



Database Management

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Semester: 2018/2019

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I. INTRODUCTION

In the database management TP, we tried to be used to Oracle as well as did some basic operations.

II. ORACLE ADMINISTRATION : LAB. 1

A. Analysis of an Existing Oracle instance (eg ORCL)

Questions Number	Commands (phenomenon)
1	select name from v\$database; show parameter db_block_size; select instance_name from v\$instance;
2	select name, bytes from v\$datafile; select distinct v\$logfile.member, v\$log.bytes from v\$log, v\$logfile where v\$logfile.group# = v\$logfile.group#;(seems something is wrong) select name from v\$controlfile;
3	select * from v\$version;
4	select count(*) from V\$fixed_table where name like 'V\$%';

B. Stopping and starting an instance (eg ORCL)

Questions Number	Commands (phenomenon)
1	Res: Data block size can not be changed. cp /ora/oracle/admin/orcl/pfile/init.ora.930201804913 myinit.ora.930201804913 startup pfile =/home/oracle/myinit.ora.930201804913
2	Try to create a table: create tablespace data_test datafile '\home\Oracle\TableSpace\data_1.dbf' size 10M; create user scott identified by tiger default tablespace data_test; grant connect,resource to scott; grant dba to scott; create table EMP1(empno number(10) primary key, ename varchar2(20) not null); insert into EMP1(empno,ename) values(1000,'toto'); shutdown in normal mode, it was blocked. shutdown immediate mode, it can be shutdown.
3	no row be selected; It means nothing was inserted into the table.
4	"shutdown transactional" was been blocked.
5	error, you are no longer logined in.
6	The database was shutdown.

C. Creating a new database

Questions Number	Commands (phenomenon)
4	startup nomount pfile = /ora/oracle/admin/FI/pfile/initFI.ora @/home/oracle/Oracle/creationFI.sql
5	select name from v\$datafile; select member from v\$logfile; select name from v\$controlfile;
6	select username,count(username) from v\$session where username is not null group by username; select * from all_users;

D. Creating Data Dictionary Views and Creating Standard Packages

Questions Number	Commands (phenomenon)
1	start /ora/oracle/product/11.2.0/db_1/rdbms/admin/catalog.sql run too much time;
2	select * from dba_users;
3	start /ora/oracle/product/11.2.0/db_1/rdbms/admin/catproc.sql run too too too much time
4	start /ora/oracle/product/11.2.0/db_1/rdbms/admin/utlsampl.sql
5	connect scott/tiger select * from emp;

III. ORACLE ADMINISTRATION : LAB. 2

A. Control files

Questions Number	Commands (phenomenon)
1	show parameter control_files
2	alter database backup controlfile to trace; create controlfile
3	without the controlfile will occur a error. startup pfile = /ora/oracle/admin/orcl/pfile/initF5.ora.930201804913
4	show parameter control_files
5	select file_name from dba_data_files; show parameter DB_FILES

B. Redo Log files

Questions	Commands (phenomenon)
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Number	
1	show parameter dump_dest select count (*) from v\$log; select group# members from v\$logfile;
2	No, disabled on my computer. archive log list
3	The current used is group2 select distinct group#, status from v\$log;
4	alter system switch logfile;
5	select GROUP#, MEMBER from v\$logfile order by 1; alter database add logfile member '/ora/oracle/oradata/orcl/redo011.log' to group 1 ;
6	mkdir /ora/oracle/oradata/orcl/DISK2 alter database add logfile group 5 '/ora/oracle/oradata/orcl/DISK2/redo05.log' size 10M ; select GROUP#, STATUS from v\$log;
7	alter database rename file '/ora/oracle/oradata/orcl/redo011.log' to '/ora/oracle/oradata/orcl/DISK2/redo051.log'; select GROUP#, MEMBER from v\$logfile where group# = 1;
8	alter database drop logfile group 4;
9	select GROUP#, MEMBER from v\$logfile order by 1,2; alter database drop logfile member '/ora/oracle/oradata/orcl/DISK2/redo051.log';

