

Date: 15 February 2006
To: T10 Technical Committee
From: Tim Symons
Subject: 06-098r0 Self configuring devices

Referenced Document

SAS-2 revision 2 (<http://www.t10.org/ftp/t10/drafts/sas2/sas2r02.pdf>)

Overview

During discussions about SAS zoning there have been many questions regarding the definition of self-configuring devices and how a management application client in either an HBA or another self-configuring device should operate during discovery. This proposal is for additional definition of self configuring devices and their expected behavior. Additions are recommended to the SAS-2 specification.

[Suggested new definition]

3.1 Definitions

3.1.a self-configuring expander devices: An expander device containing a management application client and SMP initiator port to perform the discover process to configure its own route table and the routing tables of attached expander devices.

[Start: Suggested addition to existing text (included in black), new additional text shown in red]

4.1.5 Expander devices (edge expander devices and fanout expander devices)

.... An expander device with expander phys with the table routing attribute that does not have a configurable route table shall be self-configuring, and shall contain a management application client and SMP initiator port to perform the discover process to configure its own expander route table **and the routing tables of attached expander devices.**

[End: Suggested addition to existing text shown in red]

[Start of suggested additions]

4.7.5 Self-configuring expander devices

The management application client of a self-configuring expander device shall configure routing tables in the expander devices as needed (see 4.7.1). A self configuring expander device discover process shall not traverse devices attached to phys with the subtractive routing attribute (see 4.1.8.2).

When a self-configuring expander device receives a phy initialization event or a BROADCAST (CHANGE) **on a phy that is does not have the subtractive attribute** then the CONFIGURING bit shall be set to one, and the self-configuring expander device shall start the discovery process for the phy that received the event. The BROADCAST (CHANGE) notification shall be forwarded on all ports when the self-configuring device has completed the discovery process.

If a self-configuring expander device receives a phy initialization event or a BROADCAST (CHANGE) **on a phy with the subtractive attribute** then **the self-configuring device shall not start a discovery process.** A BROADCAST (CHANGE) notification shall be forwarded on all other ports.