

Zerto

a Hewlett Packard
Enterprise company

A Comparison: Zerto Versus Legacy Disaster Recovery

Version 2.0



Zerto Versus Legacy Disaster Recovery

Having a solid disaster recovery solutions for datacenters has been top of mind ever since the inception of IT. But IT has changed and evolved with the introduction of server virtualization and the cloud. Are the technologies we have been using over the past 2 decades still suitable for our ever changing and growing workloads, or do we need to look at a new more integrated virtual-aware and flexible solution.

Zerto, a Hewlett Packard Enterprise company, delivers a single platform that converges disaster recovery, backup, and workload mobility whether on-premises or to, from and between hybrid and multi-cloud environments. Built on a foundation of continuous data protection (CDP) with built-in orchestration and automation capabilities, the platform provides you with simplicity, enterprise scale, and agile data protection to save time, resources and costs. Analytics, with intelligent dashboards and live reports, gives you complete visibility across multi-site and multi-cloud environments and instills confidence that business service levels and compliance requirements are met.

Comparing Zerto to Legacy DR

There are many different approaches to providing disaster recovery in virtualized IT environments. This comparison will focus on the following technologies and products:

Replication:

- Array-based replication such as Dell, EMC, HPE, NetApp and other storage vendors
- Software-based replication such as VMware vSphere Replication

Orchestration:

- Disaster Recovery orchestration software such as VMware Site Recovery Manager (SRM)

For all technologies and products, we'll also compare the following capabilities and characteristics:

- Granularity in recovery
- Application Protection and Recovery
- Scalability
- Simplicity
- Visibility

KEY DIFFERENTIATORS

One Platform

A single, simple, scalable platform replacing multiple complex tools.

Heterogeneous Replication

Replicate and recover to, from and between all supported platforms.

Granularity of Seconds

Recover to any point in time, only seconds apart, with journal-based recovery

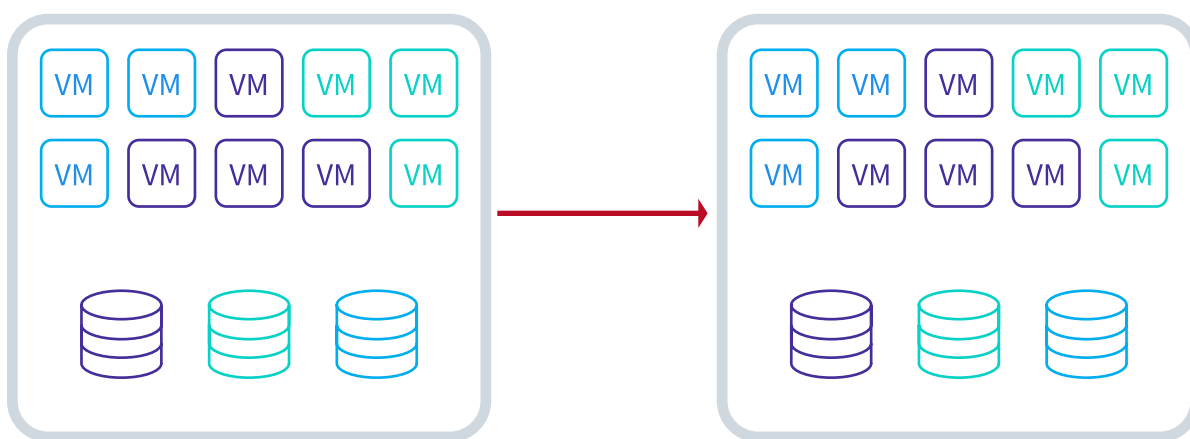
Full Application Stack Consistency

Protect and recover entire application stacks with guaranteed consistency through Virtual Protection Groups.

Replication Technology

Moving data from the production environment to its target(s) is key in any disaster recovery solution. Replication lives at the core of all solutions and needs to be both robust and flexible.

LEGACY DR	ZERTO
<p>Array-based replication requires the same (or similar) hardware configuration on both protected and target sites. It utilizes one of two methods:</p> <ol style="list-style-type: none"> 1. Asynchronous storage snapshot-based replication (RPO = typically hours); as it utilizes snapshots on the protected system it requires additional sizing (both for capacity and possibly performance). 2. Synchronous replication (RPO = 0); this requires writes to be acknowledged on both sites and limits both the performance (due to latency) and distance between the sites. <p>Most vendors only support replication on a per-LUN basis which limits flexibility.</p> <p>Legacy software-based replication offers scheduled asynchronous replication. At the scheduled times, the changed data is being read from the underlying virtual disk. In certain cases, only replication to the same platform is supported (e.g. only VMware to VMware).</p>	<p>Utilizes technology agnostic near-synchronous replication with RPO of seconds to, from and between all supported platforms. This delivers freedom of choice enabling customers to use Azure, AWS, VMware vSphere, Microsoft HyperV, IBM Cloud or one of our 400+ Cloud Service Provider offerings of DR as a Service (DRaaS).</p> <p>Replication is hypervisor-based and at the VM-level without impacting performance on the protected environment. It requires no capacity on the protected site as it does not use snapshot technology.</p> <p>One-to-many replication supports defining up to 3 targets. Targets can be any supported platform, either local or remote.</p>

