


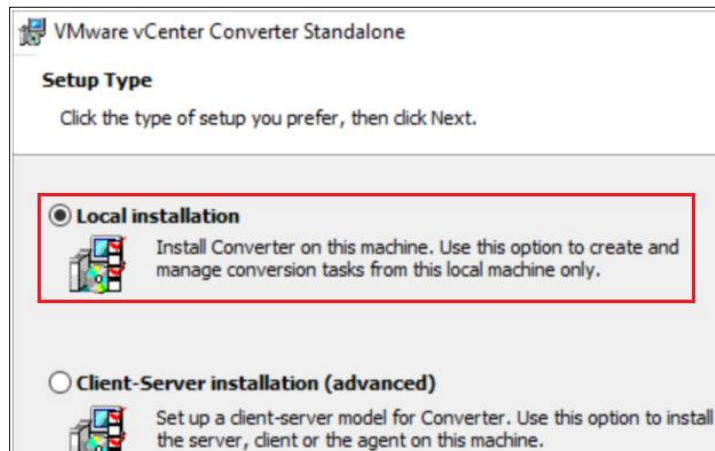
How to Resize Thin Provisioned Linux VMDK via VMware Converter

By Jacky.Zho, Double.Lin 20241002

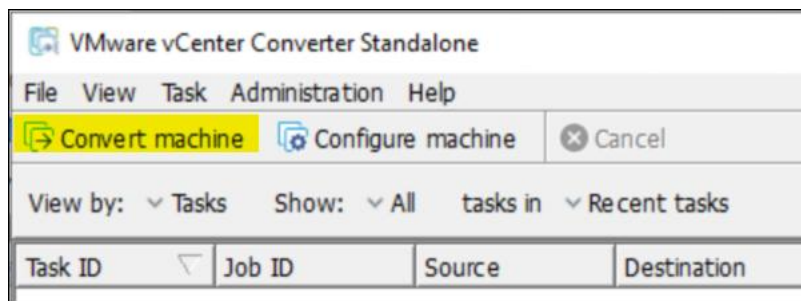
1. **Purpose:** Reduce Linux Thin_Provisioned VMDK size from 180GB to 18GB.
2. Download “VMware vCenter Converter 6.6.0” from VMware portal, v6.6 & Install
<https://support.broadcom.com/group/ecx/productfiles?subFamily=VMware%20vCenter%20converter&displayGroup=Standard&release=6.6.0&os=&servicePk=203348&language=EN>

Name	Size
 VMware-converter-en-6.6.0-23265344.exe	345,777 KB

Note: Use default “Local installation”



3. Start converting:
 - a.



- b. Configure Source information:

Source: none

Select source type: ☒ Powered on ☐ Powered off

Remote Linux machine

Convert any powered on physical or virtual Linux machine.

Specify the powered on machine

IP address or name: 172.17.32.14

User name: root

☒ Password:

☐ Private key file:

Passphrase:

- c. Destination information: its vCenter IP/Credential, check Source OS version is detected as below red words.

Source: 172.17.32.14 [ol 9.3 64 bit] <=It's source OS version. Oracle Linux 9.3

Destination type: VMware Infrastructure virtual machine

Creates a new virtual machine for use on a VMware Infrastructure product.

VMware Infrastructure server details

Server: 172.16.15.101

User name: administrator@vm.tpvaoc.com

Password:

- d. Type new VM Name:

Source: 172.17.32.14 [ol 9.3 64 bit] **Destination:** YouServerName.tpvaoc.com on 172.16.15.101 (VMware vCenter)

Name: Temp_Cacti_20241003

Inventory for: 172.16.15.101

Search for name with:

172.16.15.101	VM name	Power state
TPV_Datacenter [46 VMs]	CNHQS039	Powered off
Discovered virtual machine	Cacti_172.16.0.145	Running
vCLS	DS	Powered off

- e. Select destination host & Data Store & VM HW version (from v19 to v17 to get better support)

Source: 172.17.32.14 ... **Destination:** Temp_Cacti_20241003 on TPV_Cluster (

Inventory for: 172.16.15.101

Total source disks size: 300 GB

Datastore

vol_PS6210_5TB

Capacity: 5,119.75 GB

Free: 4,343.68 GB

Type: VMFS5

Block size: 1 MB

Virtual machine version

Version 17

- f. Change disk setting => Click Advance

Data copy type: Select volumes to copy **Advanced...**

Configuration (VMX) file location: vol_PS6210_5TB (4,343.68 GB)

Select the source volumes to copy to the destination machine. Resize destination disks to add a system and an active volume, or a system/active volume to run the destination machine.

