



CENTRIC 8

INSTALLATION GUIDE

Software Version C8 5.5
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About this Guide

Using this Guide

This Guide provides the Installation Roadmap for the Centric 8 PLM Software Application. The document outlines the hardware and software Installation checklist as well as the Pre-requisites for Installing the Centric 8 Application. This document also provides a detailed step-by-step explanation on how to install the Application on either a Single Server or a Dual Server.

Technical Support

Customer Support is available to all registered users of Centric 8.

1.866.796.6218 8:00 AM-8:00 PM EST

Email: support@centricsoftware.com

Providing feedback on Documentation

Email us your feedback regarding documentation to documentation@centricsoftware.com stating the following in the subject line:

Feedback regarding "Document Name"

Getting more information

We provide a range of online documents for registered users:

- Administrator Guide
- PDF Print Service Installation Guide
- Image Service Installation Guide
- Requirements Guide

Conventions

This document uses the following conventions:

Example	Indicates
In the Choose Database Server Location dialog box, select the Local database radio button.	In the Choose Database Server Location dialog box, use the mouse to click on the radio button corresponding to

Select Tasks ▶ Detach	the Local database. Select the Tasks menu item and then select Detach from the options.
Press ALT+TAB	On the keyboard, press both ALT key and the TAB key simultaneously.

This document uses the following font conventions:

Font Convention	Indicates	Example
Bold	Field Name, Dialog box name, Screen or Page name, Button or Radio button name, keyboard keys	Click on Next .
<i>Italics</i>	Topic Reference	If you are planning to configure shared WebAccess directory refer to WebAccess Shared Directory Installation on page 100.
Text in brown (Font type: Garamond)	Path/File Name/Folder Name	<centricinstalldirectory>\wildfly-8.1.0\standalone\configuration\standalone-pi.xml

This guide also uses the following terms for mouse actions. Use the left mouse button unless instructed otherwise.

Actions	Example
Click	Click the mouse button
Right-click	Click the right mouse button
Double-click	Click the mouse button twice without moving the mouse

PART I: INSTALLATION & CONFIGURATION REQUIREMENTS

Included in Part I:

- [Chapter 1: Installation Roadmap](#)

1. INSTALLATION ROADMAP

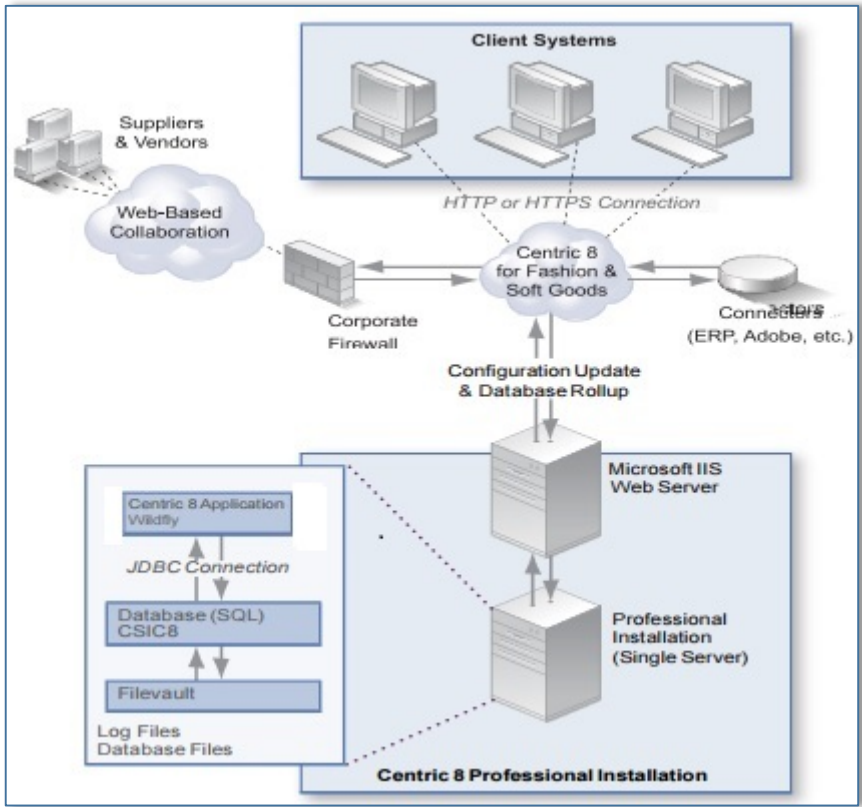
1.1 INSTALLATION

You have two installation paths when installing Centric 8 on either Single Server or the Dual Server. For more information on Server requirements, refer Centric 8 Requirements Guide.

1.1.1 Single Server Installation

In the case of a Single Server Installation, install the application software, database and the FileVault on a single server which communicates with the Microsoft IIS Web Server to deliver content to the client systems.

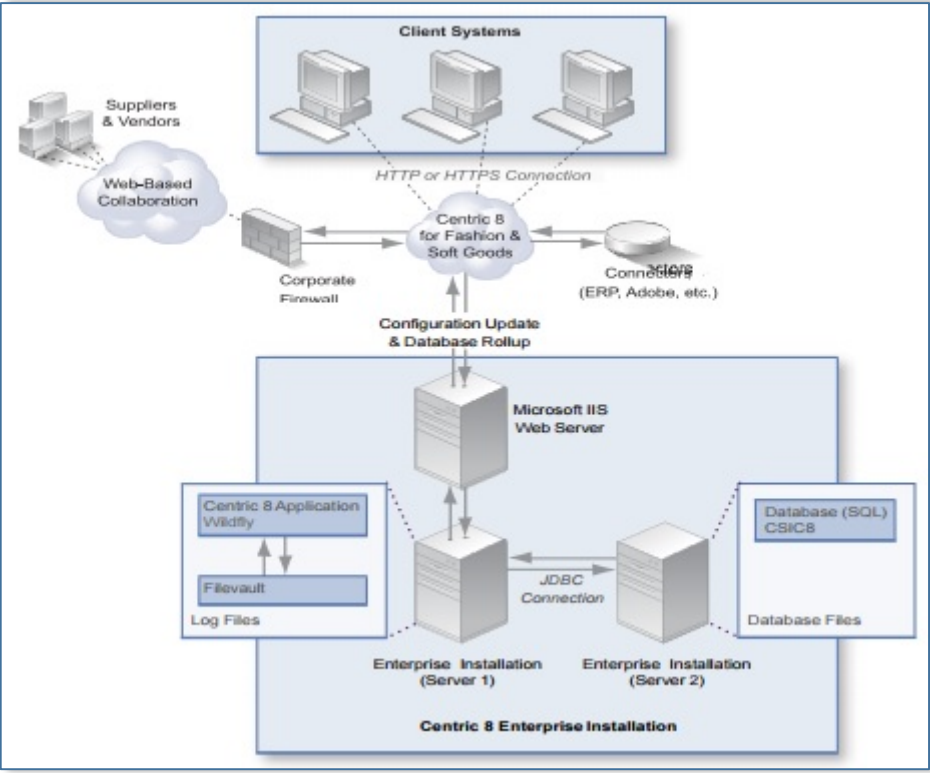
Figure 1-1: Single Server Installation



1.1.2 Dual Server Installation

In case of dual server installation, install the application software and FileVault on Server 1 and the database on Server 2. Servers 1 and 2 communicate through JDBC, and Server 1 communicates with the Microsoft IIS Web Server to deliver content to the client systems.

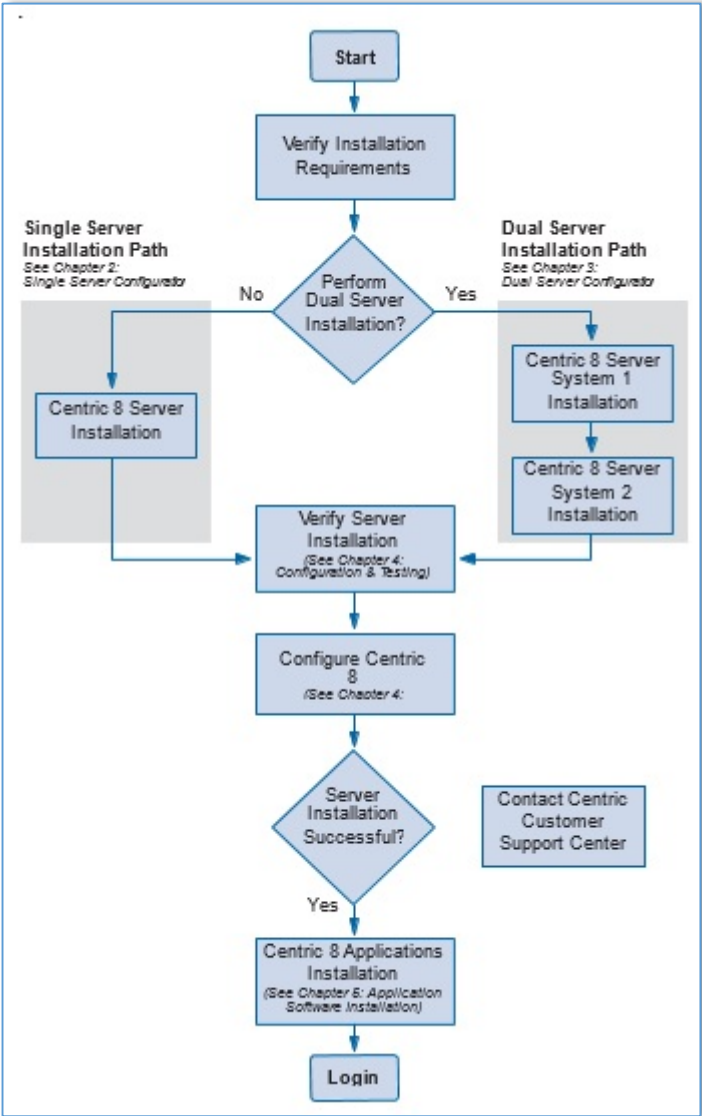
Figure 1-2: Dual Server Installation



1.1.3 Installation Roadmap

Refer to the following flowchart (Figure 1-3) below, which explains the process of installation depending on whether it is a Single Server or Dual Server Installation.

Figure 1-3: Installation Roadmap



PART II: INSTALLATION, CONFIGURATION & TESTING

Included in Part II:

- [Chapter 2: Centric 8 Installation Checklist](#)
- [Chapter 3: Single Server Software Installation](#)
- [Chapter 4: Dual Server Software Installation](#)
- [Chapter 5: Configuration & Testing](#)
- [Chapter 6: Application Software Installation](#)

2. CENTRIC 8 INSTALLATION CHECKLIST

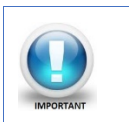
Review the following checklists before starting the Centric 8 software installation; this list is based on the requirements for an OOTB Centric 8 installation. Use this checklist to determine how best to configure Centric 8 including server set up recommendations. These checklists apply to both the Single Server and Dual Server installation except where noted.

2.1 HARDWARE CHECKLIST

1. If you install the Centric 8 server database on a shared server, it must be a separate 'instance' to minimize the impact of other database (Dual Server configuration).
2. Use a 64-bit operating system with Windows 2012 Server or Windows 2008 Server or 2008 R2 and Microsoft IIS Web Server version 7.0 or above.
3. On the database server, verify that the SQL instance port is not blocked by the Firewall. If it is blocked, set it as exception.
4. Split the database and the temporary database (TEMPDB) between two separate physical disks.
5. If the database tables are located on virtual drives, verify that the TEMPDB is on virtual drives at the physical level, and are completely independent. In other words, do not simply use another virtual drive that is a "slice" across a disk array used to support other virtual drives. If you are using RAID technology, ensure 1 RAID array for TEMPDB and a different RAID array for C8 DATA TABLES.
6. Allow additional disk space for Filevault expansion based on projected image and document storage.

2.2 SOFTWARE CHECKLIST


1. When you select the Filevault location, you must select a local disk, if you are using Single or Dual server installation. For cluster setup, select a network shared folder.
2. Determine the administrator username and password before installation and always use the same username and password for the first installation as well as for future upgrades or reinstallation.



The following characters are not supported in SQL Administrator password in Centric 8 installation: %, ^, &, *, (), "

3. Verify that C8 username and password match in server and application installation; if they do not match, the installation will fail.
4. If the Wildfly service is not manually stopped, the installer automatically stops it before installation, upgrades, restoration and reinstallation.
5. Close all applications including the Window Services dialog box before installation.
6. You must have SQL Server administrator rights to create tables and the database, as well as for mixed mode authentication. Make sure SQL Instance port is configured to use static port.
7. You must have the following Microsoft IIS Web Server Port details:

- Set to port 80 (this is the default HTTP port).
- Set other web servers to a separate port address.
- Set user account to IUSER-<machine-name>; you must have both read and execute permission to the installation directories



If you are using the Microsoft IIS Web Server version 7.0 or above, you must add the ISAPI and CGI modules when installing IIS.

Do not use an underscore “_” character in the machine name as it is not supported in the host name by Internet standards and may cause an error. Machine names must contain only alphanumeric characters (use upper and lowercase letters, and/or numbers) or the dash “-” character; however, a dash character cannot appear at the end of a machine name.

8. If you are planning to configure Wildfly Cluster, refer [Appendix B, Wildfly Cluster](#).
9. If you are planning to configure shared WebAccess directory refer to [WebAccess Shared Directory Installation](#) on page 185.


2.2.1 Supported Browsers

IE9, IE10, IE11, Firefox and Chrome.

2.3 PRE-REQUISITES

1. System Admin Privilege

To create and set up an Oracle database for Centric PLM software, the user who is preparing the database must have System Administration authority over the system and the database to be created.



The following characters are not supported in SQL Administrator password in Centric 8 installation: %, ^, &, *, 0, “

2. HTTPS

If the server has HTTPS redirect rule enabled on IIS, disable it before proceeding with the installation, else the installation will fail.

3. Oracle 11G Software Installed

The Oracle Database 11G Enterprise Edition Release 2 (11.2.0.3+) 64- Bit is recommended. The Database hosting system has to meet the minimum Hardware requirements specified in the Oracle Database Installation Guide. To achieve better performance for Centric PLM Software, the Oracle database should be configured on an efficient machine.

4. Oracle Database Software

Before creating an Oracle database to serve Centric PLM, the Oracle Database Software must be installed.

5. Minimum Required Oracle DB Components

This guide provides a minimal list to create a database using DBCA or upgrade an existing database to meet Centric PLM requirement.

6. Oracle Database Components

Centric PLM requires the following Oracle Database Components:

- Oracle Workshop Manager
- Oracle Database Catalog Views
- Oracle Database Packages and Types
- Oracle XML Database

7. Drive Structures

For better performance, it is best to have the drive structure as mentioned below.

FOR SINGLE SERVER

C:	OS & Program Drive (C: drive for C8 Program installation)
D:\SQLDATA	C8 Database files (.mdf/*.ndf)
L:\SQLLOG	C8 Database files (*.ldf)
F:\FILEVAULT	C8 Filevault directory (Image and print service Log)
T:\SQLTEMP	Temp Drive (for Windows and SQL Temp files only)

FOR DUAL SERVER - APPLICATION SERVER

C:	OS & Program Drive (C: drive for C8 Program installation)
F:\FILEVAULT	C8 Filevault directory (Image and print service Log)
T:\WINTEMP	Temp Drive (for Windows Temp files only)

FOR DUAL SERVER - DATABASE SERVER

C:	OS & Program Drive (C: drive for C8 Program installation)
D:\SQLDATA	C8 Database files (.mdf/*.ndf)
L:\SQLLOG	C8 Database files (*.ldf)
T:\SQLTEMP	Temp Drive (for SQL Temp files only)

To install C8 using LDAP Authentication, contact technical support for configuration details.

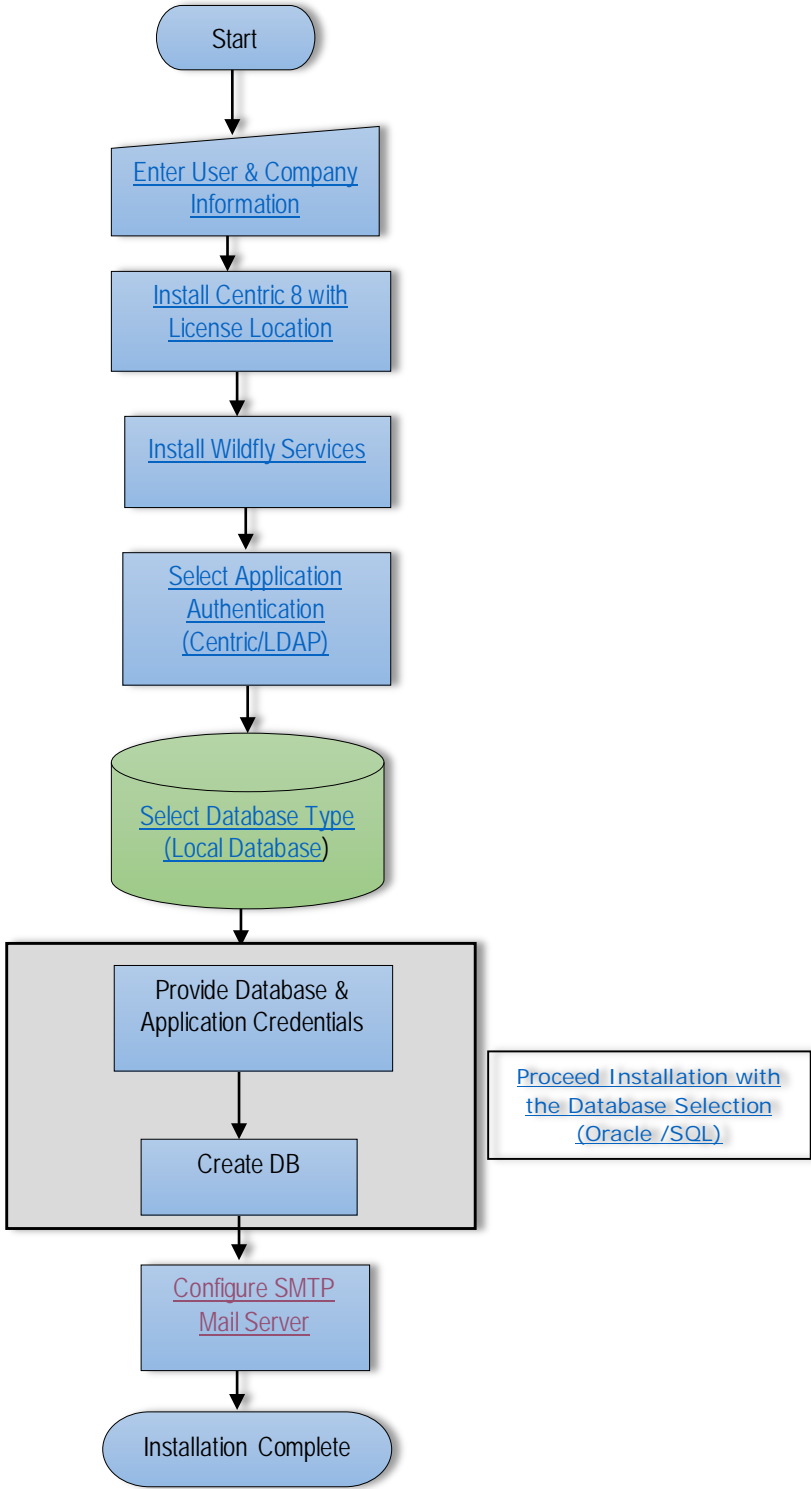
Contact technical support for SMTP details. For information regarding settings and how to configure it on your production server refer [Appendix E, Configuring SMTP on Windows 2008 Server](#).

For technical support, collect the product details from the Centric 8 Cover Page, and contact Customer Technical Support:

Telephone: 866.796.6218 (8:00 AM – 8:00 PM Eastern Standard Time)


Email: support@centricsoftware.com

3. SINGLE SERVER SOFTWARE INSTALLATION



3.1 SINGLE SERVER SOFTWARE INSTALLATION

Use the following set of instructions to install the server software for your Single Server installation.



NOTE

Before starting this installation, verify that all hardware and software specifications are met based on Centric Software recommendations; see the Centric 8 Requirements document for more information.

Note that during database installation, the Database Administrator user name and password are used to create the database user csidba, and to create the database and table. Once the database is created, database access from Wildfly uses the database user csidba user name and password created during installation.

If you install Centric 8 Server database on a shared server it must have a separate SQL instance to minimize the impact of other databases.

1. Select your domain name and log into the domain as **Administrator**.
2. Close all open Windows applications. Copy the \\install\C8Server directory to the server.

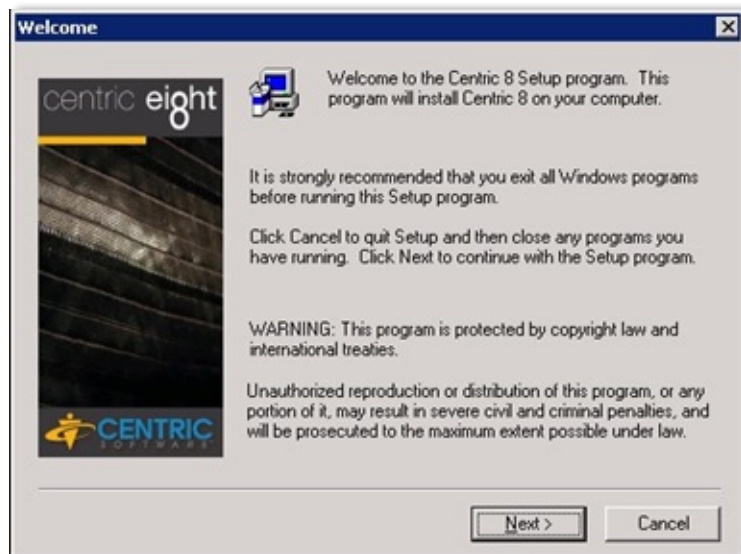


IMPORTANT

To install Centric 8, right-click **Setup.exe** and select **Run as Administrator**.

3. The **Welcome** dialog box is displayed. Read the contents of the Welcome page.

Figure 3-1: Welcome dialog box



4. To begin Installation, click on the **Next** button. The **End User License Agreement** dialog box is displayed.

Figure 3-2: End User License Agreement dialog box

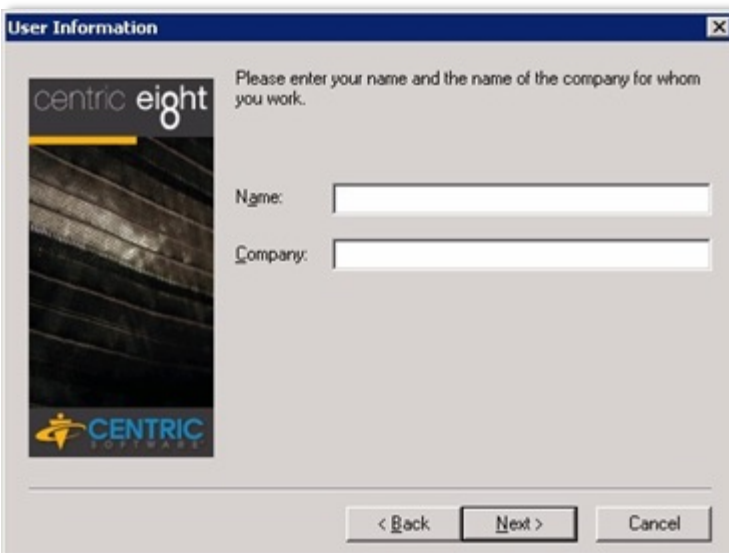


5. Read the license agreement, and then click on the **Yes** button to accept the license agreement. The **User Information** dialog box is displayed.

User Information

6. In the User Information dialog box, Enter your user name and company name in the **Name** and **Company** fields respectively, and click on Next.

Figure 3-3: User Information dialog box.



7. The **Choose Destination Location** dialog box is displayed as show below.

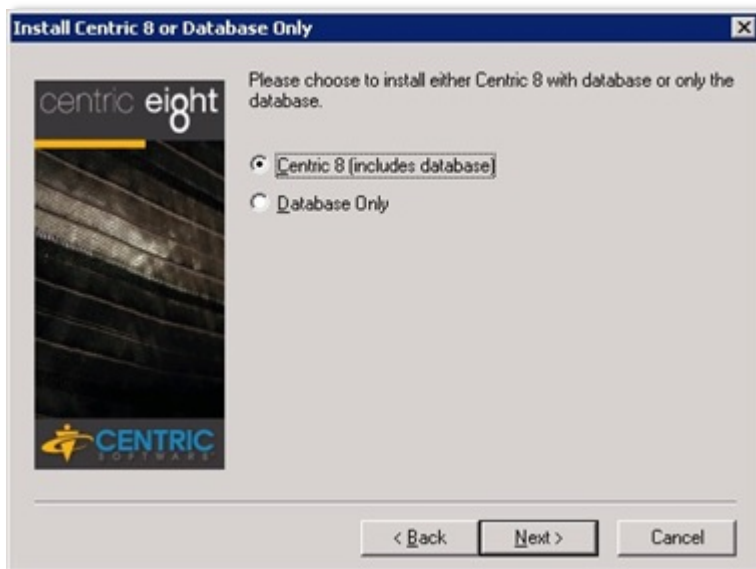
Figure 3-4: User Information dialog box

8. To accept the default destination folder, click on **Next**. Else, to select a different destination folder, click on **Browse** and click on **Next**.

◀◀ [BACK TO FLOWCHART](#)

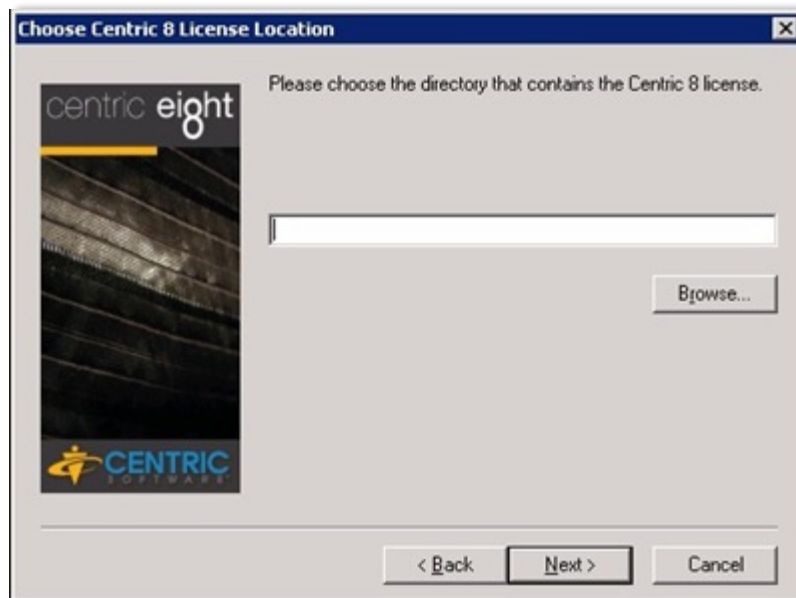
Install Centric 8

9. The following **Install Centric 8 or Database Only** dialog box is displayed.

Figure 3-5: Install Centric 8 or Database Only dialog box

10. Select **Centric 8 (includes database)**, and then click on **Next**.
11. The first time Centric 8 is installed, the **Choose Centric 8 License Location** dialog box is displayed.

Figure 3-6: Choose Centric 8 License Location dialog box



12. Click on **Browse** and navigate to the folder containing the `C8.lic` license file; click on **Next**.

NOTE

Once you select the file location, Centric 8 confirms the license file and installation process continues and the **Choose new or Existing Application Server** dialog box is displayed.

However, if you cannot locate the license file, an error message will be displayed and the installation will terminate. If you are upgrading or installing a new build on the machine, the **Choose License Location** dialog box will not be displayed.

13. The **Choose New or Existing Application Server** dialog box is displayed.

◀◀ [BACK TO FLOWCHART](#)

Wildfly Service Installation

14. In the **Choose New or Existing Application Server** dialog box, install Wildfly on your system, select the **Install Wildfly** radio button. To use a previously installed instance of Wildfly running on your system, select the **Use Installed Wildfly** radio button. Click on **Next**.

Figure 3-7: Choose New or Existing Application Server



◀◀ [BACK TO FLOWCHART](#)

Centric Authentication

15. The **Select Authentication Mode** dialog box is displayed.

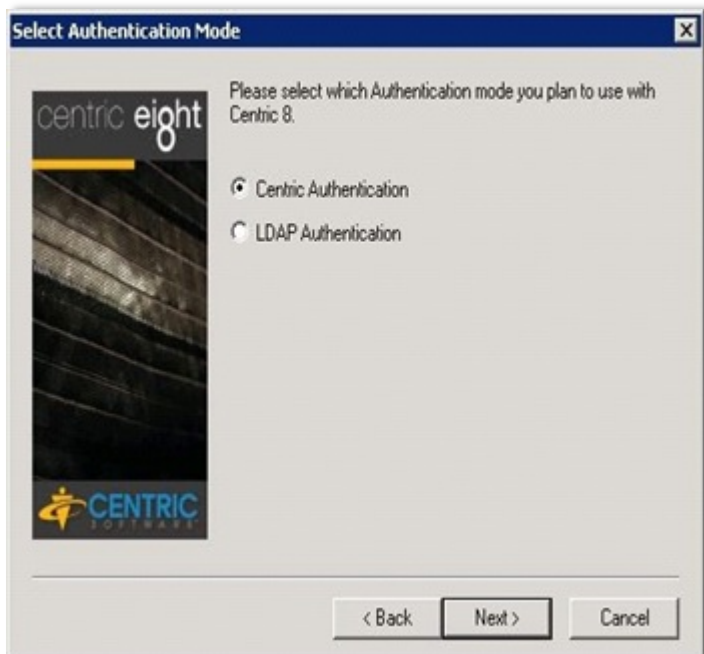
- a. If you want to use the Centric8 Authentication, click on the **Centric Authentication** radio button and click on **Next**. This will take you to the **Choose Java Development Kit (JDK) Installation directory** dialog box.

NOTE

If you select **Centric Authentication**, it will not integrate with LDAP, which means that users have to be created manually.

If you choose **LDAP Authentication**, you can integrate with Active Directory Services (LDAP) where Domain users with their information can be synchronized in real time.

Figure 3-8: Select Authentication Mode dialog box - Centric Authentication



- b. If you want to use LDAP Authentication, to enter LDAP Server information, select the **LDAP Authentication** radio button and click on **Next**.

Figure 3-9: Select Authentication Mode dialog box - LDAP Authentication



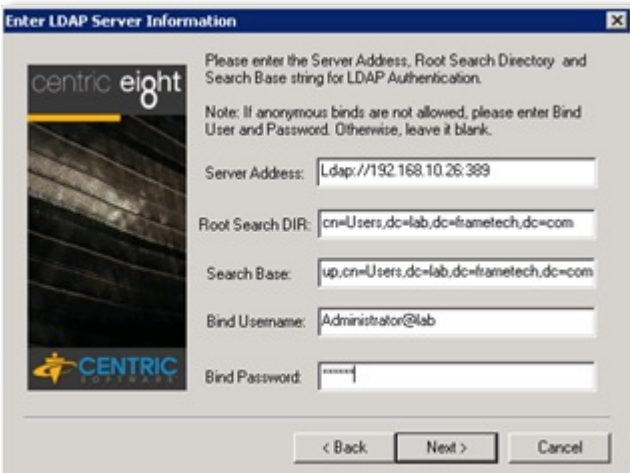
16. In the **Enter LDAP Server Information** dialog box, enter details for the following fields:

- **Server Address**
- **Root Search DIR**

- **Search Base**
 - **Bind Username**
- Note:** The **Bind Username** field details should be in the format *Username@LDAPDomainname*
- **Bind Password**

17. Click on **Next**.

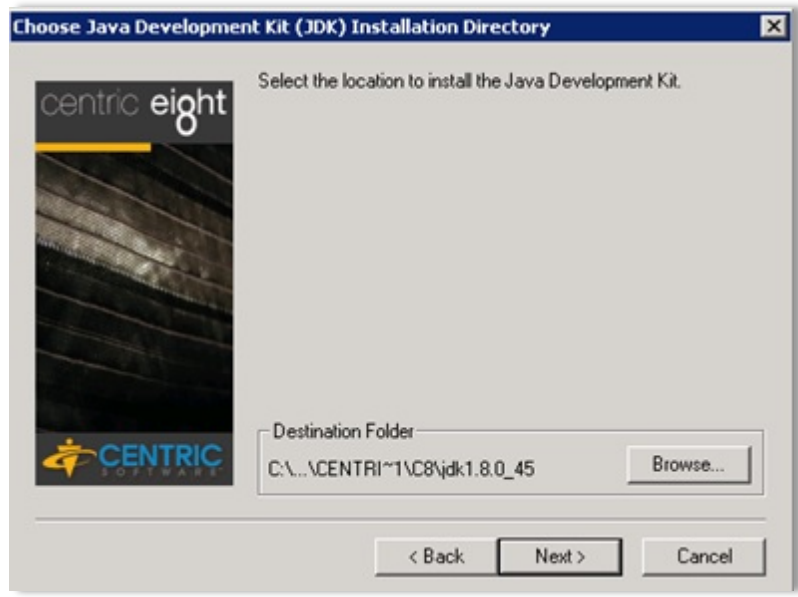
Figure 3-10: Enter LDAP Server Information dialog box



18. To enable SSL functionality for LDAP, refer [Appendix J, LDAP Setup](#).

19. If you do not have the Java Development Kit (JDK) version 1.8.0_45 already installed on your system, the **Choose Java Development Kit (JDK) Installation directory** dialog box will be displayed. To choose the destination folder for the JDK files, click on the **Browse** button. Click on **Next**.

Figure 3-11: Choose Java Development Kit (JDK) Installation Directory dialog box



◀◀ [BACK TO FLOWCHART](#)

Select Database Type

20. The **Select Database Type** dialog box is displayed.

Figure 3-12: Select Database Type dialog box



21. Select either **Microsoft SQL Server** or **Oracle** as the database type; follow the appropriate instructions based on your selection in this dialog box:

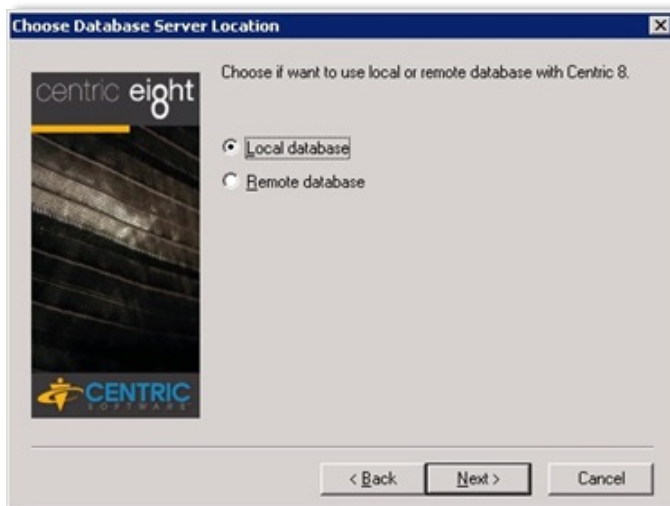
- Microsoft SQL Server on page 25
- Oracle Database on page 30

3.1.1 Microsoft SQL Server

Follow the step given below if you are using a Microsoft SQL Server database.

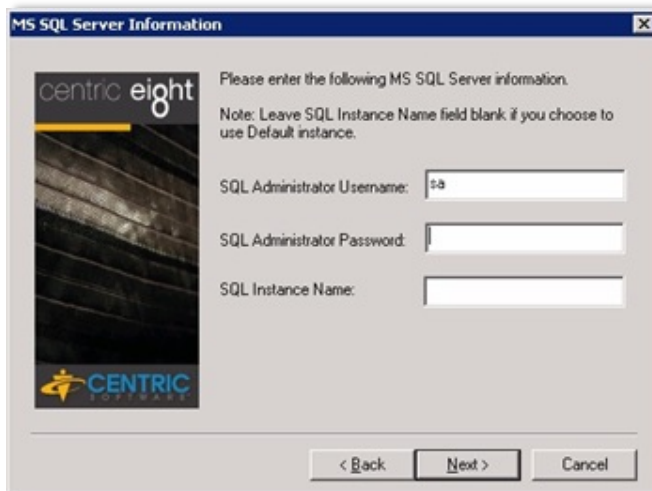
- a. Select the **Microsoft SQL Server** radio button and click on **Next**.
- b. The **Choose Database Server Location** dialog box is displayed. Select the **Local database** radio button. Click on **Next**.

Figure 3-13: Choose Database Server Location dialog box



- c. The **MS SQL Server Information** dialog box is displayed.

Figure 3-14: MS SQL Server Information dialog box



- d. Enter the username and password in the corresponding fields, and enter the SQL instance name in the **SQL Instance Name** field OR leave this field empty to use the default instance name. Click on **Next**.

- e. The Enter **Centric 8 Administrator Username and Password** dialog box is displayed. Enter the username and password, and confirm the password; click on **Next**.

Figure 3-15: Enter Centric8 Administrator Username and Password dialog box




The Username and Password cannot be identical. Use strong passwords for Centric8 Administrator user (for example, include alphanumeric upper and lowercase letters, numbers and symbols).

- f. The **Enter Centric 8 Database Information** dialog box is displayed.

Figure 3-16: Enter Centric 8 Database Information dialog box



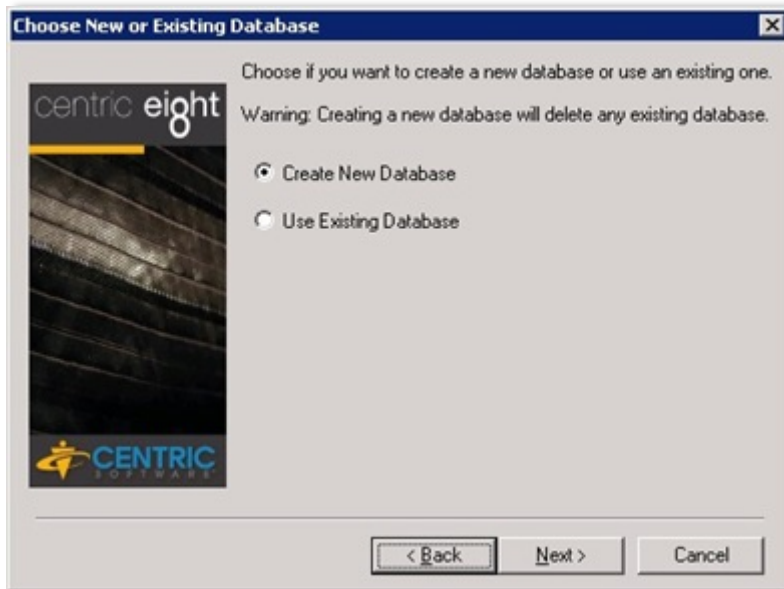
The following characters are not supported in SQL Administrator password and csidba user password in Centric 8 installation: %, ^, &, *, O, "



Use strong passwords for Centric8 Administrator user (for example, include alphanumeric upper and lowercase letters, numbers and symbols).

- g. In the **Username** field, enter the username. Enter details in the **Password** and **Confirm Password** fields. In the **Database** field, enter the database name. Click on **Next**.
- h. The **Choose New or Existing Database** dialog box is displayed.

Figure 3-17: Choose New or Existing Database dialog box



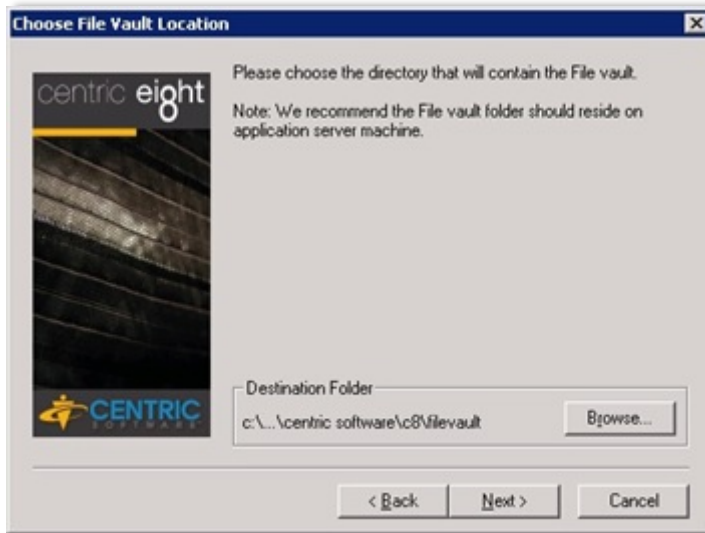
- i. Click on the **Create New Database** radio button and click on **Next**; the **Choose Database Location** dialog box is displayed.

Figure 3-18: Choose Database Location dialog box



- j. To accept the default destination folder, click on **Next** OR to select a different destination folder click on **Browse**. Then, click on **Next**.
- k. The **Choose FileVault Location** dialog box is displayed. To accept the default destination folder, click on **Next** OR to select a different destination folder, click on the **Browse** button. Then, click on **Next**.

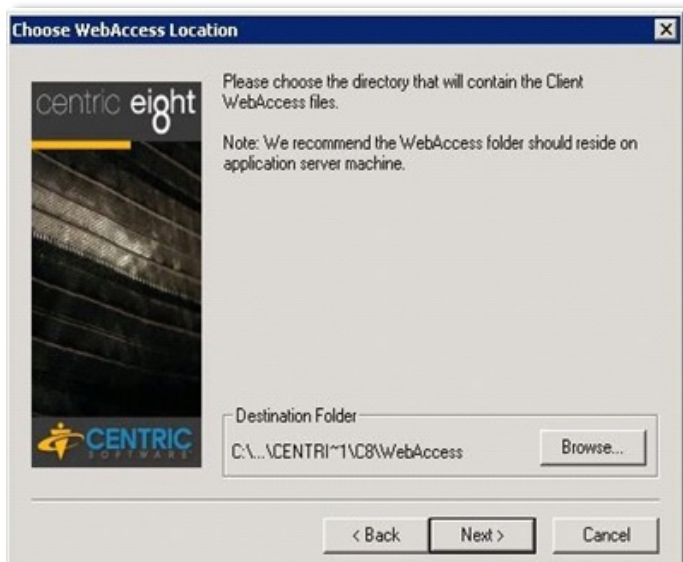
Figure 3-19: Choose File Vault Location dialog box



- l. The **Choose WebAccess Location** dialog box is displayed. If the WebAccess directory has to be configured under a different directory on the same machine or a shared directory on a different machine, click on **Browse** and select the right location.

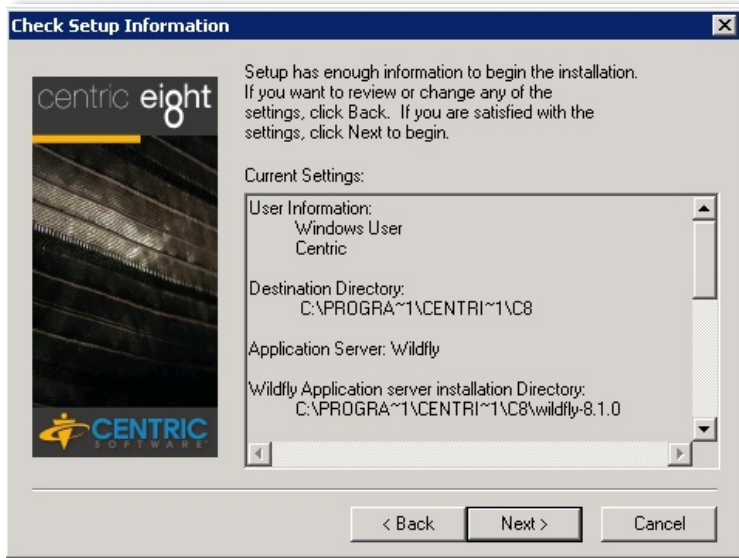
Note: If you are planning to install WebAccess using shared directory feature, refer [WebAccess Shared Directory Installation](#).

Figure 3-20: Choose WebAccess Location dialog box



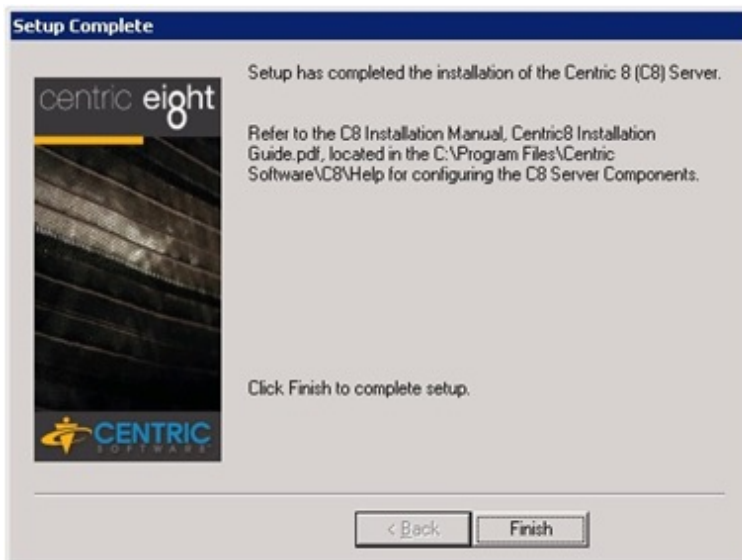
- m. The **Check Setup Information** dialog box is displayed. Verify the details displayed under the **Current Settings** section. To make changes, click on the **Back** button ELSE to confirm the settings and proceed, click on **Next**.

Figure 3-21: Check Setup Information dialog box



- n. To complete the installation process, click on the **Finish** button.

Figure 3-22: Setup Complete dialog box



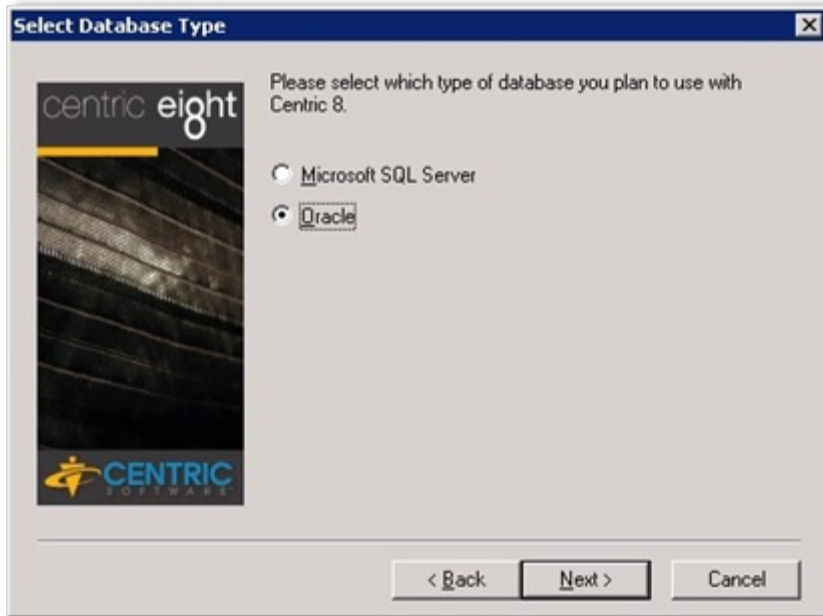
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3.1.2 Oracle Database

Follow the steps given below, if you are using an Oracle database.

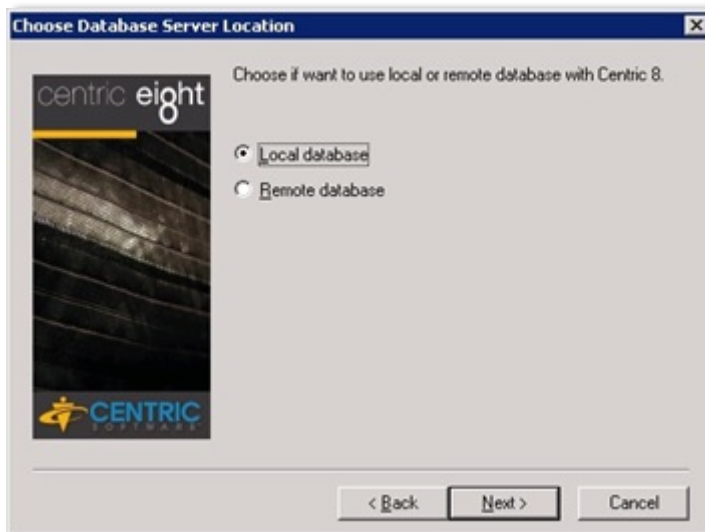
- o. In the **Select Database Type** dialog box, select the **Oracle** radio button and click on **Next**.

Figure 3-23: Select Database Type dialog box



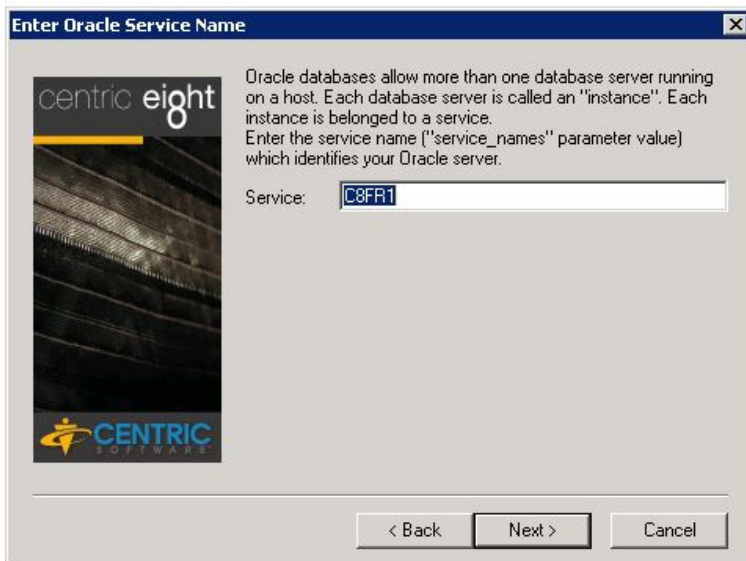
- p. In the **Choose Database Server Location** dialog box, select the **Local database** radio button and click on **Next**.

Figure 3-24: Choose Database Server Location dialog box



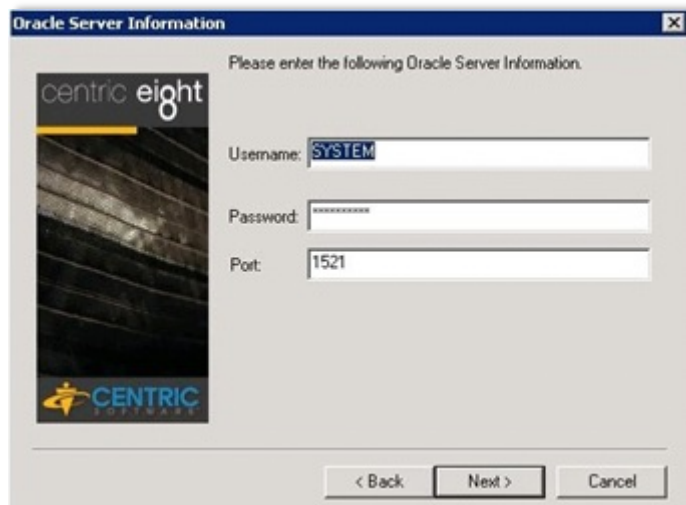
- q. The **Enter Oracle Service Name** dialog box is displayed. In the **Service** field, enter details which identifies the Oracle server, and click on **Next**.

Figure 3-25: Enter Oracle Service Name dialog box



- r. The **Oracle Server Information** dialog box is displayed. In the **Username** field, enter the Oracle Server Username details. Enter details in the **Password** and **Port** fields and click on **Next**.

Figure 3-26: Oracle Server Information dialog box



- s. The **Enter Centric 8 Administrator Username and Password** dialog box is displayed. Enter details in the **Username**, **Password** and **Confirm Password** fields; click on **Next**.

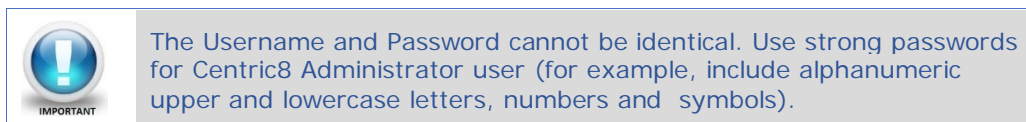



Figure 3-27: Enter Centric 8 Administrator Username and Password dialog box

- t. The **Enter Centric 8 Database Administrator Username and Password** dialog box is displayed. Enter details in the Username, Password fields and click on **Next**.



The Username and Password cannot be identical. Use strong passwords for Centric8 Administrator user (for example, include alphanumeric upper and lowercase letters, numbers and symbols).

Figure 3-28: Enter Centric 8 Database Administrator Username and Password

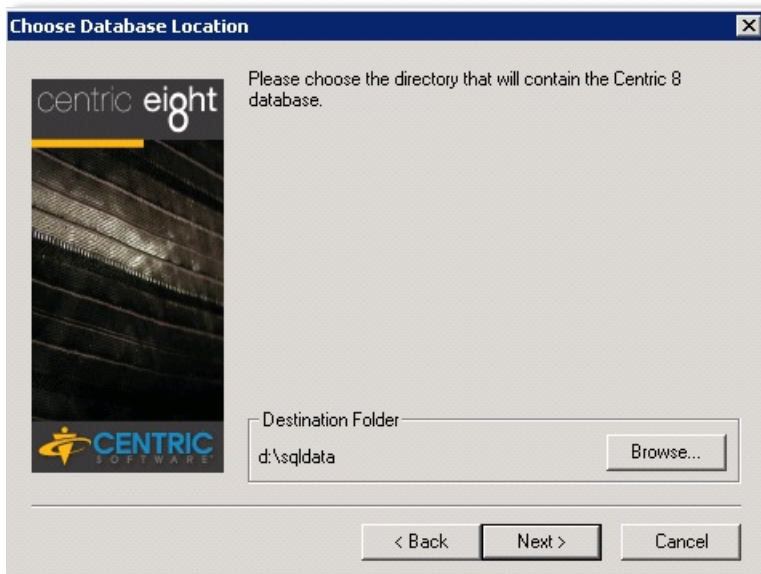
- u. In the **Choose New or Existing Database** dialog box, select the **Create New Database** radio button and click on **Next**.

Figure 3-29: Choose New or Existing Database dialog box



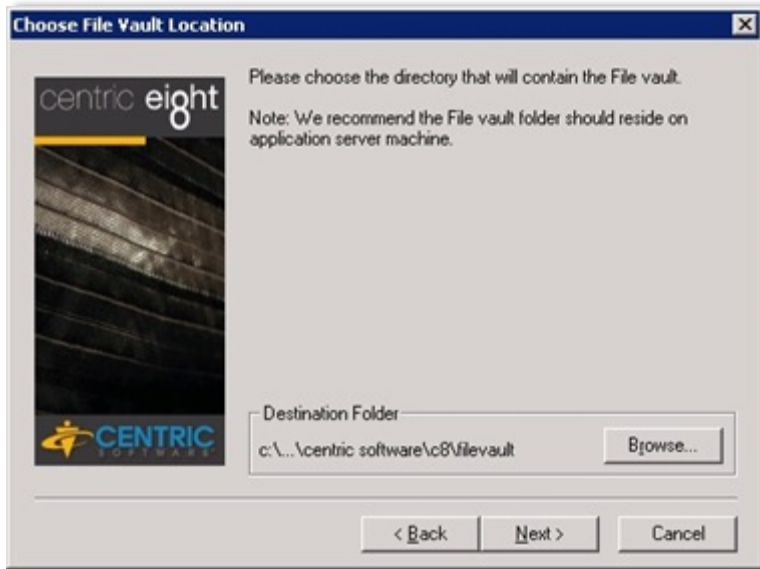
- v. The **Choose Database Location** dialog box is displayed; to accept the default destination folder, click on **Next** OR to select a different folder, click on **Browse**. Click on **Next**.

Figure 3-30: Choose New or Existing Database dialog box



- w. The **Choose File Vault Location** dialog box is displayed; to accept the default destination folder, click on **Next**. Else, to select a different folder, click on **Browse**. Click on **Next**.

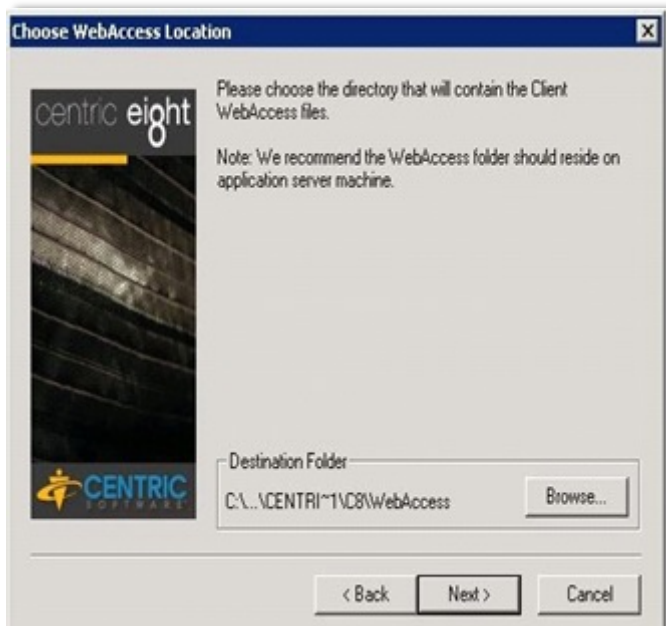
Figure 3-31: Choose File Vault Location dialog box



- x. The **Choose WebAccess Location** dialog box is displayed; to accept the default destination folder, click on **Next**. Else, if the WebAccess directory has to be configured under a different directory on the same machine or a shared directory on a different machine, click on the **Browse** button to select the right location.

Note: To install WebAccess using the shared directory feature, refer [WebAccess Shared Directory Installation](#).

Figure 3-32: Choose WebAccess Location dialog box

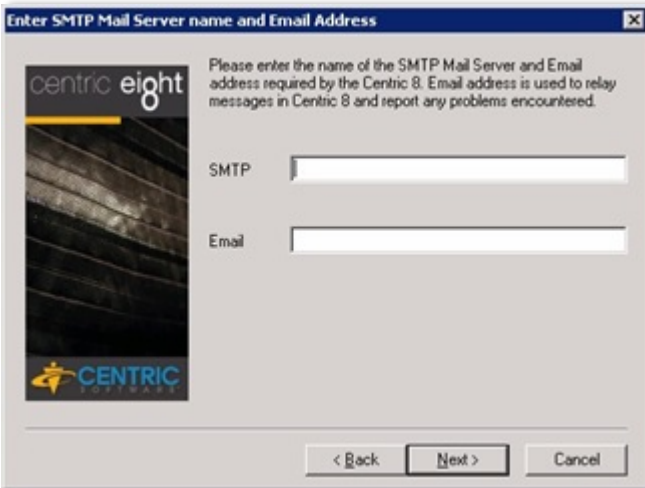


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SMTP setup

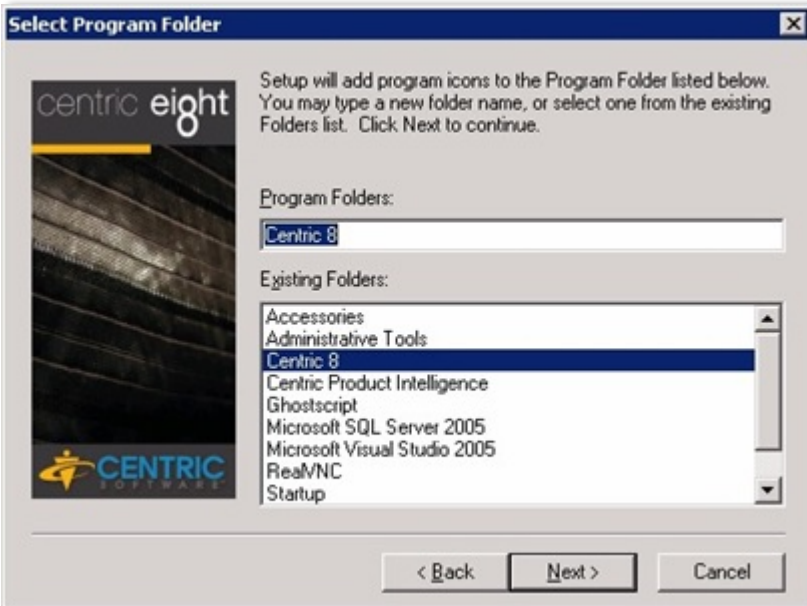
22. The **Enter SMTP Mail Server name and Email Address** dialog box is displayed.

Figure 3-33: Enter SMTP Mail Server name and Email Address dialog box



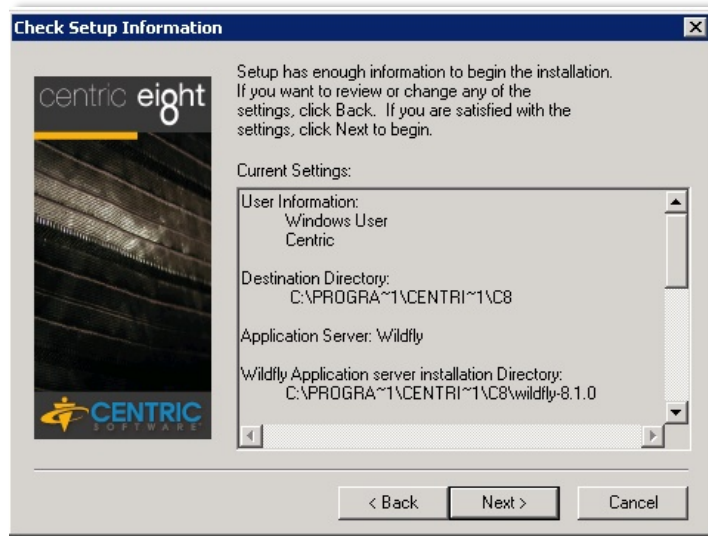
23. Enter details in the **SMTP** and **Email** fields and click on **Next**. The **Select Program Folder** dialog box is displayed.

Figure 3-34: Select Program Folder dialog box



24. To use the default program folder click on **Next**. The **Check Setup Information** dialog box is displayed.

Figure 3-35: Check Setup Information dialog box



25. Verify the details under the **Current Settings** section. To make changes to the settings, click on **Back**. Else, to accept the settings and proceed with the Installation click on **Next**.
26. Once the installation is complete, the **Setup Complete** dialog box is displayed.

Figure 3-36: Setup Complete dialog box



27. Click on **Finish**.

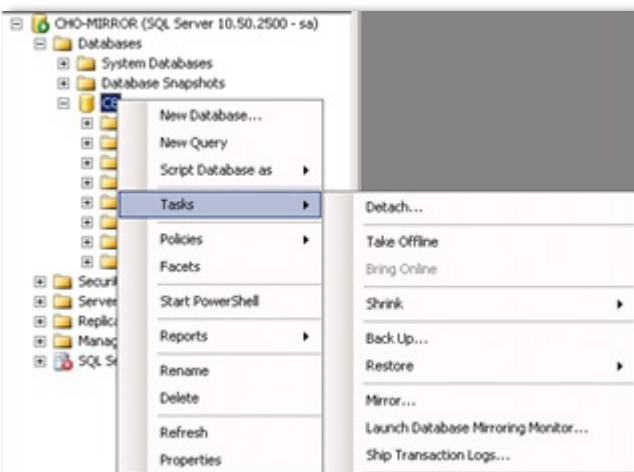
Relocate database files location

28. If you have followed the Drive Structure as mentioned in the [Pre-requisites](#) section, you need to move the `C8_txlog.ldf` to `L:\SQLLOG`. To do this, go to step 29.
29. Stop Wildfly Services.
30. In **Start** menu, click **SQL Server Management Studio**. In the **Connect to Server** dialog box, enter details for the **Server name**, **Login** and **Password** fields. Then, click on **Connect**.

Figure 3-37: Connect to Server dialog box

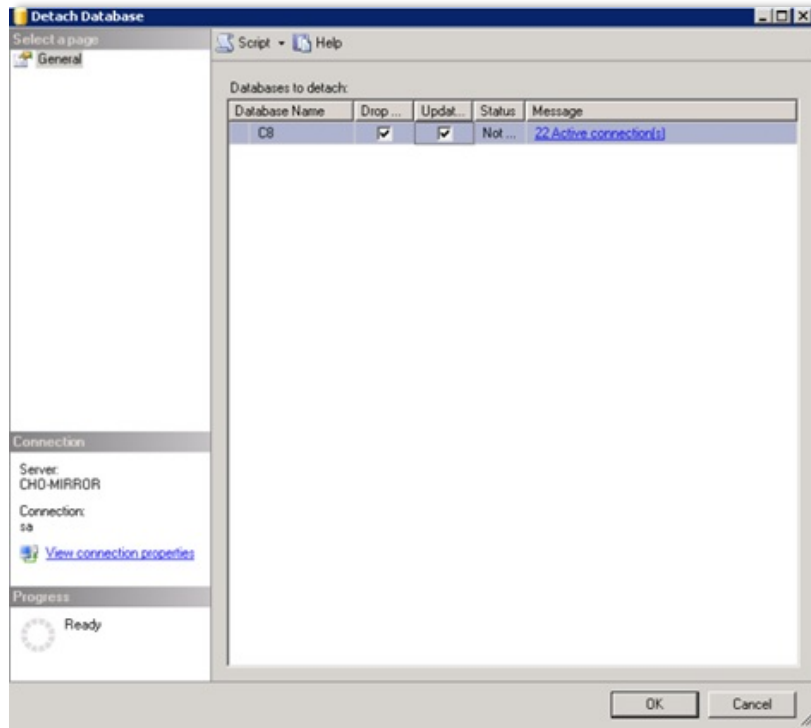


31. Right-click on the **C8** Database, and select **Tasks ▶ Detach**.

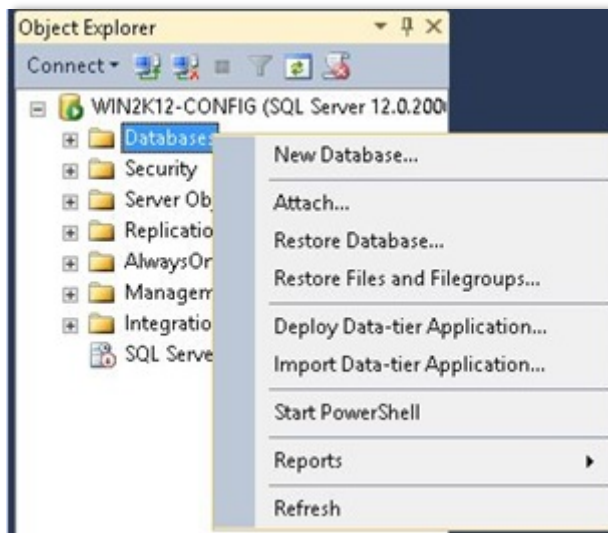


32. In the **Detach Database** dialog box, ensure that the **Drop Connection and Update Attributes** check boxes are selected. Click on **OK**.

Figure 3-38: Detach Database dialog box

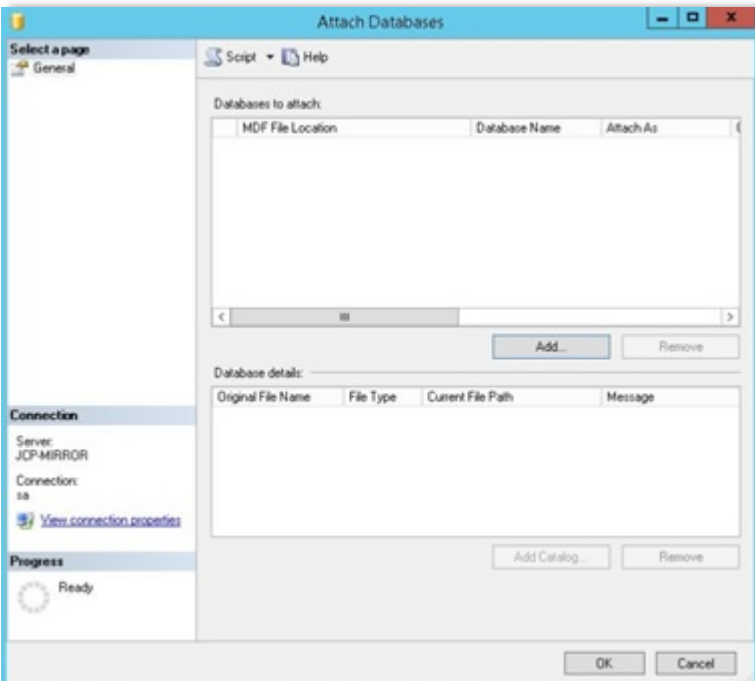


33. Once the databases are successfully detached, go to the D:\SQLDATA folder.
34. Cut C8_TXLOG.ldf file and paste it in L:\SQLLOG.
35. In the **Start** menu, click on **SQL Server Management Studio**. Enter details for the **Server name**, **User login Id** and **Password** fields. Then, click on **Connect**.
36. Right-click on **Databases** and select **Attach**.



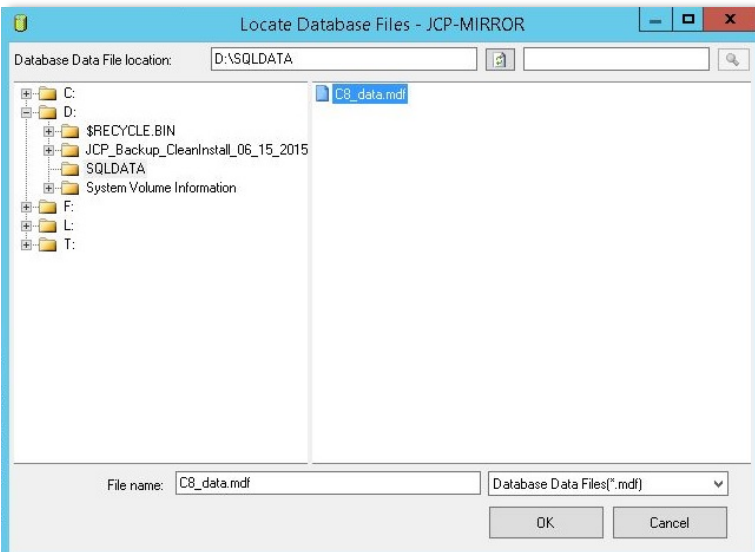
37. In the **Attach Databases** dialog box, click on **Add**.

Figure 3-39: Attach Databases dialog box



38. Select C8_data.mdf and click on **OK**.

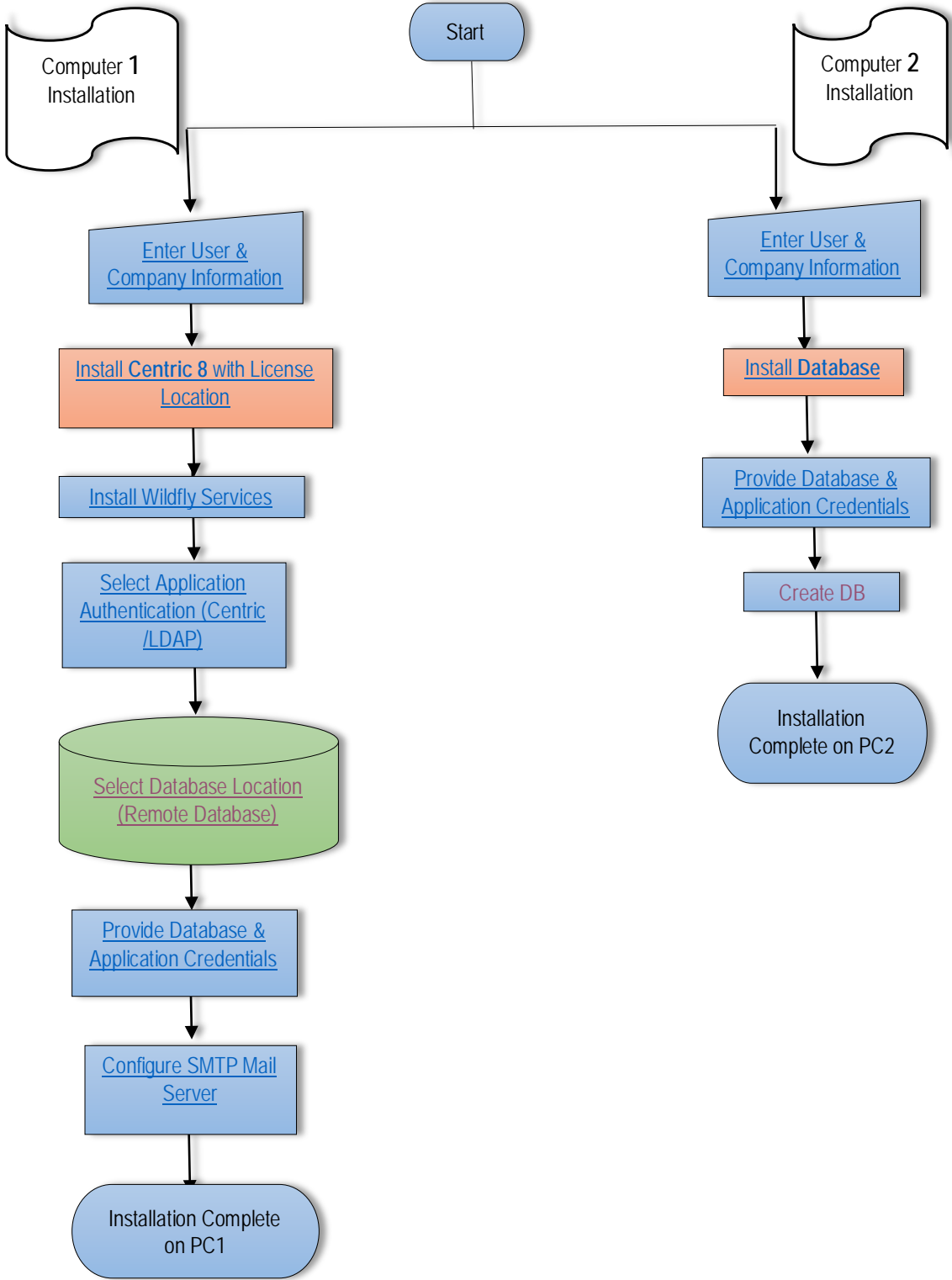
Figure 3-40: Attach Databases dialog box

**NOTE**

You can now proceed to [Chapter 5, Configuration & Testing](#) to configure the database.

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4. DUAL SERVER SOFTWARE INSTALLATION



4.1 Computer 1 Installation

Use the following set of instructions to install computer 1 of your Dual Server installation.

NOTE

Before starting this installation, verify that all hardware and software specifications are met based on Centric Software recommendations; see the [Centric 8 Requirements](#) for more information.

For Single Server installation instructions, see [Chapter 3, Single Server Software Installation](#).

1. Select your domain name and log into the domain as Administrator. Close all Windows applications.
2. Close all open applications. Copy the \\install\C8Server directory to the server.



To install Centric 8, right-click on **setup.exe** and select **Run as Administrator**.

3. The **Welcome** dialog box is displayed as shown below.

Figure 4-1: Welcome dialog box



4. To begin installation, read the details in the **Welcome** dialog box and then click on **Next**. The **End User License Agreement** dialog box is displayed.

Figure 4-2: End User License Agreement dialog box



User Information

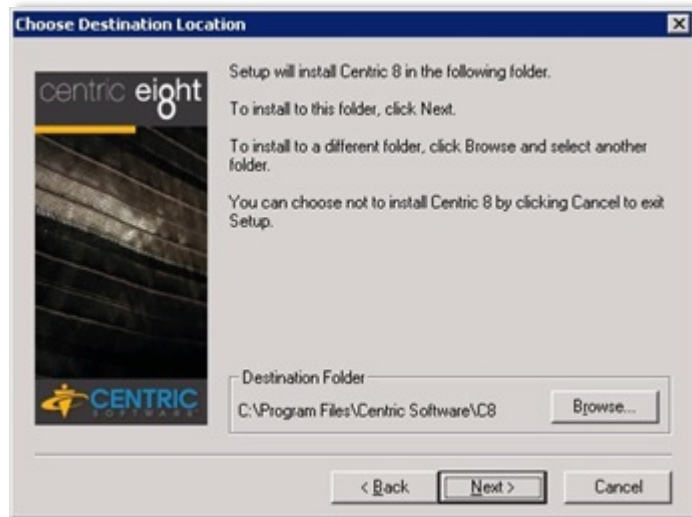
- To accept the license agreement, read the license agreement details and click on **Yes**. The **User Information** dialog box is displayed as shown below.

Figure 4-3: End User License Agreement dialog box



- Enter your user name and company name in the corresponding fields, and click on **Next**. The **Choose Destination Location** dialog box is displayed.

Figure 4-4: Choose Destination Location dialog box

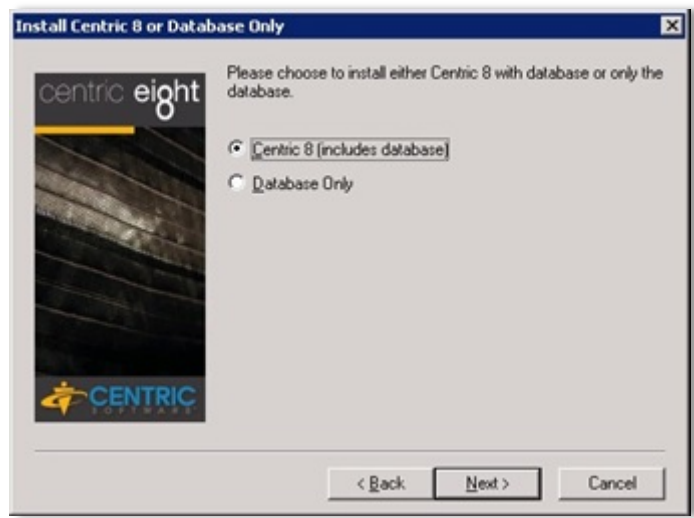


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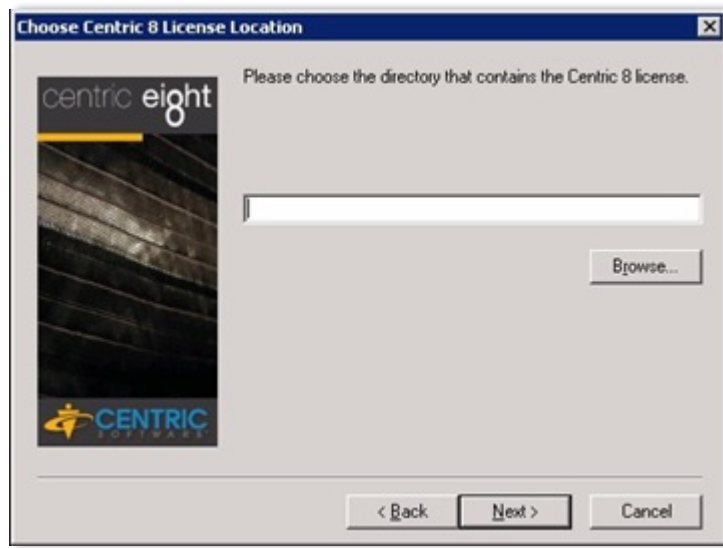
Install Centric 8

- To accept the default destination folder, click on **Next** OR to select a different destination folder click on the **Browse** button. Click on **Next**. The **Install Centric 8 or Database Only** dialog box is displayed.

Figure 4-5: Install Centric 8 or Database Only dialog box



- Select the **Centric 8 (includes database)** radio button, and then click on **Next**.
- The first time Centric 8 is installed, the **Choose Centric 8 License Location** dialog box is displayed as shown below. Click on the **Browse** button and navigate to the folder containing the C8.lic license file; click on **Next**.

Figure 4-6: Choose Centric 8 License Location**NOTE**

Once you select the file location, Centric 8 confirms the license file and installation continues displaying the **Choose new or Existing Application Server** dialog box. However, if you cannot locate the license file, an error message displays, and installation ceases.

If you are upgrading or installing a new build on the machine, the **Choose License Location** dialog box does not display.

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Install Wildfly Services

10. The **Choose New or Existing Application Server** dialog box is displayed. To install the Wildfly Server on your system, select the **Install Wildfly** radio button. Else, to use a previously installed instance of Wildfly on your system, select the **Use Installed Wildfly** radio button. Click on **Next**.

Figure 4-7: Choose New or Existing Application Server dialog box



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Application Authentication

11. The **Select Authentication Mode** dialog box is displayed.
12. To use the Centric8 Authentication, select the **Centric Authentication** radio button. Click on **Next**. This takes you to the **Choose Java Development Kit (JDK) Installation** directory dialog box.


 <p>NOTE</p>	<p>If you select Centric Authentication, it will not integrate with LDAP which means that users will have to be created manually.</p> <p>If you choose LDAP Authentication, you can integrate with Active Directory Services (LDAP) where Domain users with their information can be synchronized in real time.</p>
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Figure 4-8: Select Authentication Mode dialog box



13. To use LDAP Authentication, select the **LDAP Authentication** radio button and then click on **Next**.

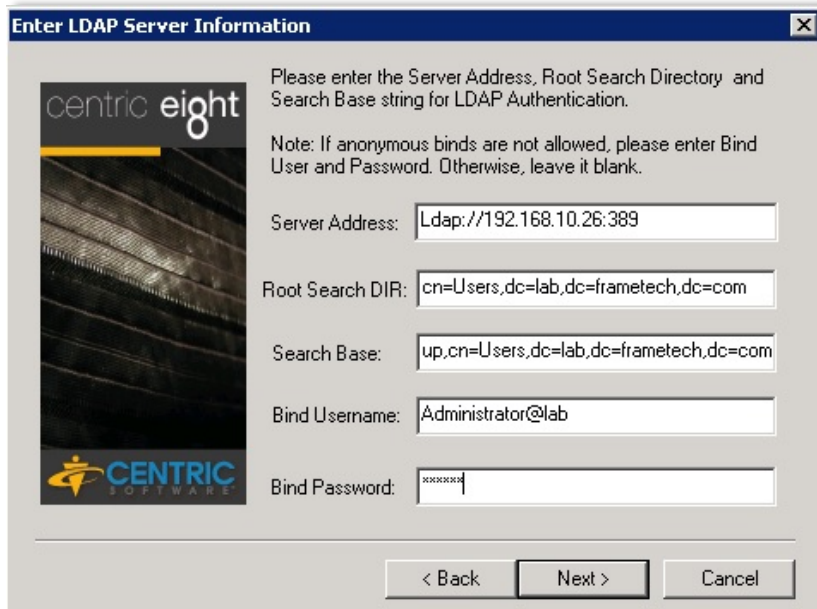
Figure 4-9: Select Authentication Mode dialog box



14. In the Enter LDAP Server Information dialog box, enter details for the Server Address, Root Search DIR and the Search Base string. Enter details for the Bind Username and Bind Password fields and click on **Next**.

