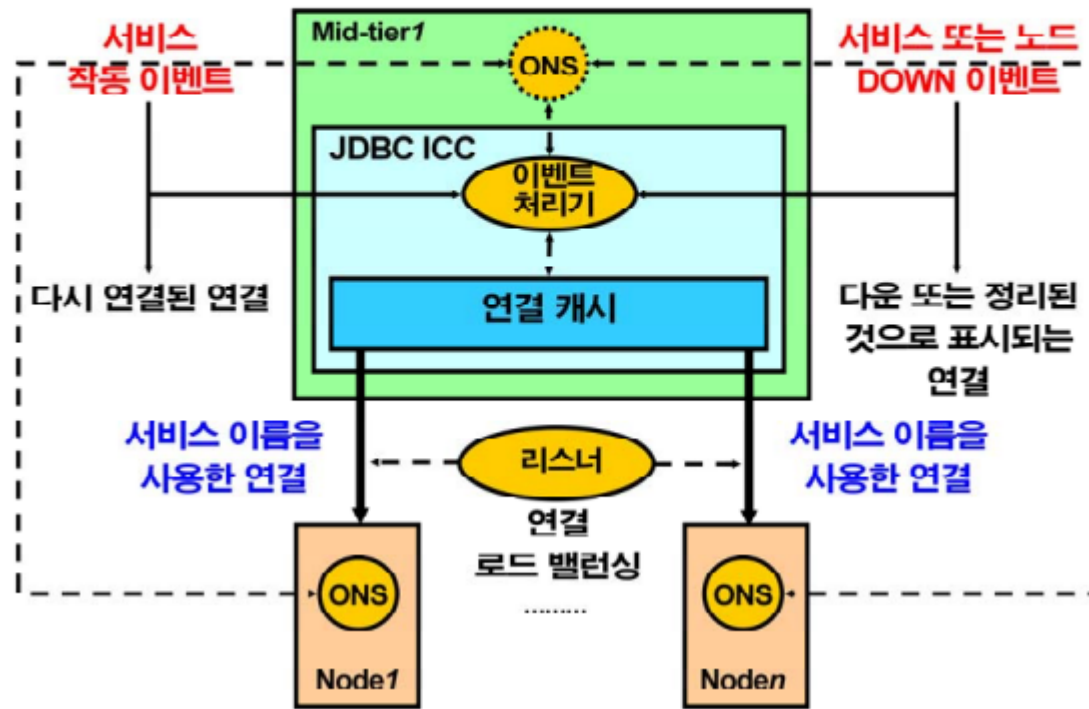# ✿ 76. FAN (Fast Application Notification)

JDBC Fast Connection Failover: 개요

장애가 발생했다는 메세지와 load balancing 정보를 응용프로그램에 빨리 알려주는 기능

- 관련 데몬 프로세서: ons(oracle notification service)
- noti 하는 정보
    1. 장애가 발생했다는 정보
    2. load balancing 정보

오라클 클라이언트 --------> 미들 티어 ---------> 오라클 db 서버

    클라이언트   --------->


```
실습. fan 기능을 구현하기
1. oltp7 서비스를 만들고 시작시킨다.
(1번 노드)
srvctl add  service  -d racdb  -s oltp7  -r racdb1,racdb2
srvctl start  service -d  racdb -s oltp7

2. sys 유저에서 oltp7 서비스를 modify 한다
(sql 1 sys)
exec dbms_service.modify_service (  -
  service_name =>'oltp7',   -
  aq_ha_notifications => true,  -
  failover_method  => dbms_service.failover_method_basic, -
  failover_type  => dbms_service.failover_type_session,  -
  failover_retries  => 180, failover_delay => 5, -
  clb_goal => dbms_service.clb_goal_long );

3. ons 프로세서가 잘 떠 있는지 확인한다.
crs_stat -t
```

```
[oracle@racdb1 ~]$ crs_stat -t
Name           Type         Target    State      Host
------------------------------------------------------------
ora.CRS.dg     ora....up.type ONLINE    ONLINE     rac1
ora.DATA.dg    ora....up.type ONLINE    ONLINE     rac1
ora.FRA.dg     ora....up.type ONLINE    ONLINE     rac1
ora....ER.lsnr ora....er.type ONLINE    OFFLINE
ora....N1.lsnr ora....er.type ONLINE    ONLINE     rac1
ora.asm        ora.asm.type   ONLINE    ONLINE     rac1
ora.cvu        ora.cvu.type   ONLINE    ONLINE     rac1
ora.gsd        ora.gsd.type   OFFLINE   OFFLINE
ora....network ora....rk.type ONLINE    ONLINE     rac1
ora.oc4j       ora.oc4j.type  ONLINE    ONLINE     rac1
ora.ons        ora.ons.type   ONLINE    ONLINE     rac1
ora....SM1.asm application    ONLINE    ONLINE     rac1
ora....C1.lsnr application    ONLINE    OFFLINE
ora.rac1.gsd   application    OFFLINE   OFFLINE
ora.rac1.ons   application    ONLINE    ONLINE     rac1
ora.rac1.vip   ora....t1.type ONLINE    ONLINE     rac1
ora....SM2.asm application    ONLINE    ONLINE     rac2
ora....C2.lsnr application    ONLINE    OFFLINE
ora.rac2.gsd   application    OFFLINE   OFFLINE
ora.rac2.ons   application    ONLINE    ONLINE     rac2
ora.rac2.vip   ora....t1.type ONLINE    ONLINE     rac2
ora.racdb.db   ora....se.type ONLINE    ONLINE     rac1
ora....tp7.svc ora....ce.type ONLINE    ONLINE     rac1
ora....er2.svc ora....ce.type ONLINE    ONLINE     rac2
ora....lba.svc ora....ce.type ONLINE    ONLINE     rac1
ora....lba.svc ora....ce.type ONLINE    ONLINE     rac1
ora....er2.svc ora....ce.type ONLINE    ONLINE     rac2
ora.scan1.vip  ora....ip.type ONLINE    ONLINE     rac1
[oracle@racdb1 ~]$
```

4. 아래의 내용을 tnsnames.ora 에 넣습니다.
cd $ORACLE_HOME/network/admin
vi tnsnames.ora
----
oltp7=
  (DESCRIPTION =
    (address_list=
     (load_balance=on)
     (failover=on)
    (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.56.111)(PORT = 1521))
    (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.56.112)(PORT = 1521)))
    (CONNECT_DATA =
      (SERVICE_NAME = oltp7)
      (server = dedicated   )`
     # (failover_mode=(type=select)(method=basic))
)
)
----
sqlplus scott/tiger@oltp7


```
[oracle@racdb1 ~]$ sqlplus scott/tiger@oltp7

SQL*Plus: Release 11.2.0.4.0 Production on Fri Apr 5 12:07:56 2024

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Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.4.0 - 64bit Pro
With the Partitioning, Real Application Clusters, Automatic Storage M
Data Mining and Real Application Testing options

oltp7(SCOTT) >  ^C
```

5. 별도의 창을 열어서 sys 유저로 접속한 후 shutdown abort를 실행한다.
(sql 1 sys)
shutdown abort

- 시간이 지나고 실행한다.

```
(sql 1 oltp7)
@i
```

```
oltp7(SCOTT) >  @i

INSTANCE_NAME    STATUS
---------------- -----------
racdb2           OPEN
```