

Where does Proxmox store virtual machines?

👤 mybne · 🕒 Feb 13, 2022

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mybne

New Member



Feb 13, 2022

🔗 #1

I am trying to locate the virtual machine files. Where to look and what to look?
(Sorry newbie on proxmox)

Code:

```
dir: local
    path /var/lib/vz
    content backup,vztmpl,iso
```

```
zfspool: local-zfs
    pool rpool/data
    content images,rootdir
    sparse 1
```

```
zfspool: SSD01
    pool SSD01
    content images,rootdir
    mountpoint /SSD01
    nodes ve
```

```
zfspool: SSD23
    pool SSD23
    content rootdir,images
    mountpoint /SSD23
    nodes ve
```

```
zfspool: HDD24TB
    pool HDD24TB
    content rootdir,images
    mountpoint /HDD24TB
    nodes ve
```



bobmc

Feb 13, 2022

🔗 #2

the config files for containers are here

Renowned Member



Code:

```
/etc/pve/lxc
```

and for virtual machines, they are here

Code:

```
/etc/pve/qemu-server
```

The virtual disks will be where you choose at creation time - rpool/data, /SSD01, /SSD23 or /HDD24TB



mybne

New Member



Feb 14, 2022

#3

I found and checked the given locations including all SSD and rpool but none of them returns any file when I use ls -l command.



Dunuin

Distinguished Member



Feb 14, 2022

#4

There are no virtual disk files. ZFS uses zvols which are block devices.



oguz

Proxmox Retired Staff

Retired Staff



Feb 14, 2022

#5

mybne said:

I found and checked the given locations including all SSD and rpool but none of them returns any file when I use ls -l command.

you can run something like `grep size /etc/pve/qemu-server/*.conf` to get the disks and their corresponding storages.

as @Dunuin pointed out above, for ZFS there are no files but block devices. you could list them like: `zfs list`

mybne said:

I am trying to locate the virtual machine files.

the question is, what would you like to do with them?

Best regards,
Oguz

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mybne

New Member



Feb 14, 2022

#6

||

oguz said:

you can run something like `grep size /etc/pve/qemu-server/*.conf` to get the disks and their corresponding storages.

as @Dunuin pointed out above, for ZFS there are no files but block devices. you could list them like: `zfs list`

the question is, what would you like to do with them?

I will try first thing in the morning. My intention was getting those virtual machines out of the broken proxmox instance. While I was trying to configure https I deleted default certificates and now I cannot access the proxmox UI. Very exciting start but so far not so good



aaron

Proxmox Staff Member

Staff member



Feb 14, 2022

#7

Regarding the first question. Proxmox VE will not always store VM disk images in files. In the case of ZFS for example, it is using "volume" datasets.

They are providing block devices and are therefore not visible in the file system hierarchy. You can view them with `zfs list` and should see that they do not have a mount point. You can access them, like any physical disk, in the `/dev/` path.

For example, `/dev/zvol/<pool>/....`

Best regards,
Aaron

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mybne

New Member






Feb 14, 2022

#8

aaron said:

Regarding the first question. Proxmox VE will not always store VM disk images in files. In the case of ZFS for example, it is using "volume" datasets.

<div>▼</div>	<div>They are providing block devices and are therefore not visible in the file system hierarchy. You can view them with <code>zfs list</code> and should see that they do not have a mount point. You can access them, like any physical disk, in the <code>/dev/</code> path.</div> <div>In my case, since I can no longer fix this instance, what would be the right course of action to migrate the VMs to the new machine?</div>
<div><div><div>F</div><div>FuriousRage Active Member</div><div>▼</div></div></div>	<div>Feb 14, 2022<div>↻ #9</div></div> <div><div>mybne said: ↻</div><div>In my case, since I can no longer fix this instance, what would be the right course of action to migrate the VMs to the new machine?</div></div> <div>When i moved my vms from my home server to a rented one, i created a backup of each vm and transfered the back up files, and then used restore on each backup</div>
<div><div><div></div><div>Dunuin Distinguished Member</div><div>▼</div></div></div>	<div>Feb 15, 2022<div>↻ #10</div></div> <div>If just your webUI is broken you can still create VM backups using vmdump from CLI using SSH. See here: https://pve.proxmox.com/pve-docs/vmdump.1.html</div>
<div><div><div><div>M</div><div>mybne New Member</div><div> ▼</div></div></div></div>	<div>Feb 15, 2022<div>↻ #11</div></div> <div>Thank you for the guidance, but I prefer to not continue working on a crippled system. After all, I noticed it is difficult to work with proxmox in case something goes wrong compared to VMware and Hyper-V.</div>
<div><div><div><div></div><div>oguz Proxmox Retired Staff Retired Staff</div><div>▼</div></div></div></div>	<div>Feb 15, 2022<div>↻ #12</div></div> <div><div>mybne said: ↻</div><div>I will try first thing in the morning. My intention was getting those virtual machines out of the broken proxmox instance. While I was trying to configure https I deleted default certificates and now I cannot access the proxmox UI.</div></div> <div>also you shouldn't delete/modify the default certificates, this is well documented [0]:</div> <div>Do not replace or manually modify the automatically generated node</div>

certificate files in `/etc/pve/local/pve-ssl.pem` and `/etc/pve/local/pve-ssl.key` or the cluster CA files in `/etc/pve/pve-root-ca.pem` and `/etc/pve/priv/pve-root-ca.key`.

