SCI StorInt™ Dispatch
Cisco announces new Service Oriented SAN capabilities

This Silverton Consulting (SCI) Storage Intelligence (StorInt™) Dispatch provides a summary of Cisco's recent announcement expanding their service oriented SAN technology and offerings.

Service oriented SAN

Sometime back (1.5 years ago) Cisco announced some new line cards for their MDS 9222i SAN directors which provided storage media encryption (SME) and data mobility migration (DMM) services for their SANs. In conjunction with Cisco SAN packet forwarding capabilities, these boards could be attached anywhere in your Cisco SAN network and support these services for any defined SAN link. With this announcement, Cisco's Service Oriented SANs have now been expanded and are now also available in a standalone hardware appliance.

SSN-16

Before the Storage Services Node (SSN-16), the only way to provide Cisco SAN services such as these was to already have a MDS 9500 Director and purchase the appropriate 9222i line card. With the SSN-16, Cisco now offers a multi-service module that can be software configured to support any 4 of these services (see below). The SNS-16 supports 16-FC ports and can support up to 4 software configured, service engines. The SNS-16 also comes with 2 GigE ports for management access. Additionally, the data migration service is available in a separate standalone appliance, to provide greater flexibility for enabling data migration/upgrade projects.

Just like the MDS-9222i service modules, the SSN-16 can be configured to support services for any defined SAN link. Once installed in your SAN, configuration and enabling/disabling of SAN service modules should be non-disruptive.

I/O Accelerator

The new I/O Accelerator services optimize long distance data transfers, such as backups or array-based replication. Such capabilities were previously only delivered as isolated , dedicated devices at both ends of a MAN / WAN pipe. All of these capabilities and more can now be had when deployed as a pair of Cisco I/O Accelerator services on Cisco SSN-16 or other modules within the MDS platform.

The I/O accelerator service accelerates write activity by buffering write data locally, acknowledging write completion early and transferring the data later. In addition, the service module can provide read-ahead buffering of data. So for sequential reading and writing to remote locations over the SAN, an I/O Accelerator can speed up I/O activity considerably.

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Secure Erase

As storage undergoes technology refresh, it often is retired and sold off or returned as it comes off lease. In the old days, unless one crushed the embedded disk devices (reducing retention value to almost $0) or performed a multi-day secure erase procedure, your data could be readable by the next company to purchase your storage hardware.

With Cisco's new Secure Erase service, all one needs to do is to activate the service to securely erase a bunch of LUNs and stand back. Cisco will take the erase workload off your hosts and place it in the SAN. Cisco states that they support MilSpec Data Security Erase standards which include multi-pass overwrites with periodic data patterns to verifiably obscure and erase any data previously present.

Announcement significance

Cisco Service-Oriented SAN offerings are starting to be made available to service providers and other channels to be used in tech refresh operations. As such, a secure erase service and a standalone appliance make a lot of sense. Overall, Cisco seems to be using service modules as a way to differentiate their SAN offerings.

As for performance, SME induces some small latency to every tape write or reads going through it.   The I/O Accelerator looks to be nothing more than an I/O cache in the network between remote links and as such, can only improve remote access response times. For DMM, the fact that migrations can be done online while continuing to access the old data means that they are no longer confined to night and weekend outage windows, so the migration can be accomplished over a much shorter duration. Secure erase takes days any way you cut it, but taking the burden off the host can only help.

Silverton Consulting, Inc. is a Storage, Strategy & Systems consulting services company, based in the USA offering products and services to the data storage community.

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