

IBM WebSphere Application Server with Nutanix on IBM Hyperconverged Systems



IBM WebSphere Application Server is a middleware offering which helps you deploy and manage Java-based applications ranging from simple websites to powerful on-demand solutions. WebSphere gives you a rich environment for deploying applications, including capabilities for transaction management, security, clustering, performance, availability, connectivity and scalability.

The purpose of an application server is to speed delivery of new applications and services which can help businesses offer richer user experiences through the rapid delivery of innovative applications.

To support this time scale organizations need an agile IT infrastructure that is quick to start, simple to scale and fully built with the data services fit for the needs of the developer. Reducing complexity, improving data security, and eliminating bottlenecks are top priorities. Traditional IT infrastructure is ill-suited to address the needs of growing WebSphere installations.

FOCUS ON WEBSHERE SERVICES, NOT WEBSHERE INFRASTRUCTURE

A Nutanix Enterprise Cloud takes the complexity out of deploying infrastructure for WebSphere, allowing application server experts to spend more time deploying new applications.

Throughput and ease with a difference. Simplicity meets performance with the combination of Nutanix and IBM Power.

IBM® Power Systems™ and the POWER® microprocessor are designed for data-intensive applications, providing more threads per core, memory bandwidth and cache than other platform options. These benefits translate into superior performance gains for WebSphere running on POWER servers.

ELIMINATE BOTTLENECKS

WebSphere Application Server deployments grow rapidly as new applications are added. By using Nutanix you start small and scale out without worrying about the bottlenecks that occur with traditional architectures:

- **Better performance.** 30% more throughput per server
- **Lower acquisition cost.** 75% of the price of comparable x86 processor-based appliances
- **Scale incrementally.** Start small and grow linearly by adding nodes one at a time.

Traditional storage systems can experience significant I/O bottlenecks, particularly in virtual environments. By ensuring data is accessed locally by WebSphere Application Servers, this eliminates the “I/O Blender” effect that can plague conventional infrastructure.

1.7x Better

Price-performance over commodity processor architectures

Administrators can scale existing Nutanix clusters or deploy new clusters in minutes with less concern for storage and network bottlenecks. A Nutanix enterprise cloud provides linear scaling, so WebSphere deployments can scale without worry. Each additional node delivers predictable performance to support WebSphere Application Server workloads. Because of its distributed architecture, a Nutanix enterprise cloud prevents one workload from starving another, allowing the infrastructure to be shared if desired.

In concert with POWER performance, Nutanix allows WebSphere Application Server to take full advantage of server virtualization without the limitations of other solutions.

EASE OF DEVOPS

- **Life cycle management.** With the Nutanix Distributed Storage Fabric (DSF), WebSphere Application Servers can access data locally. Application data is automatically stored on the right media—SSD for hot data, HDD for cold—and the resources allocated to each indexer can be changed effortlessly.
- **Data locality.** Nutanix continuously monitors data access patterns and places data in the most appropriate location, complementing the WebSphere Application Server life cycle.
- **Next generation virtualization.** Designed for the era of unstructured data, Nutanix AHV is a hypervisor that accelerates deployment and eases management. It is included at no extra cost with IBM Hyperconverged System purchases, eliminating virtualization licensing costs.
- **Self-healing infrastructure.** A Nutanix enterprise cloud environment is resilient by design. If a drive or node fails, workloads are automatically restarted and full resiliency is restored quickly without operator intervention, protecting WebSphere from unplanned downtime.
- **Built-in availability.** Data protection, disaster recovery, and high availability are integral to the Nutanix environment, delivering higher WebSphere availability with less time and effort.
- **One-click management.** With Nutanix Prism, application server administrators easily monitor and manage all infrastructure used by WebSphere, gaining full visibility of storage, CPU, and memory runway. One-click software, hypervisor, and firmware upgrades and one-click problem remediation take the pain out of day-to-day operations.

INCREASE SECURITY WITHOUT ADDING SILOS

To ensure the security of sensitive data, many application server architects find they have no choice but to deploy dedicated infrastructure for WebSphere. However, WebSphere can be deployed securely on a Nutanix cluster with other workloads, avoiding the need for a separate silo of infrastructure.

Furthermore, Nutanix combines features such as two-factor authentication and data-at-rest encryption with a security development lifecycle. Nutanix systems are certified across a broad set of evaluation programs to ensure compliance with the strictest standards.



T. 855.NUTANIX (855.688.2649) | F. 408.916.4039
info@nutanix.com | www.nutanix.com | @nutanix

68% Faster

Deployment of storage

61% Less

Time to manage

97% Fewer

Occurrences of downtime

- ✓ **Frees you up from managing infrastructure**
- ✓ **Delivers superior performance**
- ✓ **Simplifies Dev/Ops**

FOR MORE INFORMATION:

IBM Hyperconverged Systems powered by Nutanix: <https://www.ibm.com/us-en/marketplace/hyperconverged-systems/details>.

WebSphere on Power Systems: <https://www-03.ibm.com/software/products/en/appserv-was>

Based on IBM internal testing of 4 VM images running pgbench Benchmark at scale factor of 300, 20 Gb buffer size. Results valid as of 9/5/17. Conducted under laboratory condition, individual result can vary based on workload size, use of storage subsystems & other conditions.

Pricing based on single node of 3-node cluster of IBM Hyperconverged System CS822 with 22 cores (2 x 11c chips) / 176 threads, POWER8; 2.89 GHz, 512 GB memory, 8x1.92TB SSD. Competitive stack: Single node of 3-node cluster Dell XC630-10, 24 cores (2 x 12c chips) / 48 threads; Intel E5-2650 v4; 2.2 GHz; 512 GB memory, 10 x 460GB SSD. Both servers running favor performance mode with RHEL 7.2 Guests and EDB 9.6. Configurations represent the peak value for specific processor count running 4 VM images: IBM CS822 = 4 vm @ 4 cores and E5-2650 = 4 vm @ 4 cores. HW Pricing is based on: Current market information list pricing, please consult your local Nutanix reseller for more details For information on EDB: <http://www.enterprisedb.com/products-services-training/subscriptions-power> *Based on IDC study "Nutanix Delivering Strong Value as a Cost-Effective, Efficient, Scalable Platform for Enterprise Applications", August 2017.

Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence.

The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Learn more at www.nutanix.com or follow us on [Twitter @nutanix](https://twitter.com/nutanix).

©2017 Nutanix, Inc. All rights reserved. Nutanix is a trademark of Nutanix, Inc., registered in the United States and other countries. All other brand names mentioned herein are for identification purposes only and may be the trademarks of their respective holder(s).