Exor 4.8.0

Product Installation and Upgrade Guide

Document Version History

Version	*Owner*	*Source*	*Date*	*Description*
1.0	Chris Baugh	Author	08-Jun-2018	Initial Draft from previous release
1.1	Upendra Hukeri	Author	28-Aug-2019	Install/Upgrade Steps for Accidents Manager

For review:	*For approval:*

Table of Contents

1 Document Summary

This document covers steps involved in installing/upgrading Exor products.

Important:

For the 4.8.0.0 release, Exor products will be installed on an Oracle 12c database. As a result, additional steps are required to accommodate differences to previous Database versions. When upgrading from a previous Exor version it is imperative that scripts detailed under Section 3.4.5 are executed as the appropriate user.

1.1 Reference documents

Oracle Support	Windows Java Client Hangs On Accepting Not Verified Signature Of jar Files When SeparateFrame=True (Doc ID 1173365.1)
Oracle Support	Form Hangs When Acknowledging Security Warning - The application's digital signature cannot be verified (Doc ID 1328039.1)
www.snapdba.com	http://www.snapdba.com/2013/04/forms-11g-java-client-hangs-at-security-warning-with-the-applications-digital-signature-cannot-be-verified/
Oracle Support	server-side SQLJ is no longer supported in Oracle 12.2. https://community.oracle.com/thread/4036216 https://docs.oracle.com/en/database/oracle/oracle-database/12.2/upgrd/desupported-features-oracle-database-12c-r2.html#GUID-685A0333-1051-4306-B84A-574DAFE799B2
Oracle Support	12c: USE_SID_AS_SERVICE Setting in Listener Causes ORA-12514 Failures for Clients and Enterprise Manager (Doc ID 2099053.1) https://oracle-base.com/articles/12c/multitenant-connecting-to-cdb-and-pdb-12cr1

1. **Table of references**

2 Introduction

2.1 Purpose

This guide covers steps involved in installing/upgrading the components for:

- Network Manager (including Core, MapViewer)

Each product upgrade is split into two distinct stages,

Stage 1 – Implementation of the Software files

Stage 2 – Installation/Upgrade of the Server

2.2 Products Covered by this Guide

The table below lists the relevant products that are covered by this guide.

Product	***Install***	***Upgrade***	*Sequence*
Network Manager	✓	✓	1

2. Table 1: List of products covered by this guide

Table 1 lists the order in which to install/upgrade the products in this release, as indicated by the *Sequence* column.

2.3 Pre-Requisites to Installation/Upgrade

It is assumed that the audience of this document understand the configuration of the servers being installed/upgraded and are sufficiently proficient with SQL*Plus. It is also assumed that the terminology used in this document is understood by the reader.

NB. The instructions for installation of the software describe the installation of all the software into a single area (usually referred to as the 'Client'). The instructions for installing/upgrading the Server (your Highways schema) assume you have access to the database from the 'Client'.

Your configuration and server access may differ from this; the supplied file can still be used for installation. For example, you may have to install the Client software on the Application Server and the Server software on the Database Server for reasons of database access availability from the Application Server.

If in any doubt, please raise a ticket at http://selectservices.bentley.com.

Before attempting to install/upgrade, you should ensure that;

- The database version is 12c r2 in accordance with the release configuration. Please ensure that the database can be upgraded with the assistance of services or Oracle documentation.
- The appropriate software components are installed and are compatible with the Bentley-exor release configuration. The release configuration can be downloaded from the Bentley Communities web site (Release Configuration Guide for Exor Products).
- all users are disconnected from the system
- The process framework is shutdown
- the highways listener processes and scheduler are not running on the application server
- A database backup of the owner of Highways owner has been taken.
- When naming the **<exor_base>** directory and sub-directory structure (as discussed below) please ensure that the directory/folder string DOES NOT contain spaces.
- You MUST rename the current **<exor_base>** directory and sub-directory structure and contents to a new area (e.g. <exor_base4700>). This ensures that a copy is available for backup or reference purposes should any issues arise during the installation.
- The installation can then continue into the area that the **<exor_base>** normally resides (which should now be empty).

For Example:

….rename the current **<exor_base>** directory and sub-directory structure and contents to a new area (e.g. <exor_base4700>)

… The installation can then continue into a clean area (e.g. c:\exor) by unzipping the release zip file. This will create a folder/directory structure with the release files which will be used to install or upgrade your system.

2.4 Release Software Component 4.8.0.0 Versions

Component	*Version*	*PatchService Pack Level*
Oracle Database	Enterprise Edition 12.2.0.1 , with Text and Spatial Options. This is validated in Single-Tenant configuration.	Windows DB Bundle Patch April 2018 27426753 , OJVM Microsoft Windows BP 27650410
WebLogic Sever 11g	10.3.6.0	(April 2018 CPU). Patch 27395085, 27541896
Oracle Fusion Middleware: Forms and Reports 11g	11.1.2.2.0	Patch 20836354 + April 2018 CPU. Refer to Oracle Note 2353306.1 section 3.3.18 for full list of required patches
Mapviewer 11g	11.1.1.9.0 (October 2016)	(April 2018 CPU) 27534923

3. Table of Release Software Component 4.8.0.0 Versions

Further details about the components and their versions and patches please refer to the exor release configuration.

Please note that the implementation of the Oracle Fusion Middleware and WebLogic server will include the 1.7 version of Java.

2.5 Oracle Weblogic Server Configuration (Install and Upgrade)

Please note that this section is applicable when performing an install or upgrade for 4.8.0.0 (as opposed to previous releases). Please note that further configuration is required when installing the map server software and configuring the MapViewer product.

Please ensure that the Weblogic Application Server is installed and Fusion Middleware Forms and Reports are installed and configured before proceeding.

Bentley-exor release 4.8.0.0 makes use of WebUtil functionality within the Oracle Weblogic Server Technology stack for Maintenance Manager (Inspection Loader), Document Manager (uploading documents and Document Bundle Loader) and the Process Framework. This requires additional configuration within the Weblogic Server Fusion Middleware Forms deployment.

The Jar files being provided in this release have been signed. The certificates are due to expire around September 2018. Please be aware that unsigned Jar files can lead to a potential issue whereby the forms start-up process will hang(Note: From Java 1.7.0_45 onwards, Forms will not just hang with expired versions of Jars, but

the Jars will simply be blocked and user will be unable to launch the Exor application). For more information on the workaround please see documents on the Oracle support web site by referencing the documents below:

Windows Java Client Hangs On Accepting Not Verified Signature Of jar Files When SeparateFrame=True (Doc ID 1173365.1)

Form Hangs When Acknowledging Security Warning - The application's digital signature cannot be verified (Doc ID 1328039.1)

Alternatively see:

http://www.snapdba.com/2013/04/forms-11g-java-client-hangs-at-security-warning-with-the-applications-digital-signature-cannot-be-verified/

2.5.1 Deployment of forms and webutil Jar files

This section describes the deployment of the Jar files on the WebLogic server. Deployment of MapViewer Jar files is covered in the chapter specifically relating to the MapViewer installation.

NOTE: In order to edit this file the Forms Service must be down, stop the Form Service using Fusion Middleware control.

Locate the following files in **<exor_base>**\admin\lib directory –

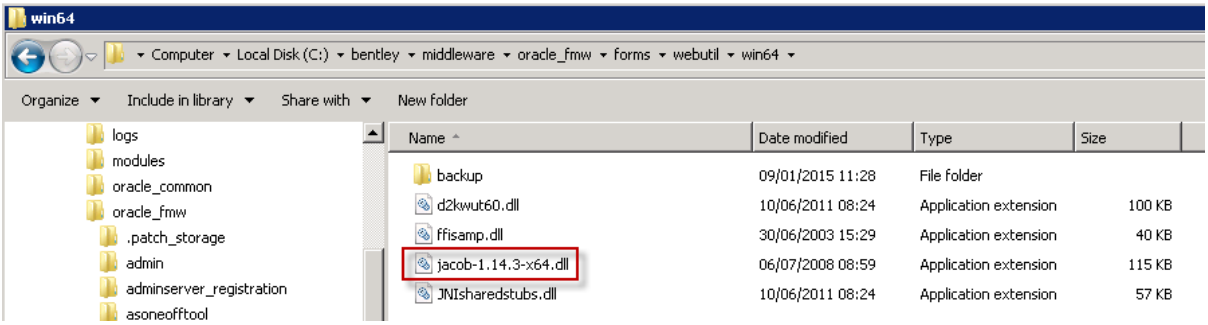
- bouncy-castle-provider.jar
- commons-codec.jar
- DJNativeSwing.jar
- DJNativeSwing-SWT.jar
- esapi.jar
- exor_jpg.jar
- exor_login_util.jar
- exor-ims.war
- frmall.jar
- frmwebutil.jar
- jacob.jar
- jacob-1.14.3-x64.dll
- jacob-1.14.3-x86.dll
- log4j.jar
- log4j.properties
- swt.jar
- UploadClient.jar
- UploadServer.jar
- exor-mapviewer.jar
- mvclient.jar

