

CASE STUDY: 1ST AVE MACHINE

High Availability Storage in a Video Production Environment with TrueNAS

1stAveMachine

“Before we moved to FreeNAS and TrueNAS we’d just used straight Linux servers with shares & Active Directory. Performance between that and our TrueNAS is like night & day, and the management was significantly easier.”

- **Chris Caravella**
Chief Engineer

THE STORAGE CHALLENGE

1st Ave Machine had been using traditional Linux servers to store data for their users, but this created storage silos that were inaccessible to many users. They decided to invest in a centralized solution that better suited their needs. They started using Nexenta, a software only storage solution, on a homegrown server, but they soon “hit a roadblock” with their pricing structure, which was at no cost until their data reached about 10TB (useable), then it went up steeply. They also found the Hardware Compatibility List (HCL) to be confusing, which caused problems for sourcing parts.

So they still had the hardware but weren’t sure what to do with it. They had liked Nexenta for utilizing ZFS, and the options for ZFS based storage software platforms were pretty limited at the time. They looked at and discarded the NAS4Free product and then looked at FreeNAS, which also used ZFS. They looked further into FreeNAS and were surprised by how extensive the documentation was and how helpful the community forums were, and they realized it was a viable solution for their enterprise and decided to run it on their hardware.

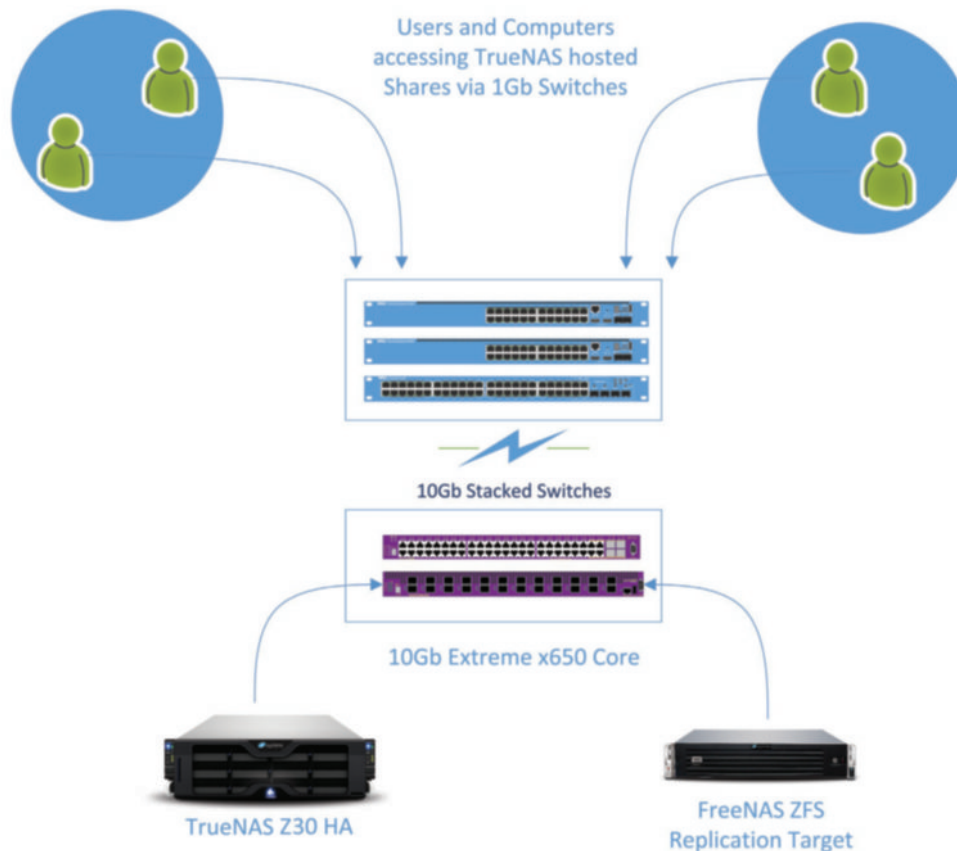
They used their FreeNAS storage server for almost 2 years with great success. During this period of time they came to iXsystems with questions about FreeNAS, which iXsystems quickly resolved. From there, they decided to acquire TrueNAS, a commercially supported storage solution based on FreeNAS.

“We had been running our FreeNAS solution for nearly 2 years. We came to iXsystems with some questions on FreeNAS. We were very impressed with everyone. The people at iX went above and beyond the expected level of knowledge and service to help us and we realized this was the commercial solution we were looking for.”

