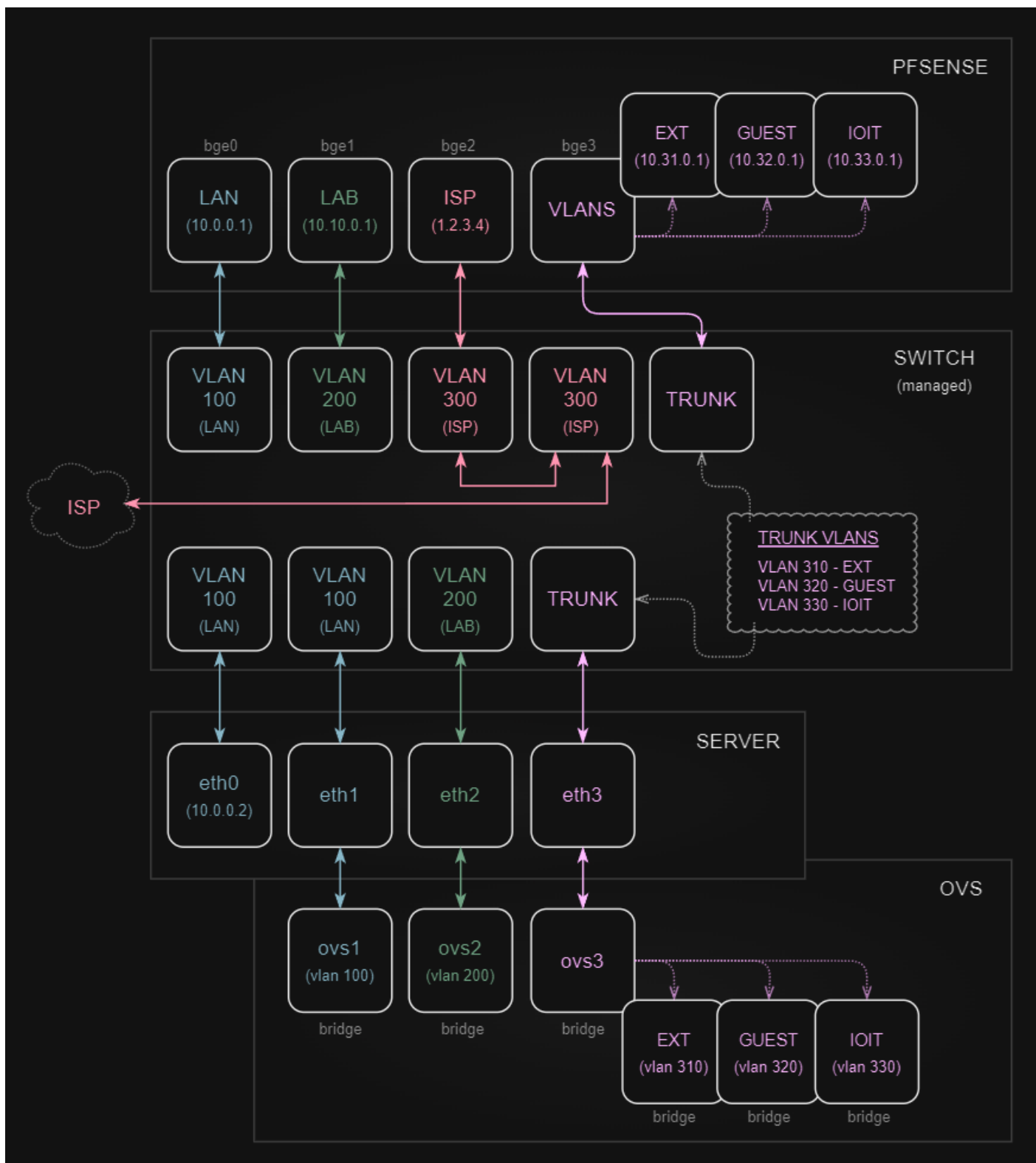


Configurations

Below are my current configurations. I have broke them out of my original write up, so I could fix them with my "new" knowledge and just to make them handy.

Network Layout:



EDIT THE SCRIPTS FIRST AND/OR JUST TAKE THE PARTS YOU NEED!!

