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DATABASE APPLIANCE

Delivering JD Edwards EnterpriseOne High Performance and Efficiency

Using Oracle Database Appliance X6-2S / X6-2M / X6-2L

ORACLE WHITE PAPER | JANUARY 2017

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Contents

Introduction

The purpose of this white paper is to illustrate deployment of Oracle JD Edwards EnterpriseOne applications database on Oracle Database Appliance X6-2S / X6-2M / X6-2L

The Oracle Database Appliance, introduced in 2011, is an Oracle Engineered System that is simple, optimized, and affordable. Through four generations of the Oracle Database Appliance, it has been enormously popular for customers deploying Oracle Database Enterprise Edition in a variety of production scenarios, especially where high availability using Oracle Real Application Clusters was required. In June of 2016, Oracle announced an expansion of the Oracle Database Appliance family to include several new models, the **Oracle Database Appliance X6-2S** the *Oracle Database Appliance X6-2M* and *X6-2L*. With an entry list price starting at a fourth of the cost of the prior generation Oracle Database Appliance hardware and flexible Oracle Database software licensing, these new models bring **Oracle Engineered Systems to within reach of every organization**.

The Oracle Database Appliance X6-2S the Oracle Database Appliance X6-2M and X6-2L expand the reach of the database appliance family to support various workloads, deployment scenarios, and database editions. They are especially designed for customers requiring only single instance databases, but who desire the implicitly, optimization, and affordability of the Oracle Database Appliance. These new models are ideal for customers who seek to avoid the complexity, tuning requirements, and higher costs of “build-your-own” database solutions. Customers can now take advantage of Oracle Engineered Systems that meet their budget and deployment requirements while realizing the benefits of an optimized database solution with built-in Oracle best practices and single vendor support.

Introducing Oracle Database Appliance X6-2S, X6-2M and X6-2L

The Oracle Database Appliance X6-2S, X6-2M X62-L are fifth generation Oracle Database Appliance systems consisting of hardware and software that save customers time and money by simplifying deployment, maintenance, and support. Now, the Oracle Database Appliance is also optimized for single instance Oracle Database deployments. Built using the world’s most popular database, Oracle Database, it offers customers a fully integrated system of software, servers, storage and networking that delivers optimized database services for a wide range of custom and packaged OLTP, small Data Warehousing, and In-Memory Database workloads. To further reduce the entry price of engineered

systems, these new appliances also **support Oracle Database Standard Edition 2**. With the introduction of multiple models and support for Oracle Database Standard Edition 2, **engineered systems are now in reach for every organization**.

Simple to Implement

The hallmarks of the Oracle Database Appliances X6-2S, X6-2M and X6-2L are their simplicity. Each is a complete system consisting of compute, storage, networking, and software — all engineered to work together. To deploy and use the Oracle Database Appliance X6-2S, X6-2M or X62-L, simply unpack it, plug in the power cords, plug in the network cables, and run the Oracle Appliance Manager installation to provision a highly optimized database system. The Oracle Database Appliance accelerates time-to-value - a single database administrator (DBA) can deploy a highly-optimized Oracle database with the Oracle Database Appliance X6-2S, X6-2M or X62-L in about an hour.

Simple to Manage and Support

Maintaining systems and keeping all the associated software elements current with the latest patches is often one of the most time consuming and error-prone tasks confronting administrators. The Oracle Database Appliance X6-2S, X6-2M and X6-2L and their specially engineered software streamlines patching for all the elements of the software stack - firmware, operating system, storage management, and database software through appliance patch bundles, a unique feature of the Oracle Database Appliance. It also eliminates the guesswork of mixing and matching patches for various elements of the stack. This reduces human error and ultimately results in less planned downtime and higher system reliability due to the fully tested patch bundles that can be quickly and safely applied.

The appliance simplifies storage management by automatically detecting performance and availability issues and performing corrective actions. In addition, the Auto Service Request (phone home) feature will generate support requests for replacement hardware components such as power supplies, fans, etc. if they fail. When a problem occurs with a “build-your-own” system, DBAs spend a lot of time initially trying to discern the source of the problem to determine which vendor to call first. With the Oracle Database Appliance X6-2S, X6-2M and X6-2L, troubleshooting is much faster and simpler because all the elements, software and hardware, are supported by Oracle. Rather than requiring a DBA or System Administrator to manually search for and compile all the logs and system history when issuing a support request, the Appliance Manager automatically collects and compiles the relevant logs and history, allowing issues to be processed, analyzed, and fixed much more quickly.

Flexible Oracle Database Software Licensing

The Oracle Database Appliance X6-2S, X6-2M and X6-2L support both Oracle Database Enterprise Edition and Standard Edition 2. Enterprise deployments that require the enhanced feature set of Oracle Database Enterprise Edition can take advantage of a unique capacity-on-demand database software licensing model to quickly scale utilized processor cores without any hardware upgrades. Customers can deploy the system and license as few as 2 processor cores in the appliance, and incrementally scale up to the maximum physical processor cores in each system. This enables customers to deliver the performance and reliability that enterprise business users demand, and align software spending with business growth.

Small enterprises, line-of-business departments, and branch office deployments that don't require enterprise class features can license Oracle Database Standard Edition 2, allowing them to realize the benefits of the Oracle Database Appliance to reduce costs and improve productivity.

Oracle Database Software Licensing		
Enterprise Edition Licensing	• Processor Core Base • Named User Plus Based • 25 minimum NUP per core	Capacity on demand

Standard Edition 2 Licensing	• CPU Socket Based
	  – ODA X6-2S : 1-socket
	  – ODA X6-2M : 2-socket
	• Named User Plus Based
	  – 10 minimum NUP per server	

Oracle JD Edwards Licensing Metric		
JD Edwards Enterprise One Licensing	• Application User • Connected Device	

An Optimized, Engineered Database Solution

The Oracle Database Appliance is engineered together at both the hardware and software levels to work in a holistic fashion as a platform optimized to run the Oracle Database. The Oracle Database Appliance X6-2S, X6-2M and X6-2L incorporate NVM Express (NVMe) flash storage to increase database performance and system reliability. The number of processor cores, amount of main memory, and NVM Express (NVMe) storage capacity in each fully integrated system is balanced to provide optimal database performance for a wide range of enterprise application workloads. The Oracle Database is also configured according to Oracle best practices and database-sizing templates ensure that the system resources are optimized for the database.

TABLE 1. ORACLE DATABASE APPLIANCE X6-2S AND X6-2M HARDWARE SUMMARY

	Oracle Database Appliance X6-2S	Oracle Database Appliance X6-2M	Oracle Database Appliance X6-2L
Size	One rack unit server	One rack unit server	One rack unit server
Processor	One 10-core Intel Xeon E5-2630 v4	Two 10-core Intel Xeon E5-2630 v4	Two 10-core Intel Xeon E5-2630 v4
Memory	128 GB expandable to 384 GB	256 GB expandable up to 768 GB	256 GB expandable up to 768 GB
Networking	2x 10GbE SFP+ (fiber) and 2x 10GBase-T (copper) ports	2x 10GbE SFP+ (fiber) and 4x 10GBase-T (copper) ports	2x 10GbE SFP+ (fiber) and 4x 10GBase-T (copper) ports
Storage	6.4 TB high performance NVMe flash storage (up to 2.8 TB usable – double mirrored)	6.4 TB high performance NVMe flash storage (up to 2.8 TB usable – double mirrored)	19.2 TB high performance NVMe flash storage (up to 9.6 TB usable – double mirrored)
Storage Management	Oracle Auto Storage Management (ASM)	Oracle Auto Storage Management (ASM)	Oracle Auto Storage Management (ASM)
Database	SE2 or EE	SE2 or EE	SE2 or EE

Server

As shown in Table 1- Oracle Database Appliance X6-2S, X6-2M and X6-2L Hardware Summary, the Oracle Database Appliance X6-2S is a one rack unit (RU) server that contains one 10-core Intel Xeon E5-2630 v4 processor, providing up to 10 enabled-on-demand processor cores and 128 GB of memory (expandable to 384 GB) per appliance. The Oracle Database Appliance X6-2M and X6-2L are also a one rack unit (RU) server that contains two 10-core Intel Xeon E5-2630 v4 processors, providing up to 20 enabled-on-demand processor cores and 256 GB of memory (expandable up to 768 GB) per appliance.

Networking

The Oracle Database Appliance X6-2S, X6-2M and X6-2L provide both 10GbE SFP+ (fiber) or 10GBase-T (copper) external networking connectivity, ensuring the appliance will be compatible with any data center.

Storage

The Oracle Database Appliance X6-2S and X6-2M base configuration includes 6.4 TB (19.2TB on X6-2L) of high performance NVMe flash storage that is double-mirrored offering 2.8 TB (9.6TB on X6-2L) of resilient, usable database storage. Each appliance also supports optional storage expansion that doubles the storage capacity of the system. With the additional storage, the appliance contains 12.8 TB (28.8Tb on X6-2L) of raw storage, or 4.8 TB (28.8Tb on X6-2L) of resilient, mirrored, usable database storage. To expand storage outside of the appliance, external NFS storage is supported for online backups, data staging, or extra database files. The Appliance Manager in conjunction with Oracle Auto Storage Management (ASM) automatically configures, manages, and monitors storage performance and availability.

Software

As shown in Table 2, the Oracle Database Appliance X6-2S and X6-2M support the following database and operating system software:

TABLE 2. DATABASE AND OS SOFTWARE FOR ORACLE DATABASE APPLIANCE X6-2S, X6-2M AND X6-2L

Oracle Operating System and Appliance Manager Software
• Oracle Linux – Pre-installed • Oracle Appliance Manager – Pre-installed • Oracle Auto Service Request (ASR)
Database Software (installed using the Appliance Manager)

• Choice of Oracle Database Software (single instance only):
  ○ Oracle Database 12c Standard Edition 2
  ○ Oracle Database 12c Enterprise Edition
  ○ Oracle Database 11g Enterprise Edition Release 2
• Oracle Auto Storage Management (ASM)
• Oracle ASM Cluster File System (ACFS)

The Oracle Appliance Manager User Interface

One of the big changes occurring with the Oracle Database Appliance X6-2S, X6-2M and X6-2L models is the introduction of a new user interface for the Appliance Manager software. This tool now offers both a command line interface and a graphical user interface for managing the Oracle Database

Appliance. The graphical user interface is web-based, and easily accessible from any browser. The management toolset offers a complete management solution for the appliance, integrated with Enterprise Manager, and able to link to the cloud with a single-click.

Introducing JD Edwards EnterpriseOne

Oracle's JD Edwards EnterpriseOne is an integrated suite of comprehensive enterprise resource planning applications software that combines business value, standards-based technology, and deep industry experience into a business solution with a low total cost of ownership. EnterpriseOne ERP solution is designed to run on different platforms and database architectures. JD Edwards EnterpriseOne also delivers mobile applications. It is also the first ERP solution to run all applications on Apple iPad.

The JD Edwards EnterpriseOne software stack consists of three core functional blocks, on top of which business-specific application modules can be loaded. The three core functional blocks of JD Edwards EnterpriseOne are listed in Table 3. In a classic deployment, each function would be housed on a separate server

TABLE 3. CORE FUNTIONAL BLOCKS IN JD EDWARDS ENTERPRISEONE SOFTWARE SUITE

Functional Block	Description
Database server	An instance of Oracle Database for data storage and tracking of assets and operations
Web server	An Oracle WebLogic Server enabling the web-based presentation of the user interface for both the core and optional JD Edwards EnterpriseOne modules
JD Edwards EnterpriseOne application server	The JD Edwards EnterpriseOne application server core installation and optional business logic functionality modules

The Oracle Database and Oracle WebLogic Server portions of the application stack are available in both standard and enterprise license levels, which provide basic and enhanced functionality, respectively. The choice of license has a very significant impact on overall system cost and can be very significantly reduced by using the licenses bundled in the Oracle Technology Foundation for JD Edwards EnterpriseOne pack. This pack includes the standard edition versions of Oracle Database and Oracle WebLogic Server software tied specifically to a JD Edwards EnterpriseOne deployment, and is attractively priced based only on the number of users required in the deployment.

Project goals and architectural setup

The objective of this project is to validate installation and configuration of Oracle JD Edwards EnterpriseOne applications 9.2 release in an environment with **Oracle Database Appliance X6-2S/X6-2M/X6-2L** serving as the database host and as applications tier server.

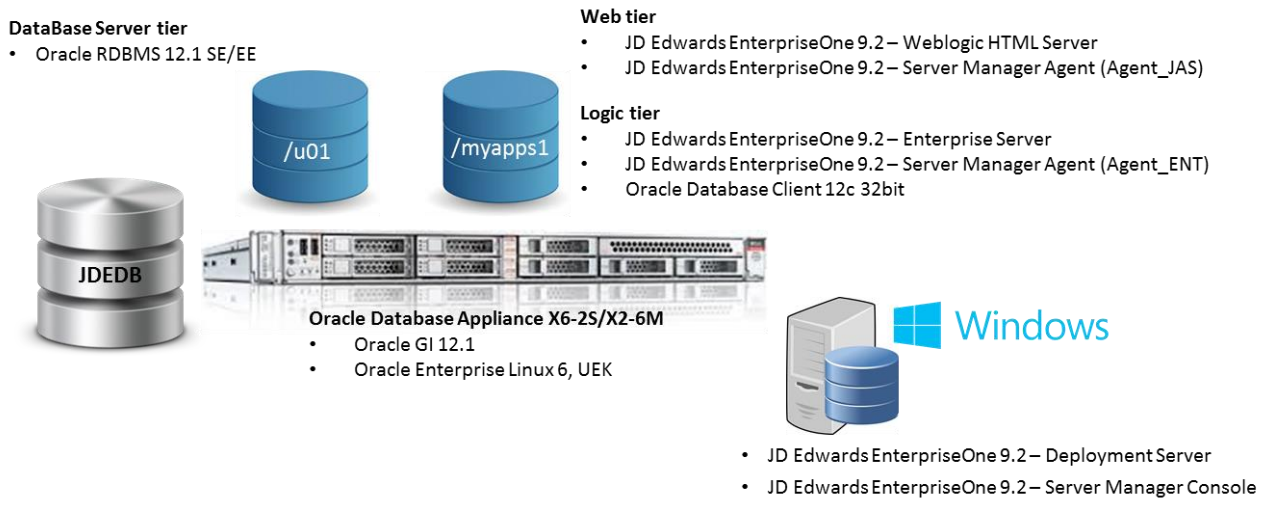


Figure 1 - Oracle JD Edwards EnterpriseOne and Oracle Database Appliance X6-2S/M Testing Architecture

Oracle Database Appliance Sizing

Oracle Database Appliance templates define databases with parameters selected specifically to optimize performance on Oracle Database Appliance. In addition, these templates help you to set up appropriate instance caging and to acquire an appropriate license.

Oracle Database Appliance enables you to consolidate many databases into a single system. Consolidation can minimize idle resources, maximize efficiency, and lower costs. By using instance caging in conjunction with Oracle Database Resource Manager (the Resource Manager), you can provide desired levels of service across multiple instances on a single Oracle Database Appliance.

