

Re: which kind of driver to design for AoE protocol?

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.development.device.drivers/2006-08/msg00942.h>

- *From:* sven.kreamer@xxxxxxxxxx
 - *Date:* 19 Aug 2006 02:18:01 -0700
-

KOOLER wrote:

You have to process as many requests at raised interrupt level as you can. If you'd queue SRBs to PASSIVE_LEVEL worker in some way just b/c it's easier to implement such a model – it would be a engineering failure... You would not get adequate performance if you'd exploit context switches, memory copy operations etc etc etc.

Obviously there are wrong ways of doing things like memory copies, context switches, and etc's. However, if you are able to efficiently distribute processing across different threads of execution in an overlapped fashion, then no matter what you are doing you stand to enhance performance. For instance, having worker threads running at the same time on different cpu cores could outrun a simplistic design trying to process each request in a linear, sequential mode at raised IRQL. In the past, drivers have been very concerned about overlapping I/O operations. Now it is more important than ever to optimize overlapping of CPU operations to really make things fly. Instead of running things through an assembly line of 5 sequential steps, you do all 5 steps at the same time to the greatest possible extent. Alas, Intel will have 100 cores per cpu within 10 years but just 2 can make a great performance advantage if you use them right.

Anyway, I guess the OP has been scared away by now. He is led to believe it will take years and there are failures waiting at every turn. It's kind of true I guess, but meanwhile about everyone commenting knows they could get a solid driver up and running within a few weeks.

.