

## SESSION 10 CREATING/ALTERING USERS and PROFILES

The Oracle base remains unchanged with value /opt/oracle

```
[oracle@oracloud12c ~]$ sqlplus / as sysdba
```

SQL\*Plus: Release 12.1.0.2.0 Production on Tue Mar 20 11:05:14 2018

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Connected to:

Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit

Production

With the Partitioning, OLAP, Advanced Analytics and Real Application

Testing options

```
SQL> set pagesize 200
```

```
SQL> DESC DBA_USERS
```

Name	Null?	Type
USERNAME	NOT NULL	VARCHAR2(128)
USER_ID	NOT NULL	NUMBER
PASSWORD		VARCHAR2(4000)
ACCOUNT_STATUS	NOT NULL	VARCHAR2(32)
LOCK_DATE		DATE
EXPIRY_DATE		DATE
DEFAULT_TABLESPACE	NOT NULL	VARCHAR2(30)
TEMPORARY_TABLESPACE	NOT NULL	VARCHAR2(30)
CREATED	NOT NULL	DATE
PROFILE	NOT NULL	VARCHAR2(128)
INITIAL_RSRC_CONSUMER_GROUP		VARCHAR2(128)
EXTERNAL_NAME		VARCHAR2(4000)
PASSWORD_VERSIONS		VARCHAR2(12)
EDITIONS_ENABLED		VARCHAR2(1)
AUTHENTICATION_TYPE		VARCHAR2(8)
PROXY_ONLY_CONNECT		VARCHAR2(1)
COMMON		VARCHAR2(3)
LAST_LOGIN		TIMESTAMP(9) WITH TIME ZONE
ORACLE_MAINTAINED		VARCHAR2(1)

```
SQL> SELECT username, account_status, default_tablespace
FROM dba_users
WHERE account_status = 'OPEN';
```

USERNAME

ACCOUNT\_STATUS

DEFAULT\_TABLESPACE

TOM

OPEN

MINE

SYSMAN_APM	
OPEN	MGMT_TABLESPACE
SYSMAN_MDS	
OPEN	MGMT_TABLESPACE
SYSMAN_OPSS	
OPEN	MGMT_TABLESPACE
SYSMAN	
OPEN	MGMT_TABLESPACE
MGMT_VIEW	
OPEN	MGMT_ECM_DEPOT_TS
SCOTT	
OPEN	USERS
SYSTEM	
OPEN	SYSTEM
SYS	
OPEN	SYSTEM

9 rows selected.

In DATABASE EXPRESS we will create a new User (Account or Schema) named **FOOBAR** by going **Security → Users → Create User** and then filling fields in 3 pages like below:

### 1) User Account

NAME:	<b>FOOBAR</b>
AUTHENTICATION	choose button <b>PASSWORD</b>
PASSWORD:	<b>foobar</b>
PROFILE	from the list pick <b>DEFAULT</b>
PASSWORD EXPIRED	<b>check</b> this box
ACCOUNT LOCKED	leave this box <b>unchecked</b>

### 2) Tablespace

DEFAULT TBSP	from the list pick <b>MINE</b>
TEMPORARY TBSP	from the list pick <b>TEMP</b>

### 3) Privilege

In the left pane find role **CONNECT** and promote it to the right pane

Now click on button **SHOW SQL** that will display the command like below

**Create user FOOBAR identified by \*\*\*\*\* Profile DEFAULT Password expire Account unlock  
Default tablespace MINE Temporary tablespace TEMP;**

**Grant CONNECT to FOOBAR;**

Now, **click OK and again OK** and user will be created in DB Express.

```
SQL> conn FOOBAR/FOOBAR
ERROR:
ORA-01017: invalid username/password; logon denied
```

Warning: You are no longer connected to ORACLE.

**Since Oracle11g, Password is Case Sensitive**

```
SQL> CONN FOOBAR/foobar
ERROR:
ORA-28001: the password has expired
```

```
Changing password for FOOBAR
New password:          abcd
Retype new password:   abcd
Password changed
Connected.
```

```
SQL> CREATE TABLE x (col1 DATE);
CREATE TABLE x (col1 DATE)
*
ERROR at line 1:
ORA-01031: insufficient privileges
```

**User FooBar does NOT have CREATE TABLE privilege. DBA must grant it to him.**

```
SQL> CONN / AS SYSDBA
Connected.
```

```
SQL> GRANT create table TO FOOBAR;
Grant succeeded.
```

```
SQL> CONN FOOBAR/abcd
Connected.
```

```
SQL> CREATE TABLE x (col1 DATE);
Table created.
```

```
SQL> INSERT INTO x VALUES (sysdate);
INSERT INTO x VALUES (sysdate)
*
```

```
ERROR at line 1:
ORA-01950: no privileges on tablespace 'MINE'
```