Oracle Database Appliance templates are already tuned for the size of each database instance workload. They are designed to run on a specific number of cores. Instance Caging ensures that each database workload is restricted to the set of cores allocated by the template (“core_count”), enabling multiple databases to run concurrently with no performance degradation, up to the capacity of Oracle Database Appliance. You can select database template sizes larger than your current needs to

Provide for planned growth, which you accommodate later by adjusting System Global Area (SGA) and Program Global Area (PGA) sizes as well as the number of cores.

The database sizing tables provide template names and sizing based on the number of CPUs and memory attributes for each type of database workload.

Identify the template type that is appropriate to your database workload and hardware:

- Use Oracle Database Appliance OLTP Database Templates if your database workload is primarily online transaction processing (OLTP).
- Use Oracle Database Appliance DSS database templates if your database workload is primarily decision support services (DSS) or data warehousing.
- Use Oracle Database Appliance In-Memory (IMDB) database templates if your database workload can fit in memory, and can benefit from in-memory performance capabilities.

Adjustments to standard Oracle Database Appliance templates

Oracle Database Appliance comes pre-configured with best practices. However, sometimes for specific workloads, minor adjustments to the configuration may be required. Two specific changes were identified to increase the effective capacity of Oracle Database Appliance for Oracle JD Edwards EnterpriseOne ERP Applications workloads. Both these parameters belong to the database configuration and can be changed directly in the database.

PROCESSES parameter – The PROCESSES database parameter was increased to 3000. The default setting of this parameter can be variable from 200 to 4000 based on the template:

```
alter system set processes=3000 scope=spfile;
```

OPEN_CURSORS parameter – The OPEN_CURSORS database parameter was increased to 5000. The default setting of this parameter is 1000:

```
alter system set open_cursors=5000 scope=spfile;
```

Oracle Database Appliance Setup

Oracle Database Appliance Deploy

1- Plumb the Network

To configure the network, please execute as root “configure-firstnet” at oak prompt:

```
[root@oak ~]# configure-firstnet
```

2- Download Image Files

List of files required for Oracle Database Appliance X6-2S, X6-2M or X6-2L version 12.1.2.x.0 are as follows. Check the MOS note “Oracle Database Appliance X6-2S and X6-2M (Doc ID 2144642.1)” for the latest software version to deploy. In the following example at the time of writing the latest is 12.1.2.7.0

Download Patch#	Contents	File name	Notes
23494985	**12c GI** and other RPMs	p23494985_121270_Linux-x86-64_1of2.zip p23494985_121270_Linux-x86-64_2of2.zip	This is mandatory
23494992	**12.1 DBBP**	p23494992_121270_Linux-x86-64_1of2.zip p23494992_121270_Linux-x86-64_2of2.zip	If deploy a 12c RDBMS, this is mandatory
23494997	**11.2.0.4 DBPSU**	p23494997_121270_Linux-x86-64.zip	If deploy a 11g RDBMS, this is mandatory

3- Move Image Files to ODA

Using the network IP address that the Oracle Database Appliance has been configured with, copy all files to /tmp.

4- Unzip the files

```
unzip p23494985_121270_Linux-x86-64_1of2.zip
unzip p23494985_121270_Linux-x86-64_2of2.zip
unzip p23494992_121270_Linux-x86-64_1of2.zip
unzip p23494992_121270_Linux-x86-64_1of2.zip
```

5- Concatenate Files

In the following

```
cat oda-sm-12.1.2.7.0-160601-GI-12.1.0.2_1of2.zippart oda-sm-12.1.2.7.0-
160601-GI-12.1.0.2_2of2.zippart > oda-sm-12.1.2.7.0-160601-GI-12.1.0.2.zip
cat oda-sm-12.1.2.7.0-160601-DB-12.1.0.2_1of2.zippart oda-sm-12.1.2.7.0-
160601-DB-12.1.0.2_2of2.zippart > oda-sm-12.1.2.7.0-160601-DB-12.1.0.2.zip
```

The resulting concatenated file name can be of your choosing. These concatenated file names are used for the following ‘update-image’ step.

If you download them to /tmp directory, due to files size huge, it could fill up the /tmp space. You could receive ‘cat: write error: No space left on device’. We recommend you to remove the zippart files after concatenating. Or remove the zip file after Step 6: update-image.

6- Update Image

```
update-image --image-files oda-sm-12.1.2.7.0-160601-GI-12.1.0.2.zip
```

Followed by either (to provision a 12c DB)

```
update-image --image-files oda-sm-12.1.2.7.0-160601-DB-12.1.0.2.zip
```

Or followed by (to provision a 11g DB)

```
update-image --image-files oda-sm-12.1.2.7.0-160601-DB-11.2.0.4.zip
```

7- Deploy the Oracle Database Appliance

After the images have been successfully updated, you are ready to deploy the Oracle Database Appliance.

Using the Google Chrome browser, type the following URL:

```
https://<ipaddress or hostname>:7093/mgmt/index.html
Username: oda-admin
Password (default): welcome1
```

Setting the CPU Core Count on Oracle Database Appliance

Use the "`configure-core-count`" command to change the core count on the Oracle Database Appliance X6-2S or X6–2M. You must always assign cores in multiples of two, with a minimum of two cores. If you change the CPU core count, then you can subsequently only increase the CPU core count.

1. Log in as "*root*" to the Oracle Database Appliance servers.
2. Run the following to configure the number of CPU cores: `configure-core-count cpu_number`. For example, run the following command to set the number of cores to 8:

```
# configure-core-count 8
```

After the system restarts, Oracle Database Appliance is reconfigured to run with the specified CPU core count.

Create JDE database

JDE infrastructure is expecting an oracle database. It can be created during the Oracle Database Appliance deploy. In case you need to create it manually a typical command line could be as following (command options valid from ODA software version 12.1.2.8.0 and above):

```
# odacli create-database --dbname JDEDB --adminpassword \
                         --dbhomeid c5e4e08d-45b4-4f16-903c-8eb23a8bfe08 \
                         --dbshape odb6 --dbstorage ACFS \
                         --dbterritory AMERICA --dblanguage AMERICAN \
                         --characterset WE8MSWIN1252
{
  "jobId" : "de5567a2-7141-416f-a83c-099b8c121d9c",
  "status" : "Created",
  "message" : null,
  "reports" : [ ],
  "createTimestamp" : 1471011734816,
  "description" : "Database service creation with db name: JDEDB",
  "updatedTime" : 1471011734837
}
```

Where the dbhomeid (in this case) is coming from "odacli list-dbhomes".

You can check the job progress doing:

```
# odacli describe-job -i de5567a2-7141-416f-a83c-099b8c121d9c
```

Where the jobID is coming from the “create-database” command.

Oracle Database Appliance JDE binary filesytem setup

Applications should not be installed on the ODA internal root file System neither on “u01” where Oracle GI/RDBMS binary are installed. All applications should be installed in a separate volume, mounted through a file system mount point /myapp1. The new volume name can be changed to suit your needs, by replacing /myapp1 with your selected name for the file system's mount point.

1. Check space is available

```
# pvscan
  PV /dev/sda2   VG VolGroupSys   lvm2 [439.44 GiB / 205.44 GiB free]
  Total: 1 [439.44 GiB] / in use: 1 [439.44 GiB] / in no VG: 0 [0   ]
```

Note: on the Oracle Database Appliance X6-2S/M the VolGroupSys volume has about 205 GB free.

2. Use the vgdisplay command to display attributes of volume groups

```
# vgdisplay
  --- Volume group ---
  VG Name               VolGroupSys
  System ID
  Format                lvm2
  Metadata Areas        1
  Metadata Sequence No  7
  VG Access             read/write
  VG Status             resizable
  MAX LV                0
  Cur LV                6
  Open LV               6
  Max PV                0
  Cur PV                1
  Act PV                1
  VG Size               439.44 GiB
  PE Size               32.00 MiB
  Total PE              14062
  Alloc PE / Size       7488 / 234.00 GiB
  Free  PE / Size       6574 / 205.44 GiB
  VG UUID               tbYJRF-kBZh-CR41-pt0b-KHj2-B1Oo-2DsTIz
```

In the above output note **6574** is the free number of physical extents for the /dev/VolGroupSys/volgroupapp volume group. This represents **205.44** GB of available space. Each Physical Extent is 32 MB.

3. Use the lvcreate command to Create a Logical Volume

```
# lvcreate -l 6574 -n LogVolApp VolGroupSys
Logical volume "LogVolApp" created
```

Note: The above command creates a logical volume, 205.44G in size. Looking at the volume that was just created with the lvcreate command:

```
# lvdisplay /dev/VolGroupSys/volgroupapp
  --- Logical volume ---
  LV Path                /dev/VolGroupSys/LogVolApp
  LV Name                LogVolApp
  VG Name                VolGroupSys
  LV UUID                HYjvfO-wm5U-hKzs-Fjuv-5xyw-6rte-ozfPJA
  LV Write Access        read/write
  LV Creation host, time odas001, 2016-08-10 01:09:23 -0700
```

```
  LV Status              available
  # open                 0
  LV Size                205.44 GiB
  Current LE             6574
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           252:10
```

3. Create a ext4 journaled filesystem on the logical volumes

```
# mkfs.ext4 -L myapp1 /dev/VolGroupSys/LogVolApp
mke2fs 1.43-WIP (20-Jun-2013)
Filesystem label=myapp1
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
13467648 inodes, 53854208 blocks
2692710 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=4294967296
1644 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
       32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632,
2654208,
       4096000, 7962624, 11239424, 20480000, 23887872

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done
```

4. Mount File Systems Automatically with /etc/fstab

Mount the new filesystem and add the entry to fstab to ensure reboots mount the filesystem automatically.

```
# mkdir /myapp1
# mount -t ext4 /dev/VolGroupSys/LogVolApp /myapp1
```

You must modify the /etc/fstab and add the following line to automacally mount the volume when the system is rebooted.

```
/dev/VolGroupSys/LogVolApp        /myapp1    ext4    defaults    1 2
```

After completing the above steps the logical volume is ready to store JDE binaries.

JD Edwards EnterpriseOne Release 9.2 Installation

It's outside the scope of this whitepaper go through all JDE installation details for which you should reference the JDE Install guide (Installation and Upgrade Documentation, see Reference at the end of this document). In this whitepaper we will describe the required steps to be performed on ODA "side". The required Deployment Server "side" steps are not described here, follow the JDE documentation.

We consider you have an up&running JDE Deployment Server on a windows host.

1 Install the Oracle Database Client 12c for Linux x86 (32-bit) (V46100-01.zip)

a. The following 32bit libraries(RPM) had to be installed in order for Oracle Database Client OUI installer to work

```
libstdc++-4.4.7-16.el6.i686.rpm
```

you could get them from (http://public-yum.oracle.com OL6 x86_64):

```
http://public-
yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libstdc++-
4.4.7-16.el6.i686.rpm
```

b. The following 32bit libraries(RPM) had to be installed in order for Oracle Database Client to work

```
compat-libstdc++-33-3.2.3-69.el6.i686.rpm
libstdc++-devel-4.4.7-16.el6.i686.rpm
glibc-devel-2.12-1.166.el6_7.7.i686.rpm
libaio-0.3.107-10.el6.i686.rpm
libaio-devel-0.3.107-10.el6.i686.rpm
```

you could get them from (http://public-yum.oracle.com OL6 x86_64):

```
http://public-
yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/compat-
libstdc++-33-3.2.3-69.el6.i686.rpm
http://public-
yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libstdc++-
devel-4.4.7-16.el6.i686.rpm
http://public-
yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/glibc-devel-
2.12-1.166.el6_7.7.i686.rpm
http://public-
yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libaio-
0.3.107-10.el6.i686.rpm
http://public-
yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libaio-devel-
0.3.107-10.el6.i686.rpm
```

c. Create the install area under the new mount point created above "/myapp1"

```
# mkdir -p /myapp1/app/oracle/product/12.1.0/client_1
# chown -R oracle:oinstall /myapp1/app/oracle
```

d. Start a vncserver as “oracle” user in order to run the Oracle Universal Installer in a graphical environment

```
$ vncserver

You will require a password to access your desktops.

Password:
Verify:
xauth:  creating new authority file /home/oracle/.Xauthority

New 'odas001:1 (oracle)' desktop is odas001:1

Creating default startup script /home/oracle/.vnc/xstartup
Starting applications specified in /home/oracle/.vnc/xstartup
Log file is /home/oracle/.vnc/odas001:1.log
```

(note: the port to connect using VNC client is `odas001:1`)

e. Connect your ODA X6-2S/M using a VNC client: “vncviewer `odas001:1`”

f. Execute the runInstaller from the stage area where you have uncompressed the Oralce Database Client 12c 32bit package (example: “/myapp1/stage/DBClient/client32/runInstaller”), the install type need to be Administrator (1.8Gb).

You could install in silent mode using a response file as following

```
# cat client.rsp
oracle.install.responseFileVersion=/oracle/install/rspfmt_clientinstall_re
sponse_schema_v12.1.0
ORACLE_HOSTNAME=<your host name>
UNIX_GROUP_NAME=oinstall
INVENTORY_LOCATION=/u01/app/oraInventory
SELECTED_LANGUAGES=en
ORACLE_HOME=/myapp1/app/oracle/product/12.1.0/client_1
ORACLE_BASE=/myapp1/app/oracle
oracle.install.client.installType=Administrator

# runInstaller -silent -responseFile /home/oracle/client.rsp
```

g. The Oracle base and the Software location will be:

```
/myapp1/app/oracle
/myapp1/app/oracle/product/12.1.0.2/client_1
```

1 Install the JDE PlatformPack

The Platform Pack installs these major components:

- JD Edwards EnterpriseOne Enterprise Server code
- JD Edwards EnterpriseOne Database files

The steps:

a. Create a stage and the install area under the new mount point created above "/myapp1"

```
# mkdir -p /myapp1/stage/UnixPPack
# chown -R oracle:oinstall /myapp1/stage/UnixPPack

# mkdir -p /myapp1/jdedwards/e920
# chown -R oracle:oinstall /myapp1/jdedwards
```

b. Download the JDE Platform Pack

From http//edelivery.oracle.com you should download the "*JD Edwards EnterpriseOne Enterprise Server Platform Pack (9.2.0.0)*", at the time of writing the part number is V77463-01.zip

c. Unzip as "oracle" the JDE Platform Pack under "/myapp1/stage/UnixPPack"

```
$ unzip V77463-01.zip -d /myapp1/stage/UnixPPack
```

d. In addition to the Platform Pack image, you need unzip file image of JD Edwards EnterpriseOne 9.2 Database Component for Oracle Database (V77465-01.zip), into this same directory

```
$ unzip V77465-01.zip -d /myapp1/stage/UnixPPack
```

