













Hypervisor-Based Replication Technology Comparison

A Comparison of Zerto 5.5 vs. Current & Legacy BC/DR Technologies

Zerto's innovative, hypervisor-based replication technology for VMware vSphere and Microsoft Hyper-V environments delivers a true enterprise-class, yet fully virtual-aware, complete BC/DR solution for all virtualized applications that require protection.

Zerto Virtual Replication (ZVR) is the only future-proof, hypervisor-based, all-in-one replication and recovery solution that makes disaster recovery simple and scalable. With version 5.5, enable true hybrid cloud resilience with replication both to and from Microsoft Azure.

One-to-Many enables VMs to be simultaneously replicated to up to 3 locations with individually definable SLAs. Zerto Analytics empowers intelligence-led decisions to optimize infrastructure performance. Use ZVR 5.5 on-premises or replicate to over 350 clouds including Azure, IBM, and AWS.

	Description	
	IT Resilience	Remove lock-in & evolve IT with storage & hypervisor-agnostic replication
	Simplicity	Single disaster recovery solution for VMware vSphere & Microsoft Hyper-V
	Hypervisor-based	Scale-out enterprise-class architecture, protect, recover & migrate thousands of VMs
	Always-on	Data loss in seconds & continuous replication of VM block-level changes with no VM snapshots
	Visibility	Monitor, analyze & report on real-time & historical data across multiple sites & clouds
	One-To-Many	Simultaneously replicate VMs both locally and to multiple remote sites
	Automation	Recover individual applications or entire sites in minutes with 1-click failback
	Granularity	Rewind and recover VMs & applications from any point in time
	File-Level	Restore files & folders from seconds before corruption, ransomware infection or deletion
	Prove Compliance	No-impact failover testing and reporting to prove recovery in working hours, during minutes
	REST API	Fully automate deployment & VM protection with easy to use ready-made examples
	Future Proof	Migrate workloads and adopt new technologies and clouds without risk

COMPARED TECHNOLOGIES

The solutions compared in this document include:

Zerto Virtual Replication 5.5

Enterprise-class replication, recovery orchestration and automation BC/DR technology

RecoverPoint for VMs v5.0 (RP4VM)

Hypervisor-based replication, CDP and recovery solution for VMware BC/DR

Array Based Replication (ABR)

LUN replication between matching storage arrays with manual recovery and testing operations

Site Recovery Manager v6.5 (SRM)+ ABR

SRM v6.5 for VM orchestration and automation utilizing ABR for replication

SRM + vSphere Replication (VR)

SRM v6.5 utilizing vSphere Replication v6.5 for VM-level replication between vCenters

Veeam Replication v9.5

Replication using Veeam Backup & Replication v9 utilizing snapshots for VMware & Hyper-V

Double-Take

Replication and recovery solution using agents inside each VM to continuously replicate writes

COMPARISON METHODOLOGY

To provide a meaningful comparison, the features required as part of a complete BC/DR solution have been separated into the following categories:

- ✓ Architecture
- ✓ Replication
- ✓ Recovery & Automation
- ✓ Cloud Readiness

COMPARISON MATRIX

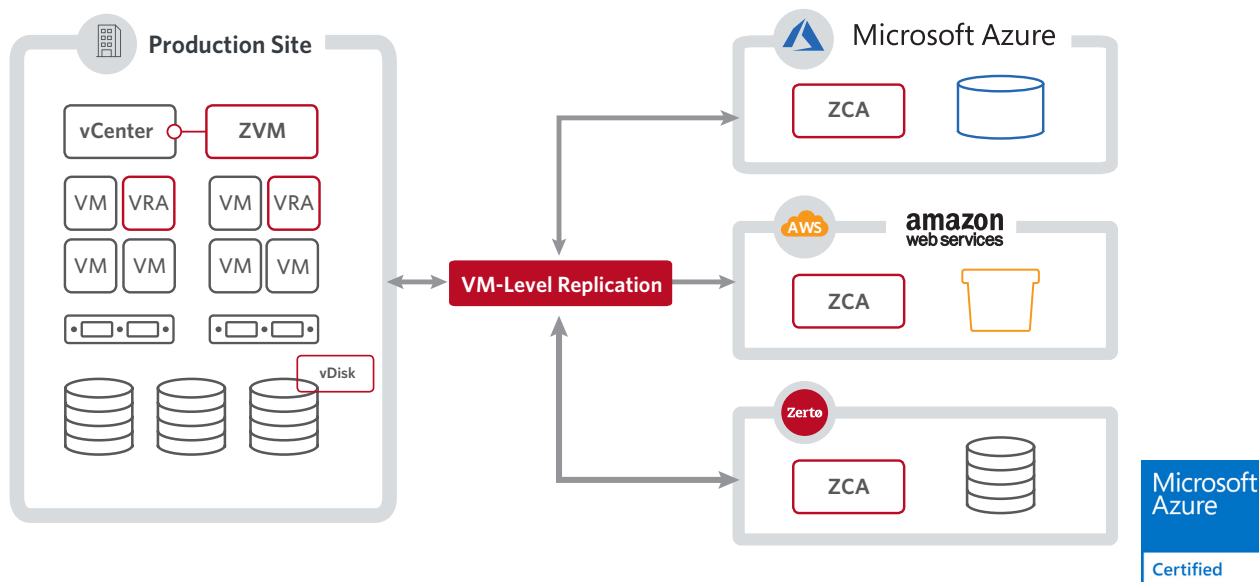
Architecture	Zerto	RP4VM v5.0	ABR	SRM v6.5 & ABR	SRM & VR	Veeam v9.5	Double-Take
BC/DR for vSphere & Hyper-V	●		●			●	●
Hypervisor-based replication	●	●			●		
Installable in minutes at any scale	●						
Scalable to 5000 VMs	●		●	●			
Software-only	●	●			●	●	●
Upgrade in-place in minutes	●						
No hypervisor version lock-in	●		●			●	●
Management redundancy	●	●	●	●	●		