Source ...	Destination size	Destination...	To...	Destination datastore
<input checked="" type="checkbox"/> /b...	...in size (1 GB)	VirtualDisk1	1 GB	vol PS6210 5TB (4,343.68 GB)
<input checked="" type="checkbox"/> /f...	...size (200 GB)	VirtualDisk2	200...	vol PS6210 5TB (4,343.68 GB)
<input checked="" type="checkbox"/> /...	...e (66.52 GB)	VirtualDisk3	99 GB	vol PS6210 5TB (4,343.68 GB)
<input checked="" type="checkbox"/> /h...	...e (32.48 GB)			

Change type from Thick => Thin, Change disk size 69G =>89GB & 30GB => 10GB

Current settings:

- Data to copy** Edit
 - Copy type: Volume-based
 - </boot>: 1 GB
 - </flowview>: 200 GB
 - </>: 89 GB
 - </home>: 10 GB
- Devices Edit
- Networks Edit
- Advanced options Edit
- Helper VM network Edit

Data copy type: Select volumes to copy Basic...

Source volumes Destination layout

Configuration (VMX) file location: vol_PS6210_5TB (4,343.68 GB)

Customize the data layout for the destination machine.

Destination layout	Size/Capacity	Type/Cluster size	Destination datastore/Copy type
VirtualDisk1	1 GB	Thin <=from	vol PS6210 5TB (4,343.68 GB)
/boot	Maintain size (1 GB)	4KB Thick to Thin	(file level)
VirtualDisk2	200 GB	Thin	vol PS6210 5TB (4,343.68 GB)
/flowview	Maintain size (200 GB)	4KB	(file level)
VirtualDisk3	99 GB	Thin	vol PS6210 5TB (4,343.68 GB)
/	89 GB <=from 69G to 89G	4KB	(file level)
/home	10 GB <=from 30G to 10G	4KB	(file level)

Click "Devices" => Edit => modify correct Socket and core qty.

Current settings:

- Data to copy** Edit
- Devices** Edit
 - vCPUs: 24 (2 sockets * 12 cores)
 - Disk controller: SCSI LSI Logic
 - Memory: 24GB
- Networks Edit
- Advanced options Edit

Memory Other

CPU Settings

Number of virtual sockets: 2

Number of cores per socket: 12

Total number of cores: 24

Changing the virtual CPU configuration after the guest virtual machine to become unstable.

The modified virtual CPU configuration might not conform to the system.

Disk controller: SCSI LSI Logic (recommended)

Click "Network" => Edit => **MUST select correct Network & VMXNET3**

Current settings:

- Data to copy** Edit
- Devices** Edit
- Networks** Edit
 - NIC1: LAN_GI
- Advanced options Edit
- Helper VM network Edit

Network adapters to connect 1

Network adapter	Network	Controller type	Connect at power-on
NIC1	LAN GI	VMXNET 3	<input checked="" type="checkbox"/>

Click "Helper VM network" => Edit => Configure IPv4 & DNS => **Click "Next"**

Current settings:

- > Data to copy Edit
- > Devices Edit
- > Networks Edit
- > Advanced options Edit
- > **Helper VM network Edit**

Helper VM network configuration

IPv4 | IPv6 | DNS

☒ Use IPv4

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 172.17.32.13

Subnet mask: 255.255.255.0

Default gateway: 172.17.32.221

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server: 172.16.0.178

Alternate DNS server:

< Back **Next >**

Check previous configurations are correct => Click Finish.

Destination system information

Virtual machine name:	Temp_Cacti_20241003
Hardware version:	Version 17
Host/Server:	172.16.15.101
Connected as:	administrator@vm.tpvaoc.com
VM folder:	TPV_Datacenter
Cluster:	TPV_Cluster
Host system:	172.16.15.103
Resource pool:	Default
Power on after conversion:	No
Number of vCPUs:	24 (2 sockets * 12 cores)
Physical memory:	24GB
Network:	Preserve NIC count
NIC1	Connected
	LAN_GI
Disk controller type:	SCSI LSI Logic
Storage:	Volume-based cloning
Number of disks:	3
Create disk 0 as:	Thin provisioned disk [vol_PS6210_5TB]
Create disk 1 as:	Thin provisioned disk [vol_PS6210_5TB]
Create disk 2 as:	Thin provisioned disk [vol_PS6210_5TB]
Configuration files datastore:	vol_PS6210_5TB
Helper VM network:	IPv4: 172.17.32.13
	Subnet mask: 255.255.255.0
	Gateway: 172.17.32.221
	IPv6: Automatic
	DNS servers:
	172.16.0.178

S... < Back **Finish**

- g. Start converting, completed rate 2% is checking point. >2% will get higher success rate.