Note: The Bind Username must be in the format *Username@LDAPDomainname*.

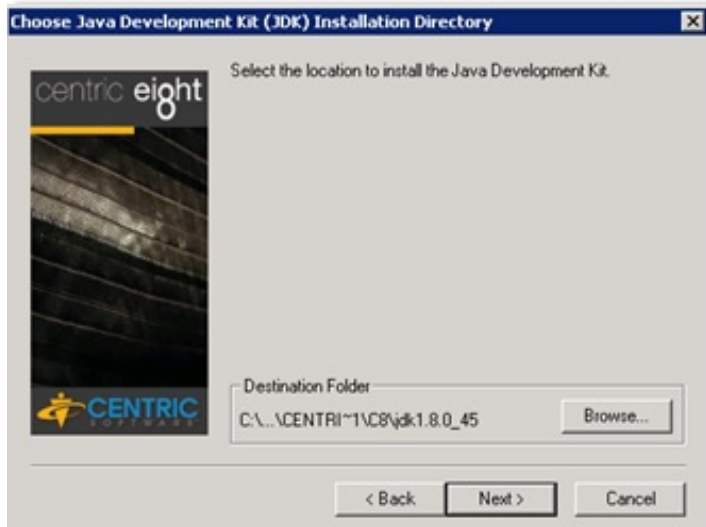
Figure 4-10: Enter LDAP Server Information dialog box



To enable SSL functionality for LDAP, refer [Appendix J, LDAP Setup](#).

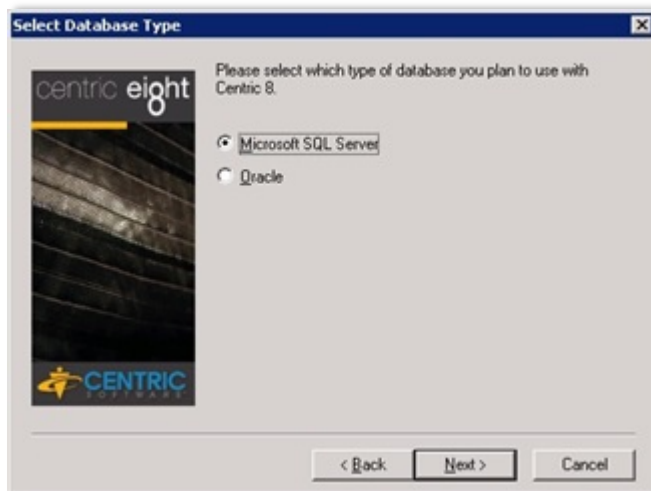
15. If you do not have the Java Development Kit (JDK) version 1.8.0_45 already installed on your system, the **Choose Java Development Kit (JDK) Installation** directory dialog box will be displayed. To choose the destination folder for the JDK files, click on the **Browse** button. Click on **Next**.

Figure 4-11: Choose Java Development Kit (JDK) Installation Directory dialog box



16. The **Select Database Type** dialog box is displayed.

Figure 4-12: Select Database Type dialog box



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Select Database Server Location

17. Select either **Microsoft SQL Server** or **Oracle** as the database type, and click on **Next**. The **Choose Database Server Location** dialog box is displayed. Select the **Remote database** radio button and then click on **Next**.

Figure 4-13: Choose Database Server Location dialog box

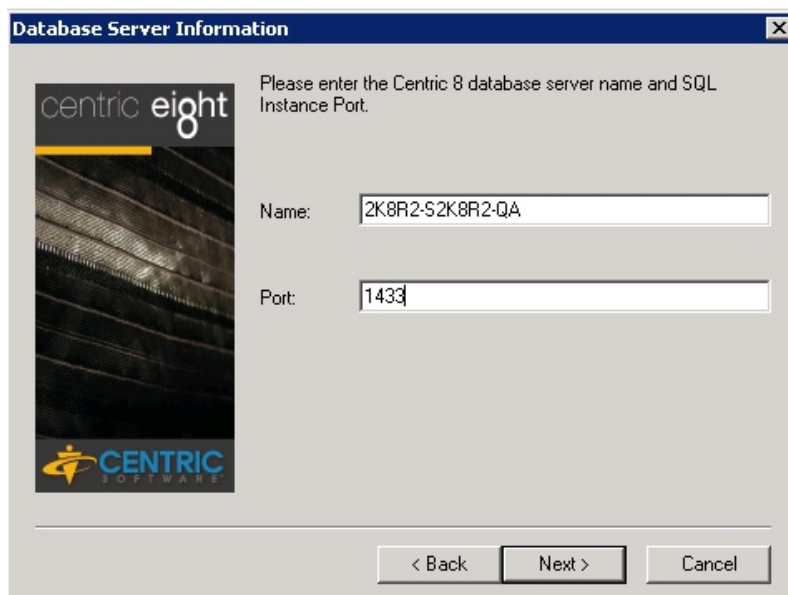


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Database Authentication and Centric Application Authentication

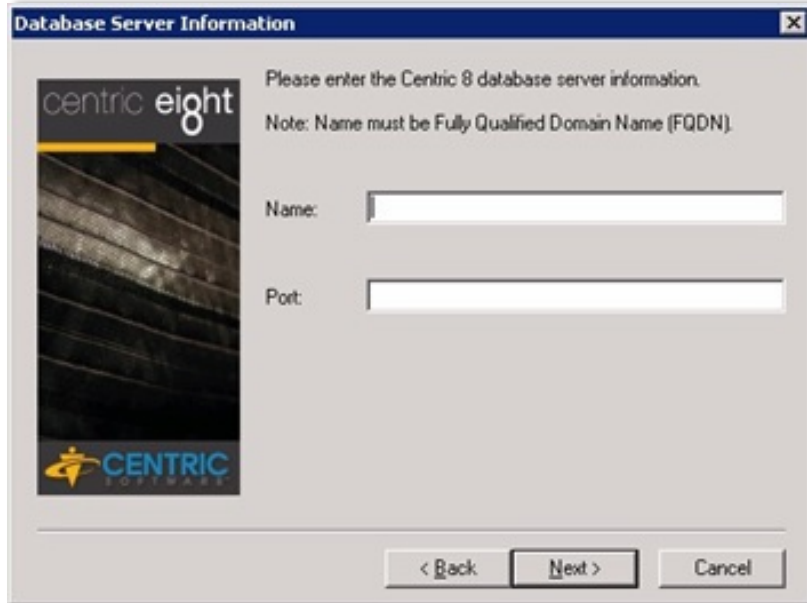
18. In step 17 above, if the database type selected was **SQL Server** then the **SQL Server Database Server Information** dialog box will be displayed; enter the database domain name and port details, and click on **Next**.

Figure 4-14: Database Server Information dialog box



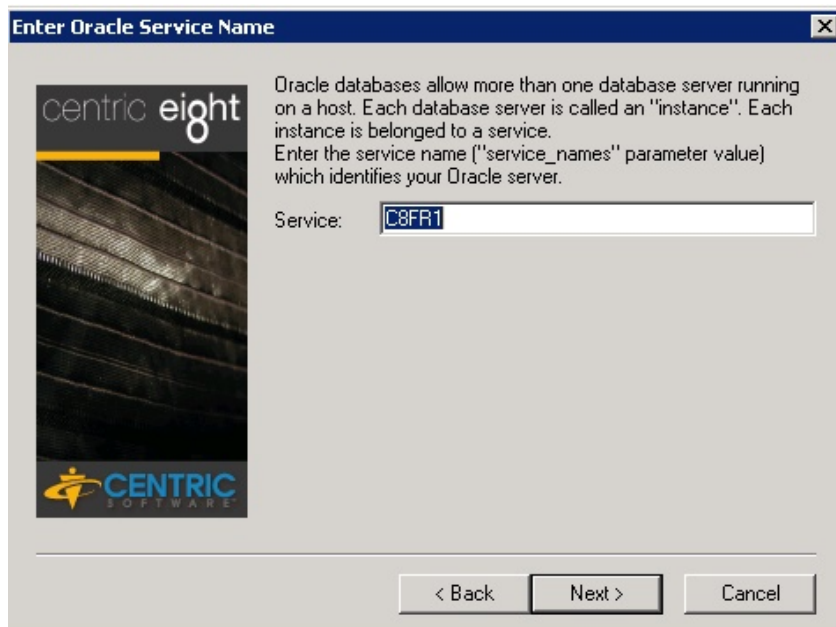
19. In step 17, if the database type selected was **Oracle**, then the **Oracle Database Server Information** dialog box is displayed; enter the database domain name and port details and click on the **Next** button.

Figure 4-15: Database Server Information dialog box



20. The **Enter Oracle Service Name** dialog box is displayed. Enter Oracle Service name and click on **Next**.

Figure 4-16: Enter Oracle Service Name



21. The **Enter Centric 8 Administrator Username and Password** dialog box is displayed.


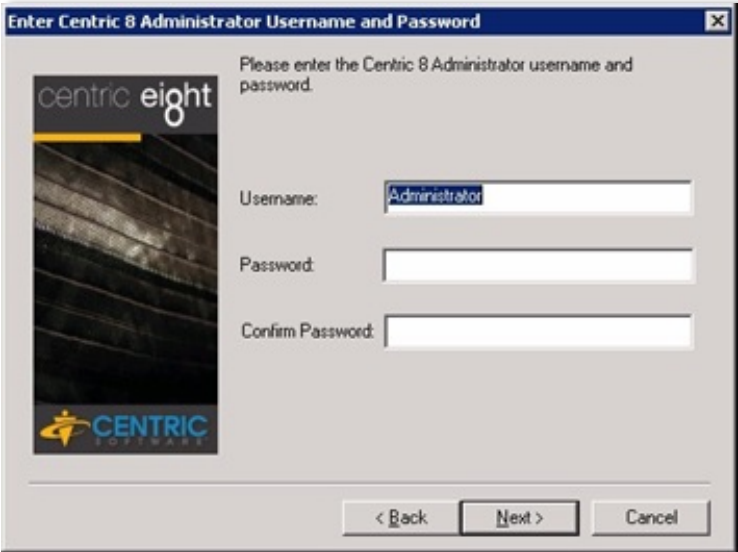
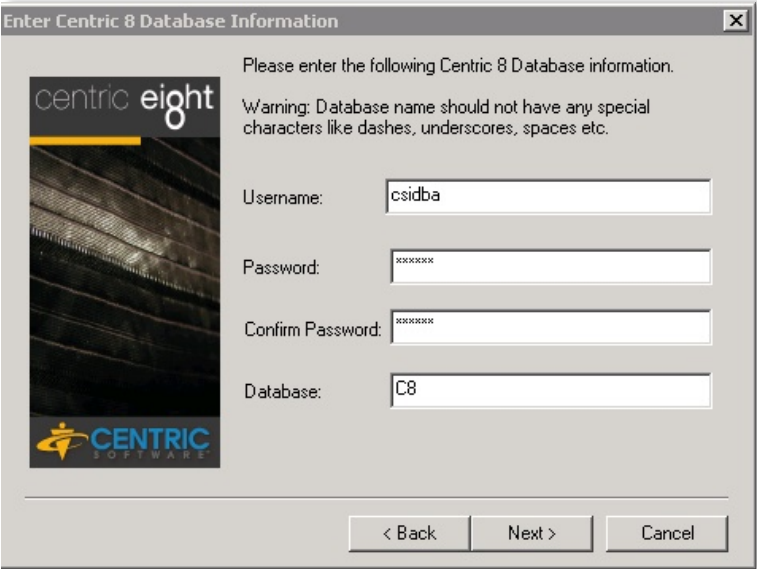
 Use strong passwords for Centric8 Administrator user (for example, include alphanumeric upper and lowercase letters, numbers and symbols).

Figure 4-17: Enter Centric 8 Administrator Username and Password



22. Enter details in the **Username**, **Password** and **Confirm Password** fields and click on **Next**. Ensure that the Username and Password are not identical. The **Enter Centric 8 Database Information** dialog box is displayed.

Figure 4-18: Enter Centric 8 Database Information dialog box

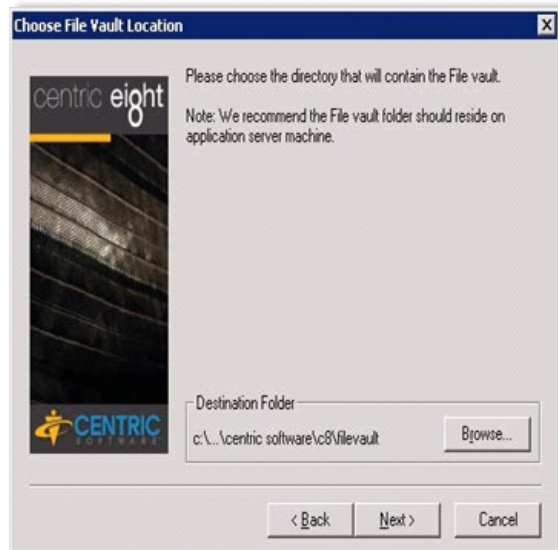


23. Enter details in the **Username**, **Password** and **Confirm Password** fields and click on **Next**.

	<p>Use strong passwords for Centric8 Database Administrator user (for example, include alphanumeric upper and lowercase letters, numbers and symbols)</p>
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24. The **Choose File Vault Location** dialog box is displayed.

Figure 4-19: Choose File Vault Location dialog box

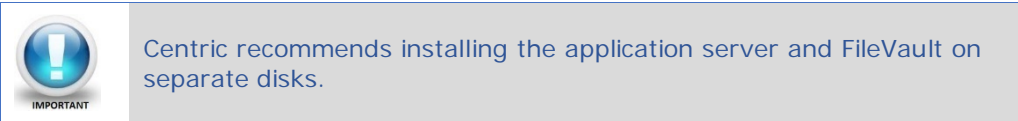


25. The **Choose WebAccess Location** dialog box is displayed. If the WebAccess directory has to be configured under a different directory in the same machine or shared directory in a different machine, click on **Browse** and select the right location. If you are planning to install WebAccess using shared directory feature, refer to [WebAccess Shared Directory Installation](#).

Figure 4-20: Choose WebAccess Location dialog box



26. To accept the default destination folder, click on **Next**. Else, to select a different destination folder, click on the **Browse** button and select the right location. Click on **Next**. The **Enter SMTP Mail Server name and Email Address** dialog box is displayed.



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SMTP Configuration

27. Enter your SMTP mail server name and email address in the corresponding fields, and click on **Next**. The **Select Program Folder** dialog box is displayed.

Figure 4-21: Enter SMTP Mail Server name and Email Address dialog box

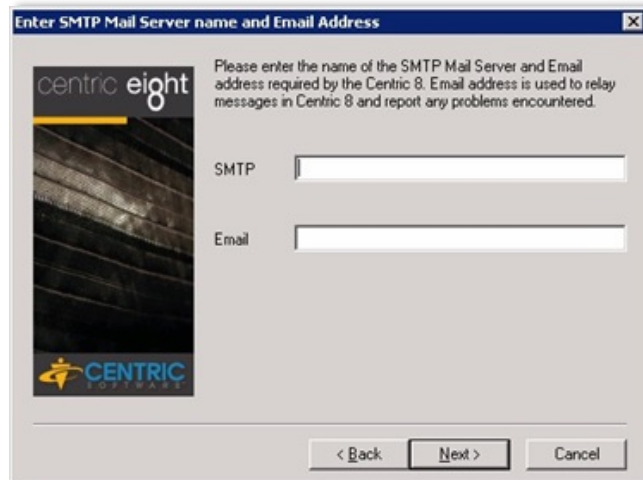
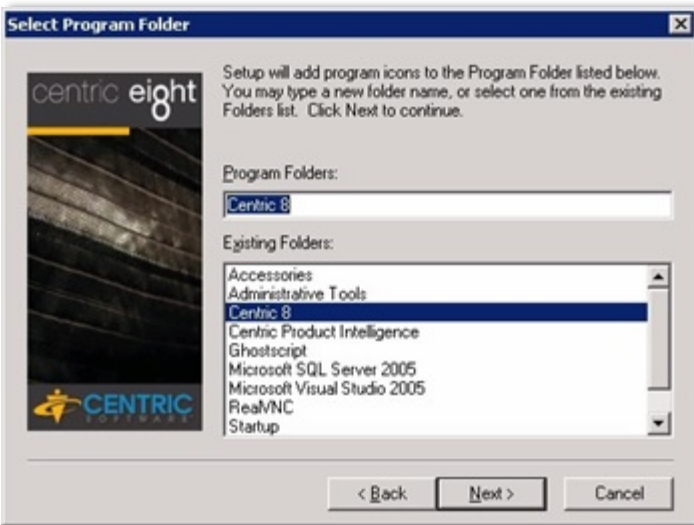
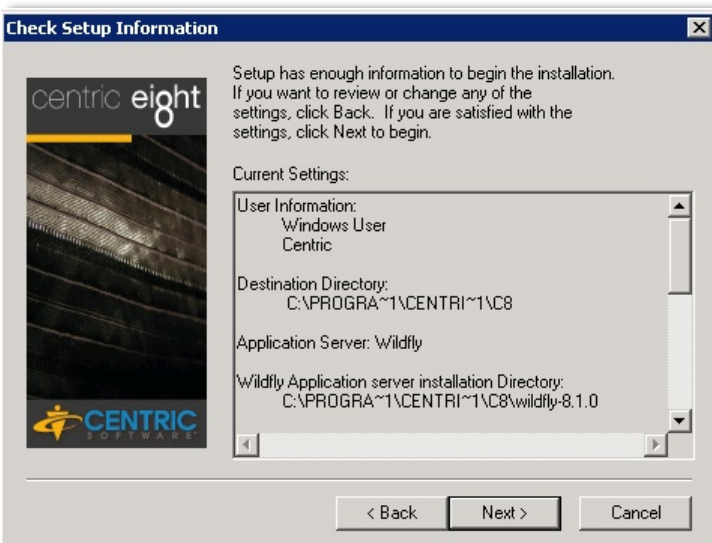


Figure 4-22: Select Program Folder dialog box



28. Click **Next** to use the default program folder. The **Check Setup Information** dialog box is displayed.

Figure 4-23: Check Setup Information dialog box




29. Verify the details under the **Current Settings** section. To make changes, click on the **Back** button. Else, to continue with the current settings and begin installation, click on **Next**. Once the installation process is completed, the **Setup Complete** dialog box is displayed.
30. Click on **Finish**. Proceed to [Computer 2 Installation](#).

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4.2 Computer 2 Installation

Use the following set of instructions to install on computer 2 of your Dual Server installation.

1. On computer 2, select your domain name and log into the domain as **Administrator**.

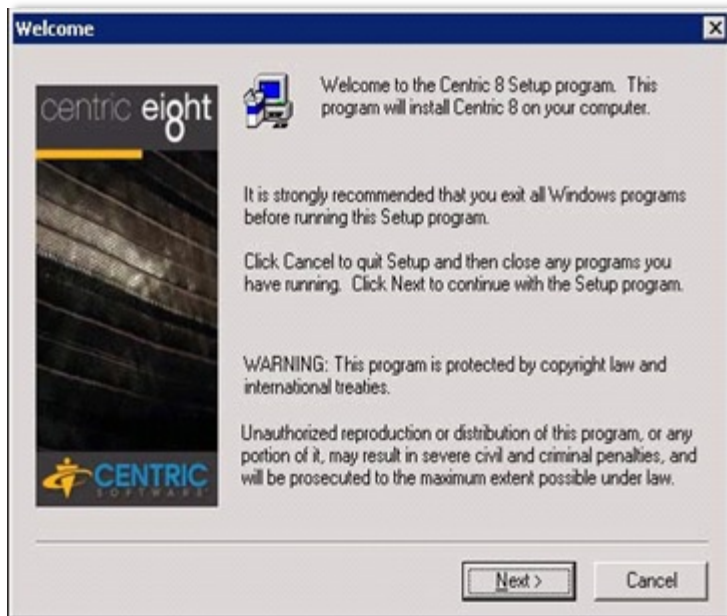
 <p>NOTE</p>	<p>During database installation, the Database Administrator user name and password are used to create the database user 'csidba' and to create the database and table. Once the database is created, database access from Wildfly uses the database user 'csidba' user name and password created during installation.</p> <p>If you install Centric 8 Server database on a shared server it must have a separate SQL instance to minimize the impact of other databases.</p>
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2. Copy the \\install\C8Server directory to computer 2.

 <p>IMPORTANT</p>	<p>To install Centric 8, right-click Setup.exe and click Run as Administrator.</p>
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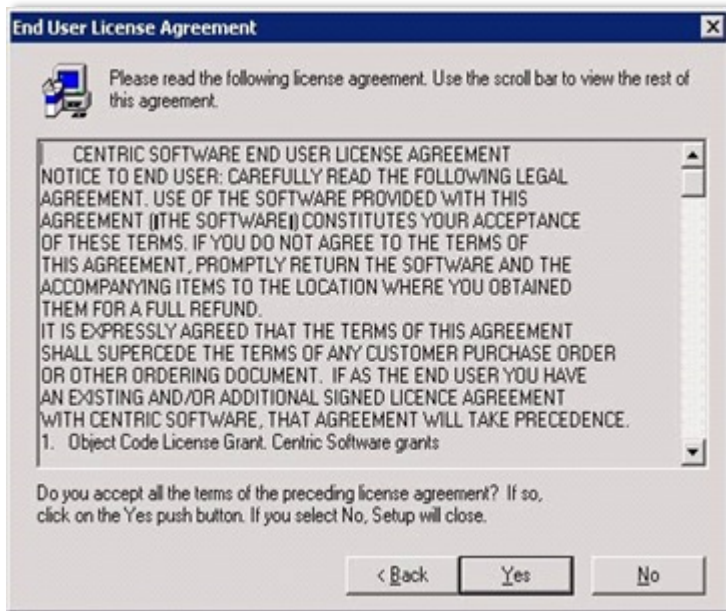
3. The **Welcome** dialog box is displayed.

Figure 4-24: Welcome dialog box



4. To begin the installation process, read the Welcome dialog box details and click on **Next**. The **End User License Agreement** dialog box is displayed.

Figure 4-25: End User License Agreement dialog box



- To accept License Agreement, read the contents of the Welcome page and click on **Yes**. The **User Information** dialog box will be displayed.

User Information

- Enter your user name and company name in the corresponding **Name** and **Company** fields, and click on the **Next** button. The **Choose Destination Location** dialog box is displayed.

Figure 4-26: User Information dialog box

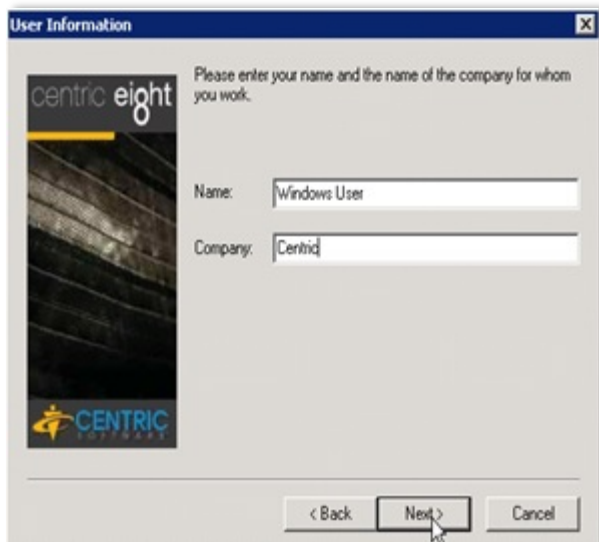
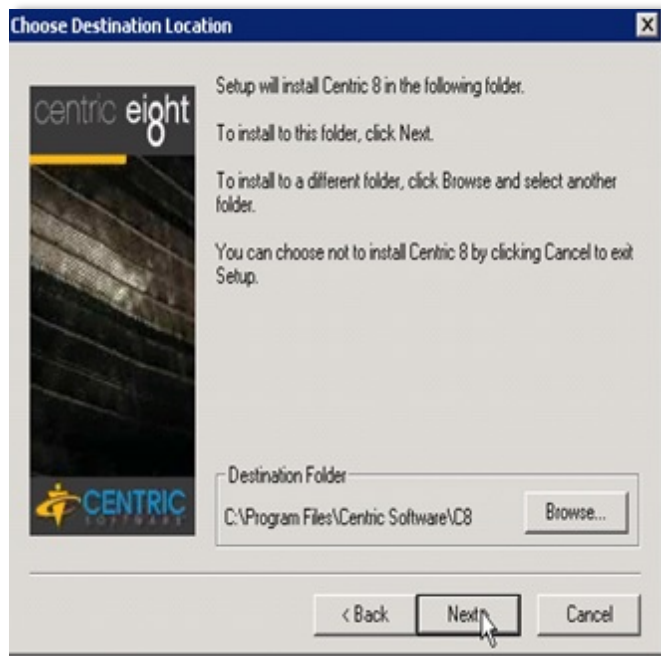


Figure 4-27: Choose Destination Location dialog box



7. To accept the default destination folder, click on **Next**. Else, to select a different destination folder, click on **Browse** and select a different destination folder. Click on **Next**. The **Install Centric 8 or Database Only** dialog box will be displayed.

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Select Database

8. Click on the **Database Only** radio button and click on **Next**. The **Select Database Type** dialog box is displayed. Select **Microsoft SQL Server** and click on **Next**.

Note: If you select the **Oracle** radio button, go to Step 11

Figure 4-28: Install Centric 8 or Database Only dialog box



Figure 4-29: Select Database Type dialog box

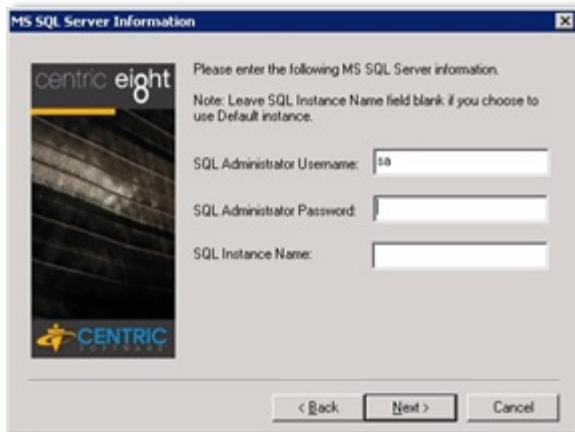


9. The **MS SQL Server Information** dialog box is displayed. Enter details for the **SQL Administrator Username**, **SQL Administrator Password** and the **SQL Instance Name** fields.



The following characters are not supported in SQL Administrator password in Centric 8 installation: %, ^, &, *, (), "

Figure 4-30: MS SQL Server Information dialog box



MS SQL Server Information

Please enter the following MS SQL Server information.
Note: Leave SQL Instance Name field blank if you choose to use Default instance.

SQL Administrator Username:

SQL Administrator Password:

SQL Instance Name:

< Back Next > Cancel

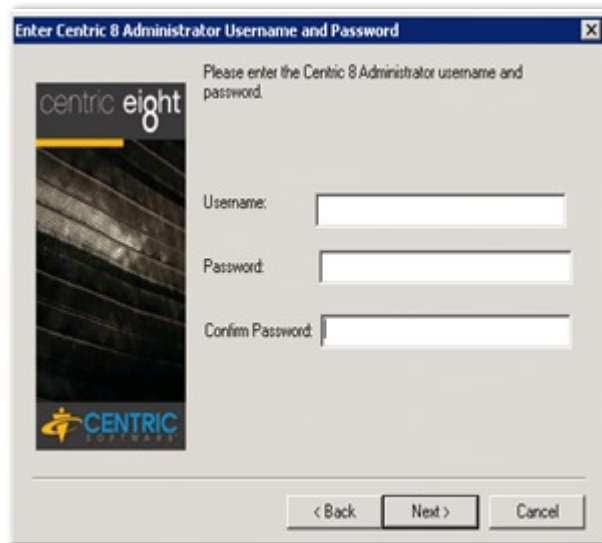
NOTE

If you are installing on a SQL Server instance, you must enter the SQL Server administrator user name and password to create tables and the database.

Database Authentication and Application Authentication

- Click on **Next**. The **Enter Centric 8 Administrator Username and Password** dialog box is displayed.

Figure 4-31: Enter Centric 8 Administrator Username and Password dialog box



Enter Centric 8 Administrator Username and Password

Please enter the Centric 8 Administrator username and password.

Username:

Password:


Confirm Password:

< Back Next > Cancel

- Enter details for the **Username**, **Password** and **Confirm Password** fields and click on **Next**. The **Enter Centric 8 Database Information** dialog box is displayed. Go to Step 18.



The Username and Password must not be identical. Use strong passwords for Centric 8 Administrator user (for example, include alphanumeric upper and lowercase letters, numbers, and symbols).



The following characters are not supported in csidba user password in Centric 8 installation: %, ^, &, *, O, "

Figure 4-32: Enter Centric 8 Database Information dialog box

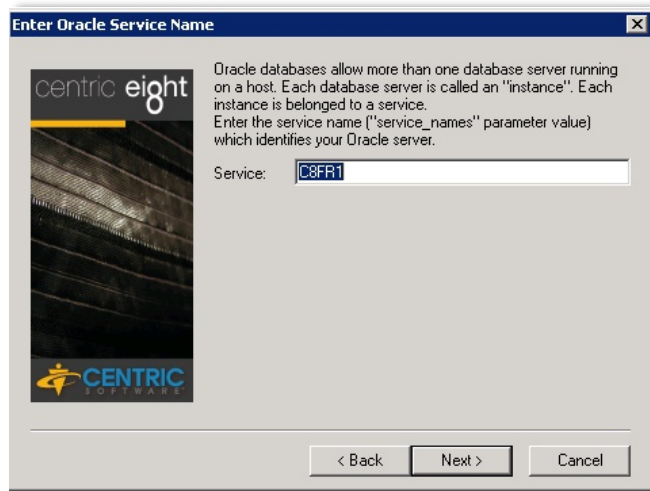
12. In the **Select Database Type** dialog box, click on the **Oracle** radio button and click on **Next**.

Figure 4-33: Select Database Type dialog box

13. The **Enter Oracle Service Name** dialog box is displayed.

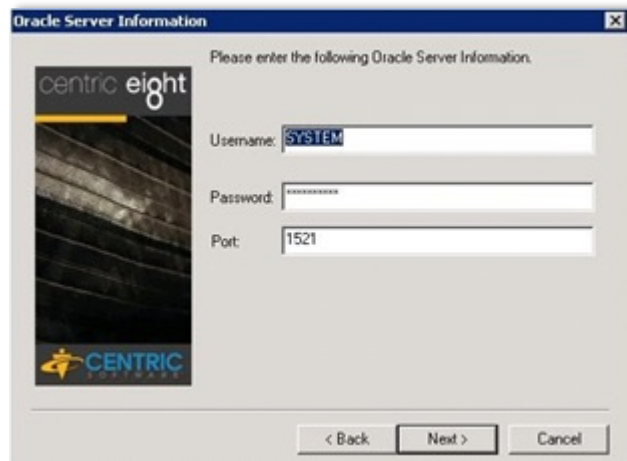
14. Enter Oracle Service name and click on **Next**.

Figure 4-34: Enter Service Name



15. The **Oracle Server Information** dialog box is displayed. Enter details for the Oracle **Server Username, Password** and **Port** and click on **Next**.

Figure 4-35: Oracle Server Information dialog box



16. Enter the server login and password details in the corresponding fields and click on **Next**. The **Enter Centric 8 Administrator Username and Password** dialog box is displayed.

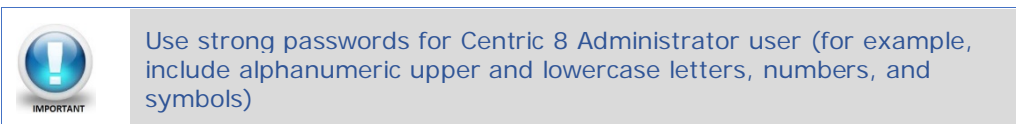


Figure 4-36: Enter Centric 8 Administrator Username and Password dialog box

17. Enter the username and password details in the corresponding fields and click on **Next**.

Figure 4-37: Enter Centric 8 Database Administrator Username and Password dialog box

18. Enter details in the **Password** and click on **Next**. The **Choose New or Existing Database** dialog box is displayed.

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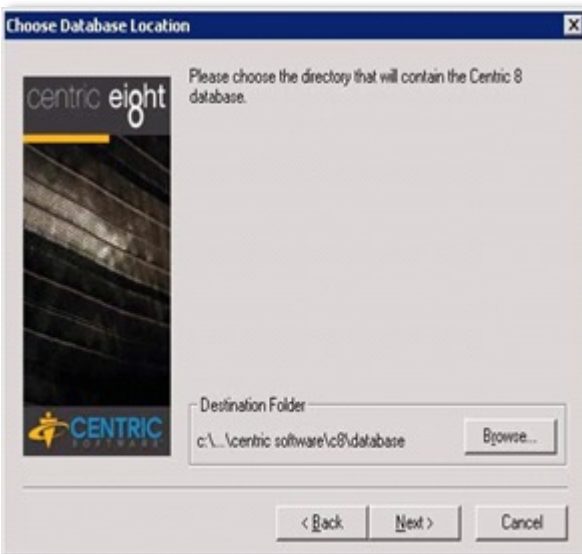
Create Database

19. Select the **Create New Database** radio button and click on **Next**. The **Choose Database Location** dialog box is displayed.

Figure 4-38: Choose New or Existing Database dialog box



Figure 4-39: Choose Database Location dialog box



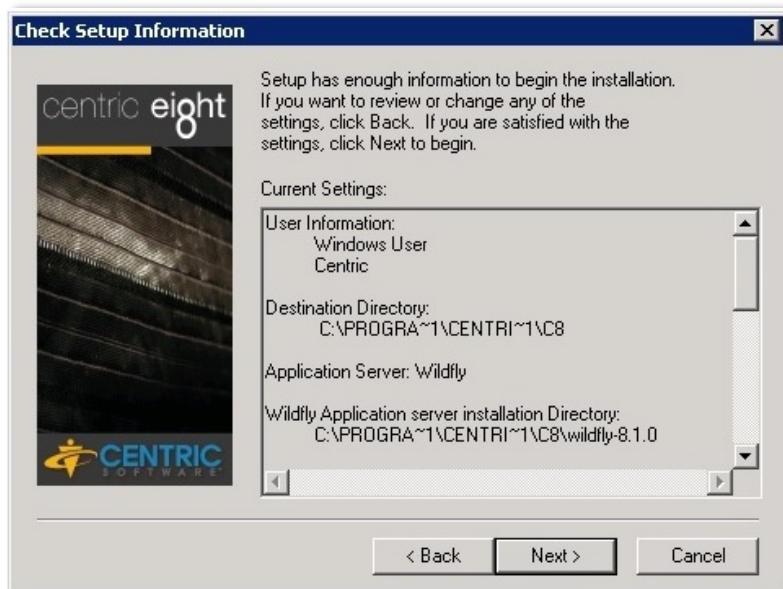
20. To accept the default destination folder, click on **Next** OR to select a different destination folder, click on **Browse** and select a destination folder. Click on **Next**. The **Select Program Folder** dialog box is displayed.

Figure 4-40: Select Program Folder dialog box



21. To use the default Program folder, click on **Next**. Else, select a new program folder from the list under **Existing Folders** and then click on **Next**. The **Check Setup Information** dialog box is displayed.

Figure 4-41: Check Setup Information dialog box



22. Verify the details under **Current Settings** section. To make changes to the current settings, click on **Back**. Else, to continue with the settings and begin the installation process, click on **Next**. Once the installation is completed, the **Setup Complete** dialog box is displayed.

Figure 4-42: Setup Complete dialog box



23. Click on **Finish**.

Move log file

If you have followed the Drive Structure as mentioned in the Pre-requisite section, you need to move the `C8_txlog.ldf` to `L:\SQLLOG`. To do this, go to step 24.

24. Stop Wildfly Services.

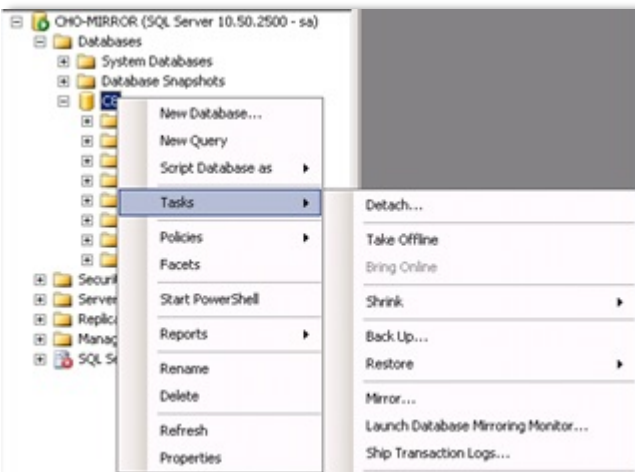
25. In the **Start** menu, click on **SQL Server Management Studio**. Enter details for the **Server name**, **User login Id** and **Password** fields. Then, click on **Connect**.

Figure 4-43: Connect to Server dialog box



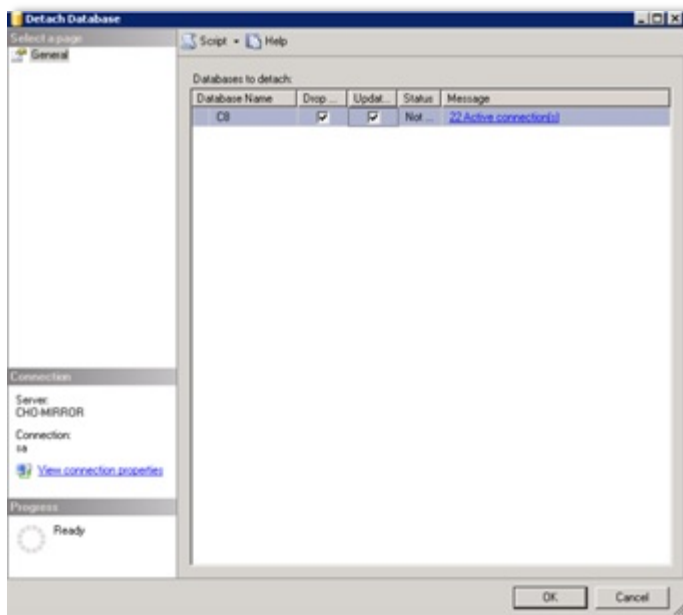
26. Right-click on the **C8 Database**. Select **Tasks** ▶ **Detach**.

Figure 4-44: Detach Database dialog box



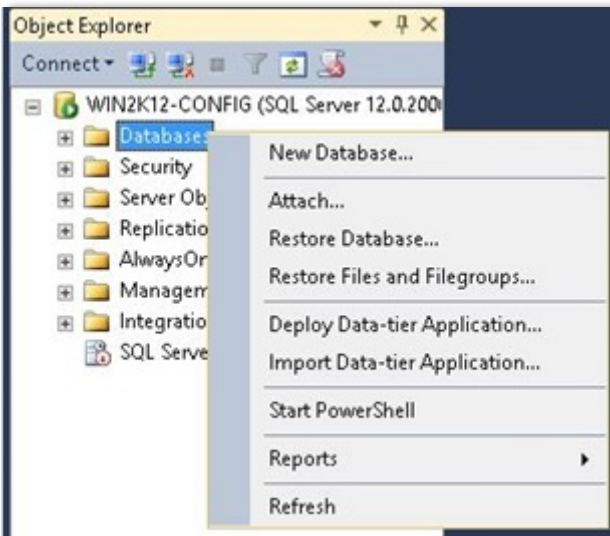
27. In the **Detach Database** dialog box, verify if the **Drop Connection** and **Update Attributes** check boxes are selected. Click on **OK**.

Figure 4-45: Detach Database dialog box



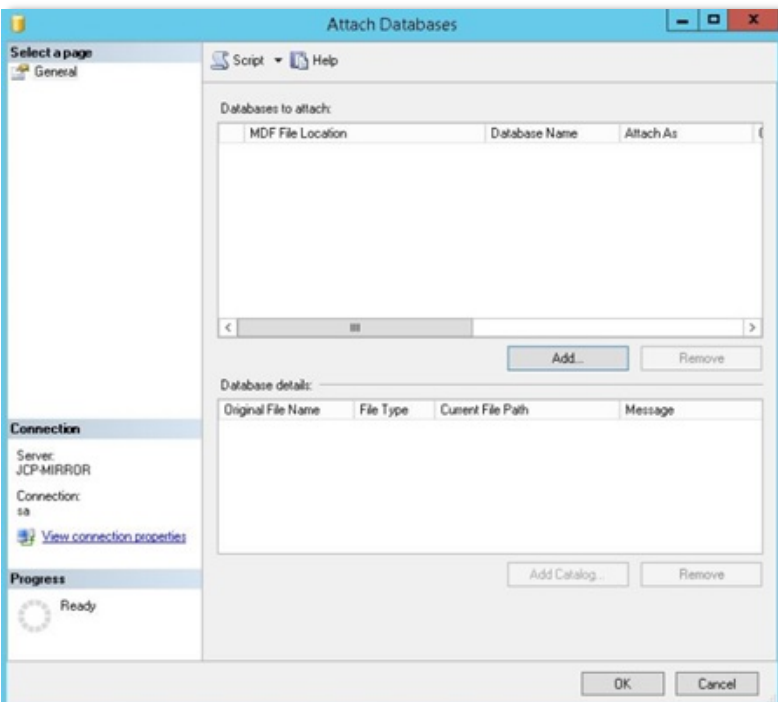
28. Once the databases are successfully detached, go to the D:\SQLDATA folder.
29. Cut C8_TXLOG.ldf file and paste it in L:\SQLLOG.
30. In the **Start** menu, click on **SQL Server Management Studio**. Enter details for the **Server name**, **User login Id** and **Password** fields. Then, click on **Connect**.
31. In the Explorer window, right-click on **Databases** and select **Attach**.

Figure 4-46: Explorer window

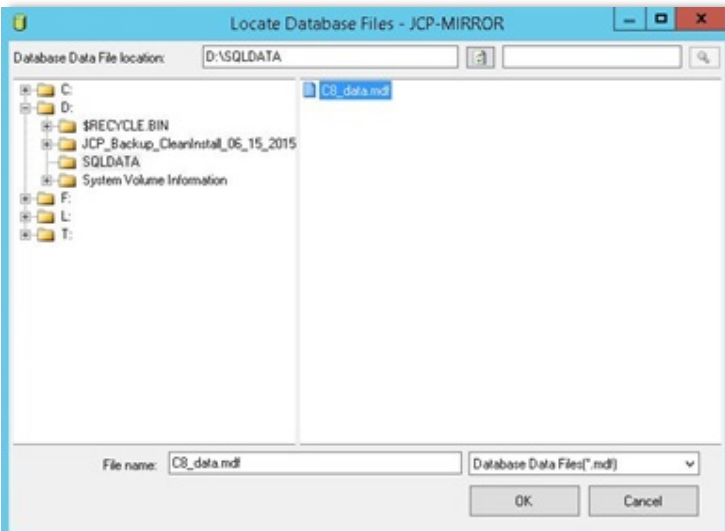


32. In the **Attach Databases** dialog box, click on the **Add** button.

Figure 4-47: Attach Database dialog box



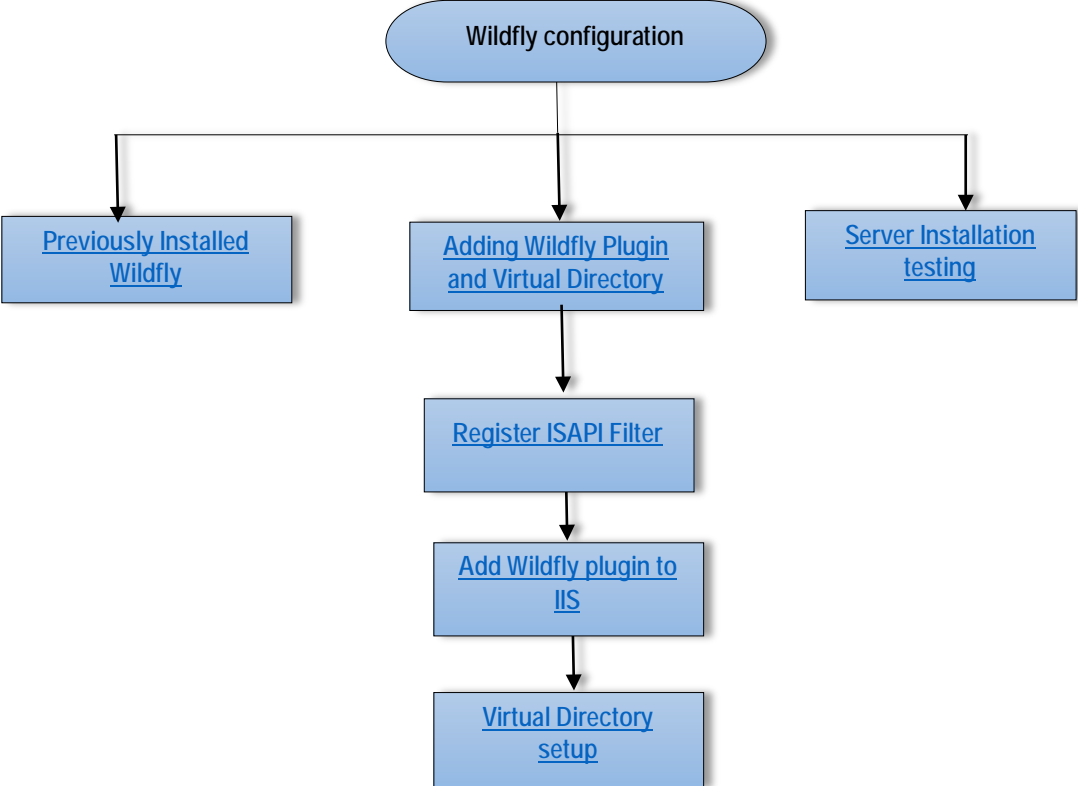
33. Select C8_data.mdf and click on **OK**.

Figure 4-48: Locate Database Files dialog box

You can now proceed to [Chapter 5 Configuration and Testing](#) to configure the database.

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5. CONFIGURATION AND TESTING



5.1 Configure Wildfly

Once you install the server software, you are ready to configure Wildfly for the server configuration.



If this is a fresh installation, you must complete all of the configuration steps in this section. However, if this is an upgrade you may proceed to [Server Installation Testing](#) on page 71.

For information about changing Wildfly memory usage, see [Appendix C, Wildfly Memory Usage](#) on page 189.

5.1.1 Previously Installed Wildfly

If you have previously installed and configured Wildfly to work with a Microsoft IIS Web Server, you must modify the configuration to work with the Centric 8 installation. Configure your Wildfly- IIS plug-in to handle the servlet context named: **csi-requesthandler**

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5.1.2 Adding the Wildfly Plug-In & Virtual Directory Set Up

After you install Wildfly using the Centric 8 installation, you must add a Wildfly ISAPI plug-in. This plug-in enables Wildfly to communicate with IIS, and enables request handling. Once you add the Wildfly plug-in, you must create a virtual directory for the Wildfly plug-in for the Microsoft IIS Web Server.

5.1.2.1 To register the ISAPI filter

1. In the Centric 8 directory, locate the file: `iis_redirect.reg`
`<Centric8InstallDirectory>\wildfly-8.1.0\bin\win32\i386\`
2. To register the ISAPI filter, double-click on the file.

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5.1.2.2 To add a Wildfly Plug-in (Microsoft IIS Web Server 7.0 and 8.0)

1. On the **Start** menu, select **Programs** ▶ **Administrative Tools** ▶ **Internet Information Services (IIS) Manager**.
2. Under **Connections**, expand the top-level server name, and then expand the **Web Sites** folder.
3. Click **Default Web Site**, and in the center pane under IIS, right-click on the **ISAPI Filters** and select **Open Feature**.
4. In the right pane under **Actions**, click on **Add**. The **Add ISAPI Filter** dialog box is displayed.
5. In the **Filter name** field, type *wildfly*.

6. Click on the **Browse** button and locate the ISAPI filter file `isapi_redirect.dll` located in
`<Centric8InstallDirectory>\wildfly-8.1.0\bin\win32\i386\`
7. Select the file. To close the **Add ISAPI Filter** dialog box, click on **OK**.

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5.1.2.3 Virtual Directory Set Up (Microsoft IIS Web Server 7.0 and 8.0)

1. On the **Start** menu, select **Programs ▶ Administrative ▶ Tools Internet Information Services (IIS) Manager**.
2. In the **Internet Information Services (IIS) Manager**, under the **Connections** section, right-click on **Default Web Site** and select **Add Virtual Directory**. The **Add Virtual Directory** dialog box displays.
3. In the **Add Virtual Directory** dialog box, type the alias name in the **Alias** field (case sensitive):

jakarta



In order for Centric 8 to function properly, the name of this virtual directory must be *jakarta*.

4. In the **Physical path** field, browse to and select the
`<Centric8InstallDirectory>\wildfly-8.1.0\bin\win32\i386` folder, and then click **OK**.
5. In the **Internet Information Services (IIS) Manager**, under **Connections**, expand the **Default Web Site** and click on **jakarta**.
6. In the center pane, under **IIS**, right-click on **Handler Mapping** and select **Open Feature**.
7. In the right pane under **Actions**, click on **Edit Feature Permissions**. The **Edit Feature Permissions** dialog box is displayed.
8. Select the **Execute** checkbox, and then click on **OK**.
9. In the **Internet Information Services (IIS) Manager**, under **Connections** section, right-click on **Default Web Site** and select **Add Virtual Directory**. The **Add Virtual Directory** dialog box is displayed.
10. In the **Add Virtual Directory** dialog box, type the alias name in the **Alias** field (case sensitive):
WebAccess
11. In the **Physical path** field, browse and select the `<Centric8InstallDirectory>\WebAccess` folder, and then click on **OK**.
12. In the **Internet Information Services (IIS) Manager**, under the **Connections** section, click on the top-level server name.
13. In the center pane, under **IIS**, right-click on **ISAPI and CGI Restrictions** and select **Open Feature**.

14. In the right pane, under **Actions**, click on **Add**. The **Add ISAPI or CGI Restriction** dialog box is displayed.
15. In the **ISAPI or CGI path** field, browse to
<Centric8InstallDirectory>\wildfly-8.1.0\bin\win32\i386 folder and select the file `isapi_redirect.dll`.
16. In the **Description** field, enter a description for the restrictions.
17. Select the **Allow extension path to execute** checkbox, and then click on **OK**.
18. In order for the changes to take effect, it is necessary to restart the Microsoft IIS Web Server. In the right pane, under **Manager Server**, click on **Restart**.

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5.1.3 Server Installation Testing

Use the following steps to test your server installation.

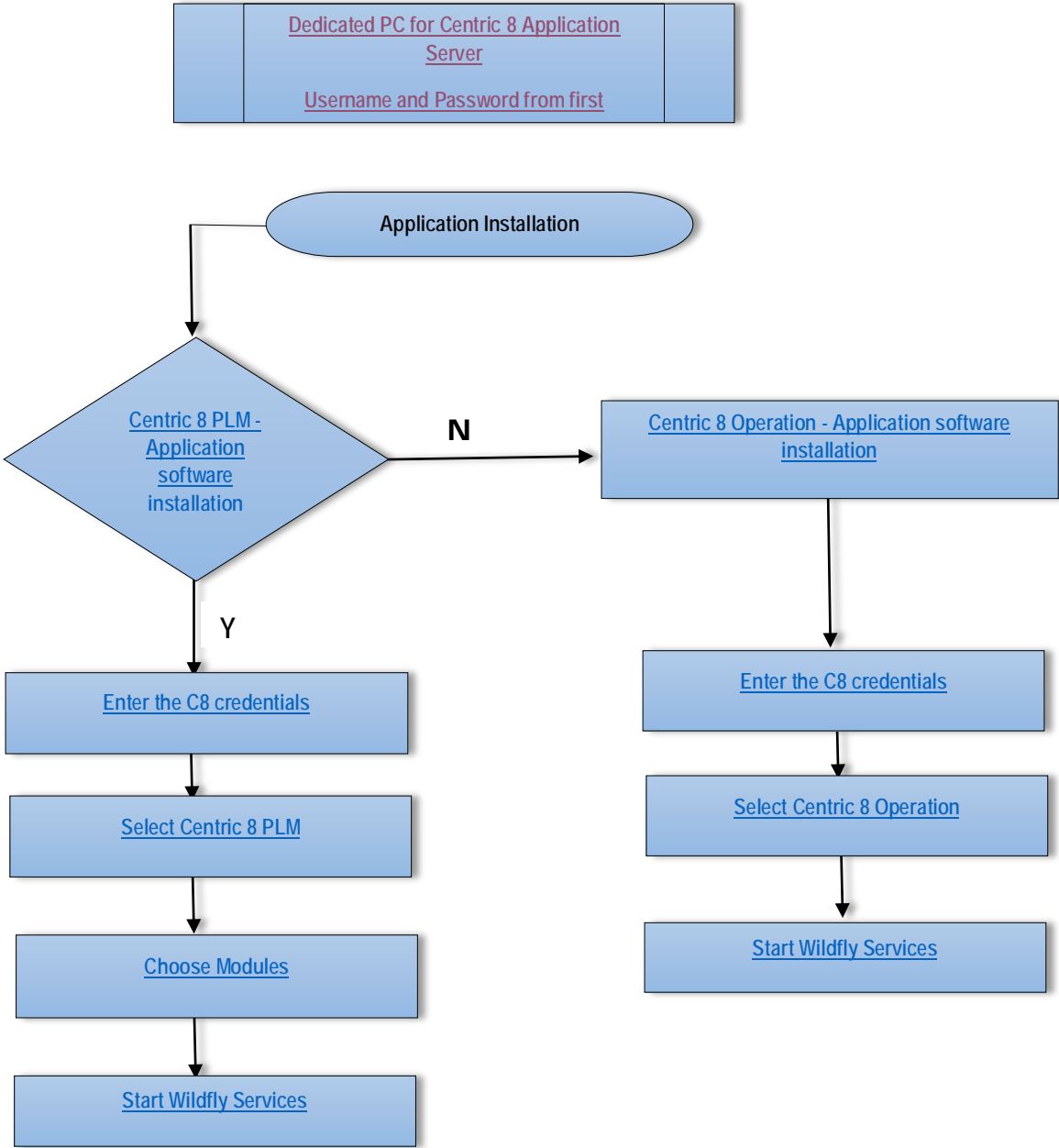


Use the **Options** menu on the **Security** tab to add the website as a trusted site in Internet Explorer.

1. Open **Internet Explorer**. On the **Tools** menu, click on **Internet Options**.
2. On the **General** tab, in the **Browsing History** section, select **Delete ▶ Delete files**.
3. In the **Delete Files** dialog box, click on **Yes** to clear the cache. Click on **Close**, and then click on **OK**. Close **Internet Explorer**.
4. On the **Start** menu, select **Programs ▶ Administrative Tools ▶ Services**.
5. In the **Services** window, right-click on **Centric Wildfly Service** and click on **Start**.
6. Once the service restarts, make sure that the login page is displayed by opening a browser window and logging into Centric 8.

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6. APPLICATION SOFTWARE INSTALLATION



6.1 Before Installing

Before you install the application software, verify the following:

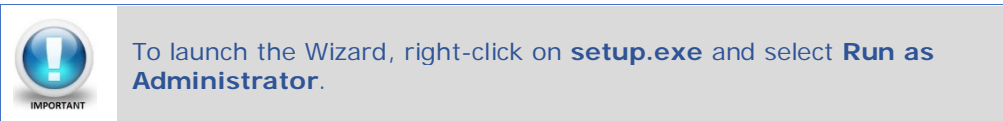
- You have a dedicated machine on which to install the Centric 8 Applications server
- Single or Dual Server software installation was successful (For more information, see [Single Server Installation](#) on page 9 and [Dual Server Installation](#) on page 10)
- For all future upgrades, use the username and password from the first installation.

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6.2 Centric 8 PLM Application Software Installation

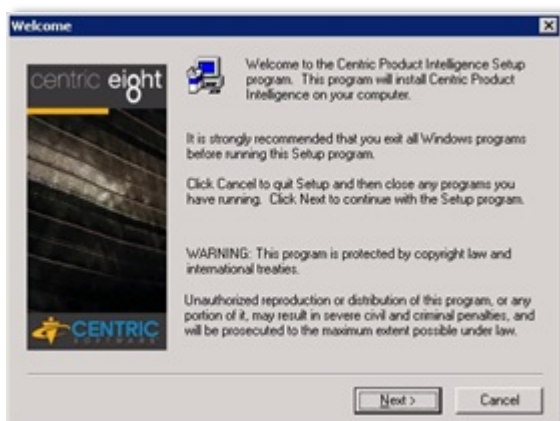
To install the application software, follow these steps:

1. Select your domain name and log into the domain as **Administrator**.
2. To verify that Wildfly is running, on the **Start** menu, select **Programs ▶ Administrative Tools ▶ Services**.
3. Close all Windows applications.
4. Copy the \\install\C8Applications directory to the server.



5. The **Welcome** dialog box is displayed as shown below.

Figure 6-1: Welcome dialog box



6. To begin the installation process, read the details on the **Welcome** dialog box and click on **Next**. The **End User License Agreement** dialog box is displayed.

Figure 6-2: End User License Agreement dialog box



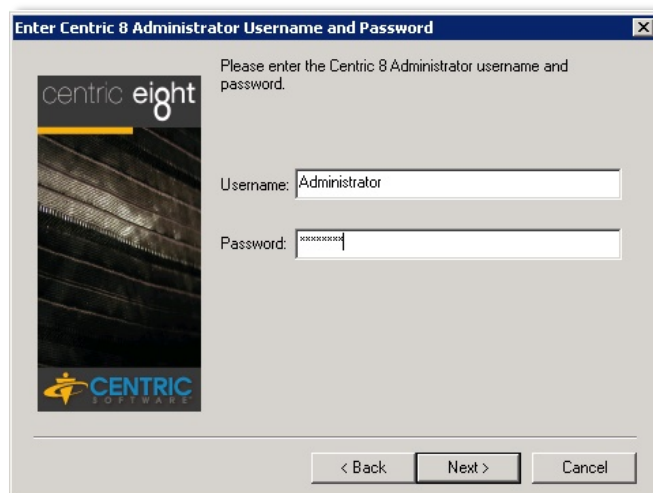
7. Read the license agreement, and click on **Yes** to accept the license agreement. The **Enter Centric 8 Administrator Username and Password** dialog box is displayed.

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Enter the credentials

8. Enter your administrator username and password in the corresponding **Username** and **Password** fields. Ensure that you use the same Username and Password used earlier (in Chapter 2 or Chapter 3). Click on **Next**. The **Choose Application** dialog box is displayed.

Figure 6-3: Enter Centric 8 Administrator Username and Password dialog box



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Select Application

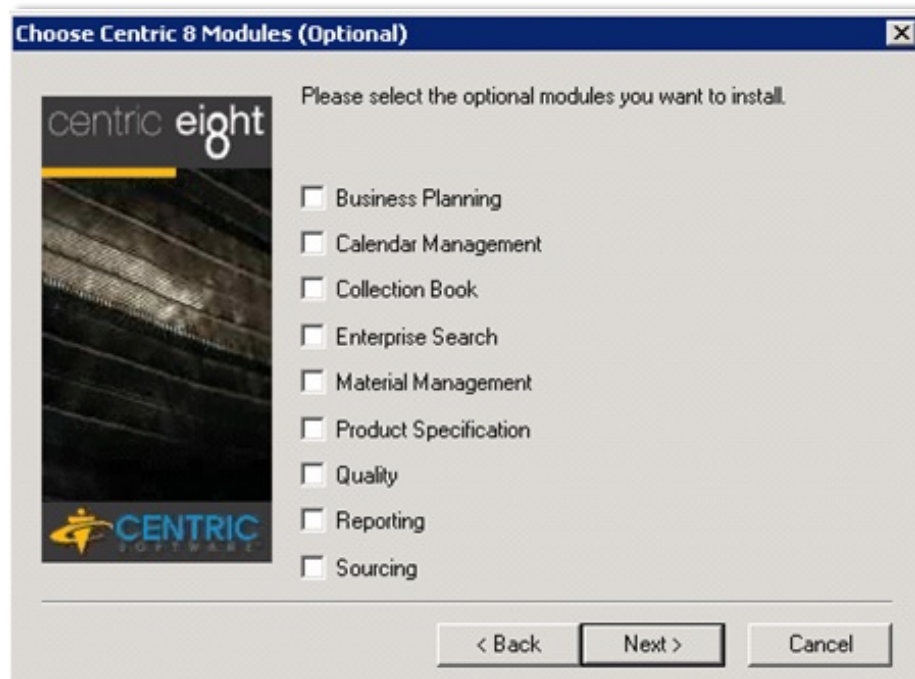
9. Select Centric 8 PLM, or select the desired configuration installation, and click on **Next**. If you select **Centric 8 PLM**, the **Choose Centric 8 Modules (Optional)** dialog box is displayed.

If you choose **Centric 8 Operations**, refer [Centric 8 PLM Application Software Installation](#) on page [73](#).

Figure 6-4: Choose Application dialog box



The following modules are available in Centric 8:

Figure 6-5: Centric 8 Modules

- **Business Planning**

Define currencies and exchange rates, configure business markets, formalization of planning buckets, linking to sourcing libraries for target and forecast buckets and plan by products (material or style).

- **Calendar Management**

Track Technical Data Sheets (TDS) as tracked activities, tracked PO, manage materials and material approval.

- **Collection Book**

This module contains details about a Product at the Marketing and Sales level. Use this module to set up data for a collection book iPad application. The module also acts as an interface to setup vendors and the sales division.

- **Enterprise Search**

This module employs advanced search tools that allow users to define search criteria in predefined search profiles. Users can search the Centric 8 product data using predefined search criteria or define a custom search profile.

- **Material Management**

Using this module, users can create materials that can be used throughout the system. This module can also be used to define libraries for creating logical groupings based on individual business needs.

- **Product Specification**

Define and deliver specification details and also create the season hierarchy capturing valuable ideas, comments and feedback.

- **Quality**

Using this module, users can define quality assurance testing methods, standards, procedures and expectations on Materials and Style Types defined in Centric 8.

- **Reporting**

Reports can be generated as per customer requirements. The output can be either in a PDF format, an Excel Sheet or a graphical representation.

- **Sourcing**

This module can be used to define supplier, factory and shipping details. The module also assists in improving supplier collaboration and performance tracking, fabric and color approval by supplier as well as sample and cost management - from product concept stage through final product delivery.

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Choose Modules

10. To select one or more of the optional modules, select the checkbox adjacent to the required module. Click on **Next**. For example, select the module **Enterprise Search**. The **Enter Centric Insight Information** dialog box is displayed; enter the Insight server information and click on **Next**.

Figure 6-6: Choose Centric 8 Modules (Optional)

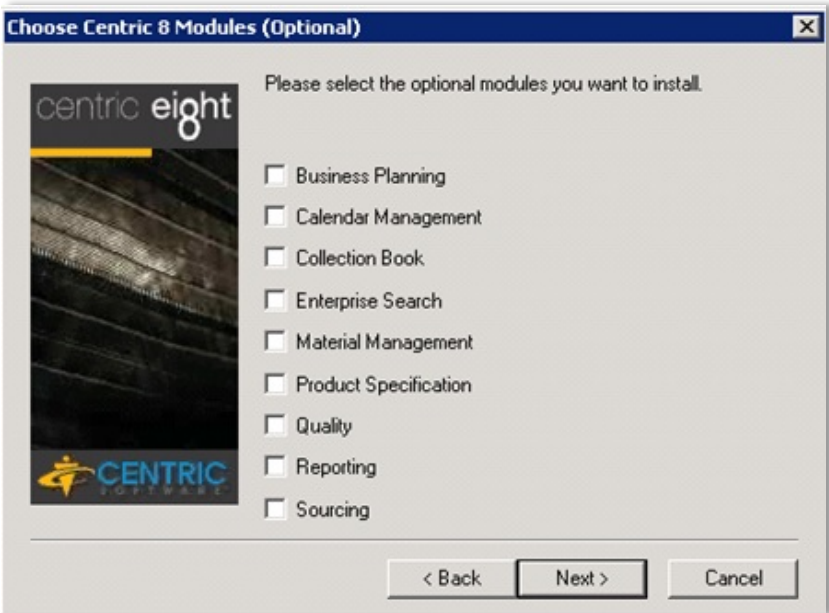


Figure 6-7: Enter Centric Insight Information dialog box



NOTE Verify that the Centric 8 Application Server and Centric Insight Server are in the same domain.

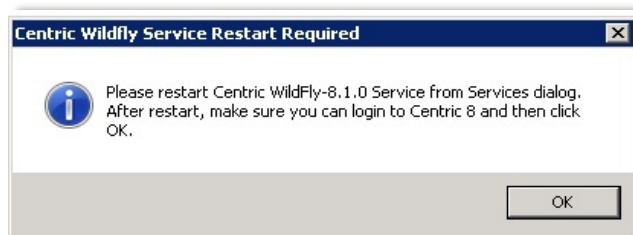
11. The **Check Setup Information** dialog box is displayed.

Figure 6-8: Check Setup Information dialog box



12. Verify the application and module settings under **Current Settings**. To change the current settings, click on the **Back** button. Else to continue with the current settings and begin the installation process, click on **Next**.
13. If you are installing Centric 8 PLM without adding any of the optional modules, proceed to step 17.
14. If one or more optional modules have been selected in the **Choose Centric 8 Modules (Optional)** dialog box,
 - The configuration files will be uploaded
 - The installer will stop the Wildfly service
 - Centric Wildfly Service Restart Required dialog box is displayed as shown below:

Figure 6-9: Centric Wildfly Service Restart Required dialog box



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Start Wildfly Services

15. To view the desktop, on your keyboard Press **Alt+Tab**. On the **Start** menu, select **Programs** ▶ **Administrative Tools** ▶ **Services**. In the **Services** window, right-click on the **Centric Wildfly Service** and select **Start**.
16. Once the service restarts, open a browser window and log into Centric 8, this is to verify successful install of the Centric 8 application. To log out of C8 click on **Sign Out**.

17. Press **Alt+Tab** to return to the installation. Else, to complete the installation, in the **Centric Wildfly Service Restart Required** dialog box, click on OK.
18. On completion of the installation process, the **Setup Complete** dialog box is displayed.

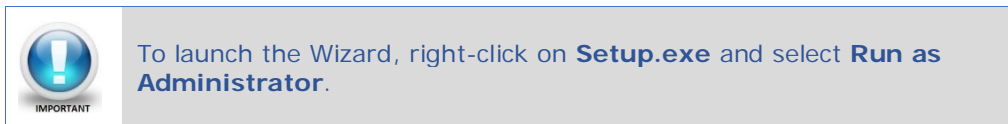
Figure 6-10: Setup Complete dialog box



19. To complete the installation process, click on **Finish**. To verify whether or not you can successfully log in to the application, use the following link: <http://localhost/webaccess>
20. You are now ready to log into Centric 8 and either configure the Centric 8 PLM OR install the Centric 8 PDF Server. For more information on installing the server, see [Appendix H, PDF Print Server](#) on page 229.

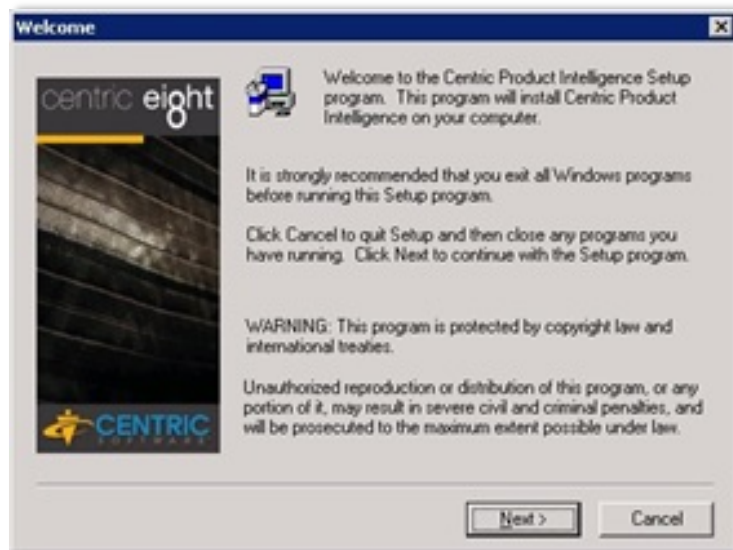
6.3 Centric 8 Operation Application Software Installation

1. To verify whether or not Wildfly is running, on the **Start** menu, select **Programs** ▶ **Administrative Tools** ▶ **Services**.
2. Select your domain name and log into the domain as **Administrator**.
3. Close all Windows applications.
4. Copy the `\\install\C8Applications` directory to the server.



5. The **Welcome** dialog box is displayed.

Figure 6-11: Welcome dialog box



6. Read the contents of the **Welcome** dialog box. To begin installation, click on **Next**. The **End User License Agreement** dialog box is displayed.

Figure 6-12: End User License Agreement dialog box



7. Read the license agreement. To accept the license agreement, click on **Yes**. The **Enter Centric 8 Administrator Username and Password** dialog box is displayed.

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Enter Centric 8 Credential

8. Enter your administrator username and password in the corresponding **Username** and **Password** fields. Ensure that you use the same Username and Password, used earlier in Chapter 2 and Chapter 3. Click on **Next**. The **Choose Application** dialog box is displayed.

Figure 6-13: Enter Centric 8 Administrator Username and Password dialog box



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Select Application

9. Select the **Centric 8 Operations** radio button and click on **Next**.

Figure 6-14: Choose Application dialog box



10. The **Check Setup Information** dialog box is displayed. Click on **Next**.

Figure 6-15: Check Setup Information dialog box



11. On completion of the upload process of configuration files, the installer stops the Wildfly service and the **Centric Wildfly Service Restart Required** dialog box is displayed as shown below:

Figure 6-16: Centric Wildfly Service Restart Required dialog box

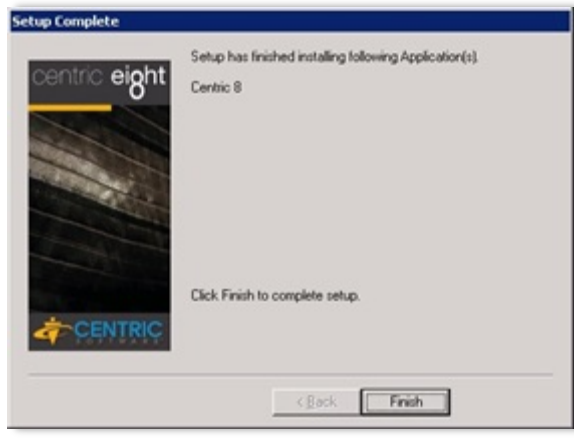


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Start Wildfly Services

12. Press **Alt+Tab** to view your desktop. On the **Start** menu, select **Programs ▶ Administrative Tools ▶ Services**. In the **Services** window, right-click on **Centric Wildfly Service** and select **Start**.
13. Make sure there is no error in the `PI_Centric.log` file. To complete the installation, in the **Centric Wildfly Service Restart Required** dialog box, click on **OK**.
14. Once the installation process is completed, the **Setup Complete** dialog box is displayed.

Figure 6-17: Setup Complete dialog box



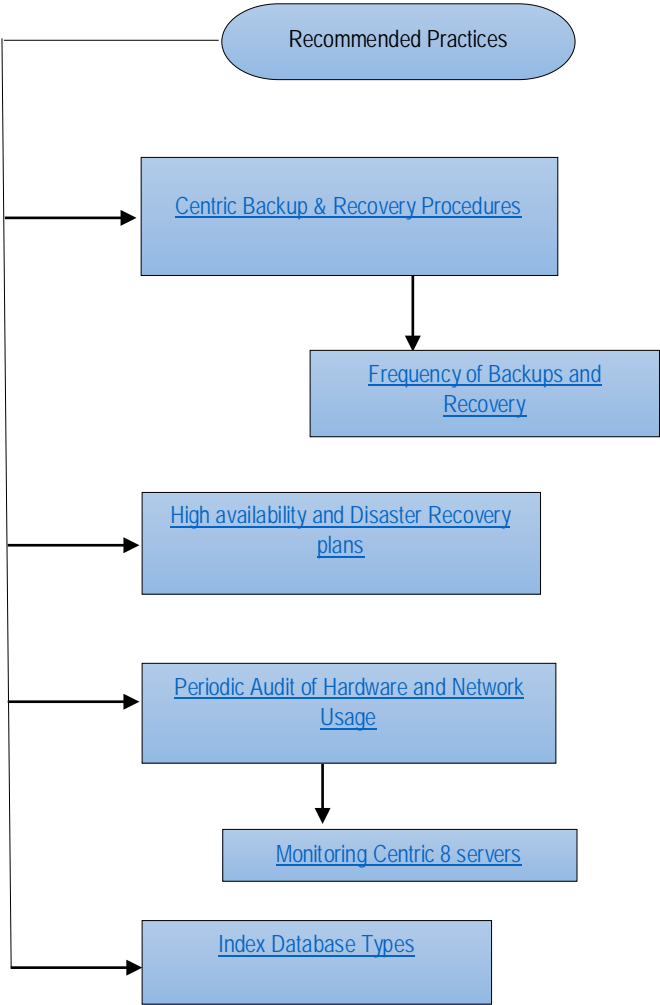
15. To complete the installation, click on **Finish**. To check if you can successfully log in to the application, use the following link: <http://localhost/webaccess>

PART III: BACKUP AND RESTORATION, UNINSTALLATION PROCEDURES

Included in Part III:

- [Chapter 07: Recommended Practices](#)
- [Chapter 08: Post Installation checklist](#)
- [Chapter 09: Backup Procedures for SQL Server](#)
- [Chapter 10: Restoration Procedures for SQL servers](#)
- [Chapter 11: Oracle DB Backup & Restore Procedure](#)
- [Chapter 12: Uninstall Centric 8](#)

7. RECOMMENDED PRACTICES



7.1 Centric 8 Backup and Recovery Procedures

Your Centric 8 database and FileVault contain all of your project data; backup your data on a regular basis to avoid data loss and to allow for data restoration and migration.

During the backup procedure, it is necessary to back up both the database and the FileVault. You can manually backup your database using the Microsoft SQL Server Management Studio.

The FileVault is a repository for all of the customer data. When you back up the FileVault, a backup of the directory sub-tree is created.

If the FileVault data is stored in multiple FileVault folders, backup all of the data into the same folder.

You can create scripts that allow you to automatically backup your database and FileVault. When you automate the backup process, use the following parameters:

- Set the backup process to run when no users are working in Centric 8
- You can back up the database and FileVault simultaneously

On completion of the backup procedure, run the restoration procedure to verify that the backup is successful.

For a successful restoration, verify that you have an original backup and that the SQL Server target instance and database used for restoration have the same collation as the source instance and database.

Restoration is possible for the following two conditions:

- **Restore Database on Same Server**

Means restoring on the same database on which Centric 8 is installed. For example, you have a Test Server and you wish to restore a previous backup of the Test Server database.

- **Restore Database on a Different Server**

Means restoring a database that is from a different server. For example, you have a Production Server and a Test Server, and you wish to update the Test Server with a database backup from the Production Server.

For detailed restoration steps, refer [Chapter 10: Restoration Procedures for SQL servers](#) on page 107.

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7.1.1 Frequency of Backups and Recovery

Depending on your IT failover and disaster policy, the following is recommended:

- Backup Centric 8 database and Filevault on daily and/or weekly basis.
- Full backup (Cold) of database and Filevault at non-business hours.
- Incremental backup (Hot) of database and Filevault on a daily basis.

- Do not put backups on same hard disk where database resides. Consider restoration time when scheduling backups.

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7.2 High Availability and Disaster Recovery Procedures

Based on Centric 8 usage, the Administrator can determine the tolerance / downtime for the PLM application. For high availability, Centric recommends the following:

1. Mirror SQL database

Setup SQL replication and mirror server such that when the SQL server is offline/not available, the mirror server can be online and available.

2. Create Failover instance for database

If the SQL cluster is in use, setup Failover instance for SQL so it can be brought in during down time.

3. Filevault in sync

Have a mirror server setup with Filevault backup either using DFS or manual copy of folders.


4. Application Failover

Setup a failover instance for the application, configure URL to point to a new server during down time.

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7.3 Periodic Audit of Hardware and Network Usage; Plan for Upgrade

Evaluate your database needs based on projected use, implementation, and integration of existing data. The Filevault expansion plan can be based on the projected image and document storage.

	<p>Based on your implementation, accumulation of log files, and projected image and document usage, your minimum requirements may vary.</p> <p>Work with Centric Software Client Services or Contact Centric Technical Support for specifications based on your disk space capacity needs.</p>
-------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Centric recommends that you evaluate the current Centric 8 data usage periodically, say every 6 months, and evaluate the projected use.

You may be adding more users to the system or adding modules for production use etc. Based on that, plan for upgrading hardware (adding more memory/upgrading CPU processors etc).

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7.3.1 Monitoring Centric 8 Servers

Following is a list of things that you (Customer IT) should monitor on Centric 8 Servers:

- **Disk usage**

Check for free space availability regularly to minimize interruption

- **CPU usage**

During peak usage of Centric 8, use monitoring tools such as Perfmon to monitor CPU usage, capture the results

- **Memory usage**

Ensure that sufficient memory is allocated for the App server (wildfly) and SQL database based on current usage in order to get optimal performance. Adjust the memory settings accordingly.

During peak load periods, monitor the PDF printing usage. Setup multiple PDF servers to distribute the load.

- Monitor Centric 8 log files (located in <C8 Install>\Log folder) and report them to the Technical Support Team
- Support if any errors found
- Monitor database performance by capturing SQL queries using SQL profiler tool and send us the trace files
- If your database server is hosting other databases, monitor database activity regularly and ensure that it does not interfere with Centric 8 database
- If the application server is hosted on a VM, monitor VM host server CPU and memory usage and adjust settings accordingly

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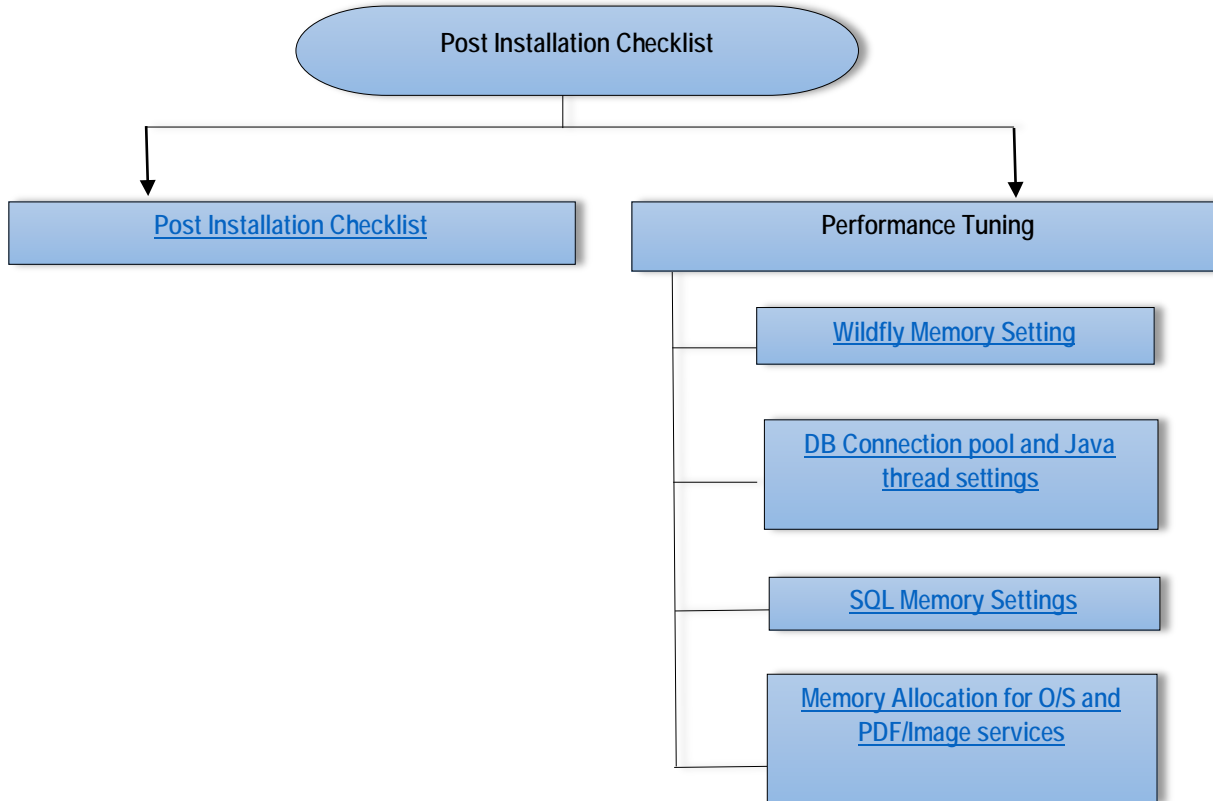
7.4 Index Database Tables

- Reindexing script is available in the Centric 8 installation path in the Database Scripts folder.
- Reindexing command: BATCH_RebuildAllIndexes.bat DBServerName sa sa_password CentricDBName.
 - Open Command prompt.
 - Navigate to Database scripts folder under C8 Installed directory.
 - Execute the Batch file BATCH_RebuildAllIndexes.bat DBServerName sa sa_password CentricDBName.



