






| TrueNAS SCALE 23.10  |                          |  |  |   | TrueNAS SCALE 24.04  |
|--|--------------------------|--|--|---|--|
| <br>Management | Multi-Systems            | TrueCommand, RBAC, Auditing, Single Sign-on, Cloud   | Alerting, Reporting, Analytics   | TrueCommand 3.0 SCALE UI  | Improved Stats   |
|  | Administration           | Web UI, SNMP, Syslog, Reporting, CLI   | REST API, WebSockets AP  | vCenter Plugin (E), API ACLs, Rootless Admin  | Audit Logging, Restricted Admins   |
|  | Systems Utilities        | Tasks, Cron Jobs, Scripts, In-Service Updates  | Alerting, Email, Debugs  | Proactive Monitoring (E)  | SMB Activity Audits, Session Management                                    |
|  | Clients and Applications | Windows, MacOS, Linux, UNIX, iOS, Android Clients  | Many applications via SMB, NFS, iSCSI, or S3 client                                    | Integrated Applications via ZFS and Containers/VMs  |  |
| <br>Services   | Application Services     | Apps (Helm Charts), Docker Containers, Kubernetes, New Apps UI and Catalogs, GPU sharing             | VMs: Windows, Linux, FreeBSD, PCIe pass-through  | Apps: OverlayFS, Alder Lake GPU, GeForce 40xx GPUs, Bulk App Updates VMs: USB pass-through, CPU Pinning | Community Supported Sandboxes  |
|  | Directory Services       | Active Directory, Google 2FA   | Local Users and Groups   | LDAP, Kerberos  | FreeIPA, Restricted Admins using AD/LDAP                                   |
|  | Storage Services         | File: SMB 2/3, NFSv3/v4, rsync, Multi-protocol shares with SMB and NFSv4, SMB Multi-channel, NFSv4.1 | Block: iSCSI, VAAI Object: Distributed Minio, Cloud Sync, Credentials                  | SMB Share proxy, Open-Stack Cinder, SMB Data Migration CSI (iSCSI, S3, SMB, NFS)                        | Data Ingest via SMB/NFS Syncthing Enterprise Improved Share Creation Forms |
| <br>ZFS      | Data Management          | Unlimited Snapshots, Pool Checkpoints, Space-efficient Clones  | Replication: Remote, Local, Auto-resume, to any OpenZFS Endpoint                       | Improved Storage UI   | Immutable Snapshots  |
|  | Data Protection          | Accelerated Copy-on-Write, 2-Copy Metadata, iX-Storj Globally Distributed Storage                    | Built-in RAID: Single/Dual/ Triple Parity, Mirrors, dRAID, Fast Resilvering, Fast Boot | Self-healing Checksums, Background Scrubbing  |  |
|  | Data Reduction           | Thin Provisioning, Fast File Cloning (SMB/NFS)   | In-line Compression  | ZFS Clones, Deduplication, SSD TRIM/UNMAP   |  |
|  | Data Acceleration        | All Flash, Fusion Pools, Metadata on Flash   | Read Cache (ARC/L2ARC): RAM/Flash  | Write Cache (SLOG/ZIL: Flash, HA NVDIMM (E), Dual Port SAS/NVMe (E)                                     | Improved ARC Behavior  |
| <br>OS       | Networking               | Full IPv4 and IPv6   | LAGG, LACP, VLANs, Interface Bridging  | Jumbo frames, TCP options   | Improved Bridging  |
|  | Data Security            | Self-Encrypted Drives (TCG Opal), Dataset Encryption   | Encrypted Replication, Wireguard, OpenVPN  | ACLs, IP Filtering, KMIP (E), FIPS 140-2 Validated Encryption (E)                                       |  |
|  | Foundation               | Debian, Boot Management, SSH, containered  | Kubernetes, KVM  | System logging, Time Synchronization  |  |
| <br>HW       | High Availability        | Fast ZFS Replication   | 10 - 100 Gbe Clustering, LAGG and/or LACP  | Dual Controller High-Availability (E) - Fast Failover   |  |
|  | Hardware Management      | IPMI Remote Management, Visual Enclosure Management (X)  | SAS JBODs, Global Spares   | SMART, SSD Wear Monitoring  |  |
|  | Hardware Platforms       | Any x86-64 System  | Mini X+/XL+, R-Series  | X-Series, M-Series, F-Series  | H-Series   |
| Support  |                          | Community: Forums, Documentation, Release Notes, Bug Ticketing                                       |  |   | Professional: Software-only via Email                                      |

(E) Indicates that an Enterprise license is required

(X) Indicates that an iXsystems hardware is required