Oracle SOA Suite 11g

Installing Oracle SOA Suite for HL7 Exploration

michael@czapski.id.au

June 2010

Table of Contents

Introduction....1
Pre-requisites....2
Download Software....2
JDK 1.6 Update 20....2
Database....2
WebLogic Server....3
Repository Creation Utility....3
SOA Suite and Patch Set 2....3
JDeveloper IDE and SOA and BPM Updates....3
B2B Document Editor....4
Install Software....4
Install Oracle Database Express Edition....4
Run Repository Creation Utility....6
Install SOA Suite....10
Install JDK 1.6.0 Update 20....10
Install WebLogic Server....11
Install SOA Suite 11g....14
Install Patch Set 2....18
Install Oracle Enterprise Pack for Eclipse (Optional)....21
Install Oracle Service Bus (Optional)....21
Install JDeveloper IDE and Extensions....24
Install Oracle B2B Document Editor and Standards Libraries....31
Configure WebLogic Domain....40
Change Runtime Properties for Development....48
Change WebLogic Server Console Settings....48
Increase diagnostics through Enterprise Manager....50
Expand DB Pools....51
References....53

Introduction

As Sun Microsystems, and SeeBeyond before it, Oracle provides support for integration of systems which use HL7 v2.x messaging. Unlike Sun, and SeeBeyond before it, Oracle treats HL7 messaging as Business to Business exchanges (B2B) and uses the B2B part of the Oracle SOA Suite to accomplish the task [1].

There are numerous articles on Oracle SOA Suite and on Oracle B2B. To wade through this material to get to a concise set of steps needed to get started with HL7 messaging is a chore precisely because there is so much material about the SOA Suite and so little on how to deal with HL7 suing it. I set off to work out what it takes to do HL7 messaging and to document it for myself and others.

This article walks through the installation and configuration of all Oracle software necessary to implement HL7 v2.x messaging as development / experimentation environment. It assumes a single machine with limited resources.

I expect that there will be subsequent articles in this series which will use this infrastructure to implement specific HL7 v2.x examples.

Pre-requisites

It is assumed that a Windows XP SP3 platform, with a minimum of 3GB of memory. A machine with less memory will simply not cope with the demands.
It is necessary to make sure that a minimum 40Gb of free disk space is available for installation of the necessary software and for use afterwards.

All software that needs to be downloaded adds up to nearly 10Gb. Allow for the time and space needed to complete all downloads.

After installation the software will occupy nearly 9Gb, before any project work is started.

Oracle software can be installed on a number of different platforms. See Oracle Fusion Middleware – System Requirements and Specifications [11]. In this article we are dealing with Windows XP SP3.

Download Software

The Oracle B2B 11g Site [2] contains references to material pertaining to release 11g of the B2B Suite. This is the version which we will use.

Since Oracle B2B 11g is a part of the Oracle SOA Suite 11g, the requisite software, and the order in which it must be installed, is discussed at the Oracle SOA Suite 11g Site[3]. The material presented there is reproduced here for convenience.

JDK 1.6 Update 20

While the SOA Suite comes with a version of the Java Development Kit it is recommended to use the Sun JDK for development work. It is not my recommendation but I don't have grounds on which to say otherwise so I will follow it. Download the jdk-6u20-windows-i586.exe from wherever you get JDKs, for example http://java.sun.com/javase/downloads/widget/jdk6.jsp.

Database

Download the Oracle Database 10g Express Edition [4] for Windows XP from http://www.oracle.com/technology/software/products/database/xe/htdocs/102xewinsoft.html, making sure to choose the Universal variant - OracleXEUniv.exe. This is a 220Mb download. (4 June 2010)

Note that the Oracle Database Express Edition 10g Release 2 (10.2) places restrictions on the database installation and execution environment. For use in production environments it will be necessary to use a regular Oracle Database of the appropriate release. See [8], sections 3.2 – 3.4, for a discussion of these restrictions. See Oracle

SOA Suite documentation for database support information. The Oracle Database Express Edition is sufficient for the purposes of this article series.

WebLogic Server

Download the Oracle WebLogic Server 10.3.3[5], which is the runtime environment for Oracle SOA Suite-based solutions including B2B solutions, from Oracle WebLogic Server Downloads page at http://www.oracle.com/technology/software/products/ias/htdocs/wls_main.html, choosing "Oracle WebLogic Server 11gR1 (10.3.3) + Coherence - Package Installer" - wls1033_win32.exe. This is an 800Mb download. (4 June 2010)

Repository Creation Utility

Download the Repository Creation Utility through the Required Additional Software section of the Oracle Fusion Middleware Downloads page [5] http://download.oracle.com/otn/nt/middleware/11g/ofm_rcu_win_11.1.1.3.0_disk1_1of1.zip. This is a 260Mb download. (15 June 2010)

SOA Suite and Patch Set 2

Download the SOA Suite 11.1.1.2.0 through the Oracle Fusion Middleware Downloads page [5] http://download.oracle.com/otn/nt/middleware/11g/ofm_soa_generic_11.1.1.2.0_disk1_1of1.zip. This is a 1.7Gb download. (4 June 2010)

Download the SOA Suite 11.1.1.3.0 Patch through the Oracle Fusion Middleware Downloads page [5] http://download.oracle.com/otn/nt/middleware/11g/ofm_soa_generic_11.1.1.3.0_disk1_1of1.zip. This is a 1.9Gb download. (4 June 2010)

Between the two of them the download will be almost 4Gb so make sure you have the space, the bandwidth and the time.

JDeveloper IDE and SOA and BPM Updates

Download jdeveloper 11.1.1.3.0 IDE through the Oracle Fusion Middleware Downloads page [5] http://download.oracle.com/otn/java/jdeveloper/11.1.1.3.0/jdevstudio11113install.exe. This is a 1.2Gb download. (4 June 2010)

To avoid delays when updating JDeveloper it is best to download:

> JDeveloper update to Oracle BPM Studio 11g, 11.1.1.3.0.6.84 for oracle.studio (min=11.1.1.3, max=11.1.1.3.99.99), from http://download.oracle.com/otn/java/jdeveloper/11.1.1.3.0/extensions/bpm-jdev-extension.zip
>
> JDeveloper update to SOA Composite Editor 11g, 11.1.1.3.0.25.57 for oracle.j2ee (min=11.1.1.3.37.56.60, max=11.1.1.3.37.56.60) and oracle.studio (min=11.1.1.3.37.56.60, max=11.1.1.3.37.56.60), from http://download.oracle.com/otn/java/jdeveloper/11.1.1.3.0/extensions/soa-jdev-extension.zip.

We will use these to update JDeveloper instead of having to do this on-line.

B2B Document Editor

Download the B2B Document Editor through the Oracle Fusion Middleware Downloads page [5]. First the B2B Document Editor itself, http://download.oracle.com/otn/nt/middleware/11g/ofm_b2b_doc_editor_win_11.1.1.1.0_disk1_1of3.zip, then the set of document specifications which include HL7, http://download.oracle.com/otn/nt/middleware/11g/ofm_b2b_doc_editor_win_11.1.1.1.0_disk1_2of3.zip. There are 3 archives that can be downloaded. The first two contains what we need for the HL7 work. The two archives are nearly 3Gb together. (4 June 2010)

Install Software

Nitesh Jain put together a starter kit page for the Oracle B2B [9]. In some sense I am repeating the work he did and documenting it all over again greater detail as I perform the installation independently.

Install Oracle Database Express Edition

The oracle Database Express Edition Getting Started Guide [6] provides material which is useful once the database is installed. The Installation Guide for Windows [8], accessible through the Oracle Database Express Edition 10g R2 site [7], provides the installation instructions. The points relevant to this article are reproduced below.

You must be a member of the Administrators group to successfully install the database.

It is assumed then no Oracle database exists on the target machine. It is assumed that the installation package, OracleXEUniv.exe, has been downloaded to c:\downloads.

Make sure you are logged in as a user with Administrative privileges.

Using Windows Explorer navigate to c:\downloads. Double-click on OracleXEUniv.exe to start installation.

Accept c:\oraclexe as the installation directory.

Enter welcome1 as the password. This is what the default password is elsewhere so let's keep it consistent.

Once the database is installed it is necessary to once-only update database parameters. Open a DOS Command Window and set the processes parameter to >=200 using the following instructions.

```
sqlplus sys/welcome1@XE as sysdba
show parameter session
show parameter processes
alter system reset sessions scope=spfile sid='*';
alter system set processes=200 scope=spfile;
shutdown immediate
```

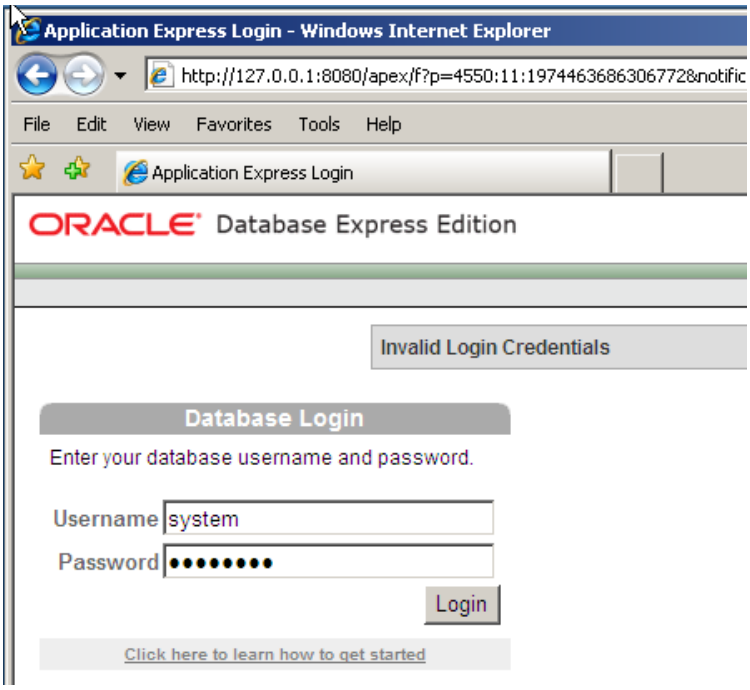
```
exit

net stop OracleServiceXE
net start OracleServiceXE

sqlplus sys/welcome1@XE as sysdba
show parameter session
show parameter processes
exit
```

Once the database restart is finished launch the database home page (http://localhost:8080/apex) to inspect configuration.

Login as system/welcome1.



Select Administration → About Database, check the Settings checkbox and click Go.

This shows database information.

Remember system and sys passwords: welcome1, and Database SID: XE.

Close the browser.

The database is configured to start when Windows boots.

Run Repository Creation Utility

Repository Creation Utility (RCU) configures the database with whatever schemas and objects are required by the SOA Suite. For more information see Section 2, Running Repository Creation Utility (RCU), in Oracle® Fusion Middleware Repository Creation Utility User's Guide 11g Release 1 (11.1.1) [12].

Assuming the archive ofm_rcu_win_11.1.1.3.0_disk1_1of1.zip is in c:\downloads, navigate to c:\downloads using Windows Explorer.

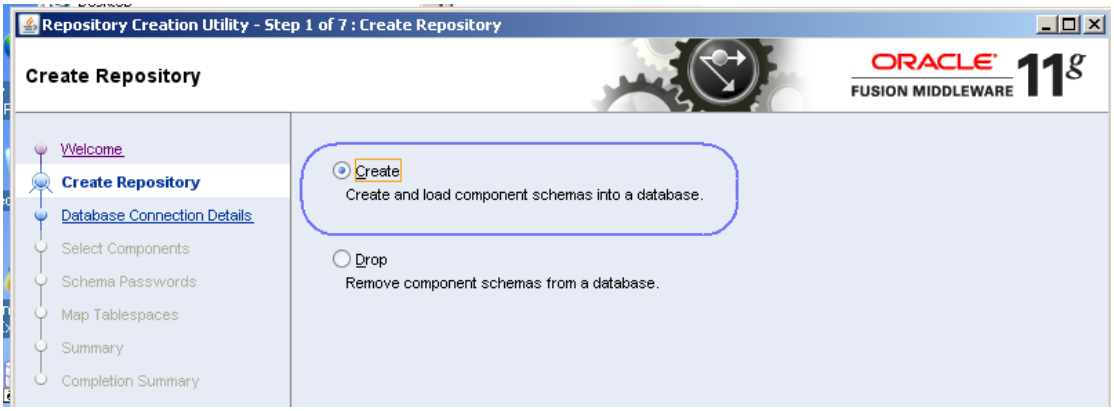
Extract rcuHome directory and its content to c:\downloads.

Open a command window, change working directory to c:\downloads\rcuHome\bin and execute rcu.bat.

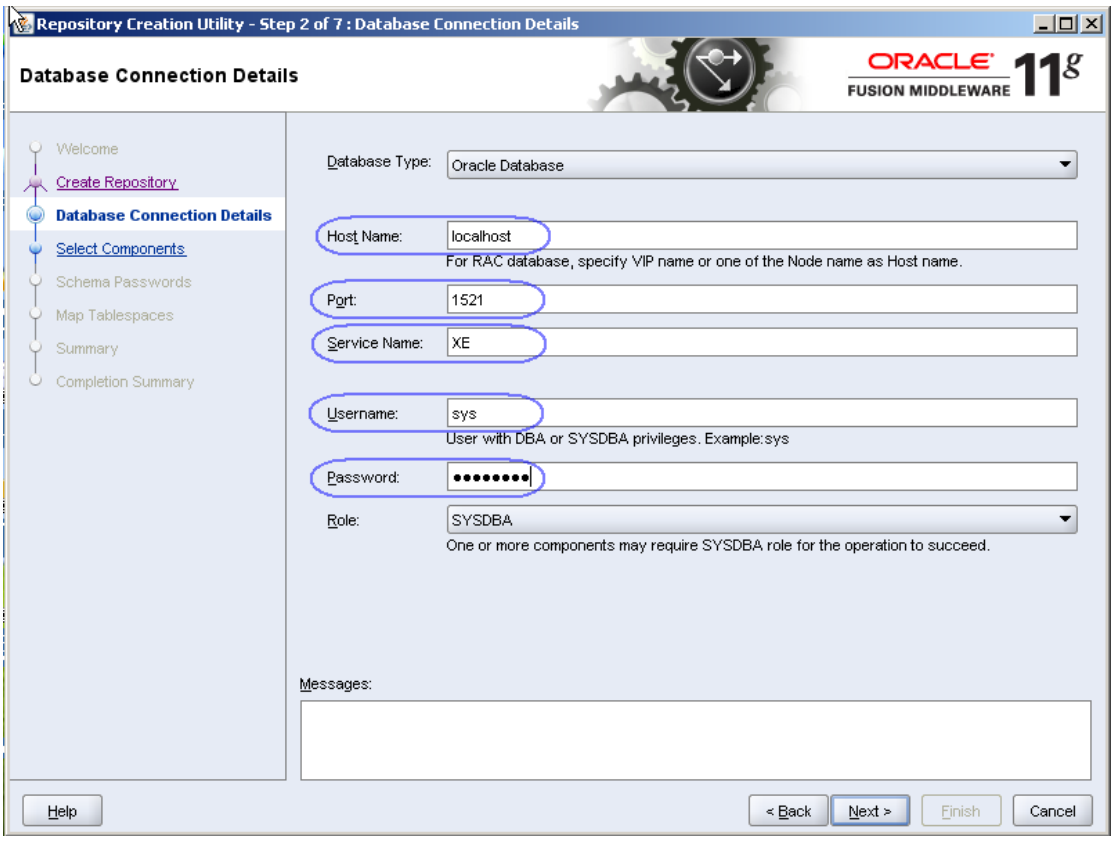
```
cd c:\downloads\rcuHome
rcu.bat
```

The bat command returns to the prompt immediately. After a few seconds the Repository Creation Utility UI appears.

Make sure “Create” option is selected.

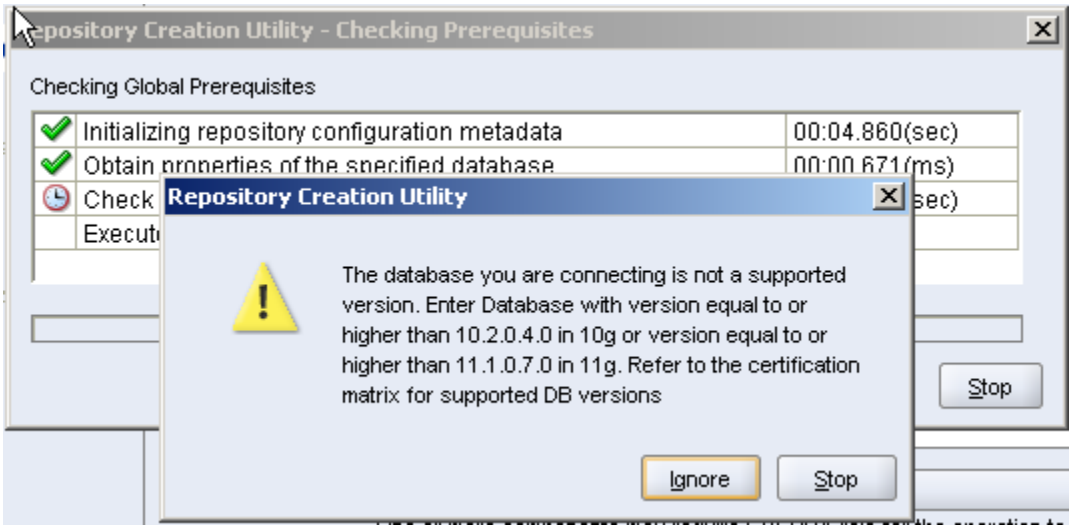


Specify:
Host Name: localhost
Port: 1521
Service name: XE
Username: sys
Password: welcome1

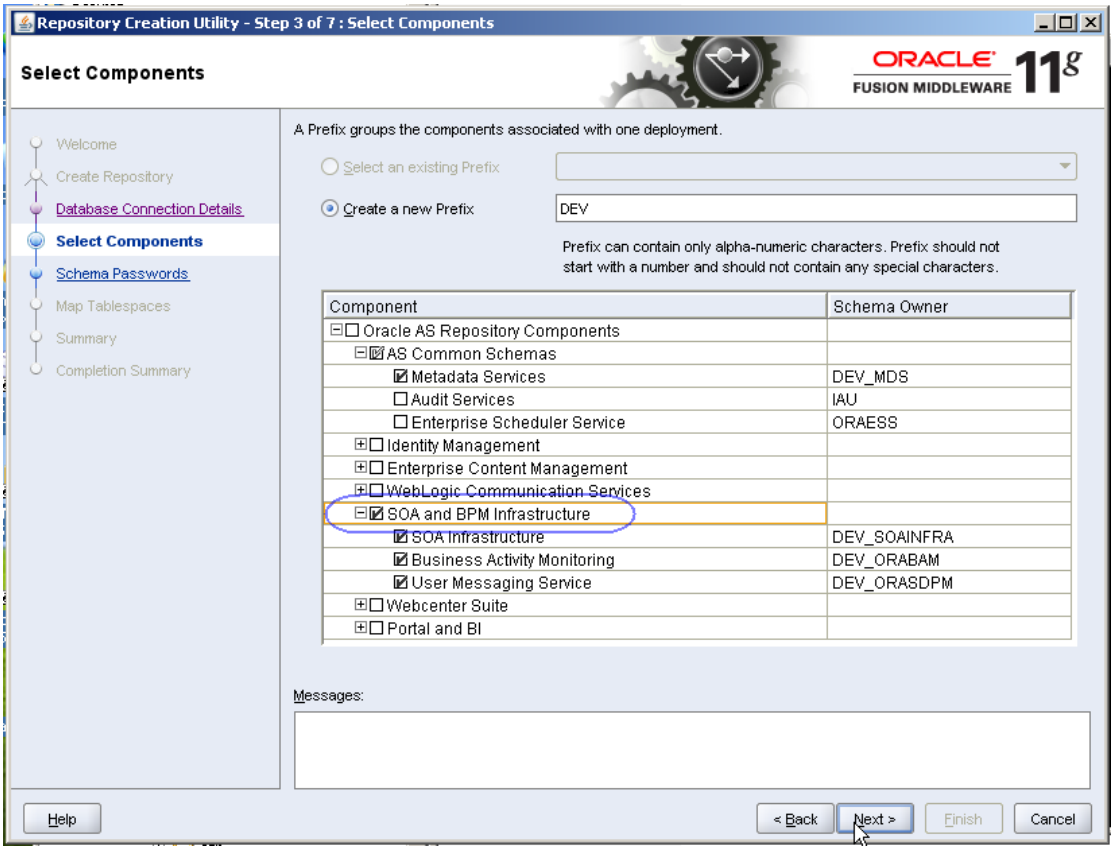


Click Next.

Ignore the warning about unsupported database version.



Select SOA and BPM Infrastructure. Dependent options will be selected automatically.

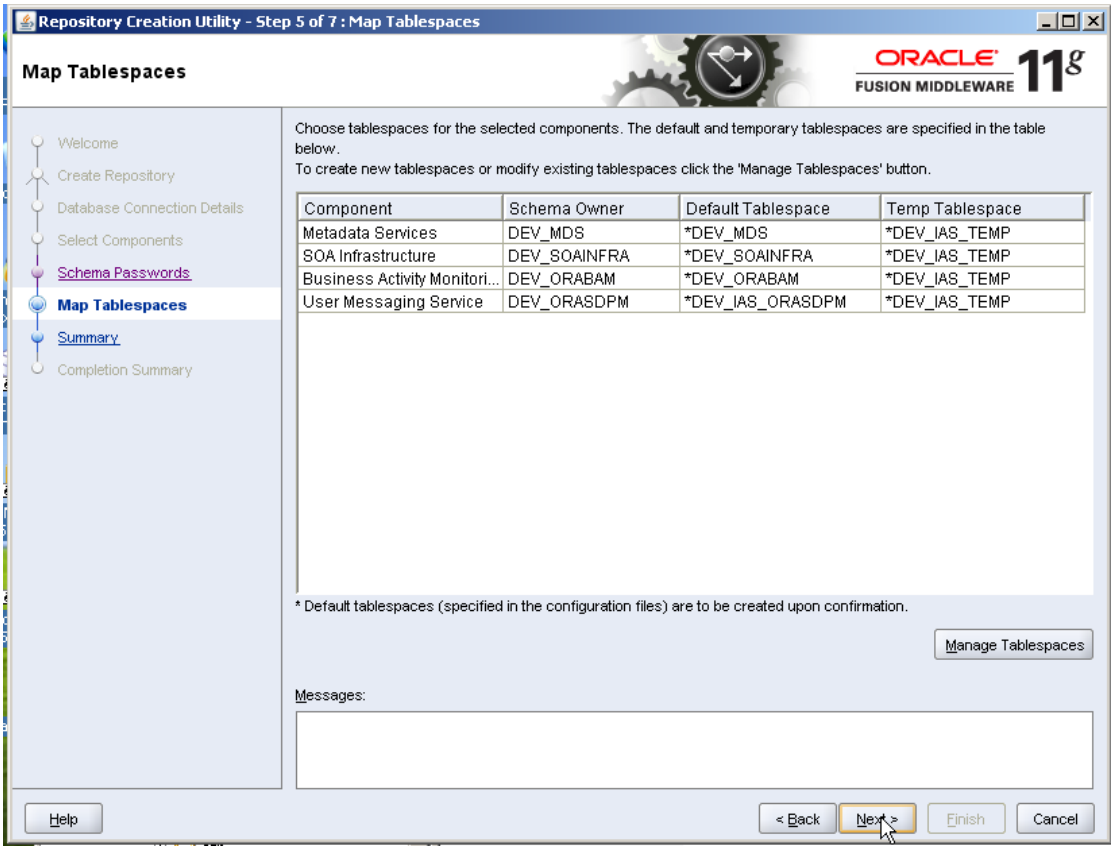


Click Next.

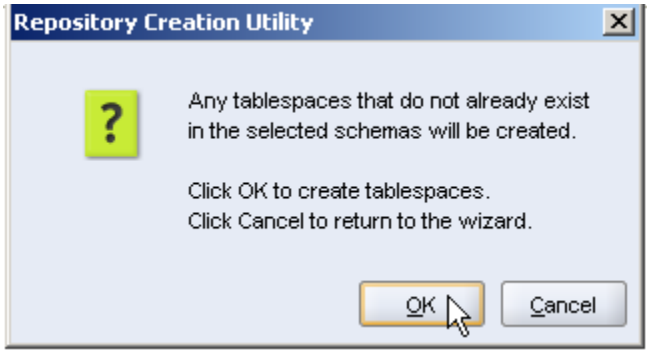
Select “Use the same password for all schemas” and enter welcome1 for the password.

Click Next.

