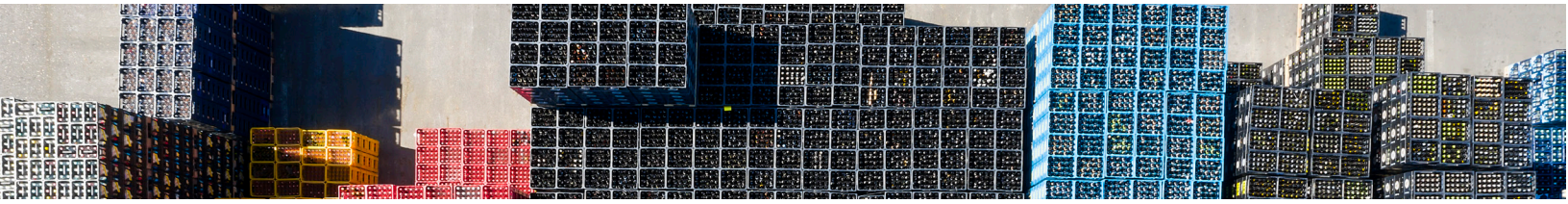
IBM Certified Containers

Modernize and Scale your Enterprise Software Solutions Across Multiple Environments with IBM Certified Containers on Red Hat® OpenShift®

IBM



Modernize and Scale your Enterprise Software Solutions Across Multiple Environments with IBM Certified Containers on Red Hat® OpenShift®

About a decade ago, everyone expected organizations to move to the cloud, with the assumption this meant public cloud. Fast forward to today, most businesses still maintain significant on-premises environments with limited cloud deployments. However, industry experts maintain that it is only a matter of time before enterprises transition to the cloud.

As businesses develop cloud strategies, they must consider factors unique to their environment such as government regulations, security, performance, data residency, service levels, time to market, architecture complexity and technical skills of its employees. Overlay the need to prevent vendor lock-in and the ability to incorporate emerging technologies such as Artificial Intelligence (AI) and machine learning, and it becomes clear that IT leaders need deployment options that co-exist, build on existing investments, and operate across multiple cloud and on-premises environments.

Early movers to the cloud started by creating and managing their own containers to transition their on-premises software to the cloud. To ease the transition, IBM offers IBM Certified Containers running on the cloud service provider's Kubernetes software, and IBM Certified Containers on the Red Hat OpenShift Container Platform (RHOCP), an even simpler, more efficient way to deploy, manage and scale secure, enterprise-grade software across multiple environments.

Gartner predicts

28%

of enterprise workloads will move to the cloud.

Gartner Forecast: Public Cloud Services Worldwide, 2016-2022, Q418 Update

The decision of which strategy to pursue depends on an organization's resources, constraints and goals. As an analogy, think of the containers as the sports team and Kubernetes as the coach. You can assemble a team and coach it yourself to perform at the high school level, provided you have the right internal resources. You can deploy IBM Certified Containers, commit to a cloud provider such as Amazon or Google and use the coach provided, for example Amazon's Elastic Kubernetes Service or Google's Kubernetes Engine, and perform at the college level. Or you can bring in a professional, Hall of Fame-caliber coach that you can count on to have the expertise to win in any environment against any challenge, the Red Hat OpenShift Container Platform for Kubernetes distribution.

Containers are used to package and partition parts or entire parts of a solution. These isolated resources can be anything from CPU to memory – even an entire network. Conceptually, containers are flexible virtual machines that do not have extreme operating needs or requirements. Kubernetes is container orchestration software to enable organizations to efficiently and securely manage their container environment at scale.

