

Understanding the Layered Storage Model of LVM2



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Overview



Layered storage in LVM

- Physical
- Volume Groups
- Logical Volumes

Using the command line to discover the layers you have in-place on your system



LVM2 Storage Layers

Logical Volumes

Dev-mapper devices which are formatted and presented to the consumer as a block device.

Volume Groups

Volume groups acts as storage pools, aggregating storage together and overcoming the limitations of physical storage size.

Physical Volumes

Physical storage existing on the host as disks, partitions and raw files.



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Managing LVM

Physical Volumes

pvs, pvmove, pvcreate

Volume Groups

vgcreate, vgs, vgdisplay

Logical Volumes

lvs, lvcreate, lvresize



Demo



Using the command line tools we can discover what we already have on our system.



Summary



We have discovered the layers used in LVM2 systems

- Physical
- Volume Groups
- Logical Volumes

The corresponding commands begin with the prefixes

- pv
- vg
- lv



Managing Physical Volumes

```
# pvs
```

```
# pvcreate /dev/sdb1
```

```
# pvdisplay /dev/sdb1
```

```
# pvremove /dev/sdb1
```

Managing Volume Groups

```
# vgs
```

```
# vgcreate vg1 /dev/sdb1
```

```
# vgdisplay vg1
```

```
# vgextend vg1 /dev/sdb2
```

```
# vgremove vg1
```

Managing Logical Volumes

```
# lvs
```

```
# lvcreate -n lv1 -l 100%FREE vg1
```

```
# lvdisplay vg1/lv1
```

```
# lvextend -L +500m vg1/lv1
```

```
# lvremove vg1/lv1
```

Configuring LVM.

