server 6.6 and 6.7
Documentum*<JBOSS version>*\server\DctmServer_MethodServer\deploy\ServerApps.ear\lib	Documentum/*<JBOSS version>*\server\DctmServer_MethodServer\deploy\ServerApps.ear\APP-INF\lib

11. Add *<install path of D2>*\D2.jar; to the CLASSPATH environment variable.
12. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Core on a Documentum Content Server using UNIX Sun Solaris

D2-API is a set of libraries for the Documentum Content Server and the JMS enabling D2 Methods to be run on the Content Server.

1. Launch D2 installer from XWindows interface using the owner account for the Documentum installation.
2. Open xterm and run installer by typing `java –jar D2-Core_4.0.0_xxx-install.jar`.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

`/tmp/D2-Core_4.0.0_xxx`

The temporary directory holds the installation logs.

3. On the **Select installation packages** page, select **D2-API for Content Server/JMS** and **DocApp/DAR**.
4. On the **D2 plugins installation** page, click **Add a plugin** and add the installer jar files for automatically packaging existing or updated plug-ins with the output D2 WAR files.

   Install new plug-ins or manually redeploy plug-in files after completing the installation of D2.
5. Fill out the **D2-API extraction folders** page as described in the following table:

Field	Path
For Content Server	`$DOCUMENTUM/D2`
For Java Method Server	For Content Server Version 6.7 SP1, use `$DOCUMENTUM/<JBOSS version>/DctmServer_MethodServer/deploy/ServerApps.ear` For Content Server Version 6.7 and earlier, use `$DOCUMENTUM/<JBOSS version>/DctmServer_MethodServer/deploy/ServerApps.ear/APP-INF`

6. On the **DAR extraction folder** page, select the path to extract the DAR files.
7. On the **Documentum dependencies** page, for **Path**, locate and select the folder to which you extracted the DFS SDK.

   Make sure you select the folder that contains the `lib` folder and other DFS SDK library directories. Selecting a folder without the `lib` folder results in deployment issues. The installer automatically includes necessary files in the extracted WAR files. You can delete the DFS SDK library files after inclusion in the D2 installation process.
8. Read the extraction summary and click **Next**.
9. Select the option **Do not install DocApp/DAR**.
10. Click **Done**.
11. Remove `itext-2.0.2.jar` and `xercesImpl-2.7.1.jar` from the folder as described in the following table:

Content Server 6.7 SPI and higher	Content Server 6.6 and 6.7
`$DOCUMENTUM/<JBOSS version>/server/DctmServer_MethodServer/deploy/ServerApps.ear/lib`	`$DOCUMENTUM/<JBOSS version>/server/DctmServer_MethodServer/deploy/ServerApps.ear/APP-INF/lib`

12. Add `<install path of D2>/D2.jar;` to the CLASSPATH environment variable.
13. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring compatibility with Documentum Process Engine on Microsoft Windows

If Documentum Process Engine is installed on the Content Server, you must install the same D2 libraries for the JMS in the Process Engine context. If the Process Engine content is not installed correctly, workflows will not work in D2.

D2-API libraries overwrite JMS libraries but do not cause any known issues. The D2-API installation must point to a Documentum Foundation Services Software Development Kit (DFS SDK) that is compatible with the Content Server you are running.

1. Right-click on `D2-Core_4.0.0_xxx-install.jar`, select **Open with**, and then select **Java(TM) Platform SE binary**.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

   `C:\Document and Settings\<user>\Local Settings\Temp\D2-Core_4.0.0_xxx`

   [user] is the user name of the account, and *X.y.z* is the version number.

   The temporary directory holds the installation logs.
2. On the **Select installation packages** page, select **D2-API for Content Server/JMS**.
3. Click **Next**.
4. On the **D2 plugins installation** page, click **Next** as the plug-in files are not needed by the Process Engine.
5. Click **Next**.
6. Fill out the **D2-API extraction folders** page as described in the following table:

Field	Path
For Content Server	*<install path of Documentum>*\D2
For Java Method Server	For Content Server Version 6.7 SP1, use *<install path of Documentum>**<JBOSS version>*\DctmServer_MethodServer\deploy\bpm.ear For Content Server Version 6.7 and earlier, use *<install path of Documentum>**<JBOSS version>*\DctmServer_MethodServer\deploy\bpm.ear\APP-INF

7. Click **Next**.
8. On the **Documentum dependencies** page, for **Path**, locate and select the extracted `emc-dfs-sdk-6.x` folder on the Content Server.
9. Click **Next** and complete the installation.
10. Remove `xalan-2.7.0.jar`from the folder as described in the following table:

Content Server 6.7 SPI and higher	Content Server 6.6 and 6.7
Documentum*<JBOSS version>*\server\DctmServer_MethodServer\deploy\bpm.ear\lib	Documentum/*<JBOSS version>*\server\DctmServer_MethodServer\deploy\bpm.ear\APP-INF\lib

11. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring compatibility with Documentum Process Engine on UNIX Sun Solaris

If Documentum Process Engine is installed on the Content Server, you must install the same D2 libraries for the JMS in the Process Engine context. If the Process Engine content is not installed correctly, workflows will not work in D2.

D2-API libraries overwrite JMS libraries but do not cause any known issues. The D2-API installation must point to a Documentum Foundation Services Software Development Kit (DFS SDK) that is compatible with the Content Server you are running.

1. Launch D2 installer from XWindows interface using the owner account for the Documentum installation.
2. Open xterm and run installer by typing `java –jar D2-Core_4.0.0_xxx-install.jar`.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

   `/tmp/D2-Core_4.0.0_xxx`

   The temporary directory holds the installation logs.
3. On the **Select installation packages** page, select **D2-API for Content Server/JMS**.
4. Click **Next**.
5. On the **D2 plugins installation** page, click **Next** as the plug-in files are not needed by the Process Engine.
6. Click **Next**.
7. Fill out the **D2-API extraction folders** page as described in the following table:

Field	Path
For Content Server	`$DOCUMENTUM/D2`
For Java Method Server	For Content Server Version 6.7 SP1, use `$DOCUMENTUM/<JBOSS version>/DctmServer_MethodServer/deploy/bpm.ear` For Content Server Version 6.7 and earlier, use `$DOCUMENTUM/<JBOSS version>/DctmServer_MethodServer/deploy/bpm.ear\APP-INF`

8. Click **Next**.
9. On the **Documentum dependencies** page, for **Path**, locate and select the extracted `emc-dfs-sdk-6.x` folder on the Content Server.
10. Click **Next** and complete the installation.

11. Remove `xalan-2.7.0.jar` and `xercesImpl-2.7.1.jar` from the folder as described in the following table:

Content Server 6.7 SPI and higher	Content Server 6.6 and 6.7
`$DOCUMENTUM/<JBOSS version>/server/DctmServer_MethodServer/deploy/bpm.ear/lib`	`$DOCUMENTUM/<JBOSS version>/server/DctmServer_MethodServer/deploy/bpm.ear/APP-INF/lib`

12. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Chapter 3

Deploying DAR or DocApp files

This chapter contains the following topics:

- **Deploying DAR files**
- **Installing the D2 DocApp for deployments when not deploying D2 DARs**

Deploying DAR files

You must deploy DAR files during the installation of D2 as described in the following table:

DAR	Description
`D2-DAR.dar`	Always deploy `D2-DAR.dar` when installing D2.
`D2-Widget-DAR.dar`	Deploy `D2-Widget-DAR.dar` when installing D2 Client 4.0.

1. Run the DAR Installer that ships with Documentum Composer and fill out the form as described in the following table:

Field	Description
DAR	Locate and select the DAR file.
Docbroker Details	Select the target Docbroker and port. Click **Connect**.
Repository Details	Type the target repository with the Content Server installation owner account, which is usually dmadmin. Type the login and password for the owner account.

   The DAR installer is usually `dardeployer.exe`.

2. If the Content Server installation owner is not dmadmin:
   a. Create a file in a text editor and save it as `nodmadmin.installparam`.
   b. Add the following lines:

```
<?xml version="1.0" encoding="UTF-8"?>

<installparam:InputFile xmi:version="2.0"
xmlns:xmi="http://www.omg.org/XMI"
xmlns:installparam="installparam">

<parameter key="dmadmin" value="<Administrator>"/>
```

```
</installparam:InputFile>
```

where *Administrator* is the name of the account owner for the installation.

c. Under **DAR Details**, click **Browse** next to **Input File**, and locate and select the `nodmadmin.installparam` you created.

3. You can review log files through **Recent DAR install log files**.
4. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing the D2 DocApp for deployments when not deploying D2 DARs

1. Run `D2-Core_4.0.0_xxx-install.jar`.
2. On the **Select installation packages** page, select **DocApp/DAR**.
3. Click **Next**.
4. On the **DocApp/DAR extraction folder** page, select the folder to extract DocApp/DAR files.
5. Click **Next**.
6. Use the Services console or Documentum Server Manager to make sure Docbroker and the target repository are running.
7. On the **DocApp/DAR installation** page, select **Install DocApp**.
8. Type the target repository with the Content Server installation owner account, which is usually dmadmin.
9. Click **Next** and complete the installation.
10. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Chapter 4

Installing D2 Config and Client 3.1 on the web application server

This chapter contains the following topics:

- **Creating D2 Config and D2 Client 3.1 WAR files on a web application server using Microsoft Windows**
- **Creating D2 Config and D2 Client 3.1 WAR files on a web application server using UNIX Sun Solaris**
- **Installing D2 Config and D2 Client 3.1 on Apache Tomcat for Microsoft Windows**
- **Installing D2 Config and D2 Client 3.1 on Apache Tomcat for UNIX Sun Solaris**
- **Installing D2 Config and D2 Client 3.1 on IBM WebSphere 7.0.0.19**
- **Installing D2 Config and D2 Client 3.1 on Oracle WebLogic**
- **Installing D2 Config and D2 Client 3.1 on Redhat JBOSS 5.1.1**

Creating D2 Config and D2 Client 3.1 WAR files on a web application server using Microsoft Windows

1. Configure Internet Explorer settings to avoid interference with D2 Client functionality as follows:
   - Allow popup windows.
   - Allow windows to resize by script without size or position constraints.
   - Allow the browser to use tabbed browser settings when encountering a popup window.
2. Right-click on `D2-Core_4.0.0_xxx-install.jar`, select **Open with**, and then select **Java(TM) Platform SE binary**.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

   `C:\Document and Settings\<user>\Local Settings\Temp\D2-Core_4.0.0_xxx`

   [user] is the user name of the account, and *X.y.z* is the version number.

