# TrueNAS® Z50 TrueFlash - All-Flash Unified Storage

**The world's leading storage server, FreeNAS, hardened and tuned for enterprise performance.**

IT departments are challenged to reduce costs yet face demand to deploy a more powerful and flexible configuration than ever before.  To address this requirement, many look to implement a software defined data center. The storage needed to sustain an SDDC has become a resource sink of its own, due to power-hungry spinning disks and massively complex and expensive storage infrastructures.  The TrueNAS Z50 TrueFlash offers a solution that combines the performance of solid state drives (SSDs) with the powerful features and elegant simplicity of TrueNAS Unified Storage, making it ideal for your latency-sensitive and business-critical VMs and physical workloads.

TrueFlash allows you to achieve storage consolidation ratios of up to 10X in heterogeneous VM environments. This means that you can store up to 3PB worth of data.  The TrueNAS TrueFlash **includes** compression, deduplication, snapshots and replication at no extra cost, a drastic reduction in your storage footprint, and has a 3x-4x lower total cost of ownership than a spinning disk or a hybrid solution. Its unified architecture reduces deployment risks and conserves power, space, and cooling.

## SELF-HEALING FILE SYSTEM

At the end of the day, data integrity is the name of the game. TrueNAS leaves nothing about your data to chance.  It lets you survive multiple disk failures, and data corruption is automatically detected and repaired.  Data corruption and bitrot are no longer a concern for your critical storage, where perfection is the only acceptable result.

## INTELLIGENT STORAGE OPTIMIZATION

Linked Clones are great for saving space when you're deploying hundreds of very similar VMs, but for an infrastructure that uses a wide variety of operating systems and services, their utility is severely limited.  TrueNAS includes in-line compression and deduplication at no additional cost.

The TrueNAS Adaptive Compression (TAC) algorithm is so efficient that it actually **boosts** storage performance, while maximizing storage capacity.  TAC intelligently adjusts its compression ratio without wasting system resources. Before data is stored, the algorithm dynamically detects and compresses what it can and skips over any data too inefficient to be worthwhile.  When enabled, TrueNAS will use block-based deduplication that can find shared blocks even between different operating systems such as a Linux and Windows VMs.  The combination of compression and deduplication let you make the most out of every byte of storage by increasing storage capacity by up to 10x.

## UNLIMITED SNAPSHOTS & REPLICATION

Most storage appliances require additional licenses for advanced features - not TrueNAS.  TrueNAS provides unlimited file version retention and restoration at no additional cost.  Data is automatically protected locally against unintentional alteration with minimal storage consumption and replicated bidirectionally for remote targets.  With the power of TrueNAS, any data protection or disaster recovery policy is simple to implement and maintain.

TrueNAS support VAAI and also seamlessly integrates with a VMware datastore by coordinating its snapshots with VMware's.  Once a VMware Snapshot is created, TrueNAS automatically snapshots every running VMware virtual machine.  The VMware snapshots are then deleted on the VMware side but still exist in the ZFS snapshot and can be used as stable resurrection points in that snapshot.

## SOFTWARE SPECIFICATIONS

### FILE-BASED PROTOCOLS
- CIFSv1, SMBv2, SMBv3
- NFS
- AFP
- FTP
- WebDAV

### BLOCK-BASED PROTOCOLS
- iSCSI
- Fibre Channel

### OBJECT PROTOCOLS
- S3-Compatible

### DIRECTORY SERVICES
- Active directory (AD)
- Kerberos
- Lightweight Directory Access Protocol (LDAP)
- Apple Open Directory
- Network Information Service (NIS)

### NETWORKING
- Port Trunking/NIC Teaming (Modes: Balance - rr, Active Backup, Balance xor,
- Broadcast, IEEE 802.3ad Link Aggregation)
- VLAN Support
- DHCP client, DHCP Server

### VIRTUALIZATION
- VMware Ready (ESXi 5.5 and ESXi 6.0), VAAI Block, ESXi Snapshot integration, VM Warn/Stun
- Citrix Ready Verified (Citrix XenServer 6.0)
- Certified for Windows Server 2012 R2 (includes Hyper-V), ODX

### SUPPORTED BROWSERS
- Internet Explorer 7.x and later
- Firefox 3.x and later
- Safari 3.x and later
- Chrome 3.x and later

### FILESYSTEM
- Intelligent in-line compression
- Snapshots and clones
- Thin provisioning
- Self-healing file system
- Online capacity expansion
- Virtual block devices
- In-line Deduplication
- ZFS Stripe, ZFS Mirror, RAID-Z, RAID-Z2, RAID-Z3

### BACKUP
- ZFS Remote Replication
- Bidirectional Remote Replication
- rsync

### REMOTE ADMINISTRATION
- HTTP/HTTPS Web Interface
- Email Alert Configuration
- Remote Syslog Client
- Backup & Restore System Settings and State
- Restore to Factory Default
- Resource Monitor
- Log and Event Collection
- Automatic Online Updates
- SNMP server/MIB
- IPMI remote console and power Management
- REST API

### SUPPORTED OPERATING SYSTEMS
- Microsoft Windows XP, Vista (32/64-bit), 7 (32/64-bit), 8/8.1, 10, Server 2003/2008 R2/2012 R2/2016
- Macintosh OS X (all versions)
- Linux
- UNIX
- BSD

## TrueNAS Z50 TrueFlash. All-Flash-Array with Simple Management, High Availability, Adaptive Compression, and Optional Deduplication

## Simple Management - Advanced Performance

TrueFlash combines the performance and features you need with simplified management. Here's a partial list of the features found in every TrueNAS Storage Appliance.

### Call or Click Today!
**855-GREP-4-IX (US) | 408-943-4100 (non-US) | iXsystems.com/TrueNAS**

2490 Kruse Drive **|** San Jose, CA 95131

## HARDWARE SPECIFICATIONS

### TRUENAS Z50 TRUEFLASH
- All-Flash Storage
- High Availability through redundant Storage Controllers
- Up to 300TB capacity
- 256GB RAM
  - RAM used for ultra-fast L1 read/write cache
- Up to 10x1gbE, 4x10gbE or 4x40gbE Interfaces per node
- Up to 4x8Gb Fibre Channel Interfaces per node

Maximum Power Draw*
- 712 Watts

### POWER MANAGEMENT
- Dual redundant Hot-Swappable high-efficiency (90%+) power supplies
- Remote power-on/off
- UPS Signal Response and Alerts

### AVAILABLE DRIVES
- SSD: 250GB/400GB/500GB/800GB/ 1TB/1.6TB/1.92TB/3.84TB eMLC SSD
- All drives are SAS

### DISK MANAGEMENT
- Hot Spares
- Hot-Swappable drives
- Bad Block Scan + HDD S.M.A.R.T.
- Enclosure Monitoring and Alert LEDs
- ISO Mounting Support
- Hard Drive Activity/Alert LEDs
- Hardware-Accelerated Disk Encryption

### PHYSICAL PARAMETERS
- Redundant Storage Controllers
- Dimensions 29"x19"x25" (LxWxH)
- Operating Temperature: 0°C to 35°C
- Non-operating Temperature: -20°C to 70°C
- Humidity: 5% to 95% non-condensing
- RoHS 6/6 compliant

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