

To: T10 Technical Committee
 From: Rob Elliott, HP (elliott@hp.com)
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 Subject: 02-473r1 SAM-3 Hard reset and multiple port devices

Revision history

Revision 0 (2 November 2002) First revision (based on T10 reflector email on 7 October 2002)
 Revision 1 (6 November 2002) Incorporated comments from CAP WG.

Related documents

sam3r03 - SCSI Architecture Model - 3 revision 3

Overview

Target devices

If a multiported target device, perhaps with target ports of different protocols, detects a hard reset with one of its target ports, SAM-3 describes how all the logical units are reset and that the transport protocol defines protocol-specific actions in response (see sam3r03 6.1 and 6.3.2).

What should happen to the other target ports in the target device? Which ports should perform those "protocol-specific actions"? Possibilities include:

- a) only the target port that reported the hard reset
- b) all target ports in the target device
- c) all target ports in the target device that are in the same SCSI domain as the one reporting the hard reset
- d) all target ports in the target device that share the same transport protocol and are in the same domain
- e) all target ports in the target device that share the same transport protocol

Initiator devices

The same question applies to initiator devices, which are advised to terminate all outstanding Execute Command () RPCs on the initiator port that receives the reset.

Should that mean:

- a) only Execute Command()s that were using the initiator port that reported the hard reset;
- b) all Execute Command()s on all initiator ports in the initiator device
- c) all Execute Command()s on all initiator ports in the initiator device that are in the same SCSI domain as the one reporting hard reset
- d) all Execute Command()s on all initiator ports that share the same transport protocol and are in the same domain
- e) all Execute Command()s on all initiator ports that share the same transport protocol

Suggested changes

The CAP group agreed on 6 November 2002 that a) is correct for both targets and initiators - only affect the port that receives the hard reset, not any others.

6.3.2 Hard reset

A hard reset is a response to a power on condition (see 6.3.2) or a **Transport Reset** event notification (see 6.4).

The definition of reset events and the notification of their detection is SCSI transport protocol specific.

Each SCSI transport protocol standard that defines reset events shall specify a SCSI target port's protocol specific actions in response to reset events. Each SCSI transport protocol standard that defines reset events should specify when those events result in the delivery of a **Transport Reset** event notification to the SCSI applications layer.

SCSI transport protocols may include reset events that have no SCSI effects (e.g., a Fibre Channel non-initializing loop initialization primitive).

The hard reset condition applies to both SCSI initiator devices and SCSI target devices.

A SCSI target port's response to a hard reset condition shall include a logical unit reset condition (see 6.3.3) for all logical units to which it has access. A hard reset condition shall not affect any other SCSI target ports in the SCSI target device.

Although the task manager response to task management requests is subject to the presence of access restrictions, as managed by ACCESS CONTROL OUT commands (see SPC-3), a hard reset condition shall not be ~~affected~~prevented by access controls.

When a SCSI initiator port detects a hard reset condition, it should terminate all its outstanding **Execute Command** remote procedure calls with a service response of SERVICE DELIVERY OR TARGET FAILURE. A hard reset condition shall not affect any other SCSI initiator ports in the SCSI initiator device.