   The temporary directory holds the installation logs.
3. On the **Select installation packages** page, select **D2-Client** and **D2-Config**.
4. Click **Next**.
5. On the **D2-Client/D2-Config extraction folder** page, select a folder to extract the WAR files.

6. Click **Next**.
7. On the **Configuration file(s) settings** page, configure whether to import configuration files and how you want to deploy the configuration files:
   a. Select the Configuration file(s) source as described in the following table:

Option	Description
Create new Configuration file(s)	Select to create and use a new set of configuration files.
Use existing Configurations file(s) from a specific location	Select to import and use an existing set of configuration files. Click **Browse**, then navigate to and select the set of configuration files.

   b. Select the method of deployment as described in the following table:

Option	Description
Include Configuration file(s) into WAR(s)	Select to automatically package configuration files with the WAR deployment.
Extract Configuration file(s) at a specific location	Select to extract configuration files to a specified location. Use this option if you do not want to store configuration files in their default locations, for example to centralize configuration files. Click **Browse**, then navigate to and select the folder you want to use as the configuration file storage location.

   If you want to include configuration files with the WAR, configure the files as described in the following table:

Application	Instructions
D2 Config	Configuring D2 Config, page 54
D2 Client 3.1	Configuring D2 Client 3.1, page 56

8. On the **D2 plugins installation** page, click **Add a plugin** and add the installer jar files for automatically packaging existing or updated plug-ins with the output D2 WAR files.

   Install new plug-ins or manually redeploy plug-in files after completing the installation of D2.
9. Click **Next**.
10. On the **Documentum dependencies** page:
    a. For **EMC DFS SDK Library location**, locate and select the extracted `emc-dfs-sdk-6.x` folder on the application server.

       Make sure you select the folder that contains the `lib` folder and other DFS SDK library directories. Selecting a folder without the `lib` folder results in deployment issues. The installer automatically includes necessary files in the extracted WAR files. You can delete the DFS SDK library files after inclusion in the D2 installation process.

    b. For **OPTIONAL**, you can configure D2 to accept DocApp files when they are included within a D2 Configuration file during the configuration import step. Click **Browse** and select `DDS.jar`.
11. Click **Next** and complete the installation.

12. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Creating D2 Config and D2 Client 3.1 WAR files on a web application server using UNIX Sun Solaris

1. In UNIX, set the graphical environment, by either:
   - Adding the variable `java.awt.headless=true` to the environment system properties of the account running the application server.
   - Adding the parameter `-Djava.awt.headless=true` to the JVM launching the JMS.
2. Launch D2 installer from XWindows interface using the owner account for the Documentum installation.
3. Open xterm and run installer by typing `java –jar D2-Core_4.0.0_xxx-install.jar`.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

   `/tmp/D2-Core_4.0.0_xxx`

   The temporary directory holds the installation logs.
4. On the **Select installation packages** page, select **D2-Client** and **D2-Config**.
5. Click **Next**.
6. On the **D2-Client/D2-Config extraction folder** page, select a folder to extract WAR files.
7. Click **Next**.
8. On the **Configuration file(s) settings** page, configure whether to import configuration files and how you want to deploy the configuration files:
   a. Select the Configuration file(s) source as described in the following table:

Option	Description
Create new Configuration file(s)	Select to create and use a new set of configuration files.
Use existing Configurations file(s) from a specific location	Select to import and use an existing set of configuration files. Click **Browse**, then navigate to and select the set of configuration files.

   b. Select the method of deployment as described in the following table:

Option	Description
Include Configuration file(s) into WAR(s)	Select to automatically package configuration files with the WAR deployment.
Extract Configuration file(s) at a specific location	Select to extract configuration files to a specified location. Use this option if you do not want to store configuration files in their default locations, for example to centralize configuration files. Click **Browse**, then navigate to and select the folder you want to use as the configuration file storage location.

If you want to include configuration files with the WAR, configure the files as described in the following table:

Application	Instructions
D2 Config	Configuring D2 Config, page 54
D2 Client 3.1	Configuring D2 Client 3.1, page 56

9. On the **D2 plugins installation** page, click **Add a plugin** and add the installer jar files for automatically packaging existing or updated plug-ins with the output D2 WAR files.

   Install new plug-ins or manually redeploy plug-in files after completing the installation of D2.

10. Click **Next**.
11. On the **Documentum dependencies** page:
    a. For **EMC DFS SDK Library location**, locate and select the extracted `emc-dfs-sdk-6.x` folder on the application server.

       Make sure you select the folder that contains the `lib` folder and other DFS SDK library directories. Selecting a folder without the `lib` folder results in deployment issues. The installer automatically includes necessary files in the extracted WAR files. You can delete the DFS SDK library files after inclusion in the D2 installation process.

    b. For **OPTIONAL**, you can configure D2 to accept DocApp files when they are included within a D2 Configuration file during the configuration import step. Click **Browse** and select `DDS.jar`.
12. Click **Next** and complete the installation.
13. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Config and D2 Client 3.1 on Apache Tomcat for Microsoft Windows

1. If you are using a fresh installation of Tomcat, start the service and then stop it after a few minutes to allow Tomcat to build folder structures. Some folders may be missing from the installation directory if you do not perform this step.
2. If you are installing a new D2 release on an old D2 version:

a. Delete the *<install path of Tomcat>*\webapps\D2-Config and *<install path of Tomcat>*\webapps\D2-Client folders.

b. Clear the Catalina cache in the folder *<install path of Tomcat>*\work\Catalina\localhost\.

3. Copy D2-Config.war and D2-Client.war to the *<install path of Tomcat>*\webapps folder of the application server.
4. If during the install wizard you did not place the configuration files in the default locations:
   - Copy the configuration files to the *<install path of Tomcat>*\WEB-INF\classes folder for manual deployment, or
   - Update the references to where the configuration files are located.

   To update the references:

   a. Navigate to *<install path of Tomcat>*\work\Catalina\conf\ and open catalina.properties

   b. Find the line common.loader=

   c. To use a common dfc.properties file for D2 Client and D2 Config, append the location of dfc.properties

      For example, common.loader=*<existing paths>*,*<install path of Documentum>*\Config

   d. Append the location of the D2 Client and D2 Config configuration files.

      For example, common.loader=*<existing paths>*,*<install path of Documentum>*\Config,*<install path of D2>*\config
5. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Config and D2 Client 3.1 on Apache Tomcat for UNIX Sun Solaris

1. If you are using a fresh installation of Tomcat, start the service and then stop it after a few minutes to allow Tomcat to build folder structures.
2. If you are installing a new D2 release on an old D2 version:
   a. Delete the *<install path of Tomcat>*/webapps/D2-Config and *<install path of Tomcat>*/webapps/D2-Client folders.

   b. Clear the Catalina cache in the folder *<install path of Tomcat>*/work/Catalina/localhost/.
3. Copy D2-Config.war and D2-Client.war to the *<install path of Tomcat>*/webapps folder of the application server.
4. If during the install wizard you did not place the configuration files in the default locations:
   - Copy the configuration files to the *<install path of Tomcat>*/WEB-INF/classes folder for manual deployment, or

- Update the references to where the configuration files are located.

To update the references:

a. Navigate to *<install path of Tomcat>*/work/Catalina/conf/ and open catalina.properties
b. Find the line common.loader=
c. To use a common dfc.properties file for D2 Client and D2 Config, append the location of dfc.properties

   For example, common.loader=*<existing paths>*,*<install path of Documentum>*/Config
d. Append the location of the D2 Client and D2 Config configuration files.

   For example, common.loader=*<existing paths>*,*<install path of Documentum>*/Config,*<install path of D2>*/config

5. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Config and D2 Client 3.1 on IBM WebSphere 7.0.0.19

1. If you are installing a new release on an old version:
   a. Use the IBM Administration console to stop the **D2-Config** and **D2-Client** web applications.
   b. Select **D2-Config** and **D2-Client**, then click **Update**.
2. Connect to the WebSphere Administration console with administrator privileges.
3. Install D2 Config:
   a. Click **Applications** > **Install New Application**.
   b. Click **Browse** , then locate and select D2-Config.war.
   c. Type /D2-Config as the context root.
   d. Click **Next**.
   e. Change the **Application Name** from D2-Config_war to D2-Config.
   f. Follow the wizard, then click **Save** to Master Configuration.
4. Install D2 Client:
   a. Click **Applications** > **Install New Application**.
   b. Click **Browse** , then locate and select D2-Client.war.
   c. Type /D2-Client as the context root.
   d. Follow the wizard until you see **Step 1: Provide options to perform the installation**, then change the **Application Name** from D2-Client_war to D2-Client.
   e. Follow the wizard, then click **Save to Master Configuration**.
   f. Click **Save**.

