



Service Management

→ logical grouping of sessions which are performing a similar kind of task is called a service,

→ There are 2 types of services

- ① Internal services
- ② Application specific services

→ Internal services are sys\$background and sys\$users
once we create a db, by default internal services will be created.

→ Oracle 10gR2 totally supports 64 services out of which 200 are internal services

→ From 10gR2, Oracle totally supports 100 services

→ we can create a service with the following options

- ① DBCA
- ② SQL*Plus
- ③ Enterprise Manager console
- ④ DBMS_SERVICE (package)

→ dbms-service is generally used to create a service in standalone system.

** If service is down, we cannot establish a connection to the instance. As a RAC dba we need to monitor the availability of services.

→ In 11g we don't have the option of creating services using DBCA. Oracle recommends us to create service either by using enterprise manager console or svctl

→ Whenever we create a service, service information has to be updated at 3 layers

- ① Database layer (system.dbf)
- ② clusterware layer (ocr file)
- ③ Network layer (tnsnames.ora)

* → When we create a service using dbca, service information will be updated at all 3 layers and the service will be started automatically

* → When we create a service using svctl or enterprise manager console, service information will not be updated at network layer and the service has to be started manually.

→ At the time of creating a service we can choose one of the instance as preferred and the other as available

→ More than one instance has preferred and more than one instance available is also possible.

→ Preferred means user establishes a connection to that particular instance and upon failure of that instance, user session will failover to the available instance

** → RAC supports 2 types of failovers

- ① session failover
- ② select failover

NOTE:- There is no concept of DML failover in a RAC syst
(not only preferred available)

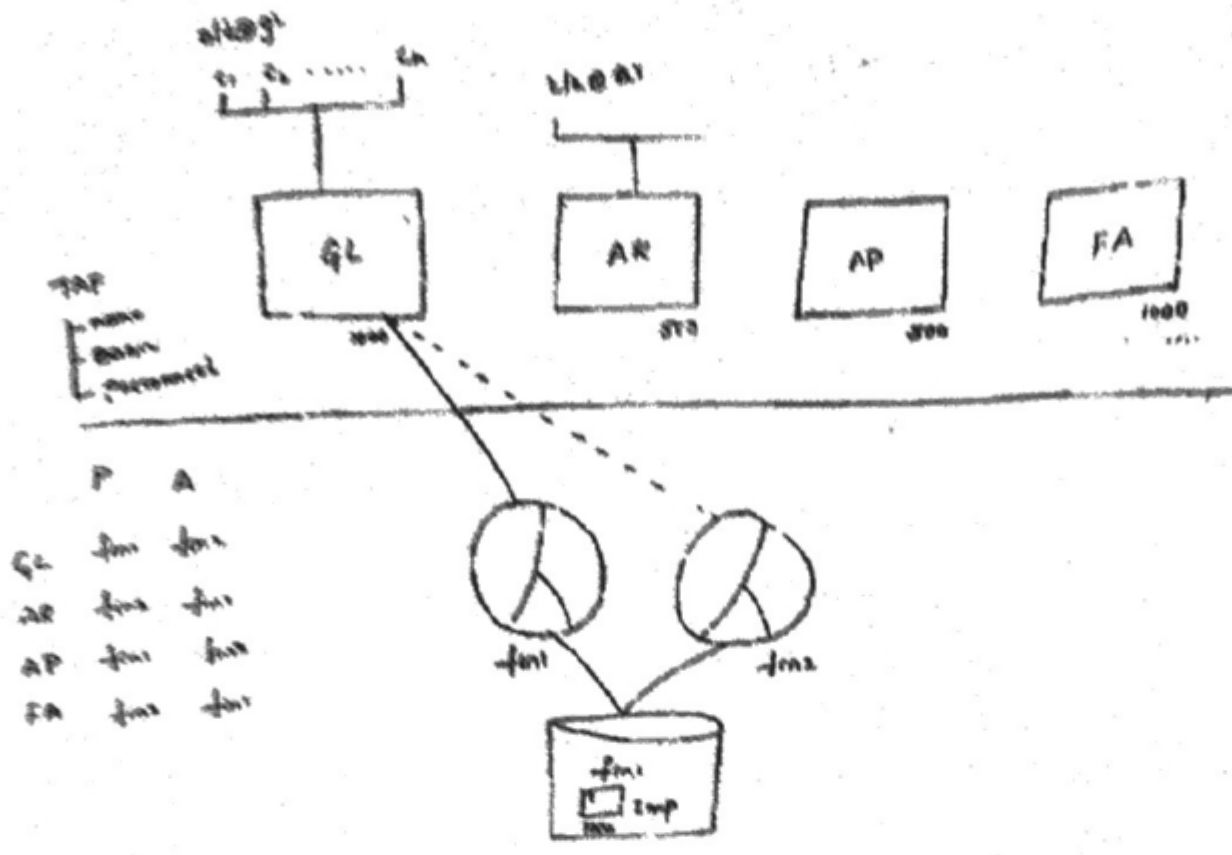
→ At the time of creating a service, we can choose TAF
(Transparent Application Failover) policy parameter like