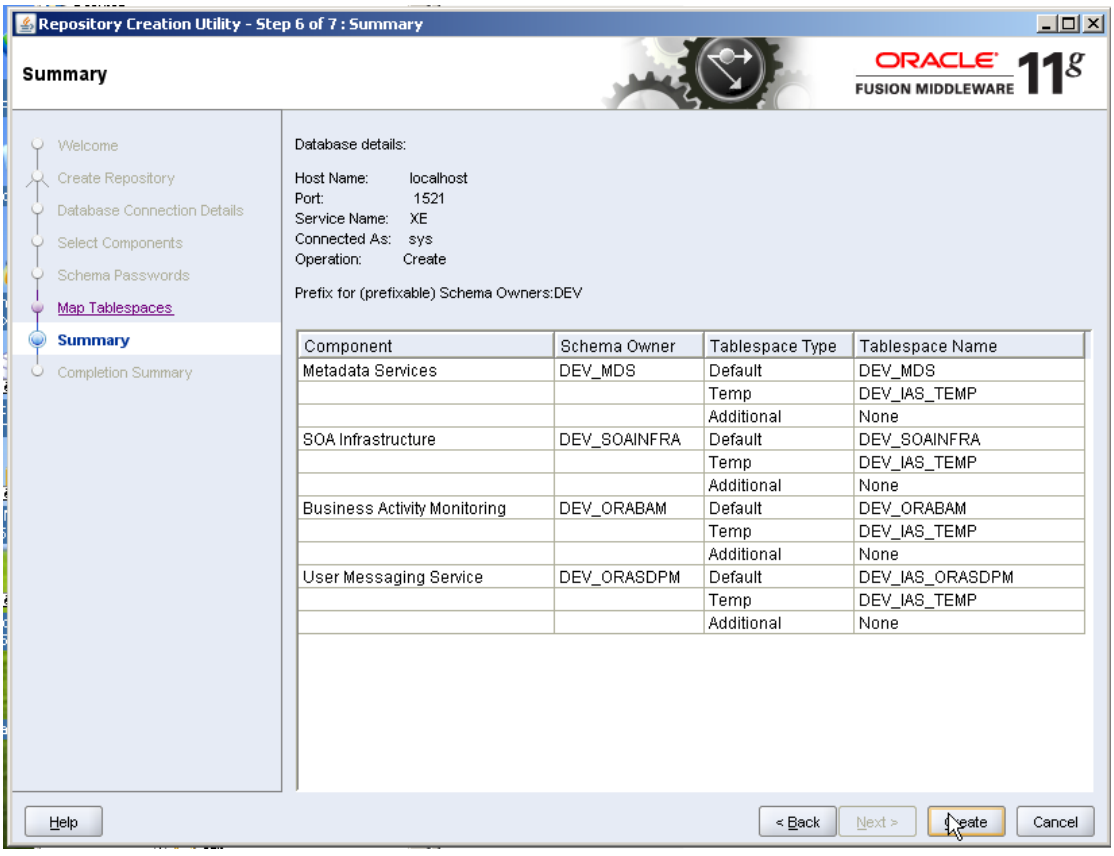
Accept defaults for tablespaces and click Next.



Click OK to create tablespaces.



Click Create to create database objects. When completed, click Close.

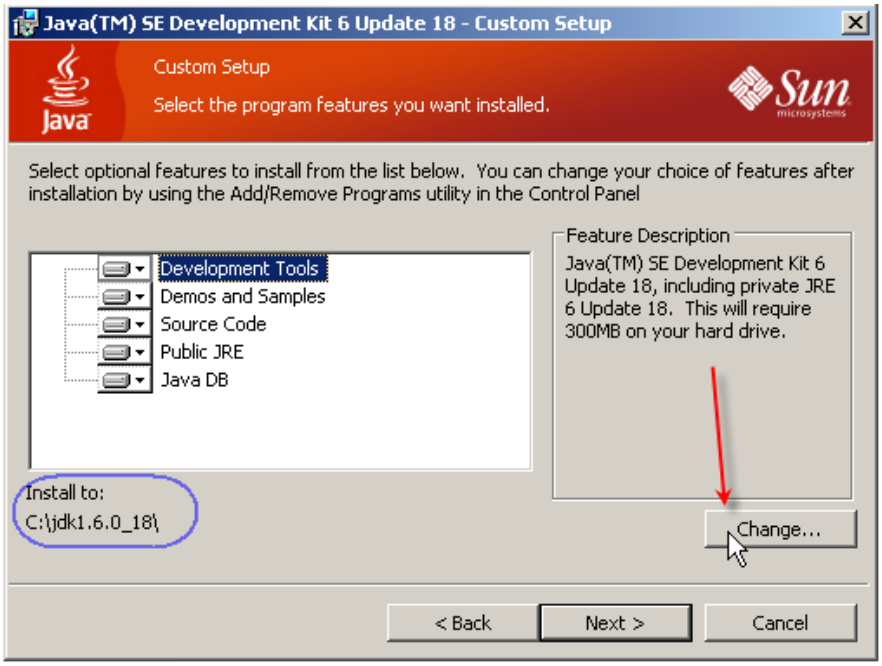


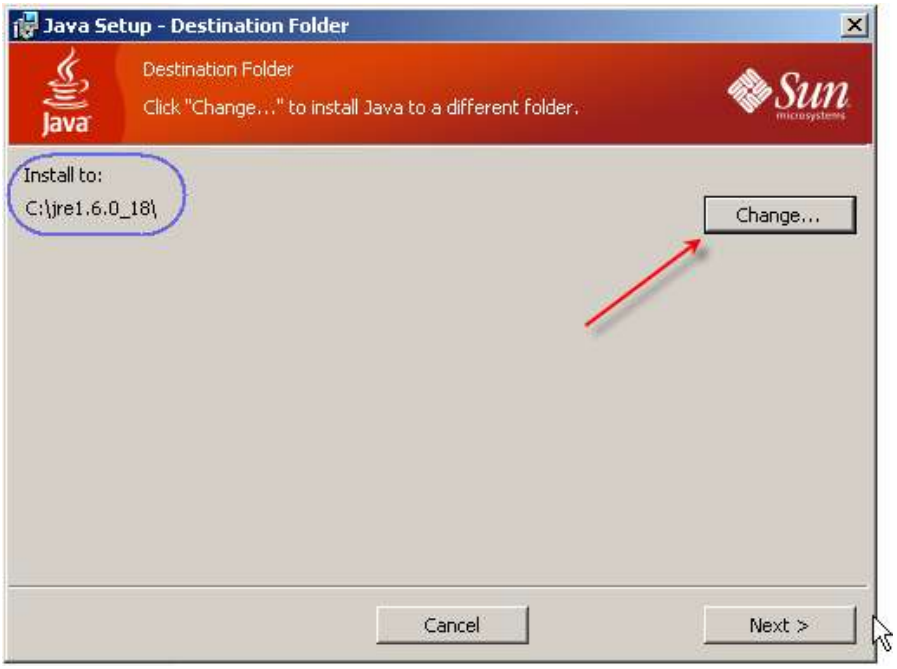
Install SOA Suite

Oracle B2B is installed as part of the Oracle SOA Suite. The SOA Suite Installation Guide [10] discusses the process in detail. The following sections discuss specific steps that need to be performed to install the SOA Suite. The steps illustrate my installation and are derived from the SOA Suite Installation Guide.

Install JDK 1.6.0 Update 20

Install JDK 1.6.0 Update 20 using the installed, jdk-6u20-windows-i586.exe, downloaded earlier. Make sure to change the installation location to c:\jdk1.6.0_20 and c:\jre1.6.0_20 when required. (The screenshots are somewhat dated – use 1.6.0_20)

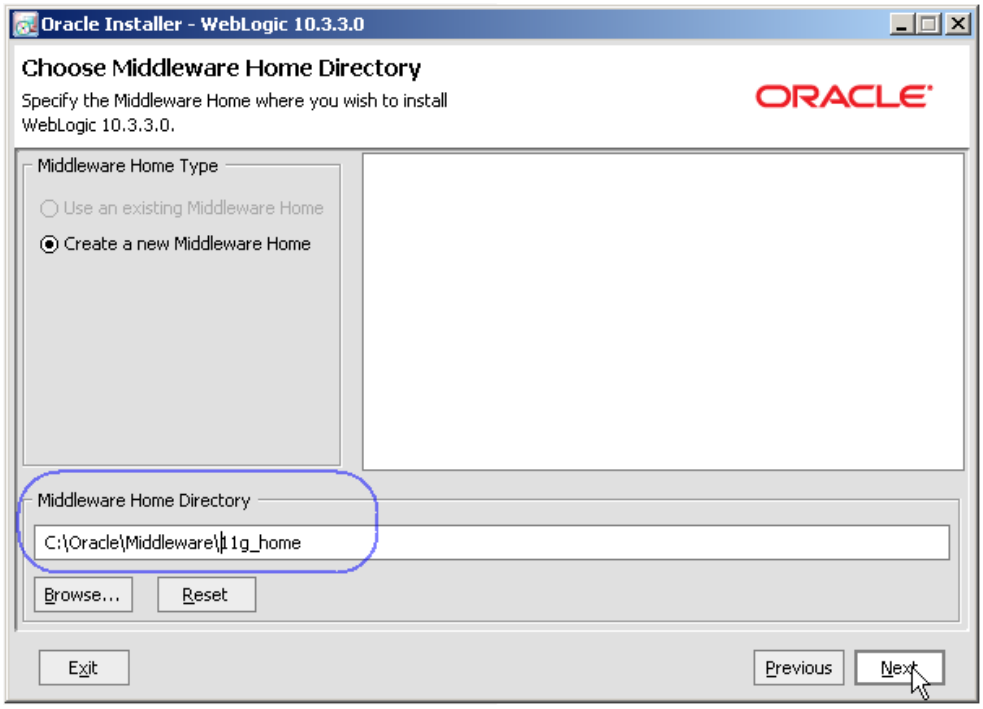




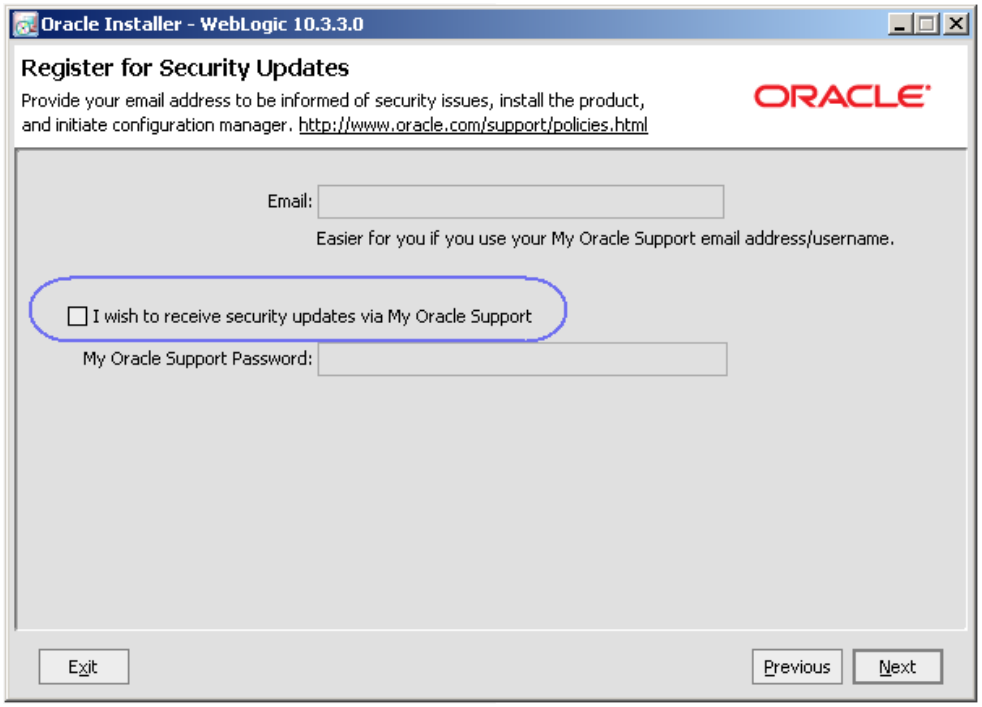
Install WebLogic Server

Assuming the WebLogic distribution, downloaded earlier, is in c:\downloads, navigate to that directory using Windows Explorer and double-click the distribution, wls1033_win32.exe, to start the installer in GUI mode.

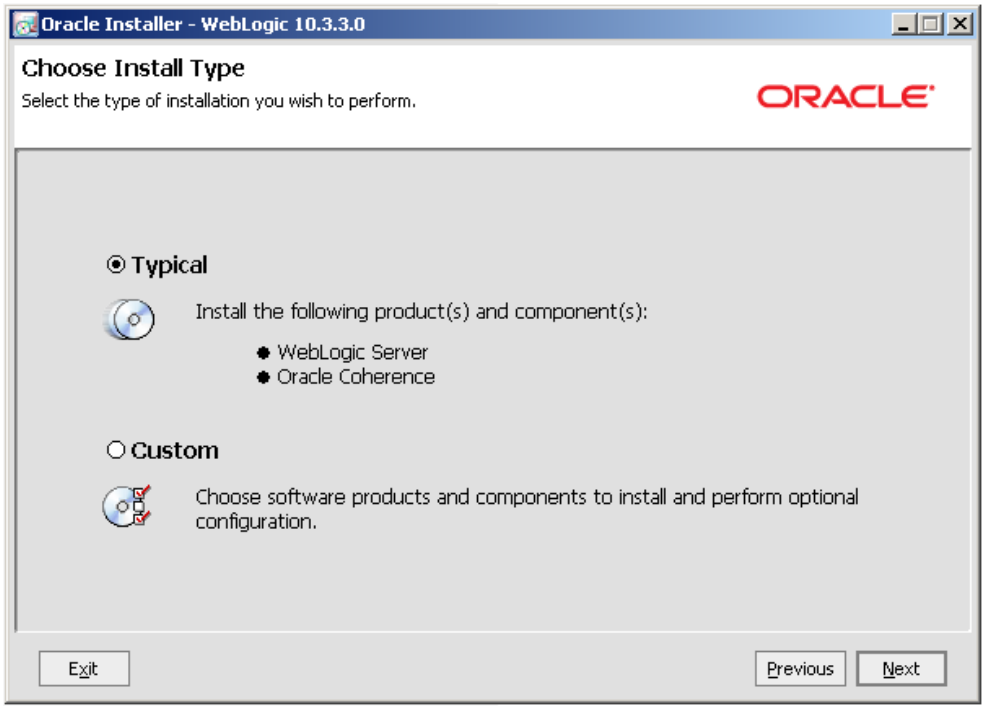
Create Middleware Home under C:\Oracle\Middleware\11g_home.



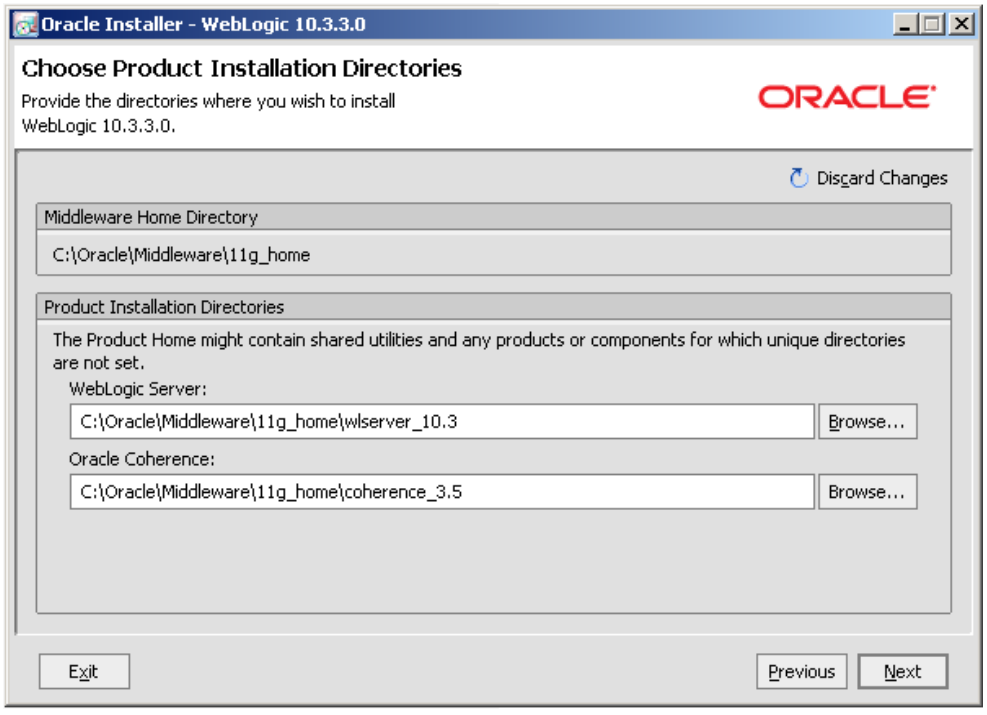
Uncheck "I wish to receive security updates …", dismiss the dialog box that appears and click Next.



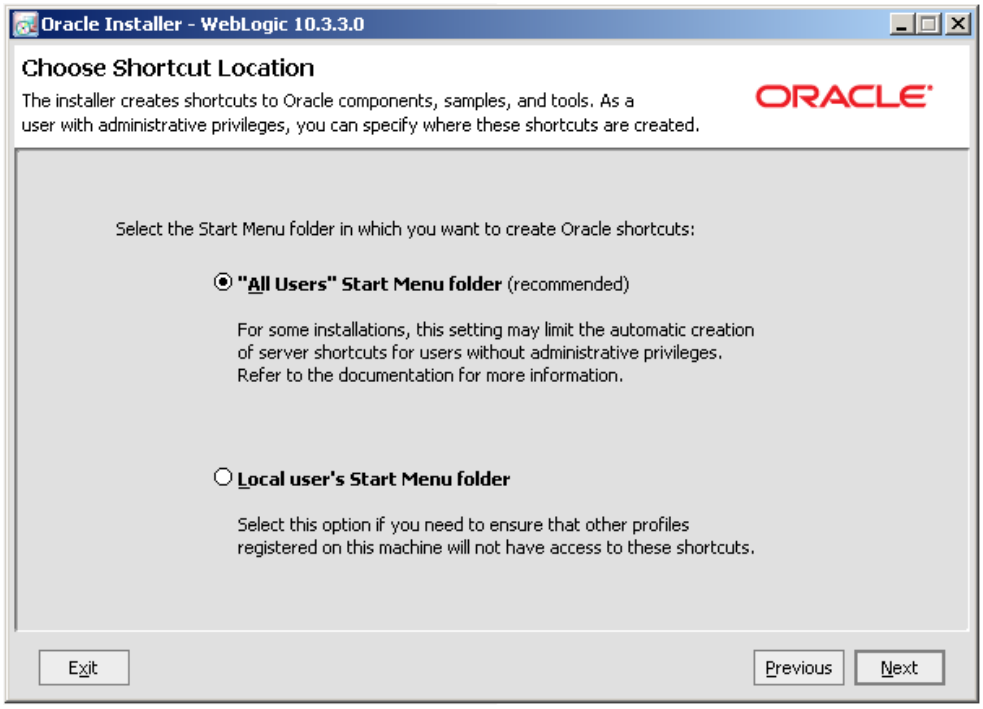
Click "Typical" then Next.



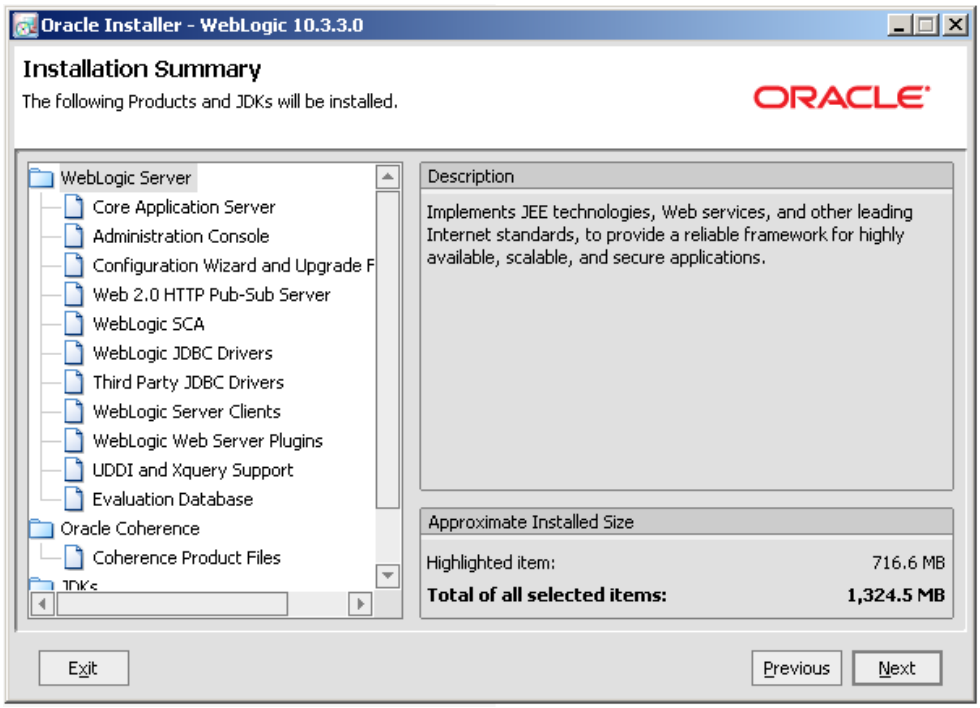
Accept defaults by clicking Next.



Accept defaults by clicking Next.



Click Next to commence installation.



Uncheck the "Run Quickstart" checkbook and click Done.

Install SOA Suite 11g

The SOA Suite installation will be performed in two stages. First the SOA Suite 11g R1 will be installed, then the Patch Set 2 will be installed.

Installation of the SOA Suite is discussed, in detail, in Section 2, Installing Oracle SOA Suite and Oracle Business Process Management Suite, of the Oracle Fusion

Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite [13]. The following steps walk through the process applicable to the installation for this article.

It is assumed that the SOA Suite archive, ofm_soa_generic_11.1.1.2.0_disk1_1of1.zip, has been extracted to c:\downloads.

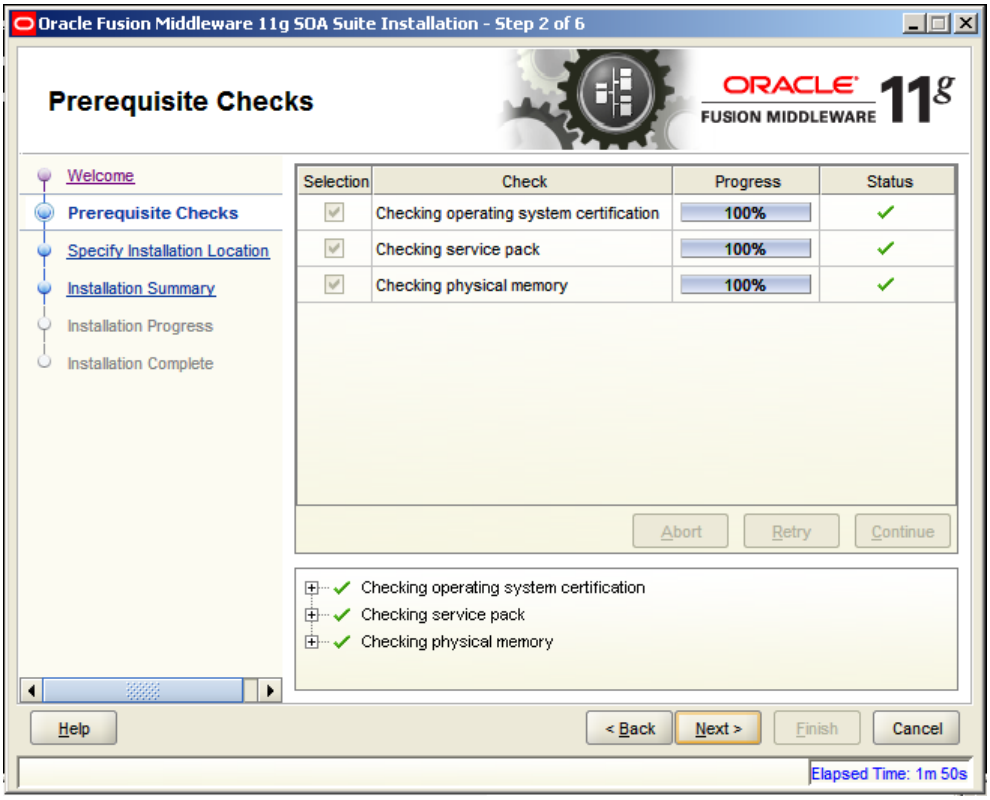
Open a command window and enter:

```
cd C:\downloads\ofm_soa_generic_11.1.1.2.0_disk1_1of1\Disk1
.\setup -jreLoc C:\Oracle\Middleware\11g_home\jdk160_18\jre
```

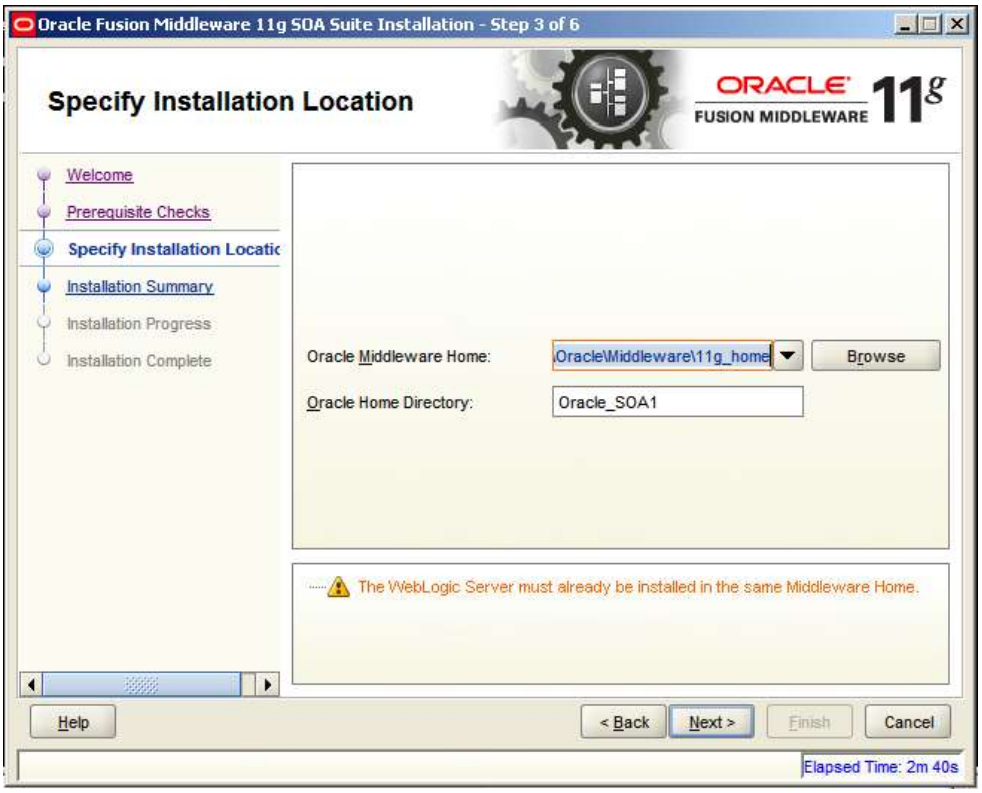
> Note: If you are tempted to perform this installation from a network drive, even if mounted locally, don't be. Installation will fail to initialize and will not provide sensible feedback. The distribution files must be available locally.

