Viking Enterprise Solutions
CLOUD NATIVE OBSIDIAN
Disaster Recovery - Storage Replication

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 support scale-up, scale-out deployment with multi-protocol support in the same datacenter or across datacenters enabling geo-redundancy.

Viking's CNO Data Replication common uses

Improve the Availability of Data

Having data distributed across networks improves fault tolerance and accessibility, especially across global organizations. Data replication enhances the resilience and reliability of systems by storing data at multiple nodes across a global network.

Access Data for Reporting and Analytics

Data-driven organizations replicate data from multiple sources into data warehouses, where they use them to power business intelligence (BI) tools. Storing data from the various applications in a common data warehouse, also allows reports to span multiple applications. This gives BI users the proverbial 360-degree view of their corporate data.

Increase Data Access Speed

In organizations where there are multiple branch offices spread across the globe, users may experience some latency while accessing data from one country to another. Placing replicas on local CNO nodes provides users with faster data access and query execution times.

Enhance Server Performance

Replicated data can also improve and optimize application server performance. For example when it comes to data analytics and business intelligence, using the original source system's database puts a drain on system resources. This can lead to performance issues with the original transactional systems. By directing all read operations to a CNO replica, administrators can save processing cycles on the primary server for more resource-intensive write operations.

Ensure Disaster Recovery

Businesses are often susceptible to data loss due to a data breach or hardware malfunction or to fire, flood, terrorism, or earthquakes are extremely rare. It is possible to compromise the employees' or clients' valuable data during a disaster. Data replication facilitates the recovery of lost or corrupted data by maintaining accurate backups at well-monitored locations. A recovery tool is also essential to this

end, one that can retain backups for varying lengths of time according to data retention best practices and a patchwork of laws governing data retention.

Viking Cloud Native Replication

Viking CNO Replication is an elastic, fully managed, feature that replicates objects between buckets. CNO replication is based on S3 which offers the most flexibility and functionality that is found in Cloud Storage, but now at your datacenter thereby giving you the controls you need to meet your data sovereignty and other business needs.

CNO local replication delivers convenient and cost-effective local data copies using cloud standards based S3 protocol to full-bucket clones. It generates copies faster and more frequently than host-based solutions, with no impact on production applications.

Figure 1 CNO On-Prem Local Replication

CNO Remote replication copying data to remote CNO storage clusters at a remote location or secondary site as part of a disaster recovery plan or data protection solution. Remote replication is used by data-driven organizations to back up important data into remote or secondary locations in case of problems with the primary production data such as disasters, malfunctions or attacks on the system that may result in data loss.