- Index Centric 8 database tables for improved performance.
- Re-index database tables weekly, process takes approximately 20 minutes.
- Schedule re-indexing time so as to least impact your business and IT processes; note that Centric 8 remains online during re-indexing but performance may be affected

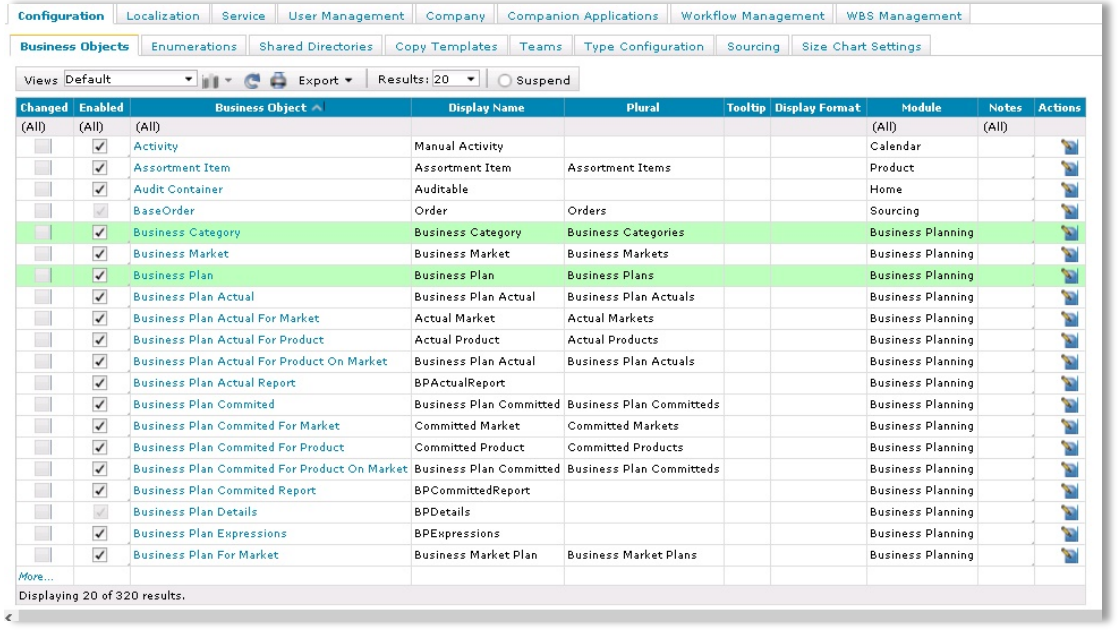
8. POST INSTALLATION CHECKLIST



8.1 Post Installation Checklist

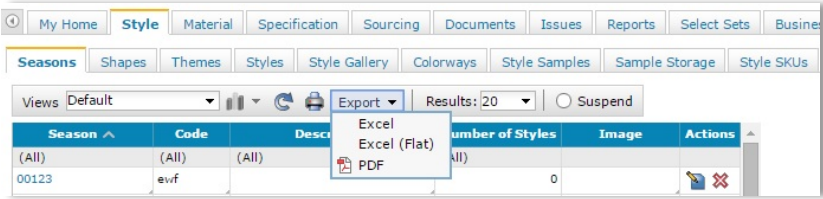
1. Make sure you are able to login to C8 application and verify that the display of the **Setup and Home** page is OK.

Figure 8-1: Centric 8 Setup Page



2. Verify whether or not you are able to print ad-hoc PDF.
 - To print ad-hoc PDF, navigate to **Home** ▶ **Style** ▶ **Season** tab. From the **Export** drop-down list, select PDF. Verify whether or not the Data Package prints is OK.

Figure 8-2: Export to PDF option



3. Ensure that the Image Service is working as expected and the images can be viewed when an AI file is added as a document.
 - To add an AI file as a document, navigate to **Home** ▶ **Documents** ▶ **Documents** tab.

Figure 8-3: Adding AI file on the Documents tab

Document	Latest Revision	Revision Description	Rev Created	File	Image	Images
(All)	(All)	(All)	(All)	(All)	(All)	(All)
AIArtboards.ai	1		1/7/16, 9:26 PM	AIArtboards.ai		
AILarge.ai	1		1/7/16, 9:26 PM	AILarge.ai		AILarge-0.png
JohnTaber001.ai	1		1/7/16, 9:29 PM	JohnTaber001.ai		JohnTaber001-0.png
TESTINGSASI.ai	1		1/7/16, 9:29 PM	TESTINGSASI.ai		TESTINGSASI-0.png

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Performance Tuning

1. Wildfly Memory Setting (standalone.conf.bat)

Adjust java memory based on available system memory and number of concurrent users.

- The default memory is 4GB (suitable for 20 users). You can increase 2GB memory for each additional user (up to 10 concurrent users)

For information about changing Wildfly memory usage, see [Appendix C, Wildfly Memory Usage](#) on page 189.

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2. DB connection pool and Java thread settings (standalone-pi*.xml)

Adjust max DB connection pool and max threads count based on number of active concurrent users.

- Search for max-connection pool string in standalone-pi*.xml file. The default pool size is 25. Increase it to number of active users count

```
<pool>
  <min-pool-size>2</min-pool-size>
  <max-pool-size>25</max-pool-size>
```

- Search for max-threads string in standalone-pi*.xml file. The default thread size is 50. Increase it to 10 less than max DB connection pool setting

```
<long-running-threads>
  <core-threads count="50"/>
  <queue-length count="50"/>
  <max-threads count="45"/>
  <keepalive-time time="10" unit="seconds"/>
```

- Increasing the db connection pool else the thread setting will increase Wildfly Java memory. Ensure that the system has enough memory available before making this change.

```
rem # JVM memory allocation pool parameters - modify as appropriate.  
set "JAVA_OPTS=-Xms512M -Xmx4096M -XX:MaxPermSize=512M"
```

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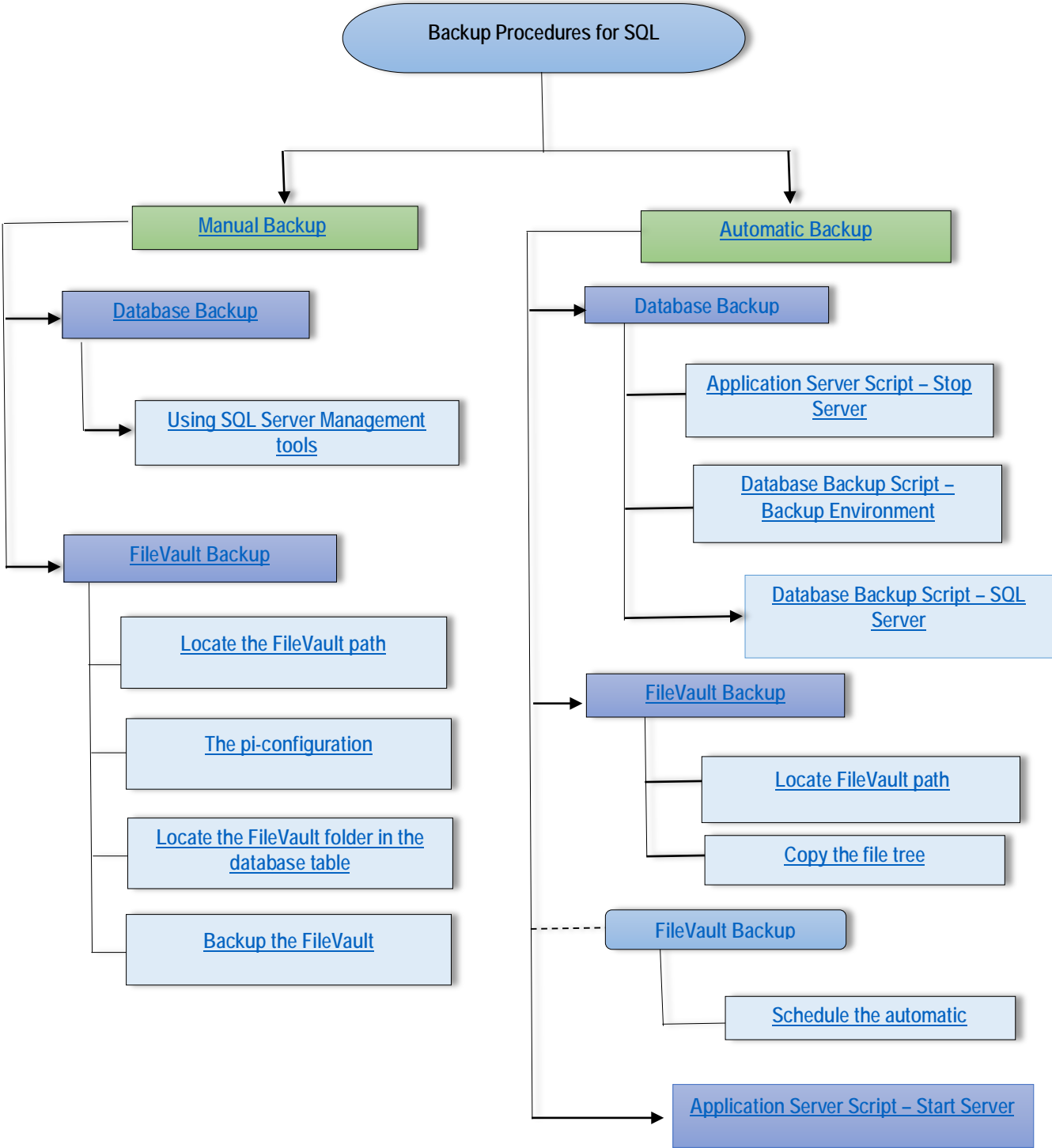
3. SQL Memory Setting (SQL management studio)

- Adjust the memory setting for the SQL instance based on Centric 8 database size
 - Based on the PLM usage and user activity, set maximum memory for SQL instance in **SQL management studio** on the **Instance properties** ▶ **Memory** tab
 - Ensure that the max memory setting is greater than the C8 database size

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4. Consider allocating 2GB for Operating system and 2GB for PDF/Image services.

9. BACKUP PROCEDURES FOR SQL SERVER



9.1 Backup

Your Centric 8 database and FileVault contain all of your project data; backup your data on a regular basis to avoid data loss and to allow for data restoration and migration.

During the backup procedure, ensure back up of both the database and the FileVault.

9.1.1 Manual Database Backup

You can manually backup your database using the Microsoft SQL Server Management Studio.

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9.1.2 Backup – Database Backup (SQL Server)

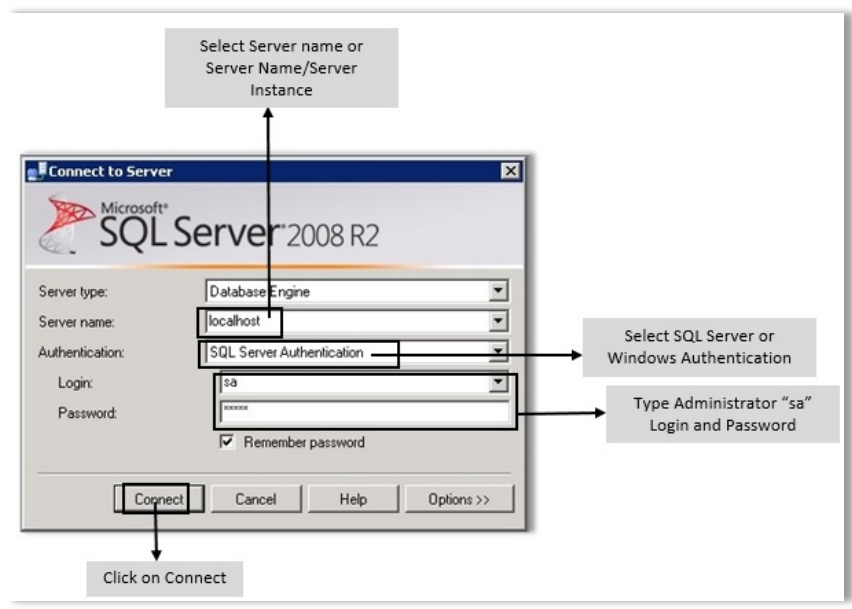
The **SQL Server Management Studio** is an integrated environment used for configuring, managing, administrating, and developing components of the SQL Server.

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9.1.2.1 Back up the database using the SQL Server Management Tools

1. Before taking a backup, ensure that the Wildfly Services are stopped. Else, the backup will fail.
2. On the **Start** menu, select **Programs ▶ Microsoft SQL Server 2008 R2 ▶ SQL Server Management Studio**. The **Connect to Server** dialog box is displayed.

Figure 9-1: Connect to Server dialog box



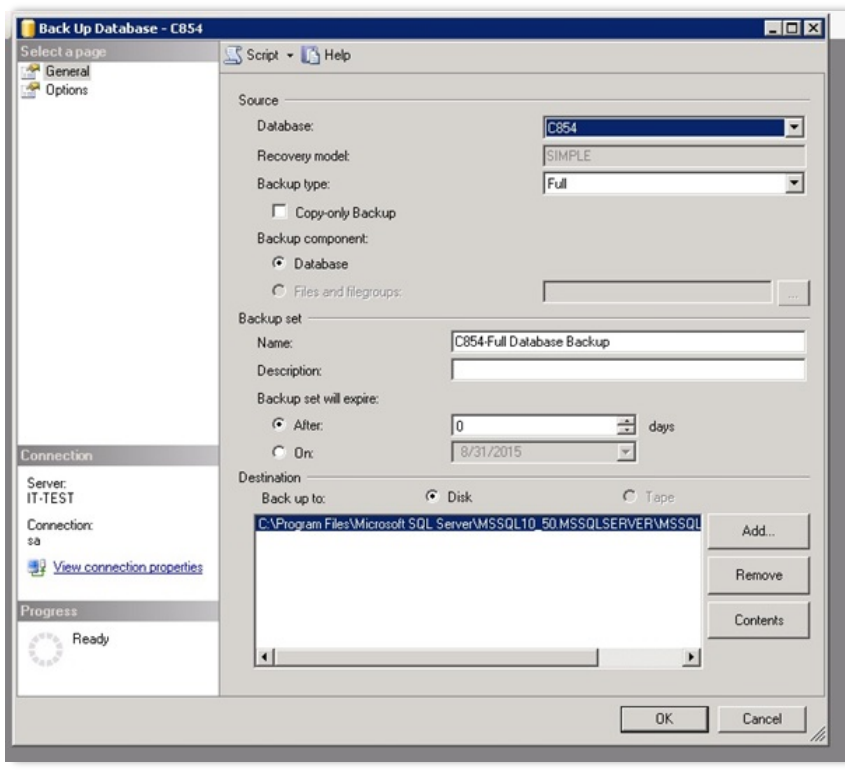
- On the **Server name** menu, select the **<server name>** to which you wish connect to the default instance OR select **<server name>\<instance name>** to select a named instance on the server.
- To use the database system administrator user name, 'sa', and the corresponding database system administrator password, on the **Authentication** menu, select **SQL Server Authentication**.

ELSE

If you have administrator rights on the server and wish to login using your user name and password, select **Windows Authentication**

- Click on **Connect**. The **Microsoft SQL Server Management Studio** window is displayed.
- In the **Object Explorer** pane, expand the server group, and then expand **Databases**.
- Under **Databases**, right-click on the **C854** database icon (or the database name specified in the `standalone-pi-mssql.xml` file), select **Tasks ▶ Back Up**.
- The **Back Up Database** dialog box is displayed. Under **Select a page**, click on **General**. The **General** dialog box is displayed in the right pane.

Figure 9-2: Back Up Database – C854 dialog box – General Page



- In the **Source** section, from the **Database** drop-down menu, select the database you wish to back up.
- From the **Backup** type drop-down menu, select **Full**.

11. In the **Backup set** ▶ **Backup set will expire**, click on the **After** radio button and select **0** days.

NOTE

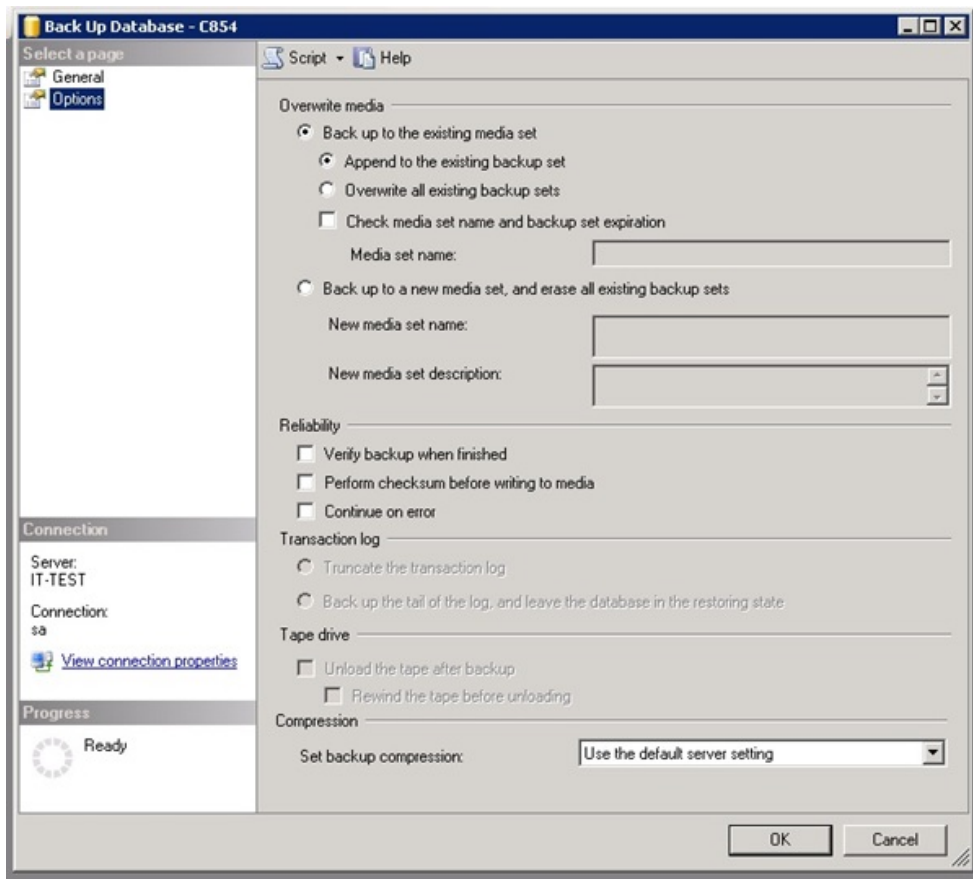
It is necessary to select **After** in the Backup set will expire option, and set the field value to **0**. Else the backup file is rendered useless after a given delay or date.

12. Under **Destination**, the **Back up to** window displays the last location used to generate the backup file.

13. Click on **Disk**. To add a new destination file, click on **Add OR** to remove the currently selected destination, click on **Remove**. Additionally, you can click **Contents** to view the media set (device) location.

14. Under **Select a page**, click on **Options**. The **Options** dialog box is displayed in the right pane.

Figure 9-3: Back up Database – C854 dialog box – Options Page



15. Under **Overwrite media**, click on the **Back up to the existing media set** and then click on one of the following options:

- a. **Append to the existing backup set:** Adds a new set of data to the media set; the new set of data is added as a new backup set inside the original backup. During restoration, this selection allows you to select which back up to restore.
- b. **Overwrite all existing backup sets:** Overwrites all data with the current media set contents.



To eliminate duplication and reduce the file size, Centric Software recommends selecting **Overwrite all existing backup sets** option.

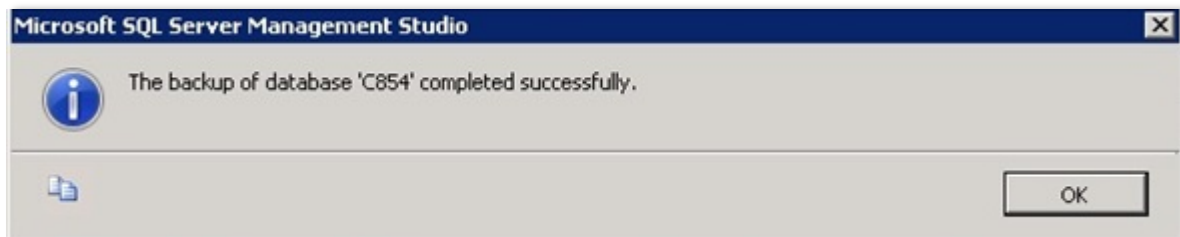
16. To safeguard the backup media from accidental overwrite, select **Check media set name** and **backup set expiration**. Type the name of the media to be used for the backup operation in the **Media set name** field OR leave the field blank to specify that the system check only the backup set expiration.
17. For backup completion verification, under the **Reliability** section, click on **Verify backup when finished**.



Under the compression section, choose **compression backup**

18. Click on **OK**. Allow the database backup to progress; depending on the database size and the installation server capacity, the backup process takes from a few seconds to a few minutes. Once the backup process is completed, the following confirmation message is displayed:

Figure 9-4: Successful backup confirmation message



19. Click on **OK**, and then close the **SQL Server Management Studio** window.

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9.1.3 Backup – FileVault

The FileVault is a repository of all customer data. When you back up the FileVault, you create a backup of the directory sub-tree.



If your FileVault data is stored in multiple FileVault folders, backup all of the data into the same folder.

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9.1.3.1 Locate the FileVault path

1. Locate the FileVault installation folder.

For example: C:\Program Files\Centric Software\C8.

If you do not know the location of the FileVault folder, you can locate the folder in one of two ways:

- Search the file: `pi-configuration.properties` OR
- Review the database table

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9.1.3.2 Search the `pi-configuration.properties` file

1. Open the file `pi-configuration.properties` in Notepad. The file is located in your Centric 8 program folder on your system:

```
<Centric8InstallDirectory>\Centric 8\wildfly-8.1.0\Standalone\configuration
```

2. Search for the following string:

```
'com.centricsoftware.server.FilePublisher.CENTRIC_FILE_VAULT.VaultFolder'
```

3. The FileVault folder location appears at the end of this line of code, for example:

```
= C:\PROGRAM~1\CENTRI~1\Centric 8\FileVault
```

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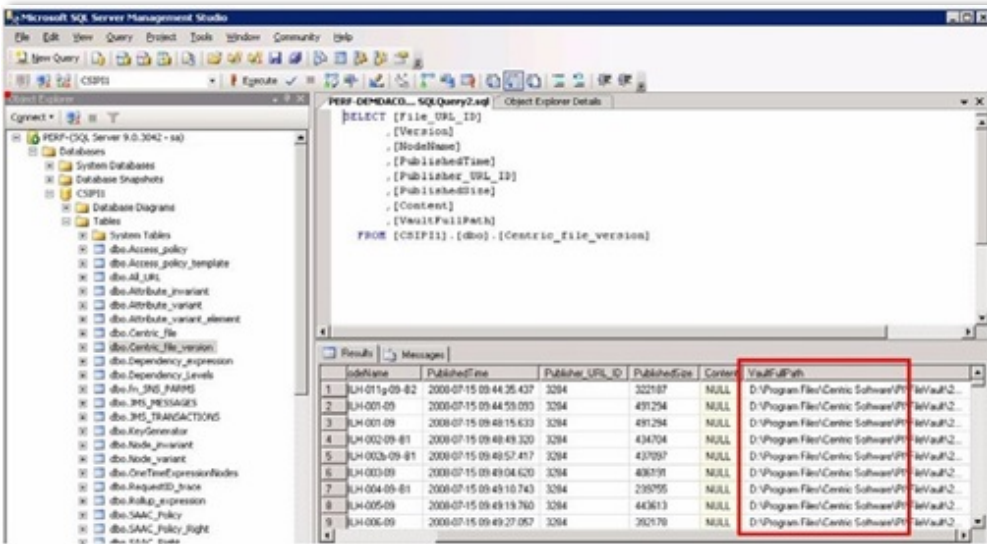
9.1.3.3 Locate the FileVault folder in the database table

1. In the SQL Server Management Studio dialog box, create a new query on the database.
2. Enter the following code in the query window:

```
SELECT  [File_URL_ID]
        , [Version]
        , [NodeName]
        , [PublishedTime]
        , [Publisher_URL_ID]
        , [PublishedSize]
        , [Content]
        , [VaultFullPath]
FROM    [Database Name].[dbo].[Centric_file_version]
```

3. Click on **Execute**.
4. The FileVault folder location is displayed in the **VaultFullPath** column in the **Result** pane.

Figure 9-5: FileVault folder location



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9.1.3.4 Backup the FileVault

If you have multiple FileVault folders, be sure to backup all the folders.

1. On the system where Centric 8 is installed, open Windows Explorer.
2. Make a copy of the FileVault sub-tree structure, and paste the **FileVault** data into a backup folder location.

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9.2 Automatic Database Backup

You can create scripts that allow you to automatically backup your database and FileVault. When you automate the backup process, use the following parameters:

- Set the backup process to run when no users are working in Centric 8
- You can back up the database and FileVault simultaneously

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9.2.1 Application Server Script – Stop Server

Once the backup process is completed, create two batch (**.bat**) files. One of the **.bat** files is used to stop the application and the application server. The other **.bat** file is used to restart the application and application server.



After the application server stops, allow the stop service scripts to conclude before continuing with the backup; this allows asynchronous activities to come to a complete stop on the application server.

9.2.1.1 Stop the application server

1. Create a batch file with the name: `StopPIApparel.bat`.
2. In the batch file, add the following command:

```
net stop <service name>
```

Where `<service name>` represents the default **Centric Wildfly Service**, for example,

```
net stop 'Centric Wildfly-8.1.0 Service'
```

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9.2.2 Database Backup Script – Backup Environment

Create a batch file to set the backup environment and execute an SQL Server script.

9.2.2.1 Set the backup environment and execute the SQL Server script

1. Create a batch file called `BackupCentricCSIPI1DataBase.bat`.
2. Add the following script to the batch file to set the environment, and to execute the SQL Server script:

```
echo on
echo *****
echo *** Centric 8 Database Backup Start ***
echo *****
sqlcmd -U <admin login> -P "<admin password>" -S <database server>
-d <database name> -i "<backup sql script path>"
echo ***** echo
*** Centric 8 Database Backup End ***
echo *****
pause
```

Where the following is true:

- `<admin login>` is the system administrator login (for example, sa)
- `<admin password>` is the corresponding password
- `<database server>` is the database server name or IP address
- `<database name>` is the name of the Centric 8 database; the default name is CSIPI1
- `<backup sql script path>` is the full path to the SQL Server script that is to follow

For example:

```

echo on
echo *****
echo *** Centric 8 Database Backup Start ***
echo *****
sqlcmd -U sa -P "123!abc" -S DBServer -d DBPLM -i"E:\PLMBackup.sql"
echo *****
echo *** Centric 8 Database Backup End ***
echo *****
pause

```

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9.2.3 Database Backup Script – SQL Server Script

Create a batch file to back up the database.

9.2.3.1 Create the SQL Server script

1. Create a batch file called **DatabaseBackup.sql**.
2. Create the following script to automatically back up the database after setting the environment with the following file:

BackupCentricCSIP11DataBase.bat

```

BACKUP DATABASE [<database name>] TO      DISK = N'<backup path>\<database
name>.bak' WITH NOFORMAT, INIT,          NAME = 'Not <database name>-Complete database
maintenance', SKIP, NOREWIND, NOUNLOAD,  STATS = 10
GO

```

Where the following is true:

- *<database name>* is the name of Centric 8 database; the default value is CSIP11
- *<backup path>* is the full path to the backup directory; the database backup is then included in the .bak file

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9.2.4 FileVault Backup Scripts (Application Server) – Copy File Tree Script

On the application server, back up the FileVault and create a batch file to copy the file subtree.

9.2.4.1 Locate the FileVault path

1. Search the pi-configuration.properties file for the FileVault location:
 - a. Open the file pi-configuration.properties in Notepad.
 - b. Search for the string:


```
'com.centricsoftware.server.FilePublisher.CENTRIC_FILE_VAULT.VaultFolder'
```
2. The FileVault folder location appears at the end of this line of code, for example


```
C:\PROGRAM~1\CENTRI~1\Centric8\FileVault
```

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9.2.4.2 Copy the file tree

1. Create a batch file on the application server called BackupCentricFileVault.bat.
2. Add the following script to the file:

```
set dir_name=FileVaultBackup_%DATE:~7,2%_%DATE:~4,2%
md <backup path>\%dir_name%
xcopy /S <file vault location> <backup path>\%dir_name%
```

Where the following is true:

- `dir_name` is any FileVault in a directory matching the backup day
- `<file vault location>` is the full path to the FileVault folder
- `<backup path>` is the full path to the backup directory

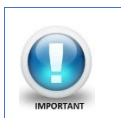


Always back up the database and FileVault in the same session. If you have multiple FileVault folders, use this script to back up all FileVault folders.

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9.2.5 FileVault Backup Scripts (Application Server) – Scheduled

The Microsoft Windows integrated backup tool allows you to schedule FileVault backup by calling the **BackupCentricFileVault.bat** file.



You can use the Scheduled Tasks window to automatically backup the database.

9.2.5.1 Schedule the automatic backup

1. On the **Start** menu, click on **Control Panel**.
2. In the **Control Panel** window, double-click on **Scheduled Tasks**.
3. In the **Scheduled Tasks** window, click on **Add Scheduled Task**. The **Scheduled Task Wizard** is displayed. Click on **Next**.

Figure 9-6: Scheduled Task Wizard (1) dialog box



4. Click on **Browse** to locate and select your FileVault batch file BackupCentricFileVault.bat. Click on **Next**.

Figure 9-7: Scheduled Task Wizard (2) dialog box



5. Enter a name for the task. To set the backup to run daily, click on the **Daily** radio button and then click on **Next**.

Figure 9-8: Scheduled Task Wizard (3) dialog box



6. In the **Start time** field, select a start time. Under **Perform this task:**, click on the **Every Day** radio button. In the **Start date:** field, select the start date. Click on **Next**.

Figure 9-9: Scheduled Task Wizard (4) dialog box



7. Enter details in the **Enter the user name**, **Enter the password** and **Confirm Password** fields.



To modify your scheduled task setup:

- On the **Start** menu, click on **Control Panel**.
- In the **Control Panel** window, double-click on **Scheduled Tasks**.
- In the **Scheduled Tasks** window, right-click on your scheduled task and select **Properties**. Modify your scheduled task as necessary. To save changes, in the **Properties** dialog box, click on **OK**.

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9.2.6 Application Server Script – Start Server

On completion of the backup procedure, restart the application server.

9.2.6.1 Start the application server

1. Create a batch (.bat) file named **StartPIApparel.bat**.
2. In the batch file, add the following command:

```
net start <service name>
```

Where <service name> represents the default **Centric Wildfly Service**, for example,

```
net start 'Centric Wildfly-8.1.0 Service'
```

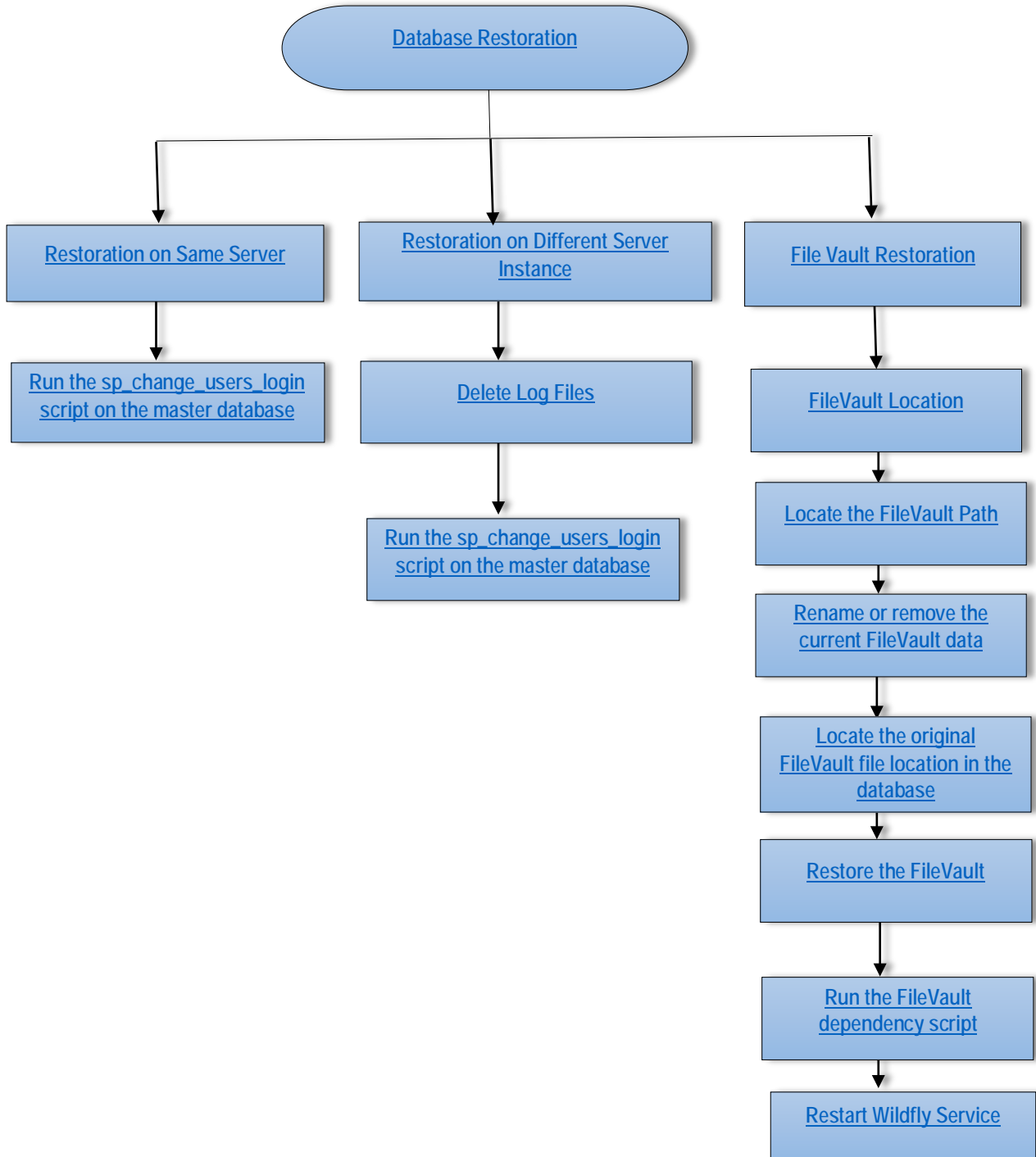
3. On completion of the backup procedure, restart the system by running the `StartPIApparel.bat` file.



To verify that the backup is successful, run the restoration procedure. For more information, refer [RESTORATION PROCEDURES FOR SQL SERVERS](#) on page 107.

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10. RESTORATION PROCEDURES FOR SQL SERVERS



10.1 Database Restoration

For a successful restoration, always back up the database and FileVault using the procedures described in the section [“Backup”](#) on page 95. Verify that you have an original backup and that the SQL Server target instance and database used for restoration have the same collation as the source instance and database.

1. Restore Database on Same Server

If you are restoring on the same database on which Centric 8 is installed, for example, you have a Test Server and you wish to restore a previous backup of the Test Server database, use the steps provided in the section [Centric 8 Backup and Recovery Procedures](#) on page 87.

2. Restore Database on a Different Server

If you are restoring a database that is from a different server, for example, you have a Production Server and a Test Server, and you wish to update the Test Server with a database backup from the Production Server, follow the steps in [Centric 8 Backup and Recovery Procedures](#) on page 87 and then use the steps in [Database Restoration: Different Server Instance](#) on page 113 to complete the restoration.

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Ensure that the same C8 software is installed and working.

10.2 Restore the Database

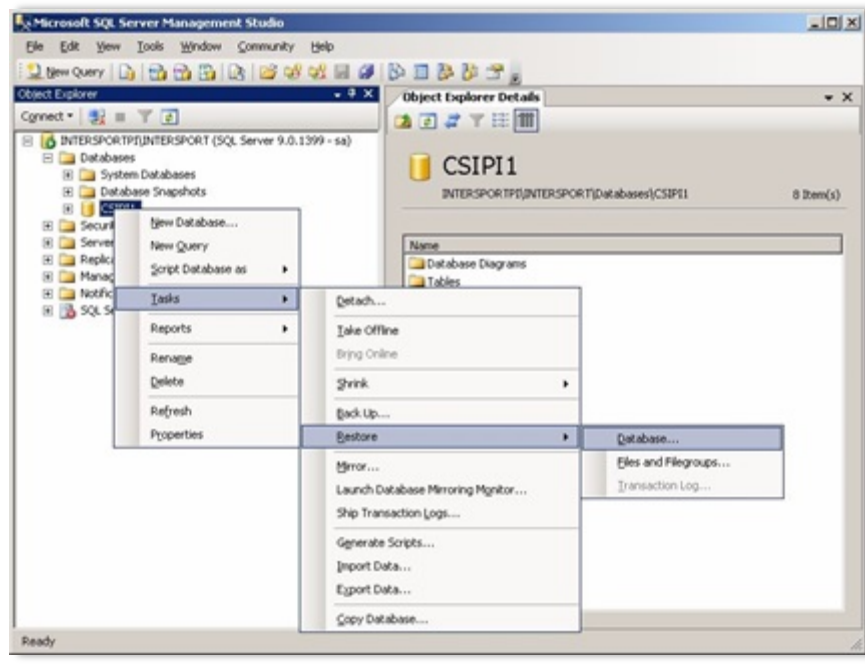
To restore the database:

1. In the **Services** window, right-click on **Centric Wildfly Service**, and select **Stop**.
2. On the **Start** menu, select **Programs ▶ Microsoft SQL Server ▶ SQL Server Management Studio**. The **Connect to Server** dialog box is displayed.
3. Log into the database server. The **SQL Server Management Studio** window is displayed.
4. In the **Object Explorer** pane, expand the server group, and then expand **Databases**.
5. Under **Databases**, right-click on the database and select **Tasks ▶ Restore ▶ Database**.



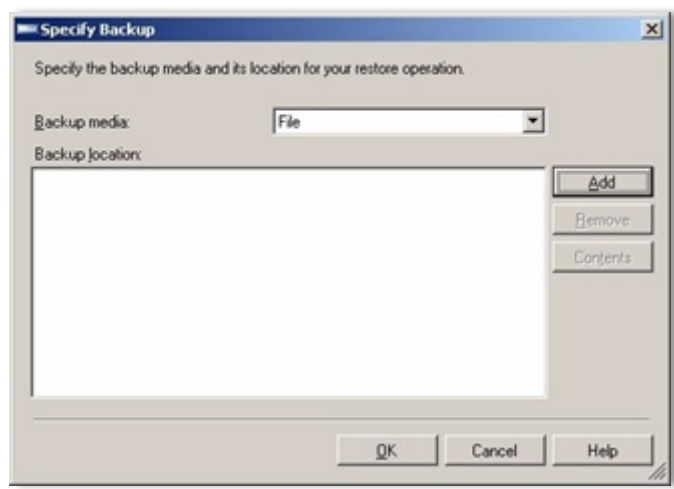
To verify the database name, refer the [standalone-pi.xml](#) file.

Figure 10-1: Microsoft SQL Server Management Module dialog box

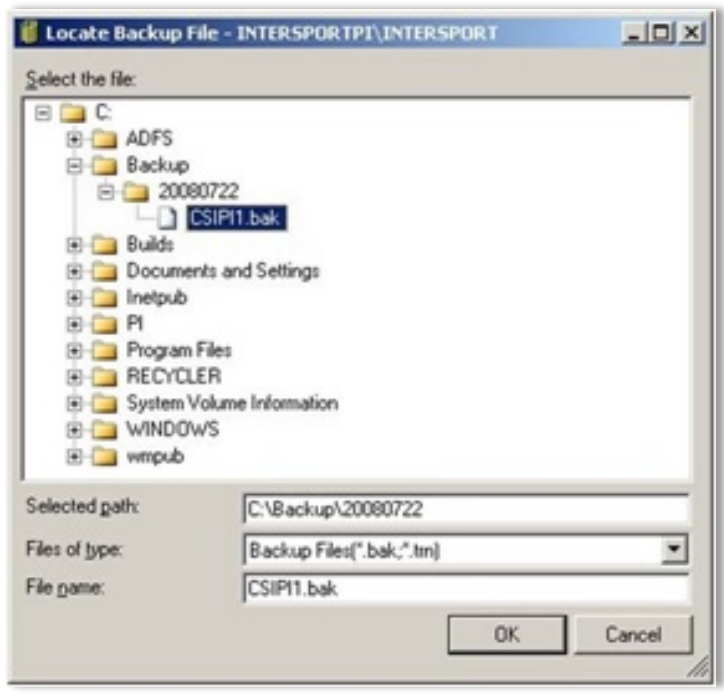


6. The **Restore Database** window appears.
7. In the **General** page, under **Destination for restore**, verify that the database name is the database name specified in the `standalone-pi-mssql.xml` file.
8. Under **Source for restore**, click **From device** and select **Browse**. The **Specify Backup** dialog box is displayed.

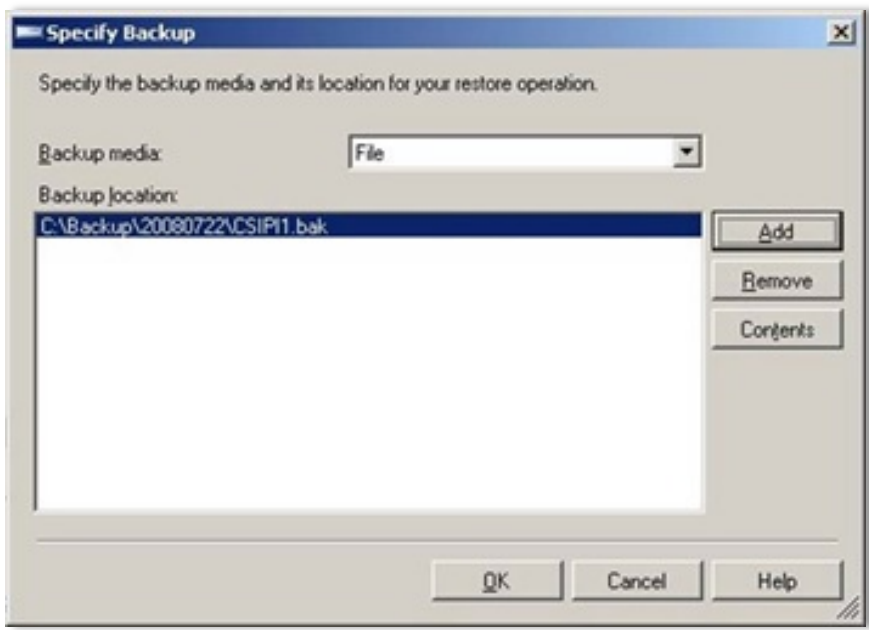
Figure 10-2: Specify Backup dialog box



9. In the **Specify Backup** dialog box, click on **Add**. The **Locate Backup File** dialog box appears.
10. In the **Locate Backup File** dialog box, locate and select the desired restoration file of type `.bak`.

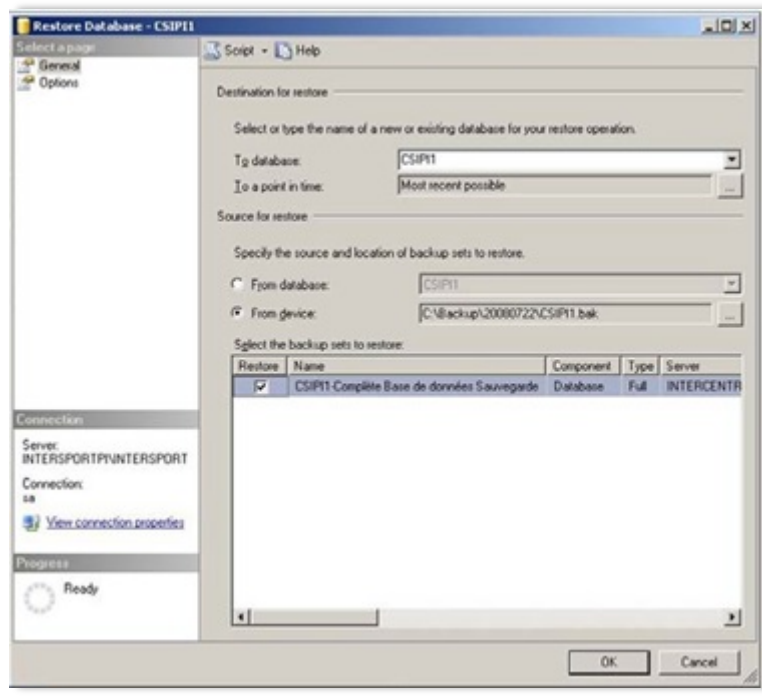
Figure 10-3: Locate Backup File dialog box

11. Click on **OK**. The selected file name is displayed in the **Specify Backup** dialog box in the **Backup location** pane.

Figure 10-4: Specify Backup dialog box

12. To close the **Specify Backup** dialog box, click on **OK**. The selected file is displayed in the **Restore Database** dialog box.

Figure 10-5: Restore Database CSIP11



13. In the **Select the backup sets to restore** pane, in the Restore column, select the checkbox adjacent to the required file name (to be used for restoration).



A single backup file can contain more than one backup. The backup date and the server name are available in this window; check the date and server information to verify that you are selecting the backup you wish to use for the restoration.

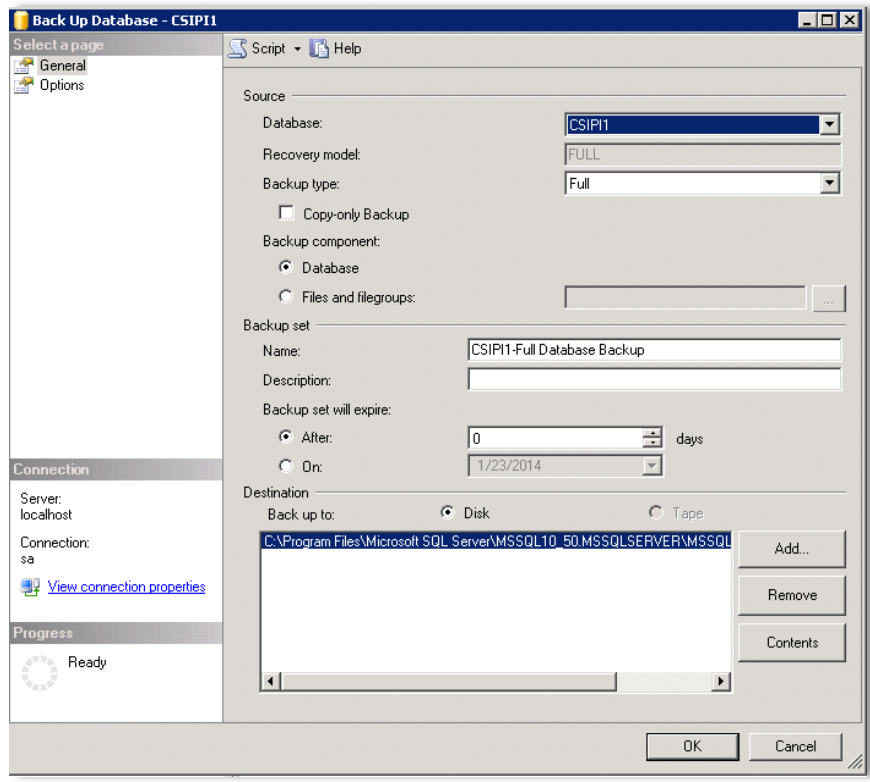
14. In the left pane under **Select a page**, click on **Options**; the right pane displays the restoration options.
15. In the right pane under **Restore options**, select the parameters for the restoration.



The database file path may change from one server to another; update all file paths in the Original File Name as necessary.

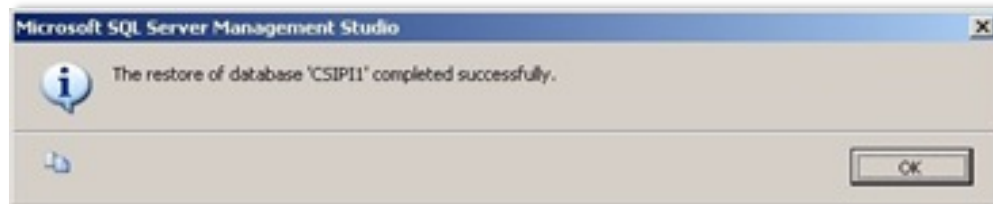
- a. Under **Restore options**, select the **Overwrite the existing database** checkbox.
- b. Under **Restore the database files as**, review the file names and make sure there are no duplicate file names. If there is a duplicate file name, modify the name.
- c. Under **Recovery state** select **Leave the database ready to use by rolling back uncommitted transactions**.

Figure 10-6: Back Up Database - CSIP11 dialog box



16. After setting up the restoration parameters, click on **OK**. The restoration progress displays at the bottom of the left pane; allow the restoration process to finish. When the restoration process is completed, a confirmation message is displayed as shown below:

Figure 10-7: Message confirming successful completion of the restoration procedure



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10.2.1 Run the sp_change_users_login script on the master database

1. Verify that the Wildfly Service is stopped.
2. In the **SQL Server Management Studio** dialog box, right-click on the top-level database icon and select **New Query**.


3. In the query window, type the *sp_change_users_login* script:

```
use <database name>
exec sp_change_users_login 'update_One', 'csidba', 'csidba'
```

For example,

```
use PLMCentricDB
exec sp_change_users_login 'update_One', 'csidba', 'csidba'
```

4. Click on **Execute**.
5. Click on **OK** and close Microsoft SQL server Management Studio.
6. In the **Services** window, right-click on the **Centric Wildfly Service** and select **Start**.

	<p>If you are restoring the database on a different server instance, proceed to Database Restoration: Different Server Instance on this page. Else, proceed to FileVault Restoration on page 114</p>
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10.3 Database Restoration: Different Server Instance

If you are restoring on a different server instance, once you restore the database by following the instructions in the section [Database Restoration](#) on page 108, you then delete the log files, and update the user login.

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10.3.1 Delete Log Files

- Delete the .log files located in the following location:
<Centric8InstallDirectory>\Centric8\LOG

On completing deletion of the log files, follow the steps given below to restore the database on a different server instance.

◀◀ [BACK TO FLOWCHART](#)

10.3.2 Run the sp_change_users_login script on the master database

1. Verify that the Wildfly Service has stopped.

2. In the **SQL Server Management Studio** dialog box, right-click the top-level database icon and select **New Query**.
3. In the query window, type the `sp_change_users_login` script:

```
use <database name>

exec sp_change_users_login 'update_One', 'csidba', 'csidba'
```

For example,

```
use PLMCentricDB

exec sp_change_users_login 'update_One', 'csidba', 'csidba'
```
4. Click on **Execute**.

◀◀ [BACK TO FLOWCHART](#)

10.4 FileVault Restoration

Once the database is restored, it is not possible to restore the FileVault.

◀◀ [BACK TO FLOWCHART](#)

10.4.1 FileVault Location

The FileVault location is determined during installation. When restoring a server or duplicating a configuration on a different server, you must verify, and if necessary, update the FileVault location to reconnect the files with the application.

◀◀ [BACK TO FLOWCHART](#)

10.4.1.1 Locate the FileVault Path

1. Search the `pi-configuration.properties` file for the FileVault location:
 - a. Open the file `pi-configuration.properties` in Notepad.
 - b. Search for the string:

```
'com.centricsoftware.server.FilePublisher.CENTRIC_FILE_VAULT.VaultFolder'
```
2. The FileVault folder location appears at the end of this line of code, for example:

```
= C:\PROGRAM~1\CENTRI~1\Centric8\FileVault
```

◀◀ [BACK TO FLOWCHART](#)

10.4.1.2 Rename or remove the current FileVault data

1. Locate the FileVault folder, for example, `<Centric8InstallDirectory>\Centric8\FileVault`.



If your FileVault data is stored in multiple FileVault folders, copy all of the data into the same restoration folder.

2. Overwrite the contents of the **FileVault** folder.

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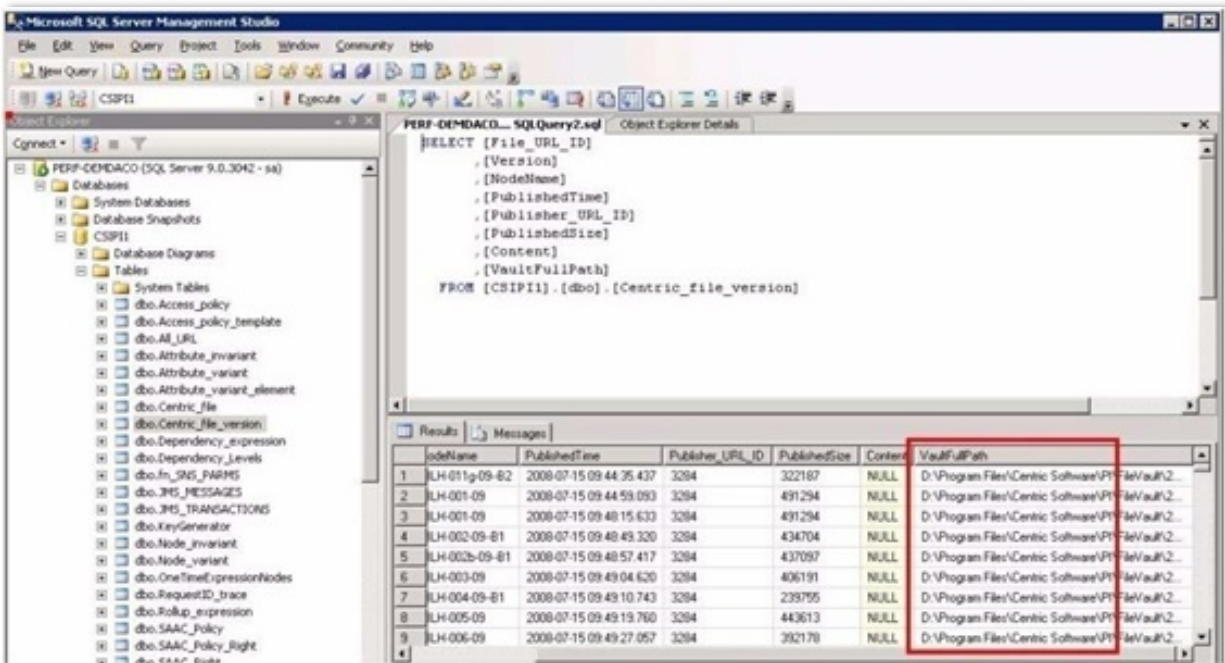
10.4.1.3 Locate the original FileVault file location in the database

1. In the SQL Server Management Studio dialog box, create a new query on the database, and enter the following code in the query window:

```
SELECT [File_URL_ID]
      , [Version]
      , [NodeName]
      , [PublishedTime]
      , [Publisher_URL_ID]
      , [PublishedSize]
      , [Content]
      , [VaultFullPath]
FROM   [Database Name] . [dbo] . [Centric_file_version]
```

2. Click **Execute**.
3. The FileVault path displays in the **VaultFullPath** column in the Result pane. Use this path to complete the dependency script in [Run the FileVault dependency script](#) on page 116.

Figure 10-8: Microsoft SQL Server Management Studio



◀◀ [BACK TO FLOWCHART](#)

10.4.1.4 Restore the FileVault

- Copy the desired FileVault backup to the FileVault location to restore the data.

◀◀ [BACK TO FLOWCHART](#)

10.4.1.5 Run the FileVault dependency script

It is possible that the FileVault path may change during backup and restoration. To update the FileVault path, run the dependency script where *<source File Vault path>* represents the backup FileVault path (defined in [Locate the original FileVault file location in the database](#) on page 115) and *<target File Vault path>* represents the new FileVault path.

1. In **SQL Server Management Studio**, right-click on the database and select **New Query**. Paste the following script into the Query pane; be sure to replace *<source File Vault path>* and *<target File Vault path>* with the correct FileVault paths:

```

SET NOCOUNT ON
SET ARITHABORT ON;
SET CONCAT_NULL_YIELDS_NULL
ON; SET QUOTED_IDENTIFIER

```

```

ON;
SET ANSI_NULLS
ON; SET
ANSI_PADDING ON;
SET ANSI_WARNINGS
ON;

SET NUMERIC_ROUNDABORT OFF;

DECLARE @ROWCOUNT INT;
DECLARE @TOTROWCOUNT INT; SET
@TOTROWCOUNT=0
DECLARE @BeforePartialString nvarchar(100); SET @BeforePartialString='<source File Vault
path>\`
DECLARE @AfterPartialString nvarchar(100); SET @AfterPartialString='<target File Vault path>\`

SET ROWCOUNT
10000 SET @ROWCOUNT = -1
WHILE @ROWCOUNT
<> 0
BEGIN
UPDATE dbo.Centric_file_version
SET VaultFullPath=REPLACE(VaultFullPath,@BeforePartialString,@AfterPartialString)
WHERE CHARINDEX(@BeforePartialString,VaultFullPath) > 0;
SET @ROWCOUNT =@@ROWCOUNT;
SET @TOTROWCOUNT=@TOTROWCOUNT +
@ROWCOUNT; IF @ROWCOUNT > 0
PRINT CONVERT(varchar(12),@TOTROWCOUNT)+'Centric_file_version.VaultFullPath columns
updated so far'
END;

```

2. Click on **Execute**.
3. On completion of the script execution, a success message is displayed in the **Messages** pane.
4. Delete the log files.

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10.4.1.6 Restart Wildfly Service

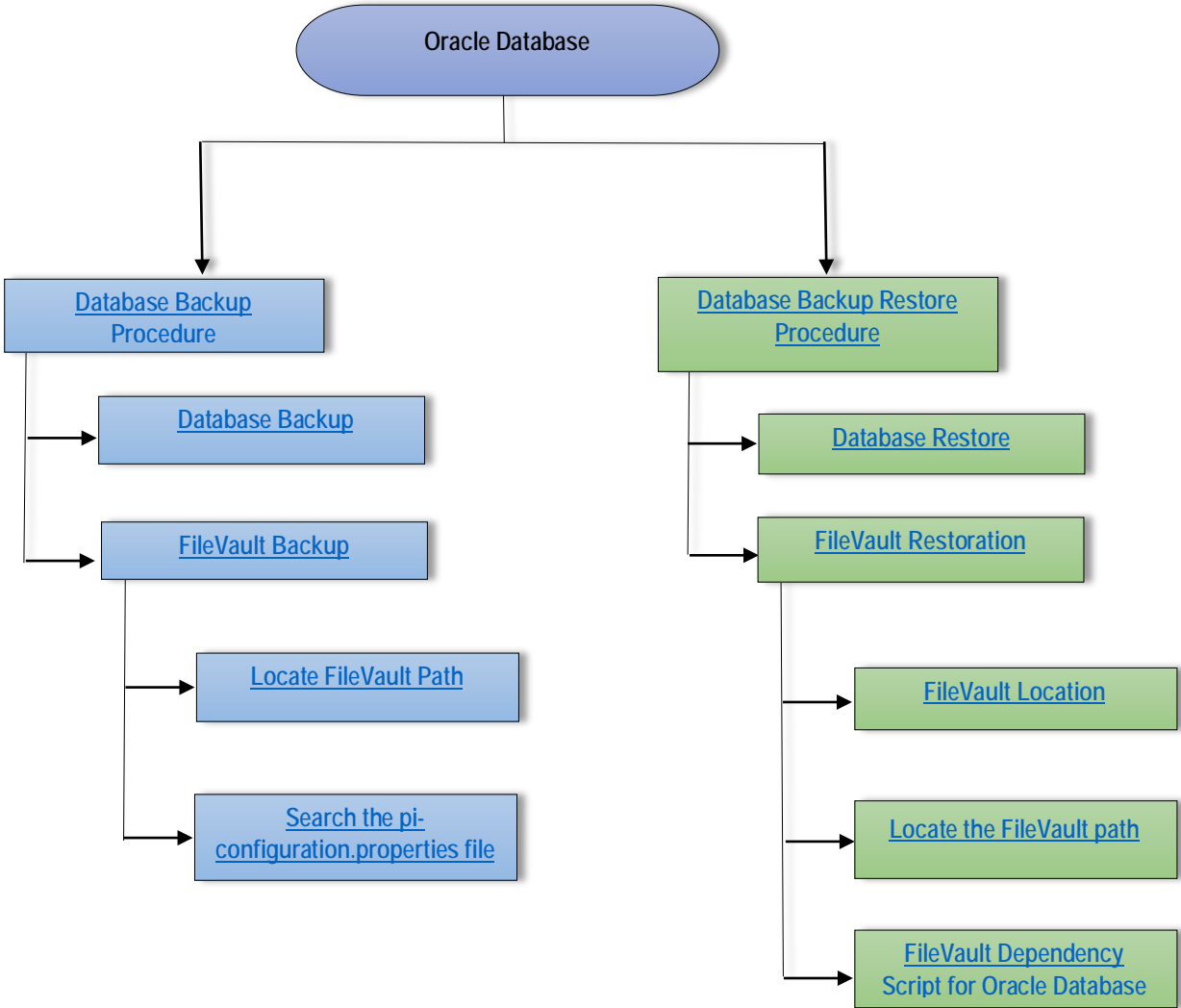
Once the restoration is complete, restart the Wildfly service.

▶ How to start Wildfly Service

1. On the **Start** menu, select **Programs ▶ Administrative Tools ▶ Services**.
2. In the **Services** window, right-click on **Centric Wildfly Service** and select **Start**.
3. Allow a few moments for the batch files to finish running in the background.

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11. ORACLE DB BACKUP AND RESTORE PROCEDURE



11.1 Backup

Your Centric 8 database and FileVault contain all of your project data. To avoid data loss and to allow for data restoration and migration, ensure that you backup your data on a regular basis.

During the backup procedure, ensure that you back up both the database and the FileVault.

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Use the DMPDIR1 directory. Use all directories to view default directories.

11.2 Database Backup

1. Open the **Command Prompt** and type `sqlplus` and press the **Enter** key. Type oracle Administrator username and password.

Figure 11-1: Administrator: Command Prompt - sqlplus

```
Administrator: Command Prompt - sqlplus
C:\Users\Administrator>sqlplus
SQL*Plus: Release 11.2.0.4.0 Production on Sun Feb 9 21:33:04 2014
Copyright (c) 1982, 2013, Oracle. All rights reserved.
Enter user-name: SYSTEM
Enter password:
Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
SQL> _
```

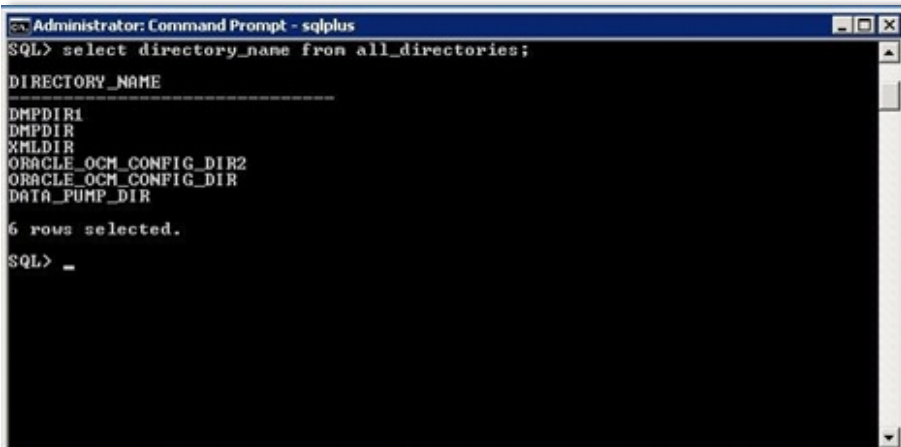
2. Type **Select directory_name from all_directories;** and click on the **Enter** key.

Note: All current default directories will be displayed.

DIRECTORY_NAME

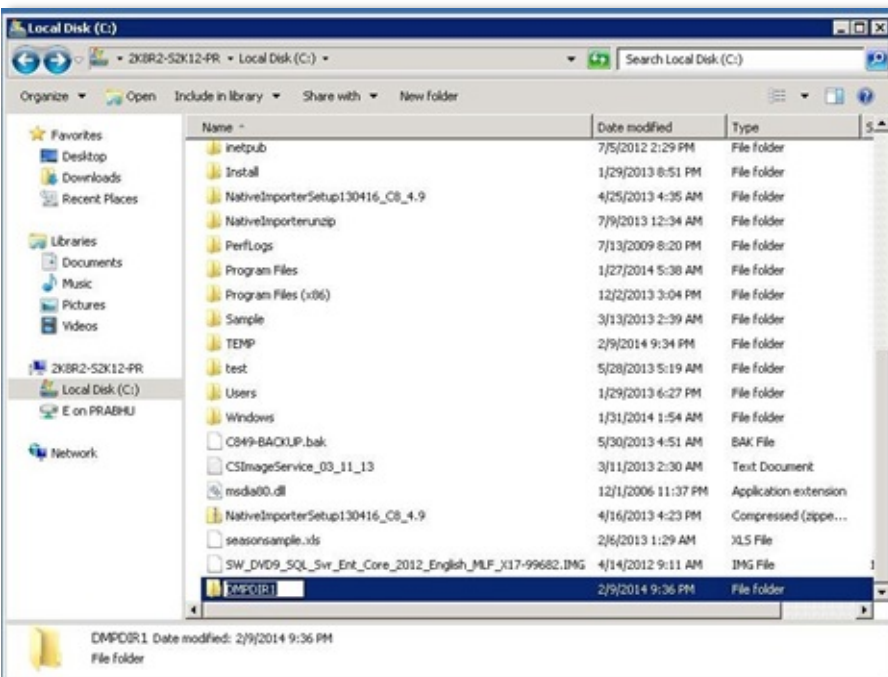
```
-----
DMPDIR
XMLDIR
DATA_PUMP_DIR
ORACLE_OCM_CONFIG_DIR
```

Figure 11-2: Administrator: Command Prompt – SQL Plus (2)



3. In SQL Plus, type **Create Directory DMPDIR1** as '`C:/DMPDIR1`'.
4. Create a New folder **DMPDIR1** under C:/ Drive.

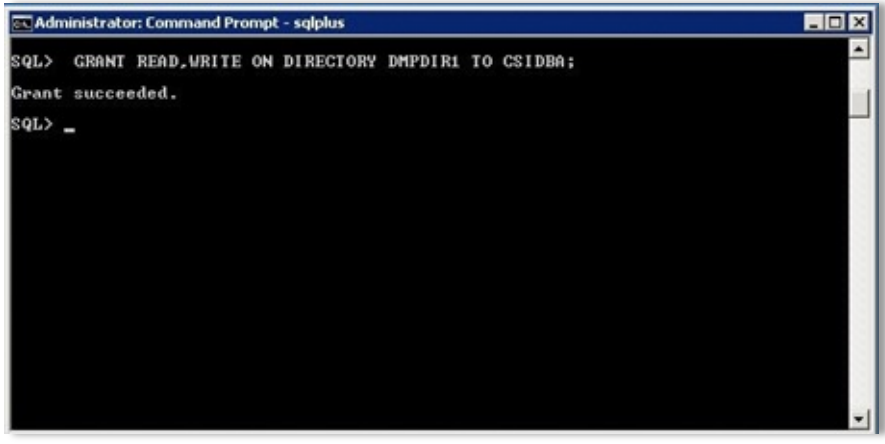
Figure 11-3: Creating a new folder under Local Disk (C:)



5. In SQL Plus, login as **Administrator** and type the command **GRANT READ,WRITE ON DIRECTORY DMPDIR1 TO CSIDBA;** and press the **Enter** key.

Grant Permission to the directory.

Figure 11-4: Administrator: Command Prompt – SQL Plus (3)

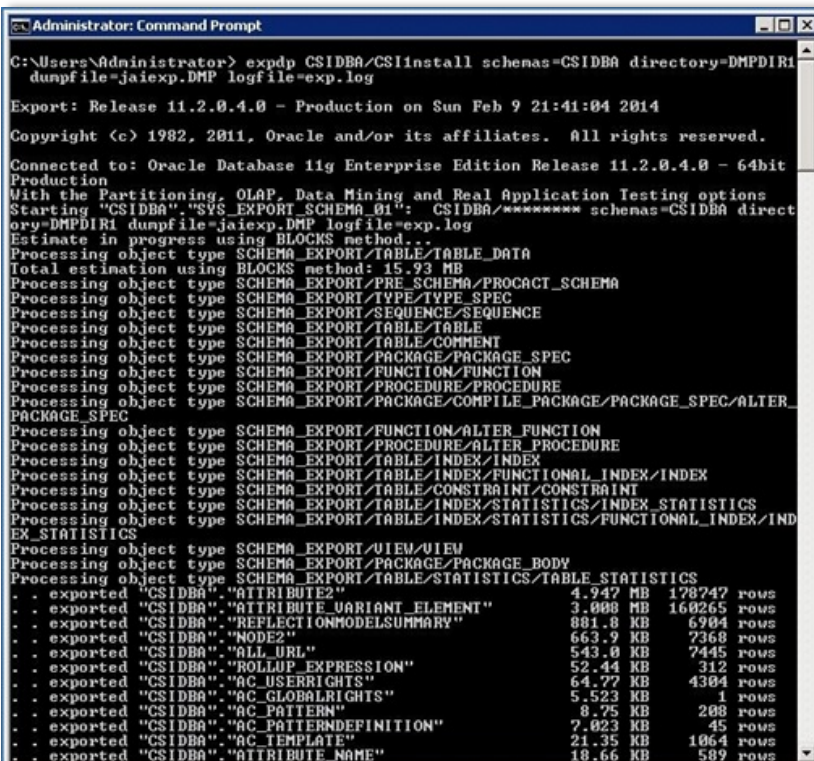


```
Administrator: Command Prompt - sqlplus
SQL> GRANT READ,WRITE ON DIRECTORY DMPDIR1 TO CSIDBA;
Grant succeeded.
SQL> _
```

6. Type the following command

```
expdp CSIDBA/CSI1ninstall schemas=CSIDBA directory=DMPDIR1 dumpfile=exp.DMP
logfile=exp.log
```

Figure 11-5: Administrator: Command Prompt



```
Administrator: Command Prompt
C:\Users\Administrator> expdp CSIDBA/CSI1ninstall schemas=CSIDBA directory=DMPDIR1
dumpfile=jaexp.DMP logfile=exp.log

Export: Release 11.2.0.4.0 - Production on Sun Feb 9 21:41:04 2014
Copyright (c) 1982, 2011, Oracle and/or its affiliates. All rights reserved.
Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit
Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
Starting "CSIDBA"."SYS_EXPORT_SCHEMA_01": CSIDBA/***** schemas=CSIDBA direct
ory=DMPDIR1 dumpfile=jaexp.DMP logfile=exp.log
Estimate in progress using BLOCKS method...
Processing object type SCHEMA_EXPORT/TABLE/TABLE_DATA
Total estimation using BLOCKS method: 15.93 MB
Processing object type SCHEMA_EXPORT/PRE_SCHEMA/PROCACT_SCHEMA
Processing object type SCHEMA_EXPORT/TYPE/TYPE_SPEC
Processing object type SCHEMA_EXPORT/SEQUENCE/SEQUENCE
Processing object type SCHEMA_EXPORT/TABLE/TABLE
Processing object type SCHEMA_EXPORT/TABLE/COMMENT
Processing object type SCHEMA_EXPORT/PACKAGE/PACKAGE_SPEC
Processing object type SCHEMA_EXPORT/FUNCTION/FUNCTION
Processing object type SCHEMA_EXPORT/PROCEDURE/PROCEDURE
Processing object type SCHEMA_EXPORT/PACKAGE/COMPILE_PACKAGE/PACKAGE_SPEC/ALTER
PACKAGE_SPEC
Processing object type SCHEMA_EXPORT/FUNCTION/ALTER_FUNCTION
Processing object type SCHEMA_EXPORT/PROCEDURE/ALTER_PROCEDURE
Processing object type SCHEMA_EXPORT/TABLE/INDEX/INDEX
Processing object type SCHEMA_EXPORT/TABLE/INDEX/FUNCTIONAL_INDEX/INDEX
Processing object type SCHEMA_EXPORT/TABLE/CONSTRAINT/CONSTRAINT
Processing object type SCHEMA_EXPORT/TABLE/INDEX/STATISTICS/INDEX_STATISTICS
Processing object type SCHEMA_EXPORT/TABLE/INDEX/STATISTICS/FUNCTIONAL_INDEX/IND
EX_STATISTICS
Processing object type SCHEMA_EXPORT/VIEW/VIEW
Processing object type SCHEMA_EXPORT/PACKAGE/PACKAGE_BODY
Processing object type SCHEMA_EXPORT/TABLE/STATISTICS/TABLE_STATISTICS
. . exported "CSIDBA"."ATTRIBUTE2" 4.947 MB 178747 rows
. . exported "CSIDBA"."ATTRIBUTE_VARIANT_ELEMENT" 3.008 MB 160265 rows
. . exported "CSIDBA"."REFLECTIONMODELSUMMARY" 881.8 KB 6904 rows
. . exported "CSIDBA"."NODE2" 663.9 KB 7368 rows
. . exported "CSIDBA"."ALL_URL" 543.0 KB 7445 rows
. . exported "CSIDBA"."ROLLUP_EXPRESSION" 52.44 KB 312 rows
. . exported "CSIDBA"."AC_USERRIGHTS" 64.77 KB 4304 rows
. . exported "CSIDBA"."AC_GLOBALRIGHTS" 5.523 KB 1 rows
. . exported "CSIDBA"."AC_PATTERN" 8.75 KB 208 rows
. . exported "CSIDBA"."AC_PATTERNDEFINITION" 7.023 KB 45 rows
. . exported "CSIDBA"."AC_TEMPLATE" 21.35 KB 1064 rows
. . exported "CSIDBA"."ATTRIBUTE_NAME" 18.66 KB 589 rows
```

◀◀ [BACK TO FLOWCHART](#)

11.3 Backup FileVault

The FileVault is a repository for all of the customer data. When you back up the FileVault, you create a backup of the directory sub-tree.



If your FileVault data is stored in multiple FileVault folders, backup all of the data into the same folder.

◀◀ [BACK TO FLOWCHART](#)

11.3.1 Locate the FileVault path

1. Locate the FileVault installation folder.

For example: **C:\Program Files\Centric Software\C8.**

If you do not know the location of the FileVault folder, you can locate the folder in one of the following two ways:

- Search the `pi-configuration.properties` file, or
- Review the database table

◀◀ [BACK TO FLOWCHART](#)

11.3.2 Search the `pi-configuration.properties` file

1. Open the file `pi-configuration.properties` in **Notepad**. The file is located in your Centric 8 program folder on your system:

```
<Centric8InstallDirectory>\Centric 8\wildfly-8.1.0\Standalone\configuration
```

2. Search for the string:

```
'com.centricsoftware.server.FilePublisher.CENTRIC_FILE_VAULT.VaultFolder'
```

3. The FileVault folder location appears at the end of this line of code, for example:

```
= C:\PROGRA~1\CENTRI~1\Centric 8\FileVault
```

◀◀ [BACK TO FLOWCHART](#)

11.4 Database Restore Procedure

For a successful restoration, always back up the database and FileVault using the procedures described in [Database Backup](#) on page 120. Verify that you have an original backup and that the Oracle Server target instance and database used for restoration have the same collation as the source instance and database.

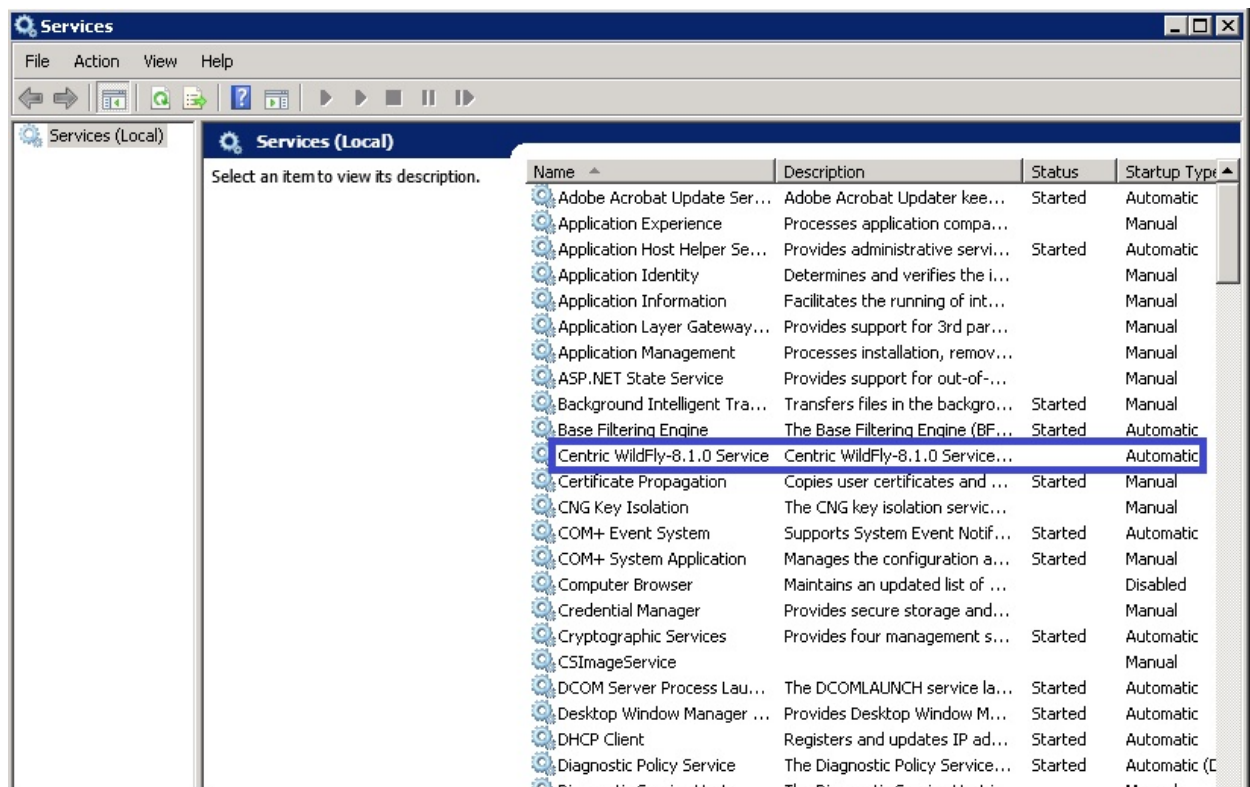
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11.5 Restore Database

If you are restoring the Database on the machine on which Centric 8 is installed, for example, you have a Test Server and you wish to restore a previous backup of the Test Server database, use the steps explained in the section [Restore the Database](#) on page 108.

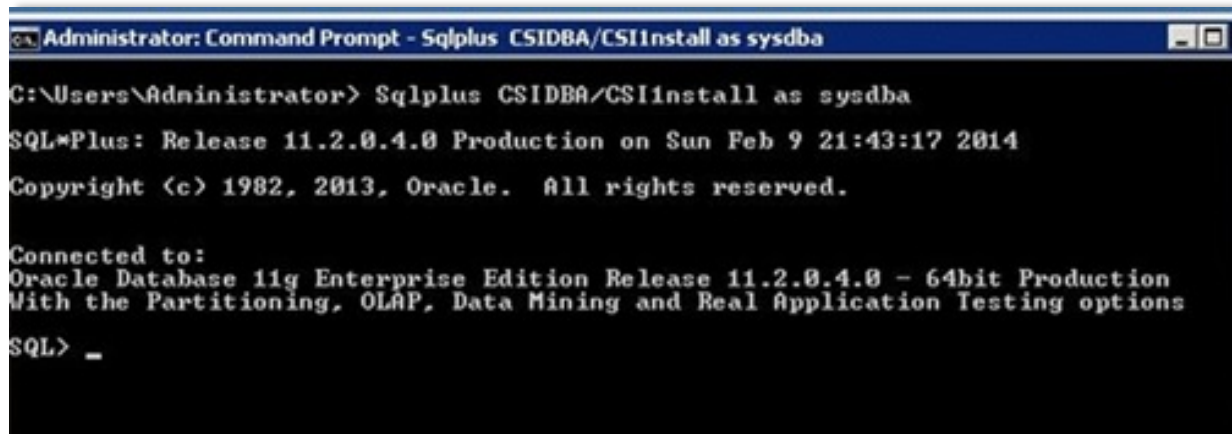
1. Stop the Wildfly service in the application server.

Figure 11-6: Services window



2. In local host command prompt, type `Sqlplus CSIDBA/CSIInstall as sysdba.`

Figure 11-7: Administrator: Command Prompt



```

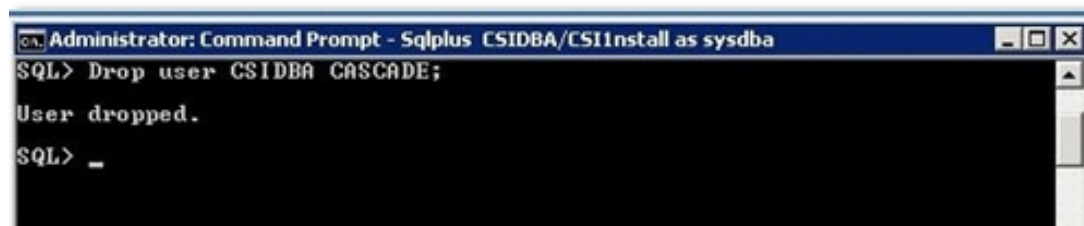
Administrator: Command Prompt - Sqlplus CSIDBA/CSIInstall as sysdba
C:\Users\Administrator> Sqlplus CSIDBA/CSIInstall as sysdba
SQL*Plus: Release 11.2.0.4.0 Production on Sun Feb 9 21:43:17 2014
Copyright (c) 1982, 2013, Oracle. All rights reserved.

Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
SQL> _

```

3. In the **SQL command prompt**, type *Drop user CSIDBA CASCADE;* and press on the **Enter** key.

Figure 11-8: Administrator Command (2)



```

Administrator: Command Prompt - Sqlplus CSIDBA/CSIInstall as sysdba
SQL> Drop user CSIDBA CASCADE;
User dropped.
SQL> _

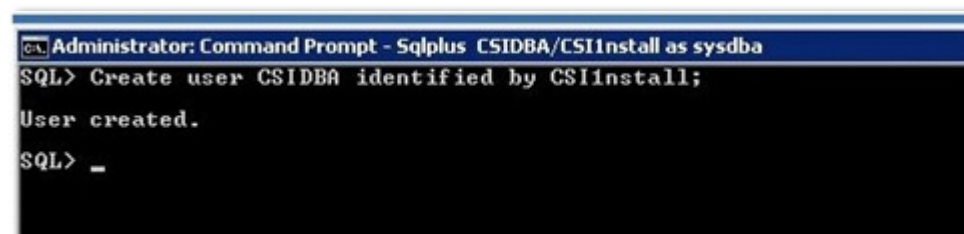
```



Drop and create user to restore the schema or else the db will prompt you already exit error message.