Scripted Configs:

rebuild-network-scripts.sh

```
#!/bin/bash
```

```
DS=$(date "+%Y%m%d"); # DATE STAMP
```

```
mkdir -p /root/backups
```

```
gtar -czf /root/backups/${DS}_network-scripts.tar.gz -C /etc/sysconfig/network-scripts/ .
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-br0 << "EOF"
```

```
DEVICE=br0
```

```
NAME=br0
```

```
ONBOOT=yes
```

```
BOOTPROTO=none
```

```
TYPE=Bridge
```

```
DEFROUTE=yes
```

```
IPADDR=10.0.0.10
```

```
PREFIX=24
```

```
GATEWAY=10.0.0.1
```

```
DNS1=10.0.0.2
```

```
DOMAIN=skullscrape
```

```
PROXY_METHOD=none
```

```
BROWSER_ONLY=no
```

```
IPV4_FAILURE_FATAL=no
```

```
IPV6_DISABLED=yes
```

```
IPV6INIT=no
```

```
CONNECTION_METERED=no
```

```
NM_CONTROLLED=no
```

```
MTU=9000
```

```
STP=no
```

```
EOF
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-eth0 << "EOF"
```

```
DEVICE=eno1
```

```
NAME=eno1
```

```
HWADDR=xx:xx:xx:xx:xx:xx
```

```
UUID=xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx
```

```
ONBOOT=yes
```

```
BOOTPROTO=none
```

```
TYPE=Ethernet
```

```
MTU=9000
```

```
BRIDGE=br0
```

```
EOF
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-eth1 << "EOF"
```

```
DEVICE=eth1
```

```
NAME=eth1
```

```
HWADDR=xx:xx:xx:xx:xx:xx
```

```
UUID=xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx
```

```
ONBOOT=yes
```

```
BOOTPROTO=none
```

```
TYPE=OVSPort
```

```
DEVICETYPE=ovs
```

```
OVS_BRIDGE=ovs1
```

```
HOTPLUG=no
```

```
MTU=9000
```

```
EOF
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-eth2 << "EOF"
```

```
DEVICE=eth2
```

```
NAME=eth2
```

```
HWADDR=xx:xx:xx:xx:xx:xx
```

```
UUID=xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx
```

```
ONBOOT=yes
```

```
BOOTPROTO=none
```

```
TYPE=OVSPort
```

```
DEVICETYPE=ovs
```

```
OVS_BRIDGE=ovs2
```

```
HOTPLUG=no
```

```
MTU=9000
```

```
EOF
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-eth3 << "EOF"
```

```
DEVICE=eth3
```

```
NAME=eth3
HWADDR=xx:xx:xx:xx:xx:xx
UUID=xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx
ONBOOT=yes
BOOTPROTO=none
TYPE=OVSPort
DEVICETYPE=ovs
OVS_BRIDGE=ovs3
HOTPLUG=no
MTU=9000
```

```
EOF
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-ovs1 << "EOF"
```

```
DEVICE=ovs1
NAME=ovs1
ONBOOT=yes
BOOTPROTO=none
TYPE=OVSBridge
DEVICETYPE=ovs
HOTPLUG=no
```

```
EOF
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-ovs2 << "EOF"
```

```
DEVICE=ovs2
NAME=ovs2
ONBOOT=yes
BOOTPROTO=none
TYPE=OVSBridge
DEVICETYPE=ovs
HOTPLUG=no
```

```
EOF
```

```
cat > /etc/sysconfig/network-scripts/ifcfg-ovs3 << "EOF"
```

```
DEVICE=ovs3
NAME=ovs3
ONBOOT=yes
```

```
BOOTPROTO=none
TYPE=OVSBridge
DEVICETYPE=ovs
OVS_PORTS="ext0 guest0 ioit0"
OVS_EXTRA="set port ovs3 trunk=310,320,330"
HOTPLUG=no
```

EOF

```
cat > /etc/sysconfig/network-scripts/ifcfg-ext0 << "EOF"
DEVICE=ext0
NAME=ext0
ONBOOT=yes
BOOTPROTO=none
TYPE=OVSIntPort
DEVICETYPE=ovs
OVS_BRIDGE=ovs3
OVS_OPTIONS="tag=310"
OVS_EXTRA="set Interface $DEVICE external-ids:iface-id=$DEVICE"
HOTPLUG=no
```

