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# Disaster Recovery as a Service

**DRaaS is becoming increasingly popular among IT professionals and vendors alike. Find out what that means in this series of articles.**

1105 MEDIA

# The Rise of Disaster Recovery as a Service

**Microsoft has made a big bet that DRaaS will be a killer application for its Cloud OS and Azure service. Numerous players are making similar gambits.**

BY JEFFREY SCHWARTZ

**Providing the ability to recover from downtime is becoming easier and more affordable.**

**I**n today's new age of "always-on" business, prolonged downtime or even brief outages are no longer acceptable. Whether it's at a global enterprise with thousands of employees, a 200-person organization or even a small office, all are expected to have their core information systems up and running all the time. Providing the ability to recover from downtime—scheduled or unplanned—is becoming easier and more affordable thanks to a growing number of emerging enterprise-grade cloud-based Disaster Recovery-as-a-Service (DRaaS) options.

Many such DRaaS offerings, where organizations replicate snapshots of their data, system settings and applications to either a local or major cloud provider or dedicated hosting operator, have been around for some time from specialists such as SunGard or Verizon Communications and a variety of high-end solutions. But over the

past year, the sheer number and scope of options has started to amass, and many more are building out cloud-based disaster recovery service operations with varying types of capabilities, architectures and costs.

Microsoft recently made a huge splash launching an extensive new portfolio of cloud-based disaster recovery options, recognizing and emphasizing disaster recovery as a key driver for its hybrid and Infrastructure-as-a-Service (IaaS) offerings. The Microsoft disaster recovery thrust came on the heels of last year's release of Windows Server 2012 R2, which included the second version of Hyper-V Replica, providing point-to-point replication of Hyper-V virtual machines (VMs) via either a LAN or WAN connection (see "Hyper-V Replica for Disaster Recovery").

**Microsoft recently made a huge splash launching an extensive new portfolio of cloud-based disaster recovery options.**

Building on that, Microsoft this year made it possible to use its Microsoft Azure cloud in lieu of a secondary datacenter for disaster recovery. At the core is Azure Site Recovery, which Microsoft announced last year at its TechEd conference in Houston. Azure Site Recovery, which became generally available in October (see "First Look: Azure Site Recovery"), is a service enabling the replication of VMs between two datacenters or from an organization's site to Azure datacenters. The service, which unlike Hyper-V Replica also supports VMware VMs and Linux servers, offers automated protection of VMs, which Microsoft backs with a service-level agreement.

The July acquisition of InMage gave Microsoft an on-premises appliance that offers real-time data capture on a continuous basis, which simultaneously performs local backups or remote replication via a single data stream. Microsoft is licensing Azure Site Recovery with the Scout technology on a per-virtual or per-physical instance basis.

At its recent TechEd conference in Barcelona, Microsoft introduced some additional capabilities including support for its Azure Automation, a runbook automation service now in preview that lets customers automate Azure Site Recovery through planned support for Windows PowerShell scripting. Microsoft sees DRaaS as a key steppingstone to offering IaaS. DRaaS especially has appeal to customers because it delivers what for many is a much-needed capability that can be out of reach, and certainly far less expensive for those using secondary datacenters or operating co-location facilities.

## Extending Azure Disaster Recovery via Cloud OS

In the same way Office 365 might not suffice for all Exchange and SharePoint users, Microsoft realizes its own Azure service won't cut it for all seeking DRaaS, either, especially those with data sovereignty requirements. As such, many Microsoft managed services and cloud hosting partners are delivering DRaaS, while some are building up to that point. One such partner is Peak 10 Inc., a hosting and managed services provider with 25 datacenters in 10 markets, whose clients include Chiquita Brands, Magazines.com, Meineke, Pergo and the PGA of America. A longtime Microsoft partner, the Charlotte, N.C.-based company has seen significant growth in its DRaaS offering this year, says Monty Blight, a vice president at Peak 10.

**Not all organizations need, or can justify the cost, of the RTOs and RPOs of mere minutes.**

"Where we see people using Disaster Recovery as a Service from us are those who need a recovery time objective [RTO] or a recovery point objective [RPO] that's measured in minutes, rather than hours or days," Blight says. "The big key component of that is the replication piece between the two."

