

To: INCITS T10 Committee

From: Kevin Butt, IBM

Date: January 20, 2003

Document: T10/T10/03-010r1

Subject: SSC-2: Sequential-Access Device log page

There is a desire by IBM to have a method by which a device server can provide an indication to an application client of how much tape has been used and how much is available for use. We propose additional parameters be added to the Sequential-Access Device log page in SSC-2.

3.1.x native logical capacity - The capacity of the medium when compression is disabled or, if the device does not support disabled compression, then the capacity of the medium assuming one-to-one compression, the media is in good condition, and that normal block sizes are used.

8.2.2 Sequential-Access Device log page

The Sequential-Access Device log page defines data counters associated with data bytes transferred to and from the media and to and from the application client, and native logical capacities of the media, and a list parameter of binary information on cleaning.

The default value for parameters 0 through 3 shall be zero.

NOTE 37 The data in parameters 0 and 1 are intended to provide an indication of the compression ratio for the written data. Parameters 2 and 3 are intended to provide an indication of the compression ratio for read data. Parameter 4 is intended to define the granularity of parameters 5, 6, and 7. Parameters 5, 6, and 7 are intended to provide an indication of native logical capacity of media and the remaining native logical capacity on the media.

Support of the Sequential-Access Device log page is optional. Support of the individual parameters in the Sequential-Access Device log page are optional. If parameter 5, 6, or 7 is supported then parameter 4 shall be supported. Parameters 4, 5, 6, and 7 are only valid when media is mounted.

Table 50 defines the parameter codes for the Sequential-Access Device log page.

Parameter Code	Description
0000h	Number of data bytes received from application clients during WRITE command operations.
0001h	Number of data bytes written to the media as a result of WRITE command operations, not counting ECC and formatting overhead.
0002h	Number of data bytes read from the media during READ command operations, not counting ECC and formatting overhead.
0003h	Number of data bytes transferred to the initiator(s) during READ command operations.
0004h	Granularity of parameters 5, 6, and 7. The values in parameters 5, 6, and 7 is to be multiplied by 10^{GRANULARITY}
0005h	Approximate remaining native logical capacity from current tape position to EOP. There is no guarantee that this amount of data can be written to media before reaching EW. At BOP this value shall equal the value in parameter 6. At EW and at any position on the EOP side of EW a value of zero shall be returned.
0006h	Approximate native logical capacity between BOP and EW of the current partition.
0007h	Approximate native logical capacity between BOP and EOP of the current partition.
0008h - 00FFh	Reserved
0100h	Cleaning required.
0101h - 7FFFFh	Reserved
8000h - FFFFh	Vendor-specific parameters

[EXAMPLE: If you have a media whose native logical capacity is 200 GB with EW at 1G prior to EOP and you are positioned at the point that is 75% of the logical length between BOP and EW, then you would use the following to determine parameters 0004h, 0005h, 0006h, and 0007h.](#)

[Since 25% of logical length is remaining, \(200 GB - 1 GB\) * 25% = 49.75 GB \(EQ 1\)](#)

[200 GB = 200 000 000 000 Bytes = 10⁶ * 200 000 \(EQ 2\)](#)

[199 GB = 199 000 000 000 Bytes = 10⁶ * 199 000 \(EQ 3\)](#)

[49.75 GB = 49 750 000 000 Bytes = 10⁶ * 49 750 \(EQ 4\)](#)

[Since the values are reported in MBs, parameter 0004h = 6 \(06h\). EQ 4 gives parameter 0005h = 49 750 \(2616h\), EQ 3 gives parameter 0006h = 199 000 \(030958h\), and EQ 2 gives parameter 0007h = 200 000 \(030D40h\). The parameter length for parameters 6 and 7 would be 3. The parameter length for parameter 5 would be 2. The parameter length for parameter 4 would be 1.](#)