

Brocade SAN Infrastructure Services

HIGHLIGHTS

- Provides a robust data center architecture to meet current and future requirements
- Advises organizations about consolidating, migrating, or expanding existing data center environments
- Optimizes SAN performance and helps maximize data and system availability
- Minimizes impact on users during the data center infrastructure assessment, design, and implementation phases
- Leverages Brocade expertise and best practices to reduce the time, cost, and risk of implementing high-performance SAN solutions
- Simplifies management, enabling technical staff to focus on core business activities, rather than maintenance

Designing, Building, and Deploying SAN Network Infrastructures

As the industry's leading data center networking solutions provider, Brocade offers end-to-end professional services to help organizations assess, design, implement, and optimize their Storage Area Network (SAN) environments. Based on years of practical experience and best practices developed in a wide range of multivendor environments, these services are designed to align with key business requirements while minimizing the impact and cost to the entire organization.

Assessment Services

Brocade® Assessment Services provide baseline information to accurately scope work, determine risks, and establish an engagement plan within particular technical constraints. These services focus on evaluating the performance, reliability, manageability, and scalability of the data center environment. Whether organizations need to expand, consolidate, integrate, or migrate their SAN fabrics to newer and more advanced equipment, Brocade can provide an assessment of the current environment to identify problem areas, evaluate their potential impact, and recommend improvements.

This service is designed to determine the overall effectiveness of an environment. As part of this service, a Brocade expert will:

- Gather key business and technical requirements, document the history of the environment, and help define an ongoing strategy
- Assess the existing design, growth potential, effectiveness, and risk areas within the current environment
- Analyze the health of the environment, identifying items such as the logical and physical topology, device inventory, zoning, bandwidth utilization, and monitoring capabilities
- Propose best practices to help optimize existing environments, including ways to consolidate, migrate, or expand those environments
- Provide a detailed report, an executive presentation, documentation of operational processes, an up-to-date Brocade SAN Health® report, recommendations for improvement, and methods to implement best practices

Design Services

Brocade Design Services focus on minimizing complexity and introducing best practices to optimize environments for current and future requirements. The goal is to transform a tactical operation into a strategic infrastructure that improves efficiency, flexibly supports change, and is highly manageable.

This service focuses on creating a strategic, best-in-class environment. Brocade provides several design options based on factors such as budget, ability to introduce the latest products, and desire to leverage existing assets. As part of this service, a Brocade expert will:

- Analyze the current environment and develop a preliminary design that includes device naming, zoning architecture, device connection strategy, and topology
- Provide design options for leveraging the existing infrastructure, introducing a partial technology refresh or performing a significant technology refresh
- Present its findings to key stakeholders, discuss each option, and provide recommendations for a final design that is tailored to the organization's unique requirements

Implementation and Management Services

Brocade Implementation and Management Services help organizations implement, connect, and manage their environments in the most effective manner. Ongoing monitoring and management are critical to optimizing SAN environments. These services are designed to minimize the time, cost, and risk of deployment and management. Brocade will detail the project scope and prerequisites, the operational impact, resource utilization, and the risk/mitigation plan. Upon completion of the implementation, Brocade documents the new environment. These services include:

- Brocade DCX®, Director, and Switch Implementation Service
- Extension Implementation Services
- Encryption Implementation Services
- Brocade Network Advisor Implementation Service
- SAN Infrastructure Migration Service

Brocade DCX, Director, and Switch Implementation Service

This service is designed for organizations that need assistance installing Brocade data center backbones, directors, and switches into new or existing Brocade Fabric OS® fabrics. As part of this service, a Brocade expert will:

- Configure each device based on best practices and specific environmental needs to ensure that the device is ready for implementation
- Upgrade the Fabric OS level, as appropriate
- Install the data center backbone, director, or switch and validate zoning, functionality, and required components

Extension Implementation Services

As part of these services, a Brocade expert will assess the network and application environment, provide an estimated throughput of the extension link, and verify that requirements align with the available capabilities and resources. Brocade will then implement the specific configuration for connections between SAN fabrics. These services are designed to connect mainframe or open systems with SAN environments through the FICON® and FCP protocols. These services include:

- **Brocade Advanced FICON Implementation Service:** Helps organizations implement extension switches and blades using Adaptive Rate Limiting, FCIP Trunking, Quality of Service (QoS), Advanced Accelerator for FICON, FICON Management Server, cascaded FICON, and by monitoring test traffic over FCIP.
- **Brocade Advanced FCP Implementation Service:** Helps organizations implement extension switches and blades using FCIP Trunking, Adaptive Rate Limiting, and FCIP Quality of Service.

