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Introduction

CDBWEB is a Web application which allows the analysis and update of Configuration Database's (CDB) data through a web browser and it's divided into two main modules:
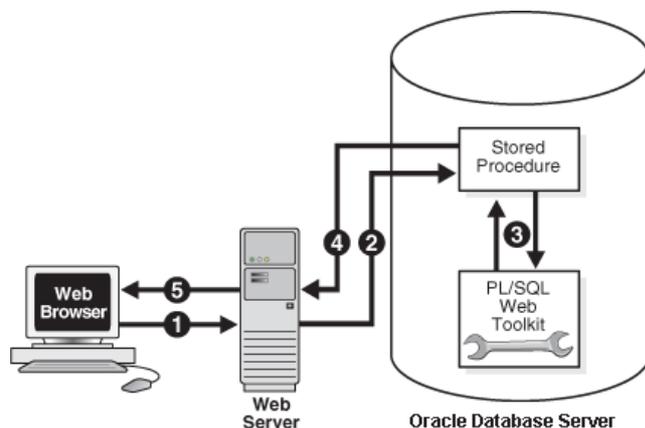
- CDB Search and Analysis Tool, found at http://oraweb.cern.ch/pls/cdbsql/web.main
- CDB Web Update Tool, accessible trough the former and found at https://oraweb.cern.ch/pls/cdbsql/webupdate.menu

CDBWEB is written in Oracle's PL/SQL and consists in a set of PL/SQL stored procedures which interact with the user's browser through HTTP. Upon receiving browser's requests these stored procedures dynamically generate the HTML pages (or any other kind of files such as XML files for example) which are returned to the browser through the HTTP protocol. PL/SQL's stored procedures generate the HTML pages by invoking procedures from Oracle's *HTP* package such as the *HTP.print* procedure. This package is part of Oracle's PL/SQL Web Tookit which is aimed for the development of Web applications.

By using PL/SQL instead of other languages/technologies (PHP or CGI scripts for example) to build Web applications you have the following advantages:

- The overhead of querying databases is much smaller since PL/SQL procedures are stored in the Oracle Database server
- Execution of DML statements (select, update, insert and delete), dynamic SQL and cursors within the PL/SQL procedures
- There is no need to fork a new process to handle each HTTP request (as it happens with CGI for example)

The following picture is an illustration for the interaction between a user's browser and a PL/SQL Web application:

Note: usually the Oracle Database server is in the same machine as the Web server.

The interaction's steps are the following:

1. While visiting a Web page, the user clicks on a hyperlink or submits data in a form. This action causes the user's Web browser to send a request for a URL to the Web server. The URL encodes the name of the PL/SQL stored procedure (as well as any parameters passed to it if any) which will be invoked to return a response (an HTML page or any other kind of file) to the user's Web browser. The name of the target procedure can be found at the end of the URL. The target procedure's name is in the form *X.Y*, where *X* corresponds to the name of the PL/SQL package to which the procedure