

Администрирование Oracle: Practice #2

Работа с БД

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Task 1

Созданная с помощью DBCA БД:

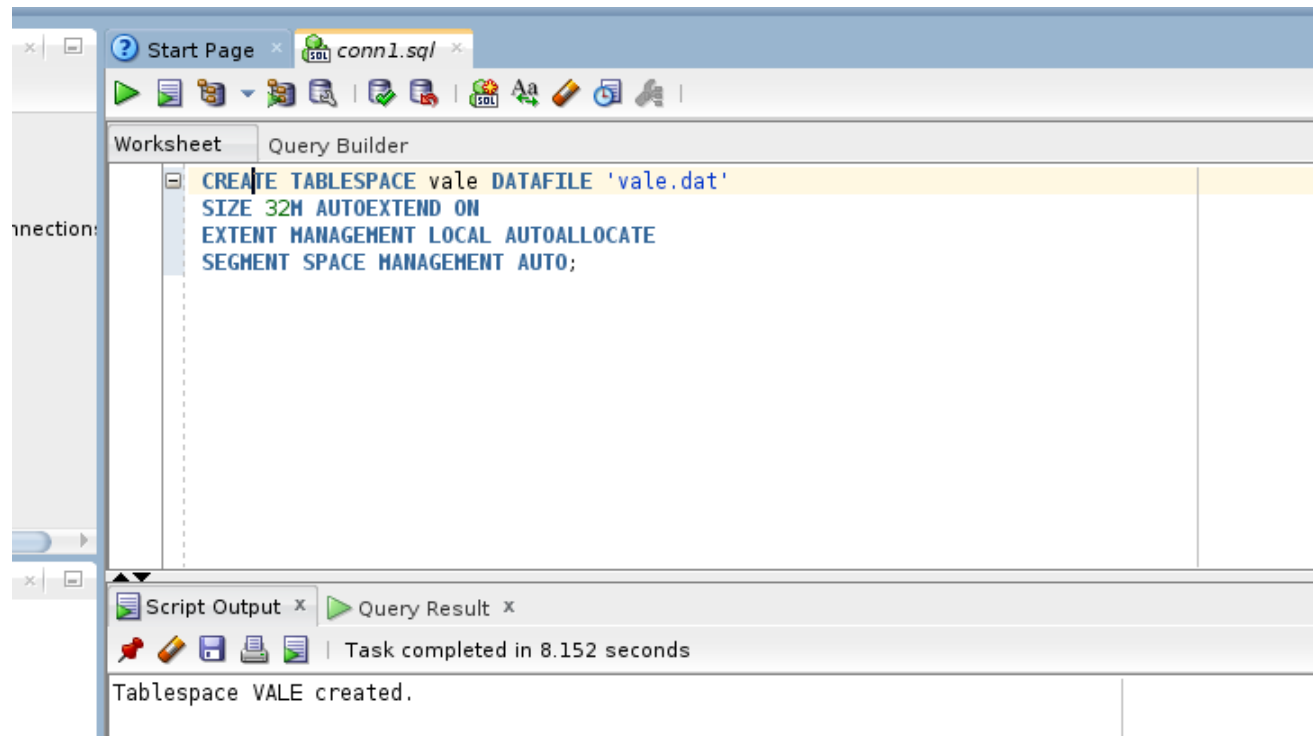
SID: klem

Размер блока данных: 8192

Пользовательское табличное пространство vale:

Type: Auto

Sizing: Auto



Task 2, 3

Скрипты создания БД - **scripts.rar**

В версии Oracle Database 12c при создании БД с помощью DBCA конфигурация БД сохраняется как response file, поэтому вместо klem.html, отправлен файл **klem.rsp**

Task 4

Query: `SELECT * FROM v$instance;`

Query result:

The screenshot shows the SQL Developer interface. On the left, the 'Query Result' window displays the results of the query `SELECT * FROM v$instance;`. The results are as follows:

INSTANCE_NUMBER	INSTANCE_NAME
1	1klem

On the right, the 'Single Record View' dialog is open, showing the details for the instance with INSTANCE_NUMBER 1. The fields and their values are:

Field	Value
INSTANCE_NUMBER	1
INSTANCE_NAME	klem
HOST_NAME	ip-192-168-0-106.is74.loc
VERSION	12.2.0.1.0
STARTUP_TIME	06-MAY-18
STATUS	OPEN
PARALLEL	NO
THREAD#	1
ARCHIVER	STOPPED
LOG_SWITCH_WAIT	
LOGINS	ALLOWED
SHUTDOWN_PENDING	NO
DATABASE_STATUS	ACTIVE
INSTANCE_ROLE	PRIMARY_INSTANCE
ACTIVE_STATE	NORMAL
BLOCKED	NO
CON_ID	0
INSTANCE_MODE	REGULAR
EDITION	EE
FAMILY	
DATABASE_TYPE	SINGLE

Task 5

Созданный SPFILE для экземпляра - spfileklem.ora

Task 6

Query: `SELECT * FROM v$parameter WHERE name='parallel_max_servers';`

Query result:

The screenshot shows the Oracle SQL Developer interface. The 'Query Builder' window displays the following SQL script:

```
SELECT * FROM v$parameter where name='parallel_max_servers';  
alter system set parallel_max_servers=170 scope=BOTH;
```

The 'Script Output' and 'Query Result' tabs are visible. The 'Query Result' tab shows the following data:

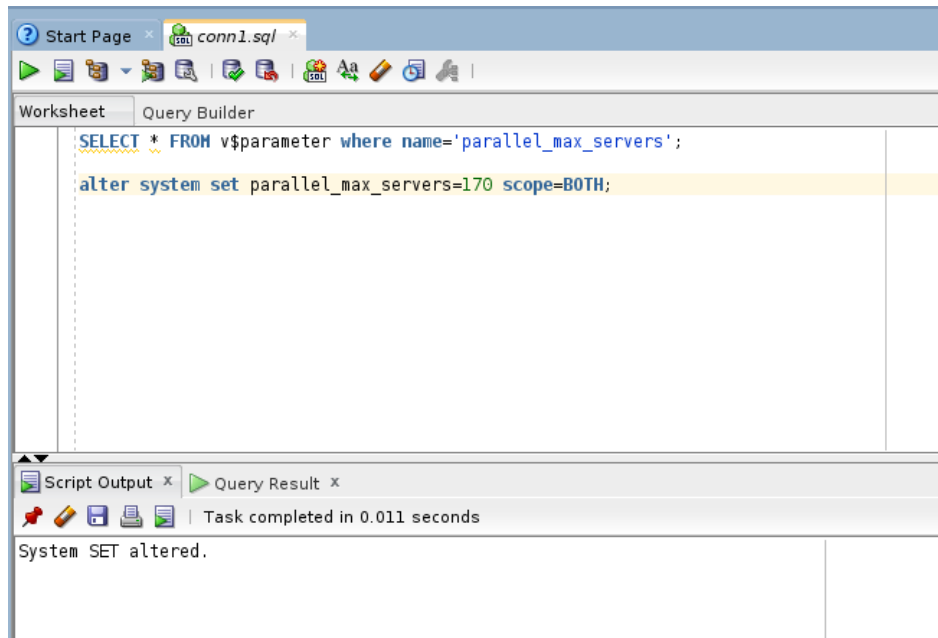
	NUM	NAME	TYPE	VALUE	DISPLAY_VALUE	DE
1	3151	parallel_max_servers	3	160	160	4294

The 'Single Record View' dialog is open, displaying the details for the selected record (NUM 3151):

Property	Value
NUM	3151
NAME	parallel_max_servers
TYPE	3
VALUE	160
DISPLAY_VALUE	160
DEFAULT_VALUE	4294967295
ISDEFAULT	TRUE
ISSES_MODIFIABLE	FALSE
ISSYS_MODIFIABLE	IMMEDIATE
ISPDB_MODIFIABLE	TRUE
ISINSTANCE_MODIFIABLE	TRUE
ISMODIFIED	SYSTEM_MOD
ISADJUSTED	FALSE
ISDEPRECATED	FALSE
ISBASIC	FALSE
DESCRIPTION	maximum parallel query servers per instance
UPDATE_COMMENT	
HASH	3629921023
CON_ID	0

