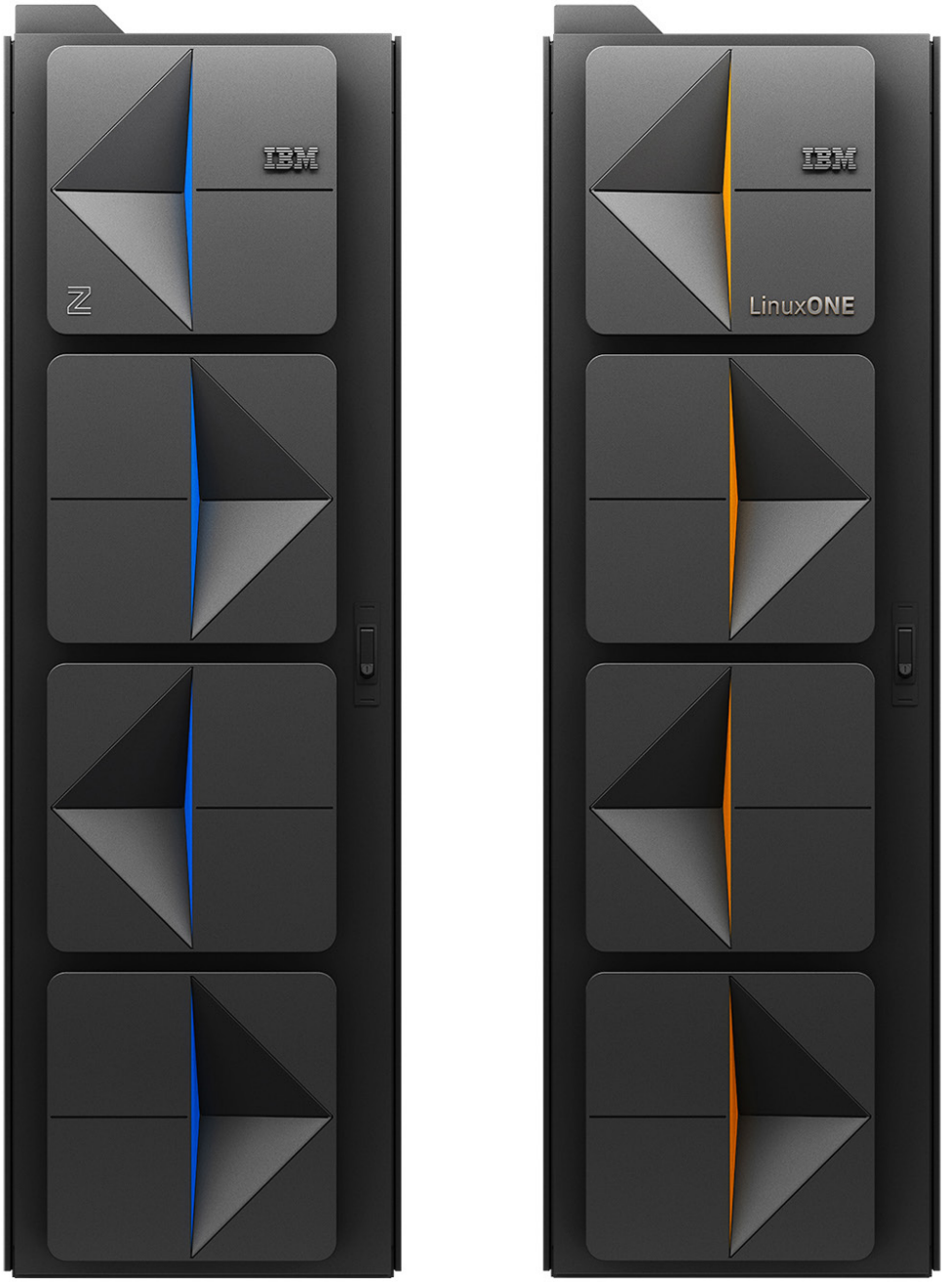
IBM Cloud Infrastructure Center

Empower how you deploy, manage, and integrate infrastructure as a service



IT organizations worldwide have turned to the agility of infrastructure as a service. By doing so, they aim to optimize their IT operations, improve efficiency, and better manage the lifecycle of their infrastructure.