- ① none
- ② Basic
- ③ Preconnect

→ If the TAF policy parameter is none then there will be no failover

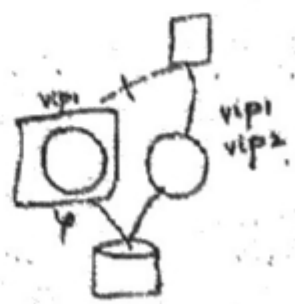
→ If the TAF policy parameter is basic, user establishes a connection to the preferred instance, upon the failure of the preferred instance he will establish a connection to the available instance.

→ If the TAF policy parameter is preconnect user establishes a connection to the preferred instance as well as a backup connection to the available instance but his stmts will be executed in the preferred only.



GL =

- (Description =
- (Addresslist = (Protocol = TCP) (host = lma2-vip) (port = 1501))
- (Addresslist = (. (host = lma2-vip) (port = 1501))
- (load-balance = yes)
- (Service-name = yes)
- (method = basic)
- (Retries = 100) n/s/n/s
- (delay = 5)



NOTE :- In 10g oracle has introduced the concept of virtual ip to overcome the default TCP/IP timeout delay in notifying the applications.

Types of init.ora parameters in a RAC system :-

→ In a RAC system init.ora parameters are broadly categorized into

① Instance specific parameters

② Common parameters

→ Parameters which are prefixed with * are called common parameters

→ Parameters which are prefixed with instance name are called instance specific parameters

```
$ export ORACLE_SID=humsa
```

```
$ sqlplus "l as sysdba"
```

```
sql> show parameter spfile
```

```
sql> create pfile = '1/home/oracle/init_humsa.ora from spfile';
```

```
> exit
```

```
$
```

(a)

RAC Specific Parameters:-

- * cluster_database_instances
- * cluster_database

Instance

hms1.instance_number = 1

hms2.instance_number = 2

* remote_listener = 'LISTENER-HMS'

hms2.thread = 2

hms1.thread = 1

hms1.undo_tablespace = 'UNDOTBS1'

hms2.undo_tablespace = 'UNDOTBS2'

SQL> show parameter open_cursors

SQL> alter system set open_cursors = 400 scope = both sid = 'hms1';

> alter system set open_cursors = 500 scope = both sid = '*';

Administering ASM :-

ASM init.ora parameters:-

\$ cd \$ORACLE_HOME/dbs

\$ vi init+ASM1.ora

cluster_database = true (RAC specific)

background_dump_dest = ?/u01/app

| db_home/admin/+ASM | bdump

core_dump_dest

| cdump

user_dump_dest

| udump

```

instance-type = asm
large-pool-size = 128
remote-login-password-file = exclusive
asm-diskgroups = 'ASM-DG-DATA', 'ASM-DG-FRA'
+ASM2.instance-type = 2
+ASM1.instance-type = 1

