ENOVIA Unified Live Collaboration V6R2011 for PDM applications

Step-by-step guide for installing and configuring on IBM Power Systems servers running IBM AIX

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Abstract

This paper provides detailed installation and configuration instructions for ENOVIA Unified Live Collaboration V6R2011 products, similar to those that were previously branded as ENOVIA MatrixOne for IBM Power Systems servers that run the IBM AIX operating system. Included in this guide are general instructions on how to create a database for ENOVIA V6R2011 product data management (PDM) products and the deployment of the web tier by using IBM WebSphere Application Server. This paper also provides hints to help you use IBM DB2 Version 9.5 and Oracle database, although installation and configuration of DB2 V9.5 and Oracle is not within the scope of this guide.

Introduction

This guide is intended as a mechanism to educate Advanced Technical Support Specialists (ATSS) and Field Technical Support Specialists (FTSS) on the installation and configuration of ENOVIA V6R2011 product data management (PDM) applications on IBM® Power Systems™ servers that run the IBM AIX® Version 6.1 TL4/SP2 operating system (OS) in support of sales and evaluation engagements. This guide can be of assistance for direct client implementation, along with some hints on steps that might be necessary to install ENOVIA V6R2011 on the AIX 6.1 operating system for evaluation purposes. This guide supplements the ENOVIA V6R2011 installation documentation; it does not replace it. The focus here is to provide a targeted set of instructions to more quickly assist you in the initial installation of ENOVIA V6R2011 on IBM Power Systems servers that run the AIX operating system. It also describes the use of a set of utility programs that help automate this installation process. These utility programs are available on the same website where this paper is posted, with filename as v6r2011_AIX_Utility.tar.gz.

Many applications are available with ENOVIA V6R2011. This guide shows examples for typical applications that are deployed by many ENOVIA MatrixOne 10.8 customers; it does not provide comprehensive coverage of all ENOVIA V6R2011 applications that are available on Power Systems servers. This guide does not review the installation of client workstation applications, such as CATIA V6. However, “Appendix G: CATIA V6 connection to ENOVIA VPM Multi-Discipline Collaboration Platform” does provide hints on establishing connectivity to ENOVIA Multi-Discipline with CATIA V6.

This guide introduces check-point installation as a new feature in the ENOVIA V6 R2011 installation process. This helps administrators recover the broken installation because of unexpected system problems. Refer to “Appendix H: About the check-point installation feature” for more details.

V6R2011 installation environment

ENOVIA V6R2011 products were successfully installed in the following environment:

- IBM Power® 750 Model 8233-EAB with AIX 6.1 TL4/SP2 installed in a logical partition (LPAR), and an IBM BladeCenter® JS22 Express blade installed with AIX 6.1 TL4/SP4 .
  Note: You can use any server that runs AIX 6.1 TL4/SP2 (minimum level), supported by the 64-bit kernel; this guide focuses on currently marketed Power Systems servers with IBM POWER6™ processor-based technology. The suggested memory configuration is 16 GB, but installation efforts on servers with less memory were successful.
- IBM WebSphere® Application Server 7.0.5 or above
- IBM Java6 SR5 (minimum level) implementation of Java™ virtual machine (JVM)
- ENOVIA V6R2011
- IBM DB2® Version 9.5 FixPack 3, or IBM DB2 Version 9.7, or Oracle 10g (10.2.0.3), or Oracle 11g (11.1.0.6.0)
- GNU tar 1.21.1 or higher
  Note: For this guide, and the automation aides and all components were installed on the same system. It is possible for a more advanced installation to have the DB2 or Oracle database server on one system, with the DB2 or Oracle database client, WebSphere instance and the ENOVIA Unified Live Collaboration V6R2011 server software on another.

Read the ENOVIA Unified Live Collaboration V6R2011 program directory, which is found at **ibm.com**/software/applications/plm/support/doc.html (select **PLM Program Directories**, then **V6R2011**).

Overview of installation tasks

This section discusses the fundamental steps needed to install PDM server ENOVIA V6R2011 on AIX. A brief summary of the steps involved in the “Overview of prerequisites” section is followed by more detailed instructions in the “Overview of installing ENOVIA section.

Overview of prerequisites

Perform the following steps to install a web application in ENOVIA V6R2011:

1. Install a supported operating system, such as AIX 6.1 TL4/SP2.
2. Create users and the required file systems. Create a service user named, *ev6adm,* that belongs to a group *ev6adm*. Create sufficient disk space for the database tables and allocate it to the database user.
   - **DB2:** Make 20 GB available in the location specified for DatabasePath in the v6r2011_variables.ksh file, which is used to assist in creating the DB2 database. The directory that DatabasePath specifies must be owned by, and writable to, the DB2 database-instance owner (db2adm9).
   - **Oracle:** Make 20 GB available in the location specified for ORACLE_BASE in v6r2011_variables.ksh script, which is used to assist in creating the Oracle database.

   Sufficient disk space is needed in the file system where the V6R2011 products are installed (provide a minimum of 6 GB; and more disk space if you are also storing CATIA V6 design data).
3. Install the prerequisite middleware.
   a. DB2 V9.5 FP 3, or DB2 V9.7, or Oracle 10.2.0.3 / Oracle 11.1.0.6.0

4. Install a suitable Java 2 Enterprise Edition (J2EE) server, such as WebSphere Application Server 7.0.5 or above, as well as the associated HTTP server (such as IBM HTTP Server).
    a. A separate guide describes the process of installing WebSphere Application Server (Refer to “Appendix I: Resources” for the Web site).
5. Install the GNU tar to handle the long-link names that are used in the V6R2011 tar zip (extension tar.gz) files.
6. Create a database with the correct characteristics needed for the ENOVIA V6R2011 products.
7. Install the ENOVIA V6R2011 components, Distributed License (DS) License Server and setup, along with obtaining the required License Use Management (LUM).
8. Deploy the web application (ematrix.ear) into the J2EE server.
    a. Stop and restart the WebSphere processes because the V6R2011 installation modifies the **startServer.sh** script and the changes take effect only after a restart.
9. Connect to the application to validate the installation.

Overview of installing ENOVIA V6R2011

The following is a summary of the steps to install ENOVIA V6R2011 on a Power Systems server with AIX 6.1. Other sections provide further details on these steps and further information about steps 19 and 20 are described in the “Installing ENOVIA V6R2011 with utility programs” section.

1. Create the /staging/V6R2011 file system with a size of 15 GB to store the installation files.
2. Create the /usr/V6R2011 file system with a size of 6 GB.
3. Create the /usr/V6R2011/staging directory.
4. Ensure that Java6 SR5 (minimum) is installed and that the PATH variable is set so that /usr/java6/bin is located ahead of other Java releases.
5. Copy the v6r2011_AIX_Utility.tar file into the /staging/V6R2011 file system.
6. Extract the files from the v6r2011_AIX_Utility.tar file.
7. V6R2011 needs access to licenses served from the DS License Server; the DS License Server may either be installed on the same AIX server where V6R2011 is installed, or the V6R2011 server may be set up as a DS License Server client to a remote DS License Server. Refer to “Appendix D: DS License Server installation and setup” for more details.
8. Make the required modifications to the **v6r2011_variables.ksh** script.
9. For DB2 database, create an user, *ev6adm*, with group membership, *ev6adm*.
10. Create database user and groups:
    - For DB2 database, create user *db2adm9* with group membership *db2*. And create user *db2cli94* with group membership *db2*.

      Or
    - For Oracle database, create user *oracle* with group membership *dba.*
11. Ensure that the passwords match those that are specified in the **v6r2011_variables.ksh** script.
12. Set the limit values in /etc/security/limits for root and for the created users to *unlimited* (value of **-1**) for file, core, data, rss and 65536 for the stack value, as shown below.

    fsize = -1
    core = -1
    data = -1
    rss = -1
    stack = 65536

NOTE: The expected limit values are checked in the prerequisite check subroutine and warn the users, if they do not match; this subroutine runs prior to actual installation.

13. For the DB2 database, create the /Data/DB2/V6R2011 file system at 20 GB and change its ownership to *db2adm9.db2*.
14. Create the /usr/IBM file system with a size of 4 GB to use for WebSphere and IBM HTTP Server.
15. Install WebSphere and IBM HTTP Server (this guide does not document the installation process).
16. Install the database server and client component:
    a. Install DB2 V9.5 FixPack 3 or DB V9.7 (not documented in this guide) and create the db2adm9 database instance and the db2cli94 client-database instance.
    b. Install Oracle 10.2.0.3/11.1.0.6.0 (not documented in this guide) and create the Oracle database and start the listener (LISTENER).
17. Copy the required installation files from the ENOVIA V6R2011 product media CDs or DVDs into the /staging/V6R2011 directory. For details, refer to “Appendix C: Installation files,”.
18. Obtain and install the GNU tar utility (version 1.21.1 or higher), Refer to “GNU tar” for more details.
19. Create the R2011 database and configure.

    For DB2:

    a. Run the **enoviav6r2011_db2.ksh** script to create and catalog it to the client database.

       Note: /Data/DB2/V6R2011, which is the directory location specified by DatabasePath, must exist and be owned by the database-instance owner (in this case, *db2adm9.db2)*, before running the **enoviav6r2011_db2.ksh** script.

    For Oracle:

    a. Run the **enoviav6r2011_oracle.ksh** script.

       Notes: Ensure that the listener with name LISTENER is not running and exists with a port other than 1521 (check the content of *ORACLE_HOME*/network/admin/listener.ora). The enoviav6r2011_oracle.ksh shell script stops the LISTENER, if it is running.

    b. The enoviav6r2011_oracle.ksh script also modifies the .profile of the Oracle user to run a shell script that sets the value of the ORACLE_SID variable and modifies the PATH so that required Oracle commands can be found when running the preq_checks.ksh script. If you create the database manually, make equivalent modifications to the Oracle user .profile.
20. Enroll the licenses into the DS License Server and make sure that the ENOVIA V6 is able to access the license server. Information on license server setup and configuration is provided in the DSLS.pdf file delivered with the ENOVIA V6 installation files.
21. Add /usr/java6/bin to PATH (for example: **export PATH=/usr/java6/bin:$PATH**) in a Virtual Network Computing (VNC) shell window, where root runs the .ksh files:
    a. Run **ulimit -d unlimited** to set the value of maximum data to *unlimited*.
       Hint: Before running the remaining steps, ensure that the names for the files match those specified in the **v6r2011_variables.ksh** file.
    b. Run the **ksh ./v6r2011_install.ksh** script.

       Hint: After the script starts running, within 5 minutes from the start, it prompts for user input, which is described in the “Setting up the connection file” section.
22. Connect to ENOVIA V6R2011 with the Test Everything user at: http://tau.austin.ibm.com/ematrix/emxLogin.jsp.

Utilities provided in v6r2011_AIX_Utility.tar

Utility files are provided to assist you in the creation of a DB2 and Oracle database and in cataloging the database to make it available through the DB2 and Oracle client-database mechanism, assuming that you have already installed DB2 and created the server and client instances.

This guide also provides hints on various db2set parameters that you need to set (see “Appendix B: DB2 hints”) based on the information found in the *ENOVIA Unified Live Collaboration V6 R2011 Server Install Guide* (this PDF file is delivered with the media when you obtain the requisite license).

Utility files automate much of the V6R2011 installation to help you get the installation up and running.

More details about these *as-is provided* utilities and their intended purposes appear later in this guide.

Operating system

You need to install the Power Systems server with the correct prerequisite software.

AIX 6.1 TL4/SP2 is suggested as the minimum AIX level as this is the level that has been qualified with ENOVIA V6 on IBM POWER7® processor-based servers. A proof of concept validation was also done in an AIX 6.1 TL5 LPAR (with eight processor cores and 32 GB of memory) on the new IBM Power 750 server.

An installation guide for PDM applications in Workload Partitions (WPARs) is available at: **ibm.com**/partnerworld/wps/servlet/ContentHandler/whitepaper/aix/v6r1/install

WPARs provide administrator flexibility, letting them create a test environment that does not require you to define and install a separate AIX LPAR. Installing ENOVIA V6R2011 products in a WPAR was part of a proof-of-concept to investigate the usage of WPARs with PDM applications.

Database server

You must install a database server and, then, properly create and configure a database (DB2 V9.5 FixPack3, DB2 V9.7, Oracle 10.2.0.3 and Oracle 11.1.0.6.0 used for this project). Refer to the Oracle support site for any patches required for Oracle.

DB2 V9.5 FixPack3 on Power Systems servers with AIX was subjected to extensive testing in the IBM Dassault Systèmes International Competency Center (IDSICC) to validate the scalability of the total IBM solution for ENOVIA Multi-Discipline Virtual Product Management (VPM).

J2EE application server

It is necessary to install a J2EE application server on the same system where you install ENOVIA V6R2011. WebSphere Application Server 7.0 at FixPack 11 is used for the installation process that is described in this guide. IBM HTTP Server, which is delivered with WebSphere Application Server, is also used to provide HTTP services.

WebSphere Application Server on Power Systems servers with AIX was subjected to extensive testing in the IDSICC to validate the scalability of the total IBM solution for ENOVIA Multi-Discipline VPM.

License server (DS License Server)

V6R2011 needs access to licenses served from the DS License Server, which can be installed on the same AIX server as V6R2011, or the V6R2011 server can be set up as a client of the DS License Server to a remote DS License Server (see “Appendix D: DS License Server installation and setup”).

Obtaining and staging installation files to disk

You can copy the installation files either from the product media CDs or DVDs.

> **Hint:** If an unzip utility is not installed, the jar utility with xvf options lets you extract the contents for installing on AIX. When transferring the files to AIX, they exceed the default *ulimit* value for file size; therefore, increase the ulimit to **-1**; then stop and restart the *inetd service/daemon process* to affect the change for the FTP transfer. Because the files are binary, when transferring them from a Microsoft® Windows® based system, remember to use .bin as the file extension for the FTP transfer.

Many extracted files are tar files (GNU Zip [.gz] compressed). Unzip is available in the Linux® Affinity Toolkit (downloaded at: **ibm.com**/systems/power/software/aix/linux/toolbox/download.html).

As described elsewhere in this guide, the tar files are created in a manner that is not fully compatible with the tar utility that is delivered with AIX. Obtaining the GNU tar program is one of the methods to extract these files and avoid errors that result if the tar extraction does not perform properly.

Installing ENOVIA V6R2011 with utility programs

This section explains the scripts and steps for installing ENOVIA V6R2011 and further describes steps 19 and 20, which are found in the “Overview of installing ENOVIA section.

v6r2011_AIX_Utility.tar (files provided and their purpose)

A tar file (v6r2011_AIX_Utility.tar) is provided with this guide. It contains the following shell scripts:

- **enoviav6r2011_db2.ksh:** This script creates and catalogs a DB2 database (R2011) that is used for the ENOVIA installation.
- **db2_create_db.txt:** This script runs as the DB2 instance owner (db2adm9) to create a database.
- **db2_client_catalog.txt:** This script runs as the DB2 client-instance owner (db2cli94) to catalog the database to the client instance.
- **enoviav6r2011_oracle.ksh:** This script creates the R2011 database used for ENOVIA installation.
- **addtablesR2011.txt:** This script file creates the required tables into the R2011 database that is used for ENOVIA installation. This file provides input for the **enoviav6r2011_oracle.ksh** script.
- **importfile.txt:** This configuration-file script is required to create additional ENOVIA VPM Multi-Discipline Collaboration Platform users, which is used by the **v6r2011_post_was_install.ksh** script.
- **v6r2011_variables.ksh:** This script contains environment variables that are used in the installation process. Modifications to user IDs, file names, and paths are performed in this file.

- **v6r2011_install.ksh:** This script automates installation. Primary modifications to this file include selecting the products to install and commenting out those that are not to be installed.
- **preq_checks.ksh:** This script performs validation before installation begins.
- **preinstall_bps.ksh:** The **v6r2011_install.ksh script** calls this script to slightly modify the DB2 database after the bootstrap-file creation is done, but before the business process services installation runs. (This script runs by using the **su** command as the DB2 instance owner.)
- **v6r2011_was_install.ksh:** This script deploys the ematrix web application by using a WebSphere command-line interface (**wsadmin** script).
- **v6r2011_post_was_install.ksh:** This script runs after the deployment of the ematrix.ear file is done in the WebSphere instance.
- The files with .py extensions are jython scripts to automate operations on the ematrix web-application deployment by using the wsadmin script.
- The license file named *v6r2011-product.lic* is a LICENSE_FILE environment variable into v6r2011_variables.ksh and is an input to the v6r2011_post_was_install.ksh script.

