



An Oracle White Paper  
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## PL/SQL enhancements brought by Oracle Database 12c

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Oracle Database 12c brings PL/SQL enhancements in these categories: transparent performance improvements; new PL/SQL language features for better performance, new functionality, and improved programming usability; and new supplied package APIs. My session at DOAG 2013 explains improvements in PL/SQL-to-SQL interoperability, improvements in how PL/SQL subprograms can be invoked from outside of the database, new constructs to improve modularization, and new APIs to assist tracing and the diagnosis of run-time errors. Other improvements are also described.

All these improvements are very well described in the *PL/SQL Language Reference* and *PL/SQL Packages and Types Reference* books in the Oracle Database 12c documentation library.

I decided to take this opportunity to recommend to you to read a whitepaper that I posted on OTN to accompany a talk that I gave at Oracle OpenWorld in September 2014. Here is its title and abstract:

### **With Oracle Database 12c, there is all the more reason to use database PL/SQL**

Fifty-year-old wisdom instructs us to expose the database to client-side code as a PL/SQL API and to securely hide the implementation details — the names and structures of the tables, and the SQL statements that manipulate them — from the client. Yet a very large number of customers ignore, or refuse to follow, this wisdom. Some of the reasons for refusal have a reasonable justification. It is claimed that PL/SQL in the database cannot be patched without causing unacceptable downtime; that the datatypes for passing row sets between the client-side code and the database PL/SQL are unnatural, cumbersome to use, and bring performance problems; and that it is impractical to give each of a large number of developers a private sandbox within which to work of the intended changes to database PL/SQL.

Oracle Database 12c, brings changes that demolish each of these objections.

There is now no excuse to follow the best practice principle that is already universally followed in all software projects except those that use a relational database as the persistence mechanism.

Here is the paper's URL:

<http://www.oracle.com/technetwork/database/features/plsql/overview/why-use-plsql-2020492.pdf>

It is linked from the PL/SQL page on OTN, here:

<http://www.oracle.com/technetwork/database/features/plsql/index.html>



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