

CLOUD-BASED DISASTER RECOVERY

DataGardens SafeHaven for Private Cloud Recovery

THE OPPORTUNITY . . .

Despite all the advantages of IaaS, a number of businesses are still reluctant to run core IT services on an external multi-tenant cloud. Sometimes the concern is over security. Other times it is about reliability of service in an environment which may suffer from resource over-commitment. Many of these businesses will insist on running core IT services in their own internal data centers for the foreseeable future.

Nevertheless, precisely because these businesses are so risk adverse, they are often eager to rely on outside provider when it comes to protecting their data centers from disaster.

In such cases, SafeHaven Disaster Recovery-as-a-Service (DRaaS) with recovery in a dedicated cloud is the perfect solution. A business can continue to run production IT systems in its own data center during normal operations, but also have the freedom to spin-up an exact replica data center within a dedicated cloud whenever the need arises.

The business wins through:

- Leveraging the specialized operational expertise of a dedicated DRaaS provider.
- Gaining a recovery data center with all the security and reliability typical for a top-tier cloud provider.
- Operationalizing the infrastructure costs it would incur with a “home baked” disaster recovery solution.
- Amortizing many of the operational costs for DRaaS across the cloud provider’s customer base.
- Regular external testing of its disaster recovery plans.

Also, since most real IT downtime and data loss traces not to natural disaster but actually to errors in operational procedures, it is prudent to have the recovery data center provisioned by an independent operations team.

SafeHaven DRaaS can be purchased either as a self-managed or fully managed service. With both options, DataGardens offers cloud providers and their subscribers 24 X 7 software support.

Q: What is DataGardens SafeHaven?

A comprehensive software system for cloud-based Disaster Recovery-as-a-Service (DRaaS).

Q: What do cloud providers gain?

- Access to a rapidly growing market
- Differentiation of their cloud platform
- Revenue for cloud & network infrastructure
- Pull through revenue for consulting services
- An easy to use on-ramp to the cloud

Q: How does SafeHaven work?

- Software-only solution
- Virtual appliances perform asynchronous LUN-level replication
- Virtual appliance orchestrates recovery plans & run book automation
- Includes both JAVA console & RESTful API for integration with 3rd party portals
- Deploys non-disruptively with optional agents in protected servers

Q: How is it deployed?

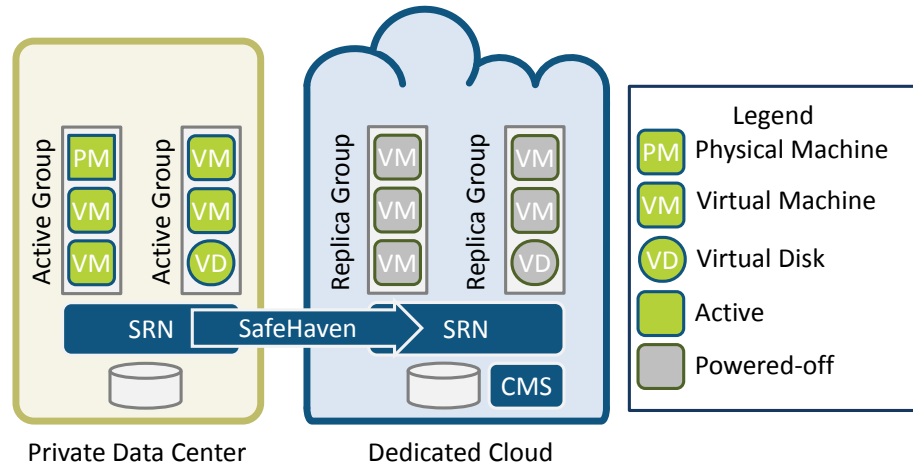
- Each subscriber can protect up to 64 physical and virtual data centers
- Deploys with an automated installer
- Servers & data volumes can be organized into “Protection Groups”
- All systems within a Protection Group recover to the same instant in time according to customizable recovery plans.
- Servers and data volumes are on-boarded for SafeHaven protection with zero downtime.

Q: What is the licensing model?

Cloud providers charge subscribers through a standard SaaS model

THE DATAGARDENS SOLUTION

A high-level network architecture for the SafeHaven solution is shown in the figure below.



A simple architecture provides comprehensive enterprise-class disaster protection . . .

