

Convert XVA Virtual Machine to VMDK

This book will cover how to convert a VM exported from Xen Orchestra in XVA format to a VMDK.

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Preparing Your Machine

eriklax/**xva-img**

XVA (Citrix Xen format) virtual disk tool. Supports RAW disk image exports and imports.



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1. Installing XVA-img

These are the instructions on how to install the XVA-img tool which is updated and patched for checksum and xxhash

1.1 Installing xva-img from source

Objective: Install xve-image from source on an ubuntu 20.04 LTS machine in order to convert from XVA to a VMDK to be imported in VMWorkstation

Step 1. Navigate to [eriklax/xva-img: XVA \(Citrix Xen format\) virtual disk tool. Supports RAW disk image exports and imports. \(github.com\)](#) and download the entire zip file of the repository. In this situation, I am using wget on the Linux machine to download in my current directory.

Step 2. From terminal, unzip everything to whatever directory you want. I chose `/opt`

change directory to where the zip file is located.

```
cd /opt/xva-img
```

Unzip the Master zip file you just downloaded from git

```
unzip master.zip
```

Step 3. Change directory into the unzipped directory of `'xva-img-master'`

Step 4. Install the dependencies for xva-img as noted on the github page, and install from source

- ```
sudo apt update && sudo apt install cmake g++ libssl-dev libxxhash-dev
```

- Once installation has completed, you will build from source to install

- **Note:** It will be easier to run as root from this point

- Change directory into the xva-img repository folder

- `cd /opt/xva-img/xva-img-master`

- **Build**

- `cmake .`

- `make`

- `make install`

This is the final step installing xva-img on to your machine.

## 2. Extracting the XVA to Raw Disk

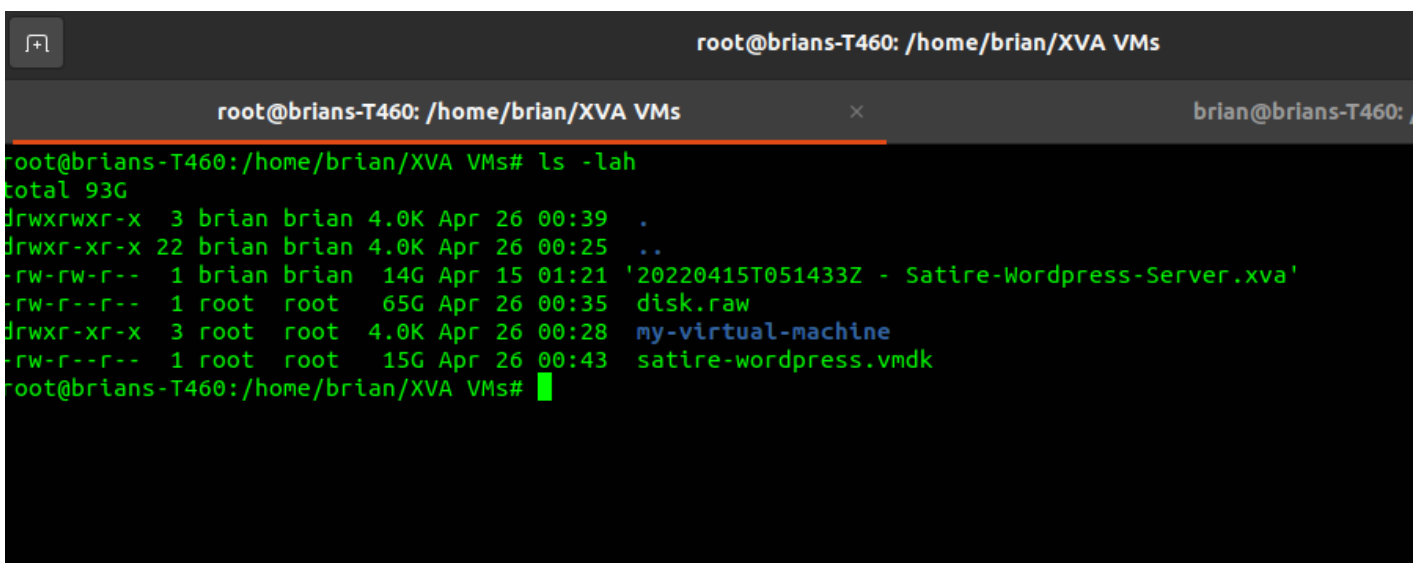
In this Chapter, I will cover how to use `xva-img` to extract the disk from the XVA file to a raw disk which will later be converted to a VMDK

## 2.1 Extract the XVA File to Raw Disk

**Objective:** Extract the disk from the from the XVA to a raw disk to be converted to VMDK.

**Step 1.** Navigate to a location that you would like to work from. In my scenario, I am working from my user's home directory in a folder name 'XVA VMs'