C. Data files and tablespaces

Questions Number	Commands (phenomenon)
1	Just create folders. /ora/oracle/oradata/FI
2	DROP TABLESPACE DATA01; create tablespace DATA01 datafile '/ora/oracle/oradata/FI/DISK4/data01.dbf' size 2M ; DROP TABLESPACE TEMP; create tablespace TEMP datafile "/ora/oracle/oradata/FI/DISK3/temp02.dbf" size 5M autoextend off; DROP TABLESPACE INDX01; create tablespace INDX01 datafile '/ora/oracle/oradata/FI/DISK2/indx01.dbf' size 3M autoextend on next 500K maxsize 20480M; DROP TABLESPACE RONLY; create tablespace RONLY datafile '/ora/oracle/oradata/FI/DISK1/ronly01.dbf' size 2M; alter tablespace RONLY read only;
3	desc dba_tablespaces; desc dba_data_files; desc dba_temp_files;

	desc dba_users; select dba_tablespace.tablespace_name, next_extent, file_name, bytes from dba_tablespace, dba_data_files where dba_tablespace.tablespace_name = dba_data_files.tablespace_name and dba_tablespace.tablespace_name = 'INDX01';
6	select tablespace_name, bytes from dba_data_files where tablespace_name='DATA01'; alter database datafile '/ora/oracle/oradata/FI/DISK4/data01.dbf' resize 3M; alter tablespace DATA01 add datafile '/ora/oracle/oradata/FI/DISK4/data001.dbf' size 1M;
7	alter tablespace INDX01 offline; select name from v\$datafile; alter tablespace INDX01 rename datafile '\ora\oracle\oradata\FI\DISK2\indx01.dbf' to \ora\oracle\oradata\FI\DISK1\indx01.dbf'; alter tablespace INDX01 online;
8	desc dba_tablespace; desc dba_data_files; desc dba_temp_files; desc dba_users; select count(*) as totalNumber, sum(bytes) / (1024 * 1024) as totalSize from dba_data_files group by tablespace_name;
9	SELECT SUM(bytes) / (1024 * 1024) AS free_space, tablespace_name FROM dba_free_space GROUP BY tablespace_name;

IV. TP3 ORACLE ADMINISTRATION

A. Managing Users

Questions Number	Commands (phenomenon)
1	create user Bob identified by bob123 default tablespace DATA01 quota 2M on data01; alter user USERNAME quota 2M on TABLESPACENAME; grant create session to Bob; connect Bob/bob123; An Error Happened. conn system/oracle @\$ORACLE_HOME/sqlplus/admin/pupbld.sql
2	create user Kay identified by mary ; grant create table to Kay; grant unlimited tablespace to Kay; grant create session to Kay;
3	connect Kay/mary; Grant Select On Scott.EMP To Kay; Create Table EMP As Select * From Scott.EMP;

4	<pre> desc dba_ts_quotas; desc dba_users; alter user BOB quota 2M on DATA01; // We must write 'BOB' not 'Bob" select username, (max_bytes - bytes) / 1024/ 1024 as FreeSpace from dba_ts_quotas where username = 'BOB'; </pre>
5	<pre> desc dba_segments; </pre>
6	<pre> select username from dba_ts_quotas; alter user KAY quota 5M on DATA01; // use the following command to delete the quota alter user BOB quota 0M on DATA01; </pre>
7	<pre> drop user Kay cascade; </pre>
8	<pre> ALTER USER BOB IDENTIFIED BY olink PASSWORD EXPIRE </pre>

B. Profile Management

Questions Number	Commands (phenomenon)
1	<pre> desc dba_profiles; select resource_name from dba_profiles; </pre>
2	<pre> select username, profile from dba_users where username='BOB'; CREATE PROFILE bob_profile LIMIT SESSIONS_PER_USER 2 idle_time 1; select * from dba_profiles where profile='BOB_PROFILE'; </pre>
3	<pre> alter user BOB profile BOB_PROFILE; select profile from dba_users where username='BOB';dba_tablespace.tablespace_name = 'INDX01'; </pre>
4	<pre> Res: we can not connect more than two. show parameter resource_limit; alter system set resource_limit=true; show parameter resource_limit; conn bob/bob123 </pre>