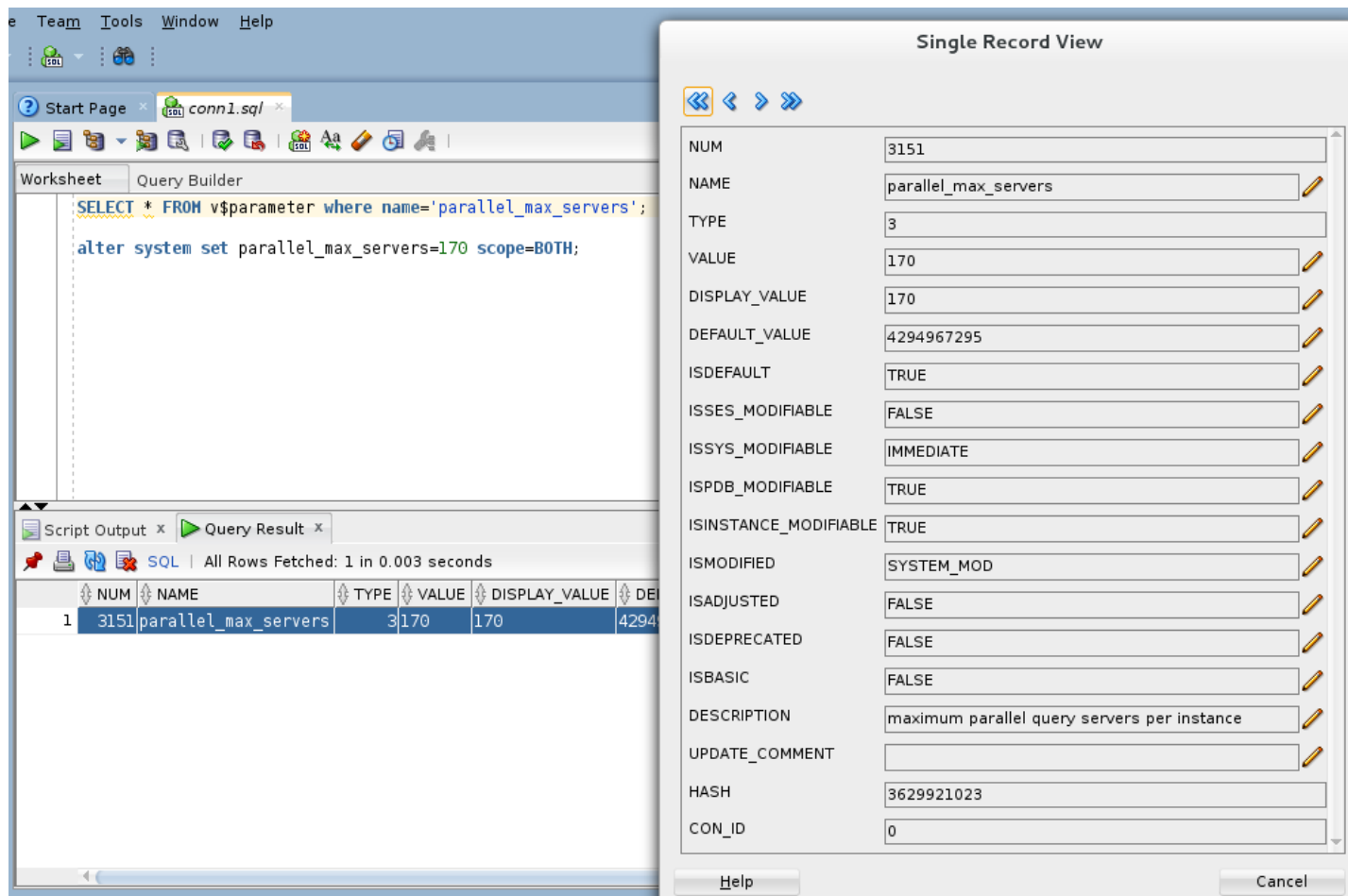
Query: `ALTER system SET parallel_max_servers=170 scope=BOTH;`

