What is SQLcl?

Oracle SQLcl (SQL Developer Command Line) is a modern, free, Java-based command-line interface for the Oracle Database.

It is designed as a powerful alternative to the traditional SQL*Plus, supporting existing scripts while offering enhanced features for modern database professionals,

Developers, and AI/ML-driven applications.

Key Features & Capabilities:

1- Modern Interface:

SQLcl offers an interactive and user-friendly command-line experience with inline editing, tab completion for SQL keywords and database objects, syntax highlighting, and persistent SQL history.

2- AI Integration (MCP Server):

It includes an integrated Model Context Protocol (MCP) Server that allows Language Learning Models (LLMs) and other AI tools to interactively execute queries and process results directly with your Oracle Database, enabling natural language interactions.

3- Database Utilities:

It simplifies common database tasks with built-in commands for features like AWR, Data Pump, Data Guard, and generating DDL for database objects.

4- Automatic Formatting:

Query results can be automatically formatted into various outputs, including CSV, XML, JSON, HTML, and INSERT statements, making data analysis and export easier.

5- No Oracle Client Required:

As a Java application, SQLcl uses the Oracle JDBC driver by default, meaning you typically only need a Java runtime (JRE) to run it, not a full Oracle Client installation.

6- CI/CD and Projects:

It supports built-in project management with Git integration, allowing users to track local database changes, generate DIFFs, and automate deployment artifacts.

7- Cross-Platform:

Being Java-based, it runs on Windows, macOS, and Linux.

8- Integration:

SQLcl is bundled with Oracle SQL Developer and is integrated into the SQL Developer Extension for VS Code and Oracle Cloud Infrastructure (OCI) services.

Configuration Steps:-

(1) Install Java and download the sqlcl-*.zip file (e.g., sqlcl-latest.zip) from Oracle website.

(2) If not downloaded on same server then copy the software on the Oracle Database Server.

(3) create a directory where you want to install SQLcl for example (mkdir /opt/sqlcl).

(4) Move the sqlcl-*.zip file to /opt/sqlcl and unzip the software.

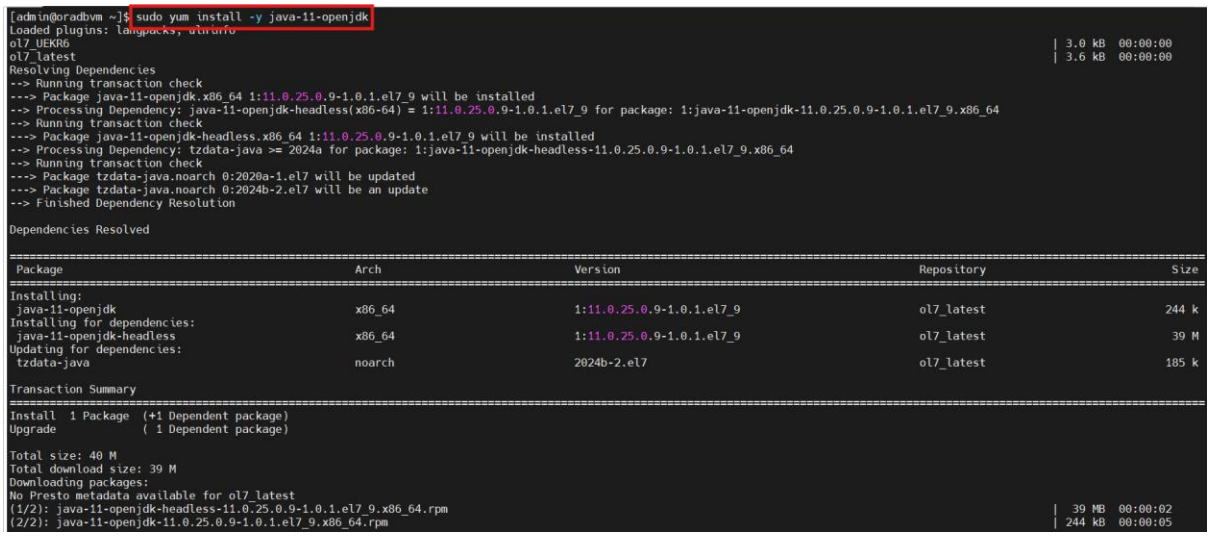
(5) This will create a sqlcl folder in the current directory, which contains the bin subdirectory where the executable resides.

