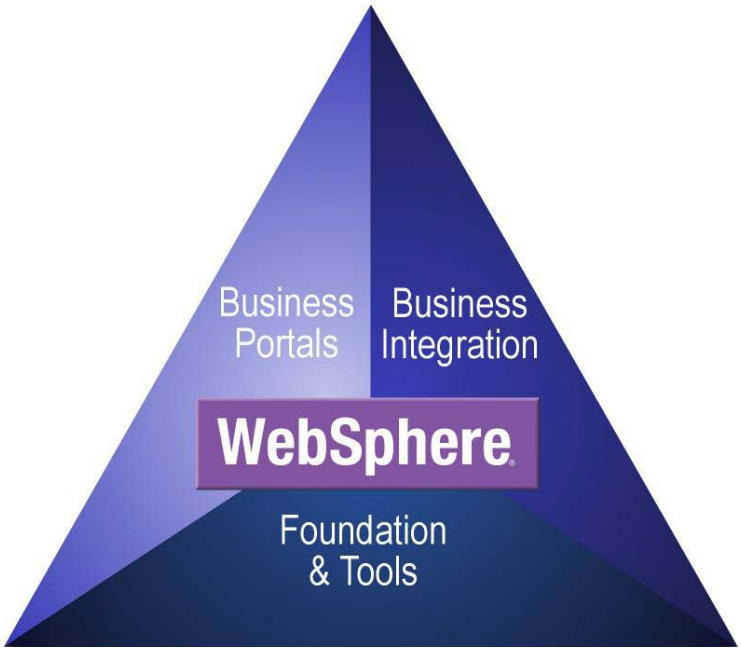
What's New in V5.0.2?

WebSphere Application Server, V5.0.2: Feature and Function Enhancement Overview



WebSphere Application Server V5.0.2 is more than just a "standard fixpack"; in this "mini-release", WebSphere demonstrates its continued commitment to the realization of the IBM e-business on demand vision with new platforms and important functional enhancements. Along with support for the Java Development Kit (JDK) 1.4 client container, there are improvements in Web Services Interoperability and Security, Performance and Application tuning, Platform Support, Systems Management, and Database Integration.

Integrated

Unleash Interoperable and Secure Web Services

IBM WebSphere® Application Server V5.0.2, the market-share leader for Java application-server software, provides a platform for high performing and interoperable Web services. With this new fixpack, IBM provides third generation support for all of the Web services standards needed for describing (WSDL 1.1) and deploying (JSR 109) applications or services on a network in a consistent way so that they can be discovered (UDDI 1.0 & 2.0) and invoked (SOAP 1.1 & SOAP 1.1 with Attachments, SAAJ 1.1, WSIF, JSR 101), in a more secure (WS-Security, XML Signature, XML Encryption) and reliable manner (SOAP over JMS). In addition to high performing support for all of the newly released Web services standards, WebSphere Application Server V5.0.2 is the first production level application server to support the June 2003 Board Approved Draft of the WS-I Basic Profile 1.0. Developers building Web services applications with WebSphere Application Server V5.0.2 will get a head start on interoperating across heterogeneous environments and enterprise boundaries.

Web services distill the best integration practices of the past into a few technologies that can be widely and consistently implemented using modern Internet open standards as well as legacy messaging technologies. Web services support in WebSphere allows enterprises to transform and integrate business designs and business processes while helping to ensure business continuity. IBM architectural leadership in the Web services standards arena helps ensure that an application deployed on WebSphere Application Server V5.0.2 can be integrated end-to-end across the company and with key partners, suppliers and customers. As a result, IBM Web services technology can allow a business to be more efficient, increase the value it can offer to its customers, and better differentiate itself from its competitors.

Industry's Broadest Platform Support

With V5.0.2, WebSphere Application Server and WebSphere Application Server Network Deployment add to their already broad platform support. Inclusion of the Native Deployment Manager for WebSphere Application Server for zSeries on Linux completes support for zSeries beyond what was included in V5.0, while the new WebSphere Application Server for Linux on iSeries and pSeries further demonstrates the WebSphere commitment to open source.