NOTE: This user license association file should have a Matrix Query Language (MQL) statement to connect as user *creator*. Therefore, the first line of the script (after the license details) has to be **set context user creator.** At the end of the script, the last line has to be **quit;** to disconnect from MQL.

Using installation aides

Log in as *super user* (root) and perform the tasks mentioned in Step1, Step2, and Step3 explained in more detail immediately following this brief list.

Running the **./v6r2011_install.ksh 2>&1 | tee /tmp/install.tee** command invokes the assisted installation and stores the results in a file that you can view for any problems that are not stored in log files created in /tmp.

Note: Scripts v6r2011_was_intsall.ksh and v6r2011_post_was_install.ksh are run as part of the v6r2011_install.ksh script with this release.

Step 1: Installing ENOVIA (v6r2011_install.ksh)

The steps that follow allow you to install ENOVIA by using the v6r2011_install.ksh script.

1. Install ENOVIA Studio Modeling Platform. The primary location is INSTALL_PATH/matrix. During this step, you enter the database information to create the bootstrap file (as described in the “System Manager session**”** section of this guide).
2. Install ENOVIA Unified Live Collaboration server. The primary location is INSTALL_PATH/matrixRMI. The installer also modifies the WebSphere startServer.sh file to add the environment variables that are needed for ENOVIA V6R2011.
3. Install the Business Process Services, including several components (Application Exchange Framework, Common Components, TeamCentral and Business Metrics Module and others).
4. Install the ENOVIA products, such as the various central files (Engineering Central, Program Central and others). Many of the files are written in directories under INSTALL_PATH/matrix/Apps, and the schema installer performs the database modifications.
5. Install any Accelerator product that is to be used – this step is not automated by the **v6r2011_install.ksh** script. In all these cases, verify the existence of any prerequisites and

platform support in the ENOVIA documentation. Because the Accelerators are industry-specific and have particular product prerequisites, the scripts do not automate the installation of these products. Tips on how to answer the questions when manually running the installer are provided to assist those who need to install any Accelerators.

6. If the ENOVIA Unified Live Collaboration server is to host the ENOVIA VPM Multi-Discipline Collaboration Platform, install this software and run it in the **v6r2011_install.ksh** script.
7. Compile the JavaServer Pages (JSP) files. This is recommended to improve performance. The logic to perform this exists in **v6r2011_post_was_install.ksh** script. You might need to do the compilation after the web application is deployed and started in the WebSphere instance.
8. **v6r2011_post_was_install.ksh** associates the set of users for respective product access.

Step 2: Creating the web application (run_warutil in v6r2011_install.ksh)

Build the ematrix web application by running the **run_warutil** subroutine in the **v6r2011_install.ksh** program.

Step 3: Deploying the web application (v6r2011_was_install.ksh)

Deploy the web application in the WebSphere instance by using the **wsadmin** command-line interface. A set of jython scripts (*.py) are included to perform these administrative tasks.

Step 4: Deploying WebSphere (v6r2011_post_was_install.ksh)

After installing the ematrix web application and starting the WebSphere instance, compile the JSP files.

The purpose of the **v6r2011_post_was_install.ksh** script is to perform steps that might be needed after the WebSphere deployment, when the ENOVIA VPM Multi-Discipline Collaboration Platform product is installed.

Step 5: Creating optional additional ENOVIA VPM Multi-Discipline Collaboration Platform users (v6r2011_post_was_install.ksh)

If ENOVIA VPM Multi-Discipline Collaboration Platform is installed, you can create more users to access ENOVIA VPM Multi-Discipline Collaboration Platform from CATIA V6 client systems.

Step 6: Associating the product licenses to the users

This step runs the MQL interface to associate the set of users to the product licenses.

Steps not automated or documented

Installing and setting up the CATIA V6 workstation integration is not in the scope of this guide. IBM and Dassault Systèmes CATIA V6 documentation explains installing CATIA V6 and configuring server access. (These PDFs ship with the media.) “Appendix G: CATIA V6 connection to ENOVIA VPM Multi-Discipline Collaboration Platform**”** offers graphical hints to configure the connection between CATIA V6 and ENOVIA V6 PDM.

Assumptions: Prerequisite software installs

This guide assumes DB2 V9.5 FixPack3 or DB2 V9.7 or Oracle 10.2.0.3 (10g) or Oracle 11.1.0.6.0 (11g) and WebSphere Application Server 7.0 FP 7 or FP11 are installed and configured. DS License Server can be installed and configured on the local or remote server for testing.

GNU tar

In the tar extraction of several GNU Zip (gz) files with the AIX **tar** command, the process shows various LongLink errors. This leads to problems with the V6R2011 installation that are avoided by installing the GNU **tar** extraction tool. The original Portable Operating System Interface (POSIX) format handles only 100 characters for link names; using the GNU **tar** utility avoids the extraction errors. The GNU **tar** utility installs in /opt/freeware/bin, so this must be the first location in the PATH variable to ensure using the proper **tar** utility for the tar extraction. The following example installation utility modifies the PATH to use the tar utility (located in /opt/freeware/bin).

1. Download the tar-1.21-1.aix6.1.ppc.rpm file from the following website:
   http://gnome.bullfreeware.com/aixtoolbox/RPMS/ppc/tar/tar-1.21-1.aix6.1.ppc.rpm
2. Install the downloaded RPM package using following command:
   # rpm –Uvh tar-1.21-1.aix6.1.ppc.rpm
3. Set up the environment for the required tar version:
4. Run the following command: # **export PATH=/opt/freeware/bin:$PATH**

Creating a DB2 database for ENOVIA V6R2011

You must create a database instance by using a script, based on the parameters specified in the *ENOVIA Unified Live Collaboration V6R2011 Installation Guide* (this PDF is delivered with the product media). After the database-creation scripts complete, an R2011 database is created to install ENOVIA V6R2011.

The specified parameters are those recommended for the traditional products previously branded as MatrixOne and are based on values described in the *ENOVIA Unified Live Collaboration VR2011 Server Installation Guide.* (This PDF is delivered with the product media). If the primary purpose of the installation is to support the ENOVIA Multi-Discipline VPM platform, you must alter some parameters. See the *Overview of the ENOVIA VPM Multi-Discipline Collaboration platform* (this PDF is delivered with the product media) for details about the suggested settings for ENOVIA VPM Multi-Discipline Collaboration Platform. As described in the ENOVIA documentation, a client-database instance is created for the ENOVIA Unified Live Collaboration server to access.

It is possible to use the EXTSHM=ON variable to avoid having the client database; however, the authors of this guide chose to use the client instance. This makes it easier to eventually separate the ENOVIA Unified Live Collaboration server to a different server or LPAR from the DB2 server.

A typical best practice for a production environment is to have the database running in another system image than that of the application server. This requires the specification of different tuning parameters, as required by the various workloads.

In this installation example, the database users are: user *db2adm9* as the DB2 database-instance owner, user *db2cli94* as the DB2 client-database owner, and AIX user *ev6adm* (which belongs to the ev6adm group) as the owner of the V6R2011 tables. The location where the database and tables are stored need to have at least 20 GB of available space.

Creating an Oracle database for ENOVIA V6R2011

You need to create a database instance by using a script based on the parameters specified in the *ENOVIA Unified Live Collaboration V6R2011 Installation Guide* (this PDF is delivered with the product

media). After the database-creation scripts complete, an R2011 database is created to install ENOVIA V6R2011.

The specified parameters are those recommended for the traditional products that were previously branded as MatrixOne and are based on values described in the *ENOVIA Unified Live Collaboration VR2011 Server Installation Guide* (this PDF is delivered with the product media). If the primary purpose of the installation is to support the ENOVIA Multi-Discipline VPM platform, you need to alter some parameters. See the *Overview of the ENOVIA VPM Multi-Discipline Collaboration platform* (this PDF is delivered with the product media) for suggested settings for ENOVIA VPM Multi-Discipline Collaboration Platform.

As described in the ENOVIA installation documentation, a client-database instance is created for the ENOVIA Unified Live Collaboration server to access.

You can use the EXTSHM=ON variable to avoid a client database; but this example uses the client instance. This makes it easier to later move the ENOVIA Unified Live Collaboration server to a different server or LPAR from the Oracle server.

A typical best practice for a production environment is to run the database in another system image than that of the application server. This requires the specification of different tuning parameters, based on the various workloads.

In this installation example, the database users are: user *ITTEST* as the database-instance owner and AIX user *ev6adm* (which belongs to the ev6adm group) as the owner of the V6R2011 tables.

The location where the database and tables are stored must have at least 20 GB of available space. **Note**: Ensure that the listener with name LISTENER is not running and exists with a port other than 1521 (check the content of ***ORACLE_HOME***/network/admin/listener.ora).

Example wrapper script for creating the R2011 database in DB2

The following script creates a DB2 database, using environment variables in **v6r2011_variables.ksh**; therefore, you must make suitable modifications to that script. You might need to alter the values for the DatabasePath, DatabaseName and PLMADMIN variables, along with a global change of R2011 to the name you want to provide to the database. (**Hint:** The directory that DatabasePath specifies must exist and be writable by the database-instance owner; otherwise, the database creation fails. Also, it requires directories named 1, 2, 3, 4, DBPATH, and DBLOG). Run this script as the DB2 database-instance owner (db2adm9).

```
#!/usr/bin/ksh
################################################################################
# File : enoviav6r2011_db2.ksh
# Genesis : Mar 2010
# IBM STG ISV Enablement
# Gary Hornyak, Sachin N Bhandare
# Provided As-is
# Purpose : Run to create the DB2 database that will be used for the V6R2011 install
#      prerequisite the location specified by DatabasePath must exist and be owned by
#      the database instance owner
#
#-- Minimum of 6 GB free disk space on $DatabasePath
#
################################################################################
DIRNAME=$(dirname $0)
```

```
#############################################################
#Export the required environment variables from the file.
#############################################################
setEnvVars () {

       cd $DIRNAME
       export SCRIPTPATH=`pwd`
       cd -

       if [[ -f $SCRIPTPATH/v6r2011_variables.ksh ]] ; then
              . $SCRIPTPATH/v6r2011_variables.ksh
       else
              print "$0: ERROR - variable file not found" >&2
              exit 1
       fi
}

################################################
# Function to check the existance of DB2 instance
# Returns
# 0 - If it does not exists
# 1 - If it does exists
################################################
doesDB2DatabaseExists() {

       ret=`su - $DB2CLIENT -c "db2 connect to $DatabaseName user $V6ADMIN using
$V6ADM_PASSWORD" > /dev/null `
       if [[ $? -eq 0 ]]; then
              print " DB2 instance ($DatabaseName) exists" >&2
              ret=`su - $DB2CLIENT -c "db2 connect reset" > /dev/null`
              return 1
       else
              print " DB2 instance ($DatabaseName) does not exists" >&2
              return 0
       fi
}

db2set() {

       echo "Script path -> $SCRIPTPATH"
       su - $DB2_SERVER_INSTANCE -c "ksh $SCRIPTPATH/db2set.txt $SCRIPTPATH"
       if [[ $? -ne 0 ]]; then
              echo "db2set - retrun value $?"
              exit 1
       fi
}

#############################################################
# Basic environment varaibles for DB2 database creation
#############################################################
#checkDB2Env() {
#        if [[ -d $DatabasePath ]]; then
#        else
#                exit 1
#        fi
#}

#############################################################################################
####
# Crate the DB2 database for ENOVIA V6R2011
```

```
################################################################################
####
createDatabase() {

       if ! doesDB2DatabaseExists; then
              print " Dropping the database ($DatabaseName) ..." >&2
              su - $DB2_SERVER_INSTANCE -c "db2 force application all; db2 drop
database $DatabaseName" > /dev/null
       fi

       print "Creating a database ($DatabaseName) ..." >&2

       LOG_FILE=/tmp/db2_create_database.log
       su - $DB2_SERVER_INSTANCE -c "ksh $SCRIPTPATH/db2_create_db.txt $SCRIPTPATH" >
$LOG_FILE


#        if [[ $? -eq 0 ]]; then
#            print "[DONE]" >&2
#        else
#            print "[FAILED]" >&2
#                  print "[INFO] Refer log file ($LOG_FILE) for more details." >&2
#                  exit 1
#        fi
}

#########################################################################
# Create table space required, prior to ENOVIA V6R2011 installation
#########################################################################
catalogDatabase() {

        LOG_FILE=/tmp/db2_client_catalog.log
       print "Catalog DB2 database ($DatabaseName) ..." >&2

       su - $DB2CLIENT -c "ksh $SCRIPTPATH/db2_client_catalog.txt $SCRIPTPATH" >
$LOG_FILE

        if [[ $? -eq 0 ]]; then
                print "[DONE]" >&2
                rm $LOG_FILE
            return 0
        else
            print "[FAILED]" >&2
            print "[INFO] Refer log file ($LOG_FILE) for more details." >&2
                exit 1
        fi
}


#=========================================
#     M A I N
#=========================================

# Activate the debugging for all functions
#set -x ;for i in $(typeset +f); do     typeset -ft $i; done

setEnvVars
db2set
createDatabase
catalogDatabase
```