Belows is a screenshot of my working directory

A terminal window screenshot showing a directory listing. The terminal title is 'root@brians-T460: /home/brian/XVA VMs'. The command 'ls -lah' has been executed, showing the following output:

```
total 93G
drwxrwxr-x 3 brian brian 4.0K Apr 26 00:39 .
drwxr-xr-x 22 brian brian 4.0K Apr 26 00:25 ..
-rw-rw-r-- 1 brian brian 14G Apr 15 01:21 '20220415T051433Z - Satire-Wordpress-Server.xva'
-rw-r--r-- 1 root root 65G Apr 26 00:35 disk.raw
drwxr-xr-x 3 root root 4.0K Apr 26 00:28 my-virtual-machine
-rw-r--r-- 1 root root 15G Apr 26 00:43 satire-wordpress.vmdk
```

**Step 2.** Once inside the working directory, run the following commands as root

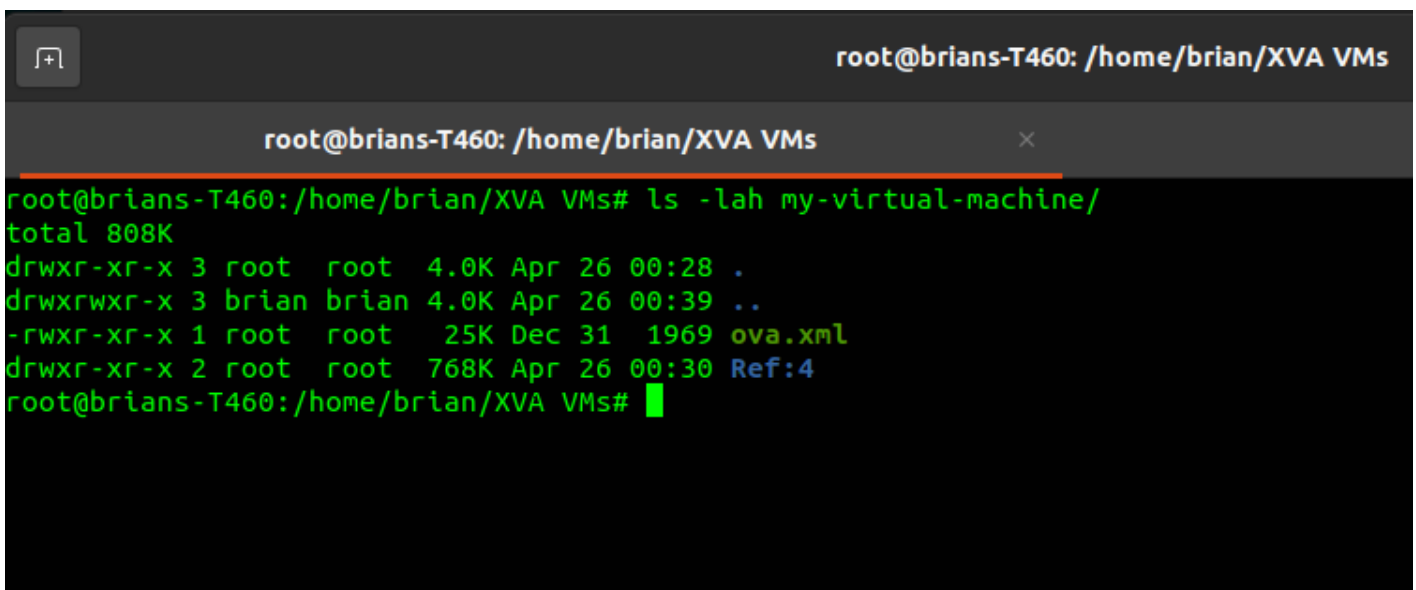
- `mkdir my-virtual-machine`

- `tar -xf my-virtual-machine.xva -C my-virtual-machine`
- `chmod -R 755 my-virtual-machine`

**Step 3.** Next we are going to export the Disk by utilizing disk-export command

```
xva-img -p disk-export my-virtual-machine/Ref:4/ disk.raw
```

The Ref: number may vary. The way to get the correct number is to run the ls command against the "my-virtual-machine directory where the ova.xml and disk files are located. Reference the below screenshot.



```
root@brians-T460: /home/brian/XVA VMs
root@brians-T460: /home/brian/XVA VMs
root@brians-T460:/home/brian/XVA VMs# ls -lah my-virtual-machine/
total 808K
drwxr-xr-x 3 root root 4.0K Apr 26 00:28 .
drwxrwxr-x 3 brian brian 4.0K Apr 26 00:39 ..
-rwxr-xr-x 1 root root 25K Dec 31 1969 ova.xml
drwxr-xr-x 2 root root 768K Apr 26 00:30 Ref:4
root@brians-T460:/home/brian/XVA VMs#
```

## Extraction Process Complete

It will take a little bit of time to extract, but the -p command when exporting will show you the current progress. Once it completes, you will have a 'disk.raw' file unless you decide to name it 'somethingelse.raw'



This completes the extraction of the disk from the XVA file. You can now examine the disk raw or convert it to any other format such as qcow2 or vmdk.