The folder content will be the following:

```
# ls -l
total 220404
drwxr-xr-x  6 root root      4096 Aug 14  2015 ini
drwxr-xr-x  4 root root      4096 Aug 14  2015 install
drwxr-xr-x  2 root root      4096 Aug 14  2015 log
drwxr-xr-x  9 root root      4096 Aug 14  2015 ORCL
drwxr-xr-x  2 root root      4096 Aug 14  2015 output
drwxr-xr-x  2 root root      4096 Aug 14  2015 PS920
drwxr-xr-x  4 root root      4096 Aug 14  2015 queues
drwxr-xr-x  2 root root      4096 Aug 14  2015 RemoteUDB
drwxr-xr-x  2 root root      4096 Aug 14  2015 scripts
-rw-r--r--  1 root root     10921 Aug 14  2015 SharedScripts.jar
drwxr-xr-x 13 root root      4096 Aug 14  2015 stage
-rw-r--r--  1 root root 225413969 Aug 14  2015 system.jar
```

e. The following 32bit libraries(RPM) had to be installed in order for JDE OUI installer to work

```
libX11-1.6.0-6.el6.i686
libXext-1.3.2-2.1.el6.i686
libxcb-1.11-2.el6.i686
libXau-1.0.6-4.el6.i686

libXi-1.7.4-1.el6.i686
libXtst-1.2.2-2.1.el6.i686

you could get them from (http://public-yum.oracle.com OL6 x86_64):
http://public-
yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libX11-1.6.0-
6.el6.i686.rpm
```

http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libxcb-1.11-2.el6.i686.rpm
http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXau-1.0.6-4.el6.i686.rpm
http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXext-1.3.2-2.1.el6.i686.rpm

http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXi-1.7.4-1.el6.i686.rpm
http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXtst-1.2.2-2.1.el6.i686.rpm

f. Increasing Semaphores

1. On the ODA, log in as root.
2. Using any text editor, edit the /etc/sysctl.conf file and search for this entry:

```
# semaphores: semms1 semmns semopm  semmni  Added for EOne
kernel.sem = 1024 32000 100 142
```

3. If this entry is missing or your existing values are lower than the above, change them to the above.

Note: Once you have made changes to the /etc/sysctl.conffile, in order for the changes to take effect you must either reboot the machine or run the `sysctl -p` command.

g. Connect your ODA X6-2S/M as “oracle” using a VNC client. Before running the OUI installer, ensure that the ORACLE_HOME and ORACLE_SID environment variables are set. Also ensure that the ORACLE_HOME/bin is present in the PATH environment variable:

```
$ export ORACLE_HOME=/myapp1/app/oracle/product/12.1.0/client_1
$ export PATH=$PATH:$ORACLE_HOME/bin
$ export ORACLE_SID=JDEDB
```

Note: the ORACLE_HOME is using the Oracle Database Client 12c 32bit software.

h. Get and install the require libgcc as requirement of JRE 32bit

http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/getPackage/libgcc-4.4.7-16.el6.i686.rpm

```
# rpm -Uvh libgcc-4.4.7-16.el6.i686.rpm
```

i. Install the 32bit JRE

```
# rpm -Uvh jdk-8u101-linux-i586.rpm
```

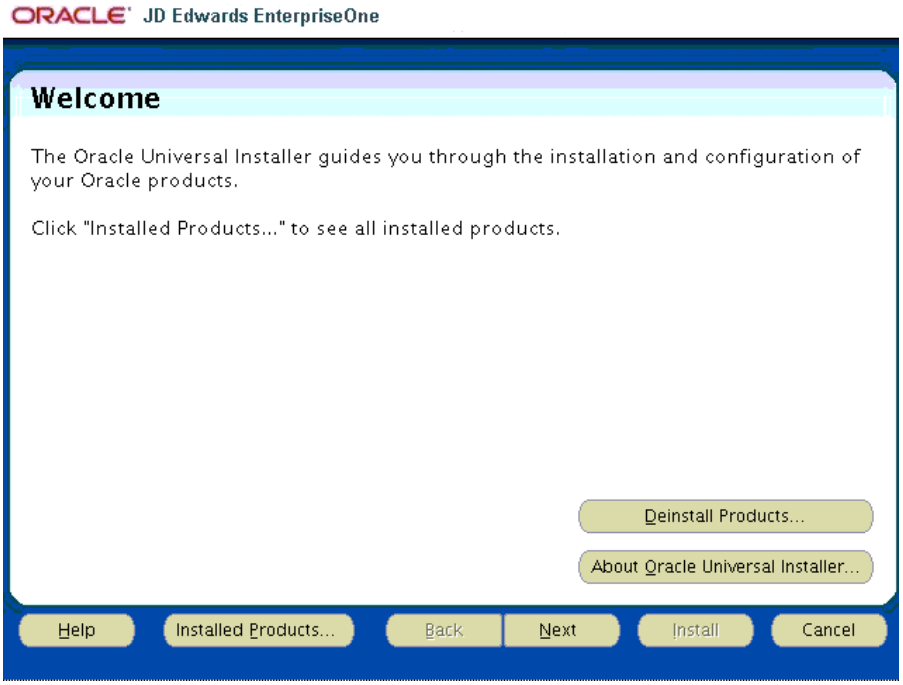
j. Change back the default JRE (1.8.0_77) to 64bit

```
# /usr/sbin/alternatives --config java

There are 2 programs which provide 'java'.

  Selection    Command
-----------------------------------------------
   1           /usr/java/jdk1.8.0_77/jre/bin/java
*+ 2           /usr/java/jdk1.8.0_101/jre/bin/java
```

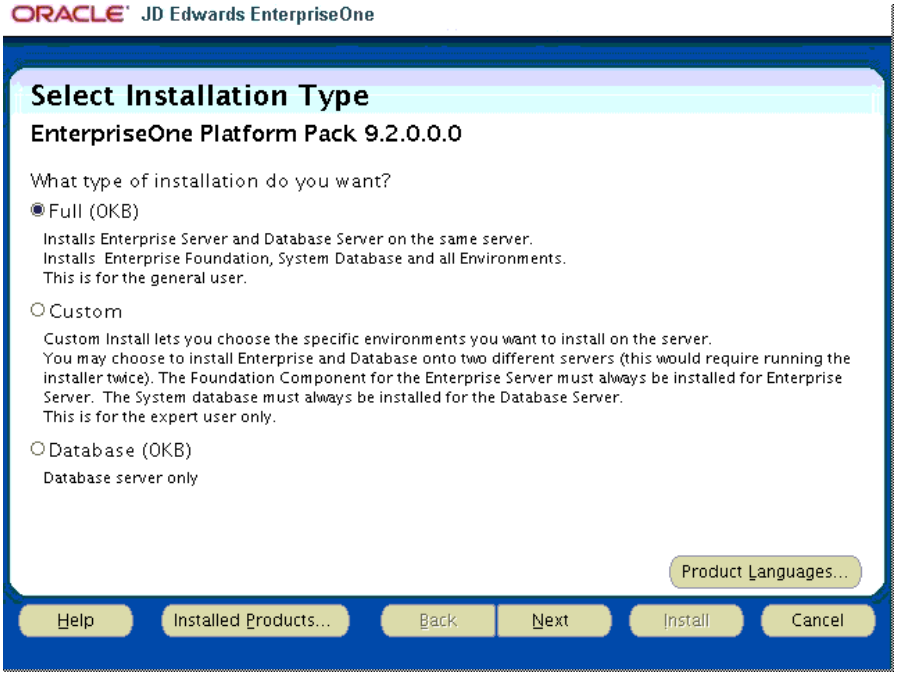
```
Enter to keep the current selection[+], or type selection number: 1
```

k. Run the OUI installer as “oracle”

```
$ chmod -R 775 /myapp1/stage/UnixPPack
$ /myapp1/stage/UnixPPack/install/runInstaller
```

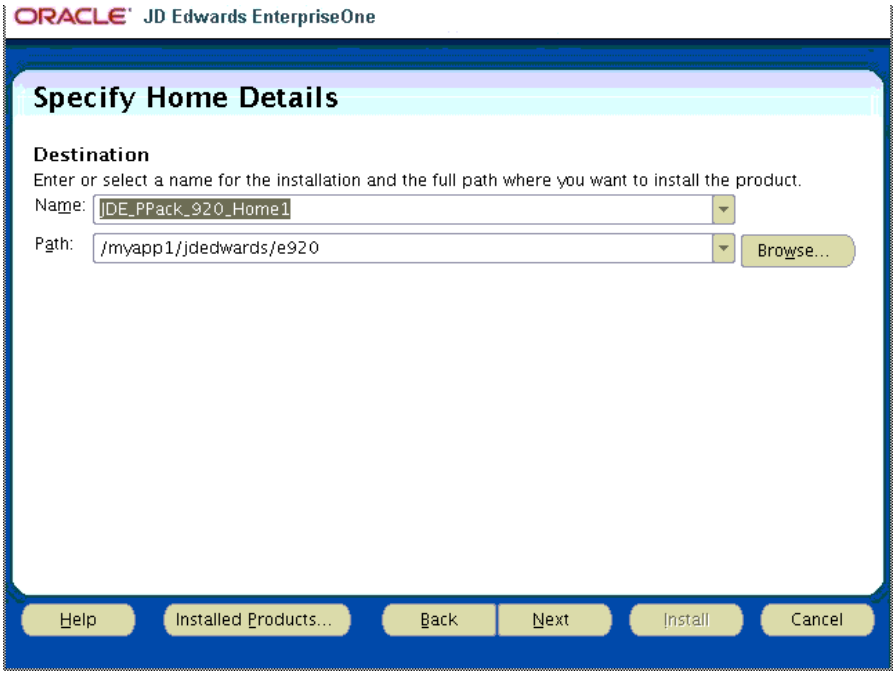


1. On Welcome, clieck the Next button



2. On Select Installation Type, choose ***Full***: Choose this setup type if you wish to complete the Platform Pack installation with no further specifications. This installation option is recommended for most users and includes the required logic and database components for the Foundation (System) and the Prototype and Pristine environments.

3. Click the **Next** Button



On Specify Home Details, complete these fields:

Enter a unique name for the JD Edwards EnterpriseOne Platform Pack installation. For example:

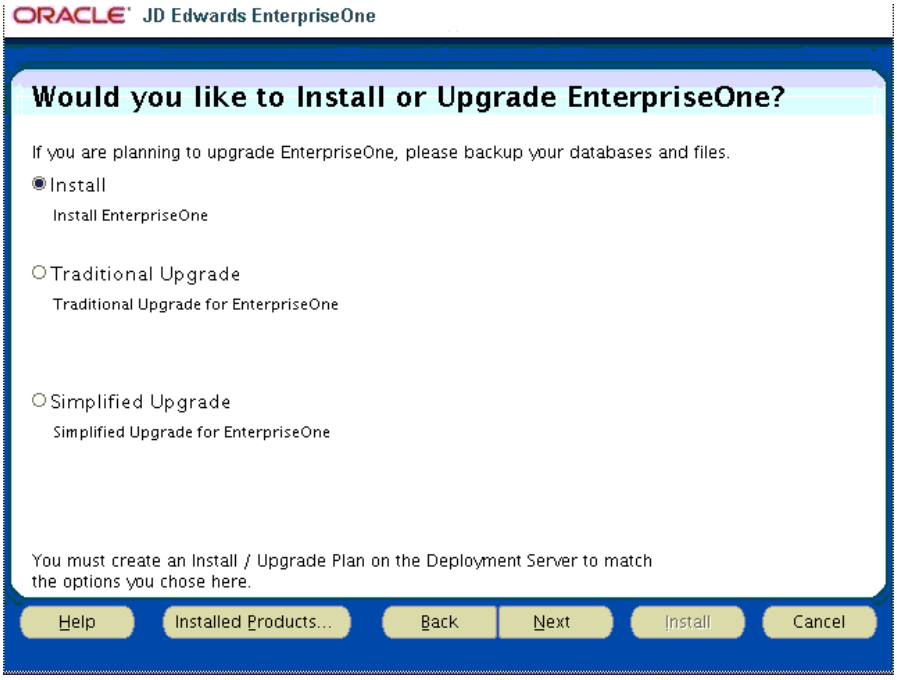
```
JDE_PPack_920_Home1
```

Enter the mount point where you want the files installed on your Enterprise Server:

```
/myapp1/jdedwards/e920
```

Note: Do not accept the default value for this fields.

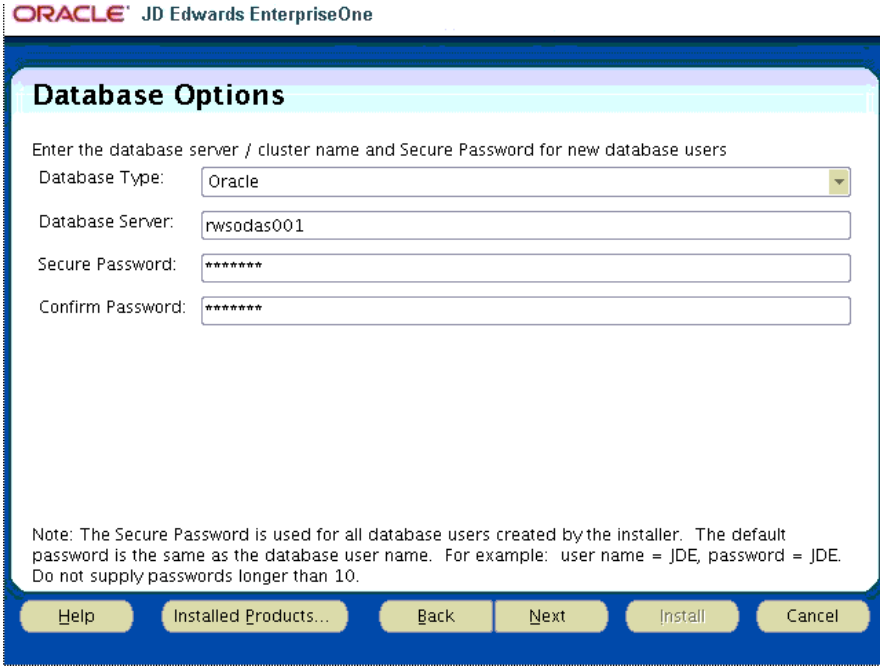
4. Click the **Next** button.



`Install EnterpriseOne`

In this mode, the JD Edwards EnterpriseOne Platform Pack Installer checks for the existence of JD Edwards EnterpriseOne business data and control tables; if either exists, the JD Edwards EnterpriseOne Platform Pack Installer aborts. This prevents the inadvertent overwriting of existing critical business data and control tables. If the JD Edwards EnterpriseOne Platform Pack Installer does not detect pre-existing JD Edwards EnterpriseOne data or control tables, the installation process continues normally.

5. Click the **Next** Button



On Database Options, complete these fields:

`Database Type`

Use the pulldown to choose Oracle.

`Database Server`

By default, the JD Edwards EnterpriseOne Platform Pack Installer automatically detects and populates this field with the machine name on which it is running. The JD Edwards EnterpriseOne Platform Pack Installer validates the Database Server name and compares it against the name of the local computer. If these values are different (for example, if you manually change the value of this field), the JD Edwards EnterpriseOne Platform Pack Installer assumes the Database Server is either a clustered or remote server. If you have selected to install databases, and the database server name that you entered cannot be validated, a warning dialog is displayed with resolution instructions.