C. Privilege Management

Questions Number	Commands (phenomenon)
1	<pre> create user Kay identified by mary; grant create table to Kay; grant unlimited tablespace to Kay; grant create session to Kay; connect SCOTT/tiger; select * from tab; //display the tables on the SCOTT/tiger </pre>

	grant select on EMP to Kay; grant select on DEPT to Kay;
2	connect Kay/mary; create table EMP as select * from SCOTT.EMP; create table DEPT as select * from SCOTT.DEPT;
3	grant select on EMP to Bob with grant option; SELECT * FROM dba_role_privs WHERE grantee='BOB'; //desc dba_tab_privs; //select privilege from dba_tab_privs where grantee = 'BOB';
4	sqlplus / as sysdba create user Todd identified by mary; connect Bob/bob123; grant select on SCOTT.EMP to Todd;
5	select * from SCOTT.EMP; connect Kay/mary; revoke select on EMP from Bob; select * from SCOTT.EMP; //Still work.
6	sqlplus / as sysdba grant all on KAY.EMP to Kay; connect Bob/bob123; create table EMP as select * from KAY.EMP;
7	conn Kay/mary as sysoper

D. Role Management

Questions Number	Commands (phenomenon)
1	SELECT privilege FROM dba_sys_privs where grantee = 'RESOURCE';
2	create role DEV not identified; grant create session to DEV ; grant create table to DEV ; grant create view to DEV ; grant select on KAY.EMP to DEV ; SELECT privilege FROM role_sys_privs WHERE role = 'DEV'; SELECT privilege FROM dba_tab_privs where grantee = 'DEV';
3	SELECT GRANTED_ROLE FROM dba_role_privs WHERE grantee='BOB'; grant DEV to BOB; grant RESOURCE to BOB; SELECT GRANTED_ROLE FROM dba_role_privs WHERE grantee='BOB';

V. TP4 ORACLE ADMINISTRATION

A. Backup and Recovery

Questions Number	Commands (phenomenon)
1	shutdown the database then copy the files under flash_recovery_area and oradata into another directory.
2	<pre> archive log list; shutdown immediate; startup mount; alter database archivelog; alter database open; archive log list; alter database open; </pre>
3-4	<pre> select file_id, file_name, status from dba_data_files; select file#, status from v\$datafile; chmod 777 tmphotbak_tb.sql chmod 777 / chmod 777 /OraBackup/HotBackup/ ho vim /OraBackup/Script/tmphotbak_tb.sql // use the following scripts to complete hot backup set feedback off set heading off set verify off set trimspool off set pagesize 0 set linesize 200 define dir = '/OraBackup/HotBackup' define script = '/OraBackup/Script/tmphotbak_tb.sql' ho rm &script ho rm &dir/* spool &script select 'alter tablespace ' tablespace_name ' begin backup ;' chr(10) 'ho cp ' file_name ' ' &dir ' chr(10) 'alter tablespace ' tablespace_name ' end backup;' from dba_data_files order by tablespace_name; </pre>

```
        spool off
        start &script
alter database backup controlfile to '&dir/controlbak.ctl';
        create pfile = '&dir/initorcl.ora' from spfile;
        start /OraBackup/Script/tmphotbak_tb.sql;
```

```
5        connect SCOTT/tiger;
        insert into EMP1(empno,ename) values(10,'totoo');
        commit;
        insert into EMP1(empno,ename) values(20,'totoj');
        shutdown abort
        startup pfile = /ora/oracle/admin/Fl/pfile/initFl.ora

//ORA-01122: database file 4 failed verification check ORA-01110: data file
4: '/ora/oracle/product/11.2.0/db_1/dbs/oraoracleoradataFIDISK4data01.dbf' ORA-01207: file is more recent than
control file - old control file
```

```
        recover database;
```
