



PROXY USER AUTHENTICATION

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DATABASE



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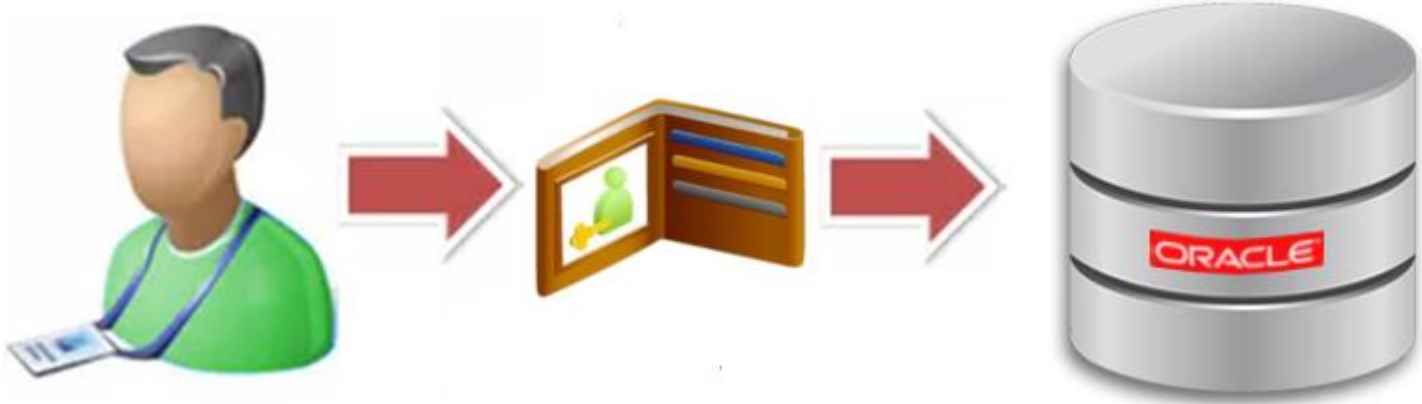
Certified Professional

MySQL 5 Database
Administrator

MISUNDERSTANDING



Proxy User Authentication != User Authentication by Proxy





Normal user

GRANTS

select any table
drop any table



SCENARIO

```
SQL> conn / as sysdba
Connected.
SQL> CREATE TABLE sys.dummy (id NUMBER);

Table created.

SQL> CREATE TABLE system.dummy (id NUMBER);

Table created.

SQL> CREATE USER jane IDENTIFIED BY "doe"
  2  DEFAULT TABLESPACE users
  3  TEMPORARY TABLESPACE temp
  4  ACCOUNT UNLOCK;

User created.

SQL> GRANT CREATE SESSION TO jane;

Grant succeeded.

SQL> GRANT SELECT ANY TABLE TO jane;

Grant succeeded.

SQL> GRANT DROP ANY TABLE TO jane;

Grant succeeded.

SQL>
```

```
SQL> conn jane/doe
Connected.
SQL> DROP TABLE sys.dummy;
DROP TABLE sys.dummy
          *
ERROR at line 1:
ORA-00942: table or view does not exist

SQL> SELECT * FROM sys.dummy;
SELECT * FROM sys.dummy
          *
ERROR at line 1:
ORA-00942: table or view does not exist

SQL> SELECT * FROM system.dummy;

no rows selected

SQL> DROP TABLE system.dummy;

Table dropped.

SQL>
```

ARE THEY REAL WORKAROUNDS?

```
whenever sqlerror exit
column password new_value pw

declare
    l_passwd varchar2(45);
begin
    select password into l_passwd from sys.dba_users where username =
upper('&1');
end;
/

select password
    from sys.dba_users
    where username = upper( '&1' )
/

alter user &1 identified by Hello;
connect &1/hello
alter user &1 identified by values '&pw';
show user
whenever sqlerror continue
```

REJECTED

```
SQL> alter session set current schema = 'john';
```

REAL WORKAROUND



```
SQL> create user PROXY identified by PROXY default tablespace USERS;  
SQL> alter user OWNER grant connect through PROXY;  
SQL> conn PROXY[OWNER]/PROXY  
SQL> show user  
USER is "OWNER"
```