Business Value of IBM Certified Containers on RedHat OpenShift

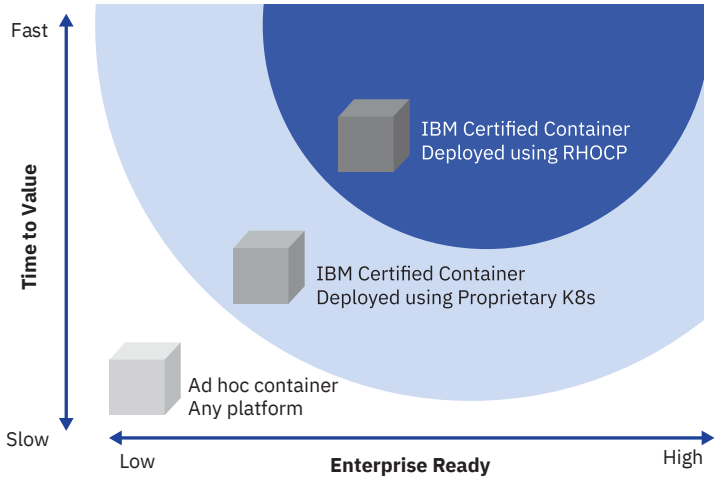
IBM Certified Containers on Red Hat OpenShift offers a consistent hybrid cloud foundation for building and scaling containerized applications. Built with the industry-leading managed Kubernetes service, Red Hat OpenShift provides speed and agility for discerning customers looking for quick-paced development processes, while also bringing significant savings in IT operational costs for existing customers through containerized architecture models. Enterprise-grade, secure "Product Editions" available for IBM Sterling Order Management and B2B Collaboration solutions provide the following:

- Ease. In a matter of minutes versus weeks, system administrators can easily deploy software in a repeatable container-based model using Red Hat OpenShift. Build once and deploy anywhere.
- Simplicity. Administrators can use containerized technology on-premises or in a third-party cloud of their choice, and make use of built-in, standardized best-of-breed tools, visualization and a graphical interface to simplify application deployment, monitoring, logging and security.
- Agility. Administrators can use automation to compile and deploy product extensions and custom integrations. By eliminating testing and production support bottlenecks, they can rollout critical market differentiating improvements quickly and respond to changing business needs without massive, waterfall software projects to upgrade.
- Portability. Run applications on-premises, private, public and hybrid cloud infrastructures – with the freedom to choose among cloud service providers including IBM Cloud, AWS, Azure, Google and Edge.
- Speed. Innovate at scale by increasing the number of major features developed per year by 36%*, shortening development and release cycles by 66%* and accelerating time to market by 80%*.
- Control: Achieve no or low downtime and improved customer experience as failure in one container will not impact operations of all applications. Teams can isolate the point of failure and work to resolve.
- Cost-savings. Lower cost with integrated tools and scripts that provide agility and auto-scaling.
- Best-in-class. Benefit from IBM and Red Hat guidance and built-in proven methods in security, availability and visibility to reduce risk. Adopt open technologies with confidence using a solution that provides a set of validated, container-based open source tools.
- IBM Cloud Paks. Take advantage of an open environment to build, move and manage data and applications in the cloud with IBM Cloud Paks. Each Cloud Pak addresses a specific user need, including applications, data, integration, automation, security and multi-cloud management. Once the license is purchased, it can be used in perpetuity.

IBM Sterling Offerings

The move to containers makes sense as the uptime criticality for normal business or systematical upgrades has substantial customer and costly impacts. IBM Sterling provides container functionality that is right for your organization. Each container delivery model from IBM Sterling supports varying degrees of technological prowess, business continuity demands and installed security and compliance capacity.

1. Traditional on-premises: Clients create their own containers using guidelines and samples provided with the standard product and documentation.
2. IBM Certified Container deployed using proprietary Kubernetes: Clients use containers provided out-of-the-box and deploy into any cloud using proprietary or native Kubernetes.
3. IBM Certified Container deployed using the Red Hat OpenShift platform: Clients use containers provided out-of-the-box and deploy into any private or public cloud using the Red Hat OpenShift platform that abstracts and normalizes the deployment to be cloud agnostic and therefore multi-cloud ready.



