

Author – A.Kishore/Sachin  
<http://appsdba.info>

## **Contents**

1> What is Cloning and How to do Single Node Cloning on Single machine	Page 2 - 2
2> Cloning prerequisites steps	Page 3 - 4
3> Prepare Source System	Page 5 - 6
4> Copy Source Node File System	Page 7 - 8
5> Configure Target System	Page 8 – 10
6> Finishing Tasks	Page 10 - 11

Author – A.Kishore/Sachin  
<http://appsdba.info>

## **What is Cloning and How to do Single Node cloning on Single machine**

**Cloning** is the act of creating an identical copy of an already existing Production Oracle Applications system.

Simply copying all of the components from source to target system does not provide us a working Oracle Applications system, there are various configuration files that must be changed & for this purpose we do **Cloning**.

There are various reasons for cloning an Oracle Applications system such as:

- Creating a copy of the production system for testing updates.
- Migrating an existing system to new hardware.
- Creating a stage area to reduce patching downtime.

We will use Rapid Clone to create template files for cloning on the source system. After the source system is copied to the target, Rapid Clone updates these templates to contain the new target system configuration settings. Rapid Clone will not change the source system configuration.

Note: 135792.1 - Cloning Oracle Applications Release 11i

Note: 406982.1- Cloning Oracle Applications Release 12 with Rapid Clone

In this Cloning demonstration, we will clone our Oracle R12 PROD single node instance to DEV instance. Even we are doing single node cloning, we will have to take dbTier and appsTier as two nodes. Our source and target node is ERP. And our source database node is PROD and Target database node is DEV. The TARGET directory structure is same .

Author – A.Kishore/Sachin  
<http://appsdba.info>

## ➤ Cloning Steps:

We should remember that the clone application system and existing Production application system must have same component versions & operating system type. And also we can not clone from windows to linux.

We need to perform certain prerequisites steps before cloning the source system:

Login as Applications file user & run the environment file.

```
su applmgr
```

```
cd /d01/oracle/PROD/apps/apps_st/appl
```

```
./APPSPROD_erp.env
```

```
[root@erp ~]# su applmgr
[applmgr@erp root]$ cd /d01/oracle/PROD/apps/apps_st/appl
[applmgr@erp appl]$ ls
ad          asp  cln  cus  fnd  gms  ieu  jl   oks  pos          vea
admin       ast  cn   cz   fpa  gr   iex  jmf  okx  pqh          wip
ahl         au   crp  ddd  frm  hri  igc  jtf  ont  pqp          wms
ak          ax   cs   dna  fte  hxc  igf  jtm  opi  PROD_erp.env wps
alr         az   csc  dom  ftp  hxt  igi  lns  ota  prp          wsh
ame         ben  csd  dt   fun  ia   igs  mfg  ozf  psa          wsm
ams         bic  cse  eam  fv   ibc  igw  mrp  pa   psb          xdo
amv         bil  csf  ec   gcs  ibe  imc  msc  pay  psp          xdp
amw         bim  csi  ecx  ghr  ibp  inv  msd  per  pv           xla
ap          bis  csl edr  gl   ibu  ipa  mso  pft  qa           xle
APPSPROD_erp.env biv  csm  ego  gma  ibw  ipm  msr  pji  qot          xnb
ar          bix  csp  eng  gmd  iby  irc  mst  pjm  qp           xnp
as          bne  csr  eni  gme  icx  isc  mwa  pmi  qrm          xtr
asf         bom  cua  fa   gmf  ieb  ita  oe   pn   rg           zpb
asg         bsc  cuf  fem  gmi  iec  itg  okc  po   rlm          zx
asl         cct  cug  ff   gml  iem  ja   oke  poa  sht
asn         ce   cui  fii  gmo  ieo  je   oki  pom  sqlnet.log
aso         chv  cup  flm  gmp  ies  jg   okl  pon  ssp
[applmgr@erp appl]$ ./APPSPROD_erp.env
```

