

## How to install XEN hypervm in centos

Written by sdx

Wednesday, 15 May 2013 16:24 -

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The simple way to install xen is.

FIRST CHECK THE BIOS/CPU IF THEY SUPPORT VIRTUALIZATION (VT) IN INTEL CPU.

First delete all the linux partition if exist on the system.

Create /swap double the size of the RAM on the system.

/boot 500mb

/40000 in ext3

In free space. Make LVM

create /

If you want to use the RAID than use software RAID.

Once completed.

For hypervm make sure selinux is disabled

- \$ **setenforce 0**

- \$ **wget**

**<http://download.lxlabs.com/download/hypervm/production/hypervm-install-master.sh>**

- \$ **sh ./hypervm-install-master.sh --virtualization-type=xen/openvz/NONE**

Here we need xen

Run the installation of hypervm xen. Once completed.

`cd /usr/local/lxlabs/hypervm/httpdocs/`

`lphp.exe ../bin/misc/fixcentos5xen.php`

If hyperVM didn't automatically recognize the xen driver, you can run the command below to forcibly set it.

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`cd /usr/local/lxlab/hypervm/httpdocs/`

`lphp.exe ../bin/common/setdriver.php --server=localhost --class=vps --driver=xen`

What's LVM? Why using Linux Logical Volume Manager or LVM?

These questions are not the scope here. But in brief, the most attractive feature of Logical Volume Manager is to make disk management easier in Linux! Basically, LVM allows users to dynamically extend or shrink Linux "partition" or file system in online mode! The LVM can resize volume groups (VG) online by adding new physical volumes (PV) or rejecting those existing PVs attached to VG.

A visualized concept diagram of the Linux Logical Volume Manager or LVM.

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In this 3-minutes Linux LVM guide, let's assume that

\* The LVM is not currently configured or in used. Having say that, this is the LVM tutorial if you're going to setup LVM from the ground up on a production Linux server with a new SATA / SCSI hard disk.

\* Without a luxury server hardware, I tested this LVM tutorial on PC with the secondary hard disk dedicated for LVM setup. So, the Linux dev file of secondary IDE hard disk will be /dev/hdb (or /dev/sdb for SCSI hard disk).

\* This guide is fully tested in Red Hat Enterprise Linux 4 with Logical Volume Manager 2 (LVM2) run-time environment (LVM version 2.00.31 2004-12-12, Library version 1.00.19-ioclt 2004-07-03, Driver version 4.1.0)!

How to setup Linux LVM in 3 minutes at command line?

1. Login with root user ID and try to avoid using sudo command for simplicity reason.

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2. Using the whole secondary hard disk for LVM partition:

```
fdisk /dev/hdb
```

At the Linux fdisk command prompt,

1. press n to create a new disk partition,
2. press p to create a primary disk partition,
3. press 1 to denote it as 1st disk partition,
4. press ENTER twice to accept the default of 1st and last cylinder - to convert the whole secondary hard disk to a single disk partition,
5. press t (will automatically select the only partition - partition 1) to change the default Linux partition type (0x83) to LVM partition type (0x8e),
6. press L to list all the currently supported partition type,
7. press 8e (as per the L listing) to change partition 1 to 8e, i.e. Linux LVM partition type,
8. press p to display the secondary hard disk partition setup. Please take note that the first partition is denoted as /dev/hdb1 in Linux,
9. press w to write the partition table and exit fdisk upon completion.

3. Next, this LVM command will create a LVM physical volume (PV) on a regular hard disk or partition:

```
pvcreate /dev/hdb1
```

4. Now, another LVM command to create a LVM volume group (VG) called vg0 with a physical extent size (PE size) of 16MB:

```
vgcreate -s 16M vg0 /dev/hdb1
```

Be properly planning ahead of PE size before creating a volume group with vgcreate -s option!

5. Create a 400MB logical volume (LV) called lvol0 on volume group vg0:

```
lvcreate -L 400M -n lvol0 vg0
```

This lvcreate command will create a softlink /dev/vg0/lvol0 point to a correspondence block device file called /dev/mapper/vg0-lvol0.

6. The Linux LVM setup is almost done. Now is the time to format logical volume lvol0 to create a Red Hat Linux supported file system, i.e. EXT3 file system, with 1% reserved block count:

```
mkfs -t ext3 -m 1 -v /dev/vg0/lvol0
```

7. Create a mount point before mounting the new EXT3 file system:

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```
mkdir /mnt/vfs
```

8. The last step of this LVM tutorial - mount the new EXT3 file system created on logical volume lvol0 of LVM to /mnt/vfs mount point:

```
mount -t ext3 /dev/vg0/lvol0 /mnt/vfs
```

To confirm the LVM setup has been completed successfully, the `df -h` command should display these similar message:

```
vgdisplay vg0
```

To check or display volume group setting, such as physical size (PE Size), volume group name (VG name), maximum logical volumes (Max LV), maximum physical volume (Max PV), etc.

```
pvscan
```

To check or list all physical volumes (PV) created for volume group (VG) in the current system.

```
vgextend
```

To dynamically adding more physical volume (PV), i.e. through new hard disk or disk partition, to an existing volume group (VG) in online mode. You'll have to manually execute `vgextend` after `pvcreate` command that create LVM physical volume (PV).

Now login to the hypervm as admin

`http://192.168.1.1:8888` (This should be your IP address)

Go to server > Home > Location >

```
lvm:vg0
```