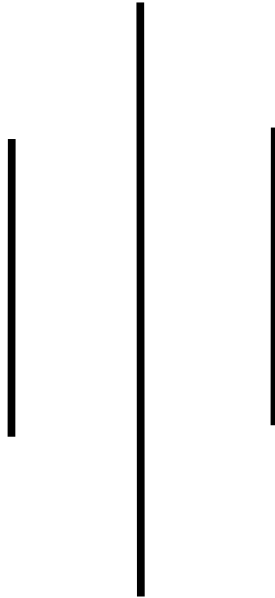


# **Deerwalk Institute Of Technology**

## **Database Administration**



**Lab:**

**Submitted By:**

**Name: Sagar Giri**

**Roll No. 205**

**Submitted To:**

**Narayan Chalise**

**Date:**

Create a user first:

```
C:\Users\IT Club>sqlplus
SQL*Plus: Release 10.2.0.3.0 - Production on Thu May 19 00:31:07 2016
Copyright (c) 1982, 2006, Oracle. All Rights Reserved.
Enter user-name: SYSTEM
Enter password:

Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options
SQL> CREATE USER rman IDENTIFIED BY rman
 2 TEMPORARY TABLESPACE temp
 3 DEFAULT TABLESPACE users
 4 QUOTA UNLIMITED ON users;

User created.
```

Grant **RECOVERY\_CATALOG\_OWNER** to the created user.

```
SQL> GRANT RECOVERY_CATALOG_OWNER TO rman;

Grant succeeded.
```

Exit SQLPLUS and connect to newly created user using **CATALOG** parameter

```
C:\Users\IT Club>rman CATALOG rman/rman
Recovery Manager: Release 10.2.0.3.0 - Production on Thu May 19 00:34:30 2016
Copyright (c) 1982, 2005, Oracle. All rights reserved.
connected to recovery catalog database
RMAN>
```

In RMAN console, create a **CATALOG**

```
RMAN> CREATE CATALOG;

recovery catalog created
```

Try registering database using **REGISTER DATABASE** command:

```
RMAN> REGISTER DATABASE;

RMAN-00571: =====
RMAN-00569: ===== ERROR MESSAGE STACK FOLLOWS =====
RMAN-00571: =====
RMAN-03002: failure of register command at 05/19/2016 00:39:05
RMAN-06171: not connected to target database
```

It will generated error because, target backup database is not connected. So, we need to exit SqlPlus and connect to target database.

```

C:\Users\IT Club>RMAN TARGET SYS/dwit#123@dwt CATALOG rman/rman@dwt
Recovery Manager: Release 10.2.0.3.0 - Production on Thu May 19 00:49:35 2016
Copyright (c) 1982, 2005, Oracle. All rights reserved.
connected to target database: DWIT (DBID=1660597217)
connected to recovery catalog database
RMAN> register database;
database registered in recovery catalog
starting full resync of recovery catalog
full resync complete
RMAN>

```

Now, we can register our database for the backup process.

## BACKING UP DATABASE

### a) Offline Backup

Offline backup is done while database instance is in shutdown state. To shutdown the database, first we need to login in SqlPlus with **SYS AS DBA** user and initiate **SHUTDOWN IMMEDIATE** command.

```

Enter user-name: sys as sysdba
Enter password:
Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Production
With the Partitioning, OLAP and Data Mining options
SQL> SHUTDOWN IMMEDIATE;
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL> STARTUP MOUNT;
ORACLE instance started.

Total System Global Area  578813952 bytes
Fixed Size                  1291844 bytes
Variable Size             260049340 bytes
Database Buffers          310378496 bytes
Redo Buffers                7094272 bytes
Database mounted.
SQL> exit
Disconnected from Oracle Database 10g Enterprise Edition Release 10.2.0.3.0 - Pr
oduction
With the Partitioning, OLAP and Data Mining options