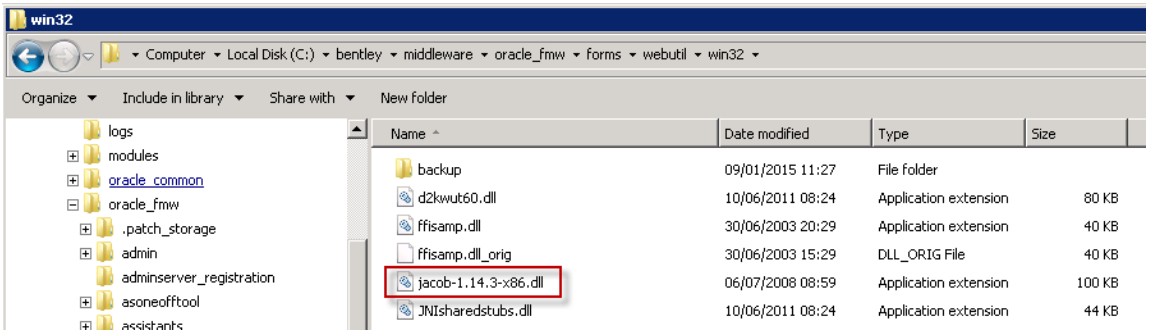
Copy

jacob-1.14.3-x64.dll into <ORACLE_HOME>\forms\webutil\win64\ and

jacob-1.14.3-x86.dll into <ORACLE_HOME>\forms\webutil\win32\

directories of the WebLogic Server –





Copy the following files into <ORACLE_HOME>\forms\java\ directory of the WebLogic Server, replacing any existing files:

- bouncy-castle-provider.jar
- commons-codec.jar
- DJNativeSwing.jar
- DJNativeSwing-SWT.jar
- esapi.jar
- exor_jpg.jar
- exor_login_util.jar
- exor-ims.war
- frmall.jar
- frmwebutil.jar
- jacob.jar
- log4j.jar
- log4j.properties
- swt.jar
- UploadClient.jar
- UploadServer.jar
- exor-mapviewer.jar
- mvclient.jar

2.5.2 Edit webutiljpi.htm

It is not possible to edit the webutiljpi.htm file via enterprise manager; navigate to <ORACLE_INSTANCE>\config\FormsComponent\forms\server and open the webutiljpi.htm file using a suitable text editor.

The new PARAMETER_NAME and EMBEDDED SRC to allow a specific java version to be used should be added to the file in two sections, first the 'Registration applet definition (start)' section, then the 'Forms applet definition (start)' section – NOTE: in this section you will have to scroll down to the EMBED SRC section to add java_version. The screen shots below indicate this.

NOTE in order to edit this file the Forms Service must be down, stop the Form Service using Fusion Middleware control.

Add the new PARAMETER_NAME and EMBEDDED SRC as per below and save the file.

```
<!-- Forms applet definition (start) -->
<NOSCRIPT>
<OBJECT classid="%jpi_classid%"
        codebase="%jpi_codebase%"
        WIDTH="%Width%"
        HEIGHT="%Height%"
        HSPACE="0"
        VSPACE="0"
        ID="%applet_name%">
</NOSCRIPT>
<SCRIPT LANGUAGE="JavaScript" SRC="/forms/frmjscript/forms_ie.js"></SCRIPT>
<PARAM NAME="TYPE"        VALUE="%jpi_mimetype%">
<PARAM NAME="CODEBASE"    VALUE="%codebase%">
<PARAM NAME="CODE"        VALUE="oracle.forms.engine.Main" >
<PARAM NAME="ARCHIVE"     VALUE="%archive%,%webUtilArchive%" >
<PARAM NAME="java_version"    VALUE="%java_version%" >
<PARAM NAME="serverURL" VALUE="%appletServerURL%">
<PARAM NAME="networkRetries" VALUE="%networkRetries%">
<PARAM NAME="serverArgs"
       VALUE="%escapeParams% module=%form% userid=%userid% debug=%debug% host=%host% port=%
<PARAM NAME="separateFrame" VALUE="%separateFrame%">
<PARAM NAME="splashScreen"  VALUE="%splashScreen%">
<PARAM NAME="background"  VALUE="%background%">
<PARAM NAME="lookAndFeel"  VALUE="%lookAndFeel%">
<PARAM NAME="colorScheme"  VALUE="%colorScheme%">
<PARAM NAME="serverApp" VALUE="%serverApp%">
<PARAM NAME="logo" VALUE="%logo%">
<PARAM NAME="imageBase" VALUE="%imageBase%">
<PARAM NAME="formsMessageListener" VALUE="%formsMessageListener%">
<PARAM NAME="recordFileName" VALUE="%recordFileName%">
<PARAM NAME="EndUserMonitoringEnabled" VALUE="%EndUserMonitoringEnabled%">
<PARAM NAME="EndUserMonitoringURL" VALUE="%EndUserMonitoringURL%">
<PARAM NAME="heartBeat" VALUE="%heartBeat%">
<PARAM NAME="MaxEventWait" VALUE="%MaxEventWait%">
<PARAM NAME="allowAlertClipboard" VALUE="%allowAlertClipboard%">
<PARAM NAME="disableValidateClipboard" VALUE="%disableValidateClipboard%">
<PARAM NAME="enableJavascriptEvent" VALUE="%enableJavascriptEvent%">
<PARAM NAME="MAYSCRIPT" VALUE="%enableJavascriptEvent%">
<PARAM NAME="digitSubstitution" VALUE="%digitSubstitution%">
<PARAM NAME="legacy_lifecycle" VALUE="%legacy_lifecycle%">
<PARAM NAME="JavaScriptBlocksHeartBeat" VALUE="%JavaScriptBlocksHeartBeat%">
<PARAM NAME="highContrast" VALUE="%highContrast%">
<PARAM NAME="disableMDIScrollbars" VALUE="%disableMDIScrollbars%">
<PARAM NAME="clientDPI" VALUE="%clientDPI%">
<PARAM NAME="guiMode" VALUE="%guiMode%">
<!-- Params specific to webutil -->
<PARAM NAME="WebUtilLogging" VALUE="%WebUtilLogging%">
<PARAM NAME="WebUtilLoggingDetail" VALUE="%WebUtilLoggingDetail%">
<PARAM NAME="WebUtilErrorMode" VALUE="%WebUtilErrorMode%">
<PARAM NAME="WebUtilDispatchMonitorInterval" VALUE="%WebUtilDispatchMonitorInterval%">
<PARAM NAME="WebUtilTrustInternal" VALUE="%WebUtilTrustInternal%">
<PARAM NAME="WebUtilMaxTransferSize" VALUE="%WebUtilMaxTransferSize%">
<PARAM name="applet_stop_timeout" value="800">
<COMMENT>
<EMBED SRC="" PLUGINSPAGE="%jpi_download_page%"
        TYPE="%jpi_mimetype%"
        java_codebase="%codebase%"
        java_code="oracle.forms.engine.Main"
        java_archive="%archive%,%webUtilArchive%"
        java_version="%java_version%"
```

This additional new parameter allows the Application to force the use of a specific version of JRE specified in the formsweb.cfg file. Once the changes are completed the Forms services may be started.

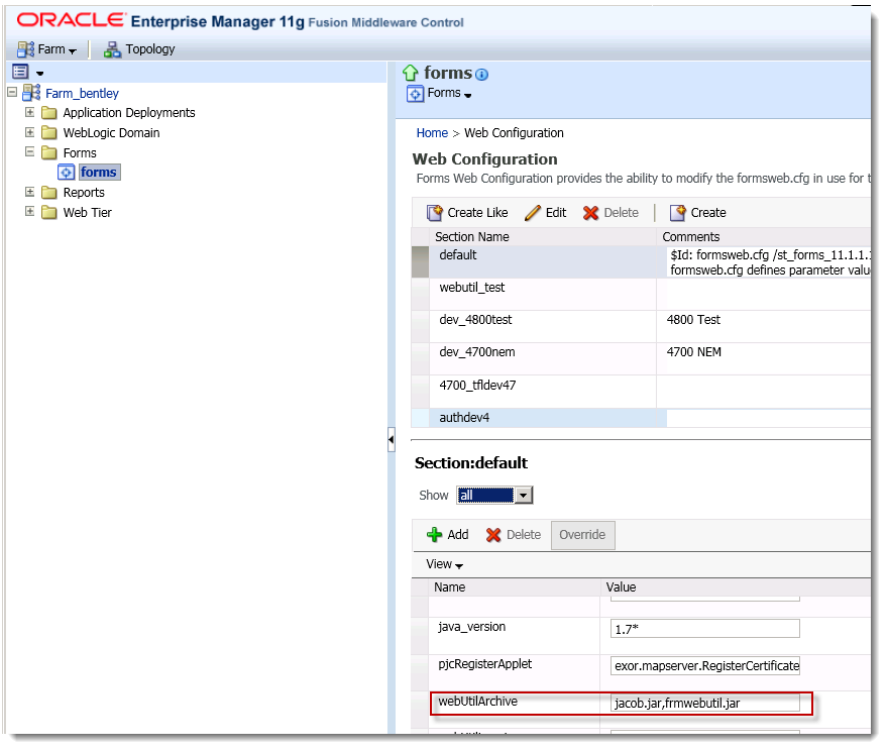
2.5.3 Configure the Forms Service to use WebUtil

Oracle Weblogic Server 10.3.60 - it is advisable to edit the configuration files using Fusion Middleware Control.

