KVM on server with libvirt

This is a work in progress, 20201015

Install and Configure

First, verify you have the required hardware virtualization support in your CPU:

```
#Verify the hvm support
egrep --color 'vmx|svm' /proc/cpuinfo
```

You should see either vmx or svm in the output.

Now, install the basic packages needed, and nothing else

```
apt install -y --no-install-recommends qemu-kvm libvirt-clients libvirt-daemon-system bridge-utils libguestfs-tools genisoimage virtinst libosinfo-bin virt-top
reboot # brings libraries online
```

Verify system is working ok

Commands are of the form: *virsh --connect qemu:///system **command*** where *command* is any of the commands accepted by virsh.

```
sudo su # become root user
virsh --connect qemu:///system list --all
```

The *--connect qemu:///system* is the connection used, which is not the default. To set that to the default, run the following one time. This will become the “norm” on the next login:

```
echo "# set default uri for libvirt" >> ~/.profile
echo "export LIBVIRT_DEFAULT_URI='qemu:///system'" >> ~/.profile
```

Defining Network

interfaces

```
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
```

```
auto lo
iface lo inet loopback

iface eth0 inet manual
iface eth0 inet6 manual

iface eth1 inet manual
iface eth1 inet6 manual

auto bond0
iface bond0 inet manual
   bond-mode 4
   bond-miimon 100
   bond_xit_hash_policy layer2+3
   bond_lacp_rate slow
   slaves eth0 eth1


iface bond0.10 inet manual
   vlan-raw-device bond0.10

iface bond0.20 inet manual
   vlan-raw-device bond0.20

iface bond0.30 inet manual
   vlan-raw-device bond0.30

auto br_wan
iface br_wan inet static
        address 192.168.1.13
        netmask 255.255.255.255
   bridge_ports bond0.10
   bridge_stp off
   bridge_fd 0
   bridge_maxwait 0

auto br_dmz
iface br_dmz inet static
        address 192.168.1.12
        netmask 255.255.255.255
        bridge_ports bond0.20
        bridge_stp off
        bridge_fd 0
        bridge_maxwait 0

auto br_lan
iface br_lan inet dhcp
        bridge_ports bond0.30
        bridge_stp off
        bridge_fd 0
```

```
        bridge_maxwait 0
```

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