

Frequently asked questions in the VMware Workstation forum

General

Q: Which host OS - Windows or Linux - should I use for the best performance / results / manageability?

A: You should use the host OS you're most familiar with. There is no remarkable performance difference between Windows and Linux hosts.

Q: When I try to start the VM I get an error message, that the VM currently is in use. I'm sure it is not.

A: Remove any lock files (.lck) or lock folders in the VM directory. Also check that any of the guests disks are not mounted within the host OS.

VM configuration

Q: How do I install VMware Tools in my Guest OS?

A: <http://pubs.vmware.com/guestnotes>

Q: Is there a list of configurable parameters for .VMX files whether supported or unsupported by VMware?

A: <http://sanbarrow.com/vmx.html>

Q: When I try to start the VM I get an error message, that one of the disks is already in use by another VM. I'm sure it is not.

A: First read this [What to do in moments of crisis](#), then post in the VMware Workstation forum and provide as much information as possible.

Q: When trying to start the VM I get an error message saying something about a changed "parent disk". What shall I do?

A: Most likely the CID chain is broken. Read this [What to do in moments of crisis](#), then post in the VMware Workstation forum and provide as much information as possible.

Q: How do I safely copy or move a VM?

A: To safely move or copy a VM do the following

- copy the files using a binary transfer method
- after copying check that the file permissions are the same
- if the disk(s) are bigger than 2Gb make sure the tools to transfer the files can handle these big files
- if the disk(s) are bigger than 2Gb make sure the destination file system can handle these big files
- if the copy stays on the same host make sure you rename the original VM folder BEFORE starting the copy the first time. If you don't get error messages you can rename the folder back.
- if after copying / moving you get an error message, stating that one of the disks could not be opened you most likely hit the "pathname" bug (see below).

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Q: My host has multiple CDROM/DVD devices and I have problems accessing them from the VMs?

A: Disable CDROM auto detection and manually select the appropriate host device.

Q: I manually modified the VMX file but VMware Workstation doesn't reflect the changes. What can I do?

A: When manually modifying a VMX file make sure to close VMware Workstation first.

If this doesn't help remove the VM from the favorites and add it afterwards.

Disks and snapshots

Q: How do I expand the size of the virtual disk? Are there any precautions to take?

A: Precautions to take:

- don't do this when the VM has snapshots
- make a backup first

The actual resizing of the virtual disk is fairly easy using the vmware-vdiskmanager tool (part of the installation).

To expand a disk to the new size of 10Gb execute the following command from the command shell

```
vmware-vdiskmanager -x 10Gb disk.vmdk
```

If disk.vmdk is not in the current folder you have to specify the complete path to the disk. Make sure to enclose the path / the disk name in quotes if it contains spaces.

After expanding the virtual disk you have to resize the partitions inside the VM.

Different methods to do this are described at vmware-land.com (thanks to Eric Siebert).

Q: I read about the "pathname" bug. How do I detect if my VMs are affected?

A: If you use disks with external descriptor files you can simply check the descriptors for absolute paths. If you use monolithicSparse disks you either have to use a HEX editor or use a tool like ddtget (available at sanbarrow.com) to extract the descriptor. There are however scenarios (like linked clones) where absolute paths inside the descriptor are totally valid.

Example of a snapshot descriptor with the "pathname" bug

```
# Disk DescriptorFile
version=1
CID=83b169c0
parentCID=83b169c0
createType="monolithicSparse"
parentFileNameHint="C:\VMs\test.vmdk"

# Extent description
RW 2097152 SPARSE "test-000001.vmdk"

# The Disk Data Base
#DDB

ddb.toolsVersion = "0"
```

the correct descriptor should look like this

```
# Disk DescriptorFile
```

```
version=1
CID=83b169c0
parentCID=83b169c0
createType="monolithicSparse"
parentFileNameHint="test.vmdk"

# Extent description
RW 2097152 SPARSE "test-000001.vmdk"

# The Disk Data Base
#DDB

ddb.toolsVersion = "0"
```

Q: I want to commit/remove a snapshot, how much free disk space do I need?

A: This depends on the disk type you use. If you use monolithicSparse disks (the default) you need up to as much free space as the disk can grow.

If you use split disks you need 2Gb of free space.

Q: I want to commit/remove a snapshot, but the Snapshot Manager won't let me. Is there a workaround?

A: If you want to get rid of a snapshot **WITHOUT** committing the data to the base disk do the following:

- close VMware Workstation
- open the VMX file in an editor and modify the disk entry pointing it to the base disk

Example:

```
ide0:0.fileName =
"test-000001.vmdk"
```

would become

```
ide0:0.fileName = "test.vmdk"
```

If you want to commit the data to the base disk you can use vmware-vdiskmanager to convert the disk. Close VMware Workstation first.

Example: suppose we have a disk test.vmdk with a snapshot test-000001.vmdk (this disk is a monolithicFlat disk).