Task ID	Job ID	Source	Destination	Status	Start time	End time
1	1	172.17.32.14 [ol 9.3 64 bit]	172.16.15.101/Temp_Cacti_20241003	7%	10/2/2024 10:14 ...	Estimated time remaining: 1 hours and 29 minutes

Task ID 1: **Running** Source: 172.17.32.14 Destination: 172.16.15.101/Temp_Cacti_20241003

Summary Task progress

Conversion status

Type: Convert physical machine to virtual machine

Created: 10/2/2024 10:14 AM by TPVAOC\Double.Lin

Status: **Running - 7% Complete**

Started: 10/2/2024 10:14 AM

Running time: 5 minutes

Estimated time remaining: 1 hours and 29 minutes

Estimated completion time: 10/2/2024 11:49 AM

Transfer rate: 63.8 MB/s

Can be canceled: Yes

Log highlights Export logs...

AM Starting to clone the volume mounted on '/flowview' from '172.17.32.14'.

AM Completed cloning the volume mounted on '/boot' from '172.17.32.14'.

AM Starting to clone the volume mounted on '/boot' from '172.17.32.14'.

AM Formatting the destination partitions.

AM Partitioning the destination disks.

AM Connected to the Converter helper server on the destination virtual machine.

AM Connecting to the Converter helper server on the destination virtual machine.

AM Waiting for the destination virtual machine to boot up as the Converter helper server.

AM Connecting the Converter helper ISO image to the destination virtual machine.

AM Powering on the destination virtual machine to run as the Converter helper server.

AM Task: Convert physical machine.

- h. Completed of converting.

Task ID	Job ID	Source	Destination	Status	Start time	End time
1	1	172.17.32.14 [ol 9.3 64 bit]	172.16.15.101/Temp_Cacti_20241003	Completed	10/2/2024 10:14 ...	10/2/2024 10:44 AM

Task ID 1: **Completed** Source: 172.17.32.14 Destination: 172.16.15.101/Temp_Cacti_20241003

Summary Task progress

Conversion status

Type: Convert physical machine to virtual machine

Created: 10/2/2024 10:14 AM by TPVAOC\Double.Lin

Status: **Completed**

Started: 10/2/2024 10:14 AM

Completed: 10/2/2024 10:44 AM

Running time: 30 minutes

Average transfer rate: 171.28 MB/s

Log highlights

Completed the reconfiguration of the destination virtual machine.

Patching LVM devices.

Patching network config files.

Patching the mount point entries in fstab.

Installing the GRUB boot loader.

Creating initial ramdisk (initrd).

Completed cloning the volume mounted on '/home' from '172.17.32.14'.

Starting to clone the volume mounted on '/home' from '172.17.32.14'.

Completed cloning the volume mounted on '/' from '172.17.32.14'.

Starting to clone the volume mounted on '/' from '172.17.32.14'.

Completed cloning the volume mounted on '/flowview' from '172.17.32.14'.

Starting to clone the volume mounted on '/flowview' from '172.17.32.14'.

Completed cloning the volume mounted on '/boot' from '172.17.32.14'.

Starting to clone the volume mounted on '/boot' from '172.17.32.14'.



Converter_20241002.zip

- i. Check VMDK size

4. Troubleshooting:

Convert machine Configure machine

View by: Jobs Show: All jobs in Last 20 jobs

Job ID	Source	Destination	Status	Running Time	Next Run Time	Last error
3	172.17.32.14 [ol 9.3 64 bit]	172.16.15.101/Temp_Cacti_20241003	Inactive			An error occurred during the conversion: 'GrubInstaller::InstallGrub: /usr/lib/vmware-converter/installGrub.sh failed with return code: 127, and message: FATAL: kernel too old
2	172.17.32.14 [ol 9.3 64 bit]	172.16.15.101/Temp_Cacti_20241003	Inactive			Cannot communicate with the remote host, either due to network errors or because the host is not running. Command: chroot "/mnt/p2v-src-root" /vmware-updateGrub.sh "GRUB2" "(hd0)" "(hd0,1)" /vmware-device.map "grub2-install"

Job ID 3: Inactive Source: 172.17.32.14

Summary

- a. Cannot create Linux booting GRUB2: Reinstall VMware converter version from v6.2 v6.6.

- b. Helper IP cannot connected: Setup Helper IP as below

Current settings:

- > Data to copy Edit
- > Devices Edit
- > Networks Edit
- > Advanced options Edit
- > **Helper VM network** Edit

Helper VM network configuration

IPv4 | IPv6 | DNS

☒ Use IPv4

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 172.17.32.13

Subnet mask: 255.255.255.0

Default gateway: 172.17.32.221

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server: 172.16.0.178

Alternate DNS server:

< Back Next >