`Secure Password`

If you wish to change the default password that the JD Edwards EnterpriseOne installer uses when creating Oracle users, you can enter a value for the Secure Password that conforms to the password policy of your operating system. The maximum length of the Secure Password is 10 characters and cannot contain any of these special characters: @ $ / \

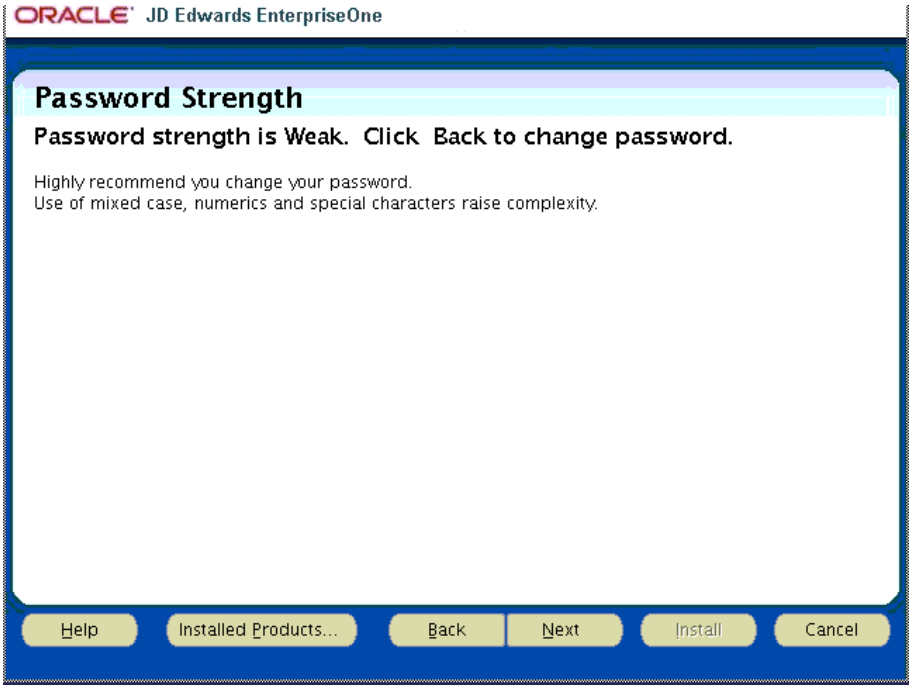
Caution: The non-encrypted value for the Secure Password is stored in the ORCL_set.sh file. This password is used to load the database components. Oracle strongly recommends that you erase this value once the database scripts have run successfully.

Note: If you subsequently add an additional database component, you must set the value in the set script back to the Secure Password before running the scripts or the OUI installer (which calls the scripts) for the additional components.

Note: If you do not change the default value (DEFAULT), the system creates a password for each user where the password is the same as their user ID. For example, if a user ID is JDE, then by default the system creates a corresponding password of JDE for that user.

Caution: When you change the default password in the Platform Pack installation for your Enterprise Server, you must also manually change the [DSPWD] section in the jde.ini on the Deployment Server and specify the new secure password that you are using. If you fail to synchronize these database password settings, the various Installation Workbenches will not be able to connect to the database. For additional details on working with the [DSPWD] section of the jde.ini file

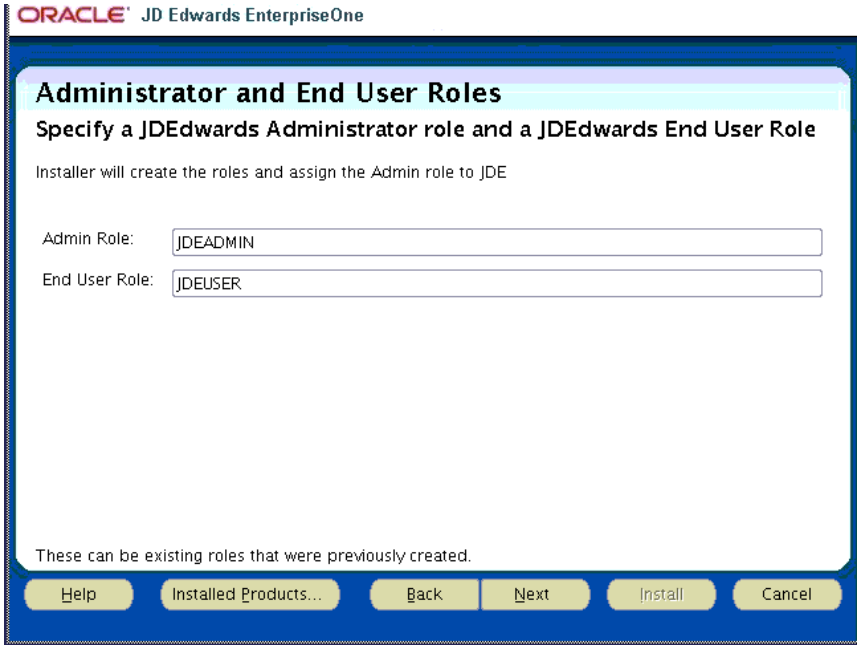
6. Click the **Next** button.



The installer displays the Password Strength panel if you have chosen a weak password.

Note: The installer program does not force you to change your password for a Weak value. However it is highly recommended that you change your password. Use of mixed case, numeric and special characters raise complexity.

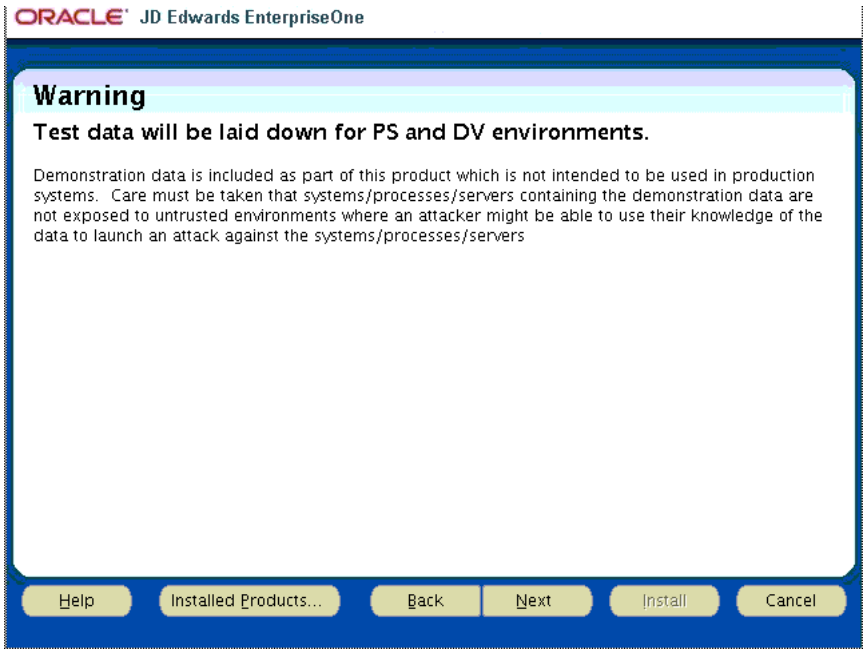
7. Click the **Next** button.



On Administrator and End User Roles, specify the roles that the installer will create and assign to the JDE users in the database:

```
Admin Role
The default value is JDEADMIN.


End User Role
The default value is JDEUSER
```

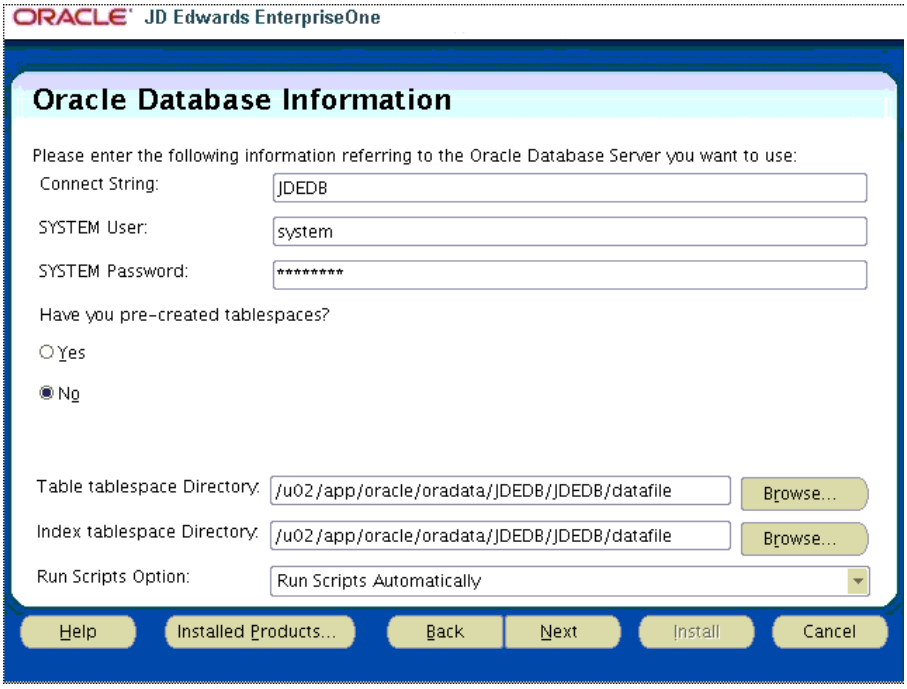
Caution: For your Production systems, Oracle highly recommends that you change these default values for roles.



8. On Warning, Test data will be laid down for PS and DV Environments, the following warning is displayed:

   Demonstration data is included as part of this product which is not intended to be used in production systems. Care must be taken that systems/processes/servers containing the demonstration data are not exposed to untrusted environments where an attacker might be able to use their knowledge of the data to launch an attack against the systems/processes/servers.

9. Click the Next button to continue the configuration of the Oracle database.



On Oracle Database Information, complete these fields referring to the Oracle Database Server that you want to use:

> Note: You must specify the SYSADMIN user as system. The Oracle portion of the install will fail if you supply sys or any other user that must connect with "as SYSDBA".

`Connect String`

Enter a valid value for your Oracle connect string. This is the db name used on “create DE database” step.

You cannot proceed with the installation until this value can be validated by the JD Edwards EnterpriseOne Platform Pack Installer; that is, the Installer will not allow you to proceed if it cannot connect to the database.

`SYSADMIN User`

The value system (or equivalent) identifies the system administration user for your Oracle installation. This user must have full DBA privileges which are standard for Oracle installations. The OUI installer uses the Oracle export / import tool (data pump).

> Caution: Unlike versions of the JD Edwards EnterpriseOne Platform Pack installer for Oracle databases which were previous to Release 9.1 and greater, you cannot use the value sys here. Oracle recommends you use the default value of system.

`SYSADMIN Password`

Enter a valid password for the system administration (SYSADMIN) user under which you will be installing the JD Edwards EnterpriseOne Oracle databases.

> Caution:The non-encrypted value for the SYSADMIN Password is stored in the ORCL_set.sh file. This password is used to load the database components. Oracle strongly recommends that you erase this value once the database scripts have run successfully.

Note: If you subsequently add an additional database component, you must set the value in the set script back to the SYSADMIN Password before running the scripts or the OUI installer (which calls the scripts) for the additional components.

Have you pre-created the tablespaces?

Choose the radio button applicable to your installation:

```
Yes
No
```

Note: The database load scripts support creating ASM tablespaces.

You should use the Yes option if you wish to do anything other than creating the tablespaces in the most basic fashion. If you select Yes, the installer will not create the tablespaces. In this case, you should also choose to the Run Scripts Manually option, and then edit the tablespace creation scripts to your specifications before running the scripts yourself. Refer to the section of this chapter entitled: Manually Running the Database Creation Scripts.

Tablespace Directory

Enter the path where you want the JD Edwards EnterpriseOne Platform Pack Installer to create your Oracle database tables. For example:

```
/u02/app/oracle/oradata/JDEDB/JDEDB/datafile
```

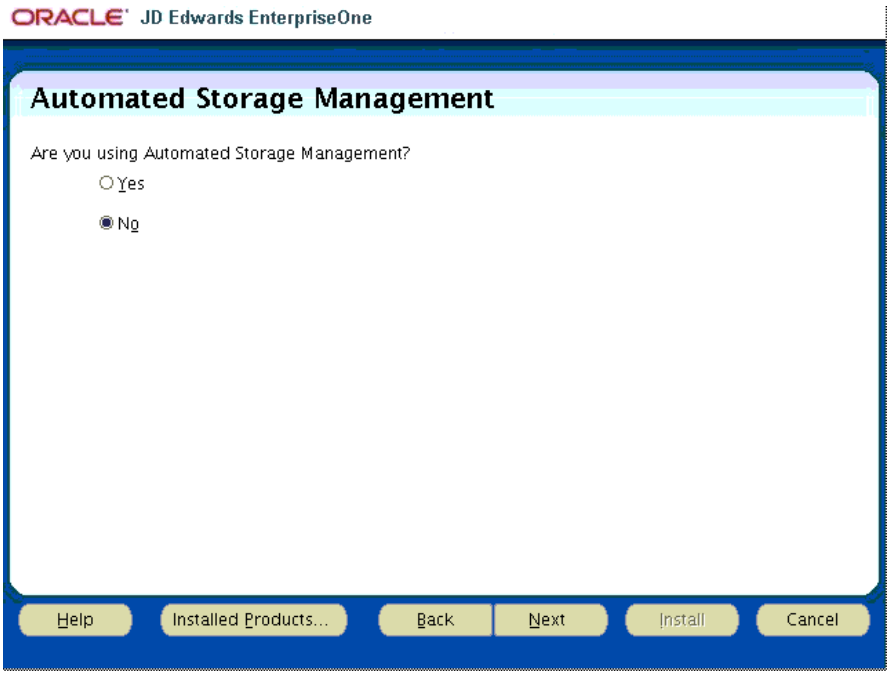
Index Tablespace Directory

Enter the path where you want the JD Edwards EnterpriseOne Platform Pack Installer to create your Oracle database indexes. For example:

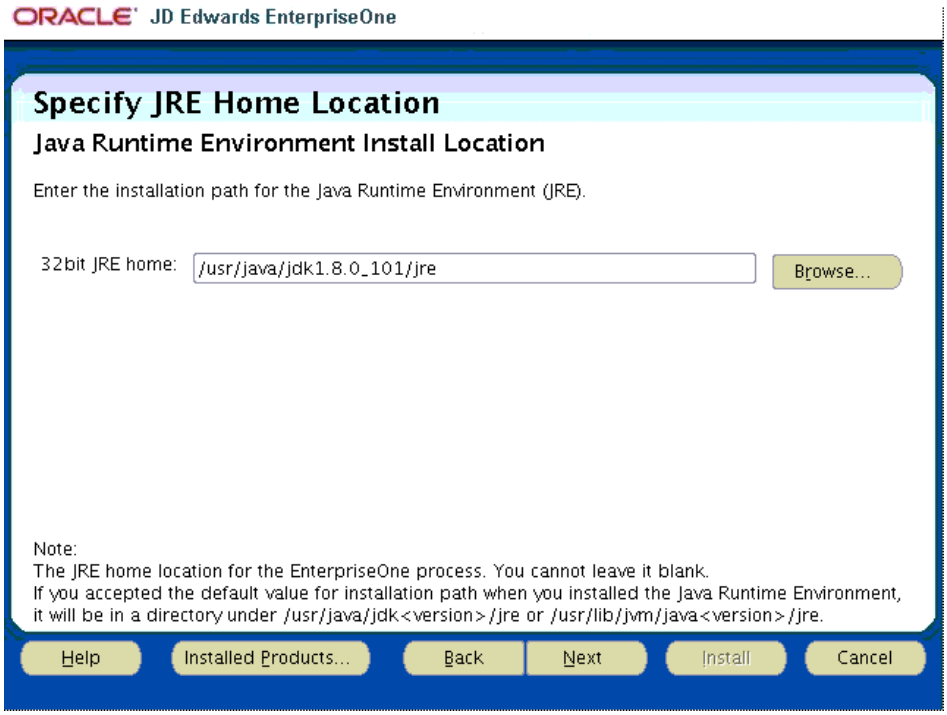
```
/u02/app/oracle/oradata/JDEDB/JDEDB/datafile
```

Run Scripts Option

The default value is Run Scripts Automatically.



