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Disaster Recovery in the Cloud Enables You to Protect More Data, More Economically

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Disaster recovery (DR) from remote sites with dedicated servers, storage, and networking gear has long been a best practice for mission-critical applications. However, other applications and data have often gone unprotected due to the costs required for redundant DR assets that are seldom, if ever, utilized. The ability to move DR to the cloud has changed the picture and enabled IT organizations to build more robust DR strategies than had been possible in the past.

The following questions were posed by NetApp to Phil Goodwin, research director within IDC's Storage Systems and Software research practice, on behalf of NetApp's customers.

Q. Why are companies turning to DR in the cloud?

A. There are several reasons why DR in the cloud has captured a lot of attention in the industry, and the number 1 reason is economics. Historically, DR has been a very expensive proposition whereby organizations needed redundant infrastructure across datacenters to facilitate recovery.

The on-demand economics of cloud have changed that picture. Organizations can now contract for on-demand resources and thus have a very basic configuration in the cloud DR datacenter at a fraction of the traditional cost with the ability to scale up resources in the event of a disaster. Users should not forget, though, that offsite data storage is not enough. It's necessary to have entire compute, storage, and network resources available on demand in the event of an actual disaster.

IDC research indicates that a large majority of organizations use some type of cloud service, and DR is often the first step that organizations take when going to the cloud. In many ways, it's the perfect initial use case. DR is necessary for every organization, and it can be implemented nondisruptively to existing workloads and users. For that reason, it's often the entrée into cloud computing for many organizations.

Q. What options are available for moving DR to the cloud?

A. The good news for IT organizations is the disaster-recovery-as-a-service (DRaaS) industry is growing very rapidly, resulting in robust competition and consumer choice. The options range from very minimal assistance for do-it-yourself (DIY) types of organizations to what we describe as white-glove disaster recovery as a service. So-called white-glove providers offer extensive consulting resources and capabilities to help with threat analysis, infrastructure planning, migration planning, test development, runbook development, and human resources planning. These are all elements of DR that must be covered, whether by the IT organization or with the help of the provider.

For IT organizations, the real trick is to find a provider that meets your needs and budget requirements. The DIY providers are obviously much less expensive, but if the IT organization has neither the time nor the complete skill set to complete the task, it may be better served by seeking a more capable provider. There is robust competition in the DRaaS provider space, and IT managers should be able to find the ideal provider partner.

Q. How do the different approaches compare with one another?

A. On one end of the spectrum is the DIY organization. The reasons companies choose this option is because they want a lot of control over the DR implementation process and they have the internal expertise to handle it. They know how to plan and execute both testing and failover, and they feel very comfortable handling those processes themselves. They just want the cloud on-demand resources to provide better economics. Fundamentally, this no different from DR planning in the traditional manner: It's up to the IT organization to do all the work.

On the other end of the spectrum is the white-glove service for DR, as previously described. DR is really the classic triumvirate of people, process, and technology. In many disaster scenarios, the IT staff is equally impacted by the event and may not be available to staff the datacenter. White-glove vendors will help organizations with staffing and the logistics of recovery. They'll help them with failover and test processes, and they will also help plan all the necessary infrastructure to effectively execute a recovery.

Q. What are some of the challenges involved when moving DR to the cloud?

A. Most of the challenges are centered around the technology, which is the first threshold that an IT organization must cross with a provider. The key question is: Can that provider offer the range of platform services that the organization will need?

For example, there are many providers that cater to virtual infrastructure. However, nearly every IT organization also has physical infrastructure. In fact, many have legacy Unix applications and some have mainframe applications as well. So it's necessary to find a provider that can offer the range of capabilities needed from a technology perspective.

Another challenge is to keep the DR plan current. This may involve infrastructure change tracking and synchronization between primary and failover datacenters. The number 1 reason that failovers fail, whether in a test or an actual event, is that the DR plan is out of date and therefore incorrect. Savvy IT organizations include DR updating as part of their change management system. In fact, DRaaS providers are constantly updating their systems and configurations, thus avoiding system obsolescence.

Q. What are the top 3 things IT leaders should be aware of when moving DR operations to the cloud?

A. I would summarize by saying that all the rules that have always applied to DR in a traditional sense apply to the cloud. Organizations still must factor people, process, and technology into their DR planning whether applications and data are in the cloud, on premise, or between datacenters.

Start with a well-documented plan in which all the testing, human resources planning, and everything else that is relevant is well understood within the organization and not just within IT. The entire organization — end users, executives, business units, and other personnel — must understand what the disaster plan involves.

Next, perform regular testing of the DR process. Too often, IT organizations try to run a monolithic, once-a-year disaster recovery test only to face insurmountable barriers that make it extremely difficult to complete that testing. Instead, we recommend that IT organizations perform quarterly testing in smaller subsets, such as particular applications, and do so on a more regular basis and on a more limited basis, which will help reduce the number of possible variables.

Finally, ensure that there is application compatibility with the cloud provider. The organization needs to factor in what types of platforms and services are required for its applications and to ensure that the cloud provider can offer those as a solution.

ABOUT THIS ANALYST

Phil Goodwin is a research director within IDC's Storage Systems and Software research practice. He provides detailed insight and analysis on evolving industry trends, vendor performance, and the impact of new technology adoption. Mr. Goodwin is responsible for producing and delivering timely, in-depth market research with a specific focus on data protection, business continuity and disaster recovery, and data availability. Mr. Goodwin takes a holistic view of these markets and covers risk analysis, service-level requirements, and cost/benefit calculations in his research.

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