

Proposed REPORT LUNS command X3T10/95-253R0

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To: Membership of X3T10
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Subject: Proposed REPORT LUNS command

This document proposes a mechanism by which an application client can determine what SCSI LUNs are supported by a device server. The proposal capability is implemented as a new SCSI command. This proposal is based on a discussion at the May 1995 SCSI Working Group meeting. As suggested at that time, this proposal attempts (as nearly as possible) to follow various reporting examples in the MAINTENANCE (IN) command, as defined in the SCSI-3 Controller Commands (SCC) document.

During the development of this proposal, it was noted that many of the SCC commands deal with 16 bit LUNs. To be as general as the SCSI-3 models, this proposal must deal with 64 bit LUNs.

In preparing this proposal, I found myself caught between conflicting goals. The Working Group specifically asked that the new command use a 12 byte CDB. In a 12 byte CDB, I could either provide for full use of 64 bit LUN values or conform to the typical 12 byte CDB format shown in the SCSI-3 Primary Commands (SPC).

In a 12 byte CDB, there are exactly enough bytes to represent the command parameters needed by a REPORT LUNS command. Specifically, a REPORT LUNS needs 1 byte for operation code, 1 control byte, 8 bytes for starting LUN value, and 2 bytes for allocation length. This amounts to exactly 12 bytes.

I choose to define a 12 byte CDB that does not conform to the typical 12 byte CDB format shown in the SPC. In doing so, I rejected the following options:

- o Using a 16 byte CDB
o Sending no starting LUN value - not practical in configurations containing large numbers of logical units
o Sending all 8 bytes of LUN value - leaves no room for enhancements in CDB functional features

The following text is proposed for inclusion in the SPC as a new command definition clause.

7.x REPORT LUNS command

The REPORT LUNS command (see table n1) requests that the logical unit numbers of known physical logical units at the target be sent to the application client.

Table n1 - REPORT LUNS command
644444L44444444L44444444L44444444L44444444L44444444L44444444L44444444L44444444L44444444L44444444
5 Bit* 7 * 6 * 5 * 4 * 3 * 2 * 1 * 0 5
5Byte * * * * * * * * * * * *
: 44444P44444444N44444444N44444444N44444444N44444444N44444444N44444444N44444444N44444444N44444444<
5 0 * Operation code (A0h) 5
K)))))3)))))M
5 1 * Reserved 5
K)))))3)))))M