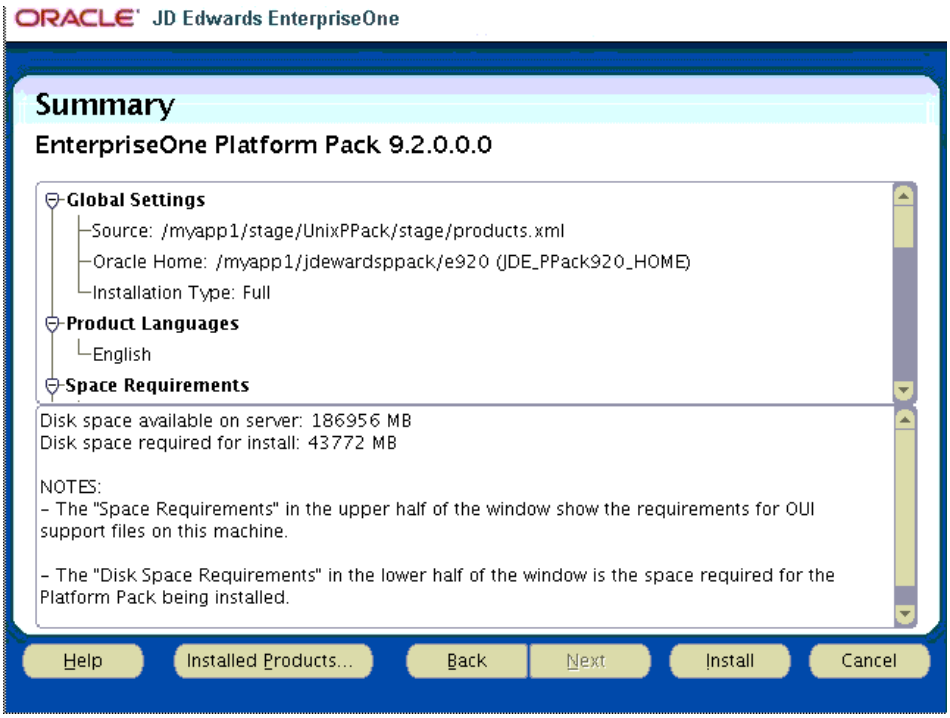
10. On Automated Storage Management, select No to indicate your Oracle database is not using ASM but ACFS



On Specify JRE Home Location, enter or browse to the location of your 32-bit Java Runtime Environment (JRE). In order to proceed, you cannot leave this value blank and you must specify an existing valid location and the JRE in that location must be a 32-bit version. Due to step ”j. Install the 32bi JRE” the path will be as following:

```
/usr/java/jdk1.8.0_101/jre
```

Caution: This JRE is a prerequisite to installing JD Edwards EnterpriseOne. Because JD Edwards EnterpriseOne running on an Enterprise Server as a 32-bit application, the pre-installed JRE for use by JD Edwards EnterpriseOne on the Enterprise Server must be a 32-bit version. Refer to the Oracle Certifications for JD Edwards EnterpriseOne Enterprise Servers for additional details



The installer validates the specified location and copies the JRE to a location where it can be used by the runtime processes of JD Edwards EnterpriseOne.

You can now proceed with the installation button. When the installation completes

a) Sign on as root.

b) Navigate to the SharedScripts subdirectory of the JD Edwards install directory. For example:

```
/myapp1/jdedwards/e920/SharedScripts
```

c) Run this script to complete setting up the system accounts:

```
addacct.sh
```

d) This script also locks down permissions to this directory

```
/myapp1/jdedwards/e920
```

e) When the scripts have completed successfully, click the OK button to exit the dialog and return to the OUI Platform Pack Installer End of Installation screen.

2. Install Oracle WebLogic Server 12.1.3

a. Prepare the home installation

```
# mkdir -p /myapp1/Oracle/Middleware
# chown -R jde920:jde920 /myapp1/Oracle/Middleware
```

This will be the Installation Location for the home for this installation of Oracle WebLogic Server 12.1.3. Modify the jde920 user to be part of "oinstall" group

```
# usermod -a -G oinstall jde920
```

b. Start a vncserver as "jde920" user in order to run the Oracle Universal Installer in a graphical environment

```
$ vncserver

You will require a password to access your desktops.

Password:
Verify:
xauth:  creating new authority file /home/ jde920/.Xauthority

New 'odas001:2 (jde920)' desktop is odas001:1
Creating default startup script /home/jde920/.vnc/xstartup
Starting applications specified in /home/ jde920/.vnc/xstartup
Log file is /home/oracle/.vnc/odas001:2.log
```

(note: the port to connect using VNC client is `odas001:2`)

b. Locate the Oracle WebLogic Server 12.1.3 installer from the image that you downloaded from the Oracle Software Delivery Cloud (V44413-01.zip). The file name of the installer is:

```
fmw_12.1.3.0.0_wls.jar
```

c. The command syntax to run the installer is (as "jde920"):

```
/usr/java/jdk1.8.0_77/bin/java -jar fmw_12.1.3.0.0_wls.jar
```

Note: as you need to use the 64bit JDK installed on ODA

d. On Installation Location, provide a location for the home for this installation of Oracle WebLogic Server 12.1.3:

```
/myapp1/Oracle/Middleware
```

e. On Installation Type, select the "**WebLogic Server**" type, which installs the Oracle WebLogic and the Oracle Coherence Server

Note: you could install weblogic in silent mode also using a response file as following:

```
$ cat weblogic.rsp
[ENGINE]
Response File Version=1.0.0.0.0
[GENERIC]
ORACLE_HOME=/myapp1/Oracle/Middleware
INSTALL_TYPE=WebLogic Server
MYORACLESUPPORT_USERNAME=
DECLINE_SECURITY_UPDATES=true
SECURITY_UPDATES_VIA_MYORACLESUPPORT=false
PROXY_HOST=
PROXY_PORT=
PROXY_USER=
PROXY_PWD=<SECURE VALUE>
COLLECTOR_SUPPORTHUB_URL=
```

and issuing the following command:

```
/usr/java/jdk1.8.0_77/bin/java -jar fmw_12.1.3.0.0_wls.jar -silent -
responseFile weblogic.rsp
```

f. On Installation Complete, if “Automatically Launch the Quickstart Configuration Wizard” checkbox is selected, it will execute it otherwise to manually launch the QuickStart configuration wizard, run this executable:

```
/myapp1/Oracle/Middleware/oracle_common/common/bin/config.sh
```

3. Configure Oracle WebLogic Server 12.1.3

a. On Configuration Type, enter or browse to your domain location. For example:

```
/myapp1/Oracle/Middleware/user_projects/domains/base_domain
```

where in this example base_domain is the domain name.

Tips: The typical default domain location is:

```
<ORACLE_HOME>/user_projects/domains
```

b. On Templates, select the checkbox for this template:

```
Basic WebLogic Server Domain - 12.1.3.0 [wlserver]*
```

c. On Administrator Account, complete the fields for user name and password for the default user that will start the domain. the default user is: **weblogic**

d. On Domain Mode and JDK, for use with JD Edwards EnterpriseOne you must select this radio button in the Domain Mode section:

```
Production
```

e. In the JDK section, ensure the radio button is selected for the available 64bit JDK. For example:

```
Oracle HotSpot 1.8.0_77 /usr/java/jdk1.8.0_77
```

f. On Advanced Configuration, check these boxes to modify their settings:

```
Administration Server
Node Manager
```

g. On Administrative Server, complete these fields:

- `Server Name`

  Enter a name for the Administration Server. For example:

  ```
  AdminServer
  ```

- `Listen address`

  You can accept the default selection, which is:

  ```
  All Local Addresses
  ```

Note: If you have multiple Network Addresses on the server ensure that you select the correct Listen Address.

- `Listen Port`

  Tip: The default port value is 7001. You can override the default value if desired.

  Caution: port number you specify here must be at least 1024 or higher. Port numbers below 1024 require -root- privileges.

  You must specify this same port number in the URL that starts the Admin Console.

h. On Node Manager, in the Node Manager Type section, select this radio button:

```
Per Domain
```

Note: The Per Domain value is the only supported Node Manager Type for use with JD Edwards EnterpriseOne.

i. On Node Manager, in the Node Manager Credentials section, enter valid values for your Node Manager.

Note: A valid username (i.e.: weblogic) and password are required to start the node manager.

l. On Managed Servers, click the Next button since we will be creating the managed server from the JD Edwards Enterprise Server Manager Console.

m. On Clusters, click the Next button to skip this step

Caution: Clustering is not part of the basic Oracle WebLogic Server 12.1.3 License. In order to use the Clustering feature, you must obtain a license for an Oracle Enterprise WebLogic Server.

n. On Machines, click the UNIX Machine tab and then click the Add button to define a machine name

Note: If you have multiple Network Addresses on the server ensure that you select the correct Listen Address.

Note: You also can define the Machine from the Oracle WebLogic Server 12.1.3 Administration Console after the configuration.

o. On Configuration Summary, review your selections.

p. Click the Create button.

4. Preparing the Oracle WebLogic Server for JD Edwards EnterpriseOne HTML Server Installation

a. Start the Oracle WebLogic Server Administration Console

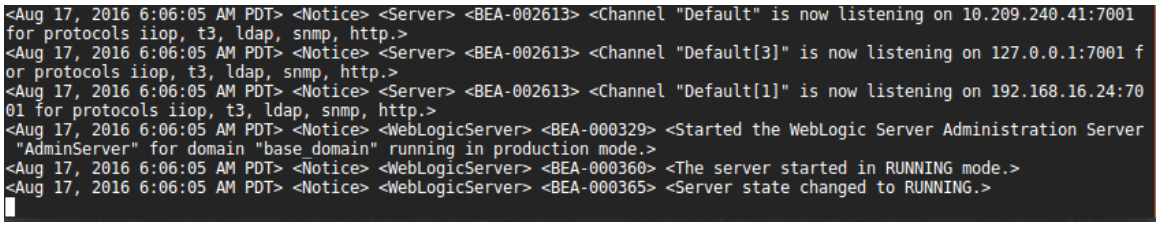
1. Sign on as an Oracle WebLogic Server user (jde920).
2. Change directory to:

   ```
   /myapp1/Oracle/Middleware/user_projects/domains/base_domain/bin
   ```

3. Start the WebLogic Admin Console by executing this script from the command prompt:

   ```
   ./startWebLogic.sh
   ```

4. At the prompts, enter the Admin user (weblogic) and password for the WebLogic Admin Console

   As indicated at the bottom of the above screen sample, when the console completes normally, the WebLogic Admin Console can be accessed after this message is displayed:

   ```
   <Server Started in RUNNING mode>
   ```

   Caution: The Admin Server Console will shut down if this process is closed.

5. To access the WebLogic Admin Console, enter this URL into a browser such as Firefox or Internet Explorer:

   http://<host>:<port>/console

   For example:

   ```
   http://your_machine_name:7001/console
   ```

   The WebLogic Admin Console is displayed.

b. Start the Node Manager

Note: The JD Edwards EnterpriseOne Server Manager requires that Node Manager is running in order to start and stop managed servers. You can start Node Manager as a background process.

To start the Node Manager:

1. Sign on as an Oracle WebLogic Server user (jde920).
2. Change directory to:

   `/myapp1/Oracle/Middleware/user_projects/domains/base_domain/bin`

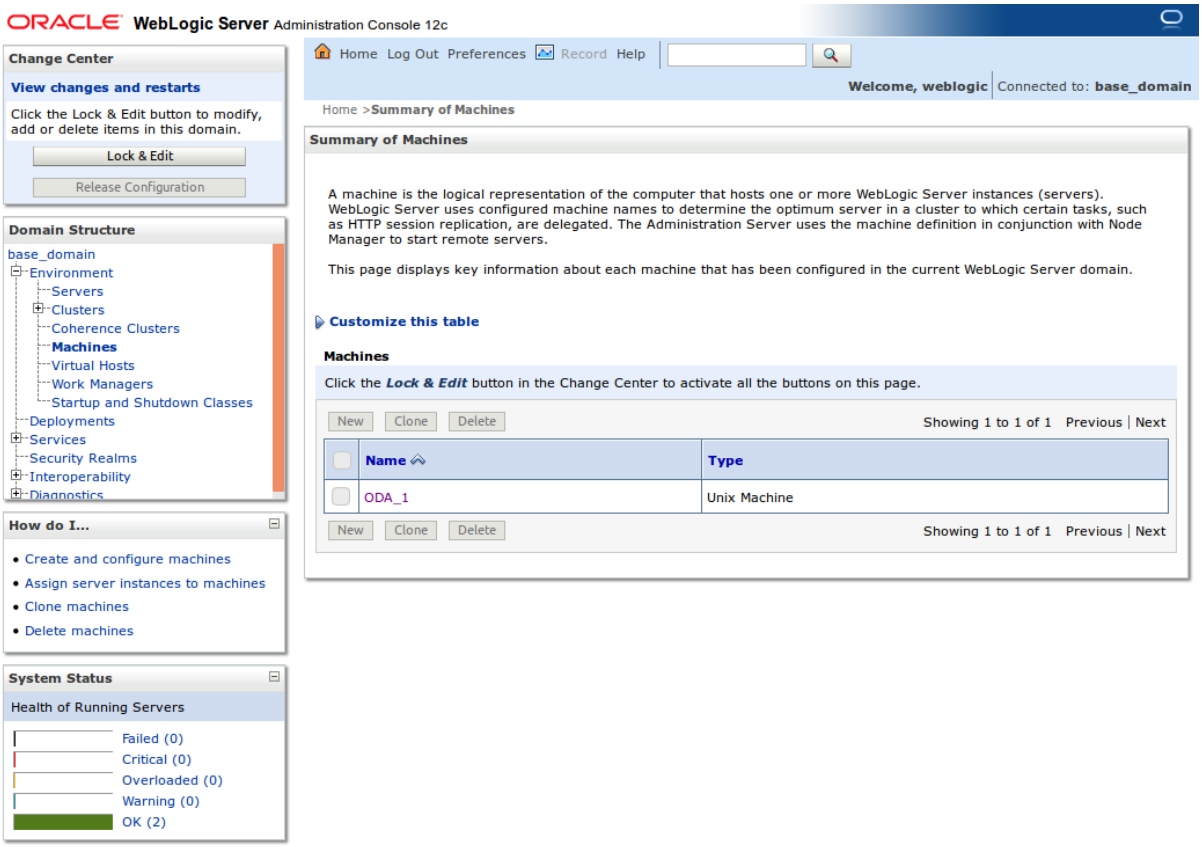
3. Start the Node Manager by executing this script from the command prompt:

   `./startNodeManager.sh`

```
Domain name mappings:

base_domain -> /myapp1/oracle/Middleware/user_projects/domains/base_domain

<Aug 17, 2016 6:16:19 AM PDT> <INFO> <WebLogic Server 12.1.3.0.0  Wed May 21 18:53:34 PDT 2014 1604337 >
<Aug 17, 2016 6:16:20 AM PDT> <INFO> <Secure socket listener started on port 5556, host localhost/127.0.0.1>
```

c. Create the Machine Definition

Caution: JD Edwards EnterpriseOne Server Manager requires a Machine to be defined prior to creating a J2EE Server.



