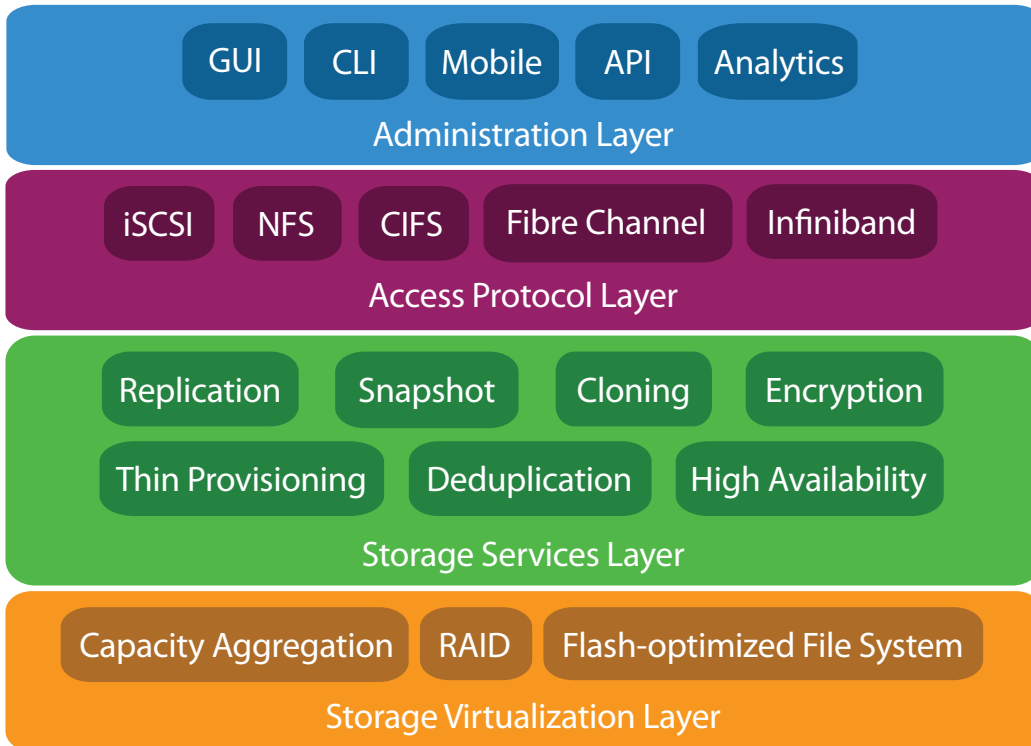


# HALO Operating System



## Highlights

- Industry's most full-featured all-flash storage software
- Unified SAN/NAS to simplify and centralize
- iSCSI, Fibre Channel, and Infiniband SAN
- NFS v2/3/4 for VMware, Citrix, Xen, and UNIX
- CIFS/SMB support for Windows clients
- Inline deduplication and compression
- Thin-provisioning and on-demand expansion
- REST API, CLI, Web, and Mobile management

## Expand and Protect

- Petabyte-scale and self-healing technology
- High-availability clustering and encryption
- Performance-optimized snapshots
- Replication and storage cloning features
- In-depth analytics and proactive notification

## Leader in Multiprotocol All-Flash Software

At the heart of Nimbus Data's all-flash systems is storage software engineered over seven years and proven at hundreds of customer sites. Nimbus Data's HALO operating system is a comprehensive software suite that provides administration, protection, data reduction, security, and monitoring of Nimbus all-flash systems, delivering the intelligent storage management essential for mission-critical primary storage. Purpose-built for flash memory, HALO's ultra-scalable file system ensures absolute data integrity, maximizes endurance, and multiplies usable capacity, reducing total cost of ownership and supporting ever-changing deployment and capacity requirements.

Intuitive yet powerful management tools ensure rapid deployment of Nimbus Data all-flash systems with minimal ongoing maintenance or administration. HALO's management features appeal to both large-scale and midsize users, featuring cloud integration, a scriptable CLI, an elegant Web interface, automatic configuration wizards, and monitoring apps for mobile devices.

