Cloud Native Edition

Cloud Native Edition includes all of the capabilities of the Community Edition but allows for high available clusters to exist to support a production on-premises cloud infrastructure. Also, the services catalog is extended in such a way that key offerings, such as IBM Vulnerability Advisor, are also available starting with this edition. Cloud Native is suited for enterprise developers who want to modernize their applications manageability and operations.

Enterprise Edition

IBM Cloud Private Enterprise Edition further extends the previous editions and is suited for enterprises to modernize and optimize applications while scaling their data centers to securely work with cloud services. The services catalog is expanded to support more enterprise products, such as IBM WebSphere Application Server Network Deployment, IBM MQ Advanced, and IBM API Connect®.

IBM Cloud Private deployment considerations

IBM LinuxONE features unmatched scalability and security capabilities when compared to traditional x86 workloads. LinuxONE systems can meet all of the hardware and software requirements to deploy an on-premises cloud infrastructure within a single hardware footprint.

The IBM Cloud Private is built in such a way that it is flexible to meet various demands. In that sense, several architecture-specific decisions must be considered before proceeding with the product installation process. As described in 7.6.3, “Deploying IBM Cloud Private on LinuxONE” on page 230, it is necessary to understand the open source components that are used by IBM Cloud Private and how they interact with each other. This understanding helps to properly plan, size, and ensure that the cloud can meet the growth demands that are required to scale your infrastructure.

Along with the proper sizing and planning details that are specific to your IBM Cloud Private cluster, the following other aspects must also be considered:

- High Availability

  IBM Cloud Private supports High Availability configurations to ensure that even the failure of critical cloud components do not interrupt IT and business operations. The IBM LinuxONE platform further uses this capability with z/VM Single System Image (SSI) and Live Guest Relocation (LGR) capabilities. LGR allows for Linux guests to be quickly relocated to other z/VM domains without any downtime, which ensures that the cloud can continue to run even during maintenance that otherwise require downtime.

- Networking

  A proper network topology is required for most cloud workloads. If possible, a highly available external load balancer, such as an F5, can be used to spread the traffic among separate master or proxy node instances in the cluster.

  Such approach allows for your IBM Cloud Private cluster to coexist across different subnets, which allows for continuous operation even when its primary network faces an outage. Other considerations that are related to networking involve the capabilities of a cluster to communicate with other IBM Cloud Private clusters, and other infrastructure components that are external to the IBM Cloud Private infrastructure.

  Under IBM LinuxONE, z/VM can provide VLAN Aware VSWITCH capabilities to allow the cloud infrastructure to scale under different network segments within a single hardware footprint.

[3] A master node provides management services and controls the worker nodes in a cluster. To support an HA solution, multiple master nodes must be deployed within a cluster.