Note: You can skip this step if you have created the machine definition during the installation.

d. Create boot.properties to Start and Stop Servers (as “jde920” user)

If you need to keep the WebLogic Admin Server running, you can launch the start up process as a background process. In order to do that, you need to enter the admin user and password in a `boot.properties` file. As a result, the start up process uses the user and password from this file instead of prompting for it.

The `boot.properties` file contains two fields:

Caution: You must enter these two parameters in lower case.

`username=`

The default value for username is weblogic. You should change this value in this file to a valid value for your WebLogic Admin Server.

`password=`

The default value for username is welcome1. You should change this value in this file to a valid value for your WebLogic Admin Server.

The information entered is this file are encrypted after the first access. This file must be located in this directory:

```
<MW_HOME>/user_projects/domains/<your_domain>/servers/<server_name>
/security

Example:
/myapp1/Oracle/Middleware/user_projects/domains/base_domain/servers
/AdminServer/security
```

Note:

You might need to create the security directory if it does not already exist.

5. Install the Server Manager Agent for JDE Enterprise Server on ODA

a) Setup the JDE management agent home

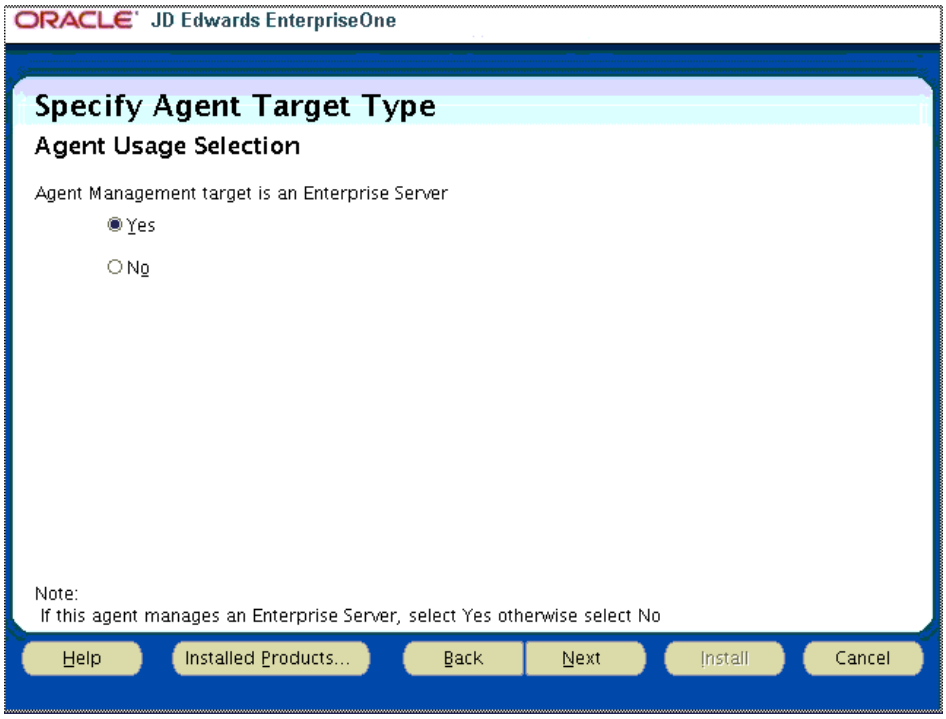
```
# mkdir -p /myapp1/jdedwards/jes_agent
# chown -R jde920:jde920 /myapp1/jdedwards/jes_agent
```

b) Login into Server Manager console (running on the deployment server) and click on Management Agents and then Download the Linux Server Manager Agent Installer. Move it on ODA and unzip on a stage area. Change permissions to runInstaller and unzip (example):

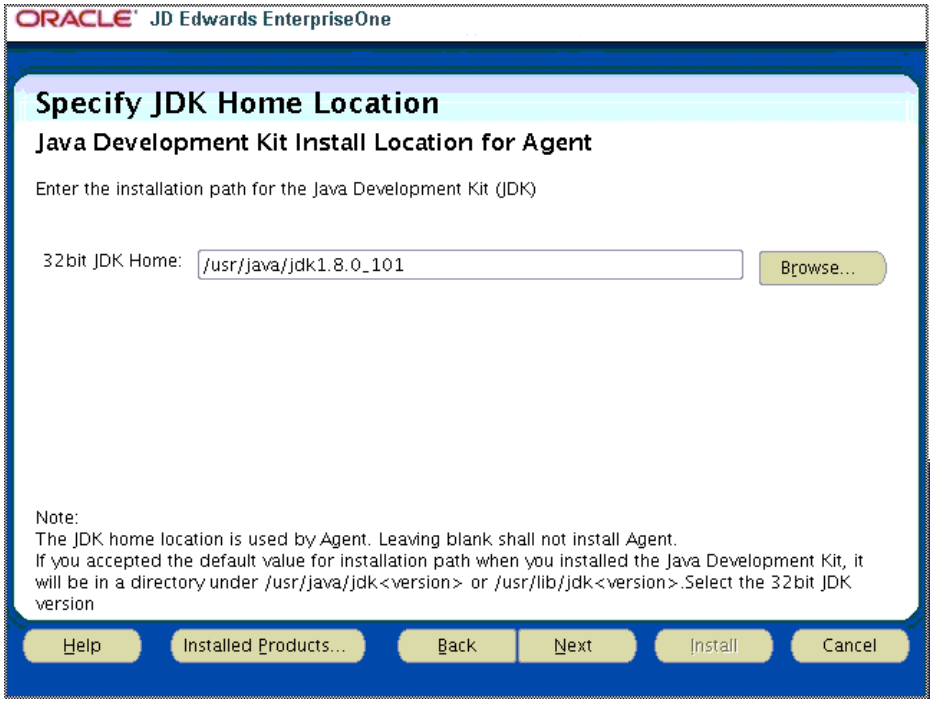
```
# chmod +x /myapp1/stage/SM_Agent/Disk1/install/runInstall
# chmod +x /myapp1/stage/SM_Agent/Disk1/install/unzip
```

c) Run the runinstaller for the Server Manager Agent (the required software is “generated” from the Server Manager Console for linux host)

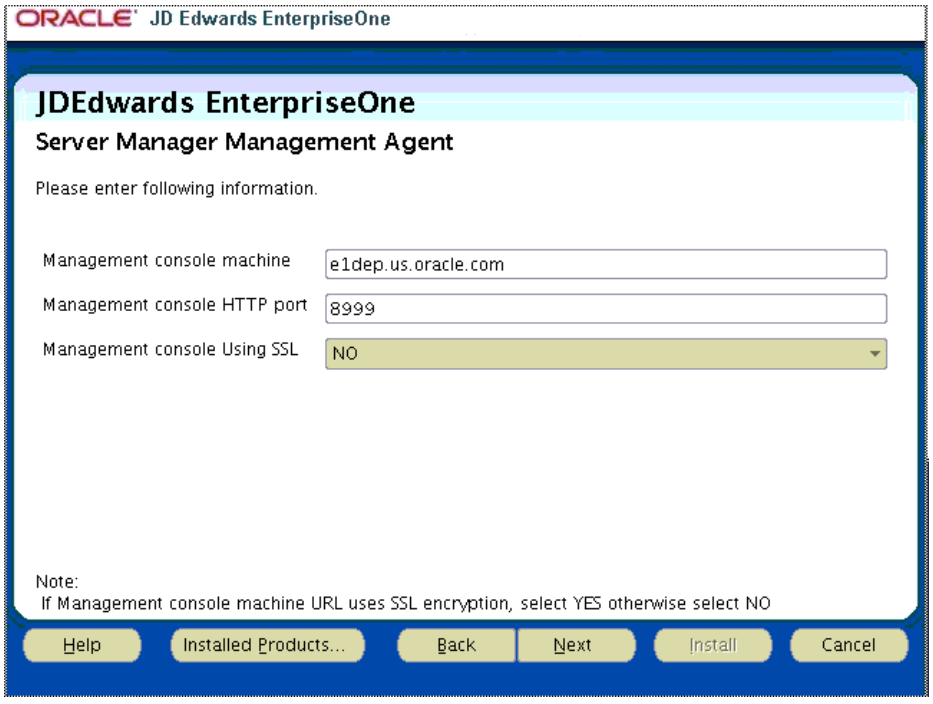
Note: at specify Agent Target Type, you need to choose “Yes” as Enteprise Server

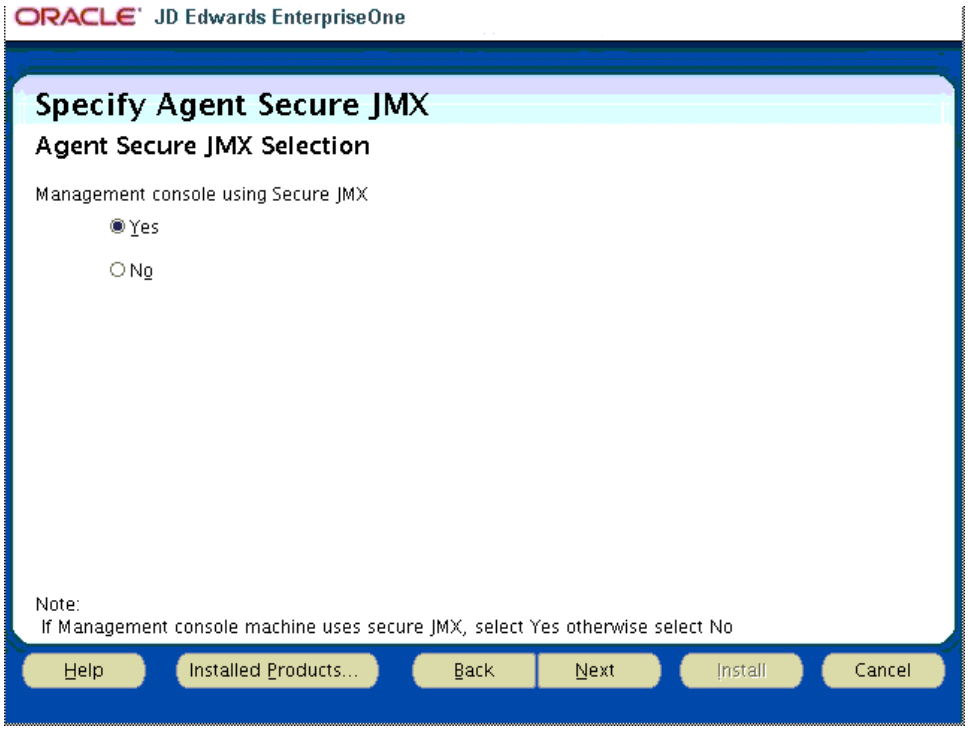


Specify the 32bit JDK installed early:



Specify the JDE Server Manager Console host (in our case the JDE deployment server host):





Login into Server Manager console on the JDE deployment server and complete the configuration:

```
http://<hostname:8999/manage
example:
       http://e1dep.us.oracle.com:8999/manage
       (default username & password: jde_admin/jde_admin)
```

Note: you could install the JDE Server Manager agent for the JDE Enterprise Server in silent mode using a response file as following:

```
# cat jes_agent.rsp

RESPONSEFILE_VERSION=2.2.1.0.0
UNIX_GROUP_NAME="oinstall"
FROM_LOCATION="<SM_agent_stage_path>/Disk1/stage/products.xml"
ORACLE_HOME="/myapp1/jdedwards/jes_agent"
ORACLE_HOME_NAME="JES_Agent"
ACCEPT_LICENSE_AGREEMENT=true
TOPLEVEL_COMPONENT={"com.e1.servermanager.agent.unix","9.2.0.0.0"}
SELECTED_LANGUAGES={"en"}
COMPONENT_LANGUAGES={"en"}
INSTALL_TYPE="Custom"
JDK_HOME="/usr/java/jdk1.8.0_77"
JDE_SEC_JMX_Q=true
JDE_ENTSVR_AGNT=true
JDE_DIALOG_LIST={"<server manager console hostname>","8999","NO"}
JDE_64_YN=true

(if SM Console uses SSL encryption, on JDE_DIALOG_LIST "YES")
```

Then issue the following command:

```
<SM_agent_stage_path>/Disk1/install/runInstaller -silent -responseFile
<path>/jes_agent.rsp
```

6. Install the Server Manager Agent for Oracle web logic server on ODA

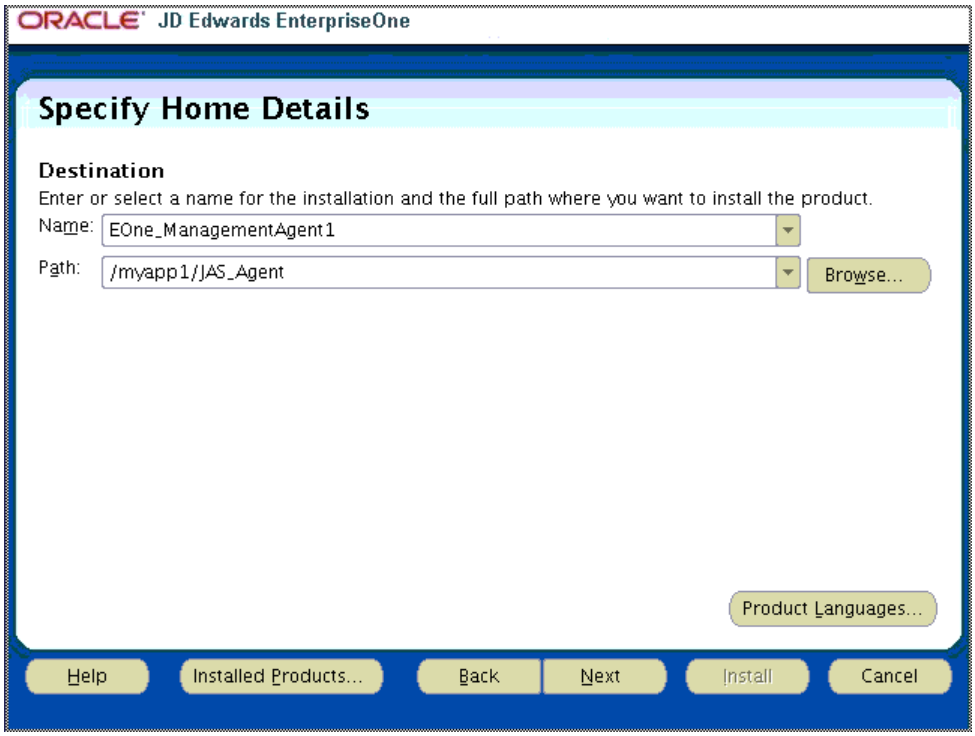
1. Setup the JDE management agent home

```
# mkdir -p /myapp1/jdedwards/jas_agent
# chown -R jde920:jde920 /myapp1/jdedwards/jas_agent
```