Example script for creating the R2011 database in DB2

The following example script runs as the DB2 database owner (db2adm9) to create a database R2011. This script is input to enoviav6r2011_db2.ksh.

```
#! /bin/ksh
#########################################################################################
#######################
#
# File: db2_create_db.txt
# Genesis : Jan 2010
# IBM STG ISV Enablement
# Gary Hornyak, Sachin N Bhandare
# Provided As-is
# Purpose : run as DB2 Instance Owner to create the database that will be used for the
V6R2010 install
# prerequisite the location specified by DatabasePath must exist and be owned by the
database instance owner
#             the PLMADMIN needs to be an existing AIX user
#
#-- Minimum of 5 GB free disk space on $DatabasePath
#-- Tablespaces for MX and LX tables segmented by DATA, INDEX, LONG
#-- Separate Tablespace for MXPROPERTY (MXPROP and MXPROP_I for indexes) as this table
often contains >100k rows
#
#########################################################################################
#######################

DIRNAME=$(dirname 0)
cd $DIRNAME
#export SCRIPTPATH=`pwd`
export SCRIPTPATH=$1
#cd -
if [[ -f $SCRIPTPATH/v6r2011_variables.ksh ]] ; then
       . $SCRIPTPATH/v6r2011_variables.ksh
else
       echo "$0: variable file not present, exiting"
       exit 1
fi

/usr/bin/mkdir -p $DatabasePath/1
/usr/bin/mkdir -p $DatabasePath/2
/usr/bin/mkdir -p $DatabasePath/3
/usr/bin/mkdir -p $DatabasePath/4
/usr/bin/mkdir -p $DatabasePath/DBPATH

db2 -tv<<EOF
CREATE DATABASE $DatabaseName AUTOMATIC STORAGE YES ON
$DatabasePath/1,$DatabasePath/2,$DatabasePath/3,$DatabasePath/4 DBPATH ON
$DatabasePath/DBPATH USING CODESET UTF-8 TERRITORY US COLLATE USING SYSTEM PAGESIZE
32768;
CONNECT TO $DatabaseName;
-- Smaller buffer pools all start at 200MB; large buffer pool for vaults starts at 2
GB
-- To calculate size : SIZE * 32768 / 1024 / 1024 in MB
-- Alternatives: Separate bufferpools for large LX tables, for the MXPROP tablespace,
etc.

CREATE BUFFERPOOL USRTMPBP SIZE 6400 AUTOMATIC PAGESIZE 32768 ;
```

```
CREATE BUFFERPOOL TEMPBP SIZE 6400 AUTOMATIC PAGESIZE 32768 ;
CREATE BUFFERPOOL MXBP SIZE 6400 AUTOMATIC PAGESIZE 32768 ;
CREATE BUFFERPOOL LXBP SIZE 64000 AUTOMATIC PAGESIZE 32768 ;

DISCONNECT current ;
CONNECT TO $DatabaseName;

CREATE USER TEMPORARY TABLESPACE USERTEMP1 PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
  BUFFERPOOL USRTMPBP NO FILE SYSTEM CACHING DROPPED TABLE RECOVERY OFF;

CREATE SYSTEM TEMPORARY TABLESPACE TEMPSPACE2 PAGESIZE 32768 MANAGED BY AUTOMATIC
STORAGE
  BUFFERPOOL TEMPBP NO FILE SYSTEM CACHING DROPPED TABLE RECOVERY OFF;

DROP TABLESPACE TEMPSPACE1;

CREATE  LARGE TABLESPACE MX_DATA PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
               BUFFERPOOL MXBP
               INITIALSIZE 100 M
               INCREASESIZE 20 PERCENT
               PREFETCHSIZE 32;
CREATE  LARGE TABLESPACE MX_INDEX PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
               BUFFERPOOL MXBP
               INITIALSIZE 100 M
               INCREASESIZE 20 PERCENT
               PREFETCHSIZE 32;
CREATE  LARGE TABLESPACE MX_LONG PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
              BUFFERPOOL MXBP
              INITIALSIZE 100 M
              INCREASESIZE 20 PERCENT
              PREFETCHSIZE 32
              FILE SYSTEM CACHING;
CREATE  LARGE TABLESPACE MXPROP PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
              BUFFERPOOL MXBP
              INITIALSIZE 100 M
              INCREASESIZE 20 PERCENT
              PREFETCHSIZE 32;
CREATE  LARGE TABLESPACE MXPROP_I PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
              BUFFERPOOL MXBP
              INITIALSIZE 100 M
              INCREASESIZE 20 PERCENT
              PREFETCHSIZE 32;
CREATE  LARGE TABLESPACE LX_DATA PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
          BUFFERPOOL LXBP
          INITIALSIZE 1 G
          INCREASESIZE 20 PERCENT
          PREFETCHSIZE 32;
CREATE  LARGE TABLESPACE LX_INDEX PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
          BUFFERPOOL LXBP
          INITIALSIZE 1 G
          INCREASESIZE 20 PERCENT
          PREFETCHSIZE 32;
CREATE  LARGE TABLESPACE LX_LONG PAGESIZE 32768 MANAGED BY AUTOMATIC STORAGE
          BUFFERPOOL LXBP
          INITIALSIZE 1 G
          INCREASESIZE 5 PERCENT
          PREFETCHSIZE 32
          FILE SYSTEM CACHING;

update db cfg for $DatabaseName using
SHEAPTHRES_SHR AUTOMATIC
SORTHEAP 5000
```

```
MAXAPPLS AUTOMATIC
APPLHEAPSZ AUTOMATIC
STMTHEAP 8000
DBHEAP AUTOMATIC
CATALOGCACHE_SZ 6000
LOGBUFSZ 2048
UTIL_HEAP_SZ 15000
STAT_HEAP_SZ AUTOMATIC
LOGFILSIZ 25000
LOGPRIMARY 30
LOGSECOND 10
logarchmeth1 OFF
logarchmeth2 OFF
newlogpath $DatabasePath/DBLOG
PCKCACHESZ AUTOMATIC
SELF_TUNING_MEM ON
LOCKLIST AUTOMATIC
MAXLOCKS AUTOMATIC
NUM_IOSERVERS 255
LOCKTIMEOUT -1
DFT_QUERYOPT 3
AUTO_MAINT OFF
DFT_DEGREE 1
MAXFILOP 32768
APPL_MEMORY AUTOMATIC;

update dbm cfg using
NUMDB 5
DIAGLEVEL 3
NOTIFYLEVEL 3
DFT_MON_BUFPOOL ON
DFT_MON_LOCK ON
DFT_MON_SORT ON
DFT_MON_STMT ON
DFT_MON_TABLE ON
DFT_MON_TIMESTAMP ON
DFT_MON_UOW ON
HEALTH_MON OFF
MON_HEAP_SZ AUTOMATIC
JAVA_HEAP_SZ 2048
AUDIT_BUF_SZ 0
INSTANCE_MEMORY AUTOMATIC
BACKBUFSZ 10240
RESTBUFSZ 10240
SHEAPTHRES 0
ASLHEAPSZ 64
RQRIOBLK 32767
QUERY_HEAP_SZ 10000
MAX_CONNECTIONS AUTOMATIC
NUM_INITAGENTS 0
KEEPFENCED YES
SPM_NAME ''
MAX_QUERYDEGREE ANY
INTRA_PARALLEL NO
NUM_POOLAGENTS AUTOMATIC
FENCED_POOL AUTOMATIC;

GRANT
DBADM,CREATETAB,BINDADD,CONNECT,CREATE_NOT_FENCED_ROUTINE,IMPLICIT_SCHEMA,LOAD,CREATE_
EXTERNAL_ROUTINE,QUIESCE_CONNECT ON DATABASE TO USER $DatabaseSchema;
GRANT USE OF TABLESPACE USERSPACE1 TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE USERTEMP TO USER $DatabaseSchema WITH GRANT OPTION;
```

```
GRANT USE OF TABLESPACE MX_DATA TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE MX_INDEX TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE MXPROP TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE MXPROP_I TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE MX_LONG TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE LX_DATA TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE LX_INDEX TO USER $DatabaseSchema WITH GRANT OPTION;
GRANT USE OF TABLESPACE LX_LONG TO USER $DatabaseSchema WITH GRANT OPTION;

bind  $DatabaseBinariesPath/bnd/db2clipk.bnd collection NULLIDRA;
update cli cfg for section $DatabaseName using SQL_ATTR_REOPT 4;
DISCONNECT current ;

terminate;
EOF
```

Cataloging the database for access by the DB2 client-database instance

The following example script runs as the DB2 client-database owner (db2cli94) on the same server where the DB2 database is installed. The **db2_client_catalog.txt** script file retrieves parameters from the **v6r2011_variable.ksh** script.

```
#!/bin/ksh
################################################################################################
#
# File : db2_client_catalog.txt
# Utility used to catalog the database onto the database client
# Genesis: Wed Aug 19 01:08:25 CDT 2009
# IBM STG ISV Enabalement
# Gary Hornyak
# Usage: To be run as the client database owner to establish client database access
#
################################################################################################
DIRNAME=$(dirname $0)
cd $DIRNAME
export SCRIPTPATH=`pwd`
cd -
if [[ -f "$SCRIPTPATH/v6r2011_variables.ksh" ]] ; then
       . $SCRIPTPATH/v6r2011_variables.ksh
else
       print "$0: variable file not present, exiting" >&2
       exit 1
fi

print "************ DATABASE CATALOG ***********" >&2
db2 "uncatalog database $DatabaseName"
db2 "uncatalog node $DB2SERVER_NODE"
db2 "catalog tcpip node $DB2SERVER_NODE remote $DB2SERVER_HOST server
$MyService_name"
db2 "catalog database $DatabaseName as $DatabaseName at node $DB2SERVER_NODE"
db2 "terminate"

print "************ VERIFICATION CATALOG *********" >&2
db2 "connect to $DatabaseName user $DB2CLIENT using $DB2CLIENT_PASSWORD"
db2 "list tables for all"
db2 "terminate"
db2 "LIST DATABASE DIRECTORY"
db2 "LIST NODE DIRECTORY"
```

Example script for creating the R2011 database in Oracle

The following sample script, which creates Oracle database and populates the required tables using the addtablesR2011.txt file, uses the environment variables specified in the **v6r2011_variables.ksh** script; therefore, you must make suitable modifications in the **v6r2011_variables.ksh** script as shown in the script..

```
#!/usr/bin/ksh
##############################################################################################
# File : enoviav6r2011_oracle.ksh
# Genesis : Jan 2010
# IBM STG ISV Enablement
# Gary Hornyak, Sachin N Bhandare
# Provided As-is
# Purpose : Run to create the database that will be used for the V6R2010 install
#      prerequisite the location specified by ORACLE_HOME must exist and be owned by
#      the database instance owner
#
#-- Minimum of 5 GB free disk space on $ORACLE_HOME
#
##############################################################################################
DIRNAME=$(dirname $0)

#################################################################
#Setup the environment variables and .profile for oracle user
#################################################################
updateOracleUserProfile() {

       print "Setting up oracle environment variables for oracle user."
        ENV_FILENAME="set_$ORACLE_SID.sh"
        ENV_FILE="/tmp/$ENV_FILENAME"
       ORACLE_PROFILE=~oracle/.profile

       if [ ! -z "$ORACLE_VERSION" ] && [ $ORACLE_VERSION -eq 10 ]; then
               echo "#ENOVIA V6R2011 - Oracle 10g environment setup
              export ORACLE_HOME=$ORACLE_HOME
                     export ORACLE_SID=$ORACLE_SID
               export PATH=\$PATH:\$ORACLE_HOME/bin:.:
                     " > $ENV_FILE
       elif [ ! -z "$ORACLE_VERSION" ] && [ $ORACLE_VERSION -eq 11 ]; then
              echo "#ENOVIA V6R2011 - Oracle 10g environment setup
              export ORACLE_HOME=$ORACLE_HOME
              export ORACLE_BASE=$ORACLE_BASE
              export ORACLE_SID=$ORACLE_SID
              export PATH=\$PATH:\$ORACLE_HOME/bin:.:
              " > $ENV_FILE
       else
              print "[ERROR] Environment variable ORACLE_VERSION is not set properly"
>&2
              exit 1
       fi

        cp $ENV_FILE ~oracle/
        #(file should be 755 permission and owned by oracle user)
        chown oracle.dba ~oracle/$ENV_FILENAME
        chmod 755 ~oracle/$ENV_FILENAME

        str=`grep $ENV_FILENAME $ORACLE_PROFILE`
        if [[ $str = "" ]]; then
                echo "
              if [[ -x \$HOME/$ENV_FILENAME ]] ; then
```

```
                    . \$HOME/$ENV_FILENAME
                fi" >> $ORACLE_PROFILE

                su - oracle -c "chmod +x ~/.profile"
        fi
       rm -f $ENV_FILE
}

#################################################################
#Export the required environment variables from the file.
#################################################################
setEnvVars () {

       cd $DIRNAME
       export SCRIPTPATH=`pwd`
       cd -

       if [[ -f $SCRIPTPATH/v6r2011_variables.ksh ]] ; then
              . $SCRIPTPATH/v6r2011_variables.ksh
       else
              print "$0: ERROR - variable file not found" >&2
              exit 1
       fi

       # Update the .profile file for user oracle
       updateOracleUserProfile
}

#################################################################
# Basic environment varaibles for Oracle database creation
#################################################################
checkOracleEnv() {

        if [[ -d $ORACLE_HOME && -x $ORACLE_HOME/bin/sqlplus ]]; then
                print "Oracle installation exists (PATH=$ORACLE_HOME)" >&2
        else
                print "[ERROR] Oracle installation does not exists, please verfiy
$ORACLE_HOME" >&2
                exit 1
        fi

        if [[ $ORACLE_HOME = "" ]]; then
                print "[ERROR] Environment variable for Oracle installation
(ORACLE_HOME) is not configured" >&2
                exit 1
        else
                print "Oracle home path $ORACLE_HOME" >&2
        fi
        if [[ $ORACLE_SID = "" ]]; then
                print "[ERROR] Environment variable for Oracle SID (ORACLE_SID) is not
configured" >&2
                exit 1
        else
                print "Oracle SID $ORACLE_SID" >&2
        fi

        #       isUserExists "oracle"
}

#################################################################################################
####
# Crate the database
```

```
# Notes:
#  - Use general database template file rather than distributing template file with
scripts
#  - dbca creates a file tnsnames.ora; which is used for network connections
#  - Tested the creation of database using dbca command line using standard General
Purpose
#    template on version Oracle 10g and 11g (11.1.0.6)
##############################################################################################
####
createDatabase() {

       print "Creating a database ($ORACLE_SID) ..." >&2

       #Oracle 10g
       if [[ $ORACLE_VERSION -eq 10 ]]; then
              su - oracle -c "dbca -silent -createDatabase \
                         -templateName $TEMPLATE_FILE -gdbName $GDB_NAME \
                         -sid $ORACLE_SID -sysPassword $SYS_PASSWORD \
                     -listeners LISTENER"

       #Oracle 11g - requires additional parameter "-systemPassword"
       elif [[ $ORACLE_VERSION -eq 11 ]]; then
              su - oracle -c "dbca -silent -createDatabase \
                         -templateName $TEMPLATE_FILE -gdbName $GDB_NAME \
                         -sid $ORACLE_SID -sysPassword $SYS_PASSWORD \
                     -systemPassword $SYS_PASSWORD -listeners LISTENER"
       else
              print "[ERROR] Environment variable ORACLE_VERSION is not set properly"
>&2
              exit 1
       fi

        if [[ $? -eq 0 ]]; then
                     print "Oracle database created successfully" >&2
        else
                     print "Oracle database creation failed. Refer log file for more
details." >&2
                     exit 1
        fi
}

#########################################################################
# Create table space required, prior to ENOVIA V6R2011 installation
#########################################################################
createTables() {
        LOG_FILE=/tmp/create_tables.log
       print "Creating required tables for ENOVIA V6R2011 using $ORACLE_SID database
..." >&2
        su - oracle -c "sqlplus -S $SYS_USER/$SYS_PASSWORD AS SYSDBA
@$ADD_TABLES_SCRIPT > $LOG_FILE"

        if [[ $? -eq 0 ]]; then
                print "Required tables in oracle database created successfully" >&2
                rm $LOG_FILE
        else
                print "Table creation in Oracle database failed. Refer $LOG_FILE for
more details." >&2
                exit 1
        fi
}

################################
```

```
## Start the listener
################################
startLISTENER() {
       print "Starting the listener ($LISTENER_NAME) ... " >&2
        su - oracle -c "lsnrctl start $LISTENER_NAME > /dev/null"
        if [[ $? -eq 0 ]]; then
              print "[DONE]" >&2
        else
              print "[FAILED]" >&2
       fi

}

################################
## Stop the listener
################################
stopLISTENER() {
       if checkLISTENERStatus; then
              print -n "Stopping the listener ($LISTENER_NAME) ... " >&2
              su - oracle -c "lsnrctl stop $LISTENER_NAME > /dev/null"
              if [[ $? -eq 0 ]]; then
                     print "[DONE]" >&2
              else
                     print "[FAILED]" >&2
              fi
       else
              print "[INFO] Listener ($LISTENER_NAME) not running." >&2
       fi
}

################################
# Check the status of listener
################################
checkLISTENERStatus() {
        su - oracle -c "lsnrctl status $LISTENER_NAME > /dev/null"
        if [[ $? -eq 0 ]]; then
                print "LISTENER is active" >&2
              return 0
        else
                print "LISTENER is not active" >&2
                return 1
        fi
}

#####################################
# Create listener using command line
# TBD: Crates a listener with new port if default pot(1521) is alrady in use.
#####################################
createLISTENER () {
        LOG_FILE=/tmp/create_listener.log

       print -n "Creating a listener ($LISTENER_NAME) ... " >&2
        su - oracle -c "$NETCA_BIN /silent /responseFile $RSP_FILE > $LOG_FILE"

        if [[ $? -eq 0 ]]; then
                print "[DONE]" >&2
                rm -f $LOG_FILE
        else
              print "[FAILED]" >&2
                print "[INFO] Refer $LOG_FILE for more details." >&2
                exit 1
        fi
```

```
}


################################################
# Verify tnsping to database by .tnsping R2011..
# If not then use netca to set up
# Return values - 0 (if reachable),
#             - 1 (if not reachable)
################################################
checkTNSPING() {
        TNSPING_BIN=$ORACLE_HOME/bin/tnsping

        su - oracle -c "$TNSPING_BIN $ORACLE_SID > /dev/null"

        if [[ $? -eq 0 ]]; then
                print "LISTENER is reachable for $ORACLE_SID database" >&2
             return 0
        else
                print "LISTENER is not reachable for $ORACLE_SID database" >&2
                return 1
        fi
}


#=========================================
#      M A I N
#=========================================

# Activate the debugging for all functions
#set -x ;for i in $(typeset +f); do     typeset -ft $i; done

setEnvVars
checkOracleEnv
stopLISTENER
createLISTENER
createDatabase
createTables
checkTNSPING
checkLISTENERStatus
```

