

# Re: Qlogic 2432, Multipath, Dynamic LUNs, and NTFS

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*Source:* <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/questions/2007-06/msg01981.html>

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- *From:* Garrett Cooper <youshi10@xxxxxxxxxxxxxxxxxxx>
  - *Date:* Fri, 29 Jun 2007 08:43:27 -0700
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Rainer Duffner wrote:

Greg H. wrote:

Hello All,

I've just installed a new HP BladeSystem with BL460c blades, connected via dual on-board Qlogic 2432 Fibre Channel controllers, to an EVA4000 SAN. After getting the isp driver from 6.2-Stable, everything runs very smoothly.

Now, I've been asked to use our very stable FreeBSD blades to backup the often flakey Windows 2003 Server drives. Both the FreeBSD blades and the Windows blades have their own LUNs on the EVA4000 SAN.

To do this, I've created a snapshot of one of the non-compressed NTFS drives on the EVA, and presented it to the FreeBSD system, dynamically. After doing a camcontrol rescan all, both a camcontrol devlist, or an ls /dev/ntfs crash the system. Because of the silly HP blade environment, I don't have access to the console during the crashes. I also haven't found any signs in the logs.

I've only played with BL20 G2 (and FreeBSD) briefly. I also witnessed some crashes in such cases.

Mr. Jacobs is currently writing a complete replacement of the driver that is supposed to be able to also properly function in MPIO environments.

Here is an additional quirk. When the system comes back up, the snapshot LUN show up, and seems to mount properly with mount -t ntfs. I can't get ntfs-3g to work properly when loaded as a package, and the port won't compile.

The strange thing is that an ls of the NTFS snapshot shows a file that is 7,653,312,512 bytes, but cat | bzip2 (and dd) only reads 3,358,345,216 bytes. Reading a larger file of 50,135,415,808 bytes crashes the system.

Re: Qlogic 2432, Multipath, Dynamic LUNs, and NTFS

Possibly cluster size? If so, that's a really inefficient amount to be shown.

The other thing is that the methods used to setup the fs may not be correct, such that normal Unix utils will fail at reading the right amount.

When you create a LUN, you have to choose which OS you want to place on it. EVA4000 has provisions for Windoze, Linux, Solaris and VMware (IIRC). This may alter the way, the LUNs are presented to the hosts – I'm not sure it is a reason for your problems.

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These are the files from the SAN snapshot of the NTFS drive:  
-rwxr-xr-x 1 root wheel 7653312512 Jun 26 20:31 MV-C.bkf  
-rwxr-xr-x 1 root wheel 50135415808 Jun 26 21:28 MV-E.bkf  
-rwxr-xr-x 1 root wheel 575225856 Jun 26 20:12 MV-SysState.bkf
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Here's what happens when I try to read them:  
Copying MV-SysState.bkf Wed Jun 27 17:58:00 PDT 2007  
(stdin): 2.792:1, 2.866 bits/byte, 64.18% saved, 575225856 in, 206056048  
out  
Copying MV-C.bkf Wed Jun 27 18:01:08 PDT 2007  
(stdin): 4.047:1, 1.977 bits/byte, 75.29% saved, 3358345216 in, 829840937  
out  
Copying MV-E.bkf Wed Jun 27 18:19:34 PDT 2007  
(stdin): <insert crash here>
```

If this is the wrong list, I'll happily send it to the proper list if someone tells me what it is.

You could try the HP ITRC forums.

Other interesting facts are that each LUN presented by the SAN appears 4 times, once on each FC port (as was expected), and GEOM seems to handle it just fine. Mounts reference the GEOM label such as /dev/ufs/mail2root or /dev/ntfs/MV-Backup.

That's the multi-pathing. See my above comment about a forthcoming driver. I would recommend disabling multi-pathing for systems that are not MPIO-capable.

Re: Qlogic 2432, Multipath, Dynamic LUNs, and NTFS

Any suggestions of how to dynamically mount/unmount FC LUNs, and faithfully read files from an NTFS file system?

I'm sorry – I can't really relate any experience to your primary problem.

BTW: Despite the name, freebsd-isp is not about the isp(4)-driver ;-)  
It's about FreeBSD @ work at Internet Service Providers.

cheers,  
Rainer

–Garrett

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