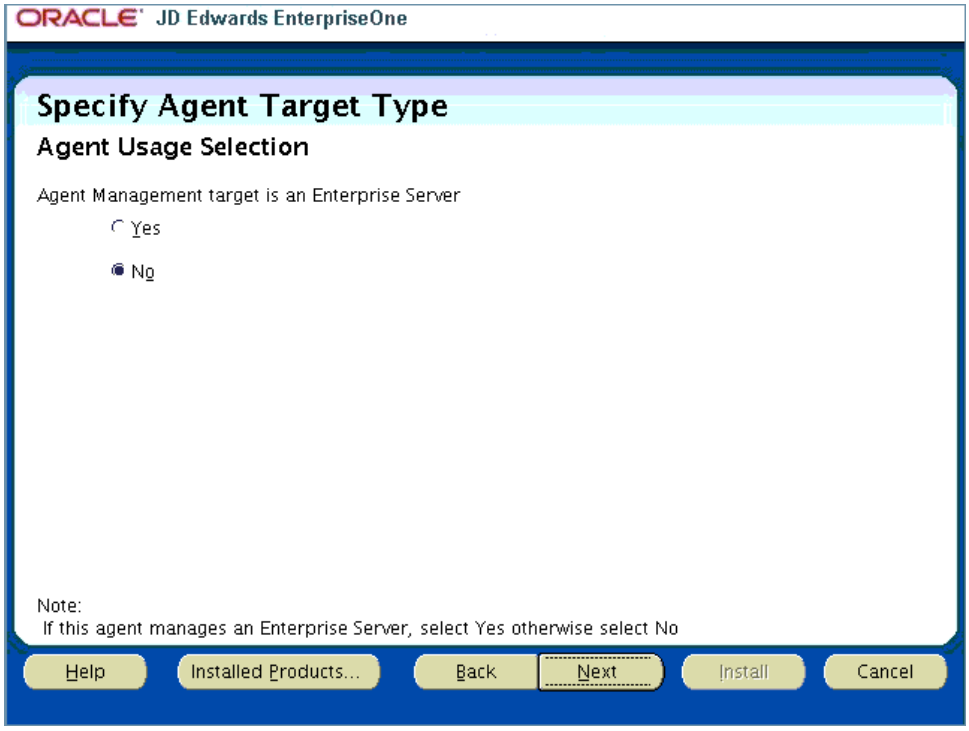
2. Login into Server Manager console (running on the deployment server) and click on Management Agents and then Download the Linux Server Manager Agent Installer. Move it on ODA and unzip on a stage area. Change permissions to runInstaller and unzip (example):

```
# chmod +x /myapp1/stage/SM_Agent/Disk1/install/runInstall
# chmod +x /myapp1/stage/SM_Agent/Disk1/install/unzip
```

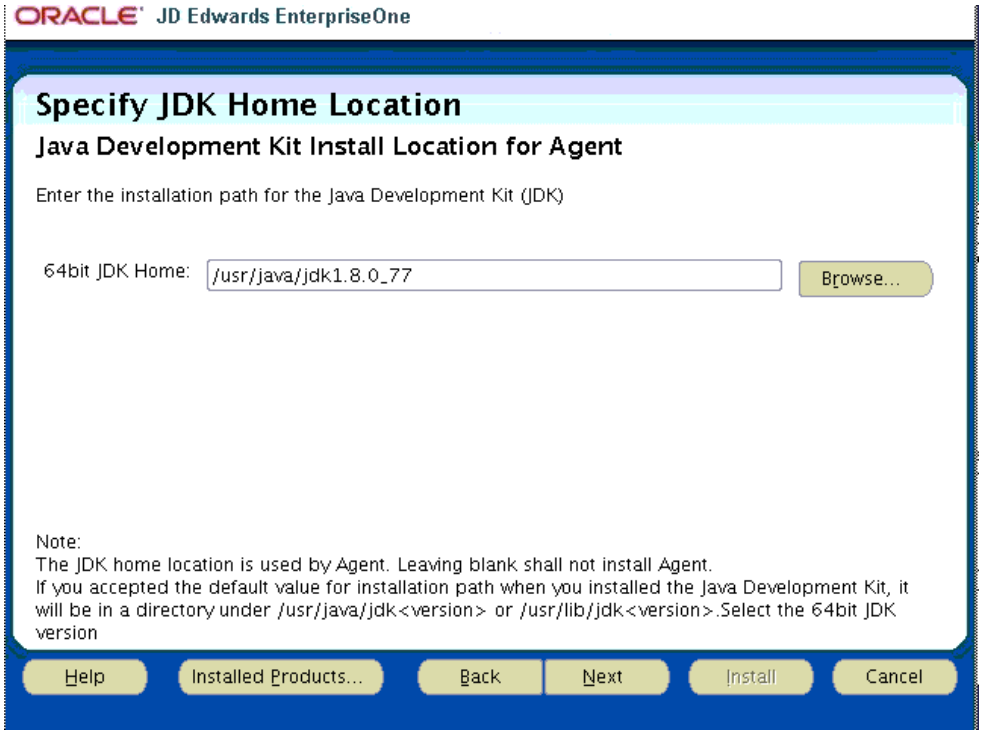
3. Run the runinstaller for the Server Manager Agent (the required software is the same for the Enterprise Server Agent above)



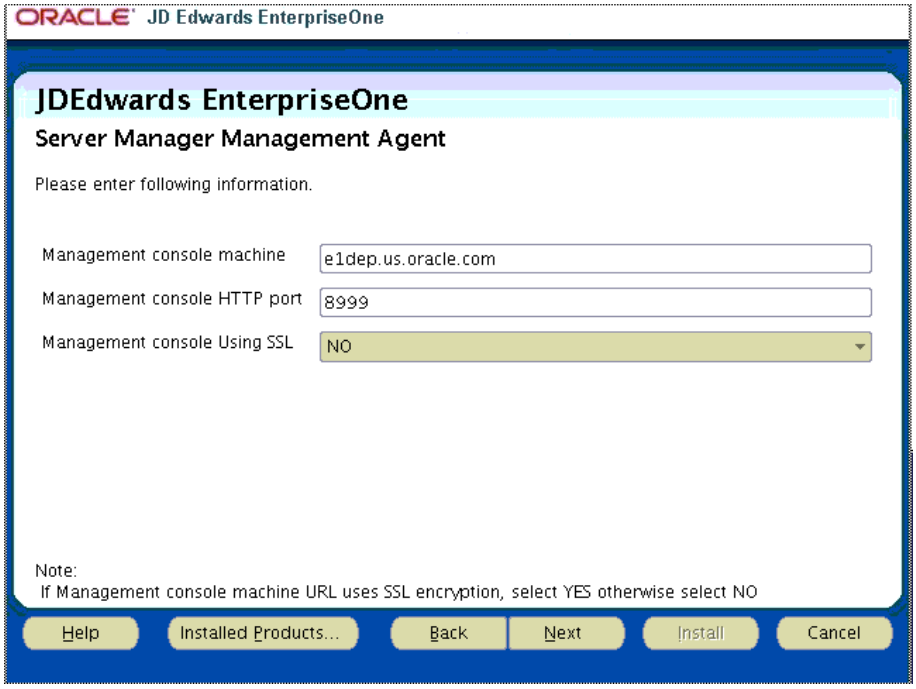
Note: at specify Agent Target Type, you need to choose “No” as Enteprise Server

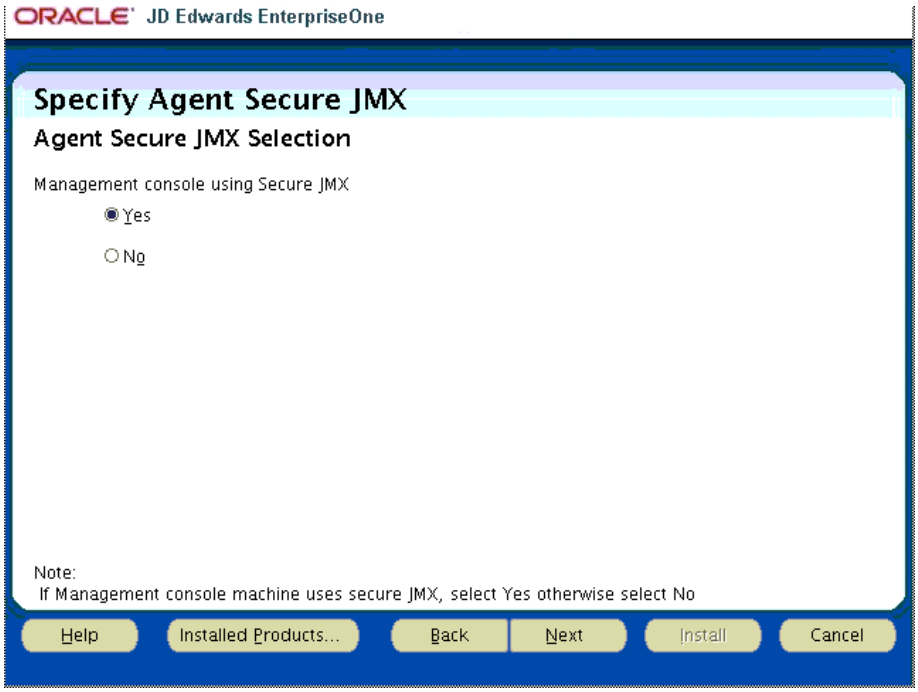


In this case the JDK must be the 64bit version



Specify the JDE Server Manager Console host (in our case the JDE deployment server host):





Login into Server Manager console on the JDE deployment server and complete the configuration:

http://<hostname:8999/manage
example:
http://e1dep.us.oracle.com:8999/manage
(default username & password: *jde_admin/jde_admin*)

Note: you could install the JDE Server Manager agent for the JDE Web Application Server in silent mode using a response file as following:

```
# cat jas_agent.rsp

RESPONSEFILE_VERSION=2.2.1.0.0
UNIX_GROUP_NAME="oinstall"
FROM_LOCATION="<SM_agent_stage_path>/Disk1/stage/products.xml"
ORACLE_HOME="/myapp1/jdedwards/jas_agent"
ORACLE_HOME_NAME="JAS_Agent"
ACCEPT_LICENSE_AGREEMENT=true
TOPLEVEL_COMPONENT={"com.e1.servermanager.agent.unix","9.2.0.0.0"}
SELECTED_LANGUAGES={"en"}
COMPONENT_LANGUAGES={"en"}
INSTALL_TYPE="Custom"
JDK_HOME="/usr/java/jdk1.8.0_77"
JDE_SEC_JMX_Q=true
JDE_ENTSVR_AGNT=false
JDE_DIALOG_LIST={"<server manager console hostname>","8999","NO"}
JDE_64_YN=true

(if SM Console uses SSL encryption, on JDE_DIALOG_LIST "YES")
```

Then issue the following command:

```
<SM_agent_stage_path>/Disk1/install/runInstaller -silent -responseFile
<path>/jes_agent.rsp
```

Appendix A

A characteristics with all JD Edwards tiers co-located on one machine is that the documentation uses jde920 user for everything installed. However, there are conflicting environment configurations. For example, the JDE Enterprise server, and JDE Server Manager Agent requires Java 32-bit path while the WebLogic server must have Java 64-bit path. To help keep this straight and avoid issues, three environments under the user jde920 are maintained; three sub folders with related "*.profile*" are configured.

Here is how it works. When you login to user jde920, a query will be given for choice of environment. It will ask for one of 3 roles to choose from:

- ent (enterprise server)
- web (weblogic server)
- agent (server manager agent)

Instructions:

- Login as user jde920
- Create the following folder

```
$ mkdir ~/home_web
$ mkdir ~/home_ent
$ mkdir ~/home_agent
```

