



OnApp DRaaS

Real-time data protection for your cloud

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Providing an effective disaster recovery service is essential if you want to attract mission-critical workloads into your cloud. OnApp DRaaS (Disaster Recovery as a Service) brings affordable, high performance DR to cloud providers for the first time.

Real-time protection without the cost

OnApp DRaaS goes far beyond simple snapshot-based DR services. You can offer real-time protection for virtual servers in your cloud, and sell high performance Disaster Recovery services with zero data loss guaranteed for most workloads.

Built on our proven cloud storage platform

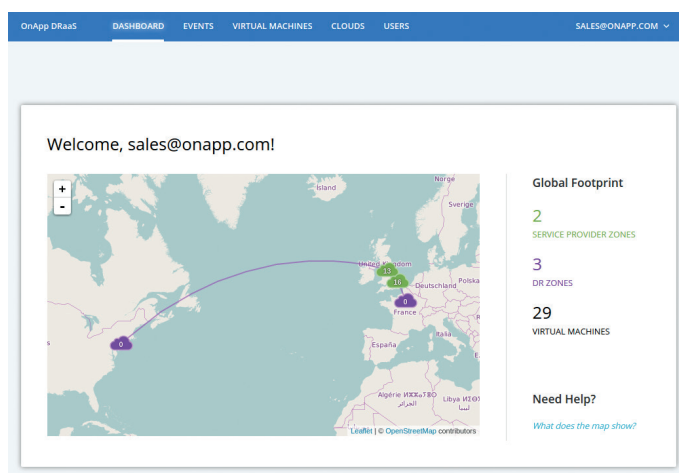
Usually, this kind of protection is only available to service providers who can afford to run multiple redundant cloud sites connected by expensive dedicated fiber links.

With OnApp DRaaS you can offer real-time protection for your customers' virtual servers, without the cost, because it's built on the integrated storage platform (OnApp Storage) built into your OnApp cloud.

Simply enable a virtual server for OnApp DRaaS, and the system copies all writes to a replication site, in real time.

Industry-leading DR performance

- > RPO - Recovery Point Objective - measures how up-to-date recovered data is. So an RPO of 2 minutes means you may lose up to 2 minutes of data writes. OnApp DRaaS has an RPO so low that you can guarantee zero data loss for the majority of workloads.
- > RTO - Recovery Time Objective - measures the time taken for an application to start running again after a failure. OnApp DRaaS has an RTO of less than 5 minutes for most virtual servers.



The OnApp DRaaS dashboard makes it easy to visualize and manage disaster recovery

OnApp DRaaS is available in two modes:

Public DRaaS

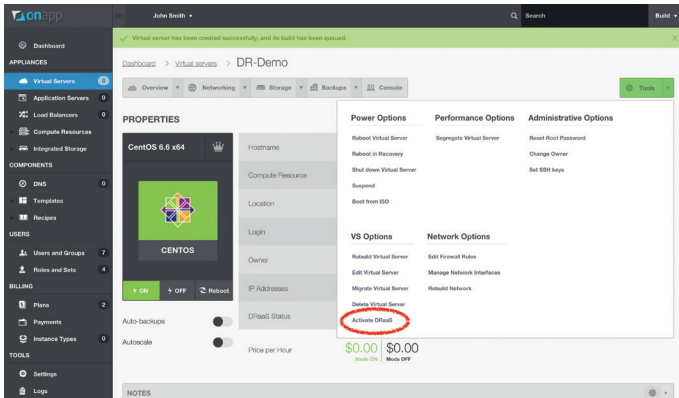
In Public DRaaS, OnApp provides a selection of remote replication sites across the world to protect your customers' data. Public DRaaS is a fully managed service, and this model supports virtual servers with simple public networks.

Private DRaaS

In Private DRaaS, use your own datacenters as remote replication sites. This model supports more complex network setups, including routable private address networks.

How it works

OnApp DRaaS builds on OnApp Storage, the integrated/distributed SAN built into the OnApp Cloud Platform.



[Enable DRaaS for virtual servers in the OnApp control panel](#)

In order to benefit from OnApp DRaaS, your compute zones must use OnApp Storage for virtual servers.

Activating protection for virtual servers

Once the zone replication settings are configured, DRaaS can be activated for individual virtual servers in that zone, via the OnApp Control Panel. You can allow users to activate DRaaS, or control that yourself.

When you enable DRaaS for a Virtual Server, a small helper VM is created on the remote replication site, and all data is copied across. Once the data is synchronized, all future Virtual Server writes are copied across at the block level.