Of course, not all organizations need, or can justify the cost, of the RTOs and RPOs of mere minutes and most commonly, it depends on the application and business function. "Where this allows the customer to have private cloud, as well as data backup to a second site, it also means you look at integrating that file-level restore, which we do for Microsoft servers all day long," Blight says. "So it integrates in with our existing backup and restore and [DRaaS] option, but also specifically on the Cloud OS it gives them a second site to ensure their data is there."

## DRaaS Considerations

Indeed, while Microsoft and all of its rivals including Amazon Web Services Inc. (AWS) and VMware Inc., as well as thousands of local and regional managed services providers and hosting operators have similar designs on DRaaS. Whether or not you use all or part of the Microsoft DRaaS or Cloud OS stack, customers have no shortage of options. At the same time, not all are created equal and IT architects need to consider numerous scenarios, requirements and capabilities, warns Enterprise Strategy Group analyst Jason Buffington.

"Providers and IT decision makers need to beware of over promising on what disaster recovery means," Buffington says. "Real disaster

recovery—even in the cloud—still means I've got to have orchestration, I've got to build a sandbox so I can do testing, it means I've got to be able to define policies, so the right [VMs] come up in the right order. Based on priority and based on dependencies of those VMs, there's a lot more to it than, 'I'm going to make a copy of my VMs and put them someplace else and when something bad happens I'm going to turn them on.'"

Among those large enterprises using Hyper-V Replica to connect to secondary datacenters and the Azure cloud is ABM Industries Inc., the largest United States provider of facility management services ranging from HVAC repair, security and landscape maintenance with 100,000 employees and nearly $5 billion in annual revenues. Andre Garcia, ABM's assistant vice president of global technology, referred to the disaster recovery scenario during a panel session on Hyper-V migration at the August TechMentor Redmond conference, which, like *Redmond* magazine is produced by 1105 Media Inc.

**Numerous software and services providers say organizations need better automation and replications than Hyper-V replica can offer.**

"Hyper-V Replica is just a feature of Hyper-V that's on by default—you just have to right-click and tell VMM [Virtual Machine Manager] what the target is for that source," Garcia said during the panel discussion. "It's a phenomenal capability," added panel participant Matt McSpirit, a Microsoft technical product manager focused on Hyper-V. "It has enabled organizations to replicate changes up to every five minutes, between Site A and B. It's well-received, with a PowerShell layer for automating it."

One shortcoming of Hyper-V Replica is that it's synchronous. Microsoft has said it's developing an answer to that with a new tool called Storage Replica (see more).

## Alternative Services Emerge

Yet numerous other software and services providers—many point out they're Microsoft partners—say organizations need better automation and replications than Hyper-V replica can offer. Many of them point to better recovery times, links to multiple clouds and faster continuous data protection (CDP), compression and data deduplication algorithms. Most dismiss Microsoft Hyper-V Replica as a suitable base-level replication mechanism for creating Windows Server Hyper-V clusters, but not sufficient for providing complete DRaaS. There's no shortage of those who have stepped up their DRaaS

offerings and market presence this year. Among them in various stated of delivering new DRaaS capabilities are Acronis International GmbH, ArcServe (spun off from CA Technologies), Asigra Inc., Axcient Inc., Dell Inc. (AppAssure), Hewlett-Packard Co. (via its Helion cloud platform), Nasuni Corp., Symantec Corp., Vision Solutions Inc., Unitrends, Veeam Software and Zerto, while CommVault is said to have new DRaaS capabilities in the works.

"Hyper-V Replica definitely has a place for the lower tier workloads," says Tim Laplante, a senior product director at Vision Solutions Inc., supplier of DoubleTake. "But where you need true high availability or you need to replicate it to something other than Hyper-V, you're going to need a solution like ours, where you need the real time and the flexibility from a target perspective."

Laplante points to Peak 10 as a provider that subscribes to that model. Peak 10's Blight says while using Hyper-V Replica is suitable in certain scenarios is suitable, in others he sees the need for third-party solutions, notably Double Take and Zerto.

"The customer who needs DoubleTake requires real-time replication," Blight says. In cases where CDP is necessary, Peak 10 has also been working with Zerto, whose namesake software has long-offered that capability for VMware environments and last month gained Hyper-V support.

Many providers of backup software are making big pushes into DRaaS. Veeam, the rapidly growing provider of VM backup and disaster recovery software for midsize organizations, in October kicked off a major push into DRaaS, adding a component to its newly branded suite called Veeam Backup and Replication v8. A key new component in its new release, Cloud Connect, offers an interface that lets users search a network of partner cloud providers and MSPs. The initial Cloud Connect supports just backup and recovery. Next year providers will also be able to deliver DRaaS using Cloud Connect.

