ANDRA Grid Storage Manager

Key Features	
Distributed Management Architecture (Grid Technology enables management of systems and storage clusters across sites, ideal for hybrid and private cloud)	Yes
Grid Configuration Analytics - identifies potential network and system configuration issues and can be configured to send as a health report via email	Yes
REST API (100% API coverage)	Yes
Python Client Library (100% API coverage)	Yes
Scriptable CLI (99% API coverage with XML, JSON, CSV output)	Yes
PowerShell module	Yes
Client OS Support	Linux, Windows, MacOS, Solaris, AIX, HPUX, VMware, XenServer
Upgrade Management (Web, CLI, API accessible)	Yes
Ansible Modules (File & Block Storage)	Yes
Base Platform OS Options	Ubuntu LTS
Web Management / WUI (Native JS/HTML5)	Yes
Web Management - Real-time Stats	Yes
Web Management - Grid/Global Dashboard	Yes
Distributed Management Control Plane (Storage Grid Technology enables WUI access and API access from all systems simultaneously)	Yes

Alert Management (over 200 call-home alert types covering system, storage, and networking related issues and maintenance items)	SNMP, Email, Teams, Google Chat, Pagerduty, Slack, Splunk On-Call, ServiceNow, DynaTrace, Squadcast, Lightstep, Discord, etc
Health Reporting (HTML & CSV)	Yes
Capacity Usage Reporting (HTML & CSV)	Yes
Zero-touch Maintenance System (automatic repair/heal on replacement of bad media)	Yes
Data scrubbing Schedule Management (bit-rot correction) for both scale-up and scale-out solutions.	Yes
Composable Infrastructure Management - NVMeoF JBOFs and correlation of pool device to enclosure view	Yes
Hardware Monitoring & Management - Servers	Yes
External System Integration	Seagate Corvault, WD Data24
Hardware Monitoring & Management - Controllers, Enclosures and correlation of pool device to enclosure view	Yes
Deploy as Virtual Storage Appliance	Yes (VMware, HyperV, VirtualBox)
Out-of-box experience - QuantaStor has a Getting Started configuration workflow manager built-in to the web management interface that makes it easy to configure new systems through a set of steps.	Yes
Branded all-in-one QuantaStor OS platform media packaged as ISO for bare-metal or VM installation	Yes
Heterogeneous Storage Grids - Bare metal deployment on hardware from multiple vendors and generations of hardware	Yes
Scale-out Cluster Management (Full management and monitoring of all services including monitors, RGWs, MDS, file/block/object pools, EC policies, Clusters, OSD, WAL, MDB, and associated protocol services)	Yes

Block Storage Copy Engine	FC, iSCSI, NVMeoF, Cloud
Block Storage Pass-thru	FC, iSCSI, NVMeoF
Block Storage Software Adapter for using 3rd party SAN storage back-end	iSCSI & NVMeoF
Backup Policies - Copy/Move/Auto-tier to/from Object and NAS storage	NFS, SMB, S3
NAS Gateway to Cloud	Yes
Intelligent Pool Provisioning with Automatic Enclosure Redundancy	Yes
Multi-tenant Resource Groups	Yes
Multi-tenant Tagging	Yes
Multi-tenant Provisioning Quotas	Yes
Automatic Multipath Device Management	Yes
Network - Port Bonding, VLANs and VIF management	Yes
Network - FIrewall Management (System & Port level)	Yes
Network - DNS, NTP Management	Yes
Security - FIPS-140-2 L1 Certification	Yes
Security - Key Management - KMIP Integration	Yes
Security - SED Opal/Ruby Hardware Encryption	Yes
Security - 2FA - Time-based OTP	Yes
Security - Single-sign-on AD/LDAP with automatic grid user creation based on AD/LDAP group settings	Yes
Security - Role Based Access Controls (security management system does authentication and authorization checks for every API call)	Yes
Security - RBAC + Multi-tenancy	Yes

