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# The Oracle GlassFish Server Advantage for Small Businesses

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## Executive Overview

To cut costs and adapt to rapid changes in business, today's dynamic, fast-growing organizations need an application server that is affordable, flexible, and powerful enough with a range of critical features. By combining enterprise-class capabilities with open source cost efficiency, Oracle GlassFish Server offers small businesses an open source application server with true interoperability, and with rich features enabling superior documentation, administration, and configuration.

## Introduction

Oracle GlassFish Server is a premier Java EE application server based on GlassFish Server Open Source Edition. GlassFish Server Open Source Edition is one of the most popular open source application server of choice for enterprises of all types and sizes, and its advantages have proven particularly compelling for small businesses. GlassFish Server Open Source Edition was launched in 2005 and delivered by the GlassFish Community. With rapid enhancements from GlassFish Community engineers and collaboration with Oracle engineers, GlassFish Server Open Source Edition is now the only open source platform that provides Java Platform, Enterprise Edition 5 (Java EE 5) and Java Platform, Enterprise Edition 6 (Java EE 6) implementations — with exhaustive and accessible documentation, intuitive administration and configuration features, five-9s availability, interoperability with Microsoft Windows, feature-rich integration with NetBeans and Eclipse, and alignment with Oracle Solaris, OpenSolaris, and MySQL

Oracle provides support services and additional feature set not available in the community offering through a commercial offering called Oracle GlassFish Server. Customers can buy licenses for Oracle GlassFish Server to obtain support, product patches, and additional tools that improve monitoring and boost performance in a production environment. This white paper describes the business and technical benefits of Oracle GlassFish Server that are of particular interest to small businesses. It explores core features and takes a closer look at the experiences of three young companies that benefited from this solution—Webzzle, TravelMuse, and Clarity Accounting.

# Overview: Oracle GlassFish Server

With tight budgets, aggressive schedules, and a pressing need to adapt quickly to meet changing conditions, small businesses find enormous appeal in the open source model in general—and in Oracle GlassFish Server in particular. Oracle GlassFish Server represents a less expensive, more flexible alternative to proprietary software, while still delivering powerful features and capabilities found in enterprise-class commercial products.

## Business Advantages

The advantages of Oracle GlassFish Server for small businesses include the following:

- **Pay at the point of value.** GlassFish Server Open Source Edition can be downloaded and used at no cost. Thus, organizations can start using and deploying with no upfront costs. As needs grow, in terms of number of applications, implementation complexity, criticality of support – organizations can switch to the commercial offering from Oracle.
- **No vendor lock-in.** Oracle GlassFish Server enables businesses to migrate applications to different platforms without constraint, if so desired. Since it is based on GlassFish Server Open Source Edition, which is the reference implementation for Java EE 6 - it supports industry standards without requiring extensions. Additionally it supports emerging open source and de facto standards.
- **Easy adaptability.** Oracle GlassFish Server supports and integrates with industry-leading open source products such as OpenSolaris, the MySQL database, and more. Oracle GlassFish Server is also the best choice for interoperating with Microsoft .NET. Oracle GlassFish Server offers feature-rich NetBeans and Eclipse integration at no cost, so small businesses are free to use NetBeans and Eclipse to develop applications. And Oracle GlassFish Server supports smaller, low-cost deployments as well as extensive, mission-critical deployments, so that companies can scale up quickly as user requirements grow.

## Key Features of Interest to Small Businesses

Numerous features make Oracle GlassFish Server ideally suited for the small business, including

- **Java EE certification.** Oracle GlassFish Server was the first Java EE 5–certified application server and is the first Java EE 6–certified application server, giving developers a head start in taking advantage of the latest advancements in Java technology.
- **High performance.** SPECjAppServer2004 benchmark results show that Oracle GlassFish Server, is the fastest open source application server available. In addition, the startup performance time measured for Oracle GlassFish Server 3 is just 7.56 seconds, and the SPT for Oracle GlassFish Server 2.1 is 22.1 seconds. Further, the performance of Oracle GlassFish Server continues to improve as new features are introduced.
- **Ease of use.** Oracle GlassFish Server provides a task-oriented administration console and configuration wizards that simplify routine administrative chores. The update center feature offers

point-and-click access to additional features that can extend Oracle GlassFish Server capabilities. In addition, Oracle GlassFish Server provides an easy-to-use installation program that can be used by non-administrative personnel.

