***SESSION 9 CREATING/ALTERING USERS and PROFILES***

Last login: Fri Mar 18 10:08:16 2022 from 10.30.2.33

[student@oracledb19c ~]$ **su - oracle**

Password:

Last login: Tue Mar 8 11:54:15 EST 2022 on pts/1

The Oracle base remains unchanged with value /opt/oracle/app/oracle

[oracle@oracledb19c ~]$ **ls -l**

total 44

-rw-r--r-- 1 oracle dba 0 Jan 28 14:36 conn

-rw-r--r-- 1 oracle dba 0 Jan 28 14:32 exit

-rw-r--r-- 1 oracle dba 396 Jan 29 12:53 profile.txt

-rw-r--r-- 1 oracle dba 9806 Feb 20 10:31 scott2.sql

-rw-r--r-- 1 oracle dba 22542 Feb 20 10:14 scott.sql

-rw-r--r-- 1 oracle dba 0 Jan 28 14:36 SELECT

-rw-r--r-- 1 oracle dba 47 Jan 6 11:48 setport.sql

[oracle@oracledb19c ~]$ **head -50 scott2.sql**

-- Creating user Scott with developer's roles

-- Needs Tablespace USERS and TEMP

-- Run as SYSTEM or SYS

**CREATE USER scott IDENTIFIED BY tiger**

**DEFAULT TABLESPACE users**

**TEMPORARY TABLESPACE temp;**

**GRANT connect, resource TO scott;**

**GRANT unlimited tablespace TO scott;**

-- Connect as Scott

CONNECT SCOTT/tiger;

-- echo Building Oracle demonstration tables. Please wait.

DROP TABLE EMP;

DROP TABLE DEPT;

DROP TABLE BONUS;

DROP TABLE SALGRADE;

DROP TABLE DUMMY;

DROP TABLE ORD;

DROP TABLE CUSTOMER;

DROP SEQUENCE ORDID;

DROP SEQUENCE CUSTID;

CREATE TABLE DEPT (

DEPTNO NUMBER(2),

DNAME CHAR(14),

LOC CHAR(13),

CONSTRAINT DEPT\_PRIMARY\_KEY PRIMARY KEY (DEPTNO));

INSERT INTO DEPT VALUES (10,'ACCOUNTING','NEW YORK');

INSERT INTO DEPT VALUES (20,'RESEARCH','DALLAS');

INSERT INTO DEPT VALUES (30,'SALES','CHICAGO');

INSERT INTO DEPT VALUES (40,'OPERATIONS','BOSTON');

**\* If you did NOT create user SCOTT, then you should run “scott2.sql” as SYSDBA \***

[oracle@oracledb19c ~]$ **sqlplus /nolog**

SQL\*Plus: Release 19.0.0.0.0 - Production on Fri Mar 18 10:12:53 2022

Version 19.3.0.0.0

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Last Successful login time: Tue Feb 22 2022 13:17:04 -04:00

Connected to:

Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production

Version 19.3.0.0.0

SQL> **set pagesize 120**

**\* Let’s re-create our user TOM, and if you never had it, just proceed to the CREATE USER tom syntax \***

SQL> **conn / as sysdba**

Connected.

SQL> **DROP USER TOM;**

DROP USER TOM

\*

ERROR at line 1:

ORA-01922: CASCADE must be specified to drop 'TOM'

SQL> **DROP USER TOM CASCADE;**

User dropped.

**\* Let’s create a new user TOM with password “cat”, Default Tablespace MINE and Temporary Tablespace TEMP. He will be granted CONNECT role and also CREATE TABLE System Privilege. We will also put Quotas on 2 tablespaces for TOM \***

SQL> **CREATE USER TOM IDENTIFIED BY cat**

**DEFAULT TABLESPACE MINE**

**TEMPORARY TABLESPACE TEMP;**

User created.

SQL> **GRANT CONNECT, CREATE TABLE TO TOM;**

Grant succeeded.

SQL> **ALTER USER tom QUOTA 2M ON mine**;

User altered.

SQL> **ALTER USER tom QUOTA UNLIMITED ON joke;**

User altered.

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)

LOCAL\_TEMP\_TABLESPACE VARCHAR2(30)

CREATED NOT NULL DATE

PROFILE NOT NULL VARCHAR2(128)

INITIAL\_RSRC\_CONSUMER\_GROUP VARCHAR2(128)

EXTERNAL\_NAME VARCHAR2(4000)

PASSWORD\_VERSIONS VARCHAR2(17)

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)

INHERITED VARCHAR2(3)

DEFAULT\_COLLATION VARCHAR2(100)

IMPLICIT VARCHAR2(3)

ALL\_SHARD VARCHAR2(3)

PASSWORD\_CHANGE\_DATE DATE

SQL> **SELECT username, account\_status, default\_tablespace**

**FROM dba\_users**

**WHERE account\_status = 'OPEN';**

USERNAME

---------------------------------------------------------------------------

ACCOUNT\_STATUS DEFAULT\_TABLESPACE

-------------------------------- ------------------------------

SYS

OPEN SYSTEM

TOM

OPEN MINE

SCOTT

OPEN USERS

SQL> **Create user FOOBAR identified by bar Default tablespace MINE Temporary tablespace TEMP PASSWORD expire;**

User created.

SQL> **conn foobar/BAR**

ERROR:

ORA-01017: invalid username/password; logon denied

* **Since Oracle11g, Password is CasE SensitiVE**

Warning: You are no longer connected to ORACLE.

SQL> **conn foobar/bar**

ERROR:

ORA-01045: user FOOBAR lacks CREATE SESSION privilege; logon denied

* **User Foobar does NOT have CREATE SESSION privilege (or CONNECT role). DBA must grant this role to EVERY user that needs to connect to our DB \***

SQL> **conn / as sysdba**

Connected.

