

Viking Enterprise Solutions

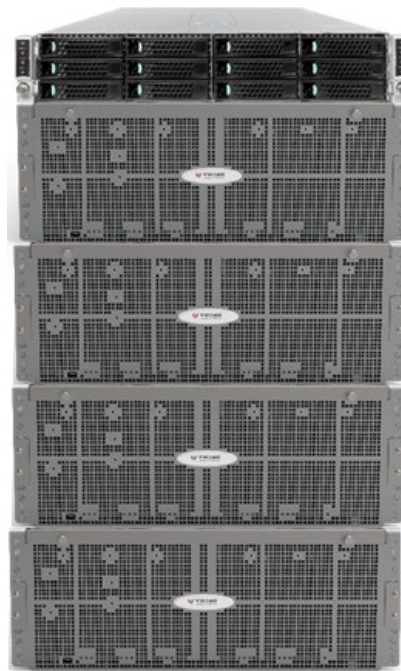
CLOUD NATIVE OBSIDIAN

High-Capacity File & Object Storage

If you're not sure exactly what kind or how much storage you'll need in the coming years, but you want to keep your costs as low as possible, Viking Enterprise Cloud Native Obsidian is the best choice for you.

The Viking Enterprise Solutions CNO High-Capacity distributed object storage solution is designed for modern data center environments that have an ever-increasing demand of data storage. This software-defined storage (SDS) solution offers extreme flexibility and scalability. CNO allows organizations to choose from a menu of standard features like erasure-coding, immutability, object locking. It's a very good choice for companies with private, hybrid or multi-cloud environments, media & entertainment, file services, data archiving, disaster recovery with cloud migration.

Viking Enterprise CNO High-Capacity Solutions comes in 18 RU and up to 8PB raw capacity or 5.5PB usable, that saves on deployment costs and has multi petabytes of data scaling using Viking multiple Storage Enclosures. The Viking Storage Enclosures have built-in I/O expansion and multi-layer security for mainstream applications with ease, delivering superior, server-grade performance to the modern data center.



Viking's CNO High-Capacity Object Storage

Hardware Controller

CNOs Quad-Node controller has pairs of four-node active/active configuration. The Viking CNO Storage Solution uses fully redundant, advanced array controllers and environmental support components that connects to Viking High Density & Capacity self-contained storage enclosures.

CNOs Quad-Node controller has pairs of active components; each member of the cluster can function in the absence of the other member, maintaining operation in the event of failure of an active component. If a component fails, the storage controller supplies information designed to assist completing corrective actions. The Storage Controller can continue to operate with multiple component failures while making intelligent decisions to provide the highest level of data protection and integrity.

Storage Enclosure

The Storage Enclosure contains a very reliable Active I/O module (IOMs). The Storage Enclosure offers best-in-class performance and capacity, space-saving density, “green” energy efficiency and high-availability of all active components. The Storage Enclosure fits into an industry standard 19” wide by 1.0m deep rack.

The High-Density Storage Enclosure is designed to enable vertical scaling of storage capacity in order to match the needs of a wide range of enterprise grade storage applications requiring full redundancy. The VDS41022 allows for expanding external object storage format through a standard SAS interface between the JBOD and any standard storage server. The VDS41022 provides leading-edge high density, capacity, \$/GB savings, and reduced footprint for even the largest of today’s hyperscale data centers.



CNO Object Storage

Viking's CNO is a distributed software-defined file & object on-premises storage solution based on Cloud Native architecture. One of the core features of CNO is the data durability and fault tolerance for today's always on data center. CNO distributed storage solution supports scale-up, scale-out deployment with object storage support in the same datacenter or across datacenters enabling geo-redundancy.

Advanced Features

The Viking CNO provides the following advanced features:

Managed Reliability:

Data is irreplaceable, so storage system reliability and fine-tuned management is paramount. CNO contains processes that improve system reliability through intelligent error management. These processes include:

- CNO is self-managing and self-healing, using algorithms that finds and rectifies issues before you are even aware of them.
- In the CNO storage cluster, CNO Monitors daemons to coordinate to increased reliability and data availability across the interconnected controller systems.
- The CNO data protection algorithm mitigates the risk of single points of failure, performance bottlenecks, and limits to scalability, creating a reliable and high-performing storage solution, fit for the growing enterprise market.
- A closed-loop feedback system collects and analyzes a variety of operating metrics between the installation and the manufacturer. This feature greatly reduces failures by remotely predicting and diagnosing potential problems and providing proactive system servicing.

Reliable-performance data I/O: The system architecture leverages the power of a single processor with multiple cores and data placement to deliver outstanding data I/O performance.

Quad-Node controller: The Quad-Node controllers actively participate in data I/O, simultaneously accessing all drives in the system. This configuration provides maximum performance as well as reliability.

Outstanding data integrity protection: The system implements the following data integrity features:

- CNO data pools are created with the data replication turned on. Every object is copied to multiple disks. This multiple copying is the method of data protection known as “replication”.

Always ON: The system performs automatic transfer of volume access from an out of service controller node to the other nodes in conjunction without impacting applications at the host level.

Run-time controller and drive firmware upgrades: The system provides the ability to upgrade the internal controller firmware, drive firmware, and servo code with new versions without service interruption. Should a node experience an unrecoverable error during the firmware upgrade process, controller firmware is returned to the previously installed version.

A Single Unified User Interface: A web browser based administrative management software that allows control of all CNO systems and clusters, eliminating the need for different user interface sessions.

CNO provides an intuitive management interface that provides simple, user-friendly storage and server administration without sacrificing precision. CNO Administrative User Interface allows the enterprise to simplify, centralize, and automate the administration with software tailored for intelligent storage.

Features

Simplified Provisioning and Capacity Deployment - Traditional storage provisioning requires a dozen or more steps across the storage system and the host. CNO allows you to create new volumes with a simple three-click process.

Intuitive Graphics - CNO is designed to function with intuitive menus and wizards easy enough for a novice user to operate, but provides all the functionality expected by an advanced user.

Cloud Integration - CNO works with the Amazon Web Services, Google Cloud and Microsoft Azure to optimize your local storage deployment and provisioning with cloud enablement.

Real-Time Storage Performance Dashboard – CNOs Real-Time Storage Performance Dashboard collects telemetry data from Viking Storage Controller, Storage Enclosures and reports it at a granular level. This allows bottleneck resolution, allocate resources more effectively, and creates more accurate forecasts for storage needs.

Centralized Management allows the user to manage all Viking CNO storage systems across sites in a single pane of glass.

