CASE STUDY: ASHLAND FOOD CO-OP

Virtualization with **TrueNAS®**

*Ashland Food Co-op is the **only certified** organic food retailer in Southern Oregon.*

"TrueNAS exceeded our performance needs. It's probably more than we need, but it's great. With ZFS replication and snapshots, I know I can easily bring back a Virtual Machine if something goes wrong and that makes me sleep well at night."

- Steve Davidson
 Systems Administrator at
 Ashland Food Co-op

Located in an idyllic setting of the Pacific Northwest, Ashland Food Co-op is the only certified organic retailer in Southern Oregon. Established in 1971 by a small group of families to form a food buying club, the cooperative now serves over 7,000 owners in the region and across the United States.

Their mission is to provide its owners and community locally produced,organically grown and ecologically sound products. They also work to promote awareness of food, nutrition and health through literature and event hosting.

BUSINESS PROBLEM

In 2011, Ashland Food Co-op turned their focus to sustainability goals, through reduction of their environmental footprint. One of those goals was to reduce the number of servers used in the IT Department. They decided that their chief means to accomplish this was through server virtualization. Using VMware vSphere, they began incrementally virtualizing their servers. However, when they transitioned their 20 servers virtually, they started running into disk I/O bottlenecks. It then became clear that their current server hardware could not keep up with the performance demands, and they began researching centralized storage solutions that could solve this problem efficiently within their established budget. Through the recommendation of a colleague, Ashland Food Co-op contacted iXsystems.

Feature Highlights

- High IOPs
- Scalability
- Periodic Snapshots
- Remote Replication
- Full CIFS, iSCSI, NFS, and AFP Support
- Intuitive, powerful Web Interface
- Thin Provisioning, Compression, Datasets, Virtualization
- Data Integrity with Powerful ZFS file system
- Active-Passive Failover (optional)
- Based on Highly Stable FreeBSD®

TrueNAS Performance

- Extreme performance read & write cache
- Up to quad 10GbE
- Up to 1.15PB of storage capacity

THE SOLUTION: TRUENAS

The team at iXsystems works hard to provide its customers with solutions tailored to their use cases. In the case of Ashland Food Co-op, they needed a system that could work with vSphere and provide the IOPs to maintain multiple concurrent virtualized servers as well as provide redundancy and fault tolerance through backups. iXsystems recommended the TrueNAS, which would provide them more than enough horsepower to solve their performance bottleneck, while still giving them plenty of overhead for future growth of their virtualized infrastructure. To solve their need for fault tolerance, Ashland Food Co-Op opted to procure two identical appliances, the second replicating itself from the first to provide the necessary redundancy and disaster recovery. The engineering and support their systems using NFS to present to the ESXi host.

In order to meet the read IOPS requirement of Ashland Food Co-op, iXsystems employed the use of Flash in their TrueNAS. A flash-based solution provides extremely low latency and high IOPs performance through moving process-critical or active data closer to the CPU where it is processed, which is then leveraged by TrueNAS as the L2ARC (read cache) for extremely fast access to hot data.

"Another thing that sold me on TrueNAS was that it was built on FreeBSD. I cut my teeth in UNIX on FreeBSD and I know it's a stable, solid Operating System, so that really appealed to me that it was the underlying platform."
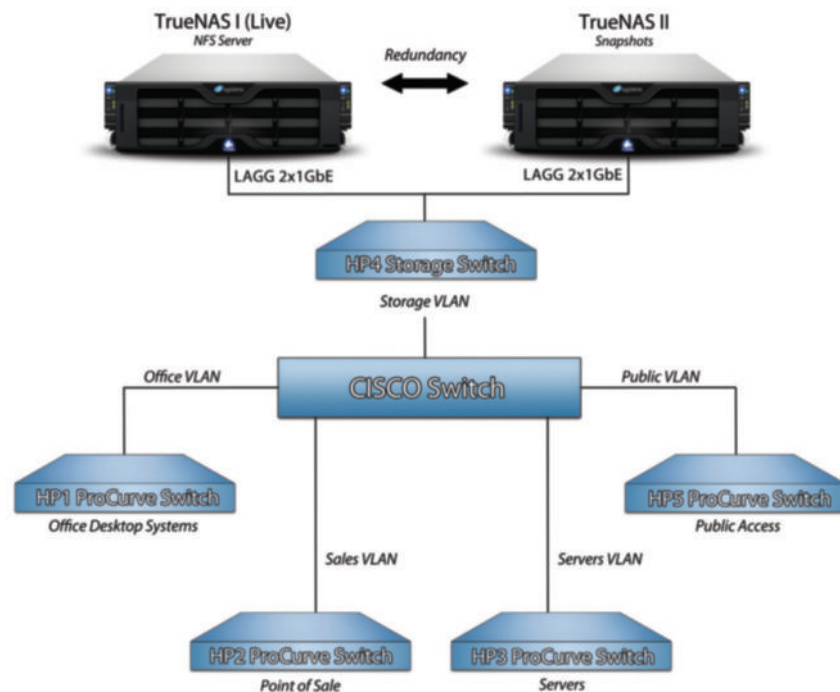
- Steve Davidson

THE RESULTS: PERFORMANCE AND STABILITY IN A VIRTUAL ENVIRONMENT

Through deploying TrueNAS, Ashland Food Co-op has met, and even exceeded, its need for high IOPS in a virtualized environment. Beyond performance, TrueNAS has provided extra levels of stability through its replication and snapshot features. Ashland Food Co-op currently employes periodic snapshots every 15 minutes, bringing their Executive Staff the peace of mind to know that their data is safe.

Last but not least, iXsystems provides world-class expertise and support for all of its customers. With its in-house engineering and support team, they have provided Ashland Food Co-op with attentive service from the initial hardware configuration to post-deployment, providing them with the ease of mind needed for their environment.

Ashland Food Co-op looks forward to working with iXsystems in the future and plans on virtualizing its desktops as well as introducing off-site redundant storage with TrueNAS to their storage environment.

ABOUT IXSYSTEMS

Since 2002, iXsystems has been a company focused on crafting innovative and powerful enterprise-class server and storage solutions for businesses and organizations around the globe, while maintaining a steadfast commitment to the world of Open Source technology through various community contributions: FreeNAS, PC-BSD, FreeBSD, and TrueOS.