Sample SafeHaven deployment with protection in a dedicated cloud

The company can protect both physical and virtual servers along with their associated data drives. When protected servers are physical, they are protected by virtual replicas within the cloud. Also, when protected systems have inter-dependencies and must be recovered at single instant in time and with a specified recovery plan, they can be configured into “Protection Groups”. Every active Protection Group within the production site has a remote replica within the cloud. The VMs within the replica Protection Groups are kept “parked” under normal operating conditions—which means that they are powered off with only minimal reserved memory and CPU.

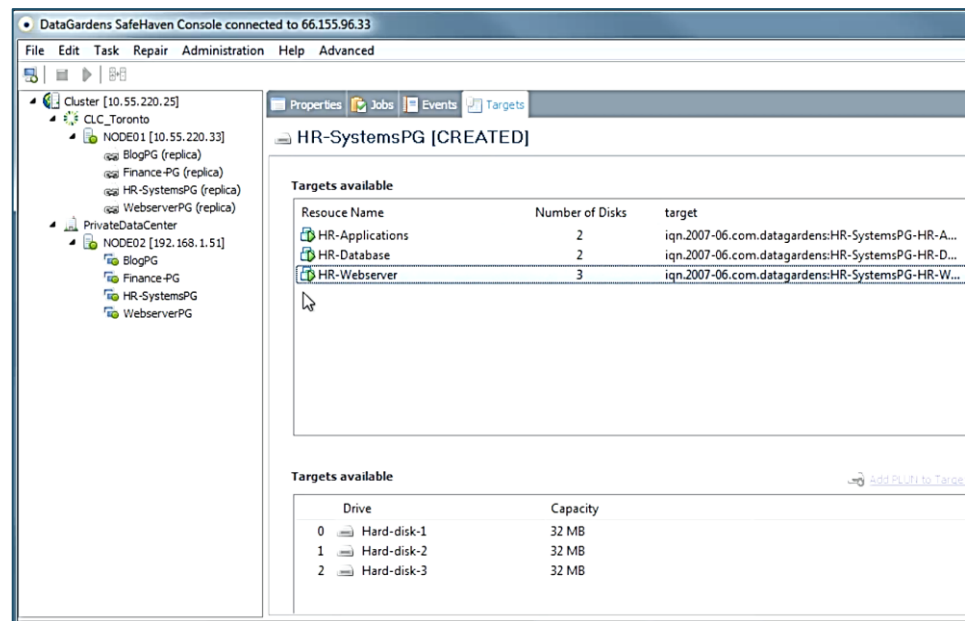
. . . with scalable replication and recovery orchestration

A DataGardens virtual appliance called a SafeHaven Replication Node (SRN) receives mirrored updates from active servers and data drives in the production site and continuously transmits these updates to a peer SRN within the cloud. The SRNs maintain up to 2048 scrolling checkpoints so that in cases of system or data corruption, administrators can roll the Protection Group back to a selected instant in time.

Another DataGardens virtual appliance called the “Central Management Server” (CMS) resides within the cloud. It monitors for failure conditions, sends alerts to administrators, and relays commands to the SRNs. The CMS acts like a command and control station for the company’s entire disaster protection environment. If desired, the company can use a single CMS to protect up to 64 sites while deploying multiple SRNs per protected site. All sites can have active Protection Groups and can share their disaster protection responsibilities.

DEDICATED CLOUD RECOVERY SERVICES

If a disaster occurs in its private data center, the company can recover protected IT systems in its dedicated cloud using the SafeHaven Console.



Point-and-click recovery through a simple management console . . .

SafeHaven Console

When a failure condition occurs, SafeHaven issues e-mail alerts to selected administrators. Recovery can be fully automated or achieved through simple point-and-click commands. Further, recovery takes just a few minutes to complete and, since protected IT systems are being constantly replicated into the cloud, little to no loss of data occurs. Finally, the company's DNS can be pre-configured to redirect clients automatically during site outages so little service interruption occurs.

Recovery services include:

- Migration without data loss and with minimal service interruption,
- Failover within a few minutes and with minimal data loss,
- Failback to the original site without data loss,
- Rollback to any one of 2048 checkpoints, and
- Non-disruptive failover testing with recovery audits.

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