Query result:



Query: SELECT * FROM v\$parameter WHERE name="parallel_max_servers";

Query result:



Task 7

Перевод БД в режим READ ONLY:

Query: ALTER database open read only;

Перевод БД в режим RESTRICT:

Query: ALTER system ENABLE RESTRICTED SESSION;

```
SQL> startup mount;
ORACLE instance started.

Total System Global Area 1946157056 bytes
Fixed Size                 8622192 bytes
Variable Size             1224740752 bytes
Database Buffers          704643072 bytes
Redo Buffers               8151040 bytes
Database mounted.
SQL> alter database open read only;

Database altered.

SQL> select open_mode from v$database;

OPEN_MODE
-----
READ ONLY

SQL> ALTER SYSTEM ENABLE RESTRICTED SESSION;

System altered.

SQL>
```

Проверка:

```
SQL> conn hr@klem;
Enter password:
ERROR:
ORA-12526: TNS:listener: all appropriate instances are in restricted mode
```

Выход из режима RESTRICT и проверка:

Query: ALTER system DISABLE RESTRICTED SESSION;

```
ORACLE instance shut down.
SQL> startup
ORACLE instance started.

Total System Global Area 1459617792 bytes
Fixed Size                  8792872 bytes
Variable Size              503317720 bytes
Database Buffers           939524096 bytes
Redo Buffers                7983104 bytes
Database mounted.

Database opened.
SQL> SQL> SQL>
SQL> ALTER SYSTEM DISABLE RESTRICTED SESSION
      2  ;

System altered.

SQL> quit
Disconnected from Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production
[oracle@ip-192-168-0-106 bin]$ ./sqlplus hr/hr as sysdba

SQL*Plus: Release 12.2.0.1.0 Production on Mon May 14 08:31:01 2018

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Connected to:
Oracle Database 12c Enterprise Edition Release 12.2.0.1.0 - 64bit Production
SQL> █
```

7c i-ii:

```
Database opened.
SQL> show user;
USER is "SYS"
SQL> create table test_sh (dummy varchar(10));

Table created.

SQL> insert into test_sh values ('junk');

1 row created.

SQL> shutdown immediate;
ORA-01097: cannot shutdown while in a transaction - commit or rollback first
SQL> shutdown abort;
ORACLE instance shut down.
SQL> startuo mount;
SP2-0734: unknown command beginning "startuo mo..." - rest of line ignored.
SQL> startup mount;
ORACLE instance started.

Total System Global Area 1459617792 bytes
Fixed Size                  8792872 bytes
Variable Size              503317720 bytes
Database Buffers           939524096 bytes
Redo Buffers                7983104 bytes
Database mounted.
SQL> recover database;
Media recovery complete.
```

Task 8

Перевод БД в состояние SUSPEND:

Query: ALTER system SUSPEND;

Проверка текущего статуса:

Query: SELECT database_status FROM v\$instance;

Возобновление работы:

Query: ALTER system RESUME;


```
SQL> ALTER system SUSPEND;

System altered.

SQL> SELECT database_status FROM v$instance;

DATABASE_STATUS
-----
SUSPENDED

SQL> ALTER system RESUME;

System altered.

SQL> SELECT database_status FROM v$instance;

DATABASE_STATUS
-----
ACTIVE
```

Task 9

Query: ALTER system SET optimizer_mode=rule scope=spfile;
SELECT value FROM v\$parameter WHERE name="optimizer_mode"
UNION ALL
SELECT value FROM v\$spparameter WHERE name="optimizer_mode";
Query result:

```
SQL> ALTER system SET optimizer_mode=rule scope=spfile;

System altered.

SQL> SELECT value FROM v$parameter WHERE name='optimizer_mode' UNION ALL SELECT value FROM v$spparameter WHERE name='optimizer_mode';

VALUE
-----
ALL_ROWS
RULE

SQL> █
```

v\$spparameter отображает те значения, которые были определены в spfile вне зависимости от того, применяются они в сеансе или нет. А v\$parameter отображает только те значения, которые применимы к сессии. v\$parameter не имеет ничего общего с spfile, который он использовал для запуска; он просто показывает, какие значения действуют для сеанса.

