

Step 1: Create a User on the Target Database

```
SQL> select name, open_mode, log_mode from v$database;
```

NAME	OPEN_MODE	LOG_MODE
ORCLCDB	READ WRITE	ARCHIVELOG

```
SQL> select name, OPEN_MODE, OPEN_TIME, con_id from v$containers;
```

NAME	OPEN_MODE	OPEN_TIME	CON_ID
CDB\$ROOT	READ WRITE	02-DEC-24 12:55:06.544 PM -06:00	1
PDB\$SEED	READ ONLY	02-DEC-24 12:55:06.574 PM -06:00	2
TESTPDB	READ WRITE	02-DEC-24 12:55:07.608 PM -06:00	3

```
SQL> select banner from v$version;
```

BANNER
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production

```
SQL> create user c##test identified by krishna123 default tablespace users
temporary tablespace temp quota unlimited on users;
```

User created.

```
SQL> grant create session, connect to c##test;
```

Grant succeeded.

```
SQL> conn c##test
```

Enter password:

Connected.

Step 2: Create the Wallet in the Directory E:\ORACLE19\orclwal

```
PS E:\ORACLE19> mkdir orclwal
Directory: E:\ORACLE19
```

Mode	LastWriteTime	Length	Name
d-----	03-12-2024 13:04		orclwal

```
PS E:\ORACLE19\orclwal> pwd
```

Path

E:\ORACLE19\orclwal

```
PS E:\ORACLE19\orclwal> orapki wallet create -wallet E:\ORACLE19\orclwal -
auto_login
```

Oracle PKI Tool Release 19.0.0.0.0 - Production

Version 19.3.0.0.0

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Enter password:

Enter password again:

Operation is successfully completed.

PS E:\ORACLE19\orclwal> pwd

Path

E:\ORACLE19\orclwal

PS E:\ORACLE19\orclwal> ls

Mode	LastWriteTime	Length	Name
-a----	03-12-2024 13:57	194	cwallet.sso
-a----	03-12-2024 13:57	0	cwallet.sso.lck
-a----	03-12-2024 13:57	149	ewallet.p12
-a----	03-12-2024 13:57	0	ewallet.p12.lck

PS E:\ORACLE19\orclwal> mkdir TNS_ADMIN

Directory: E:\ORACLE19\orclwal

Mode	LastWriteTime	Length	Name
d-----	03-12-2024 13:58		TNS_ADMIN

PS E:\ORACLE19\orclwal> ls

Mode	LastWriteTime	Length	Name
d-----	03-12-2024 13:58		TNS_ADMIN
-a----	03-12-2024 13:57	194	cwallet.sso
-a----	03-12-2024 13:57	0	cwallet.sso.lck
-a----	03-12-2024 13:57	149	ewallet.p12
-a----	03-12-2024 13:57	0	ewallet.p12.lck

PS E:\ORACLE19\orclwal\TNS_ADMIN> pwd

Path

E:\ORACLE19\orclwal\TNS_ADMIN

PS E:\ORACLE19\orclwal\TNS_ADMIN> ls

Mode	LastWriteTime	Length	Name
-a----	05-12-2024 10:37	590	sqlnet.ora
-a----	04-12-2024 13:22	1454	tnsnames.ora

Add Entry in tnsnames.ora

ORCLWAL=

(DESCRIPTION =

(ADDRESS_LIST =

(ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))

)

```

(CONNECT_DATA =
  (SERVICE_NAME = orclcdb.attlocal.net) ==> Ensure the specified
service exists.
)
)

```

Update sqlnet.ora with Wallet Location

```

SQLNET.AUTHENTICATION_SERVICES= (NTS)
NAMES.DIRECTORY_PATH= (TNSNAMES, EZCONNECT)

WALLET_LOCATION = (SOURCE = (METHOD = FILE) (METHOD_DATA =
(DIRECTORY=E:\ORACLE19\orclwal)))
SQLNET.WALLET_OVERRIDE = TRUE

```

Verify listener status and make all services are up.