4. Type *Create user CSIDBA identified by CSIInstall;*

Figure 11-9: Administrator: Command Prompt (3)



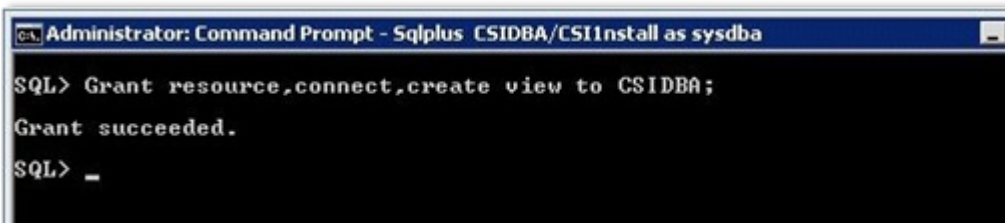
```

Administrator: Command Prompt - Sqlplus CSIDBA/CSIInstall as sysdba
SQL> Create user CSIDBA identified by CSIInstall;
User created.
SQL> _

```

5. Type *Grant resource,connect,create view to CSIDBA;* and press on the **Enter** key.

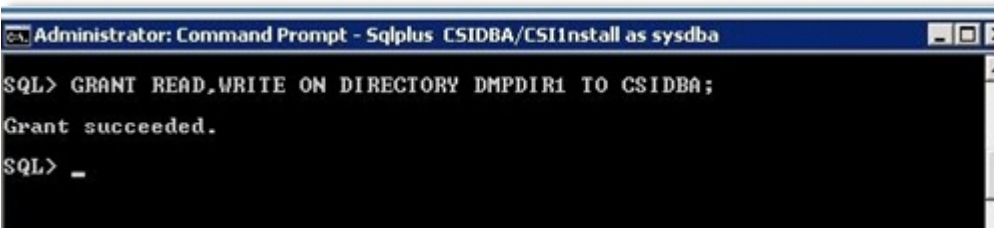
Figure 11-10: Administrator: Command Prompt (4)



```
Administrator: Command Prompt - Sqlplus CSIDBA/CSI1ninstall as sysdba
SQL> Grant resource,connect,create view to CSIDBA;
Grant succeeded.
SQL> _
```

6. Type `GRANT READ,WRITE ON DIRECTORY DMPDIR1 TO CSIDBA;` and press on the **Enter** key.

Figure 11-11: Administrator: Command Prompt (5)



```
Administrator: Command Prompt - Sqlplus CSIDBA/CSI1ninstall as sysdba
SQL> GRANT READ,WRITE ON DIRECTORY DMPDIR1 TO CSIDBA;
Grant succeeded.
SQL> _
```

7. In the local host command prompt, type:

```
impdp CSIDBA/CSI1ninstall schemas=CSIDBA directory=DMPDIR1 dumpfile=exp.DMP logfile=imp.log
```

Figure 11-12: Administrator: Command Prompt (6)

```

Administrator: Command Prompt
C:\Users\Administrator>impdp CSIDBA/CSI1install schemas=CSIDBA directory=DMPDIR1
dumpfile=jaiexp.DMP logfile=imp.log

Import: Release 11.2.0.4.0 - Production on Sun Feb 9 21:54:29 2014

Copyright (c) 1982, 2011, Oracle and/or its affiliates. All rights reserved.

Connected to: Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit
Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
Master table "CSIDBA"."SYS_IMPORT_SCHEMA_01" successfully loaded/unloaded
Starting "CSIDBA"."SYS_IMPORT_SCHEMA_01": CSIDBA/***** schemas=CSIDBA direc
ory=DMPDIR1 dumpfile=jaiexp.DMP logfile=imp.log
Processing object type SCHEMA_EXPORT/PRE_SCHEMA/PROCACT_SCHEMA
Processing object type SCHEMA_EXPORT/TYPE/TYPE_SPEC
Processing object type SCHEMA_EXPORT/SEQUENCE/SEQUENCE
Processing object type SCHEMA_EXPORT/TABLE/TABLE
Processing object type SCHEMA_EXPORT/TABLE/TABLE_DATA
. . imported "CSIDBA"."ATTRIBUTE2" 4.947 MB 178747 rows
. . imported "CSIDBA"."ATTRIBUTE_VARIANT_ELEMENT" 3.008 MB 160265 rows
. . imported "CSIDBA"."REFLECTIONMODELSUMMARY" 881.8 KB 6904 rows
. . imported "CSIDBA"."NODE2" 663.9 KB 7368 rows
. . imported "CSIDBA"."ALL_URL" 543.0 KB 7445 rows
. . imported "CSIDBA"."ROLLUP_EXPRESSION" 52.44 KB 312 rows
. . imported "CSIDBA"."AC_USERRIGHTS" 64.77 KB 4304 rows
. . imported "CSIDBA"."AC_GLOBALRIGHTS" 5.523 KB 1 rows
. . imported "CSIDBA"."AC_PATTERN" 8.75 KB 208 rows
. . imported "CSIDBA"."AC_PATTERNDEFINITION" 7.023 KB 45 rows
. . imported "CSIDBA"."AC_TEMPLATE" 21.35 KB 1064 rows
. . imported "CSIDBA"."ATTRIBUTE_NAME" 18.66 KB 589 rows
. . imported "CSIDBA"."CENTRIC_FILE" 8.179 KB 2 rows
. . imported "CSIDBA"."CENTRIC_FILE_VERSION" 7.875 KB 2 rows
. . imported "CSIDBA"."DEPENDENCY_EXPRESSION" 6.125 KB 51 rows
. . imported "CSIDBA"."KEYGENERATOR" 5.976 KB 2 rows
. . imported "CSIDBA"."MODELPARAMETERS" 17.96 KB 243 rows
. . imported "CSIDBA"."NODE2_X" 11.86 KB 13 rows
. . imported "CSIDBA"."UM_CREWASSIGNMENT" 6.015 KB 4 rows
. . imported "CSIDBA"."UM_CREWHIERARCHY" 5.976 KB 1 rows
. . imported "CSIDBA"."UM_IDENTITY" 7.25 KB 1 rows
. . imported "CSIDBA"."UM_ROLESECURITY" 7.039 KB 131 rows
. . imported "CSIDBA"."DEPENDENCY_LEVELS" 0 KB 0 rows
. . imported "CSIDBA"."ONETIMEEXPRESSIONNODES" 0 KB 0 rows
Processing object type SCHEMA_EXPORT/PACKAGE/PACKAGE_SPEC
Processing object type SCHEMA_EXPORT/FUNCTION/FUNCTION
Processing object type SCHEMA_EXPORT/PROCEDURE/PROCEDURE
Processing object type SCHEMA_EXPORT/PACKAGE/COMPILE_PACKAGE/PACKAGE_SPEC/ALTER
PACKAGE_SPEC
Processing object type SCHEMA_EXPORT/FUNCTION/ALTER_FUNCTION
ORA-39082: Object type ALTER_FUNCTION:"CSIDBA"."FN_GETDEPENDENCYLEVEL" created
with compilation warnings
Processing object type SCHEMA_EXPORT/PROCEDURE/ALTER PROCEDURE

```

8. Create the cf_safeToNumber and safeToBoolean functions as CSIDBA user.

In C:\, type *Sqlplus CSIDBA/password@SID*

CREATE OR REPLACE

FUNCTION cf_safeToNumber

(str VARCHAR2

)

RETURN NUMBER DETERMINISTIC

AS

 num NUMBER(37,10);

BEGIN

```

num: = TO_NUMBER(str);
RETURN num;
EXCEPTION
WHEN OTHERS THEN
RETURN NULL;
END;
/

CREATE OR REPLACE
FUNCTION cf_safeToBoolean
( str      VARCHAR2
)
RETURN NUMBER DETERMINISTIC
AS
num NUMBER(37,10);
BEGIN
RETURN
CASE
WHEN str = 'true' THEN 1
WHEN str = 'false' THEN 0
ELSE NULL
END
;
END cf_safeToBoolean;
/

```

9. Run impdp utility as the SYSTEM user credential.

In C:\, type *impdp SYSTEM/password@SID schemas=CSIDBA directory=DMPDIR dumpfile=EXP052813.DMP logfile=exp.log*

Clean up import errors: recreate IX_AVE_BOOLEAN ON index and recompile procedures.

- In C:\, type *Sqplus CSIDBA/password@SID*
- Type SQL> *DROP INDEX IX_AVE_BOOLEAN.*
- Type SQL> *CREATE INDEX IX_AVE_BOOLEAN ON ATTRIBUTE_VARIANT_ELEMENT (ValueBoolean)TABLESPACE C8_index.*
- Type SQL> *exec dbms_utility.compile_schema('CSIDBA');*

◀◀ [BACK TO FLOWCHART](#)

11.6 FileVault Restoration

Once you restore the database, you are ready to restore the FileVault.

◀◀ [BACK TO FLOWCHART](#)

11.6.1 FileVault Location

The FileVault location is determined during installation. When restoring a server or duplicating a configuration on a different server, you must verify, and if necessary, update the FileVault location to reconnect the files with the application.

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11.6.2 Locate the FileVault path

1. Search the pi-configuration.properties file for the FileVault location:

- a. Open the file pi-configuration.properties in Notepad.
- b. Search for the string:

'com.centricsoftware.server.FilePublisher.CENTRIC_FILE_VAULT.VaultFolder'

2. The FileVault folder location is displayed at the end of this line of code, for example:

= C:\PROGRAMS~1\CENTRI~1\Centric8\FileVault

◀◀ [BACK TO FLOWCHART](#)

11.6.3 FileVault Dependency Script for Oracle DB

1. Open Notepad and paste the following content:

```
SET SERVEROUTPUT ON;
-- @D:\Insectarium\Database\CentricHub\Oracle10g\Filevault.sql
/*****
*****
```

This standalone script must first be edited, to include correct 'before' and 'after' path details. Run this script against an Oracle database to synchronize the file vault paths stored in the database with the revised physical file vault paths, usually occurring when restoring the file vault on a different server.

```
*****
*****/
```

```
/* MSSQL T-SQL implementation
SET NOCOUNT ON
SET ARITHABORT ON;
SET CONCAT_NULL_YIELDS_NULL ON;
```

```

SET QUOTED_IDENTIFIER ON;
SET ANSI_NULLS ON;
SET ANSI_PADDING ON;
SET ANSI_WARNINGS ON;
SET NUMERIC_ROUNDABORT OFF;
DECLARE @ROWCOUNT INT;
DECLARE @TOTROWCOUNT INT;
    SET @TOTROWCOUNT=0
DECLARE @BeforePartialString nvarchar(100);SET @BeforePartialString='<source File Vault
path>\'
DECLARE @AfterPartialString nvarchar(100);SET @AfterPartialString='<target File Vault path>\'
SET ROWCOUNT 10000
SET @ROWCOUNT = -1
WHILE @ROWCOUNT <> 0
BEGIN
    UPDATE dbo.Centric_file_version
SET VaultFullPath=REPLACE(VaultFullPath,@BeforePartialString,@AfterPartialString)
WHERE CHARINDEX(@BeforePartialString,VaultFullPath) > 0;
SET @ROWCOUNT =@@ROWCOUNT;
SET @TOTROWCOUNT=@TOTROWCOUNT + @ROWCOUNT;
IF @ROWCOUNT > 0
    PRINT CONVERT(varchar(12),@TOTROWCOUNT)+' Centric_file_version.VaultFullPath columns
updated so far'
END;
*/
SET SERVEROUTPUT ON;
/
DECLARE
v_rowcount number(12);
v_totrowcount number(12) := 0;
v_BeforePartialString varchar2(100) := '<source File Vault path>\'; /*** YOU MODIFY THIS PATH
***/
v_AfterPartialString varchar2(100) := '<target File Vault path>\'; /*** YOU MODIFY THIS PATH
***/
BEGIN
-- v_BeforePartialString := 'BEFORE'; -- DUMMY for testing
-- v_AfterPartialString := 'AFTER'; -- DUMMY for testing
v_rowcount := -1;
WHILE v_rowcount <> 0
LOOP

```

```

v_rowcount := 0;
-- DBMS_OUTPUT.PUT_LINE('dummy stmt');
UPDATE Centric_file_version c1 SET VaultFullPath =
REPLACE(VaultFullPath,v_BeforePartialString,v_AfterPartialString)
WHERE COALESCE(INSTR(c1.VaultFullPath, v_BeforePartialString),0)> 0 AND rownum <=
10000;

v_rowcount := SQL%ROWCOUNT; DBMS_OUTPUT.PUT_LINE('v_rowcount=' ||
COALESCE(v_rowcount,-88));

v_totrowcount := v_totrowcount + v_rowcount;
END LOOP;
COMMIT;
DBMS_OUTPUT.PUT_LINE('v_totrowcount='||COALESCE(v_totrowcount,-99));
END;
/
--list
--show errors

```

2. Define the Source and Target FileVault Path in the above mentioned code as shown below.

Figure 11-13: Source and Target FileVault Path defined in the Code

```

40 DECLARE
41   v_rowcount number(12);
42   v_totrowcount number(12) := 0;
43   v_BeforePartialString varchar2(100) := '<source File Vault path>'; /** YOU MODIFY THIS PATH **/
44   v_AfterPartialString varchar2(100) := '<target File Vault path>'; /** YOU MODIFY THIS PATH **/
45 BEGIN
46   -- v_BeforePartialString := 'BEFORE'; -- DUMMY for testing

```

3. Under C:, create a directory named OracleBackup.
4. Save the notepad file under the name filevault.sql.
5. In the command line prompt execute the following line:

```
sqlplus csidba/manager@CSIC8 @c:\OracleBackup\filevault.sql
```

NOTE

Login to the application and check whether the Export Definition and Export Jobs are listed properly. (Setup - Services - Export/Import - Export Jobs)

◀◀ [BACK TO FLOWCHART](#)

12. UNINSTALL CENTRIC 8

▶ How to uninstall Centric 8

1. Select your domain name and log into the domain as Administrator.
2. Close all Windows applications.
3. On the **Start** menu, navigate to **Programs ▶ Centric 8 ▶ Administration** and select **Uninstall Centric 8**. The **Confirm File Deletion** dialog box is displayed.
4. To confirm that you wish to uninstall the Centric 8 software, click on **Yes**.
5. The **Remove Programs From Your Computer** dialog box is displayed. On completion of the uninstall process, click on **OK**.

PART 1V: APPENDICES

Included in Part IV:

- [Appendix A: Oracle Admin](#)
- [Appendix B: Wildfly Cluster](#)
- [Appendix C: Wildfly Memory Usage](#)
- [Appendix D: Image Upload Timeout](#)
- [Appendix E: Configuring SMTP on Windows 2008 Server](#)
- [Appendix F: Configuring SMTP on Windows 2012 Server](#)
- [Appendix G: Licensing & Administrator Password Management](#)
- [Appendix H: PDF Print Service](#)
- [Appendix I: Image Service](#)
- [Appendix J: LDAP Setup](#)
- [Appendix K: HTTPS Support](#)
- [Appendix L: Enable HTTP Compression in IIS](#)
- [Appendix M: Change SMTP Server information in Wildfly](#)
- [Appendix N: Jasper Setup](#)
- [Appendix O: Configure HTTPS](#)

A. ORACLE ADMINISTRATOR

1. Pre-requisites

- **System Admin Privilege**

To create and set up an Oracle database for Centric PLM software, the user who is preparing the database must have System Administration authority over the system and the database to be created.

- **Oracle 11G Software Installed**

The Oracle Database 11g Enterprise Edition Release 2 (11.2.0.3+) 64-bit is recommended. The database hosting system has to meet the minimum hardware requirements specified in the Oracle database installation guide. To achieve better performance for Centric PLM software, the Oracle database should be configured on effective and efficient machine.

Before creating an Oracle database to serve Centric PLM, you must have installed the Oracle database software.

- **Database must be created with the AL32UTF8 CHARACTER SET.**

Step 9 of Create Centric 8 Database

- **Minimum Required Oracle DB Components**

This guide will provide a minimal list to create a database using DBCA or upgrade an existing database to meet Centric PLM requirement.

- **Prior to Centric PLM version 4.9.5, there are only 3 Oracle database components required to have the software work.**

- Oracle Workspace Manager
- Oracle Database Catalog Views
- Oracle Database Packages and Types
- Centric PLM version 4.9.5 will require Oracle XML Database component to successfully function.

2. Create Oracle Database for 11.2.0.3+

To install Oracle Software, refer Oracle installation software and manual available at www.oracle.com.

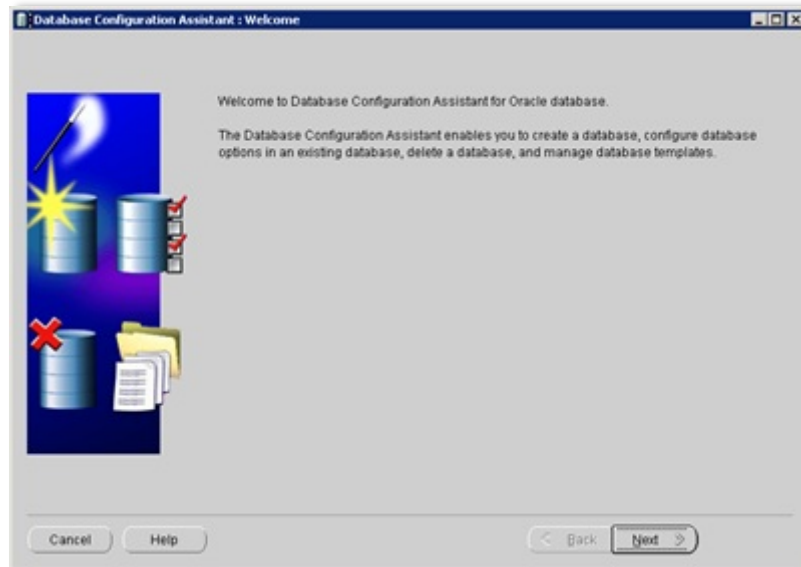
Prior to creating the Centric 8 database, users must verify whether or not RAC and ASM are installed.

RAC settings do not affect database creation. However, ASM impacts the storage method of the database. This Guide uses File System for storage.

► How to create an Oracle Database 11.2.0.3+

1. Go to (File path folder) and run the `setup` file.
2. The **Database Configuration Assistant** dialog box is displayed; to start the configuration process, click on **Next**.

Figure A - 1: Database Configuration Assistant – Welcome dialog box



3. In the **Database Configuration Assistant, Step 1 of 12: Operations** dialog box, select **Create a Database** option and click on **Next**.

Figure A - 2: Database Configuration Assistant, Step 1 of 12: Operations dialog box

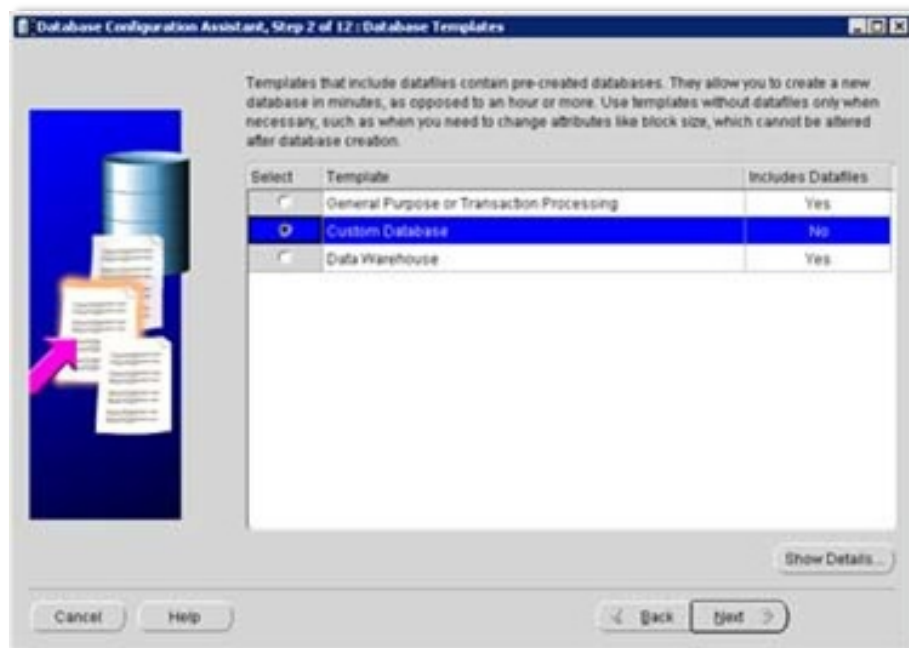


4. In the **Database Configuration Assistant, Step 2 of 12: Database Templates** dialog box, select **Custom Database** option and click on **Next**.

Note: The following components will not be installed:

- Oracle JVM
- Oracle Text
- Oracle Multimedia
- Oracle OLAP
- Oracle Spatial
- Enterprise Manager Repository
- Oracle Application Express
- Oracle Warehouse Builder
- Oracle Database Extension for .NET

Figure A - 3: Database Configuration Assistant, Step 2 of 12: Database Templates dialog box



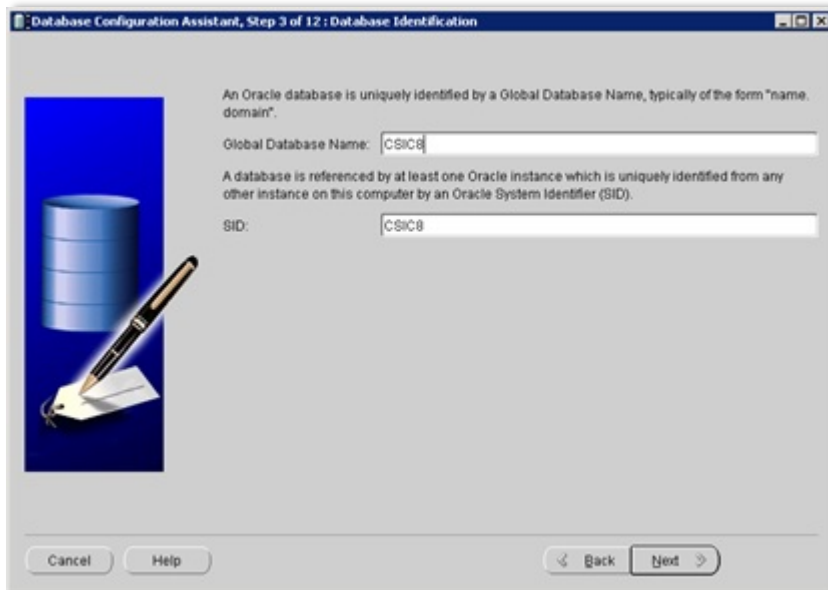
5. In the **Database Configuration Assistant, Step 3 of 12: Database Identification** dialog box, enter the Oracle Database name (ORACLE_SID) and click on **Next**.

NOTE

The Global Database Name can be SID.domain (eg. CSIC8.centricsoftware.com); this is a Service name.

If you use SID.domain as Global Database Name, the connection URL in the configuration file should display the service name instead of SID.

Figure A - 4: Database Configuration Assistant, Step 3 of 12: Database Identification dialog box



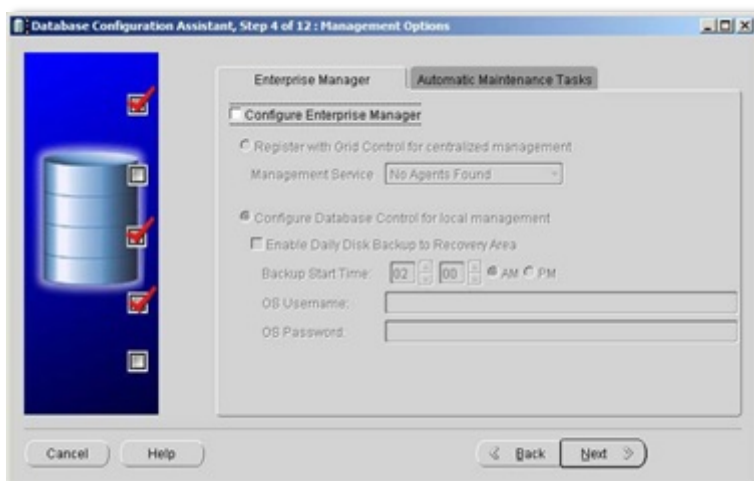
- To install the Enterprise Manager, in the **Database Configuration Assistant, Step 4 of 12: Management Options** dialog box, select the **Configure Enterprise Manager** option. Oracle installs Automatic Maintenance Tasks to self-manage the database.

NOTE

Oracle Enterprise Manager is Oracle's single, integrated solution for managing all aspects of the Oracle Grid and the applications running on it. It aids managing the database.

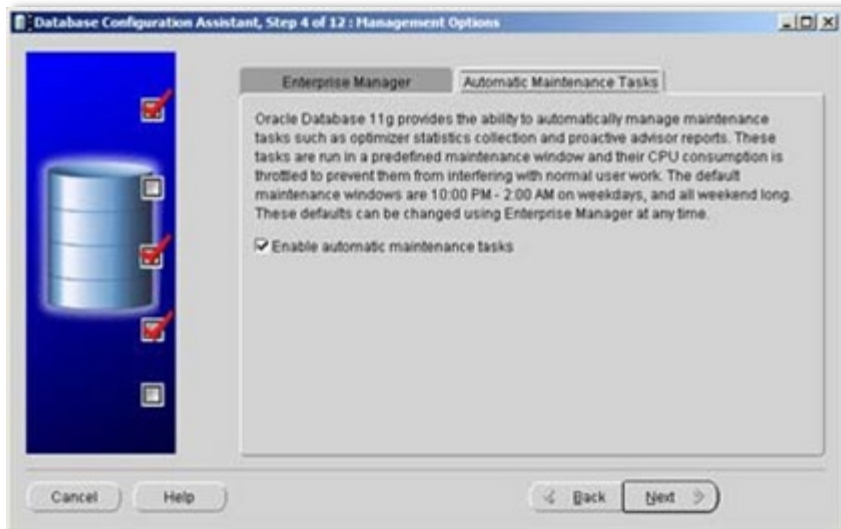
If not installed here, you can install the Enterprise Manager later.

Figure A - 5: Database Configuration Assistant, Step 4 of 12: Management Options dialog box



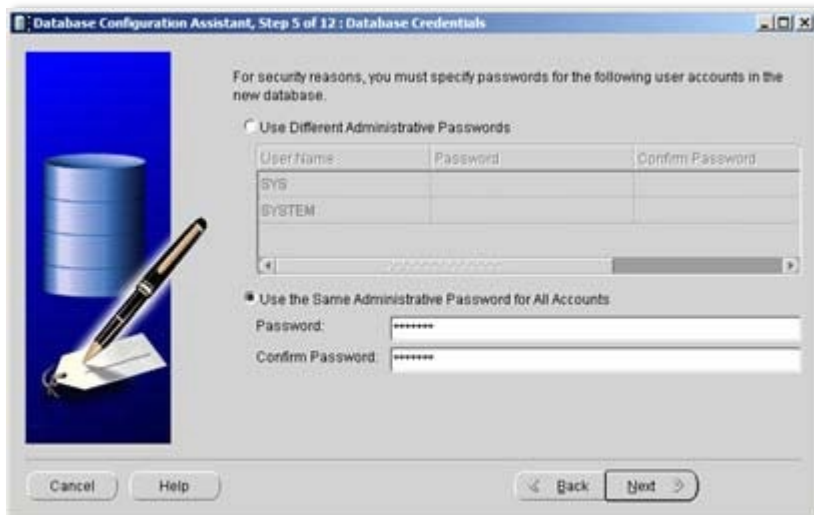
- On **Automatic Maintenance Tasks** tab, select the **Enable automatic maintenance tasks** checkbox to enable the tasks.

Figure A - 6: Database Configuration Assistant, Step 4 of 12: Management Options dialog box



8. In the **Database Configuration Assistant, Step 5 of 12: Database Credentials** dialog box, select the **Use the Same Administrative Password for All Accounts** option. Enter details for the **Password** and **Confirm Password** fields. Click on **Next**.

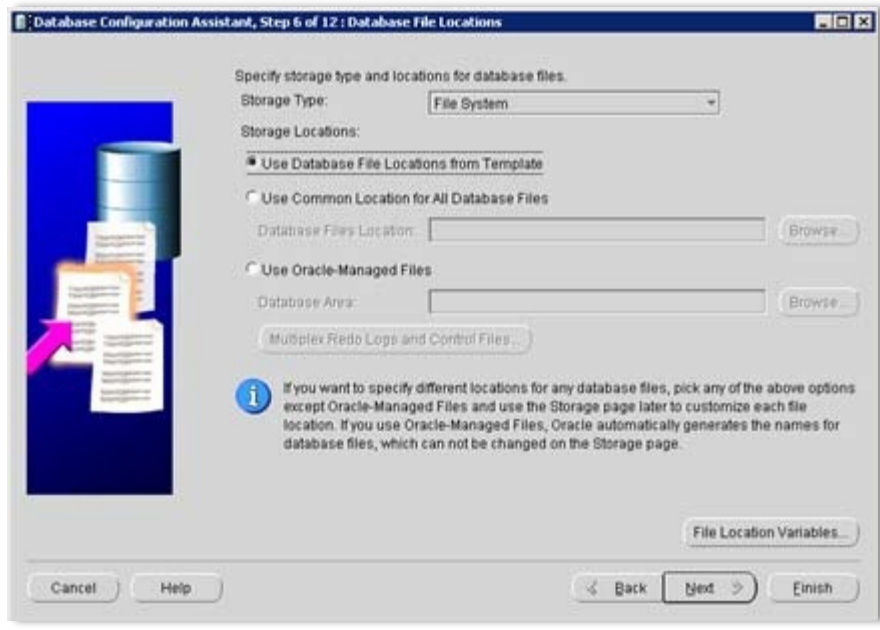
Figure A - 7: Database Configuration Assistant, Step 5 of 12: Database Credentials dialog box



4

9. In the **Database Configuration Assistant, Step 6 of 12: Database File Locations** dialog box, select the **Use Database File Locations from Template** option and click on **Next**.

Figure A - 8: Database Configuration Assistant, Step 6 of 12: Database File Locations dialog box



10. In the **Database Configuration Assistant, Step 7 of 12: Recovery Configuration** dialog box, select the **Specify Fast Recovery Area** check box and click on **Next**.

NOTE

DBCA displays all the default values. You need not provide any values.

Figure A - 9: Database Configuration Assistant, Step 7 of 12: Recovery Configuration dialog box



11. In the **Database Configuration Assistant, Step 8 of 12: Database Content** dialog box, uncheck all displayed components as C8 PLM Software requires only Oracle XML DB.

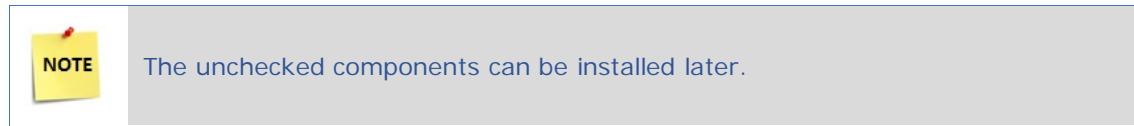


Figure A - 10: Database Configuration Assistant, Step 8 of 12: Database Content dialog box



12. Click on the **Standard Database Components** button. In the **Standard Database Components** dialog box, select the **Oracle XML DB** option and click on **OK**.

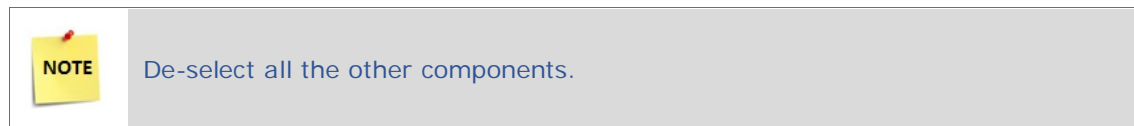
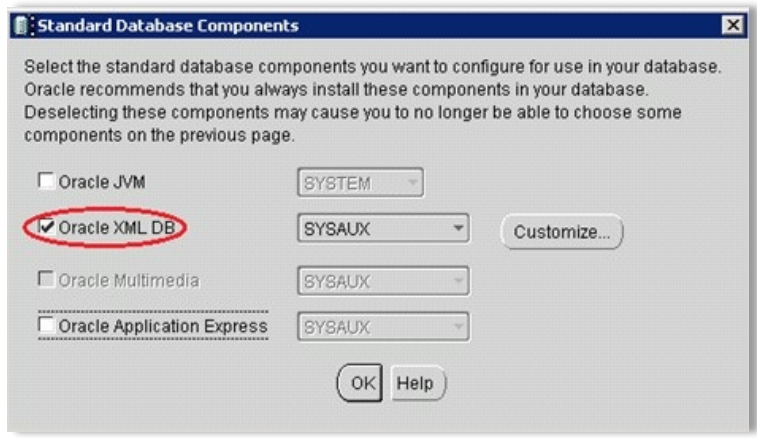


Figure A - 11: Standard Database Components dialog box

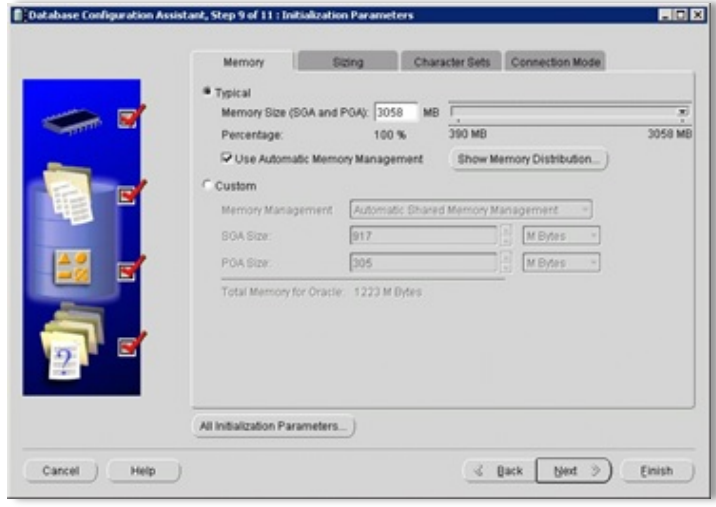


13. In the **Database Configuration Assistant, Step 9 of 12: Initialization Parameters** dialog box, click on the **Typical** radio button. Select the **Use Automatic Memory Management** check box.

NOTE

In order for Oracle to perform effectively, provide at least 12G memories.

Figure A - 12: Database Configuration Assistant, Step 9 of 12: Initialization Parameters dialog box

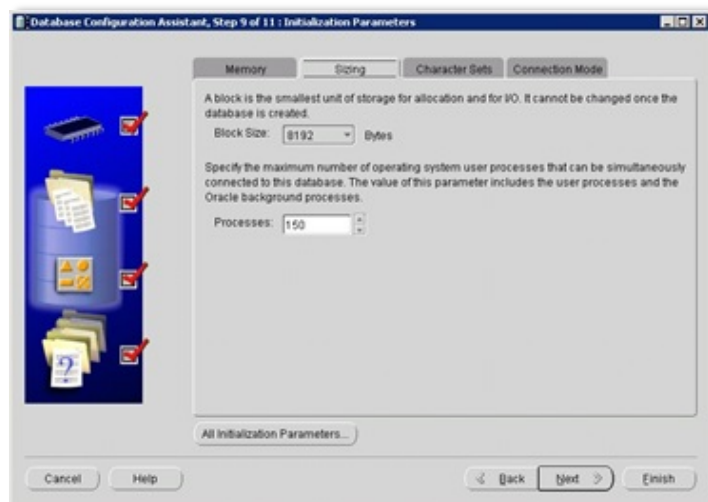


To view the default values, click on the **Sizing** tab.

NOTE

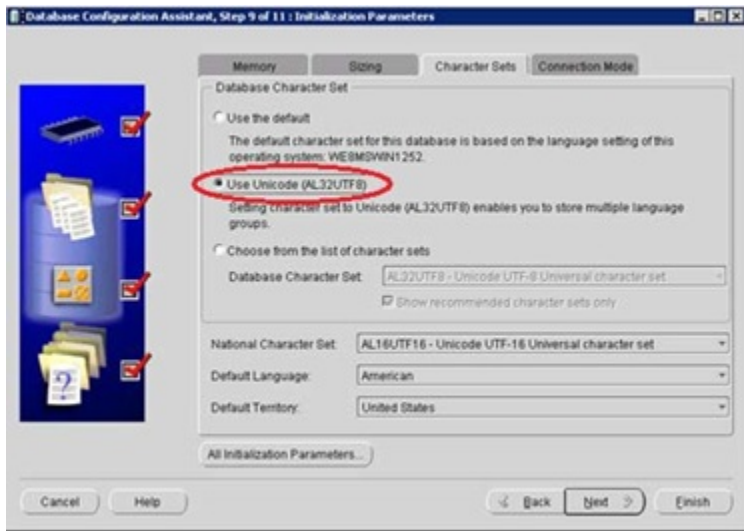
Oracle provides 150 Processes as default. Processes parameter value should be set according to the size of Web Access Connection pool + 50 for Oracle Server's house-keeping processes.

Figure A - 13: Database Configuration Assistant, Step 9 of 12: Initialization Parameters dialog box



14. On the **Character Sets** tab, select the **Use Unicode (AL32UTF8)** option. Change other settings accordingly. Click on **All Initialization Parameters** button.

Figure A - 14: Database Configuration Assistant, Step 9 of 12: Initialization Parameters dialog box



15. In the **All Initialization Parameters** table, change the value of *open_cursors* option to "400" and **processes** option to MaxConnectionSize + 50. Click on **Close**.

Figure A - 15: All Initialization Parameters Table

Name	Value	Override Def.	Category
cluster_database	FALSE		Cluster Database
compatible	11.2.0.0.0	✓	Miscellaneous
control_files	(C:\Oracle\BIO...	✓	File Configuration
db_block_size	8192	✓	Cache and I/O
db_create_file_dest			File Configuration
db_create_online_lo...			File Configuration
db_create_online_lo...			File Configuration
db_domain		✓	Database Identification
db_name	CSIC8	✓	Database Identification
db_recovery_file_dest	(ORACLE_BAS...	✓	File Configuration
db_recovery_file_de...	5218762752	✓	File Configuration
db_unique_name			Miscellaneous
instance_number	0		Cluster Database
log_archive_dest_1			Archive
log_archive_dest_2			Archive
log_archive_dest_st...	enable		Archive
log_archive_dest_st...	enable		Archive
nls_language	AMERICAN		NLS
nls_territory	AMERICA		NLS
open_cursors	400	✓	Cursors and Library Cache
pga_aggregate_target	801112064		Sort, Hash Joins, Bitmap Indexes
processes	150	✓	Processes and Sessions
remote_listener			Network Registration
remote_login_pass...	EXCLUSIVE	✓	Security and Auditing

16. Since this database is created using file system, it performs better if the Temp data file location and LOG files are separated from main Data files.

Increase Log file size and group number will reduce the log switch frequency and wait time for read consistency.

Default setting:

HD1: SYSTEM, SYSAUX, UNDOTBS, USERS, Control files

HD2: TEMP TBS files, Flash back area

HD3: Log files, future INDEX TBS

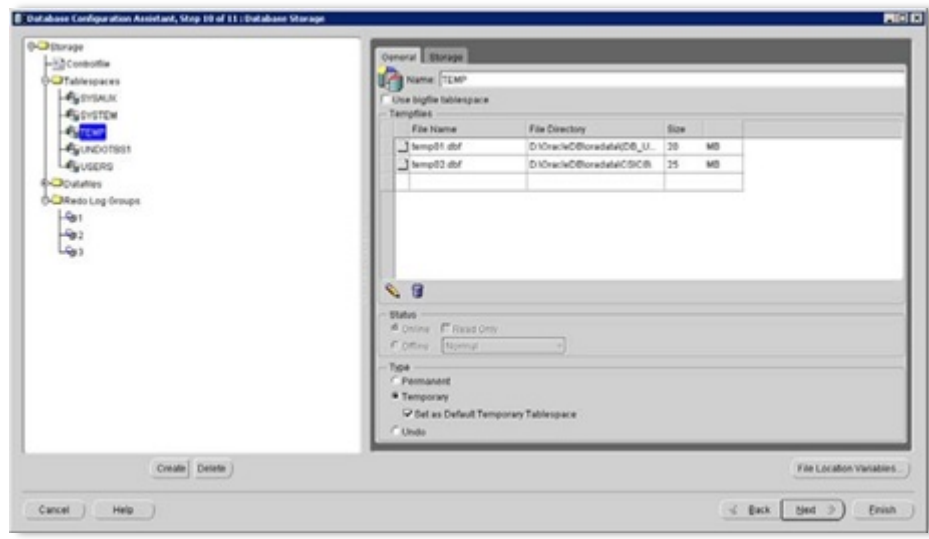
HD4: future DATA TBS

17. In the **Database Configuration Assistant, Step 10 of 12: Database Storage** dialog box,

a. **Enlarge TEMP Tablespace by:**

- Moving temp file to 2nd HD.
- Increasing temp files for Temporary tablespace. Oracle 64bit default 8k block size has limitation on file size: up to 32G, therefore add the second temp file and/or third file to default Temporary tablespace (temp).

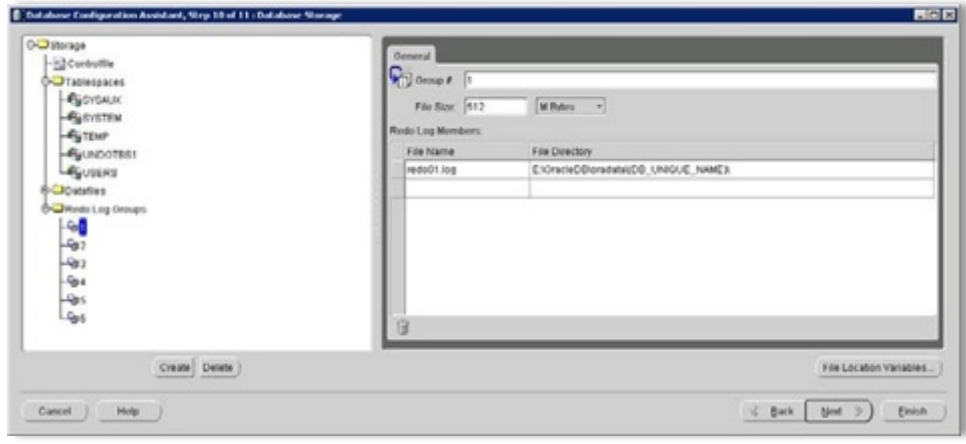
Figure A - 16: Database Configuration Assistant, Step 10 of 12: Database Storage dialog box



b. **Increase Redo Log Files by:**

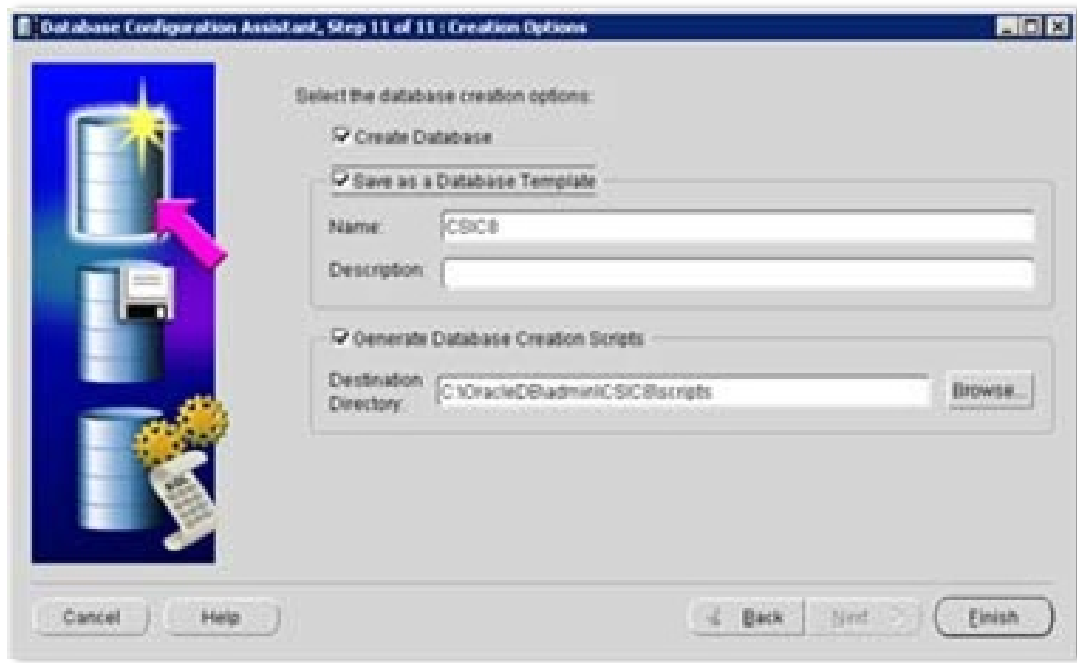
- Increasing File size from default 51200K to 512M.
- Moving files location to 3rd HD.
- Increasing file group number from 3 to 6 by clicking on the **Create** button.

Figure A - 17: Database Configuration Assistant, Step 10 of 12: Database Storage dialog box



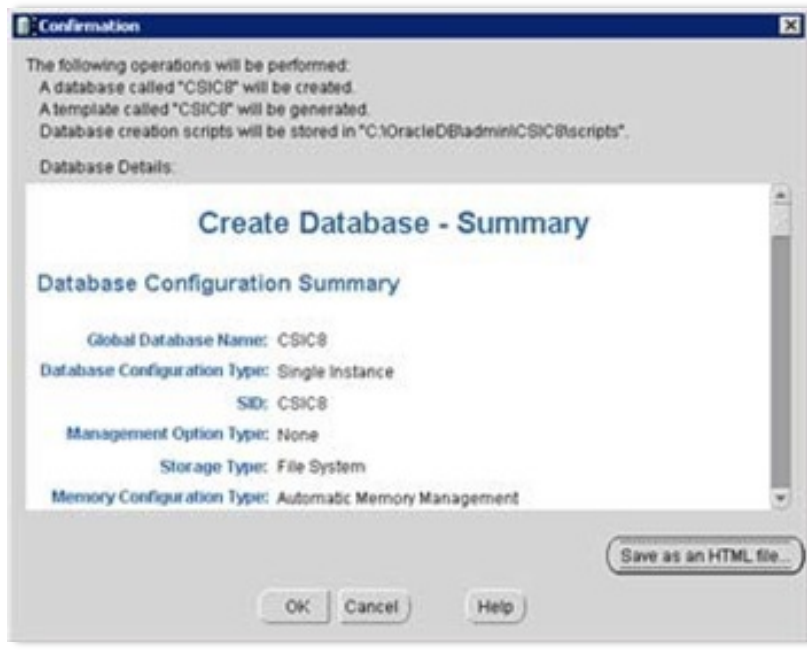
18. In the **Database Configuration Assistant, Step 11 of 12: Creation Options** dialog box, select the **Create Database and Save as a Database Template** checkbox and click on **Finish**.

Figure A - 18: Database Configuration Assistant, Step 11 of 12: Creation Options dialog box



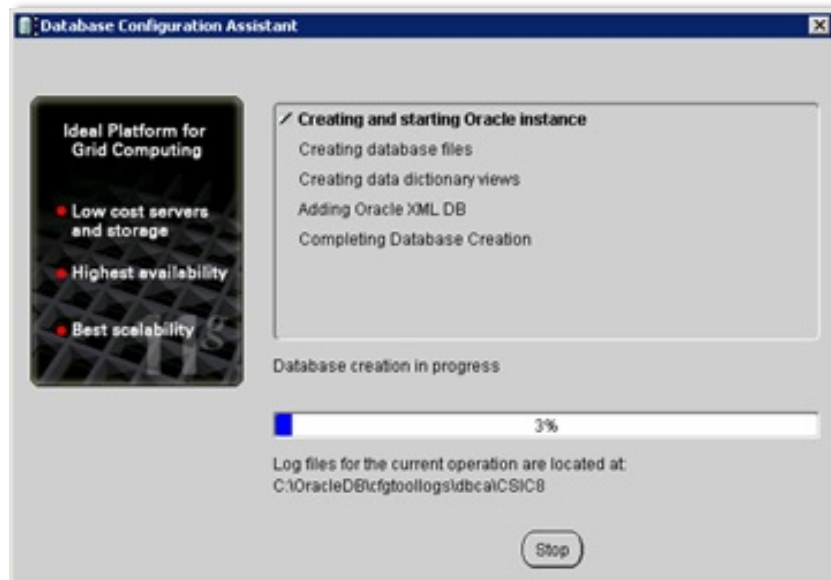
19. To create a database, in the **Confirmation** dialog box, click on **OK**.

Figure A - 19: Confirmation dialog box



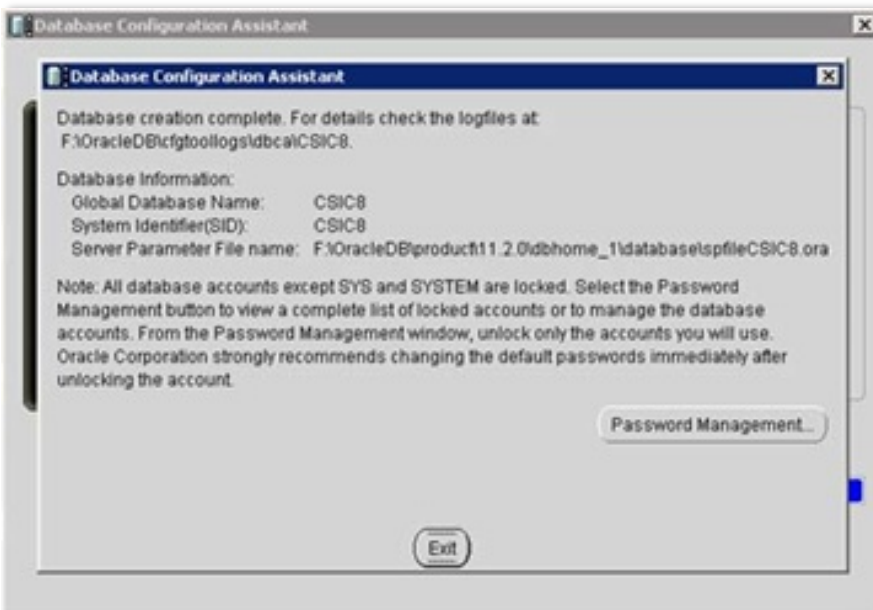
20. The **Database Configuration Assistant** dialog box is displayed as the database creation is in progress.

Figure A - 20: Database Configuration Assistant dialog box



21. On completion of the database creation process, click on **Exit**.

Figure A - 21: Database Configuration Assistant - Database creation complete dialog box



3. Create Oracle Database for 11.2.0.4+

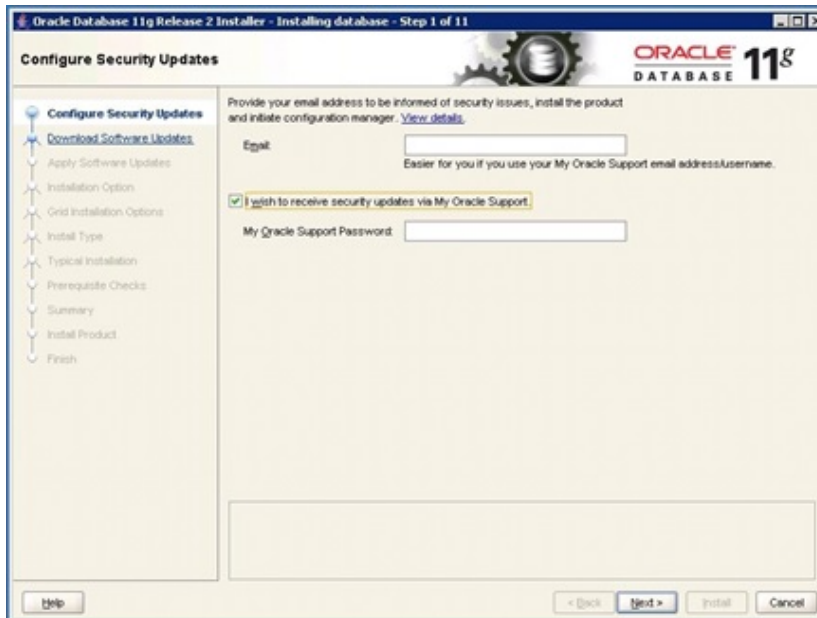
► How to create Oracle Database for 11.2.0.4+

1. Go to the Oracle Setup folder/database and run the **Setup.exe** file.

install	1/23/2014 1:51 AM	File folder
response	1/23/2014 1:51 AM	File folder
stage	1/23/2014 1:53 AM	File folder
readme	10/22/2013 12:34 AM	HTML Document
setup	10/22/2013 12:31 AM	Application
welcome	10/22/2013 12:34 AM	HTML Document

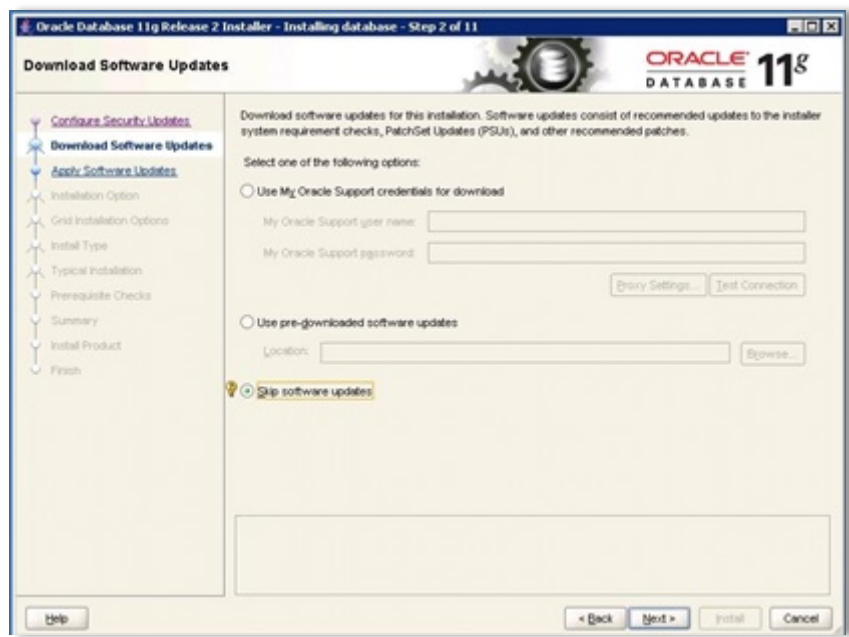
2. In the **Oracle Database 11g Release 2 Installer – Installing Database – Step 1 of 11** dialog box, de-select the **I wish to receive security updates via my oracle support** checkbox and click on **Next**.

Figure A - 22: Oracle Database 11g Release 2 Installer – Installing Database – Step 1 of 11 dialog box



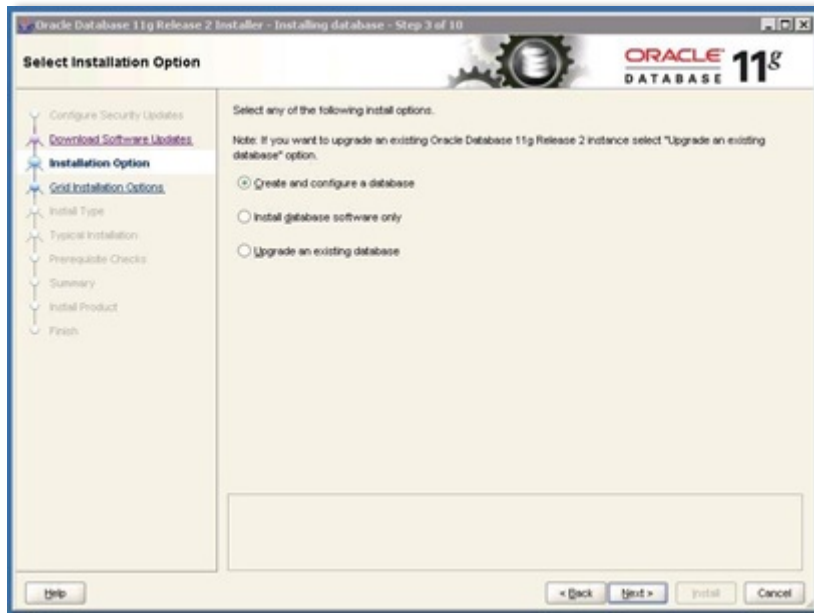
3. To continue installation, click on **Yes**.
4. In the **Oracle Database 11g Release 2 Installer - Installing database – Step 2 of 11** dialog box, select **Skip software updates** and click on **Next**.

Figure A - 23: Oracle Database 11g Release 2 Installer – Installing Database – Step 2 of 11 dialog box



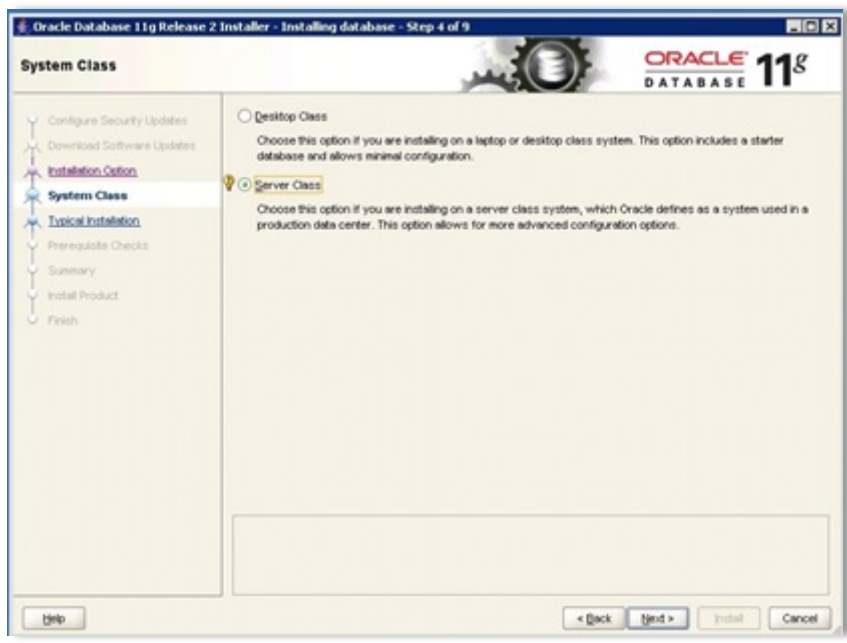
5. In the **Oracle Database 11g Release 2 Installer - Installing database – step 3 of 11** dialog box, select the **Create and configure a database** option and click on **Next**.

Figure A - 24: Oracle Database 11g Release 2 Installer – Installing Database – Step 3 of 11 dialog box



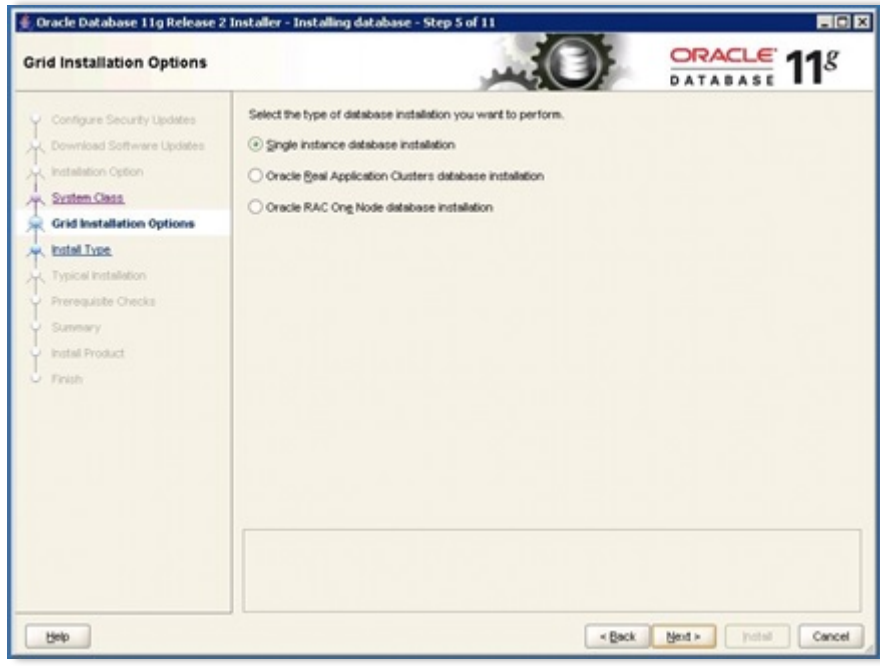
- In the **Oracle Database 11g Release 2 Installer - Installing database – Step 4 of 11** dialog box, select the **Server Class** option and click on **Next**.

Figure A - 25: Oracle Database 11g Release 2 Installer – Installing Database – Step 4 of 11 dialog box



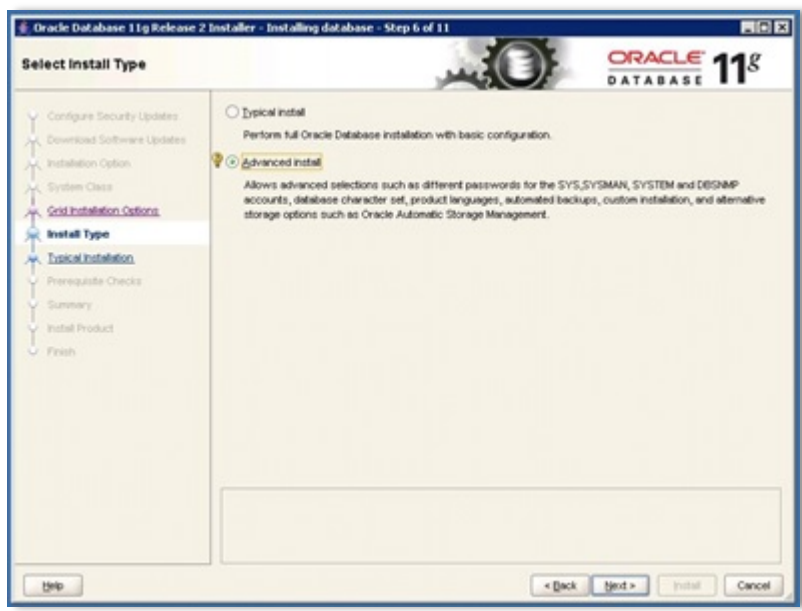
7. In the **Oracle Database 11g Release 2 Installer - Installing database – step 5 of 11** dialog box, select the **Single instance database installation** option and click on **Next**.

Figure A - 26: Oracle Database 11g Release 2 Installer– Installing Database– Step 5 of 11 dialog box



8. In the **Oracle Database 11g Release 2 Installer - Installing database – step 6 of 11** dialog box, select the **Advanced Install** option and click on **Next**.

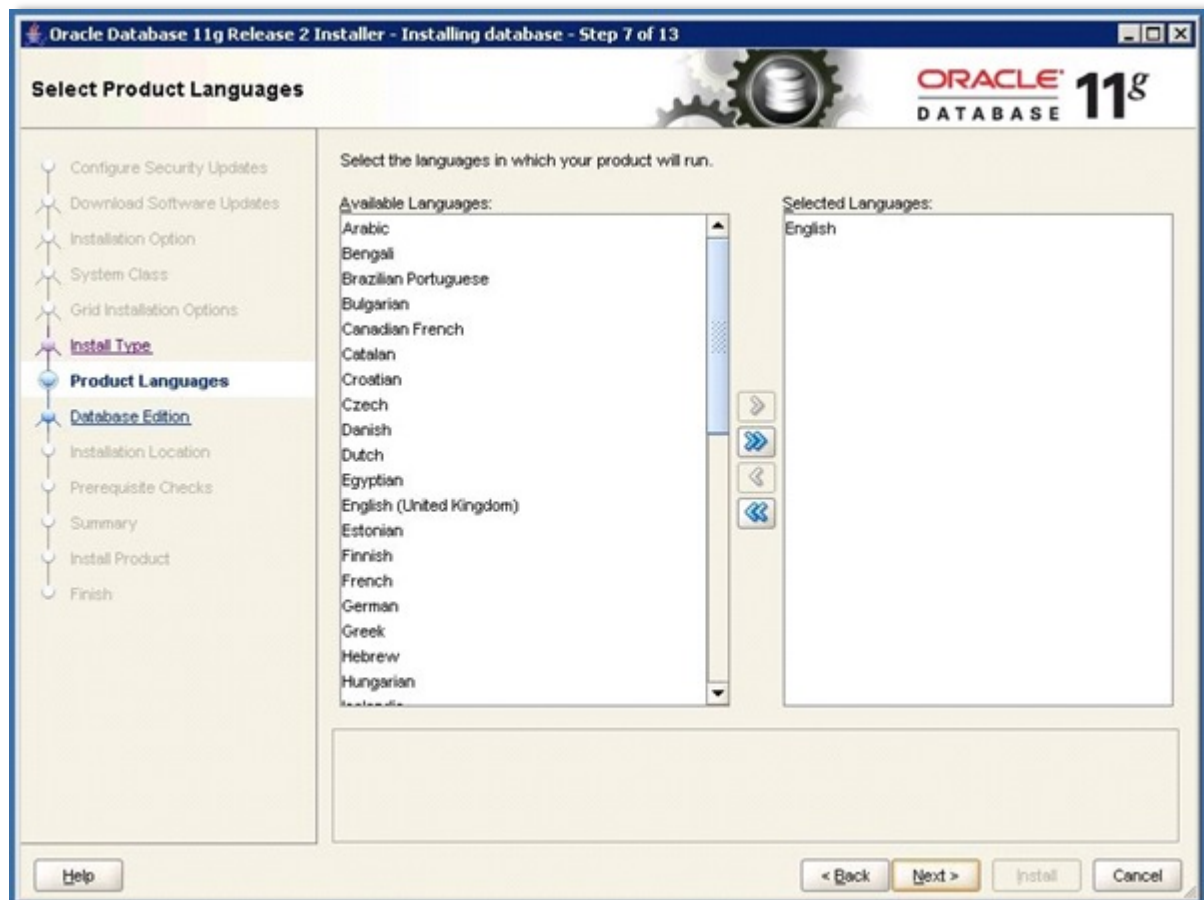
Figure A - 27: Oracle Database 11g Release 2 Installer– Installing Database– Step 6 of 11 dialog box



9. In the **Oracle Database 11g Release 2 Installer - Installing database** dialog box,
 - a. In the **Available Languages** box, click on a language and then click on the **»** arrow button. The selected language will be displayed in the **Select Languages** box.
 - b. Repeat step a, to add one or more Languages.

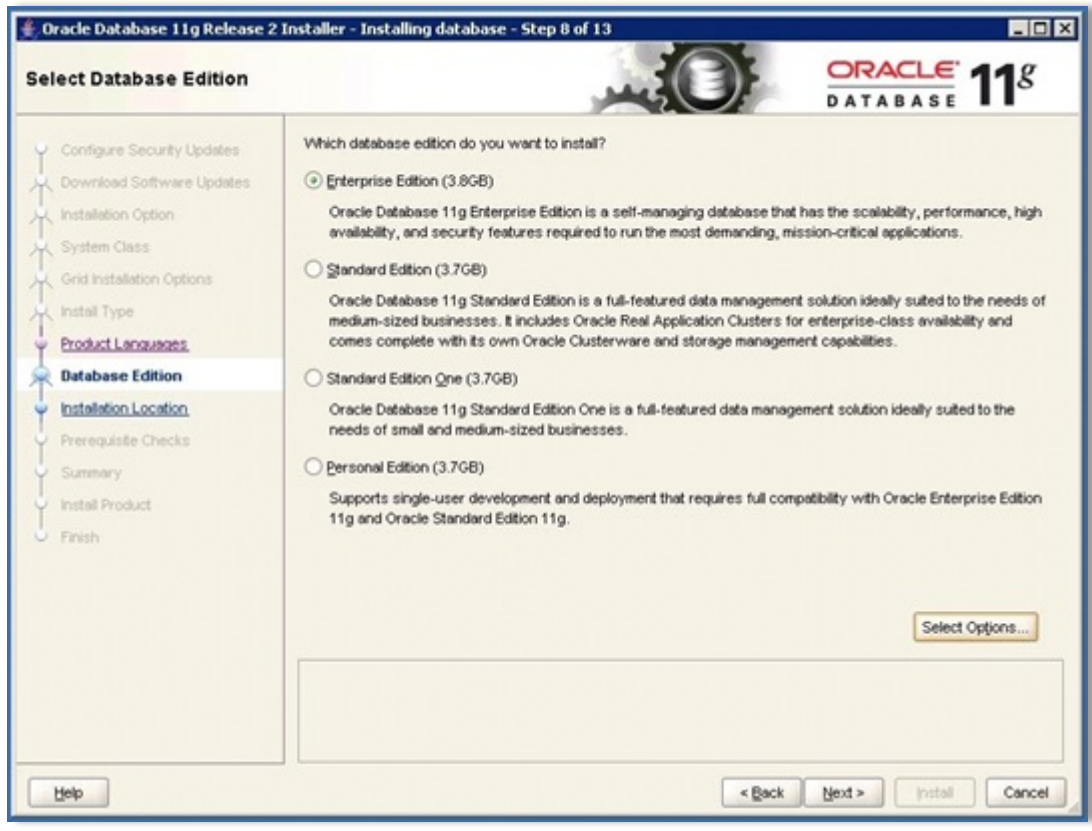
To continue the installation process, click on **Next**.

Figure A - 28: Oracle Database 11g Release 2 Installer – Installing Database – Step 7 of 13 dialog box



10. In the **Oracle Database 11g Release 2 Installer - Installing database – step 8 of 13** dialog box, select the **Enterprise Edition** option and click on **Next**.

Figure A - 29: Oracle Database 11g Release 2 Installer – Installing Database – Step 8 of 13 dialog box



NOTE

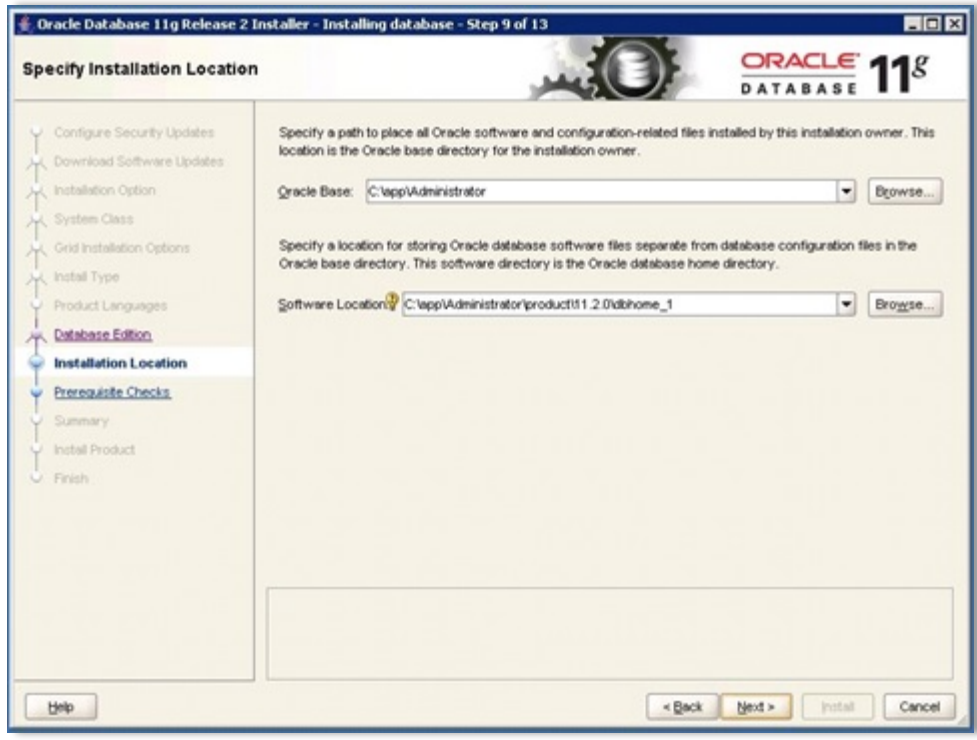
The choices under the **Select Options** window have not been modified. All the default features have been installed successfully.

11. In the **Oracle Database 11g Release 2 Installer - Installing database – step 9 of 13** dialog box,

- a. To accept the default destination folder, click on **Next** OR
- b. To select a different destination folder, click on **Browse**.

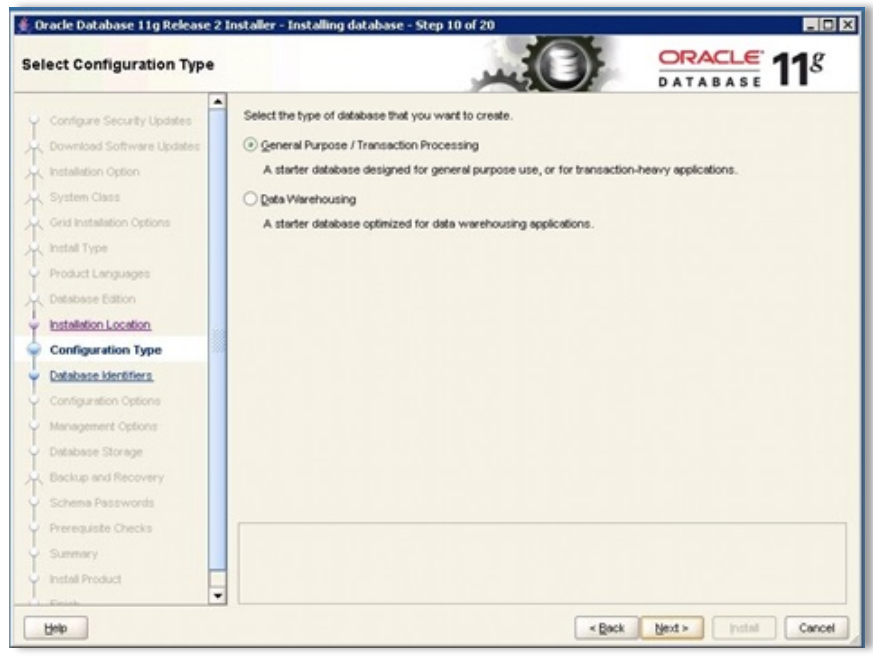
Click on **Next**.

Figure A - 30: Oracle Database 11g Release 2 Installer – Installing Database – Step 9 of 13 dialog box



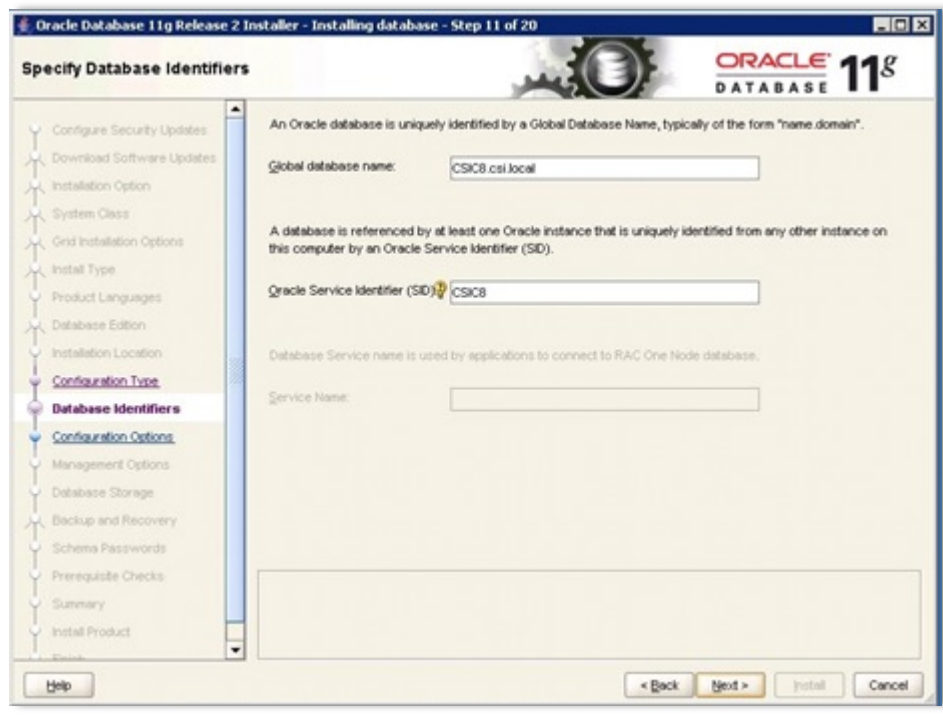
12. In the **Oracle Database 11g Release 2 Installer - Installing database – step 10 of 13** dialog box, select the **General purpose/Transaction processing** option and click on **Next**.

Figure A - 31: Oracle Database 11g Release 2 Installer – Installing Database – Step 10 of 20 dialog box



13. In the **Oracle Database 11g Release 2 Installer - Installing database – step 11 of 20** dialog box, enter the **Oracle database name:** (ORACLE_SID)

Figure A - 32: Oracle Database 11g Release 2 Installer – Installing Database – Step 11 of 20 dialog box

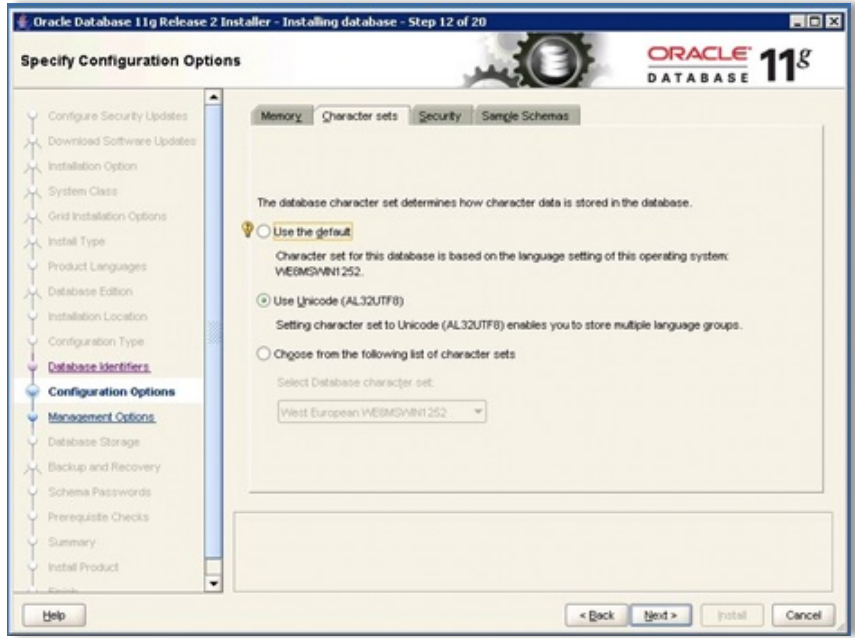


NOTE

The Global Database Name value has been updated as 'CSIC8.csi.local' and the SID is automatically updated as CSIC8.

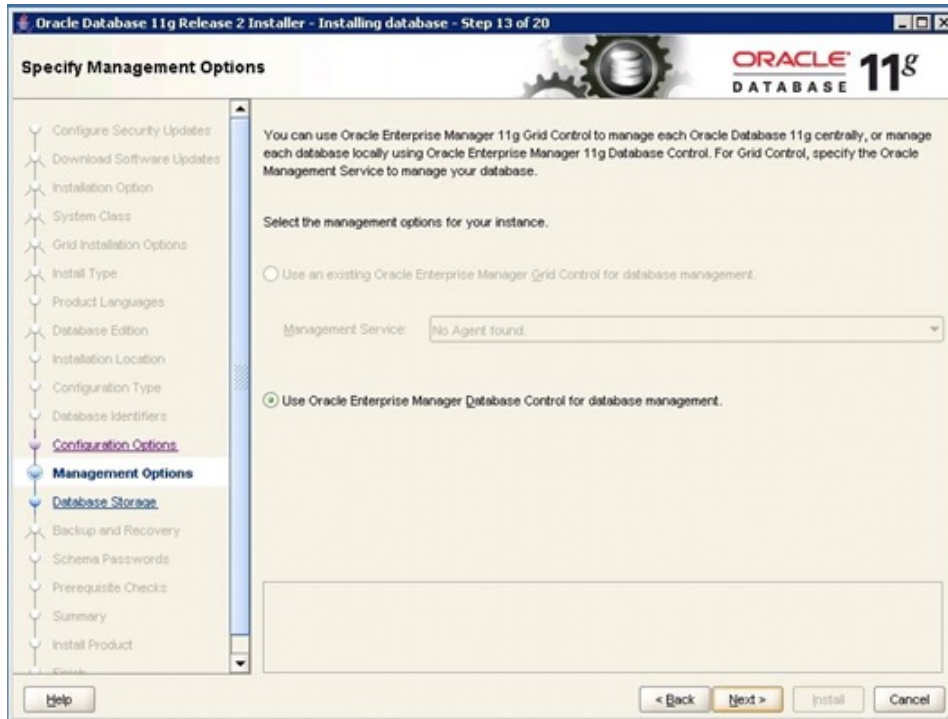
14. In the **Oracle Database 11g Release 2 Installer - Installing database – step 12 of 20** dialog box, on the **Character sets** tab, select the **Use Unicode (AL32UTF8)** option and click on **Next**.

Figure A - 33: Oracle Database 11g Release 2 Installer– Installing Database – Step 12 of 20 dialog box



15. In the **Oracle Database 11g Release 2 Installer - Installing database – step 13 of 20** dialog box, select the **Use Oracle Enterprise Manager Database Control for database management** option and click on **Next**.

Figure A - 34: Oracle Database 11g Release 2 Installer – Installing Database – Step 13 of 20 dialog box

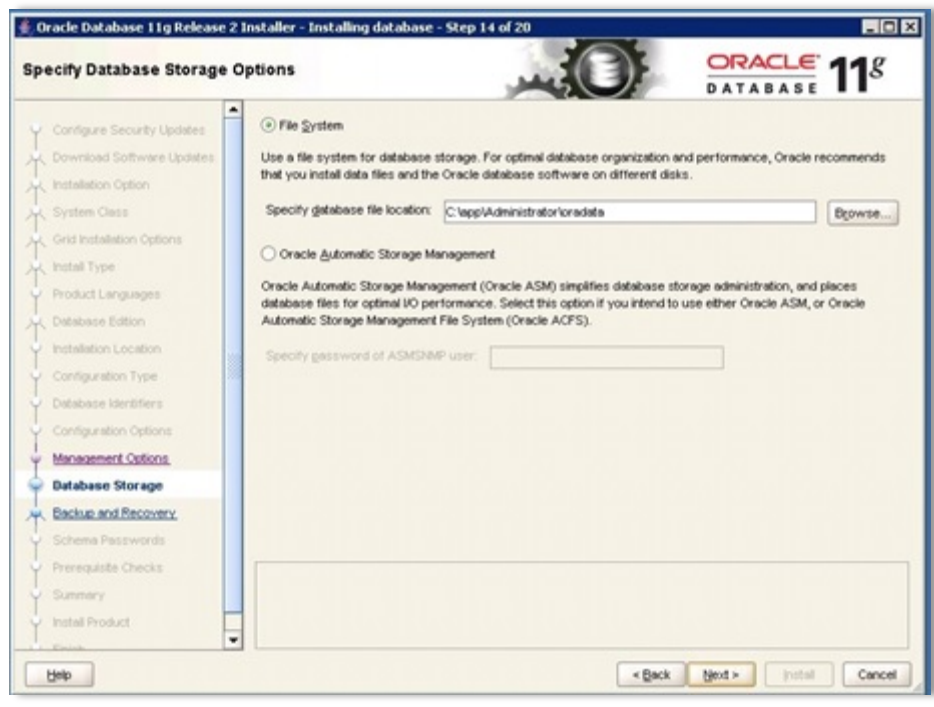


16. In the **Oracle Database 11g Release 2 Installer - Installing database – step 14 of 20** dialog box,

- a. To accept the default destination folder, select the **File System** radio button and click on **Next**. Else, to select a different destination folder, click on **Browse**.