Encryption Implementation Services

These services help organizations implement their management, encryption, and security solutions to meet compliance and regulatory requirements for encryption of data-at-rest. Brocade will configure and implement encryption solutions based on best practices and the organization's unique requirements. These services include:

- **Brocade Encryption Switch Implementation Service:** Helps organizations implement encryption switches and blades using standardized multistep implementation processes in standard or high-availability environments.
- **Thales Encryption Manager for Storage Service:** Helps organizations implement the Thales Encryption Manager for Storage (TEMS). The TEMS key manager stores and manages encryption keys for each Brocade encryption switch and blade across an enterprise. Each TEMS key manager is designed for enterprise-class availability and security.

Brocade Network Advisor Implementation Service

This service helps organizations configure and optimize their management environments. Brocade will first perform a SAN discovery to identify all SAN infrastructure, server, and storage devices to be monitored. Next, a Brocade expert will set up user and group access controls, and configure all zones. As a final step, Brocade will verify the implementation, provide reference documentation, and perform a knowledge transfer.

SAN Infrastructure Migration Service

When organizations want to consolidate environments or move from one environment to another—including vendor changes—Brocade can plan, execute, and validate the migration. As part of this service:

- Brocade will identify the supported migration path and potential levels of disruption
- Brocade will assess the source environment and leverage best practices to develop a plan for migrating devices
- Brocade will manage the interoperability between fabrics to ensure a smooth migration
- Brocade will validate the functionality of the new environment

Optimization Services

Continuous improvements which tune and optimize an organization's network design, anticipate future needs, and reduce your CapEx and OpEx costs are provided by Brocade Optimization Services. Changes in business direction, new technologies, and increased customer demand mean that networks require network maintenance to be adaptable after a successful deployment. The ability to proactively evaluate and take corrective action to maximize network performance on an ongoing basis is critical. As part of this service, Brocade experts will:

- Perform regular SAN Health assessments and apply Brocade best practices
- Review device configurations, monitoring and alerting policies, and performance analytics
- Tune and optimize BNA configurations and settings
- Recommend or implement changes based on the above to ensure the network is continuously tuned and optimized based on current and anticipated demands

Transforming Networks with Brocade Experts

Brocade Consultants have access to a vast Brocade knowledge base, including the product expertise, engineering expertise, and all Brocade documentation required to implement proven configurations. Brocade Consultants are Brocade-certified and have many years of hands-on experience delivering network solutions. The valuable transfer of knowledge that Brocade consultants bring to the organization's staff can reduce risks and disruptions while optimizing network performance.

Brocade delivers expert advice to help avoid costly mistakes and delays by identifying and actively managing risk factors related to integration, migration, cutover, and management of the enhanced network infrastructure. The core competencies of Brocade Consultants include new technology deployments, migrations, architecture design improvements, tuning, optimizing, network error interpretations, documentation, and training. The Brocade Consultants provide peace of mind and confidence in the planning and execution of network transformations.

Brocade Resident Consultant

Brocade also offers residency services that provide organizations with expert guidance for transforming existing data centers into next-generation infrastructures to meet current and future requirements. A Brocade Resident Consultant—a trusted advisor who is a Brocade Certified Professional—will be part of the organization's team throughout the length of the engagement.