The command will "complete" pretty quickly but all kinds of other command windows will flash until eventually a GUI dialogue box will appear.

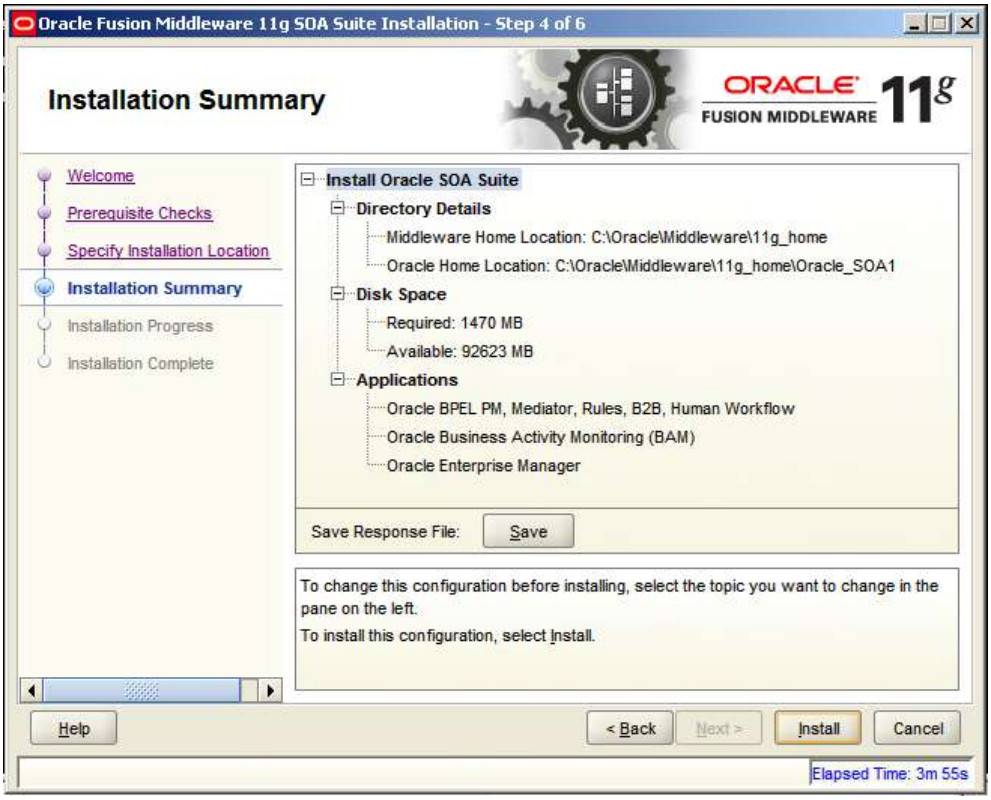
Click Next.



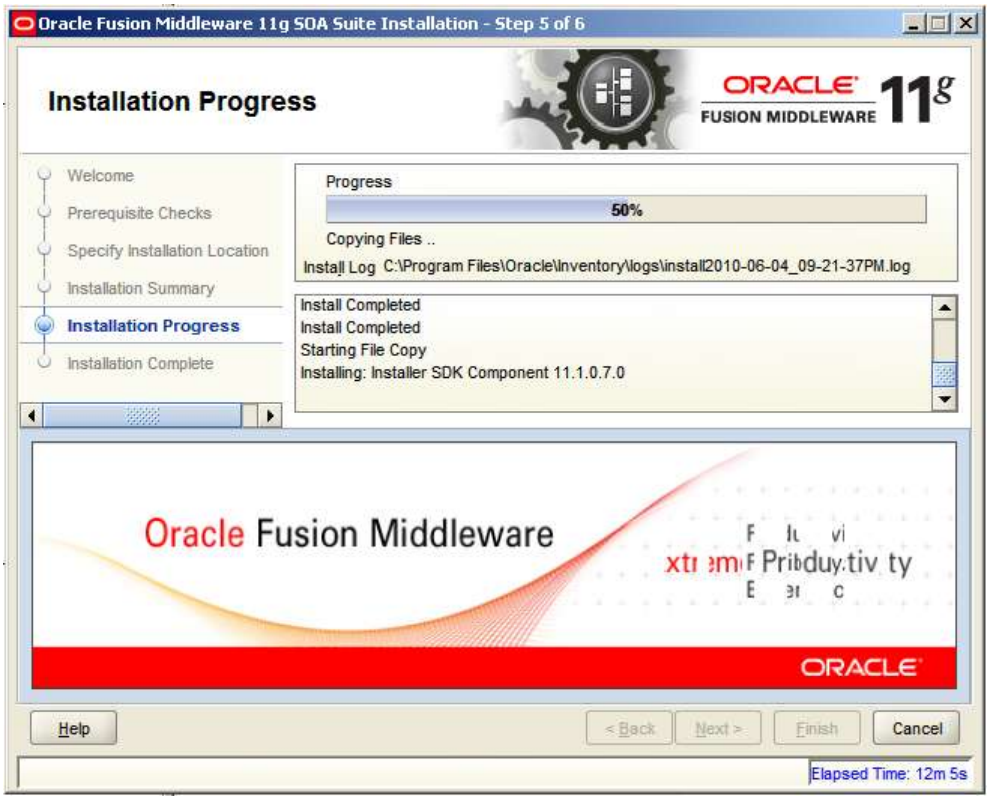
Click Next.



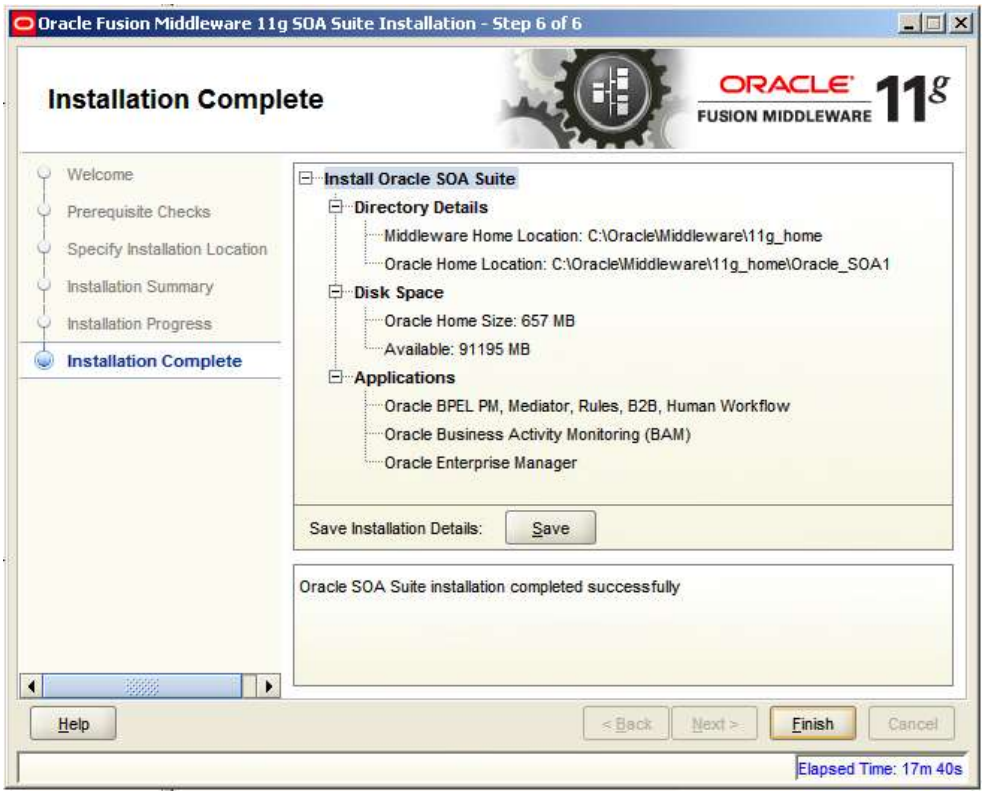
Accept the defaults and click Next.



Click Install.



Installation will take a while. When completed, click Next.



Click Finish.

The SOA Suite is installed.

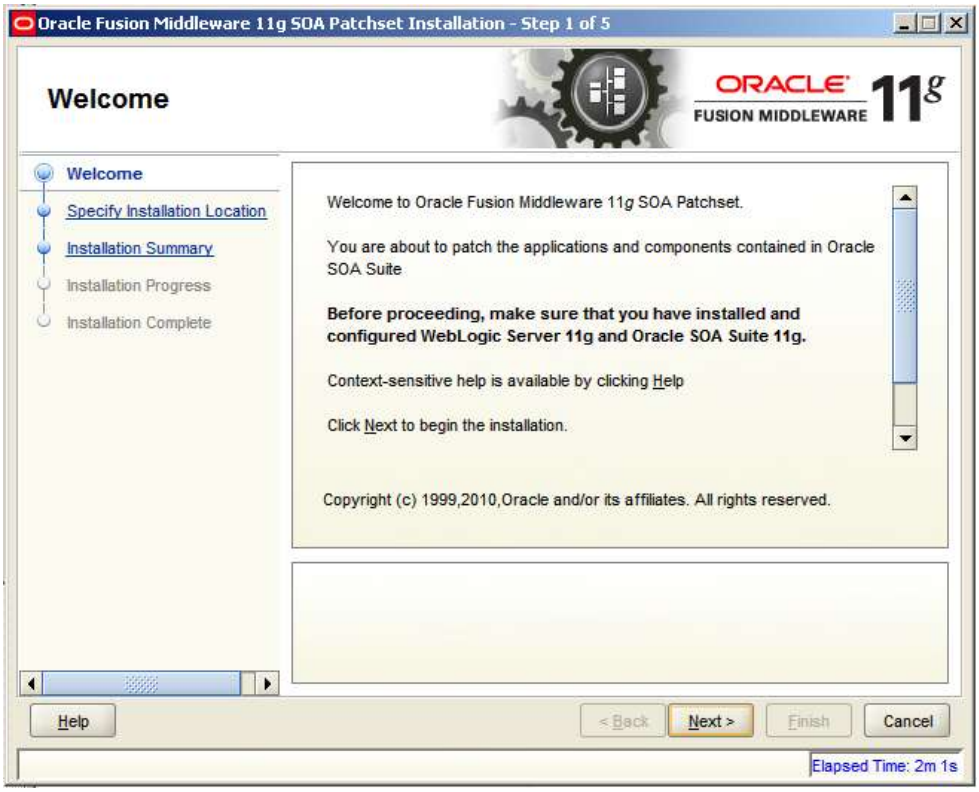
Install Patch Set 2

Let's now install the Patch Set 2. Section 4, Applying the Latest Oracle Fusion Middleware Patch Set with the Patch Set Installers, in the Oracle® Fusion Middleware Patching Guide 11g Release 1 (11.1.1)[14], discusses the process in detail. The following steps apply to the installation in this article.

Assuming you unzipped the Patch Set 2 archive, ofm_soa_generic_11.1.1.3.0_disk1_1of1.zip, to the c:\downloads directory, open a command window and issue the following commands:

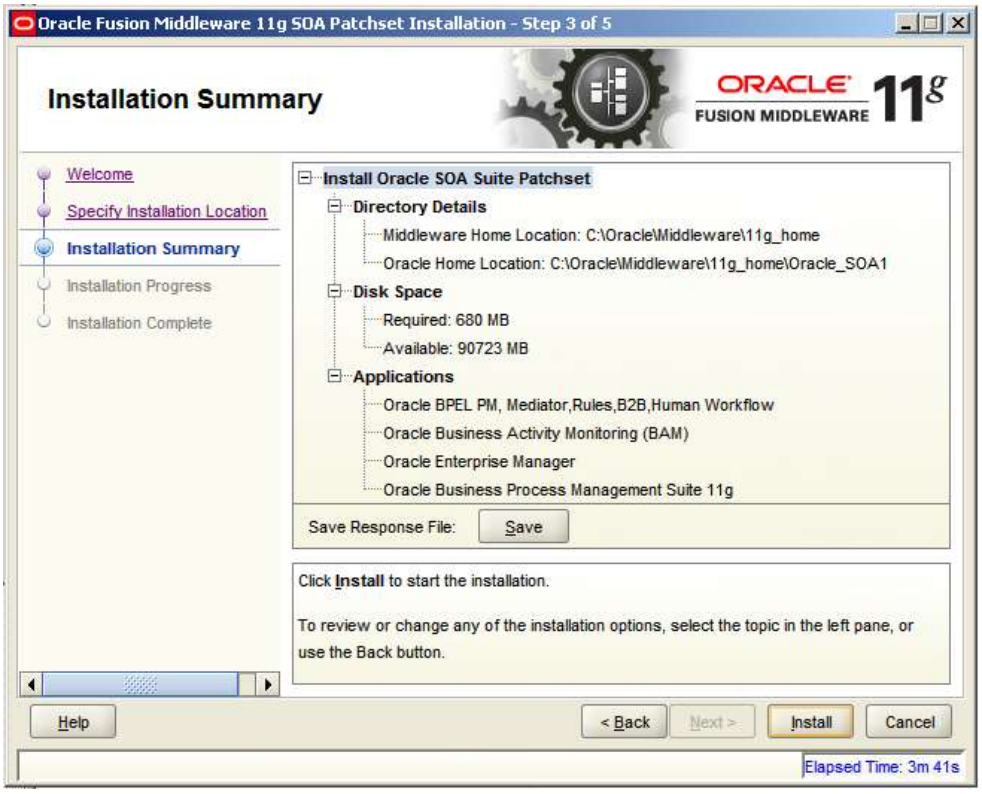
```
cd C:\downloads\ofm_soa_generic_11.1.1.3.0_disk1_1of1\Disk1
.\setup -jreLoc C:\Oracle\Middleware\11g_home\jdk160_18\jre
```

A number of command windows will open and close and eventually the oracle Universal Installer GUI will appear. Patience is advised. It may take a few minutes for the Installer to appear.

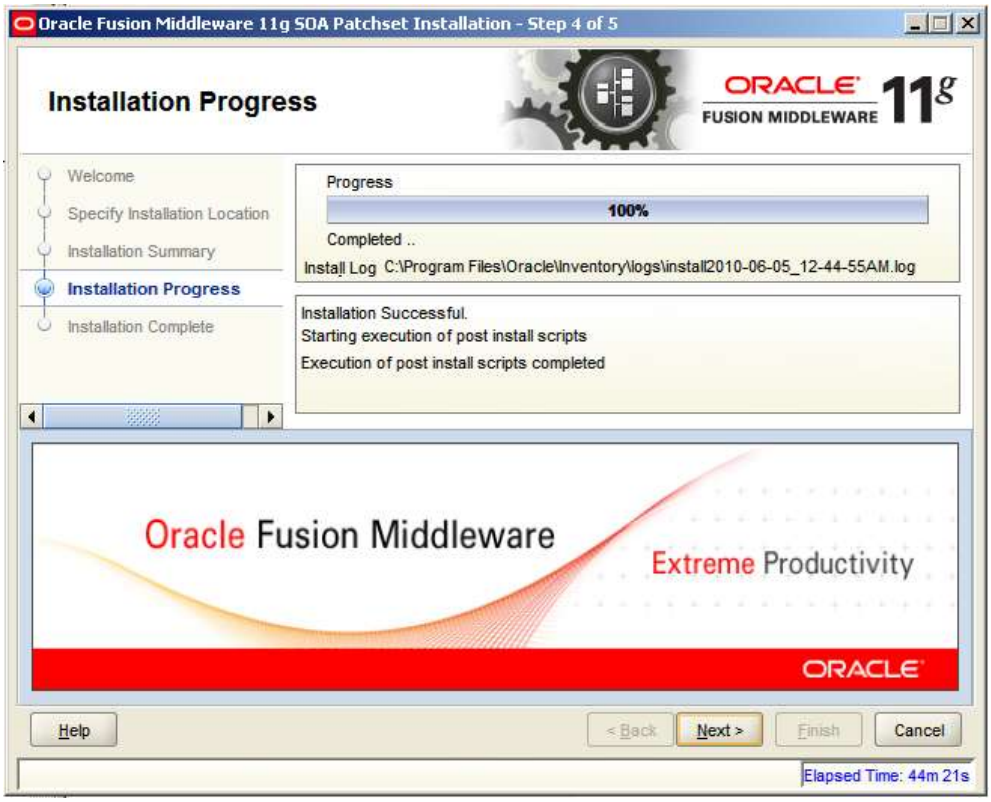


Click Next.

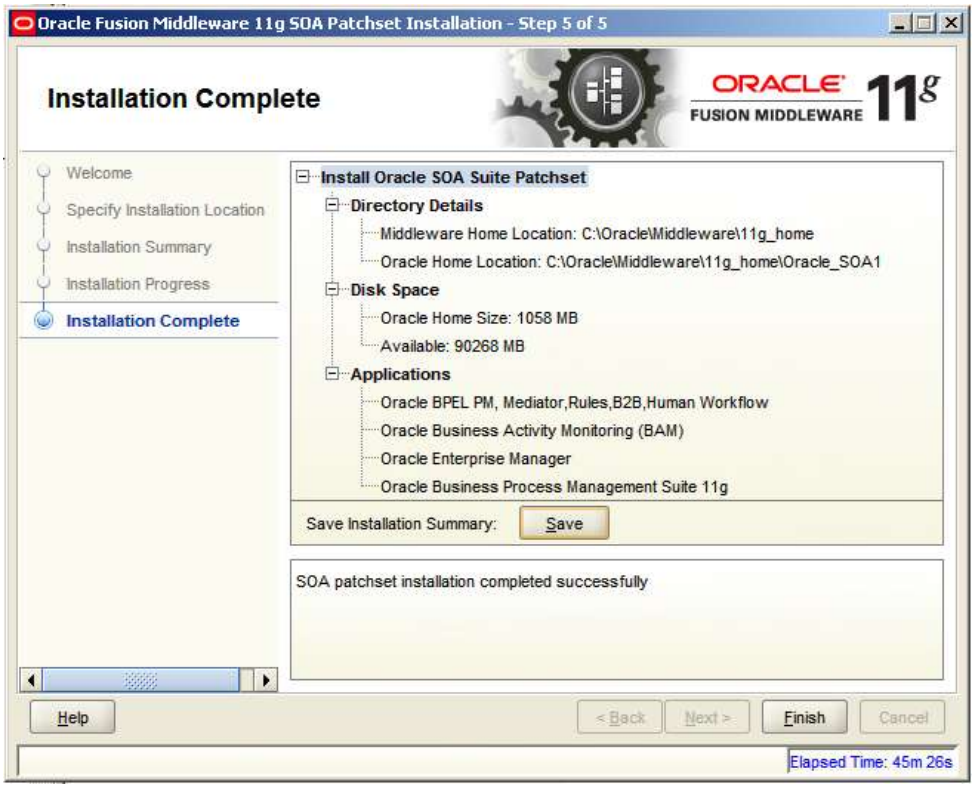
Accept the defaults and click Next.



Click Install and observe the progress of the installation process.



Click Next when the installation process completes.



Click Finish.

Install Oracle Enterprise Pack for Eclipse (Optional)

If you downloaded the Oracle Service Bus 11.1.1.3.0, intending to use it in other solutions to be developed and exercise in the environment being built, now is the time to install the Oracle Enterprise Pack for Eclipse, which you presumably downloaded also.

Unzip the Oracle Enterprise Pack for Eclipse archive, oepe-galileo-all-in-one-11.1.1.5.0.201003170852-win32.zip, to C:\Oracle\Middleware\, then rename the leaf folder C:\Oracle\Middleware\oepe-galileo-all-in-one-11.1.1.5.0.201003170852-win32 to OEPE to get C:\Oracle\Middleware\OEPE.

Install Oracle Service Bus (Optional)

If you downloaded the Oracle Service Bus 11.1.1.3.0, intending to use it in other solutions to be developed and exercise in the environment being built, now is the time to install it.

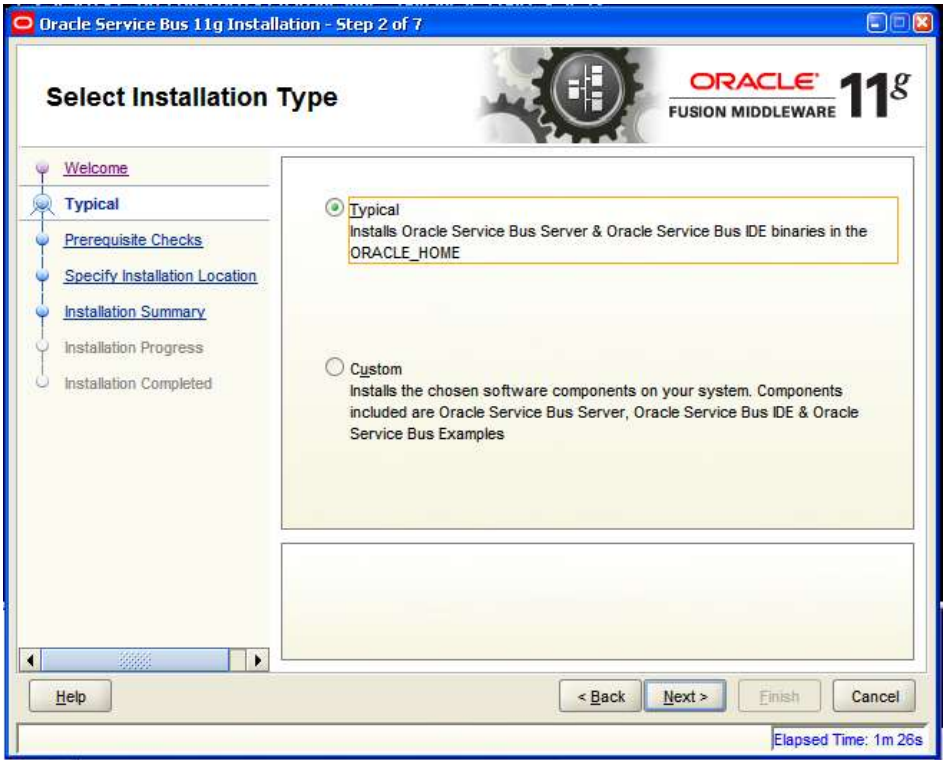
Assume that the Oracle Service Bus archive, ofm_osb_generic_11.1.1.3.0_disk1_1of1.zip, has been unzipped to c:\downloads. Open a command window and execute the following commands.

```
cd C:\downloads\ofm_osb_generic_11.1.1.3.0_disk1_1of1\osb\Disk1
setup.exe -jreLoc c:\jre1.6.0_18
```

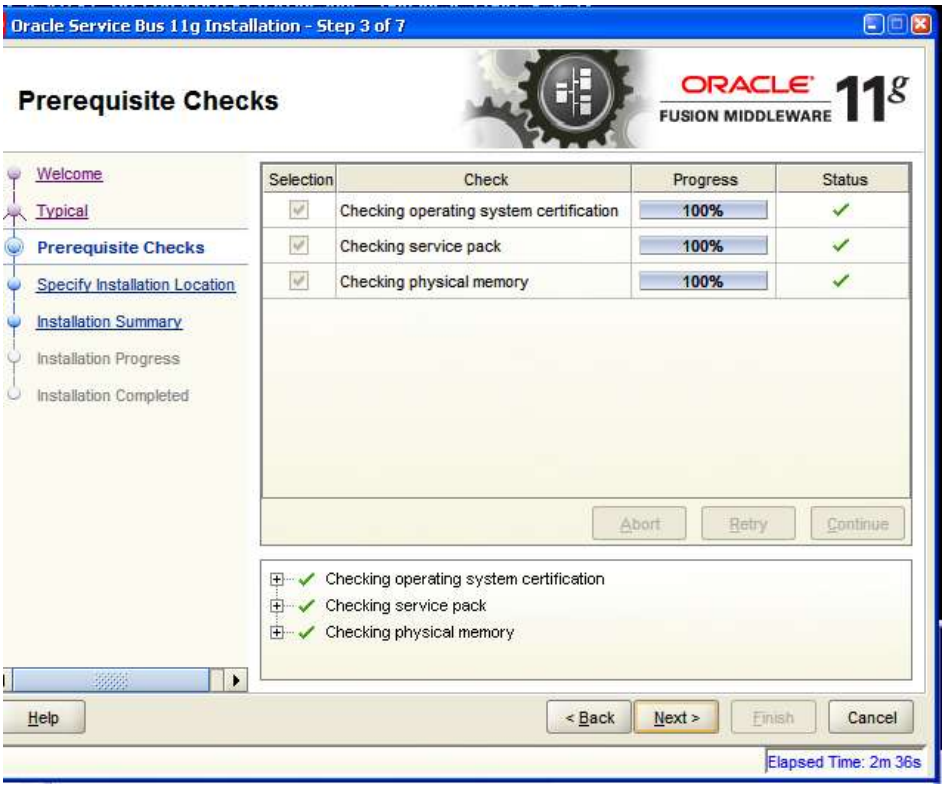
A number of command windows will open and close and eventually the oracle Universal Installer GUI will appear. Patience is advised. It may take a few minutes for the Installer to appear.