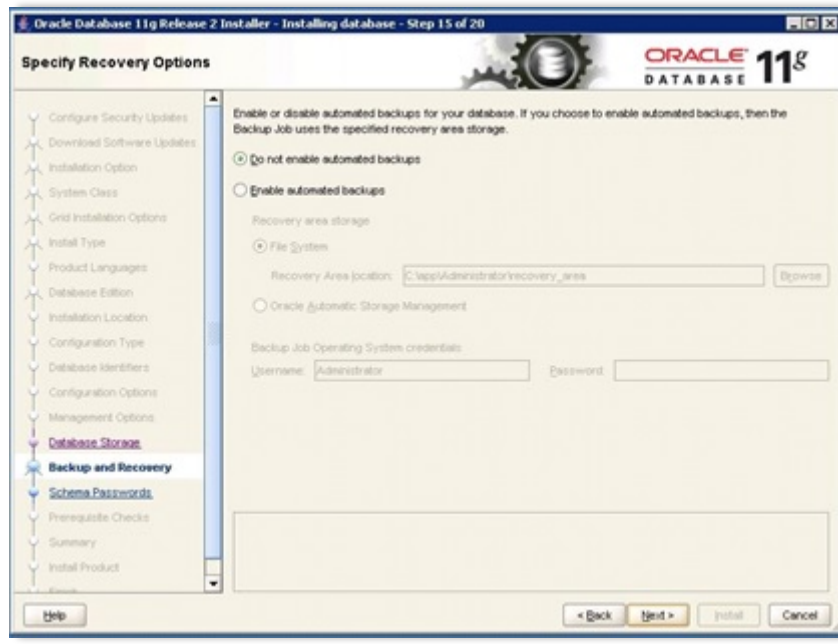
To continue the installation process, click on **Next**.

Figure A - 35: Oracle Database 11g Release 2 Installer – Installing Database – Step 14 of 20 dialog box



17. In the **Oracle Database 11g Release 2 Installer - Installing database – step 15 of 11** dialog box, select the **Do not enable automated backups** radio button and click on **Next**.

Figure A - 36: Oracle Database 11g Release 2 Installer – Installing Database – Step 15 of 20 dialog box

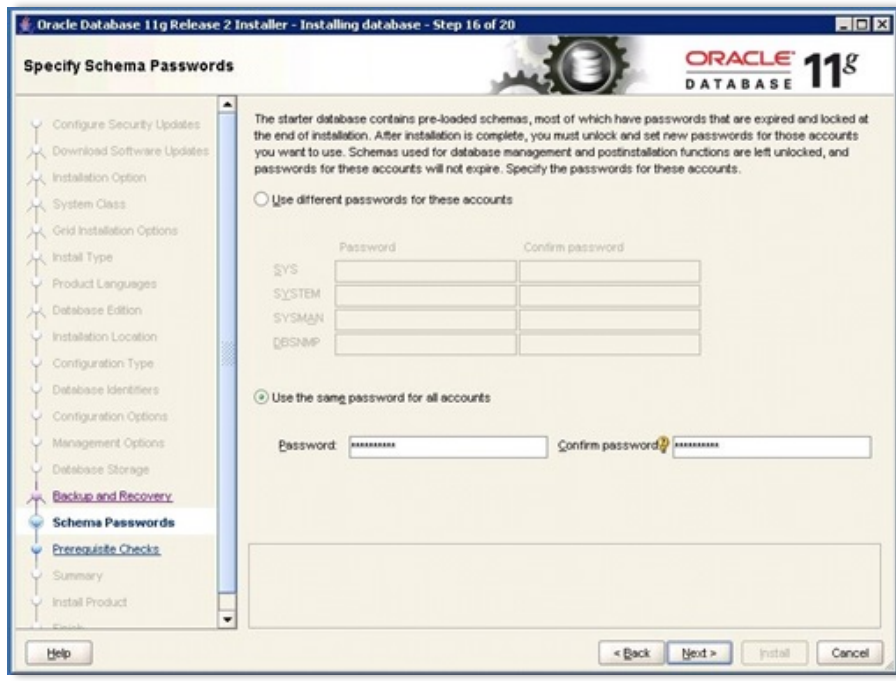


18. In the **Oracle Database 11g Release 2 Installer - Installing database – step 16 of 20** dialog box, select the **Use the same password for all accounts** radio button. Enter details in the **Password** field and click on **Next**.

NOTE

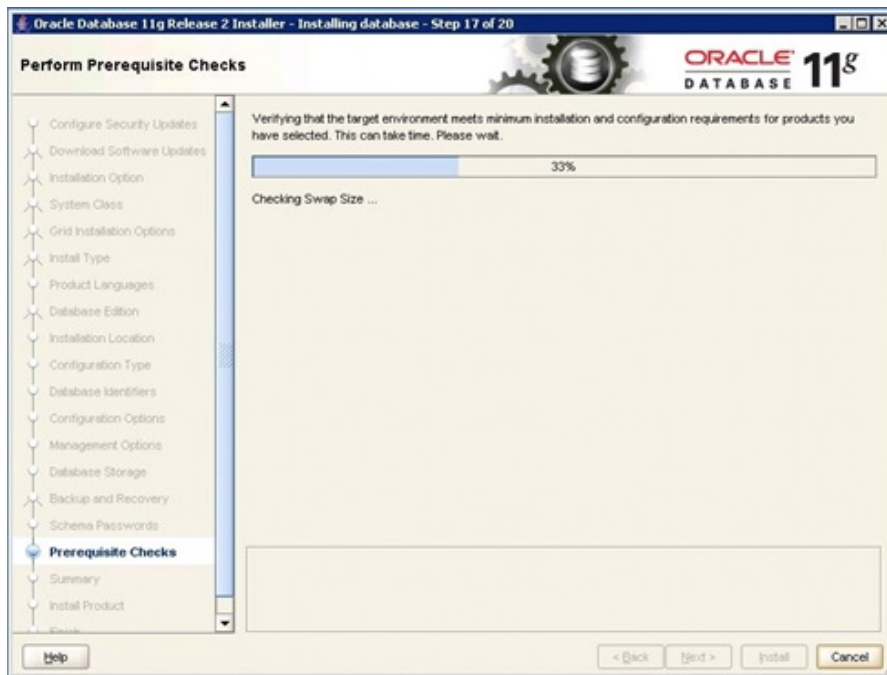
When you choose this option, the same password will be used for "SYS", "SYSTEM", "SYSMAN", "DBSNMP".

Figure A - 37: Oracle Database 11g Release 2 Installer – Installing Database – Step 16 of 20 dialog box



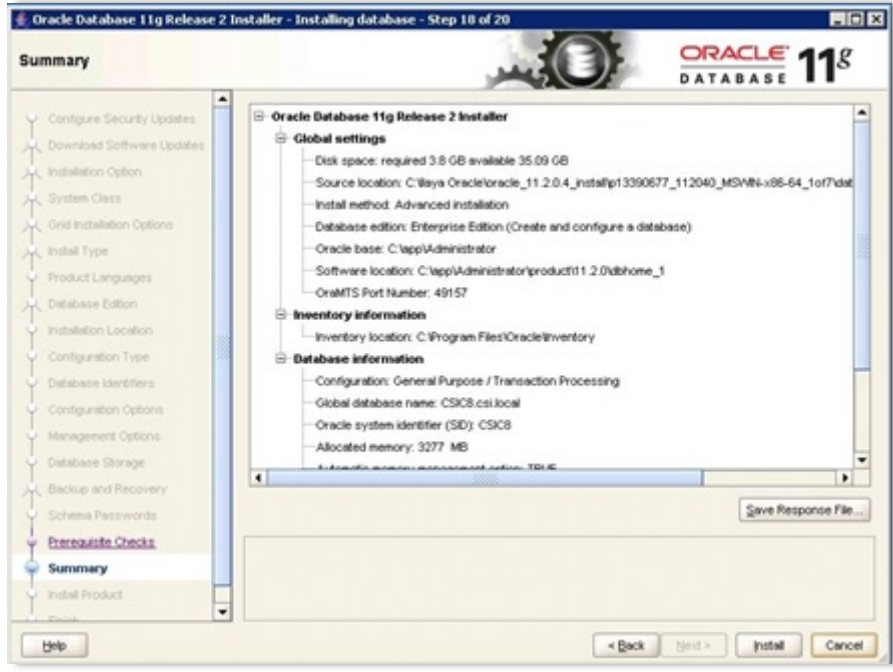
19. In the **Oracle Database 11g Release 2 Installer - Installing database – step 17 of 20** dialog box, the Installer will check for requirements based on your selection before proceeding with the installation.

Figure A - 38: Oracle Database 11g Release 2 Installer – Installing Database – Step 17 of 20 dialog box



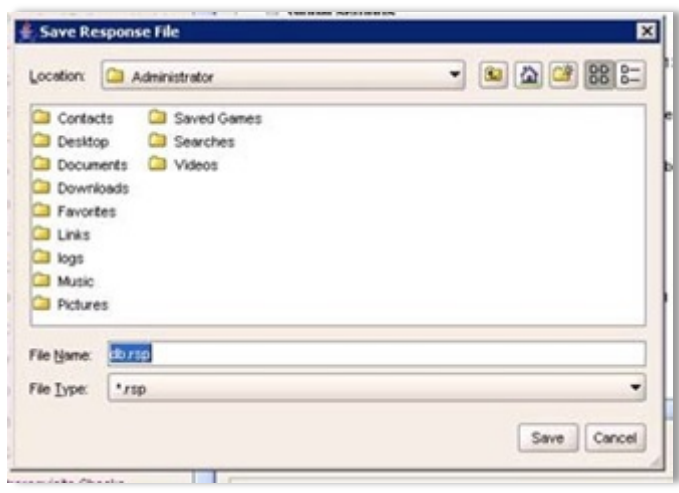
20. In the **Oracle Database 11g Release 2 Installer - Installing database step 18 of 20** dialog box, verify the details. To make changes to the changes to the settings, click on **Back**. Else, to continue to the next step, click on **Save Response File** button.

Figure A - 39: Oracle Database 11g Release 2 Installer– Installing Database– Step 18 of 20 dialog box



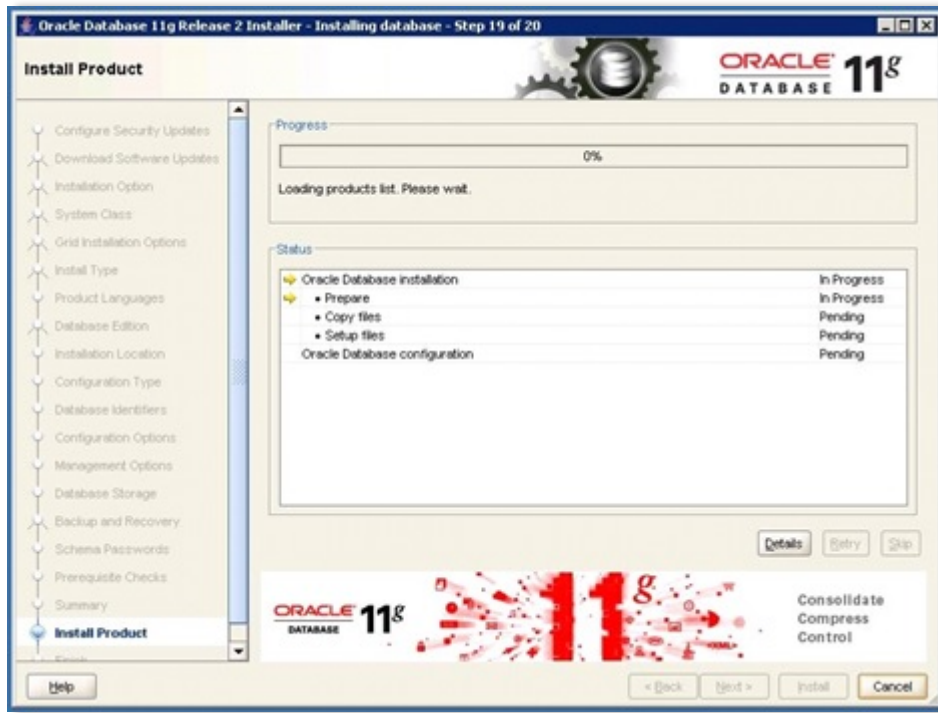
21. To save the db.rsp in the local location for reference, click on the **Save** button.

Figure A - 40: Save Response File dialog box



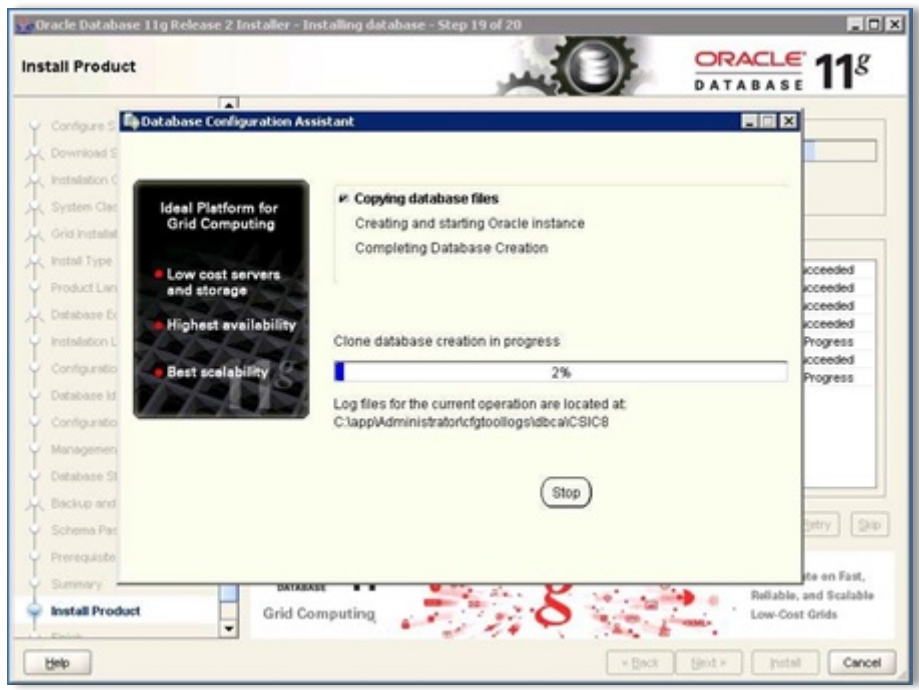
22. The Installation progress is displayed on the screen as shown below:

Figure A - 41: Oracle Database 11g Release 2 Installer – Installing Database – Step 19 of 20 dialog box



23. The Installation progress is displayed on the screen as shown below:

Figure A - 42: Oracle Database 11g Release 2 Installer – Installing Database – Step 19 of 20 (2) dialog box



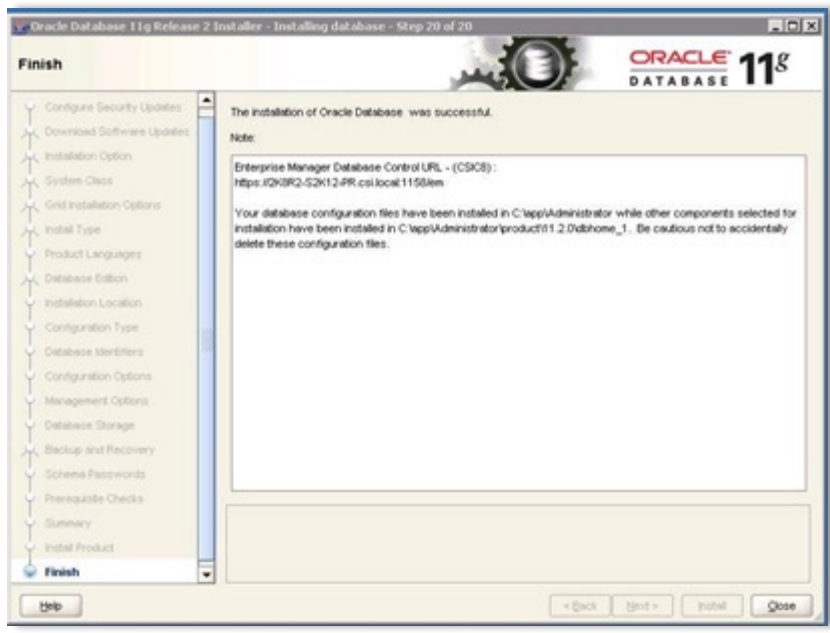
24. Click on **OK**.

Figure A - 43: Oracle Database 11g Release 2 Installer – Installing Database – Step 19 of 20 (3) dialog box



25. Save the **Enterprise Manager Database URL** and click on **Close**.

Figure A - 44: Oracle Database 11g Release 2 Installer – Installing Database – Step 20 of 20 dialog box



4. Create Centric8 Database by Script

Before installing Centric 8 Database, create an Oracle Instance and ensure that it is up and running. The ORACLE_SID and ORACLE_HOME variables should exist in the database Server.

The Centric Software database scripts will create Centric 8 Database to serve PLM Server.

- `create_reset_db.bat` is a major script to be created in Centric 8 Database. It should be executed by Oracle SYSTEM User.

1. The script will check if the Oracle Instance is created to meet pre-requisites.
2. It will create 4 basic Tablespaces (CENTRICHUB, CFV_DATA, C8_DATA, C8_INDEX) if they do not exist.
3. It will create user (if the user does not exists) and create schema for Centric 8 Database.

C:\PI\DatabaseScripts>create_reset_db.bat

Usage:

```
Create_RESET_DB connect_string userid2 password2 ORACLE_DATA_DIR1
[ORACLE_DATA_DIR2] [ORACLE_DATA_DIR3]
```

connect_string - Is of format 'uid/pwd@dbname'

uid - User having tablespace and user creation rights. Typically SYSTEM.

pwd - Password of the user.

dbname - Database/SID where schema will be created. (Eg: CSIHUB)

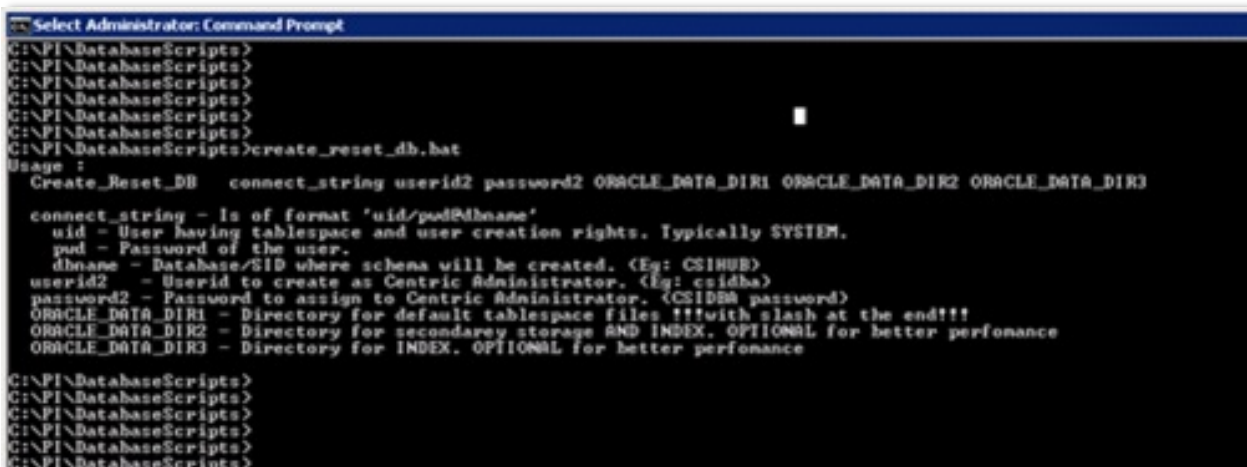
userid2 - Userid to create as Centric Administrator. (Eg: csidba)

password2 - Password to assign to Centric Administrator. (CSIDBA password)

ORA_DATA_DIR1 - Directory for default tablespace files !!! with slash at the end!!!

[ORA_DATA_DIR2] - Directory for secondary storage AND INDEX. OPTIONAL for better performance

[ORA_DATA_DIR3] - Directory for INDEX. OPTIONAL for better performance



```
Select Administrator: Command Prompt
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>create_reset_db.bat
Usage :
Create_Reset_DB connect_string userid2 password2 ORACLE_DATA_DIR1 ORACLE_DATA_DIR2 ORACLE_DATA_DIR3
connect_string - Is of format 'uid/pwd@dbname'
uid - User having tablespace and user creation rights. Typically SYSTEM.
pwd - Password of the user.
dbname - Database/SID where schema will be created. (Eg: CSIHUB)
userid2 - Userid to create as Centric Administrator. (Eg: csidba)
password2 - Password to assign to Centric Administrator. (CSIDBA password)
ORACLE_DATA_DIR1 - Directory for default tablespace files !!!with slash at the end!!!
ORACLE_DATA_DIR2 - Directory for secondary storage AND INDEX. OPTIONAL for better performance
ORACLE_DATA_DIR3 - Directory for INDEX. OPTIONAL for better performance
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
```

```
C:\PI\DatabaseScripts>create_reset_db.bat system/Manager7@csihub csidba csidba
C:\Oracle11g\oradata\csihub\E:\Oracle11g\oradata\csihub\
```

Creating Centric Hub Database tablespaces and Centric Administrator account.

ECHO is off.

STEP 1: CHECK Database ENV: TBS and USER

ECHO is off.

STEP 2: Clean up Original atabase ENV: TBS and USER csidba csidba

ECHO is off.

STEP 6: Create Tables

ECHO is off.

STEP 7: Create TYPES

ECHO is off.

STEP 8: Create Views

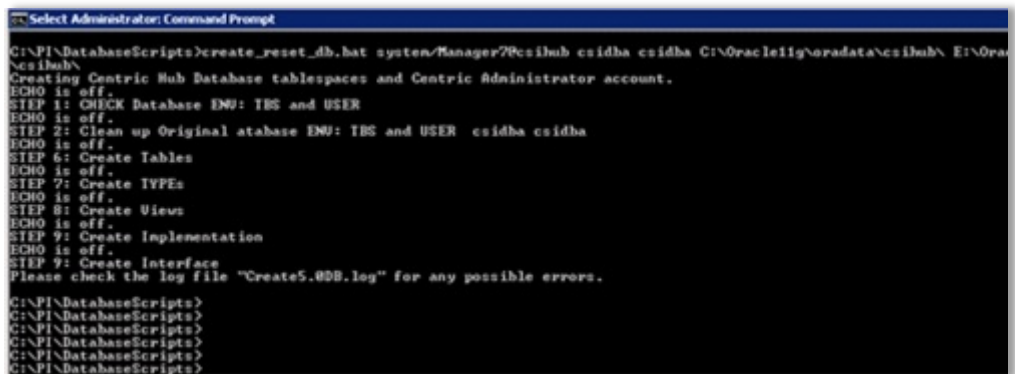
ECHO is off.

STEP 9: Create Implementation

ECHO is off.

STEP 9: Create Interface

Check the log file `Create5.0DB.log` for any possible errors.



```
Select Administrator: Command Prompt
C:\PI\DatabaseScripts>create_reset_db.bat system/Manager7@csihub csidba csidba C:\Oracle11g\oradata\csihub\E:\Oracle11g\oradata\csihub\
Creating Centric Hub Database tablespaces and Centric Administrator account.
ECHO is off.
STEP 1: CHECK Database ENV: TBS and USER
ECHO is off.
STEP 2: Clean up Original atabase ENV: TBS and USER csidba csidba
ECHO is off.
STEP 6: Create Tables
ECHO is off.
STEP 7: Create TYPES
ECHO is off.
STEP 8: Create Views
ECHO is off.
STEP 9: Create Implementation
ECHO is off.
STEP 9: Create Interface
Please check the log file "Create5.0DB.log" for any possible errors.
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
C:\PI\DatabaseScripts>
```

The C8 Database Installation is completed.

5. Create Centric 8 Database Manually

Before creating the Centric 8 database manually, the following two prerequisites must be verified:

- NLS_CHARACTERSET must be AL32UTF8.
- Ensure that the XML DB is installed.

1. Verify NLS_CHARACTERSET

When database instance is created, the NLS_CHARACTERSET should be set as **AL32UTF8**.

```
C:\sqlplus / as sysdba
```

```
SQL> SELECT value$ FROM sys.props$ WHERE name = 'NLS_CHARACTERSET';
```

It should return **AL32UTF8**.

If the answer is different, the database has to be recreated with appropriate initial parameters.

Install database instance with proper initial parameter as explained in section [Create Oracle Database](#).

2. Install XML DB

Oracle XML DB is part of the seed database and is installed by Database Configuration Assistant (DBCA) by default. No additional steps are required to install Oracle XML DB.

► How to verify that XML DB is installed in the database

1. Login in database as SYS user using SQL Plus.

a. `C:\sqlplus sys/password as sysdba`

b. `SQL>select comp_name from dba_registry where comp_name like '%XML%';`

```
COMP_NAME
```

```
-----
```

```
Oracle XML Database
```

Indicates XML DB is installed in the database and there is no additional step required.

2. "No rows selected" indicates that the XML database is not installed.

3. To install XML Database,

a. `SQL> @?/rdbms/admin/catqm password SYSAUX TEMP YES`



xdbpwd is the password for xdb. It can be different from the system password. It will be a lengthy process.

b. `SQL> GRANT EXECUTE ON utl_file TO xdb;`

c. `SQL> GRANT EXECUTE ON dbms_lob TO xdb;`

d. `SQL> ALTER SYSTEM SET DISPATCHERS = "(PROTOCOL=TCP)(SERVICE=<SID>XDB)" SCOPE=both;`

4. Use `dbms_utility.compile_schema` to compile invalid objects if there are any returned rows:

```
SQL> select distinct owner from all_objects where status='INVALID';
```

```
OWNER
```

```
-----
```

```
CSIDBA
```

```
PUBLIC
```

```
SQL> exec dbms_utility.compile_schema('CSIDBA');
```

```
SQL> exec dbms_utility.compile_schema('PUBLIC');
```

5. Repeat Step 3 till “no rows selected” is no longer displayed.

6. To verify that the XML Database is installed, repeat step 1b (shown below):

```
SQL> select comp_name from dba_registry where comp_name like '%XML%';
```

```
COMP_NAME
```

```
-----
```

```
Oracle XML Database
```

7. Create Required Tablespaces: CENTRICHUB, CFV_DATA, C8_DATA, C8_INDEX

a. Use SQL Plus as **SYSTEM** user to create all tablespaces. For performance reason, separate CENTRICHUB and C8_INDEX into different devices.

b. Manual Script:

```
C:\>Sqlplus SYSTEM/Password@SID
```

```
SQL> CREATE TABLESPACE $TABLESPACE LOGGING
```

```
DATAFILE '$DIRECTORY_FULL_PATH\$TABLESPACE.ora'
```

```
SIZE 2000M REUSE AUTOEXTEND ON NEXT 500M
```

```
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
```

```
SEGMENT SPACE MANAGEMENT AUTO;
```



Replace *\$DIRECTORY_FULL_PATH* and *\$TABLESPACE*

c. Batch File:

```
C:\PI\DatabaseScripts\Admin>createTS.bat SYSTEM/Manager7 C:\OracleDB\ G:\OracleDB\  
H:\OracleDB\  
Update Tablespace
```

```
-----
```

```
Creating Tablespace in C:\OracleDB\ G:\OracleDB\ H:\OracleDB\  
-----
```

Check the log file CREATE_TS.log for any possible errors.

d. Script File:

Use SQL Plus to login database as sys or system.

```
C:\PI\DatabaseScripts\Admin>sqlplus system/Manager7
```

```
SQL> @createTS C:\OracleDB\ G:\OracleDB\ H:\OracleDB\  
-----
```

8. Create Centric 8 Database User (CSIDBA)

a. The **CSIDBA** must be created using **SYSDBA** role for granting **SYS.DBMS_LOCK** privilege.

b. Manual Script

```
C:\>Sqlplus SYSTEM/Password@SID as SYSDBA
```

Type the following commands at the SQL Plus prompt:

```
CREATE USER CSIDBA PROFILE DEFAULT IDENTIFIED BY CSIDBA DEFAULT
TABLESPACE CENTRICHUB TEMPORARY TABLESPACE TEMP ACCOUNT UNLOCK;
GRANT ALTER SYSTEM TO CSIDBA;
GRANT CREATE PROCEDURE TO CSIDBA;
GRANT CREATE SEQUENCE TO CSIDBA;
GRANT CREATE TABLE TO CSIDBA;
GRANT CREATE TABLESPACE TO CSIDBA;
GRANT CREATE TRIGGER TO CSIDBA;
GRANT CREATE TYPE TO CSIDBA;
GRANT CREATE VIEW TO CSIDBA;
GRANT DROP TABLESPACE TO CSIDBA;
GRANT FORCE ANY TRANSACTION TO CSIDBA;
GRANT SELECT ANY DICTIONARY TO CSIDBA;
GRANT UNLIMITED TABLESPACE TO CSIDBA;
GRANT CONNECT TO CSIDBA;
GRANT RESOURCE TO CSIDBA;
GRANT EXECUTE ON SYS.DBMS_LOCK TO CSIDBA;
GRANT EXECUTE ANY PROCEDURE TO CSIDBA;
GRANT debug connect session to CSIDBA;
GRANT debug any procedure to CSIDBA;
```

c. Batch File

```
C:\PI\DatabaseScripts\Admin>createUser.bat SYSTEM/Password@SID CSIDBA
password
```

d. Script File

Use SQL Plus to login database as sys or system

```
C:\PI\DatabaseScripts\Admin>sqlplus system/password@SID as sysdba
SQL> @admin_createuser CSIDBA password
```

e. Create Database Schema

Database schema should be created as **CSIDBA** user.

Go to the SQL scripts location as following:

```
C:\>Sqlplus CSIDBA/password@SID @CreateSchema.sql
C:\>Sqlplus CSIDBA/password@SID @CreateSoftware.sql
```

6. Upgrade Centric 8 Database To Current Version

To upgrade the Centric PLM Software to a newer version, initially you need to migrate the Centric 8 Database to a newer version. Customer requires updating database environment to meet Centric 8 database prerequisites and run migration scripts to migrate Centric 8 database schema and software without losing data.

► How to upgrade the C8 Database

`MigrateToCurrent.bat` script provides a single process to migrate Centric 8 database to meet prerequisites. The script will execute following steps:

1. Export database using data pump before the upgrade process.
 - The exported dump file will be stored in Oracle provided **DATA_PUMP_DIR** directory.
 - To verify the directory location:
 - `SELECT directory_path FROM all_directories`
Where `directory_name = 'DATA_PUMP_DIR'`;
2. Verify `NLS_CHARACTERSET` parameter is set to be `AL32UTF8`
 - If the requirements are not met with, migration script will be terminated.
 - The database must be recreated if it has been created using any other **CHARACTERSET** other than **AL32UTF8**.
3. Verify XML DB component is installed.
 - If requirements are not met with, the migration script will be terminated. Users can install XML DB as per instructions provided in the section [How to install XML Database](#).
4. Create new tablespaces: `C8_DATA` and `C8_INDEX` if these tablespaces do not exist.
5. Grant all required privileges.
6. Run Migrate script to migrate schema to current version.

7. Import/Export (Data Dump) Utility for Centric 8 Database

Before running the migration script, ensure that you take a database dump to avoid any mistakes and data loss. Before exporting data, you should terminate the application server and disconnect from the database to guarantee data consistency.

Oracle Data Dump utility provides an easy way to restore the database in case of errors that may occur during the migration process. It is executed on command prompt.

Centric 8 provides **ExportC8** and **ImportC8** utilities to import and export C8 database. Details are provided in the [Centric 8 Database Utilities](#) section. A typical Setup for Data Dump is as follows:

Use Oracle Directories

1. View database directories: Use **all_directories** to view default directories.

```
SQL> select directory_name from all_directories;
DIRECTORY_NAME
-----
DMPDIR
XMLDIR DATA_PUMP_DIR
ORACLE_OCM_CONFIG_DIR
```

2. Create your own directory as **SYSTEM user** and **Grant to CSIDBA**:

```
SQL>CREATE DIRECTORY DMPDIR AS 'F:\C8_DMP';
SQL>GRANT READ,WRITE ON DIRECTORY DMPDIR TO CSIDBA;
```

Export Database

1. **Expdp/Impdp** can be run at local host or remote server command prompt and the dump files will exist in the Database server directory.
2. Run **expdp** utility as the SYSTEM user credential. For exporting consistent data, users must use the **FLASHBACK_TIME** parameter

```
C:\> expdp SYSTEM/password@SID schemas=CSIDBA directory=DMPDIR
dumpfile=EXP052813.DMP logfile=imp.log FLASHBACK_TIME=SYSTIMESTAMP
```

Import Database

1. Copy the dump file to directory before to be imported.
2. Drop CSIDBA user. Make sure there are no CSIDBA users connecting to database.

```
C:\>Sqlplus system/password@SID
SQL> drop user CSIDBA cascade;
```

3. Recreate the schema user.
4. Create the cf_safeToNumber and safeToBoolean functions as **CSIDBA** user.

```
C:\>Sqlplus CSIDBA/password@SID
CREATE OR REPLACE
FUNCTION cf_safeToNumber
( str      VARCHAR2
)
RETURN NUMBER DETERMINISTIC
AS
  num NUMBER(37,10);
BEGIN
```


4. Run impdp utility as the SYSTEM user credential. Require **REMAP_SCHEMA** keyword

```
C:\> impdp SYSTEM/password@SID schemas=CSIDBA directory=DMPDIR  
REMAP_SCHEMA=CSIDBA:NEWUSER dumpfile=EXP052813.DMP logfile=imp.log
```

5. Recreate virtual columns for `ATTRIBUTE_VARIANT_ELEMENT` table

```
C:\>Sqlplus NEWUSER/password@SID @updateAVE.sql
```

OR

Type the following commands at the SQL Plus prompt:

```
ALTER TABLE ATTRIBUTE_VARIANT_ELEMENT drop (VALUENUMBER, VALUEBOOLEAN);  
ALTER TABLE ATTRIBUTE_VARIANT_ELEMENT ADD (VALUENUMBER  
NUMBER(37,10) AS (cf_safeToNumber(ValueString)));  
ALTER TABLE ATTRIBUTE_VARIANT_ELEMENT ADD (VALUEBOOLEAN  
NUMBER(1,0) AS (cf_safeToBoolean(ValueString)));  
CREATE INDEX IX_AVE_BOOLEAN ON ATTRIBUTE_VARIANT_ELEMENT  
(ValueBoolean)  
TABLESPACE C8_index;
```

6. Execute `DropSoftware.sql` and `CreateSoftware.sql` scripts to create Objects and Types not created via impdp.

```
C:\>Sqlplus NEWUSER/password@SID @DropSoftware.sql
```

```
C:\>Sqlplus NEWUSER/password@SID @CreateSoftware.sql
```

7. Recompile procedures and gather statistics for NEWUSER user by executing following commands as SYSTEM user:

```
exec dbms_utility.compile_schema('NEWUSER');  
exec dbms_stats.gather_schema_stats('NEWUSER');
```

8. Run `UpdateSequence.sql` script to fix any possible - sequences not in sync - issues.

```
C:\>Sqlplus NEWUSER/password@SID @$PTAH/utility/updateSequence.sql
```

9. Run `validateData.sql` script to fix any possible - data out of sync - issues.

```
C:\>Sqlplus CSIDBA/password@SID @$PTAH/utility/validateData.sql
```

8. Centric 8 Database Utilities

ExportC8.bat

ExportC8 script uses Oracle Data Pump expdp utility to export C8 database to an Oracle directory with an export user default dmp file name.


Usage

ExportC8 ORACLE_SID systempassword Userid DirectoryName

<i>ORACLE_SID</i>	Database/SID where schema created. (Eg.: CSIHUB)
<i>Systempassword</i>	Oracle SYSTEM user's password
<i>UserID</i>	Userid to create as Centric Administrator. (Eg.: csidba)
<i>DirectoryName</i>	Oracle Directory Name to store the export file. (Eg.: DATA_PUMP_DIR)

Result

A Data PUMP dump file (*EXP_CSIDBA_MMDDYYHH.DMP*) will be stored in *DATA_PUMP_DIR* directory.



DirectoryName is the directory name stored in *All_Directories* table.

ImportC8.bat

ImportC8 script uses Oracle Data Pump impdp utility to import a C8 database from a User's dmp file.

Usage

ImportC8 ORACLE_SID systempassword Userid Password DirectoryName DumpFileName

<i>ORACLE_SID</i>	Database/SID where schema created. (Eg.: CSIHUB)
<i>Systempassword</i>	Oracle SYSTEM user's password
<i>UserPassword</i>	Password for Centric Administrator
<i>DirectoryName</i>	Oracle Directory Name to store the import file. (Eg.: DATA_PUMP_DIR)
<i>DumpFileName</i>	Oracle Dump file to be imported into database.



Import C8 only supports same username import.

RebuildIdx.sql

RebuildIdx.sql is an SQL script which will rebuild indexes online. It should be executed by the Centric Administrator (CSIDBA).

Usage

SQLPlus CSIDBA/password @rebuildIdx.sql

UpdateSequence.sql

UpdateSequence.sql is an SQL script which will update all sequences used by Centric Administrator (CSIDBA) to sync the sequences number to avoid primary key non-unique constraint violation.

Usage

SQLPlus CSIDBA/password @ updateSequence.sql

9. Tuning Consideration

C8 Import/Export Integration Process

Avoid running both these activities during peak hour. Exporting process should setup the process to export data to a different database which also is better located in a different server.

Online Redo Log consideration

Centric PLM software is an online transaction oriented application which actively modifies data. A few guidelines are available for configuring the redo log file.

Log file size

Oracle database default file size is 52MB. C8 recommends enlarging file size to 200MB at first.

- Log file member: Oracle database default member number is 3. C8 recommends increasing member number to 12 first.
- Log file location: It will be the best to move all log files to an isolated location to reduce IO contention.
- C8 exporting process should export data to different database.

After the modification, verify the alert log to check whether or not the setting is proper. The checking period should be during the C8 usage peak time but exclude the import/export process.

- "Checkpoint not complete" should not exist. When the messages appear, increase log file member.
- Log switch frequency should be under 10 times per hour. To reduce the log switch frequency, the log file size should be increased.

B. WILDFLY CLUSTER

1. Requirements

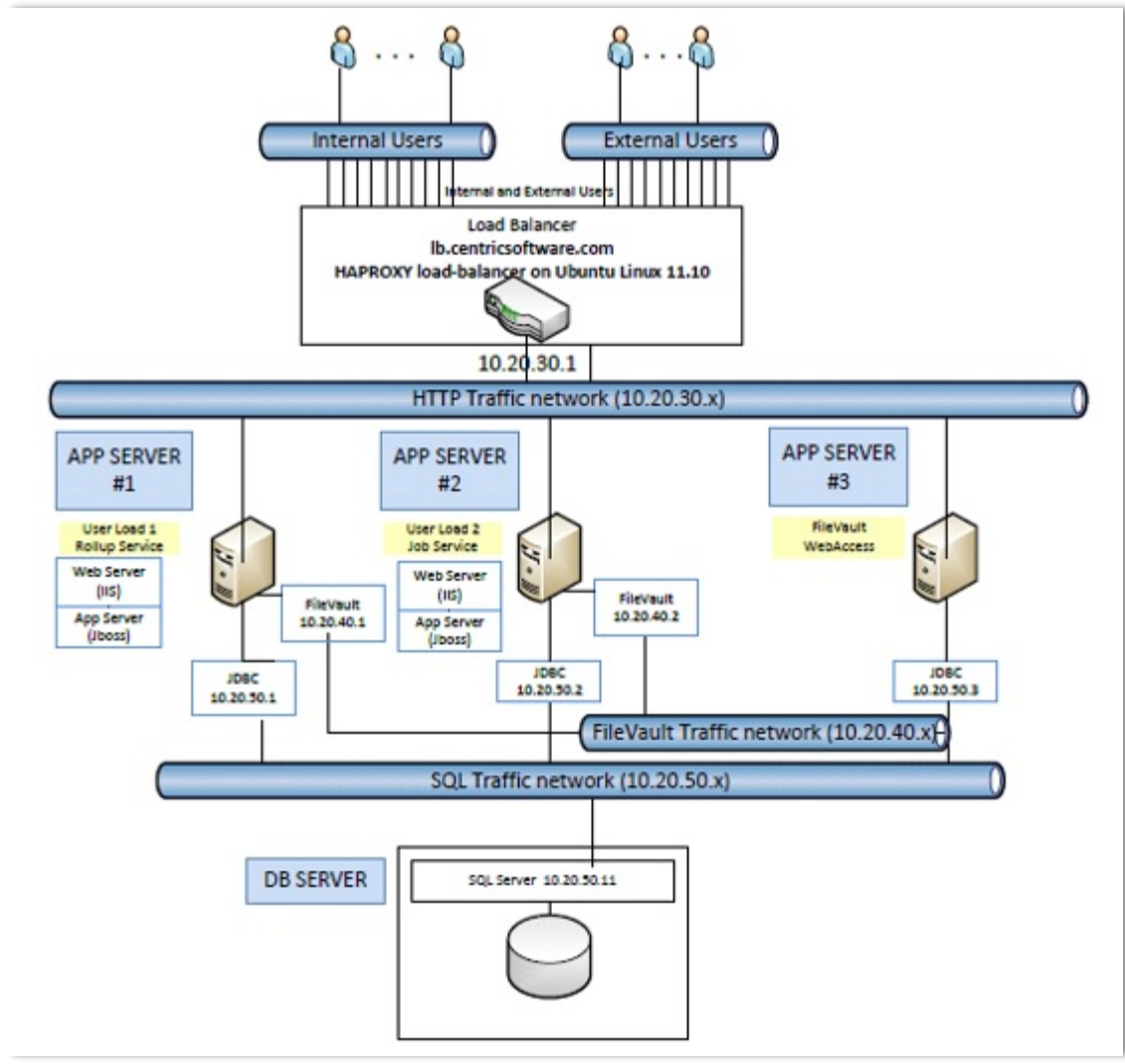
It is recommended to contact Centric before proceeding with the Wildfly Cluster Setup.

1. Filevault folder must be shared between clustered Wildfly Application servers.
2. WebAccess folder must be shared between clustered Wildfly Application servers. Both Read and Write permissions must be enabled on shared WebAccess folder.
3. The following Ports must be open between clustered Application servers:
 - TCP
 - 7700
 - 8009
 - 57700
4. To open TCP ports, refer [Open TCP Ports on Windows Firewall](#).
5. To set up SQL Environment, refer [Setup SQL Database Server](#).
6. To set up Oracle Environment, refer [Setup Oracle Database Server](#).

2. Environment Setup

The picture in the following page depicts a typical Wildfly Cluster Setup.

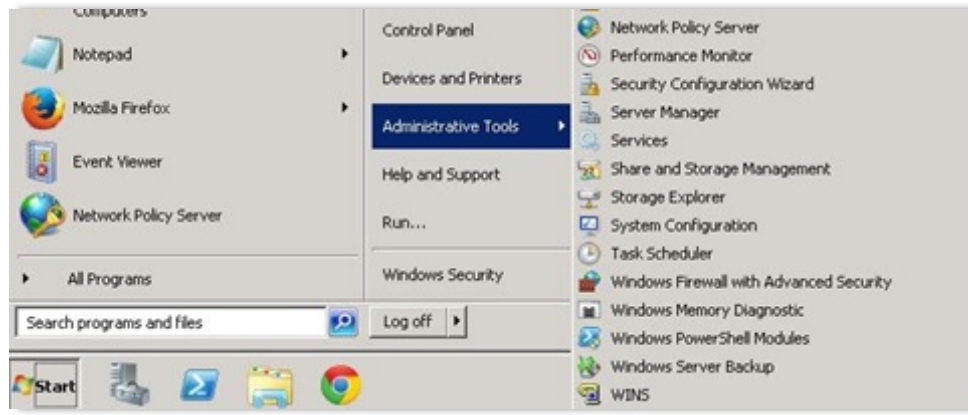
Figure (Appendix B) - 1: A typical Wildfly Cluster Setup



Open TCP Ports on Windows Firewall

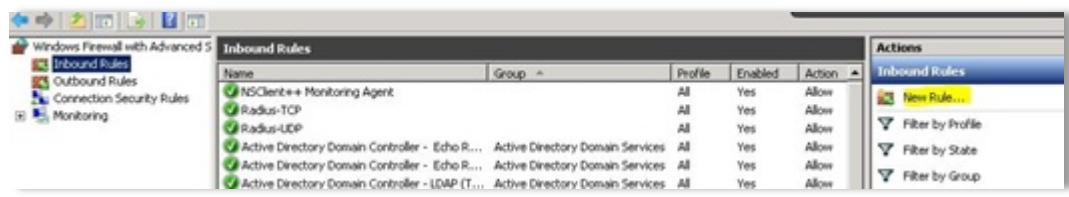
1. On the **Start** menu, select **Administrator Tools** ▶ **Windows Firewall** ▶ **Advanced Security** option.

Figure (Appendix B) - 2: Administrator Tools menu



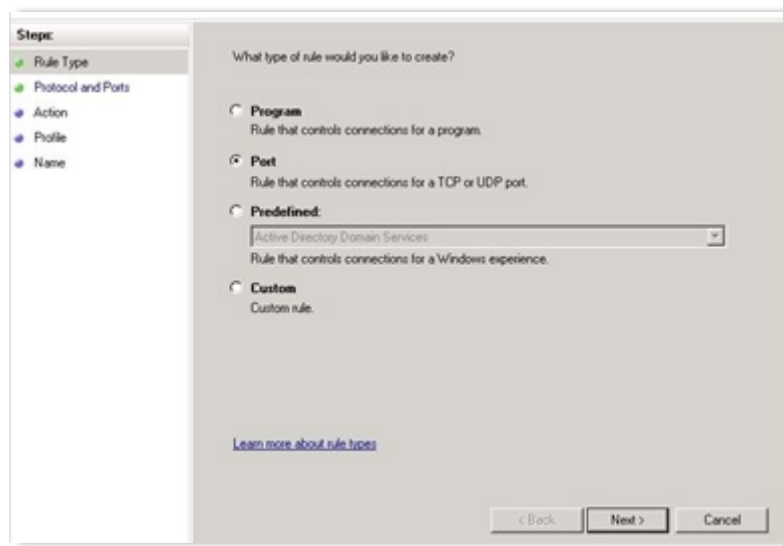
2. In the **Windows Firewall with Advanced Security** dialog box, click on **Inbound Rules** on the left side. Then, on the right-side, under **Actions**, click on **New Rule**.

Figure (Appendix B) - 3: New Rule



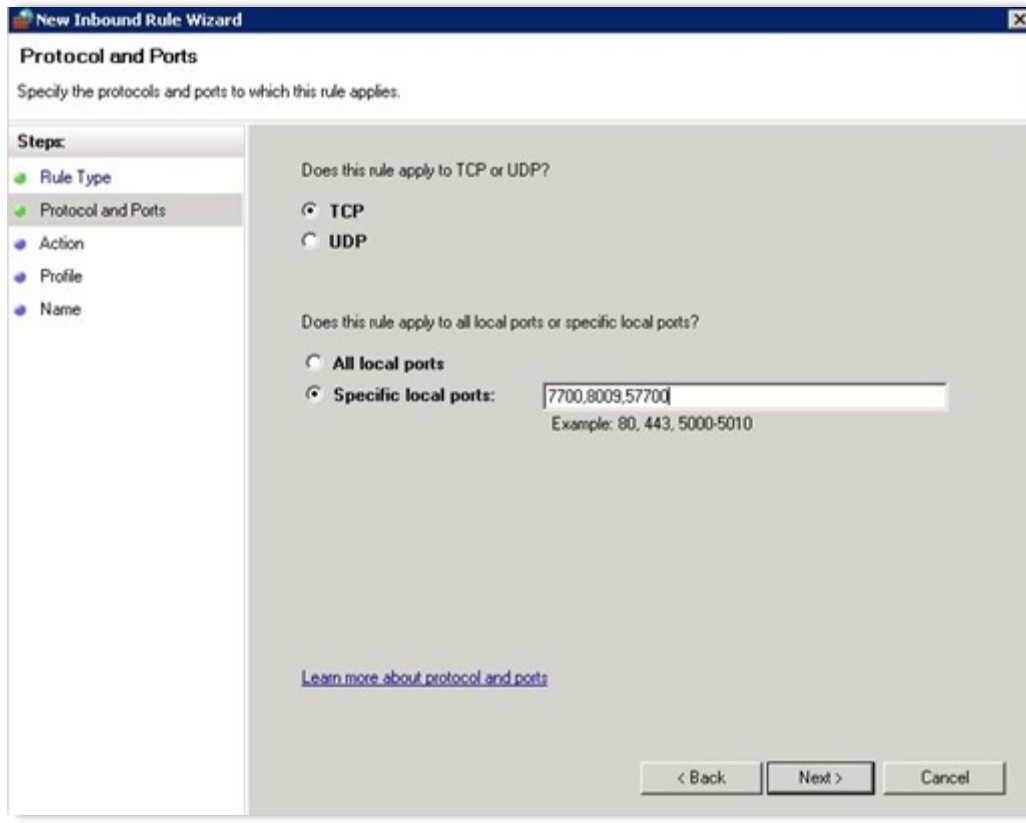
3. In the **New Inbound Rule Wizard** dialog box, click on the **Port** radio button. Click on **Next**.

Figure (Appendix B) - 4: New Inbound Rule Wizard



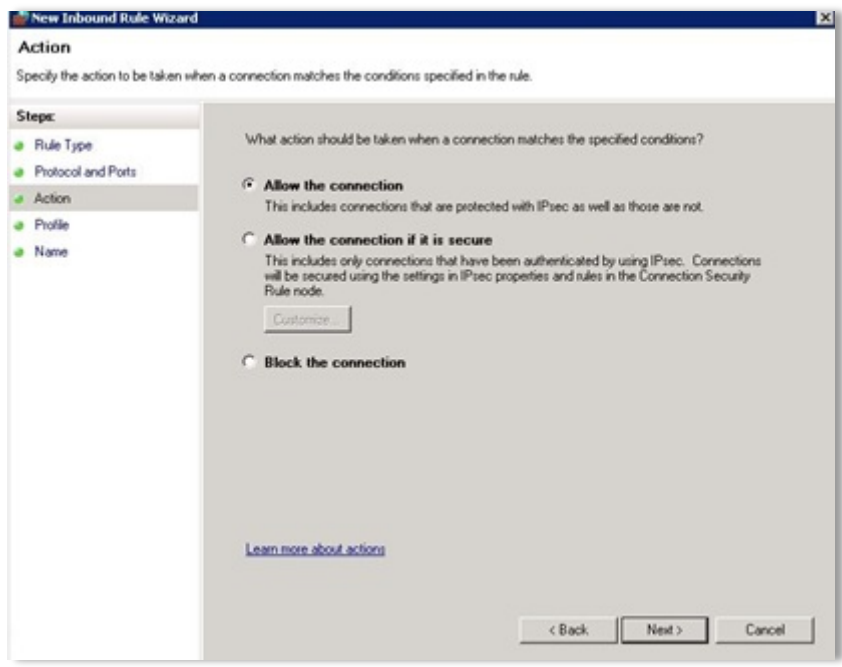
4. In the **Protocol and Ports** window, click on the **TCP and Specific local ports** radio button and then click on **Next**.

Figure (Appendix B) - 5: Inbound Rule Wizard (2)



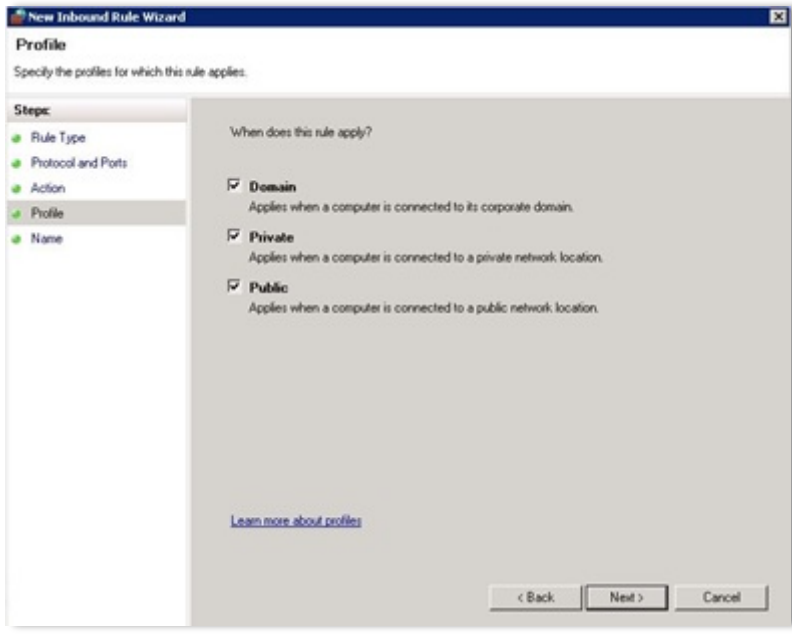
5. In the **Action** window, click on **Allow the connection** radio button and click on **Next**.

Figure (Appendix B) - 6: Inbound Rule Wizard (3)



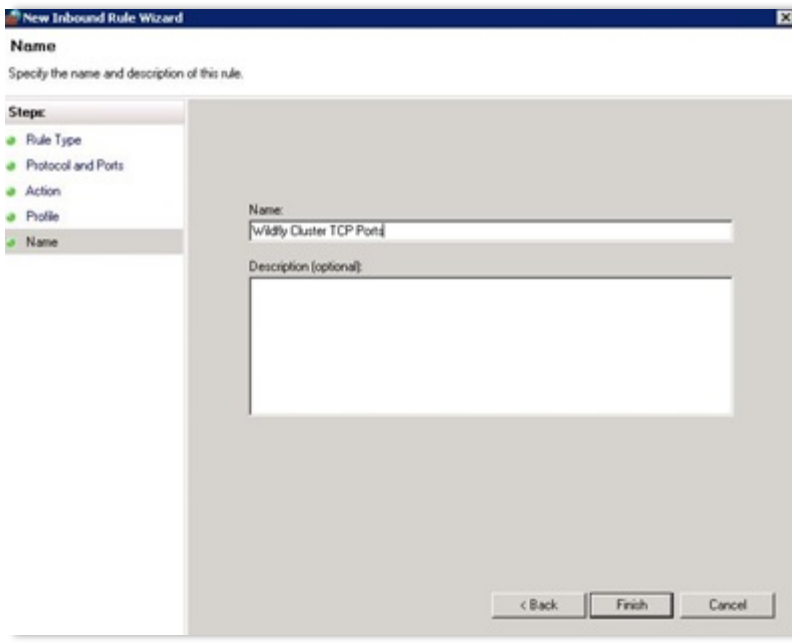
6. In the **Profile** window, select all the check boxes and click on **Next**.

Figure (Appendix B) - 7: Inbound Rule Wizard (4)



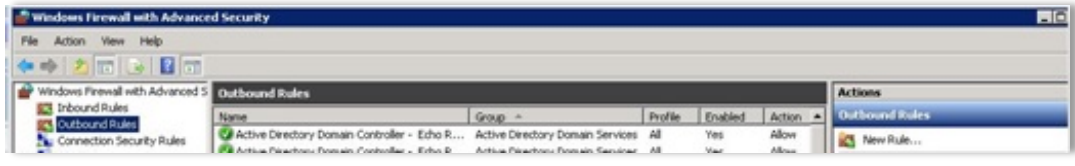
7. In the **Name** window, type *Wildfly Cluster TCP Ports* and click on **Finish**.

Figure (Appendix B) - 8: Inbound Rule Wizard (6)



8. Click on **Outbound Rules** and repeat steps 3 - 7.

Figure (Appendix B) - 9: Windows Firewall with Advanced Security



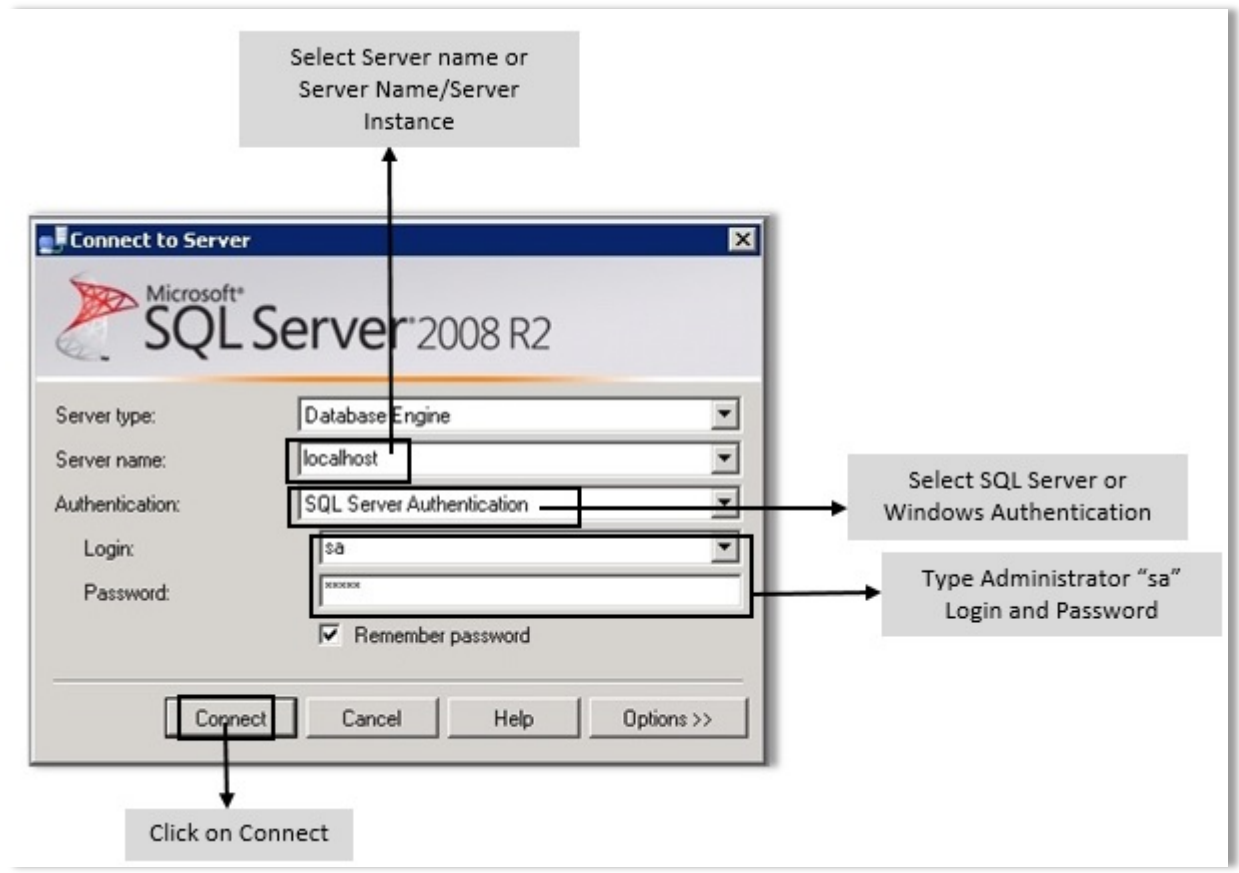
Setup SQL Database Server

1. Run C8 server Installer, choose to install Database only option, create new database options.
2. Click on **Finish** to complete the installation.

Refer [Chapter 4, Dual Server Software Installation](#) and [Computer 2 Installation](#)

3. On the **Start** menu, select **Programs** ▶ **Microsoft SQL Server 2008 R2** ▶ **SQL Server Management Studio**. The **Connect to Server** dialog box is displayed.

Figure (Appendix B) - 10: Connect to Server

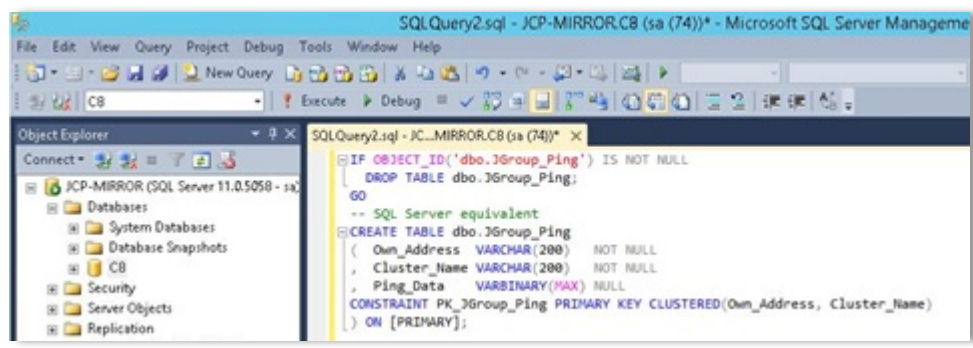


4. In the **Object Explorer** window, connect to the correct C8 database and open Query window.

Type the following script and click on Execute

```
IF OBJECT_ID('dbo.JGroup_Ping') IS NOT NULL
    DROP TABLE dbo.JGroup_Ping;
GO
-- SQL Server equivalent
CREATE TABLE dbo.JGroup_Ping
( Own_Address VARCHAR(200) NOT NULL
, Cluster_Name VARCHAR(200) NOT NULL
, Ping_Data VARBINARY(MAX) NULL
CONSTRAINT PK_JGroup_Ping PRIMARY KEY CLUSTERED(Own_Address, Cluster_Name)
) ON [PRIMARY];
```

Figure (Appendix B) - 11: SQL Query Window



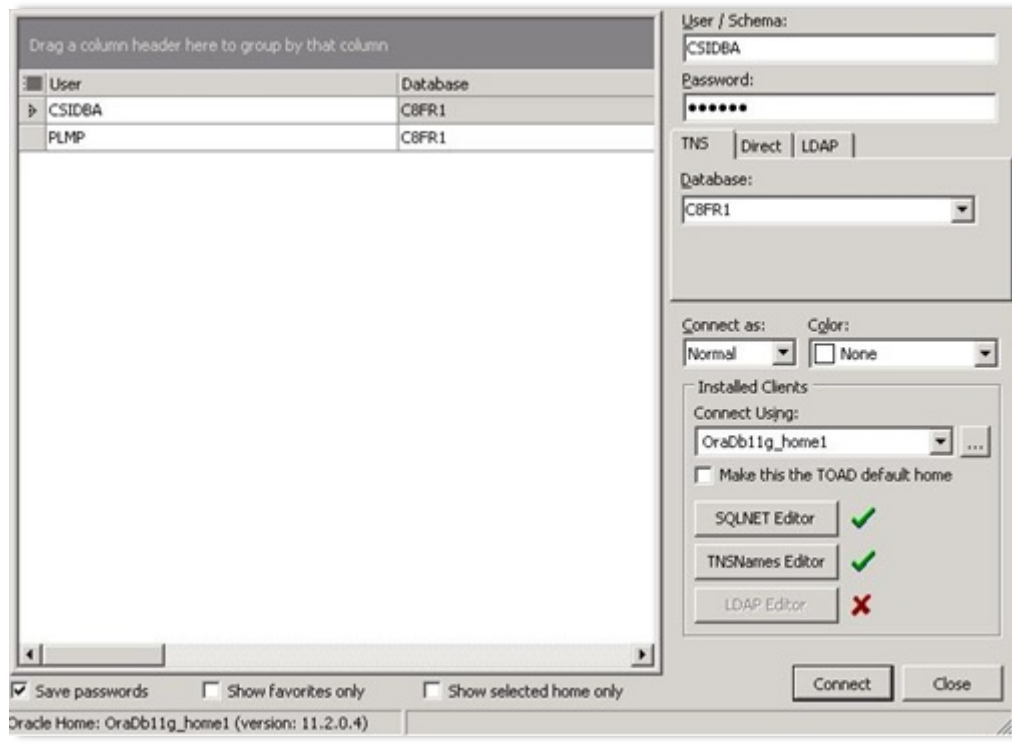
Setup Oracle Database Server

1. Run C8 server Installer, choose to install **Database only** option, create new database options.
2. To complete installation, click on Finish.

Refer [DUAL SERVER SOFTWARE INSTALLATION](#) page 40 and [Computer 2 Installation](#) on page 54

3. Open Oracle developer.

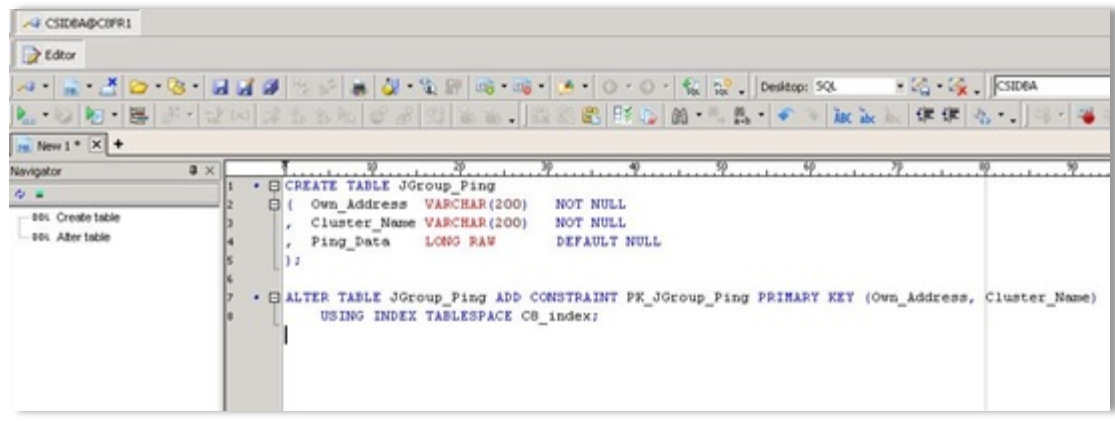
Figure (Appendix B) - 12: Oracle Developer window



4. From the **Database** dropdown list, select the appropriate Database and enter the User/Schema and Password.
5. Click on **Connect to Centric 8 PLM database** and open Query window.
6. Type the following script and click on **Execute**.

```
CREATE TABLE JGroup_Ping
( Own_Address VARCHAR(200) NOT NULL
, Cluster_Name VARCHAR(200) NOT NULL
, Ping_Data LONG RAW DEFAULT NULL
);
ALTER TABLE JGroup_Ping ADD CONSTRAINT PK_JGroup_Ping PRIMARY KEY (Own_Address,
Cluster_Name)
USING INDEX TABLESPACE C8_index;
```

Figure (Appendix B) - 13: Query Window



Setup Cluster App1

1. Run C8 Server Installer, choose to install Wildfly, remote database, and enter Filevault.
2. For WebAccess shared folder path installation refer [WebAccess Shared Directory Installation](#) on page 185.
3. To complete installation, click on **Finish**.
4. To update Wildfly Settings for Shared WebAccess refer [WebAccess Wildfly Settings](#)
5. To update WebAccess folder path in IIS Settings refer [WebAccess IIS Settings](#). Mention the server credentials of the server that holds the WebAccess shared folder.

► How to verify WebAccess Shared Directory installation

1. Open standalone-pi-db-ha-tcp.xml file (can be located in:..\C8\wildfly-8.1.0\standalone\configuration folder) in notepad.



In the file name, "db" refers to mssql or oracle depending upon the database used

2. Verify that the shared WebAccess folder path is updated here:
com.centricsoftware.AppServer.WebAccessLocalPath = SHARED_WEBACCESS_FOLDER_PATH
com.centricsoftware.AppServer.NavigationFile =
SHARED_WEBACCESS_FOLDER_PATH\\Scripts\\Navigation.xml
3. For example, if Shared WebAccess Folder path is \\LB-APP03\WebAccess, then it will be updated as \\\\LB-APP03\\WebAccess.
4. Run C8 Applications Installer, select Centric 8 and the optional modules. To complete installation, click on **Finish**.
5. Login to C8.

NOTE

Verify that the Login is successful.

Refer DUAL SERVER SOFTWARE INSTALLATION: Computer 2 Installation on page 54.

Enable / Disable Services

1. In Notepad, open `standalone-pi-mssql-ha-tcp.xml` (for SQL Database) or `standalone-pi-oracle-ha-tcp.xml` (for Oracle Database) located in `..\C8\wildfly-8.1.0\standalone\configuration` folder.
2. Look for the following lines:


```
<service name="RollupService" class='com.centricsoftware.pi.service.rollup.RollupService'
active='true'>
<dependency name="com.centricsoftware.pi.Registration"/>
</service>
<service name="JobService" class='com.centricsoftware.pi.service.job.JobService' active='true'>
<Dependency name="com.centricsoftware.pi.Registration"/>
</service>
```
3. If you want to disable the service, on the service line, change 'true' to 'false'.
4. Save and close the file.

Enable Wildfly Clustering in Wildfly Service

1. In Notepad, open **Standalone.conf.bat** (located in `..\C8\wildfly-8.1.0\bin` folder).
2. Look for the following lines:


```
set "JAVA_OPTS=%JAVA_OPTS% -Dwildfly.server.default.config=standalone-pi- oracle.xml"
```
3. Change `standalone-pi-oracle.xml` to `standalone-pi-oracle-ha-tcp.xml` for oracle database. In case you are using SQL database, change it to `standalone-pi-mssql-ha-tcp.xml` file.
4. Save and close the file.

Setup Cluster App2

1. Run C8 Server Installer, choose to install Wildfly, remote database, and enter Filevault.
2. For WebAccess shared folder path installation refer [WebAccess Shared Directory Installation](#) on page 185.
3. To complete installation, click on **Finish**.
4. To update Wildfly Settings for Shared WebAccess refer [WebAccess Wildfly Settings](#)
5. To update WebAccess folder path in IIS Settings refer [WebAccess IIS Settings](#). Mention the server credentials of the server that holds the WebAccess shared folder.

► How to verify WebAccess Shared Directory Installation

1. In Notepad, open `standalone-pi-db-ha-tcp.xml` file (located in `..\C8\wildfly-8.1.0\standalone\configuration` folder).

2. Verify that the shared WebAccess folder path is updated here:

```
com.centricsoftware.AppServer.WebAccessLocalPath = SHARED_WEBACCESS_FOLDER_PATH
com.centricsoftware.AppServer.NavigationFile =
SHARED_WEBACCESS_FOLDER_PATH\\Scripts\\Navigation.xml
```

For example, if Shared WebAccess Folder path is \\LB-APP03\WebAccess, then it will be updated as \\\\LB-APP03\\WebAccess

3. Save and close the file.

Enable/Disable Services

1. In Notepad, open standalone-pi-mssql-ha-tcp.xml (for SQL Database) or standalone-pi-oracle-ha-tcp.xml (for Oracle Database) located in..\\C8\\wildfly-8.1.0\\standalone\\configuration folder.
2. Look for the following lines:

```
<service name="RollupService" class='com.centricsoftware.pi.service.rollup.RollupService'
active='true' >
<dependency name="com.centricsoftware.pi.Registration"/>
</service>

<service name="JobService" class='com.centricsoftware.pi.service.job.JobService'
active='true' >
<dependency name="com.centricsoftware.pi.Registration"/>
</service>
```

3. If you want to disable the service, on the service line, change 'true' to 'false'.
4. Save and close the file.

Enable Wildfly Clustering in Wildfly Service

1. In Notepad, open Standalone.conf.bat (located in..\\C8\\wildfly-8.1.0\\bin folder).
2. Look for the following lines:

```
Set "JAVA_OPTS=%JAVA_OPTS% -Dwildfly.server.default.config=standalone-pi- oracle.xml"
```
3. Change standalone-pi-oracle.xml to standalone-pi-oracle-ha-tcp.xml for oracle database. If you are using SQL database, change it to standalone-pi-mssql-ha-tcp.xml file.
4. Save and close the file.

Start Wildfly on Cluster App 1

1. Ensure that Wildfly started successfully.
2. Check for errors in the pi_centric.log file.
3. Wait for **Centric Initialization Completed** message to be displayed.

Start Wildfly on Cluster App 2

1. Ensure that Wildfly started successfully.
2. Check for errors in the pi_centric.log file.

3. Wait for **Centric Initialization Completed** message to be displayed.

Configure Load Balancer

1. Setup Load Balancer URL.
2. Configure load balancer settings to redirect requests between Cluster App servers.

Login to Centric 8 using Load Balancer URL

1. Ensure that the login is successful.

Setup Print and Image Service on any Cluster APP servers

Use local machine name for Print and Image service configuration.

Ensure that the following is used:

1. Load Balancer URL in Server URL parameter
2. Cluster all server name in Service Name parameter.
3. Shared folder for Output parameter.

Refer PDF Print Service Guide and Image Service Install Guide documents.

WebAccess Shared Directory Installation

Pre-requisites

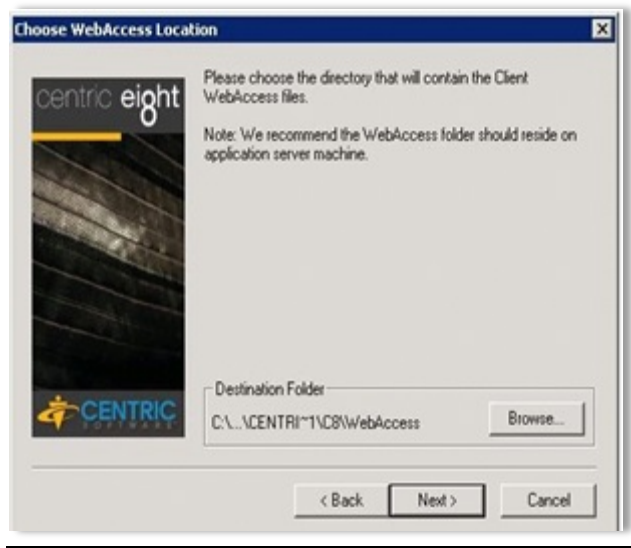
1. Create a WebAccess shared folder.
2. Ensure that the server in which the shared directory is created is able to communicate with the server in which the C8 application is going to be installed.



Use the ping command to test the communication between the two servers.

3. Make sure the Directory is accessible by typing `//servername/WebAccess` in Run. Also, ensure that you have full rights to that shared folder.

Figure (Appendix B) - 14: Choose WebAccess Location



4. To select a different destination folder, click on **Browse**.
5. Enter the shared folder path `\\server-name\WebAccess`

WebAccess Wildfly Settings



Once the installation is completed, ensure that the WebAccess contents are visible in the shared directory.

1. Select **Start ▶ Administrative tools ▶ Services**.
2. In the Services window, right click on **Centric Wildfly 8.1.0 Service** and select **Properties**.
3. In the **Centric Wildfly 8.1.0 Services Properties** dialog box, on the **Log On** tab, in the **Log on as** section, click on **this account**.
4. Click on **Browse** and locate the Administrator who performed the installation on this machine.
5. In the **Centric Wildfly 8.1.0 Service Properties** dialog box, enter details in the **Password** and **Confirm Password** fields. To close the dialog box, click on **OK**.
6. The **Service** dialog box is displayed with a confirmation message stating that the user is granted the Log on as a service right. Click on **OK**.

WebAccess IIS Settings

1. Select **Start ▶ Administrative tools ▶ Internet Information Services (IIS) Manager**.
2. Expand **Servername ▶ Sites ▶ Default website**.
3. Under **Default Website**, right-click on **WebAccess** and select **Manage Virtual Directory ▶ Advance Settings**.
4. Under the **Physical Path**, change the existing directory path to the shared directory `\\server-name\WebAccess`.

5. Under **Physical Path Credentials**:

- Select Specific user and click on **Set**
- Under user name, enter with the user account who has permission to see the network shared folder.
- In the password field, enter the password for the user mentioned above.
- Re-enter the password and click on **OK**.

6. Restart IIS.

3. Cache Mechanism

C8 uses Wildfly standard cache mechanism. In cluster node, when a piece of information is updated on one Wildfly node, all other nodes must be informed of that modification to update their local cache. This communication is configured using tcp protocol.

This protocol guarantees that communication is made between all nodes. In case of failure, a new try will happen until correct information is sent from one node and all the other nodes receive it.

Issues with the cache mechanism

It may happen that after a long period of execution (months), one cluster node does not synchronize anymore with the other nodes. This can be detected by users, depending on different information displayed on the cluster node they are redirected to. A lot of NAKACK (Negative Acknowledgements) warning messages can be viewed as Cache is not 100% reliable. Restarting one node does not fix the issue. The issue can be fixed only with a full C8 restart.

Reset Cache

► To reset cache with a full C8 restart

1. Stop all Wildfly Services.
2. Stop all additional services (image services, PDF services).
3. Ensure wildfly cluster configuration files are all set as expected.
4. Start Wildfly services.
5. Start all additional services (image services, PDF services).

On completion of the above step, cache will behave as expected.

Cache test process



It is assumed here that there are 3 nodes in the cluster, but the process can apply to any number of nodes.

1. On **AppServer1**, login to Centric 8 using localhost/WebAccess URL.
2. Navigate to **Home ▶ Documents** tab; create new document.
3. On **AppServer2**, login to PLM using localhost/WebAccess URL.
4. Navigate to **Home ▶ Documents** tab; ensure that the document created on **AppServer1** can be viewed.
5. On **AppServer3**, login to PLM using localhost/WebAccess URL.
6. Go to **Home ▶ Documents** tab; ensure that the document created on **AppServer1** can be viewed.
7. Change document name from **AppServer3** app server.
8. Navigate to AppServer1 and **AppServer2** and verify that you can see the updated document name.
9. Change the document name from **AppServer2** app server.
10. Verify that the document name is updated on other app servers.

In case the document is not visible on other nodes, or the document name is not up to date on other nodes, it indicates that the cache is not working properly.

It is therefore important to check the following:

1. Verify that emptying the browser cache on each server works properly.
2. Page refresh gives expected results.
3. Verify the cluster configuration files are set properly.
4. Ensure that no other cluster can interfere.



If any of the points listed above are not verified, there is a chance that cache is not working properly. You must then contact Support.

C. WILDFLY MEMORY USAGE

1. Changing Wildfly Usage

You can change the Wildfly usage in Centric 8 by changing the `standalone.conf.bat` file located in your Centric 8 program folder on your system.

► To change the `standalone.conf.bat` file

1. In Notepad, open the `standalone.conf.bat` file. The file is located in your installation directory in the following location: `<Centric8InstallDirectory>\C8\wildfly-8.1.0\bin`

2. Search for the following string in the `standalone.conf.bat` file:

```
rem JVM memory allocation pool parameters. Modify as appropriate. set "JAVA_OPTS=-Xms512M
-Xmx2048M -XX:MaxPermSize=512M"
```

Where `Xms` is the minimum memory requirement for Wildfly service, and `Xmx` is the maximum memory requirement for Wildfly service. The value of `Xmx` should not exceed half of the physical RAM. For example, if you have a 32GB machine, the `Xmx` maximum value is 16GB.

3. Update the `Xmx` value to change the Wildfly usage.
4. Save and close the `standalone.conf.bat` file.
5. Restart the Wildfly service.

2. Troubleshoot Wildfly Service

Wildfly is the application server used in Centric 8. When you start the Wildfly service, batch files run in the background. You must allow this processing to complete before taking any additional action on the server. If you stop the Wildfly service before the batch files finish running, the batch files are suspended; the Wildfly service cannot start until the batch files finish running.

Java Memory Error

If you are unable to log into Centric 8, java may have run out of memory. Open the `pi_centric.log` file and look for the following error message:

java.lang.OutOfMemoryError

Each business object has an associated java class. These classes are stored in java permanent heap memory. By default this value is set to a maximum value of 64MB. Because there are numerous java classes, this memory may run out.

To avoid this error, you can increase the java permanent heap memory settings using the Wildfly `standalone.conf.bat` file:

1. Select **Start** ► **Programs** ► **Administrative Tools** ► **Services**.
2. Right-click on **Centric Wildfly-8.1.0 Service** and select **Stop**.

3. In Notepad, open the `standalone.conf.bat` file. The file is located in your installation directory in the following location: `<Centric8InstallDirectory>\C8\wildfly-8.1.0\bin`
4. Search for the following string in the `standalone.conf.bat` file:


```
rem JVM memory allocation pool parameters. Modify as appropriate. set "JAVA_OPTS=-Xms512M
-Xmx2048M -XX:MaxPermSize=512M"
```

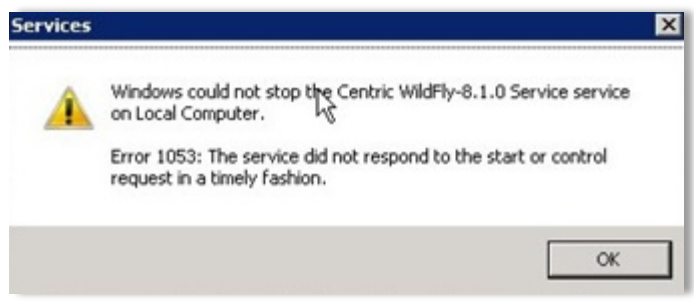
 The parameter is already set to `"-XX:MaxPermSize=512m"` so that this line of code appears as:


```
set "JAVA_OPTS=-Xms512M -Xmx2048M -XX:MaxPermSize=512M"
```
5. Save and close the `standalone.conf.bat` file.
6. Restart the Wildfly service.

Wildfly Service Warning

During installation, if you encounter the following warning message when you attempt to start the Wildfly service, Wildfly service is likely suspended and you must stop the batch files and restart the Wildfly service.

Figure (Appendix C) - 1: Services dialog box



To stop the suspended batch files:

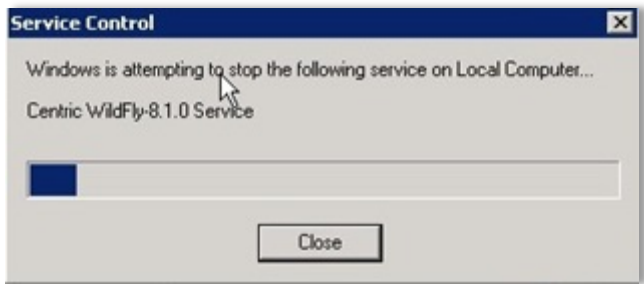
1. Open the **Task Manager** on the server where you are installing or upgrading the Centric 8 server.
2. In the **Task Manager**, click on the **Processes** tab.
3. Locate and select `Java.exe`.
4. Click **End Process**. In the **Task Manager Warning** dialog box, click on **Yes**.
5. Close the **Task Manager**.

