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Product Brief

Brocade® SANnav™ Management Portal and Global View

Highlights

- Streamline workflows to accelerate the deployment of new applications, switches, hosts, and targets.
- Transform information into actionable insights to quickly identify and isolate problems.
- Quickly visualize and isolate points of interest with simple-to-understand topology views.
- Minimize manual tasks by automating data collection and reporting.
- Capture SAN telemetry data and translate it into visual health and performance dashboards.
- Easily navigate the entire SAN from a global view down to local environments.
- Automate the identification and reconfiguration of out-of-compliance fabrics and switches.
- Increase workflow efficiencies with an intuitive one-click navigation.

Autonomous SAN

Brocade SANnav Management Portal, with its intuitive one-click, drill-down interface, leverages Brocade autonomous SAN technology to deliver a more dynamic, more comprehensive, and faster SAN management experience. The interface enables administrators to simplify monitoring across both global and local instances and easily isolate points of interest.

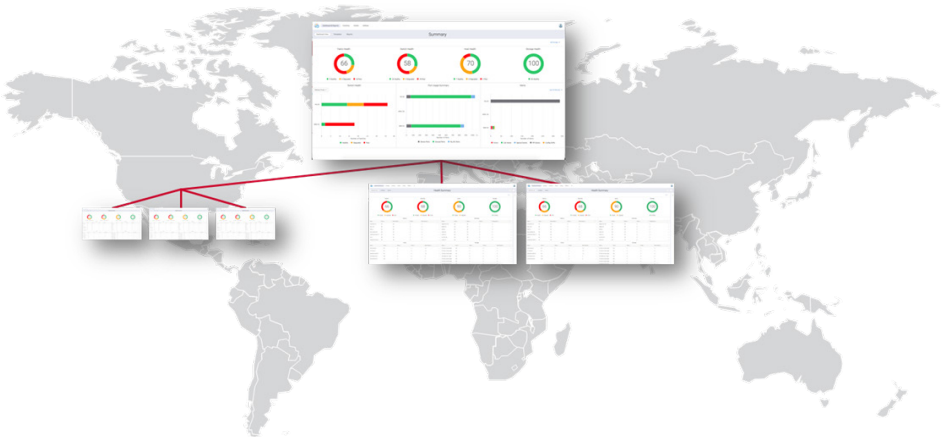
An administrator can seamlessly drill down to view real-time I/O traffic on any point of interest by selecting investigation mode from any behavior and performance dashboard. This ability to point and click anywhere within the Brocade SANnav Management Portal to access investigation mode dramatically reduces troubleshooting time.

Storage Modernization

IT organizations are facing an ever-increasing volume and velocity of data, yet users still expect data centers to deliver maximum performance, business intelligence, and operational efficiency. As organizations race to modernize the data center to support innovation and digital transformation, these demands are driving the storage network to evolve even faster to accommodate new applications. Administrators therefore need ways to easily visualize, manage, and analyze their SAN performance and overall operational health at scale. Many organizations, however, lack these capabilities due to the growing complexity of their IT environments and the lack of easy-to-use SAN management tools.*

Brocade® SANnav™ Management Portal and SANnav Global View empower IT administrators to be more efficient and productive by providing comprehensive visibility into the SAN environment. These tools transform information about SAN behavior and performance into actionable insights, allowing administrators to quickly identify, isolate, and correct problems before they impact the business. In addition, SANnav Management Portal and SANnav Global View accelerate administrative tasks by simplifying workflows and automating redundant steps, making it easier for organizations to realize their goal of an autonomous SAN.

Figure 1: Dramatization of Both Brocade SANnav Management Portal and SANnav Global View



*More than two-thirds of senior IT decision makers surveyed by ESG said that their IT environment has become more complex in the last two years. ESG, ESG Master Survey Results, 2018 IT Spending Intentions Survey, December 2017.

Autonomous SAN (cont.)

The combination of SAN telemetry and automation technologies unlocks the capabilities to deliver a self-learning, self-optimizing, and self-healing autonomous SAN.

Self-Learning:

- Gather and transform millions of data points into network intelligence.
- Visualize application-based and device-based performance and health metrics.
- Detect abnormal traffic behavior and degraded performance.
- Eliminate operational steps by automatically learning application flows.

Self-Optimizing:

- Optimize critical application performance by automatically prioritizing traffic.
- Guarantee application performance by proactively monitoring and actively shaping traffic.
- Eliminate human errors and performance impacts through open DevOps automation technology.
- Optimize administrative resources with cloud-like SAN orchestration.

Self-Healing:

- Instantly notify end devices of congestion for automatic resolution.
- Ensure data delivery with automatic failover from physical or congestion issues.
- Detect and automatically reconfigure out-of-compliance fabrics.
- Eliminate performance impacts by automatically taking corrective action on misbehaving devices.

