

GENERAL

What is Zerto Virtual Replication?

Zerto Virtual Replication is the first hypervisor-based replication solution which delivers aggressive service levels. The continuous block-level replication provides recovery point objectives of seconds. The automated orchestration ensures recovery point objectives of minutes. Failover, failback and reverse protection operations are executed in just a few clicks. Non-disruptive disaster recovery testing can be executed during business hours without impacting the performance of production workloads. It is an enterprise-class BC/DR product built for production workloads for private, public, and hybrid clouds.

What is the unit of replication?

The unit of replication is an affinity grouping of VMs that make up an application called Virtual Protection Groups (VPGs). This group of VMs can include 1 or many virtual machines. It is at this group level that protection policies are configured including boot order, re-IPing, offsite backup and continuous data protection.

Does ZVR offer point in time (PIT) recovery?

Yes, ZVR has PIT recovery capability. The checkpoints are in a journal that allows for recovery capability for up to the previous five days. The checkpoint increments are every few seconds. This means that you have very granular points of recovery to reduce the amount of lost data.

What is the offsite backup feature?

The Offsite Backup increases the usefulness of the replicated data at the target site. The offsite backup packages are compressed and retained for up to one year. The offsite backups can be stored locally or to a third site, including the public cloud.

What are the use cases for Zerto Virtual replication (ZVR) and Hyper-V?

- Replication to Hyper-V from Hyper-V
- Replication between Hyper-V and vSphere
- Replication from Hyper-V to Azure (planned)
- Replication from Any Cloud to Hyper-V (planned)

What are the system requirements to use ZVR and Hyper-V?

You must be running ZVR 4.0, Hyper-V on Windows Server 2012 R2, and System Center Virtual Machine Manager (SCVMM) must manage your Hyper-V environment. The Zerto Virtual Manager (ZVM) runs as a service on a Windows server and is registered to the SCVMM.

Why did Zerto add Hyper-V as a supported platform? Hyper-V is a strategic component of the Zerto Cloud Continuity vision of having both hardware and hypervisor agnostic workload portability.

What is the target environment size for Hyper-V?

ZVR provides complete data protection, orchestration and mobility for production workloads. Zerto delivers Recovery Point Objectives (RPOs) measured in the seconds and Recovery Point Times (RTO) measured in minutes. ZVR is production proven and protects tens of thousands of virtual machines on the VMware platform with customers ranging from the small company to large enterprise environments as well as cloud service providers located all over the world.

I have a backup product for Hyper-V already. Why do I need ZVR?

ZVR was designed to be a Disaster Recovery (DR) solution and to meet very aggressive RPOs and RTOs. ZVR protects your VMs and enables you to group them together by application affinity groupings called Virtual Protection Groups (VPGs). This means that if you have 4 VMs that make an application function, they will be protected and recovered together - even if they are on different hosts and storage to the same point in time. VPGs can be restored from any point in time up to 5 days prior, and the VMs will boot in the correct order, get the correct IP addresses, and even run customized scripts as part of the orchestrated failover. This same level of granularity and orchestration is available to include the entire datacenter, allowing for full site protection, orchestration and recovery.

What are the expected RPOs and RTOs with ZVR on Hyper-V?

This depends on several infrastructure factors, such as bandwidth, storage performance, and protected machine I/O, however most Zerto customers see 5-10 second RPOs, with RTOs measured in how many seconds or minutes it takes to boot the VMs at the target site.

What gaps in protection does Zerto Virtual Replication solve for my business?

Hyper-V has matured into a stable production hypervisor. However, low RPO/RTO data protection for disaster recovery and workload mobility has not been available for production workloads on Hyper-V prior to the release of ZVR 4.0. This has prevented many organizations from choosing Hyper-V for the most critical workloads. With the addition of ZVR support for Hyper-V, organizations now have the missing workload mobility component needed for widespread mission-critical server adoption on the Hyper-V platform.

Does Zerto have a special Hyper-V license?

No, all Zerto licenses are per protected VM, regardless of the platform.

Could ZVR be used to fully migrate from VMware to Hyper-V?

Yes, ZVR supports cross-hypervisor protection and migrations. ZVR has the capability to migrate to or from a VMware infrastructure.

I run a VMware environment but want to recover in a Hyper-V environment. How are datastores, vSwitches and networking mapped from the VMware platform to the Hyper-V platform?

During the configuration of the Virtual Protection Group (VPG), the recovery storage and network settings are selected. As part of the failover or migration event, the necessary configuration changes are made to the VMs to run in Hyper-V. The process is reversed when going from Hyper-V to VMware.

CONNECTIVITY

Is the replication traffic compressed?

ZVR has built-in compression that normally achieves an average of 50% bandwidth savings. ZVR also can work with WAN compression solutions from Zerto partner vendors like Riverbed or Silver Peak.

Is the replication traffic encrypted?

ZVR overlays and utilizes the underlying infrastructure, including security configurations such as encryption. Since the site connection is either a dedicated internal network or an encrypted site-to-site VPN, the replication traffic is protected with the security already in place.

Can the WAN bandwidth between the sites be throttled?

Yes, ZVR has built-in capability that allows bandwidth throttling on a site and time basis allowing for different bandwidth restrictions in and out of business hours.

ADMINISTRATION AND INFRASTRUCTURE

What are the components I need for ZVR to work with Hyper-V?

There are two main components that are installed:

- The management component is called the Zerto Virtual Manager (ZVM). This is deployed on a Windows Server and runs as a service. This is the only piece of software that you will touch and it manages all ZVR operations.
- The Virtual Replication Appliances (VRAs) that are installed on each Hyper-V host.

