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Disaster Recovery as a Service - Changing the Game Plan

Traditional High Availability (HA) and Disaster Recovery (DR) solutions are seen by many IT departments as a necessary evil: expensive, non-flexible, difficult to manage and even harder to test.

For many smaller organizations the high costs and resources required to implement and maintain a HA/DR solution have outweighed the return and left them priced out of a solution. Some estimating as high as 60% of companies today lack a proper DR solution.

However, with its combination of low cost computing resources, flexible infrastructure and rapid scalability, the Cloud is set to be a game changer for HA/DR. Cloud based solutions are already enabling organizations to move HA/DR from a wish list item to a realistically achievable business objective.

Unblurring the Lines Between High Availability and Hot Disaster Recovery

The line between HA and DR can be somewhat blurry and these are often confused to solve the same problem. Both solutions are designed to ensure business continuity by maintaining systems in event of an incident. Both are traditionally expensive and best suited to organizations with 24x7 operations or high traffic e-commerce sites. The difference is in the level of protection each solution can provide your business.

High Availability solutions are designed to ensure minimal disruption to business activities. They rely on technologies, like server clustering or replication, to ensure that systems failover to a secondary server when an issue is detected. A clustered HA solution can be failed over quite rapidly, usually in about fifteen minutes. While an on-site HA solution provides protection against local hardware failure it doesn't

protect against major infrastructure issues with the potential to bring down an entire data center. By placing secondary systems off-site, a DR solution can provide full protection against a broader range of issues like power outages, cooling system issues or more global infrastructure failures. In a Hot DR scenario organizations can usually failover to the DR system in a time frame ranging from one day to one hour depending on the applications to be brought online.

With limited budgets it isn't always feasible to implement both a HA and a DR solution. Organizations must settle for a trade-off between recovery times and risk mitigation with the result that IT staff are often left crossing their fingers and praying that nothing goes wrong. However, Cloud computing offers a way out of this fix.

A Cloud-based solution has the advantage of separation of primary and secondary systems and offers the same broad protection as a DR solution. More importantly, with networking established and tested, database synchronization in place and the ability to dynamically allocate resources, a Cloud DR system can failover in less than ten minutes.

The affordability and simplicity of Cloud-based HA/DR solutions over traditional Hot DR or HA is perhaps the greatest argument in favor of this technology. Traditionally, both HA and Hot DR solutions have come with high price tags. The capital expenditure on hardware alone is often prohibitive. In a traditional DR environment a secondary production server, worth hundreds of thousands of dollars must be purchased and maintained. Then there is the cost of software, support, licensing and the resources required to manage and maintain the additional systems. The key difference in a Cloud-based solution is that the user only pays for the resources they use.

The inherent scalability of the Cloud allows a DR environment to be affordably maintained with very low resource utilization.

Then it is only in the event of a disaster that additional resources are dynamically allocated. With no capital expenditure to outlay for a secondary server or ongoing maintenance requirements it is easy to see why Cloud based DR wins hands down over traditional models.

The end result is a win-win for organizations that benefit from overall faster failover time and improved protection.

Warming Up Cold Disaster Recovery

Not all organizations require the restore times of a Hot DR solution. In these cases Cold DR in the cloud can be the more appropriate and much less expensive option. The major issues with Cold DR solutions are the manual effort and time required to restore systems. Traditional cold DR vendors provide rented space with power, cooling and some connectivity; everything else is the responsibility of the customer. In the event of a disaster declaration, or even just for a test, a team must fly or drive out to the disaster recovery site with the backup tapes, set up the equipment and networking and then bring applications back online. All of which could take well over a week. Many customers find that the short windows available for DR testing don't allow adequate time to set up network connections and get their applications up and running. While it may seem cost effective to reserve empty space, it can be surprisingly expensive and costs balloon when a disaster is declared and the cold site has to be activated.

The good news is that Cloud technology solutions are warming up Cold DR by removing some of the difficulties encountered during system recovery and dramatically reducing the time to recovery. Rather than having to lease or buy servers in an emergency, space is simply reserved in the Cloud. Networking connectivity can be set up and tested, which dramatically reduces the time to restore.

Finally, a backup copy of the environment can be stored by the Cloud vendor along with a documented process for restoring the customer systems. Then, in the event of a declaration the latest backup tapes are shipped to the Cloud vendor and restored. This process can be streamlined further if backups are already stored directly with vendor on disk. Typically, customers see the time frame to restore reduced from well over a week to only a day or two depending on transportation requirements for their backup tapes. Since

space in the Cloud is reserved, rather than being constantly used, the customer only pays for the resources they need during a declaration. The end result is an affordable, ready to go solution with a much faster recovery time than traditional Cold DR.

