



oVirt in a Home Lab

Also on a laptop



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Why run a home lab?

- Working from home
- Checking out new ideas
- Reduced policy requirements
- Network requirements



Using a Laptop

- All in one solution
- Mobile
- standalone
- Demonstration purposes



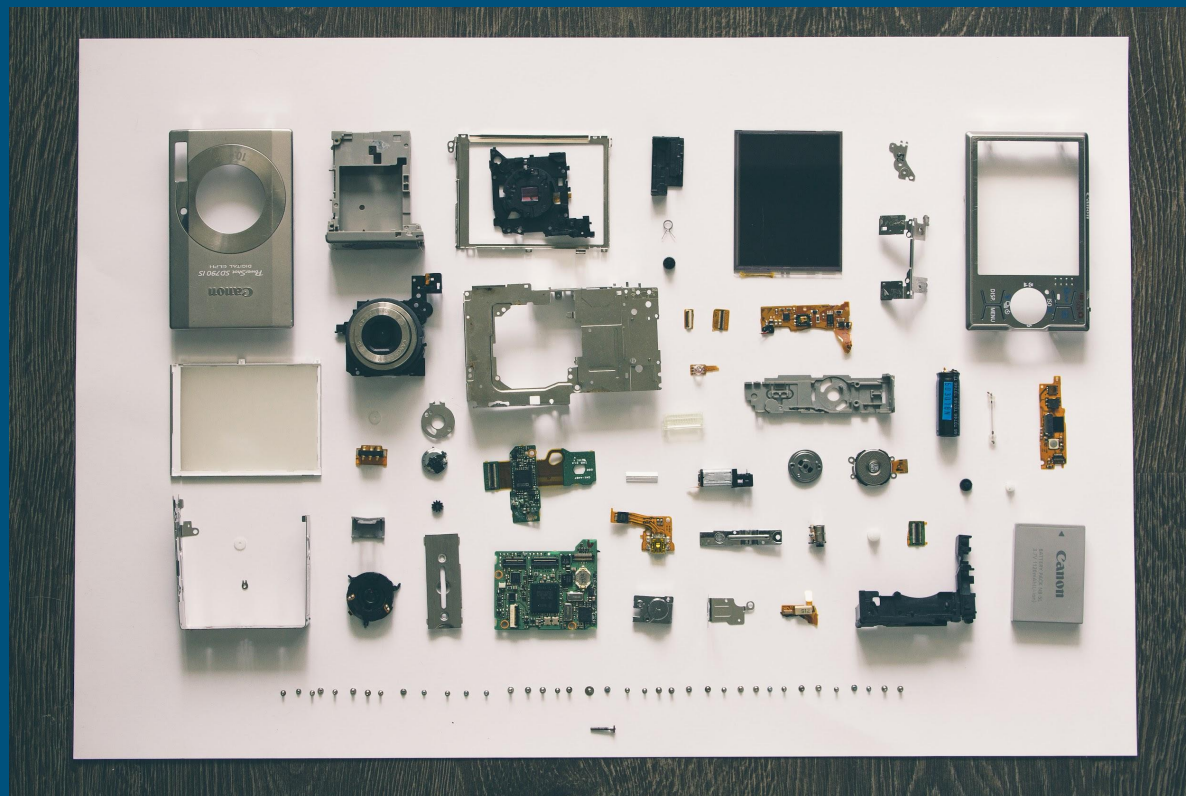
Bare Metal or Virtual

- Running on Hardware
- Nested Virtualised system
- Hybrid model



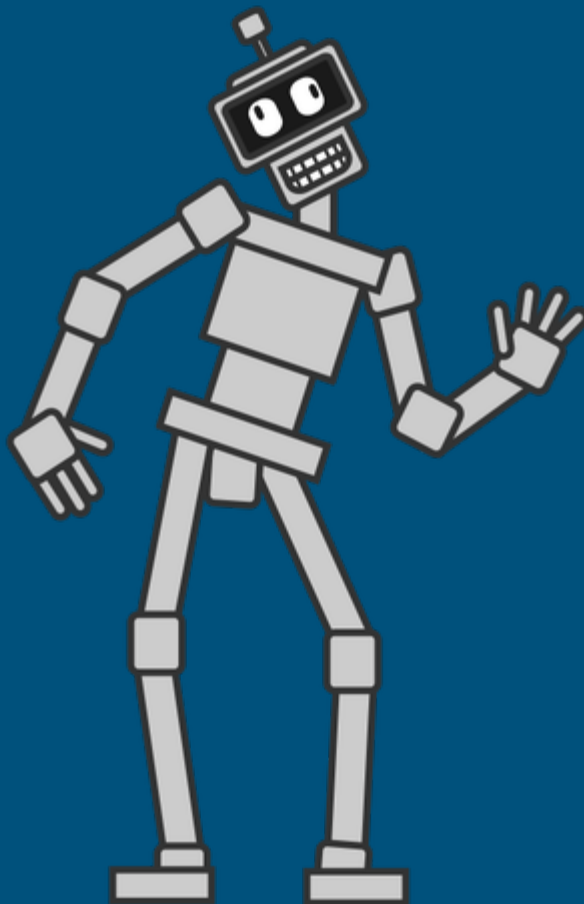
Hardware Requirements

- Memory
- CPU
- Storage
- Networking



Automation and Provisioning

- Use a solution that works for baremetal and Virtual.
- Ansible