Batch File Suspension

To avoid forcing the `Java.exe` file to end using the **Task Manager**, once you start the Wildfly service, do not attempt to stop the service during processing.

The **Service Control** progress window is displayed (as shown below) until processing is complete:

Figure (Appendix C) - 2: Service Control Window



Always allow the service to start and stop without interference, allowing a few extra moments for the batch files to finish any additional background processing once the **Service Control** window no longer displays.

Wildfly Failure to Stop

If you attempt to stop the **Wildfly service in the Services** window, the following warning message is displayed:

Figure (Appendix C) - 3: Services window



This warning message indicates that the Wildfly service has timed out which may due to one of the following reasons:

- Centric 8 was partially uninstalled, or the uninstaller froze midway through the process; Use the **Task Manager** to end this process, and then stop the Wildfly service.
- You attempted to close the Services window before Wildfly stopped the service. Use the **Task Manager** to end the Java.exe process as described in the section, [Wildfly Service Warning](#).

D. LARGE FILE UPLOAD TIMEOUT

1. IIS Connection Settings

If users uploading large files are experiencing connection timeout, you can adjust the Internet Information Service (IIS) connection settings to accommodate large file size and slow network connection speed.

Use the following steps to adjust the IIS connection settings:



These steps can be used to adjust the IIS connections settings on Windows Server 2003 (IIS6), 2008(IIS7) and 2012(IIS8).

1. On the Centric 8 application server open **IIS Manager**.
2. In the left pane, expand the local computer and expand **Web Sites**.
3. Under **Web Sites**, right-click on the **Default Web Site** and select **Properties**.
4. In the **Properties** dialog box, in the **Connections** section, enter the maximum number of seconds for which IIS should maintain an idle connection before resetting in the **Connection timeout** field; the default value is 120 seconds.
5. Click on **OK**.
6. Click the **Action** menu and select **Refresh**. Close the IIS Manager.
7. Once you update the connection settings, adjust the maximum content length:
 - [Adjust Content Length for IIS7 and IIS8](#)

2. Adjust Content Length for IIS7 and IIS8

1. On the Centric 8 application server open IIS Manager.
2. In the left pane, expand the local computer and expand **Web Sites**.
3. Under **Web Sites**, select **Default Website**.
4. Open feature on **Request Filtering**.
5. Click on **Edit Feature Settings** and modify the field **Maximum allowed content length** to a value of '500000000'.
6. Restart IIS and close IIS Manager.

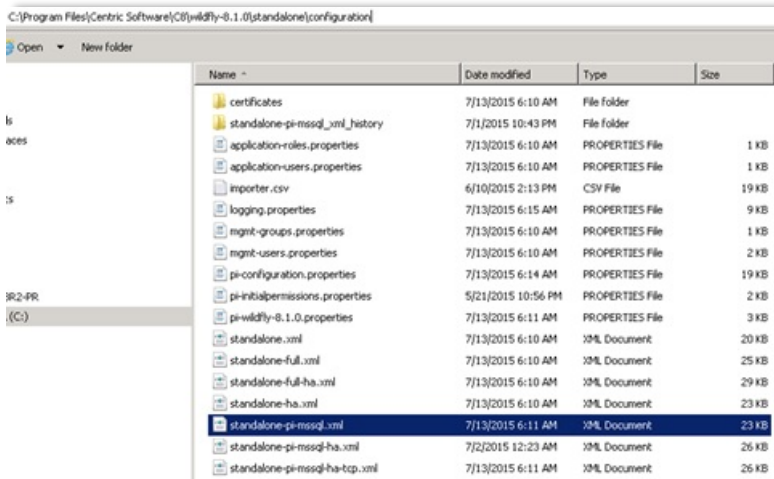
Increase Max Post Limit in Wildfly

This setup is common for both IIS7 and IIS8.

► How to increase Max Post Limit in Wildfly

1. Navigate to **C:/ Program Files ► Centric Software ► C8 ► wildfly-8.1.0 ► Standalone ► Configuration.**
2. If you are using a **MSSQL database,**
 - Click on Standalone-pi-mssql.xml.

Figure (Appendix D) - 1: Standalone-pi-mssql.xml file



- In the **max-post-size** parameter, type the maximum size as required (see figure below).

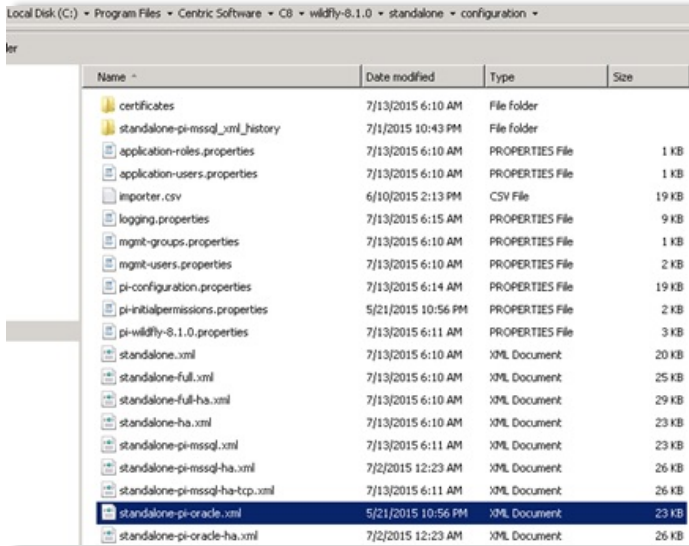
Figure (Appendix D) - 2: max-post-size parameter details

```

- <core-environment>
  - <process-id>
    <uid/>
  </process-id>
</core-environment>
<recovery-environment status-socket-binding="txn-status-manager" socket-binding="t
</subsystem>
- <subsystem xmlns="urn:jboss:domain:undertow:1.1">
  <buffer-cache name="default"/>
  - <server name="default-server">
    <http-listener name="http" socket-binding="http" max-post-size="104857600"/>
    <ajp-listener name="ajp" socket-binding="ajp" max-post-size="104857600"/>
  
```

3. Else, if you are using an **Oracle database,**
 - Click on Standalone-pi-oracle.xml.

Figure (Appendix D) - 3: Standalone-pi-oracle.xml file



- In the **max-post-size** parameter, type the maximum size, as required.

Figure (Appendix D) - 4: *max-post-size* parameter

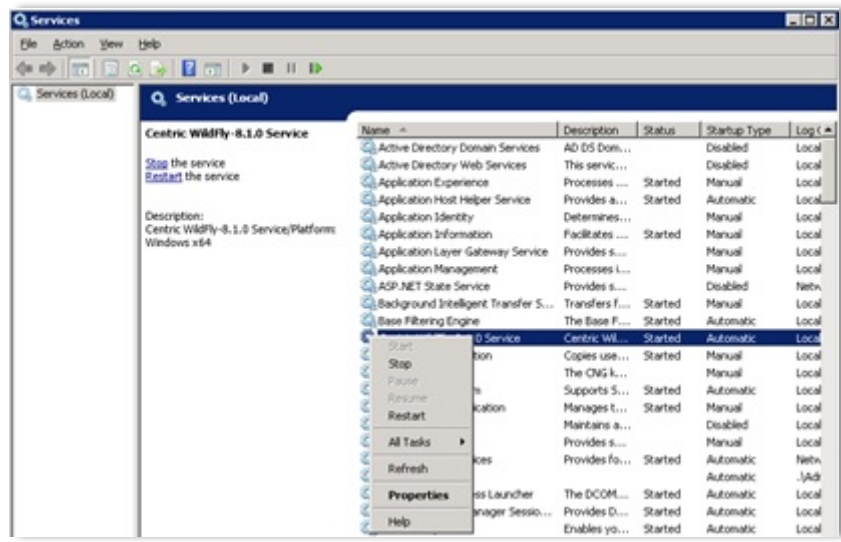
```

</subsystem>
- <subsystem xmlns="urn:jboss:domain:undertow:1.1">
  <buffer-cache name="default"/>
  - <server name="default-server">
    <http-listener name="http" socket-binding="http" max-post-size="104857600"/>
    <ajp-listener name="ajp" socket-binding="ajp" max-post-size="104857600"/>
  - <host name="default-host" alias="localhost">

```

4. Restart Wildfly Services.
5. Navigate to **Start ▶ Services**. Right-click on **Centric Wildfly – 8.1.0 Service**.

Figure (Appendix D) - 5: *Services Window*



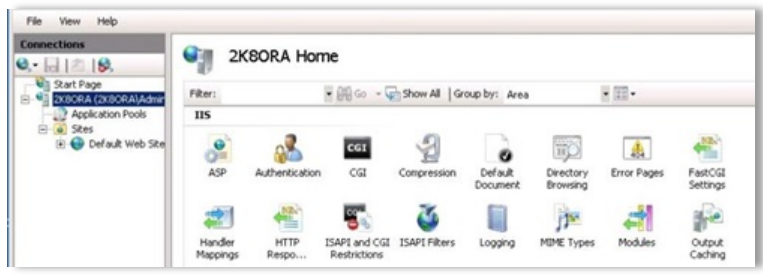
6. To restart Wildfly Services, click on **Restart**.

IIS Connection Timeout (for IIS7 and IIS8)

Requests by Centric 8 server that last longer than the set limit will be automatically terminated. You need to increase the set limit in environments that use large files and/or have slower network speeds. The default value is set to 120 seconds.

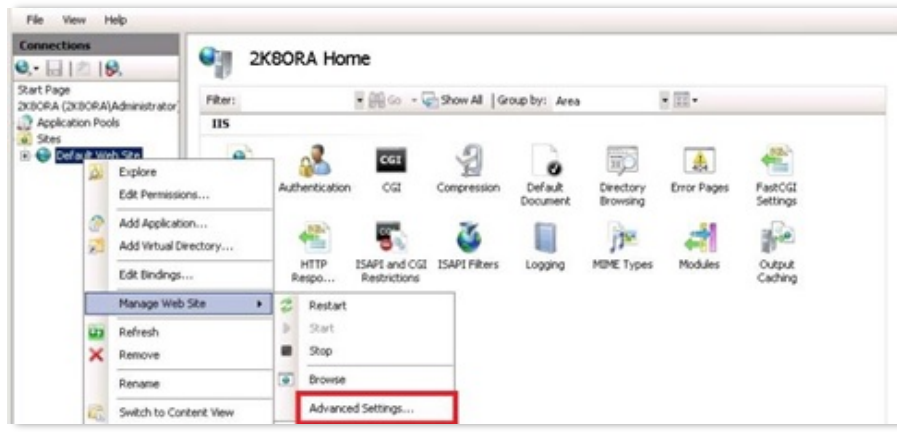
1. To open the IIS Manager, from the **Start** menu, select **Administrative Tools** ▶ **Internet Information Services (IIS) Manager**.
2. Expand the **Connections** tree and select **Sites** ▶ **Default Web Site**.

Figure (Appendix D) - 6: Connections tree



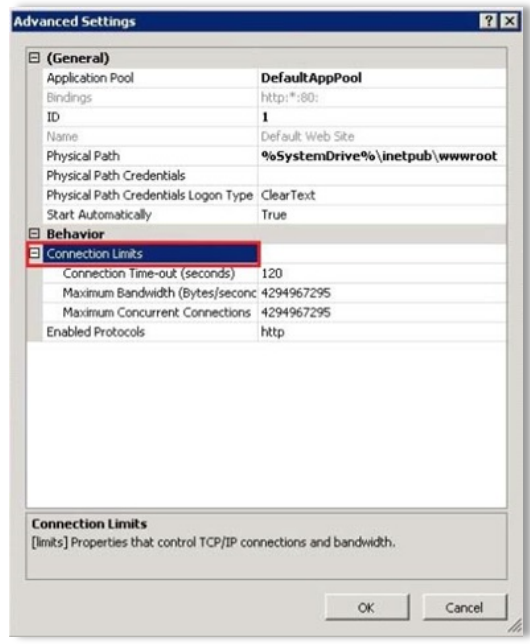
3. Right-click on the **Default Web Site** and select **Manage Web Site** ▶ **Advance Settings**.

Figure (Appendix D) - 7: Connections tree - Advanced Settings

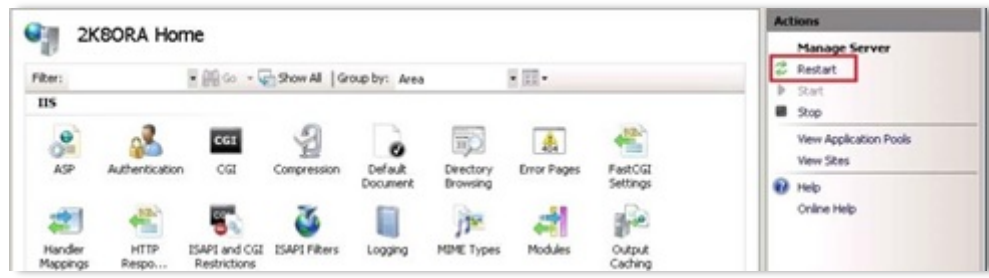


4. In the **Advance Settings** dialog box, under the **Behavior** section, expand **Connection Limits**.

Figure (Appendix D) - 8: Advanced Settings



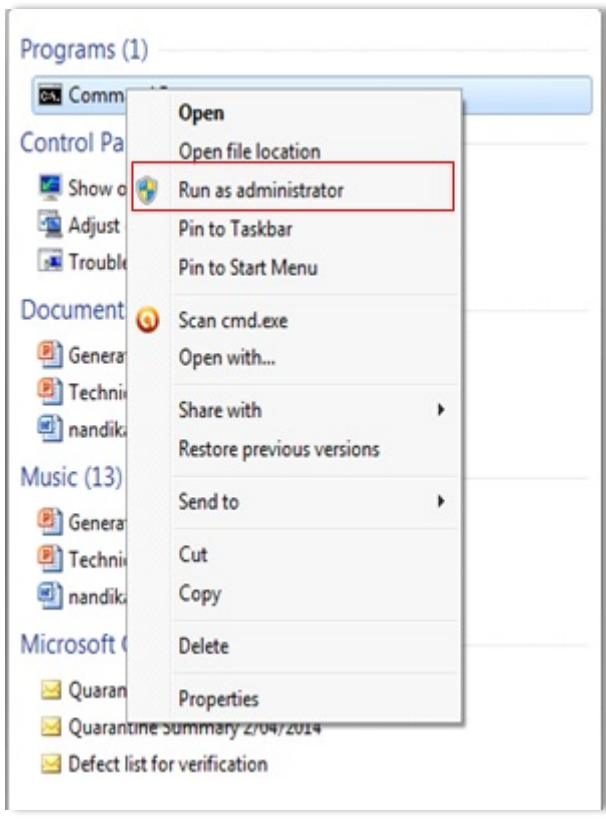
5. Update the value for **Connection Time-out (seconds)** to 900 and click on **OK**.
6. To restart the Web Site through IIS Manager, click on **Restart**.



IIS Maximum Allowed Content Length (for IIS7 and IIS8)

Requests by Centric 8 server that last longer than the set limit will be automatically terminated. You need to increase this value in environments that use large files. The default value is 30000000 bytes (about 28.6 MB).

1. From the **Start** menu, right-click on the **Command Prompt** and select **Run as Administrator**.

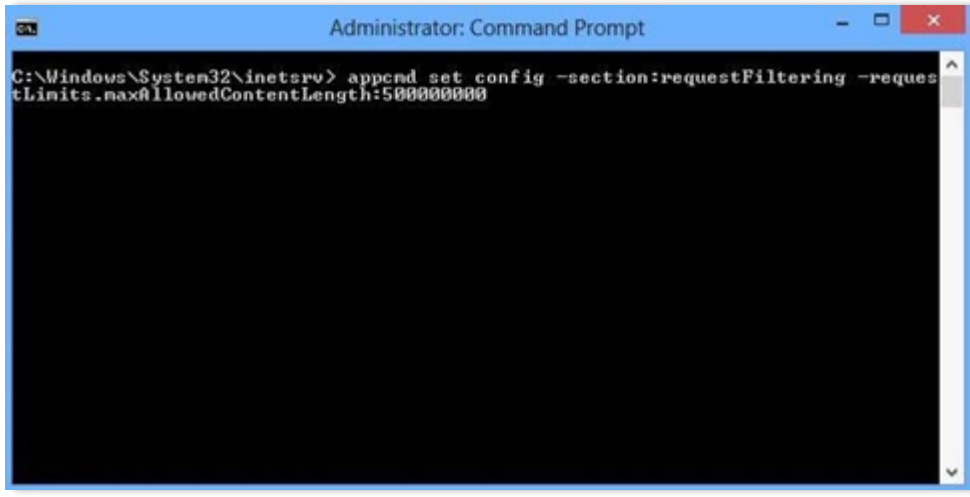
Figure (Appendix D) - 9: Start Menu

2. In the **Command Prompt** dialog box, go to the `C:\Windows\system32\inetsrv` directory.

3. Run the following command:

```
appcmd set config -section:requestFiltering -  
requestLimits.maxAllowedContentLength:500000000
```

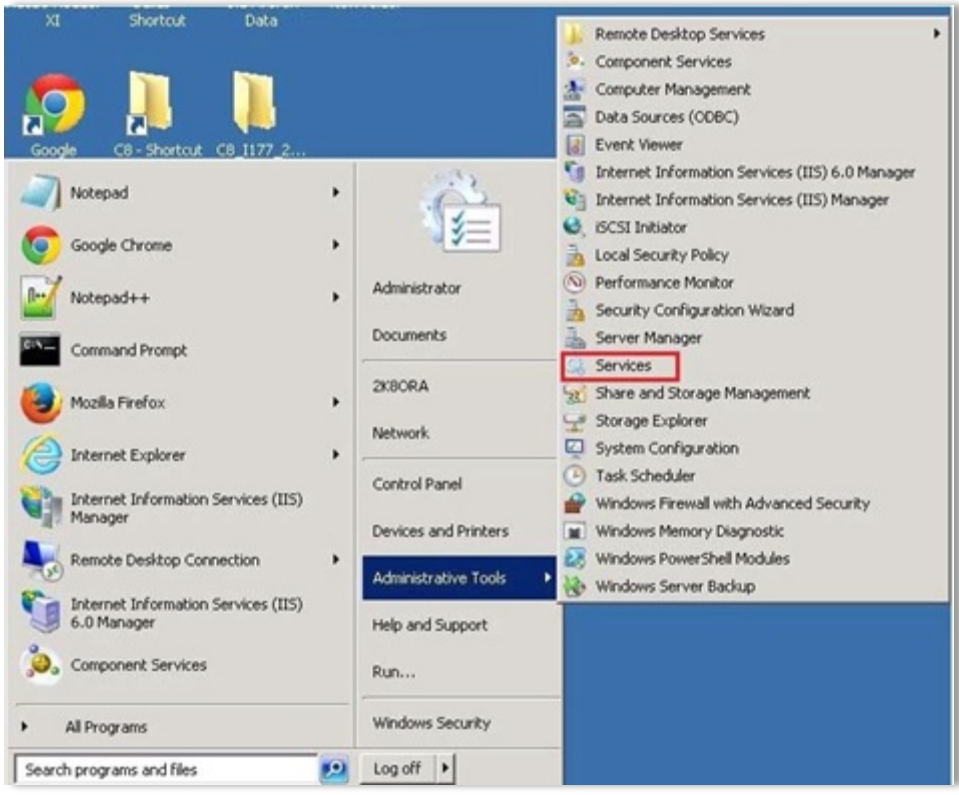
Figure (Appendix D) - 10: Command Prompt



This example sets a limit of 500000000 bytes (about 477MB). Adjust the value as per the requirement.

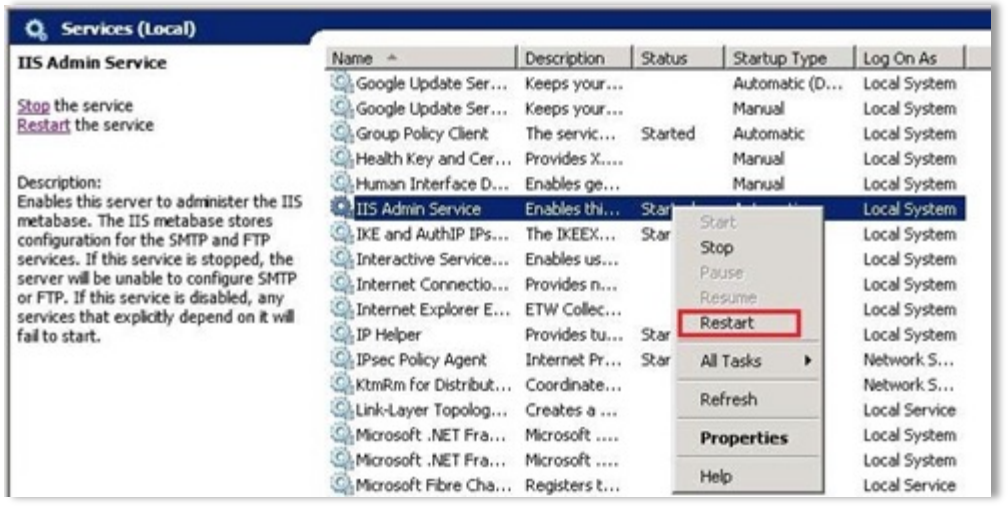
4. From the **Start** menu, select **Administrative Tools** ▶ **Services**.

Figure (Appendix D) - 11: Start Menu



5. To restart IIS, right-click on **IIS Admin Service** and select **Restart**.

Figure (Appendix D) - 12: Restart IIS Admin Service



E. CONFIGURING SMTP ON WINDOWS 2008 SERVER

1. Configuring SMTP Server with IIS 6.0 Manager

If you are using the recommended 64-bit operating system with Windows 2008 server, and Microsoft IIS Web Server version 6.0, you must configure the SMTP Server.

This appendix describes how to complete the SMTP Server configuration on Windows 2008 using the following steps:

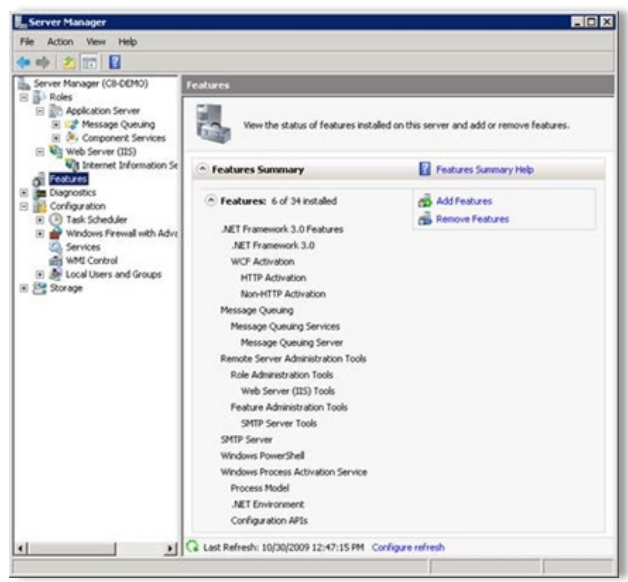
- [Step 1: Install SMTP Server Service](#)
- [Step 2: Install IIS 6.0 Manager](#)
- [Step 3: Configure SMTP with IIS 6.0 Manager](#)
- [Step 4: Configure Centric 8 SMTP Server Properties](#)

Step 1: Install SMTP Server Service

► To install the SMTP Server service OR to verify that it is already installed

1. Locate and start the **Windows Server Manager** application. From the **Start** menu, select **Programs ► Administrative Tools ► Server Manager**.
2. In the **Server Manager** window, in the left pane, click on **Features**; the Features list is displayed in the right pane, as shown in the figure below:

Figure (Appendix E) - 1: Server Manager Window

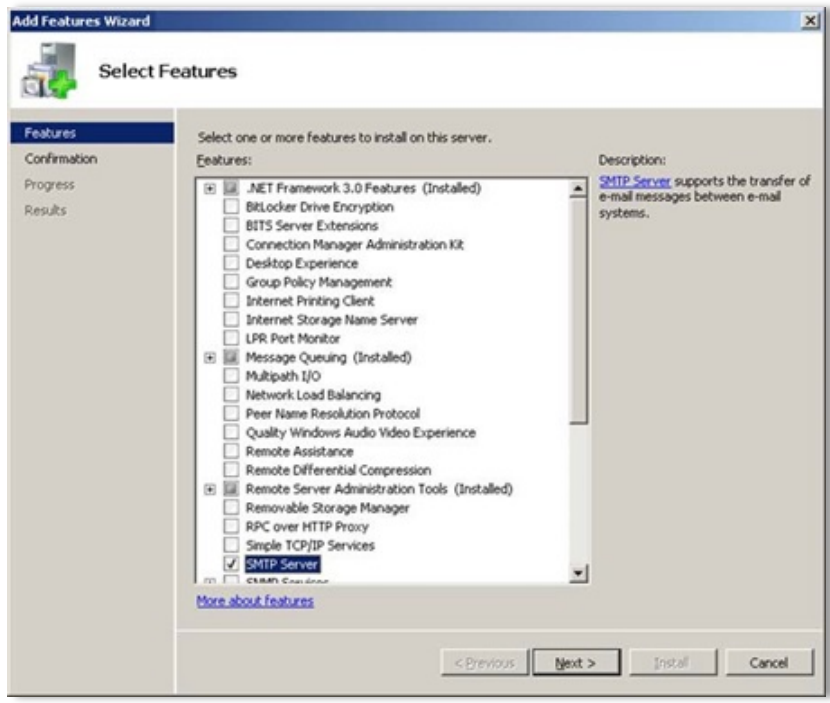


- In the Features list, if the SMTP Server is displayed, it indicates that the SMTP Server Service is installed; proceed to [Step 2: Install IIS 6.0 Manager](#)

ELSE, continue with step 4 below.

- In the right pane, click on **Add Features**; the **Add Features Wizard** is displayed.
- In the **Features** list, to turn the SMTP Server on, select the **SMTP Server** checkbox.

Figure (Appendix E) - 2: Add Features Wizard – Select Features



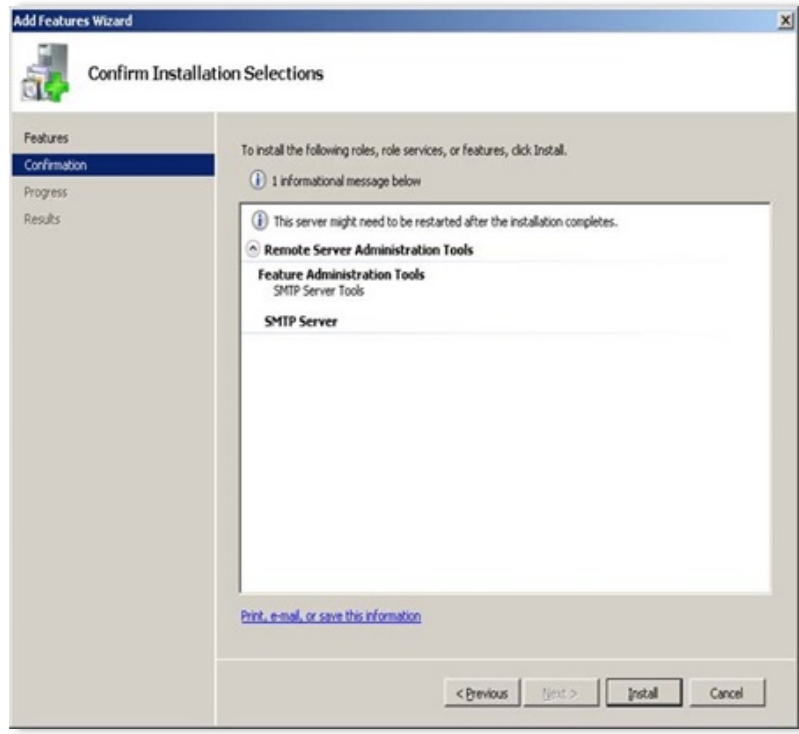
- To continue, click on **Next**.
- In the **Add features required for SMTP Server?** Dialog box, click on the **Add Required Features** button,

Figure (Appendix E) - 3: Add Features Wizard (2)



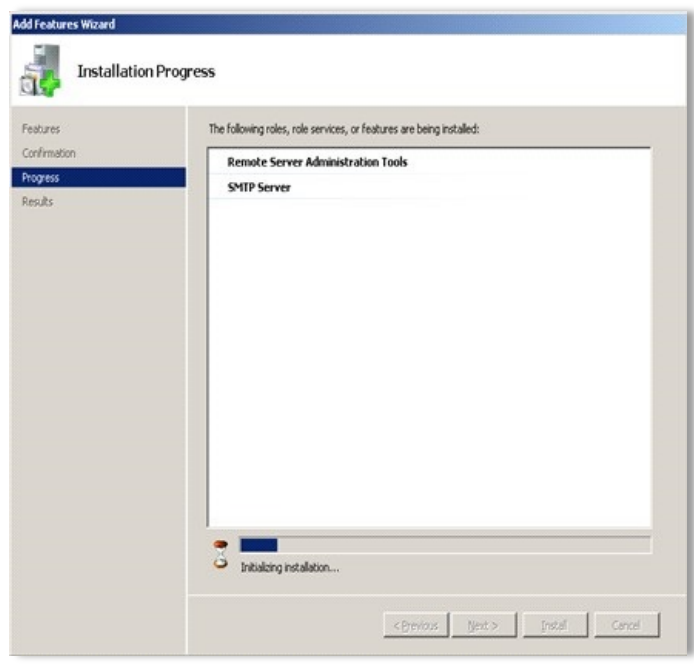
8. In the **Add Features Wizard - Confirm Installation Selections** dialog box, click on the **Install** button,

Figure (Appendix E) - 4: Add Features Wizard - Confirm Installation Selections



9. You will see the following dialog as the installation proceeds.

Figure (Appendix E) - 5: Add Features Wizard - Installation Progress



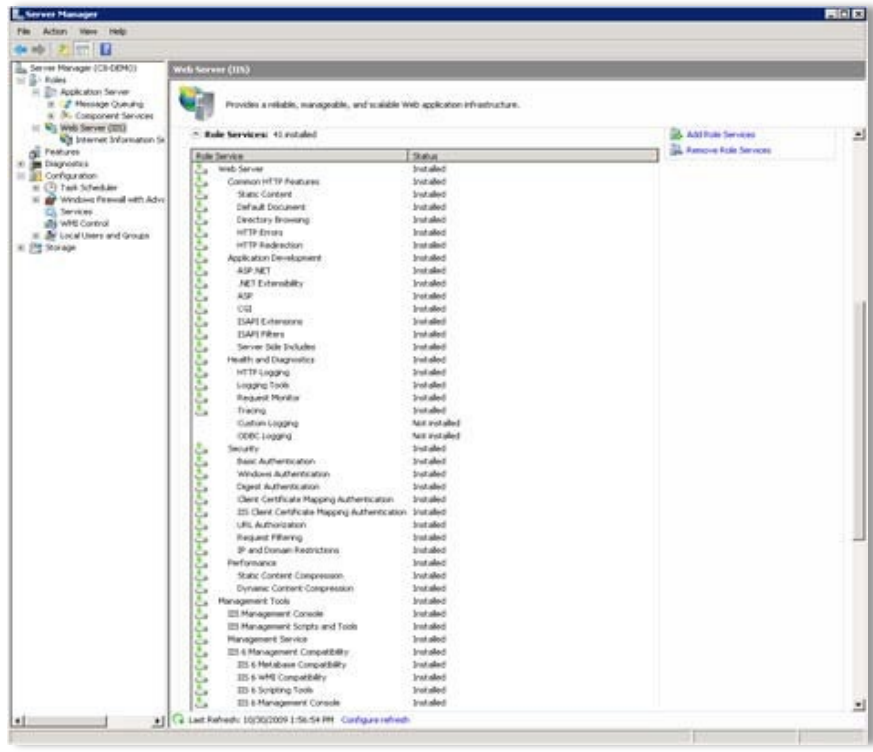
10. Once the installation is complete, close the Wizard. The SMTP Server is displayed in the Features list in the Server Manager window. Proceed to the IIS 6.0 Manager installation as described in [Step 2: Install IIS 6.0 Manager](#).

Step 2: Install IIS 6.0 Manager

To install the Microsoft IIS 6.0 Manager, or to verify that it is already installed, use the following steps:

1. To start the Windows Server Manager application, from the **Start** menu, select **Programs** ▶ **Administrative Tools** ▶ **Server Manager** menu item.
2. Click on the **Web Server (IIS)** in the left-pane.
3. In the right-pane look for **IIS 6 Management Compatibility** in the list of features, under **Management Tools**.
4. If the **IIS 6 Management Compatibility and sub-features** shows up as installed in the list, proceed directly to [Step 3. Configure SMTP w/ IIS Manager](#).
5. To add the **IIS 6 Management Compatibility**, click on the **Add Role Services** link, located in the right pane, on the right side of the dialog box.

Figure (Appendix E) - 6: Services Manager Window - Add Role Services



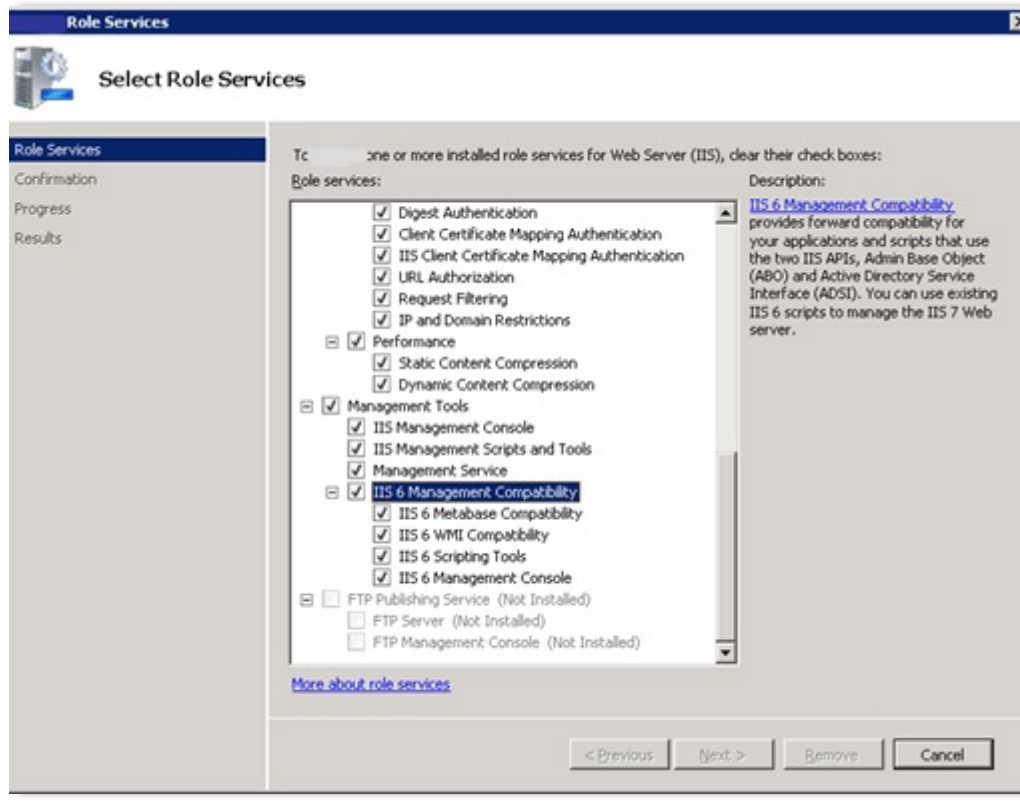
6. From the **Add Features Wizard** dialog box, in the **Role Services** list, select the **IIS 6 Management Compatibility** checkbox.

NOTE

Ensure that all the IIS6 feature checkboxes are selected.

7. To continue, click on **Next**.

Figure (Appendix E) - 7: Role Services Window

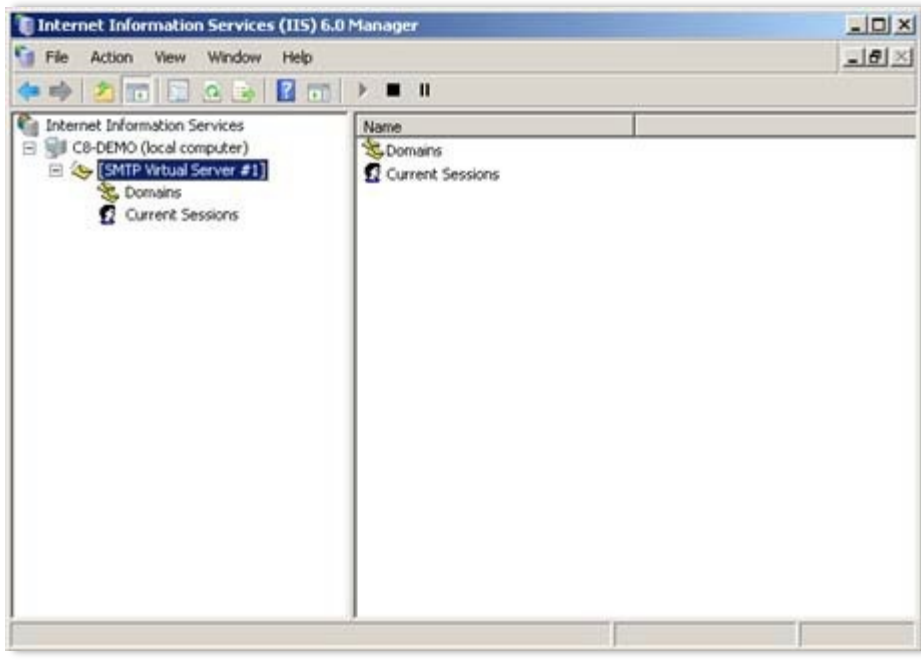


8. To continue, on the **Confirm Installation Selections** dialog box, click on the **Install** button.
9. Close the wizard when the completion message is displayed. The IIS 6 Management Compatibility is now installed.

Step 3: Configure SMTP with IIS 6.0 Manager

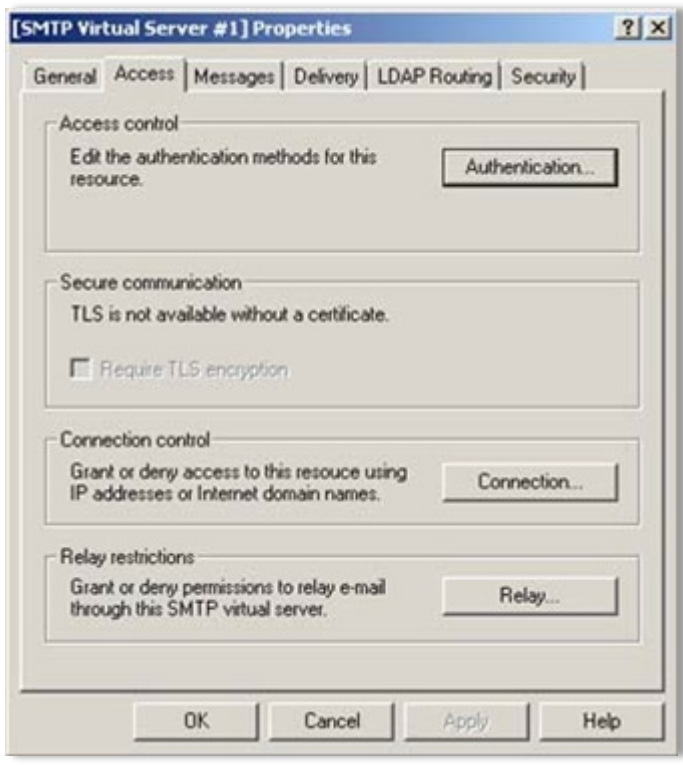
1. To start the **Windows Server Manager** Application, from the **Start** menu, select **Programs** ▶ **Administrative Tools** ▶ **Internet Information Services (IIS) 6.0 Manager** menu item.
2. Expand the Server Name object (ex. C8-DEMO)
3. Right-click on **[SMTP Virtual Server #..1]** object and choose **Properties**.

Figure (Appendix E) - 8: Internet Information Services (IIS) 6.0 Manager Menu item



4. In the **Properties** dialog box, click on the **Access** tab.
5. Click on the **Authentication** button.

Figure (Appendix E) - 9: Properties dialog box



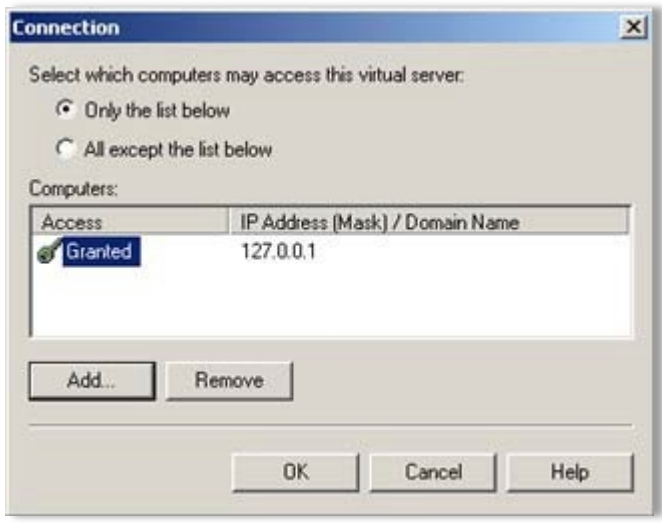
6. Verify that the **Anonymous access** checkbox is selected and then click on **OK**.

Figure (Appendix E) - 10: Authentication dialog box – Anonymous access



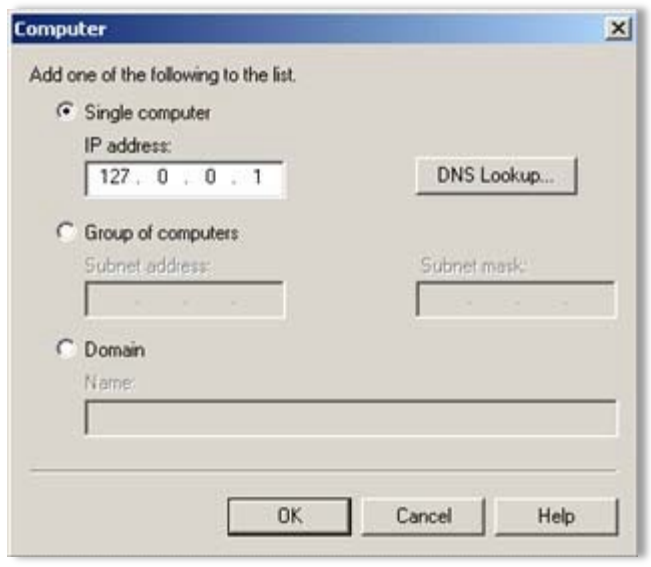
7. On the **Properties** dialog, click on the **Connection...** button.
8. Select the **Only the list** below radio button.
9. Click on the **Add...** button.

Figure (Appendix E) - 11: Connection dialog box



10. Click on the **Single Computer** radio button.
11. In the **IP address:** text box, enter 127.0.0.1.
12. To return to the **Properties** dialog box, click on **OK**.

Figure (Appendix E) - 12: Computer dialog box



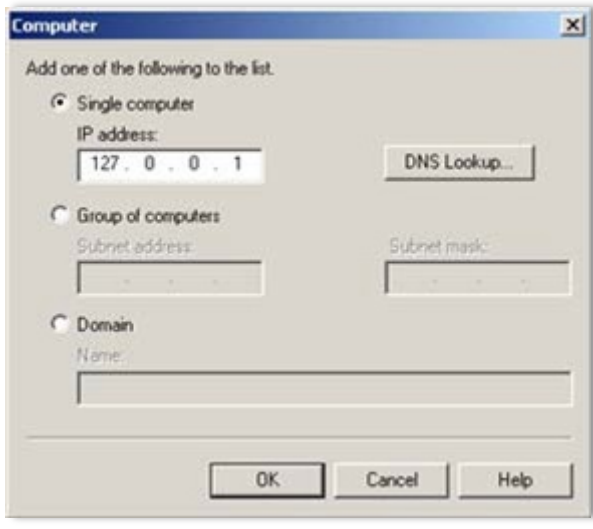
13. In the **Properties** dialog, click on the **Relay...** button.
14. Select the **Only the list below** radio button.
15. Click on the **Add...** button.

Figure (Appendix E) - 13: Relay Restrictions dialog box



16. Click on the **Single Computer** radio button.
17. In the **IP address** text box, enter 127.0.0.1.
18. To return to the **Properties** dialog box, click on **OK**.

Figure (Appendix E) - 14: Computer dialog box



19. On the **Properties** dialog box, click on the **Messages** tab.
20. In the **Send copy of Non-Delivery Report to:** text box, enter the email address of the person responsible for managing this Centric8 server.

Figure (Appendix E) - 15: Properties dialog box – Messages tab



21. On the **Properties** dialog box, click on the **Delivery** tab.
22. Click on the **Advanced...** button.

Figure (Appendix E) - 16: Properties dialog box – Delivery tab



23. Set the Masquerade domain to the domain name of the business running Centric 8.

Examples:

- Any Centric Software servers should display - centricsoftware.com
- Charlotte Russe would display - charlotterusse.com, etc.

24. The Fully-qualified domain name: should be set to match the DNS name this server is known as.

Examples:

- C8-DEMO is an internal machine, which is how users will reference the machine. (i.e. c8-demo.centricsoftware.com).
- Charlotte Russe's mirror site is known as crmirror, so this field would be set to crmirror, and along with the Masquerade domain field, it would yield as crmirror.charlotterusse.com.
- This is name that the SMTP server will provide to destination email servers, as it sends emails from Centric 8.

Figure (Appendix E) - 17: Advanced Delivery dialog box



25. To return to the **Properties** dialog box, click on **OK**.
26. To exit, in the **Properties** dialog box, click on **OK**.
27. Restart the SMTP service to apply this settings.



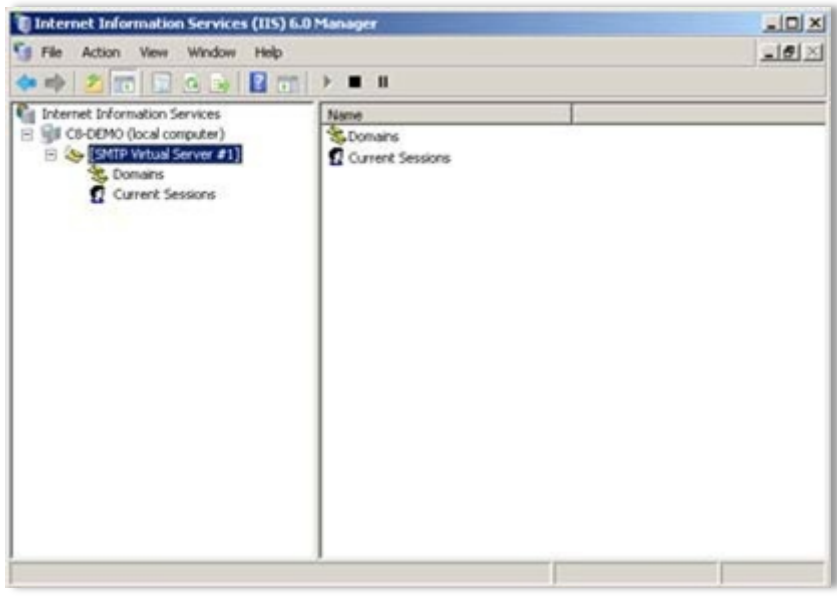
The SMTP service on this server is now configured to accept mails only from applications running on this machine (i.e. Centric 8) and will send mails to email addresses with different domain names, without any relaying errors.

Configure SMTP to connect to email servers that require authentication

To send email(s) through an email server that requires authentication, such as an Exchange Server, or an outsourced service, such as google mail, etc., the following additional configuration steps are required.

1. To start the Windows Server Manager Application, from the **Start** menu, select **Programs ▶ Administrative Tools ▶ Internet Information Services (IIS) 6.0 Manager** Menu item.
2. Expand the Server Name object (ex. **C8-DEMO**)
3. Right-click on **[SMTP Virtual Server #..1]** Object and select **Properties**.

Figure (Appendix E) - 18: Internet Information Services (IIS) 6.0 Manager Menu



4. In the **Properties** dialog box, click on the **Delivery** tab.
5. Click on the **Outbound Security...** button.

Figure (Appendix E) - 19: Properties dialog box




6. In the **Outbound Security** dialog box, select the **Basic authentication** radio button.

7. In the **User name:** text box, enter the user name details (given to you by your email Administrator for connecting to your Exchange or outsourced email server).
8. In the **Password:** field, enter details of the account password received from your email Administrator.
9. If the Exchange Server or the Outsourced Server requires TLS encryption, select the **TLS encryption** checkbox.

Figure (Appendix E) - 20: Outbound Security dialog box - TLS encryption



10. To exit the **Properties** dialog box, click on **OK**.
11. To apply the settings, restart the SMTP service.

 NOTE	<p>The SMTP Service on this server is now configured to forward all emails to an Exchange Server or outsourced email service.</p>
-------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------

Step 4: Configure Centric 8 SMTP Server Properties

For Wildfly 8.1.0

For Wildfly 8.1.0, the default file name and location are in the `C:\Program Files\Centric Software\C8\wildfly-8.1.0\standalone\configuration` folder.

The SMTP information can be found in:

- **MSSQL**

`Wildfly-8.1.0\standalone\configuration\standalone-pi-mssql.xml`

- **Oracle**

Wildfly-8.1.0\standalone\configuration\standalone-pi-oracle.xml

1. Locate and open the appropriate xml file for Centric 8 using WordPad.
2. Locate the following section:

```
<outbound-socket-binding name="mail-smtp">
  <remote-destination host="localhost" port="25"/>
</outbound-socket-binding>
```

3. Update the parameters highlighted in bold as is necessary (as shown below):

```
<remote-destination host="localhost" port="25"/>
```

4. Exit WordPad, saving the changes you have made.
5. To apply/activate the revised settings, restart the Centric 8 Wildfly service.



The Centric 8 server will now use the Windows SMTP server to send email notifications to users.

2. Configuring SMTP Server with IIS 7.0 Manager

If you are using the recommended 64-bit operating system with Windows 2008 server, and Microsoft IIS Web Server version 7.0, you must configure the SMTP Server.

This section describes how to complete the SMTP Server configuration on Windows 2008 using the following steps:

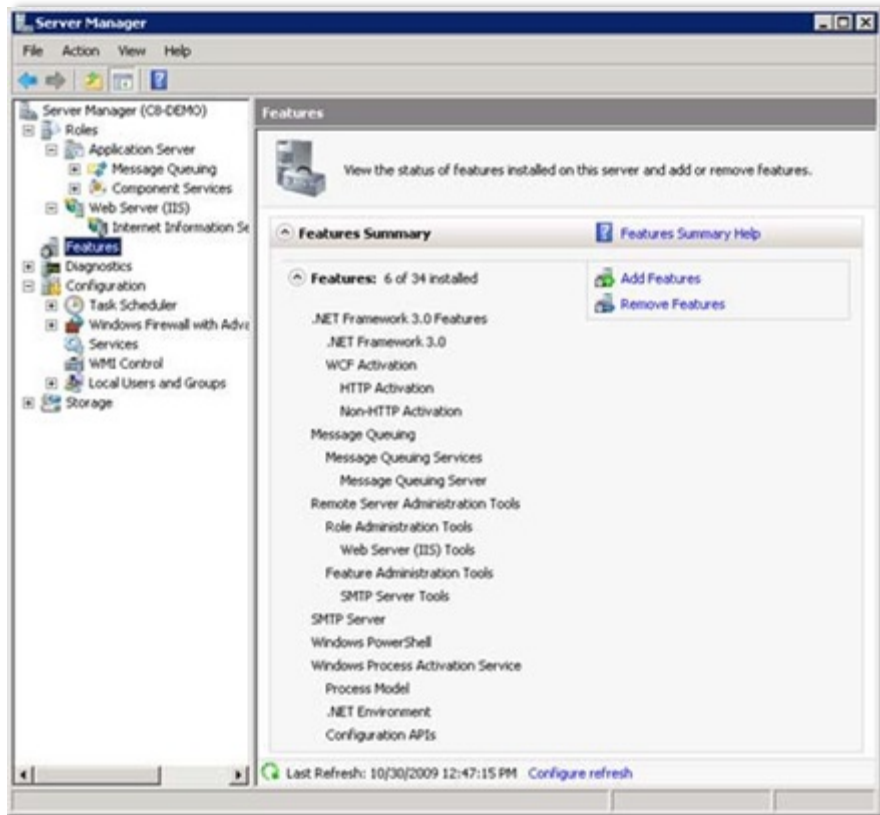
- [Step 2: Install IIS 7.0 Manager](#)
- [Step 3: Configure SMTP with IIS Manager](#)
- [Step 4: Configure SMTP with IIS 7.0 Manager](#)

Step 1: Install SMTP Server Service

To install the SMTP Server service, or to verify that it is already installed, use the following steps:

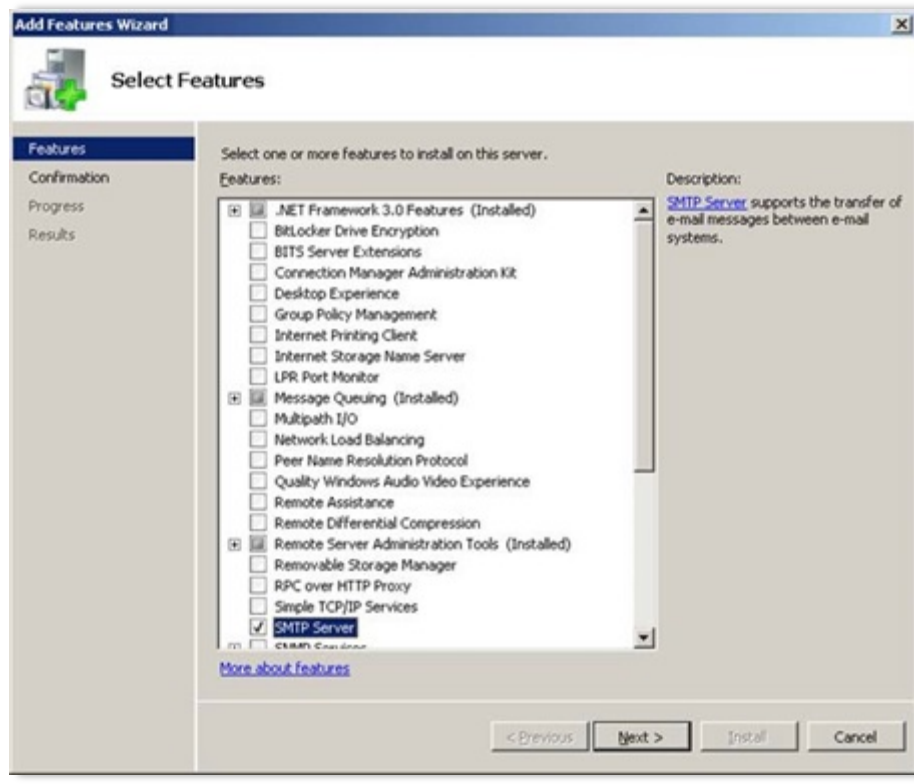
1. From the **Start** menu select **Programs ► Administrative Tools ► Server Manager**.
2. In the **Server Manager** window, in the left pane, click on **Features**; the Features list is displayed in the right pane:

Figure (Appendix E) - 21: Server Manager Window



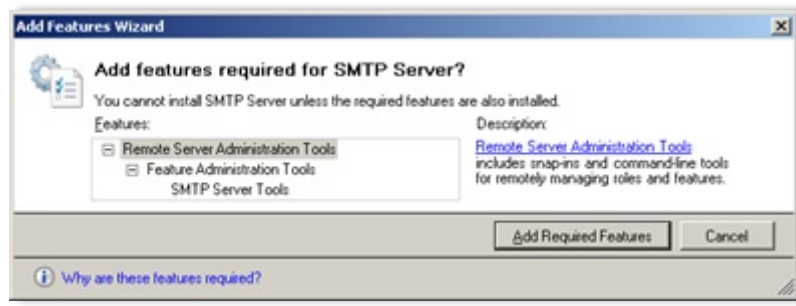
3. In the Features list, if SMTP Server is displayed then it indicates that the SMTP Server Service is installed; proceed to [Step 2: Install IIS 7.0 Manager](#) on page 216
ELSE continue with step 4 below.
4. In the right pane, click on the **Add Features** link; the **Add Features Wizard** is displayed.
5. In the **Features** list, to turn on the SMTP Server, select the **SMTP Server** checkbox.

Figure (Appendix E) - 22: Add Features Wizard - Select Features



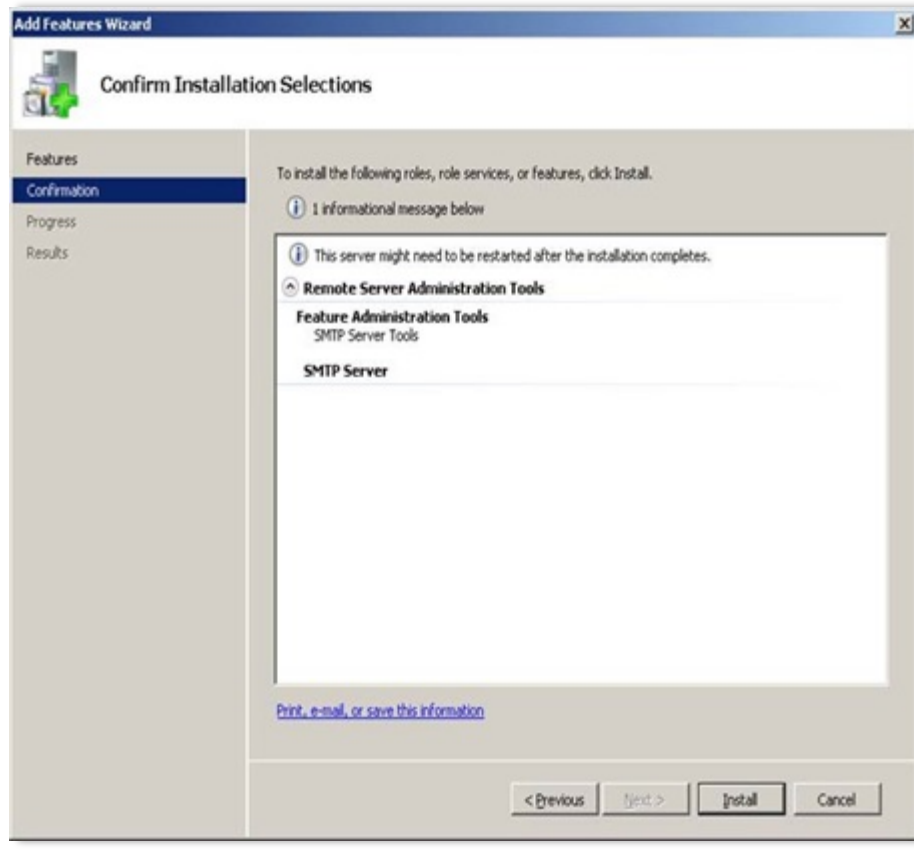
6. To continue, click on **Next**.
7. In the **Add features required for SMTP Server?** dialog box, click on the **Add Required Features:** button.

Figure (Appendix E) - 23: Add Features Wizard



8. In the **Add Features Wizard – Confirm Installation Selections** dialog box, click on the **Install** button,

Figure (Appendix E) - 24: Add Features Wizard - Confirm Installation Selections dialog box

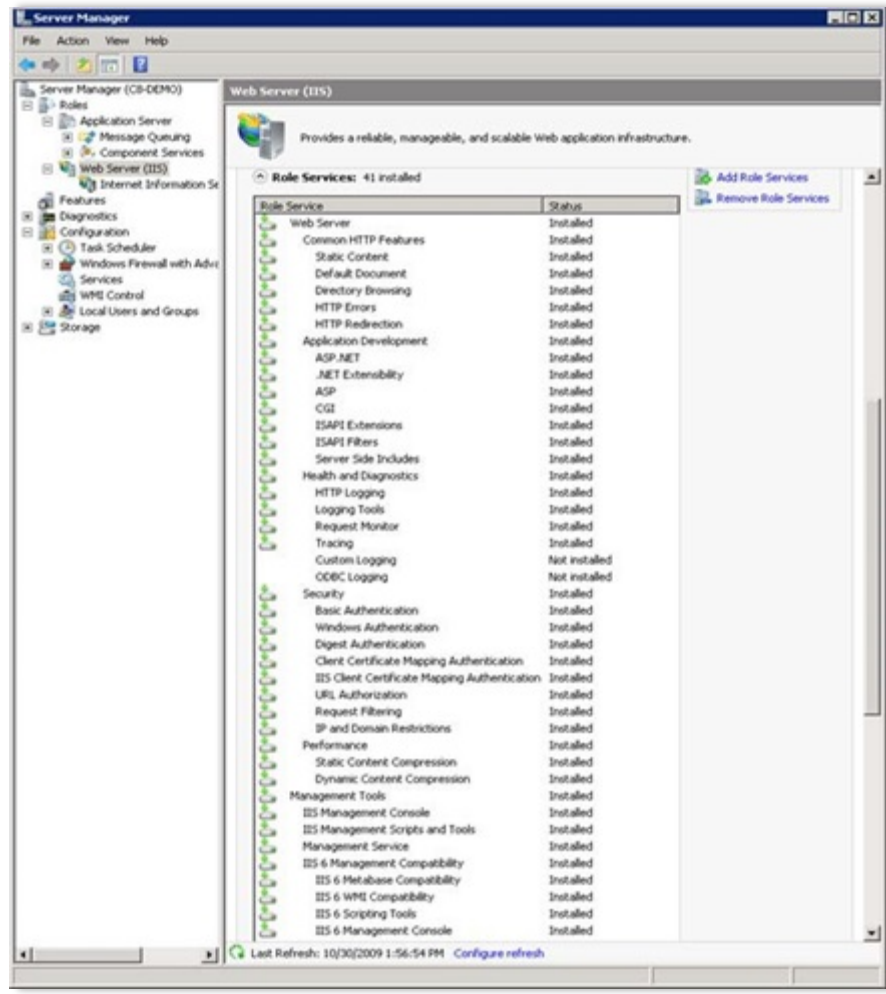


9. Once the installation is complete, you can close the Wizard; the **SMTP Server** now displays in the **Features** list in the **Server Manager Window**. Proceed to the IIS 7.0 Manager installation as explained in [Step 2: Install IIS 7.0 Manager](#).

Step 2: Install IIS 7.0 Manager

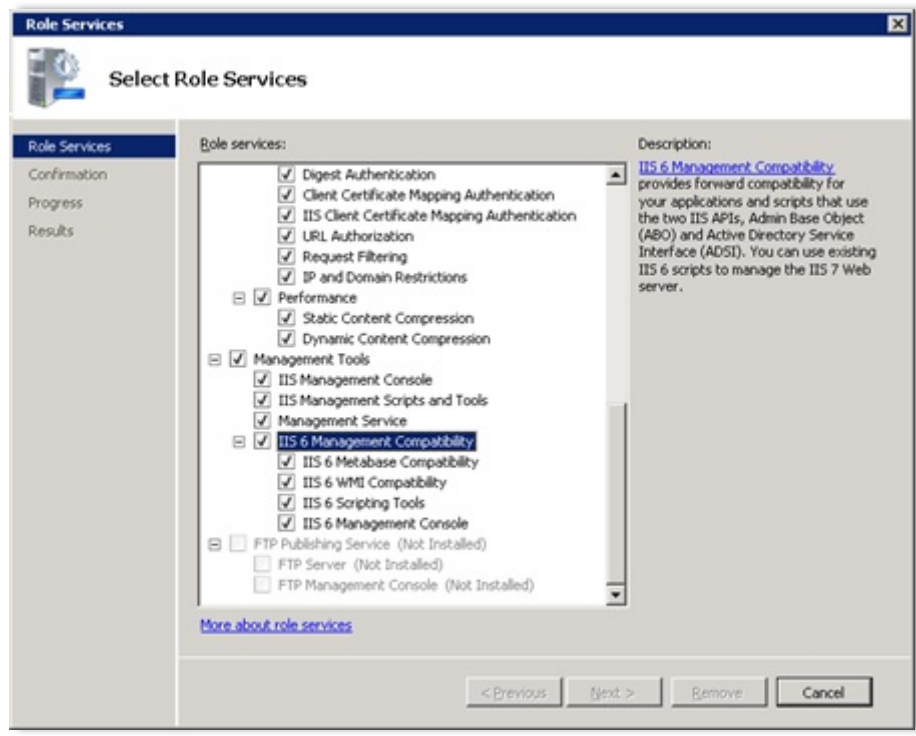
- ▶ To install the Microsoft IIS 7.0 Manager OR to verify that it is already installed
1. From the **Start** menu, select **Programs** ▶ **Administrative Tools** ▶ **Server Manager**.
 2. In the **Server Manager** window, in the left pane, click on **Web Server (IIS)**; the **Role Services** list is displayed in the right pane.

Figure (Appendix E) - 25: Services Manager Window



3. In the **Role Services** list, expand **Management tools**; if IIS 7 Management Compatibility is displayed it indicates that the IIS 6.0 Manager is already installed and you can proceed to [Step 3: Configure SMTP with IIS Manager](#) on page 222
ELSE, continue with step 4 below.
4. In the right pane, click on **Add Role Services**; the **Role Services Wizard** is displayed.
5. In the **Role Services** list, to turn on the IIS 7 Management Compatibility, select the **IIS7 Management Compatibility** checkbox.

Figure (Appendix E) - 26: Role Services - Select Role Services dialog box



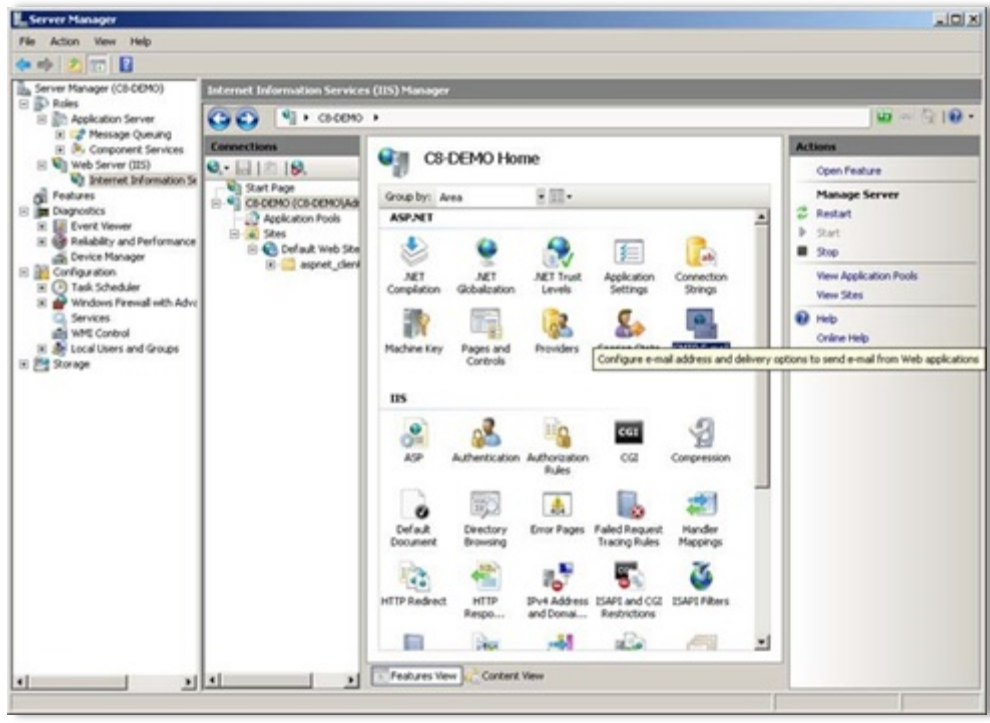
6. Click on **Next**.
7. To continue the installation, in the **Confirm Installation Selections** dialog box, click on **Install**.
8. Once the installation is complete, you can close the Wizard; the IIS 7 Management compatibility service now displays in the **Role Services** list in the **Server Manager Window**. Proceed to the SMTP configuration as explained in [Step 3: Configure SMTP with IIS Manager](#) on page 204.

Step 3: Configure SMTP with IIS Manager

To configure the SMTP with the IIS Manager, or to verify that it is already installed, use the following steps:

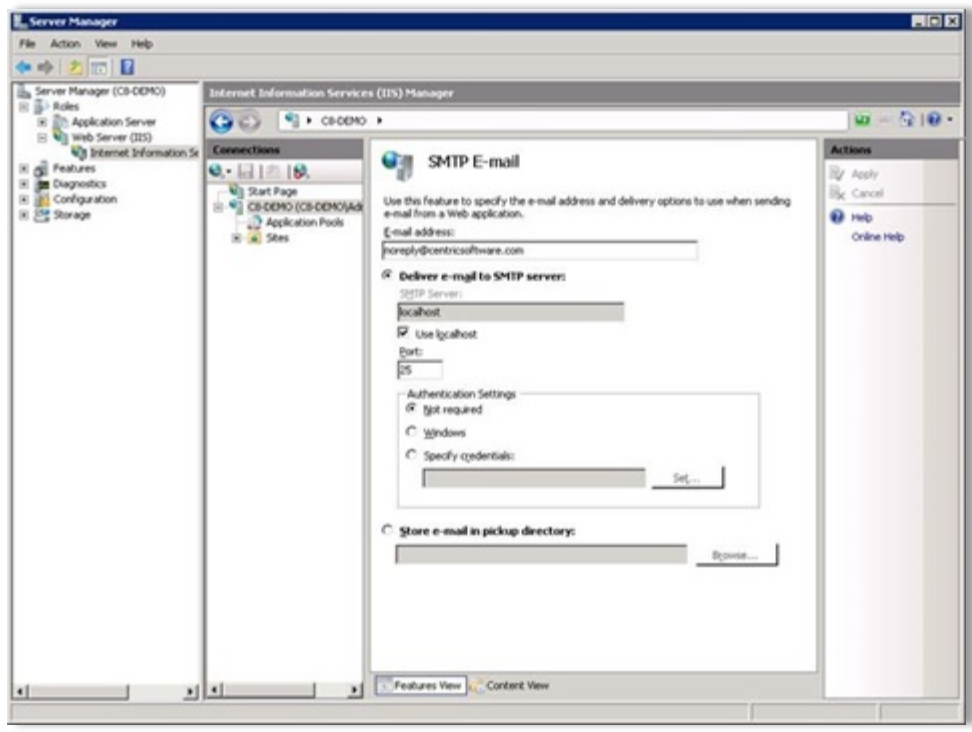
1. From the **Start** menu, select **Programs ▶ Administrative Tools ▶ Server Manager**.
2. In the **Server Manager Window**, in the left pane, expand the **Web Server (IIS)** and click on **Internet Information Services (IIS) Manager**; the **Connections** list is displayed in the right pane.
3. In the **Connections** list, click on the **Server Name**; the Server Home Page is displayed.
4. Under **ASP.NET**, double-click on the **SMTP E-Mail** icon.

Figure (Appendix E) - 27: Service Manager



5. The **SMTP E-mail** pane is displayed as shown below,

Figure (Appendix E) - 28: SMTP E-mail pane



6. In the **SMTP E-mail** pane, enter the following information:
 - a. In the **E-mail address** text box, enter the email address that identifies the server; this address must match the address for the server's email domain. For example, address@customerdomain.com
 - b. Select **Deliver e-mail to SMTP server**.
 - c. To turn on the Use localhost, select the **Use localhost** checkbox, and in the **Port** field, accept the default value (25).
 - d. In the **Actions** pane, click on the **Apply to verify your selections** option and then close the Server Manager.
7. To apply the settings, restart IIS.

Step 4: Configure SMTP with IIS 7.0 Manager

You can reset all of your directory paths using the IIS Manager. For this section, open the IIS Manager and reset the following:

- ISAPI filter path,
- ISAPI filter properties path,
- Virtual directory path and
- WebAccess path

Then, restart the IIS Manager.

► To open the IIS Manager (for updating the path details)

1. From the **Start** menu, select **Programs ► Administrative Tools ► Internet Information Services (IIS) Manager**.
2. In the **IIS Manager Window**, in the left panel, expand the server name. Proceed with the directory path updates to C8.

F. CONFIGURING SMTP ON WINDOWS 2012 SERVER

1. Configuring SMTP Server

If you are using the recommended 64-bit operating system with Windows 2012 server, and Microsoft IIS Web Server version 8.0, you must configure the SMTP Server.

This appendix describes how to complete the SMTP Server configuration on Windows 2012 using the following steps:

- [Step 1: Install SMTP Server Service](#)
- [Step 2: Install IIS 8.0 Manager](#)
- [Step 3: Configure SMTP with IIS Manager](#)
- [Step 4: Configure SMTP with IIS 8.0 Manager](#)

Step 1: Install SMTP Server Service

To install the SMTP Server service, or to verify that it is already installed, use the following steps:

1. From the **Start** menu, select **Programs ▶ Administrative Tools ▶ Server Manager**.
2. In the **Server Manager Window**, in the left pane, click on **Features**; the Features list displays in the right pane.
3. In the Features list, if the SMTP Server is displayed, it indicates that the SMTP Server Service is installed; proceed to [Step 2: Install IIS 8.0 Manager](#) on page 221,
ELSE, continue with step 4 below.
4. In the right pane, click **Add Features**; the **Add Features Wizard** is displayed.
5. To turn on the SMTP Server option, in the **Features** list, select the **SMTP Server** checkbox.
6. To continue, click on **Next**.
7. In the **Add features required for SMTP Server** pane, click on **Add Required Features**.
8. In the **Confirm Installation Selections** pane, click on **Install**.
9. Once the installation is complete, you can close the Wizard; the **SMTP Server** is displayed in the **Features** list in the **Server Manager Window**. Proceed to the IIS 8.0 Manager installation as explained in [Step 2: Install IIS 8.0 Manager](#) on page 221.

Step 2: Install IIS 8.0 Manager

▶ How to install the Microsoft IIS 8.0 Manager OR verify that it is already installed

1. From the **Start** menu, select **Programs ▶ Administrative Tools ▶ Server Manager**.
2. In the **Server Manager Window**, in the left pane, click on **Web Server (IIS)**; the **Role Services** list is displayed in the right pane.

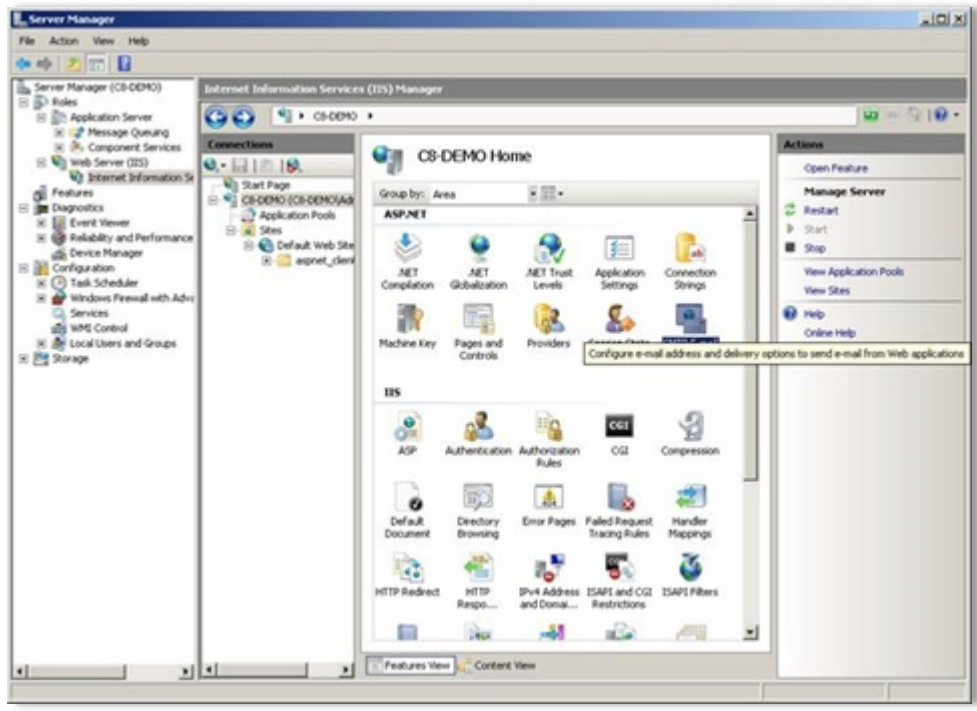
3. In the **Role Services** list, expand **Management tools**; if IIS 8 Management Compatibility is displayed, it indicates that the IIS 8.0 Manager is already installed and you can proceed to [Step 3: Configure SMTP with IIS Manager](#) on page 222,
ELSE, continue with step 4 below.
4. In the right pane, click on **Add Role Services**; the **Role Services Wizard** is displayed.
5. In the **Role Services** list, to turn on the IIS 8 Management Compatibility, select the **IIS 8 Management Compatibility** checkbox.
6. Click on **Next**.
7. To continue installation, in the **Confirm Installation Selections** pane, click on **Install**.
8. Once the installation is complete, you can close the Wizard; the IIS 8 Management compatibility service is displayed in the **Role Services** list in the **Server Manager Window**. Proceed to the SMTP configuration as explained in [Step 3: Configure SMTP with IIS Manager](#).

Step 3: Configure SMTP with IIS Manager

► To configure the SMTP with the IIS Manager, or to verify that it is already installed

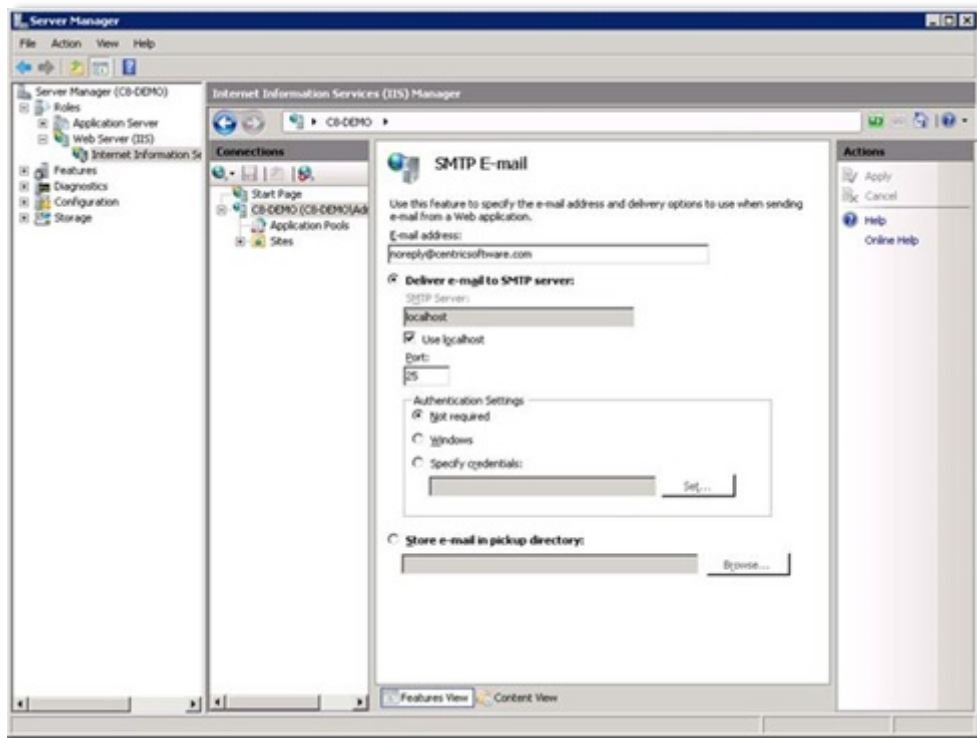
1. From the **Start** menu, select **Programs ► Administrative Tools ► Server Manager**.
2. In the **Server Manager Window**, in the left pane, expand the **Web Server (IIS)**, and select **Internet Information Services (IIS) Manager**; the **Connections** list is displayed in the right pane.
3. In the **Connections** list, click on the server name; the server home page is displayed.
4. Under ASP.NET, double-click on the **SMTP E-Mail** icon,

Figure (Appendix F) - 1: Server Manager Window



5. The **SMTP E-mail** pane is displayed as shown below,

Figure (Appendix F) - 2: Server Manager Window



6. In the **SMTP E-mail** pane, enter the following information:
 - a. In the **E-mail address** text box, enter the email address that identifies the server; this address must match an address for the server's email domain. For example, address@customerdomain.com
 - b. Select **Deliver e-mail to SMTP server**.
 - c. Turn on **Use localhost**, and in the **Port** field, accept the default value (25).
7. To verify your selections, in the **Actions** pane, click on **Apply** and then close the **Server Manager**.
8. To apply/activate the settings, Restart IIS.

Step 4: Configure SMTP with IIS 8.0 Manager

You can reset all of the directory paths using the IIS Manager. For this section, open the IIS Manager and reset the following:

- ISAPI filter path,
- ISAPI filter properties path,
- Virtual directory path and WebAccess path.

Then, restart the IIS Manager.


► To open the IIS Manager (to update the path details)

1. From the **Start** menu, select **Programs ► Administrative Tools ► Internet Information Services (IIS) Manager**.
2. In the **IIS Manager Window**, in the left panel, expand the server name. Proceed with the directory path updates to C8.

G. LICENSING AND ADMINISTRATOR PASSWORD MANAGEMENT

1. Managing User Licenses

If users, suddenly, find that they are unable to log in to Centric 8, it is possible that the organization may have exceeded the maximum number of allowable user licenses set up during installation. All active users in the system are measured against the total number of allowable user licenses.

 NOTE	<p>Exceeding the maximum number of allowable user licenses causes a forced lockout from Centric 8; contact your corporate system administrator or the Centric Customer Technical Support Center:</p> <p>Telephone : 866.796.6218 (8:00 am – 8:00 pm Eastern Standard Time) Fax : 1.603.448.2812 (Attention: Customer Technical Support) E-mail : support@centricsoftware.com</p>
--------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

To make more licenses available, you can set a user's status to inactive. For more information refer to the *Centric 8 Administrator Guide*.

