Oracle Administration : Lab. 1

Analysis of an Existing Oracle instance (eg ORCL)

1. You can connect to Oracle as administrator with the command ;

$) sqlplus / as sysdba (or $)sqlplus sys/isima as sysdba)

List the instance name, database name and the value of data block size.

2. List the name and the size of data files, log files and the name of control files.

3. Display version number.

4. What is the number of dynamic views ?

Stopping and starting an instance (eg ORCL)

1. Try to change the value of the data block size and observe what happens ;
   a. stop the database
   b. copy an existing parameter file

      $) cp /u01/app/oracle/admin/orcl/pfile/init.ora.89..... myinit.ora

   c. change the db_block_size parameter (double its size) in your parameter file myinit.ora
   d. restart the database

      $)startup pfile = …../myinit.ora

2. .Connect under scott/tiger and insert lines into the EMP table (ex. Insert into emp (empno, ename) values (1000, 'toto')) . Open a second session and try to stop the database in normal mode and then in immediate shutdown mode, explain what happens in each case.

3. Restart the instance. Open a new sqlplus session as scott/tiger and check what happened with the employee 'toto' you inserted earlier.
4. Make sure there are at least two open sessions, one session as scott and another as administrator. From the scott session, insert one tuple into the EMP table. From the SYS session, stop the instance in transaction mode (shutdown transactional). What is going on ?
5. Open a new shell window and try logging in as scott/tiger. What is going on ?
6. Return to the scott session from which you performed the insertion of the table emp. Validate the transaction with the command “commit”. What happens at the SYS session from which you ran “shutdown transactional” ?

Creating a new database

1. Create the following directories:

   /u01/app/oracle/oradata/FI

   /u01/app/oracle/flash_recovery_area/FI

   /u01/app/oracle/admin/FI

   /u01/app/oracle/admin/FI/adump

   /u01/app/oracle/admin /FI/dpdump

   /u01/app/oracle/admin/FI/pfile

2. Create a new initFI.ora parameter file in the ../FI/pfile directory by copying from the pfile in ../orcl/pfile and modify the following:
   - Replace the word orcl with FI
   - Comment the memory_target lines and undo_tablespace
   - Add the parameter instance_name ;

     Instance_name=FI

- Modify the control_files parameter ;

  Control_files= (”/u01/app/oracle/oradata/FI/control01.ctl”)

3. Download creationFI.sql script file on the site and check the content of this file, specially the options logfile, datafile, maxlogfiles, maxdatafiles, … .
4. Start the instance with the option “nomount” with your pfile. Run the script creationFI.sql.
5. After creation, Make sure that the database files have been created. Display the name of data files, control files and log files.
6. Try to display the name of the users of the database? What is going on ?

Creating Data Dictionary Views and Creating Standard Packages

1. Create the data dictionary views.

2. Display the name of the users of the database.

3. Establish the use of PL / SQL functionality.

4. Execute the utlsampl.sql script used to create the sample database (scott/tiger user and tables emp, dept, ...).

5. Verify that the scott/tiger user has been created along with the associated sample database.

Oracle Administration : Lab. 2

Controle files :

1. Where are the control files and what are their names?

2. Save the control file (generating the SQL command that recreates it). Save the generated script in the control.sql file. Observe this file.

3. Try to start the database without control files. To do this, create a copy of the initF5.ora parameter file and comment the line of the parameter “control_files” in the copy parameter file. Start the database with this parameter file. What's going on?

4. From your copy parameter file, multiplex the existing control files. To do this, create a new control03.ctl control file in a $HOME/adminbd-tp2/DISK2 directory. Check if all control files (including control03.ctl) are used.

5. What is the maximum number of data files you can create in the database? What is the current number of data files in the database?

6. Delete the control file in the directory DISK2 (created for the previous question Q4).

Redo Log files :

1. List the number and location of existing log files and display the number of log file groups and the number of members per group.

2. Is Archive Log mode enabled in your database?

3. What is the current log group?

4. Switch the current log group and verify that your change has been taken into account.

5. Add a log member to each group. Check the result.

6. Create a new log group in the DISK2 directory and verify its existence.

7. Move the members created for the question Q.5 to the DISK2 directory.

8. Delete the log group created previously (Q. 6).

9. Delete the log files in the directory DISK2.

Data files and tablespaces :

1. In the /u01/app/oracle/oradata/FI/ directory, create the following subdirectories: DISK1, DISK2, DISK3, and DISK4.

2. Create the following tablespaces:

   a. DATA01 for tables.

   b. TEMP for temporary segments (activation of no increase of "extent" size).

   c. INDX01 for indexes (activate the 500K automatic extension if additional extents are required).

   d. RONLY for read-only tables.

Tablespace name	Directory	File name (size)
DATA01	DISK4	data01.dbf (2M)
TEMP	DISK3	temp02.dbf (5M)
INDX01	DISK2	indx01.dbf (3M)
RONLY	DISK1	ronly01.dbf (2M)

3. Check the creation of the tablespaces physically and logically (display the list of tablespaces, the associated files and the size of each file).

6. We would like to add 1M to the DATA01 tablespace. What are two ways to increase the size of the tablespace? test these two methods.

7. Move the INDX01 tablespace in the directory DISK1.

8. Display the total size and number of files of each tablespace.

9. Display the size of the free space in each tablespace.