

Migrating and converting VMware® workloads to VSIs in IBM Cloud VPC

For more than a decade, VMware® has been THE leader in the workload virtualization marketplace. However, with native cloud computing becoming a dominant infrastructure component with its elasticity, flexibility and associated economics, many organizations are seeking a way to embrace and leverage cloud-native architectures.

Due to IBM Cloud's leadership in VMware, including VCF support, there is an attractive roadmap optimizing VMware VCF in IBM Cloud, followed by conversion to IBM Cloud virtualization utilizing IBM Virtual Server Instances (VSIs), and ultimately moving to containerized cloud-native applications.

This path necessitates the need to perform, at scale, conversion of VMware workloads to IBM VPC VSIs. PrimaryIO has developed ConvertIO, the most recent addition to its IBM Cloud offerings.

For prospective customers that are focused on immediate term cost optimization of their VMware licensing, PrimaryIO recommends some tactical approaches to optimization.

Short-term measures:

1. Organizations can circumvent the 3+-year commitment to VMware. IBM, as a Pinnacle VMware partner, offers flexible license options which can be deployed with shorter time commitments - as low as one-month commitment. This can buy time to figure out a longer term strategy
2. Migration from on-prem to VMware ESXi host bare-metal configurations in IBM Cloud, thereby benefiting from cloud economics and management while retaining on-prem performance.
3. With VMware and IBM's VCF license portability, an option is to deploy individual ESXi hosts with a VCF license rather than accepting a minimum 4-node vSAN deployment.
4. Sapphire Rapids (4th Gen Intel® Xeon® Scalable Processor) configurations are anticipated in Q3 2024 in IBM Cloud VPC. This will enable optimized core-to-CPU ratios that bring flexibility in right-sizing VMware core licensing.
5. For ephemeral use-cases, such as dev/test, IBM Cloud VPC can be billed on an hourly basis, allowing Bare Metal hosts to bill during work-hours only. This approach also applies to ProtectIO on-demand Disaster Recovery. Adopting on-demand DRaaS can dramatically lower the cost of typically duplicative DR infrastructure. The on-demand nature of ProtectIO DRaaS also applies to the VMware licenses that can dynamically migrate from primary to DR site in the event of a disaster. As such, there is both hardware and software infrastructure cost avoidance.
6. Within the VMware environment, ProtectIO Disaster Recovery as a Service (DRaaS) is a highly efficient solution that can lower the overall cost of a VMware configuration with DR protection. Since DR is mission-critical, it makes sense to consider the overall cost of the portfolio approach to VMware plus DR protection rather than



VMware license costs in the vacuum or absence of DR.

Conversion Approach

1. **ConvertIO**, the tool for the conversion of VMware VMs to IBM-native Virtual Server Instances (VSIs) is the first step in the journey of transforming workloads to Cloud-Native. **ConvertIO** is a solution that efficiently and effectively performs bulk conversion and migration to IBM Cloud VSIs in VPC.
2. PrimaryIO is expanding a Cloud Center of Excellence (CCoE) to deliver services and technology that solves for the network changes (e.g. NSX-T → Security Groups) and refactoring for Cloud-Native services and architectures - including Redhat Openshift on IBM Cloud (ROKS).
3. For those who, for now or ongoing, need to remain in VMware and currently have on-premises workloads, they can be migrated to IBM Cloud VPC - the best public cloud for VMware workloads. A PrimaryIO Subject Matter Expert (SME) can be engaged to outline the specific benefits of IBM Cloud for VMware workloads.

ConvertIO

ConvertIO utilizes a conversion engine at both the source as well as destination sites of the conversion operation.

The source-oriented engine enables the selection of VMware VMs to be converted. Utilizing block transfer technology, also implemented in other PrimaryIO platforms, data is transferred to the IBM Cloud VPC site where a receiving engine performs the disk format conversion.

PrimaryIO provides the **ConvertIO** technology and wraps it in onboarding services to reduce time-to-value for the customer. In addition, through the IBM Cloud Catalog, additional services can be acquired in order to augment existing resources.

Conversion takes place in a parallel operation, reducing the overall conversion timeline. As such, **ConvertIO** can be beneficial for both a small number of VMs as well as thousands of VMs.

ConvertIO is priced on a per-VM basis.

To engage PrimaryIO with regard to ConvertIO or the ProtectIO flagship software product providing Disaster Recovery as a Service, simply email the company at: engage@primaryio.com.

PrimaryIO provides a SaaS platform for Disaster Recovery as a Service. The platform delivers continuous data replication for VMware VMs into an on-demand IBM Cloud VPC DR site. The product dashboard includes Failover, Failback and Fire Drill capabilities, the latter is a non-disruptive test to assure that one can successfully recover in the event of a disaster.