Replication	Zerto	RP4VM v5.0	ABR	SRM v6.5 & ABR	SRM & VR	Veeam v9.5	Double-Take
Always-on, block-level & no scheduling	●	●			Complex		●
Storage agnostic VM-level replication	●	●			●	●	●
RPO = seconds with no snapshots	●	●					●
No protected VM performance impact	●						
Rewind to increments in seconds	●	●					
Multi-VM consistency groupings	●	●	●	●			
One-To-Many simultaneous replication	●	●					
Cross-hypervisor replication	●						
vMotion & svMotion support	●	●			●	●	●
Built-in WAN compression	●	●			●	●	●
Bandwidth throttling and QOS	●						
Dynamic & compressed journaling	●						
SQL & Oracle Temp DB optimization	●						
Automatically protect new VMs	●			●	●		

Recovery & Automation	Zerto	RP4VM v5.0	ABR	SRM v6.5 & ABR	SRM & VR	Veeam v9.5	Double-Take
Recover sites, apps, VMs & files	●						
Recover to thousands of points in time	●	●					
RTO = minutes with boot ordering	●	●		●	●	●	
Cross-hypervisor VM conversion	●						
Automated failover & boot ordering	●	●		●	●		
No snapshots on recovery VM	●	●	●	●			
Failback with reverse protection	●	●	Complex	●	●	●	●
Non-disruptive failover testing	●	●		●	●		
Automatic re-IP, re-MAC of VMs	●	●		●	●	●	●
Recovery reports for compliance	●			●	●	●	
REST API with automation examples	●						

Cloud Readiness	Zerto	RP4VM v5.0	ABR	SRM v6.5 & ABR	SRM & VR	Veeam v9.5	Double-Take
DRaaS to over 350 Zerto Cloud Providers	●						
Replicate to and from Azure with RPOs in seconds	●						
Replicate to AWS with RPOs in seconds	●						
Multi-tenancy & traffic isolation	●						
vCloud Director integration	●					●	
Self-service portals & role based access	●						
Mobile app and Analytics SaaS monitoring	●						
Multi-site management interface	●					●	

COMPARISON MATRIX



Zerto Component	Description
Zerto Virtual Manager (ZVM)	Central management interface for replication & recovery, deployed in a Windows VM, 1 per vCenter (4.x to 6.5) or SCVMM (2012 R2+ to 2016) server for redundancy
Zerto Cloud Manager (ZCM)	ZVM manager of managers for enterprises and cloud providers
Virtual Replication Appliance (VRA)	Scale-out architecture of 1 VRA per hypervisor host utilizing 1 vCPU, 4GB RAM, 12GB disk & 1 IP for continuous VM block-level replication with no snapshots & no impact
Multi-Site Connectivity	Replicate using pre-configured >5Mbps IP links, VPNs, Direct Connect, VPN to VPC for AWS, VPN to Virtual Network or Express Route for Azure
Azure Zerto Cloud Appliance (ZCA)	Combination of a ZVM & VRA running in a Windows Azure D3 v2 VM, storing replica data in a storage account, with preconfigured recovery VMs only created when needed
AWS Zerto Cloud Appliance (ZCA)	Combination of a ZVM & VRA running in a Windows AWS m4.xlarge instance, storing replica data in S3 storage, with preconfigured recovery instances created on demand
One-to-Many Replication	Simultaneously replicate VMs within a local data center for recovery direct to production, cross-hypervisor, to a DR site, Azure, AWS or over 350 Zerto Cloud Service Providers
Virtual Protection Group (VPG)	Multi-VM consistency grouping mechanism for consistent recovery of applications, supports VMs across hosts, clusters, storage, HA, vMotion & Storage vMotion
Virtual Disks (vDisk)	Replica data stored as vDisks in target vSphere or Hyper-V environment with compressed journal vDisk for point-in-time recovery, average 7-10% additional space

About Zerto

Businesses need to be available to their customers, 24/7/365. Zerto provides Resilience for Evolving IT™ by ensuring enterprises and their customers always have access to business-critical applications without any IT interruption, downtime or delay. Zerto's award-winning Cloud Continuity Platform is the simplest, most reliable BC/DR software solution built to protect applications on any virtualized IT environment — be it public, private or hybrid cloud. Zerto's proactive approach to recovery gives companies the confidence they need to withstand any disaster, easily incorporate new technology, and quickly adapt to accommodate evolving IT and business priorities. www.zerto.com