Skip the Welcome screen by clicking Next.

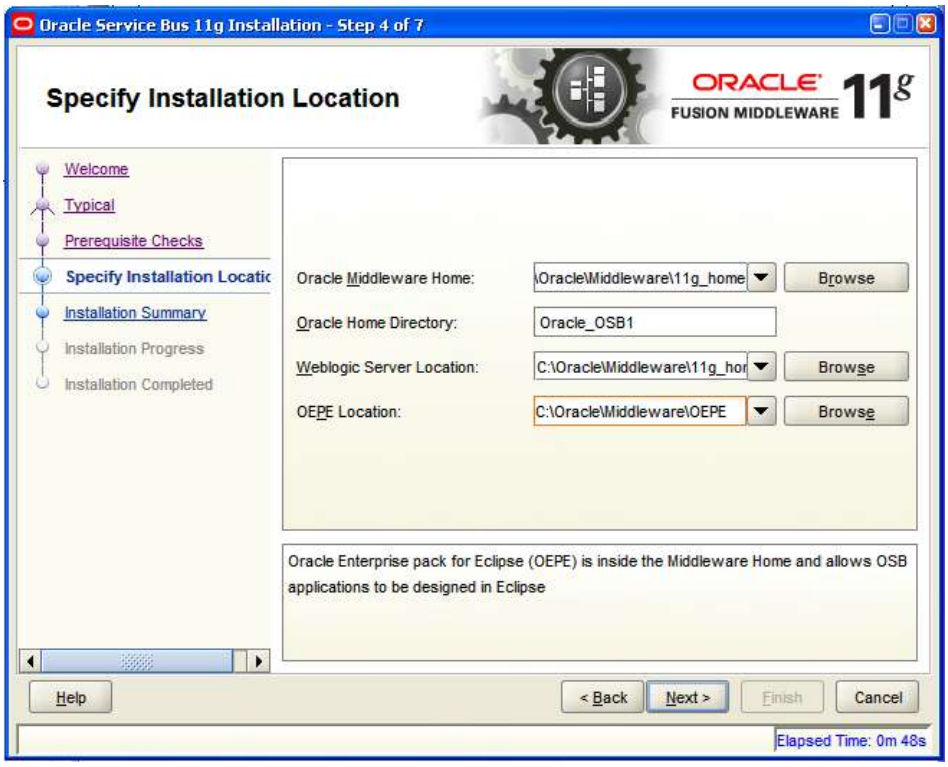
Select Typical and click Next.



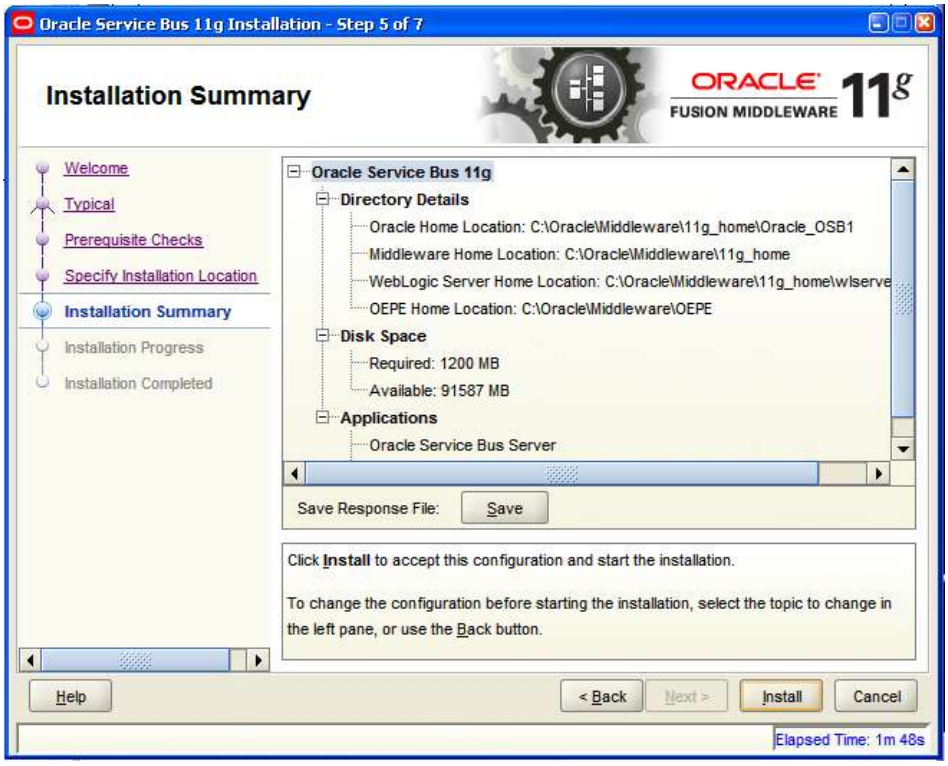
Once prerequisite checks are completed successfully, click Next.



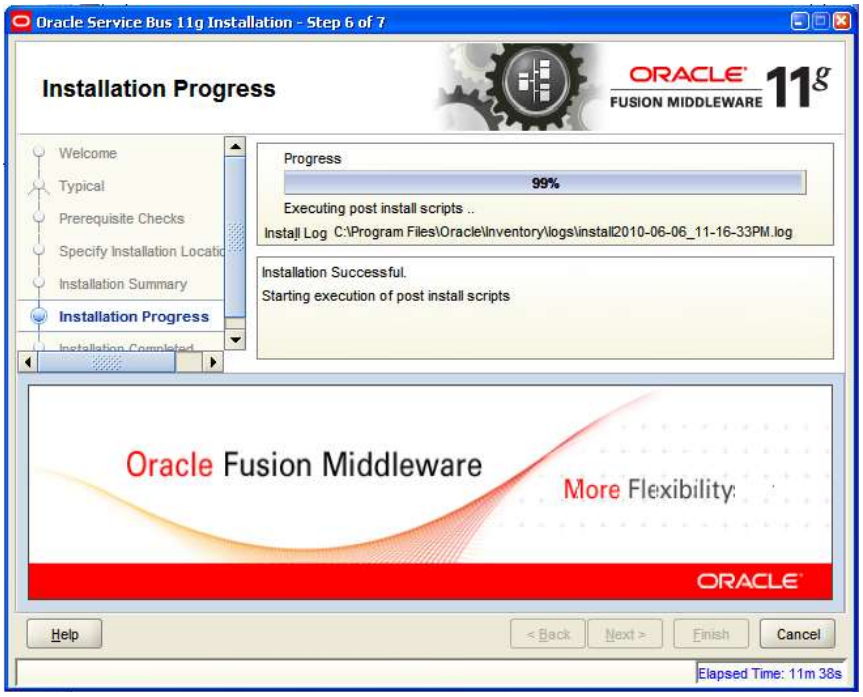
Accept defaults for Installation Location, enter C:\Oracle\Middleware\OEPE for OEPE Location and click Next.



Click Install.



When the progress bar reaches 100% click Next.



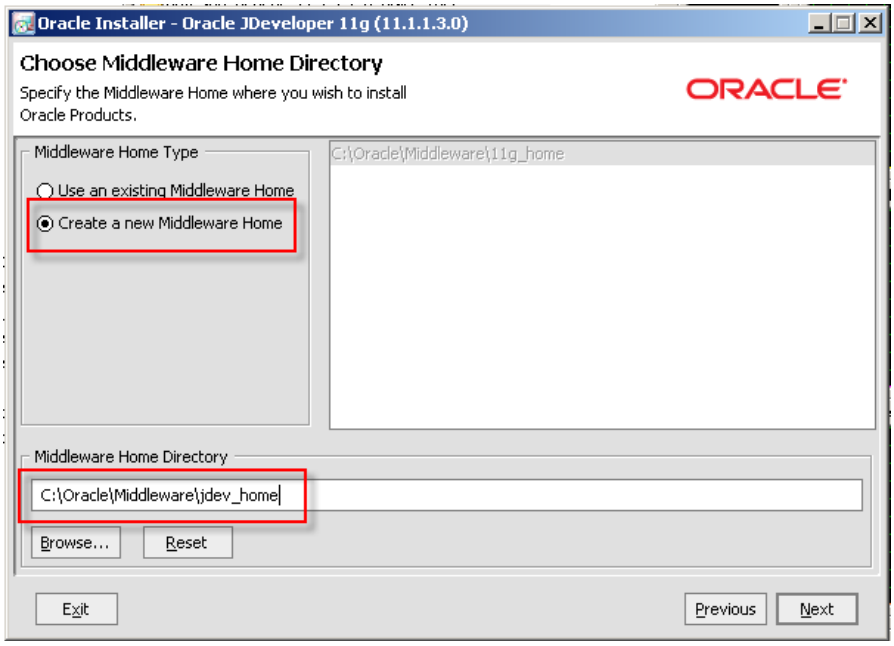
Finally, click Finish.

Install JDeveloper IDE and Extensions

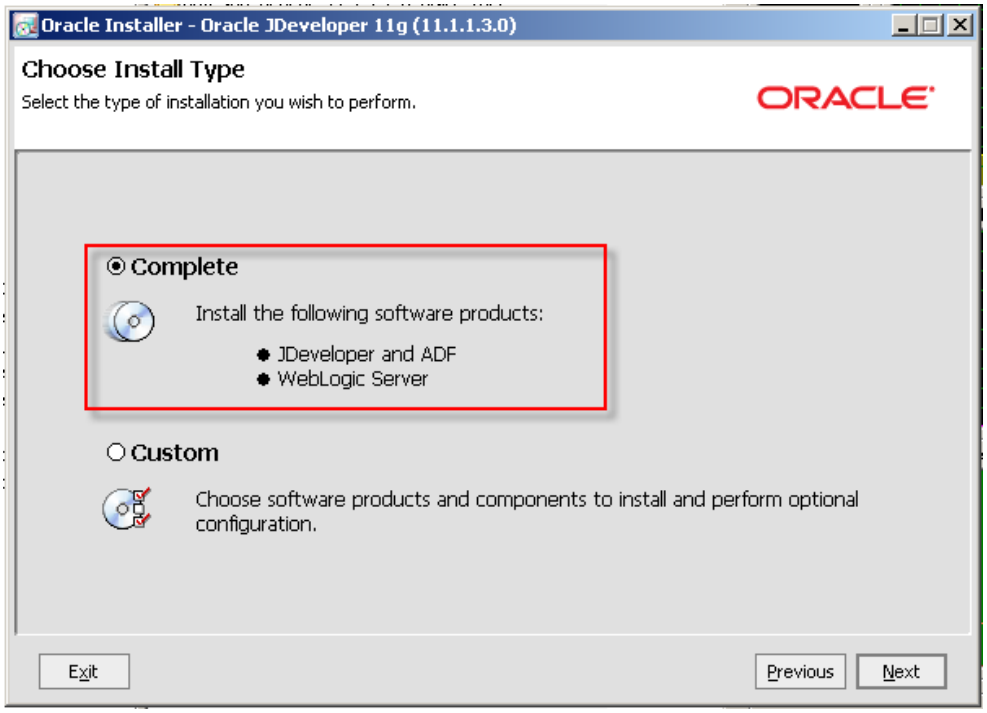
Assume that the JDeveloper Studio IDE archive, jdevstudio11113install.exe, has been downloaded to c:\downloads.

Double-click the JDeveloper Studio archive executable, jdevstudio11113install.exe, to commence installation.

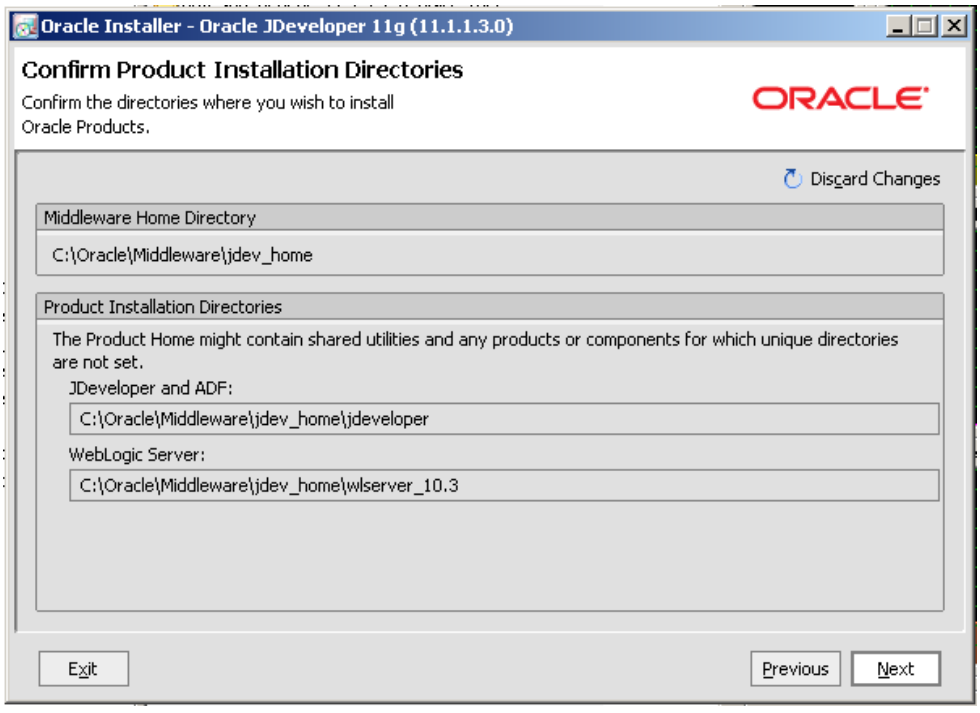
When asked to choose the middleware home directory check "Create a New Middleware Home", specify c:\Oracle\Middleware\jdev_home and click Next.



Check “Complete” for installation type and click Next.

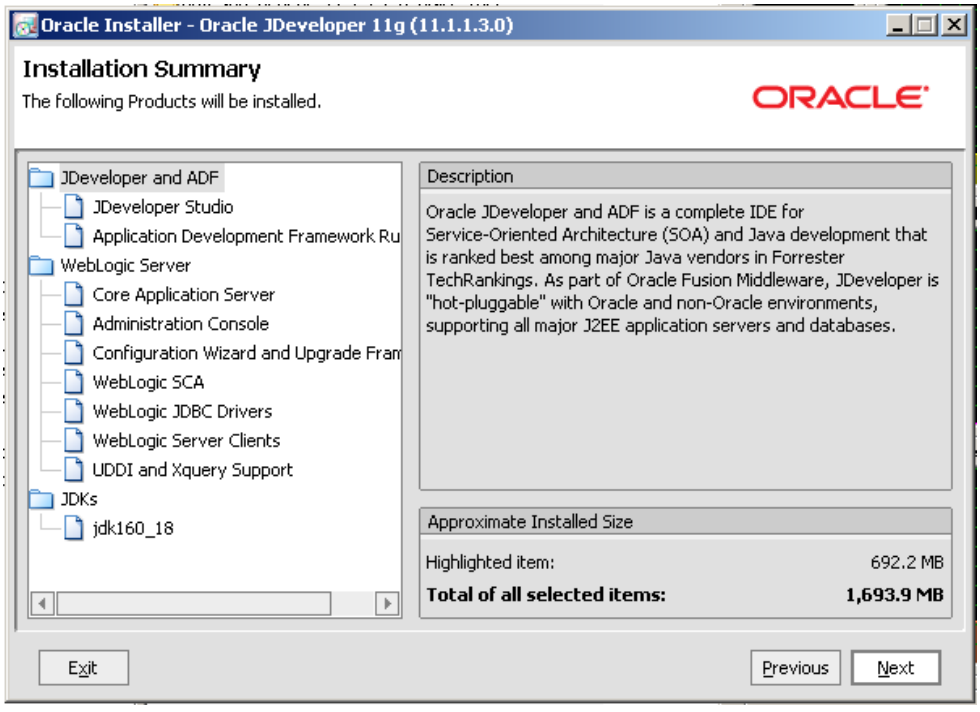


Accept product directories and click Next.

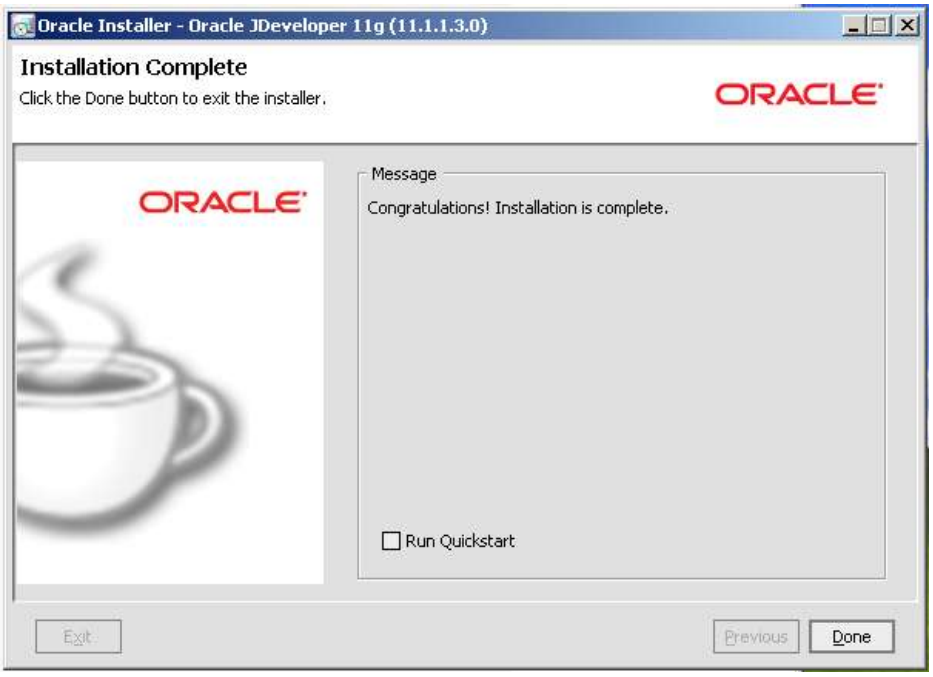


Accept default for shortcut location and click Next.

Accept installation summary and click Next.



When the installation completes, uncheck the “Quickstart" checkbox and click Done.



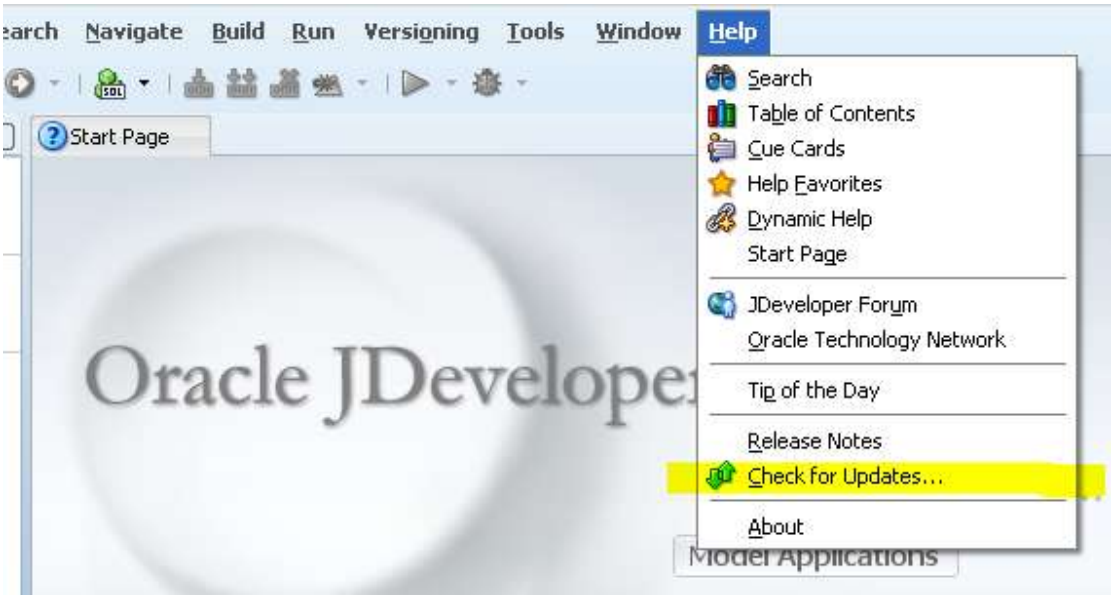
Once installation is completed it is necessary to update the BPM and SOA components of JDeveloper.

Start the JDeveloper application.

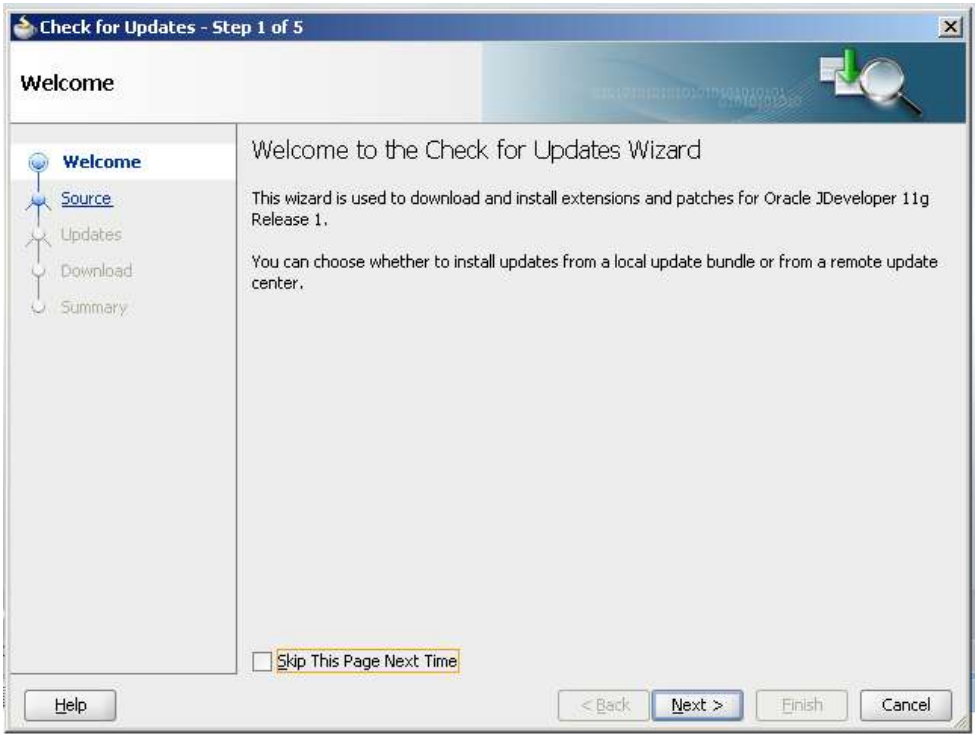
Accept Default Role and click OK.

If you like, uncheck the "Always prompt for role selection on startup" checkbox.

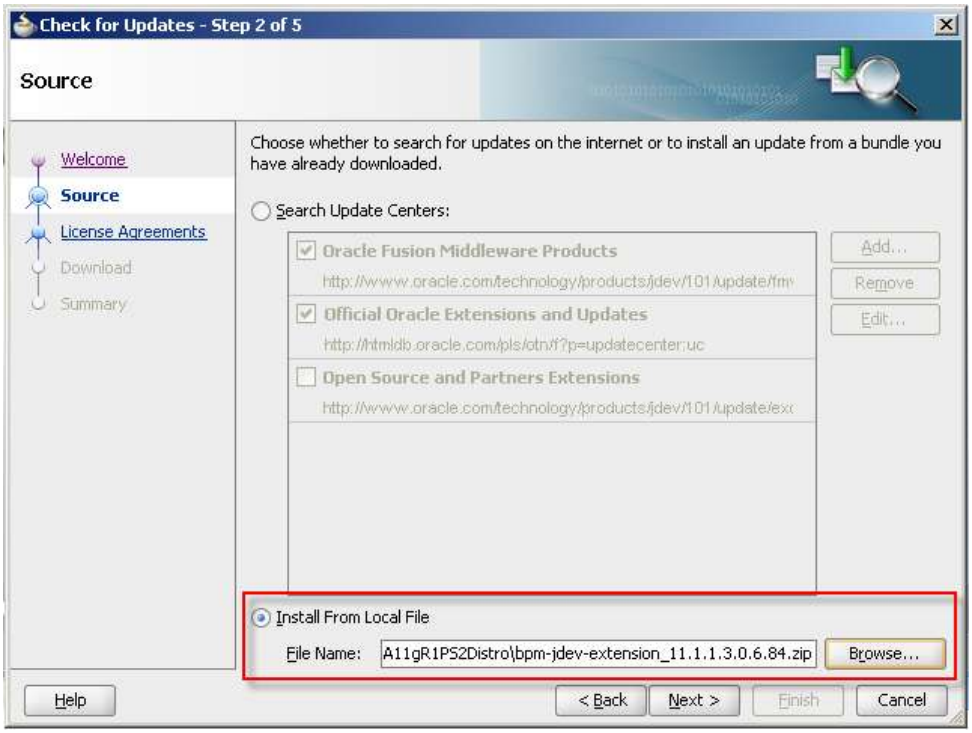
Select Help→Check for Updates



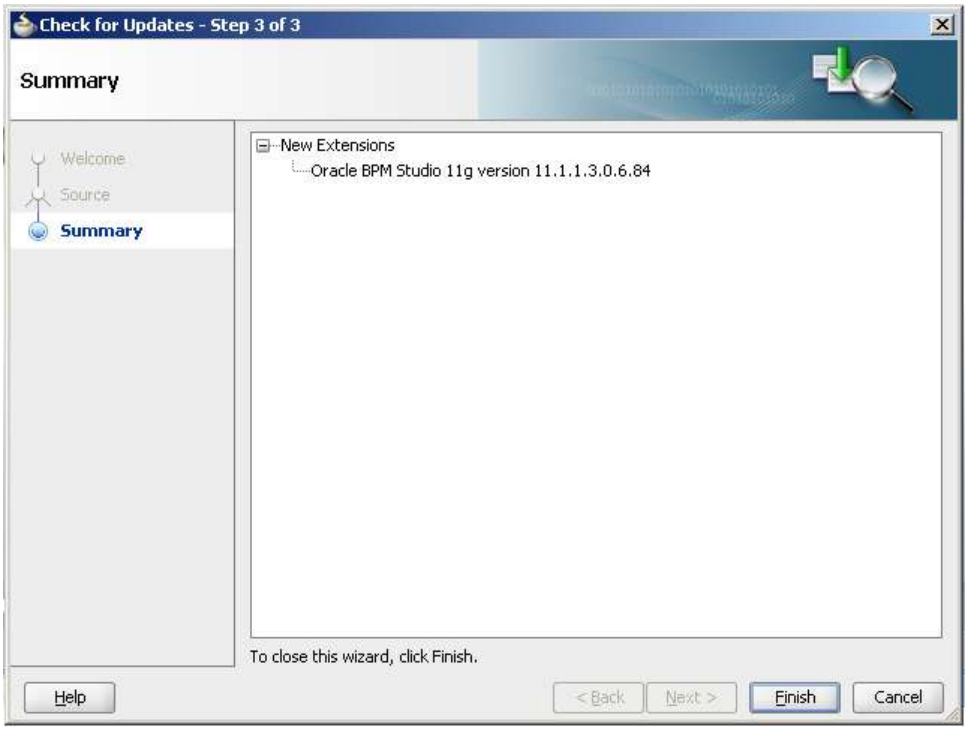
Click Next to the welcome dialogue box.