Add the additional parameters to the default section of formsweb.cfg using Fusion Middleware control:

Parameter	Value
term	<ORACLE_HOME>\config\FormsComponent\forms\fmrpcweb.res
baseHTML	<ORACLE_HOME>\config\FormsComponent\forms\server\webutilbase.htm
baseHTMLjpi	<ORACLE_HOME>\config\FormsComponent\forms\server\webutiljpi.htm
highContrast	TRUE
height	100%
form	hig1807.fmx
width	100%
archive	frmall.jar,exor_jpg.jar,UploadClient.jar
separateFrame	true
lookandfeel	oracle
WorkingDirectory	<exor_base>\bin
WebUtilArchive	jacob.jar,frmwebutil.jar
WebUtilLogging	on
WebutilLoggingDetails	normal
WebUtilErrorMode	console
WebUtilDispatchMonitorInterval	5
WebUtilTrustInternal	true
WebUtilMaxTransferSize	16384

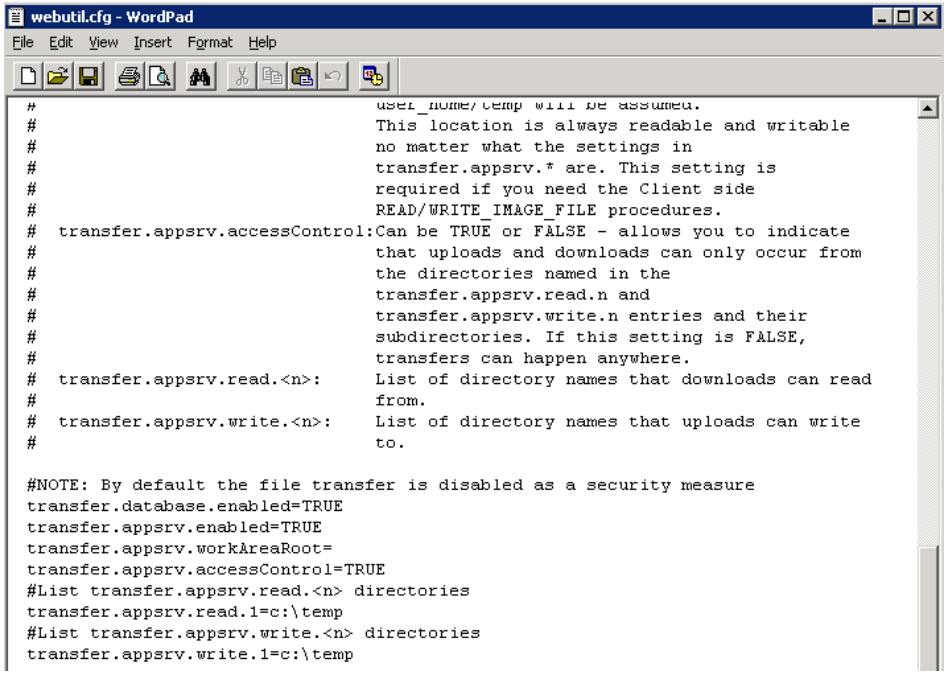
Note: Maintain the sequence of jar files for archive and WebUtilArchive parameters as mentioned in the above table.



Ensure that frmwebutil.jar exists in the CLASSPATH variable and if it does not, add it now.

2.5.4 Configure the WebUtil

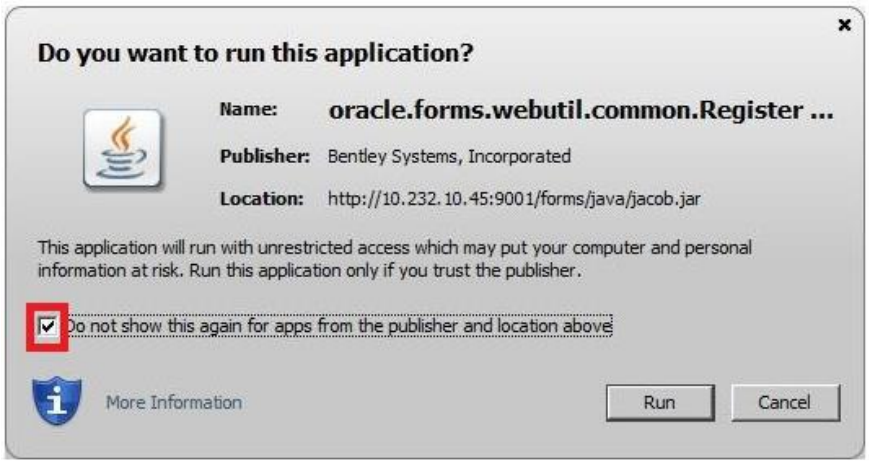
Edit the file, using a suitable text editor, located in the folder <ORACLE_INSTANCE>\config\FormsComponent\forms\server called webutil.cfg. There are numerous options that can be configured in webutil.cfg relating to Logging, OS specifics, Upload/Download, and work areas. Initially we only configure the File Transfer which requires the following change to webutil.cfg



In the example above we have set the database and appsrv to be 'TRUE' with the default settings for transfer.appsrv.read and transfer.appsrv.write being at the default of c:\temp. We may need to add additional folders here to allow the upload on Maintenance Manager files etc to the specific Exor Directories.

2.5.5 Forms startup

Please note that after deploying the pre-signed Jar files, starting the forms application may show a screen as shown below. Accept the warning by using the tick-box as shown. This is further described after the completing the installation of MapViewer (see Mapserver install)



3 Network Manager

3.1 Installation of the Network Manager Software files

To install the software components for Network Manager first check that the NM3 folder is present and correctly unzipped from the release zip file.

Important:

All exor applications that you install must go into the same destination – often referred to as **<exor_base>.**

3.2 Highways Owner Account (Install Only)

This section provides details of steps involved in creating as owner for all exor database objects.

It is important that you should only perform these steps if you do not already have a "Highways Owner" account. If you are upgrading Network Manager then skip to the section which relates specifically to the upgrade.

3.2.1 Before you start:

Before proceeding please ensure that the pre-requisites mentioned in Section 2.3 of this document are met.

Also, please be aware of the following;

- Where instructed to change to a directory before running a script, it is assumed that you are running SQL*PLUS from a DOS Command prompt.
- If you are running SQL*PLUS in windows you should set the 'start in' directory of the SQL*PLUS shortcut to simulate the change of directory.
- If you do not run SQL*PLUS from the directory stated in each step of the guide, the installation will fail.

Also, whilst following the instructions in this section you will be required to know the location of **<exor_base>**. You may recall that whilst undertaking the tasks in Section 3.1 you will have implemented software into the location referred to as **<exor_base>**, for example, C:\EXOR.

3.2.2 Product Run-time Environment

In the case of installation or upgrade of many of the products, the system depends on a properly configured middle-tier with a suitably configured folder containing all the run-time modules. These will be held in the product release installation folder such as **<exor_base>**\<prod>\11g_bin where <prod> refers to the product code such as nm3. These files will need to be copied into the fusion-middleware folder dedicated for this purpose.

Some products may also include executable files that run outside of the Oracle middle-tier and reference a database server only. These files such as listeners and C executable such as loaders will be contained inside the **<exor_base>**\<prod>\admin\C\11g_exe folder. It is important that these files are installed and executed in a suitable environment but this need not be the same as the product execution folder for forms and reports.

If in any doubt please raise a ticket at http://selectservices.bentley.com.

3.3 Creation of a Highways Owner

The following paragraphs should be used to create a new schema for the implementation of Network Manager and any other subsequent exor application.

3.3.1.1 Tablespace Requirements

The following tablespaces (or equivalents) should be made available on your server:

- **HIGHWAYS** - Default Table Space. Can be a different name if required.
- **TEMP** - Default Temporary Tablespace for users. Can be a different name.

3.3.1.2 Data Dictionary Privileges

Change directory to **<exor_base>**\nm3\install

Login to SQL*PLUS as the **SYS** user on the client PC and run the following command:

start hig_sys_grants.sql

3.3.1.3 The higowner script

Change directory to **<exor_base>**\nm3\install

Login to SQL*PLUS as the **SYSTEM** user on the client PC and run the following commands:

start system_objects.sql

followed by:

start higowner.sql

This script will prompt you for the following information:

Prompt	***Meaning***
Highways Owner Name	This should be the name to be given to your highways owner
Owner's Password	Password for highways owner
Default Tablespace	Default Tablespace for highways owner

Temporary Tablespace	Temporary Tablespace for highways owner
System Start Date	This is the earliest date at which data is valid in your database
Admin Type Code	Code for the default admin unit type
Admin Type Description	Description for the default admin unit type
Admin Unit Code	Code for the default Admin Unit
Admin Unit Description	Description for the default Admin Unit

You will now have a new Oracle user set up with all relevant privileges to run the highways application. Also the system start date for your database will have been set and Top level Admin Unit created for your default Admin Unit Type.