"We believe that next year will be the year where disaster in the cloud will start to become mainstream," says Veeam CEO Ratmir Timashev, "and we will be one of the driving forces for that, because we have a better license base and we provide this very easy out-of-the-box experience for end customers and for our service providers."

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*– Monty Blight,*
*Vice President,*
*Peak 10 Inc.*

## The MSP Azure Connection

Veeam is also enabling its MSP partners to use the back-end services of Azure. The company has made Cloud Connect available in the new Azure Marketplace. "Veeam cloud providers who want to offer Veeam Cloud Connect [can] leverage Azure to provide the underlying core infrastructure—network, compute and storage in the form of VMs," says Rick Vanover, a Veeam product strategy specialist. Selecting the Veeam Cloud Connect option in the [Azure] Marketplace will let that Veeam partner run the Cloud Connect infrastructure in Azure."

Unlike Veeam, Unitrends operates its own cloud and argues it offers higher service levels than what's available by larger cloud services like Amazon EC2/S3 and Azure. In addition to integrating its on-premises appliance with its cloud, Unitrends offers its own DRaaS and touts a tool called Reliable DR, which offers governance and compliance auditing. The company says its DRaaS has grown 180 percent this year to hundreds of customers. "They have the advantage of our software to build out similar services that we have," says Subo Guha, Unitrends vice president of product management. Unitrends is still considering whether to forge ties with Azure, Amazon or another major cloud network.

**"Public clouds are generally not purpose built, so they're good at many things, not great at any one application layer."**

*– Justin Moore,*
*Axcient CEO*

Not all DRaaS providers see the benefits of using a larger cloud provider. "Public clouds are generally not purpose built, so they're good at many things, not great at any one application layer," says Justin Moore, CEO of Axcient, which provides a turnkey replication appliance and runs its own multi-petabyte cloud for DRaaS. "If you think of disaster recovery as a service, it's more of an application layer offering than it is an infrastructure."

The City of Williamsburg in Virginia is among those who have deployed a DRaaS solution using the Axcient service, where it backs up 10TB of data including its Novell GroupWise server, SQL Server databases and file systems, all running on 22 servers tied to VMware-based VMs. The replication is performed overnight, meaning in a worst-case scenario, the city's data would be 24 hours old. "We're pretty small so that's a pretty good recovery time objective," says the city's IT manager Mark Barham. "I could knock it down to 30 minutes if I wanted to."

The Outdoor Group LLC, which supplies sporting goods gear—mainly high-end archery equipment—has started using the Veeam

Cloud Connect tool through DR provider Offsite Data Sync to replicate its Exchange e-mail system, SQL Server databases, and various application servers. "If we lose that information we're basically starting over from scratch," says IT Director Jim Klossner.

TBG Partners, a landscape architecture firm uses Nasuni's replication service. With the Nasuni appliances, CTO Greg Nichols says his company can replicate large CAD files that could be gigabytes in size each. Nasuni offers customers a choice of AWS or Azure to host their backed-up data. Nichols says data is backed up more frequently for the firm's architects. "Having it backed up every five minutes is great for our users, because they literally don't lose anything," he says.

## Buyer Beware

Gartner Inc. analyst Pushan Rinnen warns customers that Backup as a Service shouldn't be confused with DRaaS, even as many of the same companies offer both. "Disaster recovery involves not just the bits of the data, a copy of the storage part, but a lot of the business processes in the servers, applications and the consistency of the data," she says. "It's a lot more complex than backup."

If you're not using DRaaS yet, you're not alone. Many of these services are in their evolutionary state, Rinnen says. "We are definitely seeing more implementations of Disaster Recovery as a Service," she says. "But we're still very early at the beginning stage." R

*Jeffrey Schwartz is editor of Redmond magazine and also covers cloud computing for Virtualization Review's Cloud Report. In addition, he writes the Channeling the Cloud column for Redmond Channel Partner. Follow him on Twitter @JeffreySchwartz.*

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# 7 Data Recovery-as-a-Service Platforms Gaining Speed

**Microsoft has made a big bet that DRaaS will be a killer application for its Cloud OS and Azure service. Numerous players are making similar gambits.** JEFFREY SCHWARTZ

**Some suppliers run their own cloud services.**

I f **Microsoft's Hyper-V Replica** doesn't meet your service-level requirements, there's no shortage of providers of software, hardware and appliances that suppliers are making available for cloud-based Disaster Recovery as a Service (DRaaS). Many are offered as appliances, others as pure software and services solutions.

