VAST As-Built Report

Customer Deployment Documentation

Cluster: cosmos-var-202
PSNT: cosmos-var-202
Release: release-5.4.0-hf8-2022230
Management IP: 10.143.15.202

CBox Hardware: supermicro_gen5_cbox, two dual-port NICs
CBox Quantity: 2
DBox Hardware: ceres_v2
DBox Quantity: 1

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Executive Summary

This VAST As-Built Report provides a comprehensive technical documentation of the deployed VAST Data cluster infrastructure, configuration, and operational status. The report serves as a critical reference for system administrators, storage engineers, and technical stakeholders to understand the current state of the cluster deployment, validate configuration compliance, and support ongoing operations and troubleshooting. The Executive Summary consolidates key operational metrics, hardware inventory, and cluster health indicators into high-level overview tables that enable rapid assessment of cluster status and capacity utilization.

Cluster Overview

Description	Value
ID	1
Name	cosmos-var-202
Management VIP	10.143.15.202
URL	https://10.143.15.202/api/v7/clusters/1
Build	release-5.4.0-hf8-2022230
PSNT	cosmos-var-202
GUID	54eea904-dd99-5fce-8153-fb37552df622
Uptime	55 days, 9:44:10.214624
Online Since	2025-08-27T22:07:35.127665Z
Deployed	2025-08-27T22:08:21.159989Z

Hardware Overview

Description	Value
CBoxes	2
CNodes	2
DBoxes	1
DNodes	2
Switches	0
Leaf	0
Spine	0

Cluster Information

The Cluster Information section provides detailed operational status and configuration parameters for the VAST Data cluster. This section captures essential cluster metadata including cluster identification, operational state, management network configuration, and feature flags that define the cluster's capabilities and current operational mode. The information presented here is critical for understanding the cluster's current operational status, validating proper configuration, and supporting troubleshooting activities. This data is collected directly from the cluster's management API and represents the real-time operational state of the system.

Cluster Name: cosmos-var-202

Function	Status
State	ONLINE
SSD RAID State	HEALTHY
NVRAM RAID State	HEALTHY
Memory RAID State	HEALTHY
Leader State	UP
Leader CNode	cnode-3-5
Management CNode	cnode-3-4
Management Inner VIP	172.16.4.202
Management Inner VIP CNode	cnode-3-5
Enabled	Yes
Similarity Enabled	Yes
Deduplication Active	Unknown
Write-Back RAID Enabled	Yes
Write-Back RAID Layout	DATA_6_PARITY_2
DBox HA Support	No
Rack Level Resiliency	No
Metrics Disabled	No

Hardware Summary

The Hardware Summary section provides comprehensive inventory and operational status of all physical hardware components within the VAST Data cluster. This section includes detailed information about storage capacity utilization, compute nodes (CNodes), data nodes (DNodes), and their respective hardware specifications, operational status, and physical rack positioning. The capacity metrics show both logical and physical storage utilization, enabling capacity planning and performance optimization. Hardware inventory data is essential for understanding cluster scale, identifying hardware failures, planning maintenance windows, and ensuring proper rack organization for optimal cooling and cable management.

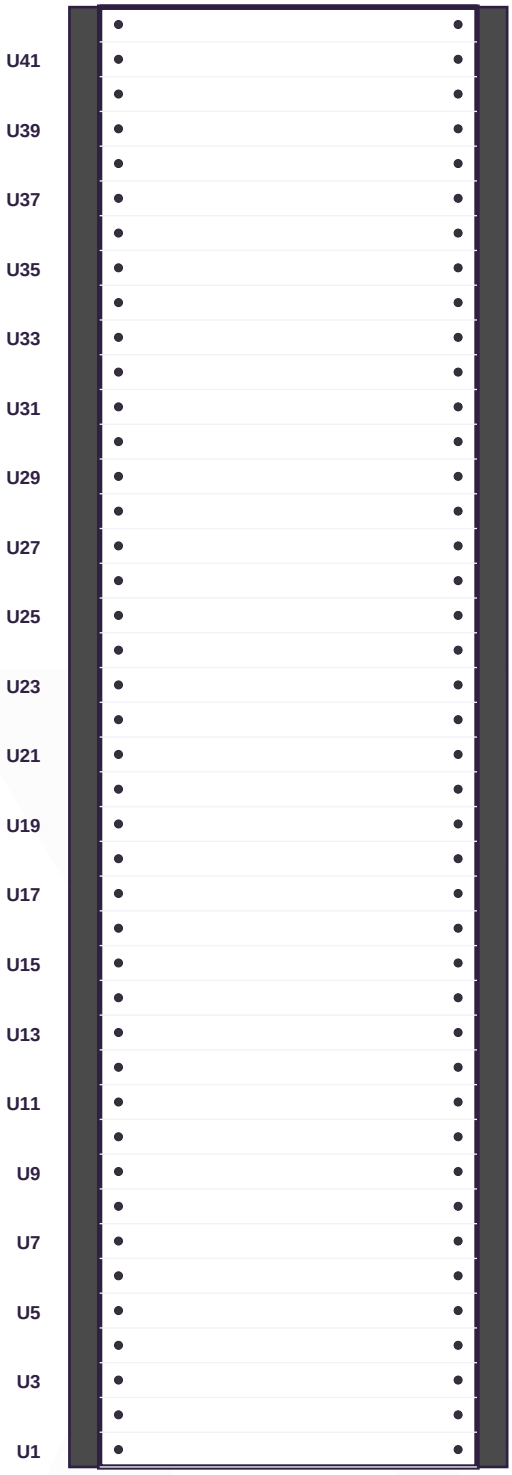
Storage Capacity

Metric	Value
Usable Capacity	246 TB
Free Usable Capacity	241 TB
Data Reduction Ratio (DRR)	10.8:1
Physical Space	310 TB
Physical Space In Use	5 TB
Free Physical Space	305 TB
Physical Space In Use %	2%
Logical Space	2643 TB
Logical Space In Use	45 TB
Free Logical Space	2597 TB
Logical Space In Use %	2%

