

PSS

Physics Services Support

CERN IT  
Department

## DB Development Tools

**Benthic**  
**SQL Developer**  
**Application Express**

WLCG Service Reliability Workshop

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- SQL\*Plus
- Graphical tools for Oracle database development
  - Benthic
    - Golden
    - PLEdit
    - GoldView
  - Oracle SQL Developer
- Web application development tool for Oracle Database
  - Oracle Application Express
- Demo

- SQL\*Plus is the primary tool to access an Oracle database. Comes with both Oracle Client and Server
- It a command line tool with a limited functionality
  - Formatting the output is not an easy task
  - No command history on Unix
  - rlwrap tool can be used to make SQL\*Plus more user friendly  
<https://twiki.cern.ch/twiki/bin/view/PSSGroup/RIWrap>

- You can set the Oracle Client version, using `/afs/cern.ch/project/oracle/script/setoraenv.csh` (for tcsh) or `/afs/cern.ch/project/oracle/script/setoraenv.sh` (bash)
- If you create `login.sql` script, it will be run automatically when you connect with SQL\*Plus

- Benthic applications provide GUI for writing queries, running scripts, developing PL/SQL code and browsing schema objects
  - Benthic Golden is an querying and scripting tool
  - Benthic PLEdit is PL/SQL code editor
  - Benthic GoldView is a schema structure browser
- Benthic is available for Windows OS only
- Benthic can be downloaded from <http://www.benthicsoftware.com>
- It is commercial software, the license keys are located at DFS, can be used by anybody on the CERN site

Benthic Golden is an ad-hoc query and SQL scripting tool.

- Edit and run multiple scripts simultaneously
- Support for SQLPlus variable prompting, bind variables (including RefCursor), and calling external scripts with parameter passing.
- Support for EXEC, DESC and CONNECT.
- Support for DBMS Output
- Script and statement timing
- Explain Plan output
- Supported for SQLPlus style SPOOL files and the SET ECHO command.
- Editing of single table result sets
- Colored syntax highlighting
- Schema information for pasting into scripts and queries

Benthic PLEdit allows editing and compiling of PL/SQL code modules (stored procedures, packages, triggers)

- Edit multiple modules simultaneously
- Places the cursor right on any errors found
- Colored syntax highlighting
- Schema information for pasting into modules
- Manage your stored procedures
- Show dependencies visually

GoldView is a schema structure browser. It displays information on the structure and properties of schema objects. It is a read-only tool. Fast way to find an information about the objects in a schema.

- Displays objects in all accessible schemas
- Show information on tables, views, triggers, indexes, synonyms, sequences, types and code modules
- Shows structure, keys, constraints, stored code, DDL (CREATE scripts) and more!



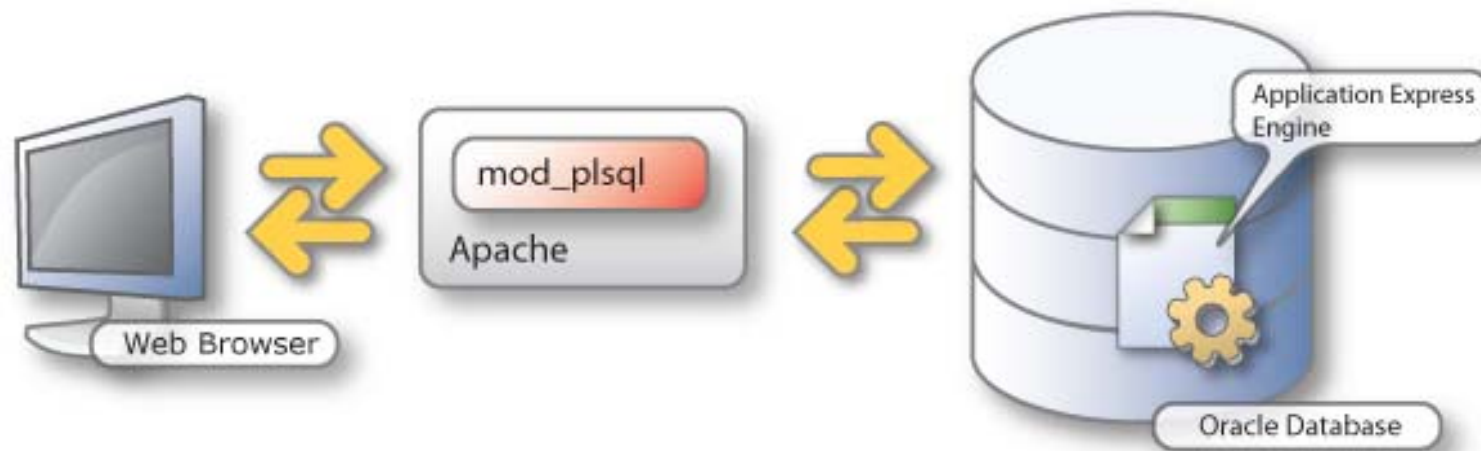
- Oracle SQL Developer is a graphical tool for database development. It has all the Benthic applications functionality and in addition:
  - Visual Query builder
  - Full PL/SQL debugging
  - Predifined and user created Reports
- Oracle SQL Developer is Java based application
- It is a free tool, can be downloaded from [otn.oracle.com](http://otn.oracle.com)

Oracle Application Express (APEX) is a rapid web development tool for the Oracle database. Using only a web browser and limited programming experience, you can develop and deploy web applications.

- APEX is a productive tool to build applications that report on database data
- You can develop small web applications quickly and easily
- Coding is declarative, everything is done using wizards and property sheets
- You can optionally write snippets of code using PL/SQL, if procedural logic is needed

- APEX is available on development platform at CERN
- You can request a workspace at [Phydb.support@cern.ch](mailto:Phydb.support@cern.ch) (specify your devdb10 account if you have it)
- You can find documentation and tutorials:
  - [http://www.oracle.com/technology/products/database/application\\_express/html/what\\_is\\_apex.html](http://www.oracle.com/technology/products/database/application_express/html/what_is_apex.html).
  - [http://www.oracle.com/technology/products/database/application\\_express/viewlets/apex\\_quicktour\\_viewlet.html](http://www.oracle.com/technology/products/database/application_express/viewlets/apex_quicktour_viewlet.html)

- No client software is required to develop, deploy, or run APEX applications.
- The whole application is stored in database tables.
- The APEX is comprised of nothing more than data in tables and large amounts of PL/SQL code.



APEX provides four primary tools:

- Application Builder - to create dynamic database driven web applications
- SQL Workshop - to browse your database objects, run ad-hoc SQL queries, as well as a graphical query builder
- Utilities - allows for data to be loaded and unloaded from both flat files and spreadsheets
- Administration - used to manage services and users and to monitor activity.

- Application Builder provides wizards to create and edit an application
- The generated reports are typically hyper text linked with other reports
- Columns in reports can be easily linked to other reports, charts, and data entry forms.
- Reports can be downloaded in various formats
- An extensive charting engine allows SQL queries to be represented graphically
- Supports a large number of declarative form controls including radio groups, checkboxes, select lists, shuttles, text editors, and date pickers.
- User interface themes

The following concepts are important to know when working with apex:

- Workspace
- Application
- Page
- Region
- Item

- DEMO

ORACLE<sup>®</sup> Application Express [Logout](#) [Help](#)

Home Application Builder SQL Workshop Utilities

Home

Application Builder SQL Workshop Utilities

**Administration**

- ◊ Administration
- ◊ Manage Services
- ◊ Manage Application Express Users
- ◊ Monitor Activity
- ◊ Change Password
- ◊ About Application Express

**Migrations**

- ◊ Application Migrations