- **High availability and clustering.** Oracle GlassFish Server has integrated clustering support and sophisticated high-availability (HA) capabilities that enable Java applications to meet stringent, enterprise-class service-level agreements (SLAs).
- **Web services.** The Oracle GlassFish Server metro feature is a stack consisting of Java API for XML Web Services (JAX-WS), Java Architecture for XML Binding (JAXB), and Web Services Interoperability Technology (WSIT), enabling developers to create and deploy secure, reliable, transactional, interoperable Web services and clients. In addition, Oracle and Microsoft personnel meet regularly to deliver the most secure and high-performing Web services stack for interoperating between .NET and Java EE with Oracle GlassFish Server.
- **Integrated development environment (IDE) support/tooling.** Oracle GlassFish Server provides multi-IDE support. For example, NetBeans 6.8 supports Oracle GlassFish Server, with complete Java EE 6 API support via easy-to-use wizards for a great out-of-the-box experience with NetBeans. IntelliJ IDEA 7 and more recent versions include an Oracle GlassFish Server plug-in. A standalone Oracle GlassFish Server plug-in for the Eclipse IDE is available via the update center feature, and a GlassFish Tools Bundle feature for Eclipse 1.1 is also available.

## Small Business Case Studies

The advantages of Oracle GlassFish Server have been transformed to tangible business results for small businesses in a broad range of industries worldwide. The examples below highlight the experiences of three fast-growing companies that chose Oracle GlassFish Server for their application server.

### Webzzle: Googling Gets Better with Oracle GlassFish Server Inside [1] [2]

Every day, millions of people search for information by typing a keyword into Google or another search engine. Although they may find the small piece of information they're looking for—usually on a Wikipedia page— what if they can find relevant links related to new knowledge thanks to Wikipedia quality results and Google results directly from any Web page?

[1] References to Oracle GlassFish Server imply Sun GlassFish Enterprise Server – the pre-Oracle acquisition name for the commercialized version of GlassFish Server Open Source Edition

[2] Sun GlassFish Enterprise Server has been renamed as Oracle GlassFish Server post Sun's acquisition by Oracle.

Webzzle, a new service operated by General Internet Company (GI), is replacing simple keyword searches with concept-based multiple queries that deliver the best possible data to the end user. From any URL, users can take advantage of the "1-Click Web Explorer" and get relevant links related to what they see —and a smaller total volume of raw information—very quickly and easily.

The Webzzle service is experiencing rapid growth, so the company needed high-powered, highly scalable application infrastructure. They chose Sun GlassFish Enterprise Server (Now Oracle GlassFish Server). Webzzle's Xavier Vaucois: "We set up our application on many identical environments and decided to run Webzzle on Sun GlassFish Enterprise Server based on the performance results. Moreover, we share the open source spirit."

To be specific, Webzzle runs Oracle GlassFish Server 2.1 on Oracle Solaris 10 and ZFS Server. The company uses a MySQL 5.1 back end and develops under Ubuntu 10.04, Windows XP, and Windows Vista. In production, Webzzle runs Oracle GlassFish Server on several rack servers (Sun Fire X4100series servers with Quad-Core AMD Opteron processors). The company uses infrastructure based on Sun open storage from Oracle for data storage.

According to Vaucois, Oracle GlassFish Server has proven to be a high-quality open-source product that fits the company's technical and business objectives. "So far, it is great," he says. "It's easy to install, easy to manage, and has not given us any issues. Thanks to the node agent architecture, we can use Oracle GlassFish Server in the cluster mode without any specific administration tools, and availability has been 100 percent."

"With Oracle GlassFish Server, Webzzle will be able to deliver ever-increasing volumes of related links and also support the collaborative development and testing of new Webzzle services and applications," says Vaucois.

To try Webzzle, visit webzzle.com, or use their new Firefox plug-in, available at addons.mozilla.org/en-US/firefox/addon/9929.

## TravelMuse: Simplified Travel Planning with Oracle GlassFish Server [3] [4]

Anyone who has planned a trip knows it can be a headache. The average traveler visits 25 Websites in the process of figuring out where to go, where to stay, what to eat, and what to do. TravelMuse, a dynamic young company based in Los Altos, California, makes planning easier with a complete Web-based solution that helps with everything from finding inspiration to finalizing the itinerary.

[3] References to Oracle GlassFish Server imply Sun GlassFish Enterprise Server – the pre-Oracle acquisition name for the commercialized version of GlassFish Server Open Source Edition

[4] Sun GlassFish Enterprise Server has been renamed as Oracle GlassFish Server post Sun's acquisition by Oracle.

In 2007, TravelMuse selected Sun GlassFish Enterprise Server (now Oracle GlassFish Server) to run a high-performance, highly scalable Website. The company needed a powerful, extremely reliable, highly available application infrastructure that was also flexible—and affordable. The solution needed to support rapid growth, interact with third-party services, and support content in multiple formats.

Given its requirements, TravelMuse wanted to use open source software—with strong support. "Even though we wanted to have an Open Source Application Server, it was also important to us to have commercial support," says Cyril Bouteille, vice president of engineering at TravelMuse. The company chose to build its architecture with Oracle GlassFish Server as its application server.