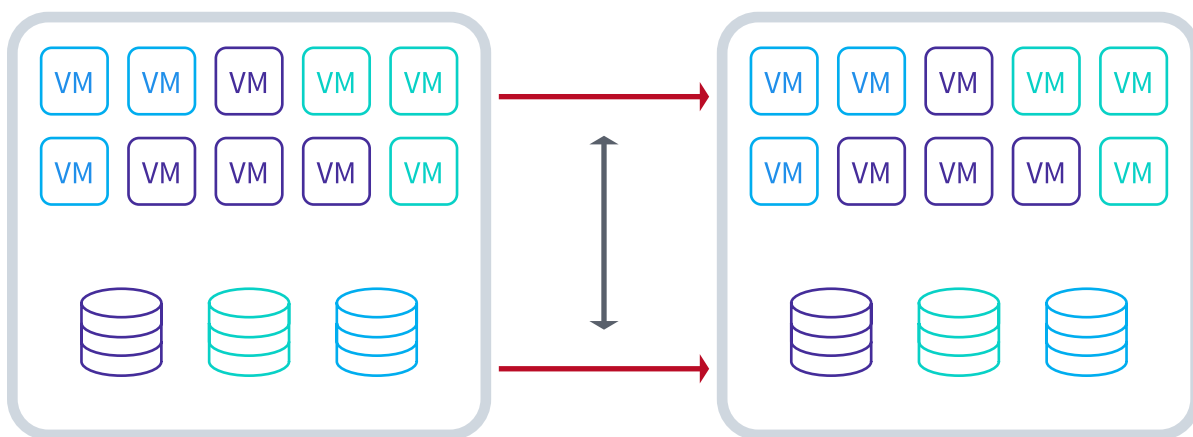


Array-based replication requires strict relationships between the virtual and storage environment.

Orchestration and Automation

To guarantee quick continuation of business after a disaster, the failover process should be orchestrated and automated to enable push-button operations. Key to any organization's DR strategy is the ability to prove a successful failover.

LEGACY DR	ZERTO
<p>Orchestration and automation are supported by using a separate component and requires integration with the storage system and/or software-based replication engine.</p> <p>When using array-based replication, orchestration is directly related to where VMs are located on the storage system which limits the granularity of recovery.</p> <p>Orchestration includes network settings, boot order, re-IP and pre/post operation scripts. VMware Site Recovery Manager (SRM) also includes recovery plans across multiple groups.</p> <p>As array-based replication only supports same-vendor configurations, workflows are limited to operating between only these systems.</p> <p>Point-in-time recovery is not part of any workflows and requires manual intervention as well as the use of different management interfaces.</p>	<p>Integrated orchestration and automation allows you to define workflows per protection group. Settings to configure include network settings, boot order, re-IP settings and pre/post operations scripts. This also allows for per-application or even per-VM granularity.</p> <p>Zerto supports workflows for failover, failover test and workload mobility.</p> <p>All workflows can be configured between the supported platforms.</p> <p>Point-in-time recovery is supported in all workflows.</p>



Multi-point solutions increase complexity.

Granularity in Recovery

Disaster recovery solutions should not only protect organizations against natural disasters or full site failures but should also take logical failures, such as corruption or ransomware, into account.

LEGACY DR	ZERTO
<p>Available replication technologies rely on storage or VM snapshot technology and therefore granularity is typically measured in hours. Point-in-time recovery requires manual intervention and greatly impacts Recovery Time Objectives (RTOs).</p> <p>When using array-based replication, only entire LUNs can be recovered. This means there is no way for organizations to perform partial or per-application failovers.</p>	<p>Continuous block-level replication utilizes journaling technology which keeps track of every change made to a VM. Checkpoints are created every few seconds and offer point-in-time recovery, enabling granularity of seconds.</p> <p>With orchestration and automation integrated into the platform, organizations can recover VMs, applications and full sites to any point-in-time within minutes. Additionally, Zerto includes journal file-level restore capabilities to also recover individual files or folders.</p>

Application Protection and Recovery

Recovery of applications in a consistent manner is key to minimizing impacts to business productivity.

