

Store .vmem files in /dev/shm ...



[MichielS](#) 4 posts since

Mar 18, 2006 Hello,

I noticed that VMware Server creates a .vmem file with size of the memory used in the guest OS. Will performance be improved if VMware Server stores the .vmem-files in a temporary directory stored in shared memory (such as /dev/shm)? If so, how can I change that path? I already tried to set tmpDirectory="/dev/shm" in /etc/vmware/config, but that does not help.

In the knowledge base of VMware this topic is covered in answer ID 844 (Configuring Linux Host for Optimal Performance and Virtual Machine Stability).

Thanks!



[KevinG](#) 16,980 posts since


Jan 8, 2004 **1. Re: Store .vmem files in /dev/shm** Mar 18, 2006 6:11 AM

After making the change tmpDirectory="/dev/shm" did you stop and restart the VMware services or reboot the host?



[MichielS](#) 4 posts since

Mar 18, 2006 **2. Re: Store .vmem files in /dev/shm** Mar 18, 2006 7:05 AM

 in response to: [KevinG](#) Yes, I did.

These are the contents of /etc/vmware/config:

```
serverd.init.fullpath = "/opt/vmware-server/lib/vmware/serverd/init.pl"
authd.client.port = "902"
control.fullpath = "/opt/vmware-server/bin/vmware-cmd"
authd.fullpath = "/opt/vmware-server/sbin/vmware-authd"
loop.fullpath = "/opt/vmware-server/bin/vmware-loop"
libdir = "/opt/vmware-server/lib/vmware"
vmware.fullpath = "/opt/vmware-server/bin/vmware"
vmmdir = "/data/vmware-data"
dhcpd.fullpath = "/opt/vmware-server/bin/vmnet-dhcpd"
serverd.fullpath = "/opt/vmware-server/sbin/vmware-serverd"
datastore.name = "local"
datastore.localpath = "/data/vmware-data/"
tmpDirectory = "/dev/shm"
```

Store .vmem files in /dev/shm ...



[sfarrell](#) 12 posts since

May 12, 2005 3. **Re: Store .vmem files in /dev/shm** Mar 19, 2006 1:11 AM

I use this:

```
mainMem.useNamedFile=FALSE
```

this moves the rubbishy files to /tmp (like vmem files etc)

and I use tmpfs for /tmp (google and look for that - it uses swap and shared memory to back the file system)

Scott

please award me the answer points for this !!!



[Michiels](#) 4 posts since

Mar 18, 2006 4. **Re: Store .vmem files in /dev/shm** Mar 19, 2006 2:41 AM

👤 in response to: [sfarrell](#) Thanks. I just added that line to the guest's config file, restarted the guest, and the .vmem-files disappeared. Since I set my tmpDirectory to /dev/shm, the memory size of the guest is now claimed in /dev/shm.

What exactly is stored in the .vmem-files? How often does the information change in those files?

Since I now moved them to a memory based tmpfs, each VM now uses twice the amount of RAM.

It is also possible to switch the usage of .vmem-files off entirely?



[petr](#) 7,218 posts since

Jul 10, 2003 5. **Re: Store .vmem files in /dev/shm** Mar 19, 2006 2:47 PM

👤 in response to: [Michiels](#) What exactly is stored in the .vmem-files?

Guest memory.

How often does the information change in those files?

Continuously. When stored on disk, kernel updates file on disk whenever it feels it should do such.

Since I now moved them to a memory based tmpfs, each VM now uses twice the amount of RAM.

I personally would highly discourage use of tmpfs (or any ram based filesystem) for *.vmem. Your machine may deadlock when you'll put it under memory stress.

It is also possible to switch the usage of .vmem-files off entirely?


No, guest memory must be backed by something, and it does not matter whether it is swapfile or file on filesystem.



[Ischweiss](#) 9 posts since

May 1, 2006 6. **Re: Store .vmem files in /dev/shm** May 18, 2006 10:45 AM

Store .vmem files in /dev/shm ...

 in response to: [petr](#) I've been trying to figure this problem out for a while now. Anytime I have more the 1GB of ram allocated in all the VMs started, the system will get slammed with disk I/O even when the VMs are idle. The CPU gets pegged with 80%+ iowait.

Moving the .vmem to /dev/shm made significant improvement in performance when exceeding 1GB of virtual memory, but still nothing close to the performance when running with less.

In no case has there been any memory paging on the host or in the VM. There is plenty of extra ram.

If putting the vmem files on a virtual disk is not the right way to fix this problem what is?

I'm running VMware on SuSE 10.0 and 10.1 hosts. Each machine has 1.5 and 2 GB or ram respectively. Both have SATA hard drives. At first I was suspicious of the hard drives until I realized difference when allocating more that 1GB total across the VMs.

I'd like to allocate most of the host memory to the VMs, as the VMs are the purpose of the machine, however anytime 1 GB is exceeded the machine becomes so slow it is useless.

Any other insight in to this problem would be greatly appreciated.