

Configuring an OLAP Spreadsheet Services deployment

This document includes tips for:

- Deploying OLAP Spreadsheet Services on WebSphere® 4.0.3 on Windows™
 - Deploying OLAP Spreadsheet Services on WebSphere 4.0.3 on UNIX ®
 - Deploying DB2 OLAP Server Enterprise Services and OLAP Spreadsheet Services as servlets on a single Tomcat instance
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Deploying OLAP Spreadsheet Services on WebSphere 4.0.3 on Windows

This section describes how to deploy OLAP Spreadsheet Services v8.1 on WebSphere 4.0.3 on Windows.

1. Install OLAP Spreadsheet Services, DB2 OLAP Enterprise Services, and WebSphere 4.0.3 on Windows. Start HTTP and the WebSphere server.
2. Start the WebSphere Administrator's Console.
3. Select **Console → Wizards → Install Enterprise Application**, as shown in Figure 1. The Install Enterprise Application wizard opens.

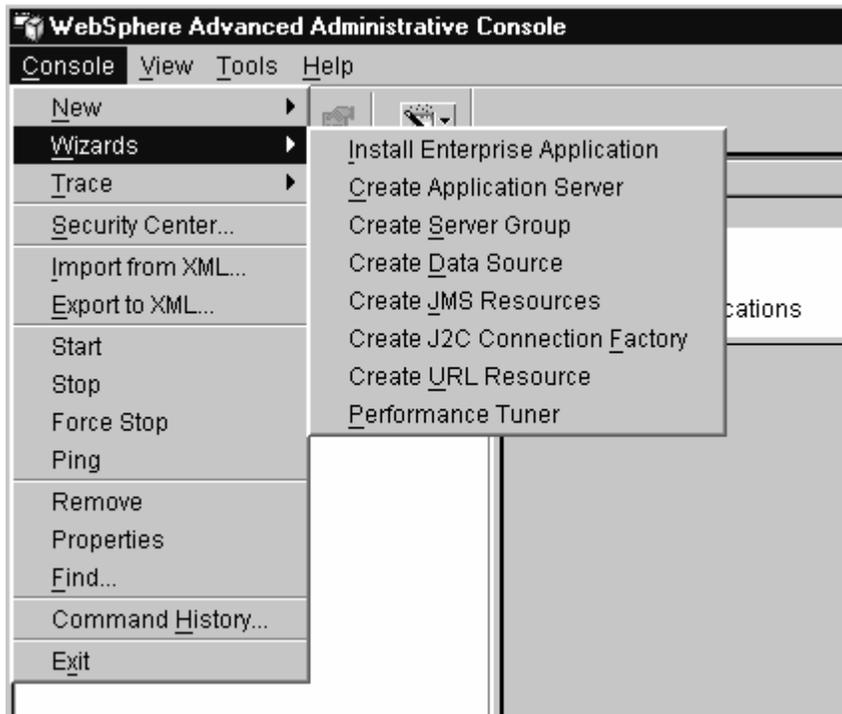


Figure 1- Select Install Enterprise Application

4. Complete the Install Enterprise Application wizard by selecting the following settings on each page:
 - On the Specifying the Application or Module page, select **Install Stand-alone module (*.war, *.jar)**. Browse and select the `..\ess\redist\ess_webservice.war` file for the Path field. Enter the application name in the Application name field. Type `/Ess` in the Context root for web module field. Figure 2 shows the correct selections for the Specifying the Application or Module page. Click **Next**.

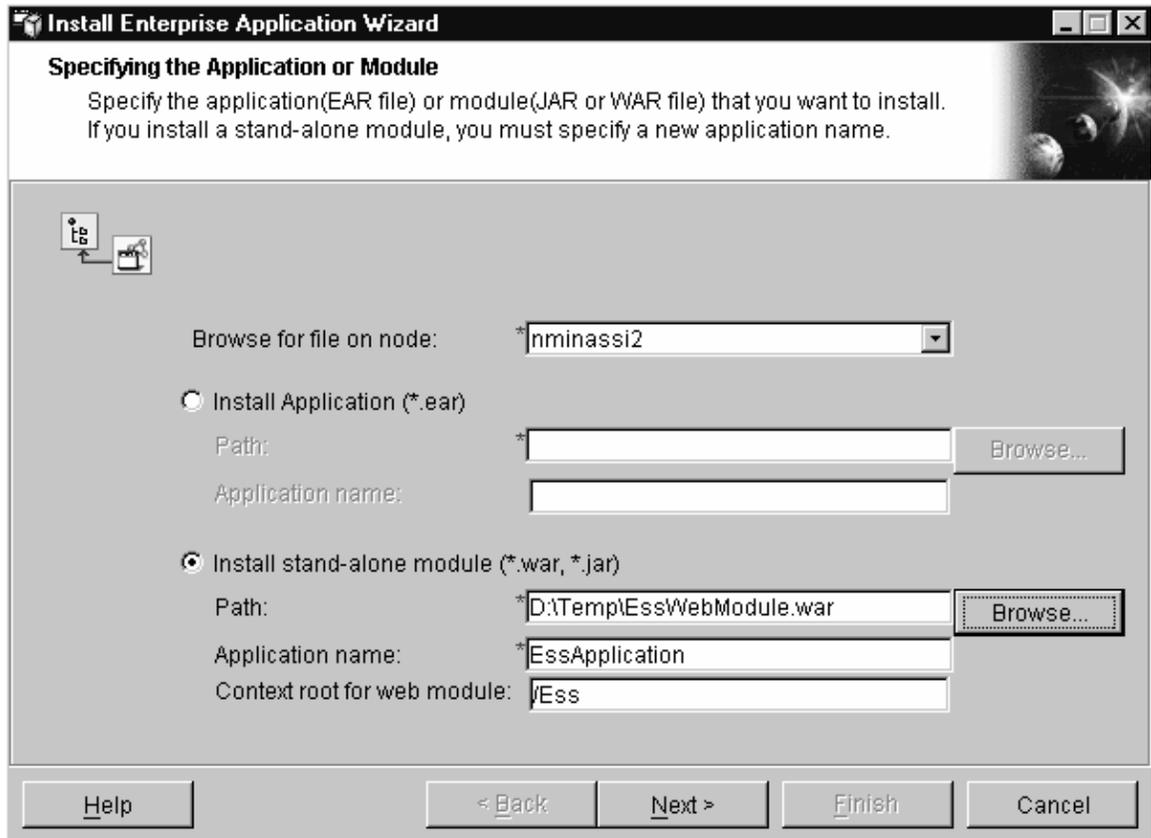


Figure 2 - Specifying the Application or Module page of the Install Enterprise Application Wizard

- On the Mapping Users to Roles page, click **Next**.
 - On the Mapping EJB RunAs Roles to Users page, click **Next**.
 - On the Binding Enterprise Beans to JNDI Names page, click **Next**.
 - On the Mapping EJB References to Enterprise Beans page, click **Next**.
 - On the Mapping Resource References to Resources page, click **Next**.
 - On the Specifying the Default Datasource for EJB Modules page, click **Next**.
 - On the Specifying Data Sources for Individual CMP Beans page, click **Next**.
 - On the Selecting Virtual Hosts for Web Modules page, click **Next**.
 - On the Selecting Application Servers page, click **Next**.
 - On the Completing the Application Installation Wizard page, click **Finish**.
5. An information dialog, shown in Figure 3, opens to indicate that the command “EnterpriseApp.install” completed successfully. Click **OK** to close the dialog.



