The Business Case for Disaster Recovery-as-a-Service Solution

Introduction

The impact to your business from unexpected downtime is immeasurable. Almost half of small to medium businesses that incur a major technology catastrophe never recover. The effectiveness of employees and loyalty of your customers all hangs on the technology choices you make. So there is real danger to a business's reputation and revenue stream if an adverse situation strikes and the business isn't set up with appropriate protection and recovery methods in place. With an increasing occurrence of natural and man-made disasters over the years, businesses are now more vulnerable than ever.

IDC research[1] states, "More than 70% of companies surveyed experienced up to 10 hours of unplanned downtime over the past 12 months. About 27% of those companies estimate their cost of downtime to be between $10,000 and $99,000 per hour." The research goes on to state, "In addition to immediate revenue loss due to an inability to conduct business, downtime can cause damage to a company's reputation, impact customer loyalty and jeopardize regulatory compliance."

So your business demands appropriate DR solutions to be made available; thankfully there are many disaster recovery (DR) solutions to choose from, but which one is right for you? Many customers consider offsite tape backup as a 'DR solution', however the cost and time to recover from major outages makes this an ineffective form of DR. The alternative of building and hosting your own DR comes at a great cost and often is shunned for this exact reason. Some businesses choose to take a scaled down DR for just critical apps using the build it yourself approach. Typically these solutions are still costly and are not flexible enough to meet the demands of DR for the business. Cloud therefore offers the answer, by combining a low cost, flexible, scale on demand approach along with a quick time to market, businesses can protect their critical data and obtain an SLA for less than the cost of hosting equipment in a datacenter.

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Today, new and innovative cloud-based Recovery-as-a-Service solutions have emerged to combine the agility benefits of a multi-tenant cloud with the latest recovery technology to get a highly reliable, stable and enterprise-grade recovery solution at a compelling price point. DRaaS is designed for the recovery of full applications, not the pieces and parts, so you're up and running faster after a declaration.

1 IDC Technology Spotlight, sponsored by Zerto, Disaster Recovery for Virtualized Environments: A DR Approach to

Defining DRaaS

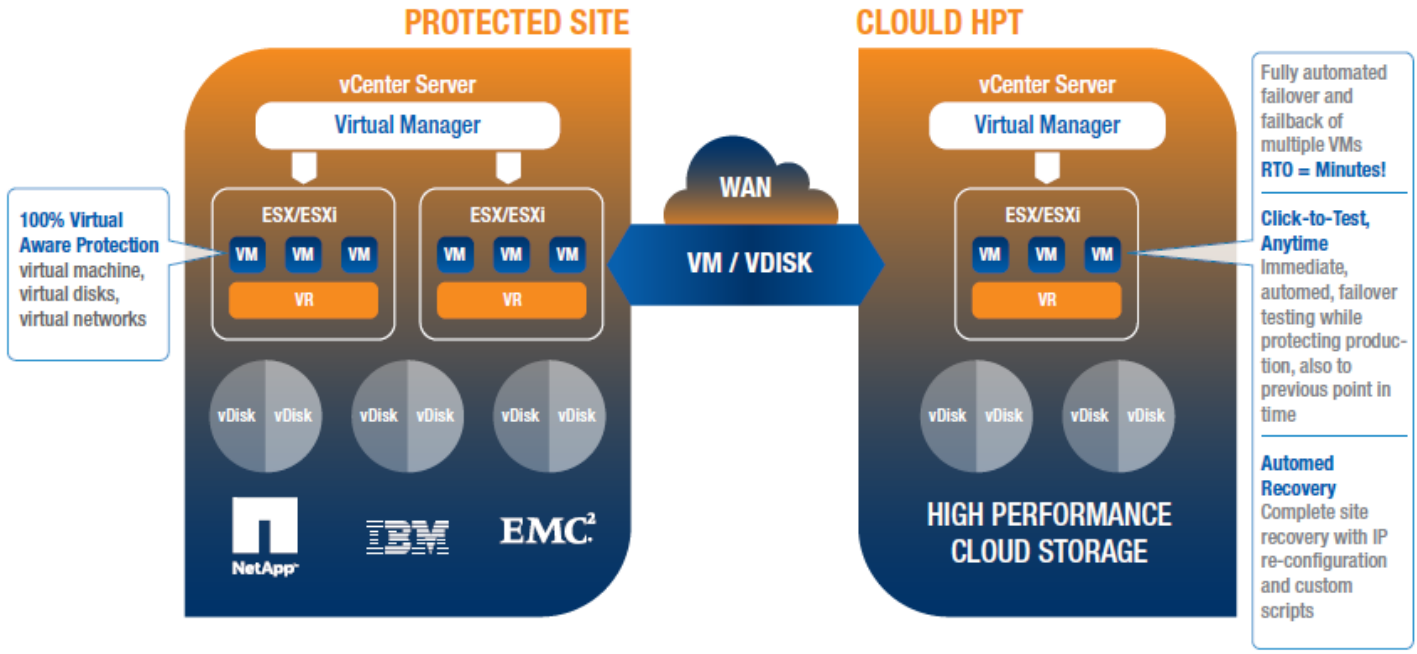
Disaster Recovery-as-a-Service refers to solutions that allow customers to backup applications by encapsulating network, security, server images and data to a cloud Infrastructure-as-a-Service (IaaS) environment. This solution allows for the ability to failover production to the target cloud during the time of declaration. These solutions provide guarantees recovery point objectives (RPO) and recovery time objectives (RTO) and allow reliable, predictable, testable recovery in the cloud. These solutions are also referred to as cloud DR or cloud recovery.