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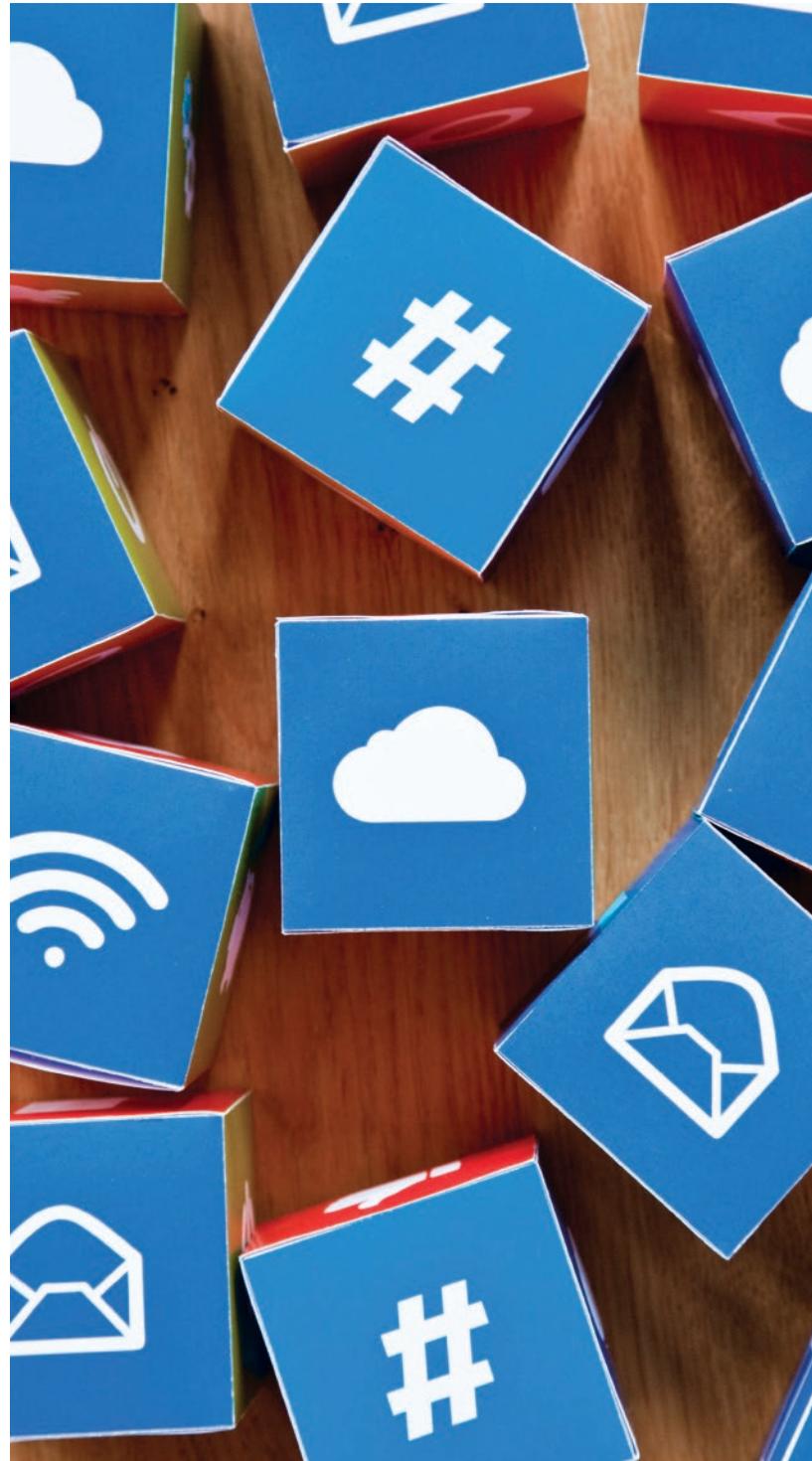
Choosing the Right Solution

It is well worth considering the benefits and cost savings available through a Cloud-based HA/DR solution. Determining the most appropriate solution is a balancing act involving:

– The maximum acceptable period of data loss, the Recovery Point Objective (RPO), usually the last backup or the time lag in a synchronized system

– The maximum acceptable time to recovery or how long the business can go without access to its systems, defined as the Recovery Time Objective (RTO)

– The potential cost of downtime – lost revenue, reduced productivity, industry penalties etc.

– The cost of the HA/DR solution

Symmetry offers expert solution architects who can help assess your requirements and create a flexible solution that protects your business operations. Core to each of Symmetry's solution is a low monthly fee that includes all the services and support required to implement, maintain and test the HA/DR solution, as well as restore systems in the event of a disaster.

Traditional vs. Cloud Solutions

	RPO	RTO	COST
Traditional Hot DR	1 Hour	<1 Hour	Very High
Clustered HA Solution	~Immediate	15 Min	Very High
Symmetry's Cloud Based Hot DR	~10 Min	~10 Min	Moderate
Traditional Cold DR	1 Week +	1 Week	Low
Symmetry's Cloud Based Cold DR	24 Hours	72 Hours	Very Low

For more information, please contact our Business Development Department at:

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