

VTCloud® Recovery Frequently Asked Questions

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Introduction

1. What is VTCloud® Recovery?

VTCloud® Recovery is a fully managed disaster recovery solution that utilizes VMware vCenter™ Site Recovery Manager™ (SRM) to provide reliable, efficient management plans, non-disruptive testing, and fully automated site recovery, migration and failback.

2. What is included in VTCloud® Recovery?

The service includes the following features:

- **IaaS:** virtual servers and storage in the VTDC (recovery site) to mirror the primary environment (recovery site)
- **Provisioning:** of the VMware tools required to “synchronize” the protected site and recovery site
- **Operating Manual:** Written guide that details all the steps and responsibilities required to failover to and failback from the recovery site.
- **Testing:** quarterly non-disruptive testing of the failover process
- **Management and Administration:** VTDC engineers monitor and support the health and status of the IaaS and replication from the protected site, including maintenance and support of the VMware tools.
- **Failover Assistance:** Venture will provide recovery assistance services as set forth in the Operating Manual produced during provisioning.

3. What is a protected site, and what is a recovery site?

A protected site is the primary site where virtual IT infrastructure supports critical business needs. A recovery site is a remote location where the protected infrastructure is “mirrored” and ready for failover should the protected site become inaccessible.

There are multiple scenarios for the protected and recovery sites involving the customer data center(s) and Venture Technologies Data Centers (VTDC) in Jackson and Dallas.

Scenario	Customer DC	VTDC Jackson	VTDC Dallas
1	Protected Site	Recovery Site	Not Used
2	Protected Site	Not Used	Recovery Site
3	Protected Site	Recovery Site	Recovery Site
4	Not Used	Protected Site	Recovery Site
5	Not Used	Recovery Site	Protected Site

4. Does this service also replicate physical servers?

No. VTCloud® Recovery service is only for virtual servers, but Venture’s VTCloud Backup service can offer data protection for Physical Servers.

5. If we are already backing up our data and servers, why would we need a cloud-based DR solution like VTCloud® Recovery?

Backup solutions should continue to be used for day-to-day data protection. Disaster Recovery solutions like VTCloud® Recovery offer protection from physical disasters, malicious attacks, and human error. An unplanned full or partial failover to the recovery site enables your virtual servers to quickly resume operation after a disaster.

As VTCloud® Recovery only maintains a single replica of the customer's data for restoration in a disaster, it is not designed to replace a file-level backup solution, but rather to compliment it to ensure total protection.

Features and Benefits

6. What are the key features?

Venture designs, implements, tests and manages a reliable Disaster Recovery plan for critical IT services. The solution is housed and managed by Venture in our SOC 2 Type 2 Audited Data Center. VTCloud® Recovery also provides the following:

- Replaces traditional, error-prone manual runbooks with simple automated recovery plans.
- Automates site recovery and migration processes, thus ensuring fast, reliable recovery.
- Enables frequent non-disruptive testing of recovery plans to ensure business requirements are satisfied.

7. What are the key benefits?

- Protection from the cost of downtime
- No upfront investment in duplicate hardware and software
- Fully automated architecture provides recovery and resumption of operations with aggressive RTO and RPO SLAs
- All-inclusive solution that includes on-site provisioning, periodic testing and assistance in transitioning operations
- Peace of mind!

8. Is VTCloud® Recovery fully managed?

Yes. Venture Technologies manages the installation and the recovery environment. Venture Technologies does not assume management of your on-site production environment. The process of activating the recovery service requires customer approval. Customer supported services outside of VTDC's control such as customer provided network services are the customer's responsibility.

9. Is this a pay-per-use model?

Yes. There is a small monthly fee per virtual machine that is replicated. This allows customers to easily increase and decrease usage without having a large capital investment.

10. Does Site Recovery Manager support a many-to-one disaster recovery configuration?

Yes. This service provides the option to protect multiple sites using a common "shared recovery site". Additionally, Venture Technologies VTCloud® Recovery can provide additional levels of protection for customer's needing more than one DR site for critical systems by utilizing our Jackson and Dallas Data Centers for site-to-site-to-site business continuity needs.