Task 10, 12

Создание пользователя - владельца приложения:

Query: CREATE PROFILE app_owner LIMIT SESSIONS_PER_USER UNLIMITED CONNECT_TIME UNLIMITED IDLE_TIME UNLIMITED;

Query: CREATE USER app_owner_user IDENTIFIED BY qwerty;

Query: ALTER USER app_owner_user PROFILE app_owner;

Query: GRANT select_catalog_role TO app_owner_user;

Query result:

```
SQL> CREATE PROFILE app_owner LIMIT SESSIONS_PER_USER UNLIMITED CONNECT_TIME UNLIMITED IDLE_TIME UNLIMITED;
Profile created.

SQL> ALTER USER app_owner_user PROFILE app_owner;
User altered.

SQL> GRANT select_catalog_role TO app_owner_user;
Grant succeeded.

SQL> CREATE PROFILE limited LIMIT SESSIONS_PER_USER 2 IDLE_TIME 15;
Profile created.

SQL> CREATE USER limited_user IDENTIFIED BY qwerty;
User created.

SQL> ALTER USER limited_user QUOTA 50M ON users PROFILE limited;
User altered.

SQL> REVOKE select_catalog_role TO limited_user;
REVOKE select_catalog_role TO limited_user
      *
ERROR at line 1:
ORA-00990: missing or invalid privilege
```

Создание ограниченного пользователя:

Query: CREATE PROFILE limited LIMIT SESSIONS_PER_USER 2 IDLE_TIME 15;

Query: CREATE USER limited_user IDENTIFIED BY qwerty;

Query: ALTER USER limited_user QUOTA 50M ON users PROFILE limited;

Query: REVOKE select_catalog_role TO limited_user;

Query result:

```
Profile created.

SQL> CREATE USER limited_user IDENTIFIED BY qwerty;

User created.

SQL> ALTER USER limited_user QUOTA 50M ON users PROFILE limited;

User altered.

SQL> REVOKE select_catalog_role TO limited_user;
REVOKE select_catalog_role TO limited_user
*
ERROR at line 1:
ORA-00990: missing or invalid privilege

SQL> REVOKE select catalog role TO limited_user;
REVOKE select catalog role TO limited_user
*
ERROR at line 1:
ORA-00990: missing or invalid privilege

SQL> REVOKE select_catalog_role FROM limited_user;
REVOKE select_catalog_role FROM limited_user
*
ERROR at line 1:
ORA-01951: ROLE 'SELECT_CATALOG_ROLE' not granted to 'LIMITED_USER'
```

Task 11

Query: SELECT username, profile, account_status FROM dba_users WHERE username='app_owner_user';

Query result:

```
APP_OWNER_USER
OPEN
APP_OWNER
```

Query: SELECT username, profile, account_status FROM dba_users WHERE username='limited_user';

Query result:

```
LIMITED_USER
OPEN
LIMITED
```

Task 13

Query: ALTER PROFILE default LIMIT SESSIONS_PER_USER 2 IDLE_TIME 15;

Query result:

```
SQL>
SQL> ALTER PROFILE default LIMIT SESSIONS_PER_USER 2 IDLE_TIME 15;

Profile altered.

SQL> █
```

Query:SELECT * FROM dba_profiles WHERE profile="DEFAULT";

Query result:

```
PROFILE
-----
RESOURCE_NAME          RESOURCE
-----
LIMIT
-----
COM INH IMP
-----
DEFAULT
SESSIONS_PER_USER      KERNEL
2
NO NO NO
```

```
PROFILE
-----
RESOURCE_NAME          RESOURCE
-----
LIMIT
-----
COM INH IMP
-----
DEFAULT
IDLE_TIME              KERNEL
15
NO NO NO
```