Figure 3 - Information dialog

6. In the WebSphere Advanced Administrative Console navigation tree, expand the WebSphere Administrative Domain, and then expand the Enterprise Applications. Select the Enterprise Application that you created for the EssApplication example. The console with an expanded navigation tree is shown in Figure 4.

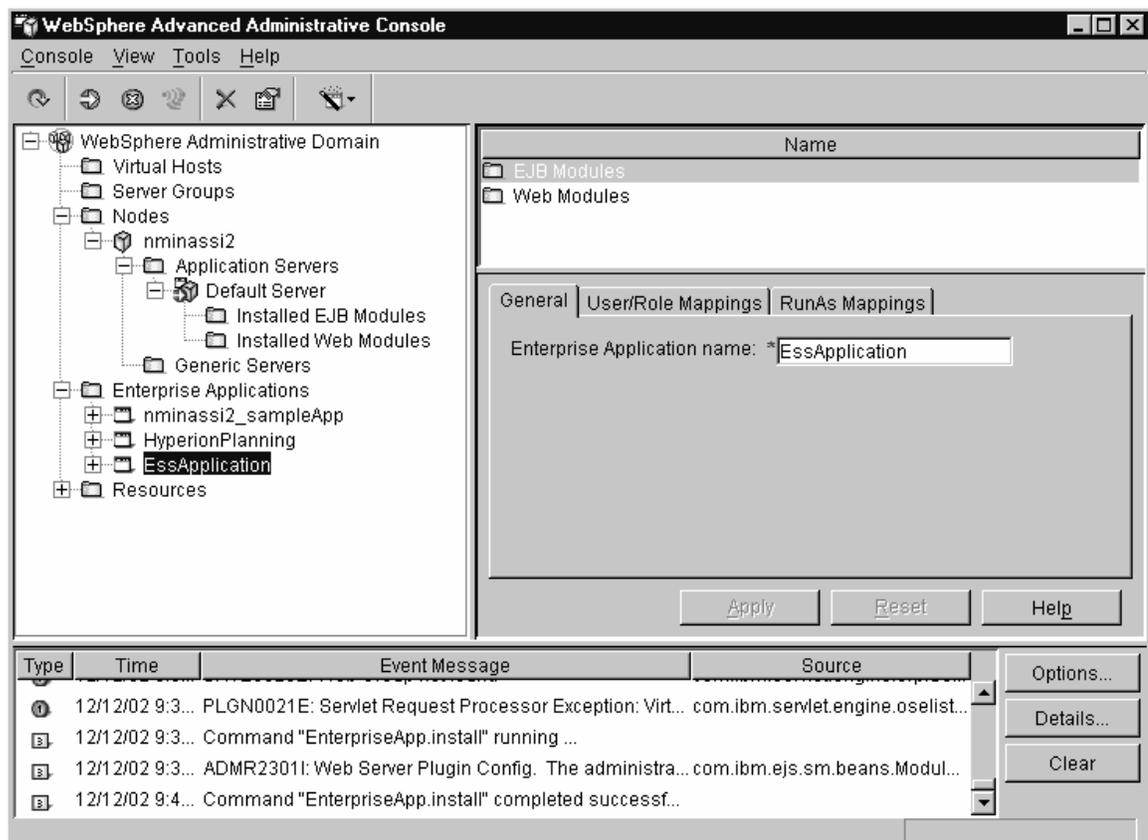


Figure 4 - WebSphere Advanced Administrative Console with expanded navigation tree

7. Select **Console** → **Start**.
8. An information dialog, shown in Figure 5, opens to indicate that the command “EssApplication.start” completed successfully. Click **OK** to close the dialog.



Figure 5 - Information dialog

9. Open a browser window and type the following address:
`http://<hostname>:9080/Ess/EssbaseWebService`. The browser window is shown in Figure 6.

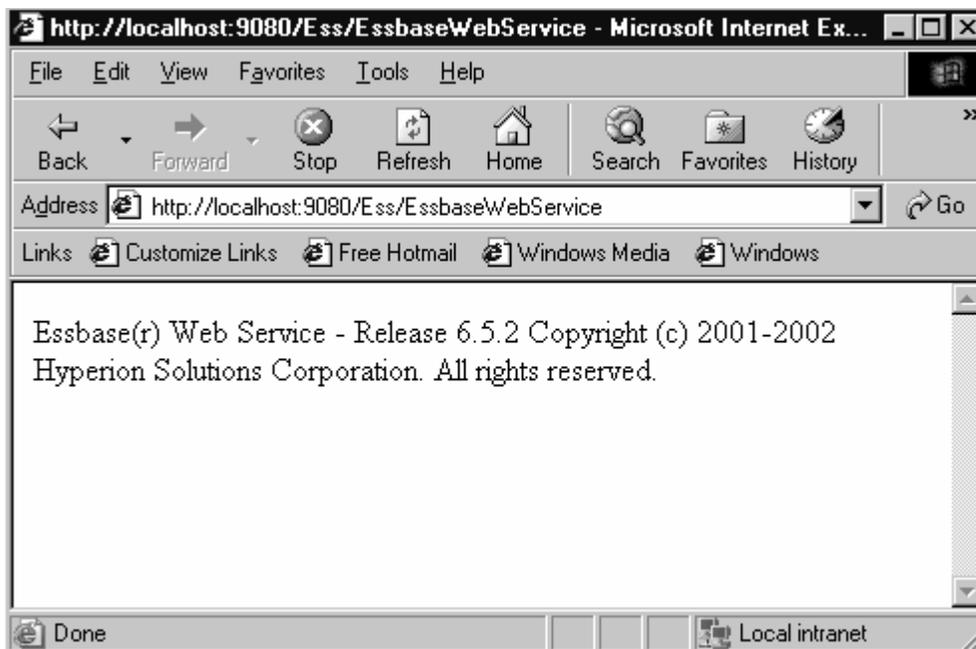


Figure 6 - Browser window

Spreadsheet Services is now deployed on WebSphere 4.0.3. To begin using Spreadsheet Services:

1. Start DB2 OLAP Server. In the Application Manager, create a user id `system` with password `password`.
2. Start EDS Server and EDS client. Log on to the EDS Console with the user id `system` and password `password`. Add your DB2 OLAP servers on the Enterprise Services client console. Synchronize the security by right-clicking Essbase server and selecting **SyncSecurity**.
3. Start Microsoft Excel. Select **Essbase** → **Sign on**. Type the user id and password and the Web service URL, `http://<hostname>:9080/Ess/EssbaseWebService`. Because you synchronized the security, you can use any valid Essbase user id and password. Figure 7 shows the log on screen to OLAP Server Spreadsheet Services. Click **Sign On**.