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> lsnrctl status
```

```
LSNRCTL for 64-bit Windows: Version 19.0.0.0.0 - Production on 05-DEC-2024
13:18:30
```

```
Copyright (c) 1991, 2019, Oracle. All rights reserved.
```

```
Connecting to (ADDRESS=(PROTOCOL=tcp) (HOST=) (PORT=1521))
STATUS of the LISTENER
```

```

-----
Alias                               LISTENER
Version                             TNSLSNR for 64-bit Windows: Version 19.0.0.0.0 -
Production
Start Date                           02-DEC-2024 13:35:49
Uptime                               2 days 23 hr. 42 min. 42 sec
Trace Level                           off
Security                             ON: Local OS Authentication
SNMP                                 OFF
Listener Parameter File
E:\ORACLE19\WINDOWS.X64_193000_db_home\network\admin\listener.ora
Listener Log File
E:\ORACLE19\ORACLEME\diag\tnslsnr\KRISHNA\listener\alert\log.xml
Listening Endpoints...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=KRISHNA) (PORT=1521)))

  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcps) (HOST=KRISHNA) (PORT=5500)) (Security=(m
y_wallet_directory=E:\ORACLE19\ORACLEME\admin\orclcdb\xdb_wallet)) (Presenta
tion=HTTP) (Session=RAW))
Services Summary...
Service "52448234712340b69f274bcc790ecfe0.attlocal.net" has 1 instance(s).
  Instance "orclcdb", status READY, has 1 handler(s) for this service...
Service "64baad14383e44b68f19a4e3751ef58d.attlocal.net" has 1 instance(s).
  Instance "orclcdb", status READY, has 1 handler(s) for this service...
Service "ORCLCDB" has 1 instance(s).
  Instance "ORCLCDB", status UNKNOWN, has 1 handler(s) for this service...
Service "krishna.attlocal.net" has 1 instance(s).
  Instance "orclcdb", status READY, has 1 handler(s) for this service...
Service "orclcdb.attlocal.net" has 1 instance(s).
  Instance "orclcdb", status READY, has 1 handler(s) for this service...
Service "orclcdbXDB.attlocal.net" has 1 instance(s).
  Instance "orclcdb", status READY, has 1 handler(s) for this service...
Service "testpdb.attlocal.net" has 1 instance(s).

```

Instance "orclcdb", status READY, has 1 handler(s) for this service...
The command completed successfully

Verify entry with tnsping

PS E:\ORACLE19\orclwal\TNS_ADMIN> tnsping ORCLWAL

TNS Ping Utility for 64-bit Windows: Version 19.0.0.0.0 - Production on 03-DEC-2024 13:22:55

Copyright (c) 1997, 2019, Oracle. All rights reserved.

Used parameter files:

E:\ORACLE19\orclwal\TNS_ADMIN\sqlnet.ora

Used TNSNAMES adapter to resolve the alias

Attempting to contact (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = orclcdb.attlocal.net)))

OK (10 msec)

Add Credentials to Wallet

PS E:\ORACLE19\orclwal> mkstore -wrl E:\ORACLE19\orclwal -createCredential ORCLWAL c##test

Oracle Secret Store Tool Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

Copyright (c) 2004, 2019, Oracle and/or its affiliates. All rights reserved.

Your secret/Password is missing in the command line
Enter your secret/Password:

Re-enter your secret/Password:

Enter wallet password:

PS E:\ORACLE19\orclwal> mkstore -wrl /u01/admin/orcl/wallet -listCredential

Oracle Secret Store Tool Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

Copyright (c) 2004, 2019, Oracle and/or its affiliates. All rights reserved.

Enter wallet password:

\u01\admin\orcl\wallet (The system cannot find the path specified)

PS E:\ORACLE19\orclwal> mkstore -wrl E:\ORACLE19\orclwal -listCredential

Oracle Secret Store Tool Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

Copyright (c) 2004, 2019, Oracle and/or its affiliates. All rights reserved.

Enter wallet password:

List credential (index: connect_string username)

1: ORCLWAL c##test

Validate TNS - to Connect with the User

