

## Adding a SCSI disk enclosure to a FreeBSD host in online mode

Currently playing around with my Netra T1 105 and a Sun StorEdge Multipack enclosure, I wondered if I really could add the whole enclosure while the host is online.

I used to do hot-plugging before, but I've never done this with a whole enclosure at once. Well worth a try?

Some things to be considered for my scenario:

The Sun StorEdge Multipack auto-assigns SCSI-IDs ascending through it's internal slots. Depending on the mode switch, it'll assign IDs 1 through 6 or 9 through 15. On the Netra T1 105 only IDs 1 through 7 are supported. This is no big deal, unless you already have two disks plugged into the internal bays (they take IDs 0 and 1). So you can add a maximum of 5 additional disks (IDs 2 through 6). This actually means that you can only add disks to bays 2 through 6, leaving bay 1 empty. If you keep a disk inside, it'll get ID 1, which won't work out as this is already taken by an internal bay hard drive.

- Also important is that the enclosure is not powered-up. Attach it to the SCSI bus first, before you power on.

After powering on the enclosure it'll take a few moments to initialize and spin-up the drives.

I recommend waiting for the SCSI ID LED to light up, before you proceed.  
Before you rescan the bus, check which devices you see.

```
[root@rohan ~]# camcontrol devlist
IBM DDYST1835SUN18G S96H      at scbus0 target 0 lun 0 (da0,pass0)
IBM DDYST1835SUN18G S96H      at scbus0 target 1 lun 0 (da1,pass1)
```

The you can either add each new device one by one, issuing a "scan" command for the respective SCSI-ID:

```
[root@rohan ~]# camcontrol rescan scbus0:2:0
[root@rohan ~]# camcontrol devlist
IBM DDYST1835SUN18G S96H      at scbus0 target 0 lun 0 (da0,pass0)
IBM DDYST1835SUN18G S96H      at scbus0 target 1 lun 0 (da1,pass1)
FUJITSU MAN3184M SUN18G 1502   at scbus0 target 2 lun 0 (da2,pass2)
```

Or you could try to rescan to whole bus at once:

```
[root@rohan ~]# camcontrol rescan scbus0
Re-scan of bus 0 was successful
[root@rohan ~]# camcontrol devlist
IBM DDYST1835SUN18G S96H      at scbus0 target 0 lun 0 (da0,pass0)
IBM DDYST1835SUN18G S96H      at scbus0 target 1 lun 0 (da1,pass1)
FUJITSU MAN3184M SUN18G 1502   at scbus0 target 2 lun 0 (da2,pass2)
FUJITSU MAJ3182M SUN18G 0804   at scbus0 target 3 lun 0 (da3,pass3)
IBM DDYST1835SUN18G S96H      at scbus0 target 4 lun 0 (da4,pass4)
```

SEAGATE ST318203LSUN18G 034A at scbus0 target 5 lun 0 (da5,pass5)  
SEAGATE ST318203LSUN18G 034A at scbus0 target 6 lun 0 (da6,pass6)

Conclusion: If you first connect to the bus and then power-up the enclosure so all disks can properly initialize, adding the enclosure and it's disks while online is definitely possible. Of course, you should only be doing this with hot-plug ready equipment, which supports auto-termination.