Example script for creating required tables in Oracle R2011 database

The following script populates the required table spaces into R2011 database for Oracle.

```
--
-- CREATE THE DATABASE ($ORACLE_SID)
--
--connect sys/ibm123 as SYSDBA;
--create database $ORACLE_SID
--datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/SYSTEM01.DBF' size 150M
--logfile group 1 ('/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO01a.rdo',
--'/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO01b.rdo') size 5M,
--group 2 ('/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO02a.rdo',
--'/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO02b.rdo') size 5M,
--group 3 ('/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO03a.rdo',
--'/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO03b.rdo') size 5M,
--group 4 ('/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO04a.rdo',
--'/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO04b.rdo') size 5M,
--group 5 ('/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO05a.rdo',
--'/$ORACLE_BASE/oradata/$ORACLE_SID/REDO/REDO05b.rdo') size 5M
```

```
--undo tablespace UNDO datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/undo01.dbf' size
200M
--maxinstances 1
--maxlogfiles 32
--maxlogmembers 3
--maxdatafiles 150
--character set AL32UTF8
--;
-- SET THE CORRECT ORACLE HOME HERE ---
--@/$ORACLE_BASE/rdbms/admin/catalog.sql
--@/$ORACLE_BASE/rdbms/admin/catproc.sql
--connect system/manager
--@/$ORACLE_BASE/oradata/sqlplus/admin/pupbld.sql

--
-- GENERAL TABLESPACES
--
--create temporary tablespace TEMP
--tempfile '/$ORACLE_BASE/oradata/$ORACLE_SID/TEMP01.DBF' size 100M
--extent management local
--;
--
-- ENOVIA Collaboration Platform SCHEMA TABLESPACES
--
create tablespace ITTEST
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/ITTEST_DATA01.DBF' size 160M REUSE
AUTOEXTEND ON
NEXT 1M
extent management local
segment space management auto
;
create tablespace ITTEST_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/ITTEST_IDX01.DBF' size 160M REUSE
AUTOEXTEND ON
NEXT 1M
extent management local
segment space management auto
;
--
-- BAT SCHEMA TABLESPACES
--
create tablespace GSP_DATA
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/GSP_DATA01.DBF' size 100M REUSE AUTOEXTEND
ON
NEXT 1M
extent management local
segment space management auto
;
create tablespace GSP_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/GSP_IDX01.DBF' size 100M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
create tablespace BEG_DATA
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/BEG_DATA01.DBF' size 150M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
```

```
create tablespace BEG_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/BEG_IDX01.DBF' size 150M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
create tablespace CLARITY_DATA
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/CLARITY_DATA01.DBF' size 200M REUSE
AUTOEXTEND ON
NEXT 1M
extent management local
segment space management auto
;
create tablespace CLARITY_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/CLARITY_IDX01.DBF' size 200M REUSE
AUTOEXTEND ON
NEXT 1M
extent management local
segment space management auto
;
create tablespace SAM_DATA
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/SAM_DATA01.DBF' size 250M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
create tablespace SAM_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/SAM_IDX01.DBF' size 250M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
create tablespace UM_DATA
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/UM_DATA01.DBF' size 100M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
create tablespace UM_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/UM_IDX01.DBF' size 100M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
create tablespace WMS_DATA
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/WMS_DATA01.DBF' size 170M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
;
create tablespace WMS_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/WMS_IDX01.DBF' size 170M REUSE AUTOEXTEND
ON NEXT
1M
extent management local
segment space management auto
```

```
;
create tablespace PRODSPEC_DATA
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/PRODSPEC_DATA01.DBF' size 100M REUSE
AUTOEXTEND ON
NEXT 1M
extent management local
segment space management auto
;
create tablespace PRODSPEC_IDX
datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/PRODSPEC_IDX01.DBF' size 100M REUSE
AUTOEXTEND ON
NEXT 1M
extent management local
segment space management auto
;
-- create tablespace COPYEDCTEST
-- datafile '/$ORACLE_BASE/oradata/$ORACLE_SID/COPYEDCTEST01.DBF' size 160M REUSE
AUTOEXTEND ON
--NEXT 1M
-- extent management local
-- ;
--
-- CREATE THE ENOVIA Collaboration Platform USER
--
create user ITTEST identified by MATRIX
default tablespace ITTEST
temporary tablespace TEMP
;
grant connect, resource to ITTEST
;
alter user ITTEST default role all
;
create user EJSADMIN identified by EJSADMIN
default tablespace SYSTEM
temporary tablespace TEMP
;
grant connect, resource to EJSADMIN
;
alter user EJSADMIN default role all
;
connect sys/change_on_install as sysdba
;
grant select on sys.v_$session to ITTEST
;
--
-- AMEND DBA USERS
--
alter user sys temporary tablespace TEMP
;
alter user system default tablespace SYSTEM temporary tablespace TEMP
;
--connect sys/change_on_install as sysdba
--startup mount pfile=/$ORACLE_BASE/oradata/$ORACLE_SID/pfile/init$ORACLE_SID.ora
--alter database archivelog;
--alter database open;
--alter system switch logfile;
--drop rollback segment rb0;
--shutdown;
--startup
set pages 0
set feedback off
--spool /tmp/rebuild.sql
```

```
--
-- REDISTRIBUTE THE MATRIX SCHEMA INDEXES
--
select 'alter index '||owner||'.'||index_name||' rebuild tablespace MATRIX_INDEX ;'
from dba_indexes
where tablespace_name = 'MATRIX_DATA'
and owner = 'MATRIX'
;
--spool off
--@/tmp/rebuild.sql
--exit

GRANT CREATE DATABASE LINK TO CONNECT;
GRANT CREATE PUBLIC DATABASE LINK TO CONNECT;
GRANT UNLIMITED TABLESPACE TO ITTEST;

disconnect;
exit
```

Installing images and scripts

Prior to starting the installation using utility programs described in this paper, copy the contents of the Product Media Kit for V6R2011 onto the AIX server as described in the “Appendix C: Installation files” section.

Note: Earlier, the files were downloaded from the IBM Xtreme Leverage website and extracted using the do_unzip.sh utility. For current release installation, DVD media was obtained from the Dassault Systèmes as files are no longer available on the internal IBM website.

Preinstallation setup

This section explains the pre-installation setup process.

Before installing the V6R2011 components

Here are the steps to perform prior to installing the V6R2011 components:

1. Create user and group *ev6adm.ev6adm* and set the password to the same value as in the **v6r2011_variables.ksh** script.
2. Ensure that the /home directory has sufficient free space (6 GB), or create a new file system and specify that location as INSTALL_PATH.
3. Increase /tmp to have a minimum of 500 MB of free space.
4. Start the database server and start either of the following, as appropriate:
    - **DB2:** Start DB2; create the R2011 database and catalog the database.
    - **Oracle:** Start Oracle, create the R2011 database and start the listener (LISTENER).

Licensing

V6R2011 needs access to licenses served from the DS License Server, which can be installed on the same AIX server as V6R2011, or you can set up the V6R2011 server as a DS License Server client to a remote DS License Server. See “Appendix D: DS License Server installation and setup” for more details.

Note: If the DS License Server installation and setup is not properly done, automated installation fails to associate licenses with the users created.

Preparing installation images

To use the automated procedure, you must copy the images to hard disk so that they are accessible during the automated installation. After copying the files to disk, modify the **v6r2011_variables.ksh** script so that the correct path is specified for each ENOVIA V6R2011 product that is being installed.

Extracting and placing utility files

You need to extract the contents of the v6r2011_AIX_Utility.tar and place them in one common directory. The **do_unzip.sh** script is provided as an extraction aid for the ZIP files (if you download the files from the IBM internal site).

The authors of this guide placed the directories that contain the installation files in the same location as the utility files. However, as long as you modify the **v6r2011_variables.ksh** script to locate the path and name of the GZ files, you can place the tar.gz files in another location. You must also validate and modify **v6r2011_variables.ksh**, as appropriate, to reflect the installation locations where the V6R2011 products are installed. Similarly, you need to provide the correct path to the installation location where WebSphere Application Server 7.0.7 and DB2 V9.5 FixPack3 or Oracle 10g/11g are installed. Modify the user IDs and passwords in this file to match the ones that the administrator has assigned.

Installing ENOVIA Live Collaboration and applications

v6r2011_install.ksh runs the following steps (full script files are in the v6r2011_AIX_Utility.tar file).

```
# execute functions
#
# step 1, install the Core product also known as Platform Modeling Studio
install_core
#step2, install RMI also known as Platform Server
install_rmi
#step3, do the additional DB2 modification
preinstall_bps
#step4, install BusinessProcessServices
install_bps
#step5, Various Central applications
install_MaterialCentral
install_Variant
install_EngineeringCentral
install_Requirements
install_LibraryCentral
install_SupplierCentral
install_SpecificationCentral
install_ProgramCentral
install_SourcingCentral
install_ProgramChangeControl
#step 6, install EVP VPMMultiDiscipline that is used for managing CATIA V6 data
install_EVP
# create Web application
run_warutil
```

v6r2011_install.ksh automates answering typical questions for each step and ensures that you provide consistent responses, thus increasing the probability of a successful installation. If you perform a manual

installation, use the answers appearing in **v6r2011_install.ksh** as an installation aide. The ENOVIA V6R2011 documents provide explanations of the options (these PDF are delivered with the product media).

1. Copy the **v6r2011_variables.ksh** script from the provided v6r2011_AIX_Utility.tar, modifying it for your environment by specifying your unique names, user IDs, passwords, and file locations.
2. As root, run the **ksh v6r2011_install.ksh** script from the staging area that does the installation. This requires a graphics-enabled terminal, such as VNC. (The graphics session is needed because, when installing, a GUI launches a System Manager session that creates the bootstrap file.)
3. Run **v6r2011_was_install.ksh** and **v6r2011_post_was_install.ksh,** if install and post install of Websphere Application Server are not part of **v6r2011_install.ksh**. These scripts are in v6r2011_AIX_Utility.tar, which installs ematrix.ear in the WebSphere instance and automatically runs certain steps after installing the web application.

System Manager session

The System Manager application provides a graphical interface for performing the following tasks:

- Modifying connection files
- Creating vaults and stores
- Creating alternate locations for replicating captured stores, including location and site objects creation
- Distributing the database across multiple servers, if needed, including the creation of Matrix Server objects that correspond to Oracle instances

To start a System Manager session, run INSTALL_PATH/matrix/scripts/system. v6r2011_install.ksh also runs the system command so that the DB2 or Oracle database can be updated with other tables.

Working with the connection file

The ENOVIA Unified Live Collaboration server is a client of the supported databases. The database is a set of tables, constraints, indexes, and database links that are owned by one database user only. This database and its contents are identified to Collaboration Platform (CPF) in the MATRIX-R connection file so that it can locate and open the database. The connection file is also referred to as the *bootstrap* file.

Setting up the connection file

The connection file contains information that MatrixOne requires to access the database. After installing MatrixOne, you need to create the connection file (if it does not already exist). Check the entries immediately upon installation and change them, as required.

Perform the following steps to set up the connection file:

1. Run **INSTALL_PATH/matrix/scripts/system** – this is launched during the **v6r2011_install.ksh** script and is the reason that a GUI terminal is required.
2. Ignore two *Cannot connect to database* panels and click **OK** and select **Cancel** on the user panel.

3. In the main System panel, click **Install + Bootstrap**.
4. Enter the following values in the system GUI (see Figure 1) that prompts you for the parameters for DB2 as database server:
   Username – **ev6adm**
   Password - **ev6adm**
   Connect String – **R2011**
   Database Driver – **DB2/CLI**
   (The user name *ev6adm* and password *ev6adm* are for the AIX user who owns the tables.)

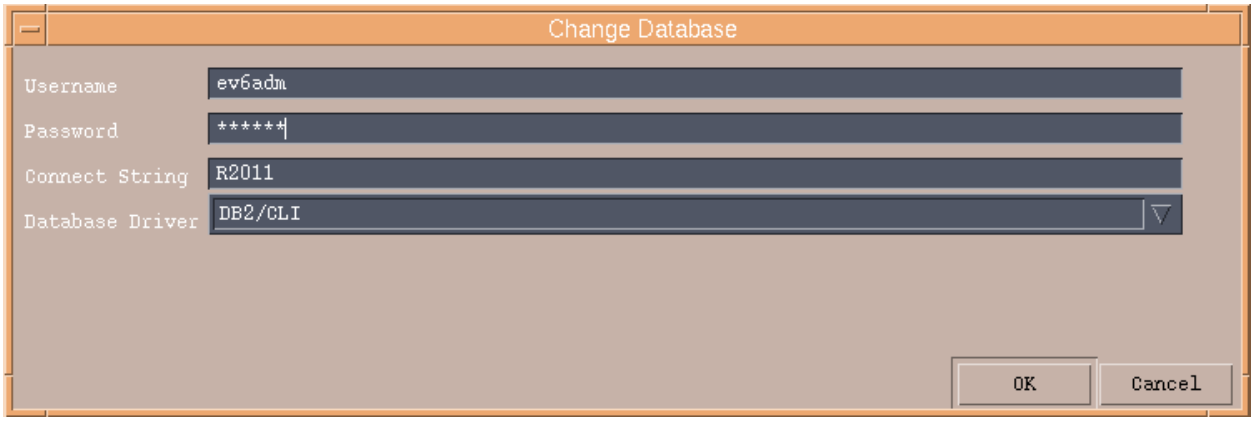

Figure 1: Using the System panel to create a bootstrap file – DB2 database

5. For Oracle database, use the the following values to change Database dialog as an input (see Figure 2)
   Username – **ITTEST**
   Password – **MATRIX**
   Connect String – **R2011**
   Database Driver – **Oracle/OCI80**

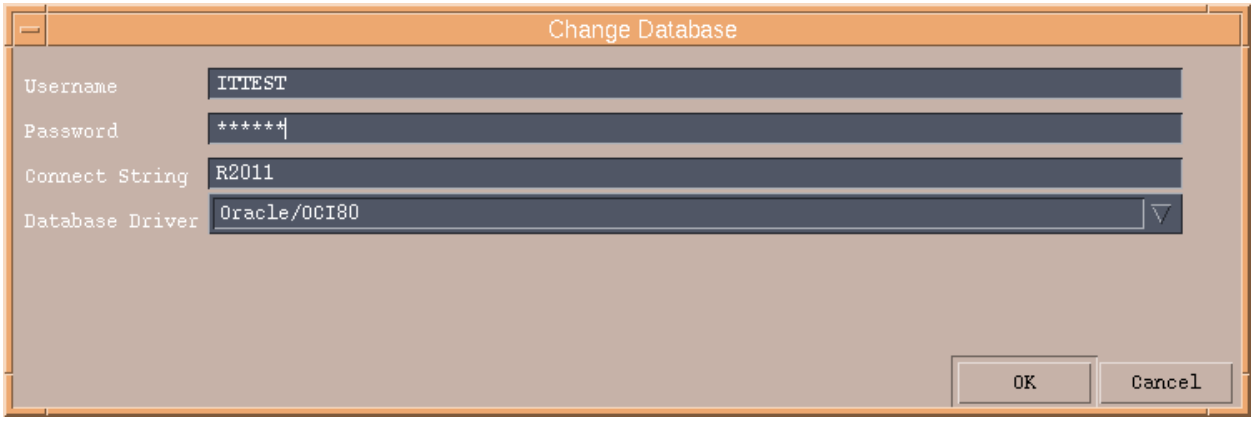

Figure 2: Using the System panel to create a bootstrap file – Oracle database

6. Continue to use the System command to verify that the creator's ID is defined to the database. Select the ellipses (**…**) in the **Session Context** pop-up window (see Figure 3).