- Puppet
- scripting/python
- Foreman/Katello
- RH Satellite
- manageiq



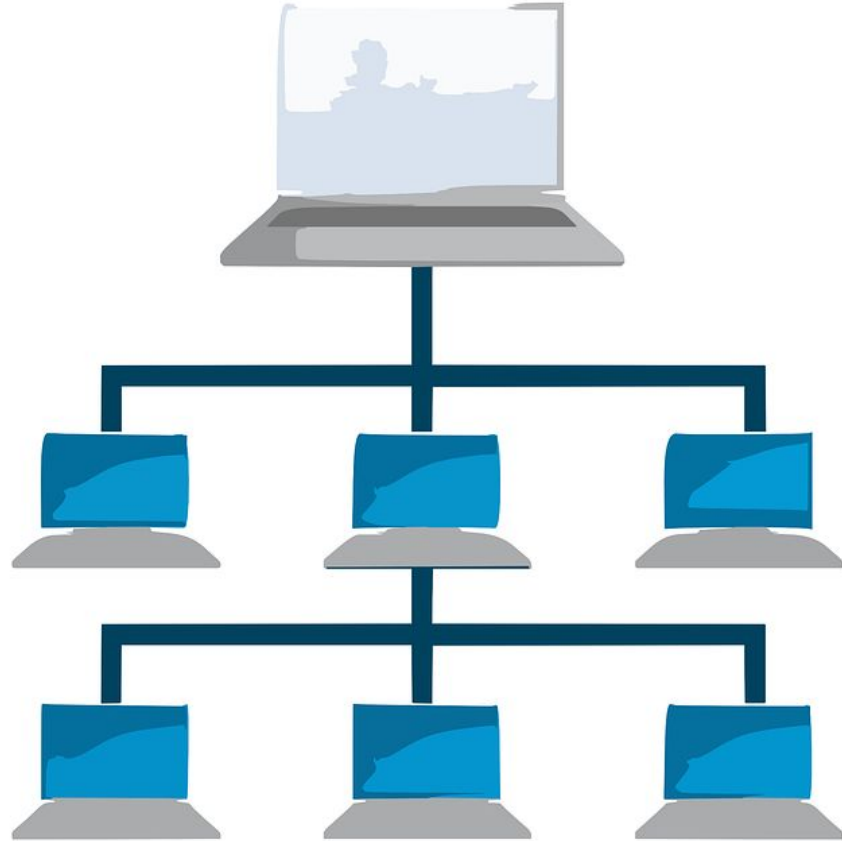
Virtual Solutions

- Libvirt
- Nested Virtualisation
- Vmware
- Azure
- VirtualBox



Networking

- Isolated network
- Separate Segment
- Try to not interfere with rest of the household network.
- VLAN switch if possible
- Laptop can work without extra hardware using NAT



Solution based on KVM and Libvirt

- Free and Open Source
- uses same tech as oVirt
- quite easy to automate
- Familiar to Linux users
- Can use different tools
 - virt-manager
 - machines in cockpit
 - virsh command line



Requirements to run nested.

