TrueNAS Expansion Shelves
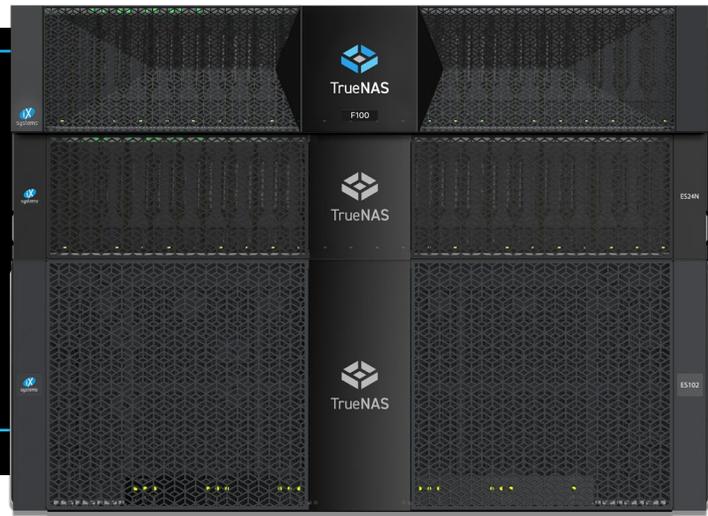
As your data grows, TrueNAS grows with you, seamlessly and without disruption.

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Scale Storage Effortlessly

Today's businesses are generating more data than ever before, and they need storage solutions that can keep up. TrueNAS Enterprise is built to support the full range of storage protocols for Windows, macOS, Unix, and mobile environments, while retaining petabytes of data for Big Data and analytics applications.

To eliminate storage sprawl and simplify growth, TrueNAS Enterprise offers a flexible, "pay-as-you-grow" pricing model. You get maximum storage, power, and space efficiency, with the ability to expand only when needed.

With various expansion shelf options, scaling your storage is easy. Every TrueNAS system includes:

- Enclosure management
- Storage controller redundancy
- Global hot spares
- Zero-downtime updates and upgrades
- 24/7 enterprise-grade support

Max Capacity

Base Unit			SAS HDD			NVMe SSD
			ES24	ES60	ES102	ES24N
SAS HDD	TrueNAS M30	500 TB	1 PB (two shelves)	1 PB (one shelf)	Not Supported	Not Supported
	TrueNAS M40	500 TB	1 PB (two shelves)	3 PB (two shelves)	5 PB (two shelves)	Not Supported
	TrueNAS M50	500 TB	4 PB (eight shelves)	10 PB (eight shelves)	15 PB (eight shelves)	Not Supported
	TrueNAS M60	500 TB	5 PB (twelve shelves)	19 PB (twelve shelves)	32 PB (twelve shelves)	Not Supported
	TrueNAS H10	250 TB	500 TB (one shelf)	1 PB (one shelf)	Not Supported	Not Supported
NVMe SSD	TrueNAS H20	360 TB	500 TB (one shelf)	1 PB (one shelf)	2.5 PB (one shelf)	Not Supported
	TrueNAS H30	720 TB	500 TB (one shelf)	1 PB (one shelf)	2.5 PB (one shelf)	Not Supported
	TrueNAS F60	1 PB	N/A	5 PB (four shelves)	8.5 PB (four shelves)	4 PB (two shelves)
	TrueNAS F100	1 PB	N/A	6 PB (four shelves)	10 PB (four shelves)	10 PB (six shelves)