3.4 Network Manager Install/Upgrade

This section provides details of steps involved in installing/upgrading the server components for Network Manager to 4.8.0.0.

Important: This product will require upgrading **before** any other 4.8.0.0 product upgrades.

3.4.1 Before you start

Before proceeding please ensure that the pre-requisites mentioned in Section 2.3 of this document are met.

Also, please be aware of the following;

Where instructed to change to a directory before running a script, it is assumed that you are running SQL*PLUS from a DOS Command prompt.

If you are running SQL*PLUS in windows you should set the 'start in' directory of the SQL*PLUS shortcut to simulate the change of directory.

If you do not run SQL*PLUS from the directory stated in each step of the guide, the installation will fail.

Also, whilst following the instructions in this section you will be required to know the location of **<exor_base>**. You may recall that whilst undertaking the tasks in Section 3.1 you will have implemented software into the location referred to as **<exor_base>**, for example, C:\EXOR.

3.4.2 Typical problems that you may encounter

It is possible that, when you are running some of the upgrade scripts, errors may be reported saying that objects already exist in the database or that columns already exist on tables. These errors can generally be ignored. If you are in any doubt, please contact the Exor support desk for guidance.

The upgrade procedures will also attempt to install database roles in the highways owner account that are necessary for the system to operate correctly. You may find that errors are produced when running the upgrade scripts to the effect that the role names being created are already used by existing roles or users. These errors can be ignored as they simply mean that the roles being created already exist.

Also, during install/upgrade Warning messages may appear saying that compilation errors have occurred. These warnings can be ignored, since invalid objects will be recompiled later on in the install/upgrade. However, it will be of concern if compilation errors still occur following the re-compilation.

3.4.3 Install of Network manager

3.4.3.1 Core User and Objects

The following should be used to create a new schema for the implementation of Context Setting. This step is only required for a new install of Network Manager (i.e. not required if upgrading from a previous version of Network Manager).

Change directory to **<exor_base>\nm3\install**

Login to SQL*PLUS as the **SYSTEM** user on the client PC andrun the following command:

start exor_core_user_creation.sql

Login to SQL*PLUS as the **EXOR_CORE** user (Password EXOR_CORE) on the client PC and run the following command:

start exor_core_objects.sql

Then continue with the Install of Network Manager.

3.4.3.2 Install of Network Manager

To create the base data and objects for Network Manager modules;

Change directory **to <exor_base>\nm3\install**

Login to SQL*PLUS as the highways owner on the client PC and run the following command:

start nm_inst.sql

You will be prompted to enter the path of the location of your highways software. This should be name of the directory, including disk identifier and a trailing slash character, referred to as **<exor_base>**.

For example, if you installed your highways software in a directory called EXOR on your C drive, you would enter the following when prompted.

C:\EXOR\

When you have supplied this value, you will be prompted to confirm that it is correct and asked whether you wish to continue.

If the value specified is not correct or does not end with a slash character, you will be given an error message and the installation script will abort. You will then need to login to SQL*PLUS again and rerun the script.

When the script has completed, all the Network Manager objects and data will have been installed.

3.4.3.3 Checking Log File(s)

The following log files are produced in the working directory. At the end of the installation, the files can be viewed to check for any errors that could have occurred during installation.

nm3_install_1_<date&time>.LOG

nm3_install_2_<date&time>.LOG

Note:

it is perfectly normal for the NM3SDE package to not compile if an SDE schema does not exist or if the highways owner has no privilege to read SDE objects.

Please raise and attach the logs to a ticket with http://selectservices.bentley.com to allow Bentley (formerly exor) support staff to verify the install has been successful.

3.4.4 Post Install Tasks

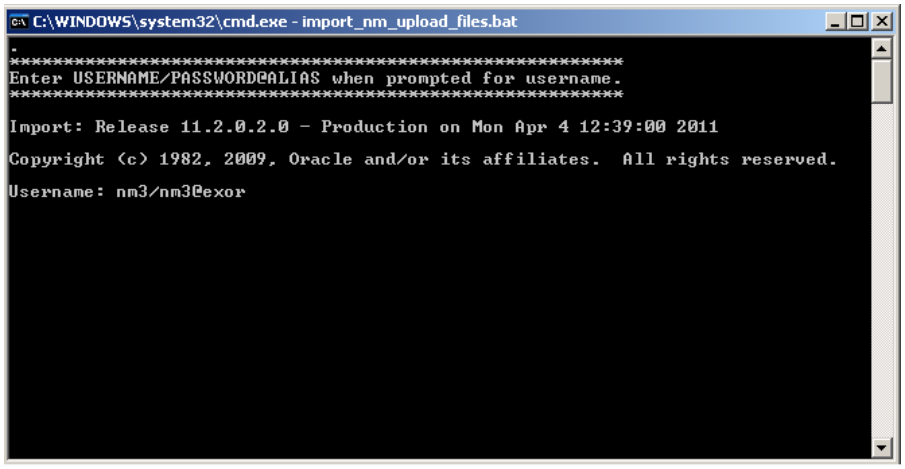
Creation of Additional Database Objects

Once an install has been completed the following batch files must be run;

import_nm_upload_files.bat

ldjava_11g.bat

These may be found in the **<exor_base>**\nm3\install\ directory and should be run from the command prompt.



You will be prompted for the Username of the Highways Owner. Enter the Username/Password@alias then press Enter, e.g. nm3/nm3@exor

3.4.4.1 Synonyms

Highways product option HIGPUBSYN is used to dictate whether or not Public database synonyms are used.

On first time installation of Network Manager synonyms are NOT created. So to create synonyms following installation, use the Highways application to set product option HIGPUBSYN and then within SQL*Plus run the following command;

```
EXECUTE nm3ddl.refresh_all_synonyms;
```

Note:

if you opt to not use Public Synonyms, then Private synonyms are created for all subordinate users when the above command is executed.

3.4.4.2 Configuring NM3WEB

This section provides details of steps involved in configuring the Gateway Database Access Descriptor to allow access to the Web modules used within Highways by Exor.

These include modules such as the

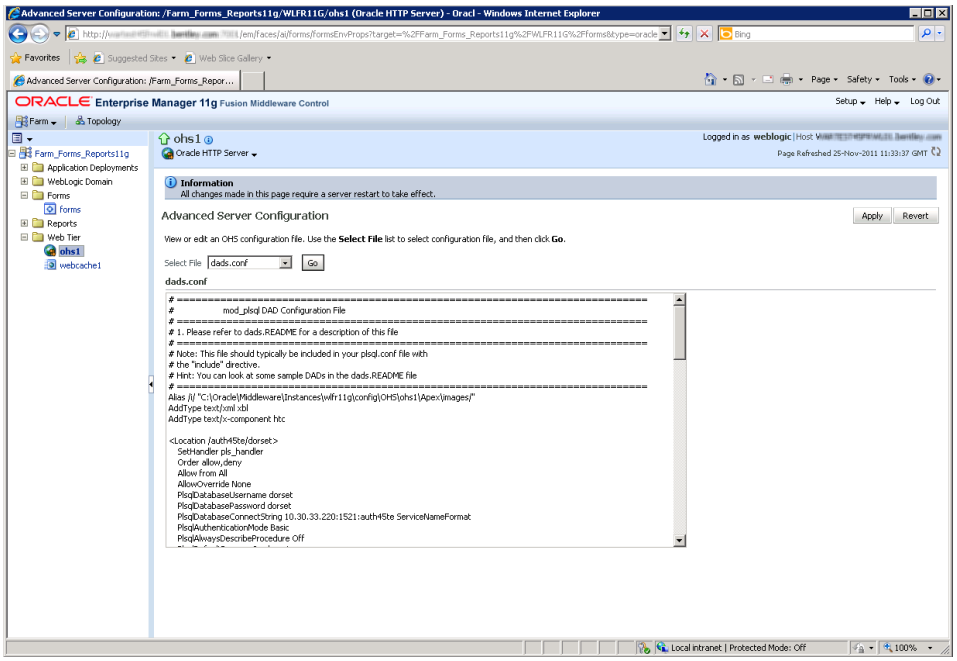
- CSV Loaders - HIGWEB2030
- Engineering Dynamic Segmentation - NMWEB0020.

It refers to the base directory for files accessed through the OHS Weblogic server. By default this is <ORACLE_INSTANCE>\config\OHS\ohs1\mod_plsql\dads.conf.

A Database Access Descriptor (DAD) must be created to handle the connection to the database by the web server.