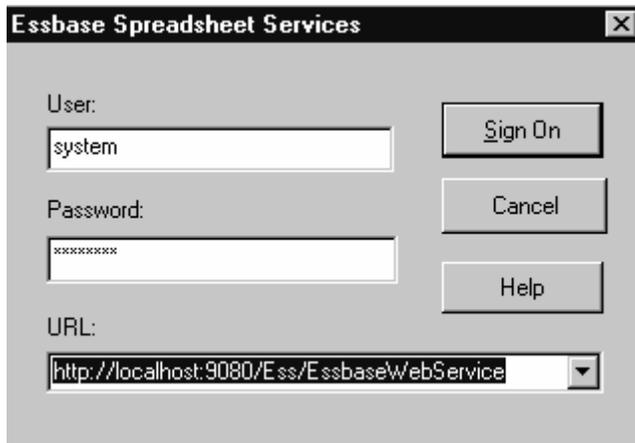


Figure 7 - OLAP Spreadsheet Services log on window

4. The Select Cube dialog, shown in Figure 8, opens. Select the cube you want to work with and begin using Spreadsheet Services.

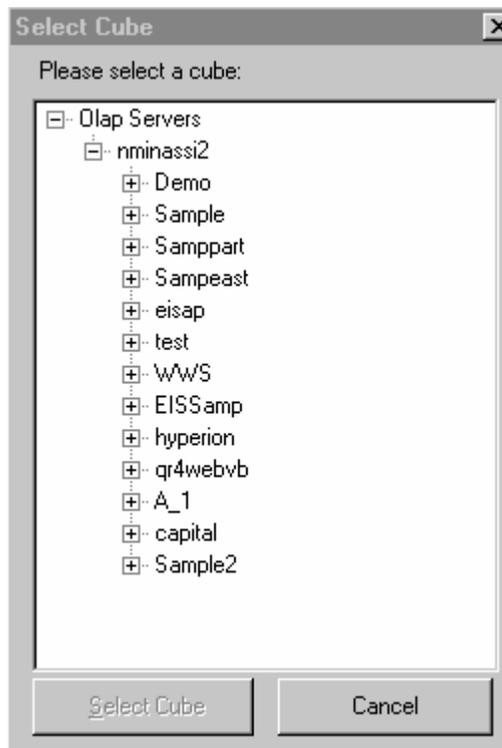


Figure 8 - Select Cube dialog

Deploying OLAP Spreadsheet Services on WebSphere 4.0.3 on UNIX

This section describes how to deploy OLAP Server Spreadsheet Services v8.1 on Windows with

DB2 OLAP Server Enterprise Services on WebSphere 4.0.3 on UNIX.

1. Install Enterprise Services and WebSphere 4.0.3 on UNIX.
2. Install Spreadsheet Services v8.1 on Windows. Move the `ess_webservice.war` file from the `..\ess_install_dir\redist` directory on Windows to your UNIX system that has WebSphere installed. Make sure that the WebSphere users on UNIX have read, write, and execution rights to the `ess_webservice.war` file.
3. Start the Administrator's Console.
4. Select **Console** → **Wizards** → **Install Enterprise Application**, as shown in Figure 9.

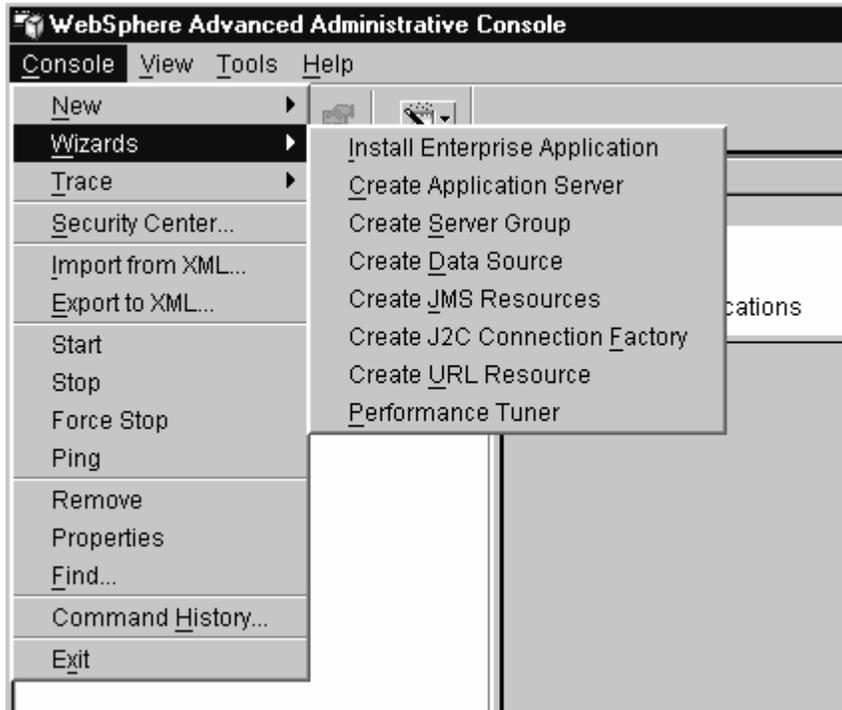


Figure 9 - Opening the Install Enterprise Application from the Administrator's Console

5. Complete the Install Enterprise Application wizard by selecting the following settings on each page:
 - On the Specifying the Application or Module page, select **Install Stand-alone module (*.war, *.jar)**. Type the path for or browse and select the `.war` file in the Path field. Enter the application name in the Application name field. Type `/Ess` in the Context root for web module field. Figure 10 shows the correct selections for the Specifying the Application or Module page. Click **Next**.