ES24   **ES102**   **ES24N**   **ES60**

Hardware Specifications

TrueNAS ES24	TrueNAS ES60
• 4U: 24× 3.5"/2.5" hard drive bays (front-loading, hot swap) • Redundant, hot-swap SAS3 (12 Gb/s) controllers • 3x Mini-SAS HD Host Connections per Controller (SFF-8644) • Physical Dimensions (length x width x height) • 20.5 × 19 × 7" │ 521 × 483 × 178 mm • Rackmount Rail Depth: 26 to 36.5" • Empty weight: 40 lbs │ 18 kg • Fully-loaded weight: 76 lbs │ 34.5 kg • Power Draw: 316W (typical); 400W (max)	• 4U: 60× 3.5"/2.5" hard drive bays (top-loading, hot swap) • Redundant, hot-swap SAS3 (12 Gb/s) controllers • 6x Mini-SAS HD Host Connections per Controller (SFF-8644) • Physical Dimensions of Shelf (L x W x H) • 28.03 × 19 × 6.9" │ 712 × 483 × 176 mm • Physical Dimensions of Shelf with Cable Management • Arm (L x W x H) • 35.04 × 19 × 6.9" │ 890 × 483 × 176 mm • Designed to fit in a standard 19" wide, 1000 mm depth cabinet • Rackmount Rail Depth • 24" to 32" (610 to 813 mm) with Cable Management • Empty weight: 82 lbs │ 37.2 kg • Fully-loaded weight: 178 lbs │ 80.8 kg • Power Draw with 60 HDDs: 1000W (typical); 1250W (max)

TrueNAS ES102	TrueNAS ES24N
• 4U: 102 × 3.5" hard drive bays (top-loading, hot swap) • Redundant, hot-swap SAS4 (24 Gb/s) controllers • 4x Mini-SAS HD Host Connections per Controller (SFF8644) • Physical Dimensions of Shelf (L x W x H) • º 38.6 × 19 × 6.9" │ 980.4 × 482.6 × 175.3 mm • Physical Dimensions of Shelf with Dual Cable Management • Arm (L x W x H) • º 39.4 × 19 × 6.9" │ 1197 × 482.6 × 1000 mm • Designed to fit in a standard EIA-310 compliant rack, 17.72" - 18.31" wide, 1000 mm deep cabinet • º Narrow cabinets could require a rack-mounted PDU to properly allow the enclosure to be fully installed into the rack and properly cabled with the included Cable Management Arms • Rackmount Rail Depth • º 32" to 36" (813 to 914 mm) with Cable Management • º Balance Warning: The ES102 also extends 37.4 in outward when fully extended from rack • Rack Width: 17.72" to 18.31" (450mm to 465mm) + 1.5mm nominal hole spacing (EIA-310 standard) • Fully-loaded weight: 262 lbs │ 118.8 kg • Power Draw: 707W (typical); 1228W (max)	• 2U: 24× 2.5" NVMe SSD drive bays •　　(front-loading, hot swap) • Redundant, hot-swap fabric modules • Physical Dimensions of Shelf (l x w x h): • 27" x 19" x 3.5" │ 686 × 483 × 89 mm • Physical Dimensions of Shelf with Cable Management • Arm (L x W x H) • º 38.9" x 19 × 3.5" │ 988 × 483 × 88 mm • Rackmount Rail Depth: 27" - 37" Empty weight: 43 lbs │ 19.5 kg • Fully-Loaded weight: 56.2 lbs │ 25.4kg • Power Draw: 558W (typical); 825W (max)

Available Storage Media	Power Management
• Enterprise Nearline Hard Drives • (7200 RPM SAS3 - 12 Gb/s) • Capacities available from 4 TB to 22 TB • Self-Encrypting Drives (SED) Available, FIPS 140-2 Options • Enterprise Solid State Drives • (SAS3 - 12 Gb/s) • Capacities available from 1.92 TB to 15.3 TB • Self-Encrypting Drives (SED) Available, FIPS 140-2 Options • Enterprise-Class NVMe Gen4 SSD (Dual Port) • Capacities from 3.8 TB to 630 TB • Self-Encrypting Drives (SED) Available, FIPS 140-3 Options	• Redundant, hot-swappable, high-efficiency (90%+) power supplies • 100-240V 50/60Hz input power on TrueNAS ES24/ES24F/ES24N (Auto-Switching) • High-line (200-240V 50/60HZ) input power only on TrueNAS ES60/ES102 • UPS signal response and alerts • Redundant cooling • All expansion shelves are RoHS 6/6 compliant

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