From the Oracle HTTP Server Advanced Server Configuration using Fusion Middleware control page

Select dad.conf from files to be edited:



Database Access Descriptor Name (<Location /NM3WEB>) should be NM3WEB

Fill in user, password and database as required.

You can leave the password and/or username blank to force the user to enter them (recommended).

PlsqlDatabaseUsername should be blank.

PlsqlDatabasePassword should be blank.

Authentication method (PlsqlAuthenticationMode) should be Basic.

Default Home page (PlsqlDefaultPage) should be nm3web.main_menu.

Document Table name (PlsqlDocumentTablename) should be NM_UPLOAD_FILES.

Document Access Path (PlsqlDocumentPath) should be the value set for Product Option WEBDOCPATH. The standard metadata value is DOCS

Document Access Procedure (PlsqlDocumentProcedure) should be nm3web.process_download

Click OK button at top of page.

Note:

In order to access the Web Modules the User must be granted the appropriate Roles for the Module. Refer to the General System Admin Guide for more information on User Roles

For example:

```
<Location /NM3WEB>
    SetHandler pls_handler
    Order allow,deny
    Allow from All
    AllowOverride None
    PlsqlDatabaseUsername <recommended to be blank>
    PlsqlDatabasePassword < recommended to be blank >
    PlsqlDatabaseConnectString <hostname>:<port>:<service_name> ServiceNameFormat
    PlsqlAuthenticationMode Basic
    PlsqlAlwaysDescribeProcedure Off
    PlsqlDefaultPage nm3web.main_menu
    PlsqlDocumentProcedure nm3web.process_download
    PlsqlErrorStyle <as required>
    PlsqlDocumentPath DOCS
    PlsqlDocumentTablename NM_UPLOAD_FILES
</Location>
```

3.4.4.3 Forms 11g Specific Configuration

There are certain product options which must be set according to the Oracle forms version that is being used to run the exor application.

REPURL

The value of this product option should be set to the URL that identifies the 11g Fusion Middleware Reports Server.

e.g.

Error! Hyperlink reference not valid.>

3.4.5 Upgrade of Network Manager

3.4.5.1 SYS Synonyms and Grants

The following should be used to add Synonyms and Grants for SYS objects. These are required to allow for IMS/Single Sign-On configuration.

Change directory to **<exor_base>\nm3\install**

Login to SQL*PLUS as the **SYS** user on the client PC and run the following command:

start nm4800_sys.sql

The following log file will be produced in the working directory, and should be checked for any errors that may have been produced:

nm4800_sys_<date&time>.LOG

3.4.5.2 SYSTEM Objects, Synonyms and Grants

The following should be used to add Objects, Synonyms and Grants for SYSTEM objects. These are required as a result of Oracle 12c changes to Job Scheduling

Change directory to **<exor_base>\nm3\install**

Login to SQL*PLUS as the **SYSTEM** user on the client PC and run the following command:

start nm4800_system.sql

The following log file will be produced in the working directory, and should be checked for any errors that may have been produced:

nm4800_system_<date&time>.LOG

3.4.5.3 EXOR_CORE Objects

Modifications have been made to objects owned by EXOR_CORE. These will require re-application.

Change directory to **<exor_base>\nm3\install**

Login to SQL*PLUS as the **EXOR_CORE** user on the client PC and run the following command:

start nm4800_exor_core.sql

The following log file will be produced in the working directory, and should be checked for any errors that may have been produced:

nm4800_exor_core_<date&time>.LOG

3.4.5.4 Upgrade of Network Manager

This section describes the steps necessary to upgrade Network Manager to 4.8.0.0

To upgrade the base data and objects for the Network Manager modules;

Change directory to **<exor_base>**\nm3\install

Login to SQL*PLUS as **Highways Owner** user on the client PC and run the following command:

start nm4700_nm4800

You will be prompted to enter the path of the location of your highways software. This should be name of the directory, including disk identifier and a trailing slash character, referred to as **<exor_base>**.

For example, if you installed your highways software in a directory called EXOR on your C drive, you would enter the following when prompted.

C:\EXOR\

When you have supplied this value, you will be prompted to confirm that it is correct and asked whether you wish to continue.

If the value specified is not correct or does not end with a slash('\') character, you will be given an error message and the installation script will abort. You will then need to login to SQL*PLUS again and rerun the script.

When the script has completed, all the Network Manager objects and data will have been upgraded.

3.4.5.5 Checking Log File(s)

The following log files are produced in the working directory. At the end of the upgrade, they can be viewed to check for any errors that could have occurred during the upgrade process.

nm4700_nm4800_1_<date&time>.LOG

nm4700_nm4800_2_<date&time>.LOG

Please raise and attach these logs, and the log files from 3.4.5.1 and 3.4.5.1, to a ticket with http://selectservices.bentley.com to allow Bentley support staff to verify the upgrade has been successful.

Due to interdependencies between some Exor products, please ignore all compilation errors until all of your products have been upgraded.

3.4.6 Mandatory Configuration (Post Install and Upgrade)

3.4.6.1 exor_version.txt

Before accessing Network Manager you must check the file exor_version.txt.

This file is referenced in Windows Registry setting 'EXOR_VERSION' and by default can be located in the **<exor_base>**\11g_bin directory.

Ensure that the entry for Network Manager is set accordingly;

NET=4.8.0.0

HIG=4.8.0.0

AST=4.8.0.0

DOC=4.8.0.0

WMP=4.8.0.0

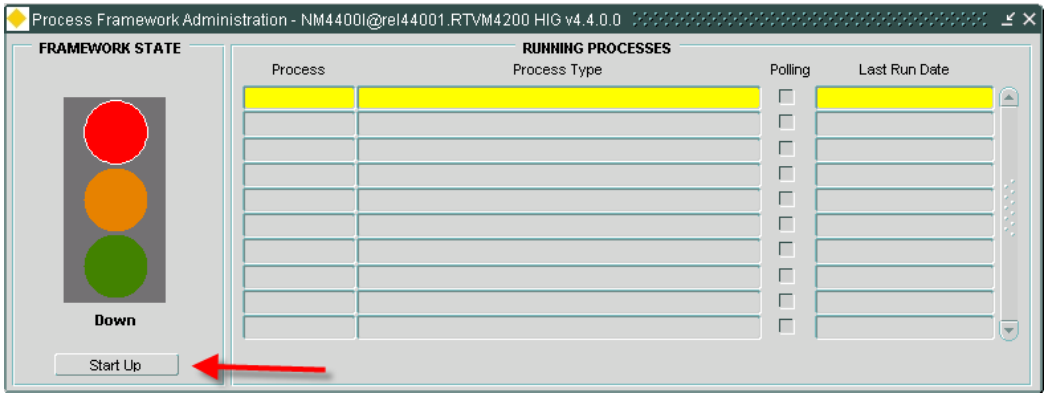
3.4.7 EXOR_JPG.JAR (Post Install and Upgrade)

Copy the new EXOR_JPG.JAR from the ***<exor_base>***/icons/java folder to the <forms_home>/java folder on the application server.

Users may need to clear their JRE caches to see the changes.

3.4.8 Process Framework (Post Install and Upgrade)

The Process Framework can be started (or stopped) via the Process Framework Administration form (hig2550). After successfully completing installs or upgrades to 4.8.0.0 for all products required navigate to this form and use the Start Up button to start up the Process Framework.



3.4.9 Jobs (Post Install and Upgrade)

After completing a successful install/upgrade of all products required to 4.8.0.0 please execute the following script to start/restart Core jobs:

Change directory to **<exor_base>**\nm3\install

Login to SQL*PLUS as the highways owner on the client PC

Run the following command:

start nm3jobs.sql

3.4.10 Spatial Configuration (Post Install and Upgrade)

Specific information regarding the registration of spatial layers can be found in the “Locator and Web Mapping” document.

3.4.10.1 Spatial Index creation

Once Network Configuration has been completed, spatial indexes included in 4.8.0.0 can be created, as follows:

Change directory to **<exor_base>**\nm3\install

Login to SQL*PLUS as the highways owner on the client PC

Run the following command:

start 4800_spatial_indexes.sql

3.4.11 Doc Bundle Loader (Post Install and Upgrade)

3.4.11.1 Oracle External Scheduler Jobs

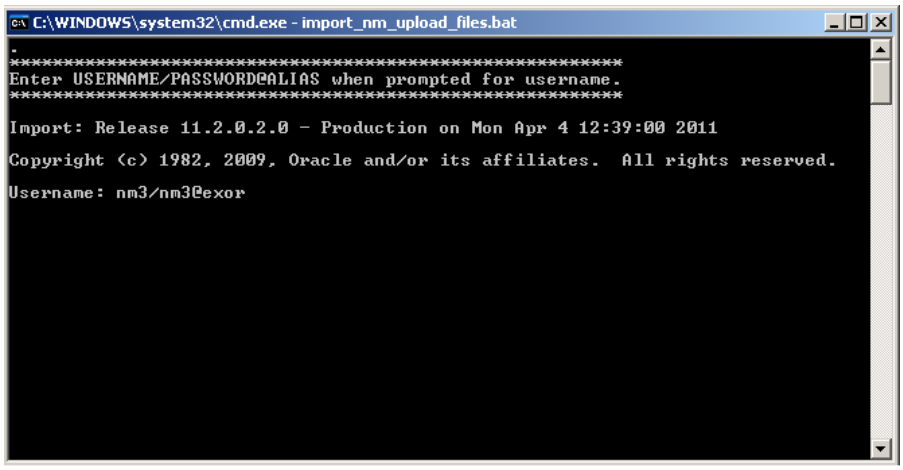
- For databases that exist on a Windows Operating System – The OracleJobScheduler<instance> service MUST be running on the database server.
- For databases that exist on a Solaris/Linux Operating System – Relevant permissions to execute <db_home>/bin/extjob must be set in accordance with Oracle Documentation.
- External Jobs are not supported on any other platform.