**When created user FOOBAR was not given any space (QUOTA) in his default tbsp**

```
SQL> CONN / AS SYSDBA
Connected.
```

```
SQL> ALTER USER FOOBAR QUOTA 5M ON mine;
User altered.
```

```
SQL> CONN FOOBAR/abcd
Connected.
```

```
SQL> INSERT INTO x VALUES (sysdate);
1 row created.
```

```
SQL> commit;
Commit complete.
```

```
SQL> conn / as sysdba
Connected.
```

```
SQL> DESC dba_ts_quotas
```

Name	Null?	Type
TABLESPACE_NAME	NOT NULL	VARCHAR2(30)
USERNAME	NOT NULL	VARCHAR2(128)
BYTES		NUMBER
MAX_BYTES		NUMBER
BLOCKS		NUMBER
MAX_BLOCKS		NUMBER
DROPPED		VARCHAR2(3)

**\* This view shows only manually given quotas (from DBA) to users and does not show who has UNLIMITED TABLESPACE privilege \***

```
SQL> SELECT tablespace_name, username, bytes, max_bytes
FROM DBA_TS_QUOTAS
WHERE USERNAME IN ('TOM', 'FOOBAR');
```

TABLESPACE_NAME	BYTES	MAX_BYTES
Joke		
TOM	1146880	-1
MINE		
FOOBAR	524288	5242880
MINE		
TOM	0	2097152

← This means UNLIMITED TABLESPACE privilege

← This is 5m given recently

Let's create another user called LISA (on command line) with Quota on default tbsp

```
SQL> CREATE USER lisa IDENTIFIED BY mona
      DEFAULT TABLESPACE joke TEMPORARY TABLESPACE temp
      QUOTA 512K ON joke ;
```

User created.

```
SQL> GRANT connect TO lisa;
Grant succeeded.
```

LISA does not have CREATE TABLE privilege, but DBA can create tables for her

```
SQL> CREATE TABLE lisa.dept AS SELECT * FROM scott.dept;
Table created.
```

```
SQL> SELECT * FROM lisa.dept;
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

```
SQL> SELECT tablespace_name, username, bytes, max_bytes
      FROM DBA_TS_QUOTAS
      WHERE USERNAME IN ('FOOBAR', 'LISA');
```

TABLESPACE_NAME	BYTES	MAX_BYTES
MINE		
FOOBAR	524288	5242880
Joke		
LISA	81920	524288

```
SQL> ALTER USER FOOBAR QUOTA UNLIMITED ON mine ;
User altered.
```

← this will bring value of -1 to the Quotas view

```
SQL> ALTER USER lisa QUOTA 0 ON joke
User altered.
```

← this will remove this row from the Quotas view and it will freeze the current quota situation for Lisa, so that NO NEW EXTENTS may be allocated (if the last extent is not full, some inserts/updates still may happen as shown next). \*

```
SQL> SELECT    tablespace_name, username, bytes, max_bytes
      FROM      DBA_TS_QUOTAS
      WHERE     USERNAME IN ('FOOBAR', 'LISA');
```

```
TABLESPACE_NAME
-----
USERNAME
-----
      BYTES  MAX_BYTES
-----
MINE
FOOBAR
      524288          -1
```

```
SQL> INSERT INTO lisa.dept VALUES ( 90, 'HR', 'TORONTO') ;
1 row created.
```

```
SQL> CREATE TABLE lisa.emp AS SELECT * FROM scott.emp ;
      AS SELECT * FROM scott.emp
      *
```

```
ERROR at line 2:
ORA-01536: space quota exceeded for tablespace 'JOKE'
→ this table has 14 rows and last extent can NOT accept all of them
```

```
SQL> DROP USER lisa;
DROP USER lisa
*
ERROR at line 1:
ORA-01922: CASCADE must be specified to drop 'LISA'
```

```
SQL> DROP USER lisa CASCADE ;
User dropped.
* If the account is NOT empty (it has objects like tables or indexes), then it can be
removed only with CASCADE option *
```

In DATABASE EXPRESS we will create a new Profile named PROG by going **Security → Profiles**  
**→ Create Profile** and then filling fields in 3 pages like below:

### 1) New profile

NAME	PROG
------	------

### 2) General

We will change only these 2 fields here in the RESOURCE part (the rest will stay with defaults)

IDLE TIME (MIN)	60	→ this is for CPU idling
CONCURRENT SESSIONS	2	

### 3) Password

EXPIRE IN (days))	120	
LOCK (days past expiration)	7	→ this is GRACE time
NUMBER OF PASSWORDS TO KEEP	UNLIMITED	
NUMBER OF DAYS TO KEEP FOR	60	→ must not reuse it for 60 days
COMPLEXITY FUNCTION	NULL	
NUMBER OF FAILED LOGINS TO LOCK AFTER	2	→ will be locked after 3 <sup>rd</sup> error
NUMBER OF DAYS TO LOCK FOR	5/1440	→ LOCK time will be 5 minutes

Now click on button **SHOW SQL** that will display the command like below

```
Create profile PROG limit  cpu_per_session UNLIMITED  cpu_per_call UNLIMITED
connect_time  UNLIMITED  idle_time 60  sessions_per_user 2
logical_reads_per_session UNLIMITED  logical_reads_per_call UNLIMITED private_sga
UNLIMITED composite_limit UNLIMITED password_life_time 120 password_grace_time 7
password_reuse_max UNLIMITED password_reuse_time 60 password_verify_function NULL
failed_login_attempts 2  password_lock_time 5/1440;
```

Now, **click OK and again OK** and PROFILE will be created in DB Express.