What does the installation entail? How long will it take?

- ZVR installs in less than one hour. It installs seamlessly into the existing infrastructure and does not require any changes to the application configuration.
- During the wizard-based installation, you point the ZVM to the SCVMM server.
- Once the ZVM installs, it will lead you through the deployment of the ZVRAs. Then you pair at least two sites and create Virtual Protection Groups (VPGs). The VPGs are the affinity groupings of VMs that make an application function. The VMs can be located on any Hyper-V server in the cluster and on any storage location. Once the VPGs are created, then ZVR will initiate replication. Alternatively, you can choose the same site for single site replication between clusters.

I use ZVR with VMware currently, but have a Hyper-V environment as well. Is the ZVR management interface different between VMware and Hyper-V?

Zerto is designed to maintain the simple interface. It looks exactly the same regardless if it is a VMware or Hyper-V hypervisor. Administrators will not need to know the hypervisor platform to perform normal operations.

Will I be able to install ZVR myself or will I need professional services?

ZVR is a wizard-based installation on a Windows server. It normally takes less than an hour to have VMs replicating between sites. Zerto offers free trials at <https://www.zerto.com/trial-request/>

Can I perform data center migrations using ZVR and Hyper-V?

Yes, in fact Zerto offers a migration license specifically for this use case.

What format are the VMs running in Hyper-V?

The VMs run in their native Generation 1 VHD or Generation 2 VHDX format.

OPERATIONS

What kind of performance impact on Hyper-V does running in ZVR have?

The VRA is a purpose-built Linux appliance that doesn't require a great deal of resources, even in heavy production usage. It is a VM that requires 1 vCPU, 3GB RAM, a single IP address, and 12GB disk space.

Can I have VSS-compliant recoveries?

Yes. ZVR allows for application-consistent checkpoints that leverage VSS.

Is the failover testing non-disruptive to my production environment and replication?

Yes. ZVR has completely non-disruptive testing to the production environment testing. Non-disruptive testing is a core step to achieve lower RTOs during failovers. It allows you to perfect the orchestration and workflow for rapid recoveries. You are able to get the right boot order, delay times between servers booting, IP address changes and the addition of any scripts that you may need to run.

Can I do offsite cloning in Hyper-V?

Yes. Offsite cloning allows a complete VPG to be cloned at the target site. This is often used for extended testing scenarios.

Can I do pre-seeding in Hyper-V?

Yes. You can manually transport the VHDXs to the target site and then map the source machine virtual disks to them. ZVR will only need to do a delta sync. This can save significant time and bandwidth in initial protection of an application.

Is there a limit to the number of machines I can protect in Hyper-V?

ZVR is unlimited in the number of VMs it can technically protect; however, on large-scale deployments Zerto recommends a soft limit of about 5,000 VMs per SCVMM due to management traffic overhead.

How do I access my VMs at the recovery site for a Move, Failover or Failover Test?

ZVR uses a browser-based UI to manage the environment. It is written in HTML5, so it will run on any platform. The ZVM connects to the SCVMM for all operations.

Can I do bi-directional replication between VMware and Hyper-V?

ZVR supports cross hypervisor protection. So, you can have a mix of VMware and Hyper-V VMs protected bi-directionally. Each VM runs in the native format to the appropriate hypervisor and the VM is transformed during the test, migration or failover operation to the target native format.

Can the IP addresses be retained or changed during the failover operations on Hyper-V?

Yes, ZVR supports retaining IPs, or will automatically change them to a different address via DHCP or static during any Zerto operations.

I'm running VMware Tools in my VMs. When I failover to Hyper-V, do they get removed?

Yes, they are replaced with Hyper-V Integration Services

LARGER ENVIRONMENTS, INCLUDING CLOUD PROVIDERS

As a CSP, how does Zerto's addition of Hyper-V benefit me?

For the managed service customers, the CSP can maintain a fully managed service capability while offering DR as a service to a whole new customer base that runs the Hyper-V platform.

Can I offer a multi-tenant solution with Hyper-V?

Yes. ZVR is natively multi-tenant by design. This enables cost effective solutions by being able to host multiple tenants in the same infrastructure, yet still provide an isolated, secure hosting environment.

I have a VMware infrastructure providing my services to customers. Do I need Hyper-V in my cloud to host customers with Hyper-V?

No, ZVR supports cross-hypervisors between Hyper-V and VMware. ZVR version 4.0 only supports Hyper-V to VMware when going to a CSP.

Can I use Zerto Cloud Manager (ZCM) with Hyper-V and VMware?

Yes, the ZCM provides the management, reporting and single interface overview for your entire ZVR deployment.

CROSS HYPERVISOR SUPPORT BETWEEN VMWARE TO HYPER-V

Will any CPU and RAM reservations persist?

They will not persist, but matching reservations may be scripted as part of the operation workflows.

How long does it take to convert the VMs?

There is no real conversion time since ZVR doesn't need to convert the data files. ZVR replicates the data continuously and modifies the VM configuration files only.

Are RDMs supported?

RDMs are not supported in a Hyper-V to VMware replication environment as pass-through disks are not supported between the two environments.

What happens to VMware snapshots after recovering a VM in Hyper-V?

ZVR will not replicate snapshots and they will not be available on recovered VMs, however VMs will be recovered with all data up to the selected checkpoint.

What is the VMware hardware version supported?

VMware hardware version 7 and above is supported.



Contact us today to learn more or request a free trial at www.zerto.com or info@zerto.com.

27-43 Wormwood Street, Suite 530
Boston, MA 02210
Phone: 617.993.6331
Fax: 617.274.8795