

Why wait for the limited functions of...



Denny Lane 5 posts since

Sep 10, 2007

During the VMware FT breakout on Tuesday, Dr Dan Scales outlined the limitations :

- **Single core support only** - although they say single processor - when pressed they admit that means single core. Hence a typical dual socket/quad core (8 cores) can only use ONE core for VMware FT
- **One ftVM per server** - due to the overhead and latency issues - you can put more than one VM with FT on that 8 core server)
- **Overhead upto 20%** - wow
- **Pair of servers required** - seems to go against the server consolidation concept.
- **Mid Tier applications** - due to all the limitations - VMware does recommends some of the mid level critical apps - don't try this with your Oracle database.

He mentioned at the end (a well kept secret) that Fault Tolerance has been supported by VMware (ESX 3.02ft) since January 08. This does not have any of the limitations outlined above..... and its available today.



Denny Lane 5 posts since

Sep 10, 2007 1. Re: **Why wait for the limited functions of VMware FT? Use the full FT in VI3 today** Sep 18, 2008 4:02 PM

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VMware support of Fault Tolerance on VI3

Attachments:

- [Stratus Technologies and VMware.pdf](#) (222.3 K)



ganesh 4 posts since

Sep 10, 2007 2. Re: Why wait for the limited functions of VMware FT? Use the full FT in VI3 today Sep 19, 2008 2:40 PM

Addressing your points:

Single core support only:

- ***This is misleading. The only limitation is that we support single vCPU VMs. However, multiple FT VMs can be deployed across all physical processors on the server without limitation.***
- One ftVM per server:
 - ***This is a false statement and was not stated in the breakout. The number of FT VMs per server is NOT limited to one. Much like sizing the number of VMs per server is governed by load requirements, the number of ftVMs depends on load. Typical configurations will support at least four ftVMs and more.***
- Overhead upto 20%:
 - ***This is the worst-case scenario - the actual overhead is dependent on the workload and can be as low as 5%. Unlike StratusFT, VMware FT runs on the latest processors from Intel and AMD the day they ship and can use these same hosts for FT and non-FT workloads.***
- Pair of servers required:
 - ***In the end, fault tolerance involves redundant components to guarantee against failure. Is it better to have a single, expensive server or to have multiple servers whose aggregate cost is less than that single server?***
- Mid Tier applications:
 - ***While VMware FT is not for all workloads, VMware has found that there are many mission critical apps that must be ALWAYS available. VMware FT allows an enterprise to deliver the benefits of continuous availability to a broader set of applications. Many enterprises today have developed infrastructure architectures to ensure continuous availability of the database platform. VMware FT may not be the right answer for the most demanding workloads, but it may be ideal for the dozen of application***

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workloads built on that database. In the end, it is those applications that the user relies on

- StratusFT:
 - ***StratusFT is a hardware platform that supports ESX. It delivers hardware fault tolerance within the Virtual Infrastructure. The addition of VMware FT extends continuous availability to more of the enterprise.***



[Denny Lane](#) 5 posts since

Sep 10, 2007 3. Re: **Why wait for the limited functions of VMware FT? Use the full FT in VI3 today** Sep 25, 2008 11:13 AM

in response to: [ganesh](#)

Ganesh,

Your final statement is correct "**The addition of VMware FT extends continuous availability to more of the enterprise**". There is not single solution that is right for every usage - in fact many customers will mix these readily throughout their environment. It is a great thing that VMware now realizes the importance of Fault Tolerance within the virtual world and encourages customers to think about it.

I think we both agree that as customers evaluate moving their mission critical work loads to the VI, they will have different needs. I don't want them to be turned off if they believe they are oversold the capabilities of a software fault tolerant solution.

Lets go back and look at the issues we discussed.

Single core support only:

- You are correct..."Uniprocessor" is misleading. Sure you can slice up a processor as small as you want with lots of VMs. My point is the opposite. **VMware FT is not SMP** where many critical apps are. Not being able to span a workload across more than one core dramatically limits your mission critical usage. Since virtually all processors (CPU) today have multiple cores - it seems misleading to call it single processor instead of the more accurate single core.
- **One ftVM per server:**
 - My notes from the breakout (Dr Scales) was that "best practices" recommended having a single FT VM on a host along with non-FT VMs. **If that was wrong - then I am wrong.** He clearly stated you should put the FT VMs on a system along with non-FTs due to performance concerns.
- **Overhead upto 20%:**
 - It is.. what it is.. As for your comment about " Unlike StratusFT, VMware FT runs on the latest processors from Intel" that is not correct. Stratus Servers ship with the current 4 core Xeons - and all of those core can power a single application with full SPM capabilities.
- **Pair of servers required:**
 - *"Is it better to have a single, expensive server or to have multiple servers"* - It is hard to determine what expensive **is** without understanding the solution cost. A true FTserver can run alone in an SBM environment - with Foundation version of ESX (\$999) but in the same environment trying to create FT through software could cost much more - at least \$11,000 of VMware (2 x Enterprise edition) - maybe more since VMware FT pricing is not established. Since ftServers start around \$11K - that single "expensive" server may in fact cost less than the software.
- **Mid Tier applications:**
 - *While VMware FT is not for all workloads, VMware has found that there are many mission critical apps that must be ALWAYS available. VMware FT allows an enterprise to deliver the benefits of continuous availability to a broader set of applications. Many enterprises today have developed infrastructure architectures to ensure continuous availability of the database platform. VMware FT may not be the right answer for the most demanding workloads, but it may be ideal for the dozen of application workloads built on that database. - I agree with you here.*

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