SOLUTION BRIEF

# TrueNAS® for your Private Cloud

Don't let the cost of public clouds cast a shadow over your IT department. Bring your ability to scale out back in-house with a TrueNAS storage array. Available in hybrid and all-flash models, award-winning TrueNAS arrays provide unrivaled data integrity, scalability, and performance.

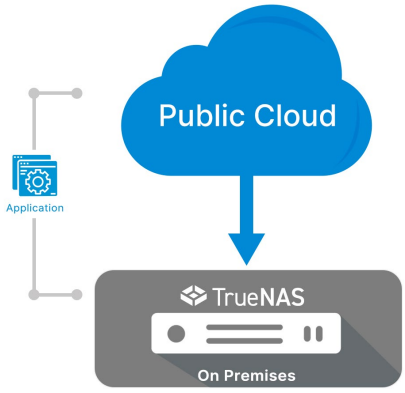
Every TrueNAS system comes with the option to deploy as S3-compatible object storage, letting you easily migrate your existing workflows from the public cloud to an on-premises solution without extensive retooling of your applications.

**Safe:** Using the OpenZFS file system, TrueNAS provides your S3 compatible workloads with a self-healing, bit-rot resistant, and flexible storage foundation.

**Fast:** From entry-level hybrid models to our latest all-NVMe solutions, TrueNAS offers a range of performance options to fit your needs.

**Scalable:** A single system capable of over 25 PB of raw storage and the capacity to scale out to multiple exabytes using erasure-coded clusters, TrueNAS gives you virtually limitless growth potential.

**Proven:** TrueNAS object storage is powered by the Open Source MinIO software stack, with over seven years of development and maturity.




**Secure:** Using MinIO's optional Locking and Compliance modes, protect your storage from inadvertent loss or deliberate damage by making objects immutable. Use the built-in snapshots and replication of TrueNAS to add even more defense-in-depth for your business.

**Economical:** According to a survey from IDC, 71% of enterprises are repatriating their cloud workloads[1] to improve cost and control. Major organizations like Ahrefs[2], Basecamp[3], and X (formerly Twitter)[4] are realizing the savings available from bringing their object storage back in-house. By operating your private cloud on-premises, there's never any surprise egress costs or inflated spot pricing during crunch time.

**Open:** TrueNAS uses the Open Source OpenZFS file system. OpenZFS is an enterprise-grade file system that iXsystems has delivered to more users than anyone. We pride ourselves on working closely with the Open Source community to ensure that OpenZFS remains a "next-generation" file system.

**Enterprise-Ready:** With end-to-end data integrity, optional redundant controllers, and over two decades of experience, leveraging iXsystems hardware for your on-premises solution lets you achieve the same uptime promises of public clouds.

**White-Glove Support:** iXsystems' reputation for high-quality service and support means you can rest assured that your private cloud will be ready for anything you can throw at it. Our 100% in-house support team is ready to work with you to achieve your goals.

1 https://www.supermicro.com/white_paper/IDC_On-Prem_Cloud_Success_Stories.pdf
2 https://tech.ahrefs.com/how-ahrefs-saved-us-400m-in-3-years-by-not-going-to-the-cloud-8939dd930af8
3 https://basecamp.com/cloud-exit
4 https://twitter.com/XEng/status/1717754398410240018

## Features

| | TrueNAS All-Flash | TrueNAS Hybrid |
|---|---|---|
| |  |  |
| **Enterprise Features** | Unlimited snapshots and clones, replication, encryption<br>Intelligent in-line compression and deduplication, read/write caching, thin provisioning, self-healing file system, non-disruptive software upgrades, online capacity expansion, RAID protection, S.M.A.R.T. monitoring, Angular Web Interface, REST and websockets API, enclosure management, single-pane-of-glass management of multiple systems | |
| **Connectivity** | 16/32 Gb/sec FC,<br>10/25/40/100 GbE | 8/16/32 Gb/sec FC,<br>1/10/25/40/100 GbE |
| **Protocols** | NFS, SMB, iSCSI, FC, and S3-API protocols | |
| **Capacity & Data Disks** | Up to 3.3 PB using 216 drive bays | Over 25 PB using 1224 drive bays |
| **Effective Capacity*** | Up to 12 PB | Over 45 PB |
| **Scale-Out Capacity** | Erasure-Coded Object Storage Cluster | |
| **High-Availability Support** | Yes, Dual Controller Option | |
| **Capacity Architecture** | All-Flash | Flash-Assisted Hybrid |
| **Cache Architecture** | High-Performance Flash or TrueCache NVDIMM | |

* Compression rates vary by application. 2.5x compression used for hybrid arrays and 5x for the all-flash array is reflected in the effective capacity.