

Drive innovation with WebSphere Application Server and IBM Cloud Private

*An enterprise solution to connect,
collaborate and innovate with
flexibility and ease of migration*



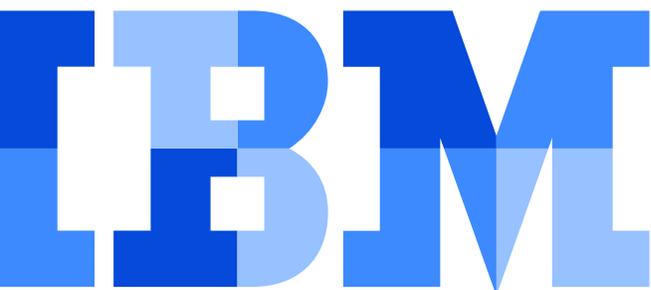
Highlights

- Use open source technologies for faster app delivery
 - Support continuous delivery and innovation with an integrated DevOps pipeline
 - Create multicloud apps using Docker containers and deploy into the Kubernetes-based cloud
 - Cloud-enable and modernize your existing applications with Virtual Machines
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Delivering innovation is a necessity for staying ahead of the competition in today's always-on, global business environment. As the digital economy matures, applications are an increasing part of this goal. However, delivering innovation is much easier said than done. The business challenge is multi-faceted, and includes the need to:

- Attract and retain developer talent
- Use short development cycles and DevOps processes
- Fit seamlessly into a hybrid cloud model
- Optimize existing investments

WebSphere Application Server can help enterprise customers confidently meet this challenge, providing solutions along their journey to digital transformation. How? By simplifying the creation of microservices and other containerized applications, modernizing existing applications, and by using capabilities that are designed to help reduce costs by moving all or part of their applications to the cloud—in a manner that is quicker, security-rich and created for optimal reliability. Through its integration with IBM Cloud Private, WebSphere Application Server can help enterprises leverage the power of private cloud to enable new technologies and DevOps models for new application creation and deployment while modernizing existing applications and workloads—all through a single platform.



WebSphere Liberty and Microservice Builder: Driving innovation through containerized microservices

WebSphere Liberty directly enables digital transformation by providing the raw building blocks for innovation and disruption:

- **Open source** with Open Liberty as its foundation, WebSphere Liberty is especially developer friendly, fundamentally changing the starting point for new development projects, making getting started a far lower cost than ever before. Use short development cycles and DevOps processes.
- **Microservices** incorporates the Eclipse MicroProfile project, which through its vendor-neutral programming model optimizes Enterprise Java for the microservices architecture, providing core capabilities for building fault tolerant and scalable microservices.
- **Containers** is available as pre-built Docker containers from IBM. WebSphere Liberty is ready for production deployment into virtually any cloud environment, enabling agility through the DevOps pipeline and providing an ideal unit for scaling microservice applications.

To help accelerate DevOps processes and shorten development cycles, the WebSphere Application Server team offers Microservice Builder, a toolchain offering an end-to-end development and deployment experience for Docker containerized applications. Developed to support a continuous delivery process, Microservice Builder enables development teams to frequently build, test and release code changes with a pre-integrated pipeline that helps automate the build, test and release cycle.

With Docker containers, Kubernetes, and at the base, you can excel in your adoption of container technology as a strategic building block for increasing application developer productivity and decoupling teams to enable speed and agility. Using Microservice Builder, you can easily and efficiently automate, deploy, scale and manage your WebSphere Liberty-based containerized applications across private and public clouds. With automated, built-in dashboards and analytics, you can manage applications and services across multiple clouds for

flexibility and choice. Add in the services you need to do key functions like connecting APIs and data, while also monitoring, logging and managing events—with IBM Cloud Private—and you now have a foundation built for rapidly producing quality code and accelerating business value.

Not to be ignored is how you protect your business and your customers. Security breaches cost businesses millions in revenue and fines, and damage both company reputation and customer trust. With sensitive and valuable data running through your business, you cannot afford vulnerabilities.

WebSphere Liberty and Microservice Builder, combined with IBM Cloud Private, gives enterprises the ability to govern and operate workloads across multiple clouds on a platform that provides the advantages of a public cloud but in a customer-controlled and more security-rich environment.

Modernize your existing applications

Businesses often want to move to a private cloud architecture with the lift-and-shift approach of traditional WebSphere Application Server, but just as commonly need to bring and use existing skills, tools and scripts with little configuration changes. The answer is running traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private. This synergistic combination can provide a solution for deploying traditional WebSphere Application Server cloud infrastructure with an optimized user experience leveraging the experience.

