

Converting CentOS 7 to VZ7 for installing SolusVM on it



According to the official Virtuozzo 7 information, the proper and reliable way to use OpenVZ 7 virtualization is to deploy the server using Virtuozzo 7 ISO image from https://download.openvz.org/virtuozzo/releases/7.0/x86_64/iso/

If due to whatever reason there is no way to deploy the server using ISO, there is also a way to convert CentOS 7 to VZ7. Such scenario is not fully supported by SolusVM and should be performed on the server's owner risk

Preparing partitioning on CentOS 7 node for conversion

Before proceeding with installing vzkernel, it is required to prepare the server to match the requirements of Virtuozzo 7. The main part here is to have a dedicated EXT4 partition mounted on /vz.

Mount a specifically created partition or a logical volume (it's a preferable way, it will be easier to extend it if required). The file system on the partition /volume **must be** ext4. Do not forget to add the corresponding mount point to /etc/fstab.

Here are the sample steps on how to achieve that in case there is a second drive /dev/sdb. Note that steps are just an example.

```
# lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
sda 8:0 0 64G 0 disk
sda1 8:1 0 1G 0 part /boot
sda2 8:2 0 21G 0 part
centos-root 253:0 0 20G 0 lvm /
centos-swap 253:1 0 1G 0 lvm [SWAP]
sdb 8:16 0 64G 0 disk

# vgcreate vz /dev/sdb
Physical volume "/dev/sdb" successfully created.
Volume group "vz" successfully created

# lvcreate -n vz -l 100%FREE /dev/vz
Logical volume "vz" created.

# mkfs.ext4 /dev/vz/vz

# mkdir /vz

# mount /dev/vz/vz /vz
# echo "/dev/vz/vz /vz ext4 defaults 1 1" >> /etc/fstab
```

Overall The result should be similar to the following one:

```
# df -hT /vz
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/vz-vz ext4 50G 827M 46G 2% /vz
```

Type **must be** ext4 and it **must be** mounted on /vz.

Doing the conversion

Once /vz partition is prepared, we can go ahead with the conversion.

1. Install python sub-processes, the latest OpenVZ 7 release, Epel repository, prctl utility, OpenVZ kernel and ploop packages:

```
# yum localinstall https://download.openvz.org/virtuozzo/releases/openvz-7.0.11-235/x86_64/os/Packages/p/python-subprocess32-3.2.7-1.vz7.5.x86_64.rpm
# yum localinstall https://download.openvz.org/virtuozzo/releases/openvz-7.0.11-235/x86_64/os/Packages/o/openvz-release-7.0.11-3.vz7.x86_64.rpm
# yum install epel-release -y
```

Install vzlinux release:

```
# yum install python3
# rpm -Uvh http://repo.virtuozzo.com/vzlinux/7/x86_64/os/Packages/r/readykernel-scan-0.11-1.v17.noarch.rpm
# rpm -Uvh http://repo.virtuozzo.com/vzlinux/7/x86_64/os/Packages/z/zstd-1.4.4-1.v17.x86_64.rpm
# rpm -Uvh http://repo.virtuozzo.com/vzlinux/7/x86_64/os/Packages/v/vzlinux-release-7-1.v17.89.x86_64.rpm
```

Move CentOS repositories to another location to avoid package conflicts in future:

```
# mv /etc/yum.repos.d/CentOS-* /root/
```

Re-install json-c and jansson packages from virtuozzo repositories

```
# rpm -e --nodeps --justdb json-c
# yum erase jansson
# yum localinstall http://repo.virtuozzo.com/vzlinux/7.7/x86_64/os/Packages/j/jansson-2.10-1.v17.1.x86_64.rpm
# yum localinstall http://repo.virtuozzo.com/vzlinux/7.7/x86_64/os/Packages/j/json-c-0.11-13.v17.1.x86_64.rpm
```

Install the necessary packages:

```
# yum install prlctl prl-disp-service vzkernel *ploop*
```

2. Update the node:

```
# yum update
```

3. On OVH dedicated servers also generate the grub.cfg file:

```
# grub2-mkconfig -o /boot/efi/EFI/virtuozzo/grub.cfg
```

4. Reboot the node:

```
# reboot
```

5. Now, enable ploop kernel modules:

```
# modprobe ploop
# modprobe pfmt_ploop1
# modprobe pfmt_raw
# modprobe pio_direct
```

The conversion is done. Feel free to try installing SolusVM on it:

```
# curl -o install.sh https://files.soluslabs.com/install.sh && sh install.sh
```

In case you did everything right, you will see the following screen on CentOS 7:

```
** Please wait while the installer requirements are installed...
** Detecting operating system...

Detected: Virtuozzo 7

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| :: SolusVM Installer                               v5.4 (2017/12/12) |
|-----o
|
| What SolusVM type would you like to install?
|
| VIRTUOZZO 7 HOST SERVER:
|-----|-----|-----|
| | Opt | Type           | Virtualization |
|-----|-----|-----|
| | [1] | Hypervisor     | OpenVZ          |
|-----|-----|-----|
| | [2] | Hypervisor     | OpenVZ with basic templates |
|-----|-----|-----|
| | [3] | UI             | OpenVZ with basic templates |
|-----|-----|-----|
| | [4] | UI             | OpenVZ          |
|-----|-----|-----|
|-----o

Choose an option :
█
```

The last step after that - install EZ packages:

```
# yum install *ez.noarch
```