Author – A.Kishore/Sachin  
<http://appsdba.info>

Login to database tier and set the environment.

su oracle

cd /d01/oracle/PROD/db/tech\_st/10.2.0

./PROD\_erp.env

```
[root@erp ~]# su oracle
[oracle@erp root]$ cd /d01/oracle/PROD/db/tech_st/10.2.0
[oracle@erp 10.2.0]$ ls
10gR2_appsutil.zip  css                jpub              opmn              root.sh
admin              ctx                jre              oracore           root.sh.old
appsmisc           dbs                ldap             oraInst.loc      root.sh.old.1
appsutil           demo              lib              oraInst.loc_back slax
appsutil.zip       diagnostics        log              ord               sqlj
assistants         has               md               oui               sqlplus
bin                hs                msg              owm               srvn
ccr                install           mgw              perl              sysman
ccr_stage          install.platform network            plsql             temp
cdata              inventory         nls              precomp           uix
cfgtoollogs       javavm           oc4j             PROD_erp.env     ultrasearch
clone              jdbc              odbc             racg              wf
config             jdk              olap             rdbms             wwg
crs                jlib             OPatch          relnotes          xdk
[oracle@erp 10.2.0]$ . ./PROD_erp.env
```

Author – A.Kishore/Sachin  
<http://appsdba.info>

## Prepare the source system

### (a) Prepare the source system database tier for cloning

Log on to the source system as the ORACLE user and run the following commands:

```
$ cd $ORACLE_HOME/appsutil/scripts/PROD_erp  
.perl /adpreclone.pl dbTier
```

```
[oracle@erp 10.2.0]$ cd appsutil/scripts/PROD_erp  
[oracle@erp PROD_erp]$ ls  
adautocfg.sh  addbctl.sh  adexecsql.pl  adpreclone.pl  adstrtdb.sql  
adchknlis.pl  addlnctl.sh  adltnodes.sh  adstopdb.sql  sqlnet.log  
[oracle@erp PROD_erp]$ Perl adpreclone.pl dbTier
```

### (b) Prepare the source system application tier for cloning

Log on to the source system as the APPLPROD user and run the following commands.

```
$ cd $/$ADMIN_SCRIPTS_HOME  
$ perl adpreclone.pl appsTier
```

```
[applmgr@erp /]$ cd /$ADMIN_SCRIPTS_HOME  
[applmgr@erp scripts]$ pwd  
//d01/oracle/PROD/inst/apps/PROD_erp/admin/scripts  
[applmgr@erp scripts]$ ls  
adalnctl.sh  adexecsql.pl  adoafmctl.sh  adstrtal.sh  jtffmctl.sh  
adapcctl.sh  adformsctl.sh  adopmctl.sh  gsmstart.sh  mwactl.sh  
adautocfg.sh  adformsrvctl.sh  adpreclone.pl  ieo  mwactlwrpr.sh  
adcmctl.sh  adoacorectl.sh  adstpall.sh  java.sh  sqlnet.log  
[applmgr@erp scripts]$ perl adpreclone.pl appsTier
```

Author – A.Kishore/Sachin  
<http://appsdba.info>

## Copy the Source Node File System

Log on to the source system application tier nodes as the APPLMGR user.

- Shut down the application tier server processes as shown below

```
cd $ADMIN_SCRIPTS_HOME
```

```
./adstpall.sh apps/appspassword
```

- Copy the following application tier directories from the source node to the target application tier node:

```
cd /do1/oracle/PROD
```

```
apps - Copy only apps directory
```

Note - No need to copy inst – perl adcfgclone.pl will create inst

```
scp -pr do1/oracle/PROD/apps applmgr@target_server:/do1/oracle/DEV
```

Once copied –

- Check the ownership as required

## Copy the database tier file system

Log on to the source system database Tier as the ORACLE user.