EOF

```
cat > /etc/sysconfig/network-scripts/ifcfg-guest0 << "EOF"
DEVICE=guest0
NAME=guest0
ONBOOT=yes
BOOTPROTO=none
TYPE=OVSIntPort
DEVICETYPE=ovs
OVS_BRIDGE=ovs3
OVS_OPTIONS="tag=320"
OVS_EXTRA="set Interface $DEVICE external-ids:iface-id=$DEVICE"
HOTPLUG=no
```

EOF

```
cat > /etc/sysconfig/network-scripts/ifcfg-ioit0 << "EOF"
DEVICE=ioit0
```

```
NAME=ioit0
ONBOOT=yes
BOOTPROTO=none
TYPE=OVSIIntPort
DEVICETYPE=ovs
OVS_BRIDGE=ovs3
OVS_OPTIONS="tag=330"
OVS_EXTRA="set Interface $DEVICE external-ids:iface-id=$DEVICE"
HOTPLUG=no

EOF

printf "\n\n RESTART NETWORK MANUALLY \n\n"

exit
```

rebuild-kvm.sh

```
#!/bin/bash

### REMOVE AND REBUILD KVM DEFINED NETWORK ###

virsh net-destroy ioit0
virsh net-destroy guest0
virsh net-destroy ext0
virsh net-destroy ovs3
virsh net-destroy ovs2
virsh net-destroy ovs1

virsh net-undefine ioit0
virsh net-undefine guest0
virsh net-undefine ext0
virsh net-undefine ovs3
virsh net-undefine ovs2
virsh net-undefine ovs1

cat > ./ovs1.xml << "EOF"
<network>
```

```
<name>ovs1</name>
<forward mode='bridge'/>
<bridge name='ovs1'/>
<virtualport type='openvswitch'/>
</network>
EOF
```

```
cat > ./ovs2.xml << "EOF"
<network>
  <name>ovs2</name>
  <forward mode='bridge'/>
  <bridge name='ovs2'/>
  <virtualport type='openvswitch'/>
</network>
EOF
```

```
cat > ./ovs3.xml << "EOF"
<network>
  <name>ovs3</name>
  <forward mode='bridge'/>
  <bridge name='ovs3'/>
  <virtualport type='openvswitch'/>
  <portgroup name='ext0'>
    <vlan>
      <tag id='310'/>
    </vlan>
  </portgroup>
  <portgroup name='guest0'>
    <vlan>
      <tag id='320'/>
    </vlan>
  </portgroup>
  <portgroup name='ioit0'>
    <vlan>
      <tag id='330'/>
    </vlan>
  </portgroup>
  <portgroup name='TRUNK'>
    <vlan trunk='yes'>
```

```
<tag id='310'/>
<tag id='320'/>
<tag id='330'/>
</vlan>
</portgroup>
</network>
EOF
```

```
cat > ./ext0.xml << "EOF"
<network>
  <name>ext0</name>
  <forward mode='bridge'/>
  <bridge name='ovs3'/>
  <virtualport type='openvswitch'/>
  <portgroup name='ext0'>
    <vlan>
      <tag id='310'/>
    </vlan>
  </portgroup>
</network>
EOF
```

```
cat > ./guest0.xml << "EOF"
<network>
  <name>guest0</name>
  <forward mode='bridge'/>
  <bridge name='ovs3'/>
  <virtualport type='openvswitch'/>
  <portgroup name='guest0'>
    <vlan>
      <tag id='320'/>
    </vlan>
  </portgroup>
</network>
EOF
```

```
cat > ./ioit0.xml << "EOF"
<network>
  <name>ioit0</name>
```

```
<forward mode='bridge'/>
<bridge name='ovs3'/>
<virtualport type='openvswitch'/>
<portgroup name='ioit0'>
  <vlan>
    <tag id='330'/>
  </vlan>
</portgroup>
</network>
EOF
```

```
virsh net-define ovs1.xml
virsh net-define ovs2.xml
virsh net-define ovs3.xml
virsh net-define ext0.xml
virsh net-define guest0.xml
virsh net-define ioit0.xml
```

```
virsh net-autostart ovs1
virsh net-autostart ovs2
virsh net-autostart ovs3
virsh net-autostart ext0.xml
virsh net-autostart guest0.xml
virsh net-autostart ioit0.xml
```

```
virsh net-start ovs1
virsh net-start ovs2
virsh net-start ovs3
virsh net-start ext0.xml
virsh net-start guest0.xml
virsh net-start ioit0.xml
```

```
rm -f ovs1.xml
rm -f ovs2.xml
rm -f ovs3.xml
rm -f ext0.xml
rm -f guest0.xml
rm -f ioit0.xml
```

```
systemctl restart libvirtd
virsh net-list
exit
```