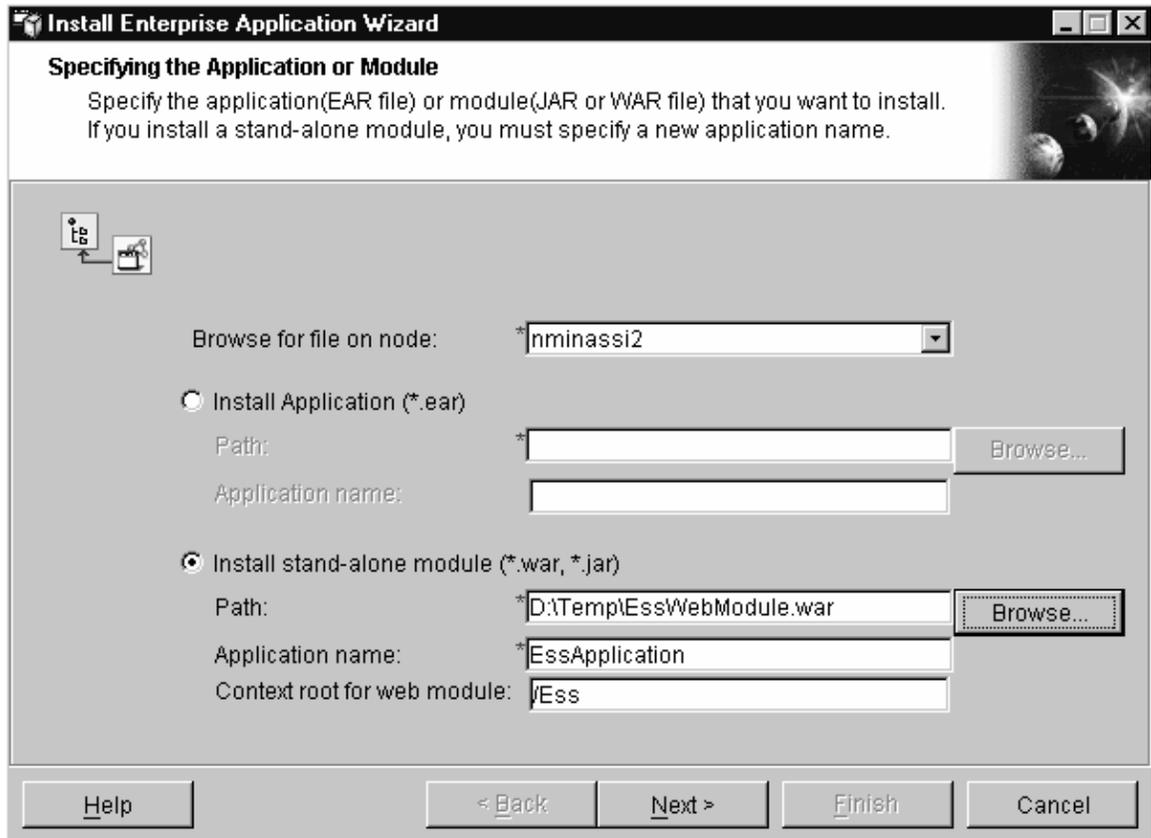


Figure 10 - Install Enterprise Application wizard

- On the Mapping Users to Roles page, click **Next**.
 - On the Mapping EJB RunAs Roles to Users page, click **Next**.
 - On the Binding Enterprise Beans to JNDI Names page, click **Next**.
 - On the Mapping EJB References to Enterprise Beans page, click **Next**.
 - On the Mapping Resource References to Resources page, click **Next**.
 - On the Specifying the Default Datasource for EJB Modules page, click **Next**.
 - On the Specifying Data Sources for Individual CMP Beans page, click **Next**.
 - On the Selecting Virtual Hosts for Web Modules page, click **Next**.
 - On the Selecting Application Servers page, click **Next**.
 - On the Completing the Application Installation Wizard page, click **Finish**.
6. An information dialog, shown in Figure 11, opens to indicate that the command “EnterpriseApp.install” completed successfully. Click **OK** to close the dialog.

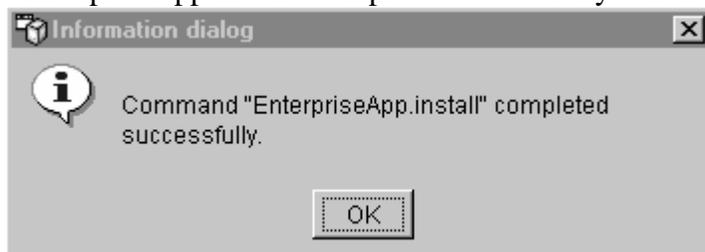


Figure 11 - Information dialog

7. In the WebSphere Advanced Administrative Console navigation tree, expand the WebSphere Administrative Domain, and then expand the Enterprise Applications. Select the Enterprise Application that you created for the EssApplication example. The console with an expanded navigation tree is shown in Figure 12.

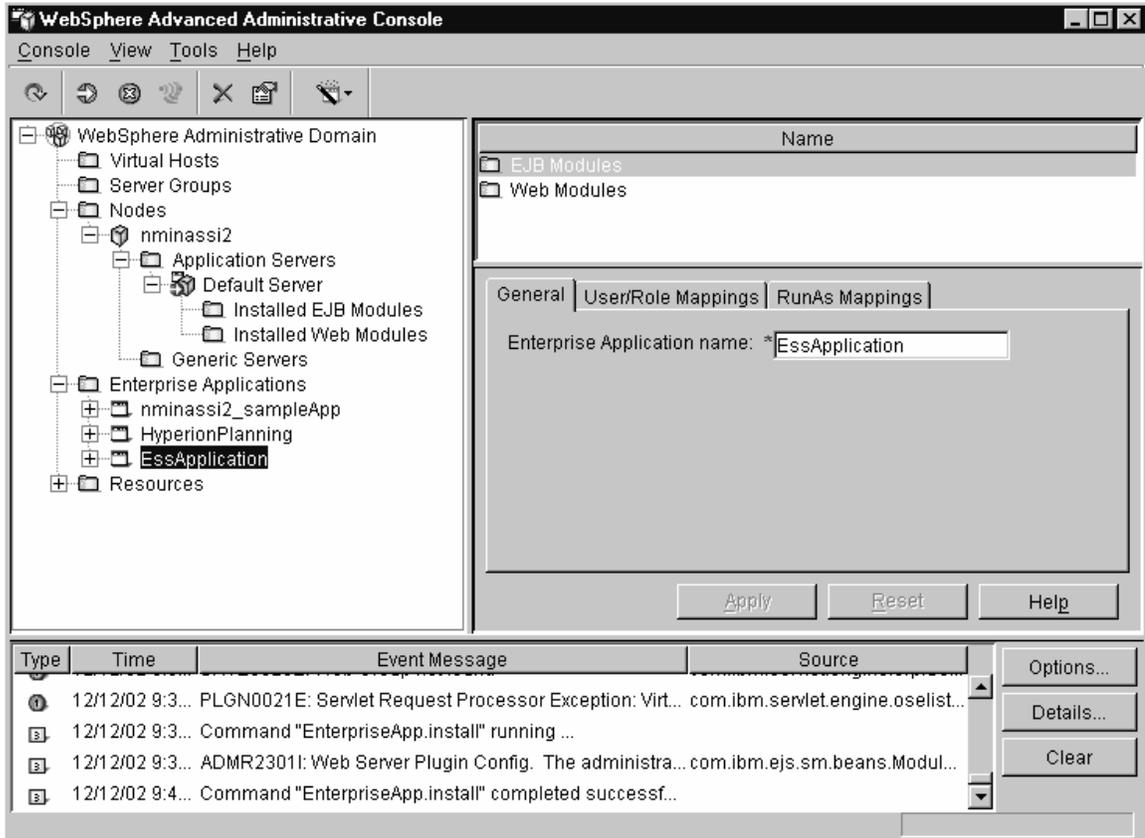


Figure 12 - WebSphere Advanced Administrative Console

8. Select **Console** → **Start**.
9. An information dialog, shown in Figure 13, opens to indicate that the command “EssApplication.start” completed successfully. Click **OK** to close the dialog.



