



5 Reasons to Consider Disaster Recovery and High Availability as a Service

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Introduction

Due to the complexity of protecting ever-changing infrastructures and the perception by some that disaster recovery planning and testing is “optional,” IT departments in companies of all sizes tend to be in a constant state of struggle. Key challenges include:

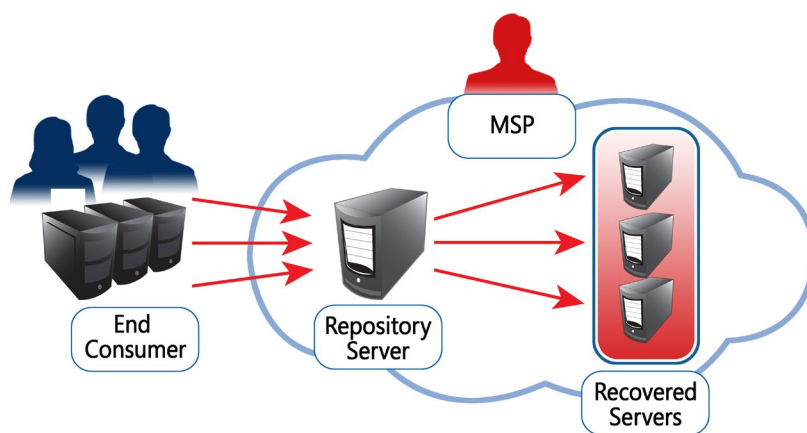
- Justifying and funding the proper disaster recovery infrastructure
- Getting their DR infrastructure updated and tested
- Finding time to investigate and understand the dizzying array of new cloud-based disaster recovery solutions.

But, these challenges are not insurmountable. Thanks to advancements in cloud computing and disaster recovery software, there are more choices than ever before for more simplified, cost effective datacenter protection.

Welcome DRaaS and HAaaS

Disaster Recovery as a Service (DRaaS) and High Availability as a Service (HAaaS) are options that are rapidly gaining popularity among enterprises and are being offered by increasing numbers of service providers. Let's define.

DRaaS in its most generic form is when a third-party Managed Service Provider (MSP) provides you some type of remotely-hosted disaster recovery services to protect your data and applications. The range of services offered can vary greatly from provider to provider.



The level of recovery capability can vary as well, protecting just data files, one or more critical applications, an entire single server or every server in the data-center. But, for any level of recovery to be possible in the first place, replication to the MSP's disaster recovery site is always required.

Most MSPs provide options that include both replication services, for data protection, and the ability to recover your most critical servers, should those servers fail. How the data or servers are recovered, and especially how quickly they can be recovered, varies by the kind of service being contracted. But in general, DRaaS implies slower, even manual recovery options.

HAaaS on the other hand, takes DRaaS a step further. With HAaaS, in addition to replicating servers and applications in real-time, if a server fails, the HA server and storage provided by the MSP must be able to take over processing immediately. This requires HA technology that ensures that the server's program and OS settings are also replicated continuously and that the applications on an existing cloud-hosted VM can be activated immediately or that an entire new VM can be automatically provisioned, configured and activated within seconds or just a few minutes.

5 Reasons to Consider DRaaS and HAaaS

Why should you be considering hosted HA and DR services?

Here are 5 reasons:

1. **Reduce Disaster Recovery Costs** – if you currently have a disaster recovery site in place, you are already familiar with the high costs associated with it. Beyond the unavoidable investments in replication software and the required software licenses for servers, storage, and security, there are a number of significant additional costs involved:

- Owning your own building or leasing space for your secondary datacenter
- Alternatively, leasing a cabinet or cage in a datacenter provider
- Monthly costs associated with power / cooling / internet bandwidth at the secondary site
- Purchase or lease of servers, storage, and network equipment at the secondary site
- Travel to and from datacenters or on-site staff at the secondary datacenter

Most of these additional costs are effectively eliminated by using DRaaS/HAaaS through a service provider.

