

ENDL TEXAS

Date: 4 November 2003
 To: T10 Technical Committee
 From: Ralph O. Weber
 Subject: PERSISTENT RESERVE OUT SPEC_I_PT additional parameter data

Revision History

- r0 Initial proposal
- r1 Eliminate the proposed change option that produces redundant length fields in the access controls data format (see r0) and describe only the change that produces a backwards incompatibility in the PERSISTENT RESERVE OUT parameter data format.
- r2 Eliminate the backwards incompatible proposal (see r1) and restore the r0 option that produces redundant length fields in the access controls data format. Also update to reference SPC-3 r14.
- r3 Correct last byte number and additional length so that the computed additional length is correct, as requested by the September CAP working group
- r4 Remove the use of 4m in the format tables, as requested by the November CAP working group

Discussion

The definition of the PERSISTENT RESERVE OUT additional parameter data when the SPEC_I_PT bit is set to one incorporates the use of TransportID values based on definitions established by the Access Controls proposal.

Owing to incomplete the SPC-3 revisions available at the time 02-065r2 (the proposal containing the SPEC_I_PT bit definition) was prepared, the required usage of TransportIDs was not followed. The following table shows usage of TransportIDs envisioned by the Access Controls proposal.

Table x — Grant/Revoke ACE page format

| Bit Byte | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|-------------|------------------------|--------------------------------|---|---|---|---|---|---|
| 0 | PAGE CODE (00h) | | | | | | | |
| 1 | Reserved | | | | | | | |
| 2 | (MSB) | PAGE LENGTH (n-3) | | | | | | |
| 3 | | | | | | | | |
| 4 | NOCNCL | Reserved | | | | | | |
| 5 | ACCESS IDENTIFIER TYPE | | | | | | | |
| 6 | (MSB) | ACCESS IDENTIFIER LENGTH (m-7) | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| m | | | | | | | | |
| | | | | | | | | |
| | | | | ⋮ | | | | |

The ACCESS IDENTIFIER TYPE field specifies the type of access identifier present in the ACCESS IDENTIFIER field, one option of which is TransportID. This construct need not be replicated in the PERSISTENT RESERVE OUT additional parameter data used when the SPEC_I_PT bit is set to one because only TransportIDs are allowed.

The ACCESS IDENTIFIER LENGTH field specifies the number of bytes in the ACCESS IDENTIFIER field. The construct should have been replicated in the PERSISTENT RESERVE OUT additional parameter data used when the SPEC_I_PT bit is set to one but was not. Inclusion of a length field is necessary to maintain the practice of having SCSI parameter data be self describing, a practice that dates back to at least SCSI-2 (almost twenty years).

Proposed Changes

All references are to SPC-3 r14.

Change 1 [iSCSI initiator device TransportID format]: The following changes are proposed for table 266 and the text describing the fields in table 266:

Table 266 — iSCSI initiator device TransportID format

| Bit Byte | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|-------------|-------------------------------------|---|----------|---|--------------------------|---|---|---|
| 0 | FORMAT CODE (00b) | | Reserved | | PROTOCOL IDENTIFIER (5h) | | | |
| 1 | Reserved | | | | | | | |
| 2 | (MSB) ADDITIONAL LENGTH (m-3) (LSB) | | | | | | | |
| 3 | | | | | | | | |
| 4 | (MSB) ISCSI NAME (LSB) | | | | | | | |
| m | | | | | | | | |

The ADDITIONAL LENGTH field specifies the number of bytes that follow in the TransportID. The additional length shall be at least 20 and shall be a multiple of four.

The null-terminated, null-padded (see 4.4.2) ISCSI NAME field shall contain the iSCSI name of an iSCSI initiator node (see iSCSI). The first ISCSI NAME field byte containing an ASCII null character terminates the ISCSI NAME field without regard for the specified length of the iSCSI TransportID or the contents of the ADDITIONAL LENGTH field.

... No further changes are required in the remainder of the description for table 266. ...

Change 2 [iSCSI initiator port TransportID format]: The following changes are proposed for table 267 and the text describing the fields in table 267:

Table 267 — iSCSI initiator port TransportID format

| Bit Byte | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|-------------|---|---|----------|---|--------------------------|---|---|---|
| 0 | FORMAT CODE (01b) | | Reserved | | PROTOCOL IDENTIFIER (5h) | | | |
| 1 | Reserved | | | | | | | |
| 2 | (MSB) <div>ADDITIONAL LENGTH (m-3)</div> (LSB) | | | | | | | |
| 3 | | | | | | | | |
| 4 | (MSB) <div>ISCSI NAME</div> (LSB) | | | | | | | |
| n-1 | | | | | | | | |
| n | (MSB) <div>SEPARATOR (2C 692C 3078h)</div> (LSB) | | | | | | | |
| n+4 | | | | | | | | |
| n+5 | (MSB) <div>ISCSI INITIATOR SESSION ID</div> (LSB) | | | | | | | |
| m | | | | | | | | |

The ADDITIONAL LENGTH field specifies the number of bytes that follow in the TransportID encompassing the ISCSI NAME, SEPARATOR, and ISCSI INITIATOR SESSION ID fields. The additional length shall be at least 20 and shall be a multiple of four.

The ISCSI NAME field shall contain the iSCSI name of an iSCSI initiator node (see iSCSI). The ISCSI NAME field shall not be null-terminated (see 4.4.2) and shall not be padded.

The SEPARATOR field shall contain the five ASCII characters ",i,0x" excluding the leading and trailing quotation marks.

The null-terminated, null-padded ISCSI INITIATOR SESSION ID field shall contain the iSCSI initiator session identifier (see iSCSI) in the form of ASCII characters that are the hexadecimal digits converted from the binary iSCSI initiator session identifier value. The first ISCSI INITIATOR SESSION ID field byte containing an ASCII null character terminates the ISCSI INITIATOR SESSION ID field without regard for the specified length of the iSCSI TransportID or the contents of the ADDITIONAL LENGTH field.