



**Disaster Recovery Myths** 



Why Zerto for Disaster Recovery?



What Is Disaster Recovery as a Service (DRaaS)?



**DRaaS Models** 



Benefits of DRaaS



Why Zerto and DRaaS Are the



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## **DRaaS** eBOOK

## 101

The true cumulative cost of disruption to a modern digital business is massive. In a landscape of evolving threats, a comprehensive protection solution is more important than ever. But traditional backup solutions aren't enough.









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## TOP CHALLENGES FOR DISASTER RECOVERY

Today's IT market is constantly evolving to meet the changing demands and challenges of our digital world. To match exponential data growth, we need protection solutions that are equally scalable. The increasing speed of business is accelerating organizations' digital initiatives, resulting in a rapidly expanding cloud market. In addition, evolving threats and the rising rates of increasingly sophisticated ransomware and malware continue to emphasize the importance of comprehensive security and recovery solutions.

If you want to succeed as a digital business in this environment, there's little room for downtime. Whether it's caused by a ransomware attack, natural disaster, human error, or even a planned IT migration, every second of downtime translates to lost revenue.





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#### The True Cost of Disruption

Direct service disruption is only the tip of the iceberg when calculating the complete cost of downtime. You must account for lost employee productivity, such as your IT department's time, resources, and labor spent on recovery and operational clean up, as well as ramifications to your public brand. The cumulative costs of such business disruptions are massive.

Though ransomware has always been a threat for digital businesses, it's currently rising at rates that make it a C-level priority for all organizations. No longer a niche threat, it is now a significant, pressing cause of disruption. The total estimated cost ransomware disruptions is expected to exceed \$265 billion by 2031, less than a decade away. 1 It's not a matter of if an attack will happen, but when.

Many companies are turning to cloud solutions, including hybrid and multicloud, to protect and accelerate their IT strategy. By 2025 the cloud footprint is projected to hit 100 zettabytes.<sup>2</sup> But cloud adoption also introduces new complexities. Organizations are now challenged to migrate to the cloud, get the most out of their investment, and ensure their cloud strategy adequately protects against ransomware and other potential disruptions.



\$250,000/hr

Average cost of downtime per hour across all industries and organizational sizes

\$2 Million/yr

A collective 8 hours of downtime per year would cost an organization







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Until now, backups have been the go-to solution for data recovery. By making extra copies of your data, backups protect you from a range of incidents, from accidental deletion and database corruption to hardware theft or employee accidents. They're often used for long-term data archiving or retention. However, backups are also limited: they have poor recovery time and recovery point objectives, and they can't mirror or replicate applications. They lack native automation and orchestration and often disrupt production systems during production and testing.

In today's environment, backups for disaster recovery are antiquated. If you want your business to quickly restore its functions after a disruption—and minimize or even eliminate downtime cost—you should opt for a true disaster recovery solution.

Unlike backups, which simply make extra copies of data, disaster recovery (DR) solutions provide comprehensive plans and infrastructures to failover datacenters following a disruption. Despite the clear benefit of and rapidly growing need for comprehensive disaster recovery solutions, some organizations are slow to adopt a DR strategy. Part of the reason may be a mentality that significant disruption, whether it's a natural disaster or ransomware attack, is too rare to be a legitimate business concern.

#### **REASONS FOR UNRECOVERABLE DATA**



49% Backup system failures



46% Corrupted/encrypted data due to malware/ransomware



**45%** Data loss occured in the gap between backups









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The reality is much different: in their 2022 State of Ransomware and Disaster Preparedness survey of businesses across North American and Western Europe, International Data Corporation (IDC) found that 93% of businesses experienced a disruption in the past year, with 68% suffering four or more.<sup>3</sup> Not only are disruptions happening, but they're becoming more frequent as well.

Another reason for delay may be an organization's lack of resources, knowledge, trust, or budget. Selecting the right disaster recovery solution can take time. For one, you have to compare multiple replication technologies and cloud models. The right solution should also integrate with your existing datacenter, and multi-site management adds another layer of complexity.

Some disaster recovery options lock you into particular platforms or vendors. Picking a solution to answer all these questions requires a good deal of trust and buy-in. With so many variables in play, estimating your true TCO can be difficult. But ultimately, the direct and indirect costs you stand to incur from an outage are far greater than adopting a way to prevent those outages.