According to Gartner[2], "Recovery as a Service (DRaaS) delivers a strong alternative to traditional disaster recovery services and is a good alternative to a self-managed approach for many midsize enterprises."

In an additional report, Gartner also states[3], "The growing recovery as a service (DRaaS) market offers organizations opportunities for cost reduction, increased recovery test flexibility, and selective applications failover."

At the highest level, DRaaS are about mitigating risk. You are mitigating the risk of losing your applications and data and even losing your business's reputation and revenue stream. The latest DRaaS technology offerings are able to mitigate the risk of over-allocating money and resources to a disaster recovery plan by increasing the number of economically efficient options available. A DRaaS solution is only as good as its ability to work when you need it. With the increased ability to easily test your

application recovery method, newer DRaaS technology also mitigates the risk that your recovery plan won't work when you need it.



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A Timeline of Recovery

Not only are DR capabilities expanding and advancing, but the number of declared disasters that occur have increased significantly over the past forty years (see fig. 1). That rise becomes even more pronounced when looking specifically at technological disasters over the past forty years (see fig. 2).

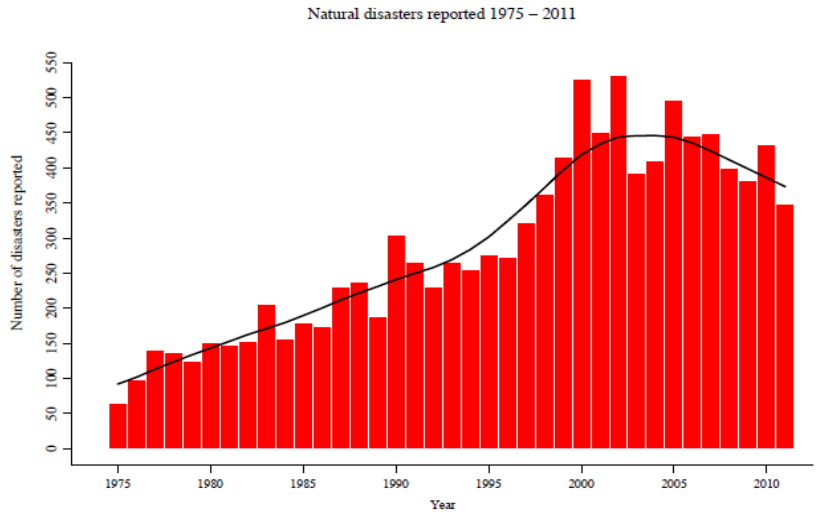

Figure 1. Natural disasters reported 1975–2011.