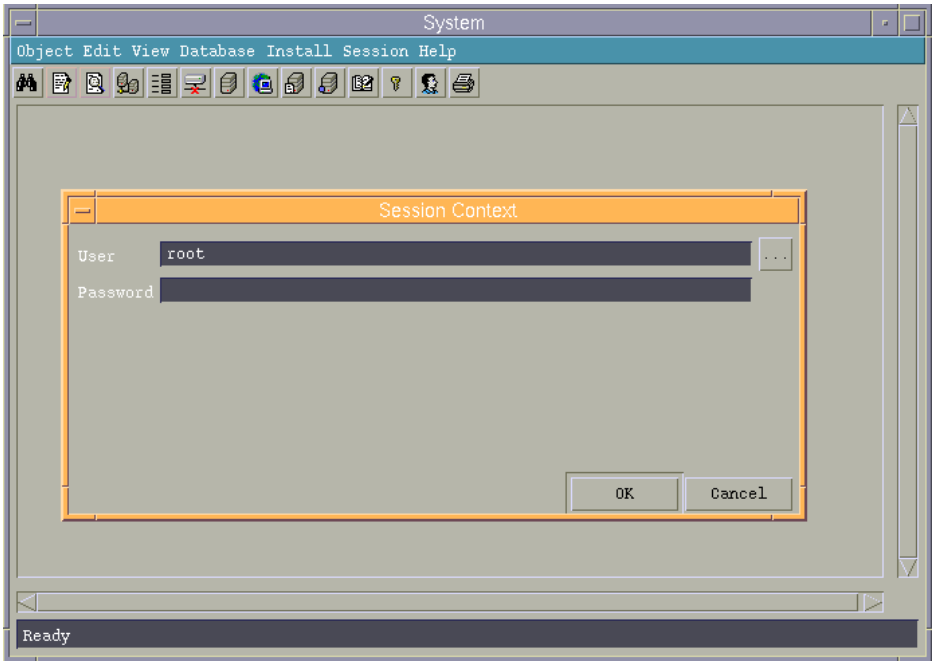

Figure 3: Verifying that the creator user is defined

7. Select **Person creator**, then click **OK** and, finally, click **Cancel** (see Figure 4).

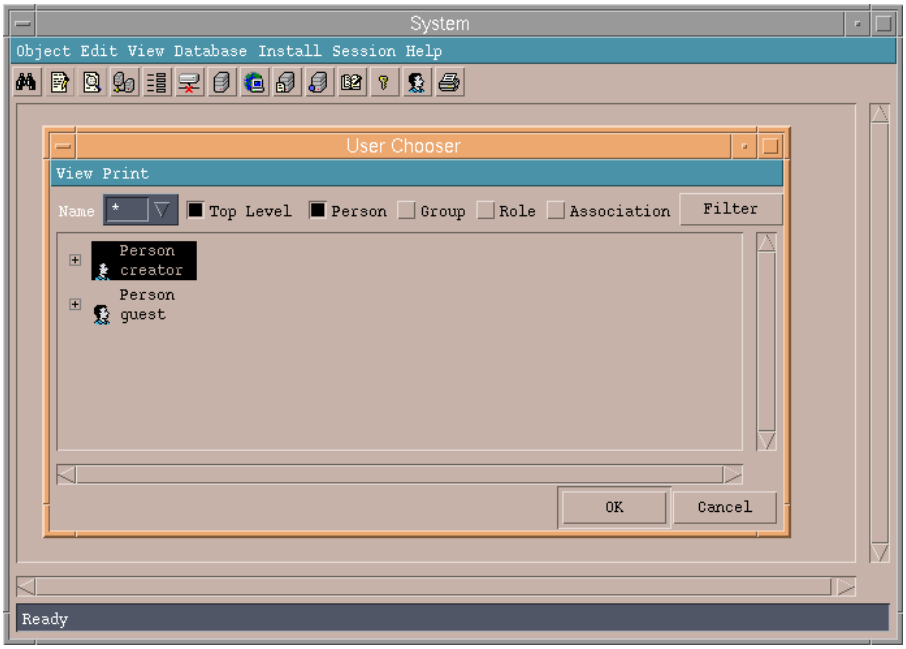

Figure 4: List of users that are defined to the matrix

8. Select **Object/Exit**.

Installing ENOVIA Accelerator

Installation of certain ENOVIA V6R2011 features is not automated because they are highly industry-specific and require particular combinations of prerequisite ENOVIA V6R2011 products, as outlined in the installation or administration guides for these products. Because they are intended to accelerate activities that are unique to a certain industry, they also typically require postinstallation modifications prior to the deployment of the web application.

You can use the provided example installation utility (**v6r2011_install.ksh**) to install the ENOVIA Accelerator requisites, such as ENOVIA Platform Modeling Studio, ENOVIA Platform Server, and ENOVIA Business Process Services, along with all the central applications that the Accelerator might use, then manually install the Accelerator.

Read the appropriate guide to understand the installation requisites, and familiarize yourself with the required postinstallation steps — prior to using the **war_setup** program to create the web application.

Some of the key PDF files might be located in the PDIR/pdf directory structure, while other installation and administration guides require that the documentation to be installed from the ENO_APPLI_R209/Documentation/Server/1 directory by either running setup.exe on Windows or **start** on AIX.

You must extract the file to be installed from the tar file. A file with the .bin extension is the self-extracting installer program. You need to make the file capable of being run by using the AIX **chmod** command.

After the installer is complete, you must recreate the web application by using the **war_setup** utility. Then, deploy the ematrix.ear in the WebSphere instance by using the **v6r2011_was_install.ksh** script.

Hints

Some of the Accelerators use a GUI-based installation, others run in a console-installation mode. PATH needs to include /usr/java6/bin. Run **java –version** to verify that Java6 can be found.

If installing one of the Accelerators that use a GUI-based installation (from a VNC server that runs on AIX), ensure that it starts with -depth 24; otherwise, it is difficult to see some of the displayed widgets.

Some of the Accelerators require more memory to be available to the Java process for their installation to complete. If a failure occurs during installation as a result of an out-of-memory condition (either displayed as an error message or a message that is put into the log file for the installation), you can use the following steps to increase the Java memory for the installer.

As root:

1. Set the LDR_CNTRL variable to MAXDATA=0x70000000@USERREGS.
2. Define two new shell variables:

MX_MEMORY_KEEP_LIMIT=100m
MX_CACHE_SYSTEM_LIMIT=100m
****
For example:
export LDR_CNTRL=MAXDATA=0x70000000@USERREGS
export MX_MEMORY_KEEP_LIMIT=100m
export MX_CACHE_SYSTEM_LIMIT=100m

Helpful information for installing the Accelerator

To start the Accelerator installation, make the file with the bin extension executable.

1. The general installation flow asks for the type of installation, which is usually *full*.
2. When asked for the location of the *build* scripts, specify it as INSTALL_PATH/matrix, which is the path to where the directory has the applications directory.
3. When asked for the location where RMI is installed, this is where the matrixRMI directory exists under the INSTALL_PATH that is specified in the **v6r2011_variables.ksh** script. In this default installation, this evaluates to /home/matrixRMI.
4. Some GUI-based installation programs ask for the location of mxEnv.sh for modifications that the Accelerator requires you to make. The path to this is INSTALL_PATH/matrixRMI/scripts, which, in this example, is /home/matrixRMI/scripts/mxEnv.sh.
5. If asked for the scripts path, it is INSTALL_PATH/matrix/scripts. In this example installation, it is /home/matrix/scripts.
6. If asked for the Administrator user for Matrix, it is the creator_user environment variable, as specified in the **v6r2011_variables.ksh** script. In this default example, it is *creator*.
7. Typically, a prompt asks if you want to continue with the installation.
8. A requisite check is made to confirm the compatibility of the installed software levels. If they are compatible, continue with the installation.

Running war_setup

The **v6r2011_install.ksh** script runs the **war_setup** script when installing the central applications. However, if you add applications, such as the Accelerator, you must recreate the ematrix.ear file by running the **war_setup** program (see Figure 5).

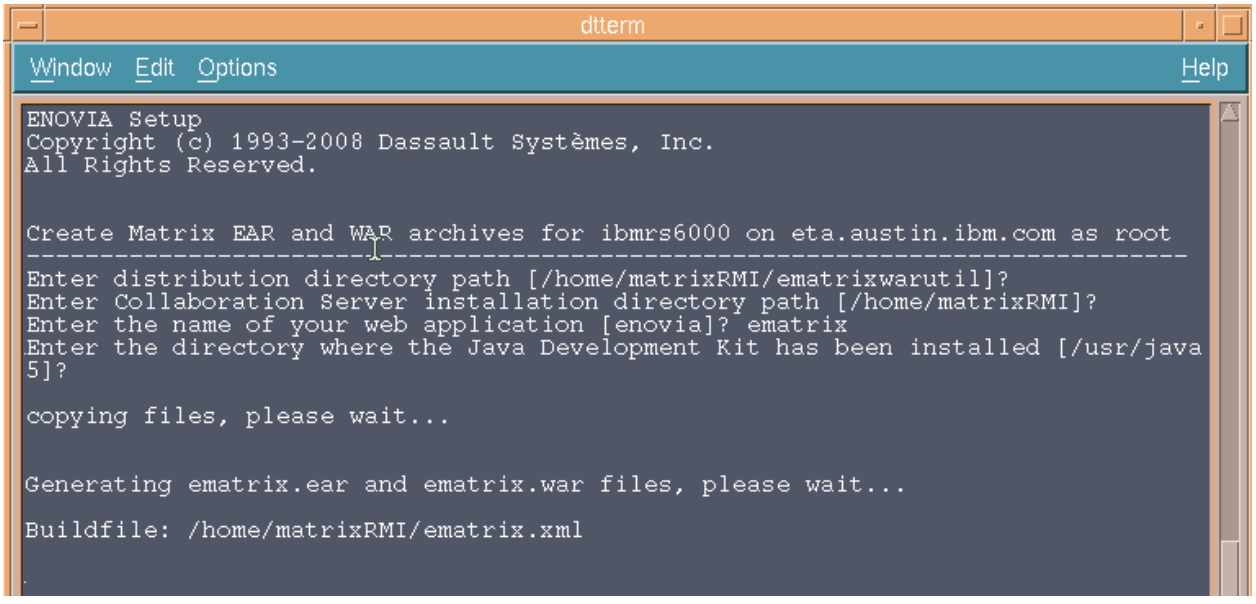

Figure 5: Recreating the ematrix.ear file

Deploying to WebSphere

You can deploy the web application in the WebSphere instance by using either of the following methods:

- Integrated Solutions Console (ISC) — GUI mode
- Wsadmin scripts — automated command-line mode

The example in this guide deploys one instance of WebSphere Application Server 6.1 that hosts the ENOVIA Unified Live Collaboration server eb-tier application ematrix.ear (EAR file bundling WAR file).

Note: For a list of currently supported web-application servers for each operating system, see the ENOVIA Live Collaboration Release Bulletin. (For the location of this document refer to “Appendix C: Installation files,” specifically, the section of this appendix that is entitled: “Key installation guide”).

WebSphere hints and tips

Following are the steps to start and stop WebSphere Application Server and access the WebSphere Administration console. The administration steps are as follows, if **profilePath**=/usr/IBM/WebSphere and **profileName**=AppServer are set in the **v6r2011_variables.ksh** script:

1. Start the WebSphere server (/usr/IBM/WebSphere/AppServer/bin/startServer.sh server1).
2. Stop the WebSphere server (/usr/IBM/WebSphere/AppServer/bin/stopServer.sh server1).
3. Deploy WebSphere Application Server in a browser (http://server_name:9060/ibm/console).

Using the ISC to deploy the EAR file in WebSphere

You can use the ISC to deploy the web application and required server-manager processes. You can also use the ISC to verify that WebSphere Application Server is installed and running.

1. Create the EAR and WAR files under the /home/matrixRMI /distrib directory (for example, INSTALL_PATH is set to /home in the **v6r2011_variables.ksh** script).
2. Using the ISC, deploy the ematrix.ear file and save it to the master configuration.
3. Validate that the WAR Class Loader Policy is set to *Class loader for each WAR in application* – if this is not the setting, you must set it and save this setting to the master configuration.
4. Under Web Servers, generate and deploy the plug-in file, then stop and restart IBM HTTP Server.
5. Optionally, you can copy the static files to IBM HTTP Server to reduce workload on the WebSphere instance.

WebSphere steps to deploy using ISC

Helpful screen images are provided to assist in deploying the ematrix.ear file. Not all steps are shown, because many of them simply require clicking **Next**. Only those in which modifications are required are shown here.

1. Start the WebSphere instance.
2. Start a browser on the server system and deploy WebSphere Application Server. (http://server_name:9060/ibm/console). Then, log in (see Figure 6).

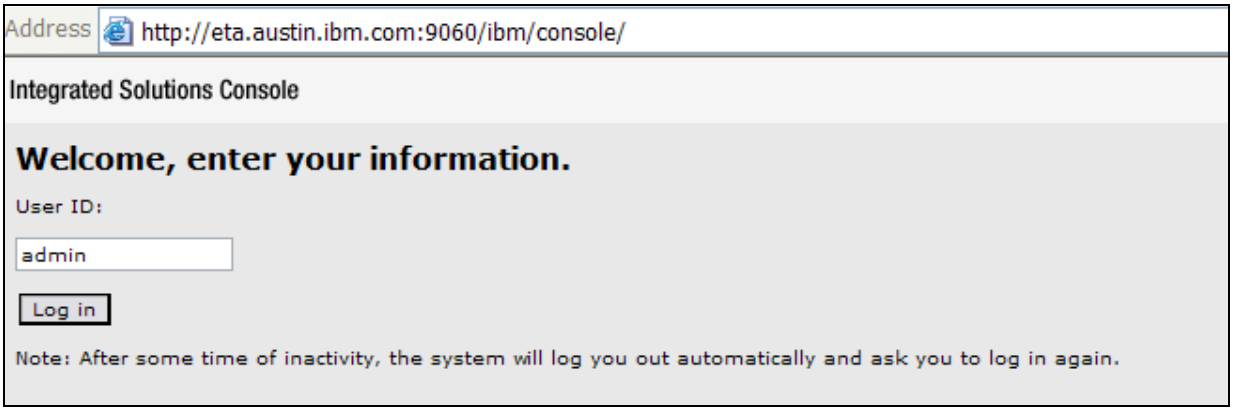

Figure 6: ISC log in

3. As shown in Figure 7, expand **Applications**. Then, select **Install New Application**. If you have previously deployed the ematrix application and need to update it, select **Enterprise Applications** and, then, select **ematrix** in the list of installed applications.
4. Select **Remote file system** and, then, click **Browse** (browse to the path for your EAR file).

