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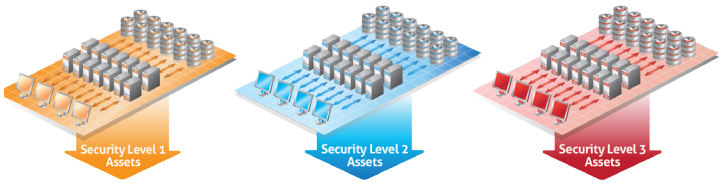
ClusterStor™ Secure Data Appliance

Data Sheet

Delivers Multilevel Security (MLS) with massive linear data storage performance and capacity.

Field proven installations of up to 25PB data storage capacity and 1TB/sec performance, all with a single globally concurrent name space.

Problem - Physically Separate Systems For Separate Security Classifications



Solution - ICD 503 (DCID 6/3 PL4) Compliant Scale-Out Parallel File System Data Storage Solution

Combining Security-Enhanced Linux (SELinux) with the Lustre® file system, the ClusterStor™ Secure Data Appliance is designed to deliver the industry first compliant and secure scale-out parallel file system solution, providing the means to implement all the necessary Mandatory Access Control (MAC), explicit audit logging / tracking, encryption and support capabilities to enforce “least privilege” access control.

With security compliance, low-latency and high throughput performance, ClusterStor Secure Data Appliance provides the means to manage multiple data types (SigINT, HumINT, GeoINT, and more) and classifications in a single file system on a single network, supporting high speed ingest and massively scalable processing. This enables unprecedented joint-mission effectiveness and efficiency under compressed timelines, to accelerate collaborative responsiveness and expedite actions with resilience in the face of threats.

Intelligence organizations no longer need to install, maintain and manage separate hardware stovepipes for different security classifications. ClusterStor Secure Data Appliance securely consolidates resources and reduces capital expenditures by multiple times (depending on how many separate hardware installations an organization deploys). Reducing operational expenditures, ClusterStor Secure Data Appliance decreases data center floor space utilization, system power / cooling, data management / administrative overhead, and cost associated to tedious manual steps to manage multiple security classifications on multiple disparate legacy systems.

ClusterStor Secure Data Appliance expands resource use and effectiveness, to help organizations do more with their existing budget and realize substantially more results. ClusterStor Secure Data Appliance enables teams with the right tools at the right scale, to help end users gain optimum productivity processing massive unstructured data sets including full motion video and images with different security classifications.

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ClusterStor Secure Data Appliance

Specifications

General Information	
File System Performance	Up to 30.8 GB/s writes and 27.6 GB/s reads per rack
File System Capacity(raw)	Up to 3,444 TB per rack using 6TB SAS HDDs
Scalable Storage Unit (SSU)	Up to 6 in base rack (first) Up to 7 in storage expansion racks (second and greater)
Object Storage Servers	Up to 12 in base rack (first) Up to 14 in storage expansion racks (second and greater)
Cluster Management Unit (CMU)	High availability server attached to storage enclosure
CMU Server	2U four node server
CMU Storage	2U 24 drive enclosure or 5U 84 drive enclosure
Client Access	InfiniBand QDR or FDR
Operating System	SELinux
Management Network	1 Gigabit Ethernet (dual management network)
File System	Lustre® 2.1 + Seagate supported enhancements
Maximum Files	Up to 2.4 Billion
Maximum Usable Capacity per Single File System	Up to 93.4 PB
Diisk Drives	
SSU Hard Disk Drive	Dual ported 6Gb/s SAS drives (4 or 6 TB capacity per drive)
CMU Hard Disk Drive	Dual ported 6Gb/s SAS drives (300 or 600 GB capacity per drive)
Solid State Disk	SLC dual ported SAS drives
Scalable Storage Unit Drive Configuration	2 SSDs, RAID 1, 1+1 80 HDDs, 3.5” 7.2K RPM, RAID 6, 8+2 2 Global Hot Spare drives
CMU Storage 2U 24	2 SSDs, RAID 1, 1+1 20 HDDs, 2.5” 10K RPM, RAID 1 & 10, 2 Global Hot Spare drives
CMU Storage 5U 84	2 SSDs, RAID 1, 1+1 80 HDDs, 2.5” 15K RPM, RAID 1 & 10, 2 Global Hot Spare drives
CMU - MDS/MGS RAID	RAID 1, 10
Dimensions	
Height	1,991 mm (78.4 in)
Width	600 mm (23.62 in)
Depth	1,200 mm (47.24 in)
Weight	1,141 Kg (2,510 lbs)
System Availability	
Hot Swappable	Disk Drives, Power Supplies, Fans, Power Cooling Modules and Server Modules
Power	Redundant Power Supplies and Power Cooling Modules
SSU Power Cooling Modules	5 redundant fan modules per SSU, each with dual fans
Power Options	
High Power US	208V AC 50A, 3 Phase delta, 4 Circuits/Rack, Hubbell CS8365C
US	208V AC 24A, 3 Phase delta, 6 Circuits/Rack, NEMA L21-30P
EMEA	415V AC 32A, 3 + N + E Phases, 4 Circuits/Rack, IEC60309 32A
Power Consumption	
Base Rack Configuration	Nominal 11.55 / Max 14.44 kilowatts
Storage Expansion Rack Configuration	Nominal 11.82 / Max 14.78 kilowattsBase
Heat Dissipation	
Base Rack Configuration	Nominal 39,416 / Max 49,271 BTU
Storage Expansion Rack Configuration	Nominal 40,336 / Max 50,420 BTU
Altitude and Temperatures	
Operational Altitude	-30 to 3048m (-100 to 10,000ft)
Operational Temperature Range	5°C to 35°C
Temperature Variance	De-rated by 1°C/300m above 900m below the specified maximum temp.
Humidity	20% to 80% non-condensing
Warranty Information	
Hardware/Software	1 Year/90 Days
Environmental Standards	
Seagate is registered through BSI to the international standard for environmental management systems ISO 14001:2004 and holds certificates for each of its three manufacturing locations at Havant UK, Guadalajara Mexico and Seremban Malaysia.	

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Take the Next Step:

To learn more about Seagate® Cloud Systems and Solutions, visit www.seagate.com/hpc

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