Maximizing Investments

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

Brocade SAN Infrastructure Services Ordering Information

Product SKU	Description
IMPL-ADD-KEYMGMT-2	Implementation of new or pre-existing NetApp KM500 Lifetime Key Management (LKM) appliance. Service is for up to two Lifetime Key Management KM500 appliances.
IMPL-ADV-7800-FICON2	Implementation of up to two Brocade 7800 Extension Switches in FICON environments using advanced extension features, including multiple tunnels and circuits, Adaptive Rate Limiting, FCIP Trunking, QOS, FICON Acceleration, and cascaded FICON. Rack and stack not included.
IMPL-ADV-7800-FICON4	Implementation of up to four Brocade 7800 Extension Switches in FICON environments using advanced extension features, including multiple tunnels and circuits, Adaptive Rate Limiting, FCIP Trunking, QOS, FICON Acceleration, and cascaded FICON. Rack and stack not included.
IMPL-ADV-FCP-FCIP-2	Implementation of up to two Brocade 7800 Extension Switches or Brocade FX8-24 Extension Blades in FCIP environments using advanced extension features, including multiple tunnels and circuits, Adaptive Rate Limiting, FCIP Trunking, QOS, FICON Acceleration, and cascaded FICON. Rack and stack not included.
IMPL-ADV-FCP-FCIP-4	Implementation of up to four Brocade 7800 Extension Switches or FX8-24 Extension Blades in FCIP environments using advanced extension features, including multiple tunnels and circuits, Adaptive Rate Limiting, FCIP Trunking, QOS, FICON Acceleration, and cascaded FICON. Rack and stack not included.
IMPL-ADV-FX-FICON-2	Implementation of Advanced FICON Distance Extension for new or pre-existing Brocade FX8-24 connections between two or more SAN fabrics. Rack and mount not included. Service is for up to two routing devices.
IMPL-ADV-FX-FICON-4	Implementation of Advanced FICON Distance Extension for new or pre-existing Brocade FX8-24 connections between two or more SAN fabrics. Rack and mount not included. Service is for up to four routing devices.
IMPL-AMP-1	Implementation for one AMP device.
IMPL-AMP-ADD1	Implementation for one additional AMP device.
IMPL-BNA-SAN-1	Implementation of Brocade Network Advisor for installing SAN licensing (BR-NTWADV-SAN-ENT), with a maximum of 24 fabrics or 120 devices. Provides reference docs and up to four hours of onsite TOI.
IMPL-DCX-2	Implementation of new or pre-existing Brocade DCX Backbones. Consultant will assess existing SANs, identify fabric settings changes, and define points on new devices connected to the SAN. Rack and mount not included. Service is for up to two devices.
IMPL-DCX-ADD2	Implementation service to increase IMPL-DCX-2 service by two devices. Additional Brocade DCX Backbones must be implemented at the same location and during the same trip as the IMPL-DCX-2 service.
IMPL-DIRECTOR-2	Implementation of SAN switches. Consultant will assess existing SANs, identify fabric settings changes, and define points on new devices connected to the SAN. Rack and mount not included. Service is for up to two devices.
IMPL-DIRECTOR-ADD2	Implementation of Advanced FICON Distance Extension for new or pre-existing FX8-24 connections between two or more SAN fabrics. Rack and mount not included. Service is for up to two routing devices.
IMPL-ENCRYPT-2	Implementation of data encryption for new or pre-existing FS8-18 Encryption Blade, and/or the Brocade Encryption Switch (BES). Service is for up to two devices or two fabrics and encrypting no more than 1 TB or 10 LUNs of production data.
IMPL-ENCRYPT-CUST	Custom encryption implementation or migration.

Brocade SAN Infrastructure Services Ordering Information

Product SKU	Description
IMPL-ENCRYPT-HA	Implementation of data encryption High Availability (HA) for new or pre-existing FS-18 blades or Brocade Encryption Switches (BES). Service is for up to two HA Clusters, four devices, or two fabrics and encrypting no more than 1 TB or 10 LUNs of production data.
IMPL-TEMS-KEYMGMT-2	Add-on TEMS Implementation for Thales Encryption Manager for Storage (TEMS). The TEMS key manager stores and manages encryption keys for each Brocade Encryption Switch and FS18-8 Encryption Blade. Service is for up to two (TEMS).
MIGRATION-DCX-2	Migration service from legacy M-series director(s) and legacy B-series director(s), up to 256 ports per SAN, to one Brocade DCX Backbone.
MIGRATION-DCX4S-2	Migration service from legacy M-series director(s) and legacy B-series director(s), up to 256 ports per SAN, to one Brocade DCX-4S blade.
PS-DAYS-SAN	Brocade Professional Services by day.
IMPL-SAN-SVC-CUST	Custom SAN implementation.
ASSESS-SAN-SVC-CUST	Custom SAN assessment.

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