

OpenEDMS Installation Guide

Version 3.0

Developed by Altimate Systems Inc.

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1. OPENEDMS SERVER ENVIRONMENT

Windows Operating systems

The **OpenEDMS** Document and Workflow Management System supports the following MS Windows Operating Systems:

- Windows 2000 Professional
- Windows XP Pro
- Windows 2000 Server
- Windows 2003 Server.

Database Servers

The **OpenEDMS** Document and Workflow Management System supports the following database servers:

- MS SQL Server 2000 with Service Pack 3a.
- MS SQL Server Enterprise
- Oracle 10g

Servlet Engine:

The **OpenEDMS** Document and Workflow Management System implements J2EE Servlet technology. It may be deployed in any servlet engine that supports servlet 1.3 specification, including:

- Macromedia Jrun 4
- BEA WebLogic 7 or higher version,
- IBM WebSphere
- Apache Tomcat 4.x or higher version

Sun's Java Development Kit

- Version 1.4 or higher.

Optional Components

- A valid X509 server certificate for SSL protocol support
- An FTP server for directory and batch transfers
- A Web server: IIS, Apache HTTPD, or Netscape Enterprise

2. SERVER INSTALLATION

2.1 REQUIRED SOFTWARE PACKAGES

- Download the **J2SE Software Development Kit (SDK)** from <http://java.sun.com>
- Download the **Tomcat Servlet Engine** from <http://www.apache.org> or WebLogic Server from <http://www.beasys.com>.
- Unzip the **OpenEDMS** installation package (**install_package.zip**) to a temporary directory (e.g. c:\temp) where the **db**, **edms**, **webapps**, **desktop** and **spicer** folders will be created.

2.2 SERVER INSTALLATION

2.2.1 TOMCAT ENVIRONMENT

- Copy the **edms** folder from the **install_package** to a local directory in the target server machine (**c:\openedms** will be used as an example henceforth).
- Create three new folders in the **c:\openedms** directory: 1) **edms**; 2) **jdk14**; 3) **tomcat**
- Install **J2SE SDK 1.4+** to **c:\openedms\jdk14**
- Set System Environment: **JAVA_HOME= c:\openedms\jdk14**
- Install Apache **Tomcat 4.1** or **5.x** to **c:\openedms\tomcat**
- Set System Environment: **CATALINA_HOME= c:\openedms\tomcat**
- Copy the **edms.war** file from the **install_package\webapps** folder to **c:\openedms\tomcat\webapps**
- Copy the **oe.cfg** file from the **edms** folder to the Tomcat home directory (e.g. **c:\openedms\tomcat**).
- Open the **oe.cfg** file with a text editor (such as EditPlus or Notepad).
- Change the configuration settings as follows:
 - Replace **\${systemDirectory}** with **c:/openedms/edms**
 - Replace **\${servletEngineDirectory}** with **c:/openedms/tomcat**

2.2.2 WEBLOGIC ENVIRONMENT

- Copy the **edms** folder from the **install_package** to a local directory in the target server machine (**c:\openedms** will be used as an example henceforth).
- **edms** folder will be created in the **c:\openedms** directory.
- Install **Bea Weblogic Server** and set **Bea Home Directory**: **C:\bea** or any directory you may like from the installation program interface.
- Create a new **WebLogic domain**:
Start->All Programs->BEA Products->Tools->Configuration Wizard ,
domain name: **edms**,
domain location: **C:\bea\user_projects\domains**
- Start **Administration Server**.
Run: **C:\bea\user_projects\domains\base_domain\bin\startWebLogic.cmd**
- Login **Administration console** using browser (URL **http://localhost:7001/console**).
- Deploy **edms.war** from **install_package\webapps** as an application.

Deploy: Deployments->install->choose edms.war ->Install this deployment as an application

- Copy the **oe.cfg** file from the edms folder to the **domainDir** (e.g. **C:\bea\user_projects\domains\edms**).

Open the **oe.cfg** file with a text editor (such as EditPlus or Notepad).

Change the configuration settings as follows:

- Replace `${systemDirectory}` with **c:/openedms/edms**
- Replace `${systemDirectory}\webapps` with **C:\bea\user_projects\domains\edms\servers\AdminServer\stage**
- Run: Deployments-> choose edms-> start->servicing all request

2.2.3 WEBLOGIC CLUSTER ENVIRONMENT

- Copy the **edms** folder from the `install_package` to a local directory in the target server machine (**z:\openedms** will be used as an example henceforth).
- Create one new folder of **edms** in the **z:\openedms** directory.
- Install WebLogic Server

If the cluster will run on a single machine, do a single installation of WebLogic Server under the `/bea` directory to use for all clustered instances. For remote, networked machines, install the same version of WebLogic Server on each machine.

- Create a new WebLogic domain:

Start->All Programs->BEA Products->Tools->Configuration Wizard ,

domain name: **edms_domain**,

domain location: **Z:**

- Start NodeManager in actual Cluster Machines:

Check file **C:\bea\weblogic91\common\nodemanager\ nodemanager.domains** and add the following line

edms_domain =Z:\ edms_domain

Run: **C:\bea\weblogic91\server\bin\startNodeManager** in every Cluster Machines.

- Start Administration Server.

Run: **z:\ edms_domain\bin\ startWebLogic.cmd**

- Login Administration console :

Once the Admin Server is up and running, go to **http://localhost:7001/console** to logon to the Admin Console using the username and password you entered while creating the domain.

- Create Cluster

After Login the console, on the left panel, go to “Clusters”, and click on “Configure a new Cluster”, accept the default settings.

- Create the Clustered Servers and Proxy Server in the Domain

Once we have the Cluster created, we need to create Servers that belong to that Cluster. Click on “Servers” on the left panel, and click on “Create a new Server”.

In the “Cluster” dropdown list, select the Cluster you just created. In the “Listen Address” field, enter the IP or machine name the Server actually

Now create the 2nd server with the steps above. When you are finished, you should see two Servers in the Cluster,

Now create the 3rd server as Proxy Server. Note that this server is not a cluster server, is a standalone server.

- Create Machines in the console. Set NodeManager value of every Machines to actual cluster machines. Assign Cluster Servers and Proxy Server to the created Machines.
- Start Clustered Servers and Proxy Server in the Console.
- Config ProxyServer

(1) Create a directory named "proxyApp" in the root of your "%BEA_Home%\user_projects" directory. Within the "proxyApp" directory, create another directory called "WEB-INF".

(2) Create a file called "web.xml" in the "WEB-INF" directory and open it with any text editor.