Visualize the SAN

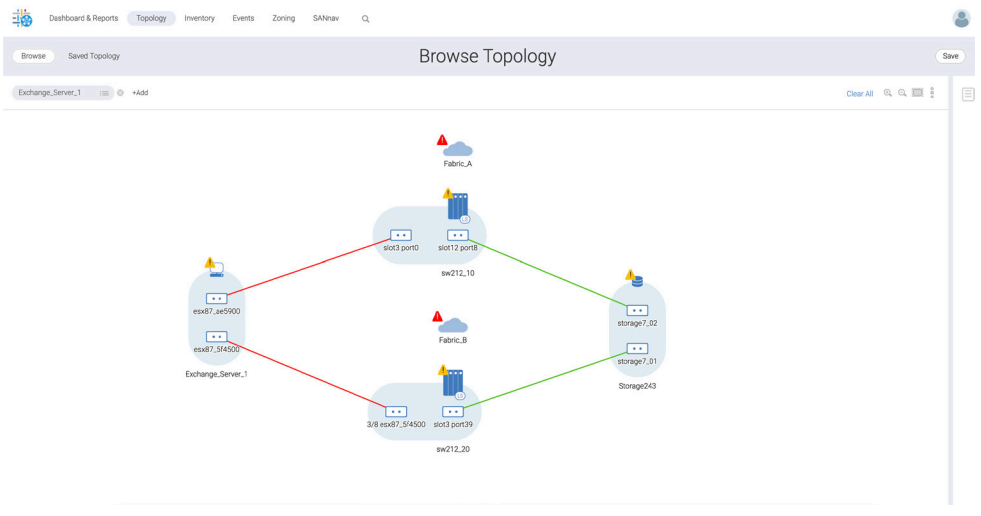
Most organizations are overwhelmed by the enormous volume of storage data that they must process daily. Even well-managed IT organizations struggle to both keep up with the demand for storage and manually correlate millions of data points to extract useful information for the business. To increase efficiency, enterprises need tools that collect, aggregate, distribute, and serve up data in ways that can be easily consumed and uniquely optimized for different users.

SANnav Management Portal

Brocade SANnav Management Portal is a next-generation SAN management application, architected from the ground up with a simple browser-based user interface (UI) and with a focus on streamlining common workflows, such as configuration, zoning, deployment, troubleshooting, and reporting. It also increases operational efficiencies with a modernized graphical user interface (GUI) that enables enhanced monitoring capabilities, faster troubleshooting, and advanced analytics. Key features and capabilities include:

- Configuration management: Implements policy-based configuration that allows users to apply consistent switch and monitoring configurations across their environments, view switches that have experienced configuration drifts via a dashboard widget, and examine what exactly has changed in the environment. This ensures operational stability and maximum uptime. In addition, SANnav Management Portal dramatically simplifies zoning configuration by implementing a highly simplified and intuitive workflow.
- Dashboards: Provides at-a-glance views and summary health scores for fabrics, switches, hosts, and targets that may be contributing to performance issues within the network. Administrators can instantly drill down into any hot spots for investigation and take corrective action. The summary health score represents the overall health of the network from various perspectives, providing an overall score from 1 to 100. A score above 90 is healthy, 71 to 90 is degraded, and 70 or below is poor.

Figure 2: Topology View from SANnav Management Portal



Brocade SANnav Management Portal and Global View

- Contextual-based topology views: Allows users to quickly locate an object of interest without having to sift through irrelevant information. Visualizing relevant contextual information about a specific device, such as a particular switch, enables users to see all directly connected entities in the data path for that switch, as well as all end-point physical devices directly connected to that switch (see Figure 2). This ability to navigate and investigate points of interest dramatically simplifies the process of detecting, isolating, and troubleshooting problems.
- Context search: Enables users to search by various contexts, such as switches, switch ports, hosts, host ports, virtual machines (VMs), storage, and storage ports. While doing a context-based search, users can type any word to search for within that context. A drop-down display under the search box will then show the search results.
- Filter management: Provides users with the ability to sort through large amounts of data by selecting only attributes of importance. For example, users can search for all 32G ports that are offline. This filter reduces the displayed content to only the points of interest, allowing faster identification and troubleshooting.
- Investigation mode: Provides intuitive views that users can instantly drill down into for key details to help them understand complex behaviors. SANnav Management Portal periodically collects metrics and stores them in a historical time-series database for further analysis. In addition, it can collect metrics more frequently (at 10-second intervals) for selected ports.
- Reporting: Generates customized reports that provide graphical summaries of performance and health information, including all data captured using Brocade Fabric Vision® technology. Reports can be configured and scheduled directly from SANnav Management Portal to show only the most relevant data, enabling administrators to more efficiently prioritize their actions and optimize network performance.