```
PS E:\ORACLE19\orclwal> sqlplus c##test@ORCLWAL

SQL*Plus: Release 19.0.0.0.0 - Production on Wed Dec 4 12:22:12 2024
Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Enter password:
Last Successful login time: Wed Dec 04 2024 11:49:54 -06:00

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
```

Set Environment Variables

```
$env:ORACLE_HOME = "E:\ORACLE19\WINDOWS.X64_193000_db_home"
$env:TNS_ADMIN = "E:\ORACLE19\orclwal\TNS_ADMIN"
```

Try Connecting Using Wallet

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> sqlplus

SQL*Plus: Release 19.0.0.0.0 - Production on Thu Dec 5 12:10:54 2024
Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Enter user-name: /@ORCLWAL
Last Successful login time: Thu Dec 05 2024 12:07:50 -06:00

Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

SQL> show user;
USER is "C##TEST"
```

Steps for Adding a New User to an Existing Wallet

```
SQL> select name,open_mode,log_mode from v$database;
```

NAME	OPEN_MODE	LOG_MODE
ORCLCDB	READ WRITE	ARCHIVELOG

```
SQL> select name,OPEN_MODE,OPEN_TIME,con_id from v$containers;
```

NAME	OPEN_MODE	OPEN_TIME
CDB\$ROOT	READ WRITE	04-DEC-24 12.55.06.544 PM -06:00
1		

```
PDB$SEED          READ ONLY  04-DEC-24 12.55.06.574 PM -06:00
2
TESTPDB           READ WRITE 04-DEC-24 12.55.07.608 PM -06:00
3
```

```
SQL> select banner from v$version;
```

```
BANNER
```

```
-----
-----
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
```

```
SQL> create user c##key identified by key123 default tablespace users
temporary tablespace temp quota unlimited on users;
```

```
User created.
```

```
SQL> grant create session, connect to c##key;
```

```
Grant succeeded.
```

```
SQL> conn c##key;
```

```
Enter password:
```

```
Connected.
```

Add Credential to Wallet for New User

```
PS E:\ORACLE19\orclwal> mkstore -wrl E:\ORACLE19\orclwal -createCredential
ORCLWAL c##key key123
Oracle Secret Store Tool Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
Copyright (c) 2004, 2019, Oracle and/or its affiliates. All rights
reserved.
```

```
Enter wallet password:
```

```
Secret Store error occurred:
oracle.security.pki.OracleSecretStoreException: Credential already exists
```

```
Note: We cannot use same TNS entry name to add a user, need a add separate
entry with different name like below:
```

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> pwd
```

```
Path
```

```
----
```

```
E:\ORACLE19\orclwal\TNS_ADMIN
```

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> ls
```

```
Directory: E:\ORACLE19\orclwal\TNS_ADMIN
```

Mode	LastWriteTime	Length	Name
----	-----	-----	----
-a----	05-12-2024 10:37	590	sqlnet.ora
-a----	04-12-2024 13:22	1454	tnsnames.ORA

Update - tnsnames.ORA with below entry.

```
ORCLWAL1=
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = orclcdb.attlocal.net)
    )
  )
```

PS E:\ORACLE19\orclwal\TNS_ADMIN> notepad tnsnames.ORA - save the file after edit

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> cat tnsnames.ORA
# tnsnames.ora Network Configuration File:
E:\ORACLE19\WINDOWS.X64_193000_db_home\NETWORK\ADMIN\tnsnames.ora
# Generated by Oracle configuration tools.
```

```
LISTENER_ORACLE =
  (ADDRESS = (PROTOCOL = TCP) (HOST = localhost) (PORT = 1521))
```

```
ORACLR_CONNECTION_DATA =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = IPC) (KEY = EXTPROC1521))
    )
    (CONNECT_DATA =
      (SID = CLRExtProc)
      (PRESENTATION = RO)
    )
  )
```