(3) Enter the text below, ensuring you modify the names and port numbers of the managed servers you specified when you created your WebLogic cluster.

```
<!DOCTYPE web-app PUBLIC "-//Sun Microsystems, Inc.//DTD Web
Application 2.3//EN" "http://java.sun.com/dtd/web-app_2_3.dtd";>
<web-app>
  <servlet>
    <servlet-name>HttpClusterServlet</servlet-name>
    <servlet-class>
      weblogic.servlet.proxy.HttpClusterServlet
    </servlet-class>
    <init-param>
      <param-name>WebLogicCluster</param-name>
      <param-value>Server1:6001|Server2:6001</param-value>
    </init-param>
    <init-param>
      <param-name>DebugConfigInfo</param-name>
      <param-value>ON</param-value>
    </init-param>
  </servlet>
  <servlet-mapping>
    <servlet-name>HttpClusterServlet</servlet-name>
    <url-pattern>/</url-pattern>
  </servlet-mapping>
  <servlet-mapping>
    <servlet-name>HttpClusterServlet</servlet-name>
    <url-pattern>*.jsp</url-pattern>
  </servlet-mapping>
  <servlet-mapping>
    <servlet-name>HttpClusterServlet</servlet-name>
    <url-pattern>*.htm</url-pattern>
  </servlet-mapping>
  <servlet-mapping>
    <servlet-name>HttpClusterServlet</servlet-name>
    <url-pattern>*.html</url-pattern>
  </servlet-mapping>
</web-app>
```

You can also include the following useful parameter, which creates a proxy log file under the default temp directory:

```
<init-param>
  <param-name>Debug</param-name>
  <param-value>ALL</param-value>
</init-param>
```

(4) Create "weblogic.xml".

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE weblogic-web-app PUBLIC "-//BEA Systems, Inc.//DTD Web
Application 8.1//EN"
"http://www.bea.com/servers/wls810/dtd/weblogic810-web-jar.dtd">
```

```
<weblogic-web-app>
  <context-root>/</context-root>
</weblogic-web-app>
```

(5) Create the “proxyApp.war” Web application by executing the following command from within the root of the “proxyApp” directory:

