

THE JOPA™ GATEWAY SERVLET FOR ORACLE® PL/SQL™ WEB APPLICATIONS.

HTTP-only access to all your web development resources.

THE CHALLENGE.

You are developing a web application which is based on an Oracle® database. You want to use PSP (PL/SQL™ Server Pages) technology along with other server-side scripting technologies, like JSP, to build the application and leverage the power of PL/SQL where appropriate. However, your developers are working remotely and you don't want to open direct access to the database for them or anyone else outside your local network. Dynamic PSP™ seems to be natural choice for these requirements, but your developers are unfamiliar with its web-based development interface or find it too simple and limited compared to web development tools like Macromedia DreamWeaver® or Microsoft® FrontPage®. You need some way to provide them with access to the Dynamic PSP unit repository, the database and the web server without putting the database at risk by opening it to the whole world and opening too many alternate access paths to the web server file system. You also want your Dynamic PSP application to process requests as quickly as possible with minimal overhead introduced by the middleware.

THE SOLUTION.

WebDAV (Web-based Distributed Authoring and Versioning) is a widely accepted standard for remote read-write access to web resources and is supported by all major web development tools. WebDAV makes remote resources look like local file systems for compatible clients and allows for creating, copying, editing and deleting remote resources through the HTTP transport, so you don't need to open any other ports and service other protocols on your server or allow direct access to the database servers.

The JOPA™ Gateway Servlet for Oracle PL/SQL Web Applications implements WebDAV access to the Dynamic PSP unit repository as well as the server file systems and allows your developers to use their favorite web authoring tools for creating and editing PSP units or any other files on the web server in consistent and secure manner.

In addition to WebDAV support, the JOPA Gateway Servlet features an optimized Dynamic PSP request processing pipeline, which is designed and built specifically to provide the best possible DPSP throughput. In Native DPSP mode, the JOPA Gateway Servlet even supports progressive output from your DPSP units, when the page output is streamed to the client as it is generated by your DPSP application significantly reducing perceived and actual response time, unlike traditional mode of execution, when the output is fully buffered on the server before being transmitted to the client. The servlet can also compress the output from your Dynamic PSP and PL/SQL applications on the fly, significantly reducing bandwidth requirements and page transfer and load times.

And the Servlet can even replace Oracle's mod_plsql PL/SQL gateway module completely! In OWA compatibility mode, the Servlet works pretty much identically to the mod_plsql, with some serious limitations of the latter removed along with the gateway module maintenance burden, thanks to the fact that the JOPA Gateway Servlet is 100% Java™ and runs everywhere there's Java2 Runtime Environment 1.4 or later and Java Servlet 2.0-compatible container. You can deploy the same binary on any platform and application server where Java Servlet 2.0 specification is supported and rest assured that it will run without any modifications, and new releases or patches will be the same binary for all platforms either. You can be sure the output your Dynamic PSP and PL/SQL applications generate is streamed to the client unmodified unlike when mod_plsql is used, because mod_plsql reviews and alters your output in some cases, effectively

prohibiting some advanced HTTP 1.1 protocol features. The Servlet also allows for efficient Oracle connection pooling and reuse on all platforms thanks to native threading and common connection pool. `mod_plsql` connection pooling on Unix platforms suffers from the OS process architecture – each HTTP server process runs its own copy of the gateway module with its own connection pool, preventing efficient connection reuse unless you use some non-trivial dual HTTP server with internal proxying hacks (and even with these hacks it's not as efficient as on operating systems with native threading, like Microsoft Windows®.) The JOPA Servlet maintains as much Oracle connections as the current workload requires, no more, no less, and reuses them efficiently, on any operating system.

The JOPA Gateway Servlet is administered through the built-in web interface, so you never need to edit its configuration file manually introducing the risk of breaking something due to typing errors, and all changes made through the web administration interface take effect immediately, without the need to restart the HTTP server.

The JOPA Gateway Servlet features extensive and highly configurable logging facility and can log all aspects of its operation to the console, log file, or both for future review or troubleshooting with variable configurable level of verbosity. By changing the logging detail level you can easily drill down to any problem with the Servlet or your applications served through it. See what comes in, how it is processed and what is sent back, and any errors on the way, all in single log file.

SYSTEM REQUIREMENTS.

The following are system and software requirements for the JOPA Gateway Servlet:

- Java Run-time Environment (JRE) Version 1.4.0 or later (Version 1.4.2 or later is recommended)
- Compatible J2EE servlets container (Servlet Specification 2.0 or later support is required)
- Oracle8i Release 2 (8.1.6) or later database backend (Oracle9i Release 2 (9.2) or Oracle Database 10g (10.1) with the latest patch set recommended)
- 256MB RAM on application server host (512MB or more recommended)

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