5. Ensure the CLASSPATH used to start the web application server does not reference DFC libraries, as there may be conflicts with the DFC included in the web application.
6. Navigate to `Applications/Enterprise Applications/<D2-Config>/Manage Modules/<D2-Config>` and set every D2 module to **Application class loader first** mode. The default is the **Parent class loader first** mode.
7. If the configuration files were kept out of the WAR files during extraction, copy the configuration files to the `/WEB-INF/classes` folder or configure the references using the shared environment definition.
8. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Config and D2 Client 3.1 on Oracle WebLogic

1. If you are installing a new release on an old version:
   a. Use the Administration console to stop the **D2-Config** and **D2-Client** web applications.
   b. Select **D2-Config** and **D2-Client**, and uninstall.
2. If the Oracle WebLogic application server is running on Red Hat Enterprise Linux, extract `D2-Config.war` and `D2-Client.war` to a temporary folder.
3. Connect to the WebLogic console with administrator privileges.
4. Install D2-Config:
   a. Click **Lock & Edit** to open the **Deployments** menu.
   b. Click **Install**, click **Browse**, then select `D2-Config.war` or the extracted folder if Oracle WebLogic is running on Red Hat Enterprise Linux.
   c. Click **Next**.
   d. Select **Install the deployment as an application.**
   e. Follow the wizard, then click **Finish**.
5. Install D2-Client:
   a. Click **Lock & Edit** to open the **Deployments** menu.
   b. Click **Install**, click **Browse**, then select `D2-Client.war` or the extracted folder if Oracle WebLogic is running on Red Hat Enterprise Linux, then click **Active Change**.
   c. Click **Next**.
   d. Select **Install the deployment as an application.**
   e. Follow the wizard, then click **Finish**.
6. If using Oracle WebLogic 10.3.5, ensure that the main CLASSPATH used to start WebLogic does not contain references to DFC libraries in the `D2-Config` and `D2-Client` domains of `startWeblogic.cmd`.
7. If the configuration files were kept out of the WAR files during extraction, copy the configuration files to the `/WEB-INF/classes` folder or configure the references using the classpath definition.
8. Return to the instructions:

- Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
- Instructions for installing D2 with only D2 Client 4.0, page 16
- Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Config and D2 Client 3.1 on Redhat JBOSS 5.1.1

1. Remove or set to false `jboss.vfs.forceVfsJar`.
2. Stop the JBOSS service.
3. Extract `D2-Config.war` as the folder `D2-Config.war`.
4. Extract `D2-Client.war` as the folder `D2-Client.war`.
5. Copy these folders to the deployment folder of your context.
6. If the configuration files were kept out of the WAR files during extraction, copy the configuration files to the `/WEB-INF/classes` folder or configure the references using the classpath definition.
7. Navigate to the `/common/lib` folder of your JBOSS installation.
8. Find and copy `log4j.jar`.
9. Paste `log4j.jar` in the `/WEB-INF/lib` folder of your web application installation.
10. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Chapter 5

Installing D2 Config without D2 Client 3.1 on the web application server

This chapter contains the following topics:

- **Creating only D2 Config WAR file on a web application server using Microsoft Windows**
- **Creating only D2 Config WAR file on a web application server using UNIX Sun Solaris**
- **Installing only D2 Config on Apache Tomcat for Microsoft Windows**
- **Installing only D2 Config on Apache Tomcat for UNIX Sun Solaris**
- **Installing only D2 Config on IBM WebSphere 7.0.0.19**
- **Installing only D2 Config on Oracle WebLogic**
- **Installing only D2 Config on Redhat JBOSS 5.1.1**

Creating only D2 Config WAR file on a web application server using Microsoft Windows

1. Configure Internet Explorer settings to avoid interference with D2 Client functionality as follows:
   - Allow popup windows.
   - Allow windows to resize by script without size or position constraints.
   - Allow the browser to use tabbed browser settings when encountering a popup window.
2. Right-click on `D2-Core_4.0.0_xxx-install.jar`, select **Open with**, and then select **Java(TM) Platform SE binary**.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

   `C:\Document and Settings\<user>\Local Settings\Temp\D2-Core_4.0.0_xxx`

   [user] is the user name of the account, and *X.y.z* is the version number.

   The temporary directory holds the installation logs.
3. On the **Select installation packages** page, select **D2-Config**.
4. Click **Next**.
5. On the **D2-Client/D2-Config extraction folder** page, select a folder to extract the WAR files.
6. Click **Next**.

7. On the **Configuration file(s) settings** page, configure whether to import configuration files and how you want to deploy the configuration files:
   a. Select the Configuration file(s) source as described in the following table:

Option	Description
Create new Configuration file(s)	Select to create and use a new set of configuration files.
Use existing Configurations file(s) from a specific location	Select to import and use an existing set of configuration files. Click **Browse**, then navigate to and select the set of configuration files.

   b. Select the method of deployment as described in the following table:

Option	Description
Include Configuration file(s) into WAR(s)	Select to automatically package configuration files with the WAR deployment.
Extract Configuration file(s) at a specific location	Select to extract configuration files to a specified location. Use this option if you do not want to store configuration files in their default locations, for example to centralize configuration files. Click **Browse**, then navigate to and select the folder you want to use as the configuration file storage location.

   If you want to include configuration files with the WAR, configure the files as described in the following table:

Application	Instructions
D2 Config	Configuring D2 Config, page 54

8. On the **D2 plugins installation** page, click **Add a plugin** and add the installer jar files for automatically packaging existing or updated plug-ins with the output D2 WAR files.

   Install new plug-ins or manually redeploy plug-in files after completing the installation of D2.

9. Click **Next**.
10. On the **Documentum dependencies** page:
    a. For **EMC DFS SDK Library location**, locate and select the extracted `emc-dfs-sdk-6.x` folder on the application server.

       Make sure you select the folder that contains the `lib` folder and other DFS SDK library directories. Selecting a folder without the `lib` folder results in deployment issues. The installer automatically includes necessary files in the extracted WAR files. You can delete the DFS SDK library files after inclusion in the D2 installation process.

    b. For **OPTIONAL**, you can configure D2 to accept DocApp files when they are included within a D2 Configuration file during the configuration import step. Click **Browse** and select `DDS.jar`.
11. Click **Next** and complete the installation.
12. Return to the instructions:

    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14

- Instructions for installing D2 with only D2 Client 4.0, page 16
- Instructions for installing D2 with only D2 Client 3.1, page 18

Creating only D2 Config WAR file on a web application server using UNIX Sun Solaris

1. In UNIX, set the graphical environment, by either:
   - Adding the variable `java.awt.headless=true` to the environment system properties of the account running the application server.
   - Adding the parameter `-Djava.awt.headless=true` to the JVM launching the JMS.
2. Launch D2 installer from XWindows interface using the owner account for the Documentum installation.
3. Open xterm and run installer by typing `java –jar D2-Core_4.0.0_xxx-install.jar`.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for Java Virtual Machine (JVM) as its temporary directory:

   `/tmp/D2-Core_4.0.0_xxx`

   The temporary directory holds the installation logs.
4. On the **Select installation packages** page, select **D2-Config**.
5. Click **Next**.
6. On the **D2-Client/D2-Config extraction folder** page, select a folder to extract WAR files.
7. Click **Next**.
8. On the **Configuration file(s) settings** page, configure whether to import configuration files and how you want to deploy the configuration files:
   a. Select the Configuration file(s) source as described in the following table:

Option	Description
Create new Configuration file(s)	Select to create and use a new set of configuration files.
Use existing Configurations file(s) from a specific location	Select to import and use an existing set of configuration files. Click **Browse**, then navigate to and select the set of configuration files.

   b. Select the method of deployment as described in the following table:

Option	Description
Include Configuration file(s) into WAR(s)	Select to automatically package configuration files with the WAR deployment.
Extract Configuration file(s) at a specific location	Select to extract configuration files to a specified location. Use this option if you do not want to store configuration files in their default locations, for example to centralize configuration files. Click **Browse**, then navigate to and select the folder you want to use as the configuration file storage location.

If you want to include configuration files with the WAR, configure the files as described in the following table:

Application	Instructions
D2 Config	Configuring D2 Config, page 54

9. On the **D2 plugins installation** page, click **Add a plugin** and add the installer jar files for automatically packaging existing or updated plug-ins with the output D2 WAR files.

   Install new plug-ins or manually redeploy plug-in files after completing the installation of D2.

10. Click **Next**.
11. On the **Documentum dependencies** page:
    a. For **EMC DFS SDK Library location**, locate and select the extracted `emc-dfs-sdk-6.x` folder on the application server.

       Make sure you select the folder that contains the `lib` folder and other DFS SDK library directories. Selecting a folder without the `lib` folder results in deployment issues. The installer automatically includes necessary files in the extracted WAR files. You can delete the DFS SDK library files after inclusion in the D2 installation process.

    b. For **OPTIONAL**, you can configure D2 to accept DocApp files when they are included within a D2 Configuration file during the configuration import step. Click **Browse** and select `DDS.jar`.
12. Click **Next** and complete the installation.
13. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing only D2 Config on Apache Tomcat for Microsoft Windows

1. If you are using a fresh installation of Tomcat, start the service and then stop it after a few minutes to allow Tomcat to build folder structures. Some folders may be missing from the installation directory if you do not perform this step.
2. If you are installing a new D2 release on an old D2 version:

a. Delete the <install path of Tomcat>\webapps\D2-Config and <install path of Tomcat>\webapps\D2-Client folders.

b. Clear the Catalina cache in the folder <install path of Tomcat>\work\Catalina\localhost\.

3. Copy D2-Config.war to the <install path of Tomcat>\webapps folder of the application server.
4. If during the install wizard you did not place the configuration files in the default locations:
   - Copy the configuration files to the <install path of Tomcat>\WEB-INF\classes folder for manual deployment, or
   - Update the references to where the configuration files are located.

   To update the references:

   a. Navigate to <install path of Tomcat>\work\Catalina\conf\ and open catalina.properties

   b. Find the line common.loader=

   c. To use a common dfc.properties file for D2 Client and D2 Config, append the location of dfc.properties

      For example, common.loader=<existing paths>,<install path of Documentum>\Config

   d. Append the location of the D2 Client and D2 Config configuration files.

      For example, common.loader=<existing paths>,<install path of Documentum>\Config,<install path of D2>\config

5. Confirm that the dfc.properties file used by D2 Config and D2 Client correctly reference the docbroker hostname and port information:

   a. Navigate to and open the D2 dfc.properties file located in <install path of Tomcat>\WEB-INF\classes or in the shared location you selected.

      If the file refers to the globally shared dfc.properties file using the syntax:

      #include <install path to Documentum>\config\dfc.properties

      No further entry is required unless you want to override the settings defined in the global dfc.properties. Ensure that the referenced path is correct.

   b. Ensure the dfc.properties file references the correct docbroker and port:

      dfc.docbroker.host=<IP address of FQDN of the docbroker host>

      dfc.docbroker.port=<port>

6. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing only D2 Config on Apache Tomcat for UNIX Sun Solaris

1. If you are using a fresh installation of Tomcat, start the service and then stop it after a few minutes to allow Tomcat to build folder structures.
2. If you are installing a new D2 release on an old D2 version:
   a. Delete the *<install path of Tomcat>*/webapps/D2-Config and *<install path of Tomcat>*/webapps/D2-Client folders.
   b. Clear the Catalina cache in the folder *<install path of Tomcat>*/work/Catalina/localhost/.
3. Copy D2-Config.war to the *<install path of Tomcat>*/webapps folder of the application server.
4. If during the install wizard you did not place the configuration files in the default locations:
   - Copy the configuration files to the *<install path of Tomcat>*/WEB-INF/classes folder for manual deployment, or
   - Update the references to where the configuration files are located.