Automate delivery of traditional WebSphere Application Server environments with consistency

Manually configuring traditional WebSphere Application Server virtual machines in any cloud infrastructure could benefit by using automation. Traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private can provide automation that helps reduce errors while offering a simplified, cloud-agnostic solution for automated delivery of traditional WebSphere Application Server cloud infrastructure.

Define traditional WebSphere Application Server topologies as code with open technology

Traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private uses open source Terraform to manage and deliver traditional WebSphere Application Server cloud infrastructure as code. Cloud infrastructure delivered as code can be reused, placed under version control, easily shared with others and can be used to replicate environments in a few clicks. Traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private comes pre-populated with sample templates to help you get started quickly. Use the sample templates as-is or customize them as needed.

Key elements of traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private

- Provision traditional WebSphere Application Server cloud infrastructure and accelerate application delivery into IBM Cloud
- Deliver and manage traditional WebSphere Application Server VM infrastructure as code with template driven automation
- Simplified interface for provisioning and managing traditional WebSphere Application Server cloud infrastructure with a single user experience

Benefits of traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private

- Automate delivery of traditional WebSphere Application Server infrastructure. Developers can spend more time building traditional WebSphere Application Server.
- Reuse valuable traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private cloud assets.
- Developers can get started faster with pre-built infrastructure from the Cloud Automation Manager library in IBM Cloud Private. Traditional WebSphere Application Server infrastructure captured as code can be placed in version control, easily replicated and shared across distributed teams. The result is improved development efficiency and a reduction in errors due to inconsistent and misconfigured infrastructure. Traditional WebSphere Application Server as Virtual Machines in IBM Cloud Private helps reduce the challenges of delivering cloud infrastructure by delivering a simplified traditional WebSphere Application Server user experience built with open technology with IBM Cloud Private.

Why IBM Cloud Private?

Built to help you solve problems and advance opportunities in a world rich with data, IBM Cloud Private can deliver:

Business innovation

- New microservices-based applications to build, deploy and manage more easily—offering dynamic scalability and variable demand management
- New integrated IBM and open source DevOps tools and services for code repositories, deployment, test automation and promotion to production
- Virtually seamless integration to IBM Public Cloud—designed to offer secure access and integration to innovative technologies including cognitive/AI, Blockchain, IoT and more

Integration

- Ease of access to the platform and other services to help developers easily integrate within and across cloud environments
- Catalog of services and integration tools to assist developers on and off premises

Greater compliance and management

- Capabilities designed to monitor, secure and operate microservices at scale
- More secure corporate data and compliance management with government regulations and/or industry standards
- Management, back-up and recovery of data and applications

Investment protection

- Ability to preserve or delay risky application changes by using next generation of cloud-enabled software
- Ability to modernize existing applications while integrating with new applications
- Catalog of software and services to enable developers and operations teams to more confidently migrate applications to new versions and the cloud

IBM Cloud App Platform for Hybrid Deployment

IBM Cloud App Platform for Hybrid Deployment brings together IBM's WebSphere Application Server portfolio and IBM Cloud Private under a single entitlement. Why should you have to choose between two great run time platform solutions when you can have both? You might not know what your mix of cloud private versus traditional platform deployments will be a year from now—or two years from now—and with IBM Cloud App Platform for Hybrid Deployment, you don't have to know, because you have the flexibility to change your platform mix as your needs change over time.

IBM Cloud App Platform for Hybrid Deployment is licensed through FlexPoints, in which each program has a certain value in FlexPoints. To license these programs, IT managers can purchase FlexPoints in packs of 1,000 and allocate them to the included programs according to your needs. As the deployment-platform mix changes or grows, the deployment of FlexPoints to the programs can be adjusted—and additional FlexPoints can be purchased.

Programs included in the IBM Cloud App Platform for Hybrid Deployment include: WebSphere Application Server Network Deployment, WebSphere Application Server, WebSphere Application Server Liberty Core, IBM Cloud Private Cloud Native, Cloud Foundry for IBM Cloud Private, and Cloud Automation Manager for External Environments.

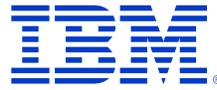
So simply buy the number of FlexPoints you need for your environment, mix and match WebSphere and IBM Cloud Private as you wish, and change the mix as your requirements change without additional purchase—simply stay within your total FlexPoints entitlement level. This approach is especially attractive if you're planning application modernization projects or migrating workload to the cloud; you can migrate at your own rate and at your own pace, because your platform mix can grow and transition with you over time.

Ready to try it out?

Install the cost-free [Community Edition](#) of IBM Cloud Private. Buy [IBM Cloud App Platform for Hybrid Deployment](#).

For more information

To learn more about IBM Cloud Private, WebSphere Liberty and Microservice Builder, please contact your IBM representative or IBM Business Partner, or visit the following website: developer.ibm.com/microservice-builder.



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