BÀI TẬP THỰC HÀNH 7

Quản lý Tablespace, Datafile

1. **Mục tiêu**
   - Tạo và quản lý Tablespace.
2. **Thực hiện**
   - **Set các biến môi trường**
   ```
   export ORACLE_SID=orcl
   export ORACLE_HOME=/u01/app/oracle/product/11.2.0/dbhome_1
   export PATH=$PATH:$ORACLE_HOME/bin
   ```

   - **Kiểm tra dung lượng của các Tablespace**
   ```
   SELECT /* + RULE */  df.tablespace_name "Tablespace",
          df.bytes / (1024 * 1024) "Size (MB)",
          SUM(fs.bytes) / (1024 * 1024) "Free (MB)",
          Nvl(Round(SUM(fs.bytes) * 100 / df.bytes),1) "% Free",
          Round((df.bytes - SUM(fs.bytes)) * 100 / df.bytes) "% Used"
     FROM dba_free_space fs,
          (SELECT tablespace_name,SUM(bytes) bytes
             FROM dba_data_files
            GROUP BY tablespace_name) df
    WHERE fs.tablespace_name (+)  = df.tablespace_name
     --and fs.tablespace_name like 'LOG2012%'
    GROUP BY df.tablespace_name,df.bytes
   UNION ALL
   SELECT /* + RULE */ df.tablespace_name tspace,
          fs.bytes / (1024 * 1024),
          SUM(df.bytes_free) / (1024 * 1024),
          Nvl(Round((SUM(fs.bytes) - df.bytes_used) * 100 / fs.bytes),
   1),
          Round((SUM(fs.bytes) - df.bytes_free) * 100 / fs.bytes)
     FROM dba_temp_files fs,
          (SELECT tablespace_name,bytes_free,bytes_used
             FROM v$temp_space_header
            GROUP BY tablespace_name,bytes_free,bytes_used) df
    WHERE fs.tablespace_name (+)  = df.tablespace_name
    GROUP BY df.tablespace_name,fs.bytes,df.bytes_free,df.bytes_used
    ORDER BY 4 DESC;
   ```

   ```
   Tablespace                    Size (MB)  Free (MB)   % Free    % Used
   ---------------------------- ---------- ---------- --------- ---------
   USERS                                 5    3.6875        74        26
   UNDOTBS1                            100   71.4375        71        29
   ```

```
SYSAUX                                        520      29.75        6           94
SYSTEM                                        680      7.375        1           99
TEMP                                           29          0        0          100
```

- **Tạo các tablespace**
  ```
  SQL> create tablespace DATA_TBS datafile '+DATA' size 100M
  autoextend on next 10M MAXSIZE 1G;

  SQL> create tablespace INDX_TBS datafile '+DATA' size 100M
  autoextend on next 10M;
  ```

- **Kiểm tra dung lượng của các ASM Diskgroup**
  ```
  SQL> select name,total_mb,free_mb from v$asm_diskgroup;

  NAME                             TOTAL_MB    FREE_MB
  ---------------------------- ---------- ----------
  DATA                             49134      47562
  FRA                              24567      24335
  ```

- **Resize cho datafile**
  ```
  col FILE_NAME format a50
  col TABLESPACE_NAME format 15
  col TABLESPACE_NAME format a15;
  select tablespace_name,file_name from dba_data_files;

  TABLESPACE_NAME FILE_NAME
  --------------- ------------------------------------------------
  USERS           +DATA/orcl/datafile/users.259.851600847
  UNDOTBS1        +DATA/orcl/datafile/undotbs1.258.851600847
  SYSAUX          +DATA/orcl/datafile/sysaux.257.851600847
  SYSTEM          +DATA/orcl/datafile/system.256.851600847
  DATA_TBS        +DATA/orcl/datafile/data_tbs.266.851782949
  INDX_TBS        +DATA/orcl/datafile/indx_tbs.267.851783011

  SQL> alter database datafile
  '+DATA/orcl/datafile/data_tbs.266.851782949' resize 1G;
  ```

- **Thêm datafile vào tablespace**
  ```
  alter tablespace DATA_TBS add datafile '+DATA' size 1G;
  ```

- **Offline tablespace**
  ```
  ALTER TABLESPACE INDX_TBS OFFLINE;
  ```

- **Online tablespace**
  ```
  ALTER TABLESPACE INDX_TBS ONLINE;
  ```

- **Drop tablespace**
```
drop tablespace DATA_TBS including contents and datafiles;
drop tablespace INDX_TBS including contents and datafiles;
```