   To update the references:
   a. Navigate to *<install path of Tomcat>*/work/Catalina/conf/ and open catalina.properties
   b. Find the line common.loader=
   c. To use a common dfc.properties file for D2 Client and D2 Config, append the location of dfc.properties

      For example, common.loader=*<existing paths>*,*<install path of Documentum>*/Config
   d. Append the location of the D2 Client and D2 Config configuration files.

      For example, common.loader=*<existing paths>*,*<install path of Documentum>*/Config,*<install path of D2>*/config
5. Confirm that the dfc.properties file used by D2 Config and D2 Client correctly reference the docbroker hostname and port information:
   a. Navigate to and open the D2 dfc.properties file located in *<install path of Tomcat>*/WEB-INF/classes or in the shared location you selected.

      If the file refers to the globally shared dfc.properties file using the syntax:

      #include *<install path to Documentum>*/config/dfc.properties

      No further entry is required unless you want to override the settings defined in the global dfc.properties. Ensure that the referenced path is correct.
   b. Ensure the dfc.properties file references the correct docbroker and port:

      dfc.docbroker.host=*<IP address of FQDN of the docbroker host>*

      dfc.docbroker.port=*<port>*
6. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14

- Instructions for installing D2 with only D2 Client 4.0, page 16
- Instructions for installing D2 with only D2 Client 3.1, page 18

Installing only D2 Config on IBM WebSphere 7.0.0.19

1. If you are installing a new release on an old version:
   a. Use the IBM Administration console to stop the **D2-Config** web applications.
   b. Select **D2-Config** and click **Update**.
2. Connect to the WebSphere Administration console with administrator privileges.
3. Install D2 Config:
   a. Click **Applications** > **Install New Application**.
   b. Click **Browse** , then locate and select `D2-Config.war`.
   c. Type `/D2-Config` as the context root.
   d. Click **Next**.
   e. Change the **Application Name** from `D2-Config_war` to `D2-Config`.
   f. Follow the wizard, then click **Save** to Master Configuration.
4. Ensure the CLASSPATH used to start the web application server does not reference DFC libraries, as there may be conflicts with the DFC included in the web application.
5. Navigate to `Applications/Enterprise Applications/<D2-Config>/Manage Modules/<D2-Config>` and set every D2 module to **Application class loader first** mode. The default is the **Parent class loader first** mode.
6. If the configuration files were kept out of the WAR files during extraction, copy the configuration files to the `/WEB-INF/classes` folder or configure the references using the shared environment definition.
7. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing only D2 Config on Oracle WebLogic

1. If you are installing a new release on an old version:
   a. Use the Administration console to stop the **D2-Config** web application.
   b. Select **D2-Config** and uninstall.
2. If the Oracle WebLogic application server is running on Red Hat Enterprise Linux, extract `D2-Config.war` to a temporary folder.
3. Connect to the WebLogic console with administrator privileges.
4. Install D2 Config:
   a. Click **Lock & Edit** to open the **Deployments** menu.

b. Click **Install**, click **Browse**, then select `D2-Config.war` or the extracted folder if Oracle WebLogic is running on Red Hat Enterprise Linux.

c. Click **Next**.

d. Select **Install the deployment as an application.**

e. Follow the wizard, then click **Finish**.

5. If using Oracle WebLogic 10.3.5, ensure that the main CLASSPATH used to start WebLogic does not contain references to DFC libraries in the `D2-Config` domain of `startWeblogic.cmd`.
6. If the configuration files were kept out of the WAR files during extraction, copy the configuration files to the `/WEB-INF/classes` folder or configure the references using the classpath definition.
7. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing only D2 Config on Redhat JBOSS 5.1.1

1. Remove or set to false `jboss.vfs.forceVfsJar`.
2. Stop the JBOSS service.
3. Extract `D2-Config.war` as the folder `D2-Config.war`.
4. Copy the folder to the deployment folder of your context.
5. If the configuration files were kept out of the WAR files during extraction, copy the configuration files to the `/WEB-INF/classes` folder or configure the references using the classpath definition.
6. Navigate to the `/common/lib` folder of your JBOSS installation.
7. Find and copy `log4j.jar`.
8. Paste `log4j.jar` in the `/WEB-INF/lib` folder of your web application installation.
9. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Chapter 6

Installing D2 Client 4.0 on the web application server

This chapter contains the following topics:

- **Installing D2 Client 4.0 on Apache Tomcat for Microsoft Windows**
- **Installing D2 Client 4.0 on Apache Tomcat for UNIX Sun Solaris**
- **Installing D2 Client 4.0 and D2FS WAR files on IBM WebSphere 7.0.0.19**
- **Installing D2 Client 4.0 and D2FS WAR files on Oracle WebLogic**
- **Installing D2 Client 4.0 and D2FS WAR files on Redhat JBOSS 5.1.1**

Installing D2 Client 4.0 on Apache Tomcat for Microsoft Windows

You must install D2 Client 4.0 and D2FS on the same machine.

1. Extract `D2.war` from `D2_4.0.0_xxx.zip`.
2. Extract `D2FS.war` from `D2FS_4.0.1_0xxx.zip`.
3. Copy `D2.war` and `D2FS.war` to the *<install path of Tomcat>*`\webapps` folder.
4. Configure the application context to the host and port of your installation:
   a. Navigate to *<install path of D2>*`\WEB-INF\classes` and open `applicationContext.xml`.
   b. Find the line `<property name="defaultUri" value="`*http://localhost:8090/D2FS/ws*`" />`.
   c. Make sure **value** points to the right host and port for your installation. For Apache Tomcat, the default port to use is 8080.
5. Extract `D2-Widget-Install.jar` from `D2-Widget_4.0.0_xxx.zip`.
6. Right-click `D2-Widget-Install.jar`, select **Open with**, then select **Java(TM) Platform SE binary**.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for JVM as its temporary directory:

   `\tmp\D2-Widget`

   The temporary directory holds the installation logs.
7. Set the location to extract the D2 Client 4.0 deployment files to be *<install path of Tomcat>*`\webapps\D2-Config\WEB-INF\lib`.

   The installer extracts the files `D2-Constants.jar`, `D2-Widget-API.jar`, and `D2-Widget.jar`.

8. Create a `plugins` folder in `<install path of Tomcat>\webapps\D2-Config\WEB-INF\classes` and copy the `D2-Widget-Plugin.jar` file.
9. Add a reference to `plugins\D2-Widget-Plugin.jar`:
   a. Navigate to and open `D2-Config\WEB-INF\classes\D2-Config.properties`
   b. In the plug-in list, add a reference to the Jar file of the plug-in.

      `plugin_number=plugins/D2-Widget-Plugin.jar`

      Begin *number* with 1 and increment by 1 with every added plug-in.
10. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Client 4.0 on Apache Tomcat for UNIX Sun Solaris

You must install D2 Client 4.0 and D2FS on the same machine.

1. Extract `D2.war` from `D2_4.0.0_xxx.zip`.
2. Extract `D2FS.war` from `D2FS_4.0.1_0xxx.zip`.
3. Copy `D2.war` and `D2FS.war` to the `<install path of Tomcat>/webapps` folder.
4. Configure the application context to the host and port of your installation:
   a. Navigate to `<install path of D2>/WEB-INF/classes` and open `applicationContext.xml`.
   b. Find the line `<property name="defaultUri" value="http://localhost:8090/D2FS/ws" />`.
   c. Make sure **value** points to the right host and port for your installation. For Apache Tomcat, the default port to use is 8080.
5. Extract `D2—Widget-Install.jar` from `D2—Widget_4.0.0_xxx.zip`.
6. Launch D2 installer from XWindows interface using the owner account for the Documentum installation.
7. Open xterm and run installer by typing `D2—Widget-Install.jar`.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for JVM as its temporary directory:

   `/tmp/D2—Widget`

   The temporary directory holds the installation logs.
8. Set the location to extract the D2 Client 4.0 deployment files to be `<install path of Tomcat>/webapps/D2-Config/WEB-INF/lib`.

   The installer extracts the files `D2-Constants.jar`, `D2-Widget-API.jar`, and `D2-Widget.jar`.

9. Create a `plugins` folder in `<install path of Tomcat>/webapps/D2-Config/WEB-INF/classes` and copy the `D2-Widget-Plugin.jar` file.
10. Add a reference to `plugins/D2-Widget-Plugin.jar`:
    a. Navigate to and open `D2-Config/WEB-INF/classes/D2-Config.properties`
    b. In the plug-in list, add a reference to the Jar file of the plug-in.

       `plugin_number=plugins/D2-Widget-Plugin.jar`

       Begin *number* with 1 and increment by 1 with every added plug-in.
11. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Client 4.0 and D2FS WAR files on IBM WebSphere 7.0.0.19

1. Install D2FS:
    a. Extract `D2FS.war` from `D2FS_4.0.1_xxx.zip`.
    b. In the WebSphere Administration console, navigate to **Applications** > **Install New Application**.
    c. Click **Browse** , then locate and select `D2FS.war`.
    d. Type `/D2FS` as the context root.
    e. Follow the wizard until you see **Step 1: Provide options to perform the installation**, then change the **Application Name** from `D2FS_war` to `D2FS`.
    f. Follow the wizard, then click **Save to Master Configuration**.
    g. Click **Save**.
    h. Navigate to **Applications** > **Application Types** and click **WebSphere enterprise applications**.
    i. Click **D2FS**.
    j. In the **Modules** section, click **D2FS**.
    k. In the **Class loader order** section, select **Classes loaded with local class loader first (parent last)**.
    l. Click **OK**.
2. Add a new shared library for `aspectjrt.jar:`
    a. In the WebSphere Administration console, navigate to **Environment** > **Shared libraries**.
    b. Select a cell for **Scope**.
    c. Click **New** and fill out the form as described in the following table:.