3.4.11.2 Server-side SQLJ is no longer supported in Oracle 12.2.

As detailed in the reference documents, SQLJ is no longer supported in Oracle 12c. As a result, the Java Util class needs to be re-loaded. To achieve this, run the following command from the command prompt:

ldjava_11g.bat

e.g.



You will be prompted for the Username of the Highways Owner. Enter the Username/Password@alias then press Enter, e.g. nm3/nm3@exor

3.4.12 Additional Configuration (Post Install and Upgrade)

Consult the documentation that accompanies this release for details of any additional configuration that may be required following an install/upgrade.

For example, to obtain details of product options, and for details of new product features/amendments.

Important: It is highly recommended that you do this before attempting to use the application.

3.4.13 ORACLE Listener JDBC Connections to PDBs (Post Install and Upgrade)

3.4.13.1 Listener specification

As specified in the Referenced documents, when attempting to connect to a PDB using the SID format, you will receive the following error.

ORA-12505, TNS:listener does not currently know of SID given in connect descriptor

Edit the "$ORACLE_HOME/network/admin/listener.ora" file, adding the following entry, with the "listener" name matching that used by your listener.

USE_SID_AS_SERVICE_listener=on

Reload or restart the listener.

$ lsnrctl reload

Now both of the following JDBC connection strings will be successful as any SIDs will be treated as services.

jdbc:oracle:thin:@ol6-121:1521:pdb1

jdbc:oracle:thin:@ol6-121:1521/pdb1

3.4.13.2 Database connection via tnsnames

Tnsames entries will need to replace any SID details with SERVICE_NAME i.e.

```
TNSNet12c =
  (DESCRIPTION =
    (ADDRESS=(protocol = tcp)(HOST=test.oracle.com)(port = 1521))
    (CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME = TEST))
  )
```

NOTE: Any Database Access Descriptor (DADs) and Mapserver Datasource definitions will need to specify the servicename, rather than a sid. (see MapViewer Data Source Definition Example).

3.4.14 Mapserver Component Install (Post Install and Upgrade)

At version 4.8.0.0 of the Exor Application set, locator mapping software using Oracle Weblogic Application Server Mapviewer version 11.1.1.9.0 should be installed and configured.

Go to the relevant <ORACLE_HOME>\forms\java directory on the **Oracle WebLogic Forms Server**

If upgrading, rename the following files –

exorMapviewer_10_3_6.jar	to exorMapviewer_10_3_6_old.jar
exor_jpg.jar	to exor_jpg_old.jar
frmall.jar	to frmall_old.jar
frmwebutil.jar	to frmwebutil_old.jar
jacob.jar	to jacob_old.jar
mvclient_10_3_6.jar	to mvclient_10_3_6_old.jar
ojdbc6_10_3_6.jar	to ojdbc6_10_3_6_old.jar
UploadClient.jar	to UploadClient_old.jar
UploadServer.jar	to UploadServer_old.jar

Locate the **<exor_base>**\nm3\admin\lib folder, where you will find:

- exor-mapviewer.jar
- exor_jpg.jar
- jacob.jar
- ojdbc6.jar
- UploadClient.jar
- UploadServer.jar

Copy these files to <ORACLE_HOME>\forms\java directory:

3.4.14.1 Forms Web Configuration Changes (formsweb.cfg)

If upgrading,

- Remove exorMapviewer4700_10_3_6.jar and mvclient_10_3_6.jar and ojdbc6_10_3_6.jar, if present, from the **archive** setting
- Remove exorMapviewer4700_10_3_6.jar from the **pjcArchive setting**

For install and upgrade,

- Add exor-mapviewer.jar and mvclient.jar to the **archive** setting.
- Add exor-mapviewer.jar to the **pjcArchive** setting;
- The **archive** setting should look like:

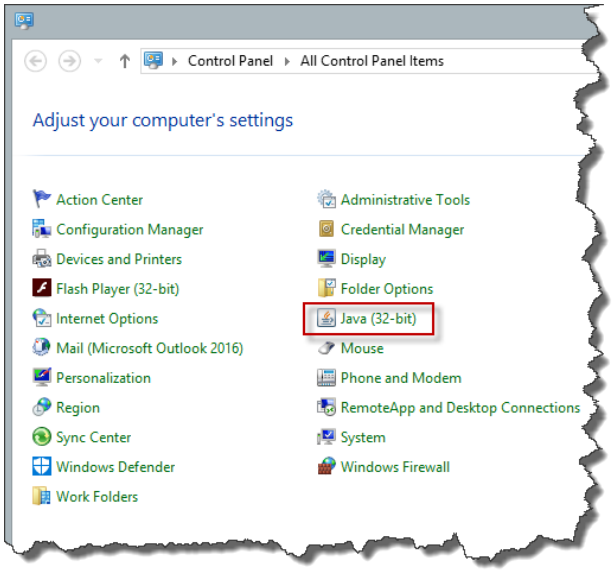
frmall.jar,exor_jpg.jar,UploadClient.jar,exor-mapviewer.jar,mvclient.jar

3.4.14.2 JRE Java settings

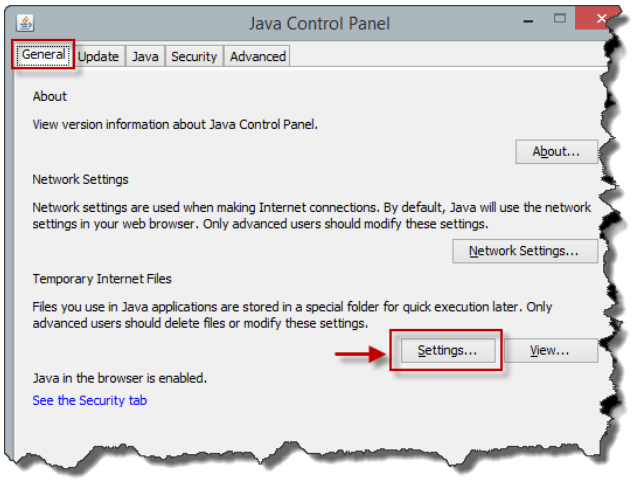
On each client machine the Jar Cache will need to be cleared. This can be done by the following methods.

Oracle JRE users:

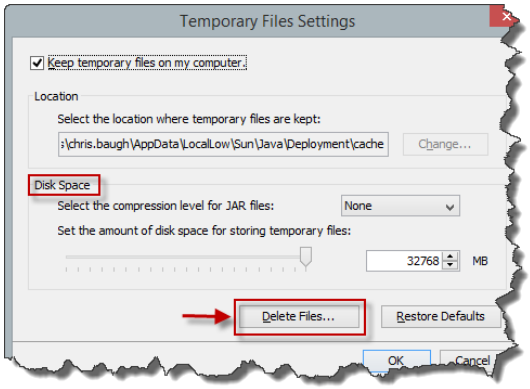
- Open Windows Control Panel and open Java Control Panel as below -

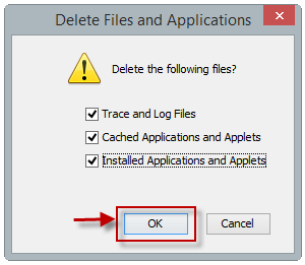


- Navigate to the "General" tab and click "Settings" button.