Hardware Inventory

ID	Model	Name/Serial Number	Status	Position
CB-1	supermicro_gen5_cbox, two dual-port NICs	cbox-S929986X4C20891	ACTIVE	None
CB-2	supermicro_gen5_cbox, two dual-port NICs	cbox-S929986X4C17457	ACTIVE	None
DB-1	ceres_v2	dbox-515-25022100600179	ACTIVE	None

Physical Rack Layout



Network Configuration

The Network Configuration section provides comprehensive documentation of all network-related settings and connectivity parameters for the VAST Data cluster. This section includes cluster-wide network configuration, individual node network settings for both compute nodes (CNodes) and data nodes (DNodes), and network service configurations such as DNS and NTP. The network configuration data is essential for understanding cluster connectivity, troubleshooting network issues, validating network security settings, and ensuring proper network segmentation. This information supports network administrators in maintaining optimal network performance and security posture for the storage infrastructure.

Network Configuration

Setting	Value
Management VIPs	10.143.15.202
External Gateways	10.143.254.254
DNS Servers	10.140.3.248
NTP Servers	10.140.0.17
External Netmask	255.255.0.0
Auto Ports Ext Interface	outband
Ethernet MTU	9000
InfiniBand MTU	65520
B2B IPMI	False

CNode Network Configuration

ID	Hostname	Mgmt IP	IPMI IP	VAST OS	VMS Host
2	cosmo-arrow-cb2-cn-1	10.143.15.61	10.143.15.62	12.14.19-1809895	True
1	cosmo-arrow-cb2-cn-2	10.143.15.63	10.143.15.64	12.14.19-1809895	False

DNode Network Configuration

ID	Hostname	Mgmt IP	IPMI IP	VAST OS	Position
4	cosmo-arrow-db2-dn-1	10.143.15.21	10.143.15.22	12.14.15-1791040	right
3	cosmo-arrow-db2-dn-2	10.143.15.23	10.143.15.24	12.14.15-1791040	left

Switch Configuration

The Switch Configuration section provides detailed information about the network switches that form the fabric interconnecting the VAST cluster nodes. This section documents switch hardware specifications, port configurations, operational status, and connectivity details. Understanding the switch topology is critical for network troubleshooting, capacity planning, and validating proper network segmentation. The port-level details enable network administrators to trace physical connectivity, identify unused ports, and plan for cluster expansion.

No switch data available

Logical Network Diagram

The Logical Network Diagram provides a visual representation of the cluster's network topology, illustrating the connectivity between compute nodes (CBoxes), data nodes (DBoxes), network switches, and the customer network. This diagram shows the redundant network paths, switch interconnections, and how data flows through the storage infrastructure. Understanding the logical network topology is essential for network planning, troubleshooting connectivity issues, validating redundancy configurations, and ensuring optimal network performance across the storage cluster.

■ Green = Switch A connections | ■ Blue = Switch B connections | ■ Purple = IPL/MLAG connections

Logical Configuration

The Logical Configuration section documents the logical organization and data protection policies configured within the VAST Data cluster. This section provides visibility into tenant configurations, data views, access policies, VIP pools, and data protection settings including snapshot programs and protection policies. Understanding the logical configuration is crucial for data governance, access control validation, backup and recovery planning, and ensuring compliance with organizational data protection requirements. This information enables administrators to verify proper data isolation, validate backup schedules, and ensure that data protection policies align with business continuity objectives.

Resource	Value
Tenants	2 tenants configured
Views	48 views configured
View Policies	13 policies configured
VIP Pools	6 pools configured
Data Protection Policies	1 policies configured

Security & Authentication

The Security & Authentication section provides comprehensive documentation of all security-related configurations and authentication mechanisms implemented within the VAST Data cluster. This section covers authentication services including Active Directory, LDAP, and NIS integration, as well as security features such as data encryption settings, external key management (EKM) configuration, and security policy enforcement. Understanding the security configuration is essential for compliance auditing, security posture assessment, access control validation, and ensuring that the storage infrastructure meets organizational security requirements and industry best practices. This information supports security administrators in maintaining a robust security framework for the storage environment.

Type	Description	Function	Value
Security	Encryption	Enabled	False
Security	Encryption	Type	INTERNAL
Security	Encryption	S3 AES Ciphers Only	Not Configured
Security	EKM	Servers	Not Configured
Security	EKM	Address	Not Configured
Security	EKM	Port	Not Configured
Security	EKM	Auth Domain	Not Configured
Security	Secondary EKM	Address	Not Configured
Security	Secondary EKM	Port	Not Configured