```
jar cfv proxyApp.war *.*
```

(6) Deployments->install->choose proxyApp.war ->Install this deployment as an application
Select “ProxyServer” as the target server.

- Deploy **edms.war** as application in all of the clustered Servers.
Deployments->install->choose edms.war ->Install this deployment as an application
- Copy the **oe.cfg** file from the edms folder to the domainDir
(e.g. **z:\edms_domain**)

Open the **oe.cfg** file with a text editor (such as EditPlus or Notepad).

Change the configuration settings as follows:

- Replace `${systemDirectory}` with **z:\openedms\edms**
- Replace `${systemDirectory}\webapps` with
\$(domainDir)\servers\\$(ServerName)\stage
(e.g. **z:\edms_domain\servers\Server1\stage**)

- Run: Deployments-> choose edms-> start->servicing all request

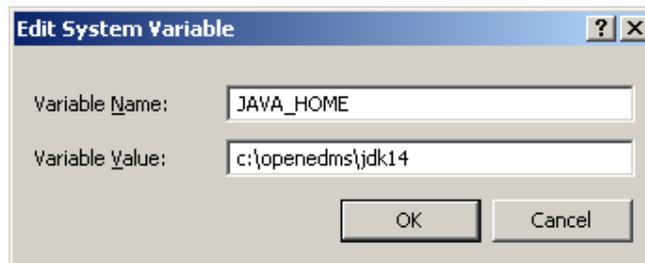
2.3 ENVIRONMENT SETTINGS

From the Windows **Control Panel**, click on the **System** icon to access **System Properties**. Select the **Advanced** tab and click **Environment Variables**. Configure the environment variables as follows:

- **CATALINA_HOME**(for Tomcat): this variable should point to Tomcat installation directory (e.g. **c:\openedms\tomcat**).



- **JAVA_HOME**: this variable should point to the J2SE installation direction (e.g. **c:\openedms\jdk14**).



- **System PATH**: add the EDMS directory path **c:\openedms\edms\bin** to the system path variable.



2.4 MS SQL SERVER 2000 DATABASE INSTALLATION

1. Install MS SQL Server 2000.

MS SQL Server 2000 can either be installed in the same machine as the Servlet Engine or in another computer. Ensure that the server is using the default connection port **1433** and that the mode of authentication is set to **Mixed**. **Please install the SQL Server 2000 Service Pack 3a prior to configuring the SQL server** (which may be downloaded from the Microsoft® website).

To set the authentication mode:

- 1) From the **SQL Enterprise Manager** → select the **Tool** menu → click **SQL Server Configuration Properties**. This brings up the **SQL Server Properties** configuration dialog.
- 2) From the SQL Server Properties dialog → select the **General** tab → click **Network Configuration** → check the **TCP/IP** protocol properties to confirm that the port number is set to **1433**.
- 3) Select the **Security** tab and set the authentication mode to **SQL Server and Windows**.

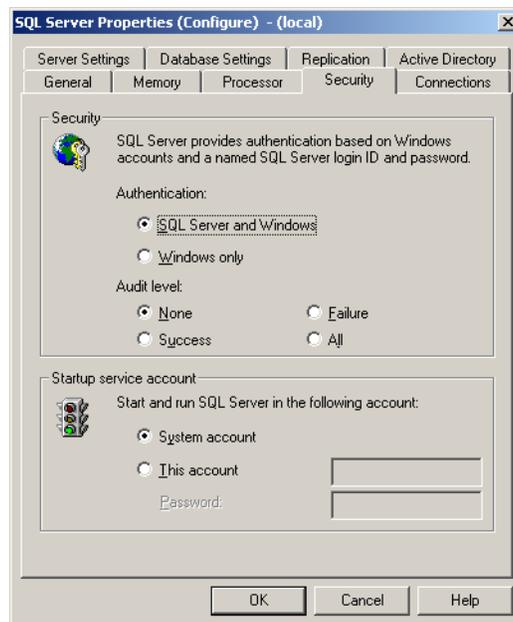


Figure 1: SQL Server Properties - Authentication

2. Create a new database and name it **oe2**
3. Point Data Files to **c:\openedms\edms\database\EDMS_Data.MDF**
4. Point Transaction Log Files to **c:\openedms\edms\database\ EDMS_Log.LDF**
5. Create a new database login ID using **oe2** as both the **Name** and **Password**.

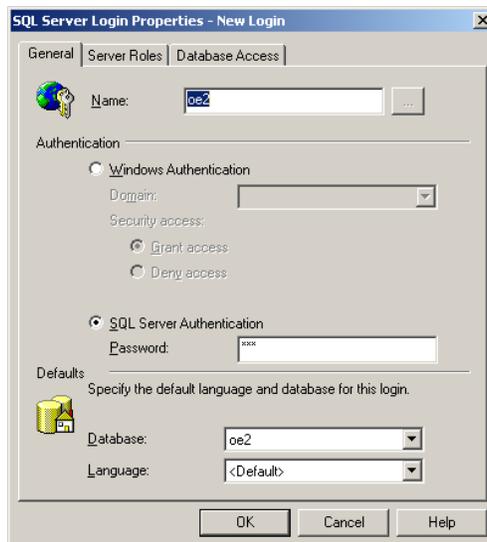


Figure 2: SQL Server Login – Create New Login

- 1) Select **SQL Server Authentication** as the mode of password authentication.
- 2) Select **oe2** database from the **Database** drop-down list.
- 3) Click on the **Database Access** tab and set **Permit** and **Database roles** for user **oe2**

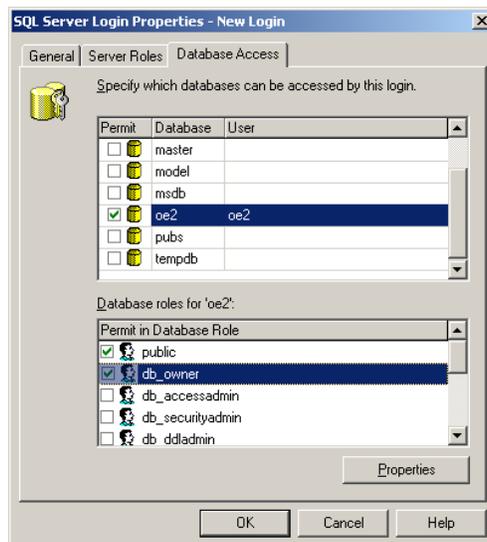


Figure 3: SQL Server Login - Define Database Roles

6. Run SQL Scripts from the **Query Analyzer** (Tools → SQL Query Analyzer) to create database tables and initial data.
 - a. Create SQL Tables and Stored Procedures: run SQL script **db\table_and_sp.sql**
 - b. Create initial data: run SQL scrip **db\data.sql**

2.5 ORACLE 10G DATABASE INSTALLATION

Use the Oracle Database Configuration Assistant (DBCA) to Create and Configure an Oracle 10g Database.

1) Starting the DBCA

To launch the DBCA on a Windows operating system, click **Start** and then select **Programs→Oracle - home_name→Configuration and Migration Tools**, and then **Database Configuration Assistant**.

To launch the DBCA on UNIX, or as another method on a Windows operating system, enter the following command at a system prompt: **dbca**

Note: The *dbca* utility is typically located in *ORACLE_HOME/bin*.

The Welcome window appears. Click **Next** to continue. The DBCA Operations window appears.

- Step 1: Creating a Database with DBCA
On the DBCA Operations window, select **Create a Database**.

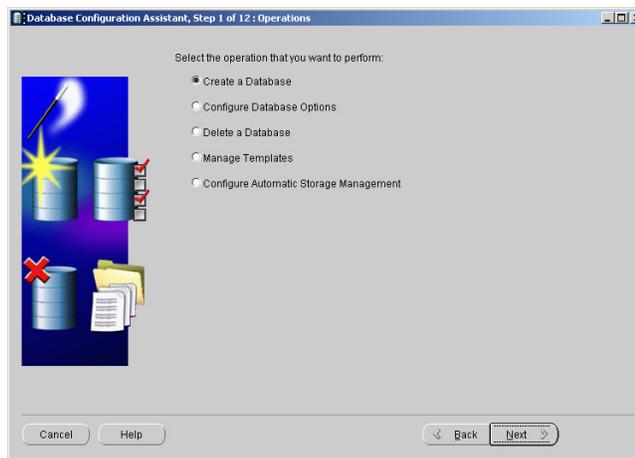


Figure 4: DBCA Operations window

Clicking **Next** starts the database configuration wizard that takes you through the necessary steps to create an Oracle database:

- Step 2: Database Templates
Select the **Transaction Processing** option. Click **Next** to continue.

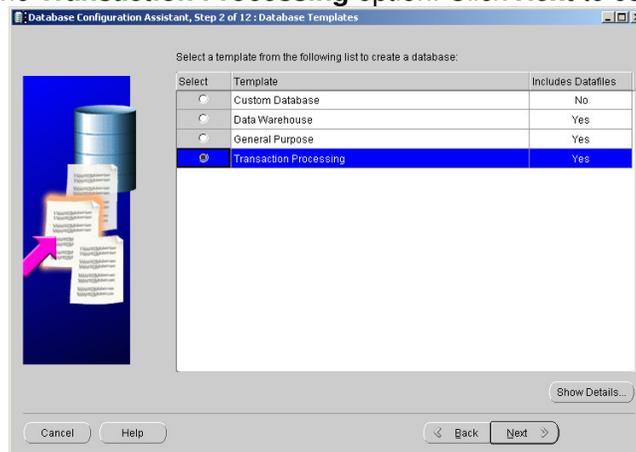


Figure 5: DBCA Database Templates

- **Step 3: Database Identification**
In the **Global Database Name** box and in the **SID** box, enter the database name **EDMS**. Click **Next** to continue.

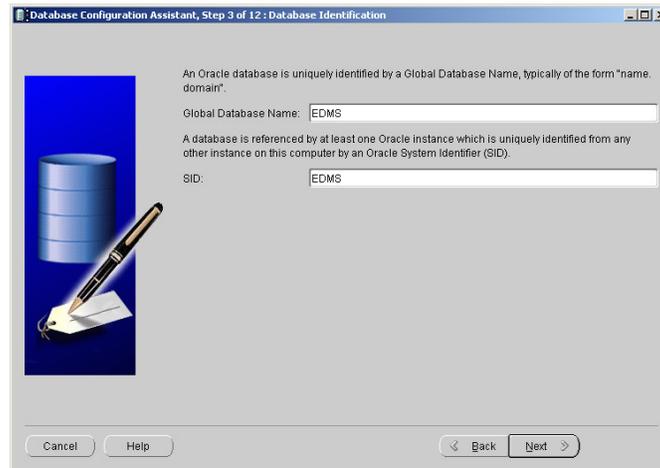


Figure 6: DBCA Database Templates

- **Step 4: Management Options**