Field	Description
Name	Type aspectjrt.jar
Classpath	Type *<install path to WebSphere>*/AppServer/profiles/AppSrv01/installedApps/*<cell>*/D2FS_war.ear/D2FS.war/WEB-INF/lib/aspectjrt.jar

d. Navigate to **Applications** > **Application Types** and click **WebSphere enterprise applications**.
e. Click **aspectjrt.jar**.
f. In the **Modules** section, click **D2FS**.
g. In the **Class loader order** section, click **Use an isolated class loader for this shared library**.
h. Click **OK**.

3. Copy all files with the .xsd extension from *<install path to WebSphere>*/AppServer/profiles/AppSrv01/installedApps/*<Cell>*/D2FS.ear/D2FS.war/W to *<install path to WebSphere>*/AppServer/profiles/AppSrv01.
4. Verify that wstx-asl-3.2.9.jar is in *<install path to WebSphere>*/AppServer/profiles/AppSrv01/installedApps/*<Cell>*/D2FS.ear/D2FS.war/W
5. Install D2 Client 4.0:
   a. Extract D2.war from D2_4.0.0_*xxx*.zip.
   b. In the WebSphere Administration console, navigate to **Applications** > **Install New Application**.
   c. Click **Browse**, then locate and select D2.war.
   d. Type /D2 as the context root.
   e. Follow the wizard until you see **Step 1: Provide options to perform the installation**, then change the **Application Name** from D2_war to D2.
   f. Follow the wizard, then click **Save to Master Configuration**.
   g. Click **Save**.
6. Configure the application context to the host and port of your installation:
   a. Navigate to *<install path of IBM WebSphere>*/IBM/WebSphere/AppServer/profiles/AppSrv01/installedApps/*<Cell>*/D2.ear/D2.war/WEB-INF/classes and open applicationContext.xml.
   b. Find the line <property name="defaultUri" value="*http://localhost:8090/D2FS/ws*" />.
   c. Make sure **value** points to the right host and port for your installation. For Websphere, the default port to use is 9080.
7. Extract D2—Widget-Install.jar from D2-Widget_4.0.0_*xxx*.zip.
8. Right-click D2—Widget-Install.jar, select **Open with**, then select **Java(TM) Platform SE binary**.

   The environment installer uses the java.io.tmpdir Java temporary directory for JVM as its temporary directory:

   /tmp/D2—Widget

   The temporary directory holds the installation logs.
9. Set the location to extract the D2 Client 4.0 deployment files to be /D2-Config/WEB-INF/lib.

The installer extracts the files `D2-Constants.jar`, `D2-Widget-API.jar`, and `D2-Widget.jar`.

10. Add a reference to `plugins/D2-Widget-Plugin.jar`:
    a. Navigate to and open `D2-Config/WEB-INF/classes/D2-Config.properties`
    b. In the plug-in list, add a reference to the Jar file of the plug-in.

       `plugin_`*`number`*`=plugins/D2-Widget-Plugin.jar`

       Begin *number* with 1 and increment by 1 with every added plug-in.
11. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Client 4.0 and D2FS WAR files on Oracle WebLogic

1. If the Oracle WebLogic application server is running on Red Hat Enterprise Linux, extract `D2FS.war` `D2-Client.war` and to a temporary folder.
2. Install D2FS:
   a. Extract `D2FS.war` from `D2FS_4.0.1_0`*`xx`*`.zip`, where *xx* is the build number.
   b. If the Oracle WebLogic application server is running on Red Hat Enterprise Linux, extract `D2FS.war` to a temporary folder.
   c. Click **Lock & Edit** to open the **Deployments** menu.
   d. Click **Install**, click **Browse**, then select `D2FS.war` or the extracted folder if Oracle WebLogic is running on Red Hat Enterprise Linux, then click **Active Change**.
   e. Click **Next**.
   f. Select **Install the deployment as an application.**
   g. Follow the wizard, then click **Finish**.
3. Install D2 Client 4.0:
   a. Extract `D2.war` from `D2-Widget_4.0.0_0`*`xx`*, where *xx* is the build number.
   b. If the Oracle WebLogic application server is running on Red Hat Enterprise Linux, extract `D2-Client.war` to a temporary folder.
   c. Click **Lock & Edit** to open the **Deployments** menu.
   d. Click **Install**, click **Browse**, then select `D2.war` or the extracted folder if Oracle WebLogic is running on Red Hat Enterprise Linux, then click **Active Change**.
   e. Click **Next**.
   f. Select **Install the deployment as an application.**
   g. Follow the wizard, then click **Finish**.
4. Configure the application context to the host and port of your installation:
   a. Navigate to `D2/WEB-INF/classes` and open `applicationContext.xml`.

b. Find the line `<property name="defaultUri" value="http://localhost:8090/D2FS/ws" />`.

c. Make sure **value** points to the right host and port for your installation.

5. Extract `D2—Widget-Install.jar` from `D2-Widget_4.0.0_xxx.zip`.
6. Right-click `D2—Widget-Install.jar`, select **Open with**, then select **Java(TM) Platform SE binary**.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for JVM as its temporary directory:

   `/tmp/D2—Widget`

   The temporary directory holds the installation logs.
7. Set the location to extract the D2 Client 4.0 deployment files to be *<install path of Oracle WebLogic>*`/webapps/D2-Config/WEB-INF/lib`.

   The installer extracts the files `D2-Constants.jar`, `D2-Widget-API.jar`, and `D2-Widget.jar`.
8. Add a reference to `plugins/D2-Widget-Plugin.jar`:

   a. Navigate to and open `D2-Config/WEB-INF/classes/D2-Config.properties`

   b. In the plug-in list, add a reference to the Jar file of the plug-in.

      `plugin_`*number*`=plugins/D2-Widget-Plugin.jar`

      Begin *number* with 1 and increment by 1 with every added plug-in.
9. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing D2 Client 4.0 and D2FS WAR files on Redhat JBOSS 5.1.1

1. Extract `D2-Widget_4.0.0_0`*xx*, where *xx* is the build number.
2. Extract `D2FS_4.0.1_0`*xx*`.zip`, where *xx* is the build number.
3. Remove `jsr173_api.jar` and `xerceslmpl-2.7.1.jar` from `D2FS.war`.
4. Copy `D2.war` and `D2FS.war` to the `webapps` folder.
5. Extract `D2—Widget-Install.jar` from `D2-Widget_4.0.0_xxx.zip`.
6. Right-click `D2—Widget-Install.jar`, select **Open with**, then select **Java(TM) Platform SE binary**.

   The environment installer uses the `java.io.tmpdir` Java temporary directory for JVM as its temporary directory:

   `/tmp/D2—Widget`

   The temporary directory holds the installation logs.

7. Set the location to extract the D2 Client 4.0 deployment files to be *<install path of Redhat JBOSS>*/webapps/D2-Config/WEB-INF/lib.

   The installer extracts the files D2-Constants.jar, D2-Widget-API.jar, and D2-Widget.jar.

8. Configure the application context to the host and port of your installation:
   a. Navigate to D2/WEB-INF/classes and open applicationContext.xml.
   b. Find the line <property name="defaultUri" value="*http://localhost:8090/D2FS/ws*" />.
   c. Make sure **value** points to the right host and port for your installation.
9. Add a reference to plugins/D2-Widget-Plugin.jar:
   a. Navigate to and open D2-Config/WEB-INF/classes/D2-Config.properties
   b. In the plug-in list, add a reference to the Jar file of the plug-in.

      plugin_*number*=plugins/D2-Widget-Plugin.jar

      Begin *number* with 1 and increment by 1 with every added plug-in.
10. Return to the instructions:
    - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
    - Instructions for installing D2 with only D2 Client 4.0, page 16
    - Instructions for installing D2 with only D2 Client 3.1, page 18

Chapter 7

Configuring D2

This chapter contains the following topics:

- **Locations of configuration files**
- **Configuring D2 Config**
- **Configuring D2 Client 3.1**
- **Configuring D2 Client 4.0**
- **Configuring D2FS**
- **Installing language packs**
- **Configuring logback.xml for the Content Server**
- **Configuring Documentum Content Server server.ini**
- **Configuring D2 Auditing**
- **Configuring Microsoft SQL Server 2008**
- **Configuring application server pooling session**
- **Importing a configuration**

Locations of configuration files

Navigate to *<install path of web application server>*/webapps/D2FS/WEB-INF/classes for the D2FS configuration files:

- D2FS.properties
- dfc.properties
- logback.xml
- dfs-trust.properties (this file may not exist if you did not create during configuration of authentication)

Navigate to *<install path of web application server>*/webapps/D2-Config/WEB-INF/classes for the D2 Config configuration files:

- D2-Config.properties
- dfc.properties
- logback.xml

Navigate to *<install path of web application server>*/webapps/D2-Client/WEB-INF/classes for the D2 Client 3.1 configuration files:

- D2-Client.properties
- dfc.properties
- logback.xml
- shiro.ini

Navigate to *<install path of web application server>*/webapps/D2/WEB-INF/classes for the D2 Client 4.0 configuration files:

- applicationContext.xml
- settings.properties
- logback.xml
- shiro.ini

Configuring D2 Config

1. Navigate to the location of your D2 Config configuration files.

   The default location is *<install path to web application server>*/webapps/D2-Config/WEB-INF/classes

2. You can configure dfc.properties to refer to an existing dfc.properties to use as a shared set of configurations.

   By default, dfc.properties contains a reference to the Documentum dfc.properties file. Configure the reference if you want to use a different shared dfc.properties. All settings found in the referenced dfc.properties apply to D2 Config. Do not remove the # as the full command is #include, and the line is not being commented out.

   #include *<install path to Documentum>*/config/dfc.properties

3. Ensure that the dfc.properties file being used or referred to addresses the correct docbroker and port:

   dfc.docbroker.host=*<IP address of the Fully Qualified Domain Name of the docbroker host>*

   dfc.docbroker.port=*<port>*

4. You can create application-specific settings that override the shared dfc.properties settings by appending the settings to the application-specific dfc.properties. For example, add DFC tracing to *<install path to web application server>*/webapps/D2FS/WEB-INF/classes/dfc.properties to apply DFC tracing only to D2FS.

