

Re: IBM FastT vs. EMC Clarion

Source: <http://unix.derkeiler.com/Mailing-Lists/AIX-L/2005-03/0245.html>

From: Vincent D'Antonio (*dantoniov_at_gmail.com*)

Date: 03/28/05

Date: Mon, 28 Mar 2005 10:15:58 -0500
To: aix-l@Princeton.EDU

I received this from EMC on 3/15/05, I do not know about the CX700 as I have only the CX300 and CX500.

Thanks
Vince

On Mon, 28 Mar 2005 10:09:02 -0500, Clifton, Pablo
<Pablo.Clifton@bcbsfl.com> wrote:

> Vincent-
> Does the EMC announcement pertain to the CX-700 Clariion also? And how
> long ago did you receive that info from EMC?
>
> thanks,
> pablo
> ---
> Pablo Clifton
> Storage Administrator
>
> -----Original Message-----
> From: IBM AIX Discussion List [mailto:aix-l@Princeton.EDU] On Behalf Of
> Andrew Townsend
> Sent: Friday, March 25, 2005 8:43 AM
> To: aix-l@Princeton.EDU
> Subject: Re: IBM FastT vs. EMC Clarion
>
> This is true. AIX hosts have to be shutdown when doing the firmware
> upgrade on the Clariion.
>
> "Vincent
> D'Antonio" To:
> aix-l@Princeton.EDU
> <dantoniov@gmail. cc:
> com> Subject: Re: IBM FastT
> vs. EMC Clarion
> Sent by: IBM AIX
> Discussion List
> <aix-l@Princeton.
> EDU>

AIX-L: Re: IBM FastT vs. EMC Clarion

>
> 03/25/2005 07:55
> AM
> Please respond to
> "Vincent
> D'Antonio"
>
> I have two CX500's and 5 CX300, not by my choice, I go with IBM. THE
> big thing I found is that if you need to do a flare upgrade (firmware)
> any AIX servers attached to that unit will have to be shutdown. That is
> as of today. I do know EMC has made some improvment to powerpath to
> help but still not there yet. The trouble is something with the OS and
> the disk, when they do a flare upgrade on the A side sometimes and not
> all, the disk are gone from the OS and you have to reboot to get them
> back. Again managment are the ones that whated EMC here and it is a
> show stopper in rolling out a new product till it is fixed.
>
> Here is a copy from EMC on this issue:
>
> EMC Corporate Statement
>
> The EMC CLARiiON CX family of arrays supports a Non-Disruptive Upgrade
> process (NDU) for upgrading the software on the array without
> interrupting host I/O access to the array. This process involves
> upgrading the software on the array storage processors one at a time,
> while allowing the other array storage processor to continue to service
> I/O requests. EMC has successfully tested this process without
> interrupting host I/O access to the array thousands of times with many
> different types of hosts attached to the array. Unfortunately, we have
> found that in a small percentage of cases upgrading the array software
> will cause interruption in host I/O from AIX attached hosts.
>
> Because even a small percentage of failures is unacceptable to customers
> who depend on the non-disruptive nature of our array software upgrades,
> EMC's current recommendation is to schedule software upgrade for arrays
> with AIX attached hosts at a time when AIX host I/O interruptions can be
> tolerated. EMC has a cross-functional team including members from
> several EMC Engineering organizations and EMC Customer Service, along
> with assistance from IBM to address the failures. The problem is related
> to complex interactions between AIX driver behavior, PowerPath behavior,
> and CX array behavior that have been difficult to reproduce for root
> cause. Due to this complexity, progress thus far has been slow. However,
> EMC is committed to the same NDU feature for AIX attached hosts that is
> currently available for other attached host environments.
>
> EMC has equipment and staff dedicated full time to these efforts and is
> committed to delivering reliable NDU for AIX as soon as possible.
> Current Status
>
> EMC has made tremendous progress in addressing the ability to
> successfully and safely perform online NDUs in an AIX attached