- Turn on Nested virtualisation
- Turn on hardware Virtualisation in BIOS
- Turn on Nested Virtualisation in Kernal
- Enable Virtualisation in oVirt nodes

```
cat /sys/module/kvm_intel/parameters/nested
N # or 0 disabled
vi /etc/modprobe.d/kvm.conf
# uncomment either of the line
# for Intel CPU, select [kvm_intel], for AMD CPU,
select [kvm_amd]
options kvm_intel nested=1
#options kvm_amd nested=1
```

```
modprobe -r kvm_intel
modprobe kvm_intel
cat /sys/module/kvm_intel/parameters/nested
Y # or 1 just enabled
```

```
virsh edit centos8
```

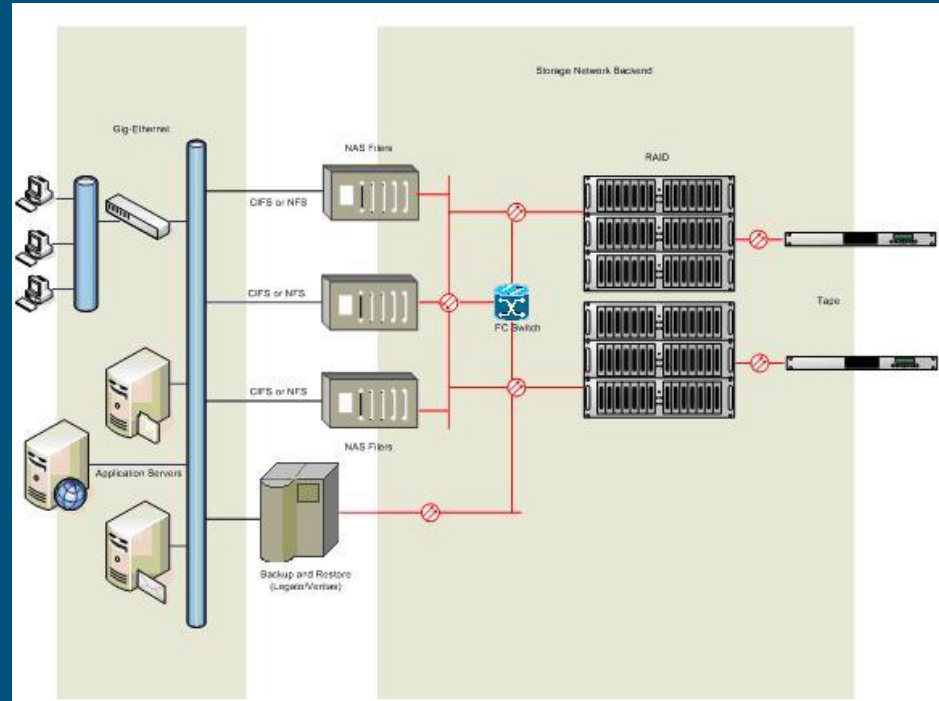
```
<cpu mode='host-model'>
```

Components required

- Networking
 - Bridged
 - Nat
- DNS
 - Separate server
 - Libvirt dnsmasq
- Storage
 - Libvirt pools
 - Libvirt volumes
 - NAS or SAN

Storage Domains

- Can be on the Host server
 - Libvirt has a firewall zone by default
- Could be external
 - Use bridged networking
- Could be on virtual nodes
 - NFS
 - iSCSI
 - Gluster



Demo next

oVirt in a Home Lab

Thanks for watching my presentation

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