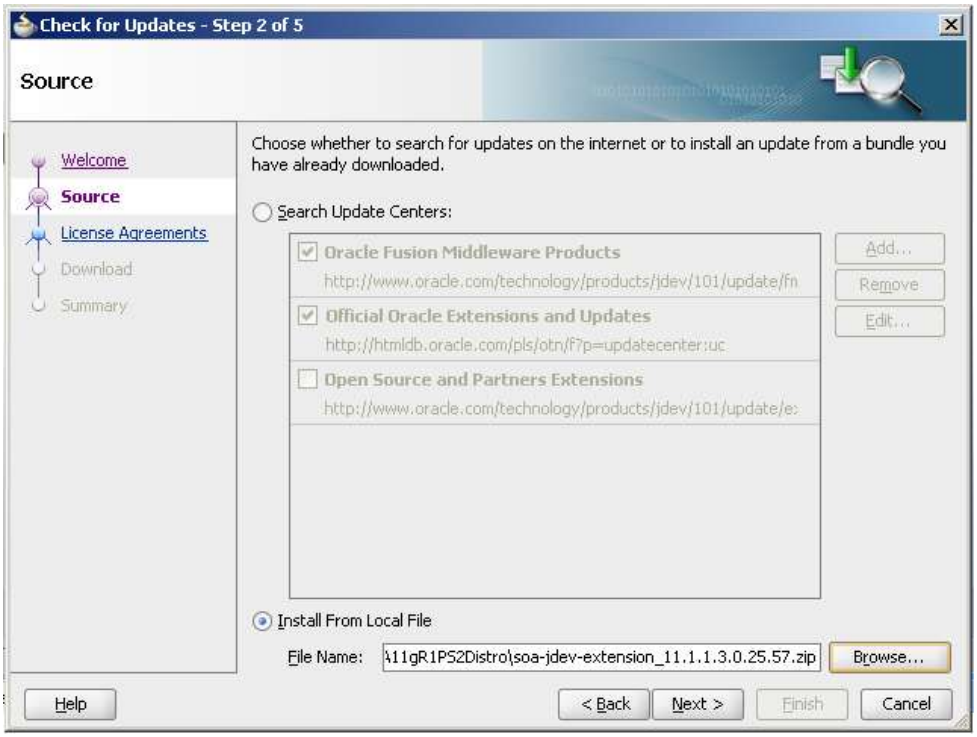
Click the “Install From Local File”, locate the archive bpm-jdev-extension.zip and click Next. (I changed the archive name, shown in the picture, to remind me of the version after I downloaded it).

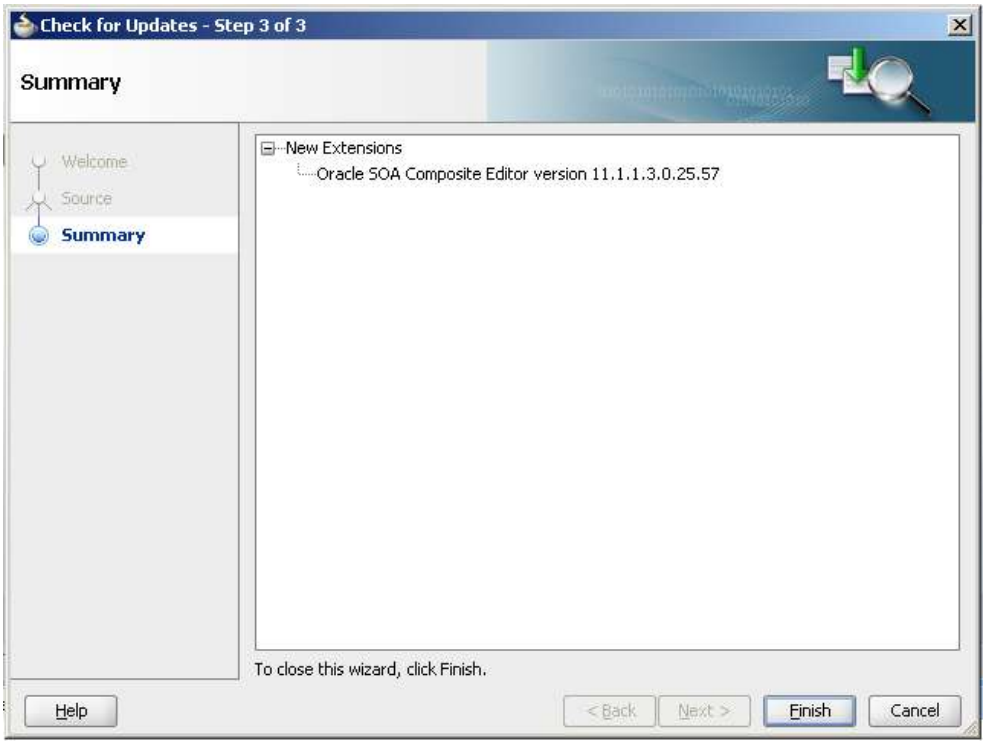


Confirm the version number and click Finish. Allow JDeveloper to re-start.

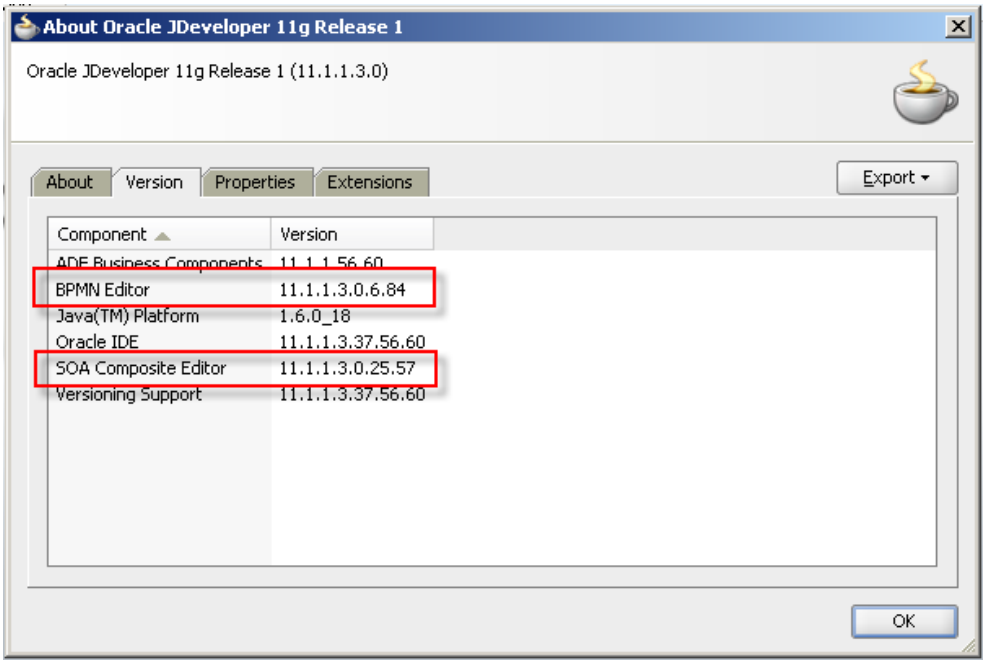


Repeat the process with soa-jdev-extension.zip.





Once JDeveloper restarts click Help→About Version tab to see what component versions are installed then exit JDeveloper.



Install Oracle B2B Document Editor and Standards Libraries

B2B Document Editor is required to allow extraction of standards-compliant objects for various B2B standards, which are then used to configure messaging and message validation. HL7 v2 is classified as one of these. The B2B Document Editor is also used to customize message strictures if customization is required. For HL7 v2 this is often the case.

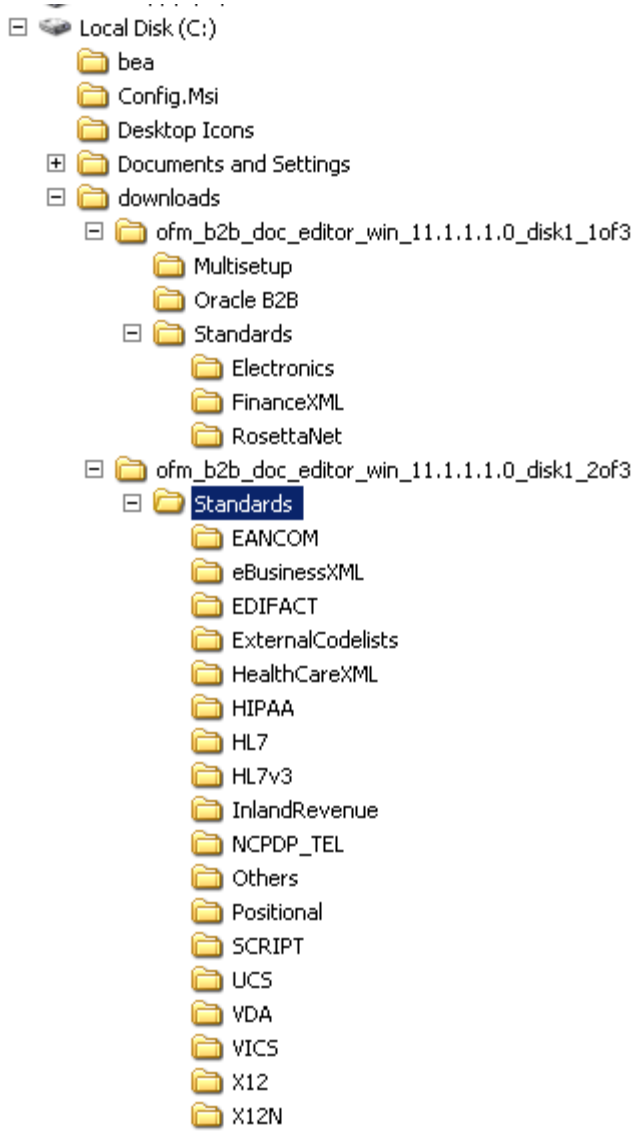
Installation of the B2B Document Editor, which is available for Windows only, is discussed in Oracle® Fusion Middleware User's Guide for Oracle B2B 11g Release 1 (11.1.1), Section 3.2, Installing Oracle B2B Document Editor[15]. The reference in that document is somewhat circular in that it sends the reader to the Help facility of the B2B Document Editor (which is assumed to be installed already) to seek help on installing the B2B Document Editor. Follow the steps below to get the job done.

Unzip Part 1 of the B2B Document Editor archive set, ofm_b2b_doc_editor_win_11.1.1.1.0_disk1_1of3.zip, to c:\downloads.

Unzip Part2 of the B2B Document Editor archive set, ofm_b2b_doc_editor_win_11.1.1.1.0_disk1_2of3.zip, to c:\downloads.

Disk 1 of 3 contains, in addition to the document editor itself, default standards libraries for Electronics, FinanceXML and RosettaNet.

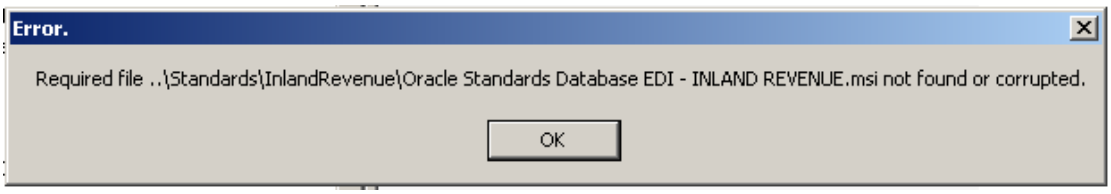
Disk 2 of 3 and Disk 3 of 3 (the last of which we did not download), contain additional standards libraries, most notably HealthcareXML, HL7, HL7v3, HIPAA, SCRIPT, Positional and Others. Some of these are only relevant to healthcare in the USA (HIPAA) while others are much more universal (HL7, HL7v3).



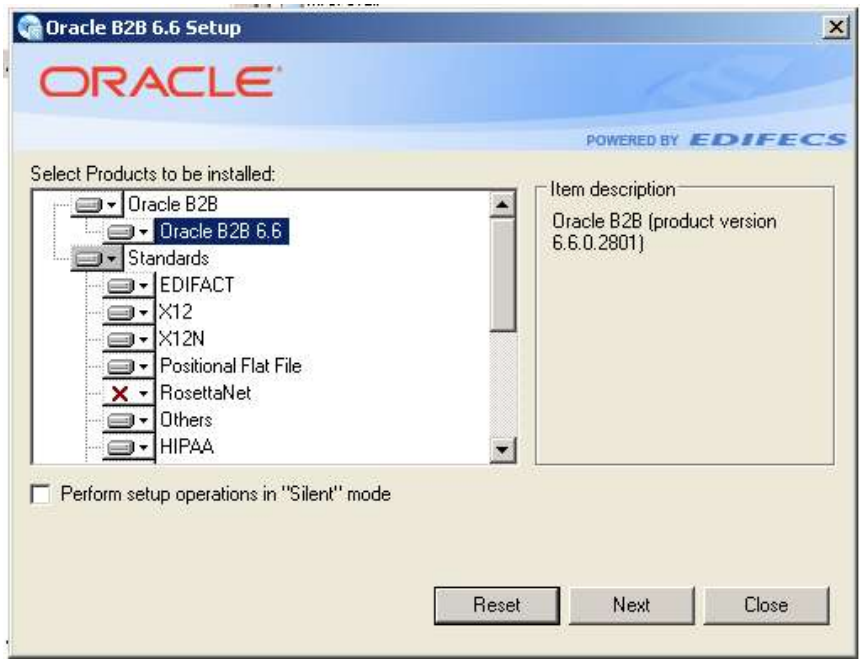
Copy directories for the standards you need to be supported from C:\downloads\ofm_b2b_doc_editor_win_11.1.1.1.0_disk1_2of3\Standards to C:\downloads\ofm_b2b_doc_editor_win_11.1.1.1.0_disk1_1of3\Standards. The installer will look for them there. Choose only the standards you need.

Navigate to C:\downloads\ofm_b2b_doc_editor_win_11.1.1.1.0_disk1_1of3 and double-click Install.exe.

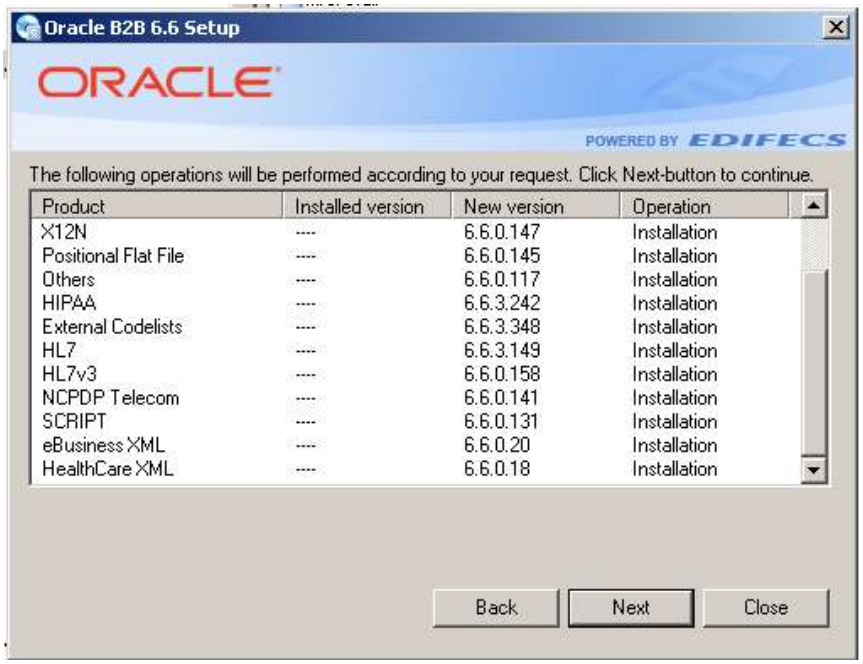
As it starts, the installer will complain about missing or corrupt standards libraries for the standards not found under the Standards directory (this is why we copied the standards directories for the standards we need to be installed). Dismiss these dialogues by clicking OK.



When the installer dialogue opens verify that all standards for which you need support are listed and click Next.

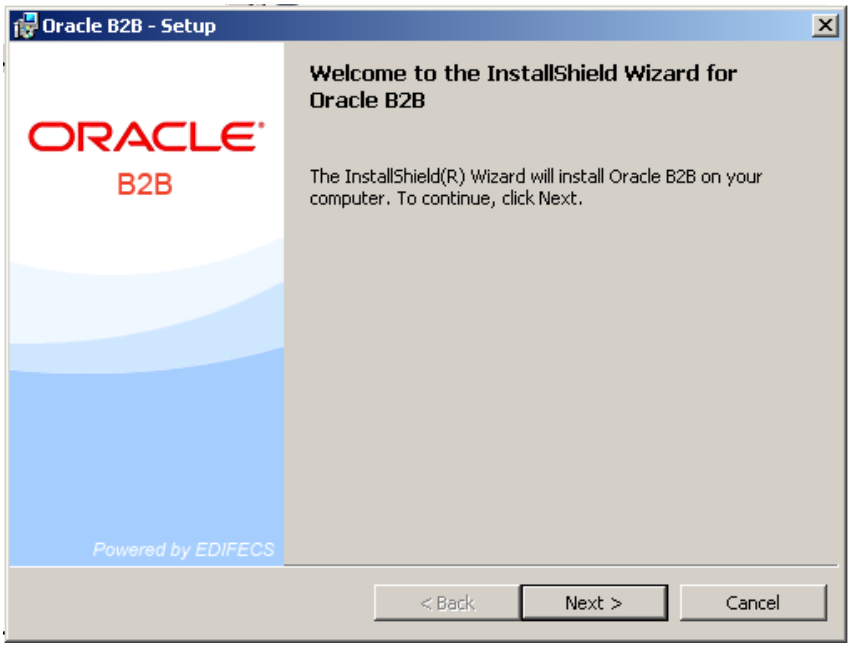


The list of operations to be performed will be shown for confirmation. Click Next to commence installation.

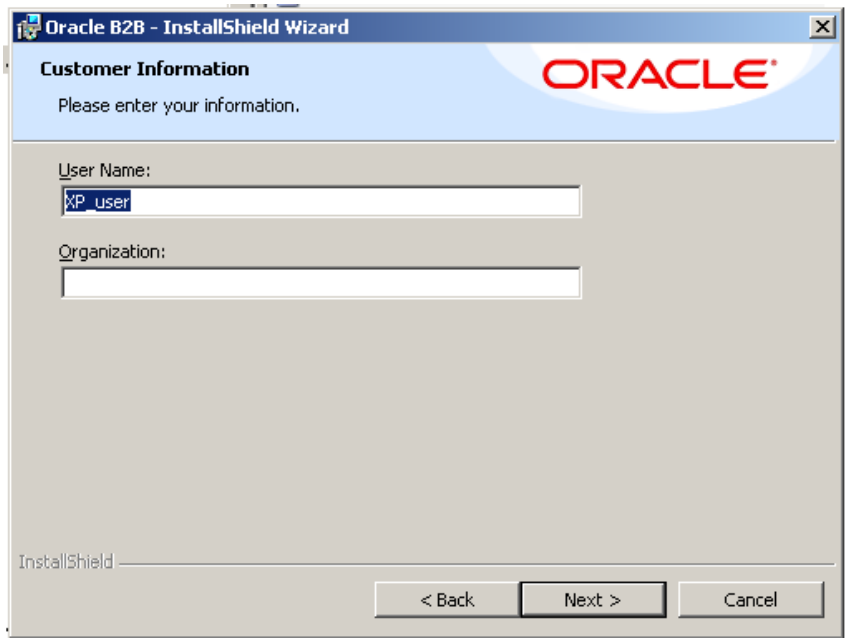


Depending on the configuration of your Windows machine .NET framework may be installed and configured as part of the B2B Document Editor installation.

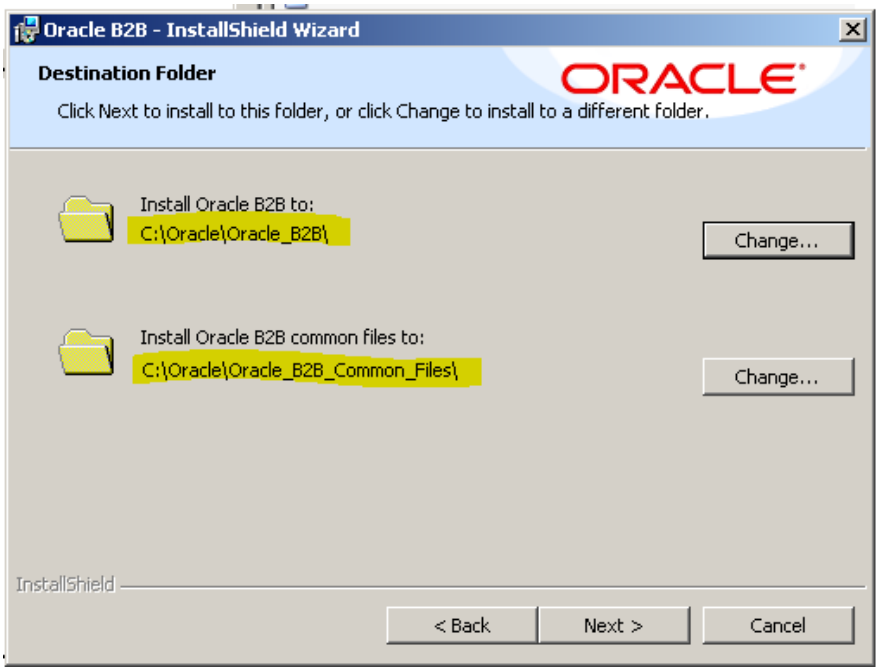
Installation will continue with the Welcome dialogue box. Click Next.



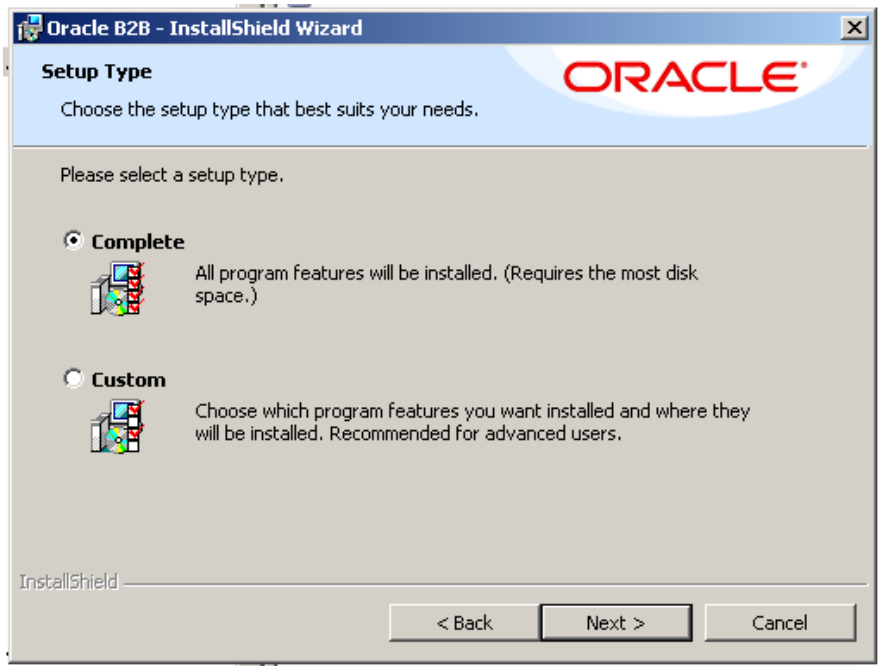
Provide “Customer Information” and click Next.



