

Installing Oracle 10g on z/OS

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Agenda

- **Introduction**
- **Preparation of pc / Unix Client**
- **Preparation of z/OS.**
- **Getting files onto z/OS.**
- **Installation.**
- **Trouble shooting.**
- **Installation Log files.**
- **Future.**

Introduction

- **In Oracle 10. Oracle on z/OS was shipped as an OUI (Oracle Universal Installer) package.**
- **This is a radical departure from previous releases but it allows far greater integration with the generic process. It means that people who are used to a unix / windows environment will be comfortable on z/OS.**
- **It allows greater configuration of the product.**
- **It allows us to ship more components**

Preparation of pc / Unix Client.

- **An X windows server is required for an interactive installation.**
 - This can be a linux box or a pc running and X windows application like Cgywin/Xfree86, eXceed or some other application.
- **Note: terminology is that an X Server is what would normally be regarded as a client. The X Client in our case is MVS.**
- **The X Server needs to access control disabled to allow z/OS to send windows to it**

Preparation of Z/OS.

- **z/OS 1.4 or above is required**
- **Need access to the Posix environment either via telnet / tn3270 or a shell.**
- **Java 1.4 is required.**
 - **Check with command** `java -version`
`http://www.ibm.com/servers/eserver/zseries/software/java`
- **Make needs to be configured.**
 - `cp /samples/startup.mk /etc/startup.mk`
 - **Check with** `make -V`
 - `make - Version z/OS Shell and Utilities v1.4`

Define Oracle User ID and Groups

```
//S0      EXEC PGM=IKJEFT01,DYNAMNBR=75,TIME=100,REGION=0M
//SYSPRINT DD SYSOUT=*
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD *
ADDGROUP OINSTALL SUPGROUP(SYS1) OMVS(GID(100))
ADDGROUP ORADBA    SUPGROUP(OINSTALL) OMVS(GID(101))
ADDUSER  ORACLE    DFLTGRP(OINSTALL)
AD  ORACLE.* UACC(READ)
ALU oracle OMVS(HOME('/u/oracle') PROGRAM('/bin/sh') UID(100))
ALU oracle PASSWORD(ORACLE)
PERMIT ACCT# CLASS(ACCTNUM) ACCESS(READ) ID(ORACLE)
PERMIT ISPFPROC CLASS(TSOPROC) ACCESS(READ) ID(ORACLE)
SETROPTS RACLIST(TSOPROC) REFRESH
RDEFINE STARTED ORA1NET.** STDATA(USER(oracle))
RDEFINE STARTED ORA1DB.** STDATA(USER(oracle))
SETROPTS RACLIST(STARTED) REFRESH
//
```

Define Filesystems

```
//S1          EXEC PGM=IDCAMS,REGION=0M
//SYSPRINT DD  SYSOUT=*
  DEFINE      CLUSTER          -
              (NAME(ZFS.ORACLE) -
              VOLUMES(ORA001)   -
              MEGABYTES(2500 500) -
              LINEAR            -
              SHAREOPTIONS(2))
  DEFINE      CLUSTER          -
              (NAME(ZFS.U.ORACLE) -
              VOLUMES(ORA001)   -
              MEGABYTES(10 5) -
              LINEAR            -
              SHAREOPTIONS(2))
```

Format Filesystems

```
//S1          EXEC PGM=IOEAGFMT,REGION=0M,  
//           PARM=' -aggregate ZFS.ORACLE -compat '  
//SYSPRINT DD   SYSOUT=*  
//STDOUT DD   SYSOUT=*  
//STDERR DD   SYSOUT=*  
//CEEDUMP DD   SYSOUT=*  
//S2          EXEC PGM=IOEAGFMT,REGION=0M,  
//           PARM=' -aggregate ZFS.U.ORACLE -compat '  
//SYSPRINT DD   SYSOUT=*  
//STDOUT DD   SYSOUT=*  
//STDERR DD   SYSOUT=*  
//CEEDUMP DD   SYSOUT=*
```


Mount Filesystems - BPXPRMxx

```
FILESYSTYPE TYPE(ZFS) ENTRYPOINT(IOEFSCM) ASNAME(ZFS)
```

```
MOUNT      FILESYSTEM( 'ZFS.ORACLE' )  
           TYPE(ZFS)  
           MODE(RDWR)  
           MOUNTPOINT( '/oracle' )
```

```
MOUNT      FILESYSTEM( 'ZFS.U.ORACLE' )  
           TYPE(ZFS)  
           MODE(RDWR)  
           MOUNTPOINT( '/u/oracle' )
```

```
>mount -f ZFS.ORACLE -t ZFS /oracle
```

```
>mount -f ZFS.U.ORACLE -t ZFS /u/oracle
```