Figure 3: Dashboard Display of SANnav Global View

SANnav Global View

Whether an organization has data center locations across the globe or a single multitenant data center, it is important for administrators to be able to understand the health of the entire SAN. With Brocade SANnav Global View, administrators can quickly visualize the health, performance, and inventory of multiple SANnav Management Portal instances using a simple, intelligent dashboard. In addition, they can easily navigate from a global view down to local environments to investigate points of interest. Important events across all local environments are propagated at a global level for instant visibility in the alerts box. Using the powerful search capabilities within SANnav Global View, administrators can then seamlessly navigate across instances and drill down into any individual SANnav Management Portal instance for additional details (see Figure 3).

Optimize the SAN

Brocade Fibre Channel hardware includes integrated network sensors that nondisruptively gather millions of real-time metrics that SANnav Management Portal uses to identify, monitor, and analyze the overall health and performance of the SAN. This data is then contextualized into dashboards that can be used to quickly detect and isolate problems. At a glance, administrators have actionable intelligence on the overall health of their fabric, switches, servers, and storage, which they can view in the form of summary health score circles (see Figure 3). The summary health score circles help administrators quickly identify areas that require further investigation. Administrators can drill down from each dashboard into investigation mode to further examine any relevant data for performance optimization or troubleshooting.

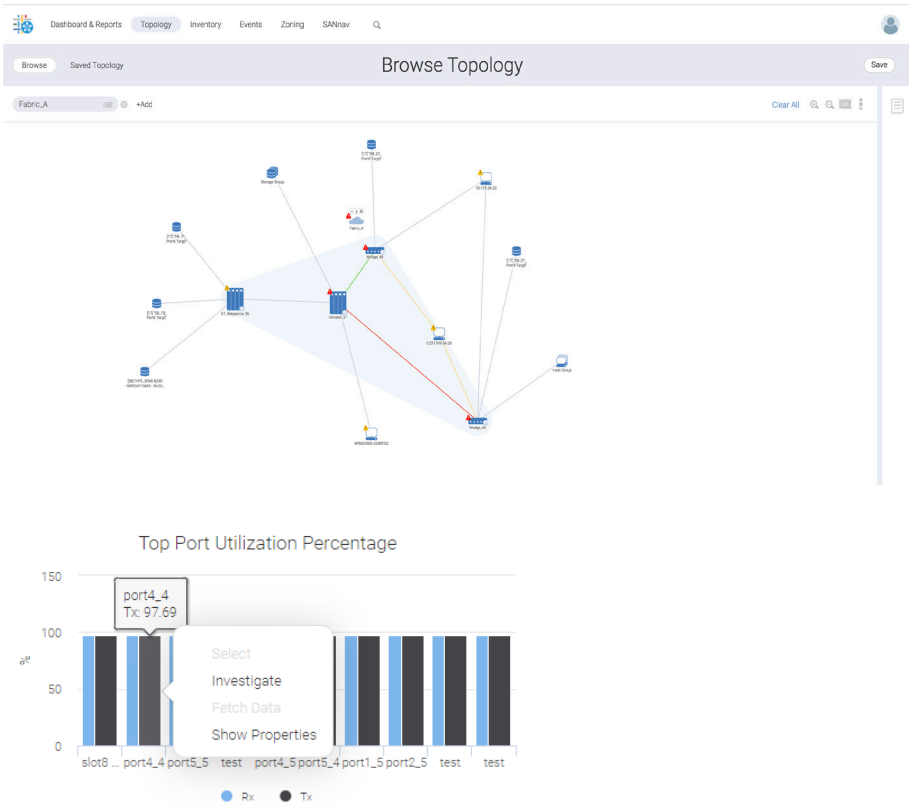
SANnav Management Portal and SANnav Global View not only transform SAN telemetry data into useful insights, such as health and performance scores, but also enable administrators to quickly associate real-time data with historical metrics and logs for in-depth analysis. This can help with spotting trends, establishing baselines, and identifying any behavioral changes over time.

Realize the Autonomous SAN

Today's IT organizations are evolving, gradually shifting their focus away from infrastructure management and toward delivering value-added applications and services. An autonomous SAN self-discovers, self-heals, and simplifies operational processes and management tasks. It leverages machine learning and advanced analytics with automation to predict behavioral changes with historical trends and real-time monitoring. In the future, administrators will be able to leverage machine learning to create application profiles based on application behavior. They will then be able to apply automation software to run multiple variants of responses to a given situation, allowing them to see the potential impact before committing to an application or infrastructure change.