```
SQL> desc dba_profiles
```

Name	Null?	Type
PROFILE	NOT NULL	VARCHAR2 (128)
RESOURCE_NAME	NOT NULL	VARCHAR2 (32)
RESOURCE_TYPE		VARCHAR2 (8)
LIMIT		VARCHAR2 (128)
COMMON		VARCHAR2 (3)

```
SQL> SELECT profile, resource_name, limit, resource_type
FROM dba_profiles
WHERE profile = 'PROG'
ORDER BY 1, 4, 2;
```

```
PROFILE
```

RESOURCE_NAME	LIMIT
RESOURCE	
PROG	
COMPOSITE_LIMIT	UNLIMITED
KERNEL	

PROG  
CONNECT\_TIME                  UNLIMITED  
KERNEL

PROG  
CPU\_PER\_CALL                  UNLIMITED  
KERNEL

PROG  
CPU\_PER\_SESSION              UNLIMITED  
KERNEL

PROG  
IDLE\_TIME                     60  
KERNEL

PROG  
LOGICAL\_READS\_PER\_CALL      UNLIMITED  
KERNEL

PROG  
LOGICAL\_READS\_PER\_SESSION  UNLIMITED  
KERNEL

PROG  
PRIVATE\_SGA                  UNLIMITED  
KERNEL

PROG  
SESSIONS\_PER\_USER            2  
KERNEL

PROG  
FAILED\_LOGIN\_ATTEMPTS 2  
PASSWORD

PROG  
PASSWORD\_GRACE\_TIME          7  
PASSWORD

PROG  
PASSWORD\_LIFE\_TIME  
120  
PASSWORD

PROG  
PASSWORD\_LOCK\_TIME          .0034  
PASSWORD

PROG  
PASSWORD\_REUSE\_MAX          UNLIMITED  
PASSWORD



```
PROG
PASSWORD_REUSE_TIME    60
PASSWORD
```

```
PROG
PASSWORD_VERIFY_FUNCTION NULL
PASSWORD
```

16 rows selected.

**In DATABASE EXPRESS we will MODIFY the account for FOOBAR by going Security → Users → select FOOBAR from the users list → Actions → Alter Account and then under Profile list pick PROG and OK**

**The same action may be done quickly by using the syntax like;**  
**ALTER USER foobar PROFILE prog;**

```
SQL> conn foobar/a
ERROR:
ORA-01017: invalid username/password; logon denied

Warning: You are no longer connected to ORACLE.
```

```
SQL> conn foobar/b
ERROR:
ORA-01017: invalid username/password; logon denied
```

```
SQL> conn foobar/c
ERROR:
ORA-28000: the account is locked
```

**\* 3rd wrong login and account is locked for 5 min. You must wait before giving the right one OR call DBA for help and he/she may manually unlock it \***

```
SQL> CONN FOOBAR/abcd → this is correct password, but still within 5 minutes
ERROR:
ORA-28000: the account is locked
```

```
SQL> conn / as sysdba
Connected.
```

```
SQL> ALTER USER foobar ACCOUNT UNLOCK;
User altered.
```

```
SQL> CONN FOOBAR/abcd
Connected.
```

```
SQL> conn / as sysdba
Connected.
```

**\* Only PASSWORD limits are enforced by default, while RESOURCE (KERNEL) limits have to be enabled dynamically (or within parameter file) before being enforced, like below \***

```
SQL> ALTER SYSTEM SET resource_limit=true;  
System altered.
```

```
SQL> CONN FOOBAR/abcd;  
Connected.
```

**\* Foobar could open second session as well, but could NOT open the THIRD one, because of SESSIONS\_PER\_USER value 2 in the PROG Profile that is allocated to him. This is the message from SQL\*PLUS when trying to open a THIRD session :**

**ERROR:ORA-02391: exceeded simultaneous SESSIONS\_PER\_USER limit \***

```
SQL> exit  
Disconnected from Oracle Database 12c Enterprise Edition Release  
12.1.0.2.0 - 64bit Production  
With the Partitioning, OLAP, Advanced Analytics and Real Application  
Testing options  
[oracle@oracloud12c ~]$ exit  
logout
```