# 3. Convert disk.raw to VMDK

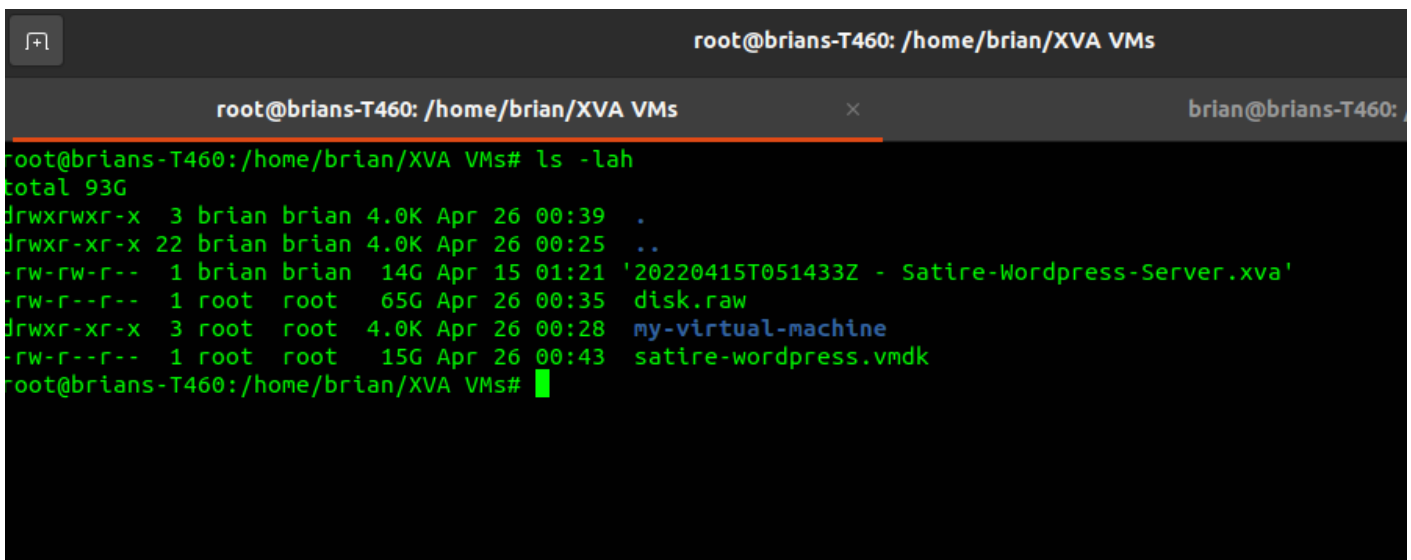
This chapter will discuss how to take the extracted raw disk from the XVA file and convert it to a vmdk

## 3.1 Convert the disk.raw file to a VMDK

**Objective:** Use qemu-img to convert the raw disk extracted from the XVA file in our working directory to a vmdk file for the ability to import in VMWare.

**Step 1.** Navigate to a location that you would like to work from. In my scenario, I am working from my user's home directory in a folder name 'XVA VMs'

Belows is a screenshot of my working directory

A terminal window screenshot showing a directory listing command. The terminal title is 'root@brians-T460: /home/brian/XVA VMs'. The command executed is 'ls -lah'. The output shows a directory with a total size of 93G, containing files like '.', '..', '20220415T051433Z - Satire-Wordpress-Server.xva', 'disk.raw', 'my-virtual-machine', and 'satire-wordpress.vmdk'.

```
root@brians-T460: /home/brian/XVA VMs
root@brians-T460: /home/brian/XVA VMs# ls -lah
total 93G
drwxrwxr-x 3 brian brian 4.0K Apr 26 00:39 .
drwxr-xr-x 22 brian brian 4.0K Apr 26 00:25 ..
-rw-rw-r-- 1 brian brian 14G Apr 15 01:21 '20220415T051433Z - Satire-Wordpress-Server.xva'
-rw-r--r-- 1 root root 65G Apr 26 00:35 disk.raw
drwxr-xr-x 3 root root 4.0K Apr 26 00:28 my-virtual-machine
-rw-r--r-- 1 root root 15G Apr 26 00:43 satire-wordpress.vmdk
root@brians-T460: /home/brian/XVA VMs#
```

**Step 2.** Before you run the command, you need to ensure that you install qemu-utils. Once you ensured that qemu-utils is installed, you need to run the following command below:

```
qemu-img convert -f raw -O vmdk disk.raw satire-wordpress.vmdk
```

You can name the vmdk whatever you like, this is just specific to my scenario

That is all there is to it. Just let this process run and you will have usable VMDK that can now utilize in VMWare products.