The SQL* Family: SQL*Plus, SQL Developer and SQLcl

Ami Aharonovich

Oracle ACE Director 

Ami@DBAces.com

About Me

- Oracle ACE Director
- Oracle Certified Professional DBA (OCP)
- Founder and CEO, DBAces
- President, Israel Oracle User Group
- Ambassador, EMEA Oracle User Group Community
- Oracle DBA consultant and instructor, specializing in Oracle database core technologies
- Frequent speaker at Oracle events and user group conferences around the globe



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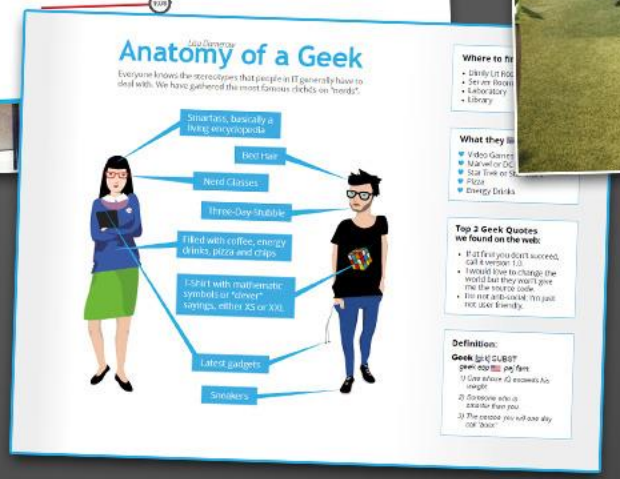
Previous Highlights





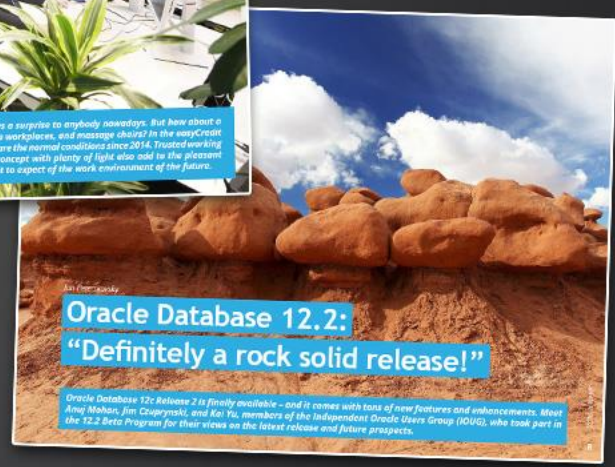












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DBACES
covering your database

DOUG

Helpful Tips

Oracle Database 18c XE
”Free Oracle Database for Everyone”

