

Ethernet Storage Forum (ESF)

Ethernet Storage Forum: Aligned to Support Market Momentum

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The SNIA IP Storage Forum recently announced a significant expansion of its charter, and a name change to the Ethernet Storage Forum (ESF), in response to the continued and accelerating growth of Ethernet-based storage networking deployments in IT organizations. This article examines the reasons for the change, the activities that the Forum will be undertaking, and what it means for the IT community.

WHAT IS THE ETHERNET STORAGE FORUM, AND WHY CHANGE?

The SNIA Ethernet Storage Forum (ESF) is a marketing organization within the Storage Networking Industry Association focused on driving the broad adoption of Ethernet-connected storage networking solutions by:

- Providing an industry focus on Ethernet-connected storage networking technologies and solutions
- Creating vendor neutral education material for IT professionals
- Driving market awareness and positioning of the various Ethernet storage technologies
- Accelerating the market acceptance of new Ethernet storage solutions through education on deployment, interoperability, best practices and IT case studies
- Leveraging SNIA and industry events, activities and end-user outreach programs around the globe

“Ethernet-connected storage networking solutions” here refers to any storage networking products that use Ethernet as the storage-to-host network -- for example iSCSI disk arrays, or Network-Attached Storage systems using the NFS protocol. This represents a big expansion in the charter of the ESF’s predecessor organization, the IP Storage Forum (IPSF).

As the SNIA’s first marketing Forum, founded in 2001, the IPSF built a solid reputation for delivering effective, vendor-neutral marketing and educational materials via the web, at events, and through media outlets around the globe. However, the Forum was chartered only to promote IP-based SAN storage systems – i.e., those using the iSCSI, FCIP or iFCP “block” storage protocols. The charter specifically excluded Network Attached Storage (NAS) systems, which use file storage protocols, for instance.

The decision to expand the charter was really just a recognition of changing customer demand – constantly being asked why the IP Storage Forum didn’t include NAS. Many of them felt that there is a dearth of reliable vendor-neutral information on the topic. At the same time, we were approached by a group of vendors looking for an industry venue to promote NFS, and particularly pNFS, which is part of the newly ratified NFS v4.1 specification. In addition, the ubiquity of Gigabit Ethernet endpoints, the widespread adoption of 10 Gigabit backbones in IT infrastructures, and the rapid growth of Ethernet-connected storage installations was driving an accelerated demand for information covering the whole topic of Ethernet storage.

This was further amplified by significant market excitement around a “unified” or “converged” data center network infrastructure based on 10 Gigabit Ethernet, and the imminent emergence of a new

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storage protocol, FCoE (Fibre Channel over Ethernet). A broadened focus seemed like a natural succession for the Forum.

WHAT'S THE STATE OF THE ETHERNET STORAGE MARKET?

NAS and iSCSI SAN installations make up the vast majority of the Ethernet storage market today.

Network Attached Storage systems based on the NFS protocol, have been around for more than fifteen years. Initially used for shared file storage in Unix technical environments, the ease of use, flexibility and rapid performance and capacity improvements delivered by NAS systems expanded the market to file-sharing applications, mainstream business applications, database, and most recently large-scale virtual server environments. NAS has proven to be a particularly efficient and cost effective storage solution for unstructured data, which makes up the majority of IT data assets today. New developments with the NFS protocol, in particular pNFS, promise to expand the market even further.

In the Windows environment, the CIFS/SMB protocols have become the basis for most file-sharing applications and storage – the other piece of the NAS market.

For Ethernet-based SANs, we have seen the rapid growth iSCSI adoption over the past 5 years, particularly in business-critical Windows environments, where iSCSI is very broadly deployed and viewed as a mainstream SAN solution in both small/medium and in large organizations. In addition, the recent rapid growth of iSCSI solutions for virtual server and blade server environments has made iSCSI the fastest growing segment of the storage market. That growth is expected to continue in the coming years as virtual server environments further proliferate, and as 10 Gigabit Ethernet drives the technology into large-scale, high-performance, and tier 1 data center environments.

Analysts forecast that the relative market share of Ethernet based networked storage could account for \$7 Billion in 2009, compared with \$11 Billion for Fibre Channel SAN storage. In fact a surprising number of enterprises today have “Ethernet only data centers” with all storage traffic using an Ethernet infrastructure for SAN, NAS, and remote datacenter connectivity. This phenomenon is likely to become increasingly widespread in the coming years as 10 GbE is more aggressively deployed and Fibre Channel over Ethernet (FCoE) solutions are brought to market.

HOW WILL THE FORUM ADDRESS THIS BROADER SCOPE?

The basic operational structure of the Forum is unchanged. The big difference is the creation of Special Interest Groups (SIGs), each focused on a specific technology. The role of the SIGs is to create and maintain a marketing and education plan related to their area of focus. They create content and provide subject-matter experts to promote and market their technology. Today, the Ethernet Storage Forum has two Special Interest Groups: the iSCSI SIG and the NFS SIG. However, we are also working on a request to form a SIG focused on the CIFS/SMB protocol, and hopefully we'll see enough vendor interest to approve a SIG. I believe it's important that we promote and represent the full range of Ethernet storage solutions. The omission of a large area such as Windows file serving would be a real shame.

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The Ethernet Storage Forum has no intention of creating SIGs focused on technologies that are specifically promoted by other industry groups. The Fibre Channel Industry Association (FCIA) is set up to promote standards created within the INCITS T11 technical committee, including Fibre Channel over Ethernet (FCoE). Our strategy to bring FCoE information into our outreach materials and educational initiatives is via a strategic alliance agreement with the FCIA.

Similarly, the Ethernet Alliance promotes the standards created within the IEEE 802.x committees. We would like to bring information on higher speed Ethernet (10Gb, 40Gb and 100 Gb) and Ethernet in the Data Center (Data Center Bridging) into our outreach materials and educational initiatives is via a strategic alliance with the Ethernet Alliance.

WHICH VENDORS ARE DRIVING THE ETHERNET STORAGE FORUM?

The leadership team (governing board) currently consists of representatives from Dell, Intel, Microsoft, NetApp, and Panasas. The current membership includes Compellent, Dell, EMC, HP, Intel, Microsoft, NEC, NetApp, Panasas and Sun. We expect to attract more vendors as the new Forum structure and activities gain momentum.

WHAT ARE THE FORUM'S TOP GOALS FOR 2009?

Our goals for the year fall into four categories:

- Promote Ethernet-connected storage networking solutions and technologies, relevant standards, and the industry's implementation of these standards to the IT community
- Promote the value of Ethernet as a storage networking fabric to the IT community
- Promote the value of ESF membership to the vendor community
- Advocate customer needs and reflect user concerns and issues back into the industry

The iSCSI SIG is focused on continuing the successful IP Storage Forum agenda to create marketing and educational materials explaining the features, benefits and best practices related to iSCSI solutions in a variety of IT environments: windows, virtual server, heterogeneous host, high performance, SMB. The goal is to drive the continued rapid market growth and broad adoption of the technology.

The NFS SIG will be focused on creating a portfolio of marketing and educational materials explaining the features, benefits, use cases and best practices related to NFS-based NAS solutions. Particular focus will be on applications and benefits of emerging new capabilities, such as pNFS., with a view to drive rapid adoption as vendors bring their pNFS implementations to market.

We are hoping that IT organizations will look to the Forum for high-quality vendor neutral information to help them in the planning, justification, selection, deployment and expansion of their Ethernet Storage footprints. For more information go to <http://www.snia.org/esf/>