New and completed platforms include:

- Complete support for zSeries on Linux, with the addition of the Native Deployment Manager
- Linux on iSeries and pSeries
- Linux Client (United Linux 1.0)
- Solaris 9
- Windows 2003 (.NET) server 32-bit
- Windows XP Professional (Client Support)
- Windows XP (Development and Test only)

Expanded Database Connectivity

A new, integrated DB2 Correlator with WebSphere Trace provides improved serviceability and better debugging when using WAS and DB2 together. WebSphere Application Server V5.0.2 also extends support to the following databases to further enable your use of your existing assets:

- New JDBC type 2 driver support for DB2 V8
- Sybase 12.5
- Oracle 9iR2 on Linux for zSeries

Virtualized

With **Backup Clusters** available in WebSphere Application Server Enterprise, customers can automatically configure their system to set up a back-up cluster of servers in case the primary cluster fails -- without having to write any code, saving customers the time spent today setting up back-up clusters. If a cluster goes down, the workload is automatically sent to another cluster elsewhere in your network.

Open

Move closer to J2EE 1.4 with JDK 1.4

WebSphere Application Server, V5.0.2 includes support for the JDK 1.4 client container, the first step toward J2EE 1.4 compliance. With JDK 1.4, enterprises can use Java technology to develop more demanding business applications with less effort and in less time. Improved functionality in 1.4 means developers can now spend less time writing custom code to accomplish the same goal as functions that are now part of the core JDK platform. This allows developers to use a single technology to develop, test, and deploy end-to-end enterprise applications and solutions.

More User Friendly than Ever Before

A more functional replacement for the Application Assembly Tool for WebSphere is being made available as a component of the WebSphere Application Server Toolkit. The Assembly Toolkit for WebSphere Application Server, based on the Eclipse Framework (www.eclipse.org), so it works as a natural part of the WebSphere Studio environment. It provides much-improved function, better usability, and a more consistent user interface with the Eclipse toolset. The new Toolkit is an answer to the complex task of packaging J2EE applications; it's an interface that assists users in updating XML for packaging procedures and assists in other value-add tasks that are not directly related to packaging but will help in their deployment. The Assembly Toolkit will be available via the WebSphere Developer Domain as part of the Application Server Toolkit in August 2003.

Autonomic

Dynamic Workload Management addresses the aspect of grid computing that monitors and manages application workload. While the primary focus of grid computing has been on sharing hardware processor load -- such as the heavy numbers-crunching of life sciences research – grid also deals with intelligently sharing application server loads across multiple machines so software runs in parallel, over multiple clusters, thereby allowing transactions to be processed more quickly and efficiently.

Moreover, dynamic workload management dramatically increases application performance and utilization of server resources by acting as an intelligent "traffic cop" within an application server cluster. Previously, application workload running on a cluster of servers was handled with static or fixed weighting algorithms; workload directed to servers based on pre-determined metrics based on individual server capacity. With WebSphere, the system can monitor the workload on each server in the cluster and automatically route the application to one with the lightest workload.

This is the first step in IBM's ambitious Adaptive Server Technology, which will be rolled out over the next 12 months. With Adapter Server Technology, companies will be equipped to manage disparate business applications running on different server clusters, and with differing priorities, usage patterns and computing profiles, as a single application environment. This on demand environment can then automatically adapt to sudden changes, much like an electrical grid.

IBM is building its OGSA (Open Grid Services Architecture) enabled grid services capabilities on the WebSphere platform. IBM WebSphere intends to make this solution available within the next 12 months on a number of platforms, including Linux. WebSphere is being used as the reference application for OGSA, and WebSphere will be enhanced as emerging OGSA standards mature.

Significantly Enhanced Web Services and XML Performance
The new B2B Parser provides extensive XML parsing performance improvements for the Web Services Engine. This featured, combined with other improvements in the Web Services implementation in WebSphere Application Server V5.0.2, provide significant performance advantages. Additionally, Advanced Performance Advisors simplify the administrator's job by making suggestions on how to set the most critical WebSphere Application Server parameters to maximize performance. Performance Advisors use live data collected from a running system to give tuning advice.

Enhanced Monitoring Capabilities
The new Request Metrics function helps administrators debug and monitor their system by timing individual requests as they travel through WebSphere Application Server components. In addition to the web container, the enterprise bean container, and the database, WebSphere Application Server 5.0.2 can provide time spent in the web server.

IBM Corporation
Software Group
Route 100
Somers, NY 10589
U.S.A.

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