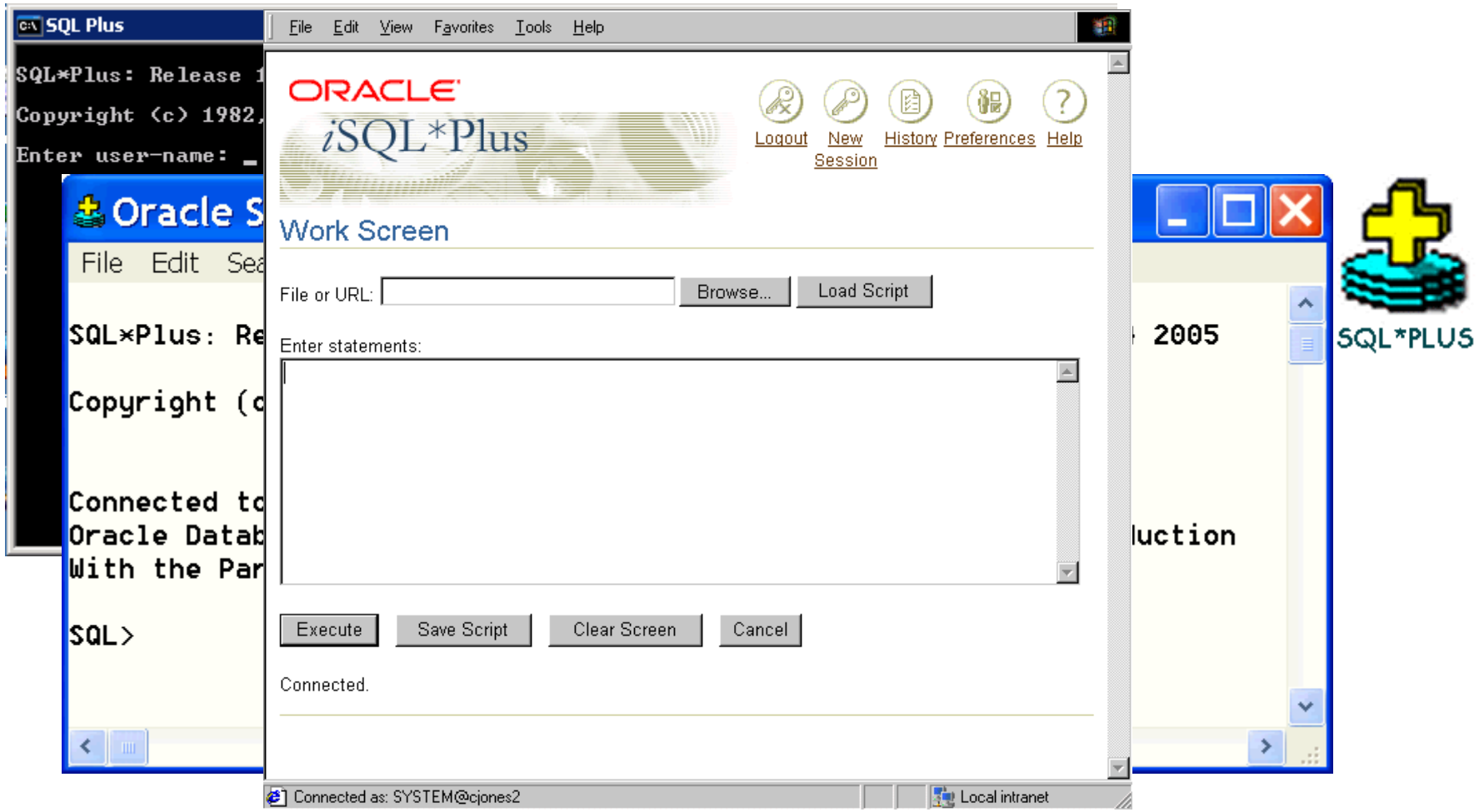
- Same powerful Oracle Database with a full-featured experience
- Use in any environment, plus the ability to embed and redistribute – free!
- What is included:
  - Multitenant (multiple Pluggable Databases inside your Multitenant Container Database)
  - In-Memory (to support real-time analytics using In-Memory column store)
  - Partitioning
  - Advanced Analytics (Data Mining SQL, R programming and the Oracle Data Miner UI)
  - Advanced Security (TDE and Data Redaction)
- Resources – up to: 12GB of user data, 2GB DB RAM, 2 CPU threads, 3 PDBs

https://www.oracle.com/database/technologies/appdev/xe.html

Agenda

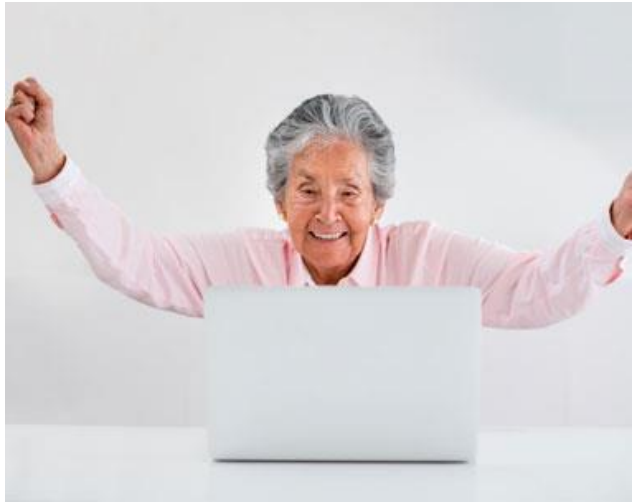
- SQL*Plus
- SQL Developer
- SQLcl
- Live demo