```

```

$ export ORACLE_SID = +ASM1
SQL > desc v$asm_disk
> select name, total-mb, free-mb, path, state from v$asm_disk
> select name, total-mb, free-mb, state from v$asm_diskgroup

```

Adding a disk to the existing diskgroup :-

```

# fdisk /dev/sda
P
n
L
U
+10g
10g
# partprobe
# ssh lms2
# partprobe
lms2] # cd /etc/init.d
initd] # /usr/sbin/lsblk
# /usr/sbin/cvtool disk vols /dev/sdb2
# /usr/sbin/scandisks
# /usr/sbin/lsblk

```

linux] # cd /etc/init.d

init.d] # ./oraclasm scandisks

./oraclasm listdisks

SQL > alter distgroup asm-dg data add disk 'ORCL:VOL3';

linux] # su - oracle

\$ cd \$ORACLE_HOME /admin

\$ ls

\$ cd +ASM1

\$ cd bdump1

\$ ls

\$ tail -f alert +ASM1.log

\$asmcmd

ASMCMD > lsct

> lsdg (list distgroups)

> ls

> cd ASM-DG-^{DATA}~~DATA~~

> ls

> cd hums

> ls

> cd asm-dg-fol

> ls

> cd hums

> ls

> cd archivelog

> cd 2012-11-22

> ls

linux] # export ORACLE_SID= hums

sqlplus "/as sysdba"

sql > alter system switch logfile;

> alter system archivelog connect;

Service Management :-

Creating and Adminstring high availability services :-

linux] # dbca

Oracle RAC database

Next

Service Management

Next

Next

click on Add

Entry Service Name:

click on ok

hums1: preferred

hums2: Available

TAF policy: Basic

click on Add

Entry Service Name:

click on ADD

hums1: preferred

hums2: Available

: pre-connect



click on Add
 Enter service name : AP
 click on ok
 hms1 : Available
 hms2 : Preferred
 TAF policy : Basic
 click on Finish
 click on ok

```

lms1]# export ORACLE_SID=hms1
# sqlplus "/as sysdba"
SQL> desc gv$services;

> select inst_id, name, creation_date from gv$services

lms1]# svctl status service -d status hms
# svctl config service -d hms
# cd $ORACLE_HOME/network/admin
# vi tnsnames.ora

# sqlplus "/as sysdba"
> select inst_id, username, state, service_name from
gv$session
where username = 'SCOTT';

> save userinfo.sql
> alter user scott account unlock;
> alter user scott identified by tiger;
  
```

```
lmo2] $ export ORACLE_SID=hms1
```

```
$ sqlplus scott/tiger@gl
```

```
sql > @userinfo.sql
```

```
$ sqlplus scott/tiger@ae
```

```
scott > select inst_id, username, state, service_name
```

```
$ sqlplus scott/tiger@ae
```

```
scott > insert into salgrade select * from salgrade;
```

```
> / > / > / > / > / > / > /
```

```
> commit;
```

```
> select count(*) from salgrade;
```

```
> select * from salgrade;
```

```
> shut abort
```

```
lmo1] $ svctl status database -d hms
```

```
$ svctl status service -d hms
```

```
$
```

```
lmo2] $ cd $ORACLE_HOME/admin/hms/bdmp
```

```
$ ls
```

```
-100
```

```
$ tail -10 alert_hms2.log | more
```

```
lmo1] $ svctl start instance -i hms1 -d hms
```

```
$ svctl status instance -i hms1 -d hms
```

```
$ svctl config service -d hms
```

```
$ svctl stop service -s gl -d hms
```

```
$ svctl stop service -s ae -d hms
```

```
$ svctl start service -s gl -d hms
```

```
$ svctl start service -s ba -d hms
```

```
$ svctl status service -d hms
```