Check **Configure the Database with Enterprise Manager to use Enterprise Manager**. Select **Use Database Control for Database Management** to manage the database locally. Click **Next** to continue.

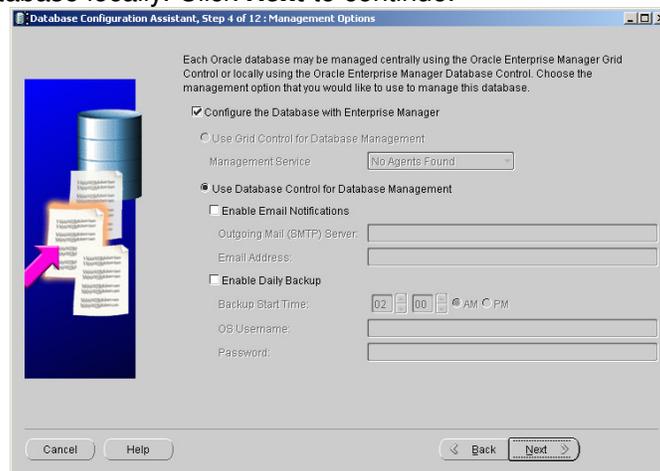


Figure 7: DBCA Management Options

- **Step 5: Database Credentials**
Select **Use the Same Password for All Accounts** and enter the password to use the same password for all accounts. Click **Next** to continue.

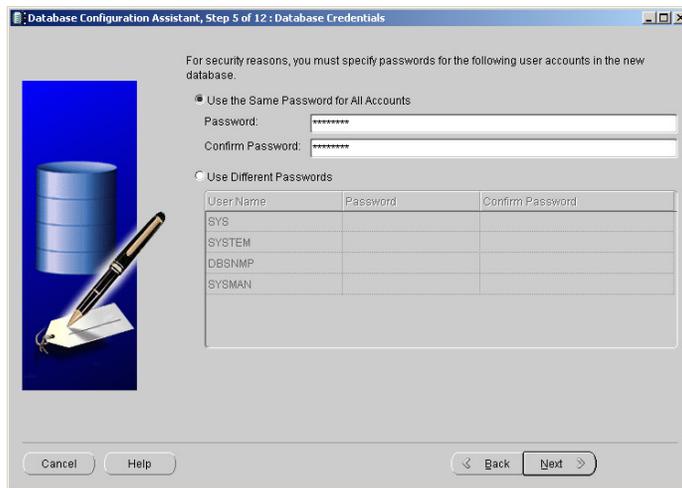


Figure 8: DBCA Database Credentials

- Step 6: Storage Options
Select the **File System** option. Click **Next** to continue.

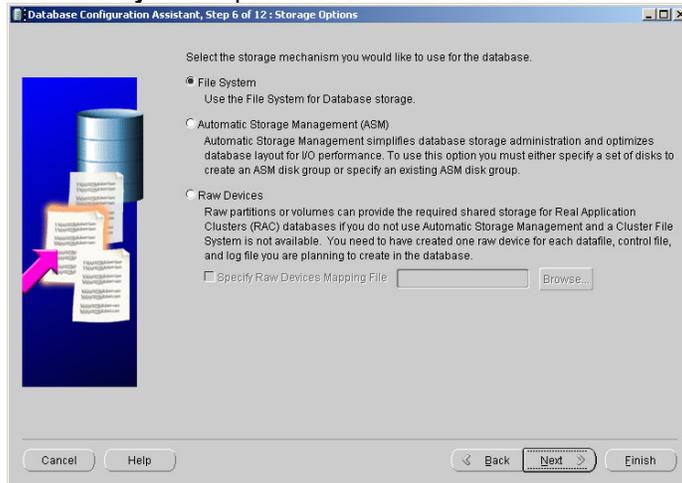


Figure 9: DBCA Storage Options

- Step 7: Database File Locations
Select the **Use Database File Locations from Template** option. Click **Next** to continue.

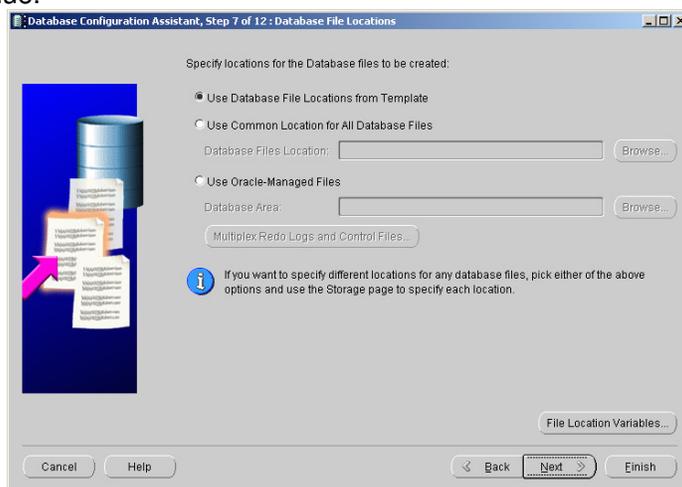


Figure 10: DBCA Database File Locations

- Step 8: Recovery Configuration

Check **Specify Flash Recovery Area**. Use the default values. Click **Next** to continue.

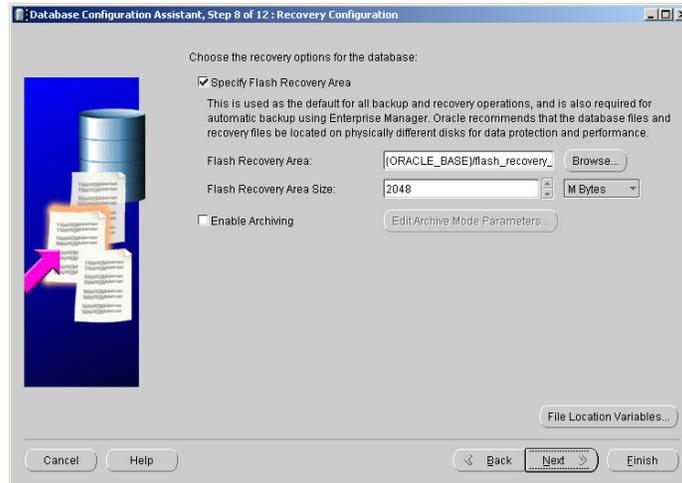


Figure 11: DBCA Recovery Configuration

- Step 9: Database Content
In the **Custom Scripts** tab, check Run the following scripts and specify scripts **db\oracle_table_and_sp.sql** and **db\table_and_sp.sql** to run. Click **Next** to continue.

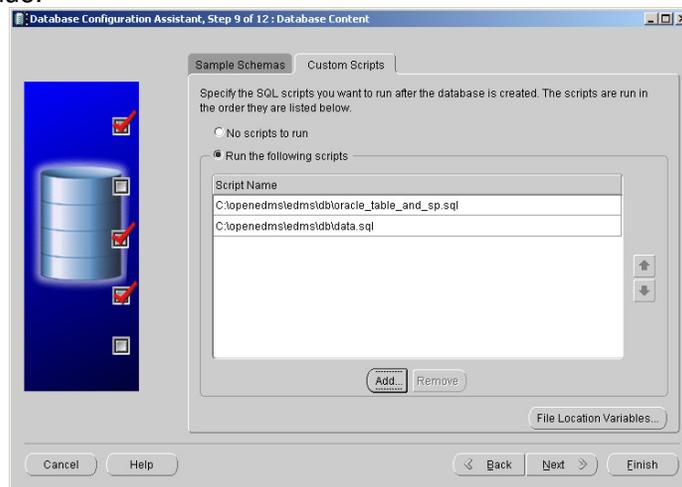


Figure 12: DBCA Database Content

- Step 10: Initialization Parameters
Use the default value. Click **Next** to continue.

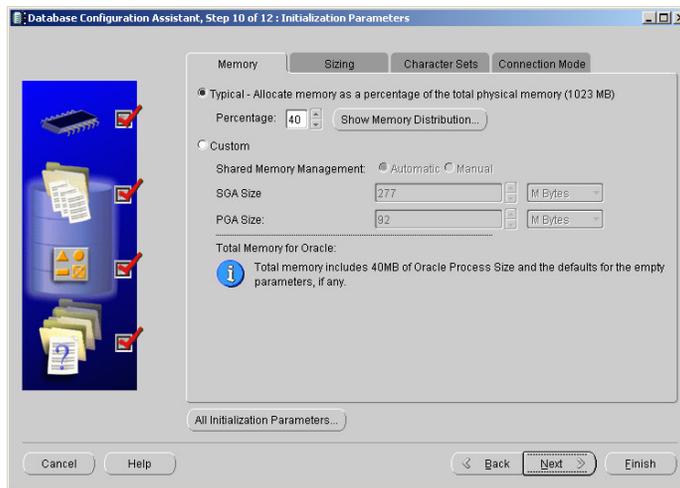


Figure 13: DBCA Initialization Parameters

- Step 11: Database Storage
Use the default value. Click **Next** to continue.

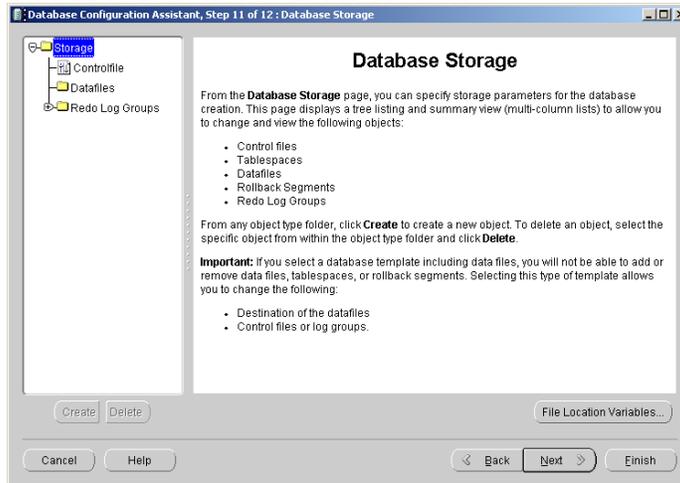


Figure 14: DBCA Database Storage

- Step 12: Database Creation Options
Check the **Create Database** option for creating the database. Click **Finish** to create the Oracle database.

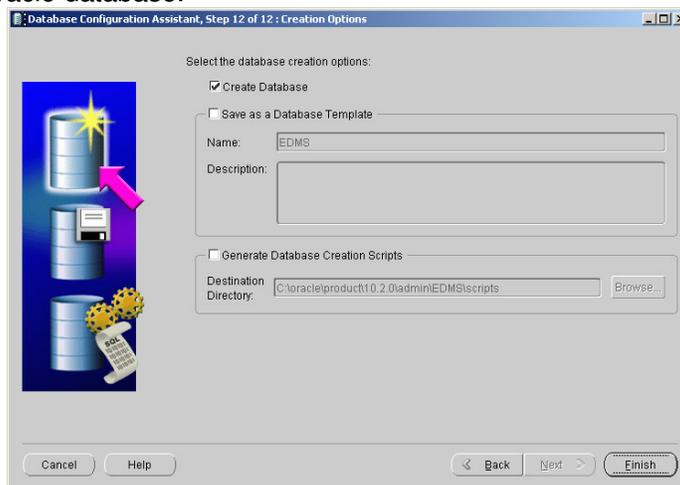


Figure 15: DBCA Creation Options

2.5.1 CONFIGURATION FILE CHANGE:

To connect to the Oracle 10g database, you must change the database setting in the **oe.cfg** file. You can *uncomment* the line for **//DATABASE=ORACLE**, so the changed configuration will be: **DATABASE=ORACLE**.

2.6 INSTALLATION OF THE OPENEDMS LICENSE FILE

The **OpenEDMS** installation package includes a temporary license key file that the system administrator needs to activate upon completion of the installation. A valid license key password is required to activate the **OpenEDMS** server. A license key file can be requested via email (all such requests should be sent to **info@ultimate.ca**), or by telephone at 416-585-9088.

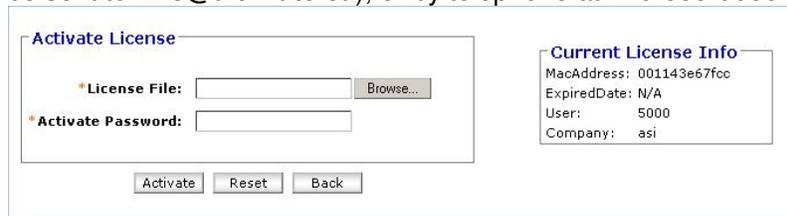


Figure 16: Activate License Key Dialog

To activate the **OpenEDMS** server:

1. Enter the **License File**. Click **Browse** to locate the License Key File on your server. The install package includes a temporary evaluation license file “**asiedms.lic**”. You can find the file in the [openedms_install_directory]\edms\template folder. The temporary evaluation license key file is valid for three (3) months, for ten (10) concurrent users.
2. Enter the **Activate Password**. The password for activating the temporary license key is: **openedms**.
3. Click **Activate** to enter/change the license password, **Reset** to clear the fields so you can re-enter the password, or **Back** to return to the **Administrative Panel** without changing the license password.

In the **Current License Info** panel, you will find current information regarding your OpenEDMS license.

- **MAC Address:** This field identifies your server’s MAC address. The license key is only valid for this MAC address.
- **Expire Date:** This field identifies the date on which the license will expire.
- **Concurrent Users:** This field identifies the number of concurrent users supported by your license.
- **Company:** This field identifies your company.

3. SYSTEM CONFIGURATION

3.1 SERVLET ENGINE CONFIGURATION

To verify the installation of the Tomcat server, start the Servlet Engine from the Windows command prompt (Start menu → Run: cmd):

- Open the **c:\openedms\tomcat\bin** directory and enter: **startup**

Once the installation has been verified, stop the Servlet Engine from the command prompt and restart it as a Windows service:

- To stop the Servlet Engine enter: **shutdown**
- To start the Servlet Engine using Windows Service: open the **Control Panel**, click **Administrative Tools**, and select **Services**.

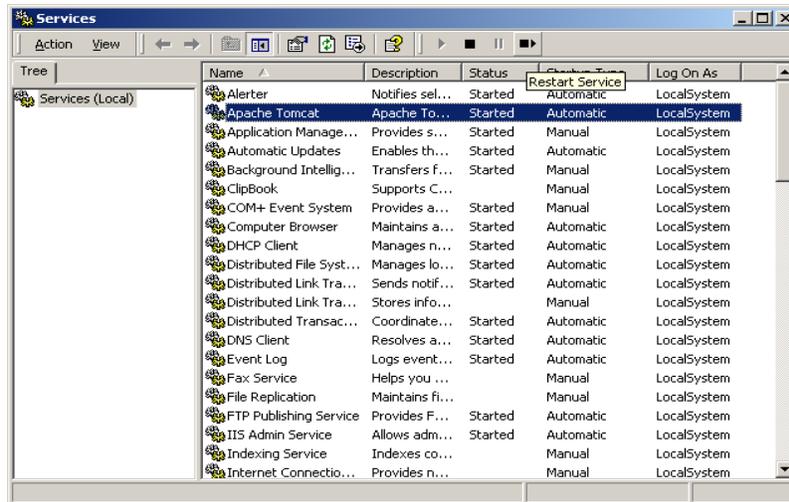


Figure 17: Windows Services Dialog

By default, the Tomcat Servlet Engine uses port 8080 for HTTP message processing. The port number may be changed from the `c:\openedms\tomcat\conf\server.xml` file. In the event of any changes to the default port number, the Tomcat Servlet engine must be restarted.

3.2 OPENEDMS SERVER CONFIGURATION

Using the server machine, login to the **OpenEDMS** server (URL for Tomcat: <http://localhost:8080/edms>; for Weblogic: <http://localhost:7001/edms>) as a system administrator from any standard web browser. The server may be configured from another machine over a local area network or the Internet by logging into the server using a valid server URL.