Security and Data Protection

11. How is data protected in flight?

Venture Technologies utilizes a number of methods of protecting a customer's data in transit. If the customer is using the Internet as the communication mechanism, we require a site to site IPSEC VPN using 3DES or AES encryption. Or the customer may opt for a private line connection, in which case the customer's data never leaves Venture's or the customer's private network.

12. How is data protected at rest in Venture's Data Center(s)?

Data at Rest Encryption (DARE) is accomplished using Self-Encrypting Disks (SED) on Venture's SAN. All VTCloud Recovery VMware VMDKs are stored on our SAN.

13. How can Venture's service help organizations remain compliant with regulatory/legal requirements?

Many regulatory or legal policies require that a customer's data be protected from disaster to restore services to consumers / customers within a certain timeframe. Venture Technologies' VTCloud® Recovery service can help you meet those requirements without the costly expense of a large capital purchase and the ongoing cost and complexity of maintaining a DR / BC site.

Optional Features

14. Does Venture offer a solution to back up my organization's data on laptops, desktops and servers?

Yes. Venture's VTCloud® Backup is a file-level backup solution that can work with VTCloud® Recovery for fast reliable data backup. VTCloud Backup complements the VTCloud Recovery service by protecting your data everyday and making it available following a disaster.

15. Is there an option for storage-array replication?

Yes. This service includes an option for storage-array replication using select third party vendor(s). Today, replication from EMC (VNX and VNXe) is supported. The customer is responsible for any storage array configuration and licensing necessary to support array based replication. Please contact us for more information.

Provisioning and Activation

16. How long does it take to activate this service?

Because we take time to understand your needs and develop a customized, comprehensive and detailed recovery plan, it can take a while to activate the service. Customers already taking advantage of VTCloud IaaS can typically be activated within a few days.

17. How much bandwidth is required between sites?

Bandwidth requirements depend on the amount of data being replicated, the frequency of replication and the specific replication software. Site Recovery Manager sends very little information between sites itself and as a result generally has no impact on the bandwidth required between sites. Venture's engineer can help to determine the required bandwidth for replication determined by your expected data change rate, desired Recovery Point Objective (RPO) and more.

Support and Maintenance

18. What kind of support can I expect?

VTCloud® Recovery includes 24/7/365 support from our local Help Desk. Our support team is available by toll-free phone or email.

19. What is the failover process?

1. The Venture Technologies Data Center team (VTDC) is notified when SRM vCenter detects loss of the protected site.
2. Customer declares the need to failover to the recovery site.
3. Venture and customer initiate the failover process, using SRM as defined in the Operating Manual.
4. Connectivity is established and services are migrated from the protected site to the recovery site.
5. When the protected site is restored, a manual failback will be completed unless the customer has opted to receive automatic failback which shortens the time to restore and eliminates the possibility for human error.

20. What is the difference between planned migration and DR failover?

Planned migration and DR failover both leverage the same recovery plans. DR failover is used in the event of a disaster and is designed to quickly recover virtual machines at the failover site. Planned migration is used for preventative migrations and disaster avoidance. Planned migration ensures an orderly shutdown of virtual machines at the protected site, synchronizes the data with the failover site by ensuring complete replication of all the data, and finally recovers virtual machines at the failover site. Planned migration ensures application-consistent recovery to the secondary site with no data loss.

21. How are Disaster Recovery Plans tested?

Site Recovery Manager allows for automated testing of disaster recovery plans as well as managing recovery in the event of a real disaster. Site Recovery Manager facilitates the process of migrating an entire virtual environment from one location to another. It centralizes the process of configuring a DR plan and allows for the testing of the plan without causing any impact to the production environment. When testing a Recovery Plan, a snapshot of the replica VMs is brought online in an isolated virtual environment and the recovery steps are executed. Upon completion, administrators can logon to the recovery VMs to validate the expected outcome. The VTCloud® Recovery service includes scheduled testing of the recovery plans based upon your contract.

General Terms

22. What are Venture's VTCloud® Recovery service targets?

An RPO an RTO will be specified in customer agreements.

- **Recovery Point Objective (RPO)** - The maximum tolerable period in which data might be lost due to a major incident
- **Recovery Time Objective (RTO)** - The maximum period of time an organization can be without its IT systems, without incurring significant risks or significant losses

23. Does this solution require commitment for a specific term?

VTCloud® Recovery has options for 12, 24 and 36 month contract terms.