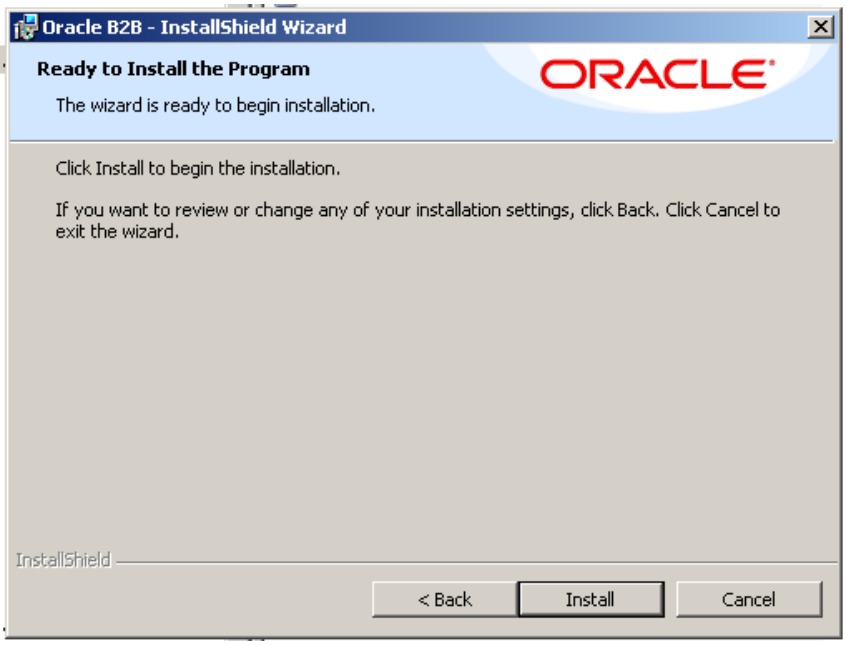
Change installation directories from defaults to keep all software together. Change “Install Oracle B2B To:” to C:\Oracle\Oracle_B2B\. Change “Install Oracle B2B Common Files To:” to C:\Oracle\Oracle_B2B_Common_Files\. Click Next.



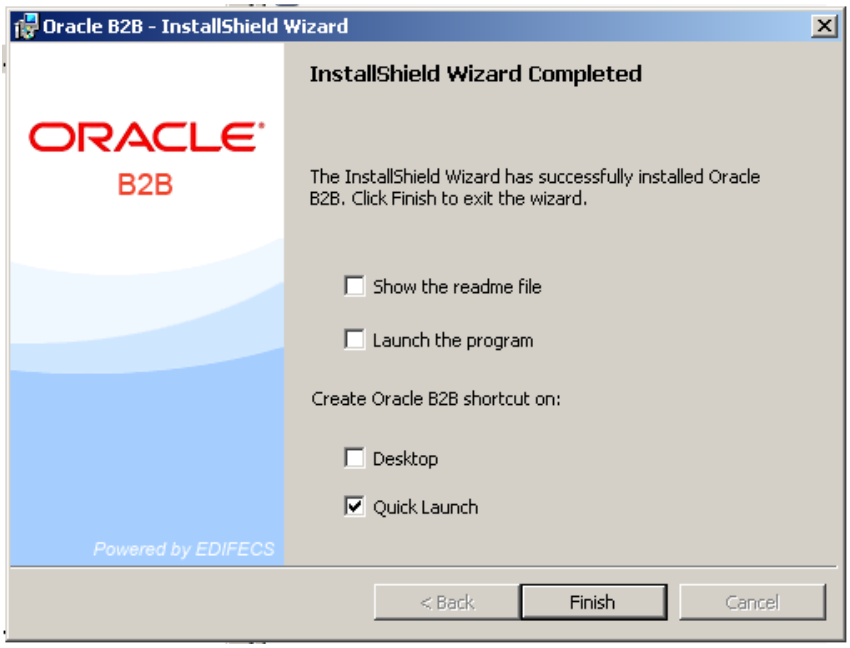
Accept the default of "Complete" and click Next.



Click Install and wait for completion.

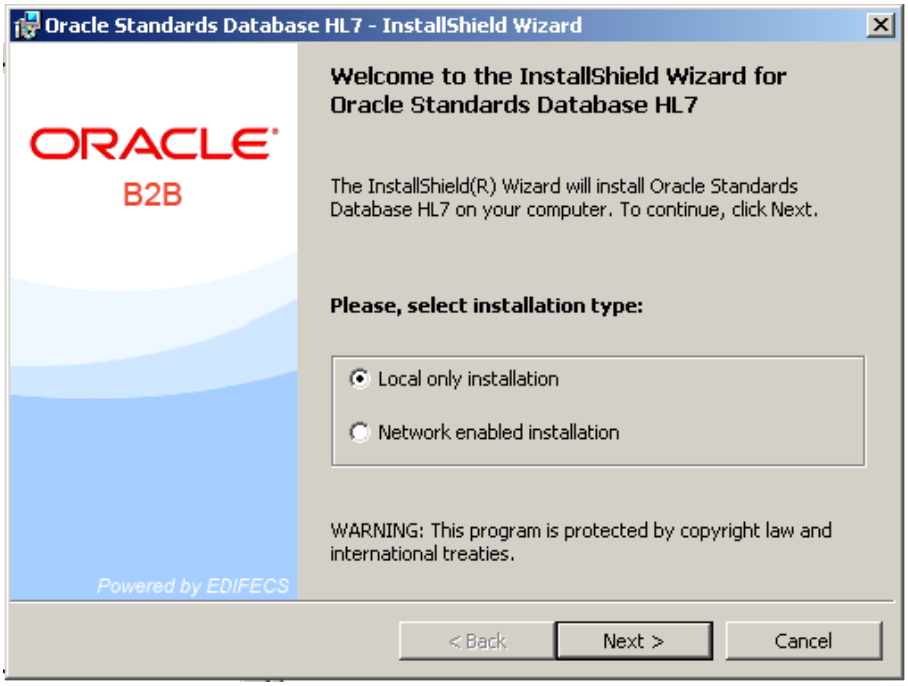


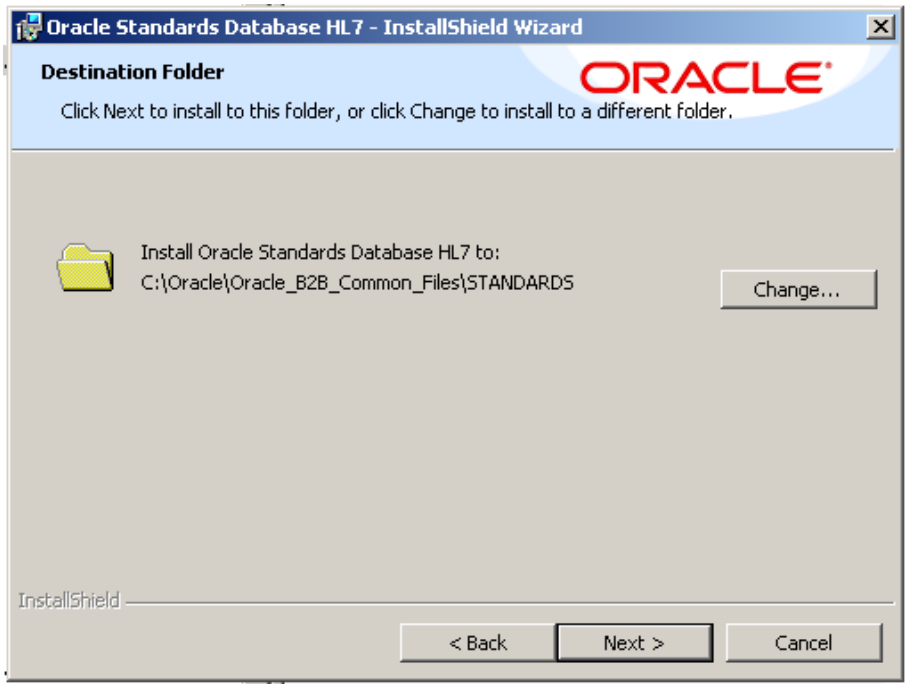
Check / uncheck the checkboxes in the final dialogue box as you see fit and click Finish.

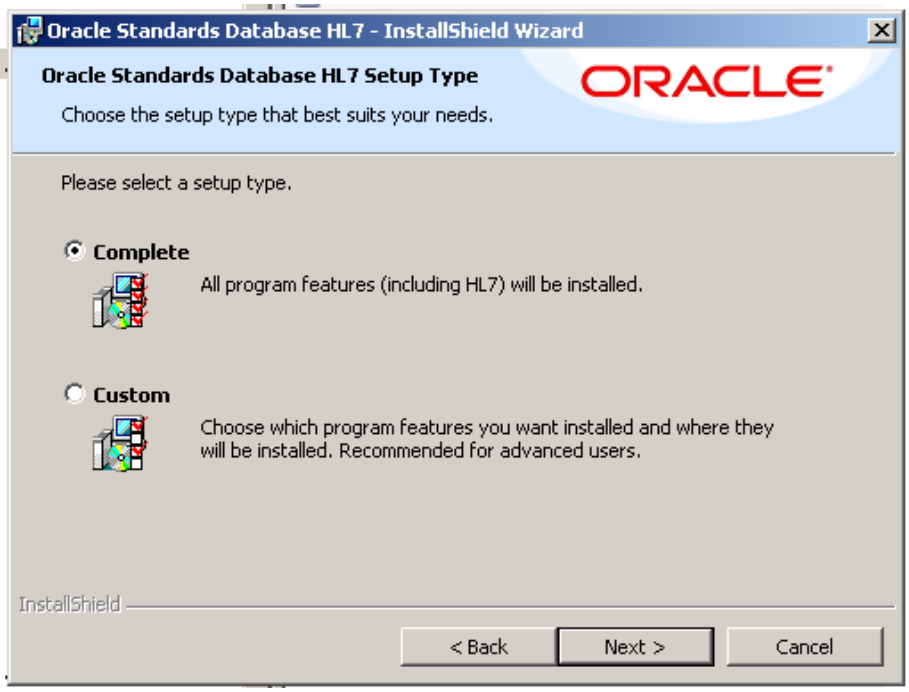


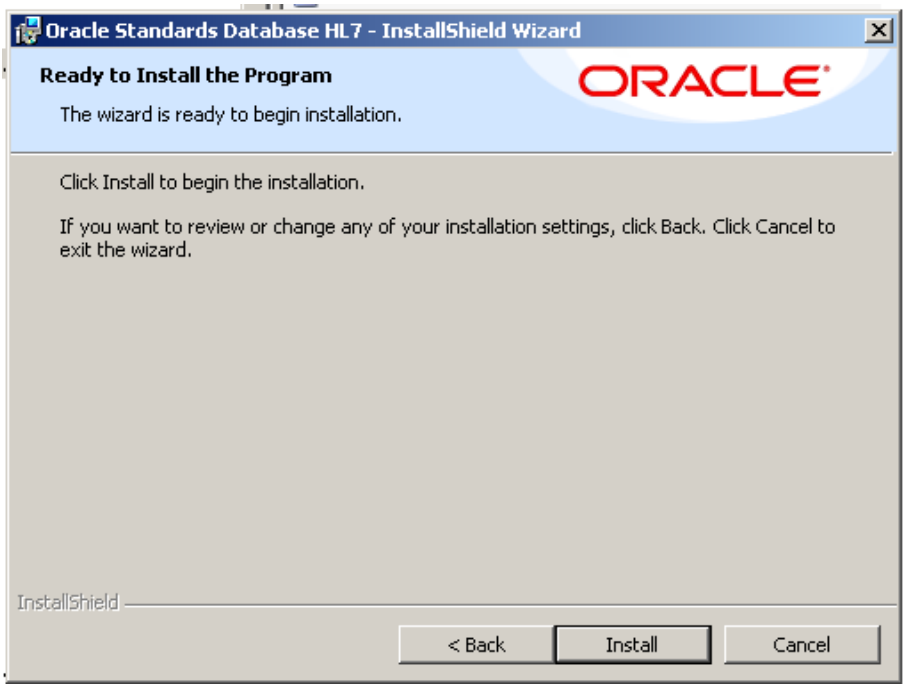
A series of Standards configuration wizards will appear for specific standards. In general, the wizard dialogues will ask for confirmation that local installation is to be performed, location of the destination folder and whether a complete or custom installation is to be performed.

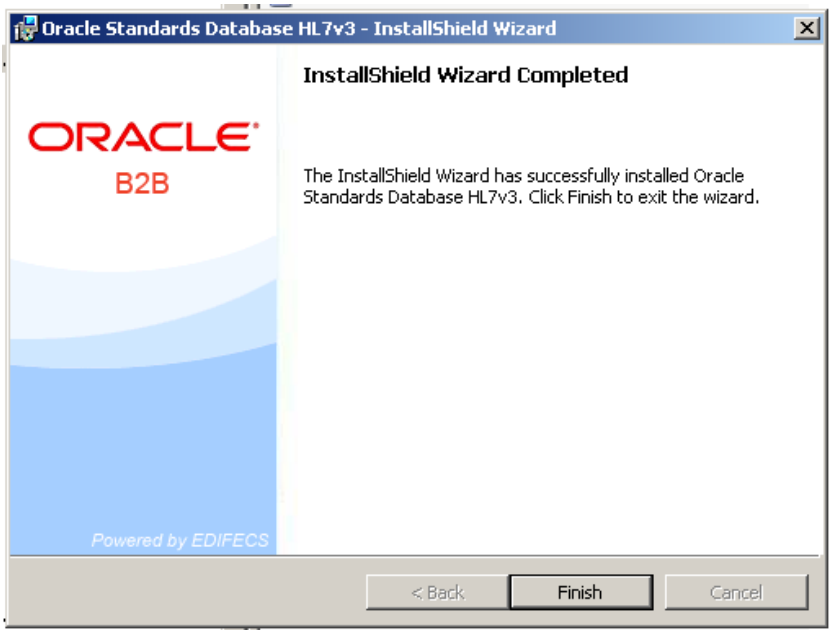
A set of dialogue windows for HL7 is shown below.


Oracle Standards Database HL7 - InstallShield Wizard
ORACLE
B2B
Welcome to the InstallShield Wizard for Oracle Standards Database HL7
The InstallShield(R) Wizard will install Oracle Standards Database HL7 on your computer. To continue, click Next.
Please, select installation type:
Local only installation
Network enabled installation
WARNING: This program is protected by copyright law and international treaties.
Powered by EDIFECS
< Back
Next >
Cancel

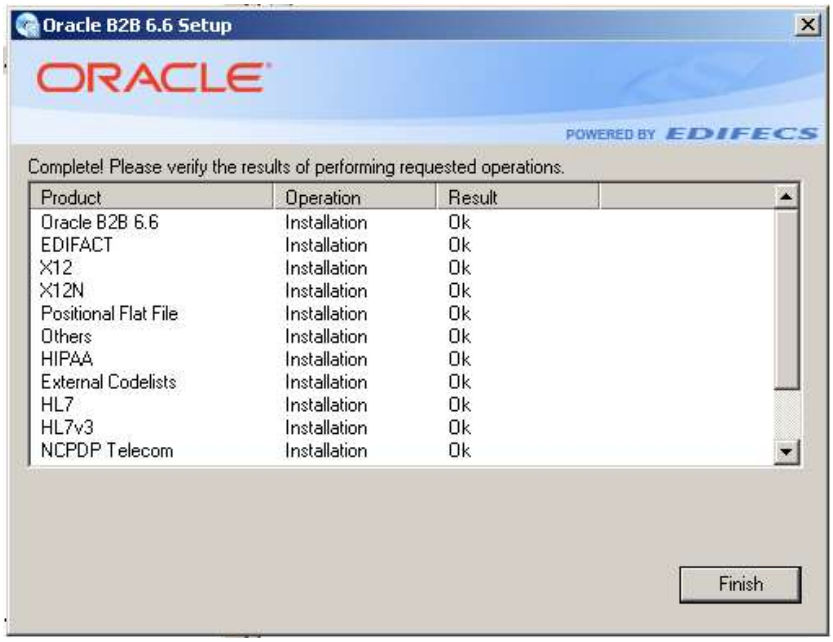

Oracle Standards Database HL7 - InstallShield Wizard
Destination Folder
ORACLE
Click Next to install to this folder, or click Change to install to a different folder.
Install Oracle Standards Database HL7 to:
C:\Oracle\Oracle_B2B_Common_Files\STANDARDS
Change...
InstallShield
< Back
Next >
Cancel


Oracle Standards Database HL7 - InstallShield Wizard
Oracle Standards Database HL7 Setup Type
Choose the setup type that best suits your needs.
ORACLE
Please select a setup type.
Complete
All program features (including HL7) will be installed.
Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.
InstallShield
< Back
Next >
Cancel

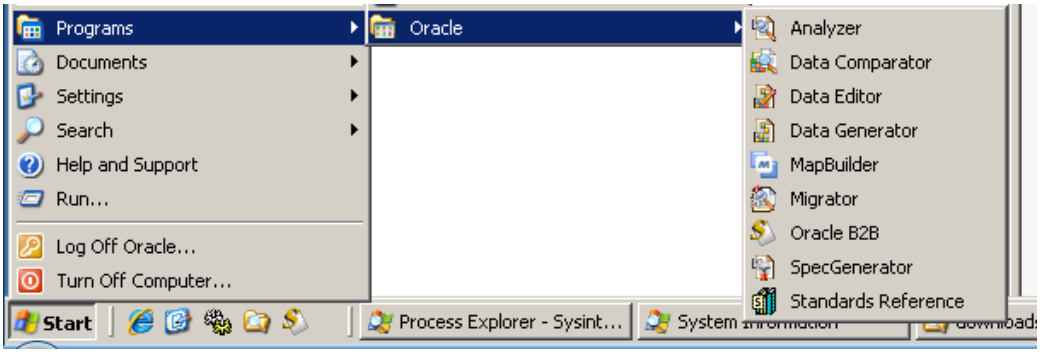

Oracle Standards Database HL7 - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
ORACLE
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel



Once all wizards are done a completion dialogue windows will appear. Click Finish.



Oracle B2B Document Editor-related shortcuts will appear under the Oracle item in the Start menu → Programs option.

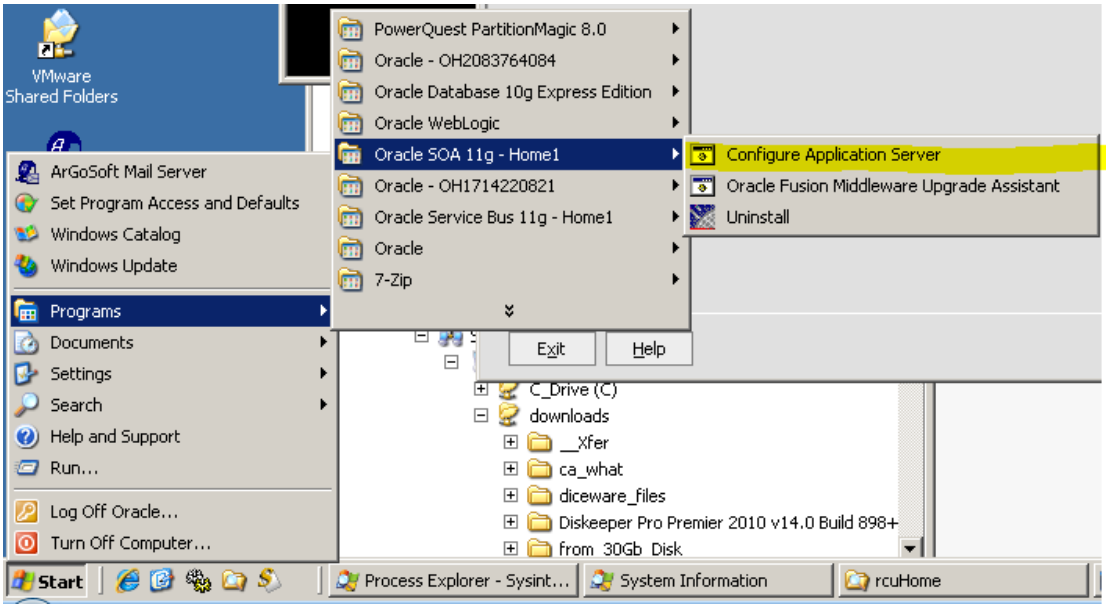


Configure WebLogic Domain

With all software installed now is the time to configure the runtime environment.

Normally the infrastructure consists of an admin server and one or more managed servers. The SOA and the BAM typically have a separate managed server each. This requires the physical host to have a fair amount of memory, more then Windows XP supports. Since this article discusses an environment built for development and exploration using a single machine with limited resources, we will configure all components to use that same, single WebLogic server. While this will increase the time the server takes to start, it will minimize the amount memory needed to run all that needs to be run.

Start the WebLogic Configuration Wizard, Start menu → Programs → Oracle SOA 11g – Home 1 → Configure Application Server Wizard.

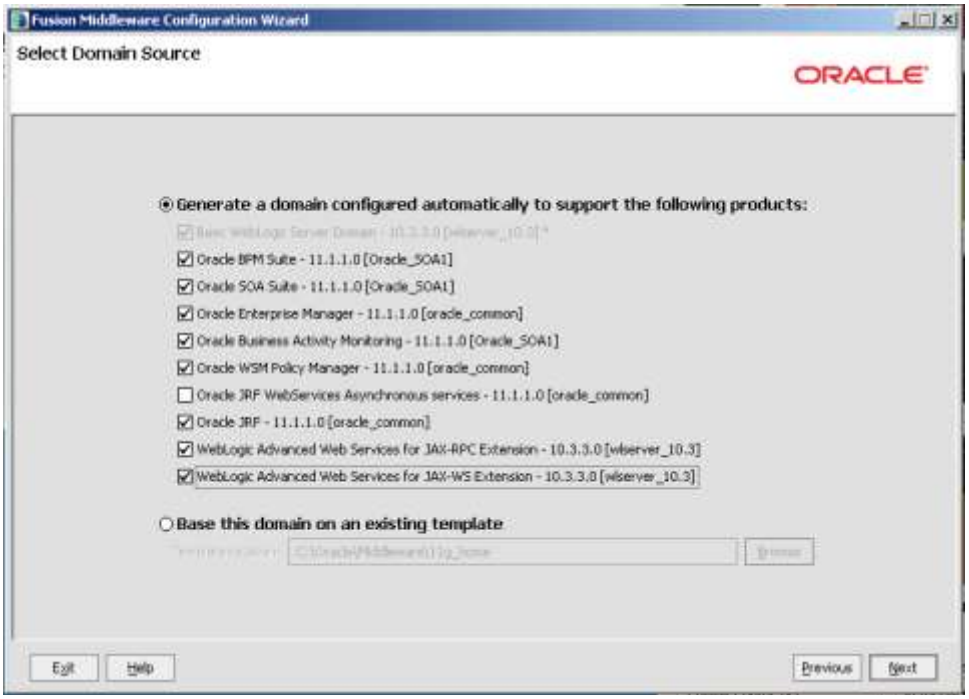


Accept the default "Create a new WebLogic Domain" and click Next.