Figure 13 - Information dialog

10. Open a browser window and type the following address:
<http://<hostname>:9080/Ess/EssbaseWebService>. The browser window is shown in Figure 14.

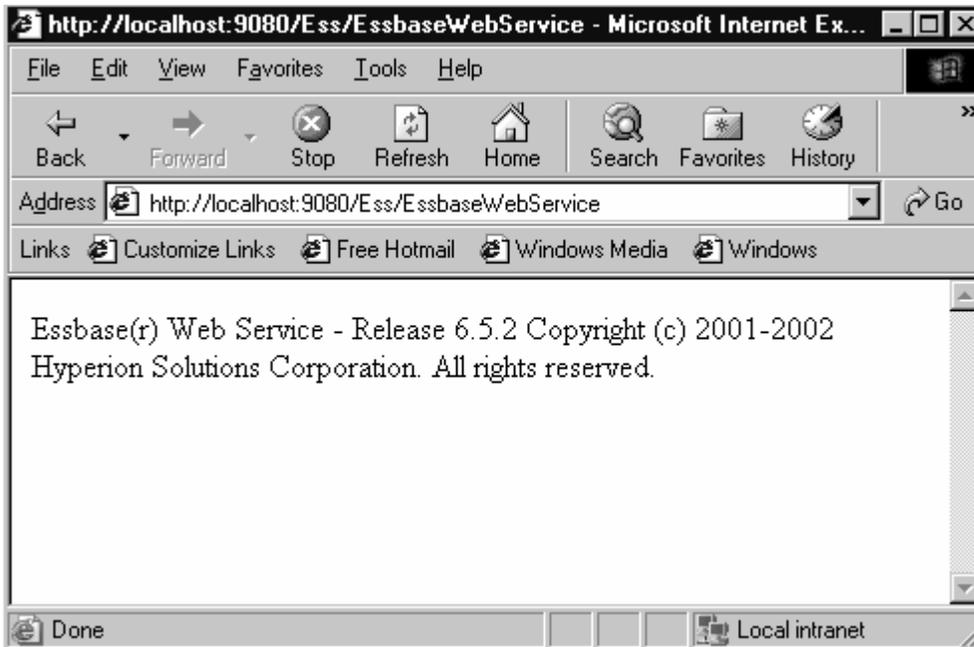


Figure 14 - Browser window

Spreadsheet Services is now deployed on WebSphere 4.0.3. To begin using Spreadsheet Services:

1. Start DB2 OLAP Server. In the Application Manager, create a user id system with password password.
2. Start EDS Server and EDS client. Log on to the EDS Console with the user id system and password password. Add your DB2 OLAP Servers on the Enterprise Services client console. Synchronize the security by right-clicking Essbase server and selecting **SyncSecurity**.
3. Start Microsoft Excel. Select **Essbase** → **Sign on**. Type the user id and password and the Web service URL, `http://<hostname>:9080/Ess/EssbaseWebService`. Because you synchronized the security, you can use any valid Essbase user id and password. Figure 15 shows the log on screen to Spreadsheet Services. Click **Sign On**.

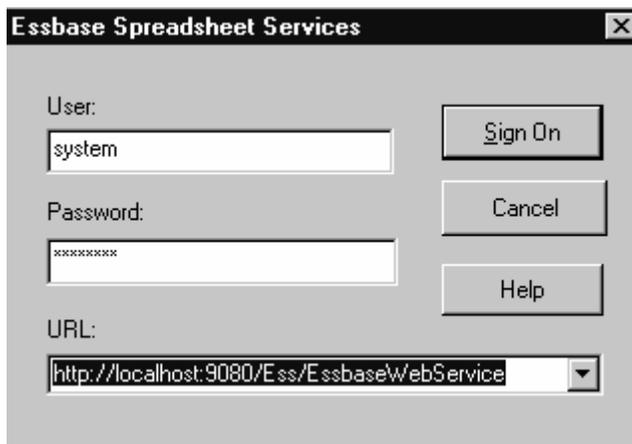


Figure 15 - OLAP Spreadsheet Services log in window

4. The Select Cube dialog, shown in Figure 16, opens. Select the cube you want to work with and begin using Spreadsheet Services.

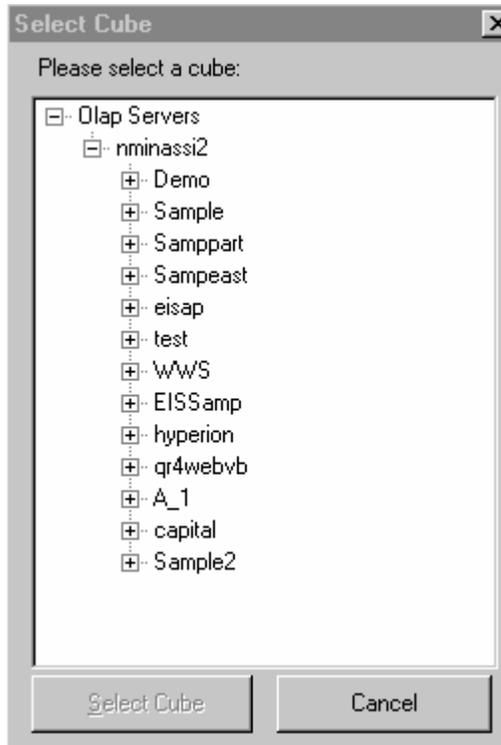


Figure 16 - Select Cube dialog

Deploying DB2 OLAP Server Enterprise Services and OLAP Spreadsheet Services as servlets on a single Tomcat instance

This section describes how to add DB2 OLAP Server Enterprise Services and DB2 OLAP Spreadsheet Services as servlets on a single Tomcat instance installed on Windows and UNIX.

Deploying on a Windows Tomcat instance:

Make sure that the Tomcat server instance is installed with DB2 OLAP Administrative Server as the application server and complete the following steps:

1. Install Server Enterprise Services and Spreadsheet Services.
2. Add a lib directory in the WEB-INF directory of your DB2 OLAP Server Enterprise Services root located at:
 `.. \eas\server\tomcat\webapps\ROOT\WEB-INF\`
The lib directory name is case sensitive and must be in lower case.