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Zerto, a Hewlett Packard Enterprise company, makes it easy to weigh your options. Zerto provides continuous data protection (CDP) with near-synchronous replication and unique journal-based technology. This delivers industry-leading recovery point objectives (RPOs), which is the time elapsed since the last good data copy (i.e., data loss), and recovery time objectives (RTOs), which is time needed to access the last good data copy (i.e., downtime).

#### **Near Synchronous** Replication

Zerto continuously replicates only changed data to the recovery site, second by second, with zero impact to production workloads. Without scheduling, agents, or snapshots, it's one of the most efficient ways to replicate data.

#### Journal-based Technology

Zerto stores all protected data in its unique journal. The journal stores all changes for a userdefined period (1hr up to 30 days) and allows you to recover to any point in time within that journal, ensuring your RPO is always as low as possible

#### **Virtual Protection** Groups

Today, there are very few scenarios where an application is run on a single server or container. Instead, most applications have multiple VM or microservice dependencies. Using the traditional method of protecting individual components results in significant challenges to recovering your complete application.





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Zerto Protection Groups differ by allowing you to protect one or more components together in a consistent fashion, ensuring every point in time that is inserted into Zerto's journal is from the same point in time for all components within the Protection Group. This allows easy recovery of an entire application, and all its dependencies, to a consistent point in time, reducing manual tasks and therefore lowering the risk of human error during a recovery.

The Zerto solution is platform-agnostic, applicable beyond VMs alone, and trusted by more than 9,500 customers and 1,500 partners. With Zerto, your organization is always on, always protected.



**Gartner Peer Insights** 

4.7 out of 5.0





**IT Central Station** 

4.6 out of 5.0





**G2- Business Review** 

4.8 out of 5.0







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**DRaaS Offerings REQUEST A DEMO**  With Disaster Recovery as a Service (DRaaS), an organization backs up its data and IT infrastructure to a third-party cloud computing environment that restores access and functionality after a disaster. This third-party managed service provider (MSP) orchestrates disaster recovery through their own SaaS solution. With DRaaS, organizations can save time, money, and resources by avoiding the additional staff and additional IT infrastructure required to maintain internal disaster recovery capability.

Even large organizations that otherwise have the resources to manage their own DR are opting for DRaaS to counter a frequently changing threat landscape and meet strict service level agreements (SLAs). Because third-party MSPs often distribute architecture globally, geographic disruptions are less likely to affect both the DRaaS provider and the organization, further improving protection confidence.



#### **Control Costs**

Gain greater predictability of storage costs and choose the DR strategy that is right for you.



#### **Diversify Data Protection**

Gain confidence with target site diversification. Take advantage of the extended global network of DR sites afforded by managed service providers.



#### Take DR to the Cloud

Leverage a DRaaS provider to be your guide to the cloud.







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#### **Choosing a DRaaS Provider**

When selecting a DRaaS provider, it's important to understand their approach to disaster recovery and how it fits with your organization's needs. A DR solution may use one of several kinds of replication, each one providing a different functionality and RPO:

Replication Type	Method	RPO Time
Synchronous	Simultaneously writes data to source and target storage by relying on matching storage arrays and geographic proximity, will have production impact slowing down production applications.	Instantaneous
Asynchronous	Takes point-in-time snapshots of data on a frequency that the storage and application can withstand, often happens at the storage layer which adds another layer of complexity.	>1 hour
VM snapshot-based	Takes VM-level, point-in-time snapshots of data every few hours, as performance impact allows, can often leave applications stunned requiring action to be taken before operations can resume.	>1 hour
Guest-based	Replicates asynchronously via portable modules that must be installed on each physical and virtual server which leads to increased overhead in managing these agents and also takes resources away from production applications.	>1 hour
Hypervisor-based	Continuously replicates only changed data to the recovery site, second by second, with zero impact to production workloads and one of the most efficient ways to replicate data.	Within seconds





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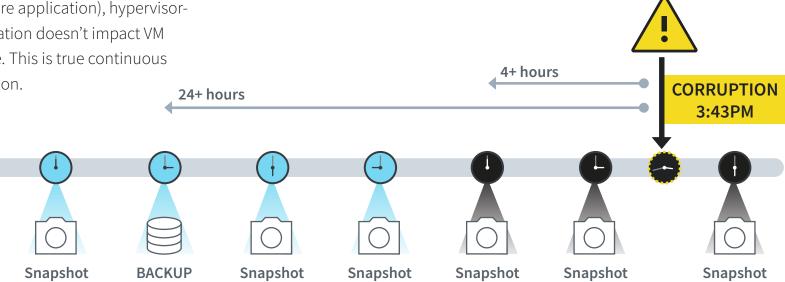


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Replication occurs on a schedule. Whether it's seconds or hours, the recovery times a DR solution provides depend on what kind of replication is being used. Snapshot-based recovery has wide windows of potential data loss because snapshots are taken hours apart.