SQL*Plus


SQL Plus
SQL*Plus: Release 1
Copyright (c) 1982,
Enter user-name:
File Edit View Favorites Tools Help
ORACLE
iSQL*Plus
Logout
New Session
History
Preferences
Help
Work Screen
File or URL:
Browse...
Load Script
Enter statements:
Execute
Save Script
Clear Screen
Cancel
Connected.
Connected as: SYSTEM@cjones2
Local intranet
Oracle S
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SQL*PLUS

SQL*Plus – History

- Oldest, most basic Oracle database command-line utility
- First version was called UFI (User Friendly Interface), until the release of Oracle Database version 4
- Later it was changed to Advanced UFI and then to SQL*Plus with the release of version 5 (1985)
- SQL*Plusw – Windows “GUI” version
- iSQL*Plus – web based version



SQL*Plus

- Automatically installed with every Oracle database version
- The first tool to be updated when syntax changes
- Very strong integration with other Oracle infrastructure tools
- Supports SQL statements, PL/SQL blocks, use of variables, internal commands, prompt command, external commands
- Scripts are typically used for batch processes and maintenance
- Still getting new features added, even 12c R2 has a few…

SQL*Plus Useful Commands

- COPY
- MARKUP HTML
- SPOOL APPEND
- LIST, CHANGE and RUN
- GLOGIN.SQL (script file)
- PROMPT (ACCEPT) and NEW_VALUE
- WHENEVER SQLERROR
- ERRORLOGGING (11*g* R1)
- EXITCOMMIT (11*g* R2)
- HOST

ERRORLOGGING

- Enables error logging of SQL, PL/SQL and SQL*Plus errors
- Errors are written to a default table called SPERRORLOG:
  - Username
  - time of error
  - script name (if applicable)
  - user-defined identifier (to see errors from a specific session)
  - ORA, PLS or SP2 error messages
  - the statement that caused the error
- ROLLBACK issue: possible solution to create a view and an instead of trigger

Database Application Development Hands On Labs



- Install virtual appliance that provides pre-configured Oracle software for your use
- For testing purposes only, unsupported and should not be used in production. Includes:
  - Oracle Linux 7
  - Oracle Database 18.3
  - Oracle SQL Developer 18.3
  - Oracle Application Express 18.2
  - Hands On Labs (accessed via the Toolbar Menu in Firefox)
- Requirements: 2GB RAM (default 1GB), 15GB free space

https://www.oracle.com/technetwork/database/enterprise-edition/databaseappdev-vm-161299.html

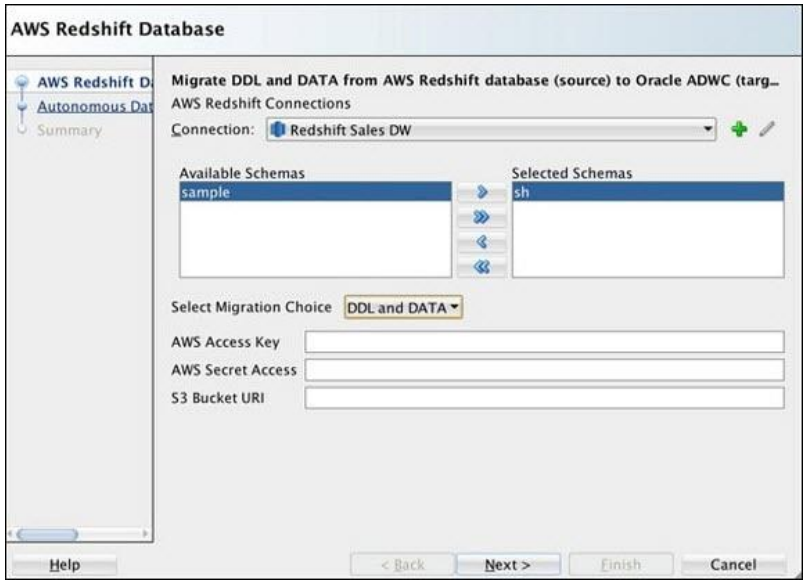
SQL Developer (18.3)