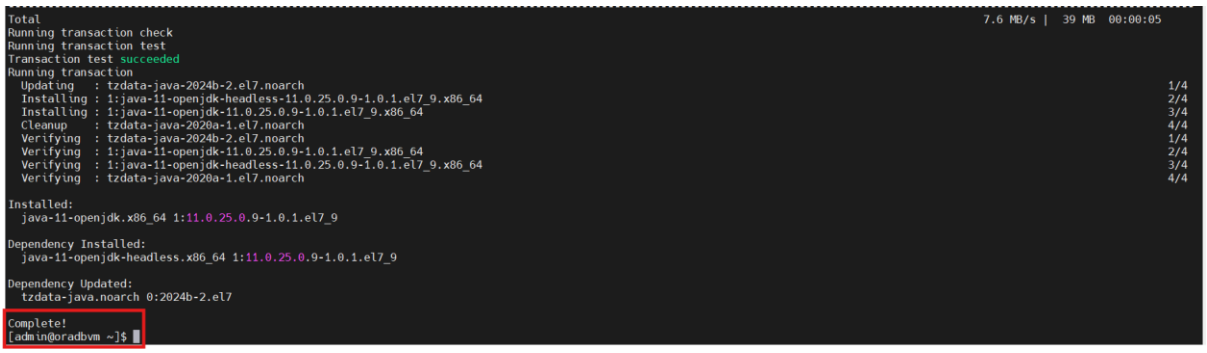
(6) Configure Environment Variables (Optional but Recommended).

(7) To run sqlcl from any location, add its bin directory to your system's PATH environment variable.

Note:- Edit your shell profile file (e.g., ~/.bashrc or ~/.bash_profile): nano ~/.bashrc and put export PATH=$PATH:/opt/sqlcl/bin source the profile to persistent the changes.

sudo yum install -y java-11-openjdk





Download and copy the sqlcl software on the DB server.

```
[admin@oradbvm ~]$ ls -ltrh
total 4.0K
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Downloads
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Desktop
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Templates
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Public
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Pictures
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Music
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Documents
drwxr-xr-x. 2 admin admin    6 Nov 16 11:16 Videos
drwxrwxr-x. 4 admin admin 4.0K Jan 11 20:29 sqlcl
[admin@oradbvm ~]$
```

Sudo mkdir /opt/sqlcl

Cd /opt/sqlcl

```
[admin@oradbvm ~]$ sudo mkdir /opt/sqlcl
[sudo] password for admin:
[admin@oradbvm ~]$ ls -ld /opt/sqlcl/
drwxr-xr-x. 2 root root 6 Jan 11 20:33 /opt/sqlcl/
[admin@oradbvm ~]$
```

Cp –rf * /opt/sqlcl

```
[admin@oradbvm sqlcl]$ sudo cp -rf * /opt/sqlcl/
[admin@oradbvm sqlcl]$ cd /opt/sqlcl/
[admin@oradbvm sqlcl]$ ls -ltrh
total 20K
-rw-r--r--. 1 root root   44 Jan 11 20:34 25.4.0.346.1855
drwxr-xr-x. 2 root root   75 Jan 11 20:34 bin
drwxr-xr-x. 3 root root 4.0K Jan 11 20:34 lib
-rw-r--r--. 1 root root  348 Jan 11 20:34 THIRD-PARTY-LICENSES.txt
-rw-r--r--. 1 root root  192 Jan 11 20:34 NOTICES.txt
-rw-r--r--. 1 root root  216 Jan 11 20:34 LICENSE.txt
[admin@oradbvm sqlcl]$ pwd
/opt/sqlcl
[admin@oradbvm sqlcl]$
```

Sudo chown –R oracle:oinstall /opt/sqlcl

```
[admin@oradbvm ~]$ sudo chown -R oracle:oinstall /opt/sqlcl/
[admin@oradbvm ~]$
```

Nano .bash_profile

```
[oracle@oradbvm ~]$ nano .bash_profile
[oracle@oradbvm ~]$
```

Add $PATH:/opt/sqlcl/bin

Alias sqlplus='sql'

TIP: - Create alias for sqlcl with sqlplus (as most of the persons have usual practice to use sqlplus utility).

```
# .bash_profile

# Get the aliases and functions
if [ -f ~/.bashrc ]; then
        . ~/.bashrc
fi

# User specific environment and startup programs

PATH=$PATH:$HOME/.local/bin:$HOME/bin

export PATH
export ORACLE_HOME=/u01/app/oracle/product/19c/dbhome_1
export PATH=$ORACLE_HOME/bin:$PATH:/opt/sqlcl/bin
export ORACLE_BASE=/u01/app/oracle
export ORACLE_SID=prod_stby
export TNS_ADMIN=$ORACLE_HOME/network/admin

alias alertlog='tail -100f /u01/app/oracle/diag/rdbms/prod_stby/prod_stby/trace/alert_prod_stby.log'
alias sqlplus='sql'
```

Source the oracle bash profile and check.

Source .bash_profile and check with sqlplus / as sysdba

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

SQLcl: Release 19.1 Production on Sun Jan 11 20:48:33 2026

Copyright (c) 1982, 2026, Oracle.  All rights reserved.

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


SQL>
```