2. Install New User License

To install a new user license in Centric 8

1. From the **Start** menu, select **Programs ▶ Administrative Tools ▶ Services**.
2. Unzip the `C8.lic` to the certificates folder in the following location:


```
<Centric8InstallDirectory>\C8\wildfly-8.1.0\standalone\configuration\certificates
```
3. Once the file `C8.lic` has successfully been added to the certificates folder, restart the Wildfly service.
 - To restart the Wildfly Service,
 - From the **Start** menu, select **Programs ▶ Administrative Tools ▶ Services**.
 - In the **Services Window**, right-click on **Centric Wildfly Service** and select **Start**.
 - Allow a few moments for the batch files to finish running in the background.

Change Admin Password: Post Installation Steps

To change your Administrator password, you must first log into Centric 8 with Administrator rights and modify the password in the UI.

Change Password in Centric 8 UI

► How to change the password in the UI

1. Log into Centric 8 as the site administrator.
2. On the **User Management** tab, in the **User Login** column, click on the **Administrator User Login Name**. The **User Profile** tab is displayed.
3. On the **User Profile** tab, click on **Change User Login/Password**. The **Change User Login/Password** dialog box is displayed.
4. Enter details in the **Password** and **Confirm Password** fields, and click on **Save**.

Confirmation

On completing the [Change Password in Centric 8 UI](#) procedure, confirm that the password is properly reset in Centric 8.

► How to confirm that the password is reset properly

1. Log into Centric 8 as the site Administrator.
2. If you are unable to log in, verify that you entered the correct user name and new password. If you continue to receive the message **User Name and/or password is invalid**, verify that no errors exist in the `pi_sessions.log` file located in the `<Centric8InstallDirectory>\C8\Log` folder.
3. If no errors exist, try logging in again.



The C8 Print and Image Services use the C8 Administrator password. Whenever the C8 Administrator password is changed, make sure to change the password information in the relevant files for C8 Print and Image Services.

3. Install Mobile App License

To Install Mobile App license

1. Unzip the **license file** to the **ios** folder in the following location:

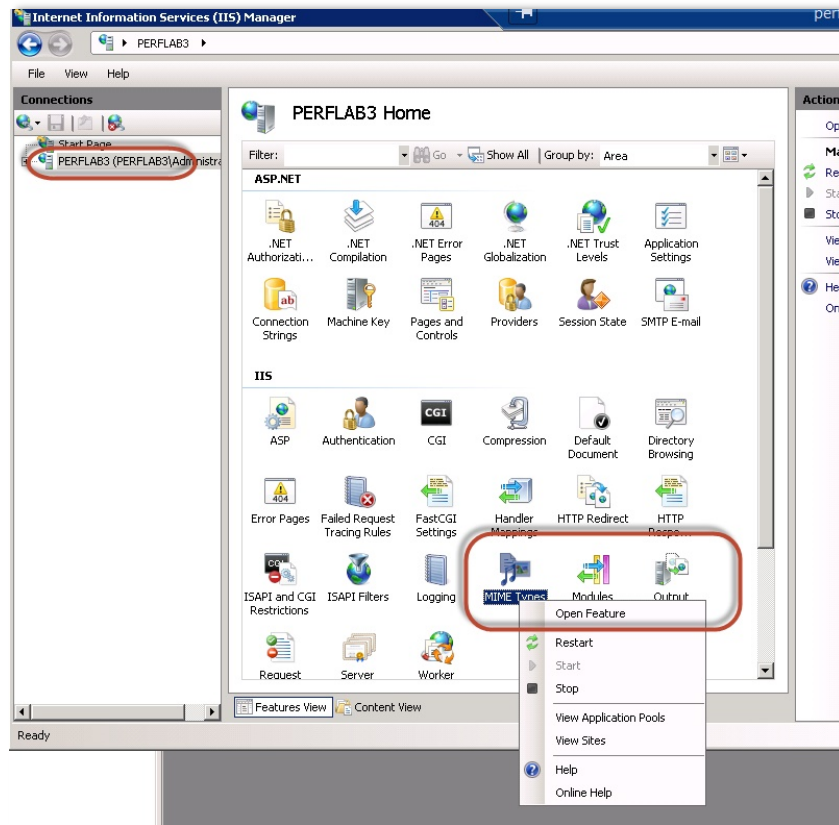
`..\C8\WebAccess\ios` folder



1. If license file is not available, contact the Administrator
2. If ios folder does not exist, create a new one

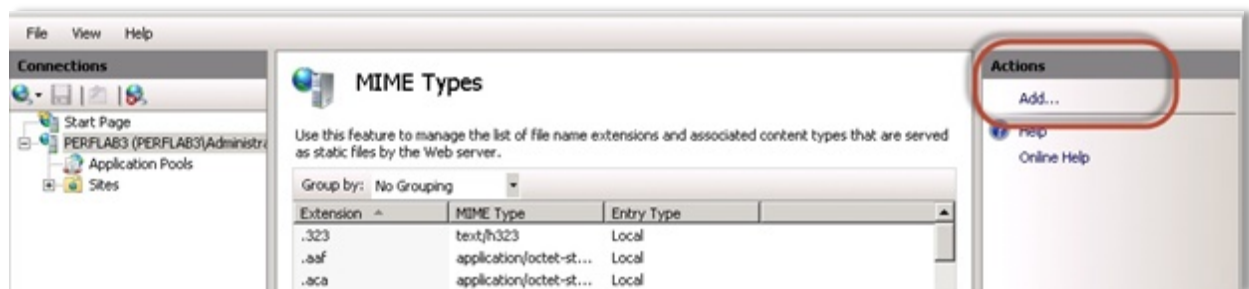
2. Rename that file to `C8MobilePermissions.plist`
3. Open **IIS Manager** and select the computer name from the left pane
4. In **IIS** section, right click on **MIME Types** and select **Open Feature**

Figure (Appendix G) - 1: IIS Manager Window



- From the **Actions** column, click on **Add**

Figure (Appendix G) - 2: IIS Manager Window

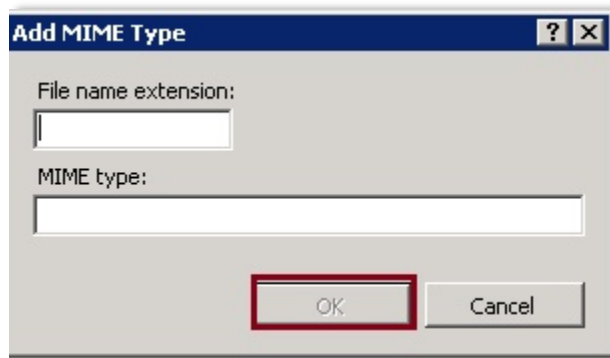


- Enter the following in the **Add MIME Type** dialog box:

File name extension – .plist

MIME type – application/xml

Figure (Appendix G) - 3: Add MIME Type Dialog box



7. Click on **OK** and restart **IIS**

H. PDF PRINT SERVICE

For information on the PDF Print Service, refer to the PDF Print Service Installation Guide.

I. IMAGE SERVICE

For information on Image Service, refer Image Service Installation Guide.

J. LDAP SETUP WITH SSL

This section explains the configuration requirements for enabling LDAP Authentication with SSL.

1. Pre-requisite

LDAP Administrator must create a user group in LDAP of Users allowed to access Centric8 through LDAP.

2. SSL CERTIFICATE INSTALLATION

1. If a SSL Certificate is required to be deployed, obtain the certificate file from the Customer and copy it to the Centric 8 server machine.
2. Install the Certificate in the C8 jre certificate store, as follows:

- Open a command prompt as Administrator and navigate to Centric 8 Installation folder\jdk1.8.0_45\bin
- Type: `keytool -import -trustcacerts -alias %COMPANY_NAME% -file% PATH_TO_CERTIFICATE_FILE% -keystore`

`%C8_INSTALL%\%JAVA_DIR%\lib\security\cacerts`

- Default keytool password is "changeit"
- Type 'YES' to install the certificate
- The following parameters need to be updated for LDAP configuration

Pi-configuration.properties file (found in ... \C8\wildfly-8.1.0\standalone\configuration folder)

```
com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPAddress =
##LDAP_SERVER_ADDRESS##

com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPSearchBase =
##LDAP_SEARCH_BASE##

com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPGroupBase =
##LDAP_GROUP_BASE##

com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPBindUser =
##LDAP_BIND_USER##

com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPBindPassword =
##LDAP_BIND_PASSWORD##

com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPGroupType =
##LDAP_GROUP_TYPE##

com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPUserType =
##LDAP_USER_TYPE##

com.centricsoftware.server.IdentityProvider.CENTRIC_IDENTITY_PROVIDER.LDAPType =
##LDAP_TYPE##
```

Refer to the table below for a description of the parameters and some example settings for these parameters.

Table (Appendix J) - 1: Description of Parameters and example settings for Pi-configuration.properties file

Configuration Settings	Example OpenLDAP Settings	Configuration Defaults	Setting Details (and available Options)	Requirements
LDAP_SERVER_ADDRESS=	ldap://192.168.10.174:389	set during config	ldap:// or ldaps:// +ip/port or server name	
LDAP_SEARCH_BASE	cn=CentricUsers,ou=Groups,dc=centricsoftware,dc=com	set during config	Distinguished name' of root search directory (could be base LDAP domain or lower directory)	This is like a file path in reverse notation, where cn is the end of the path ou is the parent path and dc is the 'drive
LDAPGroupBase=	cn=TestGroup1,cn=Users,dc=lab,dc=frametech,dc=com	set during config	Distinguished name of group object containing C8 users to import	This is like a file path in reverse notation, where cn is the end of the path ou is the parent path and dc is the 'drive
LDAP_GROUP_BASE	cn=CentricUsers,ou=Groups,dc=centricsoftware,dc=com	set during config	Distinguished name' of root search directory (could be base LDAP domain or lower directory)	This is like a file path in reverse notation, where cn is the end of the path ou is the parent path and dc is the 'drive
LDAP_BIND_USER	cn=admin,dc=centricsoftware,dc=com	set during config	Either distinguished name of binding user (OpenLDAP), or username@domain (Active Directory)	
LDAP_BIND_PASSWORD	2:C^K(?B=%	set during config	Encrypted password (generated as part of install process but need to regenerate if binduser is changed on LDAP server)	
LDAP_GROUP_TYPE	groupOfNames	groupOfNames (OpenLDAP)Group (Active Directory)	Object type for group container (Variable for OpenLDAP, Group for Active Directory)	User DNs contained in member attribute list (OpenLDAP), or in memberOf attribute list of Group (AD).
LDAP_USER_TYPE	posixAccount	posixAccount (OpenLDAP)User (Active Directory)	Object type for user object (Variable for OpenLDAP, User for Active Directory)	User must have username set in sAMAccountName (AD) or uid (OpenLDAP). Foreign ID taken from objectGUID (AD) or uidNumber (OpenLDAP)
LDAP_TYPE	OpenLDAP	Left blank (implies Active Directory)	Active Directory (or blank), OpenLDAP	
PAGESIZE	LDAPPageSize=500		If no value is specified, then the default is 500	This option is used when synchronizing a large number of LDAP users, i.e. 1000+ users

3. Once the parameters are updated, save and close the file. Restart Centric Wildfly service.

4. Confirm the certificate has been installed correctly.
 - Enter the following command in the command prompt (navigate to the same directory used when installing the certificate)

```
keytool -list -keystore %JAVA_HOME%\lib\security\cacerts
```

Example:

```
keytool -list -keystore C:\C8\jdk1.8.0_45\jre\lib\security\cacerts
```

- No password is required, but 'changeit' should work if desired.
- In the displayed list, search for the alias name you entered in the section [SSL Certificate Installation - Step 2](#) on page 231 in the list that is displayed.

Import Users from LDAP

1. Log into C8, navigate to **Setup ▶ User Management ▶ LDAP** tab.
2. Verify the LDAP server details like Server address, search base string etc.
3. Verify whether the **Force SSL** checkbox has been selected, if SSL is enabled on LDAP Server.
4. On the toolbar, click on the **Synchronize** icon. You can view a message saying how many users are imported, in the lower right corner of the page.

Optional Steps

1. To synchronize users daily, select **Job Enabled** checkbox. To change the Job schedule, navigate to **Setup ▶ Service ▶ Job Service** tab. In the Job Schedule table, change the execution time.
2. To import LDAP users as active, click **Import As Active User**.

K. HTTPS SUPPORT



This section applies only if you have already installed SSL Certificate in your server.

Configuration Files

After the SSL Certificate has been installed on IIS, change the following configuration files:

<program files>\Centric Software\C8\wildfly-8.1.0\standalone\configuration\standalone-pi-mssql.xml to com.centricsoftware.AppServer.HomeURL

Image Services

1. Update the CSImageService.cfg file.
2. # Server URL for obtaining print requests
3. Server URL=https://HostUrl/csi-requesthandler/RequestHandler

PDF Print Services

1. Update the PDFService.cfg file.
2. # Server URL for obtaining print requests
3. Server URL=https://HostUrl/csi-requesthandler/RequestHandler



If Firewalls are installed on the Windows Server and network, update it to allow traffic through on port 443 (https).

The Centric 8 server must be able to resolve the Host name to an IP address on this machine.

There are cases where Administrators do not have external names resolved to an IP address inside their own network.

4. After making changes to the configuration file, ensure that a valid IP address that matches the IP address on the server is returned. Else, the Centric8 application will not function properly.
5. Ensure that each of the configuration files uses **https://HostUrl**. Note that inserting an IP address instead of the host URL, will prevent the Centric8 application from functioning properly.
6. The URL must match the certificate name (i.e. Host Url).
7. For example, if the certificate name is example.somecompany.com, the URL must start with **https://example.somecompany.com/....**
8. If the URL does not match the certificate name, then the Print and Image services will not work as expected.

► How to test whether or not the hostname returns a valid IP address

1. Open a command prompt and type PING Host Url. Press **ENTER**.
2. An IP address is displayed.
3. Type IPCONFIG and press **Enter**.
4. Verify that the IP address returned by the PING is displayed in the IPCONFIG report.

If the PING response is *unknown host* or an IP address that does not match with that of the server, complete the following steps given below:



You will need help from the Customer's IT Administrator to perform these steps.

1. Edit the Windows system hosts file and add the following line (The hosts table can be found in C:\Windows\System32\drivers\ etc)
2. In the **Start** menu, locate the **Notepad app** icon.
3. Right-click on the **Notepad app**, and select **Run As Administrator** option.
 - If you do not select the **Run As Administrator** option, the file will be opened in Read-only mode and the changes will not be saved.
4. At the end of the file, type the line (IP address) 127.0.0.1 Customer name, save the changes and exit notepad.
5. Now, when you type **PING Customer name** and press **Enter**, the following IP address will be displayed:

127.0.0.1



This is a special IP address which refers to the machine you are currently logged on. Any reference to 127.0.0.1 will point back to the machine you are currently system on which you are currently logged in.

6. Restart Wildfly; the Print, and Image services will pick up the changes made to the configuration files.

L. ENABLE HTTP COMPRESSION IN IIS

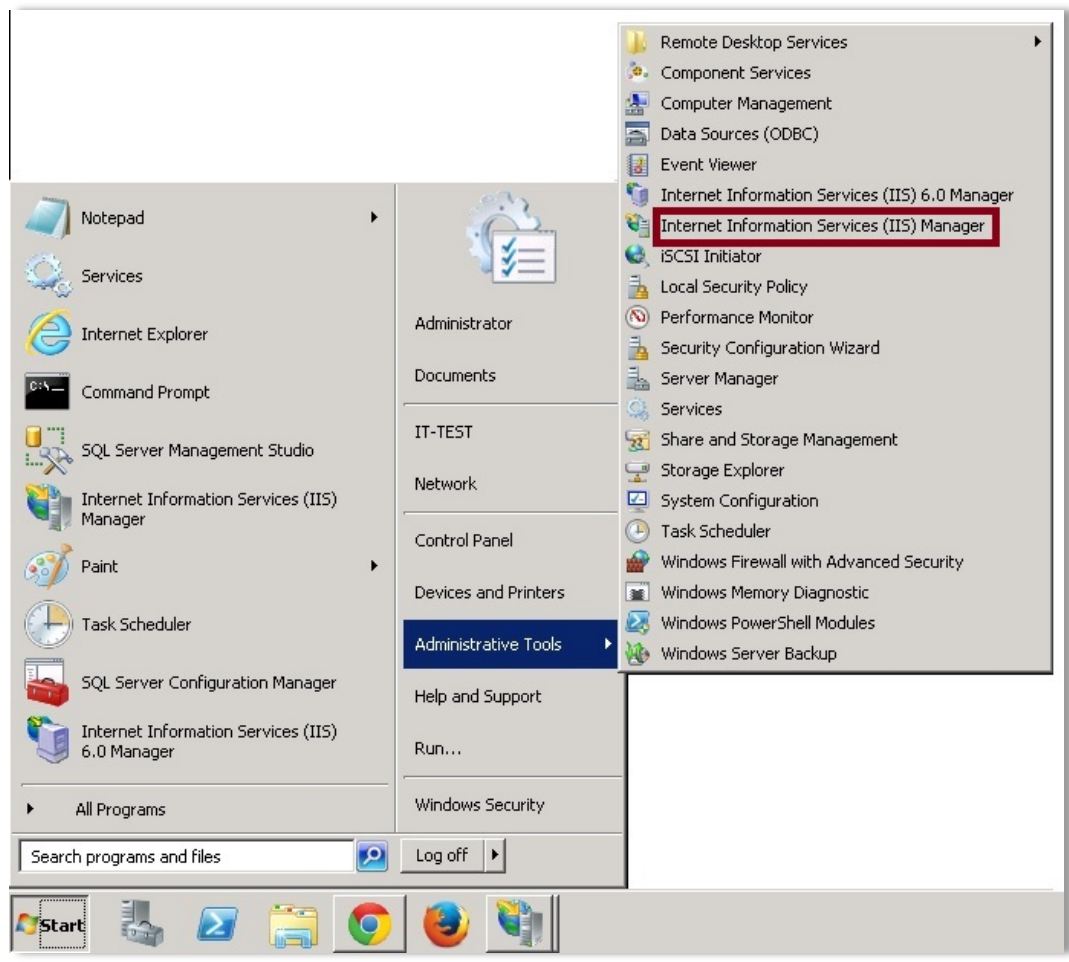
Enable HTTP Compression in IIS to improve client performance slow networks.



This step is required for Mobile Apps to improve performance.

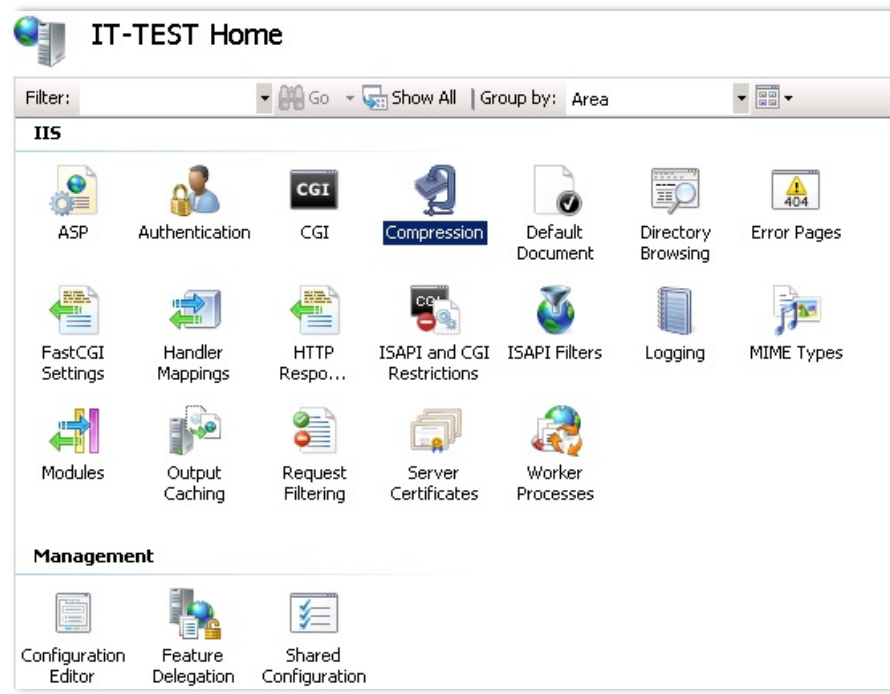
1. Open Internet Information Service (IIS).

Figure (Appendix L) - 1: Internet Information Service (IIS)



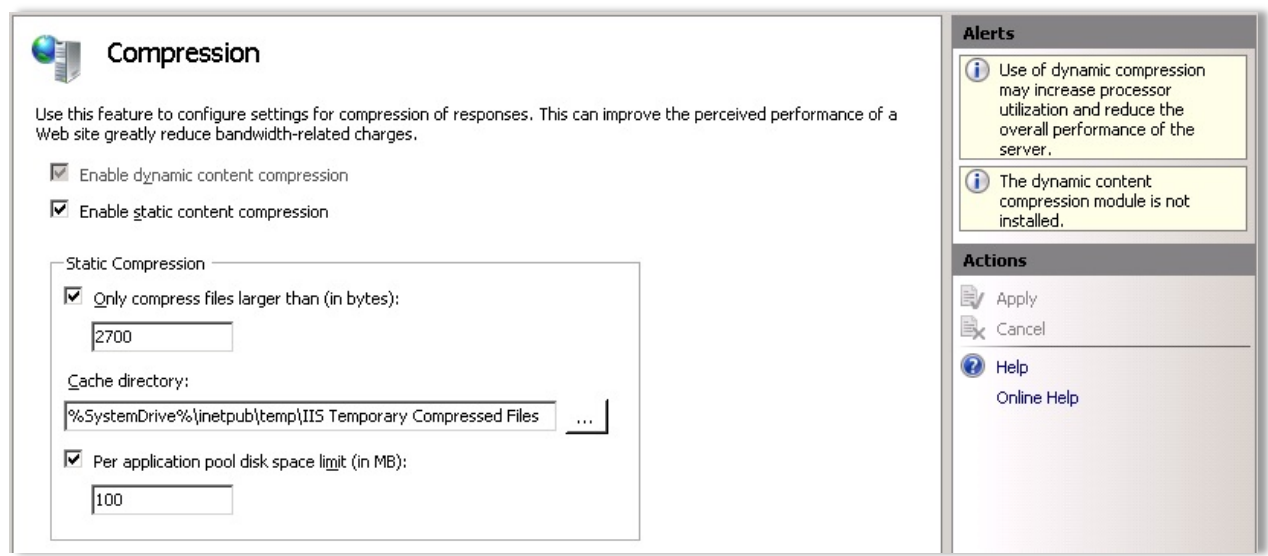
2. On the left pane, click on a server name. On the right hand side, under IIS, right-click on **Compression** and select the **Open Feature** option.

Figure (Appendix L) - 2: IIS Window



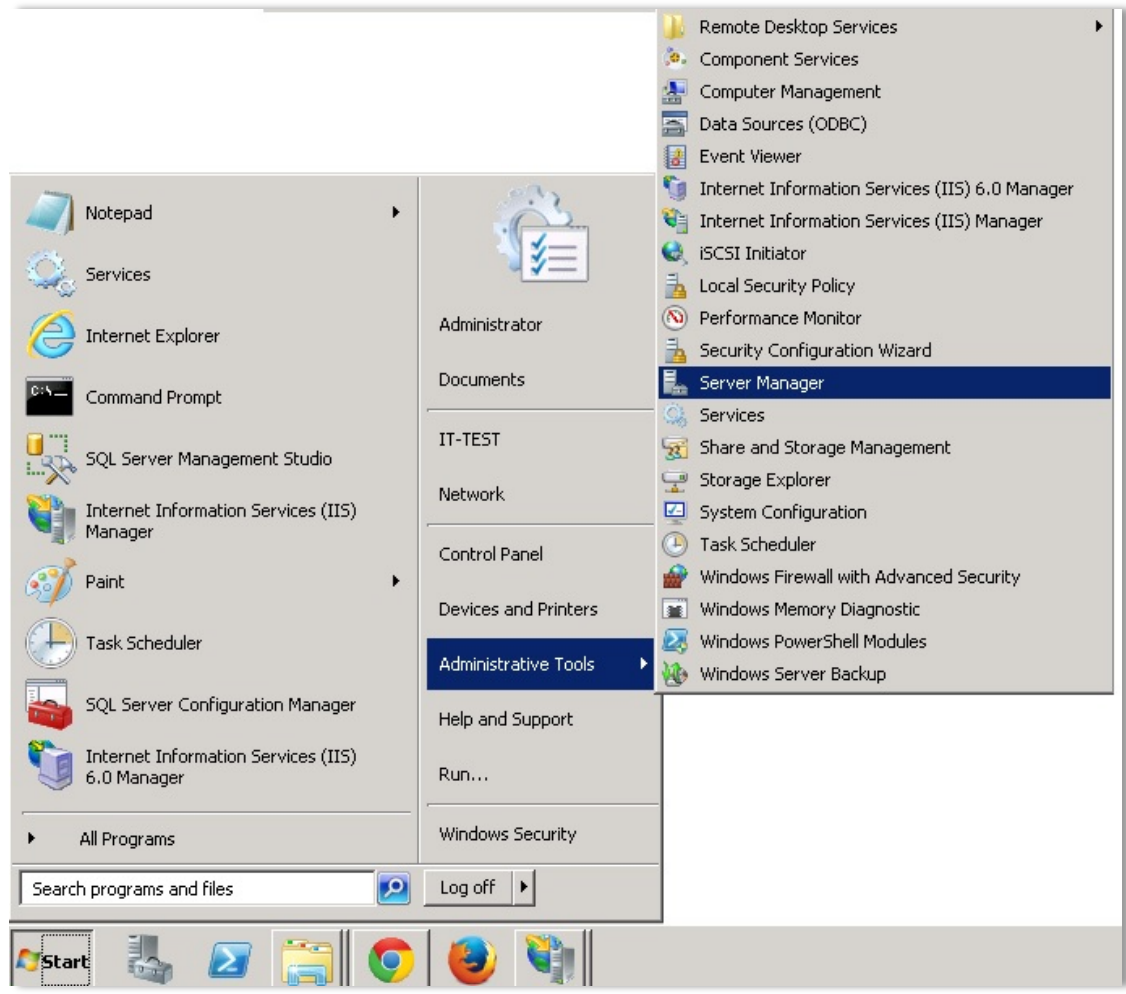
3. Select the **Enable dynamic content compression** and **Enable static content compression** checkboxes. Click on **Apply** on the right hand side. Go to Step 7.

Figure (Appendix L) - 3: Compression Window



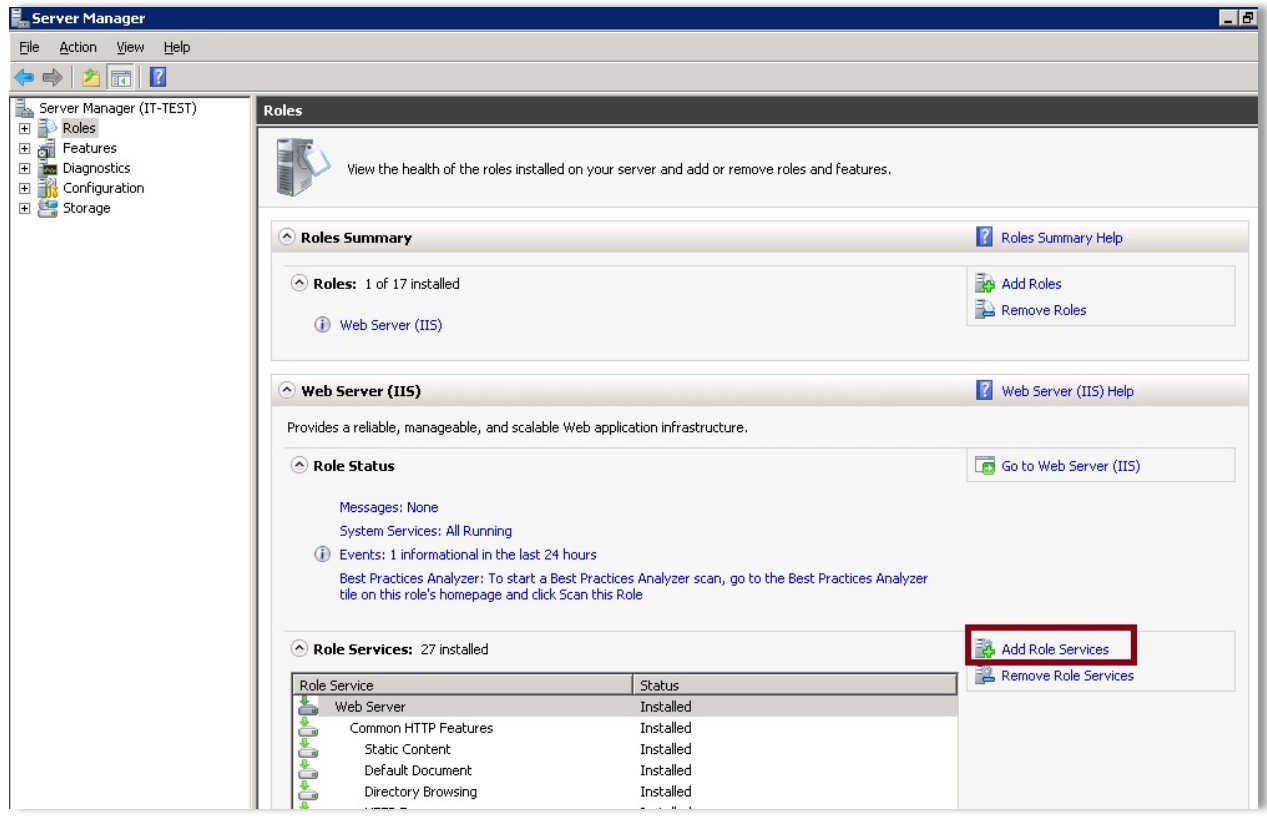
4. If dynamic content compression module is not installed, open **Server Manager**.

Figure (Appendix L) - 4: Server Manager



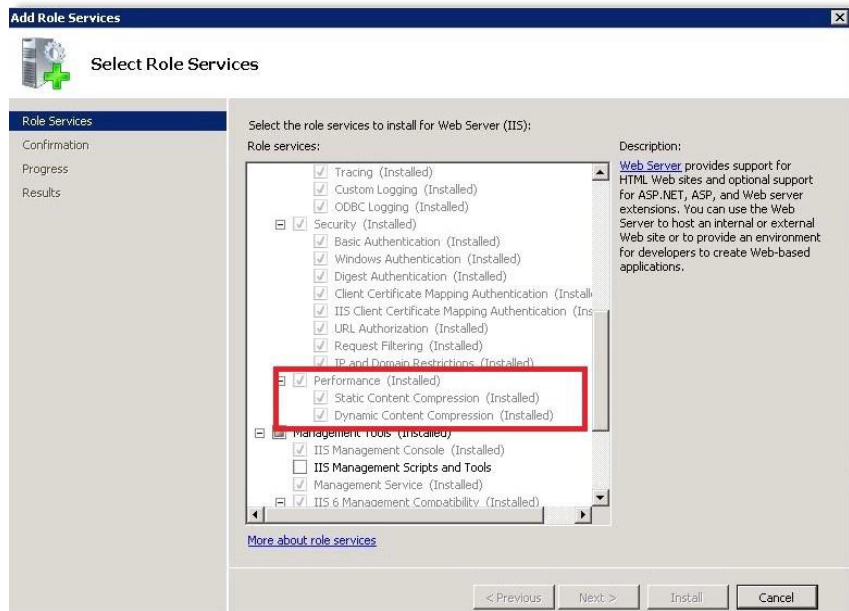
5. Click on **Roles**. In the **Roles** Window, in the **Web Server (IIS)** section, click on **Add Role Services**.

Figure (Appendix L) - 5: Roles Window



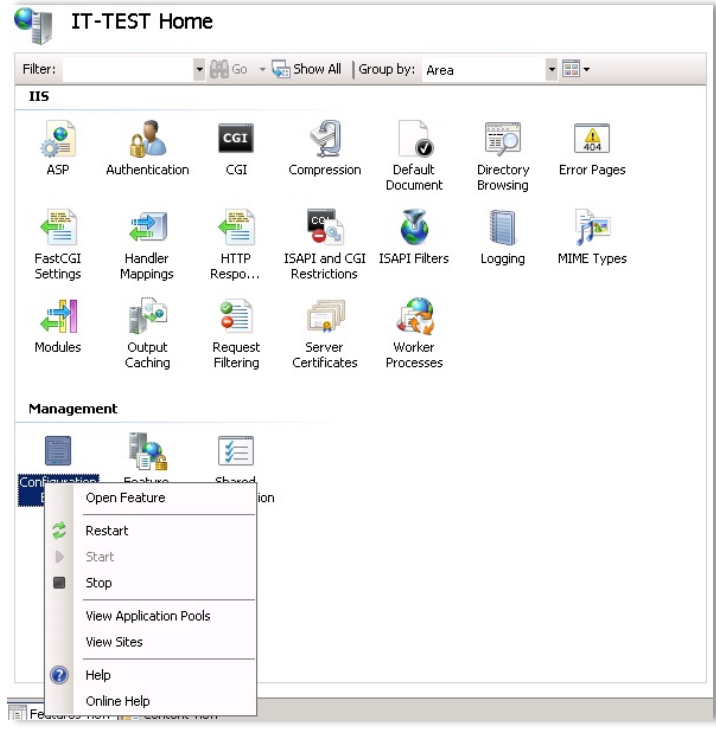
- In the **Add Roles Service** dialog box, under Performance, select **Static Content Compression** and **Dynamic Content Compression** checkboxes and click on the **Install** button.

Figure (Appendix L) - 6: Select Roles Window



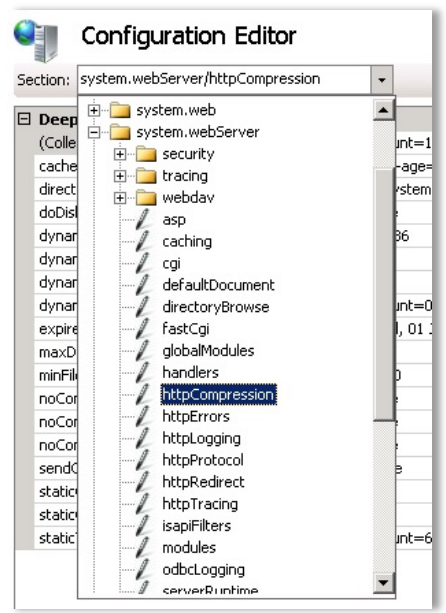
- From the **Start** menu, select **IIS Manager**. In the **Connections** section on the left, click on the server name in IIS. On the right hand side, under the **Management** section, right-click on the **Configuration Editor** and select **Open Feature**.

Figure (Appendix L) - 7: Configuration Editor - Open Feature



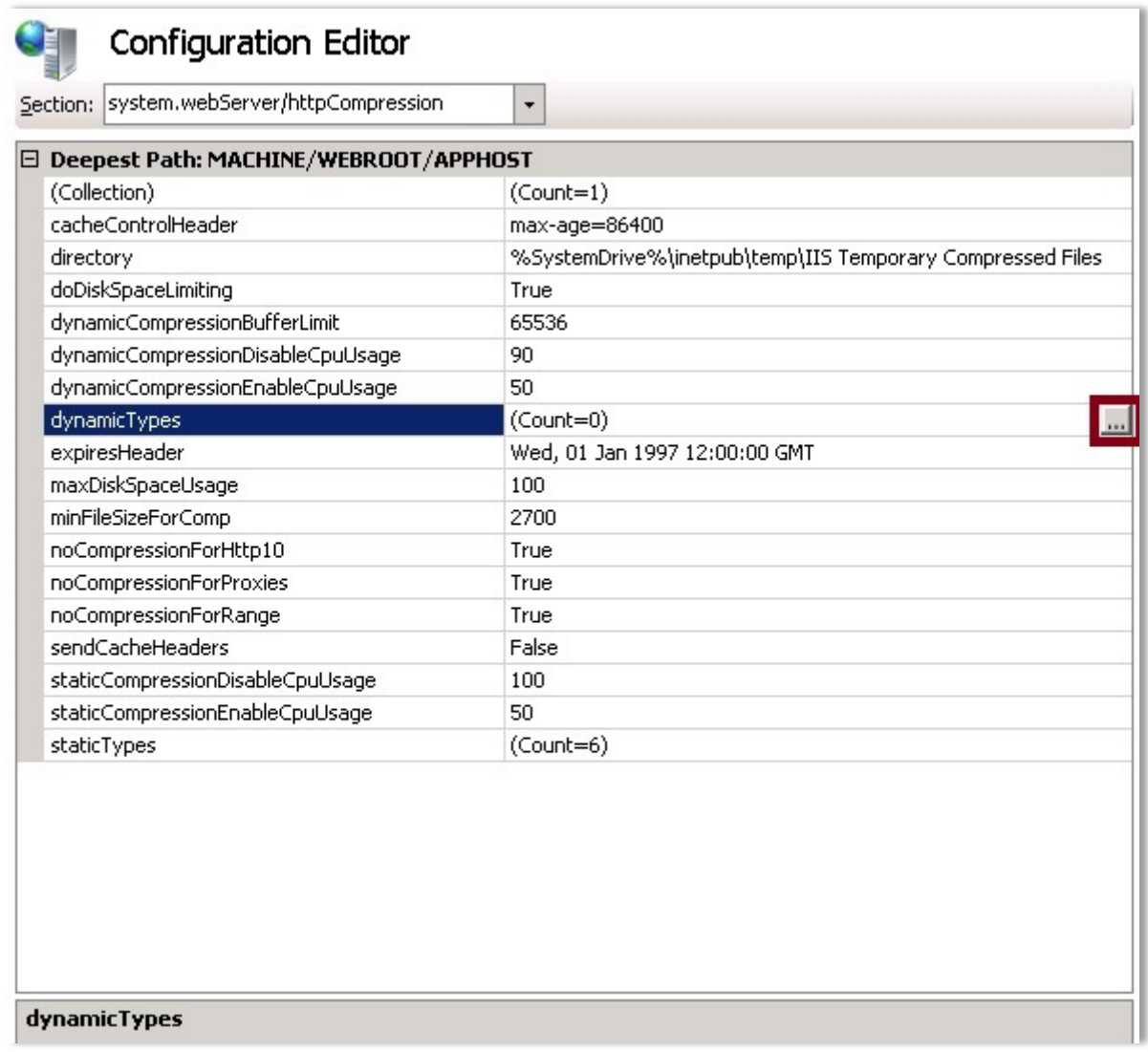
- From the **Section** drop-down list, expand **System.webServer** and select **httpCompression**

Figure (Appendix L) - 8: Configuration Editor



- Select **dynamicTypes** and click on the **Browse** button.

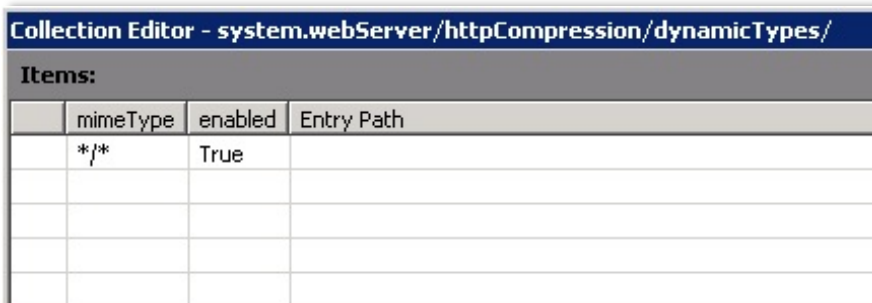
Figure (Appendix L) - 9: Configuration Editor (2)



10. No changes are required if,

- In the **Collection Editor** dialog box, if you see the **mimeType */*** and the enabled field is set to *True*, no changes are required.

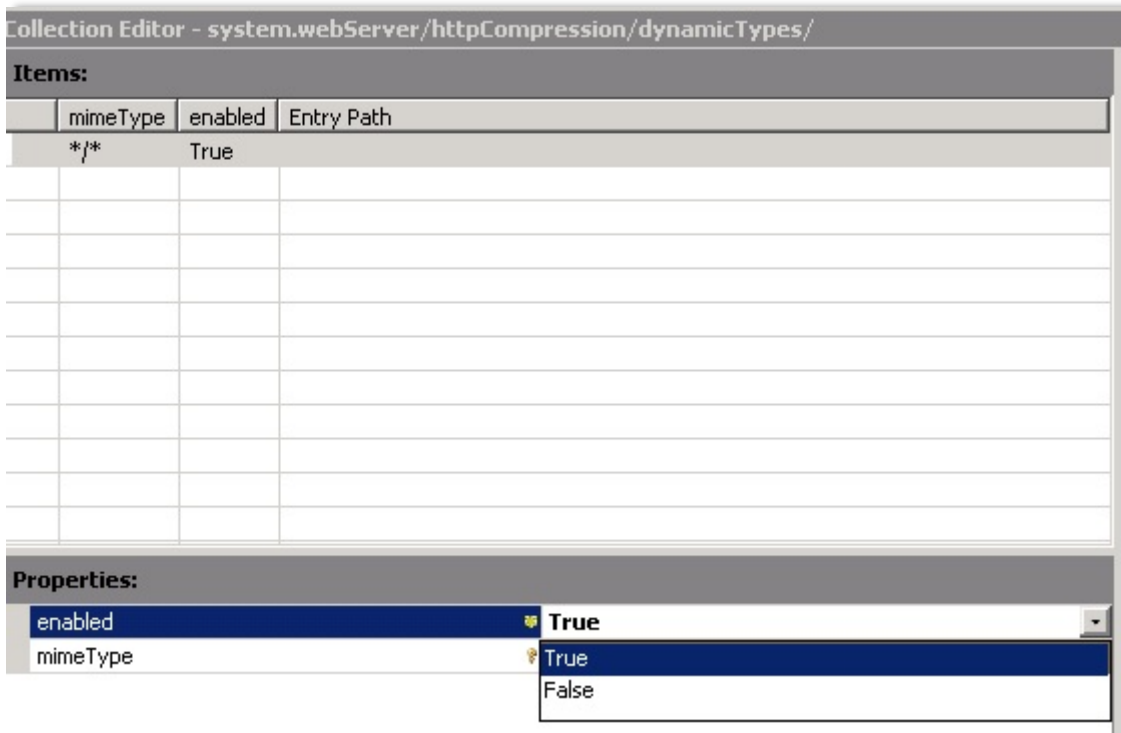
Figure (Appendix L) - 10: Collection Editor (3)



ELSE,

- In the **Collection Editor** dialog box, if you see this **mimeType** ***/*** and the enabled field is set to *False*,
 - Click on it.
 - In the **Properties** section, from the **enabled** drop-down list, select *True*.

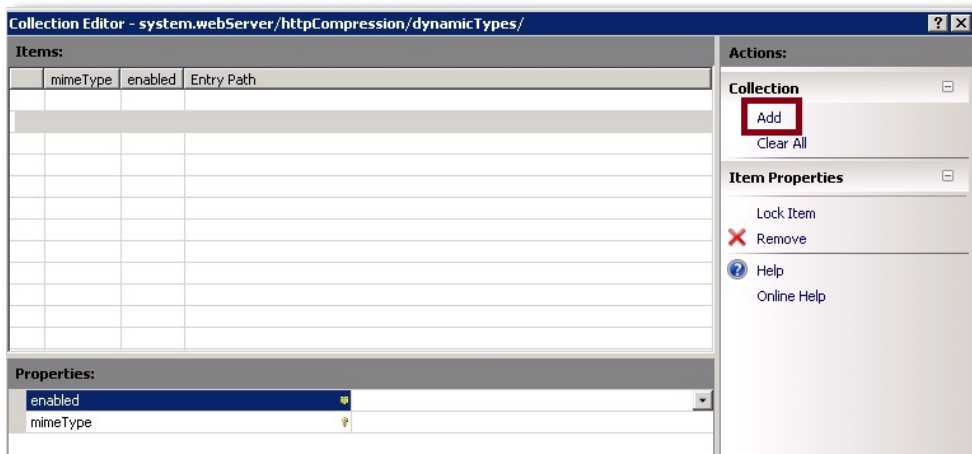
Figure (Appendix L) - 11: Collection Editor - Properties section



11. If no **mimeType** is available,

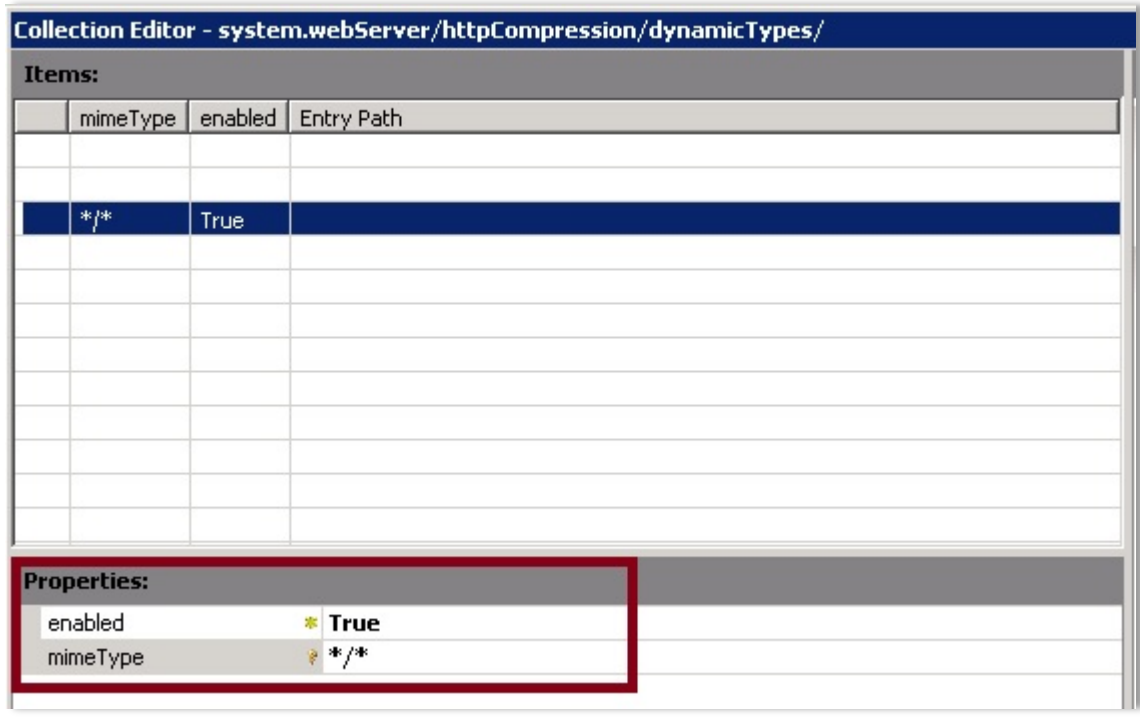
- In the **Collection Editor** dialog box, on the right –hand side, in the **Actions** section, click on **Add**.

Figure (Appendix L) - 12: Collection Editor - Properties



12. In the **Properties** window, in the **enabled** drop-down list, select *True* and type **/** in **mimeType** field.

Figure (Appendix L) - 13: Properties Window



13. Close the Configuration window and restart the IIS.

Offline App Cache

Centric 8 5.5 release uses HTML5 which introduces application cache, which means that a web application is cached, and accessible without an internet connection.

Advantages of Setting Offline App Cache

Application cache gives the following advantages:

- **Offline browsing** : Users can use the application when they're offline
- **Speed** : Cached resources load faster
- **Reduced server load:** The browser will only download updated/changed resources from the server

Supported Browsers for Offline App Cache

The numbers in the table specify the first browser version that fully supports Application Cache

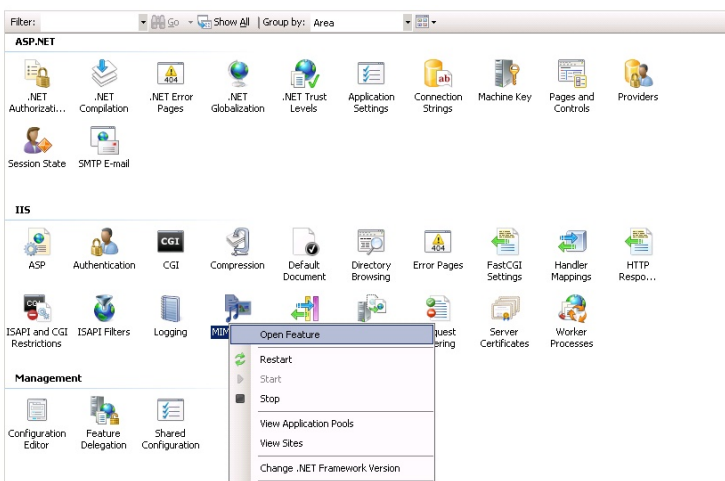
Browser	Chrome	IE	Firefox	Safari
Application Cache	4.0	10.0	3.5	5.0

NOTE The Application Cache is not supported in IE9 version

► To setup Offline Cache

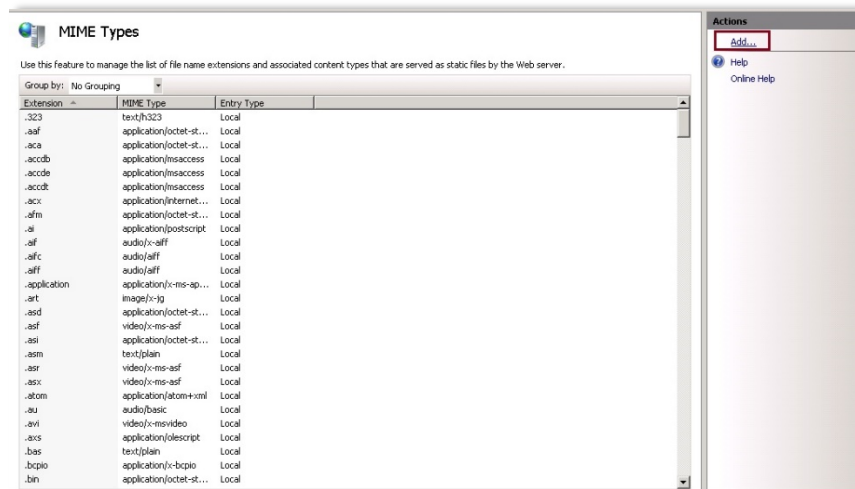
1. Open IIS manager
2. Click on **machine name** from the **Connections** pane
3. In the IIS section, right-click on **MIME Types** and select **Open Feature**

Figure (Appendix L) - 14: IIS Manager Window



4. Click on **Add** from the **Actions** pane

Figure (Appendix L) - 15: MIME Types Window

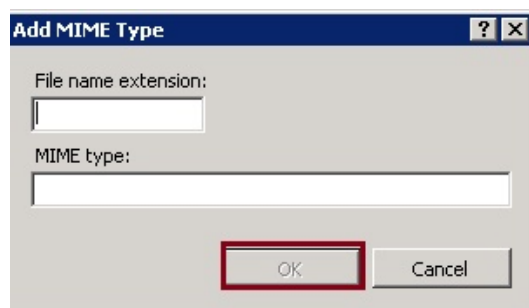


5. Enter the following in the **Add MIME Type** dialog box:

File name extension: .appcache

MIME type: text/cache-manifest

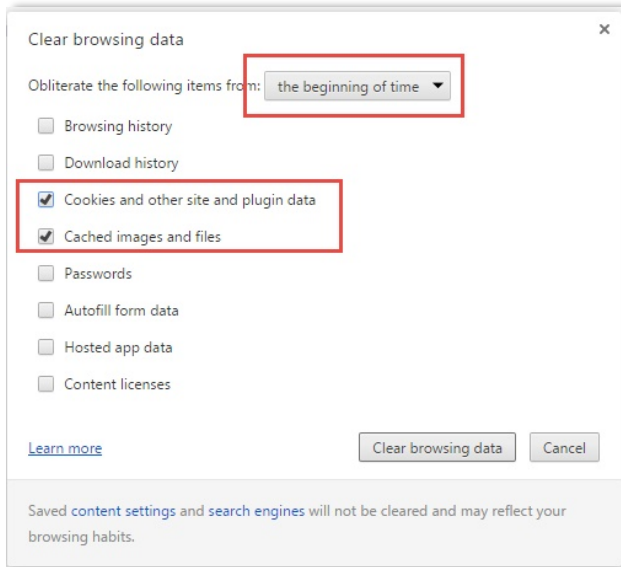
Figure (Appendix L) - 16: Add MIME Type Window



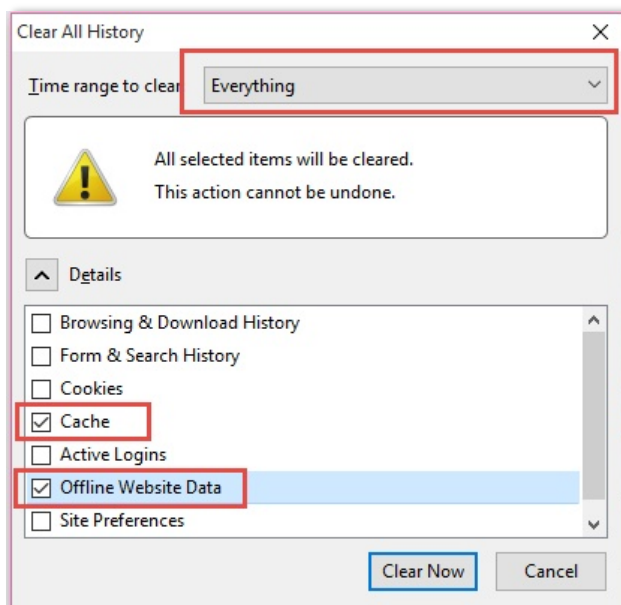
6. Click on **Ok** and restart IIS. To restart IIS, click on the machine name and click **Restart** from the right pane

► To clear Browser Cache

- **In Chrome:**
 1. Navigate to **Options ► More Tools ► Clear Browsing Data**
 2. From the Obliterate the following items from: drop-down menu, choose the beginning of time
 3. Enable Cookies and other site and plugin data and Cached images and files checkboxes
 4. Click on Clear browsing data

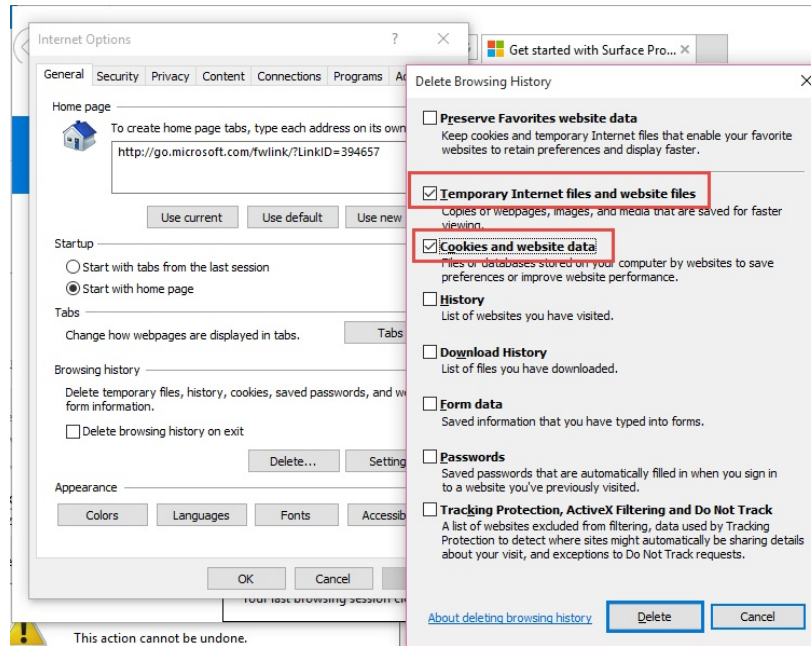
Figure (Appendix L) - 17: Clear Browsing Data Window

- **In Firefox:**
 1. Navigate to **Tools** ▶ **Options** ▶ **History** ▶ **Clear Recent History**
 2. From the **Time range to clear:** drop-down menu, choose **Everything**
 3. From the **Details** section, enable **Cache** and **Offline Website Data**
 4. Click on **Clear Now** to clear the browser cache

Figure (Appendix L) - 18: Clear All History Window

- In **Internet Explorer**:
 1. Navigate to **Tools** ▶ **Internet Options** ▶ **Browsing History** ▶ **Delete**
 2. In the Delete Browsing History popup, enable Temporary Internet files and website files and Cookies and website data
 3. Click on **Delete** to clear the browser cache

Figure (Appendix L) - 19: Delete Browsing History Window

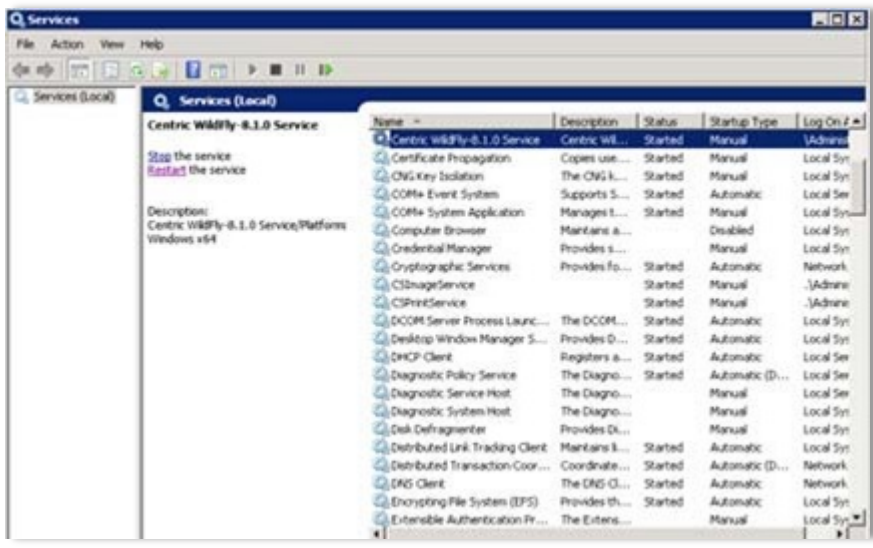


M. CHANGE SMTP SERVER INFORMATION IN WILDFLY

► To change SMTP Server information in Centric 8

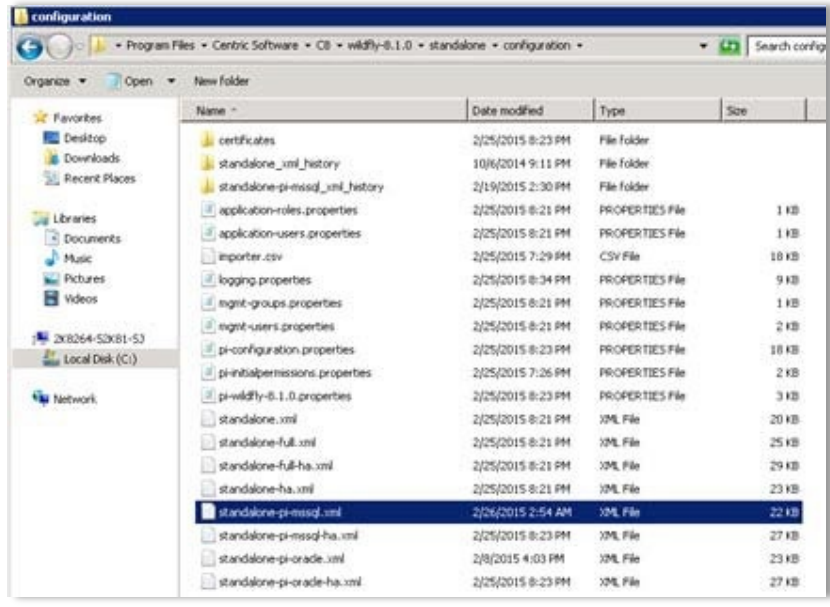
1. In the Services window, stop Wildfly Services.

Figure (Appendix M) - 1: Services Window



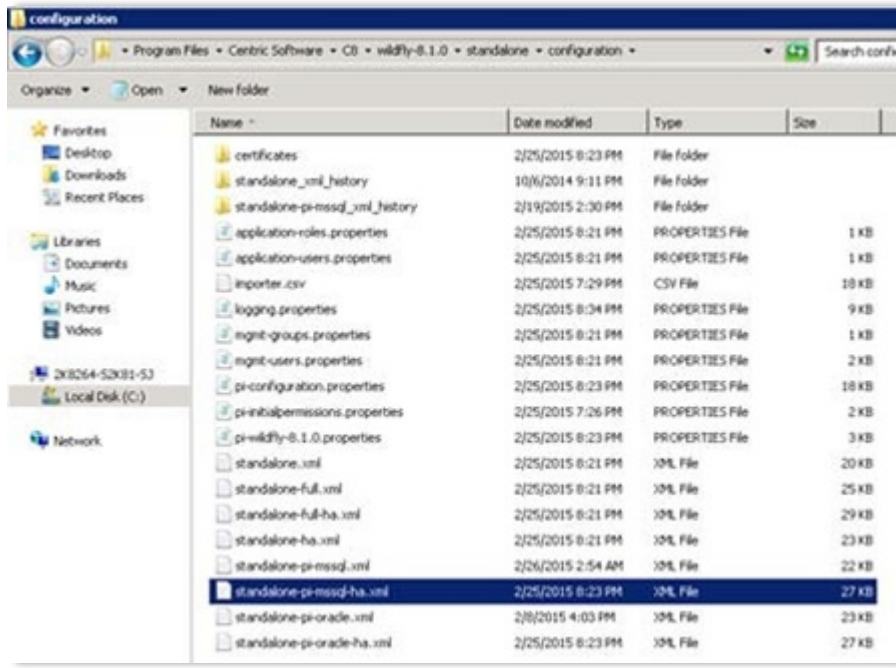
2. If using SQL Server, edit Standalone-pi-mssql.xml file (located in ..\C8\wildfly-8.1.0\standalone\configuration folder) in XML editor application (Notepad ++).

Figure (Appendix M) - 2: Configuration Window



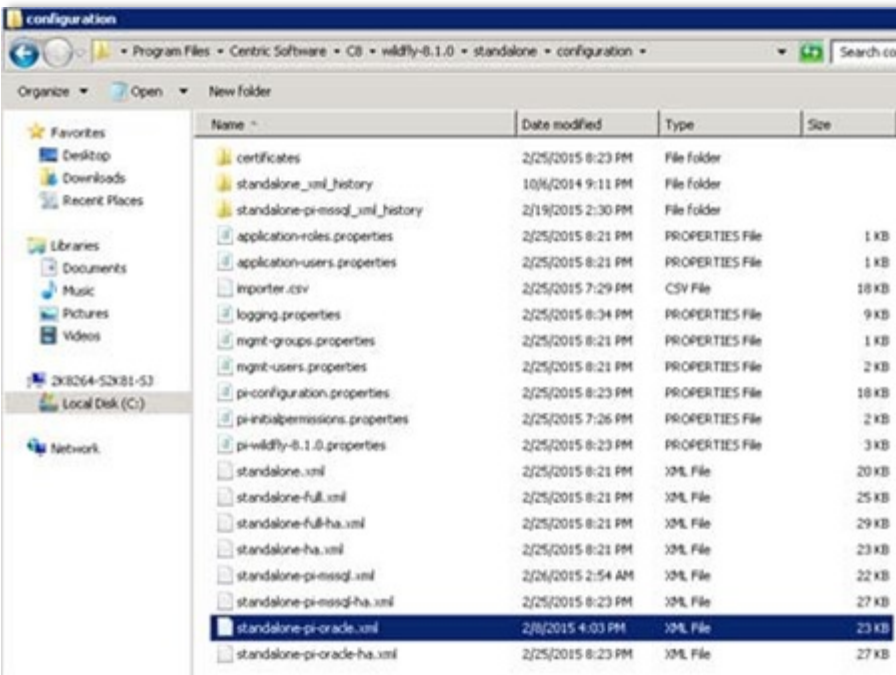
- If you are using SQL Server with wildfly Cluster Setup, then edit Standalone-pi-mssql- ha-tcp.xml in all Cluster Servers. (located in ..\C8\wildfly-8.1.0\standalone\configuration folder) in XML editor application (Notepad++).

Figure (Appendix M) - 3: Configuration Window (2)



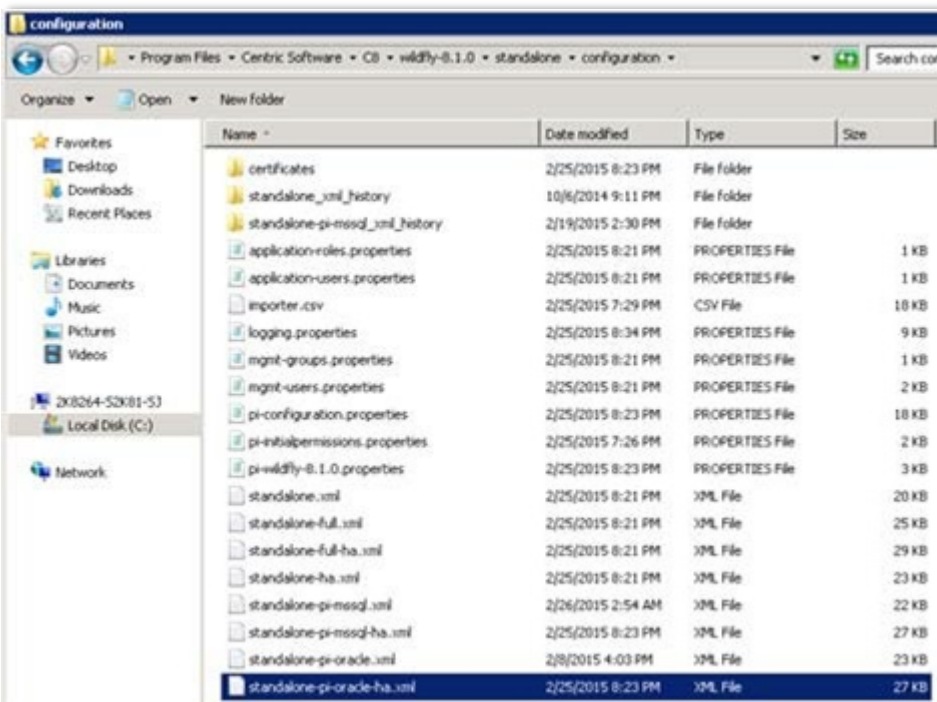
- If you are using Oracle Server, edit Standalone-pi-oracle.xml (located in ..\C8\wildfly-8.1.0\standalone\configuration folder) in XML editor application (Notepad++).

Figure (Appendix M) - 4: Configuration Editor (3)



5. If you are using Oracle Server with Wildfly Cluster Setup, then edit Standalone-pi-oracle- ha-tcp.xml in all Cluster Servers. (located in ..\C8\wildfly-8.1.0\standalone\configuration folder) in XML editor application (Notepad+).

Figure (Appendix M) - 5: Configuration Editor (5)



6. Search for the following lines and make changes as explained below:
 - a. Change the Local Host to your SMTP Server name
 - b. Change the Port number 25 to your SMTP Port number

Make sure your SMTP Port number is open in your local Firewall settings.

NOTE If you modify Host and Port information, remove standalone-pi- mssql_xml_ (located in ..\C8\Wildfly-8.1.0-\standalone\configuration\folder).

Figure (Appendix M) - 6: Modify host and port information in the Wildfly-8.1-0 folder

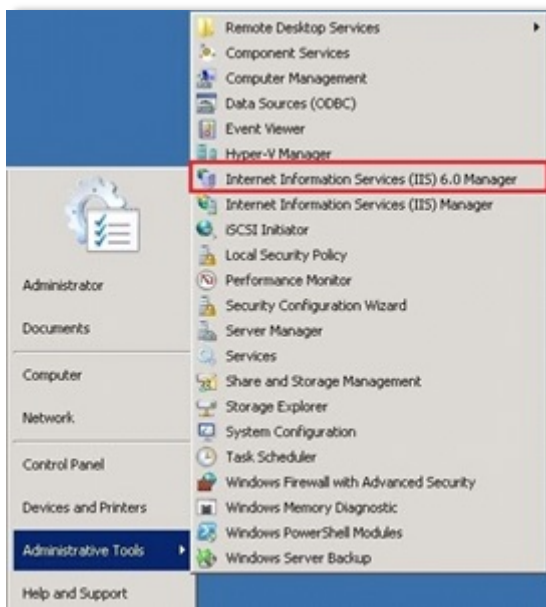
```

<socket-binding-group name="standard-sockets" default-interface="public">
  <socket-binding name="ajp" port="{jboss.ajp.port:8009}" />
  <socket-binding name="http" port="{jboss.http.port:8080}" />
  <socket-binding name="https" port="{jboss.https.port:8443}" />
  <socket-binding name="management-http" interface="management" port="{jboss.management.http.port:9990}" />
  <socket-binding name="management-https" interface="management" port="{jboss.management.https.port:9993}" />
  <socket-binding name="txn-recovery-environment" port="4712" />
  <socket-binding name="txn-status-manager" port="4713" />
  <outbound-socket-binding name="mail-smtp">
    <remote-destination host="localhost" port="25" />
  </outbound-socket-binding>
</socket-binding-group>

```

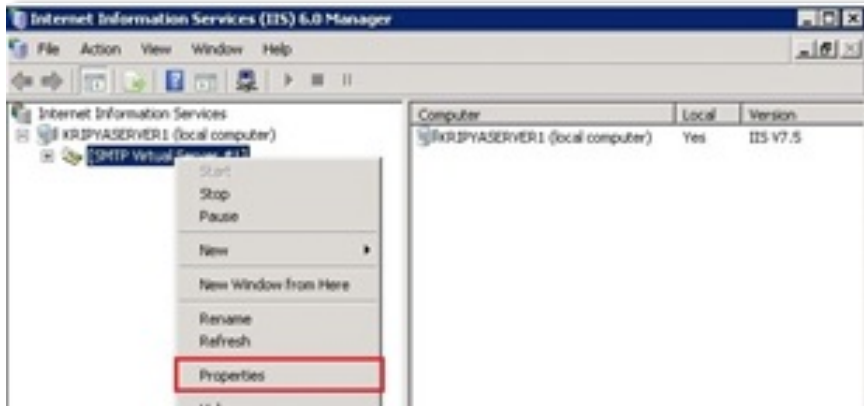
7. Check whether or not your SMTP Server accepts anonymous authentication.
 - ▶ To check whether your SMTP Server accepts anonymous authentication,
 - From the **Start** menu, select **Administrative Tools ▶ Internet Information Services (IIS) 6.0 Manager**.

Figure (Appendix M) - 7: IIS 6.0 Manager



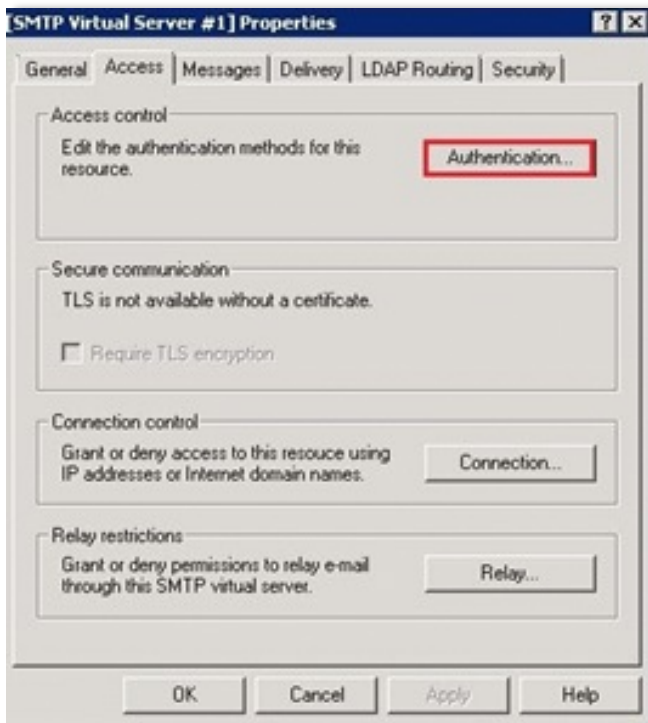
- In the **Internet Information Services (IIS) 6.0 Manager** window, click on the expand button before your server name. Right-click on **[SMTP Virtual Server#1]** and select **Properties**.

Figure (Appendix M) - 8: SMTP Server



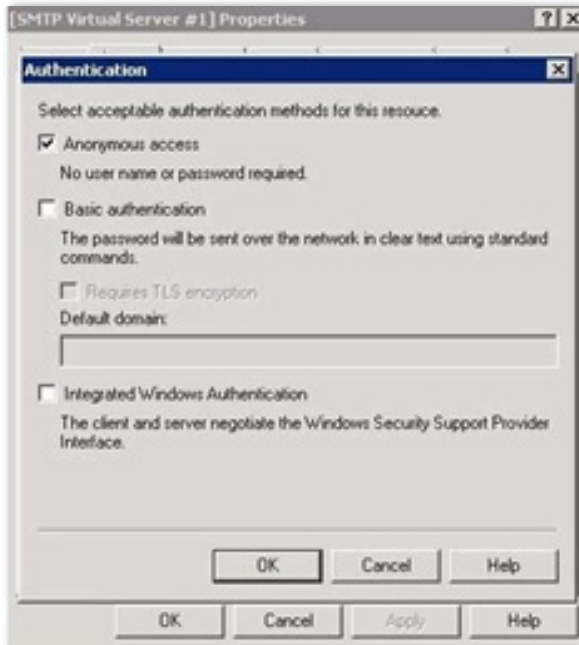
- In the **Properties** window, on the **Access** tab, click on the **Authentication** button.

Figure (Appendix M) - 9: SMTP Virtual Server #1 Properties dialog box



- Make a note of the type of authentication selected and click on **OK**.

Figure (Appendix M) - 10: SMTP Virtual Server #1 Properties - Authentication dialog box



- In [SMTP Virtual Server # 1 Properties] window, on the **Delivery** tab, click on the **Outbound Security** button.

Figure (Appendix M) - 11: SMTP Virtual Server #1 Properties dialog box



- Make a note of the type of authentication selected and click on **OK**.

Figure (Appendix M) - 12: Outbound Security dialog box



- If on the **Access** and **Outbound Security** tabs, the **Anonymous access** radio button is selected, then the next step is not required.

ELSE, continue.

8. If the SMTP server does not accept anonymous authentication, then enter SMTP user/password details as follows,

```
<subsystem xmlns="urn:jboss:domain:mail:2.0">
  <mail-session name="default" jndi-name="java:/Mail/Default">
    <!--<smtp-server outbound-socket-binding-ref="mail-smtp"
    username="##SMTP_SERVER_USERID##"
    password="##SMTP_SERVER_PASSWORD##" />-->
  </mail-session>
</subsystem>
```

9. Add the following line and change ## values to correct values.

For Example -

```
<subsystem xmlns="urn:jboss:domain:mail:2.0">
  <mail-session name="default" jndi-name="java:/Mail/Default">
    <smtp-server outbound-socket-binding-ref="mail-smtp" username="MySMTPUser"
    password="MySMTPUserPassword" />
  </mail-session>
</subsystem>
```

10. Save and close the file.
11. Restart Wildfly Service.

N. JASPER SETUP

Pre-requisite Installation Files

MSSQL JDBC Driver: sqljdbc4.jar

JasperServer + iReports 4.2 Installer (either x86 or x64, operating system dependent)

Setup Instructions

- [Creating a Report DB in SQL Management Studio](#)
- [JasperServer / iReport Installation](#)

Creating a Report DB in SQL Management Studio

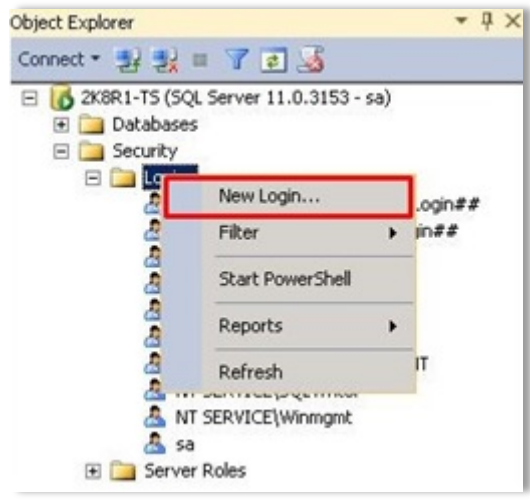
1. From the **Start** menu, select SQL Server Management Studio. Enter the **Server name**, **User login Id** and **Password**. Then, click on **Connect**.

Figure (Appendix N) - 1: Connect to Server dialog box



2. On the **Object Explorer** window, drill-down on the **Security** folder and right-click on the **Login** folder.
3. To create a new login id, select **New Login**.

Figure (Appendix N) - 2: Object Explorer Window - New Login



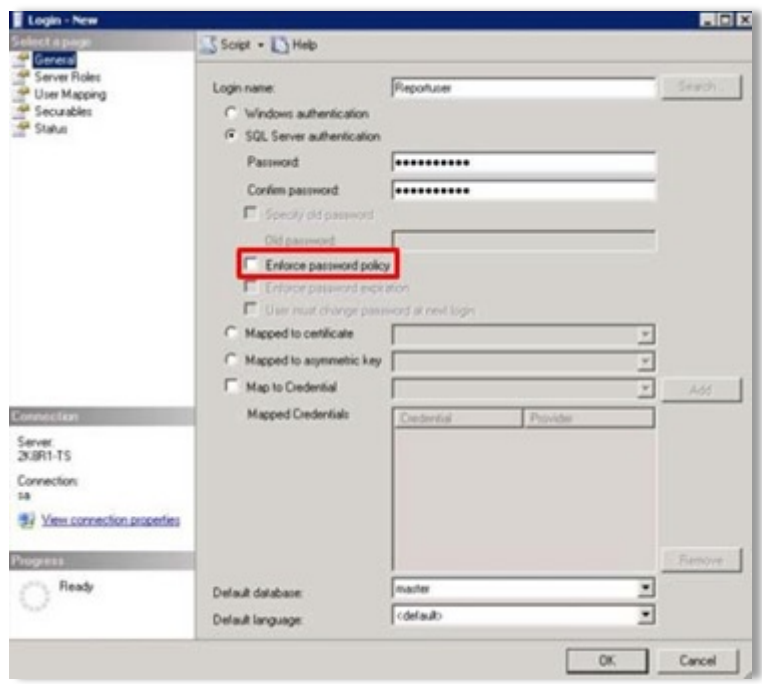
4. In the **Login – New** dialog box, select the **SQL Server Authentication** button.
5. Enter the login name as *Reportuser*.

NOTE

It is possible to create a login in any name.

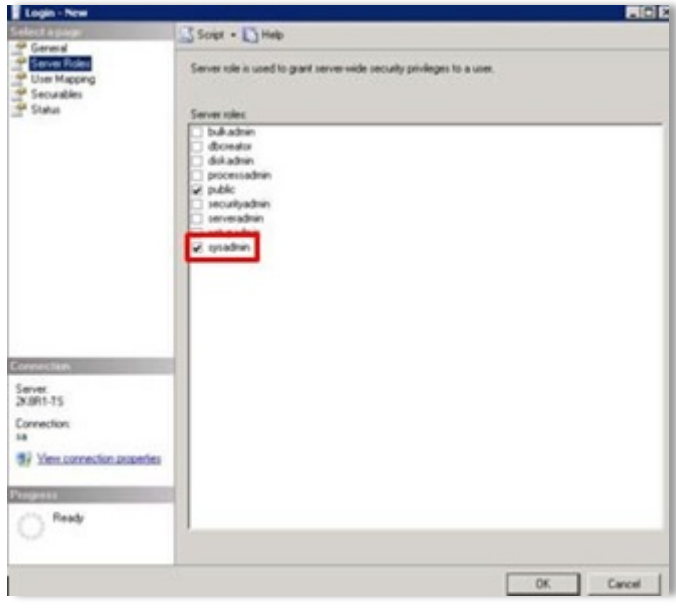
6. In the **Password** and **Confirm Passwords** fields, type *Reportuser*.
7. De-select the **Enforce password policy** checkbox.

Figure (Appendix N) - 3: Login – New dialog box – Enforce password policy checkbox



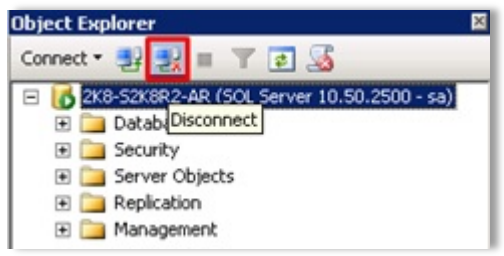
8. On the **Login – New** dialog box, in the left pane, click on **Server Roles**.
9. Select the **sysadmin** check box and click on **OK**.

Figure (Appendix N) - 4: Login – New dialog box



10. In the **Object Explorer** window, click on the **Disconnect** icon.

Figure (Appendix N) - 5: Object Explorer window



11. To connect into SQL Server with login id as *Reportuser*, in the **Object Explorer** window, click on the **Connect** icon.

Figure (Appendix N) - 6: Object Explorer Window (Connect)

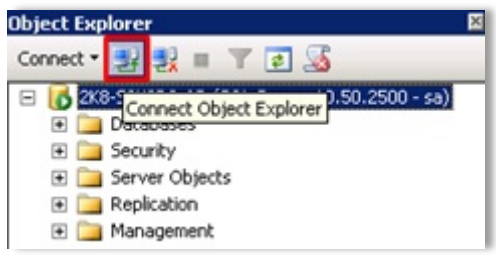
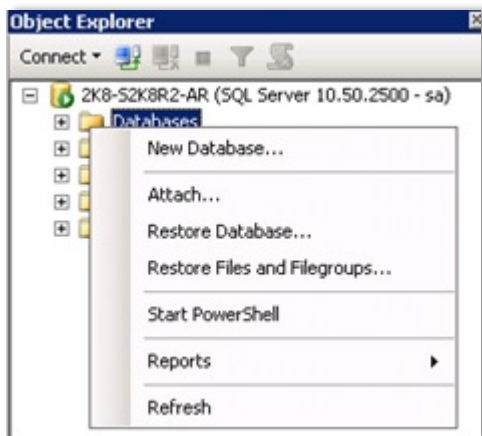


Figure (Appendix N) - 7: Connect to Server dialog box



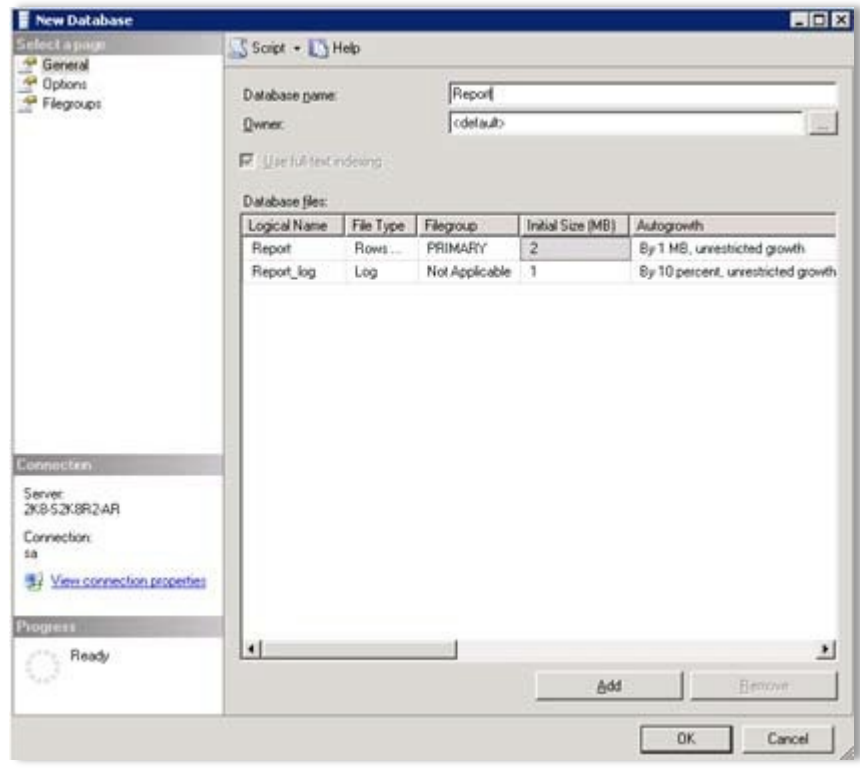
12. In the **Object Explorer** window, right-click on the **Database** folder and select the **New Database...** option.