On the other hand, a hypervisor-based solution constantly replicates data as it's in memory in the hypervisor and uses journal-based technology to provide industry-low RPOs and RTOs. Because it replicates only the changed information (rather than the entire application), hypervisor-based replication doesn't impact VM performance. This is true continuous data protection.

Replication method and recovery time aren't the only factors to consider in a DRaaS provider. Some solutions may incorporate both hardware and software, while a solution like Zerto is software only, offering greater simplicity. If you have multiple, geographically diverse datacenters and various clouds, the right DR solution should be able to solve for that too. Payment plans can also vary between subscription and pay-per-use models.



If we take the above example of a data corruption at 14:43, then a VM-level 24-hour snapshot-based replication solution means you are going to potentially have nearly 16 hours of data loss, as you would have to restore a replicated snapshot from the previous night. The same example with storage-level snapshots would result in data loss of nearly 4 hours.





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Depending on the size, capability, and complexity of your organization's IT infrastructure, it may be more or less advantageous to manage some, all, or none of your disaster recovery. The three main DRaaS models are fully managed, partially managed, and self-service.

#### **Fully Managed**

Under the fully managed model, the DRaaS provider has complete responsibility for the entire DR solution, including design, installation, and ongoing maintenance. A customer should be closely aligned with the MSP to keep them abreast of any changes to infrastructure, applications, or services. This model is best suited for customers who don't have the time or resources to manage their own DR. Through this route, customers with limited technical personnel can still build a mature disaster recovery operation that meets high security requirements.

#### **Partially Managed**

The second option is partial management. With this model, the customer maintains responsibility for some aspects of the DR plan, and the DRaaS provider optimizes DR procedures where both parties mutually agree.

#### **Self-Service**

The final option is self-service, where the customer assumes the greatest responsibility. In a self-service model, the customer still uses a pre-packed DRaaS option, but they are fully responsible for planning, testing, and managing DR. The DRaaS provider supports with backup management software, a third-party target site for replication, and remote backup and VMs. Self-service is best for organizations that have the internal resources to support DR and want to retain overall control but reduce their datacenter footprint.





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Not every organization can build their own datacenter or hire full-time DR specialists. Even for those that can, there are benefits to replacing the direct and indirect costs of secondary sites with a predictable monthly expense for a specialized service. For many organizations, DRaaS can be an ideal solution. The benefits of DRaaS include:

- Flexible deployment. Choose a
   partnership that makes the most
   sense for your organization—from
   self-managed to partially or fully
   managed—and explicitly define both
   your responsibilities and those of your
   managed service provider.
- Disaster recovery customized for your business. Fully managed service provides complete end-to-end design, implementation, and management for your DR environment.
- Remote copies for additional security.
   A resilient, remote, cloud-based location for disaster recovery protects you against any geographic disruptions.

- Diversified data protection. Gain confidence with target site diversification.
   Take advantage of the extended global network of DR sites afforded by MSPs.
- Additional internal resources. Save time with disaster recovery specialists managing the solution.
- Predictable billing. Take advantage of flexible billing models that range from pay-as-you-go to reserved infrastructure to dedicated resources. Only pay for what you need.

As with any DR solution, the effectiveness

of DRaaS will depend on the underlying technology, and many DRaaS solutions still suffer from legacy backup and replication technologies that provide poor RPOs and RTOs. Evaluating the recovery times and points is crucial to not only meeting SLAs, but also reducing the cost of the solution when a disaster strikes. Downtime costs and lost data incurred by legacy technology, like snapshot-based replication or slow manual recoveries, add to the cost of the solution.





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# WHY ZERTO AND DRaaS ARE THE PERFECT COMBINATION





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Both IT vendors and customers are recognizing that continuous data protection offers the greatest disaster recovery readiness. Converged solutions that combine disaster recovery, backup, and cloud mobility are rising to the top of the market. The leading hypervisor-based replication solutions include replication, recovery, automation, and orchestration all in one.

