

# Nirvanix Enterprise Cloud Storage for VMware

## Backup and Replicate Virtual Machines to the Cloud

As enterprises continue to adopt and expand VMware-based environments, protecting data used by virtualized applications is crucial for ongoing business operations. IT departments, therefore, have to maintain rigorous backup and replication processes in order to achieve recovery time and recovery point objectives. However, with data growing exponentially and backup and replication files multiplying equally fast, IT managers are faced with an increasingly costly purchase/upgrade cycle of storage systems and tape silos in addition to the space, cooling, and power expenses, and staff to manage them.

Nirvanix cloud storage services not only provide superior economics over onsite backup and replication of virtual machines, but also maximize data protection through globally distributed redundant copies for disaster recovery. In addition, Nirvanix offers on-demand storage to meet spikes, while reducing power and cooling costs, and freeing up data center space and IT staff for applications that will enhance enterprise competitiveness.

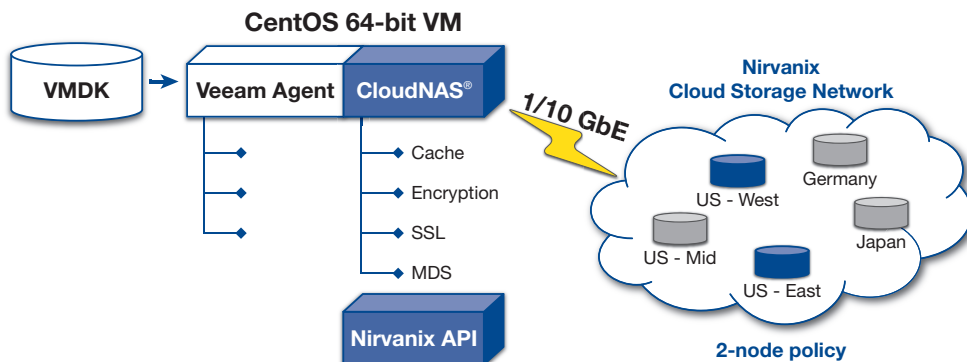
### Nirvanix Enterprise-Class Cloud Storage: A Seamless Extension of the VM Environment

Nirvanix's battle-hardened, second generation implementation of cloud storage services seamlessly extend the backup and replication of VM environments and deliver:

- Usage-based pricing—Lower CapEx from day one
- Elastic, on-demand storage immediately deployable: expand or shrink storage pool as required—No physical storage systems or tape silos to buy, manage, and house; No idle storage
- Guaranteed enterprise QoS—No excuses SLAs with up to five nines of data availability
- Multi-level security—Safeguard critical business data used by virtualized applications
- Global network—Access files from any location; Leverage redundant copies for disaster recovery
- One flat monthly rate for unlimited uploads, downloads, bandwidth and replication—No maintenance fees; No tech refresh fees

Over 1,200 global customers from SMBs to Fortune 500 companies are already enjoying these benefits in a seamless extension from the enterprise data center to the enterprise cloud. Nirvanix cloud storage services not only provide backup and replication, but also enable global access and data recovery from any location, within a highly secure environment.

### Converged Products Reference Architecture



### Backup and Replicate VM Environments to the Cloud Using Nirvanix CloudNAS

Protecting business critical data used by VMware-virtualized applications by moving to Nirvanix cloud storage requires no changes to workflows or processes. Simply establish Nirvanix CloudNAS® Gateway as a target for backup and replication software from leading providers such as CommVault, Symantec, or Veeam. An implementation of this architecture at one of the world's leading media, entertainment and communications companies, a US\$50 billion+ conglomerate which includes the largest US cable operations, is shown below. With the integration of Veeam Backup and Replication software and Nirvanix CloudNAS, data is written at local LAN speeds and uploaded over time to the Nirvanix cloud in the background. Simultaneous CloudNAS instances can write to the same Nirvanix directory at the same time enabling multiple locations to backup to the cloud concurrently—all in one global namespace. Further, multiple copies of the data can be duplicated to geographically distributed Nirvanix cloud storage nodes to ensure data recovery in the event of a disaster.

By moving to Nirvanix cloud storage this conglomerate dramatically reduces hardware CapEx with granular, usage-based pricing, gains redundancy and security for its VMware-based virtualized environments, and achieves further savings on floor space, power and cooling in the data center.

## Cloud Deployment Options

Nirvanix is the only company that offers public, hybrid and private cloud storage deployment options under its CloudComplete™ portfolio to protect VMware-based environments—with usage-based pricing for all options.