"Sun GlassFish Enterprise Server was always consistently ahead of the competition in terms of Java EE 5 compliance," says Bouteille. "It was always very up-to-date with the latest standards. Other implementations sometimes cherry-picked what they implement and lag in terms of full compliance. When we chose Oracle GlassFish server in 2007, it was great to always have access to the latest and greatest Java EE enhancements. I also felt that the Sun GlassFish Enterprise Server's architecture was very good overall. It has been a low-cost, low-maintenance platform for operating our Website."

Bouteille also pointed out that developers are more productive with JavaServer Faces. "Rather than maintaining different versions of the same user interface widget on multiple Web pages, we were able to define the module in one place and reuse it on numerous pages seamlessly."

NaviSite hosts the TravelMuse hardware architecture. The company set up five virtual servers with Solaris Containers (the built-in virtualization technology in Oracle Solaris 10) on Oracle servers. TravelMuse purchased the Alfresco Enterprise Content Management software and Oracle GlassFish Server to host the Website applications. Apache Web servers manage static assets, and the MySQL database stores all transactional and user-generated content.

With Oracle GlassFish Server and Oracle Solaris 10, TravelMuse maintained 99.9 percent availability while growing fivefold in just a few months. "Solaris 10 and Sun GlassFish Enterprise Server have always been very stable systems that have basically never gone down," he said.

## Clarity Accounting: Clear, Simple, and Secure with GlassFish Server Open Source Edition[5]

For small-business owners, traditional accounting packages all have their trade-offs and limitations. Either they're designed for large enterprises and scaled back for smaller companies, or their interfaces are difficult to use, or they don't offer multicurrency support—and the list goes on. Clarity Accounting overcomes the trade-offs because it is a business accounting software solution specifically designed for self-employed individuals and small-business owners. It is a Web-based solution that is simple, reliable,

[5] References to GlassFish imply GlassFish Server Open Source Edition – the pre-Oracle acquisition name for the open source product

secure, and accessible at all times from anywhere. Clarity Accounting runs GlassFish Server Open Source Edition as a core element of the software infrastructure.

Dobes Vandermeer, an experienced developer who worked at several startups before launching Clarity Accounting, cofounded the company. In his previous jobs, Vandermeer learned about accounting, startups, and life as a small-business owner and operator. He eventually decided to apply this knowledge to a new online application for small businesses.

For Vandermeer, GlassFish Server Open Source Edition was the obvious choice. "The alternatives I considered were JBoss and Tomcat, and there really was no comparison," he says. "GlassFish was much easier to install and faster to start up and deploy. The performance was good, and GlassFish is very flexible. We can scale up and scale down on demand, and we can do resource changes with less than five or ten minutes of downtime."

Vandermeer appreciates the Enterprise Java Beans (EJB) integration in GlassFish Server Open Source Edition that enables applications to run better and makes them easier to maintain. He also comments that the task-oriented administration console and configuration wizards help simplify routine administrative chores.

Vandermeer says he has found the work manager class in GlassFish Server Open Source Edition to be particularly useful because it allows developers to add runnable bits of work for GlassFish Server Open Source Edition to run in another thread pool. He uses this capability to perform independent tasks asynchronously, enabling him to run specific jobs almost immediately.

"GlassFish gets the job done, and I'm very happy with the level of performance, availability, and configuration flexibility it gives us," he says. "For small businesses, it's got the right combination: sophisticated features and the affordability of open source software. I definitely recommend it."

## For More Information

The following links provide more information:

- For additional details about Oracle GlassFish Server, visit http://www.oracle.com/goto/glassfish
- To download Oracle GlassFish Server, visit http://edelivery.oracle.com/
- To join the GlassFish Community, visit https://glassfish.dev.java.net/public/devindex.html
- For details about Oracle GlassFish Server, visit http://www.oracle.com/technology/products/glassfish/index.html
- For success stories and customer ratings, visit http://blogs.sun.com/stories/

## Conclusion

Budgets are getting tighter in IT departments—yet the technology requirements to keep pace in the business world today are evolving more rapidly than ever. Oracle GlassFish Server is the platform of choice for enterprises of all types and sizes, including small and fast-growing businesses, to provide an affordable, flexible, and powerful application server solution.

Oracle GlassFish Server based on GlassFish Server Open Source Edition which is the only open source application server that provides Java EE 5 & 6 support; exhaustive and accessible documentation; intuitive administration and configuration features; five-9s availability; interoperability with Microsoft Windows; feature-rich integration with NetBeans and Eclipse; and alignment with Oracle Solaris, OpenSolaris, and MySQL. By combining enterprise-class capabilities with open source cost efficiency, Oracle GlassFish Server can offer small businesses like Webzzle, TravelMuse, and Clarity Accounting a robust solution flexible enough to grow with them and within their budgets.

Oracle is committed to developing practices and products that help protect the environment

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