WebSphere® software

Are you looking at open source-based application servers?
Ask the right questions and do the math.

A comparison of IBM WebSphere Application Server to JBoss Application Server by Red Hat

Choosing IBM WebSphere Application Server over JBoss Application Server
As Easy as 1-2-3

Succeeding in today's smarter world not only means utilizing technology to create intelligent, instrumented and interconnected solutions, but leveraging that technology to optimize costs and do more with less. Subsequently, determining the lowest cost solution isn't simply a matter of comparing two vendors' prices, but assessing how the technology and features provided by those solutions can influence their total cost of ownership. The right solution will not only have the lowest cost, but keep your applications running smoother and help you meet your IT objectives.

With ever-increasing pressure to reduce costs, many companies are specifically looking to open source as a way to save money, which might mean considering a JBoss Application Server (AS). Open source application servers can certainly be cost-effective solutions in single server environments running one or two Web applications. In these cases cost and simplicity are key considerations and security, scalability and manageability are less critical. For these scenarios IBM offers IBM® WebSphere® (WAS) Community Edition (CE), an open source based application server with no license costs.

However, for most environments, consisting of multiple application servers in clusters, open source application servers can be significantly more costly than their closed source counterparts. These environments, which often support business critical and key company-wide Java based applications, can benefit from the highest qualities of service such as security, scalability, and manageability delivered through WebSphere Application Server Network Deployment. By contrast, using an open source application server such as JBoss Application Server in clustered environments can mean needing to hire additional, higher skilled administrators, suffering

from insufficient performance and scalability, struggling with insufficient documentation, dealing with cumbersome security, or not having access to the latest innovation and technologies, all of which can significantly increase total cost of ownership and negatively impact your business success.

While JBoss may tempt customers with its lack of license fees, an IBM Business Value Assessment showed that license costs only account for 14% of total cost of application server ownership. The remaining 86% of costs consist of hardware, training, support, development and management costs. These costs can be easy to overlook and difficult to quantify, but a recent study performed by Summa Technologies showed that when these factors are taken into account, JBoss AS v5 costs as much as 70% more than IBM WAS v7.

IBM WebSphere Application Server achieves its cost advantage over JBoss by delivering an effective and efficient application foundation that helps you meet business objectives at the lowest overall cost. First, WebSphere helps you drive customer satisfaction with highly effective performance, offering faster transactions, less downtime, greater scalability and streamlined security. Second, it helps you reach customers in new ways by enabling application innovation that gives you more options in reusing legacy applications as well as the ability to deploy the latest technologies without wholesale upgrades. Third, WebSphere helps reduce costs through efficient development and management with integrated and centralized tools and up-to-date and thorough documentation.

This brochure describes how these 3 key attributes of IBM's application foundation help deliver higher quality of service at a lower cost than JBoss, making IBM the clear choice for you and your customers.

1. Performance

Drive customer satisfaction with highly effective performance

For business critical environments, IBM WebSphere's application foundation will help you deliver higher quality application performance, and an enhanced experience for customers that JBoss can't match. This not only means that your applications will run fast, but they will have higher availability, scalability and the most dependable security. When your customers demand high performance, reliable applications, IBM is the clear choice over JBoss.

First, WAS Network Deployment (ND) offers the industry's best performance value, helping you deliver responsive applications when performance matters. In fact, according to the independent SPECjAppServer2004 benchmark, WAS ND leads the industry in cost for performance delivering over 80 JOPS per $1000 spent. JBoss, on the other hand, does not participate in SPECj benchmark testing.

In a study comparing the performance of WAS ND and JBoss AS, Summa technologies found that WAS ND was over 2.4 times faster than JBoss. In fact, IBM's performance advantage has grown with these latest releases. In testing of previous versions, IBM's WAS v6.1 was 1.65 times faster than JBoss

AS v4. With JBoss's slower performance, it's your customers who demand performance that get left behind, with less responsive applications that ultimately reflect poorly on IT.
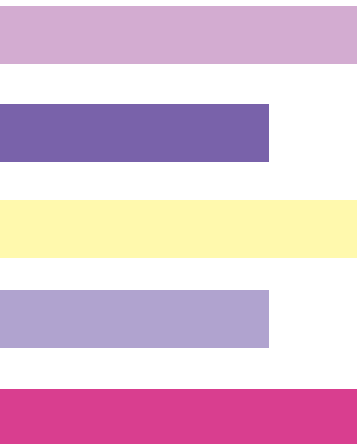
IBM also provides superior scalability to JBoss, allowing you to spend less on additional hardware and software. According to the SPECjAppServer2004 benchmark, IBM offers industry leading scalability (22,634.13 JOPS). If you need multiple processors to handle your transactions, this means real cost savings for you, because for a given workload on WAS, you will need less hardware than you would to run the same workload on JBoss. With the extra hardware that JBoss requires will also come more hardware support costs, more datacenter space, more power consumption, more OS licenses and support costs and more JBoss support subscriptions. Even at moderate workload volumes, these costs can be significant.

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For mission critical environments, IBM also delivers advanced, high availability features, with significantly enhanced reliability relative to JBoss, so you will experience less down time and your customers will have continuous access to your applications. These high availability features include advanced clustering, data replication services, and unique workload distribution that enables applications to handle twice as many concurrent users compared to the JBoss environment, while averaging CPU utilization that is significantly lower than JBoss. JBoss AS 5 also requires customers to bring down the entire cluster in the case of cluster node failures and requires frequent restarts to avoid outages due to memory leaks. JBoss AS 5 simply fails to deliver the robust environment that your customers demand for critical applications.

