TrueNAS® SCALE Features

		TrueNAS SCALE "Bluefin" 22.12			"Cobia" 22.22
Management	Multi-Systems	TrueCommand, RBAC, Auditing, Single Sign-on, Cloud	Alerting, Reporting, Analytics	TrueCommand 2.3 SCALE UI	Improved Stats
	Administration	Web UI, SNMP, Syslog, Reporting, CLI	REST API, WebSockets AP	vCenter Plugin (E), API ACLs, Rootless Admin	Improved System Reporting
	Systems Utilities	Tasks, Cron Jobs, Scripts, In-Service Updates	Alerting, Email, Debugs	Proactive Monitoring (E)	Performance Analysis Tools
	Clients and Applications	*Windows, MacOS, Linux, UNIX, iOS, Android Clients*	*Many applications via SMB, NFS, iSCSI, or GlusterFS client*	*Integrated applications via ZFS and Containers/VMs*	NVMe TCP Clients
Services	Application Services	Apps (Helm Charts), Docker Containers, Kubernetes, App Catalogs, GPU sharing	**VMs:** Windows, Linux, FreeBSD, PCIe pass-through	**Apps:** OverlayFS, Alder Lake GPU, GeForce 30xx GPUs, Bulk App Updates **VMs:** USB pass-through, CPU Pinning	Improved Apps UI, Kubevirt
	Directory Services	Active Directory, Google 2FA	Local Users and Groups	LDAP, Kerberos	
	Storage Services	**File:** SMB 2/3, NFSv3/v4, rsync, SMB Multi-Channel, NFSv4.1	**Block:** iSCSI, VAAI **Object:** Distributed Minio, Cloud Sync, Credentials	SMB Share proxy, OpenStack - Cinder, CSI (iSCSI, Gluster, SMB, NFS)	Gluster Snapshots, Data migration, FC
ZFS	Scale-Out	Clustering; Gluster, S3	Erasure Coded Volumes, Configurable Redundancy	Node Replacement Process, UI Enhancements	Cluster Expansion via UI
	Data Management	Unlimited Snapshots, Pool Checkpoints, Space-efficient Clones	**Replication:** Remote, Local, Auto-resume, and to Linux ZFS	Improved Storage UI	Index / Searching
	Data Protection	Accelerated Copy-on-Write, 2-Copy Metadata, iX-Storj Globally Distributed Storage	**Built-in RAID:** Single/Dual/Triple Parity, Mirrors, Fast Resilvering, Fast Boot	Self-healing Checksums, Background Scrubbing	dRAID, RAIDZ Expansion, iX-Storj LUN backup
	Data Reduction	Thin/Thick Provisioning	In-line Adaptive Compression	Clones, Deduplication, Trim	iX-Storj deduplication, ZFS Copy Block
	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 Linux ARC
OS	Networking	Full IPv4 and IPv6	LAGG, VLANs, 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 140-3 Validated Encryption (E)	Virus Detection
	Foundation	Debian, Boot Management, SSH	Kubernetes, KVM	System logging, NTP	Containerd, K8s Clustering
HW	High Availability	Fast ZFS Replication	10 - 100 Gbe Clustering, VLANs or LAGG	Dual Controller High-Availability (E) - Fast failover	Node Scalability: 1200 drives
	Hardware Management	IPMI Remote Management	SAS JBODs, Global Spares	SMART, SSD Wear Monitoring	Visual Enclosure Management (X)
	hardware Platforms	Any x86 System	Mini X+/XL+, R-Series	X-Series, M-Series (Single)	AWS and More
Support		Community Support - Forums, Documentation, Release Notes, Bug Ticketing			**Professional:** Software-Only via Email

Bold Italics indicates the feature requires third party software separate from TrueNAS

(E) Indicates that an Enterprise license is required

(X) Indicates that an iXsystems hardware is required