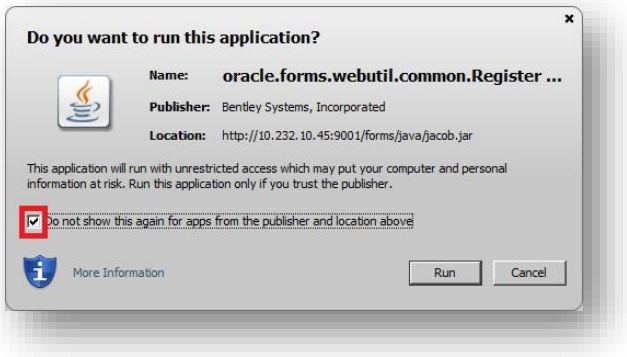


- In the Disk Space section click "Delete Files" button, select all options in the resulting screen and press OK





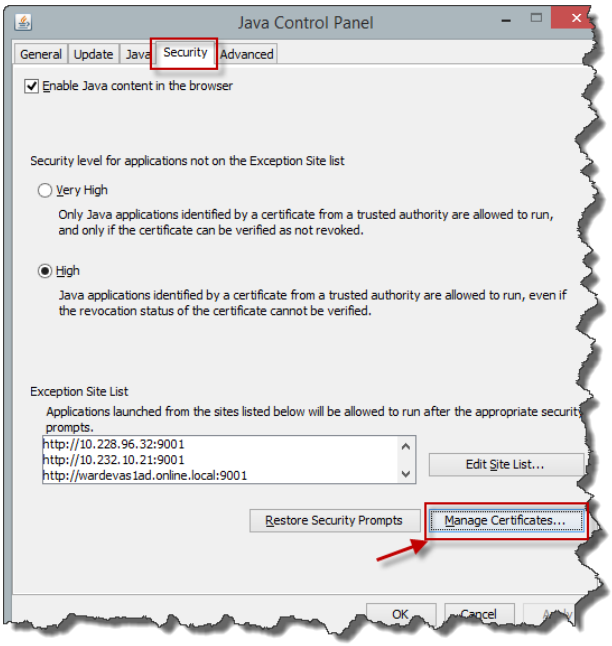
When you launch the Exor Application for the first time a java security warning will appear. Select the checkbox in front of 'Do not show this again for apps from the publisher and location above' as shown in the following screenshot and then click Run –

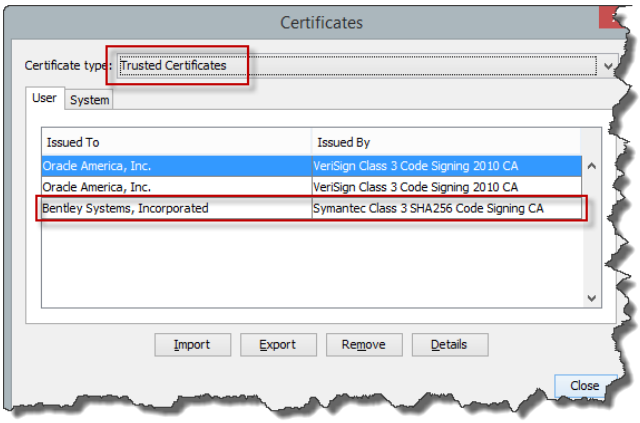


Again, open the Java Control Panel as described above. In the Java Control Panel go to –

Security -> Manage Certificates…

Now you will see the Bentley Systems, Incorporated Certificate installed and listed under Trusted Certificate.





Close the Java Control Panel.

After this, you should not see any warnings in future, unless the certificate gets removed.

You should now load the Exor Application in the usual way. On the first load, it will take longer than usual whilst the JAR files are cached again.

3.4.14.3 MV_SECURITY Option

Please ensure that the MV_SECURITY option in the Mapviewer config file is set to FALSE. This has to be set to FALSE so that the Java code can create a data source on the fly when the preferred data source is not set.

3.4.14.4 Undeploying old mapviewer application

- Log on to the **Oracle WebLogic MapViewer Server Admin Console** page.
- Go to **Domain Structure** > **Deployments**.
- On the **Summary of Deployments** page, select the existing mapviewer application and click on **Stop** > **Force Stop Now** (above/below the Deployments list), follow the next screen and confirm the stopping by clicking on **Yes** button.
- If WebLogic Server was configured in **Production** mode, lock the server: click on **Lock & Edit** button.
- Again, select the existing mapviewer application from the list and click on **Delete** button (above/below the Deployments list), follow the next screen and confirm the deleting by clicking on **Yes** button.
- If WebLogic Server was configured in **Production** mode, click **Activate Changes** to remove the old deployment completely.

3.4.14.5 Deploying new mapviewer application

- Shut down the **Oracle WebLogic MapViewer Server** – e.g. **WLS_MAPVR.**
- Go to the relevant <ORACLE_INSTANCE> directory on the **Oracle WebLogic MapViewer Server** –

  e.g. E:\Oracle\Product\Middleware\instance

  and **rename** the following directory,if present –

  mapviewer to mapviewer_old,

- Create a new directory with name **mapviewer**.
- Change directory to the newly created **mapviewer** directory and copy **mapviewier.ear** from **<exor_base>**nm3\admin\lib

- Rename mapviewer.ear to mapviewer1.ear.
- Create a subdirectory named mapviewer.ear.
- Unpack **mapviewer1.ear** into **mapviewer.ear** (that is, into \mapviewer\mapviewer.ear).
- Change directory to the mapviewer.ear directory.
- Rename **web.war** to web1.war.
- Create a subdirectory named web.war.
- Unzip **web1.war** into web.war (that is, into \mapviewer\mapviewer.ear\web.war).
- Modify the MapViewer configuration file (\mapviewer\mapviewer.ear\web.war\WEB-INF\conf**mapViewerConfig.xml**) as needed, such as to change the logging level or to add permanent data source definitions. You can also modify this configuration file at any time later.

  Note – Any settings from old mapviewer deployment configuration will not work – e.g. Data Sources, Log Level, MV Security Options etc.

  Note – A permanent data source definition must be in accordance with the example given in Section 3.4.14.6
- Log on to **Oracle WebLogic MapViewer Server Admin Console** page.
- Start the **Oracle WebLogic MapViewer Server** – e.g**. WLS_MAPVR.**
- If **Oracle WebLogic MapViewer Server** was configured in **Production** mode, lock the server: click on **Lock & Edit** button.
- Go to **Domain Structure > Deployments**.
- On the **Deployments** page, click on **Install** button (above/below the list of deployments).
- In the **Install Application Assistant**, under **Locate deployment to install and prepare for deployment**, for **Path** `<ORACLE_INSTANCE>\mapviewer`, for **Current Location** select **mapviewer.ear** (the exploded EAR folder), and click **Next**.
- Under **Choose targeting style**, accept the default (**Install this deployment as an application**), and click **Next**.
- In the **Select deployment targets**, under **Servers** select the MapViewer WebLogic Server (e.g. **WLS_MAPVR**).
- Under **Optional Settings**, accept the defaults except under **Source Accessibility**, **select I will make this deployment accessible from the following location.**
- Click the **Finish** button to go to the **Summary of deployment** page.
- If WebLogic Server was configured in **Production** mode, click **Activate Changes** to activate the deployment.
- **Start** MapViewer as follows:
  a. On the **Summary of deployment** page select the just installed **mapviewer** from the list.
  b. Click **Start** > **Servicing all requests** (above/below the Deployments list) and confirm the starting by clicking on the **Yes** button.
  c. MapViewer is now started (with **State**: Active and **Health**: OK).

3.4.14.6 MapViewer Data Source Definition Example

```
<map_data_source name="mvdemo"
       jdbc_host="db1.sample.com"
       jdbc_sid="orcl.online.local"
       jdbc_port="1521"
       jdbc_user="myuser"
       jdbc_password="!mypassword"
       jdbc_mode="thin"
       number_of_mappers="21"
       max_connections="100"
       allow_jdbc_theme_based_foi="false"
       editable="false"
       plsql_package="web_user_info"
       web_user_type="SUBUSERNAME"
/>
```

Note – `<map_data_source>` Element Attributes –

The values for attributes – `plsql_package` and `web_user_type` – must be the **same** as mentioned in above example (in **bold**).

The Data Source connection must always be as **HIG_OWNER** only, hence the values for attributes – `jdbc_user` and `jdbc_password`.

The Data Source `jdbc_sid` value needs to be secified as a servicename, rather than a sid

For other attributes, values can be set according to the environment requirements.

Note – Restart WebLogic Forms and MapViewer Servers – e.g. **WLS_FORMS** and **WLS_MAPVR** – to take the above changes effect.

4 MapCapture Interface

4.1 Implementation of the MapCapture Interface Software files

To install the software components for MapCapture Interface check that the folder has been correctly unzipped from the release zip file. Note that in release 4.8.0.0 the MapCapture Interface software resides on the core/NM3 release file in a parallel folder to the nm3.

4.2 MapCapture Interface Server Install/Upgrade

This chapter provides details of steps involved in installing/upgrading the server components for MapCapture Interface.

Important:

This product will require installing/upgrading after Network Manager and Maintenance Manager.

4.2.1 Before you Start

Before proceeding please ensure that the pre-requisites mentioned in Section 2.3 of this document are met.

Also, please be aware of the following;

- Where instructed to change to a directory before running a script, it is assumed that you are running SQL*PLUS from a DOS Command prompt.
- If you are running SQL*PLUS in windows you should set the 'start in' directory of the SQL*PLUS shortcut to simulate the change of directory.
- If you do not run SQL*PLUS from the directory stated in each step of the guide, the installation will fail.

Also, whilst following the instructions in this section you will be required to know the location of **<exor_base>**. You may recall that whilst undertaking the tasks in Section 3.1 you will have implemented software into the location referred to as **<exor_base>**, for example, C:\EXOR.

