

## CASE STUDY: NAKIVO AND TRUENAS®

### NAKIVO AND TRUENAS PROVIDE A MULTI-TIERED STORAGE SOLUTION FOR A SUBSTANTIAL NETWORKING COMPANY

*“Since we are a networking company, we have a majority of infrastructure-based things, including VPN devices, websites, corporate financial data, file and email servers, while also hosting a variety of applications for our customers. Previously, we were not able to perform full and incremental VM backups because our homegrown system with asynchronous replication and snapshots allowed us to only backup the files inside the VMs and that limited our data protection obligations. We had to start looking for a VM backup solution that would match our requirements in cost, performance, and simplicity, as well as guarantee 24/7 availability of ours and our customers’ data and IT systems.”*

**- Doug C.,**  
Senior Network Engineer

### THE STORAGE CHALLENGE

A well-known large networking company, headquartered in the United States, needed to achieve 24/7 availability and reduce VM backup storage space. Their IT infrastructure consists of three main data centers, a corporate office, and several remote offices. Each main datacenter runs eight VMware ESXi hosts, while the corporate office has four VMware ESXi hosts. The networking company knew their main goal was to achieve 24/7 availability of critical IT systems within the data centers, so that if the data and applications are not available, there is still a way to restore VMware VMs quickly and efficiently. The company could not contemplate having critical IT systems offline, because many customers would be adversely affected.

### SOLVING THE CHALLENGE BY USING A MULTI-TIERED SOLUTION WITH NAKIVO AND TRUENAS

NAKIVO Backup & Replication is a fast, reliable, and affordable VM backup solution for VMware, Hyper-V, and AWS EC2 environments. NAKIVO Backup & Replication offers advanced features that increase VM backup performance, improve reliability, speed up recovery, and help reduce the networking company's TCO. TrueNAS is an enterprise-ready storage appliance developed by iXsystems that guarantees data integrity and has complete redundancy throughout the storage array. TrueNAS is based on the world's number one Open Source storage solution, FreeNAS, and provided the networking company with the performance and capacity they needed right out of the box.

*“We have established a multi-tier data protection strategy that works well for us. VMware VMs running on top of VSAN handle the first level of failures, while replica VMs that are stored on the TrueNAS are a second tier of protection in case something would happen to VSAN. In addition, we perform full VM backup with NAKIVO Backup & Replication running on top of the TrueNAS appliances and FreeNAS servers. Lastly, we use backup copy jobs to send backups offsite.”*

**- Doug C.,**  
*Senior Network Engineer*

*“NAKIVO Backup & Replication and TrueNAS work well together. NAKIVO Backup & Replication has native support for NFS mounts and we can also make an NFS mount on the TrueNAS and get things working pretty fast. Both products are straightforward, operate cohesively with each other, and produce high VM backup performance results.”*

**- Doug C.,**  
*Senior Network Engineer*

The switch to NAKIVO Backup & Replication made sense to the networking company since the product provided not only reliability, simplicity, and cost savings, but also because NAKIVO Backup & Replication can be installed on Linux which was a strong selling point. Since the organization wanted to keep both Rsync backups and NAKIVO Backup & Replication backups, storage space became a pressing issue. The networking company decided to craft their own high-performance VM backup solution by using NAKIVO Backup & Replication on FreeNAS servers and TrueNAS storage appliances from iXsystems.

NAKIVO Backup & Replication provides the networking company with the ability to simultaneously run backup jobs in different datacenters, and backup all of the VM servers at once. This makes the entire data protection process significantly easier to manage. Using the VM replication feature, the organization can easily power on the VM replicas for near-instant disaster recovery. With NAKIVO's backup copy, the company can easily maintain copies of its backups between datacenters for an extra layer of protection.

The primary goal for using NAKIVO Backup & Replication with TrueNAS appliances and FreeNAS servers was to achieve 24/7 availability by securing enough storage space on the dedicated hardware for VM backup and VM replication. NAKIVO Backup & Replication integrates well with TrueNAS and FreeNAS® servers which results in higher VM backup performance. On average, the networking company is seeing an average reduction of 85% in storage space use with NAKIVO Backup & Replication bundled with TrueNAS and FreeNAS servers.

## NAKIVO AND TRUENAS DELIVER RESULTS

Using NAKIVO Backup & Replication, with TrueNAS, delivers results for the networking company by providing 24/7 availability of data and critical IT systems, as well as providing a VM backup storage space savings of 85%. With both TrueNAS and NAKIVO Backup & Replication, the organization can now easily use VM backup, VM replication, and backup copy features that fit well with the networking company's goal of multi-tier data protection. The networking company utilizes a TrueNAS system at all three of their main data centers to hold replica VMs, while the FreeNAS certified servers are used as backup boxes.