- Perform a normal shutdown of the source system database

```
cd $RDBMS_ORACLE_HOME/appsutil/scripts/PROD_erp
```

```
./addbctl.sh stop
```

- Copy the following application tier directories from the source node to the target application tier node:

Author – A.Kishore/Sachin  
<http://appsdba.info>

```
scp -pr do1/oracle/PROD/db/tech_st/10.2.0 oracle@target_server:/do1/oracle/DEV/db/tech_st/10.2.0
```

```
scp -pr /do1/oracle/PROD/db/apps_st/data oracle@target_server:/do1/oracle/DEV/db/apps_st/data
```

Once copied –

- Check the ownership as required
- Start up the source Applications system database and application tier processes

### **Configure the Target System**

Operating System of Target should be same as Source. Operating system should have all prerequisite packages required for Oracle R12 before configuring the Target System. Execute the following commands to configure the target system. You will be prompted for the target system specific values (SID, Paths, Ports, etc)

#### **(a). Configure the target system database server**

Log on to the target system as the ORACLE user and type the following commands to configure and start the database:

```
cd <RDBMS ORACLE_HOME>/appsutil/clone/bin  
perl adfgclone.pl dbTier
```

```
[oracle@erp /]$ cd /d01/oracle/PROD/db/tech_st/10.2.0/appsutil/clone/bin  
[oracle@erp bin]$ ls  
adfgclone.pl adchkutl.sh adclonectx.pl adclone.pl  
[oracle@erp bin]$ perl adfgclone.pl dbTier
```

Author – A.Kishore/Sachin  
<http://appsdba.info>

```
Enter the APPS password [APPS]:  
APPS
```

```
First Creating a new context file for the cloned system.  
The program is going to ask you for information about the new system:
```

```
Provide the values required for creation of the new Database Context file.
```

```
Do you want to use a virtual hostname for the target node (y/n) [n] ? :n
```

```
Target instance is a Real Application Cluster (RAC) instance (y/n) [n] :n
```

```
Target System database name [PROD]:DEV
```

## b. Configure the target system application tier server nodes

Log on to the target system as the APPLMGR user and type the following commands:

```
cd <COMMON_TOP>/clone/bin  
perl adcfgclone.pl appsTier
```

```
[applmgr@erp /]$ cd /d01/oracle/PROD/apps/apps_st/comn/clone/bin  
[applmgr@erp bin]$ ls  
adaddnode.pl adcfgclone.pl adchkutl.sh adclonectx.pl adclone.pl  
[applmgr@erp bin]$ perl adcfgclone.pl appsTier
```

```
Enter the APPS password [APPS]:  
APPS
```

```
First Creating a new context file for the cloned system.  
The program is going to ask you for information about the new system:
```

```
Provide the values required for creation of the new APPL_TOP Context file.
```

```
Do you want to use a virtual hostname for the target node (y/n) [n] ? :N
```

```
Target system database SID [PROD]:DEV
```

```
Target system database server node [erp]:
```

```
Target system database domain name [com]:
```

```
Does the target system have more than one application tier server node (y/n) [n] ? :N
```

```
Is the target system APPL_TOP divided into multiple mount points (y/n) [n] ? :N
```



Author – *A.Kishore/Sachin*  
<http://appsdba.info>

---

All enabled services for this node are started.  
Existing with status o

Author – A.Kishore/Sachin  
<http://appsdba.info>

## Finishing Tasks

Post clone steps vary from client to client, here is the basic change.

### Profile Option Name Changes at Site Level after Cloning

Site Name-> PROD, Change it to "DEV – Clone of PROD as of 15-Dec-10"

Connect to System Administrator

#### Profile – System

Find System Profile Values

Display

- Site
- Application
- Responsibility
- Server (B)
- Organization
- User
- Profiles with No Values

Profile Site Name%

Find Clear

Author – A.Kishore/Sachin  
<http://appsdba.info>

Profile Option Name	Site	Application	Responsibility	User
Site Name	DEV - Clone of PROD as of 1			

Now Oracle Apps Instance of DEV Looks Like:

