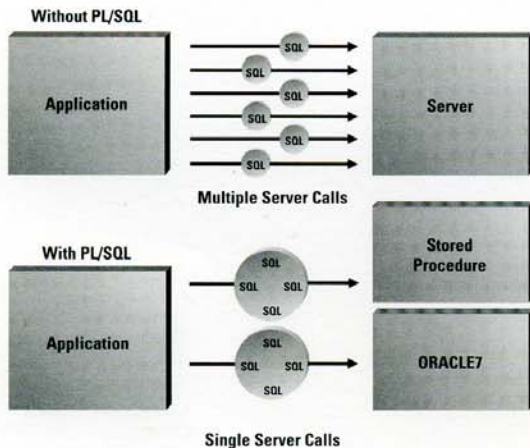


**PL/SQL, Oracle's powerful procedural language extension to SQL, significantly increases application performance and developer productivity while enhancing the power and functionality of other Oracle products. PL/SQL V2.0 provides a sophisticated application development language that is tightly integrated with both the ORACLE7 server and key Oracle tools. PL/SQL V2.0 augments the capabilities of PL/SQL V1.0 by delivering superior integration, faster transaction processing, and new functionality.**



**A multistatement or multitransaction PL/SQL procedure executes with a single request to ORACLE.**

### **Tight Integration with ORACLE7**

PL/SQL V2.0 works closely with the ORACLE7 server, thus providing tight integration, integrity, and security. Rather than replicating complex processing, multiple applications can share PL/SQL procedures and functions stored in the database. Complex business rules may be enforced automatically when data is modified by triggering a stored procedure. Access to critical data may be restricted to stored procedures, and users never need be granted privileges for direct access.

PL/SQL is a robust block structured language with powerful procedural and error handling capabilities. It supports datatypes such as arrays, user defined record types, as well as standard CHAR, INTEGER, BOOLEAN, etc. Variable definitions can be based on definitions of database objects.

The full power of Oracle's extended SQL language can be used to manipulate data under the control of PL/SQL procedures.

### **Faster Development, Easier Maintenance**

PL/SQL stored procedures and functions greatly improve programmer productivity. Because multiple applications can share a single, centralized copy of a PL/SQL procedure or function, you no longer have to rewrite procedures for each application. When it's time to modify the stored PL/SQL procedure, you do it just once.

PL/SQL Packages improve productivity by grouping related PL/SQL procedures and functions. Since the implementation and specification are separate, you can also facilitate development by hiding implementation details.

### **Dramatic Performance Gains**

PL/SQL V2.0 improves system performance by storing compiled procedures, sharing procedures among users, and providing network efficiency. Procedures are compiled once and are stored in ready-to-run form. Procedures are automatically shared among users, so memory requirements are reduced. Because a procedure can be invoked with a single message, network efficiency is optimized.

### **More Powerful Tools**

PL/SQL adds the functionality of a complete programming language to all key ORACLE application development tools, including Oracle Forms V4.0, Oracle Reports V2.0, SQL\*Plus, and SQL\*DBA. With PL/SQL, you can not only define the logic for form and report processing, but also call stored database procedures from the application.

### **Extended Functionality Compatibility**

PL/SQL fully supports ANSI/ISO SQL data manipulation statements. In tool environments, PL/SQL can flag ORACLE extensions to ANSI SQL, in accordance with FIPS standard 127-1.

## Key Features

### Full SQL Support

- ORACLE SQL, including:
  - Data manipulation statements (INSERT, UPDATE, DELETE, SELECT)*
  - Data definition statements (CREATE TABLE, DROP TABLE)*
  - Data control statements (GRANT)*
  - Transaction processing control (COMMIT, ROLLBACK, SAVEPOINT)*
- Additional embedded SQL constructs, including:
  - Declaration of host variables*
  - Handling of errors and warnings*
  - Database connections*
  - Dynamic SQL*

### Full PL/SQL Support

- PL/SQL stored procedures can call using PL/SQL anonymous blocks
- PL/SQL tables can pass host language arrays to stored procedures

## High Productivity and Performance

- Application control of SQL statement processing, including:
  - Parsing of SQL syntax*
  - Binding parameter values for repeated execution of parsed SQL statements*
  - Indicator variables for null values*
- Full cursor support, including multiple open cursors
- Automatic conversion of host datatypes to and from SQL types
- Multiple concurrent connections
- TP monitor interface using XA standard
- Error reporting

## Efficient Client/Server Performance

- Deferred execution of parse, bind, and define calls

- Calls for SELECT cursors may defer until the first FETCH
- Array interface moves batches of records between client and server for greater network efficiency

## Languages Supported

The Oracle Call Interface works with most versions of Ada, C, COBOL, or FORTRAN. Please check with your Oracle sales representative for current availability.