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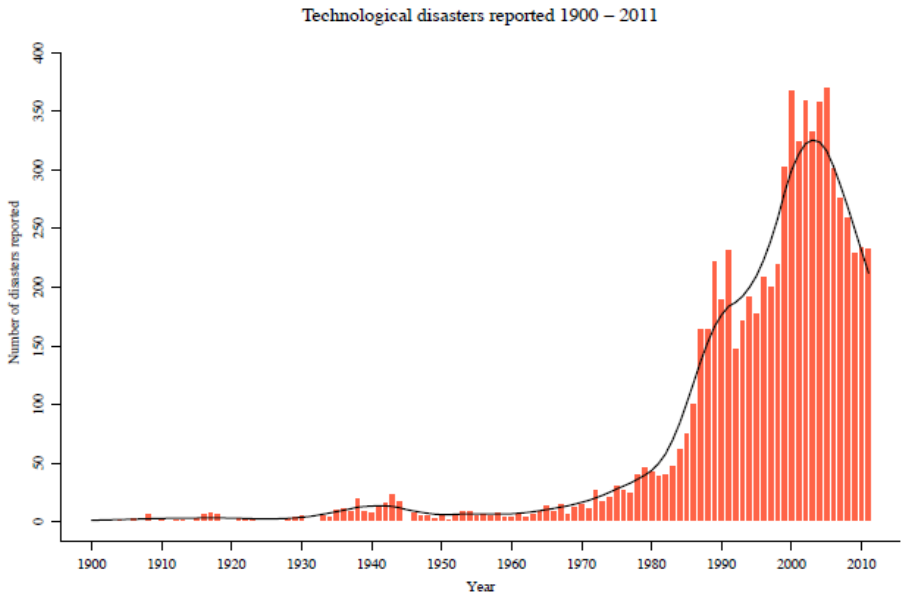

Figure 2. Technological disasters reported 1900–2011.

Historical Solutions

In the past, traditional disaster recovery subscription services have been most popular. These subscription-based options are often set-up so companies pay a monthly fee to subscribe to a system or partition for a set time period. The monthly costs are fixed in this model, and the solution is designed to provide a short RTO in the event of a disaster.

Colocation providers offer a geographically-separated, rack-based solution for your business to use to set up its own DR plan. These solutions are costly due to the capital expenditures, management requirements and time and resource needs. The benefit is that it allows the IT department total control, but it's not a very agile solution and the expense is high.

Technological History

The replication used in DR is as important as the target hardware. Until recently, replication solutions weren't virtualization-ready, so they weren't scalable and often fought to keep up with virtualized infrastructure. Most legacy replication technology was built for physical assets, making it hard to work effectively for virtualized infrastructure, especially cloud. Legacy replication solutions like OS/Guest-based, Array-based and Appliance-based are not a good fit for new technologies. OS/Guest-based requires a footprint on every virtual machine (VM) and is most suitable for small-scale businesses. They are difficult and expensive to scale due to the requirement to install and manage a module and license on every single server and supporting infrastructure for one or more target servers at the DR site.

Appliance-based replication uses LUNs, not VMs, and requires additional hardware. The lack of granularity conflicts with the premise of virtualization and they require dual points of management, one for the physical and one for the virtual. Array-based replication is complex to manage and uses LUNs, as well. Array-based replication is inflexible and locks the organization into a single SAN vendor. Additionally, because the SAN or appliance doesn't "see" VMs, it's oblivious to configuration changes and can't ensure full application protection.

However, recent DR technology has leapt forward and caught up with virtualization. Advancements in Replication Technology The major advancement in today's DR industry is hypervisor-based replication. The premise of hypervisor-based replication moves the replication up the stack, to the hypervisor, which removes the need to install agents and reboot your app to get up and running. Moreover, no rework of the application is required to obtain recovery protection.

Hypervisor-based replication technology brings DR to the application level by recognizing the groupings of VMs and their related virtual disks and assures complete, accurate and timely replication of the whole application.

New hypervisor-based replication technology is also storage agnostic, which lowers the barrier to entry for DRaaS consumers. Without the need to match SAN/storage brands or sizes, customers can replicate from any type of hardware with any SAN to the cloud. This means you are no longer required to force

your applications to fit the disaster recovery solution, instead you can choose a DR solution that fits the application.

Why Cloud-Based DR Has Changed the Game

Disaster Recovery-as-a-Service simplifies the application recovery portion of your business continuity plan by leveraging the benefits of cloud in ways previously unavailable. To-Cloud solutions offer businesses the perfect mix of solution option, price point and ease of use.

Recover the Application, Not the Pieces

DRaaS solutions provide the business the ability to stand back up quickly at full capacity. A common misconception is that backups and backups-as-a-service offer your business the same results as recovery-as-a-service. In reality, backups protect the data, not the applications. Should your business be hit with a disaster, your team will be left with the "puzzle pieces" to put back together when the backups are used as a recovery solution. Alternatively, with DRaaS, the environment stands back up in a designated RTO window, from the agreed upon RPO, without your team having to put the puzzle back together.

DRaaS leverages consistency groups for complete application recovery. Rather than replicating the pieces and data points, groups of VMs are "locked" together prior to replication. Because of these consistency groups, all locked VMs are recovered from the same point in time. All resources come back in sync and no transactions are lost. You recover the puzzle as a whole, not in pieces that need to be reassembled.

