IBM System Storage N series IP SAN solution

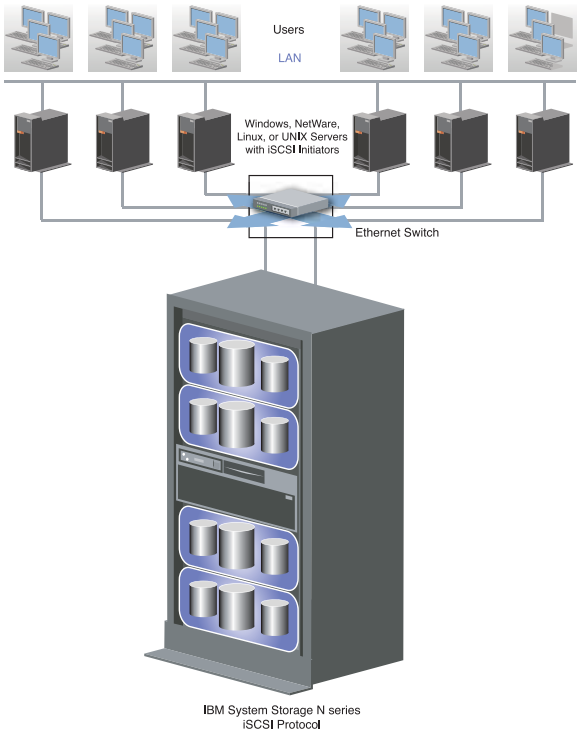

Figure 1) N series IP SAN architecture. A comprehensive and flexible networked storage solution for AIX, HP-UX, Linux, NetWare, Solaris and Windows environments.

Highlights

- ***Helps increase storage system performance***
- ***Helps streamline data storage infrastructure and management***
- ***Helps improve data availability and application uptime***
- ***Helps reduce technology and cost limitations***

Dispersed storage impacts operation

Business value centers on information; it is the lifeblood of any organization. Employees and customers depend on proper information flow to communicate and conduct transactions. Executives need to secure information to protect intellectual property and respond to regulatory requirements. Consequently, the ability to easily access, migrate, protect and store data is an absolute necessity.

Despite the need, many IT administrators cannot effectively distribute, manage or protect data residing in direct-attached storage. Scattered, disconnected application and data storage systems unnecessarily reduce administrator productivity and increase vulnerability. As application data volumes continue to grow and data storage regulatory requirements increase, administrator problems are compounded. Data storage and management solutions utilizing storage area networks (SANs) can overcome these problems, supporting not only performance improvements, but also operational and resource efficiencies.

IBM System Storage N series IP SAN solution

The IBM® System Storage™ N series IP SAN solution is designed to help your organization easily and cost-effectively consolidate distributed storage resources—from multiple system types and from both local and remote sites—and then centralize storage resource administration. The solution offers redundant storage components and multiple redundant paths to help support your highest availability needs. Functionality that allows multiple hosts to access a broadened, interconnected storage pool can help provide networked storage dependability, performance, and functionality.

An IP SAN solution can help your efforts to improve data availability and application uptime, safeguard business data, simplify infrastructure and management, and leverage existing investments and resources. Since the N series solution is based on standard Internet protocol (IP) technologies, the solution has the capability to be easily integrated into your organization's infrastructure—at minimum expense and using current IP implementation skills.

An attractive alternative to standard SANs

N series IP SANs can be an effective alternative in situations where Fibre Channel SANs are unfamiliar or economically unfeasible, yet the data storage consolidation benefits of a SAN remain attractive. The N series IP SAN solution offers the competitive advantages of a Fibre Channel SAN, along with the maturity, ease, functionality and pervasiveness of SCSI, IP networking, and Ethernet technologies. With an IP SAN, your company can use existing skills and infrastructure and take advantage of IP network assets to build SANs out to the edges of the enterprise.

Flexible and functional solutions

Because N series solutions are based on a single platform and rely on industry-standard protocols, N series IP SAN solutions can help you leverage existing investments—both hardware and software. The N series IP SAN solution is designed to fully interoperate with and easily integrate into enterprise environments. Plus, the N series solution is capable of incorporating advanced data protection, disaster recovery, and regulatory compliance capabilities.

N series solution description

IBM System Storage N series IP SAN solutions consist of N series storage systems and the iSCSI protocol (also supporting NFS, CIFS, and HTTP protocols), software, services and support. The following are brief descriptions of the components of the solution.

N series storage systems

N series storage is designed to offer high availability, reliability, and business continuance across multiple platforms—Windows®, UNIX®, and Linux®—and storage architectures—NAS or IP SAN.

iSCSI protocol

N series systems support the iSCSI protocol. These storage systems, along with standard Ethernet infrastructure (cables and switches) and iSCSI initiators in servers, form the foundation for the N series IP SAN solution.

iSCSI initiators

A networked storage solution using iSCSI requires the host server to run an iSCSI initiator. This is analogous to an NFS client in a NAS solution or an FCP initiator in an FC SAN solution. iSCSI software initiators are available from the operating system vendors for Windows, NetWare, Linux, AIX®, and HP/UX. Multiple iSCSI hardware initiators are also available and qualified for use with N series iSCSI storage systems.

For more information

Contact your IBM representative or IBM Business Partner or visit:

ibm.com/storage/nas

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MB, GB and TB equal 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, where referring to storage capacity. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers given for storage capacities give capacity in native mode followed by capacity using data compression technology.

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