```
ORCLWAL=
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = orclcdb.attlocal.net)
    )
  )
```

```
ORCLWAL1=
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = orclcdb.attlocal.net)
    )
  )
```

Verify ping for the newly added entry in tnames.ora file:

```
PS E:\ORACLE19\orclwal> tnsping ORCLWAL1
```

TNS Ping Utility for 64-bit Windows: Version 19.0.0.0.0 - Production on 04-DEC-2024 13:23:12

Copyright (c) 1997, 2019, Oracle. All rights reserved.

Used parameter files:

E:\ORACLE19\orclwal\TNS_ADMIN\sqlnet.ora

Used TNSNAMES adapter to resolve the alias

Attempting to contact (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = orclcdb.attlocal.net)))
OK (20 msec)

Add new entry into wallet file:

```
PS E:\ORACLE19\orclwal> mkstore -wrl E:\ORACLE19\orclwal\ -createCredential ORCLWAL1 c##key key123
```

Oracle Secret Store Tool Release 19.0.0.0.0 - Production

Version 19.3.0.0.0

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Enter wallet password: >> Enter wallet password

```
PS E:\ORACLE19\orclwal>
```

List credentials:

```
PS E:\ORACLE19\orclwal> mkstore -wrl E:\ORACLE19\orclwal -listCredential
```

Oracle Secret Store Tool Release 19.0.0.0.0 - Production

Version 19.3.0.0.0

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Enter wallet password:

List credential (index: connect_string username)

2: ORCLWAL1 c##key

1: ORCLWAL c##test

Now we can see both entries in the wallet file:

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> sqlplus
```

SQL*Plus: Release 19.0.0.0.0 - Production on Thu Dec 5 12:29:38 2024

Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Enter user-name: /@ORCLWAL1

Last Successful login time: Thu Dec 05 2024 10:07:39 -06:00

Connected to:

Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

```
SQL> show user;
USER is "C##KEY"
```

Updating Credentials in Wallet

If a password changes in the database, you must update the wallet credential as follows:

```
PS E:\ORACLE19\orclwal> mkstore -wrl E:\ORACLE19\orclwal -modifyCredential
ORCLWAL c##test krishna123
Oracle Secret Store Tool Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
Copyright (c) 2004, 2019, Oracle and/or its affiliates. All rights
reserved.
```

Enter wallet password:>> Enter wallet password.

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> sqlplus
```

```
SQL*Plus: Release 19.0.0.0.0 - Production on Thu Dec 5 12:34:17 2024
Version 19.3.0.0.0
```

Copyright (c) 1982, 2019, Oracle. All rights reserved.

```
Enter user-name: /@ORCLWAL
Last Successful login time: Thu Dec 05 2024 12:10:58 -06:00
```

```
Connected to:
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
```

```
SQL> show user;
USER is "C##TEST"
```

Steps to Add a PDB User to the Wallet

Create the user in the PDB:

```
SQL> show pdbs;
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
2	PDB\$SEED	READ ONLY	NO
3	TESTPDB	READ WRITE	NO

```
SQL> alter session set container=TESTPDB;
```

Session altered.

```
SQL> show pdbs;
```

CON_ID	CON_NAME	OPEN MODE	RESTRICTED
3	TESTPDB	READ WRITE	NO

```
SQL> create user PDBTEST identified by krishna123 default tablespace users
temporary tablespace temp quota unlimited on users;
```

User created.

```
SQL> grant create session,connect to pdbtest;
```

Grant succeeded.

```
ADD ENTRY IN TNSNAMES.ORA FILE FOR PDB USER:
```

```
-----
```