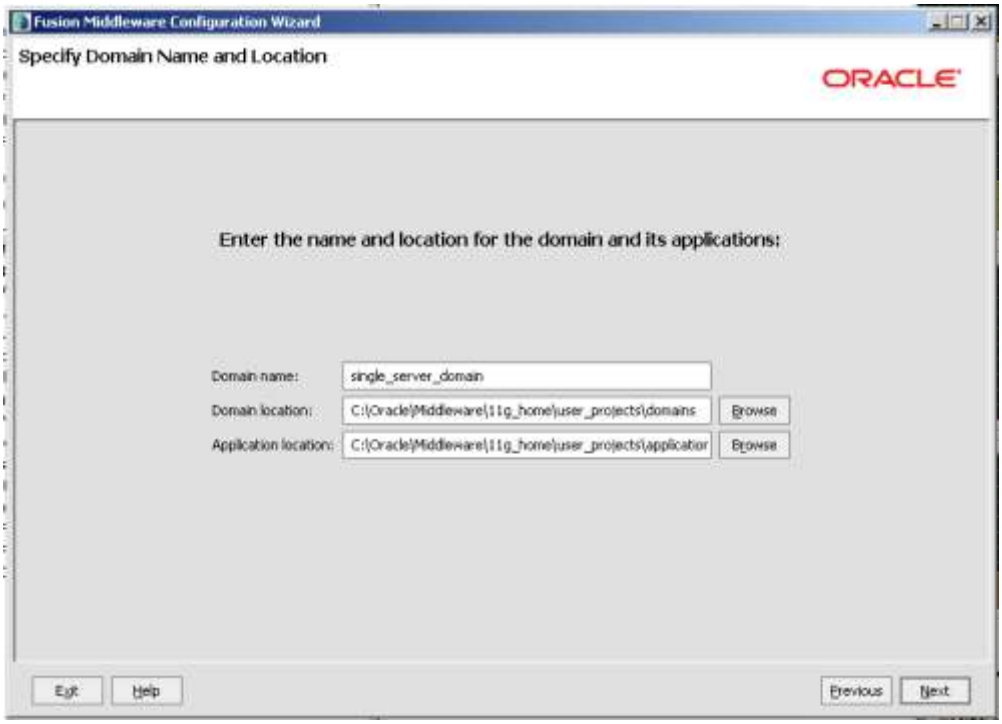
Check, in the specified order:

1. Oracle WSM Policy Manager
2. Oracle Business Activity Monitoring
3. Oracle Enterprise Manager
4. Oracle SOA Suite
5. Oracle BPM Suite
6. WebLogic Advanced Web Services for JAX-RPC Extension
7. WebLogic Advanced Web Services for JAX-WS Extension

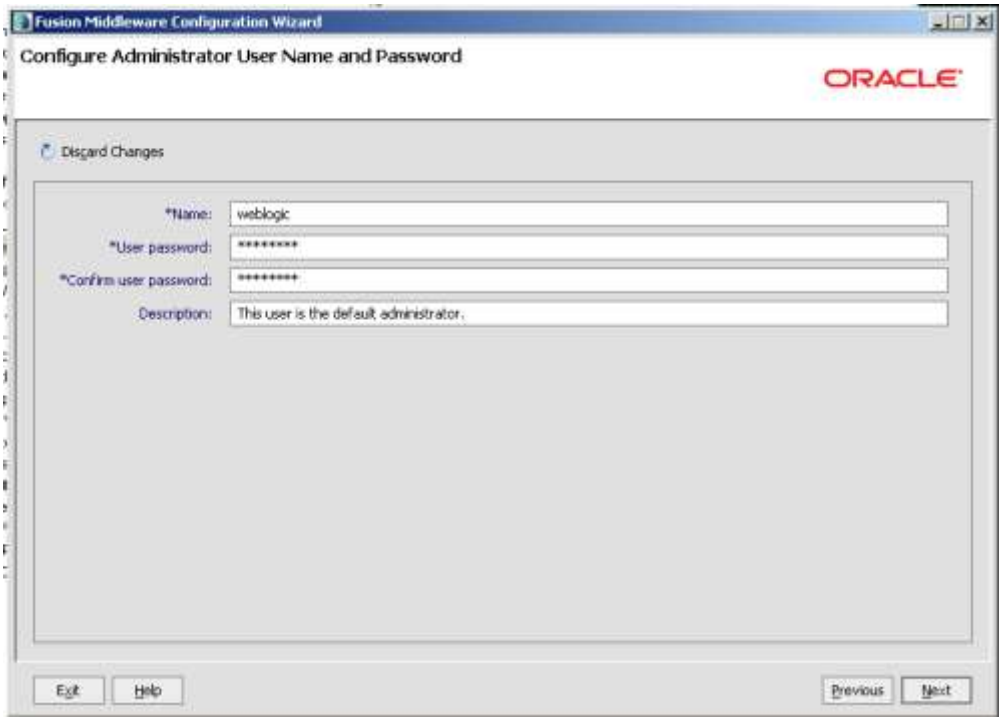
Click Next when done.



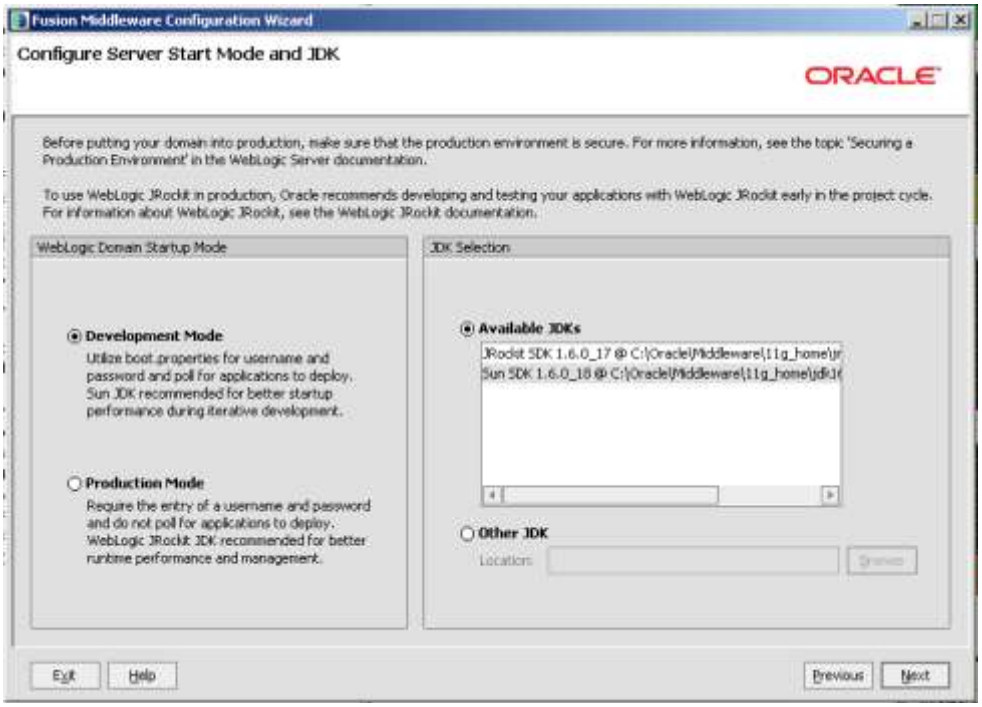
Change the name of the new domain to single_server_domain, accept defaults for domain and application locations and click Next.



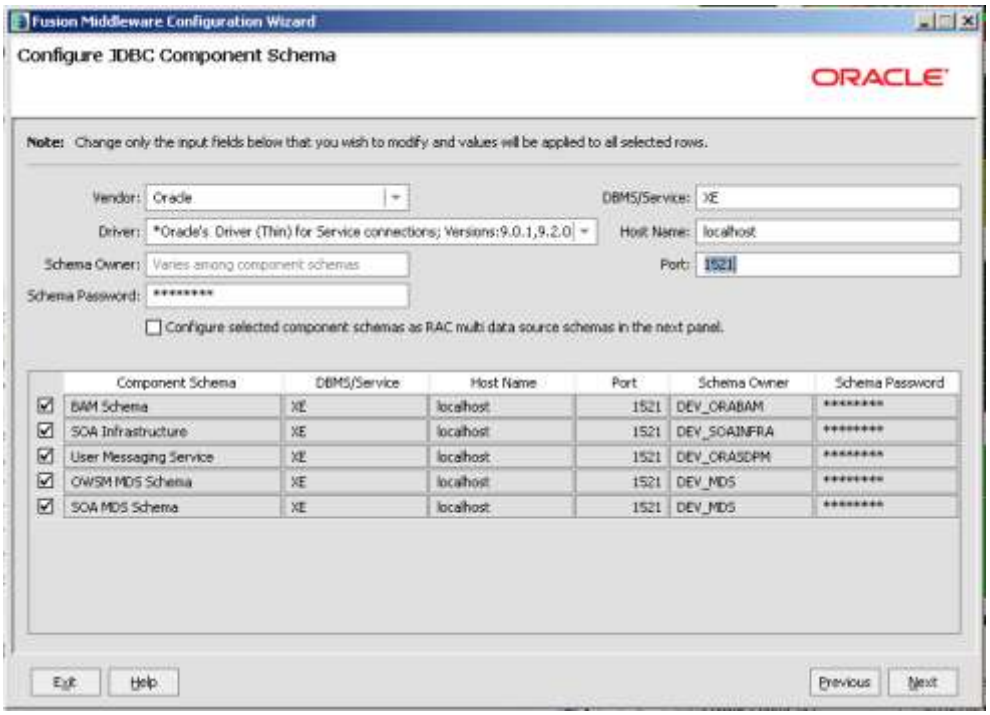
Accept the default Name of weblogic. Set the two passwords to the conventional password of welcome1 or a password of your own choosing then click Next.



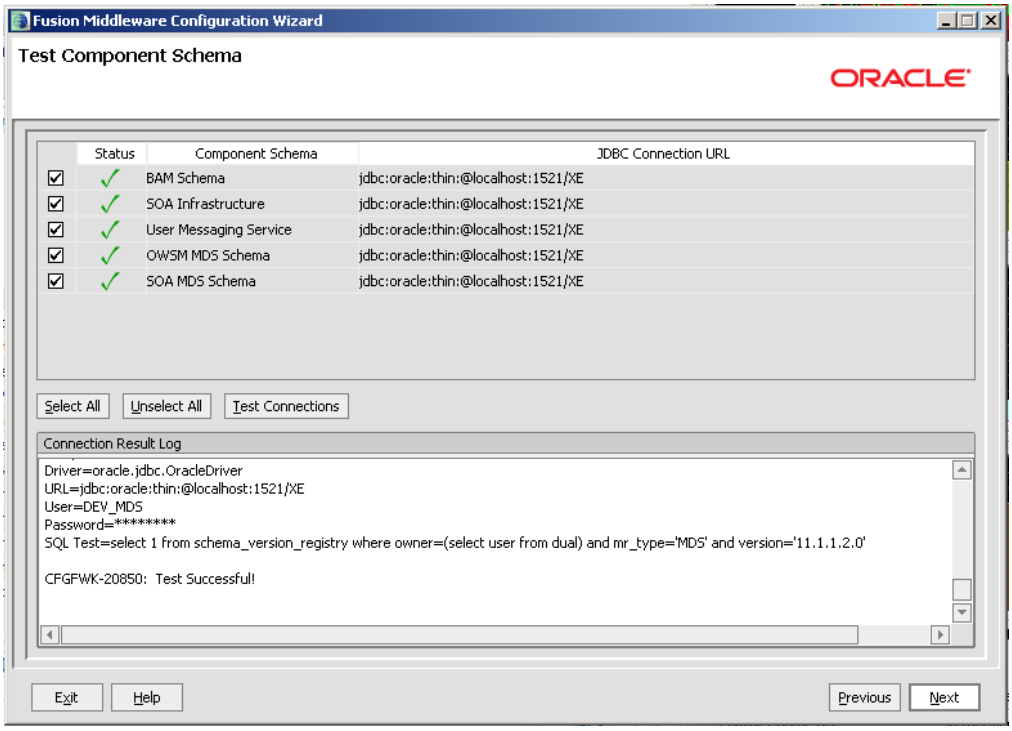
Accept default Development Mode and Sun JDK and click Next.



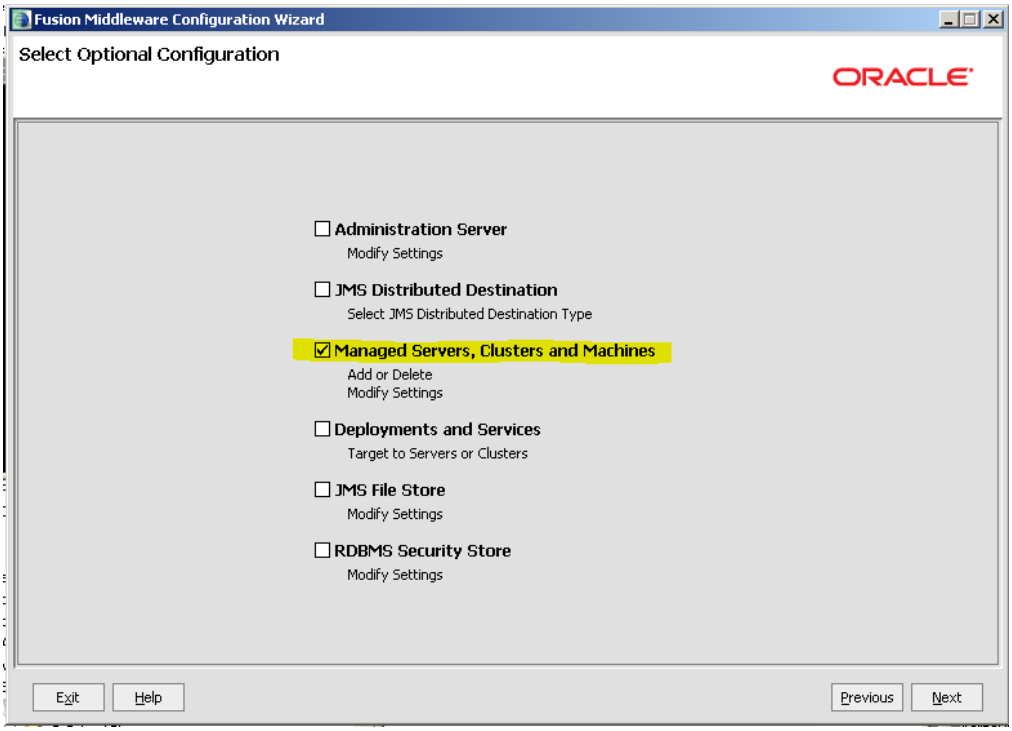
Check the checkboxes next to all Component Schemas. Choose Oracle as Vendor. Choose "*Oracle Driver (Thin) for Instance connections" for Driver. Enter welcome1 (or the password specified for the repository creation utility earlier on) for Schema Password. Set DBMS/Service to XE. Set Host Name to localhost. Set Port to 1521. Click Next.



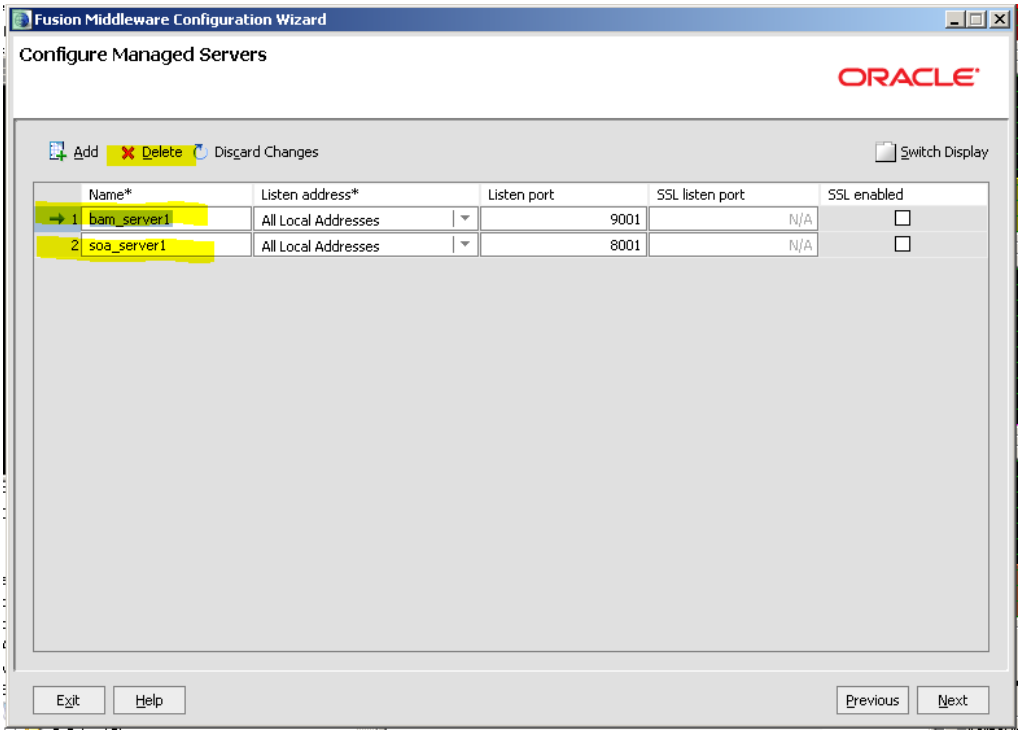
Test Connections. Click Next.



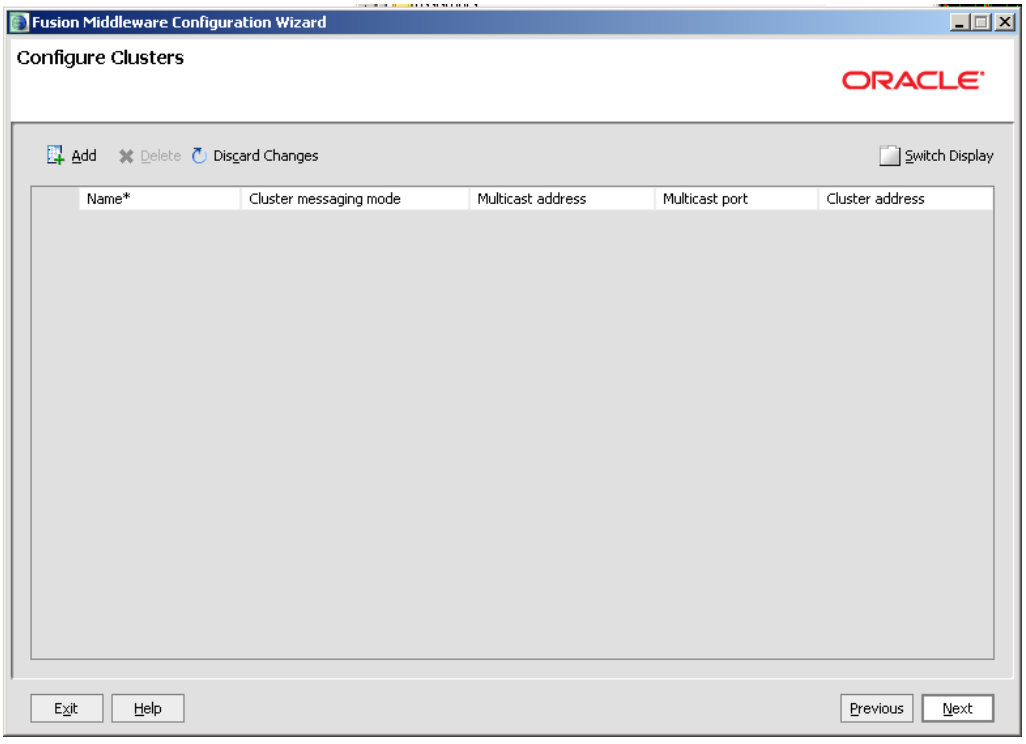
Check the "Managed Servers. Clusters and Machines" checkbox and click Next.



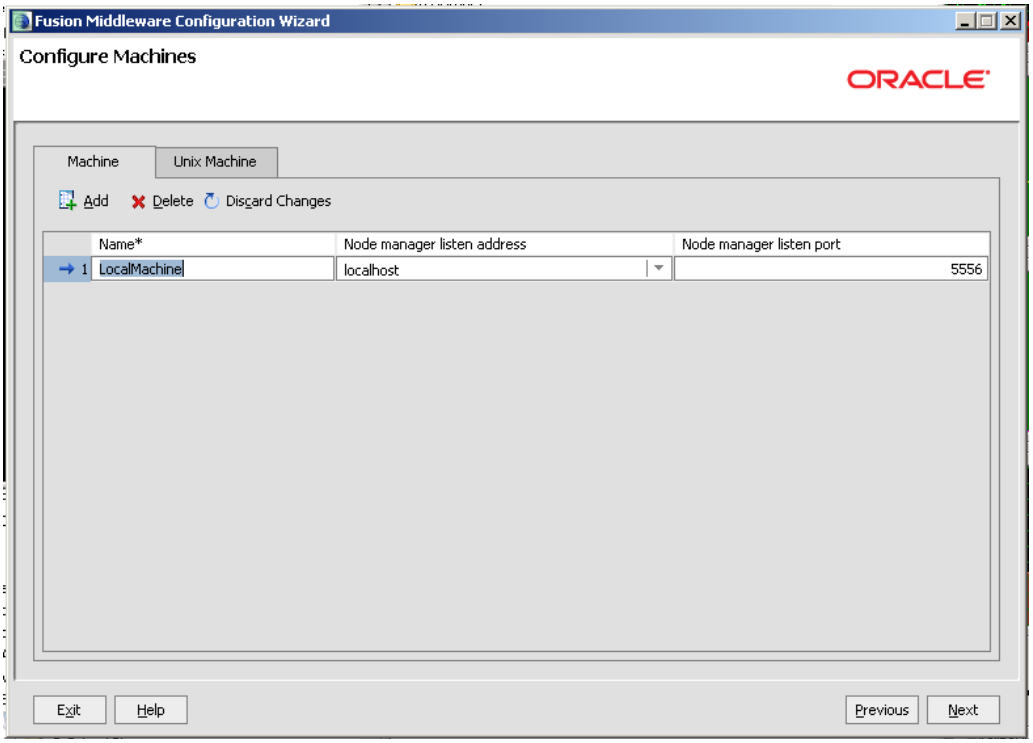
Select, one at a time, and delete the bam_server1 and soa_server1 managed server entries. We are configuring a single server domain to conserve machine memory resources.



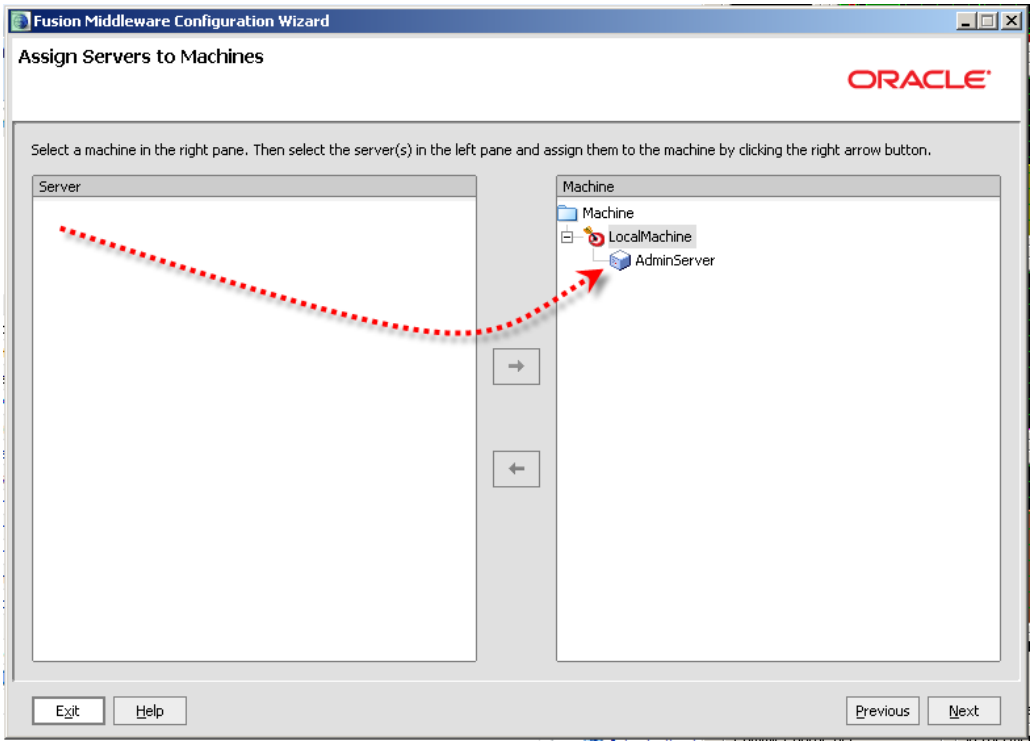
Accept default for configure clusters (none) and click Next.



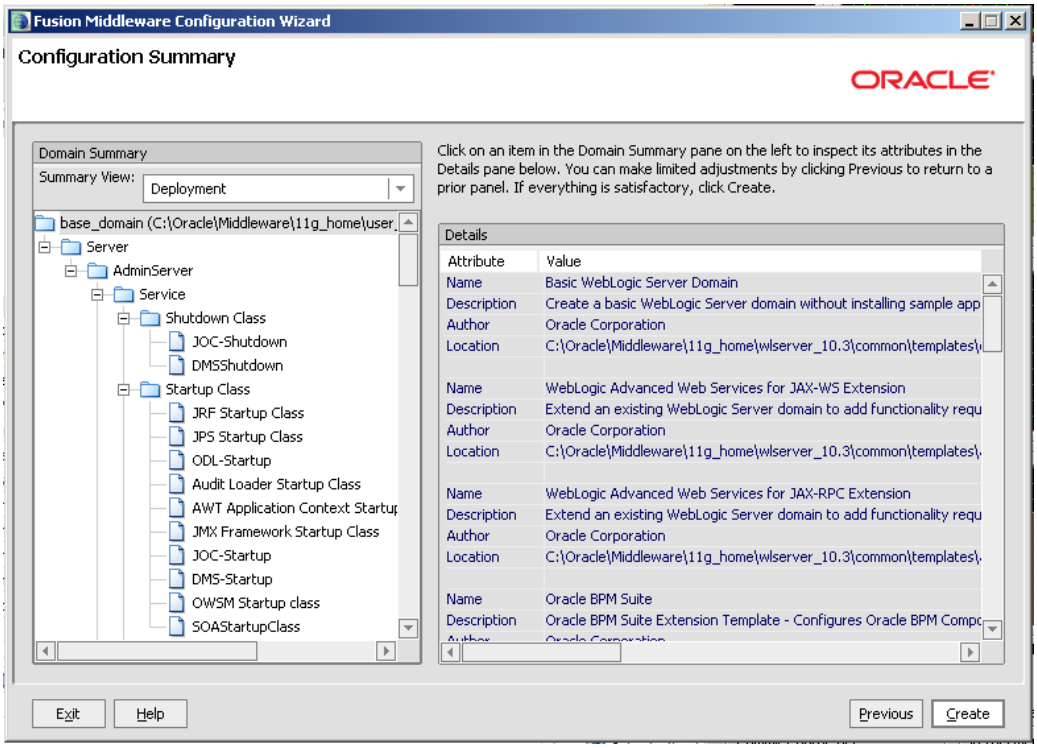
Accept default for configure machines and click next.