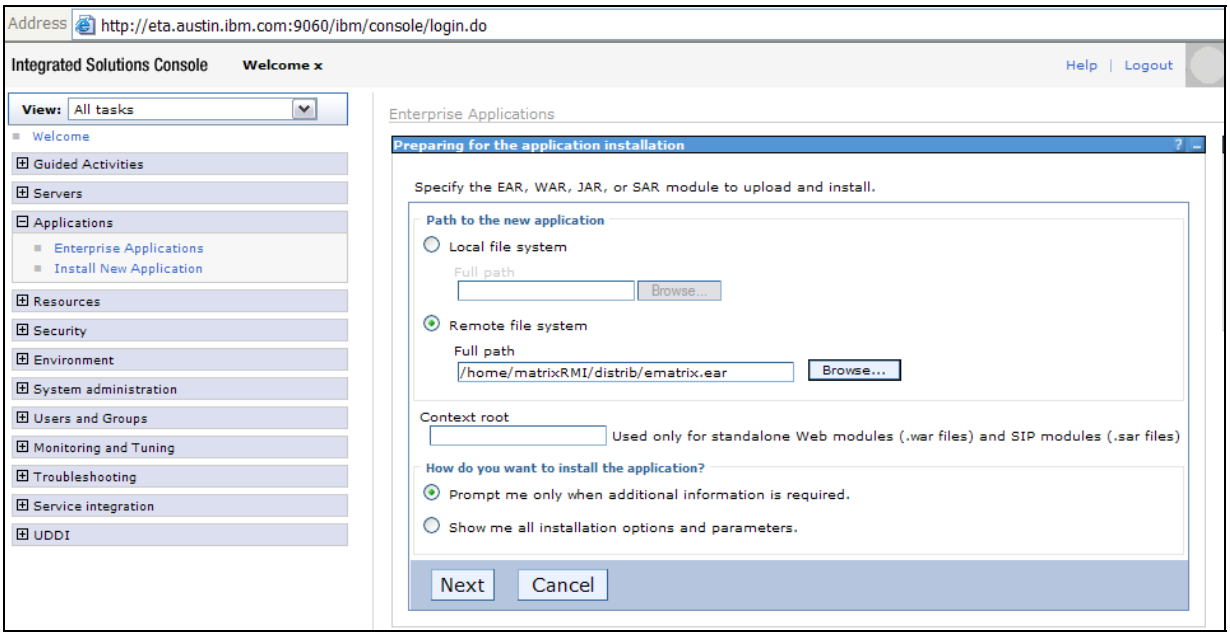

Figure 7: Browse to the EAR file

5. As shown in Figure 8, select both **server1** and **webserver1** for ematrix.

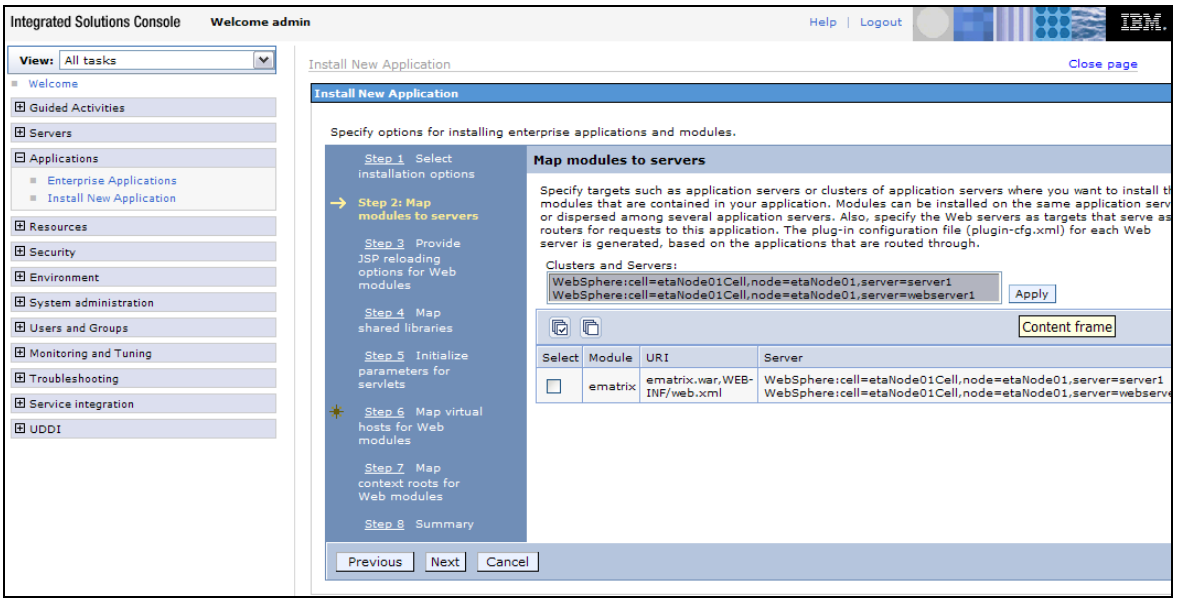

Figure 8: Map modules to servers

6. After the installation completes, click **Manage Applications**, as shown in Figure 9.

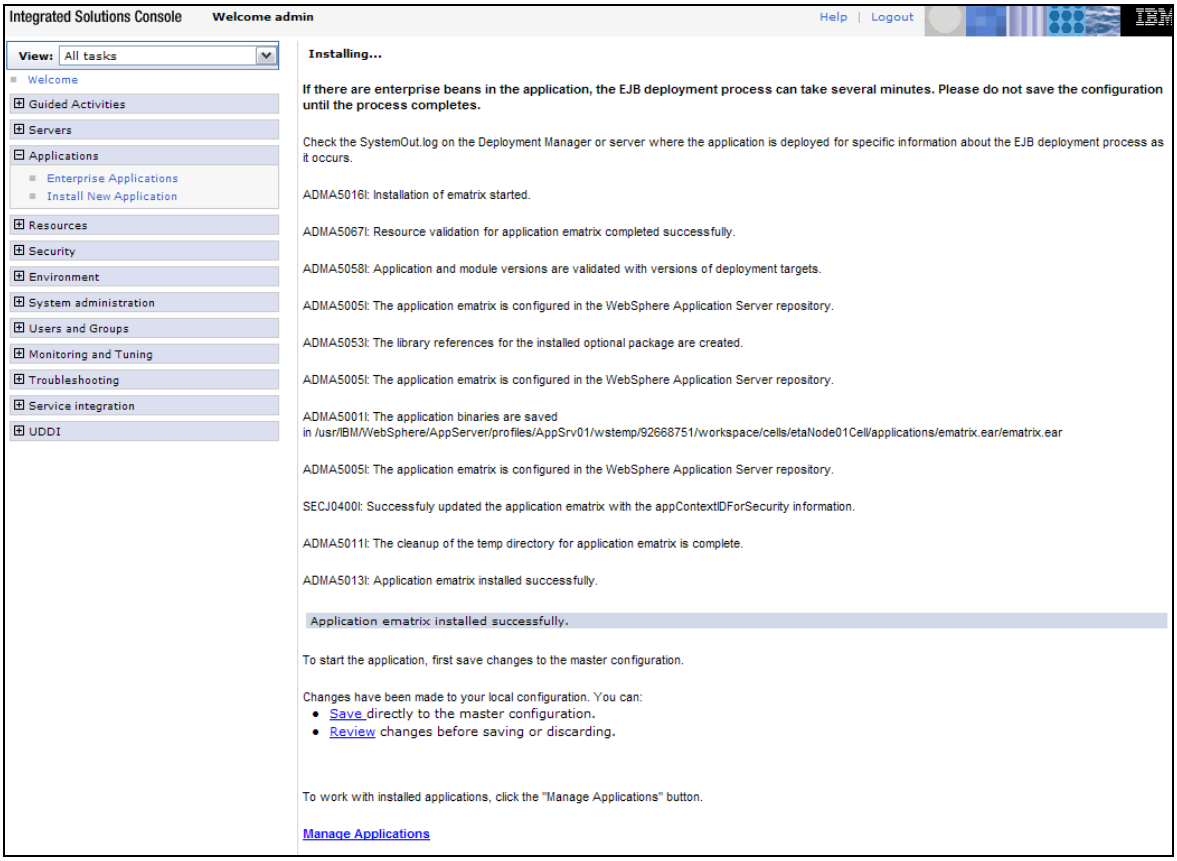

Figure 9: Installation complete - manage applications

7. As shown in Figure 10, select **Class loading and update detection**.

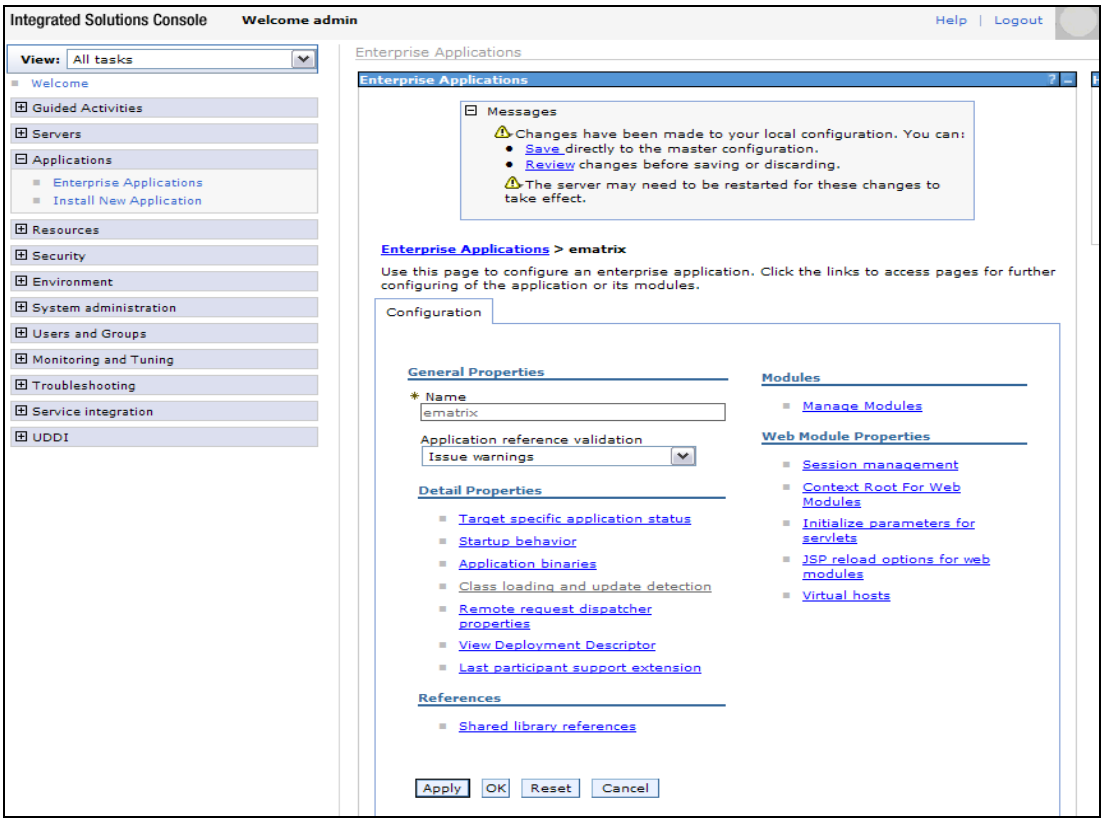

Figure 10: Class loading and update detection

8. Ensure that the class-loader order and WAR class-loader policy match those shown in Figure 11.

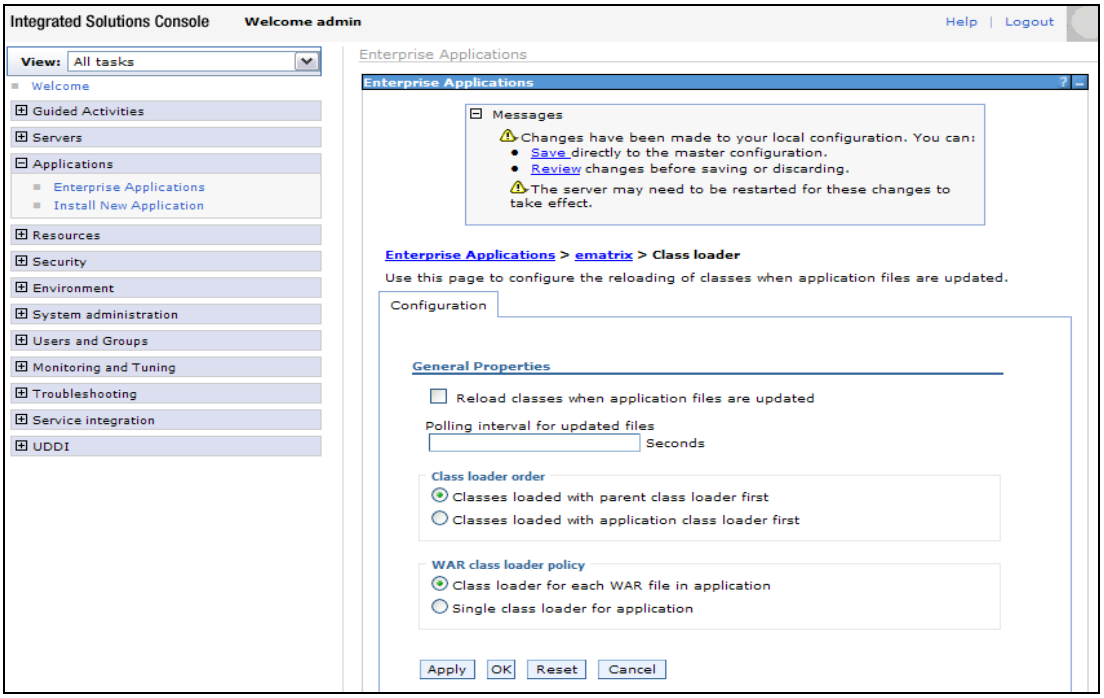

Figure 11: Class loader

9. As shown in Figure 12, click **Generate Plug-in**; then click **Propagate Plug-in**.

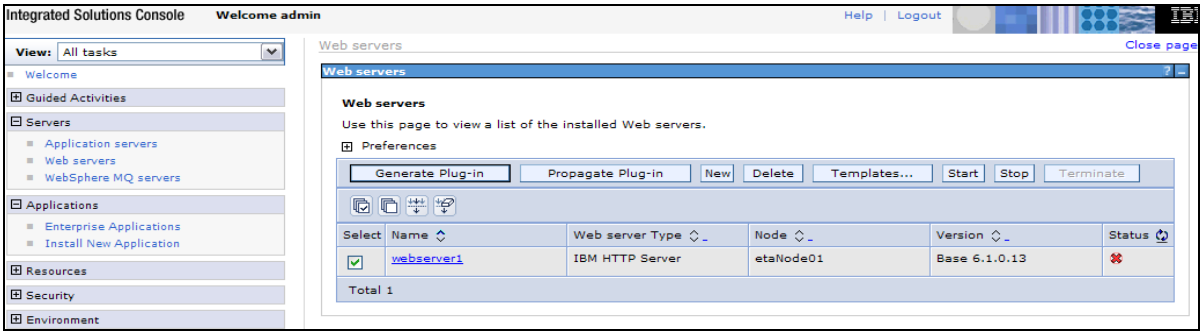

Figure 12: Web server plug-in

10. Start IBM HTTP Server, which, in this case, is installed at location /home/IBM/HTTPServer:

```
/home/IBM/HTTPServer/bin/apachectl start
```

11. Start the ematrix application, as shown in Figure 13.

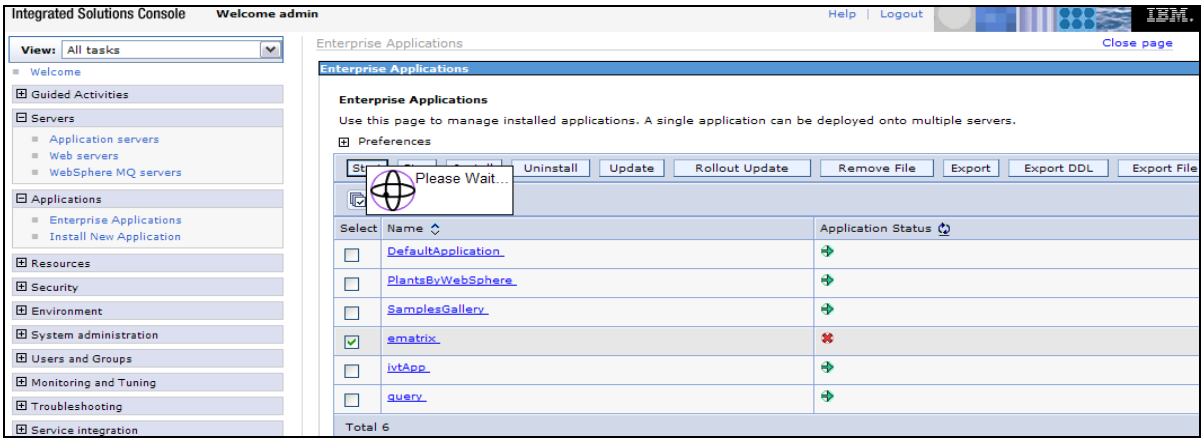

Figure 13: Start the ematrix application

Deploying EAR file in WebSphere by using wsadmin scripts

Optionally, you can automatically deploy the web application through wsadmin scripts. The EAR and WAR files are created under the `/home/matrixRMI/distrib` directory (for example, INSTALL_PATH is set to /home in the **v6r2011_variables.ksh** script). Using the **wsadmin.sh** script provided with WebSphere, the ematrix.ear file is deployed and saved to the master configuration. The WAR class-loader policy's default setting is *Class loader for each WAR in application*. The plug-in file for web servers (IBM HTTP Server) is generated and propagated; then IBM HTTP Server is stopped and restarted.

The **wsadmin.sh** script provides two interfaces, *Jacl* and *Jython*, to perform the administrative tasks and the current implementation uses the Jython interface. Refer to the WebSphere administrator guide (at **ibm.com**/redbooks/abstracts/SG247304.html) for details about the **wsadmin** script.

Deploying WebSphere Application Server using wsadmin

The **wsadmin** automated script uses a configuration that maps the modules for the application server (for example, server1) when deploying the ematrix.ear file. Mapping the modules for a web server (in this case, IBM HTTP Server) is not recommended.

Algorithm

Follow these steps to map the modules for ematrix:

1. Start the WebSphere instance, if it is not already running.
2. Install and deploy the ematrix application.
    a. Map the modules for server1 for ematrix.
    b. Ensure that the class-loader order and WAR class-loader policy match (set as default).
    c. Ensure that Classes are loaded with the parent class loader first.
    d. Use the class loader for each WAR file in the application.
3. Generate and propagate the plug-in for server1.
4. Propagate the plug-in by copying the generated plug-in configuration file (plugin-cfg.xml) into the web server plug-in directory (for example, /usr/IBM/HTTPServer/Plugins/config/webserver1/).
5. Restart IBM HTTP Server.
6. Start the ematrix application.
7. Restart the WebSphere instance (optional).