Without the need to match SAN/storage brands or sizes, customers can replicate from any type of hardware with any SAN to the cloud. The supporting VMs can be located across disparate hosts and storage arrays, even different processor chip sets, but because the replication groups together VMs regardless of physical location, it consistently replicates the VMs using a group-level policy.

That's less time for your business to be down and puts your entire company back to work quicker. The differential in time gained between backups as your recovery solution and a DRaaS can more than pay for itself in the amount of business you can complete during the timeframe differential.

Seamless VMware Integration

Today's DRaaS solutions also offer seamless integration with your centralized VMware-based management portal. With simple, complete integration into your existing environment and VMware-virtualized infrastructure, the barrier to choosing DRaaS for your DR solution is lower than other options.

Compatibility barriers have also been eliminated with new technology that supports replication between different versions of VMware vSphere. With deep VMware integration, this DRaaS solution has full awareness of vApps, networks and datastore settings allowing for failback automation to be managed centrally. The ability to replicate VMs from any type of storage VMware supports, regardless of whether it is SAN or local, allows a broad range of workloads to be protected.

Choose Your Recovery Point

One threat that has always been of particular headache and concern is a corruption or virus. If replication last occurred after the virus infected your system, and you can only recover to that latest point, the recovery won't do you any good. A DR solution that offers the ability to recover from a chosen point in time, rather than only the latest instance is of great benefit. Cloud-based DRaaS allows you the piece of mind that you can recover your workload from a non-corrupted state by offering a range of time periods from which to recover.

Choose Your Replication Destination

By using the cloud for disaster recovery, customers have more choices. When dealing with compliance, regulatory or geographic requirements of applications, the cloud offers a wider range of options for your replication needs. Today, customers can access DRaaS in multiple zones, including East and West zones, whether they're replicating from the cloud, their own datacenter, or a co-located environment. This provides greater protection and peace of mind for customers who are worried about the risks of having all their data and applications in one geographic area.

Test Your Solution Easily and Effectively

The value of your solution is only equal to your confidence in your ability to recover. With legacy recovery technology, tests were nearly impossible to perform so you were stuck crossing your fingers and hoping it worked. With cloud-based DRaaS, testing is encouraged and expected. Testing with cloud-based DRaaS also comes at a much lower cost than testing in legacy recovery solutions. This allows for more advanced testing possibilities including failover and failback testing. Lower resource costs also increase the number of tests annually you can perform to further increase confidence or meet additional business requirement.

Access the Cost Efficiencies of Cloud

Because Disaster Recovery-as-a-Service is based on cloud computing, customers can now pay for DR like they pay for cloud; paying only for the resources consumed. This new cost model is disrupting the world of existing DR solutions because at about 50% of the cost of a traditional "warm site" approach, you can get the same RTO and RPO. Or, for workloads with more flexible RTO and RPOs, you can recover in a fraction of the time compared to traditional cold sites for only about 10% more.

Introducing CloudHPT Virtual Datacenters for DRaaS

CloudHPT provides innovative cloud IaaS solutions that offer unprecedented visibility and control, helping customers make better decisions about risk, agility and operational efficiency. CloudHPT, a UAE based service provider, facilitates a true hybrid cloud approach for IT departments and business units seeking choice, platform compatibility and a true partner relationship. Our cloud-based recovery solutions leverage its industry-leading Virtual Datacenters combined with the total resource and cost visibility our customers also have access to the highly knowledgeable cloud support staff and are guided through the DRaaS experience with the help of the professional and advisory services team.

Leveraging replication technology specifically built for scale, CloudHPT DRaaS solutions are ideal whether your business is replicating a few VMs or thousands.

If you're currently hosting a private cloud or physical infrastructure at your business, you're likely considering DRaaS against an internal, traditional solution in which you manage both ends of the replication sites. CloudHPT DRaaS solution is ideal for businesses running VMware-virtualized environments that are frustrated with the complexity and expense of traditional DR options.

This customer datacenter-to-cloud recovery solution boasts easy management, testing and verification to ensure confidence. By replicating to a public cloud provider instead of replicating to an internally managed second site you will save by not having to purchase or maintain a second infrastructure.

Our DRaaS solution comes in a turnkey package complete with customer support, client services and technical documentation to make your installation, planning and recovery experience easy and efficient. The solution provides everything you need to effectively replicate your production workloads to a our cloud based here in the UAE using the most advanced replication technologies. The required software is not an agent. It is simple to understand and easy to install with no required reboots. No assembly or maintenance of complex software and infrastructure technology is required, so you can focus on the projects that would otherwise get pushed to the side if your team were managing its own replication environment.