3. Copy the .jar files from the ees\lib and ess\lib directories into the lib directory you just created at \eas\server\tomcat\webapps\ROOT\WEB-INF\lib. You should copy 5 .jar files in total.
4. Replace the web.xml file located in the ..\eas\server\tomcat\webapps\ROOT\WEB-INF\ directory with the sample web.xml file that is shown in the following example:

```

    <?xml version="1.0" encoding="ISO-8859-1"?>
<!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>
    EssbaseEnterprise
  </servlet-name>
  <servlet-class>
    com.essbase.server.plugins.http.EssbaseEnterprise
  </servlet-class>
</servlet>

<servlet>
  <servlet-name>
    EssbaseWebService
  </servlet-name>
  <servlet-class>
    com.essbase.webservices.EssbaseWebService
  </servlet-class>
  <init-param>
    <param-name>essbase.properties</param-name>
    <param-
      value>c:/ibm/db2olap/ess/bin/essbase.properties
    </param-value>
  </init-param>
</servlet>

<servlet-mapping>
  <servlet-name>
    EssbaseEnterprise
  </servlet-name>
  <url-pattern>
    /EssbaseEnterprise
  </url-pattern>
</servlet-mapping>

<servlet-mapping>
  <servlet-name>
    EssbaseWebService
  </servlet-name>
  <url-pattern>
    /EssbaseWebService

```

```
</url-pattern>
</servlet-mapping>
</web-app>
```

Edit the web.xml file so that it uses the directory that OLAP Spreadsheet Services is installed in on your system.

5. Add the full ees\bin path to first path system variable. Figure 17 shows the Edit System Variable dialog and the highlighted path, C:\Hyperion\ees\bin, is an example of the path that you need to add.

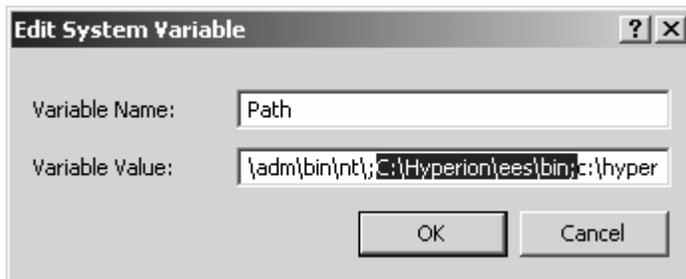


Figure 17- Adding the ees\bin path to your environment path

6. Stop and restart the DB2 OLAP Administrative Server Tomcat server window. Do not use the stop and restart buttons. You must completely shut down and restart the server.
7. Validate that the Enterprise Services servlet is installed in your browser. Open the following Web site in your browser: <http://<hostname>:9001/EssbaseEnterprise>. As shown in Figure 18 - Browser window that validates the servlet installation, you should see the text: “Essbase Enterprise Services: Hello!”

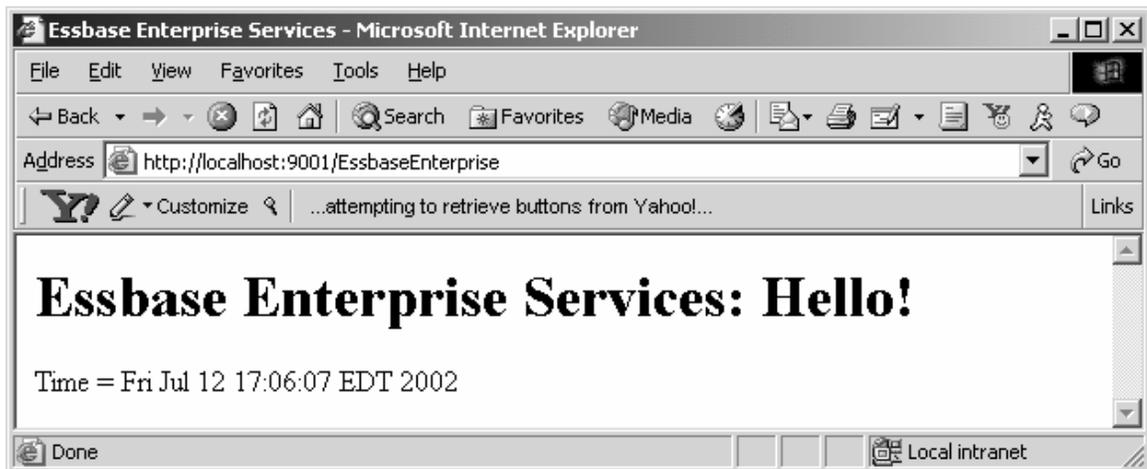
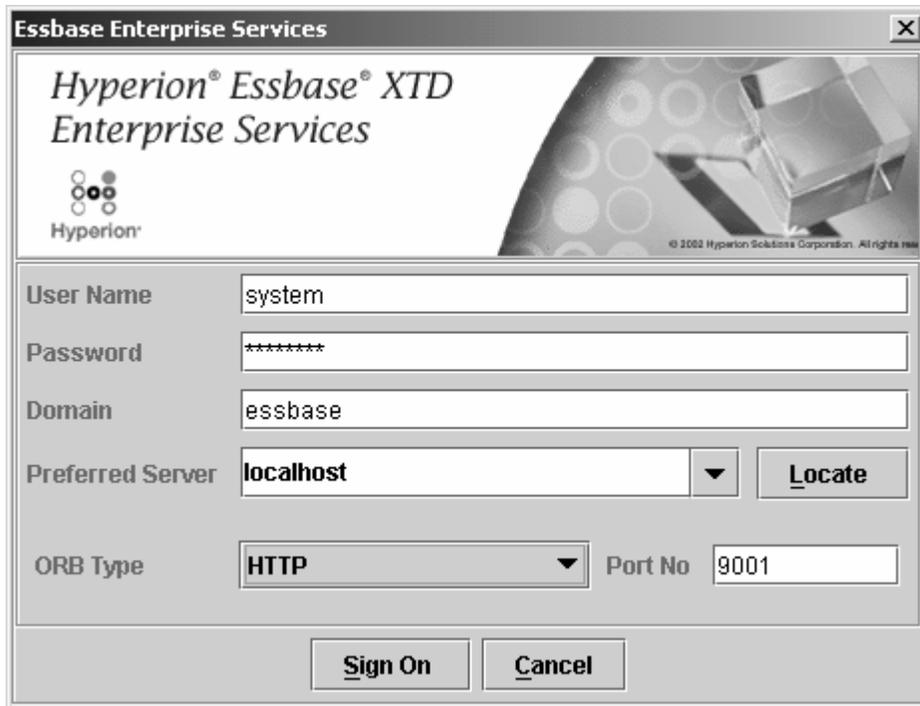


Figure 18 - Browser window that validates the servlet installation

8. Use the Application Manager to add a supervisor with user id=system and password=password.
9. Start the Enterprise Services server. Log on to the DB2 OLAP Server Enterprise Services Console with user id system and password password. Make sure that you change the

orb type to http and the port to 9001 before logging on to the console. The log on window is shown in Figure 19. Add your DB2 OLAP Servers on the Enterprise Services client console. Synchronize the security by right-clicking Essbase server and selecting **SyncSecurity**.



The screenshot shows a log-on dialog box for Essbase Enterprise Services. The window title is "Essbase Enterprise Services". The header area features the Hyperion logo and the text "Hyperion® Essbase® XTD Enterprise Services". Below the header, there are several input fields: "User Name" with the value "system", "Password" with "*****", "Domain" with "essbase", "Preferred Server" with "localhost" and a "Locate" button, "ORB Type" with "HTTP" and a dropdown arrow, and "Port No" with "9001". At the bottom, there are "Sign On" and "Cancel" buttons.