Finally, IBM WAS helps you avoid costly security exposures by providing granular and flexible control over security through a simple to use management tool helping you deliver more secure applications that are easily managed by production operations. In contrast, JBoss security is managed through cumbersome and error-prone scripts that leave operations dependent on developers to fix and patch. Why create these dependencies and put the burden of keeping your applications secure and your customers protected on your developers when WAS provides complete and easily managed security out-of-the-box?

When cost and simplicity are greater concerns than performance and availability, open source solutions, like WAS CE, can often meet your needs. In the majority of environments, however, when performance and qualities of service are critical to your business, you should not compromise with JBoss when you can depend on the capabilities of WAS ND.

2. Innovation

Reach customers in new ways with application innovation

Not only does WAS deliver highly effective performance, but it provides you with the technology to deliver innovative new applications helping you reach customers in new ways and drive revenue growth. WAS helps you achieve this innovation through faster access to new technologies, targeted feature-specific upgrades and broad support for integrating legacy software in new ways.

One key benefit to WAS is that it provides you with greater access to new technologies, standards and programming models than JBoss. This means that you can use the latest standards and programming models to deliver cutting edge solutions to your customers today, rather than waiting for JBoss to support them. IBM has delivered Java EE 5, Service Component Architecture (SCA), XML with tested interoperability, Web services standards, WS-RM, and Communication Enabled Applications (CEA) support, which allows innovative communication features such as click to call. JBoss has not delivered Java EE 5 support in a production release, does not support the SCA specification, has not performed XML interoperability testing with Microsoft, and does not provide CEA support. An IBM solution offers extended capabilities so you can deliver the innovative applications that your customers demand.

IBM also offers WAS Feature Packs, which provide you with the fastest access to new features without a full product upgrade. Feature packs enable you to perform isolated upgrades of only the specific features and new technologies that you want, such as SCA, CEA, and Web 2.0 without performing a full upgrade of the application server. This helps maintain a more stable application release cycle and minimize disruption of operations to add new capability and address new standards. JBoss, meanwhile, requires its users to perform a full application server upgrade to add new features, creating a disruptive proliferation of application server versions and unnecessary barriers between your customers and the latest technologies.

WAS allows you to innovate with your current applications by providing support for the broadest range of existing packaged and legacy applications so new services can be created and existing applications extended to the Web to improve the user experience. JBoss has no certified adapters for Siebel, SAP, PeopleSoft, or CICS, which can result in reduced productivity and the need to reinvent/recode existing assets. As a result, a WAS solution allows you to spend your time and money unlocking new value from your legacy applications, instead of waiting for development to rewrite code to make them work with JBoss.

3. Efficiency

Reduce costs with efficient management

IBM's Application Foundation not only makes your applications more effective and innovative, but it also saves you money by enabling your employees to work smarter. In fact, according to Summa Technologies' analysis, JBoss can cost over 93% more to manage than IBM WAS ND. Many factors contribute to this difference, including high labor costs for administration of applications with JBoss which can be up to 269% of the cost for IBM WAS ND. This stems from the fact that JBoss AS 5 does not include a supported centralized management tool and the management capabilities they do offer are immature and incomplete relative to IBM's capabilities. WAS ND also provides LDAP, cache, and WLM servers at no additional charge, saving money and simplifying compatibility. JBoss requires that separate software be purchased for this functionality, further driving up costs. Additionally, as the size of a JBoss environment increases, the complexity of management drives overall costs higher, so when you should be realizing economies of scale, the cost of JBoss keeps going up.

WAS ND eases your management burden with a comprehensive set of tools for common administrative tasks such as backups, restores, cluster management and remote application deployment, making complicated administrative tasks far simpler to perform than JBoss. In addition, JBoss AS 5 lacks farm deployment capabilities, meaning that each individual application server cluster member must be configured separately. A JBoss solution will mean that your team will spend valuable time and resources manually performing tasks or writing new scripts to address issues, all of which could be avoided with WAS ND's built-in functionality.

Finally, IBM reduces risk for your business and your customers, by providing accurate and well-written documentation that fully specifies compatibility requirements helping to lower staff training cost and avoid incompatibility. JBoss AS 5 offers limited documentation and does not adequately specify compatibility requirements with other software, driving users to a time consuming search of forums and wikis for evidence of implied compatibility. You can rely on IBM's clear documentation to avoid the costly downtime, tedious searches and unexpected incompatibilities that come from unnecessary guess work.

Conclusion

WebSphere's effective, efficient, and innovation enabling application foundation provides the best technology and features to create real value for both you and your customers, while delivering lower total cost of ownership than JBoss. With WAS ND as the foundation of your business critical application infrastructure you can satisfy your customers with highly effective performance, reach them in new ways with the latest innovative applications, and reduce your costs with more efficient development and management. For less critical applications open source based WAS CE can meet your needs with no license fees. In today's smarter planet, lower costs are achieved with superior systems, and IBM and the WebSphere Application Server Family provide the agility, the technology and the simplicity to deliver the best solution at the lowest cost. Experience the WebSphere advantage today by contacting your IBM WebSphere sales representative or business partner. To learn more about the differences between application servers download Summa's JBoss AS v5 vs WAS v7 total cost of ownership study at:

ibm.com/software/webservers/appserv/was

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