LEGACY DR	ZERTO
<p>Array-based replication only supports LUN consistency or LUN consistency groups if the underlying storage systems support it. Legacy software-based replication does not support any consistency grouping.</p>	<p>Supports consistent protection and recovery of complete application stacks and their VM dependencies, even across multiple storage systems.</p>

Scalability

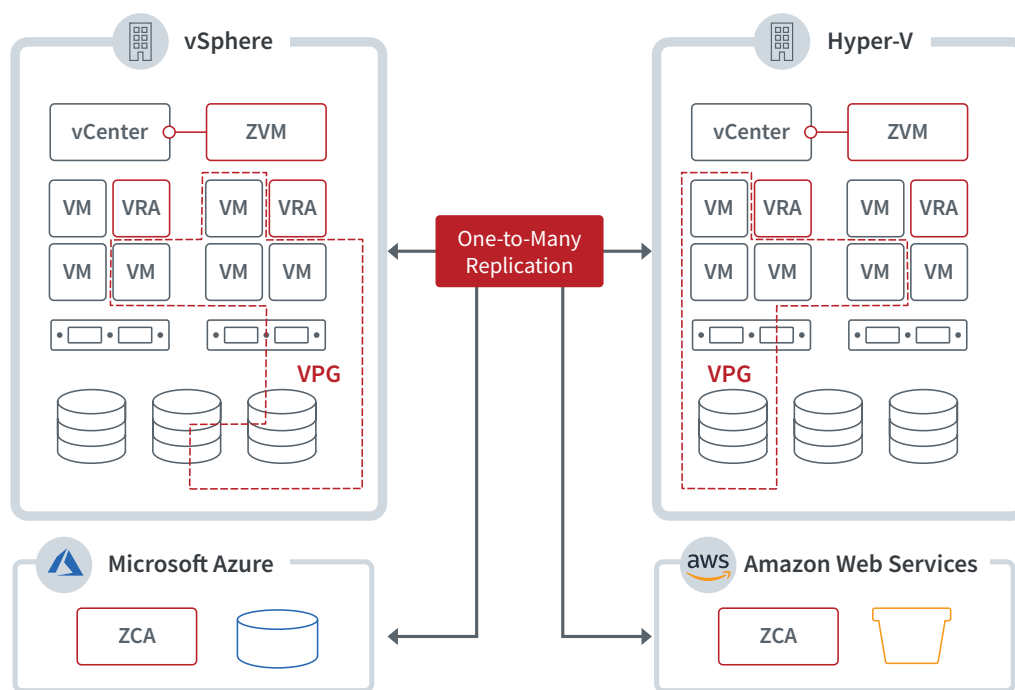
Organizations need to ensure optimal protection at any time, maintaining the SLAs required by the business, while at the same time having flexibility to reliably scale up or down to meet business needs.

LEGACY DR	ZERTO
<p>Scale is determined by the storage array being used and requires complex sizing prior to recovery. Snapshot overhead needs to be considered from a capacity and performance impact perspective. When using synchronous replication, latency of the connection between the different sites determines the latency for production workloads as well. Users can scale up to 1000's of VMs.</p> <p>Software-based replication reads the changes directly from the production storage at a scheduled interval (minimum 5 mins). This impacts production performance and limits the scale. When low RPO is required, scale is limited to approximately 50-100 VMs.</p>	<p>Zerto uses a scale-out architecture of virtual replication appliances to guarantee protection at any scale. Replication is continuous and has no performance impact to the production environment, supporting thousands of VMs per site.</p> <p>There is no dependency on latency as near-sync replication doesn't require acknowledgment on the target site.</p>

Simplicity

With businesses relying on limited IT resources to deliver core services, recovery from any disruption needs to be fast and simple. Ease of operation, sizing, scaling and maintenance need to be simple.

LEGACY DR	ZERTO
Requires multiple components from multiple vendors. Because of this, upgrades are complex and require careful planning. For example, a specific storage system firmware could be a pre-requisite before upgrading.	Zerto is a single, scalable and 100% software-based platform which includes block-level replication as well as orchestration and automation.
Requires multiple teams to be managed successfully (storage, networking, VMware).	With a consistent user experience and interface, the platform installs and upgrades in minutes without any disruption to the production environment.



Multi-point solutions increase complexity.