SCHE00 Member

```
EDIT          ADCD.ZOSV14S.PARMLIB(SCHE00) - 01.01          Columns 00001 00072
Command ==>                                         Scroll ==>
      HALF
011700 PPT PGMNAME(ORARASC)          /* PROGRAM NAME          */
011800      NOCANCEL                  /* NOT CANCELABLE        */
011900      KEY(7)                    /* PROTECTION KEY 7 FOR DB */
012000      NOSWAP                    /* PROGRAM IS NOT SWAPABLE */
012100      SYST                      /* SYSTEM TASK, NOT TIMED  */
012200 PPT PGMNAME(ORANET)          /* PROGRAM NAME          */
012300      NOCANCEL                  /* NOT CANCELABLE        */
012400      NOSWAP                    /* PROGRAM IS NOT SWAPABLE */
012500      SYST                      /* SYSTEM TASK, NOT TIMED  */
```

APF Authorize Oracle Libraries

```
EDIT          ADCD.ZOSV14S.PARMLIB(PROG00) - 01.01          Columns 00001 00072
Command ===>                                         Scroll ===> HALF
000001 APF FORMAT(DYNAMIC)
000002 APF ADD
000003      DSNAME(ORACLE.V1010.AUTHLOAD)      VOLUME(ORA001)
```

SETPROG command to activate

SETPROG APF,ADD,DSN=ORACLE.V10103.AUTHLOAD,VOL=STOR??

File Names

- **User that does the install must have write access to /var/opt/oracle. Or you need to define the inventory location in a different place where the user does have write access.**
- **High Level Qualifier for Oracle data sets**
 - **Catalog pointers may be required**
 - **ORACLE.V10103**

Load Oracle Software.

- **Current recommended release 10.1.0.3**
- **Available on Metalink. Complete refresh.**
- **1) Download from Metalink to a PC or Unix.**
- **2) unzip file.**
 - This produces Disk1.pax and Disk2.pax
- **3) FTP these files to z/OS in **BINARY** to a temporary location.**
- **4) pax -rvf Disk[1|2].pax to extract the files**
- **5) Disk*.pax files can be discarded.**

Installation

- Change to the directory containing the expanded files

- **ls -altr**

```
-   -rwxr-xr-x  1 AROGERS  OEQA1      772 Nov 23 16:29 runInstaller
-   drwxr-xr-x  3 AROGERS  OEQA1      288 Dec  8 13:15 Translations
-   drwxr-xr-x  4 AROGERS  OEQA1     1184 Jan 31 16:31 install
-   drwxr-xr-x  3 AROGERS  OEQA1      384 Feb  9 08:56 Disk1
-   drwxr-xr-x  3 AROGERS  OEQA1      288 Feb  3 18:04 Disk2
```

- **Decide on location of Inventory**
- **Decide if you will have multiple inventories**
- **May need to define oraInst.loc**
- **>cat oraInst.loc**

```
#Oracle Installer Location File Location
#Tue Nov 23 16:45:57 PST 2004
inst_group=OEG647
inventory_loc=/qa/ship/10103/oraInventory
```

Interactive Installation.

- **Set DISPLAY**
 - **Export DISPLAY=nn.nn.nn.nn:0.0**
 - Where nn.nn.nn.nn is the ip address of your PC / Unix box which will display the X windows for you.
- **./runInstaller**
 - **-invPtrLoc /qa/ship/10103/orainst.loc**
 - **Or orainst.loc will go into /var/opt/oracle**
- **Follow the instructions on the panels**
- **Root.sh – only needed for em agent.**

Non-interactive Installation.

- **Create oraInst.loc file**
- **Copy files from Disk1/stage/Response to a local location and tailor this file.**
- **./runInstaller –silent –responseFile
“oracle.mvsosdi.server.complete.rsp”**

Trouble Shooting.

- **OUI Fails to start**
 - **Display is not set or not valid**
 - **Try xclock. Can other X applications access your X server?**
 - **Xhost +?**
 - **Permissions**
 - **Most commonly due to a failed previous install or you really do not have permission to create / update the directory.**
 - **Previous failed installation**
 - **If this is a first install, it is better to delete everything and start again – (I.e remove the inventory / remove everything under ORACLE_HOME and remove PDSE files.**

Trouble Shooting

- **Failed installation**
 - **What is the error message?**
 - - **If there is an error message displayed at your telnet session and it is something like cp -X then this is an actual command that is being invoked. Normally it means that the copy has failed because of space or RACF permissions.**
 - **Space.**
 - **OUI does check the space requirements before starting but it is not 100% accurate. Allow for some expansion of the file system up to 10%.**
 - **Interactive installs are easier than non-interactive installs provided you have X working.**

Installation log files.

- **OUI provides a very detailed log of what it is doing.**
- **Look in oraInventory/logs.**

Future.

- **Add full NLS support**
- **netca / dbca / dbma**
- **Reduce size of oui install.**
- **Tidy up response files.**

Any Questions?

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