list-networks.sh

```
#!/bin/bash

CYN="\e[96m"
NON="\e[0m"

printf "${CYN}\n OVS NETWORK \n\n${NON}"
ovs-vsctl show
printf "${CYN}\n OVS BRIDGE LIST \n\n${NON}"
ovs-vsctl list-br
printf "${CYN}\n VIRSH DOMAIN LIST \n\n${NON}"
virsh list --all
printf "${CYN}\n VIRSH NETWORK LIST \n\n${NON}"
virsh net-list --all
printf "${CYN}\n VIRSH INTERFACE LIST \n\n${NON}"
virsh iface-list --all

exit
```

Cisco Config:

Cisco Config

```
### NOT A SCRIPT - JUST THE PERTINENT PARTS OF MY CONFIG ###

vrf definition LAN
description LAN NETWORK
address-family ipv4
exit-address-family
!
```

```
vrf definition LAB
description LAB NETWORK
address-family ipv4
exit-address-family
!
vrf definition ISP
description ISP NETWORK
address-family ipv4
exit-address-family
!
vrf definition EXT
description EXTERNAL NETWORK
address-family ipv4
exit-address-family
!
vrf definition GUEST
description GUEST NETWORK
address-family ipv4
exit-address-family
!
vrf definition IOIT
description INSECURE NETWORK
address-family ipv4
exit-address-family
!

vlan 100
name LAN
!
vlan 200
name LAB
!
vlan 300
name ISP
!
vlan 310
name EXT
!
```

vlan 320

name GUEST

!

vlan 330

name IOIT

!

interface GigabitEthernet1/0/1

description PFSense : BGE0 : LAN (10.0.0.1)

switchport access vlan 100

switchport mode access

!

interface GigabitEthernet1/0/2

description PFSense : BGE1 : LAB (10.10.0.1)

switchport access vlan 200

switchport mode access

!

interface GigabitEthernet1/0/3

description PFSense : BGE2 : WAN (1.2.3.4)

switchport access vlan 300

switchport mode access

!

interface GigabitEthernet1/0/4

description PFSense : BGE3 : TRUNK (VLANs)

switchport trunk allowed vlan 310,320,330

switchport mode trunk

!

interface GigabitEthernet1/0/5

description VHOST : ETH0 : MGMT

switchport access vlan 100

switchport mode access

!

interface GigabitEthernet1/0/6

description VHOST : ETH1 : LAN (OVS1)

switchport access vlan 100

switchport mode access

!

interface GigabitEthernet1/0/7

```
description VHOST : ETH2 : LAB (OVS2)
switchport access vlan 200
switchport mode access
!
interface GigabitEthernet1/0/8
description VHOST : ETH3 : TRUNK (OVS3)
switchport trunk allowed vlan 310,320,330
switchport mode trunk
!
interface GigabitEthernet1/0/9
description ISP IN
switchport access vlan 300
switchport mode access
!

interface Vlan100
description LAN
vrf forwarding LAN
ip address 10.0.0.254 255.255.255.0
!
interface Vlan200
description LAB
vrf forwarding LAB
ip address 10.10.0.254 255.255.255.0
!
interface Vlan300
description ISP
vrf forwarding ISP
no ip address
!
interface Vlan310
description EXT
vrf forwarding EXT
ip address 10.31.0.254 255.255.255.0
!
interface Vlan320
description GUEST
vrf forwarding GUEST
```

```
ip address 10.32.0.254 255.255.255.0
!
interface Vlan330
description IOIT
vrf forwarding IOIT
ip address 10.33.0.254 255.255.255.0
!

ip route vrf LAN 0.0.0.0 0.0.0.0 10.0.0.1
ip route vrf LAB 0.0.0.0 0.0.0.0 10.10.0.1
ip route vrf EXT 0.0.0.0 0.0.0.0 10.31.0.1
ip route vrf GUEST 0.0.0.0 0.0.0.0 10.32.0.1
ip route vrf IOIT 0.0.0.0 0.0.0.0 10.33.0.1
!
```

Revision #8

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