### Public Cloud Storage

Nirvanix's public cloud, the Cloud Storage Network™, delivers battle-hardened, proven second generation technology, enabling VMware-based environments to satisfy backup and disaster recovery requirements. With security, ease-of-access, and globally distributed nodes, the Nirvanix public cloud provides the optimal solution for enterprises looking to reduce CapEx through usage-based pricing and benefit from the elasticity that on-demand storage provides.



### Hybrid Cloud Storage

Virtualized enterprises may choose a hybrid cloud storage configuration which enables them to keep some of their data onsite to meet strict legal compliance requirements and move data to the Nirvanix Cloud Storage Network for increased bandwidth, additional archiving capacity, replication or for optimizing business processes and workflow. Hybrid Cloud also enables customers to benefit from cloudbursting during peak business periods—the ability to access additional capacity and bandwidth on demand—dramatically shortening the storage procurement cycle.



### Private Cloud Storage

Nirvanix Private Cloud Storage is designed to enable enterprises to comply with the most stringent corporate or legal data retention policies by storing data within their own facility. This solution is a local instantiation of a cloud storage node in an organization's data center premises, fully managed as a service by Nirvanix. The Private Cloud storage service supports the addition of nodes in any other of the organization's data center locations all federated under a single namespace.

## A True Enterprise-Class Cloud Storage Experience

Nirvanix provides an enterprise-class cloud storage experience for VMware-based virtualized enterprises, featuring:

### The Highest Security Levels

To meet enterprises' data security needs, Nirvanix implements unparalleled military-grade safeguards and processes at the user, data storage and physical data center levels. These include strong password, token-based authentication; SSL for data transfer and AES 256-bit encryption for storage; and Tier III data center facilities with biometric secured access and SAS 70 Type II certification. Further, Nirvanix invites organizations to visit its data centers to perform third party audits and provides a choice of where to store their data.

### Infinite Scalability

The Nirvanix Cloud File System™ was designed from the ground up to accommodate massive unstructured content files and present petabytes of pooled storage as one large global namespace, accessible from any location. It can handle millions of users and billions of files, while supporting data ingest rates of up to 10 terabytes per day, per customer. Enterprises can start with as little as one gigabyte and expand that into petabytes or exabytes when business needs require, continuing to grow their global namespace. Nirvanix simply adds more storage across the node grid to accommodate their growth.

### Highest Data Availability and Integrity

Nirvanix offers guaranteed quality-of-service levels, not best efforts, to meet companies' data availability and disaster recovery needs. Using Nirvanix's policy-based data replication, guaranteed SLAs range from the standard 99.9% for one copy, to 99.99% for two copies or 99.999% for 3 or more copies, ensuring that business-critical data is always immediately available without painful fail-over scenarios.

### The Time to Move to Nirvanix Cloud Storage Is Now

The superior economics and flexibility of cloud storage are driving widespread adoption, with the potential for permanently advancing the way enterprises purchase storage and manage their data.

The Nirvanix CloudComplete portfolio of cloud storage solutions and integration software from leading vendors makes it enterprise-ready now. Visit [www.nirvanix.com](http://www.nirvanix.com), call 619.764.5650 x330, or e-mail: [info@nirvanix.com](mailto:info@nirvanix.com) to get started.

### Global Coverage

The Nirvanix Cloud Storage Network™ consists of eight globally-dispersed storage nodes strategically located to optimize access and maximize data availability—U.S.: California (2), Texas, New Jersey; Germany; Switzerland (2) and Japan. Enterprises can move data from one node to another to enhance performance, facilitate collaboration among geographically dispersed users, or duplicate data to ensure availability and recovery in the event of a disaster. The nodes are accessible via a single namespace, which means writing to one location and having access to any one or all of the nodes.

### 24x7 Service and Support

Nirvanix provides enterprise-class service and support—from initial contact through Nirvanix cloud storage service integration and to post-implementation support. To ensure the highest levels of performance and protection, the Nirvanix Network Operation Control staff monitor the Cloud Storage Network 24x7 and regularly test it.

### Choice of Access Methods: One Click to the Cloud

Nirvanix cloud storage is accessible through the standards-based Nirvanix Web Services API, the Nirvanix Management Portal or the Nirvanix CloudNAS® Gateway which supports standard CIFS, NFS, and FTP protocols. The Nirvanix Cloud Storage Network is also fully integrated with third-party applications, including Veeam, CommVault, Panzura, Riverbed Technology and Symantec.



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