   See *<install path to Documentum>*/config/dfcfull.properties for possible settings.

5. Configure D2-Config.properties as described in the following table:

Parameter	Description
default_language	Type the two-letter language code to set the default language and prevent users from changing their language option.

Parameter	Description
forceServerInDocbaseName	Set to `true` to force connections to use the *<repository>*@*<server>* address structure.
hideDomain	Set to `true` to hide the domain on the login dialog box. You can also specify the repository by using the parameter `hideDomain.`*<repository name>*.
docbaseFilter	Type a list of repositories, separated by commas, that appear in the repository list box of the login dialog box.
temporaryMaxFiles	Type the maximum number of files temporarily stored by D2. Once the maximum is reached, D2 deletes the oldest files.
logLevel	Append one of the following values: • all • info • trace • debug • warn • error
logSaveMethod	Set to `true` to save all event logs from D2Methods in the **Temp** cabinet of the repository. Configuring logback.xml for the Content Server, page 62 contains more information. By default this setting is set to `false`.
D2–BOCS	Set to `true` to enable BOCS in D2 Client 4.0 if D2–BOCS is deployed on one or more BOCS servers.
includeAcsServer	Set to `true` to enable BOCS if D2–BOCS is deployed on the Accelerated Content Services server on the Content Server.
proxyClientIpHeader	Set to `true` to put the client IP address in the header instead of the proxy IP. Use this setting when you have a proxy in your architecture, as by default the proxy replaces the client IP address with the proxy IP. For example, if disabled, you may not be able to select the correct instance of BOCS.

6. Configure `LoadOnStartup` settings in `D2-Config.properties` as described in the following table:

Parameter	Description
docbase	Repository name.
username	User name.

Parameter	Description

password	Encrypted password.
	
	To encrypt a password, type the following in your command line window:
	
	`set classpath=%class-path%;<path>/d2.jar`
	
	where <*path*> is the path to d2.jar. This enables the encryption command on the application server. Next, type the encryption command as follows to output the encrypted password:
	
	`java eu.c6.d2.api.utils.GetCrypt-edPassword <password>`

domain	Optional value, but the # at the start of the line must be removed even if the field is left empty.
locale	Optional value, but the # at the start of the line must be removed even if the field is left empty.

For each setting, use the syntax `LoadOnStartup.<parameter>.<number of the setting>`

For example, the first setting would have `LoadOnStartup.docbase.1=`, `LoadOnStartup.username.1=`, `LoadOnStartup.password.1=`, `LoadOnStartup.domain.1=`, and `LoadOnStartup.locale.1=`. Subsequent settings would increase the number by one.

7. Configure `logback.xml` to set up when and how D2 Config logging events occur. The logback website (http://logback.qos.ch/) contains further information.

   You can overload `logback.xml` by using `logback-d2-config.xml`. Overloading enables you to apply temporary changes to the logging capabilities of each web application without altering the original file.

   Set the log path if you do not want to use the default location.

8. In D2 Config, navigate to **Menu** > **Tools** > **Reload D2 options** to refresh the options.
9. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring D2 Client 3.1

1. Navigate to the location of your D2 Client 3.1 configuration files.

   The default location is `<install path to web application server>/webapps/D2-Client/WEB-INF/classes`

2. Configure `dfc.properties` to refer to the existing `dfc.properties` used as a shared set of configurations.

By default, dfc.properties contains a reference to the Documentum dfc.properties file. Configure the reference if you want to use a different shared dfc.properties. All settings found in the referenced dfc.properties apply to D2FS.

#include <*install path to Documentum*>/config/dfc.properties

Do not remove the # as the full command is #include, and the line is not being commented out.

3. Ensure the dfc.properties file references the correct docbroker and port:

   dfc.docbroker.host=<*IP address of the Fully Qualified Domain Name of the docbroker host*>

   dfc.docbroker.port=<*port*>

4. You can create application-specific settings that override the shared dfc.properties settings by appending the settings to the application-specific dfc.properties. For example, add DFC tracing to <*install path to web application server*>/webapps/D2FS/WEB-INF/classes/dfc.properties to apply DFC tracing only to D2FS.

   See <*install path to Documentum*>/config/dfcfull.properties for possible settings.

5. Configure D2-Client.properties as described in the following table:

Parameter	Description
default_language	Type the two-letter language code to set the default language and prevent users from changing their language option.
forceServerInDocbaseName	Set to true to force connections to use the <*repository*>@<*server*> address structure.
hideDomain	Set to true to hide the domain for login. You can also specify the repository by using the parameter hideDomain.<*repository name*>.
timeout	Type the duration in minutes before a user login session times out. You must disable Messaging in D2 Client 3.1 by navigating to **Tools** > **Options**.
showRetainSession	Set to true to enable the **Remember my credentials** checkbox on the login dialog box.
launchMethodAllowed	Type a list of methods, separated by commas, that have been configured in D2 Config and can be launched through the D2 Client 3.1 menu.
docbaseFilter	Type a list of repositories, separated by commas, that appear in the repository list box of the login dialog box.
temporaryMaxFiles	Type the maximum number of files temporarily stored by D2. Once the maximum is reached, D2 deletes the oldest files.

Parameter	Description
logLevel	Append one of the following values: • all • info • trace • debug • warn • error
logSaveMethod	Set the save result flag when running a Documentum method. By default this setting is set to `false`.
D2–BOCS	Set to `true` to enable BOCS in D2 Client 3.1 if D2–BOCS is deployed on one or more BOCS servers.
includeAcsServer	Set to `true` to enable BOCS if D2–BOCS is deployed on the Accelerated Content Services server on the Content Server.
proxyClientIpHeader	Set to `true` to put the client IP address in the header instead of the proxy IP. Use this setting when you have a proxy in your architecture, as by default the proxy replaces the client IP address with the proxy IP. For example, if disabled, you may not be able to select the correct instance of BOCS.
allowedHtmlTagsForTooltip	Type a list of allowed HTML tags separated by a comma. For example, `allowedHtmlTagsFor-Tooltip=i,b,u`

6. Configure `LoadOnStartup` settings in `D2-Config.properties` as described in the following table:

Parameter	Description
docbase	Repository name.
username	User name.

password	Encrypted password.
	To encrypt a password, type the following in your command line window:
	`set classpath=%class-path%;<path>/d2.jar`
	where <*path*> is the path to d2.jar. This enables the encryption command on the application server. Next, type the encryption command as follows to output the encrypted password:
	`java eu.c6.d2.api.utils.GetCrypt-edPassword <password>`

Parameter	Description
domain	Optional value, but the # at the start of the line must be removed even if the field is left empty.
locale	Optional value, but the # at the start of the line must be removed even if the field is left empty.

For each setting, use the syntax `LoadOnStartup.<parameter>.<number of the setting>`

For example, the first setting would have `LoadOnStartup.docbase.1=`, `LoadOnStartup.username.1=`, `LoadOnStartup.password.1=`, `LoadOnStartup.domain.1=`, and `LoadOnStartup.locale.1=`. Subsequent settings would increase the number by one.

7. Configure `logback.xml` to set up when and how D2 Client 3.1 logging events occur. The logback website (http://logback.qos.ch/) contains further information.

   You can overload `logback.xml` by using `logback-d2-client.xml`. Overloading enables you to apply temporary changes to the logging capabilities of each web application without altering the original file.

   Set the log path if you do not want to use the default location.

8. Open `http://<hostname>/D2-Client/ReloadOptions` in a web browser, where <*hostname*> is the address of your D2 Client 3.1 installation, to refresh the options.
9. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring D2 Client 4.0

1. Navigate to the location of your D2 Client 4.0 configuration files.

   The default location is `<install path to web application server>/webapps/D2/WEB-INF/classes`

2. Configure `applicationContext.xml` as described in the following table:

Parameter	Description
wsdl	Type the access URL of D2FS/ws. `http://<server>:<port>/D2FS/ws/d2fs.wsdl`
defaultUri	Type the access URL of D2FS/ws. `http://<server>:<port>/D2FS/ws` If you keep *server* as localhost, you may get an error during file transfer.
connectionTimeout	Type the number in milliseconds of the session timeout. The default value is `15000` for 15 seconds.

Parameter	Description
readTimeout	Type the number in milliseconds before a read action times out. The default value is `60000` for 60 seconds.
maxTotalConnections	Type the maximum number of connections allowed by the web application server. The default value is `20`.
maxConnectionsPerHost	Type the maximum number of connections that can come from a single host.

3. Configure `settings.properties` as described in the following table:

Parameter	Description
transfer.http.compression	Set to `true` to enable HTTP compression.
login.domain.hide	Set to `true` to hide the domain for login. You can also specify the repository by using the parameter `hideDomain.<repository name>`.
error.uncaught.display	Set to `true` to show uncaught error messages.
uid.session.cookie.timeout	Set the time in seconds that the session remains valid after a user closes, refreshes, or navigates away from D2 in a browser tab or window.
language.user.forced	Append the two-letter language code if you want to force users to access D2 in a specific language and disable language options.
connection.remote.url	Uncomment and type the address of the proxy server to enable content transfer in a reverse proxy setup. `http<s>://<proxy or server address>:<port>/<D2FS_Ctx>`
browser.folder.limit	Type the limit for the number of folders displayed in any single level.

4. Configure `logback.xml` to set up when and how D2 Client 4.0 logging events occur. The logback website (http://logback.qos.ch/) contains further information.

   You can overload `logback.xml` by using `logback-d2.xml`. Overloading enables you to apply temporary changes to the logging capabilities of each web application without altering the original file.

   Set the log path if you do not want to use the default location.

5. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring D2FS

1. Navigate to the location of your D2FS configuration files.

   The default location is *<install path to web application server>*/webapps/D2FS/WEB-INF/classes

2. Configure dfc.properties to refer to the existing dfc.properties used as a shared set of configurations.

   By default, dfc.properties contains a reference to the Documentum dfc.properties file. Configure the reference if you want to use a different shared dfc.properties. All settings found in the referenced dfc.properties apply to D2FS.Do not remove the # as the full command is #include, and the line is not being commented out.