The DRaaS dashboard

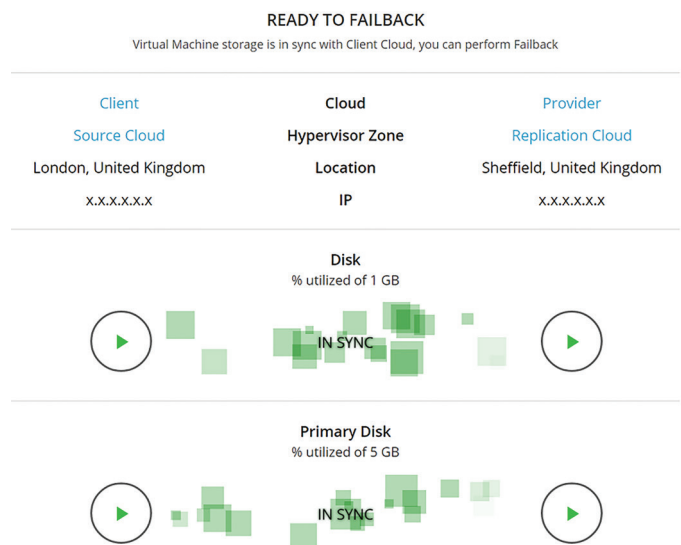
Once a virtual server has DRaaS activated, it registers on the DRaaS dashboard, which is used to control all DR actions, such as failover and failback. The DRaaS dashboard runs independently of the OnApp control panel, so you can activate DR for your clients even in the face of a major outage.

The dashboard shows the status of all of your clouds and highlights any virtual servers that need attention. You can drill down into a virtual server to see details of the replication status of each disk, and to activate failover or failback for that virtual server.

Enabling DR for your cloud

OnApp DRaaS is available as an add-on to OnApp Cloud v4.2 or later. Once activated, you can choose to enable DR for some or all of your compute zones, and choose different replication targets for each zone.

For example, you can replicate to a geographically distant location for greater protection against local outages, or to a nearby location if there's a requirement to keep data within a specific jurisdiction.



[See the replication state of each disk](#)

Detecting outages and initiating failover

OnApp DRaaS monitors uptime for each cloud that has disaster recovery enabled. If a problem is detected, it actively probes to see if any DRaaS-enabled virtual servers are down.

Any problems discovered are automatically flagged on your DRaaS dashboard, and an email alert is generated. You, or your customer, can then activate the failover process through the OnApp control panel. You can also activate failover any time you need to, for planned maintenance.

The DRaaS failover process

When failover is initiated, an identical virtual server is deployed at the DRaaS location using the replicated data.

In our public DRaaS service, the new virtual server will have an identical network configuration but will be assigned a different IP address: it will therefore need a minor update to DNS records to maintain a seamless service for end users.

Private DRaaS supports IP address mobility if you have the correct infrastructure.

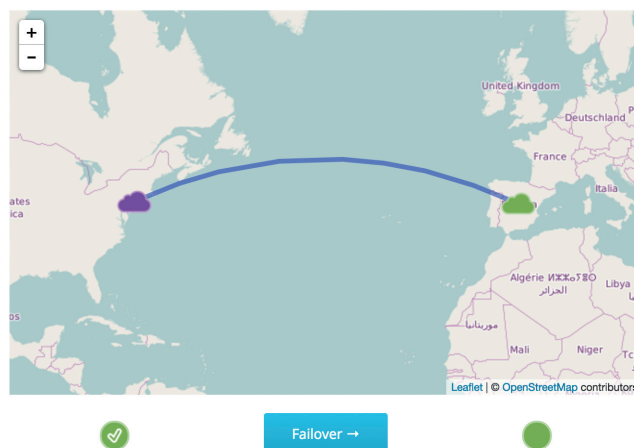
Real-time restore

Once the outage has been fixed, the failback/restore process is again triggered manually. OnApp DRaaS automatically restores to the original virtual server, or creates a new virtual server in the original cloud. It ensures all live data from the failover VM is replicated back to the source, in real time.

Once the data is in sync the final stage is to boot the VM on the original site, at which point DRaaS resumes replication from the source back to the DRaaS site.

All Clouds / Madrid / KVM-Zone-Madrid / test2

Virtual Machine test2



OnApp DRaaS: start failover with a single click

OnApp DRaaS requirements

Public DRaaS:

- You must run OnApp Integrated Storage on all compute zones you wish to replicate
- Sufficient bandwidth for the replication (recommend >100Mbps)
- Your Compute resources (HVs) must be publicly accessible (e.g. via a NAT)

Private DRaaS additional requirements:

- To activate IP address mobility you will need the appropriate infrastructure
- You are responsible for ensuring there are equivalent networks available on both the provider and source sites

More information:

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