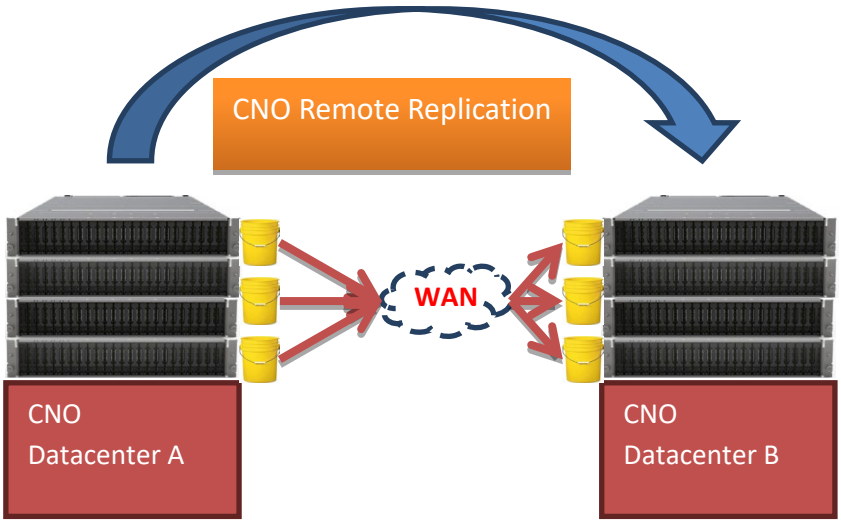


Figure 2 CNO Clusters Multi-Site Replication

Figure 3 CNO Clusters Cloud Replication

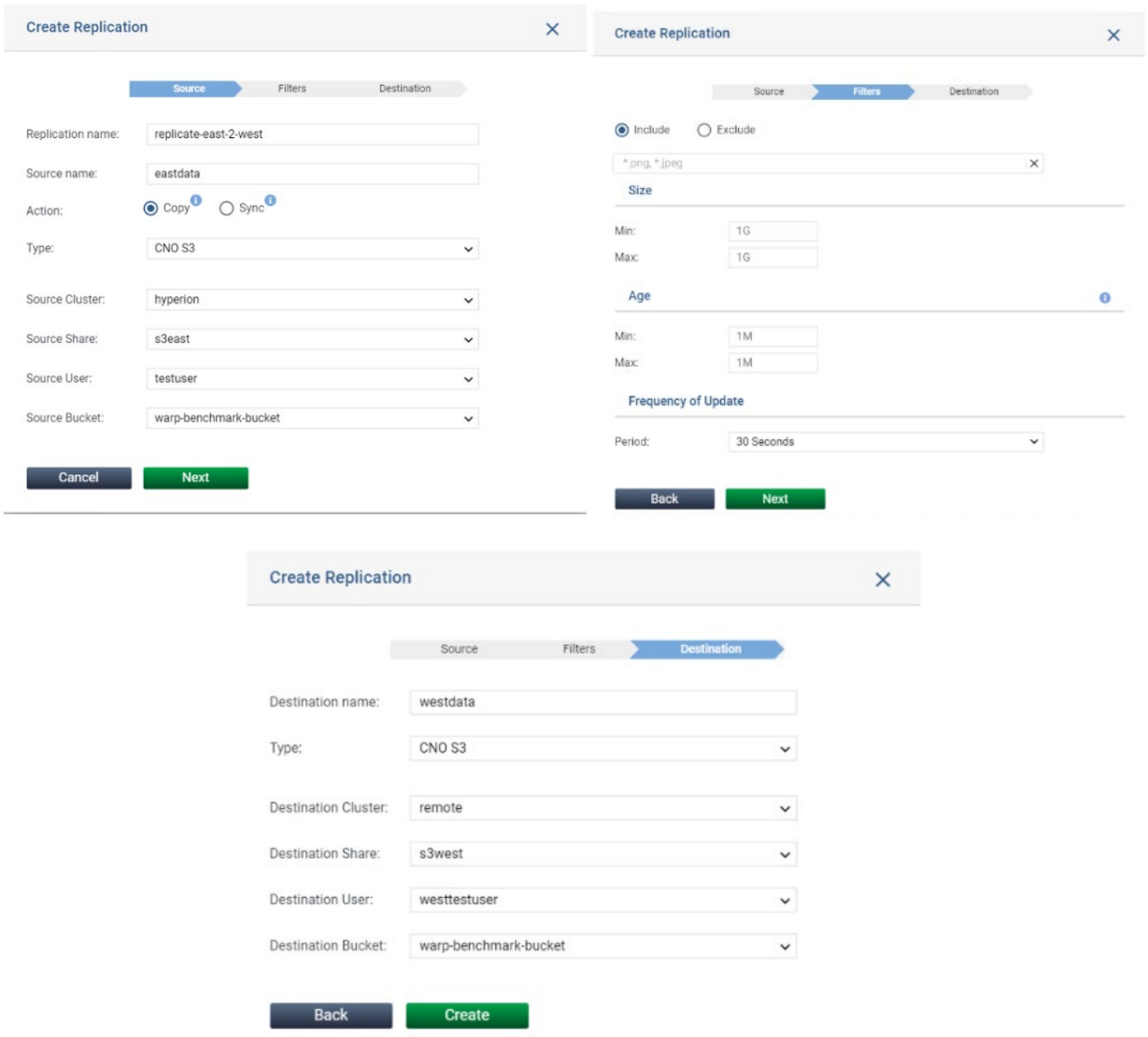
CNO Data Storage Replication also supports moving data between cloud object storage and CNO. Hybrid cloud users can replicate to and from any S3 compatible cloud vendor including AWS, Azure, and Google Cloud. This gives users cost effective options for storing data either locally, remotely, or in the cloud.

