VAST As-Built Report

Customer Deployment Documentation

Cluster: selab-var-204
PSNT: selab-var-204
Release: release-5.3.1-sp3-1898015
Management IP: 10.143.11.204

CBox Hardware: supermicro_gen5_cbox, two dual-port NICs
CBox Quantity: 3
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	selab-var-204
Management VIP	10.143.11.204
URL	https://10.143.11.204/api/v7/clusters/1
Build	release-5.3.1-sp3-1898015
PSNT	selab-var-204
GUID	127db70c-0197-5f4f-8af8-44bead61cda2
Uptime	9 days, 20:20:22.199921
Online Since	2025-10-08T01:02:57.509200Z
Deployed	2025-08-07T18:57:44.259621Z

Hardware Overview

Description	Value
CBoxes	3
CNodes	3
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: selab-var-204

Function	Status
State	ONLINE
SSD RAID State	HEALTHY
NVRAM RAID State	HEALTHY
Memory RAID State	HEALTHY
Leader State	UP
Leader CNode	cnode-3-11
Management CNode	cnode-3-11
Management Inner VIP	172.16.4.204
Management Inner VIP CNode	cnode-3-10
Enabled	Yes
Similarity Enabled	No
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	245 TB
Free Usable Capacity	59 TB
Data Reduction Ratio (DRR)	1.6:1
Physical Space	310 TB
Physical Space In Use	234 TB
Free Physical Space	76 TB
Physical Space In Use %	76%
Logical Space	385 TB
Logical Space In Use	293 TB
Free Logical Space	93 TB
Logical Space In Use %	76%

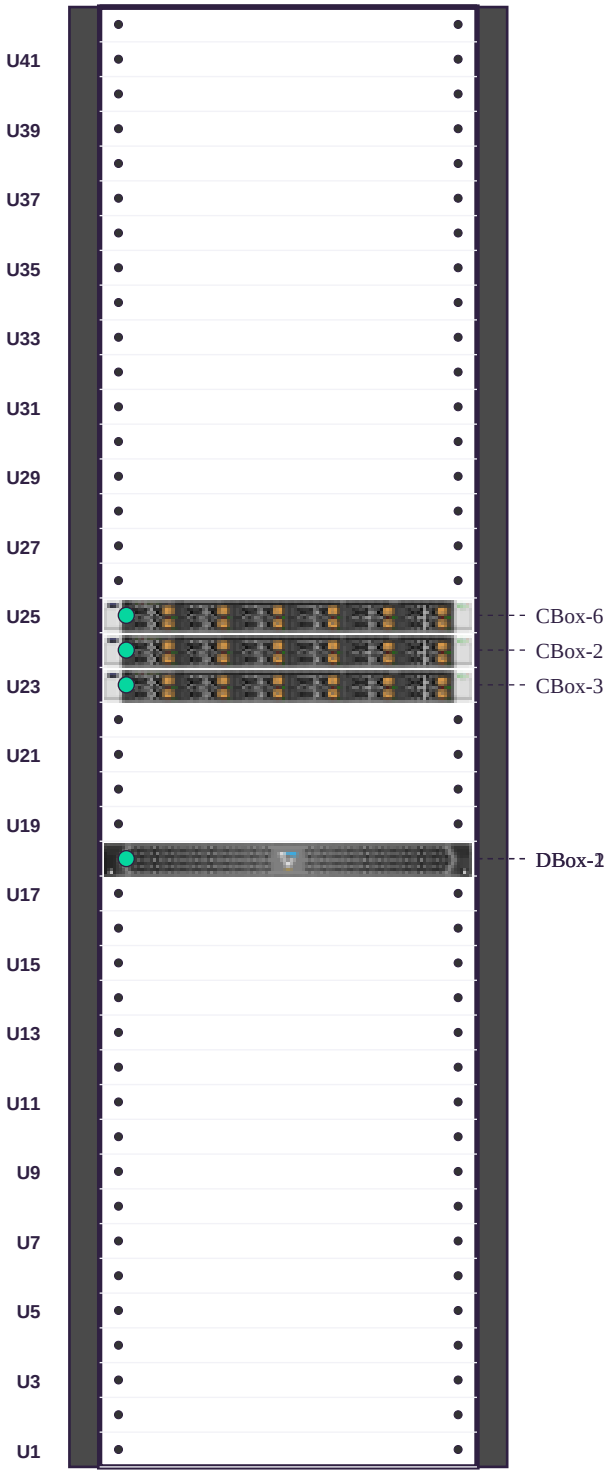
CBox Inventory (Compute)

ID	Model	Name/Serial Number	Status	Position
1	supermicro_gen5_cbox, two dual-port NICs	cbox-S929986X5306437	ACTIVE	U23
3	supermicro_gen5_cbox, two dual-port NICs	cbox-S929986X5306720	ACTIVE	U24
4	supermicro_gen5_cbox, two dual-port NICs	cbox-S929986X5306758	ACTIVE	U25

DBox Inventory (Data)

ID	Model	Name/SN	Status	Position
1	ceres_v2	dbox-515-25042300200055	ACTIVE	U18

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	10.143.11.204
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
IPMI Gateway	10.143.254.254
IPMI Netmask	255.255.0.0
B2B IPMI	False

CNode Network Configuration

ID	Hostname	Mgmt IP	IPMI IP	VAST OS	VMS Host
8	se-az-arrow-cb4-cn-1	10.143.11.81	10.143.11.82	12.14.19-1809895	False
2	se-az-arrow-cb4-cn-2	10.143.11.83	10.143.11.84	12.14.15-1791040	True
1	se-az-arrow-cb4-cn-3	10.143.11.85	10.143.11.86	12.12.15-1440723	False

DNode Network Configuration

ID	Hostname	Mgmt IP	IPMI IP	VAST OS	Position
4	se-az-arrow-db4-dn-1	10.143.11.41	10.143.11.42	12.14.15-1791040	right
5	se-az-arrow-db4-dn-2	10.143.11.43	10.143.11.44	12.14.15-1791040	left

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.

Network Topology Diagram

Visual representation of cluster network connectivity showing CBoxes, DBoxes, switches, and customer network connections.

[Network Topology Diagram Diagram Placeholder]

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	23 tenants configured
Views	330 views configured
View Policies	126 policies configured
VIP Pools	42 pools configured
Data Protection Policies	26 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
Authentication	Active Directory	Enabled	True
Authentication	Active Directory	Domain	Unknown
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	5696
Security	EKM	Auth Domain	Not Configured
Security	Secondary EKM	Address	Not Configured
Security	Secondary EKM	Port	5696