   #include *<install path to Documentum>*/config/dfc.properties

3. Ensure the dfc.properties file references the correct docbroker and port:

   dfc.docbroker.host=*<IP address of the Fully Qualified Domain Name of the docbroker host>*

   dfc.docbroker.port=*<port>*

4. You can create application-specific settings that override the shared dfc.properties settings by appending the settings to the application-specific dfc.properties. For example, add DFC tracing to *<install path to web application server>*/webapps/D2FS/WEB-INF/classes/dfc.properties to apply DFC tracing only to D2FS.

   See *<install path to Documentum>*/config/dfcfull.properties for possible settings.

5. You can configure D2FS.properties as described in the following table:

Parameter	Description
D2–BOCS	Set to true to enable BOCS in D2 Client 4.0 if D2–BOCS is deployed on one or more BOCS servers.
includeAcsServer	Set to true to enable BOCS if D2–BOCS is deployed on the Accelerated Content Services server on the Content Server.
hideDomain	Set to true to hide the domain for login. You can also specify the repository by using the parameter hideDomain.*<repository name>*.
maxResultSetSize	Type a value to limit the result set of all queries used in populating the Users and Groups widgets as well as user and group selection lists in property dialog boxes. Use this parameter to avoid performance problems associated with large result sets. The default value is 1000.

6. You can configure `logback.xml` to set up when and how D2 logging events occur. The logback website (http://logback.qos.ch/) contains further information.

   To allow web applications to share the `logback.xml file`, add `-Dlogback.ContextSelector=JNDI` to the JVM parameter list of your application server.

   Set the log path if you do not want to use the default location.

7. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Installing language packs

Deploy language packs on top of the English installation to enable the display of localized user interfaces in D2 Client 4.0.

1. Install the locale to the repository. The *EMC Documentum Content Server Administration and Configuration Guide* contains future instructions on populating and publishing localized Data Dictionaries into the repository.
2. Extract the contents of the language pack zip files to the *<your server>*`/webapps/`*<corresponding application folder>* folder.

   For example, extract the contents of `D2FS4DCTM-LanguagesPack_`*<lang>*`.zip` to the `/webapps/D2FS` folder for D2FS.

3. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring logback.xml for the Content Server

Installation generates `logback.xml` for both the Content Server and the Java Method Server. Locate `logback.xml` in the install path to D2 and *<install path of JMS>*`/Dctm-Server_MethodServer/deploy/Server-Apps.ear/APP-INF/classes/`, respectively.

1. If the JMS file is named `logback_jms_full.xml`, rename it to `logback.xml`.
2. Adjust configurations for Content Server and JMS in the respective `logback.xml` file. The logback website (http://logback.qos.ch/) contains further information.

   For Microsoft Windows installations, change the location and settings for saving JMS log files in the JMS `logback.xml`.

   By default, the location is set to `C:/logs/D2-JMS.log`, the log level of `info` is used, and logs are kept across up to five files.

   For UNIX installations, change the file location for both log and history files.

3. If you do not have sufficient rights on the Content Server:
   a. Locate and open `D2-Client.properties`.
   b. Find the line `#logSaveMethod=`.
   c. Remove the `#` at the beginning of the line.
   d. Append the value `true` or `false`.

      When set to `true`, the system saves all event logs from D2Methods in the repository under the **Temp** cabinet.
4. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring Documentum Content Server server.ini

1. Navigate to *<install path of Documentum>*`dba/config/`*<repository name>* and open `server.ini`.
2. To configure `RETURN_TOP` behavior in searches, add or set the line `return_top_results_row_based=`*<T or F>* to the `[SERVER_STARTUP]` section.

   When the property is set to `F`, the results appear as:

Name	Author
Doc 1	user01, user02
Doc 2	user02

   When the property is set to `T`, the results appear as:

Name	Author
Doc 1	user01
Doc 1	user02
Doc 2	user02

3. Restart the Documentum Content Server.
4. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring D2 Auditing

Create a registered table to allow queries on the audit trail and the reading of audit information related to deleted content.

The dmadmin superuser account must have the right to purge the audit.

1. On the Content Server, run the following DQL query:

   ```
   register table dm_audittrail_s (event_name string(64), user_name
   string(32), time_stamp time, object_name string(255), string_1
   string(200), string_2 string(200), string_3 string(200), string_4
   string(200), string_5 string(200))
   ```

2. Modify the name and permissions of the registered table with the following DQL query:

   ```
   update dm_registered object set object_name = 'D2 Audits',
   set owner_table_permit = 1, set group_table_permit = 1, set
   world_table_permit = 1 where object_name = 'dm_audittrail_s';
   ```

3. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring Microsoft SQL Server 2008

Problem

Error message received when saving D2 options or a template:

```
<date and time> [ERROR] - eu.c6.d2.web.servlets.D2Context :  {}
com.documentum.fc.client.DfServiceException:

at
com.documentum.fc.client.transaction.impl.Transaction.commit(Transaction.java:66)
[dfc.jar:na]

at
com.documentum.fc.client.transaction.impl.TransactionManager.commit(TransactionMa
[dfc.jar:na]

at
com.documentum.fc.client.impl.session.SessionManager.commitTransaction(SessionMan
[dfc.jar:na]
```

Cause

Microsoft SQL Server 2008 requires an additional setting on the Documentum Content Server machine.

Resolution

Use the SQL ALTER command to set READ_COMMITED_SNAPSHOT to the ON state.

Configuring application server pooling session

1. Navigate to and open dfc.properties. You can configure the shared dfc.properties for pooling sessions or override the dfc.properties in each application.
2. To configure a pooling session on the application server, add or change the following lines:

   dfc.session.pool.enable = <*true or false*>

   dfc.session.pool.expiration_interval = *duration*

   Set the enable value to *true* to enable and false to disable session pools.

   Type the expiration_interval as the duration in seconds with a maximum value of 300. When a session has lasted this duration, it is stopped and started again.

   For example you can set *duration* to 300 for a duration of 5 minutes.

Importing a configuration

D2 may return errors or not function when certain configurations are missing. Download and import the sample configuration or a previous configuration to ensure that required configurations exist to ensure D2 runs without errors.
\

1. If you do not have an existing configuration, download HR Config D2 4.0 – Export-Config.zip to the web application server.
2. Import the configuration:
   a. In **D2 Config**, navigate to **File** > **Import Configuration**.
   b. Navigate to and select either your configuration or the downloaded HR Config D2 4.0 – Export-Config.zip, then click **OK**.
   c. Follow the instructions to import the configuration.
3. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Chapter 8

Configuring authentication

This chapter contains the following topics:

- **Configuring Microsoft Windows NT Unified Logon (NTLM)**
- **Configuring Kerberos**

Configuring Microsoft Windows NT Unified Logon (NTLM)

1. In your Active Directory Server, create a user with the same name as the computer hosting your application server.
2. Use Documentum Administrator or D2 Client 3.1 to create a user with the same name as in Step 1 in your repository.
3. Navigate to `webapps/D2/WEB-INF/classes/` and open `shiro.ini`.
4. Add the following lines:

   ```
   [main]
   D2-NTLM=eu.c6.d2.web.filters.authc.D2NtlmHttpAuthenticationFilter
   D2-NTLM.domainController=<domain controller>
   D2-NTLM.domainName=<domain name>
   D2-NTLM.domainUser=<domain user to authenticate>
   D2-NTLM.domainPassword=<user passwords>
   D2-NTLM.docbases=<repository1,login1,password1,domain1|docbase2,...>
   [urls]
   /** = D2-NTLM
   ```

   where *repositoryX* corresponds to a repository using NTLM, *loginX* corresponds to a superuser login for repositoryX, *passwordX* corresponds to the encrypted password of the superuser account, and *domainX* is the optional domain of the repository.

   To encrypt a password, type the following in your command-line window:

   ```
   set classpath=%classpath%;<path>/d2.jar
   ```

   where <*path*> is the path to d2.jar. The command enables the encryption command on the application server. Next, type the encryption command as follows to output the encrypted password:

   ```
   java eu.c6.d2.api.utils.GetCryptedPassword <password>
   ```

5. Locate and open `dfs-trust.properties` in the folder `webapps/D2FS/WEB-INF/classes/` and add the following lines:

   ```
   *.user=<administrator user>

   *.password=<encoded password>

   *.domain=<your domain> [not mandatory]

   #or for each repository

   <repository>.user=<administrator user>

   <repository>.password=<encoded password>

   <repository>.domain=<your domain>
   ```

   where *repository* corresponds to the repository using Kerberos and *password* is an encrypted password for the superuser of the respective repository.

   To encrypt a password, type the following in your command-line window:

   ```
   set classpath=%classpath%;<path>/d2.jar
   ```

   where <*path*> is the path to d2.jar. The command enables the encryption command on the application server. Next, type the encryption command as follows to output the encrypted password:

   ```
   java eu.c6.d2.api.utils.GetCryptedPassword <password>
   ```

   If `dfs-trust.properties` does not exist, create the file in a text editor.

6. If you are using Microsoft Windows 7:
   a. Log in to the client machine with Administrator privileges.
   b. Run secpol.msc.
   c. Navigate to **Security Settings** > **Local Policies** > **Security Options** > **Network Security: LAN Manager authentication level**.
   d. From the list box, select **Select NTLM response only**.
   e. Click **OK**.
   f. Restart the computer to enable the new group policy.
   g. Log in to the client machine with the user created in Step 1 to access the application.
7. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14
   - Instructions for installing D2 with only D2 Client 4.0, page 16
   - Instructions for installing D2 with only D2 Client 3.1, page 18

Configuring Kerberos

1. In your Active Directory Server, create a user with the same name as the computer hosting your application server.
   a. Select **Use Kerberos DES encryption types for this account**.
   b. Select **This account supports Kerberos AES 128 bit encryption**.