Some suppliers run their own cloud services, others are in the process of enabling partner networks of local and regional managed services and hosting providers to deliver those services. A number now also offer the option to use both local services providers and large ones such as Amazon Web Services (AWS) and Microsoft Azure. Others are still looking into doing so. Here are seven providers that have recently updated their offerings:

## DRaaS Part of Veeam Availability Suite via Cloud Connect

The newly released Veeam Software Data Availability Suite v8 looks to enable customers who have used its virtual machine-focused backup and recovery software to implement disaster and recovery capabilities via secondary datacenters or using a cloud services provider. CEO Ratmir Timashev says that Veeam is on pace to post $500 million in booked revenue (non GAAP) this year and is aiming to double that to $1 billion by 2018. To get there, Timashev sees the growing DRaaS business as a key catalyst of that growth.

Timashev says Veeam can reach those fast-growth goals without deviating from its core mission of protecting virtual datacenters. The new Data Availability Suite v8 incorporates the company's new Cloud Connect interface that will let customers choose from a growing network of partners that are building cloud-based and hosted backup and disaster recovery services.

The Cloud Connect component initially only supports backup and recovery with DRaaS replication promised early next year, Timashev says. "From the user perspective, they are just going to see in the interface, 'Do you want to also backup up to cloud?,' and then they can select, 'Yes,' and then they can go directly to our Web site for the services provider they want to use. We have a simple registration and certification process for them to become a services provider who is using the Cloud Connect. So customers will be able to select in different countries the services providers in their cities."

Because Veeam Cloud Connect just became available, the company has only formally announced a handful of providers offering the service. They Include Cirrity LLC, iLand, NewCloud Networks, OffisteDataSync and Phoenix NAP. Veeam says it aims to have 1,500 services providers available in the coming year.

The new v8 suite offers a bevy of other features including what it calls "Explorers" that can now protect Microsoft Active Directory and SQL Server, and provides extended support for Exchange Server and SharePoint. Also added is extended WAN acceleration introduced in the last release to cover replication and a feature called Backup IO, which adds intelligent load balancing.

> **"We have a simple registration and certification process for them to become a services provider."**
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> *– Ratmir Timashev,*
> *Veeam CEO*

## Unitrends New Offering Links Appliances and Cloud Service

The new Unitrends DRaaS offering uses the company's own cloud network, which it believes offers higher service levels than larger cloud services providers such as AWS Inc., Microsoft and Google. Though the company hasn't ruled out partnering with such players or others in the future for certain capability, the DRaaS offering lets customers use its appliances to conduct on-site backups of servers and virtual machines (VMs) and utilize its continuous data replication technology for data, systems and applications to the company's No Limits Cloud service, which the company says offers 24x7 telephone services and the use of its newly acquired optional Reliable DR disaster recovery testing tool to meet compliance and governance requirements.

Either live VMs or physical servers are spun up in real time to the cloud, providing recovery of those systems in the event of unplanned downtime or a disaster. On-premises appliances range in configuration from 1TB to 97TB and the company also offers software-based virtual appliances for instant recovery of both physical and VMs.

"We take it one step further and provide what we call deep virtualization, meaning we can go into the application that sits on the virtual machine," says Ubo Guha, Unitrends vice president of product management. "There may be an application like Exchange or custom apps that need to have a lot more deeper management of the operating system, the application, and you might want to adjust things."

## Vision Solutions Adds DRaaS to DoubleTake

The new DoubleTake 7.1, released last month from Vision Solutions Inc., dons a number of improved migration and high-availability features, but also provides disaster recovery for Windows hybrid cloud environments. It's suited for DRaaS, thanks to a new metered usage feature available for cloud and managed services providers deploying the product.

DoubleTake 7.1 is also now fully API-enabled and designed with full server data replication and is container-based rather than volume-based. It supports the new Microsoft virtual hard drive format VHDX and its Volume Shadow Copy Service (VSS), says Tim Laplante, director of product strategy at Vision Solutions.