Figure 19 - Essbase Enterprise Services log on window

10. Copy the `essbase.properties` file from the `\ees\bin` directory to the `\eas\server\bin` directory so that the server that Enterprise Services is running on can access the properties file.
11. Make the following changes to the copy of the `essbase.properties` file located in the `\eas\server\bin` directory:
 - Replace all occurrences of `../data` with the full Enterprise Services path: `\data, C:\. . .ees\data`. If you do not have any directories or files after `.. \data`, make sure that all occurrences of `/"` are changed to `\`. The Enterprise Services path is case sensitive, so make sure that you type the path exactly as it is.
 - Change `system.cmdShell.start=true` to `system.cmdShell.start=false`.
12. Validate that the Spreadsheet Services servlet is installed in your browser by opening the following Web site in your browser: `http://<hostname>:9001/EssbaseWebService`. As shown in Figure 20, you should see the text: "Essbase® Web Service – Release 6.5 Copyright © 2001-2002 Hyperion Solutions Corporation. All rights reserved."

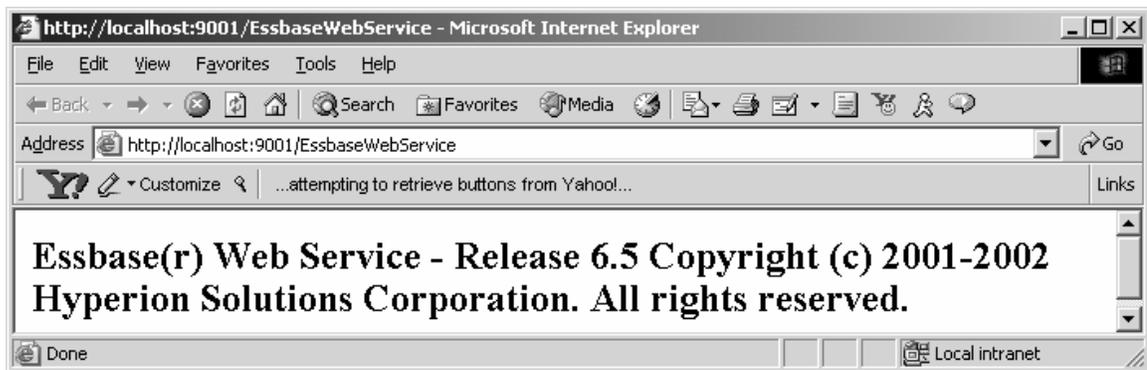


Figure 20 - Browser window that validates the servlet installation

13. To launch the spreadsheet add-in for the Web service, edit the `essbase.properties` file in the `.. \ess\bin` directory. Do not copy this file; edit the existing file to change the orb type to `http` and the port to `9001`.
14. Stop and restart the Tomcat server again. Enterprise Services starts as a servlets when you start the Tomcat server. Start the DB2 OLAP server.
15. Open Excel and log on to Spreadsheet Services. Make sure that you select the Essbase Enterprise Services add-in from the Add-in menu, as shown in Figure 21, and that you use the correct Web address when you log on as shown in Figure 22. You can use any valid Essbase user id and password to log on.

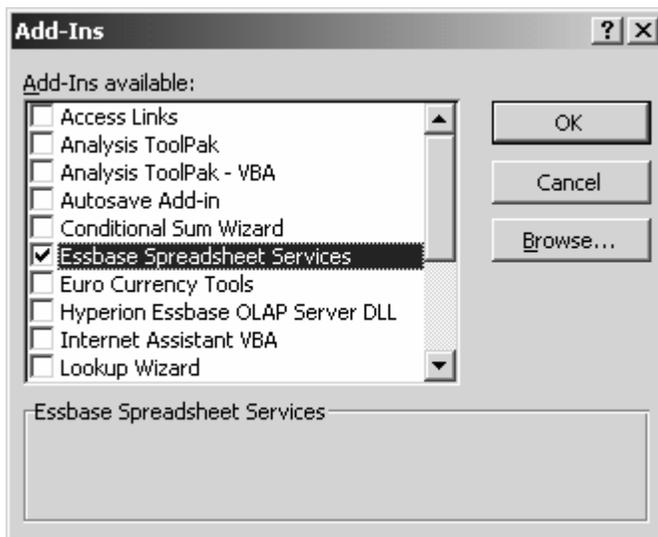


Figure 21 - Spreadsheet Services Add-ins window

If the fat client Spreadsheet Services add-in is selected when you open Excel, you might need to unselect it, close the Add-in menu, and click **Tools** → **Add-in** again to select the Enterprise Services add-in.

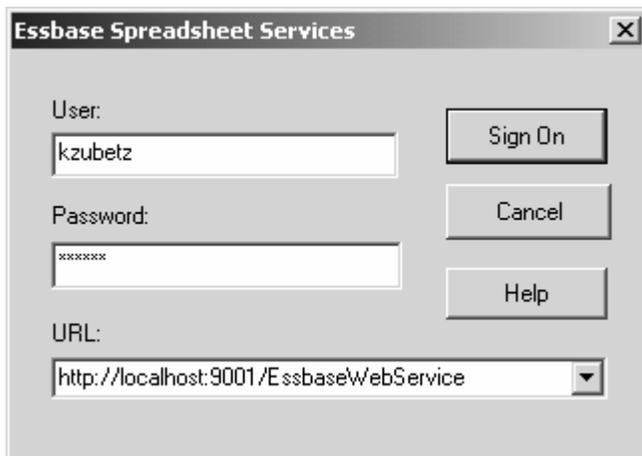


Figure 22 - Spreadsheet Services log on window

Deploying on a UNIX Tomcat instance:

Install OLAP Server Spreadsheet Services on Windows and follow the same steps for Windows deployment, with the following changes:

1. In step 3, move the `ess_webservice.jar` file from the `..\ess\lib` directory of your Windows system to the `..\tomcat\webapps\ROOT\WEB-INF\lib` directory of the UNIX system on which Enterprise Services and Tomcat are installed.
2. In step 4, save the `web.xml` file with the sample contents shown in step 4, to the `..\tomcat\webapps\ROOT\WEB-INF` directory located on your UNIX system. Edit the `web.xml` file so that it uses the `essbase.properties` file used by the Tomcat server and the correct path to that properties file.
3. Before restarting the Tomcat server in step 6, make sure that no other Web servers are running and that you set up the UNIX session environment to run the Enterprise Services server. Use the `..\ees\bin\startees` file as a reference for environment variable settings. Start the Tomcat server and validate that the Enterprise Services and OLAP Spreadsheet Services servlets are installed in your browser. Then start the DB2 OLAP server and connect from the Spreadsheet Services client.
4. If you want to deploy both Enterprise Services and Spreadsheet Services as servlets in Tomcat, combine the two `essbase.properties` files for Enterprise Services and Spreadsheet Services into one file that replaces the file referenced in step 11. The Spreadsheet Services properties file is located on the Windows system in the `../ess/bin/` directory. After combining the two files, save the new `essbase.properties` file to your UNIX system. The properties file can be located anywhere on the UNIX system, but the `web.xml` file must use the correct path to this properties file.