2. Use Documentum Administrator or D2 Client 3.1 to create a user with the same name as in Step 1 in your repository.
3. Create and set the keytab:
   a. In the command prompt, type the command `ktpass /pass <password> –out <computer name>.keytab –princ HTTP/<computer name>.<domain>@<DOMAIN> –crypto ALL +DumpSalt –ptype KRB5_NT_PRINCIPAL /mapOp set /mapUser <computer name>@<DOMAIN>`.
   b. Copy the keytab file created to your application server machine.
4. Navigate to `webapps/D2/WEB-INF/classes/` and open `shiro.ini`:
   a. Find the line `D2-Kerberos.keyTabLocation` and append `=<location>`, where `<location>` is the path to the keytab you copied to the machine.
   b. Add the lines:

```
[main]

#D2-BASIC=eu.c6.d2.portal.server.filters.authc.
D2BasicHttpAuthenticationFilter

#D2-BASIC.defaultRepository=<default repository>

#D2-NTLM=eu.c6.d2.portal.server.filters.authc.
D2NtlmHttpAuthenticationFilter

#D2-NTLM.defaultRepository=<default repository>

#D2-NTLM.domainController=<domain controller>

#D2-NTLM.domainName=<domain name>

#D2-NTLM.domainUser=<domain user to authenticate>

#D2-NTLM.domainPassword=<user passwords>

D2-Kerberos=eu.c6.d2.portal.server.filters.authc.
D2KerberosHttpAuthenticationFilter

D2-Kerberos.defaultRepository=<default repository>

D2-Kerberos.servicePrincipal=
HTTP/wtkerappsrvr.sumithxcp.com@SUMITHXCP.com

D2-Kerberos.krbConfLocation=<path to KRB5.ini>

D2-Kerberos.keyTabLocation=<path to keytab file>

D2-Kerberos.debug=true

[urls]

##Authentication type

#/** = D2-BASIC or D2-NTLM or D2-Kerberos

/** = D2-Kerberos
```

5. Navigate to the `Windows` folder found in the operating system installation drive and open `KRB5.ini`.

Add the following lines:

```
[libdefaults]
default_realm=<DOMAIN>
[realms]
<DOMAIN> = {
kdc = <active directory server>.<domain>
}
```

6. Locate and open `dfs-trust.properties` in the folder `webapps/D2FS/WEB-INF/classes/` and add the following lines:

```
*.user=<administrator user>
*.password=<encoded password>
*.domain=<your domain> [not mandatory]
#or for each repository
<repository>.user=<administrator user>
<repository>.password=<encoded password>
<repository>.domain=<your domain>
```

   where *repository* corresponds to the repository using Kerberos and *password* is an encrypted password for the superuser of the respective repository.

   To encrypt a password, type the following in your command-line window:

```
set classpath=%classpath%;<path>/d2.jar
```

   where <*path*> is the path to d2.jar. The command enables the encryption command on the application server. Next, type the encryption command as follows to output the encrypted password:

```
java eu.c6.d2.api.utils.GetCryptedPassword <password>
```

   If `dfs-trust.properties` does not exist, create the file in a text editor.

7. If you are using Microsoft Windows 7:
   a. Log in to the client machine with Administrator privileges.
   b. Run gpedit.msc.
   c. Navigate to **Local Computer Policy** > **Computer Configuration** > **Windows Settings** > **Security Settings** > **Local Policies** > **Security Options** > **Network Security: Configure encryption types allowed for Kerberos**.
   d. Select all options.
   e. Click **OK**.
   f. Restart the computer to enable the new group policy.
   g. Log in to the client machine with the user account created in Step 1 to access the application.
8. Return to the instructions:
   - Instructions for installing D2 with both D2 Client 4.0 and D2 Client 3.1, page 14

- Instructions for installing D2 with only D2 Client 4.0, page 16
- Instructions for installing D2 with only D2 Client 3.1, page 18

Chapter 9

Troubleshooting the installation

This chapter contains the following topics:

- **Unable to access D2 using Internet Explorer**
- **Unable to open a new window or new connection. No resource available.**
- **DfRegistryWin32.DLL is already loaded in another classloader**
- **Tomcat 6.0 PermGen Space error**
- **IBM AIX and Apache Tomcat 6.0 crashing the server**
- **Files corrupting during export**
- **D2 caching and file-cleaning services fail to operate**
- **Null pointer exception when using reverse-proxy IIS 7 to import a file larger than 25 MB**
- **Slow file transfer when using a Linux-based operating system**

Unable to access D2 using Internet Explorer

Problem

D2 cannot run ActiveX controls on Internet Explorer.

Cause

Internet Explorer blocks D2 URLs from running ActiveX controls and MSXML.

Resolution

Make D2 URLs a part of the intranet or Trusted Security Zone to allow D2 ActiveX controls and MSXML.

Unable to open a new window or new connection. No resource available.

Problem

Warning dialog box that says `Unable to open a new window or new connection. No resource available.`

Cause

There is a problem with the browser cookie settings.

Resolution

Open an instance of Internet Explorer.

Click **Tools** > **Internet Options**.

On the **General** tab, click **Delete Cookies**.

Click **OK**.

DfRegistryWin32.DLL is already loaded in another classloader

Problem

When D2 Config and D2 Client (any version) are both running, only one web application can perform Documentum operations such as reading, editing, and checkin/checkout. Attempting to perform Documentum operations on the other web application leads to the error message: `DfRegistryWin32.dll is already loaded in another Classloader`.

Cause

The error is shown when both applications use the same IBM JVM with no cluster configuration in an IBM WebSphere 6.1 environment on a Windows installation.

Resolution

Follow the documentation for Documentum Administrator installation via the Web Development Kit or Webtop on IBM Websphere 6.1, or set the registry mode in the `dfc.properties` file from `windows` to `file`:

```
dfc.registry.mode = file
dfc.registry.file = ${dfc.data.user_dir}/documentum.ini
```

Tomcat 6.0 PermGen Space error

Problem

Using D2 on leads to the error message `error message java.lang.OutOfMemoryError: PermGen space`.

Cause

Insufficient Java memory settings on the web application server.

Resolution

Add or increase the following Java options in your application server environment to instruct the JVM to create permanent generation:

`-XX:PermSize=`*`YYY`*`m` (for example 256m): sets the initial size of the permanent generation memory space upon startup of Tomcat.

`-XX:MaxPermSize=`*`YYY`*`m` (for example 256m): sets the maximum amount of permanent generation memory space that can be allocated.

Set `PermSize` to the same value as `MaxPermSize` to allocate the maximum amount of permanent generation memory from startup to help reduce the occurrence of full garbage collection.

You can also configure the clearing of classes:

- CMSPermGenSweepingEnabled: `-XX:+CMSPermGenSweepingEnabled`
- CMSClassUnloadingEnabled: `-XX:+CMSClassUnloadingEnabled`

Tuning JVM Garbage Collection for Production Deployments (http://docs.oracle.com/cd/E13209_01/wlcp/wlss30/configwlss/jvmgc.html) contains further information about JVM garbage collection settings.

IBM AIX and Apache Tomcat 6.0 crashing the server

Problem

When using Apache Tomcat with an IBM AIX server, you can encounter issues with the number of simultaneously opened files. A number of file channels reading `D2-Web.jar` are opened for each user session, which exceeds the operating system limit and crashes the application server. The problem does not occur in Sun Solaris or Microsoft Windows environments.

Cause

The web application must directly access class files instead of the archive.

Resolution

Use the validated workaround for this problem:

1. Stop your application server.
2. Remove `D2-Web.jar` from the `WEB-INF/lib/` folders for D2 Config and D2 Client 3.1.
3. Extract the contents of `D2-Web.jar` to the `WEB-INF/classes/` folders for D2 Config and D2 Client 3.1.

Rename the file to `D2-Web.zip` if your unzip tool does not recognize the JAR file.

Files corrupting during export

Problem

When exporting a file from the repository to your local file system using D2 Client (any version), the file is corrupted. This issue exists in all compatible web servers except Tomcat 5.5.

Cause

While using the **Save As** dialog box, the session times out, and the file is corrupted.

Resolution

Configure the HTTP 1.1 connector `connectionTimeout` global setting for your web application server to wait longer before disconnecting the session.

While the parameter defaults to 60 seconds when not set, installation of the web server sets the parameter to 20 seconds. The documentation for your web server contains the default value and further instructions.

For example, in Tomcat 6.x:

1. Navigate to `<Tomcat installation path>/conf/` and open `server.xml`.
2. Locate the line `<Connector port="port" protocol="HTTP:/1.1" connectionTimeout="timeout duration" />`.
3. Change *timeout duration* to the duration you want in milliseconds, such as 60000.

D2 caching and file-cleaning services fail to operate

Problem

D2 caching services and temporary D2 file-cleaning services fail to operate normally due to file deadlock.

Cause

If D2 is deployed on multiple JVMs on the same application server or machine, the JVMs by default share the same folder and lock files from each other.

On UNIX systems, the error is frequently caused by JVMs being run by different users.

On Microsoft Windows systems, the error is caused by critical files being overwritten.

Resolution

Set up private Java temporary directories for each JVM instance.

To define a specific Java temporary directory, add the parameter `-Djava.io.tmpdir=/tmp/my_jvm_tmpdir` to the JVM launch command line.

Null pointer exception when using reverse-proxy IIS 7 to import a file larger than 25 MB

Problem

Import fails when using IIS 7 as a reverse proxy for D2 and importing a file larger than 25 MB. The Java Console log of the browser machine displays `Null Pointer Exception`.

Cause

IIS is not configured to support larger files.

Resolution

1. Log in to IIS Manager.
2. Click **Default Website**.
3. Navigate to **IIS** > **Request Filtering**.
4. In the view that opens, select **File Name Extensions**.
5. Right-click the view and select **Edit Feature Settings** in the context menu.
6. In **Maximum allowed content length**, select a larger value.

Slow file transfer when using a Linux-based operating system

Problem

D2 file transfer is slower than Documentum Administrator when running on a Linux-based operating system.

Cause

Known issue with random number generation on Linux-based operating systems.

Resolution

1. Manually start the random generator daemon by typing `/sbin/rngd —b —r /dev/urandom —o /dev/random` as the root user.

   You can also include in your web application server startup script the command `-Djava.security.egd=file:///dev/./urandom`. Refer to your web application server documentation for further information.

2. If your Content Server is Linux-based, you may need to modify the Java Method Server to use the random number generator. Check the number of `entropy_avail` events by typing `cat /proc/sys/kernel/random/entropy_avail`

   If the `entropy_avail` did not increase, navigate to and open `startMethodServer.sh`, then add the line `Djava.security.egd=file:///dev/urandom`

   For Java 5 or later, use the line `-Djava.security.egd=file:///dev/./urandom`