CASE STUDY: CLICKBANK®

Production Environment Integrity and User Backups with **TrueNAS®**

THE STORAGE CHALLENGE

ClickBank helps tens of thousands of content publishers get their work to the market with its content delivery platform. This service generates copious data that requires significant storage and processing resources. In order to serve these applications and data, ClickBank needed two things.

First, they needed to keep log files running for their production environment. When a problem arises, proper documentation can reduce the time spent fixing it by minutes, hours, and sometimes even days, ultimately saving money.

Secondly, they needed to provide snapshots for all of their customers. When clients change their content, backups can be a lifesaver if the client also decides to change their mind later. Snapshots allow users to rollback to previous saved states and recover deleted or changed files with ease and confidence. ClickBank needed a comprehensive storage solution that could meet those needs while handling a write-intensive workload.

> "*I just set it up and it hums right along. It's a great system and gives me the peace of mind I need for my production environment. It just works.*"

- Brad Davis
  Information Systems Architect
  at ClickBank

"I'm a committer to the FreeBSD project, so I've been a fan of iXsystems for a long time now. I like all the work they do for the FreeBSD community as well. We use FreeBSD here in our production environment, so the fact that TrueNAS is based on FreeBSD makes me feel more secure."
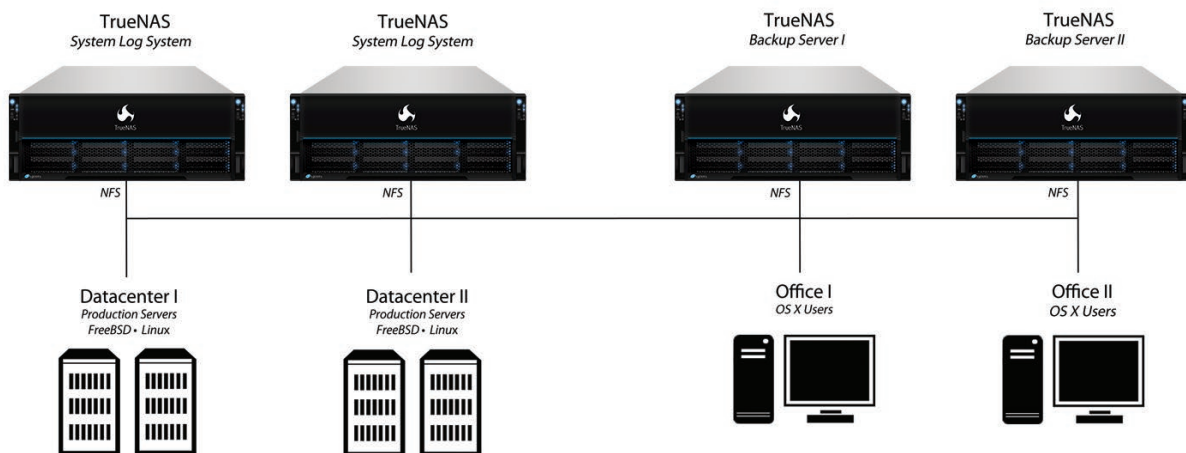
- Brad Davis

TRUENAS BACKS UP CLICKBANK

Systems Architect Brad Davis knew of iXsystems through their work in the FreeBSD community and their development of FreeNAS, TrueNAS, and PC-BSD, and had been a longstanding customer of their server hardware for years, both at ClickBank and through his work with the Internet Systems Consortium (isc.org). This led him to reach out to iXsystems to see if they could provide a solution for their storage needs. iXsystems provided ClickBank with four TrueNAS appliances to handle both server logs and customer backups. Two of these systems are set up in separate data centers to their production servers. The other two systems are used for customer backups at their offices.

All four systems were populated with high performance flash for their ZIL (write cache) and L2ARC (read cache). Each one was configured with a 3-disk and 6-disk vdevs on raid RAID-Z, single parity with ZFS, with a shared hot spare drive. The systems were connected via onboard and expansion NICs utilizing LACP aggregation with a Cisco 1GbE switch. Each system has a management VLAN and a NFS VFLAN on top of an LACP bound.

Production servers communicate with the TrueNAS systems over NFS and are a mix of FreeBSD and Linux operating systems. Users are mostly on OS X and back up using a program called CrashPlan. The TrueNAS appliances back up several types of databases that ClickBank utilizes.

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"As someone who generally works from CLI I hate to say this, but TrueNAS has a pretty nice web interface for getting things started and managing storage. I like that it comes with so many protocols rightout of the gate. You can share data however you want, which makes the system really flexible. With a lot of vendors, you have to pay per protocol, so that's a very nice thing about TrueNAS."

- Brad Davis

EASE OF MANAGEMENT AND PROFESSIONAL ASSISTANCE WITH TRUENAS

After ClickBank integrated TrueNAS into their environment, it became clear that TrueNAS provided more than just disk space. It also provided many things like exceptional write performance (which was a critical need for their IT department), a powerful set of management tools not often found in storage platforms outside of the command line, and a flexible set of protocols that worked in every environment they needed it in.

Going beyond the system itself, ClickBank also enjoys a close relationship with the iXsystems sales and technical staff. The professionals at iXsystems utilize their specialized knowledge to support customers from storage deployment through the entire product life cycle. In particular, the technical team used its knowledge of the ZFS file system to maximize performance and stability for ClickBank.

ABOUT CLICKBANK

ClickBank has been in the business of helping people turn their knowledge, passions, hobbies, and work experiences into an additional source of income since 1998. The ClickBank platform provides the tools its users need to put together a professional face to the marketplace at large.

The ClickBank platform allows for easy website creation with powerful tools for keeping in touch with current and potential customers as well as for expanding your audience. ClickBank also provides its "infopreneurs" with a broad range of secure content delivery methods as well as access to a worldwide sales team.

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.