Administrators can use Brocade SANnav Management Portal to build the foundation for an autonomous SAN. This innovative tool streamlines workflows to accelerate the deployment of new applications, switches, hosts, and targets. It also automates key processes, such as deploying new resources, allowing administrators to reduce repetitive tasks and focus on being more strategic.

Figure 4: Intuitive One-Click, Drill-Down Interface for Increased Workflow Efficiencies



SANnav Management Portal further simplifies operations through its self-discovery and self-healing capabilities, which it uses to identify and reconfigure out-of-compliance fabrics and switches, keeping the infrastructure up and running. For ongoing management processes, such as reporting, SANnav Management Portal automates the collection of data and generates customizable reports for different stakeholders.

Brocade Global Support

Brocade Global Support has the expertise to help organizations build resilient, efficient SAN infrastructures. Leveraging 25+ years of expertise in storage networking, Global Support delivers world-class technical support, implementation, and migration services to enable organizations to maximize their hardware and software investments, accelerate new technology deployments, and optimize the overall performance of their network.

Training and Education

Brocade Education provides free web-based training on Brocade SAN products and technologies. These self-paced training modules help customers and partners build the critical skills needed to install, configure, manage, and maintain SAN environments utilizing Brocade products.

Maximizing Investments

To help optimize technology investments, Brocade, a Broadcom company, and its partners offer complete solutions that include professional services, technical support, and education. For more information, contact a Brocade sales partner or visit www.broadcom.com/brocade.

System Requirements

Brocade SANnav Management Portal software and documentation are available via download. For details on the recommended system specifications, refer to www.broadcom.com. Both SANnav Management Portal Base Edition and SANnav Management Portal Enterprise Edition fully support managing FICON environments.

Browser Support

Chrome and Firefox are supported.

Software Evaluation

90-day, full-featured evaluation versions of SANnav Management Portal and SANnav Global View are available for download. Please refer to the SANnav FAQ for more information. Install the software in only minutes, and start experiencing more effective SAN management.

Server Requirements (Single-Host Deployment)

Product/Edition	Max. Switch Ports/Instances under Management	Operating System	Host Type	CPU	Memory	Hard Disk
Brocade SANnav Management Portal Base Edition (Manages switches only, no directors)	600	RHEL 7.8, 8.1, & 8.2 CentOS 7.8, 8.1, & 8.2	Bare Metal/ESXi VM, OVA	16 cores	48 GB	600 GB
Brocade SANnav Management Portal Enterprise Edition (Required to manage directors)	Up to 3000	RHEL 7.8, 8.1, & 8.2 CentOS 7.8, 8.1, & 8.2	Bare Metal/ESXi VM, OVA	16 cores	48 GB	600 GB
	Between 3000 to 15,000	RHEL 7.8, 8.1, & 8.2 CentOS 7.8, 8.1, & 8.2	Bare Metal/ESXi VM, OVA	24 cores	96 GB	1.2 TB
Brocade SANnav Global View	Up to 20 SANnav Management Portal instances	RHEL 7.8, 8.1, & 8.2 CentOS 7.8, 8.1, & 8.2	Bare Metal/ESXi VM, OVA	16 cores	32 GB	450 GB

Note: It is possible to install SANnav Management Portal and/or Global View (Bare Metal or VM only) on later releases of RHEL or CentOS 7.8, 8.1, or 8.2 (for example, RHEL/CentOS 7.9 or 8.3). Explicit end-user approval will be required during the SANnav product installation procedure in order to proceed on later RHEL/CentOS versions than the ones that SANnav products have been qualified with.

Ordering Information

All SANnav products are offered via subscription-based licensing. For additional details, refer to the Brocade SANnav FAQ on www.broadcom.com.

Brocade SANnav Management Portal

License	Supported Instances/Ports	Duration
Trial (Enterprise Edition with no license)	15,000	90-day trial period.
Base Edition (Manages switches only, no directors)	600	BR SKUs are offered for 1-year to 7-year durations in increments of 1 year. Renewals can be for any duration (even in days).*
Enterprise Edition (Required to manage directors)	15,000	BR SKUs are offered for 1-year to 7-year durations in increments of 1 year. Renewals can be for any duration (even in days).*

Brocade SANnav Global View

License	Supported Instances/Ports	Duration
Trial (No license)	20 SANnav Management Portal instances	90-day trial period.
Brocade SANnav Global View	20 SANnav Management Portal instances	BR SKUs are offered for 1-year to 7-year durations in increments of 1 year. Renewals can be for any duration (even in days).*

*At this time, durations of 1 to 7 years are not applicable to OEMs (including Pure Storage). For OEMs, valid durations are 1-year, 3-year, and 5-year.

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For product information and a complete list of distributors, visit our website at: broadcom.com

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