Edit the combined `essbase.properties` file to include the following changes instead of the changes noted in step 11 of the Windows deployment:

- Replace all occurrences of the ../data/.. path with the full ees_install_path/data/.. path. For example, the path might include the ../ees/data/.. directories.
- Change system.arborPath=../essolap where ../essolap is the full ees_install_path/essolap path.
- Change system.cmdShell.start=true to system.cmdShell.start=false.
- Make sure that the host is the machine name of the system that Enterprise Services is installed on, that orb Type=HTTP, and port=9001. A sample essbase.properties file is shown in the following example:

```
#####
# Essbase Properties File. Used by ESS
#####
webservice.request.redirect.enterpriseServer.host=callisto
webservice.request.redirect.enterpriseServer.orbType=http
webservice.request.redirect.enterpriseServer.port=9001
webservice.encoding=windows-1252
webservice.cubeview.useConnPool=true
webservice.cubeview.connPerOp=false
japi.netRetryCount=1
japi.netRetryInterval=5
#
# END- webservice settings.

# Essbase Properties File. Used by Essbase Enterprise Services.
#####

# License key.
# Substitute xxxxx with your actual license key before
starting the server.
licenseKey=xxxxx

# Data directory.
system.dataDir=/olaptest/olap81/ees/data

# Arbor path.
system.arborPath=/olaptest/olap81/ees/essolap

# Embedded Command console.
system.cmdShell.start=false

# Message log:
#   log.info      - log information.
#   log.error     - log errors.
#   log.request   - log requests.
#   log.file.enable - Enable logging to a file
#   log.file.name  - Name of the log file
#   log.file.option 0 - recreate log file every time EES
#                   server starts,
#                   1 - allow log file to grow
#                   indefinitely.
#
```

```

# log.file.buffer.size - Log buffer size. 0 - use default
# size.
#
system.log.info=true
system.log.error=true
system.log.request=true

system.log.file.enable=true
system.log.file.name=/olaptest/olap81/ees/data/essbase.log.txt
system.log.file.option=0
system.log.file.buffer.size=0

# Server TCP/IP settings.
server.tcpip.port=5001

# Location service.
service.location.start=false

# Messaging service. Set the email.server and email.sender
# below to suit your environment.
service.messaging.start=false
service.messaging.email.server=localhost
service.messaging.email.sender=admin@localhost

# system.faultTolerance
# onErrorCodes - List of error codes to handle.
# For eg: 1013095,1042006
# reconnectRetryOnSameSvcComp - EES will reconnect and retry
# the operation once on the
# same service component.
# retryOnSameSvcComp - EES will retry the operation
# once on the same service
# component.
# retryOnNextSvcComp - EES will retry the operation
# on the next service
# component in the cluster.
system.faultTolerance.retryOnSameSvcComp.onErrorCodes=
system.faultTolerance.reconnectRetryOnSameSvcComp.onErrorCodes
=1013095,1042006,1013136,1051021,1051010,1042017,1042013
system.faultTolerance.retryOnNextSvcComp.onErrorCodes=1013009,
1013204,1054009,1054010,1013110

#####
# BEGIN: Domain store (domain.store)
#
# Possible domain store types are: file, rdbms.
#
# Properties for file type:
# name - name of the domain store file name.
# Properties for rdbms type:
# driver - The jdbc driver, url - database url,
# user - rdbms user. Comment out this entry to use the
# starter of EES instead.
# password - rdbms user password.

```

```
#####
domain.store.type=file

# Domain store type: file
domain.store.file.name=/olaptest/olap81/ees/data/domain.db

# Domain store type: rdbms.
# DB2 entries:
#domain.store.rdbms.product=DB2
#domain.store.rdbms.jdbc.driver=COM.ibm.db2.jdbc.net.DB2Driver
#domain.store.rdbms.jdbc.url=jdbc:db2:localhost:essbase
#domain.store.rdbms.user=db2admin
#domain.store.rdbms.password=db2admin
#domain.store.rdbms.connectionPool.capacity=2

# Oracle entries:
#domain.store.rdbms.product=Oracle
#domain.store.rdbms.jdbc.driver=oracle.jdbc.driver.OracleDrive
# r
#domain.store.rdbms.jdbc.url=jdbc:oracle:thin:@localhost:1521:
# essbase
#domain.store.rdbms.user=scott
#domain.store.rdbms.password=tiger
#domain.store.rdbms.connectionPool.capacity=2

# SQLServer entries:
#domain.store.rdbms.product=SQLServer
#domain.store.rdbms.jdbc.driver=com.jnetdirect.jsql.JSQLDriver
#domain.store.rdbms.jdbc.url=jdbc:JSQLConnect://localhost/data
# base=essbase
#domain.store.rdbms.user=sa
#domain.store.rdbms.password=
#domain.store.rdbms.connectionPool.capacity=2
#####
# END: Domain store.
#####

#####
# BEGIN: Native security (nativeSecurity)
#
# Possible native security types are: ldap,winnt,custom.
#####
nativeSecurity.enabledProviders=

# Native security type: winnt.
nativeSecurity.winnt.domain=localhost

# Native security type: ldap.
nativeSecurity.ldap.host=localhost
nativeSecurity.ldap.port=389
nativeSecurity.ldap.admin.name=cn=Directory Manager
nativeSecurity.ldap.admin.password=password

# Native security type: custom.
```

```
nativeSecurity.custom.jspiAdapterClassName=com.essbase.samples
.jspi.NativeSecurity
#####
# END: Native security.
#####

# BEGIN: OLAP server (olap.server)
#
# autoStart - if true, start the OLAP agent if it is not
#             running.
# admin.name - admin name of the OLAP server. Make sure you
#             have a supervisor with that name in Essbase
#             OLAP server.
# admin.password - admin password. Make sure this is the right
#                 password.
# autoCreateUser - If a user exists in the EES store but not
#                 in the OLAP server security file, setting
#                 this option to true will direct the EES
#                 server to create that user in the OLAP
#                 server, when the user connects to the OLAP
#                 server. In order to create this user, EES
#                 will first login to OLAP server as the
#                 admin name specified above, create the user,
#                 and logs out.
# autoChangePassword - If a user exists in both the EES store
#                       and the OLAP server security file, but
#                       the passwords are different, this
#                       option will change the password in the
#                       OLAP security file to be the same as
#                       the password in the EES store. In order
#                       to change the password, EES will first
#                       login to OLAP server as the admin name
#                       specified above, change the password,
#                       and logs out.
#####
olap.server.autoStart=false
olap.server.admin.name=system
olap.server.admin.password=password
olap.server.autoCreateUser=false
olap.server.autoChangePassword=false
#####
# END: OLAP server.
#####
```