*“We use both compression and deduplication on TrueNAS and the storage space savings are usually pretty high; on average, we see an 85% reduction in storage space.”*

**- Doug C.,**  
*Senior Network Engineer*

## ABOUT NAKIVO

Headquartered in Silicon Valley, NAKIVO Inc. is a privately-held company founded in 2012. NAKIVO develops a fast, reliable, and affordable data protection solution for VMware, Hyper-V, and cloud environments. Over 10,000 companies are using NAKIVO Backup & Replication to protect and recover their data more efficiently and cost effectively, while over 140 hosting, managed, and cloud services providers are using NAKIVO's software to deliver VM BaaS and DRaaS to their customers. NAKIVO has a global presence with over 1,700 channel partners in 117 countries worldwide.

Visit [www.nakivo.com](http://www.nakivo.com) to learn more.

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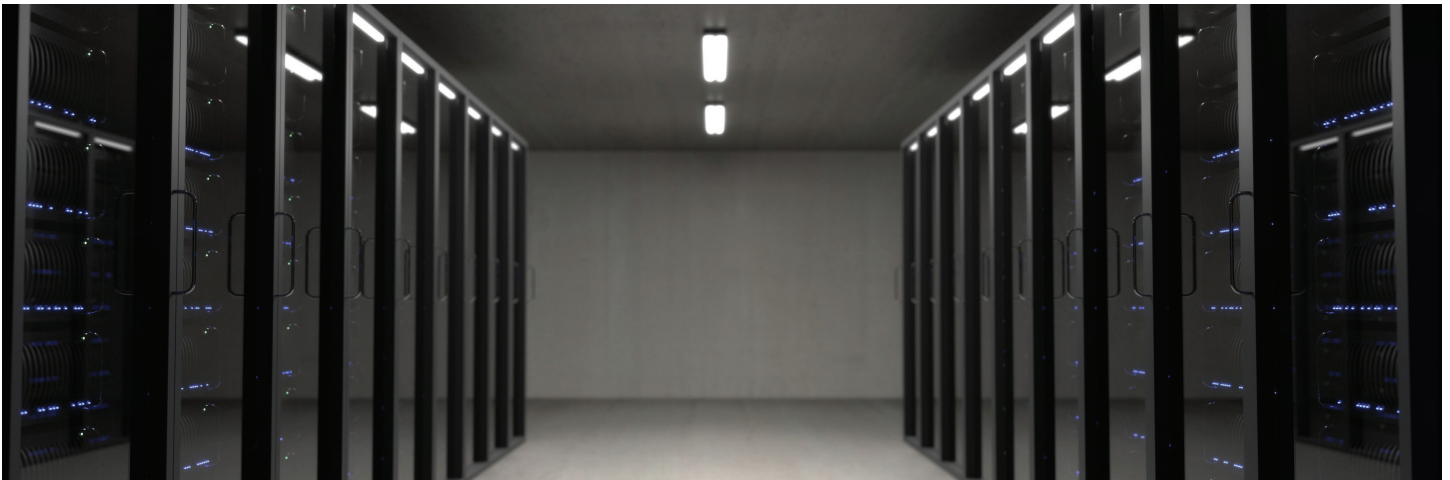
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*“We are really happy that TrueNAS and FreeNAS servers operate so well with NAKIVO Backup & Replication and how they complement each other with a great price/performance ratio. With the help of NAKIVO Backup & Replication, and iXsystems, we now have onsite backups, offsite backups, and VM replicas. Both TrueNAS and NAKIVO Backup & Replication are valuable components to our successful daily operations.”*

**- Doug C.,**  
*Senior Network Engineer*

## ABOUT IXSYSTEMS

By leveraging decades of expertise in hardware design, its contributions to many Open Source software communities, and corporate stewardship of leading Open Source projects (FreeNAS and TrueOS), iXsystems has become an industry leader in building innovative storage solutions and superior enterprise servers for a global marketplace that relies on open technology.

Thousands of companies, universities, and government organizations have come to rely on iXsystems' storage, servers, and consultative approach to doing business. Headquartered in the heart of Silicon Valley since its founding in 1996, the dedication to white-glove customer service, industry-leading support, and transparent technological contributions has never wavered and continues to help lay the foundation for a new era powered by open technology.

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