To commit the changes to the disk we first have to convert the disk to another disk format, the following command converts the disk (including the snapshot) to a monolithicFlat disk named newtest.vmdk.

```
vmware-vdiskmanager -r
test-000001.vmdk -t 0 newtest.vmdk
```

Now you have to modify the VMX file and modify the disk entry to point to newtest.vmdk.

The last step is to remove any snapshot related files (vmem, vmsn and vmsd). For safety reasons move the files to another folder instead of deleting them!

If the VM successfully starts you can remove the original disk, the snapshot.

Make a backup first before using the above approach!

Q: I want to shrink the disk, how much free disk space do I need?

A: This depends on the disk type you use. If you use monolithicSparse disk (the default) you need up to as much free space as the disk can grow.

If you use split disks you need 2Gb of free space.

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Q: I'm running out of disk space, what shall I do?

A: Most people run into this problem when either using sparse disks or when using snapshots.

First make a backup! Then you need to get some more free disk space in the hosts file system. If this is not possible copy the VM to another temporary storage (for example an USB disk) but make sure that the VM is not affected by the "pathname" bug (see above).

If after the clean-up the VM works again - fine. If not read [What to do in moments of crisis](#) and post in the VMware Workstation forum and provide as much information as possible.

Q: What are the pros and cons of the different disk types?

A: Here's a table

VMware name	no of files	max file size	external descriptor file	Description
monolithicSparse	1	950Gb	no	This is a growing disk in one piece - the only disk type that uses no external descriptor but an embedded one
monolithicFlat	2	950Gb	yes	This is a pre-allocated disk in one piece
twoGbMaxExtentSparse	1+x	2Gb	yes	this is a growing disk split into 2Gb chunks
twoGbMaxExtentFlat	1+x	2Gb	yes	this is a preallocated disk split into 2Gb chunks

Disks split into 2Gb chunks are a lot easier to handle. Many filesystems and tools have problems with files larger 2Gb!

Another drawback of monolithic disks is their free space requirements during shrink and snapshot operations.

[A more detailed comparison of virtual disk types is available at sanbarrow.](#)

Q: Is it a good idea to use monolithicSparse disks?

A: No. Since monolithicSparse disks use an embedded descriptor they are hard to repair. Another drawback is that they need a lot of free disk space during snapshot or shrink operations.

Q: Is there a performance difference between the different disks?

A: No - at least it is not noticeable.

Q: So which disk type should I use?

A: If you are concerned about disk space use twoGbMaxExtentSparse disks else use twoGbMaxExtentFlat disks.

Q: Help! My VM is broken and I need to recover the data.

A: First read this [What to do in moments of crisis](#), then post in the VMware Workstation forum and provide as much information as possible.

[Sanbarrow has a page with common problems and suggested procedures.](#).. These are meant for advanced / experienced users!

Q: I've heard about RAW disks. Shall I use them?

A: Since it is easy to completely "mess up" the disk - don't use RAW disks unless you are an experienced user and you know what you are doing!

Networking

Q: Why does my guest operating system report that it is connected at 10Mbps even though I have a 100Mbps or 1000Mbps network adapter in my host computer?

A: http://www.vmware.com/support/kb/enduser/std_adp.php?p_faqid=856

Q: My guests can't see the host or can't communicate with the network, networking is set to bridged, Host O/S is Windows 2003 SP2

A: If your host is running Windows 2003 SP2, you will want to try disabling TOE and associated settings:
See the MS KB article 912222 for commands / registry entries to modify (i.e. EnableTCPChimney etc...)

Q: My host OS is Windows Server 2003. I can't copy big files from guest to the host using the bridged network connection.

A: On the host add the registry entry called "DisableDos" according to the "Method 2" of the Microsoft's [KB898468](#) and reboot the host.

Q: There are different networking options (bridged, host-only and NAT) available. Which one should I use?

A: In short:

- use host-only if your VMs don't need to/should not (for example in an isolated test environment) communicate with other systems (besides the host)
- use NAT if your VMs don't provide services to other machines but need to access the network
- use bridged if your VMs provide services to other machines or if you have other "special" requirements
- use the "guest-only" networks vmnet2 - vmnet7 and vmnet9 to create closed environments. VMs connected to these networks will be able to communicate only with each other.

Q: The host has two (or more) NICs. Are there any precautions to take?

A: In this case you should disable automatic bridging and manually bridge the different host NICs to different vmnets. Otherwise you might get routing problems.

Q: Is it a good idea to modify the default settings of vmnet1 or vmnet8?

A: No.

Q: I've upgraded VMware Workstation and now my network settings are broken. Did I miss something?

A: Unfortunately the installer overwrites the old network settings.

On a Windows host you can save the settings using the following command

```
vnetlib -- export filename
```

and import them using

```
vnetlib -- import filename
```

On a Linux host the information is spread across a few files / folders

/etc/vmware/config, /etc/vmware/netmap.conf, /etc/vmware/vmnet1 and /etc/vmware/vmnet8

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