SQL> **GRANT connect, create table TO foobar;**

Grant succeeded.

SQL> **conn foobar/bar**

ERROR:

ORA-28001: the password has expired

Changing password for foobar

New password:

Retype new password: *🡪 new one is* ***foobar***

Password changed

Connected.

SQL> show user

USER is "FOOBAR"

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 MINE and that means he may create an empty table, but can not insert a single row there. \***

SQL> **conn / as sysdba**

Connected.

SQL> **ALTER USER foobar QUOTA 3M ON mine;**

User altered.

SQL> **conn foobar/foobar**

Connected.

SQL> **INSERT INTO x VALUES (SYSDATE);**

1 row created.

SQL> **commit;**

Commit complete.

SQL> **select \* from x;**

COL1

---------

18-MAR-22

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)

SQL> **SELECT tablespace\_name, username, bytes, max\_bytes**

**FROM DBA\_TS\_QUOTAS**

**WHERE USERNAME IN ('TOM','FOOBAR');**

TABLESPACE\_NAME

------------------------------

USERNAME

-------------------------------------------------------------------------

BYTES MAX\_BYTES

---------- ----------

MINE

FOOBAR

524288 3145728 ** This is QUOTA 3M given recently to FOOBAR**

MINE

TOM

0 2097152

JOKE

TOM

0 -1 ** This means QUOTA UNLIMITED on Tbsp JOKE**

**\* This view shows only manually given quotas (from DBA) to users and does not show who has UNLIMITED TABLESPACE privilege. Column BYTES gives us a current usage in EXTENTS (not exactly how many bytes is used so far), and column MAX\_BYTES is same as the QUOTA given from DBA \***

SQL> **CREATE USER lisa IDENTIFIED BY lisa**

**DEFAULT TABLESPACE joke TEMPORARY TABLESPACE temp**

**QUOTA 512K ON joke ;**

User created.

SQL> **GRANT connect TO lisa;**

Grant succeeded.

SQL> **CREATE TABLE lisa.dept AS SELECT \* FROM scott.dept;**

Table created.\*

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

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

------------------------------

USERNAME

-----------------------------------------------------------------------------

BYTES MAX\_BYTES

---------- ----------

MINE

FOOBAR

524288 3145728

JOKE

LISA

81920 524288

SQL> **ALTER USER FOOBAR QUOTA UNLIMITED ON mine ;**

User altered.

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> **conn lisa/lisa**

Connected.

SQL> **SELECT \* FROM dept;**

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> **INSERT INTO dept VALUES (90,'HR','TORONTO');**

1 row created.

SQL> **commit;**

Commit complete.

SQL> **SELECT \* FROM dept;**

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

90 HR TORONTO

SQL> **conn / as sysdba**

Connected.

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

CREATE TABLE lisa.emp AS SELECT \* FROM scott.emp

\*

ERROR at line 1:

ORA-01536: space quota exceeded for tablespace 'JOKE'

** this table has 14 rows and the last (and only) 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.

SQL> **Create profile PROG limit**

**idle\_time 60  this is for CPU idling in Minutes**

**sessions\_per\_user 2  this is # of allowed concurrent sessions**

**password\_life\_time 120  this is time in Days before EXPIRATION**

**password\_grace\_time 7  this is GRACE time in Days**

**password\_reuse\_max UNLIMITED**

**password\_reuse\_time 60 🡪 must not reuse it for 60 days**

**password\_verify\_function NULL  NO checking of password complexity by default**

**failed\_login\_attempts 2  will be locked after 3rd password error**

**password\_lock\_time 3/1440;  LOCK time will be 3 minutes**

Profile created.

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)

INHERITED VARCHAR2(3)

IMPLICIT 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

INACTIVE\_ACCOUNT\_TIME

DEFAULT

PASSWORD

PROG

PASSWORD\_GRACE\_TIME

7

PASSWORD

PROG

PASSWORD\_LIFE\_TIME

120

PASSWORD

PROG

PASSWORD\_LOCK\_TIME

.002

PASSWORD

PROG

PASSWORD\_REUSE\_MAX

UNLIMITED

PASSWORD

PROG

PASSWORD\_REUSE\_TIME

60

PASSWORD

PROG

PASSWORD\_VERIFY\_FUNCTION

NULL

PASSWORD

17 rows selected.

SQL> **ALTER USER foobar PROFILE prog;**

User altered.

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 3 min. You must wait before giving the right one OR call DBA for help and he/she may manually unlock it \***

SQL> **CONN foobar/foobar  this is the correct password, but still within 3 minutes**

ERROR:

ORA-28000: The account is locked.

SQL> **conn / as sysdba**

Connected.

SQL> **ALTER USER foobar ACCOUNT UNLOCK;**

User altered.

SQL> **CONN foobar/foobar**

Connected.

SQL> **conn / as sysdba**

Connected.

**\* In version 11g only PASSWORD limits were enforced by default, while RESOURCE (KERNEL) limits had to be enabled dynamically by DBA (before being enforced) like**

**ALTER SYSTEM SET resource\_limit=true; But in 12c default value for this parameter is TRUE like shown below \***

SQL> **SHOW PARAMETER RESOURCE\_LIMIT**

NAME TYPE VALUE

------------------------------------ ----------- ---------------------------

resource\_limit **boolean TRUE**

SQL> **ALTER SYSTEM SET resource\_limit=FALSE;**

System altered.

**\* Now FOOBAR can idle for Hours or can open 15 sessions.**

**FALSE means here that KERNEL parameters will NOT be enforced at all \***