SAS Asynchronous Event Reporting

02-175r0
Ralph O. Weber
SAS AEN Picture
from 02-158r0

Initiator port  Target port

AEN

AEN_Response
SAS AEN Picture
the way it sounded to me

Initiator port  Target port

AEN

AEN_Response

Then miracles happen

AEN Data
Miracle 1

- The SAS protocol engine sends REPORT LUNS and REQUEST SENSE commands to obtain the AER sense data
Miracle Abomination 1

- The SAS protocol engine sends REPORT LUNS and REQUEST SENSE commands to obtain the AER sense data.
- There is history for this … very very bad history.
- This absolutely breaks the layering between protocols and application clients.
Miracle 1 — Option A

- If the desire is to transfer the AER data completely within the SAS protocol...

- Then, define SAS protocol commands to do the job
Miracle 1 — Option B

• If the desire is to transfer the AER data using SCSI commands...

• Then, define a Transport Attention that notifies the application client that AER data is available
Miracle 2

- REPORT LUNS and REQUEST SENSE stay in synchronization regarding which logical units have AER data to be retrieved
- This is a very big assumption
- It is far better to have only one command that both
  - Decides if AER data is there, &
  - Retrieves the AER data
Miracle 2 — Proposed Solution

- Add a descriptor format sense data descriptor to contain the LUN to which the sense data applies
- Add a well known LUN to which AER retrieval REQUEST SENSE commands are sent
- Only REQUEST SENSE needed to retrieve AER data