

# Linux

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# Why Linux?

- Open Source Software
- Free (Open Source Licenses: Apache, Beer, etc)
- Virus Free
- Secure
- Minimum memory required
- Easily ported to different platforms
- Fast

# Where is Linux

- Cell Phones
- Televisions, Remote Controls, Set Top Boxes
- Cars, Trains, Buses, Airplanes
- Internet
- NASA, NSA, CERN
- Desk Top Systems

# What is a Linux System

- Linux kernel
- File management system
- Shell environment
- Text editors
- Compilers and Interpreters
- Communication interfaces
- Print servers
- File servers

# Linux Desktop System

- Linux Server System
- Graphical User Interfaces
- Internet Browsers
- Multi-media editors and players
- Office Management Systems
  - Word Processor
  - Spread Sheets
  - Presentation Systems
- Other Applications

# Package Management

## Red Hat (RPM)

- Red Hat
- Fedora
- SUSE

## Debian (DPM)

- Ubuntu
- Mint
- Arch
- Raspbian, jessie
- Wheezy

[www.distrowatch.com](http://www.distrowatch.com)

# File Management

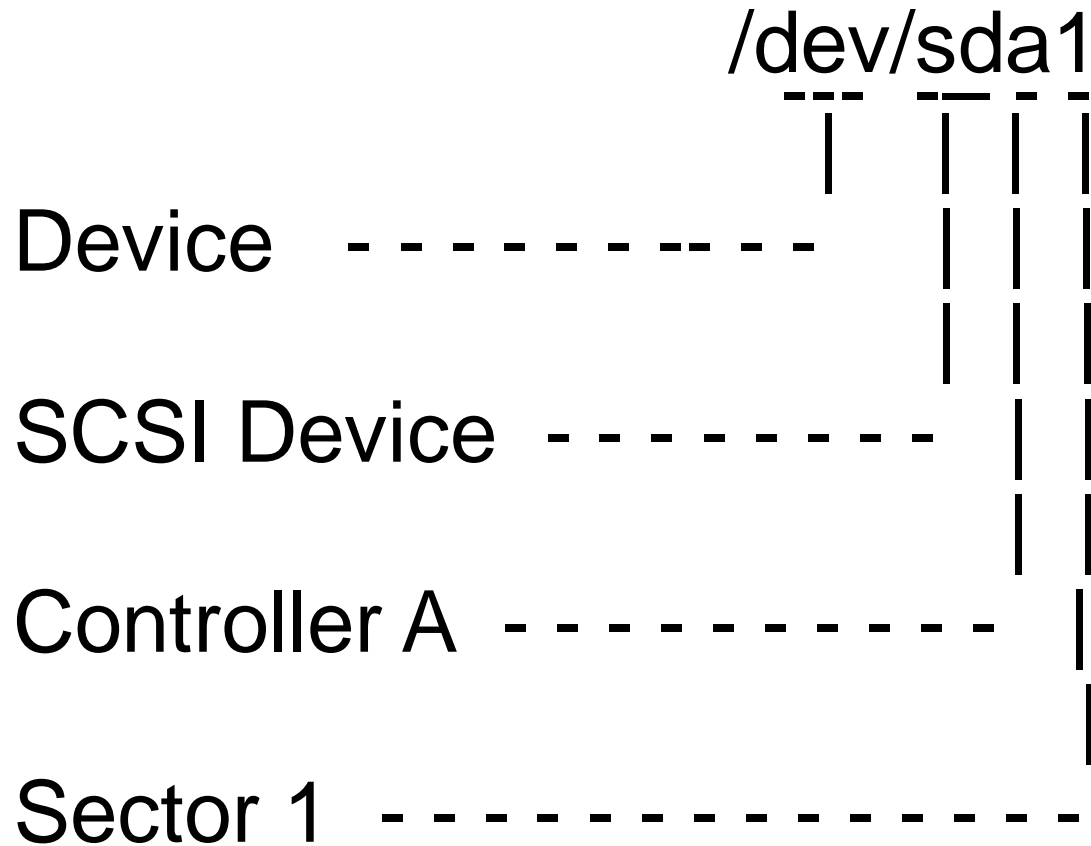
C:\

/

C:\aaa\bbb\ccc

~/aaa/bbb/ccc

# File Management





# Shell Commands

man, history

ls, lscpu, lspci, lsusb, lshw,

cat, less, more, echo

cd, mkdir, rmdir, touch, df, dfisk

vi, nano, joe, emacs

cp, mv, mount, umount

grep, find, diff

gcc, link, python, javascript

ssh, scp, ifconfig

# Demostration

# Raspberry Pi

1: Download image zip file from:

[www.raspberrypi.org/downloads/](http://www.raspberrypi.org/downloads/)

2: Extract from zip file:

2016-03-18-raspbian-jessie.img

3: Insert mini-SD card

`/dev/sdd1`

4: `dd if=2016-03-18-raspbian-jessie.img of=/dev/sdd`

# Network Demonstration

# Questions