2. **Reduce Complexity** – as the list above showed, building and maintaining a secondary DR site can be both costly and complex. If all of that infrastructure could be eliminated the administration, upgrade requirements, maintenance contracts, and more could be eliminated as well.
3. **Achieve Interoperability** – so many DR solutions are based on replication / synchronization to/from only one specific hypervisor, or may be restricted to use with one model physical server. Some solutions are even application-specific. In contrast DRaaS solutions are available that are hardware,

hypervisor and application agnostic, so you can protect virtual machines from different hypervisors, replicate data between dissimilar storage systems, etc.

- 4. Save Time** – by reducing complexity and simplifying the disaster recovery solution with a single provider, IT groups will save a tremendous amount of time as compared to managing their own disaster recovery site. Additionally, if you have yet to deploy your own DR site, you'll be able to deploy DRaaS within hours or days (depending on your number of servers) as compared to the weeks or months it can take to deploy your own site.
- 5. Provide a comprehensive DR solution** – in many cases companies who implement their own DR site have to do it in phases and only protect the most critical servers first (in many cases, never even being able to protect all servers). Because DRaaS is so much easier and more affordable, many companies are able to protect all of their servers (physical and virtual), providing a complete DR solution.

Typical Challenges in Adopting Public Infrastructure Cloud Services

Many companies are excited about public infrastructure cloud services. But they also have concerns about the challenges they will face when adopting this new model for protecting their business.

Those concerns include:

- Privacy and security of their data
- Loss of control and lack of self-service
- Availability, reliability, and performance
- Migration in and out of the cloud
- Migration from cloud to cloud

These are all valid concerns and are topics that you should discuss with any cloud providers you consider. These concerns are addressed by the provider's infrastructure, policies, service level agreement (SLA), and the DRaaS or HAaaS solution that they employ.

Best Practices in Selecting a DRaaS and HAaaS Solution

When evaluating DRaaS and HAaaS solutions yourself, how will you select from the numerous options available today?

Here are 7 must-have features and capabilities to look for when selecting a DRaaS / HAaaS provider:

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1. **Multi-platform support** – covering physical, virtual, and cloud hosted servers
 2. **Multi-cloud support** – over time, if your production infrastructure moves out to the cloud, you'll need the ability to leverage multiple clouds providers for DR, to mitigate the risk of a major outage at your sole cloud provider. This also simplifies migrating from one cloud to another.
 3. **Recovery into the cloud** – rather than just having a “backup image” of physical or virtual machines in the cloud, you want actual recovery of your servers from the cloud when disaster happens.
 4. **Flexible licensing** – your technology provider should offer you licensing and billing options for their products which fully support and enable a subscription based billing model.
 5. **Real-time replication** – Continuous protection without the need for a “backup window”
 6. **Scalability** – your DRaaS or HAaaS solution should be able to grow as you grow, supporting small businesses with just a few virtual machines, all the way to very large enterprises with thousands of physical and virtual machines.

Ensure that any provider you select meets all of these crucial feature requirements.

Recommendations

DRaaS and HAaaS solutions have advanced to the point that they are now realistic solutions for most every company. For enterprises that already have a DR site in place, they should investigate whether their TCO could be reduced by implementing DRaaS through a service provider. For those enterprises that don't yet have a DR site, they will find that DRaaS is an ideal solution, which will make your DR implementation easier, reduce the implementation time, and make DR easier to manage in the long run.

About the Author

David Davis is a well-known virtualization and cloud computing expert, author, speaker, and analyst. He holds several certifications including VCP5, VCAP-DCA, CCIE #9369, and has been awarded the VMware vExpert award 5 years running. Additionally, David has spoken at major conferences like VMworld and authored hundreds of articles for websites and print publications. David's library of popular video training courses can be found at Pluralsight.com. For more information on how to contact David, his speaking schedule, and his latest project, visit his personal website - VirtualizationSoftware.com.