Each one of our customers receive DRaaS consultation to accurately assess and document your needs and requirements. Configuration documentation and best practices training for your staff is included

and CloudHPT will setup the target VDC and resources needed for tests and declaration. Routine maintenance of the target components will ensure that the replication components, agents and infrastructure are operating properly.

Customers of CloudHPT's DRaaS solution will enjoy a quick deployment of this DRaaS solution since it doesn't require application modification to obtain protection. Our customers have full control over self-test with access to compute resource throughout the year to ensure the environment recovers effectively. You also maintain visibility and control over what is being replicated and the service status. As a CloudHPT customer, you have full access to leverage our tools that allows complete visibility into your VDC usage, to help you predict and manage your monthly expenses.

The true measure of a DR plan is in the quality of the recovery. With our solutions, your workloads and applications will recover at full production capacity in state-of-the art Virtual Datacenters, rather than on old, depreciated gear. DRaaS by CloudHPT gives a full recovery in four hours or less and with an RPO of generally 30 minutes or less. Plus, with easy testing capabilities you will have the confidence you need to promise your organization that your applications are covered in the event of a disaster.

This In-Cloud solution comes with a turnkey implementation backed by the 24x7x365 support and assistance from our Dubai based NOC. By leveraging the most advanced hypervisor-level replication technologies available, there is no need for your team to assemble or maintain complex software and infrastructure technologies yourself.

Our team will configure the replication software and other services to ensure proper replication. Replication will be performed at the vApp-level between your production VDC and your replication target VDC. We will also monitor and manage the DRaaS infrastructure and respond to RTO and RPO alerts that are infrastructure related. Our team will work with yours via change requests to modify replication parameters, including adding resources and VMs, to your protected vApps.

CloudHPT's DRaaS solution offers an RTO of either four or eight hours, based on what you assess your workload needs to be, and an RPO as low as 30 minutes. Because you're leveraging Our state-of-the-art VDCs, your workload will recover and completely standup within your chosen RTO window.

As an CloudHPT customer you receive semi-annual testing resources, a DR consultation kickoff to accurately assess and document your needs and requirements and configuration of VMs and vApps requiring protection. You also receive routine, scheduled maintenance of the source and target components and monitoring of alerts and remediation of any replication and infrastructure-based issues.

Choosing the Right Disaster Recovery Solution

There is no one-size-fits-all solution for disaster recovery. Because infrastructure, workloads and applications are unique, the DR plan should be, too. Disaster recovery solutions are best evaluated after performing a risk assessment of your application as well as a business impact analysis. In those analyses

and assessments, you will determine the optimal RTO and RPOs for your applications, as well as the lowest RPO and highest RTO your application can sustain.

The next step is to analyze the budget that you are willing and able to allocate to your DR plan. The answer may be different for different business units or workloads, and therefore you may need to evaluate different solution options for each. Budget will become a huge factor in your decision as everyone will want a near instantaneous RTO and RPO, but that is simply not feasible for all apps for economic reasons.

Lastly, determine the technical proficiency your staff has to stand back up your environment as well as requirements to bring it back online in its original home environment. Your DR plan is not complete or successful until your workloads are back and running at 100% on their primary infrastructure. Working with a cloud service provider for a DRaaS solution can extend and expand your IT team, which can be critical during a crisis.

Conclusion

The right recovery solution for your organization is one that is tailor-made to address your applications' unique characteristics. Evaluate your options based on price, visibility, testing ability and compatibility to make sure you're making the right choice. The barrier to entry is lower for cloud-based DRaaS than for any other holistic recovery solution and new advances in technology have shrunk the time it takes to put a solution in place as well as to get back up and running after a disaster strikes.

Ask anyone who is responsible for managing BC/DR solutions; the key to success is testing. CLoudHPT makes it easy to test your DRaaS solution so your organization will have confidence in its disaster preparedness and any technological issues can be identified and fixed early on. When it comes to disaster recovery, a solution is only as good as it performs when you need it most, when your job and your company are on the line. DRaaS by CloudHPT is offers a reliable solution you can trust. Plus, you will have the added benefit of creating a partnership with a team that cares about your job and your organization's success.

Still have questions?

Our expert team can help you assess the alignment between your business's recovery requirements and our cloud-based recovery solutions. If you'd like to learn more, you can request a demo and additional information by visiting www.cloudhpt.com