Zerto for disaster recovery provides this all-in-one functionality in a single flexible solution and is the underpinning of over 350 MSP's DRaaS solutions. In addition to best-in-class SLAs, lightweight software, and comprehensive DR through continuous data protection, a Zerto partner provides:

- True disaster recovery. Unlike solutions whose core systems still rely on backup, Zerto provides comprehensive DR with continuous data protection and industryleading RPOs and RTOs.
- Cloud agility. Zerto supports DR, and cloud mobility to, from, or between multiple clouds. With no vendor lock-in, the solution provides true protection and mobility across public and private clouds and any hybrid and multi-cloud deployment.

- Ransomware recovery. With journal checkpoints, Zerto's fully automated failover and failback recovers encrypted files and data within minutes of when an infection occurred.
- Non-disruptive testing. Zerto runs failover, dev, and other QA tests at any time without production impact, ensuring aggressive SLAs are met.
- Easy onboarding. With consumer-level simplicity, Zerto can be up and running in under an hour, avoiding disruption to daily operations.





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This flexibility, reliability, and ease has led more than 9,500 customers to make Zerto their preferred disaster recovery solution.

Across its many use cases—from disaster to ransomware recovery to multi-cloud mobility—Zerto creates success stories for its customers.

On average, Zerto delivers a TCO savings of 50%, RPOs of ten seconds or less, and 10 k+ VM scalability. For many customers, the proof is in the numbers:

- HCA Healthcare—reduced DR solutions from four to one, saving \$10 million
- United Airlines—reduced DR testing time by 50%
- XPO Logistics—consolidated 21 datacenters into six in 36 months
- Columbus Metropolitan Library—
   achieved significant cost savings,
   reduced the need for more IT resources,
   and reduced RPOs to under 15 minutes

#### **Case Study Highlights**

#### **GREY COUNTY**

Grey County, a Canadian county employing 900 and serving nearly 100,000, needed a backup and recovery solution that could reliably support their critical functions of social services, housing, emergency medical care, and more. They opted for a hybrid architecture, augmenting their on-premises servers with Microsoft Azure and Zerto, which work seamlessly together. Grey County was able to streamline its IT backup and recovery team from 13 to one, optimize its budget, and get the compliance and performance reporting it needed in real time.



**READ CASE STUDY** 

#### **MEDONE**

MedOne delivers managed datacenter services and instills trust in its customers through exceptional data storage solutions, particularly MedOne Cloud. When one of MedOne's medical equipment and software customers suffered a ransomware attack, they faced a potential shutdown of 15 production servers and multiple workstations, as well as 30–40 days of data loss. But when MedOne deployed Zerto, they recovered to a state before disruption in an hour, and no additional data was lost.



**READ CASE STUDY** 





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#### **Net3 Technology**

Net3 Technology is a Zerto CSP Gold Partner and a leading Cloud Services Provider that offers Cloud Backup, Disaster Recovery, Infrastructure-as-a-Service (laaS), Cybersecurity, and Ransomware Protection. Their wide range of offerings paired with their excellent customer support provides you with the freedom of choice and ensures cloud confidence for IT teams nationwide.

To learn more: Net3 Technology DRaaS

#### NET3 TECHNOLOGY OFFERS DISASTER RECOVERY SOLUTION WITH ZERTO

- Supports both VMware and Hyper-V environments
- Utilize SCVMM-as-a-Service
- Encryption on the fly and at rest
- Different licensing options: ECE monthly, site to site monthly, bring your own license.

#### NET3 TECHNOLOGY DISASTER RECOVERY WITH ZERTO

DR, backup, and cloud mobility within a single, simple, scalable solution—Net3 Disaster Recovery with Zerto offers secure, flexible, and scalable DR. It enables clients to achieve better uptime and recovery objectives, while reducing expenses.

- Spin up in their cloud, PvDC, during a DR event
- Protect your brand from outages and disruptions with continuous data protection.
- Avoid ransomware cost, downtime, and data loss.
- Rewind to any point in time with next to no data loss or downtime —from 7 seconds, 7 days, 7 months or 7 years.
- RPOs of seconds and RTOs of minutes.
- Free Disaster Recovery Runbook and 2 free DR tests per year
- Dedicated team of Net3 Engineers with 24/7/365 American-based support
- Instant reporting for compliance & analysis





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In today's environment, a successful digital business needs a comprehensive security and recovery solution that eliminates any potential data loss and downtime. Zerto 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 solution eliminates the risks and complexity of modernization and cloud adoption across private, public, and hybrid deployments. The simple, software-only solution uses continuous data protection at scale to converge disaster recovery, ransomware recovery, and cloud 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.

Learn more at www.zerto.com