Visibility

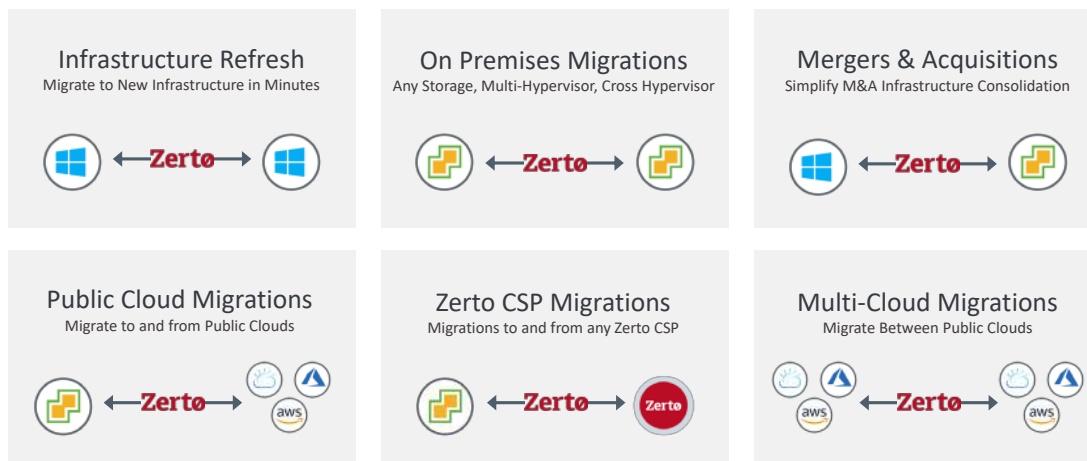
Proving the status of your environment's protection and being able to monitor SLAs is key for any disaster recovery or business continuity solution. Having the ability to report on historical data and recovery helps organizations to comply with regulations and during audits.

LEGACY DR	ZERTO
Analytics are often supported, but require a separate component or module. With multiple components in use, there is often a need to have multiple tools or integrations to provide full visibility, which adds complexity and cost.	By integrating the replication engine and the orchestration into a single platform, Zerto offers seamless visibility of real-time RPO, RTO, throughput and bandwidth statistics.
	Integrated analytics offer real-time and historical analysis, allowing monitoring of health and protection status of applications. Resource planning features lets customers plan and forecast their compute, networking and storage needs.

Additional Zerto Use Cases

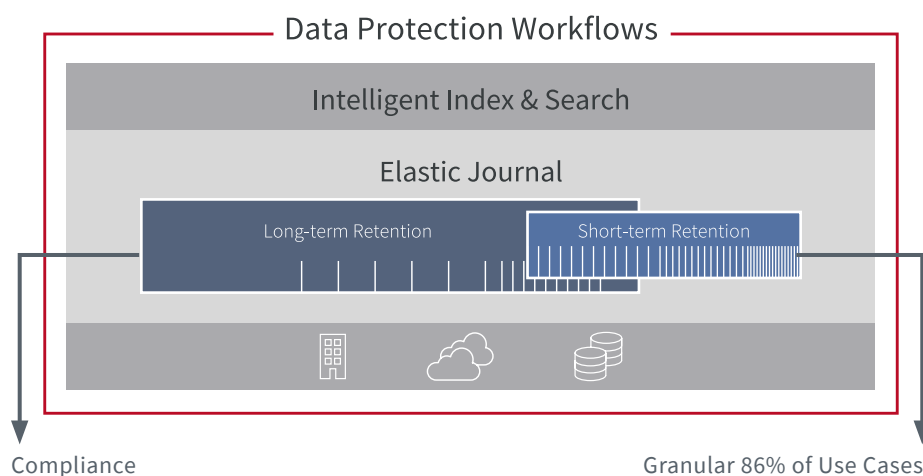
Workload Mobility

Zerto's technology agnostic approach to delivering replication with integrated orchestration and automation allows customers to seamlessly move workloads from and to any of the supported platforms.



Backup

The Zerto Elastic Journal brings together both short-term and long-term retention for data protection. Using unified data protection workflows, powered by intelligent index and search, it enables quick recovery of data—regardless of whether it's from a few seconds or a few years ago. Data gets copied from the short-term retention journal into the long-term retention repositories according to your requirements. As the short-term journal is already stored on the target side, moving data to long-term retention repositories has no impact on production, so copies can be taken as often as needed, eliminating the concept of “backup windows.”



To learn more about the Zerto IT Resilience Platform and how your current solution might compare to Zerto, you can [request a demo](#) or speak to a solutions representative about your specific needs.



About Zerto

Zerto, a Hewlett Packard Enterprise company, empowers customers to run an always-on business by simplifying the protection, recovery, and mobility of on-premises and cloud applications. Zerto's cloud data management and protection platform eliminates the risks and complexity of modernization and cloud adoption across private, public, and hybrid deployments. The simple, software-only platform uses continuous data protection at scale to converge disaster recovery, backup, and data mobility. Zerto is trusted by over 9,500 customers globally and is powering offerings for Microsoft Azure, IBM Cloud, AWS, Google Cloud, Oracle Cloud, and more than 350 managed service providers. www.zerto.com

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