4.2.2 Typical problems that you may encounter

It is possible that, when you are running some of the upgrade scripts, errors may be reported saying that objects already exist in the database or that columns already exist on tables. These errors can generally be ignored. If you are in any doubt, please contact the Exor support desk for guidance.

The upgrade procedures will also attempt to install database roles in the highways owner account that are necessary for the system to operate correctly. You may find that errors are produced when running the upgrade scripts to the effect that the role names being created are already used by existing roles or users. These errors can be ignored as they simply mean that the roles being created already exist.

Also during install/upgrade Warning messages may appear saying that compilation errors have occurred. These warnings can be ignored, since invalid objects will be recompiled prompt later on in the install/upgrade. However

it will be of concern if compilation errors still occur following the re-compilation and completion of post installation tasks.

4.2.3 Install of MapCapture Interface

To create the base data and objects for the MapCapture Interface modules:

- Change directory to **<exor_base>**\mcp\install
- Login to SQL*PLUS as the highways owner on the client PC and run the following command

  start mcp_inst.sql

- You will be prompted to enter the path of the location of your highways software. This should be name of the directory, including disk identifier and a trailing slash character, referred to as **<exor_base>**.
- For example, if you installed your highways software in a directory called EXOR on your C drive, you would enter the following when prompted.

  C:\EXOR\

- When you have supplied this value, you will be prompted to confirm that it is correct and asked whether you wish to continue.

- If the value specified is not correct or does not end with a slash character, you will be given an error message and the installation script will abort. You will then need to login to SQL*PLUS again and rerun the script.
- When the script has completed, all the MapCapture Interface objects and data will have been installed.

4.2.3.1 Checking Log File(s)

The following log files are produced in the working directory. At the end of the install, they can be viewed to check for any errors that could have occurred during the install process.

mcp_install_1_<date&time>.LOG

mcp_install_2_<date&time>.LOG

Please raise and attach the logs to a ticket with http://selectservices.bentley.com to allow Bentley (formerly exor) support staff to verify the install has been successful.

Due to interdependencies between some Exor products, please ignore all compilation errors until all of your products have been installed.

4.2.4 Upgrade of MapCapture Interface

This section describes the steps necessary to upgrade MapCapture Interface to 4.8.0.0

To upgrade the base data and objects for the MapCapture Interface modules;

- Change directory to **<exor_base>**\mcp\install
- Login to SQL*PLUS as the highways owner on the client PC
- Run the following command

  start mcp4700_mcp4800.sql

- You will be prompted to enter the path of the location of your highways software. This should be name of the directory, including disk identifier and a trailing slash character, referred to as **<exor_base>**.
- For example, if you installed your highways software in a directory called EXOR on your C drive, you would enter the following when prompted.

  C:\EXOR\

- When you have supplied this value, you will be prompted to confirm that it is correct and asked whether you wish to continue.
- If the value specified is not correct or does not end with a slash character, you will be given an error message and the installation script will abort. You will then need to login to SQL*PLUS again and rerun the script.
- When the script has completed, all the MapCapture Interface objects and data will have been upgraded.

4.2.4.1 Checking Log File(s)

The following log files are produced in the working directory. At the end of the upgrade, they can be viewed to check for any errors that could have occurred during the upgrade process.

Mcp4700_mcp4800_1_<date&time>.LOG

Mcp4700_mcp4800_2_<date&time>.LOG

Please raise and attach the logs to a ticket with http://selectservices.bentley.com to allow Bentley (formerly exor) support staff to verify the upgrade has been successful.

Due to interdependencies between some Exor products, please ignore all compilation errors until all of your products have been installed. Also, objects may be invalid for certain products due to post configuration tasks not being completed. In this case reassess invalid objects when post installation task have been completed.

4.2.5 Post Upgrade Tasks

After the upgrade of MapCapture Interface has completed it is necessary to create the metadata for the loader.

- Change directory to **<exor_base>**\mcp\install
- Login to SQL*PLUS as the highways owner on the client PC
- Run the following command

```
start mcp_nlf_data.sql
```

4.2.6 Mandatory Configuration

4.2.6.1 exor_version.txt

Before accessing MapCapture Interface you must check the file exor_version.txt.

This file is referenced in Windows Registry setting 'EXOR_VERSION' and by default can be located in the runtime environment bin folder.

Ensure that the entry for MapCapture Interface is set accordingly;

MCP=4.8.0.0

5 Accidents Manager

5.1 Implementation of the Accidents Manager Software files

To install the software components for Accidents Manager, extract the ACC files from the zip file into a working directory e.g. C:\EXOR to be referred to as **<exor_base>**.

5.1.1 Before You Start

Before proceeding please ensure that the pre-requisites mentioned in Section 2.3 of this document are met.

Also please be aware of the following;

Where instructed to change to a directory before running a script, it is assumed that you are running SQL*PLUS from a DOS Command prompt.

If you are running SQL*PLUS in Windows, you should set the 'start in' directory of the SQL*PLUS shortcut to simulate the change of directory.

If you do not run SQL*PLUS from the directory stated in each step of the guide, the installation will fail.

Also, whilst following the instructions in this section you will be required to know the location of **<exor_base>**. You may recall that whilst undertaking the tasks in Chapter 2 you will have installed software into the location referred to as **<exor_base>**, for example, C:\EXOR.

5.1.2 Typical Problems That You May Encounter

It is possible that, when you are running some of the upgrade scripts, errors may be reported saying that objects already exist in the database or that columns already exist on tables. These errors can generally be ignored. If you are in any doubt, please contact the Exor support desk for guidance.

The upgrade procedures will also attempt to install database roles in the highways owner account that are necessary for the system to operate correctly. You may find that errors are produced when running the upgrade scripts to the effect that the role names being created are already used by existing roles or users. These errors can be ignored as they simply mean that the roles being created already exist.

Also, during install/upgrade warning messages may appear saying that compilation errors have occurred. These warnings can be ignored, since invalid objects will be recompiled prompt later in the install/upgrade. However, it will be of concern if compilation errors still occur following the re-compilation.

5.1.3 Installation of Accidents Manager

To create the base data and objects for Accidents Manager modules;

Change directory to **<exor_base>**\acc\install

Login to SQL*PLUS as HIGHWAYS owner on the client PC and run the following command:

START acc_inst.sql

You will be prompted to enter the path of the location of your HIGHWAYS software. This should be name of the directory, including disk identifier and a trailing slash character, referred to as **<exor_base>**.

For example, if you installed your HIGHWAYS software in a directory called EXOR on your C drive, you would enter the following when prompted.

C:\EXOR\

When you have supplied this value, you will be prompted to confirm that it is correct and asked whether you wish to continue.

If the value specified is not correct or does not end with a slash character, you will be given an error message and the installation script will abort. You will then need to login to SQL*PLUS again and rerun the script.

When the script has completed, all the Accidents Manager objects and data will have been installed.

Checking Log Files

The following log files are produced in the working directory. At the end of the installation, the files can be viewed to check for any errors that could have occurred during installation.

acc_install_1_<date&time>.LOG
acc_install_2_<date&time>.LOG

Note:

Please raise and attach the logs to a ticket with http://selectservices.bentley.com to allow Bentley (formerly exor) support staff to verify the install has been successful.

5.1.4 Upgrade of Accidents Manager

This section describes the steps necessary to upgrade Accidents Manager to 4.8.0.x from 4.7.0.x.

To upgrade the base data and objects for the Accidents Manager modules;

Change directory to **<exor_base>**\acc\install

Login to SQL*PLUS as HIGHWAYS owner on the client PC

Run the following command

START acc4700_acc4800.sql

You will be prompted to enter the path of the location of your HIGHWAYS software. This should be name of the directory, including disk identifier and a trailing slash character, referred to as **<exor_base>**.

For example, if you installed your HIGHWAYS software in a directory called EXOR on your C drive, you would enter the following when prompted.

C:\EXOR\

When you have supplied this value, you will be prompted to confirm that it is correct and asked whether you wish to continue.

If the value specified is not correct or does not end with a slash character, you will be given an error message and the installation script will abort. You will then need to login to SQL*PLUS again and rerun the script.

When the script has completed, all the Accidents Manager objects and data will have been upgraded.

5.1.5 Checking Log Files

The following log files are produced in the working directory. At the end of the upgrade, they can be viewed to check for any errors that could have occurred during the upgrade process.

acc4700_acc4800_1_<date&time>.LOG
acc4700_acc4800_2_<date&time>.LOG

Please raise and attach the logs to a ticket with http://selectservices.bentley.com to allow Bentley (formerly exor) support staff to verify the upgrade has been successful.

5.1.6 Post Install/Upgrade Tasks

Before accessing Accidents Manager, you must check the file exor_version.txt.

This file is referenced in Windows Registry setting 'EXOR_VERSION' and by default can be located in the **<exor_base>**\bin directory.

Ensure that the entry for Accidents Manager is set accordingly;

ACC=4.8.0.1