Figure (Appendix N) - 8: Object Explorer dialog box - New Database..



13. In the **New Database** dialog box, in the **Database Name** field, enter the Database name and click on **OK**.

Figure (Appendix N) - 9: New Database dialog box

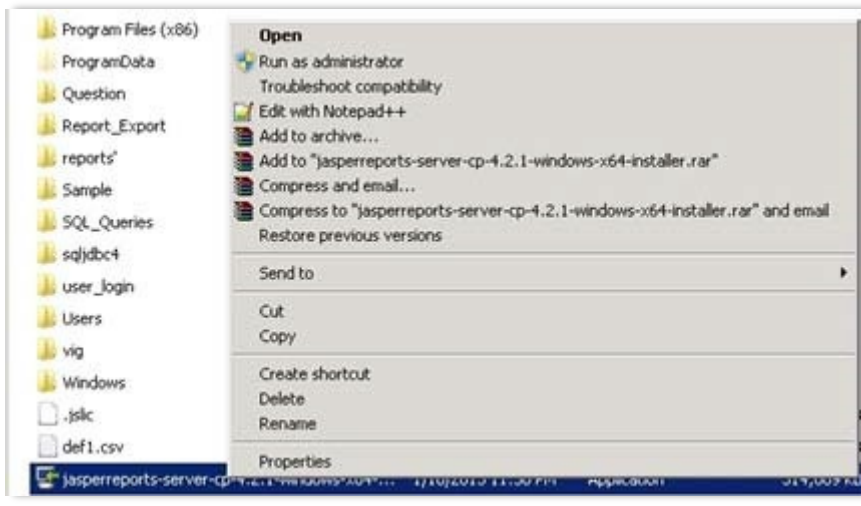


The created database is displayed in the **Object Explorer** window under the **Databases** folder.

JasperServer / iReport Installation

1. If you are on a 64 bit server, click on the file `jasperreports-server-cp-4.2.1-windows-x64-installer.exe`
ELSE, if you are on a 32 bit server, click on `jasperreports-server-cp-4.2.1-windows-x86-installer.exe`
2. Right-click and select **Run As Administrator** to run the Jasper Report exe file, if supported by your OS.
 - Default folder is fine
 - Use bundled Tomcat
 - Use bundled PostgreSQL (the SQL datasource will be added after installation)
 - Tomcat Server Port : 8081
 - Tomcat Shutdown Port : 8006
 - Database Server Port : 5433
 - Install sample reports : No
 - Install iReport : Yes

Figure (Appendix N) - 10: Run as administrator option

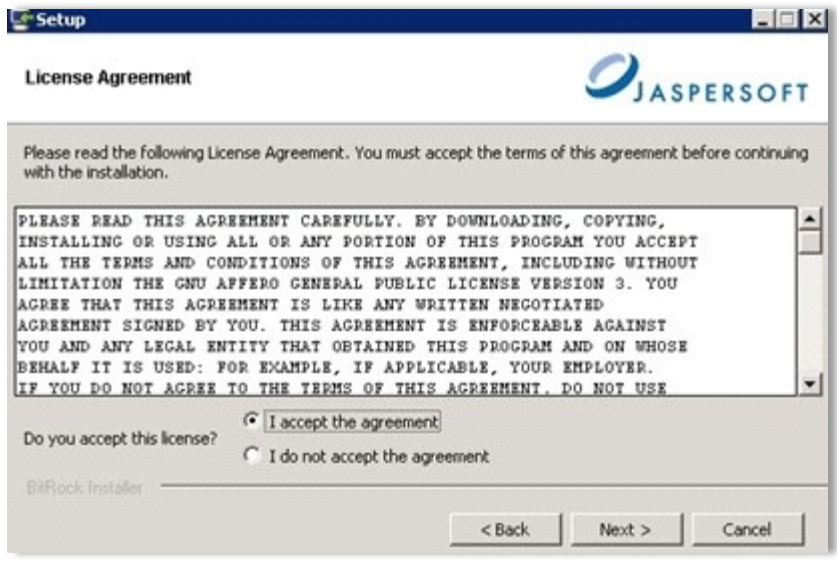


3. In the **Setup** dialog box, click on **Next**.

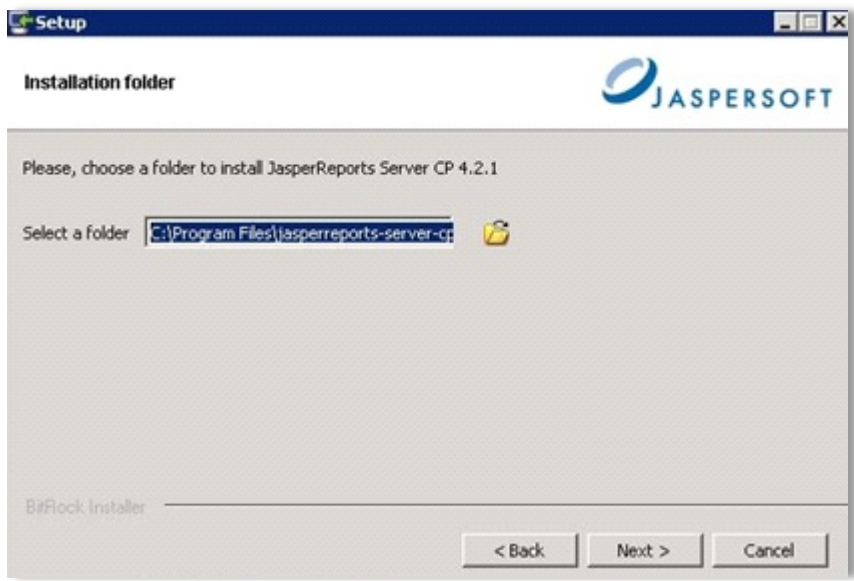
Figure (Appendix N) - 11: Setup dialog box



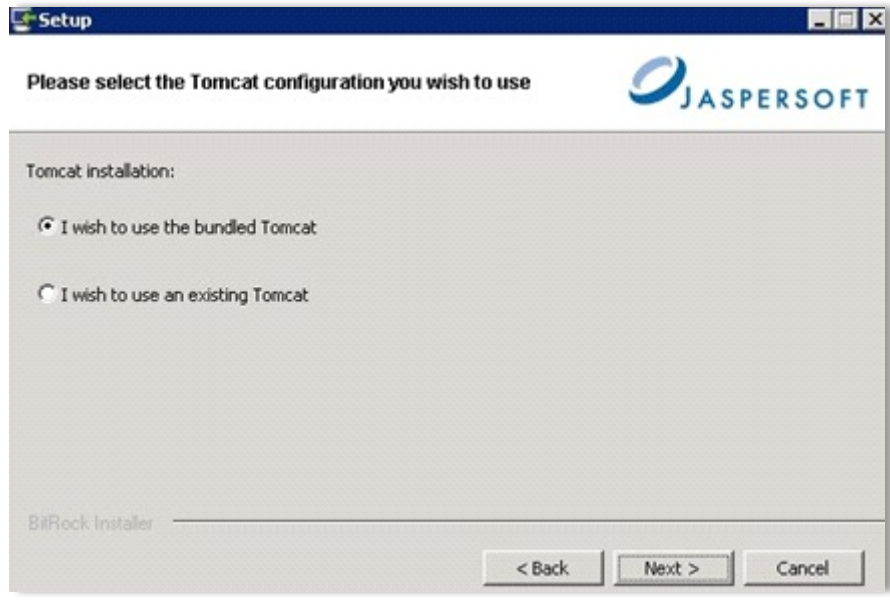
4. In the **Setup License Agreement** dialog box, select **I accept the agreement** option and click on **Next**.

Figure (Appendix N) - 12: License Agreement dialog box

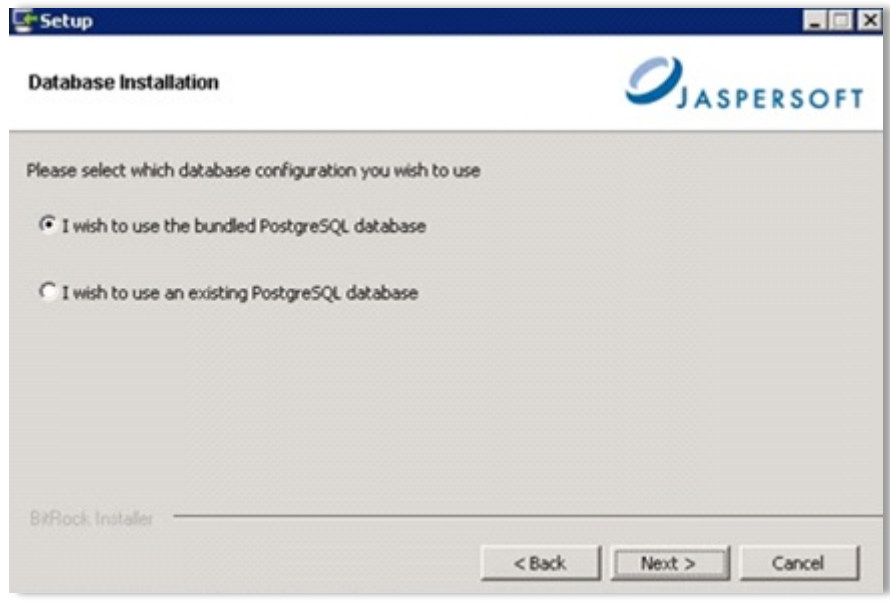
5. In the **Setup Installation Folder** dialog box, select a folder to install JasperReports Server CP 4.2.1 and click on **Next**.

Figure (Appendix N) - 13: Installation Folder dialog box

6. Select **I wish to use the bundled Tomcat** option and click on **Next**.

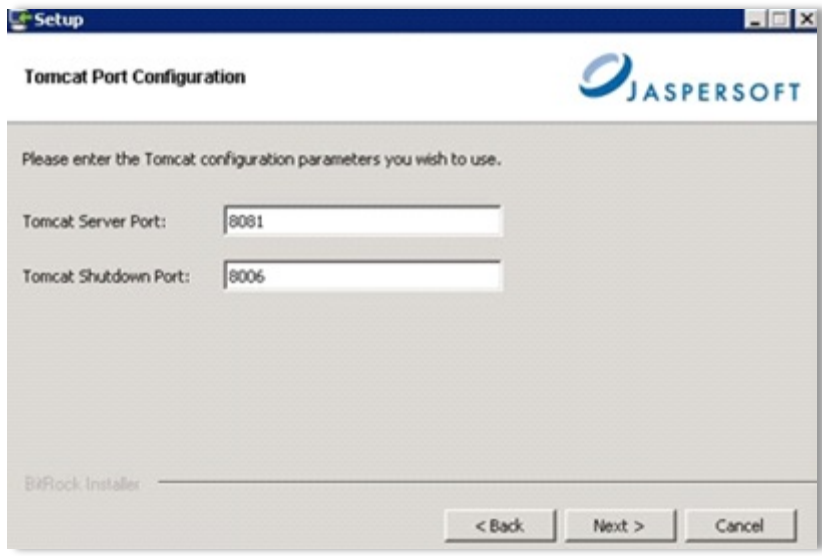
Figure (Appendix N) - 14: Setup dialog box

7. Select **I wish to use the bundled PostgreSQL database** option and click on **Next**.

Figure (Appendix N) - 15: Setup dialog box - Database Installation

8. Enter the Tomcat Port Configuration. Enter **8081** in the **Tomcat Server Port** field and **8006** in **Tomcat Shutdown Port** field. Click on **Next**.

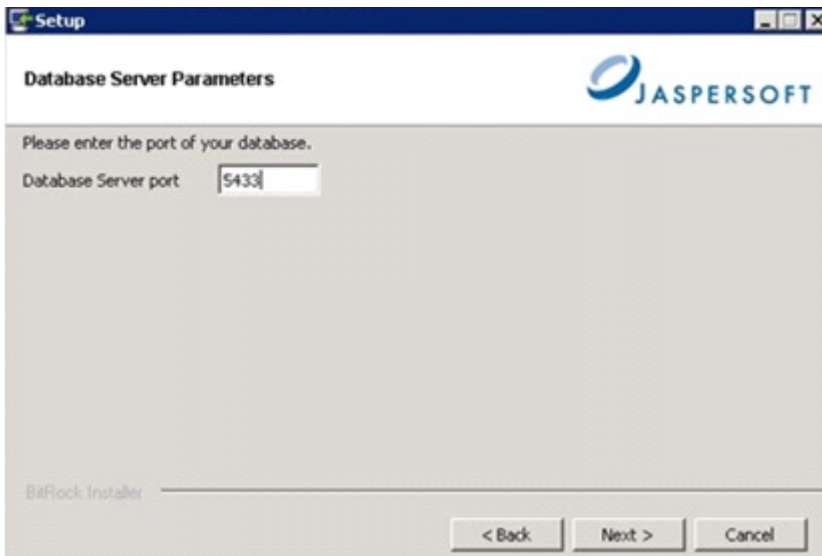
Figure (Appendix N) - 16: Setup dialog box - Tomcat Port Configuration



The screenshot shows a Windows-style dialog box titled "Setup" with a sub-header "Tomcat Port Configuration" and the Jaspersoft logo. The main text reads "Please enter the Tomcat configuration parameters you wish to use." There are two input fields: "Tomcat Server Port:" with the value "8081" and "Tomcat Shutdown Port:" with the value "8006". At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The text "BitRock Installer" is visible in the bottom left corner.

9. In the **Database Server port** field, enter the port of your database as *5433*. Click on **Next**.

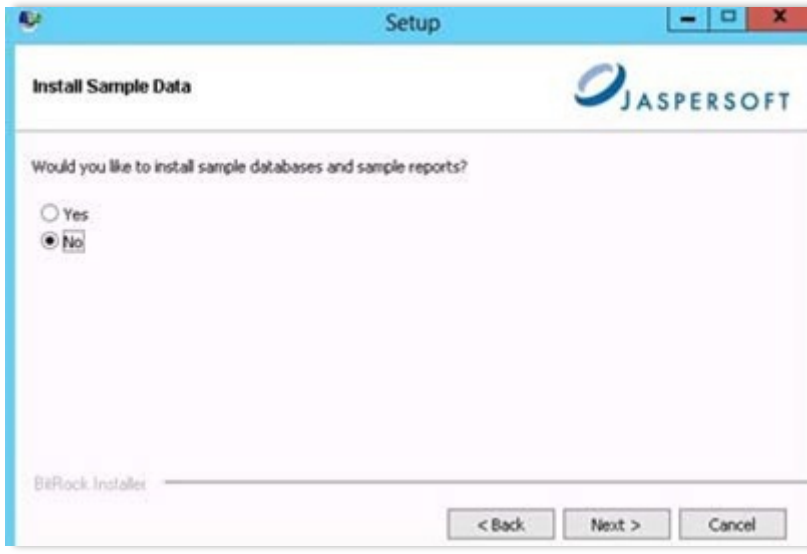
Figure (Appendix N) - 17: Setup dialog box - Database Server Parameters



The screenshot shows a Windows-style dialog box titled "Setup" with a sub-header "Database Server Parameters" and the Jaspersoft logo. The main text reads "Please enter the port of your database." There is one input field labeled "Database Server port" with the value "5433". At the bottom, there are three buttons: "< Back", "Next >", and "Cancel". The text "BitRock Installer" is visible in the bottom left corner.

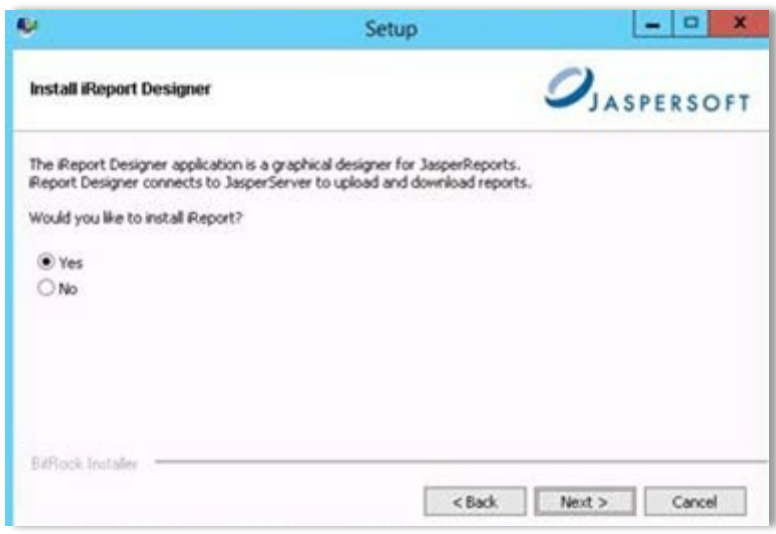
10. In the section **Would you like to install sample databases and sample reports**, click on the **No** radio button. Click on **Next**.

Figure (Appendix N) - 18: Setup dialog box - Install Sample Data



11. In the **Setup – Install iReport Designer** dialog box, select the **Yes** radio button. Click on **Next**.

Figure (Appendix N) - 19: Setup dialog box - Install iReport Designer



12. The progress of iReport installation is displayed in the progress bar.

Figure (Appendix N) - 20: Setup dialog box – Installation progress bar



13. On completion of the Installation process, click on **Finish**.

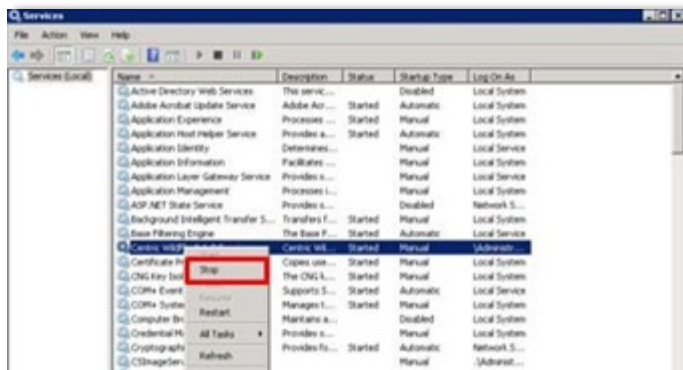
Figure (Appendix N) - 21: Setup dialog box - Completion of the JasperReports Server CP 4.2.1 Setup Wizard



14. Navigate to **Start ▶ Services**.

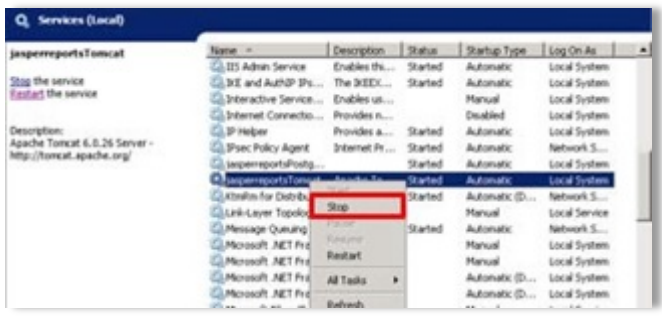
15. Right-click on Centric Wildfly-8.1.0, select **Stop**.

Figure (Appendix N) - 22: Services Window



16. Right-click on **JasperreportsTomcat**, and select **Stop**.

Figure (Appendix N) - 23: Services Window (2)

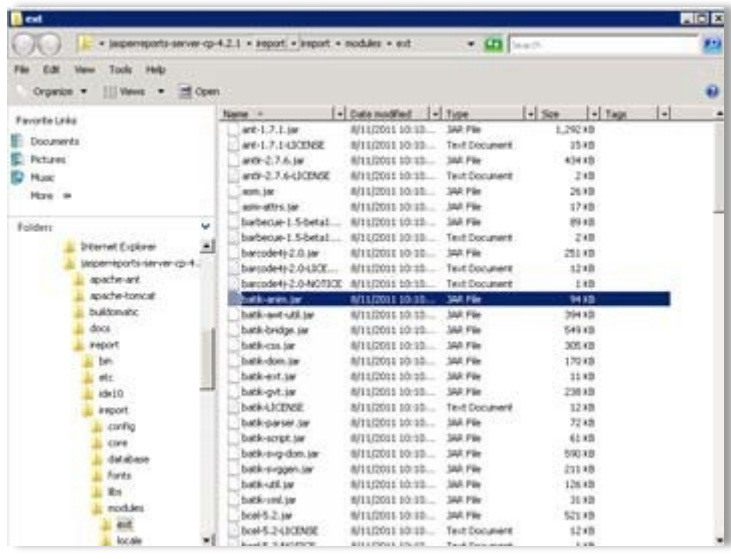


17. Go `C:\Program Files\jasperreports-server-cp-4.2.1\ireport\ireport\modules\ext`

Delete the following .jar files:

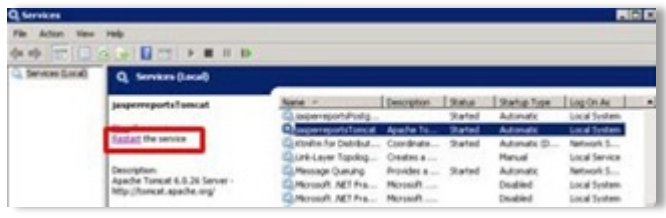
- batik-anim.jar
- batik-awt-util.jar
- batik-bridge.jar
- batik-css.jar
- batik-dom.jar
- batik-ext.jar
- batik-gvt.jar
- batik-LICENSE.txt
- batik-parser.jar
- batik-script.jar
- batik-svg-dom.jar
- batik-svggen.jar
- batik-util.jar
- batik-xml.jar

Figure (Appendix N) - 24: Delete .jar files



18. To restart the previously stopped Services (Wildfly-8.1.0 and JasperreportsTomcat), in the left pane, click on the **Restart** link.

Figure (Appendix N) - 25: Services dialog box - Restart (Wildfly)



Add SQL Datasource Support to JasperServer

1. Go to C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\lib
2. Copy the file sqljdbc4.jar to this directory.



3. Navigate to C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\META-INF\context.xml
4. Add the following Resource parameter before the </Context> tag:

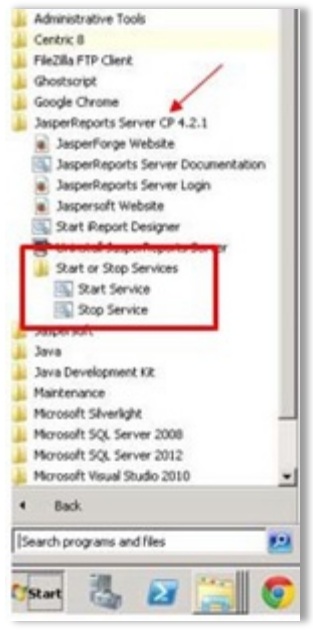

```
<Resource name="jdbc/SQL" auth="Container" type="javax.sql.DataSource"
maxActive="100" maxIdle="30" maxWait="10000"
username="Reportuser" password="Reportuser"
driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver" validationQuery="SELECT 1"
testOnBorrow="true" url="jdbc:sqlserver://localhost:1433;databaseName=Report"/>
```

```

<Resource name="jdbc/foodmart" auth="Container" type="javax.sql.DataSource"
  maxActive="100" maxIdle="30" maxWait="10000"
  username="jasperdb" password="password"
  driverClassName="org.postgresql.Driver"
  validationQuery="SELECT 1"
  testOnBorrow="true"
  url="jdbc:postgresql://localhost:5432/foodmart?useUnicode=true&characterEncoding=utf8"
  <Resource name="jdbc/SQL" auth="Container" type="javax.sql.DataSource"
  maxActive="100" maxIdle="30" maxWait="10000"
  username="Reportuser" password="Reportuser"
  driverClassName="com.microsoft.sqlserver.jdbc.SQLServerDriver"
  validationQuery="SELECT 1"
  testOnBorrow="true" url="jdbc:sqlserver://localhost:1433;databaseName=Report"/>
</Context>

```

5. Navigate to **Services ▶ All Programs ▶ JasperReports Server CP 4.2.1**.
6. Click on **Start or Stop Services**.
7. To stop the service, click on **Stop Service**.
8. To start the service, click on **Start Service**.



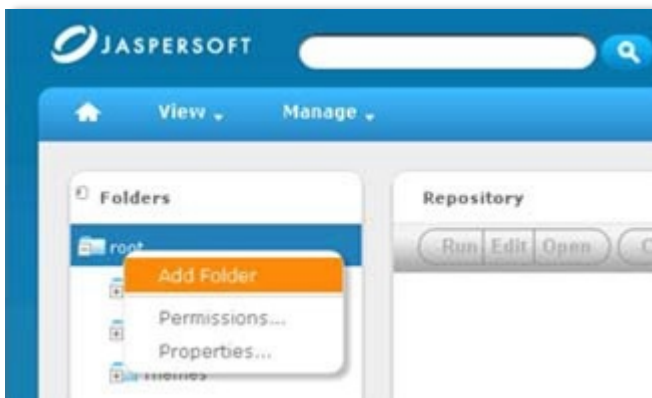
9. Launch Jasper Report client in your browser: <http://localhost:8081/jasperserver/>
 - a. Login as *jasperadmin* with password as *jasperadmin*.

Figure (Appendix N) - 26: Login to Jaspersoft



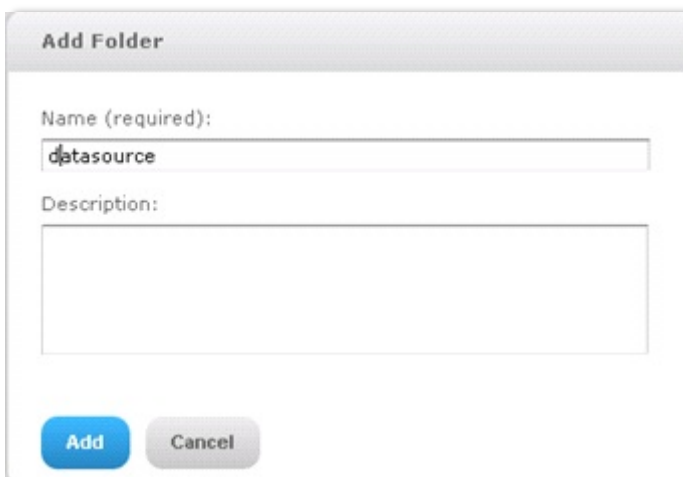
- b. In the **Server Repository** dialog box, in the **Folders** pane, right-click on **Root** folder and select **Add Folder**.

Figure (Appendix N) - 27: Server Repository dialog box

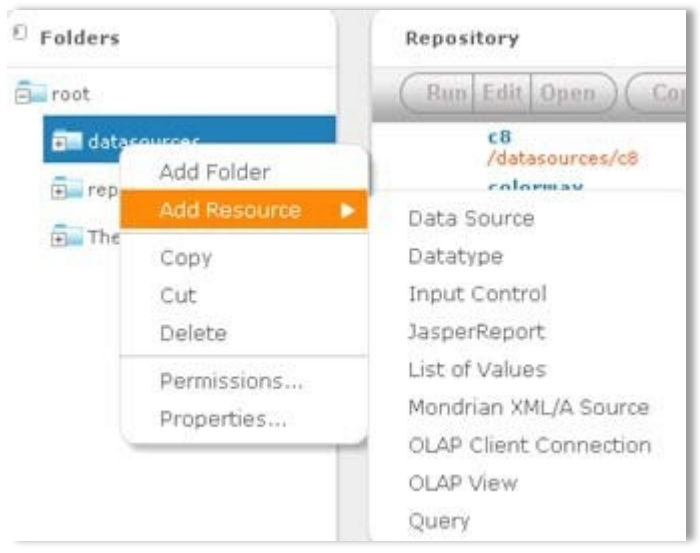


- c. In the **Add Folder** dialog box, in the **Name (required):** text box, type *datasources*.
- d. Click on the **Add** button.

Figure (Appendix N) - 28: Add Folder dialog box



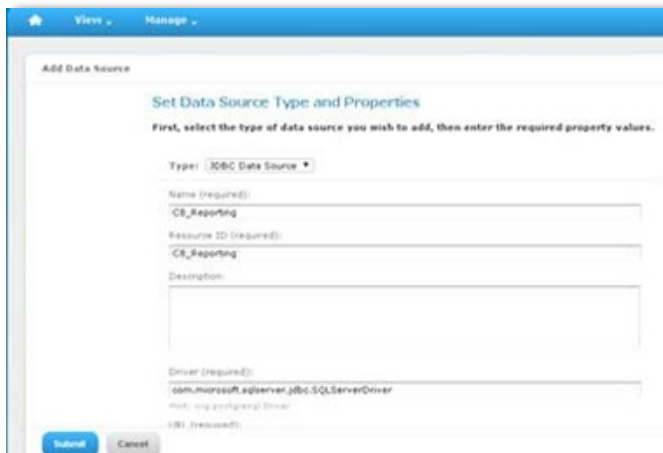
- e. Right-click on **Datasources** and select **Add Resources** ▶ **Data source**.



- f. In the **Add Source** dialog box, enter the following details:

Type : JDBC Data Source
Name (required) : C8_Reporting
Resource ID : C8_Reporting
Description (Optional) : Driver. Com.microsoft.sqlserver.jdbc.SQLServerDriver
URL : jdbc:sqlserver://localhost:1433;databaseName=Report
User Name : Reportuser
Password : Reportuser
Time Zone : Use database setting.
Save Location : /datasources

Figure (Appendix N) - 29: Add Data Source dialog box



- g. To verify the new connection, click on the **Test Connection** button.

Figure (Appendix N) - 30: Test Connection

URL (required):
jdbc:sqlserver://localhost:1433;databaseName=Report
Hint: jdbc:sqlserver://localhost:5432/mysdb

User Name (required):
Reportuser

Password:

Time Zone:
Use database setting.
Hint: Do not change the time zone setting unless you know the database timestamp data is incorrect.

Save Location:
/datasources

Submit Cancel Test Connection Browse...

- h. Click on the **Submit** button.



Similarly, create another folder for reports. To create a reports folder, refer to step c above.

Configuration Setups in iReport

1. From the **Start** menu, select **All Programs**. Click on **iReport 4.1.1**, to launch the **iReport**.

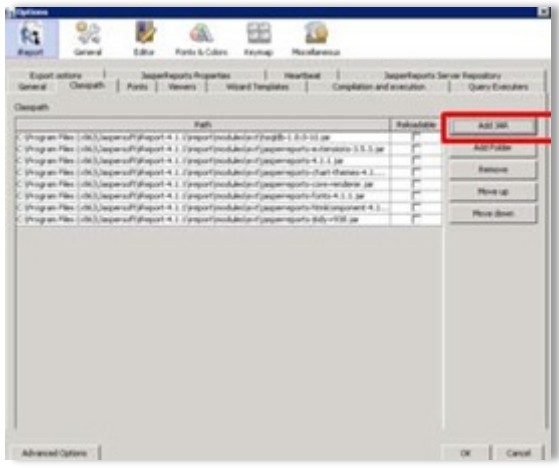


2. Navigate to **Tools** ▶ **Options**.

Figure (Appendix N) - 31: Jasper iReport Designer 4.1.1



- In the **Options** dialog box, select the **Classpath** tab. Click on the **Add JAR** button on the right. Navigate to the **SQL Server jar** file and select it. Click on **OK**.



- Click on the **Report Datasources** icon.



- In the **Connections/Datasources** dialog box, click on **New**.

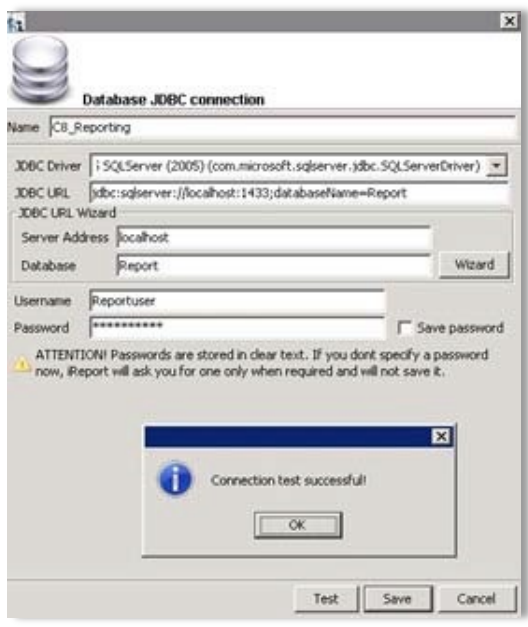
Figure (Appendix N) - 32: Connections/Datasources dialog box



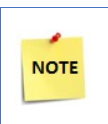
- Select the **Database JDBC connection** option and click on **Next**.



7. To check if the connection is successful, enter the details and click on **Test**.
8. The **Connection test successful** message box is displayed. Click on **OK**.
9. Click on **Save**.



10. In the **Connections/ Datasource** dialog box, click on **Close**.



The newly created Data source is displayed in the Home Page.

Wildfly8 Jasper Reports Setup Instructions

1. Open Edit module.xml (path: %Wildfly8

Installation%\modules\com\centricsoftware\pi\main\module.xml)

- In between the <resources> tags, add:
 - <resource-root path="com-jaspersoft-ireport.jar"/>
 - <resource-root path="com-jaspersoft-ireport-jasperserver.jar"/>
 - <resource-root path="commons-beanutils-1.8.0.jar"/>
 - <resource-root path="commons-digester-1.7.jar"/>
 - <resource-root path="commons-logging-1.0.4.jar"/>
 - <resource-root path="itext-2.1.7.jar"/>
 - <resource-root path="jasperreports-4.1.2.3.jar"/>
 - <resource-root path="jasperserver-api-common-4.2.0.jar"/>
 - <resource-root path="jasperserver-api-common-impl-4.2.0.jar"/>
 - <resource-root path="jasperserver-common-ws-4.2.0.jar"/>
 - <resource-root path="jcommon-1.0.15.jar"/>
 - <resource-root path="jfreechart-1.0.12.jar"/>
 - <resource-root path="poi-3.6.jar"/>

2. Copy the following jar files to C8 modules directory (path: %Wildfly8

Installation%\modules\com\centricsoftware\pi\main) :

- C:\Program Files\jasperreports-server-cp-4.2.1\ireport\ireport\modules\com-jaspersoft-ireport.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\ireport\ireport\modules\com-jaspersoft-ireport-jasperserver.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\commons-beanutils-1.8.0.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\commons-digester-1.7.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\commons-logging-1.0.4.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\itext-2.1.7.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\jasperreports-4.1.2.3.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\jasperserver-api-common-4.2.0.jar

- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\jasperserver-api-common-impl-4.2.0.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\jasperserver-common-ws-4.2.0.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\jcommon-1.0.15.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\jfreechart-1.0.12.jar
- C:\Program Files\jasperreports-server-cp-4.2.1\apache-tomcat\webapps\jasperserver\WEB-INF\lib\poi-3.6.jar

3. Restart the Centric Wildfly service to complete the changes



With the given changes there are no additions made to C8\wildfly-8.1.0\bin\standalone.conf.bat as there were previously

Excel Export Format

The following settings are available for Excel export format:

External viewer

An absolute path to the executable to use for Excel preview.

Remove empty space between rows

Flag that indicates whether the empty space should be suppressed.

White page background

Flag that indicates whether white page background should be used in the export generated document.

Auto-detect cell type

Flag that indicates whether excel cell type should auto-detect and set in the generated Excel document.

Ignore pagination

Flag that indicates that the report should be printed on a single page. If true, the height of the page is increased automatically to fit the whole document.

0. CONFIGURE HTTPS

Pre-requisites

1. SSL Certificate should be in the .pfx format.



Adobe PLM Connect, requires an SSL certificate issued from only one of the three Certificate Authorities namely GlobalSign, Verisign, and Thawte. Adobe does NOT support any other Certificate Authority, such as GoDaddy.

If you are using Adobe PLM Connect with Centric, you MUST have a certificate issued from one of these three Certificate Authorities (GlobalSign, Verisign, and Thawte).

2. Installation Password for the SSL Certificate .pfx file is required. The password is generated at the time SSL Certificate is created by the Certificate Authority.
3. Download the URL Rewrite 2.x from Microsoft Download Site
(<http://www.iis.net/downloads/microsoft/url-rewrite>)
4. Verify that all Firewalls are set to allow traffic on the https port (443)



Check the local windows server for Firewall settings; whether it is built-in Microsoft Windows Firewall or possibly a third-party software Firewall solution.

If you have any hardware firewalls, ensure that https port (443) traffic is allowed through to the Windows Server. These firewall settings may require actions by the Customers IT Support and Network Administrators. Ensure that these settings are made prior to attempting installation of the certificate.

Install URL Rewrite Extension

Once you have the SSL Certificate in .pfx format and the Certificate password, install the URL Rewrite module.

► How to install the URL Rewrite module

1. Browse to the URL <http://www.iis.net/downloads/microsoft/url-rewrite> and click on **Install this extension** button.

Figure (Appendix O) - 1: URL Rewrite module URL details



2. To install the Web Platform Installer, click on the **Install Now** button.

Figure (Appendix O) - 2: Web Platform Installer dialog box



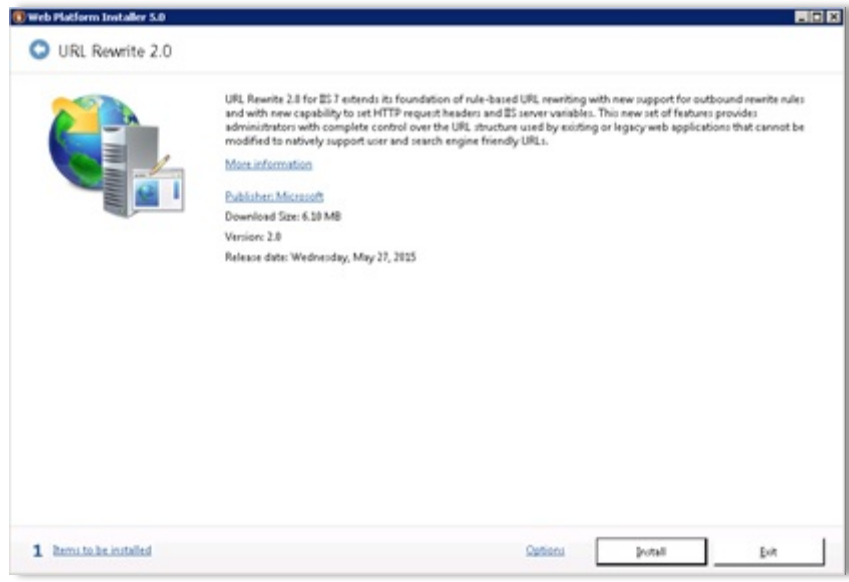
3. To install the .exe file, in the **Open File ▶ Security Warning** dialog box, click on **Run**.

Figure (Appendix O) - 3: Open File - Security Warning dialog box



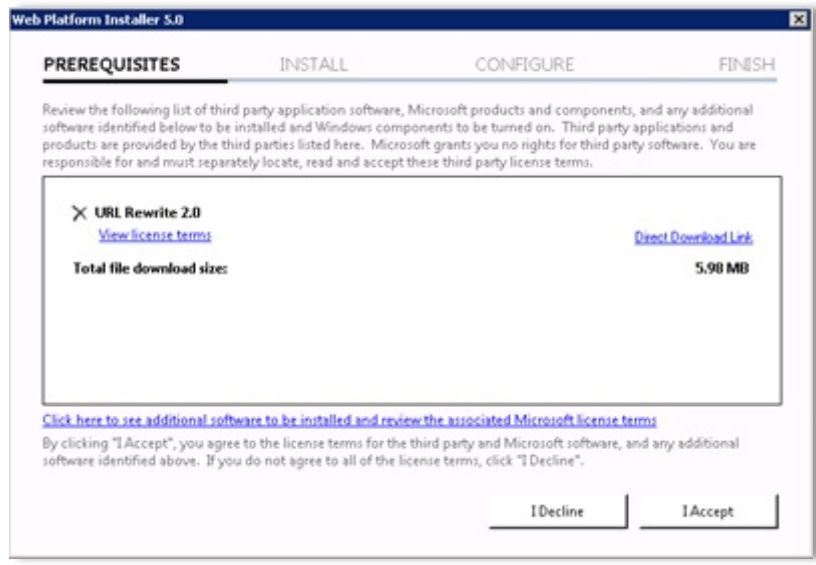
4. To begin the Installation process, in the **Web Platform Installer 5.0** dialog box, click on **Install**.

Figure (Appendix O) - 4: Web Platform Installer 5.0 dialog box



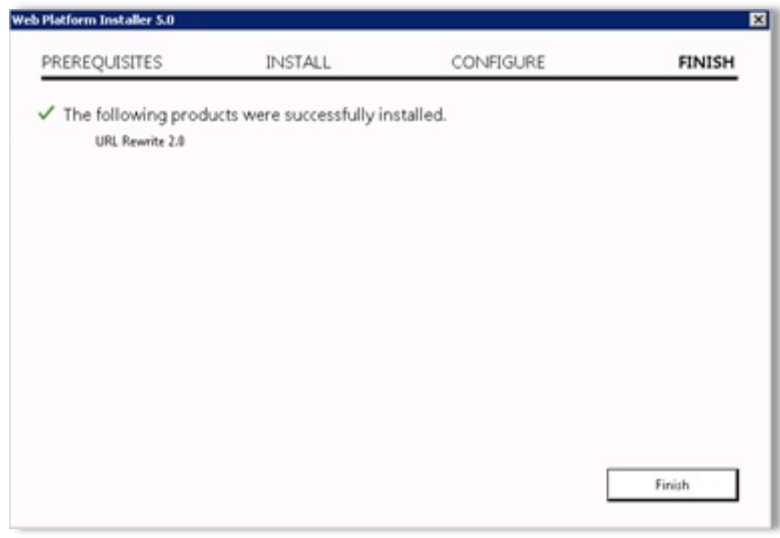
5. To accept the License terms and conditions, Click on **I Accept**.

Figure (Appendix O) - 5: Web Platform Installer 5.0 dialog box (2)



6. To complete the installation process, click on **Finish**.

Figure (Appendix O) - 6: Web Platform Installer 5.0 dialog box (3)



7. To exit from the application, click on **Exit**.

Import the SSL Certificate

1. From the **Start** menu, open **Internet Information Services (IIS) Manager**.

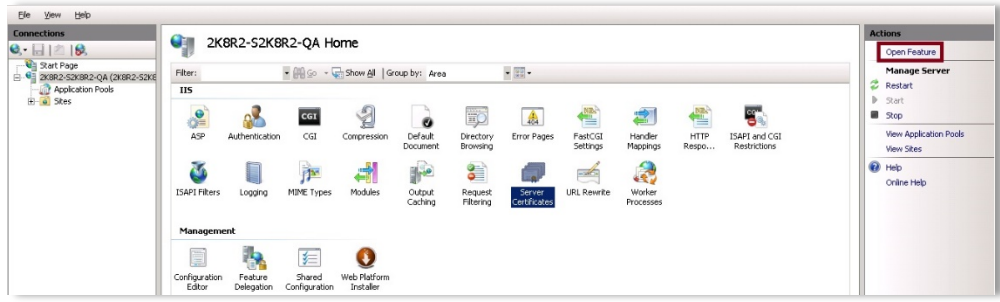
Figure (Appendix O) - 7: Start Menu



2. Click on a server name in the left pane.

3. In the middle pane, under the **IIS** section, click on **Server Certificates**.
4. In the right pane, click on **Open Feature**.

Figure (Appendix O) - 8: Connections Window



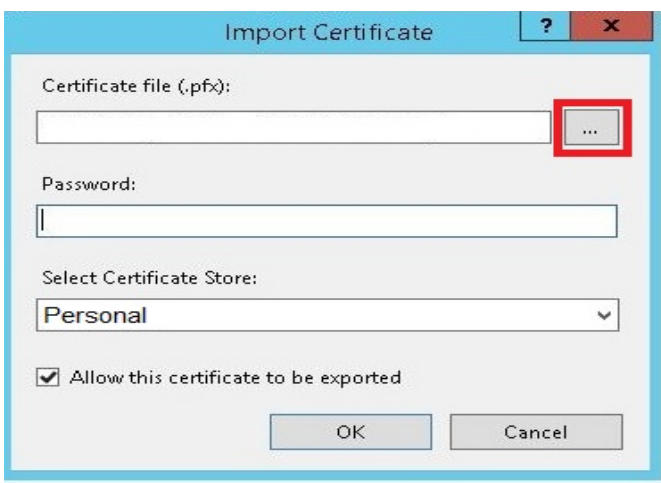
5. The middle pane displays **Server Certificates...**
6. In the right pane, under **Actions**, click on **Import...**

Figure (Appendix O) - 9: Connections Window - Actions pane



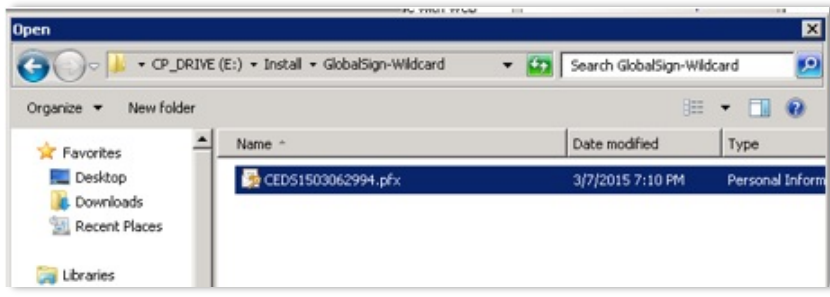
7. In the **Import Certificate** dialog box, click on the Browse button.
8. Browse to the location where you have saved the SSL Certificate in .pfx format.

Figure (Appendix O) - 10: Import Certificate dialog box



9. Select the required Certificate name and click on the **Open** button.

Figure (Appendix O) - 11: Select Certificate



10. The selected certificate is displayed in the **Certificate file (.pfx)** field in the **Import Certificate** dialog box.

11. In the **Password:** text box, type the password for the SSL Certificate.



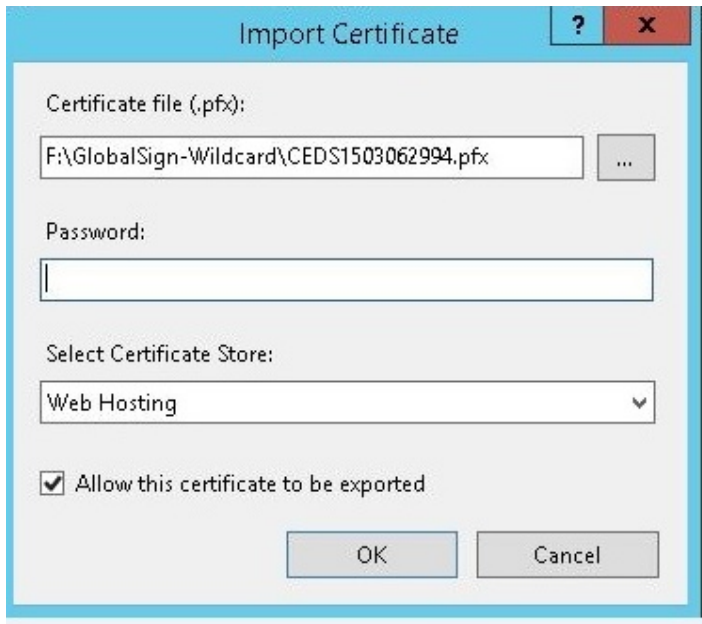
The SSL Certificate password is generated during the SSL Certificate creation and is provided by the Certificate Authority.

12. From the **Select certificate store** drop down box, choose **Web Hosting** and click on **OK**.



In the **Select Certificate Store** section, by default **Personal** will be selected.

Figure (Appendix O) - 12: Import Certificate dialog box (2)



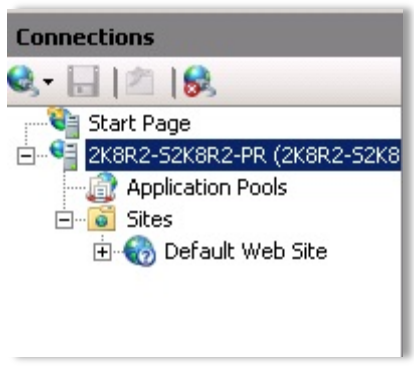
13. Verify that the Imported Certificate appears in the middle frame of the **Server Certificates** window.

Figure (Appendix O) - 13: Server Certificates Window



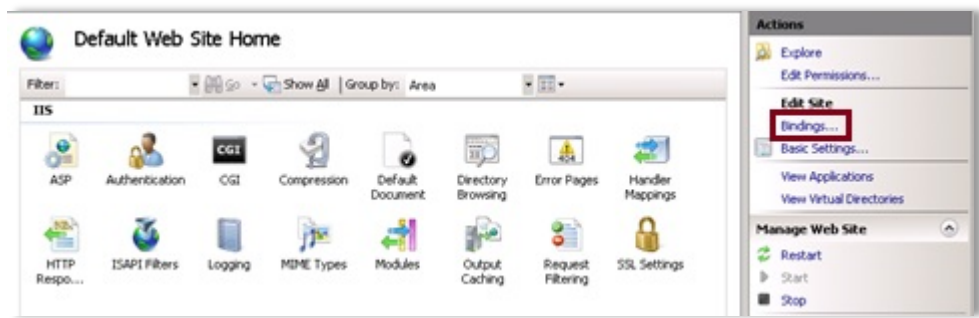
14. In the left frame of the **Internet Information (IIS) Manager** Window, drill-down into the **Sites** folder and click on **Default Web Site**.

Figure (Appendix O) - 14: Connections Window



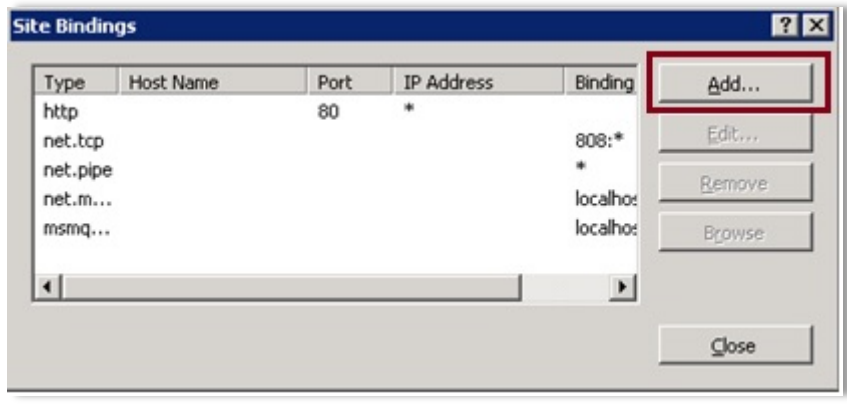
15. In the right frame, under **Actions**, click on the **Bindings...** menu item.

Figure (Appendix O) - 15: Actions section - Bindings



16. In the **Site Bindings** dialog box, click on the **Add...** button.

Figure (Appendix O) - 16: Site Bindings dialog box

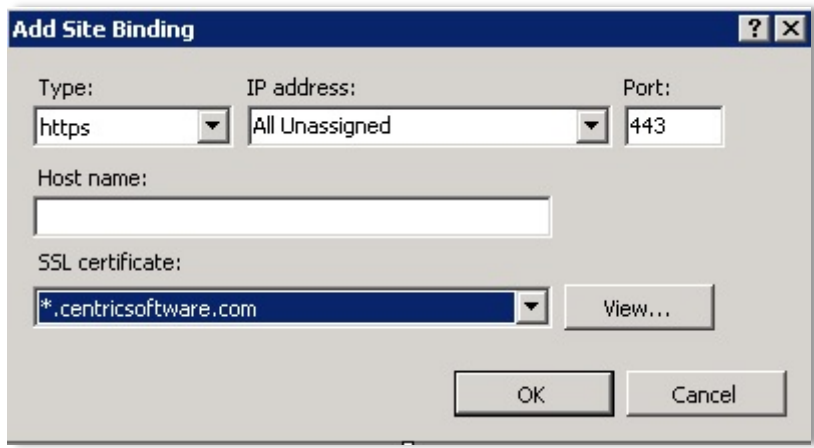


17. In the **Add Site Binding** dialog box, add the following:

- From the **Type:** drop-down list, select **https**
- From the **IP address:** drop-down list, select **All Unassigned** unless the customer identifies a specific IP address.
- In the **Port:** text box, type *443*
- The **Host name:** field is either greyed out or empty.
- From the **SSL certificate:** drop-down list, select the certificate that you just imported.

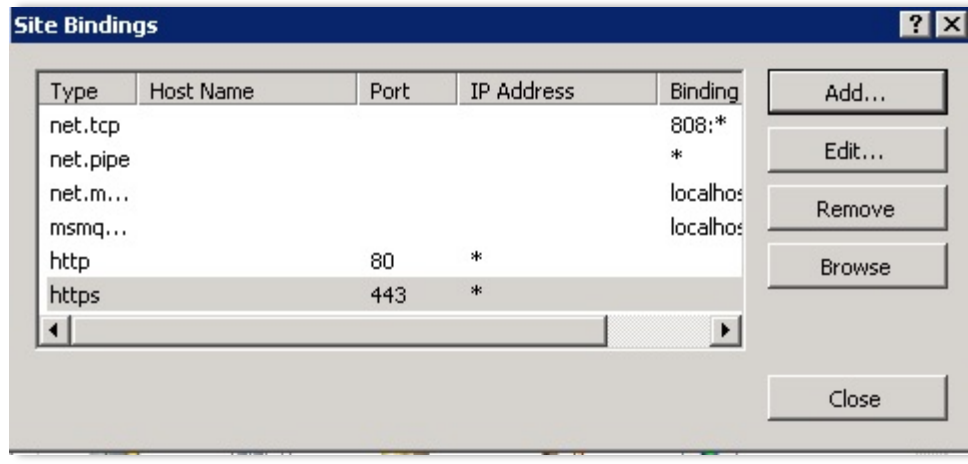
18. To accept the settings, click on **OK**.

Figure (Appendix O) - 17: Add Site Binding dialog box



19. In the **Site Bindings** dialog box, in the **Site Bindings** table, verify that the **Type** *https* with **Port** *443*.

Figure (Appendix O) - 18: Site Bindings dialog box - Site Bindings table



20. To complete the Certificate configuration, click on the **Close** button.



The **URL Rewrite** icon will now be displayed in the **Internet Information Services (IIS) Manager Window** in the **Default Web Site Home** pane.



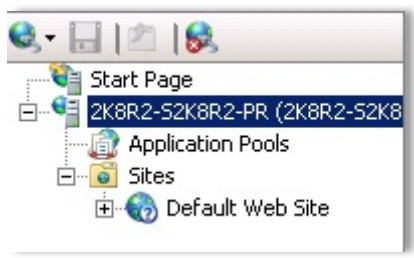
Make sure **SSL certificate Server URL** is added as trusted site to IE internet options dialog

Configure Automatic HTTP to HTTPS rewrite

1. Open **Internet Information Services (IIS) Manager**.

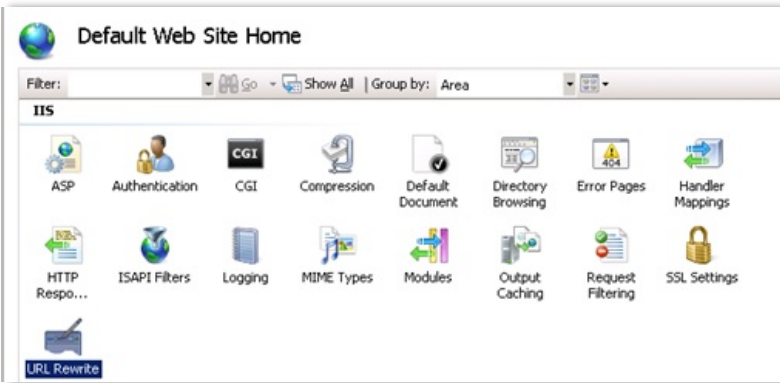
Figure (Appendix O) - 19: Start menu

2. In the left frame, drill-down the **Sites** folder and click on the **Default Web Site**.

Figure (Appendix O) - 20: Sites folder

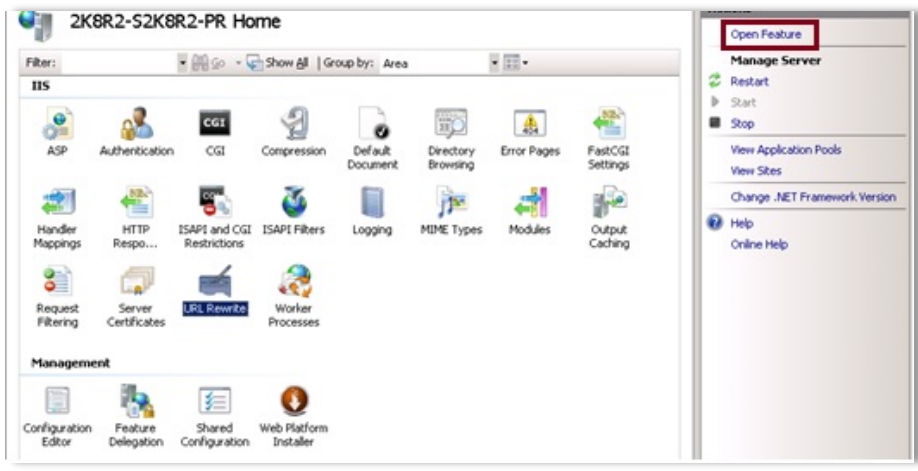
3. In the **IIS** section, select **URL Rewrite**.

Figure (Appendix O) - 21: IIS section - URL Rewrite



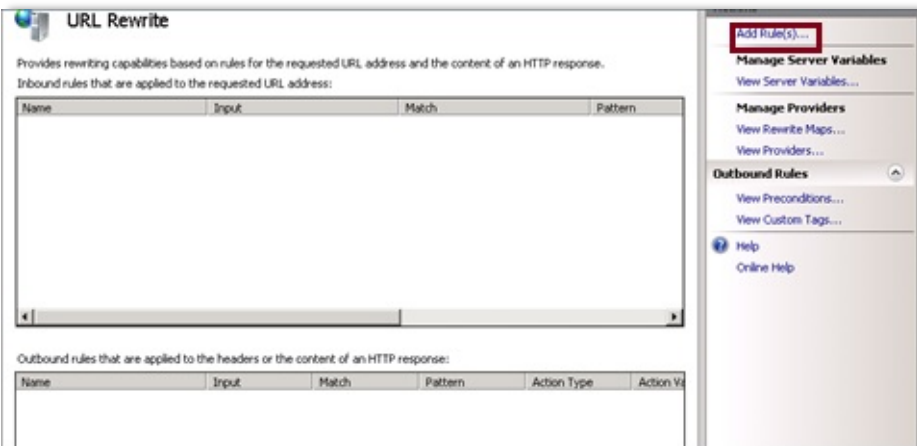
4. In the right-hand pane, under **Actions** section, click on **Open Feature**.

Figure (Appendix O) - 22: IIS - Actions section



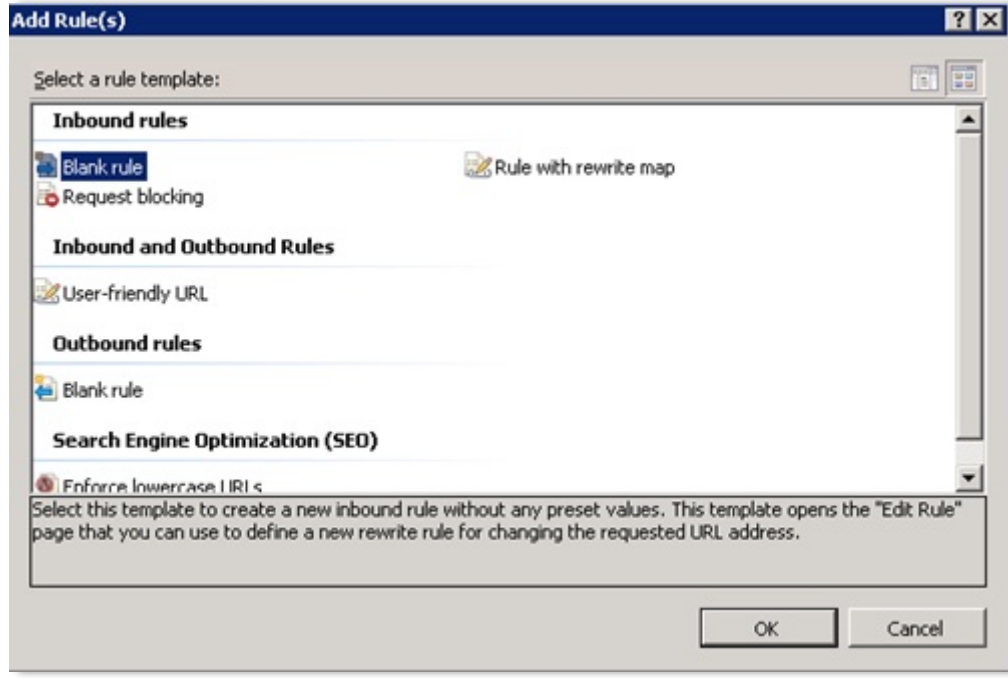
5. The center pane displays the **URL Rewrite** details.
6. In the right pane, in the **Actions** section, click on **Add Rule(s)**

Figure (Appendix O) - 23: URL Rewrite details window



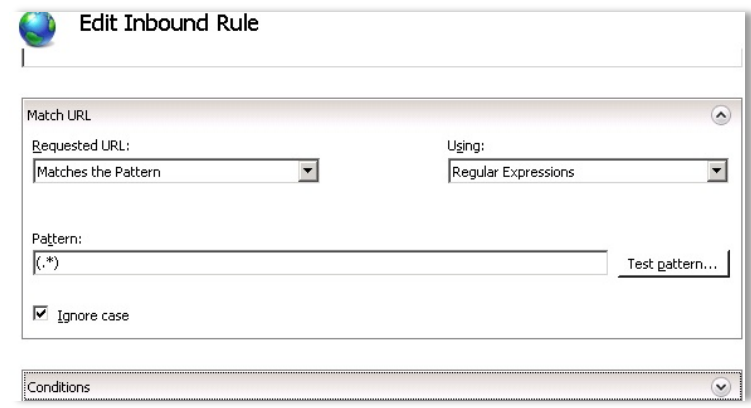
7. The **Add Rule(s)** dialog box is displayed.
8. In the **Inbound Rules** section, click on **Blank Rule** and then click on the **OK** button.

Figure (Appendix O) - 24: Add Rule(s) dialog box



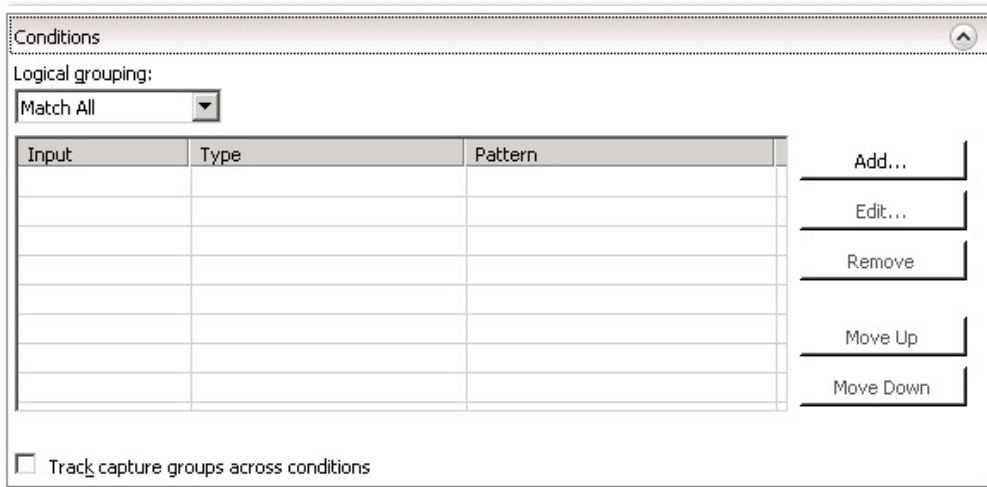
9. In the **Edit Inbound Rule** dialog box, add the following:
 - In the **Name:** text box, enter a descriptive name, such as *Redirect http to https*
 - In the **Match URL** frame, from the **Requested URL:** drop-down list, select *Matches the Pattern*.
 - From the **Using:** drop-down list, select *Regular Expressions*.
 - In the **Pattern:** to text box, type *(.*)*
 - The **Ignore case** checkbox is selected by default.

Figure (Appendix O) - 25: Edit Inbound Rule dialog box



10. In the **Conditions** frame, from the **Logical Grouping:** drop-down list, select **Match All**.

Figure (Appendix O) - 26: Conditions Window

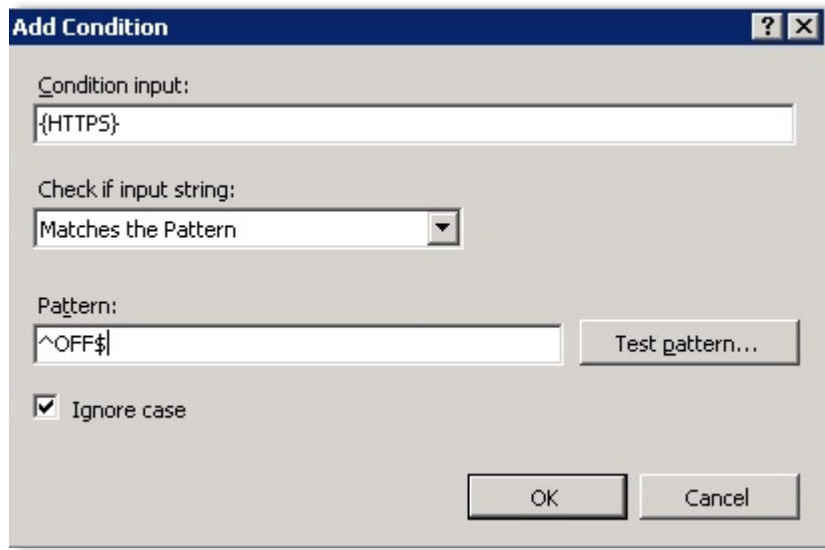


11. In the **Add Conditions** dialog box, add the following:

- In the **Condition input:** dialog box, type `{HTTPS}`
- From the **Check if input string:**, select *Matches the Pattern*
- In the **Pattern:** field, type `^OFF$`
- Verify that the **Ignore case** checkbox is selected.

12. Click on the **OK** button.

Figure (Appendix O) - 27: Add Condition dialog box



13. In the **Edit Inbound Rule** dialog box, add the following:

- In the **Action** frame, from the **Action type:** drop-down list, select **Redirect**
- In the **Action Properties** section,

- In the **Redirect URL**: type `https://{HTTP_HOST}/{R:1}`
 - Verify that the **Append query string** checkbox is selected.
 - From the **Redirect type**: drop-down list, select *Permanent (301)*.
14. In the right pane, in the **Actions** sections,
- Click on **Apply**.
 - Click on **Back to Rules**.

Figure (Appendix O) - 28: Actions section

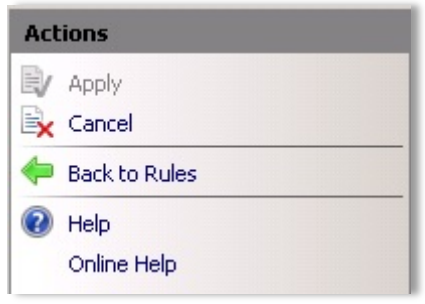
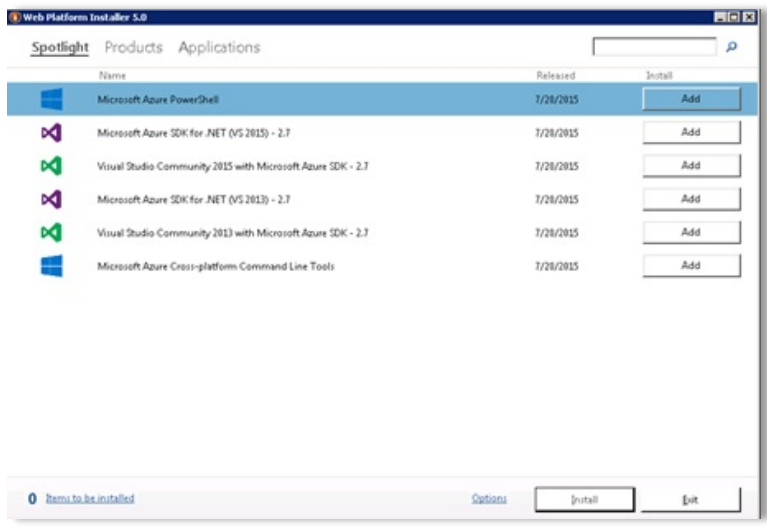


Figure (Appendix O) - 29: Web Platform Installer Window



Modify Centric 8 configuration files to function properly using the https protocol



'xxxx' denoted in the configuration lines below must be changed to reflect the actual Customer Name.

1. Edit `standalone-pi-mssql.xml` and change the following two configuration lines,
 - `com.centricsoftware.AppServer.HomeURL = http://XXXX/WebAccess/home.html`
 Change as follows:

- `com.centricsoftware.AppServer.HomeURL=`
`https://xxxx.centricsoftware.com/WebAccess/home.html`

`com.centricsoftware.AppServer.HomeExternalURL = http://XXXX/WebAccess/home.html`

Change as follows:

`com.centricsoftware.AppServer.HomeExternalURL=https://xxxx.centricsoftware.com/WebAccess/home.html`

2. Edit `PDFService.cfg` and change the following two configuration lines:

- `Service Name=XXXX`

Change as follows:

`Service Name=xxxx.centricsoftware.com`

- `Server URL=http://XXXX/csi-requesthandler/RequestHandler`

Change as follows:

`Server URL=https://xxxx.centricsoftware.com/csi-requesthandler/RequestHandler`



Failure to make these changes will result in PDF generation failure, especially when using Internet Explorer to generate PDF files.

3. Edit `ImageService.cfg` and change the following two configuration lines:

- `Service Name=XXXX`

Change as follows:

`Service Name=xxxx.centricsoftware.com`

- `Server URL=http://XXXX/csi-requesthandler/RequestHandler`

Change as follows:

`Server URL=https://xxxx.centricsoftware.com/csi-requesthandler/RequestHandler`



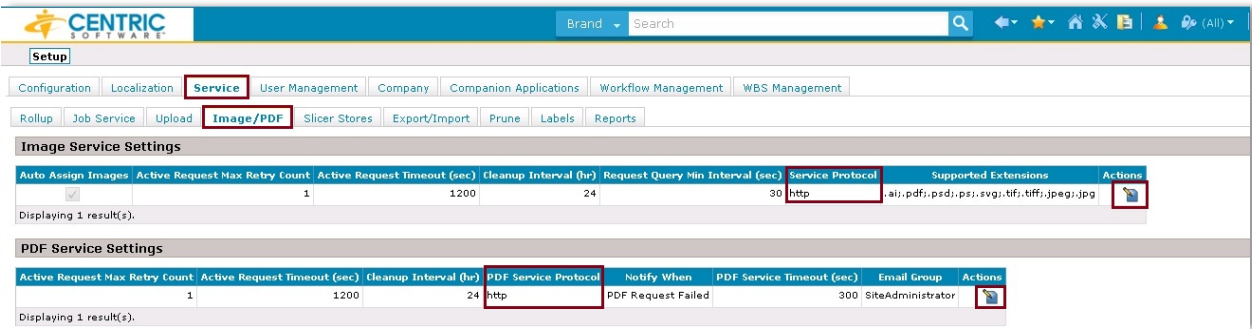
Failure to make these changes will result in Image generation failure.

Change PDF and Image Service Protocol to HTTPS

Do the following changes to PDF and Image Service Protocol in the Centric Software:

1. Navigate to **Service** ▶ **Image/PDF** tab.
2. In the **Image Service Settings** and **PDF Service Settings** sections, click on **Edit** icon from the **Actions** column

Figure (Appendix O) - 30: Image/PDF Service Protocol



- 3. In the Edit dialog box, from the Service Protocol (for Image Service)/PDF Service Protocol (for PDF Service) drop-down menu choose https and click on Save

Figure (Appendix O) - 31: Image Service Protocol Edit window

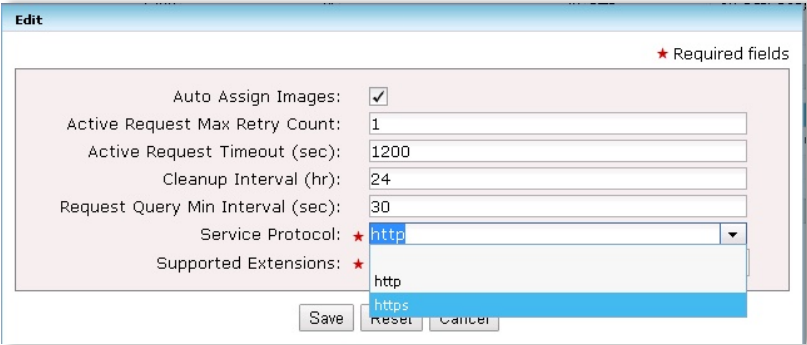
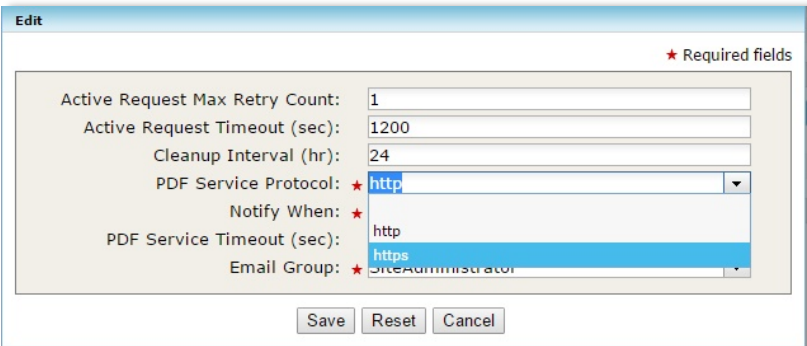


Figure (Appendix O) - 32: PDF Service Protocol Edit window



Activate changes

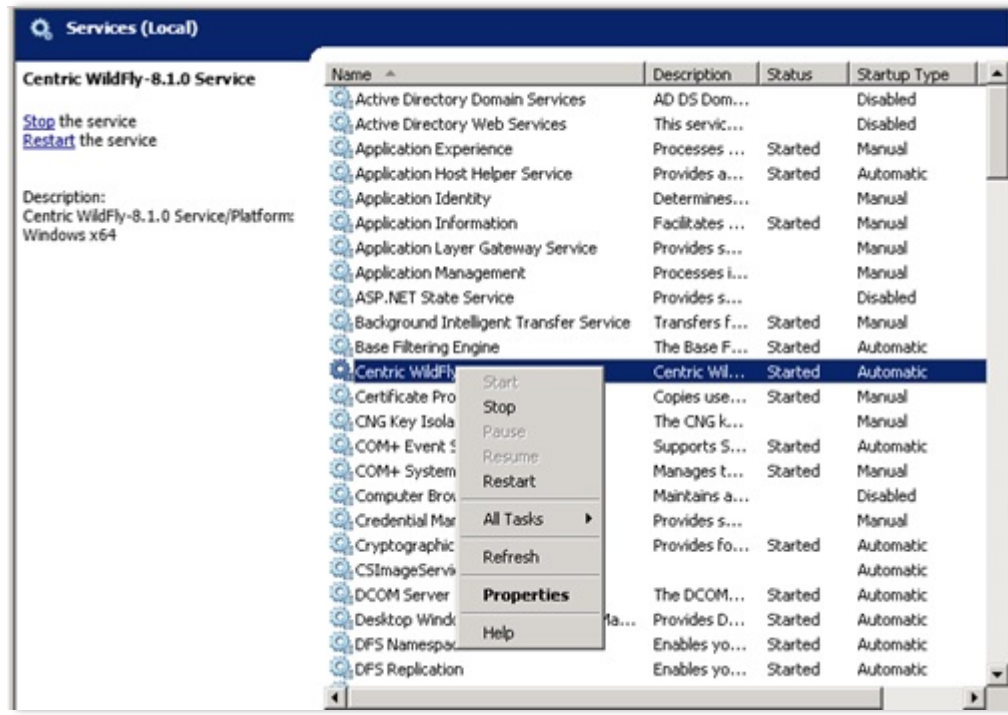
- 1. Navigate to **Start ▶ Control Panel**.
- 2. Click on **Administrative Tools**.
- 3. Click on **Services**.

Figure (Appendix O) - 33: Start Menu - Services

Name	Date modified	Type	Size
ADSI Edit	4/9/2015 1:09 AM	Shortcut	2 KB
Component Services	7/13/2009 6:58 PM	Shortcut	2 KB
Computer Management	7/13/2009 6:57 PM	Shortcut	2 KB
Data Sources (ODBC)	7/13/2009 6:57 PM	Shortcut	2 KB
Event Viewer	7/13/2009 6:58 PM	Shortcut	2 KB
Internet Information Services (IIS) 6.0 Mana...	7/5/2012 8:44 AM	Shortcut	2 KB
Internet Information Services (IIS) Manager	7/5/2012 8:44 AM	Shortcut	2 KB
iSCSI Initiator	7/13/2009 6:57 PM	Shortcut	2 KB
Local Security Policy	7/13/2009 6:58 PM	Shortcut	2 KB
Performance Monitor	7/13/2009 6:57 PM	Shortcut	2 KB
Security Configuration Wizard	7/13/2009 6:58 PM	Shortcut	2 KB
Server Manager	7/13/2009 6:58 PM	Shortcut	2 KB
Services	7/13/2009 6:57 PM	Shortcut	2 KB
Share and Storage Management	7/13/2009 6:58 PM	Shortcut	2 KB

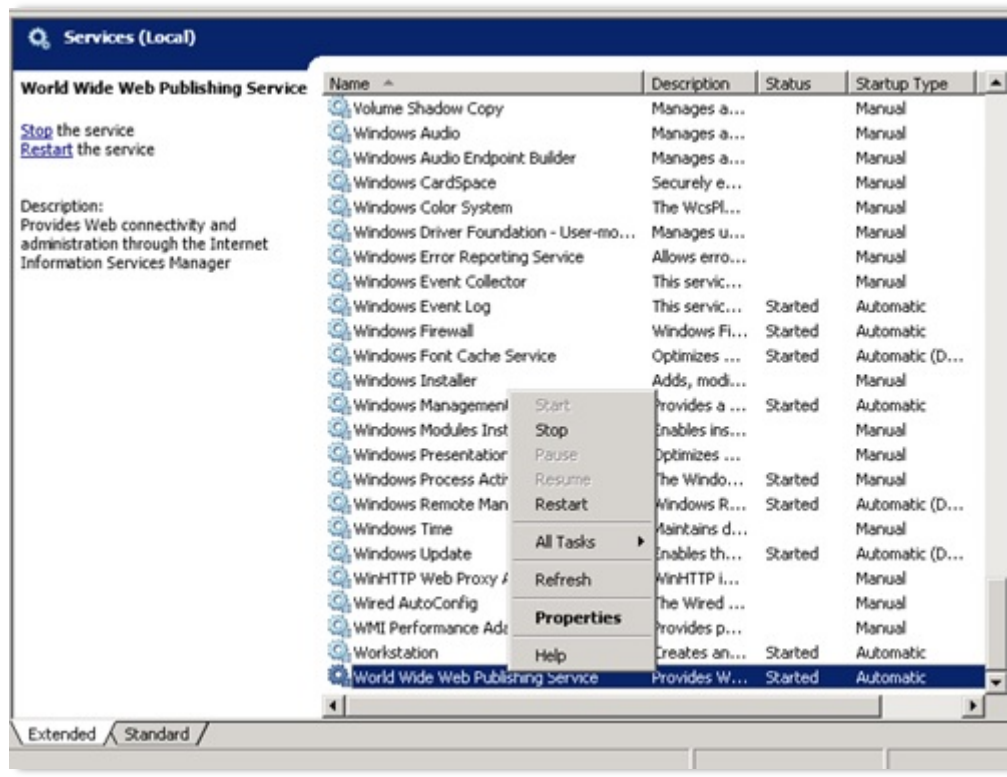
4. In the **Name** column, locate the **Centric WildFly-8.1.0 Service**.
5. Right-click on this service and choose the **Restart** option.

Figure (Appendix O) - 34: Services Window - Wildfly Restart option



6. View the `pi_centric.log` file. When it indicates Centric 8 has successfully started, in the **Name** column, locate the World Wide Web Publishing Service.
7. Right-click on this service and select the **Restart** option.

Figure (Appendix O) - 35: Services Window - WWW Publishing Service Restart option



Verify that you can access the Centric 8 application

1. The following URL will display the Centric 8 login page:

<https://xxxx.centricsoftware.com/webaccess>

2. The following URL will re-direct you to <https://xxxx.centricsoftware.com/webaccess> and display the Centric 8 login page:

<http://xxxx.centricsoftware.com/webaccess>

3. The following two URLs will display an error message – **This is no longer a valid URL to use.**

<http://XXXX//WebAccess>

<http://localhost/webaccess>

4. The only valid URL is as follows:

<https://xxxx.centricsoftware.com/webaccess>

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