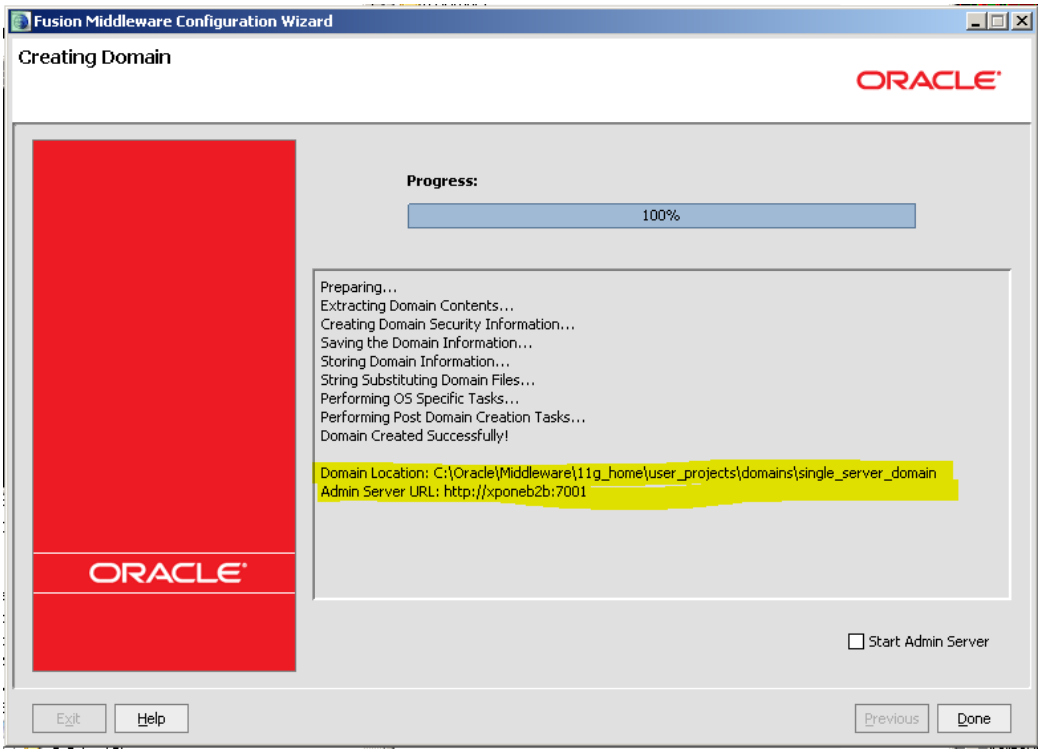
Assign AdminServer to LocalMachine and click Next.



Review Configuration Summary and click Create.



Once condifguration is finished click Done.



Shortcuts to start and stop the server, and to connect to start the web-based console are created in the Start menu → Programs → Oracle WebLogic → User Projects → single_server_domain folder.

Start the WebLogic Server, watching the console output until strings
"`<Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING>`"
and
"`<Notice> <WebLogicServer> <BEA-000360> <Server started in RUNNING mode>`"
are seen.

Verify that you can start various consoles and tools and log in to get at the relevant functionality. Use the following URLs:

http://localhost:7001/console - WebLogic Applicaion Server Console
http://localhost:7001/b2b - Oracle B2B Trading Partner Manager Console
http://localhost:7001/em - Oracle Enterprise Manager Console
http://localhost:7001/OracleBAM - Oracle BAM Console
http://localhost:7001/integration/worklistapp - Worklist Manager Application

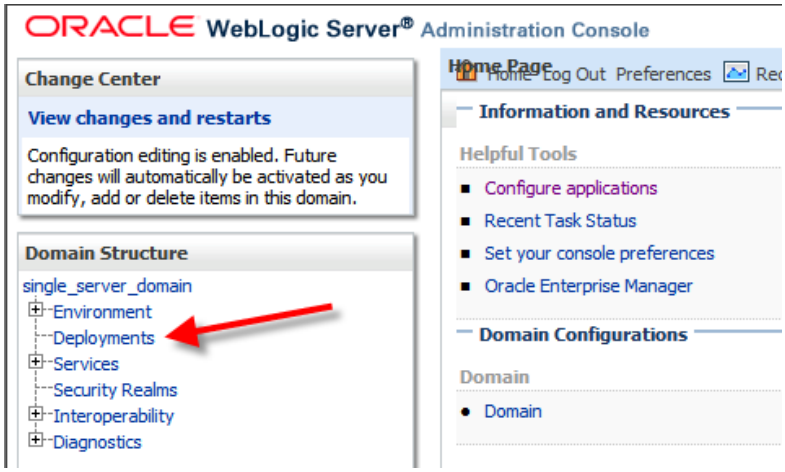
The B2B Document Editor can be accessed through the Start menu --> Programs → Oracle → B2B.

Shut down the WebLogic Server. Back up the system. Defragment the disks onto which you installed the infrastructure components.

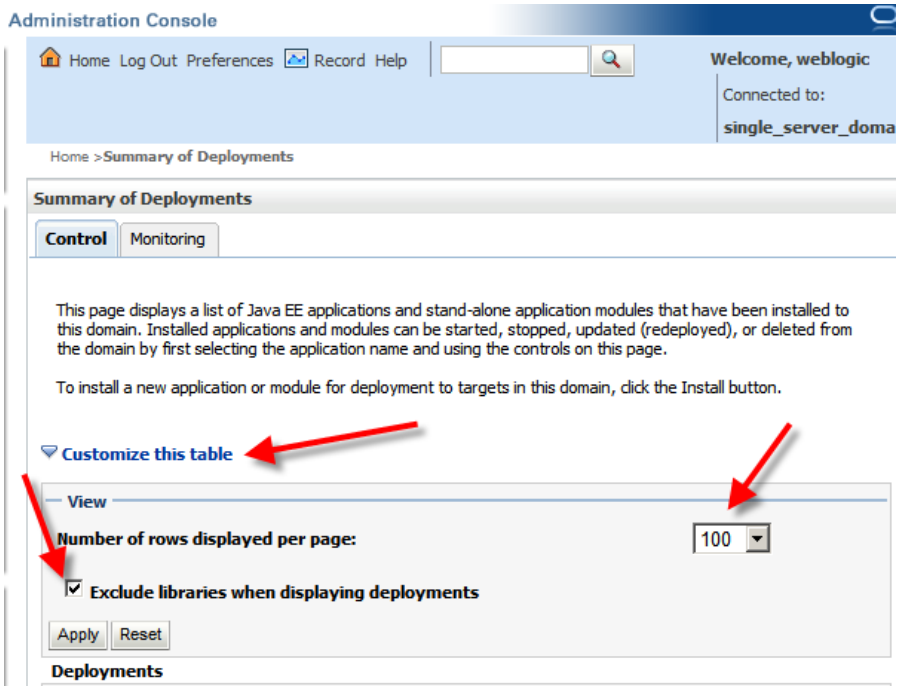
Change Runtime Properties for Development

Change WebLogic Server Console Settings

1. Start the WebLogic Admin Server (WLS) if it is not already running
2. Log in to the WLS console http://localhost:7001/console
3. Click on **Deployments** in the left navigation bar



4. Click on **Customize this table** at the top of the **Deployments** table.
5. Change the number of rows per page to **100** (there are only about 30), select the checkbox to exclude libraries and click on **Apply**

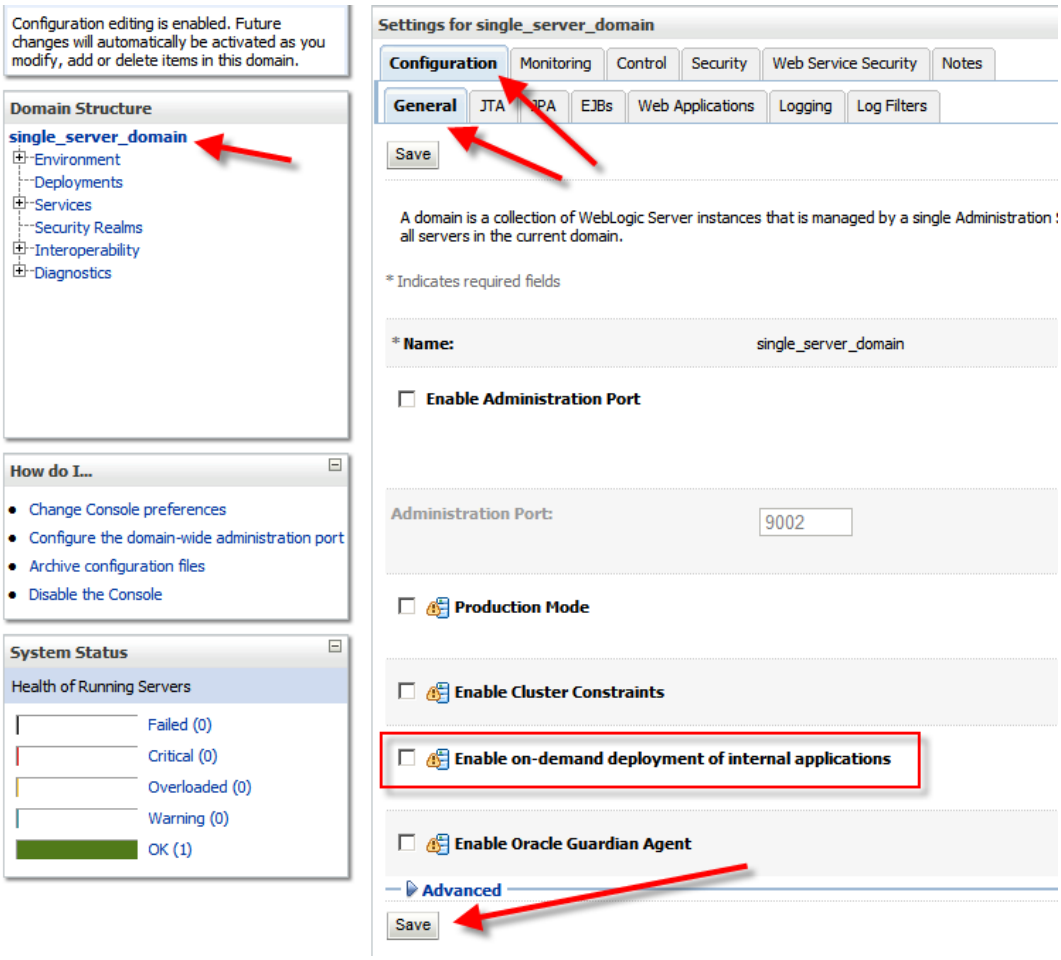


When the server is started, internal applications like the WLS console are not deployed completely and a delay is experienced when the console application is first accessed after server startup.

Let's change this behaviour to deploy internal applications at startup to eliminate the delay.

1. Click on **single_server_domain** in the left navigation bar in the WLS console.
2. Click on **Configuration | General** tab
3. Deselect **Enable on-demand deployment of internal applications** checkbox

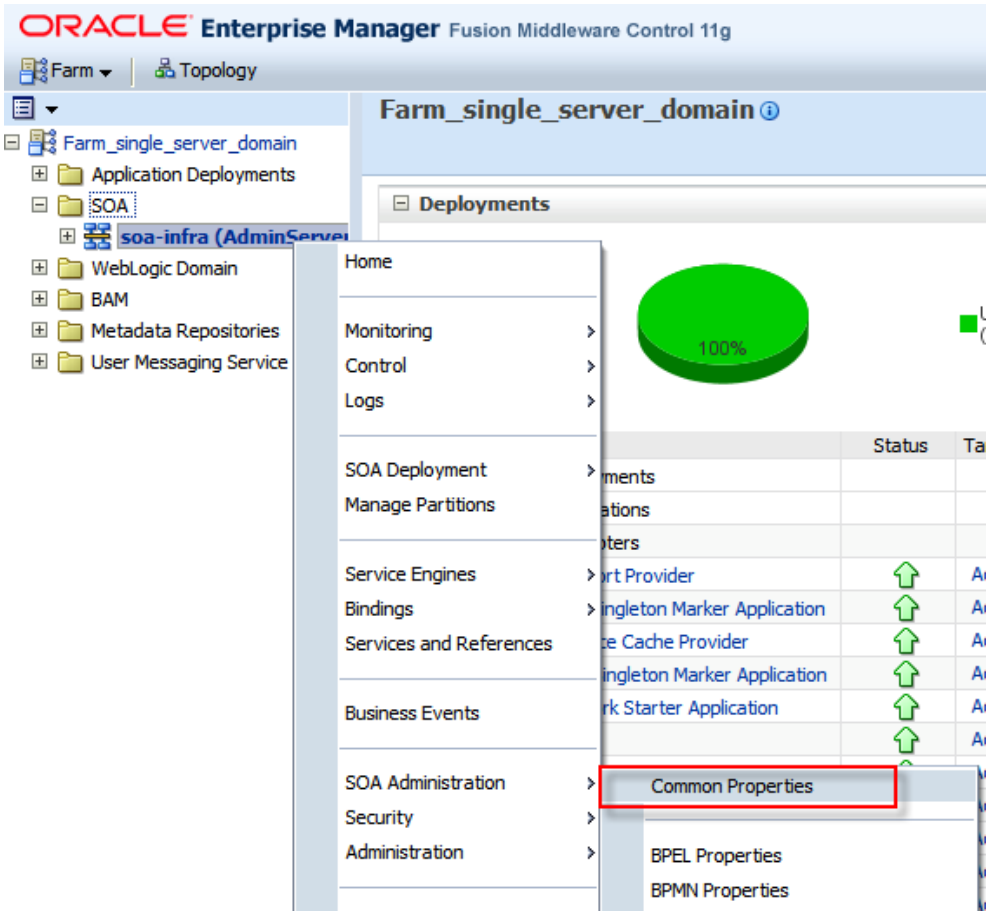
4. Click on the **Save** button



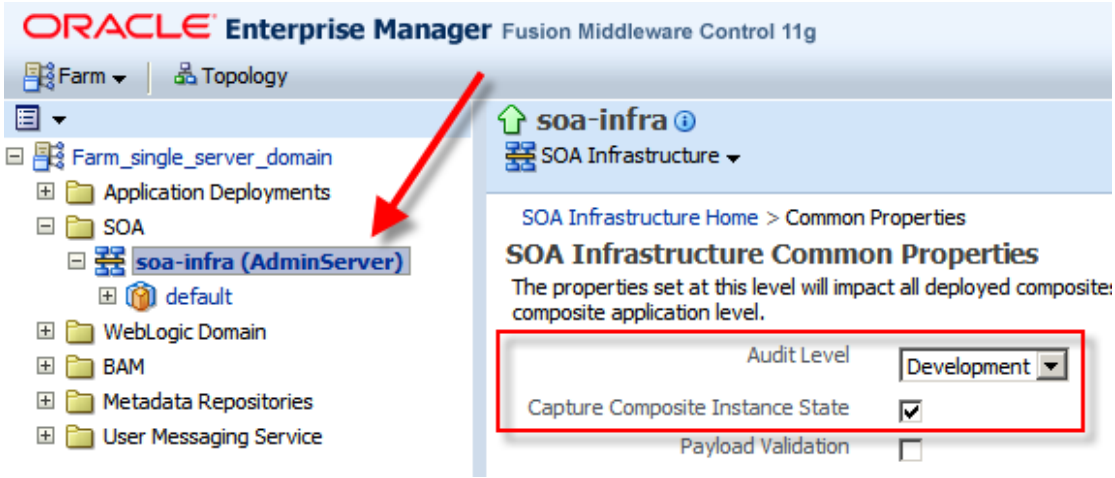
Increase diagnostics through Enterprise Manager

The Enterprise Manager can provide different levels of information about composite runtime instances.

1. Start the WebLogic server if it is not not already running
2. Log in to the EM console at http://localhost:7001/em
3. Right-click on the **soa-infra (AdminServer)** in the left navigation bar to open the SOA menu and select SOA Administration → Common Properties

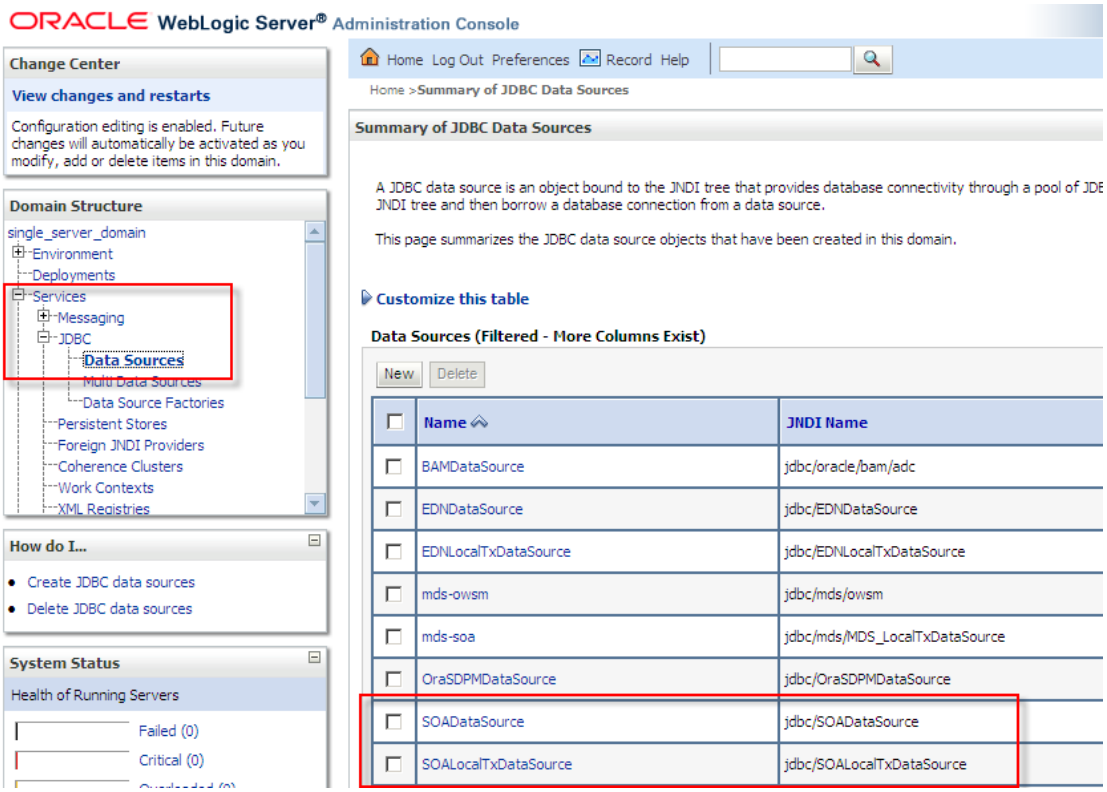


4. Select Audit Level : Development and check the "Capture Composite Instance State" checkbox, the click Apply.

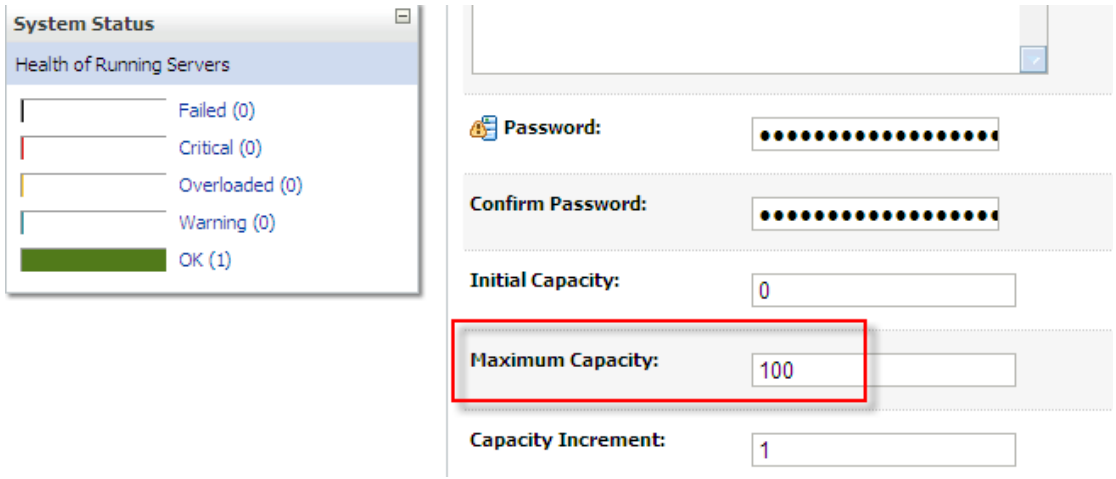


Expand DB Pools

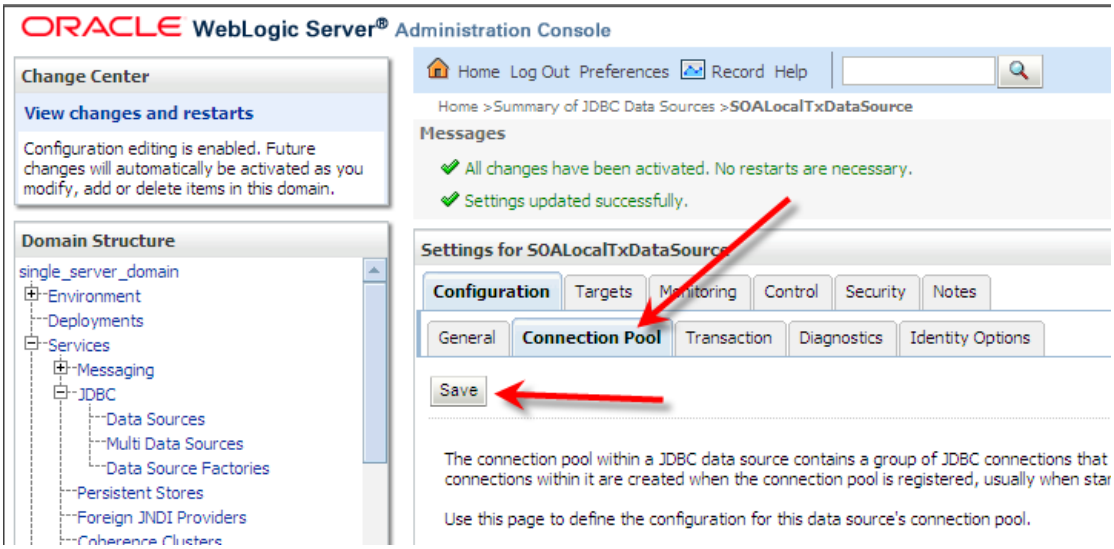
Log into the WebLogic Application Server Console, http://localhost:7001/console. Navigate through Services --> JDBC --> DataSources.



Click on the SOALocalTxDataSource, Connection Pool Tab. Change Maximum Capacity property from the default 50 to 100.



Click Save.



Repeat the process for the SOADataSource connection pool.

The environment is ready for project work.

References

[1] Oracle B2B Site, Available: http://www.oracle.com/technology/products/integration/b2b/index.html, Accessed: 4 June 2010

[2] Oracle B2B 11g Site, Available: http://www.oracle.com/technology/products/soa/b2b/index.html, Accessed: 4 June 2010

[3] Release Downloads for oracle SOA Suite, SOA Suite 11g, Available: http://www.oracle.com/technology/products/soa/soasuite/collateral/downloads.html#11g, Accessed: 4 June 2010

[4] Oracle Database 10g Express Edition, Available: http://www.oracle.com/technology/products/database/xe/index.html, Accessed: 4 June 2010

[5] Oracle Fusion Middleware 11gR1 Software Downloads, Available: http://www.oracle.com/technology/software/products/middleware/htdocs/fmw_11_download.html, Accessed: 4 June 2010

[6] Oracle Database Express Edition, Getting Started Guide, 10g Release 2 (10.2), Available: http://download.oracle.com/docs/cd/B25329_01/doc/admin.102/b25610/toc.htm, Accessed: 4 June 2010.

[7] Oracle Database Documentation Library, Oracle Database Express Edition 10g Release 2 (10.2), Avaialble: http://www.oracle.com/pls/xe102/homepage, Accessed: 4 June 2010

[8] Oracle Database Express Edition 10g Release 2 Installation Guide for Microsoft Windows, Available: http://download.oracle.com/docs/cd/B25329_01/doc/install.102/b25143/toc.htm, Accessed: 4 June 2010

[9] Nitesh Jain, Oracle Fusion Middleware – B2B Team Blog, Oracle B2B Starter Kit, Available: http://blogs.oracle.com/oracleb2bgurus/2010/04/oracle_b2b_started_kit.html, Accessed: 4 June 2010

[10] Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite 11g Release 1 (11.1.1), Available: http://download.oracle.com/docs/cd/E14571_01/doc.1111/e13925/toc.htm, Accessed: 4 June 2010

[11] Oracle Fusion Middleware, System Requirements and Specifications, Available: http://www.oracle.com/technology/software/products/ias/files/fusion_requirements.htm, Accessed: 4 June 2010

[12] Oracle® Fusion Middleware Repository Creation Utility User's Guide 11g Release 1 (11.1.1), 2 Running Repository Creation Utility (RCU), Available: http://download.oracle.com/docs/cd/E14571_01/doc.1111/e14259/rcu.htm, Accessed: 4 June 2010

[13] Oracle® Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite 11g Release 1 (11.1.1), Installing Oracle SOA Suite and Oracle Business Process Management Suite, Available: http://download.oracle.com/docs/cd/E14571_01/doc.1111/e13925/install.htm#CHDHCJEC, Accessed: 5 July 2010

[14] Oracle® Fusion Middleware Patching Guide 11g Release 1 (11.1.1), Applying the Latest Oracle Fusion Middleware Patch Set with the Patch Set Installers, Available: http://download.oracle.com/docs/cd/E14571_01/doc.1111/e16793/patch_set_installer.htm#PATCH20, Accessed: 5 July 2010

[15] Oracle® Fusion Middleware User's Guide for Oracle B2B 11g Release 1 (11.1.1), Installing Oracle B2B Document Editor, Available: http://download.oracle.com/docs/cd/E12839_01/integration.1111/e10229/bb_doc_ed.htm#BEIGGJBC, Accessed: 9 June 2010