

sqTask: Create a READ-ONLY called SCOTT_READONLY. This user should be able to read all tables and views from SCOTT schema.

Step #	Description	Command
1	Login to Server	N/A
2	Switch user to oracle	<pre>sudo su - oracle or su - oracle</pre>
3	Set Database Environment	<pre>. oraenv → PrimeDG</pre>
4	Make a directory for Read Only	<pre>mkdir -p ~/scripts/SQL/ReadOnlyUserScott</pre>
5	Change directory	<pre>cd ~/scripts/SQL/ReadOnlyUserScott</pre>
6	Login to Database	<pre>sqlplus / as sysdba</pre>
7	Create a DB Read Only Role	<pre>Create role ROLE_DB_READONLY_SCOTT;</pre>
8	exit out of SQL	<pre>exit;</pre>
9	Create a new SQL file to generate read only script.	<pre>cd ~/scripts/SQL/ReadOnlyUserScott touch readonlyscott.sql</pre>
10	vi into readonlyscott.sql and save the following script.	<pre>vi readonlyscott.sql Press i key to go to insert mode set feedback off set trimspool on set heading off set echo off spool /tmp/DB_Read_Only_Scott.sql select 'Grant select on ' owner '. ' object_name ' to ROLE_DB_READONLY_SCOTT;' as "Command2Execute" from dba_objects where owner='SCOTT' and object_type in ('TABLE','VIEW'); spool off set echo on set heading on set feedback on @/tmp/DB_Read_Only_Scott.sql exit; Press ESC key to go to ESCAPE mode :wq! → to save the file</pre>
11	Run the script to grant	<pre>cd ~/scripts/SQL/ReadOnlyUserScott</pre>

	permission to ROLE_DB_READONLY	sqlplus / as sysdba @readonlyscott.sql								
12	Create Read Only User	sqlplus / as sysdba create user SCOTT_Reader identified by abc123;								
13	Grant CONNECT and ROLE_DB_READONLY role to SCOTT_Reader schema.	Grant connect, ROLE_DB_READONLY_SCOTT to SCOTT_Reader;								
14	Verify all permissions given to ROLE_DB_READ_ONLY	<pre>set linesize 200 set pagesize 200 col grantee format a30 col owner format a25 col privilege format a10 select grantee, owner, privilege, count(*) from dba_tab_privs where grantee = 'ROLE_DB_READONLY_SCOTT' and owner in (select username from dba_users) group by grantee, owner, privilege order by 4;</pre> <table><tr><th>GRANTEE</th><th>OWNER</th><th>PRIVILEGE</th><th>COUNT(*)</th></tr><tr><td>ROLE_DB_READONLY_SCOTT</td><td>SCOTT</td><td>SELECT</td><td>13</td></tr></table>	GRANTEE	OWNER	PRIVILEGE	COUNT(*)	ROLE_DB_READONLY_SCOTT	SCOTT	SELECT	13
GRANTEE	OWNER	PRIVILEGE	COUNT(*)							
ROLE_DB_READONLY_SCOTT	SCOTT	SELECT	13							
15	Verify ROLE_DB_READONLY is granted to SCOTT_READER	<pre>set linesize 200 set pagesize 200 Col "User, his roles and privileges" format a50 select lpad(' ', 2*level) granted_role "User, his roles and privileges" from (/* THE USERS */ select null grantee, username granted_role from</pre>								

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        dba_users
        where
            username ='SCOTT_READER'
/* THE ROLES TO ROLES RELATIONS */
union
    select
        grantee,
        granted_role
    from
        dba_role_privs
/* THE ROLES TO PRIVILEGE RELATIONS */
union
    select
        grantee,
        privilege
    from
        dba_sys_privs
)
start with grantee is null
connect by grantee = prior granted_role;

```

User, his roles and privileges

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SCOTT_READER
CONNECT
CREATE SESSION
ROLE_DB_READONLY_SCOTT

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16.	Ask user to verify if he/she can access database objects	<pre> sqlplus SCOTT_reader/abc123 select * from emp; → wrong select * from scott.emp; → correct </pre>
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SQL> show user
USER is "SCOTT_READER"
SQL> select * from scott.emp;
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EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-DEC-80	800		20
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7698	BLAKE	MANAGER	7839	01-MAY-81	2850		30
7782	CLARK	MANAGER	7839	09-JUN-81	2450		10
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7839	KING	PRESIDENT		17-NOV-81	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-87	1100		20
EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7934	MILLER	CLERK	7782	23-JAN-82	1300		10

14 rows selected.

```
SQL> insert into scott.emp (empno) values (1111);
insert into scott.emp (empno) values (1111)
*
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ERROR at line 1:
ORA-01031: insufficient privileges
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