- Free, integrated development environment that simplifies the development and management of Oracle database. It offers:
  - Complete end-to-end development of your PL/SQL applications
  - Worksheet for running queries and scripts
  - DBA console for managing the database
  - Reports interface
  - Complete data modeling solution
  - Migration platform, moving 3rd party databases to Oracle



New Features in Release 18.x

- Autonomous Data Warehouse Cloud – built-in support (ADWC)
- New end-to-end migration of AWS Redshift to Oracle Cloud service (wizard)
- Refreshed welcome page and new assistance for making connections
- Database Sharding option support enhancements
- Real Time SQL Monitoring (HTML reports)
- Faster Excel imports



SQL Developer Useful Features

- Grouping connections
- Export/import connections
- Multi-cursor editing
- Formatting the SQL code
- Editing and using snippets
- Creating reports (csv, xml, …)
- Database document and reports
- Import data wizard
- Real time SQL monitor
- Code templates
- Shortcut keys
- Schema compare
- SQL Data Modeler
- Monitor SQLs and sessions
- Instance viewer
- DBA tools (multitenant)
- Copy database to Oracle cloud



SQL Developer Useful Links

- SQL Developer:

https://www.oracle.com/database/technologies/appdev/sql-developer.html

- SQL Developer Exchange:

https://apex.oracle.com/pls/apex/f?p=43135:1

- SQL Developer OTN Forum:

https://community.oracle.com/community/groundbreakers/database/developer-tools/sql_developer

- SQL Developer Online Tutorials:

https://docs.oracle.com/en/database/oracle/sql-developer/



“Sell Me on Oracle SQLcl in 50 Seconds”

- “It’s everything you like about SQL*Plus, and everything you didn’t like about SQL*Plus – fixed”
- Everyday things made easier: Object completion, In-line editing, SQL history, Automatic SQL formatting, new commands, and so much more…
- Official product, included with your database license, covered by MOS
- Quarterly updates with new features and bug fixed

https://www.thatjeffsmith.com/archive/2018/10/sell-me-on-oracle-sqlcl-in-50-seconds/



SQL Developer Command Line – SQLcl (18.3)

- It is the “New SQL*Plus on Steroids” (since 2016)
- Free command line interface based on the script engine in Oracle SQL Developer
- Execute SQL and PL/SQL either interactively or batch
- Provides: in-line editor, auto-complete, command history, new commands (CTAS, DLL, REPEAT, ALIAS, LOAD, and more…), SQL*Plus support
- No installation required
- It is part of the SQL Developer suite
- Java based



SQLcl Useful Commands

- Object Completion (Tab)
- HISTORY
- INFO, INFO+
- DDL
- SQLFORMAT (csv, html, xml, insert, loader…)
- ALIAS
- REPEAT
- CTAS
- LOAD



SQLcl Keyboard Shortcuts

- Ctrl+W – top first line
- Ctrl+A – beginning of line
- Ctrl+E – end of line
- Ctrl+S – bottom of buffer
- Ctrl+R – run
- Ctrl+L – clear screen



SQLcl Useful Links

SQL Developer Command Line SQLcl 18.3 Release Notes:

https://www.oracle.com/technetwork/developer-tools/sqlcl/downloads/sqlcl-relnotes-183-5112172.html

SQL Developer Command Line SQLcl Forums:

https://community.oracle.com/community/groundbreakers/database/developer-tools/sql_developer/sqlcl

Jeff Smith, SQL Developer Product Manager (@thatjeffsmith):

http://www.thatjeffsmith.com

The Modern Command Line (blog)

https://blogs.oracle.com/oraclemagazine/the-modern-command-line





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