

Re: SCSI Pass Through to SAS Enclosure

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.development.device.drivers/2008-03/msg00598.html>

- *From:* "Gary G. Little" <gary.g.little@xxxxxxxxxxxx>
 - *Date:* Tue, 25 Mar 2008 11:33:42 -0500
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No, you basically have the right assumption.

Every vendor may or may not support the `IOCTL_SCSI_MINIPORT`, and if they do you have to go to them to get the information you need. However, that said ... there is a lot of commonality. For instance, `SRB_IO_CONTROL` is fixed as to format. You need specific vendor information for two fields within that structure, but handling it and passing it to a `DeviceIoControl` call won't change from vendor to vendor. The fact that it is the header portion of the total buffer you send via that interface won't change. Thus all you really need is a class that defines the common header and then overloads the methods needed to build the vendor control area and the data portion. Don't expect blinding speed since you are not going to define really huge buffers since your using `METHOD_BUFFERED` and everything gets copied. However, for mode pages, IOC control config for LSI, or another vendors control and config, the speed is going to be negligible since your dealing with less than 1 page. For most mode pages, you should be using the system defined IOCTLs or at a minimum standard pass through. The backdoor lets you control a RAID, look at a disc in a RAID, or do what you want to do which is look at or control the SAS topology using a specific set of LSI messages to the IOC.

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The personal opinion of
Gary G. Little

"KenH" <KenHwang@xxxxxxxxxxxxxxxxxxxx> wrote in message
<news:98AE2A2D-C715-4579-8976-C45F90A18A4B@xxxxxxxxxxxxxxxxxxxx>

Gary,

Thanks and that's what I am afraid of. Because the program I'm working on needs to work with multiple vendors HBA/Enclosure. By using LSI MPI then I'll need to re-write for other vendors due to they have different SDK. That's why I'm trying to find a single solution for multiple vendors product. But it seems like I may not be able to save the effort. Or I have a wrong assumption?

Re: SCSI Pass Through to SAS Enclosure

Thanks,

Ken

"Gary G. Little" wrote:

Ken,

You may not have the granularity you need to acquire what you need using standard SCSI pass through. To get and manage the enclosure, you need to send an LSI MPI formatted message to the IOC, and there is no way, that I know of, via standard pass through to do that. If you have the MPI 1.5.4 spec you will see the messages you need in the IOC Config section detailing the messages that you need to send to the IOC. There are only two ways I know of that you can send those messages to the IOC: 1. write your own port driver, not recommended. 2. use the "back door", IOCTL SCSI_MINIPORT. #2 allows you to send any formatted MPI message to the IOC and get the IOC reply back in your application. To use that "back door" you must go to your LSI rep and get their specifications and development kit.

It is doable. I currently use both 1 and 2 for a hard drive diagnostic application.

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The personal opinion of
Gary G. Little

"KenH" <KenHwang@xxxxxxxxxxxxxxxx> wrote in message
news:19C229A9-D772-46A6-8FFA-A2BEA84202E7@xxxxxxxxxxxxxxxx

Hi,

I need to send various SCSI commands to a SAS disk enclosure connected with LSI SCSI HBA. I read the SPTI sample in DDK and realize I need to use CreateFile with device name such as \\.\PhysicalDrive0, \\.\scsi1: to get a handle of the device and then use the handle in the SCSI_PASS_THROUGH IOCTL call to send SCSI command to the specific SCSI device. But

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I could not
find
the name for the SAS Disk Enclosure. Can anyone give me a
hint on the
disk
enclosure name and how to discover a disk enclosure?

Thanks,

Ken