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> *environment through changes in PowerPath. We are constantly running NDUs*
> *in our lab and we now have runs of as many as a 100 consecutive*
> *successful NDUs under heavy host I/O load with hundreds of paths to the*
> *array. However, we still have occasional failures.*
>
> *We have reached agreement with IBM engineering on an approach to*
> *addressing the problem that involves changes in array behavior combined*
> *with changes in PowerPath behavior. We are in the process of*
> *implementing and then testing the changes. We are optimistic that these*
> *changes will enable reliable NDU for AIX. However, to assure the changes*
> *enable successful NDU and do not introduce new problems, extensive*
> *testing will be required. As we complete our implementation and get some*
> *testing completed, we will have a better feel for the success of this*
> *approach and will start to plan how to deliver the updates to the field.*
>
> *Additional information should be available in the next 30 days. We*
> *remain committed to reliable NDU for AIX ASAP.*
>
> *HTH*
> *Vince*
>
> *On Thu, 24 Mar 2005 23:25:50 -0500, Jim Richard <JRichard@sciquest.com>*
> *wrote:*
> *> I have a fastt600 running for a year now flawlessly... My only gripe*
> *> is*
> *> that*
> *> it was advertised as being raid 10 aka (1+0) capable... And*
> *> technically*
> *> it's*
> *> not. To my mind raid 10 is Mirror the disks across pairs then stripe*
> *> the data across the mirrors. IBM builds the stripe on half the disks*
> *> then mirrors the entire stripe onto the other half of the physical*
> *> disks.*
> *>*
> *> This has a number of negative reliability, and recovery ramifications*
> *> :*
> *>*
> *> Reliability:*
> *>*
> *> In my idea of a raid 10 (and most other vendors' that I've*
> *> dealt*
> *> with) you would have to loose 2 individual disks that are*
> *> directly*
> *> paired together to loose the array.*
> *> So say you have a disk array with 10 drives, this would be*
> *> comprised*
> *> of*
> *> 5 pairs.*
> *> You would have to loose both disks of any single pair for the*
> *> array*
> *> to fail. So I can actually have up to 5*

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> > *disks of the 10 units fail before the array fails (very best case),*
> > *so long as no two failed disks were paired together.*
> >
> > *In IBM's idea of a raid 10 you have an array comprised of 5 drives striped (raid 0) then the raid 0 is mirrored to another 5 drives (raid 0+1).*
> > *In this case if you loose 1 drive on one stripe then any other drive*
> > *on the other stripe the array is toast. The only way to lose 5 disks and have the array*
> >
> > *survive is if all 5 failed disks are in the same stripe. Of course the only likely scenario for this is if*
> > *your stripes are in two separate disk enclosures, and you lose an enclosure. Which is a good idea in either case, in my idea of a raid 10 no paired disks would reside in the same enclosure.*
> >
> > *Recovery:*
> >
> > *In my idea of a raid 10 described above, if you loose a drive, when you replace it only the one drive has to be re-mirrored.*
> >
> > *In IBM's idea of a raid 10, the entire 5 drive stripe has to be re-mirrored...5x I/O, CPU, contention on the switch Etc.*
> >
> > *To be fair you can mitigate most of the reliability risk with proper use of hot spares and diligent monitoring, which should be the norm in any large disk deployment SAN, SCSI, or anything else. Unfortunately the recovery issue is still a problem for large arrays.*
> >
> > *Unfortunately for me the decision to purchase these units) was based on high level marketing material and discounts... I only found all this out after slogging through the technical docs (and this little detail is buried way down in them) after the equipment was already on order. A typical case of buyer beware.*
> >

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> > *Other than that the stuff is pretty nice. If you're not planning on*
> *running*
> > *raid 10 (1+0) you should be fine. If you are going to run mirrored*
> > *you'll*
> *be*
> > *fine as long as you follow best practices and understand the issues.*
> >
> > *Jim*
> >
> > -----Original Message-----
> > *From: glh@DAIRYNET.COM [mailto:glh@DAIRYNET.COM]*
> > *Sent: Thursday, March 24, 2005 12:31 PM*
> > *To: aix-l@Princeton.EDU*
> > *Subject: IBM FastT vs. EMC Clarion*
> >
> > *We are in the process of selecting our first SAN for our environment –*
> >
> > *approximately 10 AIX servers and 3 Windows servers. We've narrowed*
> > *our choices down to either an IBM DS4300 Turbo (old FastT) or the EMC*
> *CLARion*
> > *CX500. For those of you who may have worked with either (or both) of*
> *these*
> > *products, what is your overall opinion of the product? Would you buy*
> *that*
> > *product again? Any positive or negative comments would be greatly*
> > *appreciated. Thanks.*
> >
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> >
> >