though you can regenerate the certificates. just connect to your node via SSH (this should be possible even if the GUI is not working), and run this command: `pvecm updatecerts`. you should have new certificate files in `/etc/pve/local/`

mybne said: ↩

Thank you for the guidance, but I prefer to not continue working on a cripled system.

since you want to export your VM disks, you can just make backups of your VMs and restore them elsewhere. take a look at this chapter [1]

mybne said: ↩

After all, I noticed it is difficult to work with proxmox in case something goes wrong compared to VMware and Hyper-V.

hmm, i noticed it's difficult for something to go wrong if you're following our documentation and not ignoring the warnings
could you elaborate and let us know what we could improve?

[0]: https://pve.proxmox.com/pve-docs/pve-admin-guide.html#sysadmin_certs_api_gui

[1]: https://pve.proxmox.com/pve-docs/pve-admin-guide.html#_examples_11

Best regards,
Oguz

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mybne

New Member



Feb 15, 2022

🔗 #13

oguz said: ↩

also you shouldn't delete/modify the default certificates, this is well documented [0]:

though you can regenerate the certificates just connect to your node via SSH

[Click to expand...](#)

Dear Oguz, The reason I am here as a newbie is ironically following the wrong proxmox documentation which was for an earlier version of proxmox. Any system can have disaster but there must be restoration chance. I will check the documents and video tutorials to be fair towards this project because developers putting so much effort and sharing with us for free. I see here staff members also trying to help and I am really appreciated for this.

oguz



Ips90
Member



Feb 20, 2023

🔗 #14

oguz said: ↩

you can run something like `grep size /etc/pve/qemu-server/*.conf` to get the disks and their corresponding storages.

as @Dunuin pointed out above, for ZFS there are no files but block devices. you could list them like: `zfs list`

the question is, what would you like to do with them?

Mine shows "scsi0: local:1000/vm-1000-disk-0.qcow2,size=250G"
So where is the location? i can't find it with this info.



Neobin
Famous Member



Feb 20, 2023

🔗 #15

Ips90 said: ↩

Mine shows "scsi0: local:1000/vm-1000-disk-0.qcow2,size=250G"
So where is the location? i can't find it with this info.

Full path for this vdisk should be: `/var/lib/vz/images/1000/vm-1000-disk-0.qcow2`
Check with: `pvesm path local:1000/vm-1000-disk-0.qcow2`



Ips90
Member



Feb 20, 2023

🔗 #16

My proxmox is showing the same space being used even after i deleted 50GB of files from a VM and some LXC's
88.91% (388.51 GB of 436.95 GB)

i already used "qm rescan" and even restarted the dedicated server, nothing changed.
Any possible solution?

**Dunuin**

Distinguished Member



Feb 21, 2023

#17

You set up discard in your VM and regularly run `pct fstrim`?

**Ips90**

Member



Feb 21, 2023

#18

Dunuin said:

You set up discard in your VM and regularly run `pct fstrim`?

Discard part yes, "run `pct fstrim`" not.

Anyway, `pct fstrim` is not only for LXC containers?

Cause i am talking about VM's.

btw, containers can not use "discard".

So what i need to do for VM's?

Last edited: Feb 21, 2023

**Dunuin**

Distinguished Member



Feb 21, 2023

#19

Ips90 said:

i deleted 50GB of files from a VM and some LXC's

Yes, "`pct fstrim`" is to trim LXC's on LVM-Thin.

LXC's on ZFS you trim by "`zpool trim`".

Ips90 said:

So what i need to do for VM's?

If it is a linux VM a `fstrim -a` inside the VM. On a Win VM something like a `Optimize-Volume -DriveLetter YourDriveLetter -ReTrim -Verbose`. And this of cause all only works when using proper settings like enabled "discard" checkbox and "virtio SCSI" with "SCSI" and not protocols like IDE that doesn't support TRIM commands.

Ips90

**Ips90**

Feb 21, 2023

#20

Thanks for the help mate.

I worked well for my linux vm's, the problem is i have FreeBSD vm's too and i

Member

don't know how to do it to this systems.



1

2

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