- Save the "`.profile`" as "`.profile_ORIG`"
- Copy the "`profile.jde`" into the "`.profile`" of jde920
- Copy the contents of each "`profile_XXX`" into the location of the "`home_XXX`" directory. For example, open the contents of "`profile_ent`", into the `/home/jde910/home_ent` directory as .profile.

```
#------------------------------------------------------------
# profile.jde - JDE profile
#------------------------------------------------------------
found="false"
while [ "X$found" != "Xtrue" ]
do
        echo -e "Enter environment: [agent,ent,web]:\n"
        read ans
        if [ "X$ans" == "Xent" ] ; then
                found="true"; export HOME=/home/jde920/home_ent;
        fi
        if [ "X$ans" == "Xweb" ] ; then
                found="true"; export HOME=/home/jde920/home_web;
        fi
        if [ "X$ans" == "Xagent" ] ; then
                found="true"; export HOME=/home/jde920/home_agent;
        fi
done
. $HOME/.profile;
export PS1=${LOGNAME}@($ans):'$PWD$ '
cd $HOME
#------------------------------------------------------------
# EndOfFile
#------------------------------------------------------------
```

```
#-------------------------------------------------------------
# profile.web - JDE Weblogic Server profile
#-------------------------------------------------------------

export MYJAVA=/usr/java/jdk1.8.0_77
export PATH="${MYJAVA}/bin:$PATH"
export WLS_HOME=/myapp1/Oracle/Middleware
export WLS_COMMON=${WLS_HOME}/wlserver_10.3/common
export WLS_BIN=${WLS_HOME}/wlserver/server/bin
export DOMAIN_HOME=${WLS_HOME}/user_projects/domains/base_domain
export DOMAIN_BIN="${DOMAIN_HOME}/bin"

#-------------------------------------------------------------
#locations
alias 2h="cd ${WLS_HOME};                       pwd"
alias 2s="cd ${DOMAIN_HOME}/servers;            pwd"
alias 2node="cd ${DOMAIN_BIN};                  pwd"
alias 2log="cd ${DOMAIN}/servers/JVM920/logs;   pwd"
#-------------------------------------------------------------

#-------------------------------------------------------------
#Start commands
alias startnm="(cd ${DOMAIN_BIN}; pwd; ksh ./startNodeManager.sh)                 &"
alias startws="(cd ${DOMAIN_BIN}; pwd; ksh ./startWebLogic.sh)                    &"
alias starths="(cd ${DOMAIN_BIN}; pwd; ksh ./startManagedWebLogic.sh html_server) &"
#-------------------------------------------------------------

#-------------------------------------------------------------
#Stop commands
alias stophs="(cd ${DOMAIN_BIN}; pwd; ksh ./stopManagedWebLogic.sh html_server) &"
alias stopws="(cd ${DOMAIN_BIN}; pwd; ksh ./stopWebLogic.sh)                    &"
alias stopnm="(cd ${DOMAIN_BIN}; pwd; ksh ./stopNodeManager.sh)                 &"
#-------------------------------------------------------------

#-------------------------------------------------------------
# status commands
alias psws="ps -aef | fgrep jde920 | grep -E 'startWebLogic.sh|weblogic.Server' | fgrep -v grep"
alias psnm="ps -aef | fgrep jde920 | grep -E 'startNodeManager.sh|weblogic.NodeManager' | fgrep -v grep"
alias psall="ps -aef | fgrep jde920"
alias psw="echo 'Webogic:'; pswl; echo 'NodeMgr:'; psm"
#-------------------------------------------------------------

#-------------------------------------------------------------
# EndOfFile
#-------------------------------------------------------------
```

```
#------------------------------------------------------------
# profile.ent - JDE Enterprise Server profile
#------------------------------------------------------------

export MYJAVA=/usr/java/jdk1.8.0_101
export PATH="${MYJAVA}/bin:$PATH"
export JHOME=/myapp1/jdedwards/e920
export JHOME_BIN="${JHOME}/system/bin32"

# Added by EnterpriseOne installer for destination /myapp1/jdedwards/e920 - do not edit
if [ -f /myapp1/jdedwards/e920/SharedScripts/enterpriseone.sh ] ; then
 . /myapp1/jdedwards/e920/SharedScripts/enterpriseone.sh
fi
# End of EnterpriseOne installer changes for destination /myapp1/jdedwards/e920

#------------------------------------------------------------
#locations
alias 2h="cd $JHOME;       pwd"
alias 2ini="cd $JHOME/ini; pwd"
alias 2log="cd $JHOME/log; pwd"
#------------------------------------------------------------

#------------------------------------------------------------
#Start commands
alias startes="(cd ${JHOME_BIN}; pwd; ksh ./RunOneWorld.sh) &"
#------------------------------------------------------------

#------------------------------------------------------------
#Stop commands
alias stopes="(cd ${JHOME_BIN}; pwd; ksh ./EndOneWorld.sh) &"
#------------------------------------------------------------

#------------------------------------------------------------
# status commands
alias psall="ps -aef | fgrep jde920"
alias pse="ps -aef | fgrep "$JHOME" | fgrep -v fgrep"
#------------------------------------------------------------

#------------------------------------------------------------
alias sqltest="sqlplus JDE/JDE@jdedb"
alias portest="porttest JDE JDE PV920"
alias vini="vi $JHOME/ini/JDE.INI"
#------------------------------------------------------------

#------------------------------------------------------------
# EndOfFile
#------------------------------------------------------------
```

```
#-------------------------------------------------------------
# profile.agent - JDE Server Manager Agent profile
#-------------------------------------------------------------

export MYJAVA=/usr/java/jdk1.8.0_101
export PATH="${MYJAVA}/bin:$PATH"

export JAS_AGENT_HOME=/myapp1/jdedwards/jas_agent/SCFHA
export JES_AGENT_HOME=/myapp1/jdedwards/jes_agent/SCFHA

#-------------------------------------------------------------
#locations
alias 2haa="cd $JAS_AGENT_HOME;        pwd"
alias 2logaa="cd $JAS_AGENT_HOME/logs; pwd"

alias 2hea="cd $JES_AGENT_HOME;        pwd"
alias 2logea="cd $JES_AGENT_HOME/logs; pwd"
#-------------------------------------------------------------

function start_jas_agent {
  echo "find $JAS_AGENT_HOME -name '*.log' -exec rm -f {} \;"
  find $JAS_AGENT_HOME -name '*.log' -exec rm -f {} \;
  ${JAS_AGENT_HOME}/bin/startAgent
  sleep 5 ; ps -aef | fgrep svrmgr_agent/SCFHA
}

function start_jes_agent {
  echo "find $JES_AGENT_HOME -name '*.log' -exec rm -f {} \;"
  find $JES_AGENT_HOME -name '*.log' -exec rm -f {} \;
  ${JES_AGENT_HOME}/bin/startAgent
  sleep 5 ; ps -aef | fgrep svrmgr_agent/SCFHA
}

#-------------------------------------------------------------
#Start commands
alias startaa="start_jas_agent"
alias startea="start_jes_agent"
#-------------------------------------------------------------

#-------------------------------------------------------------
#Stop commands
alias stopaa="${JAS_AGENT_HOME}/bin/stopAgent"
alias stopea="${JES_AGENT_HOME}/bin/stopAgent"
#-------------------------------------------------------------

#-------------------------------------------------------------
# status commands
alias psall="ps -aef | fgrep jde920"

alias psaa="ps -aef | fgrep ${JAS_AGENT_HOME} | fgrep -v fgrep"
alias fneweraa="(cd $JAS_AGENT_HOME; find . -newer ./agent.pid)"

alias psea="ps -aef | fgrep ${JES_AGENT_HOME} | fgrep -v fgrep"
alias fnewerea="(cd $JES_AGENT_HOME; find . -newer ./agent.pid)"
#-------------------------------------------------------------

#-------------------------------------------------------------
# EndOfFile
#-------------------------------------------------------------
```

Appendix B

In this section the Oracle Universal Installer “responseFile” to install in silent mode the components

- Oracle Database Client

```
#-------------------------------------------------------------
# client.rsp - Oracle Database Client responseFile
#-------------------------------------------------------------
oracle.install.responseFileVersion=/oracle/install/rspfmt_clientinstall_response_schema_v12.1.0
ORACLE_HOSTNAME=<your host name>
UNIX_GROUP_NAME=oinstall
INVENTORY_LOCATION=/u01/app/oraInventory
SELECTED_LANGUAGES=en
ORACLE_HOME=/myapp1/app/oracle/product/12.1.0/client_1
ORACLE_BASE=/myapp1/app/oracle
oracle.install.client.installType=Administrator
```

Review the following entries and change them according with your needs:

```
ORACLE_HOSTNAME=<your host name>
ORACLE_HOME=/myapp1/app/oracle/product/12.1.0/client_1
ORACLE_BASE=/myapp1/app/oracle
```

- Oracle Weblogic Server

```
#-------------------------------------------------------------
# weblogic.rsp - Oracle Weblogic Server responseFile
#-------------------------------------------------------------
[ENGINE]
Response File Version=1.0.0.0.0
[GENERIC]
ORACLE_HOME=/myapp1/Oracle/Middleware
INSTALL_TYPE=WebLogic Server
MYORACLESUPPORT_USERNAME=
DECLINE_SECURITY_UPDATES=true
SECURITY_UPDATES_VIA_MYORACLESUPPORT=false
PROXY_HOST=
PROXY_PORT=
PROXY_USER=
PROXY_PWD=<SECURE VALUE>
COLLECTOR_SUPPORTHUB_URL=
```

Review the following entries and change them according with your needs:

```
ORACLE_HOME=/myapp1/Oracle/Middleware
```

- JD Edwards Server Manager Agent for JDE Enterprise Server

```
#------------------------------------------------------------
# jes_agent.rsp - JD Edwards Server Manager Agent for JDE Enterprise Server
#------------------------------------------------------------
RESPONSEFILE_VERSION=2.2.1.0.0
UNIX_GROUP_NAME="oinstall"
FROM_LOCATION=" <SM_agent_stage_path>/Disk1/stage/products.xml"
ORACLE_HOME="/myapp1/jdedwards/jes_agent"
ORACLE_HOME_NAME="JES_Agent"
ACCEPT_LICENSE_AGREEMENT=true
TOPLEVEL_COMPONENT={"com.e1.servermanager.agent.unix","9.2.0.0.0"}
SELECTED_LANGUAGES={"en"}
COMPONENT_LANGUAGES={"en"}
INSTALL_TYPE="Custom"
JDK_HOME="/usr/java/jdk1.8.0_77"
JDE_SEC_JMX_Q=true
JDE_ENTSVR_AGNT=true
JDE_DIALOG_LIST={"<server manager console hostname>","8999","NO"}
JDE_64_YN=true
```

Review the following entries and change them according with your needs:

```
UNIX_GROUP_NAME="oinstall"
FROM_LOCATION=" <SM_agent_stage_path>/Disk1/stage/products.xml"
ORACLE_HOME="/myapp1/jdedwards/jes_agent"
ORACLE_HOME_NAME="JES_Agent"
JDK_HOME="/usr/java/jdk1.8.0_77"
JDE_DIALOG_LIST={"<server manager console hostname>","8999","NO"}
```

if SM Console uses SSL encryption, on JDE_DIALOG_LIST “YES”

- JD Edwards Server Manager Agent for JDE Web Application Server

```
#------------------------------------------------------------
# jas_agent.rsp - JD Edwards Server Manager Agent for JDE Web Application Server
#------------------------------------------------------------
RESPONSEFILE_VERSION=2.2.1.0.0
UNIX_GROUP_NAME="oinstall"
FROM_LOCATION=" <SM_agent_stage_path>/Disk1/stage/products.xml"
ORACLE_HOME="/myapp1/jdedwards/jas_agent"
ORACLE_HOME_NAME="JAS_Agent"
ACCEPT_LICENSE_AGREEMENT=true
TOPLEVEL_COMPONENT={"com.e1.servermanager.agent.unix","9.2.0.0.0"}
SELECTED_LANGUAGES={"en"}
COMPONENT_LANGUAGES={"en"}
INSTALL_TYPE="Custom"
JDK_HOME="/usr/java/jdk1.8.0_77"
JDE_SEC_JMX_Q=true
JDE_ENTSVR_AGNT=false
JDE_DIALOG_LIST={"<server manager console hostname>","8999","NO"}
JDE_64_YN=true
```

Review the following entries and change them according with your needs:

```
UNIX_GROUP_NAME="oinstall"
FROM_LOCATION=" <SM_agent_stage_path>/Disk1/stage/products.xml"
ORACLE_HOME="/myapp1/jdedwards/jas_agent"
ORACLE_HOME_NAME="JAS_Agent"
JDK_HOME="/usr/java/jdk1.8.0_77"
JDE_DIALOG_LIST={"<server manager console hostname>","8999","NO"}
```

if SM Console uses SSL encryption, on JDE_DIALOG_LIST “YES”

Reference

Oracle Documentation

	Title	URL
Oracle Database Appliance	Oracle Database Appliance Documentation	http://docs.oracle.com/cd/E75549_01/index.htm
	X6-2S/X6-2M Deployment and User's Guide	http://docs.oracle.com/cd/E75549_01/doc.121/e76082/toc.htm
	ODA - Administration and Reference Guide	http://docs.oracle.com/cd/E75549_01/doc.121/e74838/toc.htm
	Setup Poster X6-2S/X6-M	http://docs.oracle.com/cd/E75549_01/doc.121/e73487.pdf
	Oracle Database Appliance X6-2S and X6-2M	https://support.oracle.com/epmos/faces/DocumentDisplay?id=2144642.1
JD Edwards EnterpriseOne 9.2	JD Edwards EnterpriseOne Applications	http://docs.oracle.com/cd/E64610_01/index.htm
	JD Edwards EnterpriseOne Tools	http://docs.oracle.com/cd/E53430_01/index.htm
	JD Edwards Applications Installation Guide	https://docs.oracle.com/cd/E61420_01/EOIUO/toc.htm
	JD Edwards EnterpriseOne HTML Server on Oracle WebLogic Server Reference Guide	https://docs.oracle.com/cd/E61420_01/EOHLU/toc.htm

Software

	Component Name (https://support.oracle.com)	Patch Number	# Files
Oracle Database Appliance	Mandatory. GI Clone, zookeeper rom, dcs-agent rpm, dcs-controller rpm and oda-hw-mgmt rpm.	23494985	2
	Mandatory if provisioning a 12c database – DB BP RDBMS Clone	23494992	2
	Mandatory if provisioning a 11g database – DB PSU RDBMS Clone	23494997	2

Oracle Database Client 12c 32bit requirements	URL (http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64)
libstdc++-4.4.7-16.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libstdc++-4.4.7-16.el6.i686.rpm
compat-libstdc++-33-3.2.3-69.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/compat-libstdc++-33-3.2.3-69.el6.i686.rpm
libstdc++-devel-4.4.7-16.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libstdc++-devel-4.4.7-16.el6.i686.rpm
glibc-devel-2.12-1.166.el6_7.7.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/glibc-devel-2.12-1.166.el6_7.7.i686.rpm
libaio-0.3.107-10.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libaio-0.3.107-10.el6.i686.rpm
libaio-devel-0.3.107-10.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libaio-devel-0.3.107-10.el6.i686.rpm

JDE Platform Pack OUI requirements	URL (http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64)
libX11-1.6.0-6.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libX11-1.6.0-6.el6.i686.rpm
libXext-1.3.2-2.1.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libxcb-1.11-2.el6.i686.rpm
libxcb-1.11-2.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXau-1.0.6-4.el6.i686.rpm
libXau-1.0.6-4.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXext-1.3.2-2.1.el6.i686.rpm
libXi-1.7.4-1.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXi-1.7.4-1.el6.i686.rpm
libXtst-1.2.2-2.1.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/x86_64/getPackage/libXtst-1.2.2-2.1.el6.i686.rpm

JDE Platform Pack requirements	Component Name
libgcc-4.4.7-16.el6.i686	http://public-yum.oracle.com/repo/OracleLinux/OL6/latest/getPackage/libgcc-4.4.7-16.el6.i686.rpm
jdk-8u101-linux-i586 (32bit)	http://download.oracle.com/otn-pub/java/jdk/8u101-b13/jdk-8u101-linux-i586.rpm

JD Edwards EnterpriseOne Core Tools and Infrastructure 9.2.0.2.0 (http://edelivery.oralce.com)	Part Number
Oracle Database 12c Release 1 Client (12.1.0.2.0) for Linux x86 (32-bit)	**V46100-01.zip**
JD Edwards EnterpriseOne Enterprise Server Platform Pack (9.2.0.0)	**V77463-01.zip**
JD Edwards EnterpriseOne 9.2 Database Component for Oracle Database	**V77465-01.zip**
Oracle WebLogic Server 12.1.3.0.0	**V44413-01.zip**

Software Home, user and group

Component	Oracle Home Name	Oracle Home Path	Username	Group
JDK 32bit		**/usr/java/jdk1.8.0_101**	root	root
JDK 64bit		**/usr/java/jdk1.8.0_77**	root	root
Oracle Database Client 12c 32bit	OraClient12Home1	/myapp1/**app/oracle/product/12.1.0/client_1**	oracle	oinstall
JDE 9.2 – Enterprise Server	JDE_PPack_920_Home1	/myapp1/**jdewards/e920**	Jde920	Jde920
JDE 9.2 – Server Manager Agent	JES_Agent	/myapp1/**jdewards/jes_agent**	Jde920	Jde920
Oracle Weblogic Server 12c	OracleHome	/myapp1/**oracle/Middleware**	Jde920	Jde920
JDE 9.2 – Server Manager Agent	JAS_Agent	/myapp1/**jdewards/jas_agent**	Jde920	Jde920

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Hardware and Software, Engineered to Work Together

Delivering JD Edwards EnterpriseOne High Performance and Efficiency Using Oracle Database Appliance X6-2S / X6-2M / X62-L
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