Version 19.3.0.0.0

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> cat .\tnsnames.ORA
```

```
# tnsnames.ora Network Configuration File:
```

```
E:\ORACLE19\WINDOWS.X64_193000_db_home\NETWORK\ADMIN\tnsnames.ora
```

```
# Generated by Oracle configuration tools.
```

```
LISTENER_ORACLE =
```

```
(ADDRESS = (PROTOCOL = TCP) (HOST = localhost) (PORT = 1521))
```

```
ORACLR_CONNECTION_DATA =
```

```
(DESCRIPTION =
```

```
(ADDRESS_LIST =
```

```
(ADDRESS = (PROTOCOL = IPC) (KEY = EXTPROC1521))
```

```
)
```

```
(CONNECT_DATA =
```

```
(SID = CLRExtProc)
```

```
(PRESENTATION = RO)
```

```
)
```

```
)
```

```
ORCLWAL=
```

```
(DESCRIPTION =
```

```
(ADDRESS_LIST =
```

```
(ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))
```

```
)
```

```
(CONNECT_DATA =
```

```
(SERVICE_NAME = orclcdb.attlocal.net)
```

```
)
```

```
)
```

```
ORCLWAL1=
```

```
(DESCRIPTION =
```

```
(ADDRESS_LIST =
```

```
(ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))
```

```
)
```

```
(CONNECT_DATA =
```

```
(SERVICE_NAME = orclcdb.attlocal.net)
```

```
)
```

```
)
```

```
TESTPDBWAL=
```

```
(DESCRIPTION =
```

```
(ADDRESS_LIST =
```

```
(ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))
```

```
)
```

```
(CONNECT_DATA =
```

```
(SERVICE_NAME = testpdb.attlocal.net)
)
```

Validate Entry using Tnsping:

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> tnsping TESTPDBWAL
```

```
TNS Ping Utility for 64-bit Windows: Version 19.0.0.0.0 - Production on 05-DEC-2024 12:41:32
```

```
Copyright (c) 1997, 2019, Oracle. All rights reserved.
```

```
Used parameter files:
```

```
E:\ORACLE19\orclwal\TNS_ADMIN\sqlnet.ora
```

```
Used TNSNAMES adapter to resolve the alias
```

```
Attempting to contact (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP) (HOST = KRISHNA) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = testpdb.attlocal.net)))
```

```
OK (0 msec)
```

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> sqlplus PDBTEST@TESTPDBWAL
```

```
SQL*Plus: Release 19.0.0.0.0 - Production on Thu Dec 5 12:46:51 2024
Version 19.3.0.0.0
```

```
Copyright (c) 1982, 2019, Oracle. All rights reserved.
```

```
Enter password:
```

```
Connected to:
```

```
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
```

```
SQL> show user;
```

```
USER is "PDBTEST"
```

ADD ENTRY INTO WALLET:

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> mkstore -wrl E:\ORACLE19\orclwal -createCredential TESTPDBWAL pdbtest;
```

```
Oracle Secret Store Tool Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
```

```
Copyright (c) 2004, 2019, Oracle and/or its affiliates. All rights reserved.
```

```
Your secret/Password is missing in the command line
```

```
Enter your secret/Password:
```

```
Re-enter your secret/Password:
```

```
Enter wallet password:
```

```
PS E:\ORACLE19\orclwal\TNS_ADMIN> mkstore -wrl E:\ORACLE19\orclwal -listCredential
```

```
Oracle Secret Store Tool Release 19.0.0.0.0 - Production
Version 19.3.0.0.0
```

```
Copyright (c) 2004, 2019, Oracle and/or its affiliates. All rights reserved.
```

Enter wallet password:

List credential (index: connect_string username)

3: TESTPDBWAL pdbtest

2: ORCLWAL1 c##key

1: ORCLWAL c##test

PS E:\ORACLE19\orclwal\TNS_ADMIN> sqlplus

SQL*Plus: Release 19.0.0.0.0 - Production on Thu Dec 5 12:56:17 2024
Version 19.3.0.0.0

Copyright (c) 1982, 2019, Oracle. All rights reserved.

Enter user-name: /@TESTPDBWAL

Last Successful login time: Thu Dec 05 2024 12:49:36 -06:00

Connected to:

Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
Version 19.3.0.0.0

SQL> show user;

USER is "PDBTEST"

Happy Learning 😊