
IBM Z and IBM LinuxONE
June 2020

IBM Cloud Infrastructure Center

Frequently Asked Questions

Worldwide



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IBM Cloud Infrastructure Center

What is IBM Cloud Infrastructure Center?

IBM Cloud Infrastructure Center is an advanced infrastructure management offering, including on-premises cloud deployments of IBM z/VM®-based Linux® virtual machines on the IBM Z® and IBM LinuxONE platforms.

What is hybrid cloud?

Hybrid cloud is a computing environment that connects a company's on-premises private cloud services and third-party public cloud into a single, flexible infrastructure for running the organization's applications and workloads.

The principle behind hybrid cloud is that its mix of public and private cloud resources—with a level of orchestration between them—gives an organization the flexibility to choose the optimal cloud for each application or workload (and to move workloads freely between the two clouds as circumstances change). This enables the organization to meet its technical and business objectives more effectively and cost-efficiently than it could with public or private cloud alone.

How does IBM Cloud Infrastructure Center fit into the IBM hybrid cloud strategy?

IBM Cloud Infrastructure Center fits perfectly in the hybrid cloud strategy, providing infrastructure management for private, on-premises cloud deployments of z/VM-based Linux virtual machines on Z and LinuxONE.

What is an Infrastructure-as-a-Service?

Infrastructure-as-a-Service, commonly referred to as simply "IaaS", delivers fundamental compute, network, and storage resources to consumers on-demand. IaaS enables you to instantiate and decommit, scale and shrink resources on an as-needed basis. Such services can be exploited either programmatically via APIs or via a self-service portal.

How does the IBM Cloud Infrastructure Center relate to IaaS?

The IBM Cloud Infrastructure Center is an IaaS offering that provides a consistent, industry-standard user experience to define, instantiate, discover and manage the lifecycle of virtual infrastructure, deployment of images (operating system and applications), and policies to maximize resource utilization. Cloud Infrastructure Center provides an industry-proven turn-key solution.

Can IBM Cloud Infrastructure Center be integrated with other cloud management tools?

Yes, IBM Cloud Infrastructure Center enables the integration to higher-level cloud automation tools, such as IBM Cloud Automation Manager or VMware vRealize Automation (vRA) / Orchestration (vRO).

Why to use IBM Cloud Infrastructure Center?

What are the advantages of IBM Cloud Infrastructure Center?

The IBM Cloud Infrastructure Center delivers the following capabilities:

- Easy provisioning of virtual machine instances into an on-premises cloud via a self-service portal that include network and storage bindings, and optionally also image deployment.
- Fast provisioning of virtual infrastructure to be consumed by Red Hat® OpenShift®
- Infrastructure provisioning that can be confined by workflow-driven policies, such as approval flows, expiration dates, or resources quotas.
- Optional discovery and on-boarding of pre-existing virtual machines to be managed by Cloud Infrastructure Center
- Support for Lightweight Directory Access Protocol (LDAP) to meet enterprise identity mapping requirements
- Enablement of SCSI-only based virtual machines Automated configuration of I/O and network resources
- Image management that includes virtual machine image capture, catalog and deployment
- Multi-tenancy support
- Easy integration into higher-level cloud automation and orchestration tools
- Federation of an on-premises cloud with other OpenStack clouds via OpenStack compatible APIs establishing a multi-region cloud
- Provisioning of Red Hat® Enterprise Linux CoreOS as guest environment via template
- It is built to require no specific platform skills from the end user and minimal platform skills from the administrator to accelerate cloud deployments

What is meant by Virtual Machine Lifecycle & Image Management?

After the creation of a deployable image, you can upload the image with IBM Cloud Infrastructure Center. Now you can start to deploy new virtual machines based on the initial image.

Another approach could be that administrators can configure image deployment properties and save them as a deployment template. The deployment template can include the necessary information to quickly and easily create a virtual machine, such as deploy target, co-location rule, network, and compute template. This eases the repetitive deployment of virtual machines with predictive results.

The virtual machine will be active after the deployment, and you can stop/start and delete the virtual machine. You can also capture a virtual machine into a deployable image, which can be used to help backup your environment.

How does IBM Cloud Infrastructure Center integrate with IBM Cloud Automation Manager?

With its built-in OpenStack compatible APIs, Cloud Infrastructure Center is based on the industry standard for vendor-agnostic IaaS management to connect, provision, orchestrate Linux-based virtual machine instances for Z and LinuxONE. IBM Cloud Automation Manager integrates with Cloud Infrastructure Center via Terraform or Red Hat CloudForms®. Terraform can call the Cloud Infrastructure Center APIs via terraform-provider-OpenStack. Red Hat CloudForms can consume Cloud Infrastructure Center via OpenStack compatible RESTful APIs.

