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To: T10 Committee (SCSI)

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Subject: Optional INQUIRY command processing before entering task set

1 Overview

We have seen problems at customers involving failover, where one host is trying to take over the LUNs for a failed host. There were some LUNs on the failed host which had commands queued (some with ordered tags). The second host issued an Inquiry which didn't complete because of the proceeding ordered commands.

The second host could have gotten out of this situation by doing a LUN reset, but the software didn't want to do the LUN reset until it verified it was talking to the correct device (by comparing unit serial page).

Some SCSI devices handle this problem by treating Inquiry as a 'priority' command. What that means is that they will respond to Inquiry immediately upon receipt regardless of what is in the queue or how it is tagged. Those devices have done it that way since the first generation SCSI product.

To address this the following proposal would make it legal for a logical unit to process an INQUIRY command before it is entered into the task set without regard to it's tag or any tag for any command in the task set.

2 Proposal

In SAM-3 section 8.1 Introduction to task set management add the following:

A command standard (e.g., SPC-3, SBC) may define tasks that may be processed by the task manager as if the task's task attribute is HEAD OF QUEUE without regard to the actual task attribute received with the task.

In SPC-3 a new section should be added between section 5.2 and 5.3 as follows:

5.x Implicit Head Of Queue

The following commands may be processed by the task manager as if they have a task attribute of HEAD OF QUEUE if they are received with a SIMPLE task attribute, an ORDERED task attribute, or no task attribute:

    a) INQUIRY; and
    b) REPORT LUNS;

In SBC-2 a new section should be added between section 4.2.1.5 and 4.2.16 as follows:

The following commands may be processed by the task manager as if they have a task attribute of HEAD OF QUEUE if they are received with a SIMPLE task attribute, an ORDERED task attribute, or no task attribute:

    a) READ CAPACITY (10); and
    b) READ CAPACITY (16).