## Unified SAN and NAS

HALO provides iSCSI, Fibre Channel, Infiniband, NFS, and CIFS/SMB support for unified block and file storage. This reduces cost, maximizes utilization, and simplifies storage management.

## Applications and Hypervisors

HALO seamlessly integrates with major hypervisors, like VMware, Citrix, and Microsoft Hyper-V, as well as virtual desktop infrastructure (VDI) using XenDesktop, VMware View, and more. Critical business applications like Oracle, Microsoft SQL Server, Exchange, and SharePoint run better than ever with Nimbus Data's combination of fast flash hardware and intelligent software.

## Data Reduction Maximizes Capacity

Selectable inline deduplication and compression strips out duplicate data in real-time, reducing the amount of actual storage capacity needed by up to 90% in server and desktop virtualization environments and certain database workloads. With thin provisioning, storage capacity is allocated on-the-fly to maximize efficiency.

## Cloud Ready

With the increased deployment of private and public clouds, automation of the storage infrastructure is essential. HALO provides a full-featured REST API and integration with major cloud management platforms, perfect for large enterprises looking to deliver storage as a utility with minimal effort.

## Automatic Data Integrity

The HALO file system does not require file system checks -- it is self-defending and self-healing. Today's 24 x 7 x 365 environments do not have time to unmount file systems for time-consuming fsck operations. Furthermore, the automatic checksums eliminate silent corruption and ensure that in the event of a flash failure, data synchronization will succeed.

## Snapshots and Replication

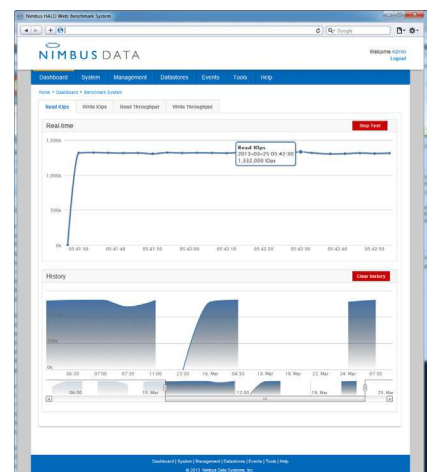
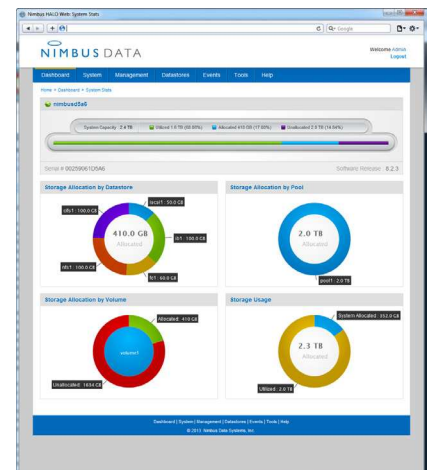
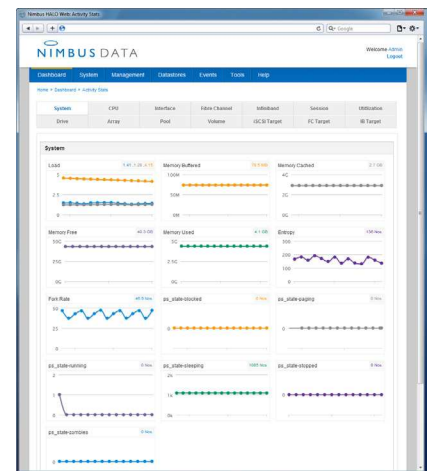
The powerful snapshot feature creates mountable, point-in-time images of production volumes without impacting performance. Snapshots can be scheduled, and policies can be set to retire them automatically over time. Synchronous and asynchronous replication provide disaster recovery.

## Analytics and Reporting

Over 200 health and performance metrics are tracked. All data is stored in a database accessible via the REST API. Alternatively, customers can use the built-in charting tools in HALO Web to view real-time and historical statistics. Administrators can create custom dashboards to track critical metrics and configure phone-home with email and SNMP notification.

## All-inclusive Software License

Unlike competing products, HALO includes all features in one license, reducing software licensing costs and budgeting complexity.



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