Logical Unit Unique Identifier/Type

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It is highly desirable to identify logical units using a unique identifier. Legacy and non-compliant devices that do not support VPD page 0x83, specifically identifier type 3h or 2h, cause problems for applications using commands such as Extended Copy. Without the VPD page 0x83 type 3h or 2h unique identifier, applications are forced to find and use, alternate, hopefully unique identifiers, for the logical unit. Most likely, this alternate identifier will be a VPD page 0x83 type 0h or 1h value or the unit serial number obtained via VPD page 0x80.

So, for Extended Copy, the E4 target descriptor is much preferred since it provides the capability to uniquely identify the logical unit (i.e., not the address or port where the logical unit resides). But, currently there is no guaranteed way to completely pass these alternate identifiers via the E4 target descriptor since the E4 target descriptor allows for a maximum of 20 bytes for the identifier field. As a result, the 3PC application must pick one of the other target descriptor formats.

Proposal: add a new Identifier Type and specify a method for generating a unique identifier for a logical unit. This unique identifier is intended to be generated by a bridge device that front ends a legacy or non-compliant device.

07h = MD5 Logical Unit Identifier

The MD5 algorithm (see RFC 1321) generates a 128 bit (16 byte) message digest of the supplied message input and the message input may be of an arbitrary length. The MD5 algorithm is not an encryption algorithm. As such, there is no feasible way to determine the input, given the output.

Table 1 — MESSAGE INPUT field format

Value	Description
0h	Reserved
1h	VPD page 0x80
2h	VPD page 0x83 type 0h
3h	VPD page 0x83 type 1h
4h-Fh	Reserved

- Note: VPD page 0x83 type 0h provides no guarantee that the identifier is unique.

Table 2 — MD5 Logical Unit Identifier field format

Bit / Byte	7	6	5	4	3	2	1	0
0	Reserved							
1	Reserved							
2	Reserved							
3	Reserved				MESSAGE INPUT			
4	(MSB)							
5								
6								
7								
8								
9								
10								
11								
12				MD5 LOGICAL UNIT IDENTIFIER				
13								
14								
15								
16								
17								
18								
19								(LSB)