Implementation steps (v6r2011_was_install.ksh)

The following steps tell you how to install and start the ematrix web application. The v6r2011_was_install.ksh script automates these steps.

1. Start the WebSphere instance and run the following commands:
    a. ***WAS_HOME***/bin/startServer.sh server1
    b. ***WAS_HOME***/bin/wsadmin.sh –lang jython –f install_ematrix.py <path/of/ematrix.ear> <server name>
    c. ***WAS_HOME***/profiles/AppSrv01/bin/GenPluginCfg.sh
    d. ***IHS_HOME***/bin/apachectl start
    e. ***WAS_HOME***/bin/wsadmin.sh –lang jythong –f ./start_ematrix.py
2. Run the following commands to restart the WebSphere instance.
    a. ***WAS_HOME***/bin/stopServer.sh server1
    b. ***WAS_HOME***/bin/startServer.sh server1

Details of the wsadmin scripts (Jython interface)

Table 1 lists the wsadmin scripts and includes a description of what each script does.

Script	Description
install_ematrix.py	This uses WebSphere administration objects to install and deploy the web application (ematrix) using the given configuration.
uninstall_ematrix.py	This uses WebSphere administration objects to uninstall the web application (ematrix).
start_ematrix.py	This is used to start the web application on a given server configuration.
stop_ematrix.py	This is used to stop the web application on a given server configuration.

Table 1: wsadmin scripts

Note: When starting or stopping a server by using a wsadmin interactive-scripting session, you might receive an exception indicating that the read timed out, for example:

```
WASX7015E: Exception running command: "$AdminControl startServer server1 Node1";
exception information: com.ibm.websphere.management.exception.ConnectorException
org.apache.soap.SOAPException: [SOAPException: faultCode=SOAP-ENV:Client; msg=Read
timed out; targetException=java.net.SocketTimeoutException: Read timed out]
```

This exception occurs because the timeout value is too small. To fix this, increase the timeout value specified by the **com.ibm.SOAP.requestTimeout** property in the soap.client.props file, either in the ***config_root***/AppServer/properties (single-server) directory or ***config_root***/DeploymentManager/properties (network-deployment) directory. The value you choose depends on several factors, such as the size and number of applications installed on your server, as well as the server's speed and usage level. The default value of the **com.ibm.SOAP.requestTimeout** property is 180 seconds.

Static content

Note: This step is necessary only when IBM HTTP Server is installed on a different server than WebSphere Application Server.

You can move the static pages to the web server by copying the WEBAPPNAME_static.zip file from the RMI HOME/distrib directory to the doc root of your web server (for example: ematrix_static.zip to /usr/IBM/HTTPServer/htdocs/en_US). Unzip ematrix_static.zip in the doc root, that creates the /ematrix directory. Add an entry for the new directories in plugin-cfg.xml, which is located in a directory relative to /usr/IBM/WebSphere/AppServer/profiles/AppSrv01/config/cells/.

For example, locate the plugin-cfg.xml file by using **find /usr/IBM/WebSphere/AppServer –print plugin-cfg.xml**. Edit the plugin-cfg.xml file by using the **vi** command to make a change similar to the following. **(Note:** The last two character strings in the following listing already exist in the plugin-cfg.xml) file and probably include a different string; add the text in **bold** immediately after the *italic* face entry.)

<UriGroup Name="default_host_server1_etaNode01_Cluster_URIs">
<Uri Name="/ematrix/*/*.jsp"/>
<Uri Name="/ematrix/servlet/*"/>

You must restart the WebSphere instance after updating the plugin-cfg.xml.

Accessing the application

If everthing goes well, you can connect using the emxLogin.jsp URL — modify it to your WebSphere name (http://Server_Name:9080/ematrix/emxLogin.jsp). If the integration between WebSphere and HTTP Server works correctly, connect through the default web port of 80, and do not specify *:9080* in the URL.

1. Go to the URL http://Server_Name:9080/ematrix/emxLogin.jsp
2. Enter the Username as **Test Everything.** There is no password (see Figure 14:

Figure 14: V6R2011 login

Uninstalling ENOVIA V6R2011

This section explains how to uninstall ENOVIA.V6R2011

Summary of steps

Uninstalling the ENOVIA V6R2011 applications is not difficult. To uninstall:

1. Stop and remove the ematrix web application that is installed in the WebSphere instance.
2. Drop the DB2 R2011 database.
3. Remove the files written in INSTALL_PATH/matrix and INSTALL_PATH/matrixRMI.

Removing the web application

The **v6r2011_was_uninstall.ksh** script included in v6r2011_AIX_Utility.tar helps you to stop and uninstall the ematrix web application (by using the command-line interface).

Deleting the MyInstance (R2011) DB2 database

As the DB2 database-instance owner (such as db2adm9), run the following commands:

1. db2adm9 $> db2 force application all
2. db2adm9 $> db2 drop database R2011

Deleting the MyInstance (R2011) Oracle database

As a root user, run the following commands:

1. Stop the listener (LISTENER): **#> su - oracle -c "lsnrctl stop LISTENER"**
2. Delete the database: **#> su - oracle -c "dbca -silent -deleteDatabase -sourceDB R2011"**

Removing the ENOVIA V6R2011 files

As root, erase the files in INSTALL_PATH/matrix and INSTALL_PATH/matrixRMI.

Assuming that INSTALL_PATH=/home, the **rm –r /home/matrix /home/matrixRMI** command removes the files that the ENOVIA V6R2011 installation placed on the system when running the **v6r2011_install.ksh** script.

Summary

This guide has provided step-by-step installation and configuration instructions for ENOVIA V6R2011 on an IBM Power Systems server. It also provided information on how to create a DB2 and Oracle database instance for the installation of the ENOVIA Unified Live Collaboration server and the deployment of the ematrix web application into a WebSphere instance. In all, this guide provides easy-to-follow instructions for advanced technical support specialist and advanced technical support specialist personnel who want to install and configure ENOVIA V6R2011 on IBM Power Systems servers.

For more details about ENOVIA V6R2011 products or other information that is not covered in this guide, see the list of resources provided in “Appendix I: Resources”.

Appendix A: v6r2011_variables.ksh

Note: Because of formatting, some names wrap to a second line. You must extract the file from the v6r2011_AIX_Utility.tar, along with the rest of the files. It is included in this appendix for your reference. The values that may need to be modified are displayed in italicized text.

```
#!/bin/ksh
################################################################################################
#############
# File : v6r2011_variables.ksh
# Genesis : Jan 2010
# IBM STG ISV Enablement
# Gary Hornyak, Sachin N Bhandare
#
# Purpose: Drive the install of the V6R2011 Core products, Central Products and ENOVIA
VPM V6 server
# This script defines variables that are used during the various install steps
# setting common variables needed for the V6R2011 install
# Provided As-is
################################################################################################
#############

################################################################################################
#############
# media names
# Names that will be used in the "staging location" where the files will be extracted
for install
################################################################################################
#############
export Core_media_name=ENOVIAStudioModelingPlatform-V6R2011
export RMI_media_name=ENOVIACollaborationPlatformServer-V6R2011
export BPS_media_name=ENOVIALiveCollaborationBusinessProcessServices-V6R2011
#export EngCentral_media_name=ENOVIAEngineeringCentral-V6R2011
export EngCentral_media_name=ENOVIAEngineeringConfigurationCentral-V6R2011
export Variant_media_name=ENOVIAVariantConfigurationCentral-V6R2011
export Requirements_media_name=ENOVIARequirementsCentral-V6R2011
export Library_media_name=ENOVIALibraryCentral-V6R2011
export Supplier_media_name=ENOVIASupplierCentral-V6R2011
export Specification_media_name=ENOVIASpecificationCentral-V6R2011
export Program_media_name=ENOVIAProgramCentral-V6R2011
export ProgramChange_media_name=ENOVIAProgramChangeControl-V6R2011
export Sourcing_media_name=ENOVIASourcingCentral-V6R2011
export Material_media_name=ENOVIAMaterialsComplianceCentral-V6R2011
export EVP_media_name=ENOVIALiveCollaboration_VPM-V6R2011

################################################################################################
#############
# names for the gz files
# these are the V6R2011 files that contain the products to be installed
# the names that are provided are the ones that exist in the "zip" files on the
# IBM internal xTreme Leverage software download and are in a directory name that
refelects the
# name of the original zip file they were contained in
################################################################################################
#############

# Top level path for mount point where all directories containing the GNU Zip files
export GZ_DIRECTORY_PATH=/mnt/V6R2011/v6r2011_AIX_Utility
```

```
export
Core_GZFile=$GZ_DIRECTORY_PATH/CZ96DML/ENOVIALiveCollaboration/ENOVIAStudioModelingPla
tformRichClients-V6R2011.AIX.tar.gz
export
RMI_GZFile=$GZ_DIRECTORY_PATH/CZ96DML/ENOVIALiveCollaboration/ENOVIALiveCollaborationS
erver-V6R2011.AIX.tar.gz
export
BPS_GZFile=$GZ_DIRECTORY_PATH/CZ96DML/ENOVIALiveCollaboration/ENOVIALiveCollaborationB
usinessProcessServices-V6R2011.Unix.tar.gz

export
EngCentral_GZFile=$GZ_DIRECTORY_PATH/CZ968ML/EngineeringCentral/ENOVIAEngineeringCentr
al-V6R2011.Unix.tar.gz
#export
EngCentral_GZFile=$GZ_DIRECTORY_PATH/CZ968ML/EngineeringConfigurationCentral/ENOVIAEng
ineeringConfigurationCentral-V6R2011.Unix.tar.gz

#export
Variant_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/VariantConfigurationExperience/ENOVIAVariant
ConfigurationExperience-V6R2011.Unix.tar.gz
export
Variant_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/VariantConfigurationCentral/ENOVIAVariantCon
figurationCentral-V6R2011.Unix.tar.gz

export
Requirements_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/RequirementsCentral/ENOVIARequirementsC
entralFoundation-V6R2011.Unix.tar.gz

export Library_GZFile=$GZ_DIRECTORY_PATH/CZ968ML/LibraryCentral/ENOVIALibraryCentral-
V6R2011.Unix.tar.gz

export
Supplier_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/SupplierCentral/ENOVIASupplierCentral-
V6R2011.Unix.tar.gz

export
Specification_GZFile=$GZ_DIRECTORY_PATH/CZ968ML/SpecificationCentral/ENOVIASpecificati
onCentral-V6R2011.Unix.tar.gz

export
Program_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/ProgramCentral/ENOVIAProgramCentralFoundatio
n-V6R2011.Unix.tar.gz

export
ProgramChange_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/ProgramChangeControl/ENOVIAProgramChan
geControl-V6R2011.Unix.tar.gz

export
Sourcing_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/SourcingCentral/ENOVIASourcingCentral-
V6R2011.Unix.tar.gz

export
Material_GZFile=$GZ_DIRECTORY_PATH/CZ967ML/MaterialsComplianceCentral/ENOVIAMaterialsC
omplianceCentral-V6R2011.Unix.tar.gz

export
EVP_GZFile=$GZ_DIRECTORY_PATH/ENO_LC_R209/ENOVIALiveCollaboration/ENOVIALiveCollaborat
ion_VPM-V6R2011.AIX.tar.gz

##########################################################################################
#############
# location for EVP install files
```

```
# Note: The VPMMultiDiscipline install files are more like the CATIA V5 install format
################################################################################################
#############
export
EVP_files=$GZ_DIRECTORY_PATH/CZ96DML/ENOVIALiveCollaboration_VPM/ENOVIA_VPM_Server.AIX
/1/install

#############################################################################
# Global environment variable DB_TYPE is use to se the database type.
# Expected values for this variable "DB2" or "ORACLE".
#############################################################################
export DB_TYPE="DB2"
#export DB_TYPE="ORACLE"

#############################################################################
# DB2 Variables
# DB2 Client Instance that is used for accessing the "MyInstance" database
#############################################################################
export DB2CLIENT=db2cli94
export DB2CLIENT_PASSWORD=db2cli94
# DB2 Instance Owner that actually owns the "MyInstance" database
export DB2_SERVER_INSTANCE=db2adm9
export DB2_SERVER_INSTANCE_PASSWORD=db2adm9
export DB2_GROUP=db2
export MyService_name=db2c_db2adm9

# when DB2 is installed in a WPAR with a shared /usr, location is best set to a
directory under home
# when DB2 is installed in regular AIX, location is usually in /opt/IBM
export DB2_CODE_PATH=/opt/IBM/db2/V9.5

#############################################################################
# Server where the DB2 instance exists -
#      in a simple config this will be the same server
#       where the WAS and V6R2011 will be installed
#############################################################################
export DB2SERVER_HOST=pi.austin.ibm.com
export DB2SERVER_NODE=pi
#This is used in "enoviav6r2011_db2.txt"
export DatabaseName=R2011
export DatabasePath=/Data/DB2/V6R2011
export DatabaseSchema=ev6adm
export DatabaseBinariesPath=/opt/IBM/db2/V9.5
export DatabasePath_REQ_SPACE=8000      # 8000 MB ~ 8 GB
export PLMADMIN=ev6adm

#############################################################################
# Oracle DB environment variables
#############################################################################
#export ORACLE_VERSION=10
#export ORACLE_BASE=/home/oracle/ora10
#export ORACLE_HOME=$ORACLE_BASE

#*********************************************************************
#Note: Oracle 11g has oradata directory under following ORACLE_BASE path
#*********************************************************************
export ORACLE_VERSION=11
export ORACLE_BASE=/home/oracle/ora11
export ORACLE_HOME=$ORACLE_BASE/product/11.1.0/db_1

ORACLE_HOME_REQ_SPACE=6000       # 6000 MB ~ 6 GB
export ORACLE_SID=R2011
```

```
export GDB_NAME=$ORACLE_SID
export TEMPLATE_FILE=$ORACLE_HOME/assistants/dbca/templates/General_Purpose.dbc
export SYS_PASSWORD=ibm123
export SYS_USER=sys
export DB_USER=ITTEST
export DB_USER_PASSWORD=MATRIX
export ADD_TABLES_SCRIPT=$PWD/addtablesR2011.txt
export NETCA_BIN=$ORACLE_HOME/bin/netca
export RSP_FILE=$ORACLE_HOME/network/install/netca_typ.rsp
export LISTENER_NAME=LISTENER

#################################################################################################
###
# WebSphere Variables
#
# Information about where the profilePath exists and the name of the profile
#   In a typical AIX install of WebSphere Application Server this will be:
#   /usr/IBM/WebSphere , the path that exists here was used for a WPAR install of
V6R2011
#################################################################################################
###
export profilePath=/usr/IBM/WebSphere
#export profilePath=/wpars/eta/home/IBM/WebSphere
export profileName=AppServer
export WAS_HOME="$profilePath/$profileName"
export WSADMIN_BIN='$WAS_HOME/bin/wsadmin.sh'
export SERVER_NAME='server1'
export WEB_SERVER_NAME='webserver1'
export IHS_HOME=/usr/IBM/HTTPServer

#################################################################################################
# Location paths
# Staging location
# work location where files will be extracted from the compressed tar files
#
# Note: when using WPAR, easiest to use directories under /home
# Note: when using regular AIX, separate filesystems give some additional flexibility
#################################################################################################
export CDROM_LOCATION=/usr/V6R2011/staging
export INSTALL_PATH=/usr/V6R2011
export INSTALL_REQ_SPACE=5000           # 6000  MB ~ 6 GB

export JAVA6_PATH=/usr/java6

########################################
# Prodcut licnese  and import filenames
########################################
export LICENSE_FILE=V6R2011-product.lic
export IMPORT_FILE=importfile.txt

########################################
#Time Zone
########################################
export TimeZone=$TZ

#################################################################
# V6 Admin
#    variables that define various users needed for V6R2011
#################################################################
export V6ADMIN=ev6adm
export V6ADM_PASSWORD=ev6adm
export creator_user=creator
```

```
export UserIntentions=/tmp/UserIntentions_modified.xml
export VPMADM=VPMADM
export VPMADM_PASSWORD=VPMADM
```

Appendix B: DB2 hints

On systems that support multiple page sizes, such as IBM POWER5™ and POWER6 processor-based systems, you can add the CAP_BYPASS_RAC_VMM capability to the DB2 database-instance owner by running the **chuser** command as root.

chuser capabilities=CAP_BYPASS_RAC_VMM db2adm9

Setting the db2set parameters

As the DB2 instance owner, use the **db2set** command to define the following list of parameters:

For example: `db2set DB2AUTOSTART=YES`

```
DatabaseInstance=db2adm9
db2set -i $DatabaseInstance DB2_USE_ALTERNATE_PAGE_CLEANING=ON
db2set -i $DatabaseInstance DB2_DIRECT_IO=
db2set -i $DatabaseInstance DB2_INLIST_TO_NLJN=NO
db2set -i $DatabaseInstance DB2_INLIST_TO_NLJN=NO
db2set -i $DatabaseInstance DB2_EVALUNCOMMITTED=ON
db2set -i $DatabaseInstance DB2_SKIPDELETED=ON
db2set -i $DatabaseInstance DB2_SKIPINSERTED=ON
db2set -i $DatabaseInstance DB2MAXFSCRSEARCH=1
db2set -i $DatabaseInstance DB2ASSUMEUPDATE=OFF
db2set -i $DatabaseInstance DB2_CORRELATED_PREDICATES=
db2set -i $DatabaseInstance DB2_HASH_JOIN=
db2set -i $DatabaseInstance DB2ENVLIST=EXTSHM
db2set -i $DatabaseInstance DB2_MMAP_WRITE=OFF
db2set -i $DatabaseInstance DB2_MMAP_READ=OFF
db2set -i $DatabaseInstance DB2_PARALLEL_IO=*
```

If using the enoviav6r010x_db2.ksh script to create the database and configure the client database, the script db2set.txt is run to define the required db2set values.