How does IBM Cloud Infrastructure Center integrate with VMware vRealize?

With its built-in OpenStack compatible APIs, Cloud Infrastructure Center is based on the industry standard for vendor-agnostic IaaS management. VMware vRealize Automation (vRA) / Orchestration (vRO) can consume Cloud Infrastructure Center via OpenStack compatible RESTful APIs to connect, provision, orchestrate Linux-based virtual machine instances for Z and LinuxONE. Together, the integration between VMware vRA/vRO and Cloud Infrastructure Center increases flexibility, improves efficiency via common VMware skills, and simplifies VM lifecycle management providing a unified hybrid multicloud environment via a single glass pane for Z and LinuxONE.

What workflow-driven policies can be defined?

The infrastructure provisioning can be confined by workflow-driven policies.

Administrators and project managers can set several project-specific policies such as users require approval to perform certain tasks. Following policies are supported: deploys before approval is required, days before virtual machine expiration, days before expired virtual machine deletion, expiration extensions before approval is required, and days before automatic approval of pending expiration extension requests.

Such policies can configure IBM Cloud Infrastructure Center to send email notifications when events occur, for example in the case of a new provision request. Also, they can configure which emails to send by default, including the subject and content for those emails.

Does IBM Cloud Infrastructure Center provide a diagnose tool?

Yes, the IBM Cloud Infrastructure Center provides an environment checker and a diagnose tool.

The environment checker supports the check of the resources, version, and service status for the management node and compute nodes.

The diagnose tool can help you to collect diagnostic data, for example information about the product, operating system, configurations, databases, message queue, service status, error logs, and more.

What are the requirements to run IBM Cloud Infrastructure Center?

What are the software requirements for the IBM Cloud Infrastructure Center?

IBM Cloud Infrastructure Center requires the following software:

- IBM z/VM V7.1, as a managed hypervisor
- Red Hat Enterprise Linux 7.7 or 7.8 as a host environment
- Red Hat Enterprise Linux 7.7, 7.8 or 8.1 and Red Hat Enterprise Linux CoreOS 4.2 and 4.3 to be deployed as guest operating system instances

Note, for the list of the supported Red Hat Enterprise Linux releases for the single hardware platforms, you have to check the individual IBM hardware announcements.

What are the hardware requirements for the IBM Cloud Infrastructure Center?

IBM Cloud Infrastructure Center requires one of the following IBM servers:

- IBM z15™ (all models)
- IBM z14® (all models)
- IBM z13®
- IBM z13s®
- IBM LinuxONE III
- IBM LinuxONE Emperor II
- IBM LinuxONE Rockhopper II
- IBM LinuxONE Emperor
- IBM LinuxONE Rockhopper

Where do I find detailed information about IBM Cloud Infrastructure Center?

The documentation for IBM Cloud Infrastructure Center is available at the IBM Knowledge Center, available at: ibm.com/support/knowledgecenter/SSL2F

Where do I find a demo about IBM Cloud Infrastructure Center?

IBM has a demo available, please ask your IBM or Business Partner representative.

Where do I find more information IBM Cloud Infrastructure Center?

You can ask your IBM or Business Partner representative, or look at the 'IBM Cloud Infrastructure Center' web page at: ibm.com/marketplace/cloud-infrastructure-center

Resources

Cloud Infrastructure Center	ibm.com/marketplace/cloud-infrastructure-center
Cloud Infrastructure Center Data sheet	ibm.com/downloads/cas/L9328P0M
Cloud Infrastructure Center Documentation on IBM Knowledge Center	ibm.com/support/knowledgecenter/SLL2F
Support Handbook	ibm.com/support/guide
Shopz - web service to order Z software, manage software licenses, and more	ibm.com/software/shopzseries/ShopzSeries_public.wss
Linux on IBM Z	ibm.com/it-infrastructure/z/os/linux
IBM z/VM	ibm.com/it-infrastructure/z/zvm and www.vm.ibm.com/newfunction
IBM Cloud Paks®	ibm.com/cloud/paks
Red Hat OpenShift Container Platform	blog.openshift.com/ibm-and-red-hat-bring-openshift-to-ibm-z-and-linuxone
IBM Software Availability tool	publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/productsOnOs.html
IBM Z	ibm.com/it-infrastructure/z
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