Infrastructure-as-a-Service (IaaS) is a computing model that delivers fundamental compute, network, and storage resources to users on demand. IaaS enables to scale and shrink resources on an as-needed basis, especially in the case of spiky workloads.

By providing on-demand infrastructure services through a self-service portal, users are empowered to take control of their resource needs, efficiency, and productivity without requiring administrative assistance.

IBM Cloud Infrastructure Center provides a ready-to-use infrastructure management solution for:

- Lifecycle management of the infrastructure, including on-premises deployments of virtual machines.
- Deployment of Linux® images, which can include on-containerized workloads.
- Support to simplify the deployment of Red Hat® OpenShift® Container Platform clusters.
- User consumption of services via a self-service portal.
- Integration with management tools, such as IBM Cloud Paks®, IBM Instana®, Red Hat Ansible®, Terraform, VMware vRealize, based on OpenStack-compatible APIs.

Cloud Infrastructure Center is based on industry standards and uses common skills for infrastructure management.

Managing the infrastructure as a service enables the seamless convergence of infrastructure services with cloud computing, creating a unified, enterprise-wide infrastructure environment that drives business agility and innovation, and becomes more important as IT strategies evolve to hybrid infrastructure and cloud models.

Highlights

- Simple lifecycle management of infrastructure
- Integration with infrastructure and cloud management tools
- Fast Linux image deployment
- Simplified deployment of Red Hat OpenShift
- Consistent user experience

“Cloud Infrastructure Center allows us to substantially improve our infrastructure management and reduce cost & complexity to manage from simple to complex environments.”

Infrastructure on IBM Z® and IBM® LinuxONE

IT infrastructure serves as the critical foundation for driving business outcomes, and as such, it is essential to invest in a strategic infrastructure that scales to support non-containerized and containerized workloads, across multiple computing models.

The IBM Z and IBM® LinuxONE platforms deliver on-premises computing platforms that provide a robust, scalable, and highly secure infrastructure foundation, optimized for a broad range of workloads, cloud-native applications, and automation scenarios.

The virtual machines based on IBM z/VM® or Red Hat Enterprise Linux KVM can be managed as infrastructure-as-a-service with Cloud Infrastructure Center.

IBM Cloud Infrastructure Center capabilities

- Management
- Automation
- Integration

Infrastructure management

Infrastructure management Cloud Infrastructure Center can manage the full lifecycle of virtual machines and their associated storage and network bindings, meaning that virtual machines can be created, started, stopped, restarted, resized, captured, and deleted. Also, live migration of the virtual machines is supported.

The full lifecycle includes managing the storage, such as carving/deleting volumes from the storage subsystems along with fabric management and the management of network resources, such as IP allocation or network setup.

An image can either be based on a Linux distribution from Canonical, Red Hat, or SUSE and can include non-containerized workloads, or it is based on Red Hat Enterprise Linux CoreOS as part of Red Hat OpenShift.

Automation
Cloud Infrastructure Center comes with a self-service portal that provides users easy access to exploit infrastructure services. Users can invoke the services with an industry-standard user experience and without worrying about any infrastructure details and technical skills.

The services are automating infrastructure management tasks are defined by an administrator and made available at the self-service portal.

The administrator can capture and maintain a library of virtual machine images to quickly deploy a virtual machine environment. They can launch a stored image from the library, instead of manually recreating a virtual machine image, as well, they can move virtual machines to available systems, thereby expediting deployment and improving productivity.

The thought behind it: create once and deploy quickly and easily.

Further automation capabilities, improving the efficiency and coming with Cloud Infrastructure Center, are the environment checker, a diagnosis tool, and an upgrade validation tool.

Integration with infrastructure and cloud management tools
With its built-in OpenStack compatible APIs, Cloud Infrastructure Center is based on the de facto standard for vendor-agnostic infrastructure management. It enables an easy integration to infrastructure and cloud management tools, such as IBM Cloud Paks, IBM Instana, Red Hat Ansible, additional Red Hat tools, Terraform, or VMware vRealize.

Together, the integration of Cloud Infrastructure Center with the infrastructure and cloud management tools, can simplify the lifecycle management of the virtual machines across the enterprise and can provide a unified hybrid infrastructure and cloud environment with a single pane of glass for IBM Z and IBM® LinuxONE. The ability to use common skill, helps to improve operational efficiency.