Appendix C: Installation files

This appendix discusses the image files and preprocesses installation files.

Procedure to copy contents of V6R2011 media from Product Media Kit

Prior to starting the installation using the utility programs described in this paper, manually copy the contents of the Product Media Kit for V6R2011 onto AIX server.

In situations where the DVD or CDs were labeled with "1 of 3", "2 of 3" and "3 of 3" or "1 of 2 and 2 of 2" the contents from all of the related DVD/CDs has to be copied into one directory of the AIX server. The media kit shipped in support of this activity included DVDs and CDs that contained labels that included the text strings and subdirectories created with the following directory names:

- ENO_APPLI_R209
- ENO_LC_R209
- PDIR
- ENO_CLC_R209
- ENO_MCAD_R209
- ENO_DEC_R209
- ENO_STUDIO_R209

Copy the contents of the DVDs and CDs into the corresponding subdirectory using the tar utility. The following example provides an instance on how to perform the tar copy, after defining a CD-ROM file system using System Management Interface Tool(SMIT) and creating and mounting a file system (/export/v6r2011) using SMIT.

Define a cdrom file system on /dev/cd0, with the mount point /cdrom, using the option in SMIT to not automatically mount the filesystem.

Create a /export/v6r2011 files ystem sized at 24 GB, mount the file system then create the subdirectories with the names as mentioned in this section.

Example of copying three DVDs for ENO_APPLI_R209

As an example of copying the contents of the three DVDs delivered with the label ENO_APPLI_R209, the following procedure has to been used.

1. Insert the DVD with the 1 / 3 label and run the **mount /cdrom** command
2. Run the following command:
   (cd /cdrom && tar -cvf- ./) | (cd /export/v6r2011/ENO_APPLI_R209 && tar -xvf-)
3. After the copying of the first DVD completes, run the **umount /cdrom** command
4. Insert the DVD with the 2 / 3 label and run the **mount /cdrom** command
5. Run the following command:
   (cd /cdrom && tar -cvf- ./) | (cd /export/v6r2011/ENO_APPLI_R209 && tar -xvf-)
6. After the copying of the second DVD completes, run **the umount /cdrom** command
7. Insert the DVD with the 3 / 3 label and run the **mount /cdrom** command.

8. Run the following command:
   (cd /cdrom && tar -cvf- ./) | (cd /export/v6r2011/ENO_APPLI_R209 && tar -xvf-)
9. After the copying of the third DVD completes, run the **umount /cdrom** command

Use a similar procedure to copy the contents of the rest of the DVDs and CDs into the appropriately named subdirectories, using the names listed in the previous section.

Key installation guide

The ENOVIA Unified Live Collaboration V6R2011 Installation Guide is provided in a PDF file named ENOVIALiveCollaborationInstallationGuide-V6R2011.pdf. The ENOVIA Live Collaboration Release Bulletin is provided in a PDF filed named ENOVIALiveCollaborationReleaseBulletin-V6R2011.pdf.

Some of the key PDF files may be located in PDIR/pdf directory structure, while other installation and administration guides require that the documentation be installed from the ENO_APPLI_R209/Documentation/Server/1 directory by either running setup.exe on Windows or **start** on AIX.

The DS License Server Installation and Setup Guide is provided in a PDF file named DSLS.pdf. This file is located in the directory structure of the files copied into ENO_STUDIO_R209 when following the procedure outlined in “Appendix C: Installation files”

Appendix D: DS License Server installation and setup

This appendix explains DS License Server installation and setup on AIX for ENOVIA V6R2011.

Installation

For installation, you can use CD-ROM or the CZ96DML.zip image file (installable location: CZ96DML/V6LicenseServer/1/AIX). Refer to DSLS.pdf (Section: Installing the Dassault Systèmes License Server on UNIX) for installation details on AIX.

Setup

After installing DS License Server, configure it using the GUI configuration tool. The details you provide are saved in a configuration file, which DS License Server uses to direct the behavior of the local system in the licensing environment.

Scenario 1: Configuring a network-license server

Refer Dassault Systèmes License Server for V6R2011 (DSLS.pdf) (Section: Configuring the Dassault Systèmes License Server and Clients, page 16) for more details.

The licenses need to be obtained and enrolled in the license server, following the procedures outlined in the DSLS.pdf file. The licenses requested in the V6R2011-product.lic file need to be enrolled in the license server, otherwise the license enrollment step might not succeed.

Scenario 2: Configuring a network-license client

This scenario shows how the administrator or user configures a client of the network-license server (configured in the previous scenario). After your license server is up and running and your licenses have been enrolled, you need to configure the license clients.

To configure a network-license client:

1. Create the following directory: `/var/DassaultSystemes/Licenses`
2. Go to the directory and create a file named,**DSLicSrv.txt**
3. Edit the file to declare the license servers to which the client can connect.
   The syntax for the declaration is as follows: `servername:portnumber`
   For example: `rho:4085`
4. The port number is the license server listening port, not the administration port. If several standalone license servers need to be accessed, add a new line for each license server.
   Note: The syntax for failover servers is different. The three failover servers must all be referenced on the same line as follows: `server1:4085,server2:4085,server3:4085`

Appendix E: importfile.txt

The following is an example of the format for the **importfile.txt** script that you need to create to add ENOVIA Multi-Discipline VPM users to the People and Organization databases. Create this file by using the information that is appropriate for your environment — prior to running the run_add_users function in the **v6r2011_post_was_install.ksh** script.

You can find more information about ENOVIA VPM Multi-Discipline Collaboration Platform administration in *ENOVIA VPM Multi-Discipline Collaboration Platform Installation and Administration Guide*, which is delivered with the installation images.

```
// ----------------------------------------------------------------
// Use to add plmu001 through plmu010 to P&O database
*VERSION V6R2011-1.0
*NULL $
*SEPARATOR ;
//plmu001
*PERSON plmu001;MyCompany;$
+ATTRIBUTE Email Address;plmu001@plm.com
+ATTRIBUTE Fax Number;Unknown
+ATTRIBUTE First Name;plm
+ATTRIBUTE Home Phone Number;Unknown
+ATTRIBUTE Host Meetings;Yes
+ATTRIBUTE Icon Mail;FALSE
+ATTRIBUTE JT Viewer Type;None
+ATTRIBUTE Last Name;plmu001
+ATTRIBUTE Login Type;Standard
+ATTRIBUTE Middle Name;Unknown
+ATTRIBUTE Pager Number;Unknown
+ATTRIBUTE Web Site;Unknown
+CONTEXT VPLMDesigner.MyCompany.Engineering
+CONTEXT VPLMDesigner.MyCompany.Standard
+CONTEXT VPLMLeader.MyCompany.Engineering
+CONTEXT VPLMLeader.MyCompany.Standard
+CONTEXT VPLMReviewer.MyCompany.Engineering
+CONTEXT VPLMReviewer.MyCompany.Standard
+PASSWORD plmu001

//plmu002
*PERSON plmu002;MyCompany;$
+ATTRIBUTE Email Address;plmu002@plm.com
+ATTRIBUTE Fax Number;Unknown
+ATTRIBUTE First Name;plm
+ATTRIBUTE Home Phone Number;Unknown
+ATTRIBUTE Host Meetings;Yes
+ATTRIBUTE Icon Mail;FALSE
+ATTRIBUTE JT Viewer Type;None
+ATTRIBUTE Last Name;plmu002
+ATTRIBUTE Login Type;Standard
+ATTRIBUTE Middle Name;Unknown
+ATTRIBUTE Pager Number;Unknown
+ATTRIBUTE Web Site;Unknown
+CONTEXT VPLMDesigner.MyCompany.Engineering
+CONTEXT VPLMDesigner.MyCompany.Standard
+CONTEXT VPLMLeader.MyCompany.Engineering
+CONTEXT VPLMLeader.MyCompany.Standard
+CONTEXT VPLMReviewer.MyCompany.Engineering
+CONTEXT VPLMReviewer.MyCompany.Standard
+PASSWORD plmu002
```

Appendix F: v6r2011-product.lic

The following is an example of the format for the **v6r2011-product.lic** script that you need to create to associate ENOVIA Multi-Discipline VPM users to the product licenses into databases. You receive this file as your request for licenses that you purchased.

The following is a snapshot of the sample product license file (v6r2011-product.lic).

```
set context user creator;
modify product ENG add person plmu001;
modify product ALX add person plmu001;
modify product CPF add person plmu001;
modify product DEC add person plmu001;
modify product ECC add person plmu001;
modify product FTR add person plmu001;
modify product LBC add person plmu001;
modify product PIX add person plmu001;
modify product PRG add person plmu001;
modify product RMT add person plmu001;
modify product SRC add person plmu001;
modify product ALV add person plmu001;

modify product ENG add person plmu002;
modify product ALX add person plmu002;
modify product CPF add person plmu002;
modify product DEC add person plmu002;
modify product ECC add person plmu002;
modify product FTR add person plmu002;
modify product LBC add person plmu002;
modify product PIX add person plmu002;
modify product PRG add person plmu002;
modify product RMT add person plmu002;
modify product SRC add person plmu002;
modify product ALV add person plmu002;
```

Appendix G: CATIA V6 connection to ENOVIA VPM Multi-Discipline Collaboration Platform

Although the focus of this guide is to provide information on the installation of the ENOVIA Unified Live Collaboration server on IBM Power Systems servers that run the AIX operating system, accessing the ENOVIA Multi-Discipline VPM product from a workstation that runs CATIA V6 is an important task.

Figure 15, along with the following explanation, allows you to make the connection successfully.

When establishing the connection, you must know the following (see Figure 15):

- Type of connection: ENOVIA V6
- Protocol: HTTP
- Port: 80 (HTTP port that IBM HTTP Server listens on)
- Host name: Host name of the Unified Live Collaboration server

The root Uniform Resource Identifier (URI) is the name that is given when the EAR file is built (using the war_setup program), unless this was changed, the name is *ematrix*.

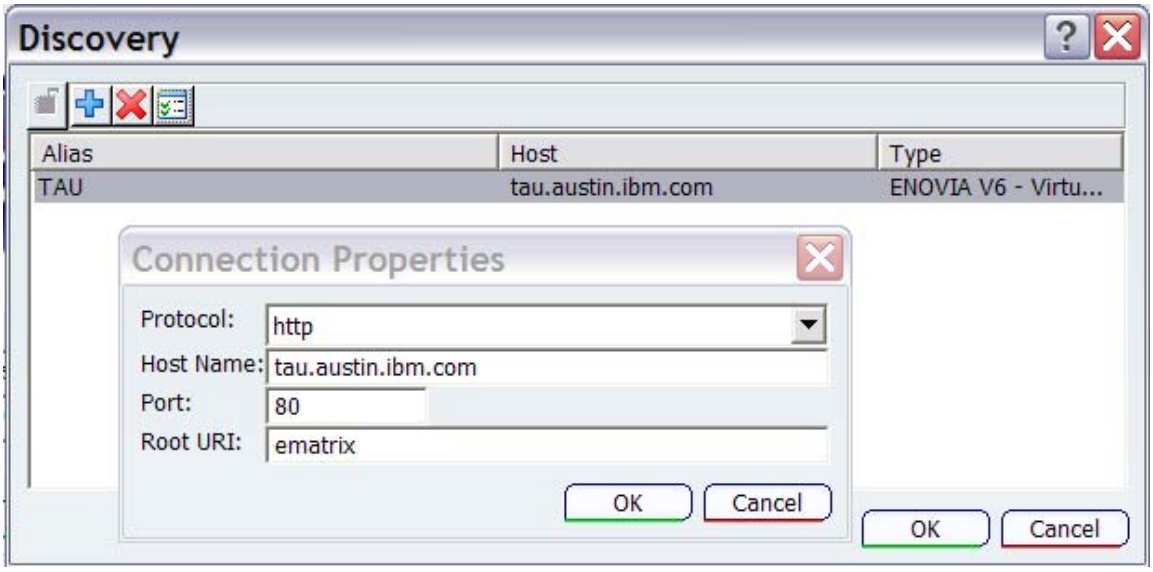

Figure 15: Connection properties

Appendix H: About the check-point installation feature

During the automated installation, if any of the application or component installation steps fail because of an unexpected error, the next installation session does not start back at the beginning; it commences where it failed in the previous step.

The following algorithm is for check-point installation of the ENOVIA V6R2011 product on the AIX platform.

1. Check to see whether a file named **.installed** exist in $INSTALL_PATH (for example, /usr/V6R2011).
   a. If an earlier installation effort failed, the user or administrator is warned with a message that says, “Would you like to continue the previous failed installation? [y/n] “
   b. If the user selects **y**, then read the **.installed** file to view the list of installed components.
   c. If the user selects **n**, then warn the user to perform the clean-up and restart the installation.
2. If the **.installed** file does not exist, then do a fresh or regular installation (that is, install all the components).

Assumption

The database type (Oracle or DB2) should be consistent across the installation session when recovery of installation is required.

Appendix I: Resources

These websites provide useful references to supplement the information contained in this guide:

- IBM System p and AIX Information Center
  http://publib.boulder.ibm.com/infocenter/pseries/index.jsp
- Power Systems on IBM PartnerWorld®
  ibm.com/partnerworld/wps/pub/overview/B5P00PW
- AIX on IBM PartnerWorld
  ibm.com/partnerworld/aix
- IBM AIX 7.1 Information Center
  http://publib.boulder.ibm.com/infocenter/aix/v7r1/index.jsp
- IBM AIX 6.1 Information Center
  http://publib.boulder.ibm.com/infocenter/pseries/index.jsp
- IBM Systems on IBM PartnerWorld
  ibm.com/partnerworld/systems
- IBM Publications Center
  www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi?CTY=US
- IBM Redbooks®
  ibm.com/redbooks
- IBM developerWorks®
  ibm.com/developerworks
- IBM Product lifecycle management (PLM) website
  ibm.com/solutions/plm
- Oracle website
  www.oracle.com/index.html
- WebSphere Application Server V6.1 Install Guide for PDM Applications
  ibm.com/software/plm/pdif/resources/websphere61_install_pdm.html
- IBM Xtreme Leverage intranet site (IBM employees only)
  https://w3-104.ibm.com/software/xl/download/ticket.do?openform

Appendix J: About the authors

Gary Hornyak is a senior software engineer technical consultant for IBM PLM Solutions, specializing in PDM application architecture. Gary has more than 20 years of experience with CATIA, ENOVIA PLM applications, and other PLM software solutions. Gary is a founding member of the IBM Dassault Systèmes International Competency Center (IDSICC).

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