Data migration is usually driven by an application migration or consolidation in which legacy systems are replaced or augmented by new applications that will share the same dataset. These days, data migrations are often started as firms move from on-premises infrastructure and applications to cloud-based storage and applications to optimize or transform their company.

Figure 4 CNO Third Party Storage Migration

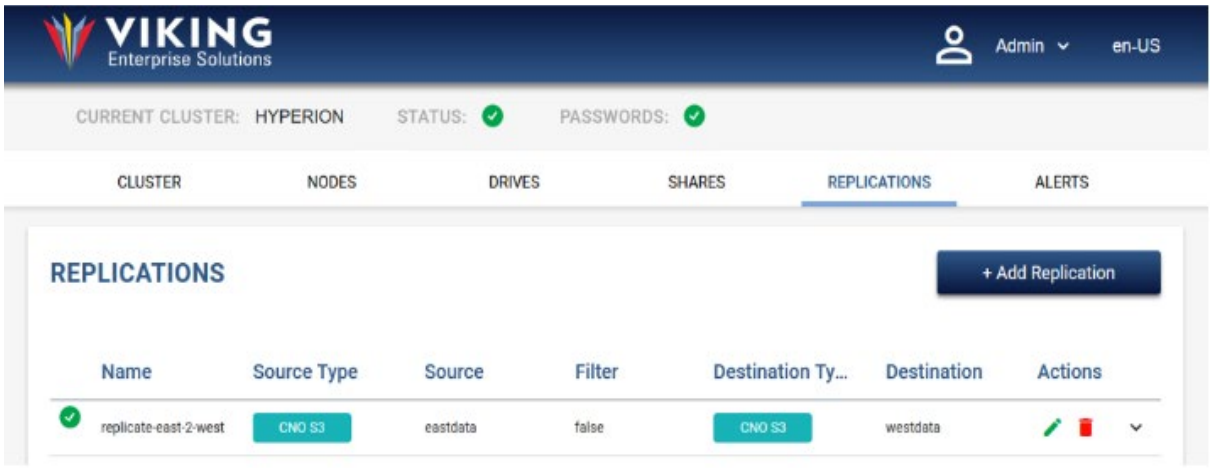
CNO Replication Workflow

CNO provides the replication controls in its simple user friendly interface. A storage or an application administrator can easily create replication and configure the parameters without needing to know a lot about storage, protocols, networking and cloud.



Customers needing a predictable replication time backed by a Service Level Agreement (SLA) can use Replication Time Control (RTC) to replicate objects without impacting performance for local users.

Viking CNO Replication also provides detailed metrics and notifications to monitor the status of object replication between buckets. You can monitor replication progress by tracking bytes pending, operations pending, replication latency, and operations failed replication using the Viking CNO Administration User Interface. You can also set up CNO Event Notifications to receive replication failure notifications to quickly diagnose and correct configuration issues. CNO Replication metrics and notifications help you closely monitor replication progress



Benefits of CNO Data Replication

Viking CNO Data Replications makes data available on multiple data centers thereby facilitating large-scale sharing of data among systems and distributes the network load among multisite systems.

Organizations can expect to see benefits including:

Improved reliability and availability: If one system goes down due to faulty hardware, malware attack, or another problem, the data can be accessed from a different site.

Improved network performance: Having the same data in multiple locations can lower data access latency, since required data can be retrieved closer to where the transaction is executing.

Increased data analytics support: Replicating data to a data warehouse empowers distributed analytics teams to work on common projects for business intelligence.

Improved test system performance: Data replication facilitates the distribution and synchronization of data for test systems that demand fast data accessibility.