

Re: can M5 simulator act as CMP/SMP simulator?

2005-10-31 05:27

Sorry for not replying to your earlier message. I had to clarify exactly where we're at with MP simulation. Right now you can simulate multiple processors on a coherent bus as long as (1) there is only one bus that has multiple caches connected to it and (2) there is only one level of cache above the shared bus. That is, like this:

```

CPU --- L1 --|
                |--- MEM
CPU --- L1 --|

```

or like this:

```

CPU --- L1 --|
                |--- L2 --- MEM
CPU --- L1 --|

```

but NOT like this:

```

CPU --- L1 --- L2 --|
                      |--- MEM
CPU --- L1 --- L2 --|

```

If you want to do something more complicated you'll need to extend the coherence protocol yourself.

Note that SMP vs CMP is only a matter of how you configure the bandwidths and latencies; topologically they are not necessarily any different.

The detailed CPU model also supports SMT, but Linux does not support Alpha CPUs, so you won't be able to take advantage of SMT in full-system mode without some kernel hacking. It should work for syscall emulation though.

Steve

xiao junhua wrote:

```

> I want to use M5 to simulate CMP architecture.
> can it do that function?
> I'm not sure. just use it for several days.
>
> would anyone help me?
>
>
>  ???? ?? MSN Hotmail?? http://www.hotmail.com
>
>

```

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can M5 simulator act as CMP/SMP simulator?	xiao junhua <xiao_401@ho...>	2005-10-31 02:22