- Chris Caravella

TRUENAS STORAGE FOR A VIDEO PRODUCTION ENVIRONMENT

1st Ave Machine decided to purchase a TrueNAS Z30 High Availability (HA) solution with 2 expansion shelves. Their system is running 160TB of raw disk space in a RAID 10 configuration, which gives them 80TB of total useable storage. Each head of their HA system has 10GbE fiber SFP+ connection to a 24 port 10GbE switch, which is stacked to 4 x 1GbE switches. There is an additional 1GbE switch stacked to one of those switches dedicated to their render farm as well as a 1GbE copper connection for IPMI (remote management) from the TrueNAS system itself. Their TrueNAS utilizes the 10GbE switch for backup and replication with closed access and a 1GbE switch for client access.



“Box to box performance is exponentially better. It used to take 2 or more days for replication, but now it tops out at a bit over a day’s time.”

- Chris Caravella

The main use for their system is post-production with high read and performance requirements, so iXsystems offers performance intensive read and write caches. Their TrueNAS system supports over 35 concurrent clients on average. On a busy day, they will have around 20 to 25 users hammering their TrueNAS without issue. Users access the system via the CIFS/SMB protocol from Mac & Windows clients. They also perform a variety of actions, including direct edits off the server, raw file read & write transactions with small & large files.

Clients easily saturate their 1GbE connection, with about 110 MB/s read and write performance. Neither 1st Ave Machine’s local storage nor their Nexenta solution was able to keep up, but it was no problem for TrueNAS. 1st Ave Machine uses their 10GbE fabric for backup & replication and with TrueNAS have seen even greater improvements over their previous storage, with their backup times cut in half. They’ve also seen improved client performance since switching to their new TrueNAS system.

“I really like that I can use the management console anywhere on the network. The ease of use of the Web Interface itself is very good and makes administration a snap.”

- Chris Caravella

EASE OF MANAGEMENT AND QUALITY SUPPORT WITH TRUENAS

Before implementing their TrueNAS solution, they used the documentation of FreeNAS and community resources for their storage solution. Once they acquired their TrueNAS system they also got a team of dedicated support engineers located at iXsystems headquarters in Silicon Valley, CA. The support team has direct access to the people who design and build TrueNAS, whom they can call on quickly if the situation warrants. Every issue is handled by the person best suited to resolve it as quickly as possible, not by the next available representative in a call center. We’re committed to the best possible experience for all our clients, and we sustain that commitment through the entire lifetime of each appliance.

“Support has been great, from the FreeNAS Community Forums & documentation, to the TrueNAS support staff itself. The support team has gone 110% for us, working through the weekends to get issues resolved and things working at the level we need.”

- Chris Caravella

CONCLUSION

1st Ave Machine needed a unified storage solution to best serve their clients and their data. They found that a Nexenta Software Defined Storage solution had a complicated pricing and licensing scheme, so they used FreeNAS. They discovered a robust FreeNAS project and community that served their needs for several years. After years of success, they decided to opt for a commercially supported appliance that had High Availability and 24x7 support. They kept their FreeNAS system as an extra line of defense. By implementing TrueNAS, they improved performance and got the peace of mind that having a modular architecture, high availability, and a team of experts to support them provides.

ABOUT 1ST AVE MACHINE

1st Ave Machine is a collective of international directors, artists, designers and scientists based in New York. Since 2004, they have been a generator for communicative and creative ideas, working to entertain audiences and touch on human emotion with top quality video production. They work to engage their audience with new perspectives and deliver media that gives them a reason to think and remember the message. Rooted in a culture of collaboration, they work with agencies and brands to build the most stand out, creative ideas. Since its inception, 1st Ave has expanded and diversified, while producing award-winning videos and remaining committed to presenting a singular vision for stories to share.

ABOUT IXSYSTEMS

iXsystems, Inc. is an employee-owned and operated, open source-centric, customer focused organization, dedicated to providing scalable storage solutions as well as the highest quality built-to-order enterprise rackmount server solutions, to our customers around the globe.

The iXsystems team includes experienced leaders and engineers in the Internet server industry, all with years of experience in developing Internet infrastructure-grade solutions and provisioning Internet data centers and global service networks. Nestled in the heart of Silicon Valley, we have been committed to serving technology needs with a focus on Open Source since our beginning in 1996 and incorporation of BSDi in 2000. From our inception onward, we've been perfecting our craft of making quality hand-tailored servers and storage solutions. Our quality and dedication to a superior customer experience has been unwavering.