Mastering Linux Storage Using LVM2

LINUX STORAGE MANAGEMENT WITH LVM

Andrew Mallett
LINUX AUTHOR AND TRAINER

@theurbanpenguin www.theurbanpenguin.com

Course Contents

- Understanding LVM
- Configuring the LVM system
- Using Ansible configuration management
- Configuring storage layers
- Managing volume groups and volumes
- LVM thin-provisioning
- Snapshotting logical volumes
- Migrating to new hardware
- Creating special purpose volumes

Lab System

We use Ubuntu 18.04 for the demonstrations but any recent Linux distribution will suffice, labs will require root access

It is possible to use AWS or other cloud based systems

A single system is enough for this course but we use three systems to highlight the advantages of using Ansible as a configuration management system.

Logical Volume Management

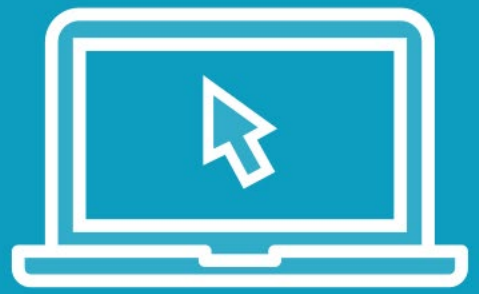
Aggregating block storage to re-allocate as needed in the form of device-mapper volumes.

```
$ lsblk #List block devices

$ sudo dmsetup ls --tree #List device-mapper devices

$ sudo lvm version || sudo apt install -y lvm2 #Install lvm2 if not
installed
```

Installing the LVM Package

LVM may already be installed depending on how the disks were setup on your system. If it is not installed we can add the package.

Demo



Check the existing system

- List block devices
- List device-mapper devices
- These commands help us better understand the system we have

Testing for the version of LVM is a sure fire way to determine if it is installed.

Summary

We now know what we will look at during this course.

We have ensured the the LVM tools are available to use with the lvm2 package.

Having used command line tools we better understand the storage on our system.

Next up: Understanding the layered storage model of LVM2.