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> – *Ubo Guha, vice president of product management at Unitrends*

"This provides more granular level of control and gives you that near CDP [continuous data protection), which is nice because it gives you the best of both worlds," Laplante says. "If there's a disaster and you need to execute your DR plan, it gives you the option at that point to say, 'Do I need to go back to that exact point in time, or do I need to go back to 15 minutes ago because it was really just a virus or data corruption that happened, so I need to step back for a couple of minutes to the point that happened before then?"

Besides the metered usage, it's suited for DRaaS in that the DoubleTake 7.1 repository can replicate both physical machines and VMs on-premises to another datacenter, private cloud or public cloud. Likewise, recovery service can be anywhere in the physical, virtual and cloud mix, as well. Administrators can specify discrete repository server targets, so customers know exactly where a specific system and data is, which should appeal to those who have sovereignty requirements. "It's not that your data is in multiple zones," Laplante says. "You know exactly where that data is when you need it for compliance purposes."

With the new disaster recovery feature in DoubleTake, LaPlante says Vision Solutions will step up working with services providers to offer DRaaS. "It's a huge piece of where we see our growth," he says.

### Zerto Virtual Replication Now Supports Hyper-V

Zerto, a 4-year-old company with headquarters in Israel and the United States that provides disaster recovery and replication software, until now has a following among VMware Inc. shops. The company has recently entered the Hyper-V world. The Zerto Virtual Replication now supports replication of Hyper-V hypervisors to other Hyper-V targets, as well as to vSphere and vice versa.

In short, the company says its CDP-based replication tool is now hypervisor-agnostic. Gil Levonai, the company's president of marketing, says its software offers recovery point objectives (RPOs) of seconds, and said it can provide consistent recovery of multiple VM applications. It doesn't use snapshots, just CDP, automatically orchestrates disaster recovery processes ensuring the consistency of applications and data, and generates reports.

**Zerto says its CDP-based replication tool is now hypervisor-agnostic.**

"We took real hard enterprise-class replications from storage and moved it into the hypervisor," Levonai says. "You don't have to worry about where the VM is and you don't care about where the data is. You can move it between storage. We are agnostic to storage because we are replicating virtual objects, which can be VMs or volumes."

## Dell Combines Backup and DRaaS in New AppAssure Suite

Dell Inc. was one of the earliest players to offer DRaaS to enterprises and earlier this year said it has more than 1,000 managed services providers (MSPs) offering its AppAssure replication software. The latest release, AppAssure 5.4, offers multi-target and multi-hop replication, which the company claims makes it suited for multi-tier disaster recovery.

AppAssure 5.4 also lets customers set multiple data retention policies both for on-premises and off-site cloud and MSP facilities. Customers can customize replication schedules for each target, enabling them to throttle when needed and restrict speed in bandwidth-limited situations.

Dell is offering AppAssure as part of a new data protection that includes NetVault Backup and vRanger backup and recovery offerings. The company is also now offering a capacity-licensing model with a range from 1TB going as high as 250TB of data.

## Acronis Enters DRaaS with nScale Deal

Known for its protection of Windows physical and virtual file server data protection wares, including specialty versions for SharePoint, Exchange, SQL Server and VMware environments, Acronis International GmbH in September jumped into the DRaaS mix with the acquisition of San Francisco-based nScaled.

Acronis says users of its Hosted Backup as a Service offering will be able to use nScale to extend that into a cloud-based disaster recovery offering. The company will enable its partners to offer the nScaled DRaaS offering, which is designed to enable remote and local sites to failover via the cloud to ensure recovery within minutes of an outage.

**AppAssure 5.4 lets customers set multiple data retention policies both for on-premises and off-site cloud and MSP facilities.**

**Nasuni says service is suited for providing recovery of blocks of data including CAD and BIM files.**

## Nasuni Adds Azure to DRaaS

Until recently Nasuni Corp. has relied on AWS as the cloud provider for its DRaaS offering, now the company has added the Microsoft Azure service as an option. Customers can now choose which provider they want their data replicated to, or if they prefer, can use both for contingency.

The latest version of its offering was released this summer. It includes the 6.0 release, which the company says adds file data virtualization that separates file data from storage hardware. It adds global file locking to utilize cloud storage architectures. With it is the new Nasuni Filer NF-100 appliance, the company says service is suited for providing recovery of blocks of data including CAD and BIM files. **R**

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