

KVM

KVM (Kernel-based Virtual Machine) is a hypervisor built into the Linux kernel.

1. Install `libvirt` Packages

```
yay -S qemu libvirt edk2-ovmf virt-manager nfs-utils virtio-win

# optional dependencies
iptables-nft dnsmasq # for default NAT/DHCP networking
bridge-utils        # for bridged networking
openbsd-netcat       # for remote management over SSH
```

2. Add user to `libvirt` groups

```
sudo usermod -aG libvirt $USER
```

3. Start `libvirtd` daemon

```
sudo systemctl enable --now libvirtd
```

4. Create network bridge with `nmcli`

```
nmcli connection add type bridge ifname br0 con-name "Netzwerkbrücke" stp no
nmcli connection add type bridge-slave ifname enp39s0 con-name "Ethernet" master br0
nmcli connection down "Kabelgebundene Verbindung 1"
nmcli connection up "Netzwerkbrücke"
```

- When using bonding of interfaces, disable IPv4 and IPv6 on the **bridge**

```
nmcli con mod "Netzwerkbrücke" ipv4.method disabled ipv6.method ignore
```

5. Define bridge network XML file, e.g. as `br0.xml`

```
<network>
  <name>br0</name>
  <forward mode='bridge'/>
  <bridge name='br0'/>
</network>
```

6. Add bridge network to `virt-manager`

```
virsh -c qemu:///system net-define br0.xml
```

```
virsh -c qemu:///system net-autostart br0
```

7. Disable COW on Btrfs (optional, recommended)

```
sudo chattr +C /var/lib/libvirt/images
```

8. Define a remote storage pool (e.g. remote ISO images) `remote-iso.xml`

```
<pool type="netfs">
  <name>iso</name>
  <source>
    <host name="dragonhoard"/>
    <dir path="/Download/Software/ISOs"/>
    <format type="auto"/>
  </source>
  <target>
    <path>/var/lib/libvirt/images/iso</path>
  </target>
</pool>
```

9. Add storage pool to `virt-manager`

```
virsh -c qemu:///system pool-define remote-iso.xml
```

```
virsh -c qemu:///system pool-autostart iso
```

10. Create the storage pool mountpoint

```
sudo mkdir -p /var/lib/libvirt/images/iso
```

Revision #11

Created 6 May 2020 20:38:15 by Sebin

Updated 26 March 2023 03:28:21 by Sebin