The default system administrator login ID is `system` and the default password is `openedms` (case-sensitive). Only the system administrator may login to an inactive server.

To activate the server, navigate to the **Administrative Tools** and use the [License Management](#) utility to enter a valid license password before restarting the Servlet engine (the evaluation password for the license file is also `openedms`). The server will not allow users to login to the system unless the license file has been activated using a valid password.

The **Server Configuration** utility (located under **Administrative Tools**) may be used to designate file drives, to configure email, FTP, and Fax servers, to set the default browser timeout value, to set the time at which batch processing will execute, and to enter the encryption password to be used to encrypt folder and files on the server.

For more information on **Server Configuration**, refer to the companion **OpenEDMS Administrator Guide**.

Server Configuration

Outbound Email server configuration
Outbound Email server is used for file forwarding and outbound email communication

FTP server configuration
FTP server is used for batch file transferring

FAX server configuration
FAX server is used for document forwarding

Disk Drive configuration
Disk Drive is used for document storage

Default Panel Configuration
Set default login panel for the system

Default Browser Time Out
Set default browser time out

System Timer
Set system timer for batch processing

Encryption Password
Set system encryption file password

Back

Figure 18: Server Configuration Dialog

3.2.1 OUTBOUND EMAIL SERVER CONFIGURATION

The **Outbound Email Server** configuration is required in order to forward documents or to receive email messages within **OpenEDMS**. A valid SMTP server host name must be specified as well as an email address to which respondents may reply, a default email forward subject line, the email format (text or html), and the URL to be displayed at the foot of the email message. If the SMTP server requires user authentication, a valid user id and password must also be provided.

Outbound Email Server Configuration

Outbound Email Server (SMTP) :*

Reply-To Email Account :*

Email Forward Subject :

Multi Part Email :

Email Forward URL :

Email Footer Message :

Authentication required

Authentication User Name :

Authentication Password :

Save Back

Figure 19: Outbound Email Server Configuration

3.2.2 FTP SERVER CONFIGURATION

The **FTP Server** configuration is required to transfer batch files or folders using an FTP protocol. The system requires that an FTP Upload Folder (or home directory) be accessible from the **OpenEDMS** server. The FTP client must be able to reach the host FTP server for file transfers to be successful. If you are using the **OpenEDMS Desktop** application, you can test the FTP connection from within the application to verify that you are connected.

FTP Configuration

FTP Server :*

FTP Login :

FTP Password :

FTP Password Confirmation :

FTP Upload Folder :

Figure 20: FTP Server Configuration

3.2.3 FAX SERVICE CONFIGURATION

The **FAX Service** configuration is required to connect to an external fax machine. **OpenEDMS** supports EFax and Fax Modem.

- In order to use Fax modem, the system needs to have a Fax modem installed on the EDMS server machine. Ensure that the win32com.dll is set to the system path environment. Copy the javax.comm.properties file from the **edms** folder to the **JRE lib** directory.
- To send faxes via EFax, a valid EFax account is required.

FAX Configuration

FAX Allowed Files :
(separated by comma)

Maximum FAX File Size : B

FAX Default Mode :

FAX Modem Service Settings

FAX Port :

FAX Timeout :

FAX Send Area Code :

FAX International Code :

EFAx Service Settings

EFAx Email Account :

Figure 21: Fax Server Configuration

3.2.4 DISK DRIVE CONFIGURATION

Disk Drive configuration: all servers require active disk drive configuration. If the **OpenEDMS** system was installed to **c:\openedms**, the active drive setting should be **c:\openedms/edms/files**. The secondary drive configuration is optional and only required if the primary active drive has insufficient capacity to store all of the documents in the system.

If the system was installed to **c:\openedms**, the index drive should be **c:\openedms/edms/index**. The index name should be **oe2**.

The archive drive should also point to the **OpenEDMS** installation directory (e.g. **c:\openedms/edms/archive**).

DISK Configuration

Active Drive :

Secondary Drives :

Index Drive :

Index Name :

Include Filter :

Archive Drive :

OCR Drive :

Figure 22: Disk Configuration

3.2.5 SYSTEM PANEL SETTING CONFIGURATION

The **System Panel Setting** allows the system administrator to decide which panel will be the default panel when the user first login to the system.