Since Oracle 9i Release 2

APPROVED


```
SQL> conn / as sysdba
Connected.
SQL> REVOKE DROP ANY TABLE FROM jane;

Revoke succeeded.

SQL> CREATE USER john IDENTIFIED BY "doe"
  2  DEFAULT TABLESPACE users
  3  TEMPORARY TABLESPACE temp
  4  ACCOUNT UNLOCK;

User created.

SQL> GRANT CREATE SESSION TO john;

Grant succeeded.

SQL> GRANT RESOURCE TO john;

Grant succeeded.

SQL> ALTER USER john QUOTA UNLIMITED ON
users;

User altered.

SQL> CREATE TABLE john.dummy (id NUMBER);

Table created.
```

```
SQL> ALTER USER john GRANT CONNECT THROUGH
jane;

User altered.

SQL> AUDIT SESSION BY jane;

Audit succeeded.

SQL> conn jane/doe
Connected.
SQL> SELECT * FROM john.dummy;

no rows selected

SQL> DROP TABLE john.dummy;
DROP TABLE john.dummy
                *
ERROR at line 1:
ORA-01031: insufficient privileges

SQL> conn jane[john]/doe
Connected.
SQL> show user
USER is "john"
SQL> DROP TABLE dummy;

Table dropped.
```



```
SQL> conn / as sysdba
Connected.
SQL> ALTER SESSION SET NLS_DATE_FORMAT = 'yyyy-mm-dd hh24:mi:ss';
SQL> SET LINES 132 PAGES 60 TRIMS ON
SQL> COL username    for a13
SQL> COL proxy_user  for a13
SQL> COL obj_name    for a13
SQL> COL timestamp   for a20
SQL> SELECT  a.username,
 2          b.username proxy_user,
 3          a.obj_name,
 4          a.returncode,
 5          a.timestamp,
 6          a.sessionid,
 7          a.proxy_sessionid
 8 FROM    dba_audit_trail a,
 9         dba_audit_trail b
10 WHERE   a.action_name      = 'DROP TABLE'
11 AND     a.proxy_sessionid = b.sessionid
12 AND     b.action_name      = 'PROXY AUTHENTICATION ONLY'
13 ORDER BY sessionid;
```

USERNAME	PROXY_USER	OBJ_NAME	RETURNCODE	TIMESTAMP	SESSIONID	PROXY_SESSIONID
JOHN	JANE	DUMMY	0	2018-09-14 14:27:44	295832023	295832022

What happens if user 'john' is locked and 'jane' tries to login through him?

```
SQL> ALTER USER john ACCOUNT LOCK;
```

```
User altered.
```

```
SQL> conn jane[john]/doe
```

```
ERROR:
```

```
ORA-28000: the account is locked
```

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

```
SQL>
```

Can I check which kind of method I'm using for login, similar to *nix environment?

```
SQL> conn jane[john]/doe
Connected.
SQL> col "whoami"    for a25
SQL> col "who am i" for a25
SQL> col "sid"      for a10
SQL> SELECT sys_context('userenv','session_user') "whoami",
  2         sys_context('userenv','proxy_user')  "who am i",
  3         sys_context('userenv','sid')         "sid"
  4 FROM dual;
```

whoami	who am i	sid
JOHN	JANE	878

```
SQL> conn jane/doe
Connected.
SQL> SELECT sys_context('userenv','session_user') "whoami",
  2         sys_context('userenv','proxy_user')  "who am i",
  3         sys_context('userenv','sid')         "sid"
  4 FROM dual;
```

whoami	who am i	sid
JANE		878

```
SQL>
```

Can I realize someone is logged into my instance by using this feature without looking audit trail?

```
SQL> SELECT * FROM proxy_users;
```

PROXY	CLIENT	AUT FLAGS
JANE	JOHN	NO PROXY MAY ACTIVATE ALL CLIENT ROLES

```
SQL> col username          for a25
SQL> col network_service_banner for a100
SQL> SELECT s.username, s.sid, s.serial#, s.state, c.network_service_banner
 2 FROM   v$session s,
 3        v$session_connect_info c
 4 WHERE  s.sid          = c.sid
 5 AND    s.serial#      = c.serial#
 6 AND    c.authentication_type = 'PROXY';
```

USERNAME	SID	SERIAL#	STATE	NETWORK_SERVICE_BANNER
JOHN	878	19357	WAITING	Oracle Bequeath NT Protocol Adapter for Linux: Version 11.2.0.3.0 - Production
JOHN	878	19357	WAITING	Oracle Advanced Security: authentication service for Linux: Version 11.2.0.3.0 - Production
JOHN	878	19357	WAITING	Oracle Advanced Security: encryption service for Linux: Version 11.2.0.3.0 - Production
JOHN	878	19357	WAITING	Oracle Advanced Security: crypto-checksumming service for Linux: Version 11.2.0.3.0 - Production