Security - NIST 800-53 Compliance	Yes
Security - Audit Logging	Yes
Security - Data-shredding (DoD, Army, random)	Yes
Security - GDPR compliant Log Send System	Yes
Security - CJIS Compliance	Yes
Security - HIPAA Compliance	Yes
Licensing System (capacity per system, subscription based, cloud native for service providers)	Yes
Cluster Management System for HA VIFs	Yes
OEM Branding System	Yes
VMware Certification	iSCSI, FC
Veeam Ready Certified	Yes
Veeam SOSAPI Integrated	Yes
Docker Volume Driver	Yes
Openstack Cinder Driver	Yes
Kubernetes CSI Integrated	Yes (scale-out)
Weka IO Certified	Yes
Seagate Corvault - Integrated Management & Certified	Yes
Western Digital Data24 - Integrated Management & Certified	Yes
Pliops Certified	Yes

AGSM cluster Object Storage features

S3 Compatible	Yes
S3 User and Tenant Management	Yes

S3 Bucket Management	Yes
Bucket Object Locking (Governance/Compliance)	Yes
Data Compression	Yes
Thin Provisioning/Over Provisioning	Yes
Write Log (SSD acceleration)	Yes
Read Caching (SSD acceleration)	Yes
Meta-data Offload (SSD acceleration)	Yes
Async Replication	Yes
SMB bucket access	Yes
Scale-out NFS bucket access	Yes
S3 Bucket Management	Yes
Erasure-coding (any K+M)	Yes
Replicas (r=2, 3, 4)	Yes
Multi-site Clusters	Yes
Multiple Clusters per Storage Grid (Multi-cluster / Zone Management)	Yes
Bucket replication	Yes
Bi-directional bucket replication	Yes
Quotas (Tenant, User & Bucket)	Yes
Multi-tenant (Group users by tenant)	Yes
Hierarchical Fault-tolerance (Rack / Site / Building)	Yes
Supported Media	SSD, HDD
Hybrid storage optimized HDD+SSD	Yes
Snapshot Rollback	Yes
Encryption-at-rest (AES256)	Yes

S3 Reverse Proxy	Yes
Multi-site / Multi-cluster Management	Yes
Clustered High Availability Interface Management	Yes
Multiple S3 Gateways per system	Yes
S3 Gateway optimization for NVMeoF	Yes
Built-in Load Balancer	Yes
Open Data Storage Technology	Ceph RGW
Multi-tenant Charge-back Accounting Data (API/CLI/WUI)	Yes
Intelligent Placement / Auto-tiering of objects to specific Storage Classes via rules	Yes
Multi-Zone / Zone-to-Zone Replication	Yes
Overflow Rules to redirect objects to specific Storage Classes based on available capacity	Yes
Maximum Object Size	50TB

AGSM cluster File Storage features

NFS v3/v4	Yes
SMB v2/v3	Yes
Native scale-out client	Yes
Sync Replication / Multi-site strech clusters	Yes
Data Compression	Yes
Thin Provisioning/Over Provisioning	Yes
Write Log (SSD acceleration)	Yes
Read Caching (SSD acceleration)	Yes

Meta-data Offload (SSD acceleration)	Yes
Async Replication	Yes
N-way & Cascading Replication	Yes
Snapshot Shares	Yes
Clone Shares	Yes
Share, User & Group Quotas	Yes
Multiple Clusters per Storage Grid (Multi-cluster / Zone Management)	Yes
AD Integration for SMB users	Yes
Supported Media	SSD, HDD
Hybrid storage optimized HDD+SSD	Yes
Encryption-at-rest (AES256)	Yes
Clustered High Availability Interface Management	Yes
Snapshot Schedules (instant)	Yes
Multi-site / Multi-cluster Management	Yes
Share aliases & sub-share Mangement	Yes
Grid Network Share Namespaces (NFS v4 referrals & SMB DFS)	Yes
Open Data Storage Technology	CephFS
NAS to Cloud Storage Tiering	Yes
NAS to Cloud Storage Gateway	Yes
Backup Policy - Move/Copy to/from NAS and Object Storage	Yes
Maximum Files per Directory	configurable 100K default
Maximum File Size	configurable 50TB default