Panel Name

File Browser Tree View
 File Browser Flat View(system default)
 Workflow Manager
 Favorites
 Administrative Tools
 News Board
 Signature Log
 Search - Simple
 Search - Advanced
 Mail Box
 User Profile
 Calendar
 File Watch List

Figure 23: System Panel Setting Configuration

3.2.6 DEFAULT BROWSER SESSION TIMEOUT CONFIGURATION

The **Default Browser Session Timeout** configuration specifies the user browser automatic disconnect time (in minutes) if the user browser has been connected with the OpenEDMS server in inactive mode.

Browser Configuration

Session Timeout : * Minute(s)

Figure 24: Default Browser Session Timeout Configuration

3.2.7 SYSTEM TIMER CONFIGURATION

The **System Timer** configuration specifies the time at which batch processing will execute.

Timer Configuration

Set the time you want the system to start the batch processing.
Please use the format: HH:MM AM/PM, such as 8:30 AM.

Start Time: * (HH:MM AM/PM)

The specified time will be used to execute the system batch processing daily.

Figure 25: System Timer Configuration

3.2.8 ENCRYPTION PASSWORD CONFIGURATION

The **Encryption Password** configuration specifies the password that OpenEDMS will use to encrypt folders and files on the server. OpenEDMS uses Password Based Encryption (PBE) algorithms to perform all encryptions. OpenEDMS will automatically decrypt selected folders and files for all authorized users. Authorized users are those who have at minimum read-access to the folder or file. All sub-folders and files created in an encrypted folder are by default encrypted.

Encryption Password Configuration

Password: *

Confirmation: *

Figure 26: Encryption Password Configuration

3.2.9 PRINT STREAM SERVER (E2VAULT¹) CONFIGURATION (OPTIONAL)

To enabled e2vault services, please change the configuration file oe.cfg (it should be located in the tomcat home directory).

- uncomment the e2vault.Host line and replace the IP address with the correct host name or IP address
- uncomment the e2vault.Port line and replace the port number with the correct port number of your e2vault server.
- Restart the servelt engine

e2Vault.Host=192.168.0.6

e2Vault.Port=6003

¹ E2vault is Pitney Bowes/Group 1 enterprise print stream management system

4. PDF CONVERTER INSTALLATION

The **OpenEDMS** Evaluation version uses OpenOffice for PDF file conversion. OpenOffice 1.1.4 can convert MS Office, text, HTML and OpenOffice files (SXW, SXC, etc.) to PDF.

OpenOffice 1.1.4 may be downloaded from www.openoffice.org. Once the download is complete, install the application in the same machine as the **OpenEDMS** server. Using OpenOffice, modify the `openoffice_startup.cmd` file (located in the `edms\bin` folder) by replacing `${OpenOffice_Folder}` with the OpenOffice installation directory name.

To start OpenOffice from the command prompt, enter: `openoffice_startup.cmd`

The **OpenEDMS** server will connect to OpenOffice whenever the server logs a PDF conversion request.

OpenOffice can be added to the Startup program folder on the Start menu so that it will automatically run whenever the server is started or rebooted.

5. OPENEDMS DESKTOP INSTALLATION

Authorized users can use the **OpenEDMS Desktop** for batch file or folder transfers from local systems to the central **OpenEDMS** document repository, for creating and managing workflow templates, and for connecting their local machine to a scanner and importing scanned images directly into the OpenEDMS repository. For more information on using **OpenEDMS Desktop**, refer to the companion **OpenEDMS Desktop Guide**.

The application may be downloaded at www.altimate.ca/downloads with or without Java VM 1.4.2 – if there is no Java runtime environment already installed locally, select the bundled package. The newly installed **OpenEDMS Desktop** program will automatically attempt to connect to the default **OpenEDMS** server at www.openedms.com. The server name and port number may be changed to reflect your particular server settings.

6. ADVANCED VIEWER AND REDACTION UTILITY (OPTIONAL)

Spicer ViewCafe and Image a.X are integrated with **OpenEDMS** so that the contents of hundreds of industry-standard file formats may be previewed and redacted directly off the server.

Requirements

- Spicer ViewCafe and Image a.X must be installed and running. Image a.X must be installed on the same computer as the Tomcat Servlet engine. If ViewCafe is also installed on the same machine as Tomcat, the Tomcat port number should be changed from 8080 (which is the default port number used by the ViewCafe application server).
- Tomcat 4.x is recommended for optimal performance.

Configuring Tomcat for ViewCafe

- Copy the **XMLServlet.jar** and **ViewcafeSever.jar** files from the ViewcCafe installation directory to the `<tomcat>\common\lib` directory.
- Open `<tomcat>\conf\web.xml` and add the following content to the web-app section: `<servlet>`