Feature	Traditional On-Premises	IBM Certified Container Deployed Using Proprietary Kubernetes	IBM Certified Container Deployed using Red Hat OpenShift Platform
Core Product Functionality	✓	✓	✓
Deployment (Helm Chart)		✓	✓
Prebuilt Container Images with Secure Prepacked Operating System and Hypervisor		✓	✓
Advanced Documentation			✓
Platform Services (logging, monitoring, authentication)			✓
Security, Compliance and Portability from OpenShift PaaS			✓
Automated CI/CD sing scripted Source to Image workflows			✓
Fast-tracked Security updates based on Red Hat advisories			✓

A Better Way to Modernize IBM Sterling Order Management and B2B Collaboration On-premises Applications

IBM certified containers on Red Hat OpenShift are enterprise-grade, secure "Product Editions" available for IBM Sterling Order Management and B2B Collaboration solutions. These product editions integrate a container platform, containerized middleware, open source components and common software services.

Red Hat OpenShift certified containers are a simpler, more efficient way to deploy, manage and scale software across multiple environments. IT teams gain consistent deployment life-cycle management. A certified container can be built quickly and deployed anywhere, across hybrid environments, leveraging an open and integrated Kubernetes-based platform. And, with IBM and Red Hat OpenShift together, clients enjoy advantages of two industry leaders; best practices, open source commitment, a graphical interface and visualization to lower cost and risk.

Enterprises can drive incremental value from their existing software investments and reduce operational and infrastructure costs, while simultaneously accelerating innovation.

Specific technical benefits:

- Delivers container images built using open source technologies such as Buildah and Podman
- IBM-certified Helm charts easily deliver enterprise-grade, secure, production editions
- Open sourced Db2® and MQ dockers provide readily available application servers and agent containers for an empowered developer environment
- Off-the-shelf scripts and documentation are accessible to assist with creating builder images and customized build pipelines aligned with the Source-To-Image (S2I) framework
- Liveness and readiness probes that work with Kubernetes replicas to monitor the health of the application and provide graceful self-healing recovery characteristics
- Unified monitoring, security and logging tools using a common services foundation to give administrators a consistent hybrid cloud interaction model
- Advanced analytics and AI solutions can easily be enabled with IBM Cloud Paks

Across industries, IBM clients are all looking at continual innovation in order to remain competitive. Below are examples of how clients are modernizing their operations and technology with IBM certified containers on Red Hat OpenShift, and their potential efficiency gains.

Use Cases – IBM Certified Containers on Red Hat OpenShift	
Retail Services	**Manufacturing**
In order to improve capacity at scale, while reducing resource expense, the largest North American supply company selected IBM to containerize their applications. Red Hat OpenShift can help reduce 35% of IT staff time per application instance*.	An American Fortune 100 corporation, which is the world's largest construction equipment manufacturer, was looking to modernize their operations with a focus to lower costs and speed time to market. Using Red Hat OpenShift, they expect to gain up to a 60% increase in IT administrator efficiencies*.
Food Services	**Financial Services**
The largest grocer in the United States needed to be able to support exponential growth. Scalability and resilience were equally important. IBM collaborated on a four-week proof-of-concept which confidently demonstrated self-healing and autoscaling abilities. Red Hat OpenShift can enable 80%+ faster time to market*.	A multi-national investment bank and financial services company wanted to drive budget expenses down, keep up with the competition and consolidate data centers. They used IBM certified containers to help them achieve their goals. They estimate deploying with Red Hat OpenShift can lower IT infrastructure and development costs by 35%*.

Conclusion

IBM is leading the way toward an open, hybrid, multi-cloud world with solutions that facilitate deployment and management. Our focus is to provide clients with options so that they can employ cloud technologies to deliver innovation at scale and at lower cost, in a way that works for them. IBM certified containers help organizations evolve from on-premises deployments without adding complexity and cost. Build once and deploy anywhere, leverage an open and integrated approach, and take advantage of best practices from IBM and Red Hat experts, a graphical interface and visualization.

Let IBM help you modernize existing applications with an approach that considers the many factors unique to your environment, so you can move forward with confidence.

Wherever you are in your journey to the cloud, there is an IBM Sterling B2B Collaboration solution to meet your needs. Learn more here.

*The Business Value of Red Hat OpenShift by IDC, 2017

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