```

Now in another window, login to **RMAN** console using

**RMAN TARGET SYS/<pass>@<db\_instance>** command.

After login is successful, **BACKUP DATABASE;** command will backup the whole database.

```

C:\Users\IT Club>RMAN TARGET SYS/dwit#123@dwit
Recovery Manager: Release 10.2.0.3.0 - Production on Thu May 19 01:05:04 2016
Copyright (c) 1982, 2005, Oracle. All rights reserved.
connected to target database: DWIT (DBID=1660597217, not open)
RMAN> BACKUP DATABASE;

Starting backup at 19-MAY-16
using target database control file instead of recovery catalog
allocated channel: ORA_DISK_1
channel ORA_DISK_1: sid=156 devtype=DISK
channel ORA_DISK_1: starting full datafile backupset
channel ORA_DISK_1: specifying datafile(s) in backupset
input datafile fno=000001 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\SYSTEM01.DBF
input datafile fno=000003 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\SYSAUX01.DBF
input datafile fno=000005 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\EXAMPLE01.DBF
input datafile fno=000002 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\UNDOTBS01.DBF
input datafile fno=000004 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\USERS01.DBF
channel ORA_DISK_1: starting piece 1 at 19-MAY-16
channel ORA_DISK_1: finished piece 1 at 19-MAY-16
piece handle=C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\DWIT\BACKUPSET\2016_05_19\01_MF_NNNDP_TAG20160519T010519_CMSJ3MF8_.BKP tag=TAG20160519T010519 comment=
NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:55
channel ORA_DISK_1: starting full datafile backupset
channel ORA_DISK_1: specifying datafile(s) in backupset
including current control file in backupset
including current SPFILE in backupset
channel ORA_DISK_1: starting piece 1 at 19-MAY-16
channel ORA_DISK_1: finished piece 1 at 19-MAY-16
piece handle=C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\DWIT\BACKUPSET\2016_05_19\01_MF_NCSNF_TAG20160519T010519_CMSJ5D2Q_.BKP tag=TAG20160519T010519 comment=
NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:03
Finished backup at 19-MAY-16
RMAN>

```

## b) Online Backup

For the online backup, database instance should be in the **ARCHIVELOG** mode. To know the log mode of the database, run **SELECT LOG\_MODE FROM V\$DATABASE** command;

```

SQL> select LOG_MODE from v$database;

LOG_MODE
-----
NOARCHIVELOG

```

To change the **LOG\_MODE**, fire **ALTER DATABASE ARCHIVELOG** command.

```

SQL> alter database archive log;

Database altered.

SQL> select LOG_MODE from v$database;

LOG_MODE
-----
ARCHIVELOG

```

Now, we can do Online Backup. To do so, login to RMAN console, using target database username and password. And fire **BACKUP DATABASE** command.

```

C:\Users\IT Club>RMAN TARGET SYS/dwit#123@dwit
Recovery Manager: Release 10.2.0.3.0 - Production on Thu May 19 01:14:54 2016
Copyright (c) 1982, 2005, Oracle. All rights reserved.
connected to target database: DWIT (DBID=1660597217)
RMAN> BACKUP DATABASE;

Starting backup at 19-MAY-16
using target database control file instead of recovery catalog
allocated channel: ORA_DISK_1
channel ORA_DISK_1: sid=159 devtype=DISK
channel ORA_DISK_1: starting full datafile backupset
channel ORA_DISK_1: specifying datafile(s) in backupset
input datafile fno=000001 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\SYSTEM01.DBF
input datafile fno=000003 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\SYSAUX01.DBF
input datafile fno=000005 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\EXAMPLE01.DBF
input datafile fno=000002 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\UNDOTBS01.DBF
input datafile fno=000004 name=C:\ORACLE\PRODUCT\10.2.0\ORADATA\DWIT\USERS01.DBF
channel ORA_DISK_1: starting piece 1 at 19-MAY-16
channel ORA_DISK_1: finished piece 1 at 19-MAY-16
piece handle=C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\DWIT\BACKUPSET\2016_05_19\01_MF_NNND_F_TAG20160519T011505_CMSJOY1V_.BKP tag=TAG20160519T011505 comment=
NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:45
channel ORA_DISK_1: starting full datafile backupset
channel ORA_DISK_1: specifying datafile(s) in backupset
including current control file in backupset
including current SPFILE in backupset
channel ORA_DISK_1: starting piece 1 at 19-MAY-16
channel ORA_DISK_1: finished piece 1 at 19-MAY-16
piece handle=C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\DWIT\BACKUPSET\2016_05_19\01_MF_NCSNF_TAG20160519T011505_CMSJQDNR_.BKP tag=TAG20160519T011505 comment=
NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:02
Finished backup at 19-MAY-16

```