Popular use cases of IBM Cloud Infrastructure Center

- Simplified virtualization experience
- Service management for service providers
- Deployment of database-as-a-service
- Deployment support of Red Hat OpenShift clusters
- Hybrid Cloud Resource Management and Automation with IBM Cloud Infrastructure Center and Terraform

Simplified virtualization experience
The capabilities of Cloud Infrastructure Center in ‘infrastructure management’, ‘automated service deployment’, and the ‘integration of IBM Z and IBM® LinuxONE into hybrid enterprise environments’ are all based on the vendor-agnostic OpenStack technology and deliver a major step towards simplifying the management of the infrastructure.

Providing a consistent, industry-standard user experience to manage the lifecycle of virtual infrastructure on IBM Z and IBM® LinuxONE, helps users to do their first deployments and management experience.

Infrastructure management for service providers
Service providers require high efficiency in managing the infrastructure. For them, Cloud Infrastructure Center can serve as the management system for the virtualized infrastructure, supporting several computing models.

With the built-in OpenStack-compatible APIs, Cloud Infrastructure Center can handle a wide range of infrastructure management tasks and can integrate various components to automate infrastructure services. This can result in reduced complexity and cost, while delivering predictability and repeatability in a secure, multitenant safe way.

Accurate charging of the allocated and consumed resources to each client is important. Cloud Infrastructure Center, integrated with the IBM Cloud Pak for AIOps, enables metering of the consumed resources of the virtual machines.

Deployment of on-premises database-as-a-service
Cloud Infrastructure Center can help to deploy Linux based images with non-containerized workloads. Using this capability, administrators can create customized images that combine a Linux distribution and a database. By offering this image as a service in the self-service portal, user can rapidly deploy a database with a seamless and on-demand experience.

Administrators can create a range of database-as-a-services, using different Linux distributions, different data bases, and tailor each service to specific user needs. The services can be saved and offered as distinct services to the users.

While database-as-a-service is a widely adopted use case, the ‘as-a-service’ approach can be seamlessly applied to other workloads to achieve similar benefits

Deployment support of Red Hat OpenShift clusters

Cloud Infrastructure Center supports the simplification and automation of the deployment of Red Hat OpenShift and the management of the virtual machines used for the deployment of the cluster.

A Red Hat Enterprise Linux CoreOS image as part of Red Hat OpenShift can be deployed like any other image into a virtual machine that is based on z/VM or Red Hat KVM.

Cloud Infrastructure Center can ease an automated Red Hat OpenShift cluster deployment in a user provisioned infrastructure model (UPI) via Red Hat Ansible or Terraform

Hybrid Cloud Resource Management and Automation with IBM Cloud Infrastructure Center and Terraform
IBM Cloud Infrastructure Center integrated with Terraform for IBM Z and IBM® LinuxONE delivers a unified, automated approach to managing hybrid cloud environments.

This solution streamlines infrastructure provisioning and lifecycle management, reduces manual errors, and ensures consistent security and compliance across platforms.

Why IBM?

As you transform your business in a trust economy, IBM remains your partner.

With IBM Z and IBM® LinuxONE we built the powerful and secure platform for business, let us build the future of yours. We have the total expertise in cloud, systems, software, delivery, and financing to help you create a secure, open, and intelligent foundation for you.

Our experts can help you configure, design, and implement the IBM Cloud Infrastructure Center optimized for your needs.

For more information

IBM Cloud Infrastructure Center is designed to improve user experience and administrator productivity, providing infrastructure management for the IBM Z and IBM® LinuxONE environment and the integration of IBM Z and IBM® LinuxONE infrastructure into hybrid enterprise infrastructure and cloud environments.

Please refer to our comprehensive documentation[1] for a detailed overview of all product capabilities. For the latest information on 'what's new with IBM Cloud Infrastructure Center 1.2.5 and its hardware and software requirements[3], we provide entry points through the URLs.

Want to learn more about IBM Cloud Infrastructure Center, please contact your IBM representative, your Red Hat representative, or IBM Business Partner.

Learn more:

IBM Cloud Infrastructure Center
IBM Z
IBM LinxONE

IBM Corporation
New Orchard Road
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1. ibm.com/docs/en/cic/1.2.5
2. ibm.com/docs/en/cic/1.2.5?topic=overview-what-is-new-in-cloud-infrastructure-center-125
3. ibm.com/docs/en/cic/1.2.5?topic=planning-hardware-software-requirement