```
<servlet-name>viewcafe</servlet-name>
```

```
<servlet-class>com.spicer.servlet.MatrixXMLServlet</servlet-class>
```

```
<init-param>
```

```
  <param-name>properties</param-name>
```

```
  <param-value>d:/viewcafe/XMLServlet.properties</param-value>
```

```

</init-param>
<load-on-startup>6</load-on-startup>
</servlet>
<servlet-mapping>
  <servlet-name>viewcafe</servlet-name>
  <url-pattern>/XMLServlet/*</url-pattern>
</servlet-mapping>

```

If ViewCafe was not installed to the directory **d:\viewcafe**, replace **d:\viewcafe** in the example above with the directory path to which the program was installed (e.g. **x:\viewcafe...**)

- To determine whether the above steps were completed properly, enter the URL <http://localhost/XMLServlet> in your browser. If the ViewCafe server is running, a "ViewCafe XMLServlet is running" message will be displayed.

Preparing required OpenEDMS files for integration with ViewCafe

- Copy the **Image.ini** file to the Image a.X directory; overwrite the original when prompted.
- Create two directories for saving temporary files in the Spicer directory (e.g. **OriginalFiles** and **RedactedFiles**).
- Copy the **normal2d.xml** and **normal3d.xml** files to the new temporary RedactedFiles directory (using your directory name).

Modifying the config file

- Open the **oe.cfg** file with a text editor (such as EditPlus or Notepad).
- Look for the segment / ******* FOR DOCUMENT MARKUP ******* /
- Replace the **Markup.System.Path** value with the **ViewCafe** directory name (e.g. c:\ViewCafe).
- Replace the **Markup.Source.Directory** value with the newly created subdirectory for temporarily storing original files in the Spicer directory (e.g. c:\ViewCafe\OriginalFiles).
- Replace the **Markup.Markup.Directory** value with the subdirectory created for temporarily storing redacted files in the Spicer directory (e.g. c:\ViewCafe\RedactedFiles).
- Replace the **Markup.Forward.Supported** value with "yes" so as to enable forwarding of redacted documents.
- Look for the segment **FilePreview service**
- Replace the **HttpFilePreviewService** value with **asi.edmssvc.HttpViewcafeService**

7. OPENEDMS REPORT INSTALLATION (OPTIONAL)

MS SQL Server 2000 database installation

1. Create a new database and name it **oereport**
2. Restore the database from the file "oereport.db"
 - 1) Select **Restore backup set** and **Database complete** option.
 - 2) Check **Force restore over existing database**.
 - 3) Point Data Files to **c:\openedms\edms\database\oereport.mdf**
 - 4) Point Data Files to **c:\openedms\edms\database\oereport_log.MDF**

-
3. Select **oe2** as the new database user.

TOMCAT configuration

1. Edit **c:\openedms\tomcat\oe.cfg** file. Add a line **OEReport=yes**.
2. Copy the **OEReport.war** file and **OOJobManager.war** from the `install_package\oereport` folder to **c:\openedms\tomcat\webapps**
3. Startup tomcat. The **OEReport.war** file is extracted automatically and creates a new folder: **c:\openedms\tomcat\webapps\OEReport**.
4. Shutdown tomcat.
5. Edit the file **c:\openedms\tomcat\webapps\OEReport\WEB-INF\Web.xml**.
 - Set the "param-value" where "param-name" is "integration database" to **oe2**. It is the reference to the openedms database name.
 - Create a new folder **oereport** in the **c:\openedms\edms** directory.
 - Set the "param-value" where "param-name" is " pdfFileDefaultFolder" to **c:\openedms\edms\oereport**. It is a reference to a folder storing temporal pdf files.
6. Edit the file **c:\openedms\tomcat\webapps\OEReport\WEB-INF\config\database.xml**.
 - Update the database name, url, database user, and password.
7. Startup tomcat. **OOJobManager.war** is extracted automatically and creates a new folder **c:\openedms\tomcat\webapps\OOJobManager**.
8. Shutdown tomcat.
9. Edit the file **c:\openedms\tomcat\webapps\OEReport\WEB-INF\config\database.xml**.
 - Update the database name, url, database user, and password.

8. WEB SERVER INTEGRATION (OPTIONAL)

OpenEDMS can be integrated with MS IIS, Apache HTTPD, or Netscape Enterprise web servers. Most J2EE servers provide GUI-based web server integration. The following section describes how to integrate a Tomcat server with an MS IIS server.

Requirements

- IIS 5.x should be installed and running on port 80 (test by going to `http://localhost`).
- J2SE (1.3x or greater) should be installed and the environmental variable `JAVA_HOME` should already be set to the J2SE base directory.
- Tomcat 4.1.30 should be installed and running on the default port 8080 (test by going to `http://localhost:8080`). The `CATALINA_HOME` environmental variable `CATALINA_HOME` should already be set to the Tomcat base directory.
- Test the server installation by determining whether Tomcat 4.1.30 is able to run the example jsp files. For example: `http://localhost:8080/examples/jsp/dates/date.jsp`.

IMPORTANT: The binary version of Tomcat 4.1.30 must be downloaded (as opposed to the zipped version).

Extract the contents of the **IIS_Config.zip** file to the `CATALINA` directory where the necessary subdirectories will automatically be created and populated.

Configuring the `workers.properties` file

Open the `workers.properties` file located in the `CATALINA\conf\ntiis` directory.
Edit the value **`workers.tomcat_home`** (line 41) and point it to the `CATALINA` directory.
Edit the value **`workers.java_home`** (line 47) and point it to the J2SE directory.

Editing and Loading the Registry file

Using your text editor, open the **`isapi.redirector.reg`** registry file located in the `CATALINA\conf\ntiis` directory.

The `Log_file` should point to `CATALINA\logs\iis_redirector.log`

(e.g. **`c:\openedms\tomcat\logs\iis_redirector.log`**)

The `worker_file` should point to `CATALINA\conf\ntiis\workers.properties`

(e.g. **`c:\openedms\tomcat\jdkconf\workers.properties`**)

The `worker_mount_file` should point to `CATALINA\conf\ntiis\uriworkermap.properties`

(e.g. **`c:\openedms\tomcat\jdkconf\uriworkermap.properties`**)

Once the changes have been made, save the file and reload it. To view the registry values, go to `HKEY_LOCAL_MACHINE` → `software` → `Apache Software Foundation` → `Jakarta ISAPI Redirector` → `1.0`

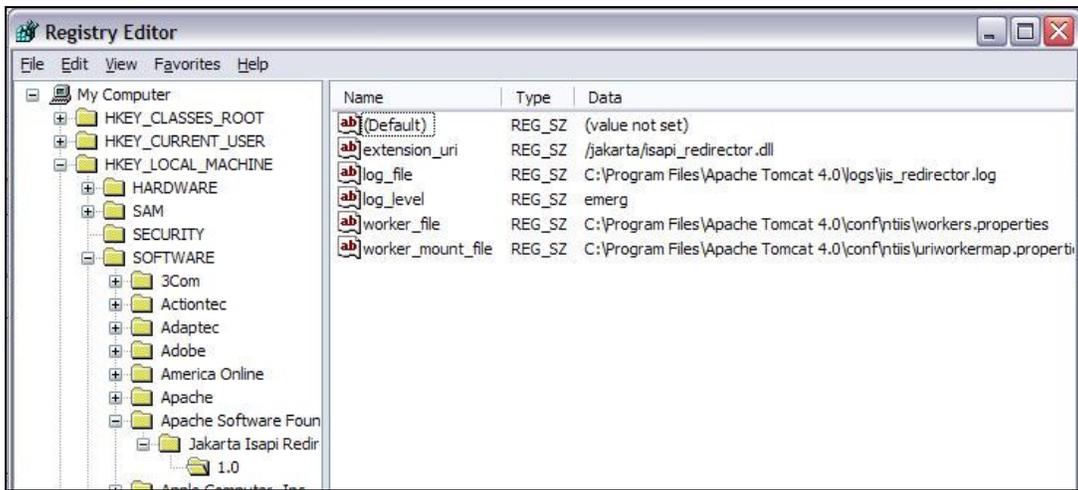


Figure 27: Registry Editor

Configuring IIS (Internet Information Services)

Open IIS Admin and select the **Default Web** site.

1. Add a Virtual Directory called **jakarta** and point it to the CATALINA/bin directory, and make it EXECUTABLE.

To add a Virtual Directory, right-click your web site, select **New**, and select **Virtual Directory**. Type **jakarta** in the alias textbox. Enter your CATALINA_HOME directory in the directory textbox (e.g. c:\openedms\tomcat\bin). Check Read, Run Scripts, and Execute access permissions.

2. Add CATALINA\bin\isapi_redirector.dll as an ISAPI Filter.

To add an ISAPI Filter, right-click your web site and select **Properties**. Select the **ISAPI Filters Tab** and click **Add**. Provide a name for the filter (such as "Jakarta ISAPI Redirector"). Navigate to your CATALINA/bin directory and select **isapi_redirector.dll**. Save all changes before closing the properties window. Re-open the **Properties** dialog and select the **ISAPI Filters Tab** as before. The Filter should now display a green arrow; if not, restart the web services and check again. If there is still no green arrow, repeat the configuration steps outlined above.

To test the configuration settings, go to <http://localhost/examples/jsp/dates/date.jsp>.

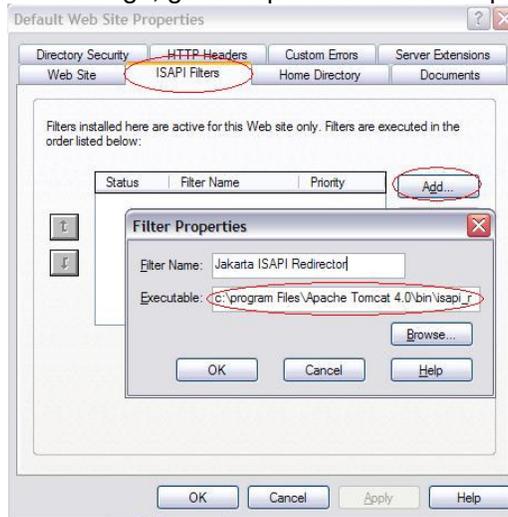


Figure 28: IIS Configuration

Adding virtual directories

Define the virtual Tomcat directory so that it can be accessed from a web browser at <http://localhost:8080/my-directory>.

Define the virtual ISAPI Redirector filter directory so that it can be accessed from a web browser at <http://localhost/my-directory>.

For example, if you want a folder called my-jsp to store, process, and deliver JSP files, then it must first be defined in the Tomcat Server.

To add a virtual directory, the **server.xml** file located in **CATALINA/conf** must be modified. Find the Server element nested inside, look for a Service element. Nested inside the Service Element, look for an Engine element. Nested inside the Engine Element, look for a Host element. This is where you will add a Context element, which will define your virtual directory. A simple context element should look like this:

```
<Context path="/my-jsp" docBase="c:\JSP-Files" debug="0" privileged="true" />
```

where path is the name of the virtual directory and docBase points to the physical folder. After modifying server.xml, you will need to restart Tomcat. When this is working correctly you should be able to access the folder via Tomcat at <http://localhost:8080/my-jsp>.

To define the directory to your ISAPI redirector, you need to open the file **uriworkermap.properties**. You then need to add two lines.

```
/my-jsp=$(default.worker)  
/my-jsp/*=$(default.worker)
```

After saving this file, you need to restart you IIS Service in order to get the ISAPI redirector to reload. When this is working properly you should be able to access the folder via IIS at <http://localhost/my-jsp>

9. SSL CONFIGURATION (OPTIONAL)

Tomcat Servlet Engine Configuration for standard http and SSL ports

Create a folder named **cert** within the Tomcat home directory (e.g. **c:\openedms\tomcat**)

Copy the **c:\openedms\edms\etc\keystore** file to **c:\openedms\tomcat\cert**

Use the following configuration (found between lines 90 – 120) as a template for your **c:\openedms\tomcat\conf\server.xml** file:

```
<!-- Define a non-SSL Coyote HTTP/1.1 Connector on port 80 -->  
<Connector port="80"  
    maxThreads="150" minSpareThreads="25" maxSpareThreads="75"  
    enableLookups="false" redirectPort="8443" acceptCount="100"  
    debug="0" connectionTimeout="20000"  
    disableUploadTimeout="true" />  
<!-- Note : To disable connection timeouts, set connectionTimeout value to -1 -->  
  
<!-- Define a SSL Coyote HTTP/1.1 Connector on port 443 -->  
<Connector className="org.apache.coyote.tomcat5.CoyoteConnector"  
    port="443" minProcessors="5" maxProcessors="75"  
    enableLookups="true"  
    acceptCount="100" debug="0" scheme="https" secure="true"  
    useURIVValidationHack="false" disableUploadTimeout="true">  
<Factory className="org.apache.coyote.tomcat5.CoyoteServerSocketFactory"
```

```
clientAuth="false" protocol="TLS"  
keystoreFile="c:/openedms/tomcat/cert/keystore"  
keystorePass="unclue_tom" />  
</Connector>
```

For information on setting up and using SSL with the **OpenEDMS Desktop** application, refer to the companion **OpenEDMS Desktop Guide**.

APPENDIX A. RELATED DOCUMENTS

- **OpenEDMS Administrator Guide**
- **OpenEDMS User Guide**
- **OpenEDMS Desktop Guide**
- **OpenEDMS Report Guide**
- **OpenEDMS Implementation Guide**