TO: T10 Membership
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SUBJECT: T10/06-061r3, ADC-2 Model for Devices with No ADT Ports

06-061 Revision 0

- Initial revision

06-061 Revision 1

- Introduced the concept of automation port to make changes less wordy. This includes non-SAM-compliant ports which can pass SCSI requests and responses.
- Changed references to "ADT port" to "automation port" where appropriate.

06-061 Revision 2

- Replace all instances of "ADT port" with "ADI port."
- Clarify conditions under which devices servers are presented on different ports.

06-061 Revision 3

- Place RMC and ADC device server requirements in separate paragraphs.
- Adjust articles to reflect possibility of multiple ports.

General

The model section of ADC specifies that DT and automation devices would include an ADT port. This is an unnecessary restriction, since the automation application client can communicate with the ADC device server via any SCSI port, such as USB or even a primary port.

Changes

These changes are with respect to ADC-2 revision 4.

Delete definitions 3.1.2 through 3.1.5, which are variations of "ADT port."

3.1.9 automation device primary port: A SCSI target or target/initiator port in an automation device.

3.1.x ADI port: A port that is not a data transfer device primary port and not an automation device primary port used to connect an automation device and a data transfer device. It supports a transport that passes SCSI requests and SCSI responses (e.g., ADT or USB).

4.2.1 Automation/drive interface overview

…
An automation device contains:
…
d) ~~An ADT port (see 3.1.3),~~ An ADI port (see 3.1.x) through which the automation application client ~~invokes commands or task management requests on~~ transmits SCSI requests to and receives SCSI responses from the ADC device server in the DT device.

…
A DT device contains:
…
Replace items d) and e) with:

d) One or more ports through which the device servers and the application client contained within the DT device pass SCSI requests and SCSI responses. At least one of these ports shall be a data transfer device primary port.

4.2.2 Device server interaction

Replace the second paragraph with:

If enabled (see 6.2.2.4.2), the RMC device server shall be accessible as a logical unit through a DT device primary port. If the DT device contains an ADI port, then the RMC device server should be accessible as a logical unit through an ADI port, and may be an asymmetric logical unit (see SAM-3).

The ADC device server may be accessible as a logical unit through a DT device primary port. If the DT device does not contain an ADI port, then the ADC device server shall be accessible as a logical unit through a DT device primary port. If the DT device contains an ADI port, then the ADC device server shall be accessible as a logical unit through an ADI port.

In Figure 2, change all occurrences of "ADT Port" to "ADI Port."

In Figure 3, change "ADT Port" to "ADI Port" and highlight it as optional.

4.2.3.1 ADI bridging introduction

The DT device may support ADI bridging for the automation device. When ADI bridging is enabled via the ENABLE bit of the SMC Logical Unit descriptor (see 6.2.2.4.3), the DT device shall contain the bridging manager and the local SMC device server (see figure 3). The DT device shall report to its DT device primary port(s) a logical unit that implements an SMC device server (i.e., the local SMC device server), and the automation device shall report a logical unit to the automation device ~~ADT~~ ADI port that implements an SMC device server (i.e., the remote SMC device server). The local SMC device server may be accessible as a logical unit through the DT device ~~ADT~~ ADI port, and may be an asymmetric logical unit (see SAM-3).

The local SMC device server receives a SCSI command or task management request via a DT device primary port. In processing the command or request, the local SMC device server may require the automation device to perform tasks. To do this, the local SMC device server passes requests to an application client in the DT device (i.e., the bridging manager). This communication is performed by means outside the scope of this standard. Using the ~~ADT~~ ADI ports on the DT device and automation device, the bridging manager then invokes requests on the remote SMC device server that resides in the automation device.

The effect is that some or all requests addressed to the local SMC device server are passed to the remote SMC device server through the ~~ADT~~ ADI port. This may be used in low-cost automation devices that do not have automation device primary ports.

6.1.2.4.1 DT device primary port status log parameter(s) overview

NOTE 8 When the VS bit is set to one, vendor-specific log parameters may appear in a standard log page (e.g. the vendor-specific parameters in the Error Counter log pages, see SPC-3) or in a vendor-specific log page. If the device includes an ~~ADT~~ ADI port (see ADT-2) the application client may be able to retrieve vendor-specific log parameters using the vendor-specific protocol of ADT-2.

6.2.2.3.1 DT Device Primary Port subpage overview

The DT Device Primary Port subpage contains descriptors that allow the DT device's primary ports to be configured, independent of the port type receiving the command (e.g., a Fibre Channel DT device primary port may be configured via the DT device's ~~ADT~~ ADI port).

6.2.2.4.2 RMC logical unit descriptor format

…

Third paragraph on page 71:

An ENABLE bit set to one indicates that the DT device primary port(s) associated with the RMC logical unit shall be responsive to SCSI tasks and task management requests received on that DT device primary port(s). An ENABLE bit set to zero indicates that the DT device primary port(s) associated with the RMC logical unit shall not respond to SCSI tasks and task management requests received on that DT device primary port(s) and the associated RMC logical unit number shall not be reported in any REPORT LUNS command. The ENABLE bit has no effect on the access to the RMC device server through the ~~ADT~~ ADI port.

6.2.2.4.3 SMC logical unit descriptor format

…

Second paragraph on page 74:

An ENABLE bit set to one indicates that the DT device primary port(s) associated with the SMC logical unit shall be responsive to SCSI tasks and task management requests received on that DT device primary port(s). Received SCSI tasks may be processed by the local SMC device server or may be passed by the bridging manager to the remote SMC device server for processing (see 4.2.3). An ENABLE bit set to zero indicates that the DT device primary port(s) associated with the SMC logical unit shall not respond to SCSI tasks and task management requests received on that DT device primary port(s) and the associated SMC logical unit number shall not be reported in any REPORT LUNS command. The ENABLE bit has no effect on the access to the SMC device server through the ~~ADT~~ ADI port.

6.2.2.4.4 ADC logical unit descriptor format

…

Fifth paragraph on page 75:

An ENABLE bit set to one indicates that the DT device primary port(s) associated with the ADC logical unit shall be responsive to SCSI tasks and task management requests received on that DT device primary port(s). An ENABLE bit set to zero indicates that the T device primary port(s) associated with the ADC logical unit shall not respond to SCSI tasks and task management requests received on that DT device primary port(s) and the associated ADC logical unit number shall not be reported in any REPORT LUNS command. The ENABLE bit has no effect on the access to the ADC device server through the ~~ADT~~ ADI port.