

??? 13, 2009 ??? sunchiahome

? RHEL5 update4 KVM ??? Virtual machine ? Network ??????. 1.Virtual network 2.Shared physical device ???  
 ??? Virtual network.

????? RHEL5 update 4 KVM ?????????? bridge,? QEMU ?????? virbr0 ????? Virtual machine ??????????????  
 Virtual network .

- **Virtual network - virbr0**

- 1.QEMU Linux bridge "virbr0" .virbr0 NAT ??,??? NAT + DHCP ??,??  
 Virtual machine virbr0 (private IP).?? 192.168.122.2 ~ 192.168.122.254 (???????????)  
 ? DHCP IP ??).
- 2.??? default gateway ? 192.168.122.1/24 ,??????? Virtual Machine ?????????????? NAT ??????????.
3. ????? NAT ??? Virtual Machine ?????????? private ???,????????????? Virtual Machine ??????.

????? Qemu ???????????? /etc/libvirt/qemu/networks/default.xml

```
<network>
  <name>default</name>
  <uuid>49a0ceb-5662-4a61-8149-98ea750d393b</uuid>
  <bridge name="virbr0" />
  <forward/>
  <ip address="192.168.122.1" netmask="255.255.255.0">
    <dhcp>
      <range start="192.168.122.2" end="192.168.122.254" />
    </dhcp>
  </ip>
</network>
```

??? ip address ? default gateway IP,range ??DHCP clients ???????,???????????

- **Shared physical device**

????????? "Shared physical device" ??????????????.????? Virtual machine ?????????????????? Hub ?? Switch ?,????  
 ??? IP ??????. ? Linux ?????????????????? Bridge mode,??????? NIC Adapter ports ?????????? Bridge(Switch) ???????,  
 ??????????????????,????? Linux ??? switch ????.  
 ??? Linux ??????????:????????????????????????????????????? Bridge ????.????????????????????????? NIC ??? NIC ?????? bridge ???  
 ????.

**1.???? eth0 ?????? bridge(bri0)**

```
[root@benjr ~]# ifconfig eth0 0.0.0.0
[root@benjr ~]# brctl addbr bri0
[root@benjr ~]# brctl addif bri0 eth0
```

**2.???? eth ?????? bridge ?.**

```
[root@benjr ~]# brctl show
bridge name  bridge id          STP enabled  interfaces
bri0         8000.001517785dd6  no           eth0
virbr0       8000.000000000000  yes
```

**3.???? IP ,?????????.**

```
[root@benjr ~]# ifconfig bri0 192.8.1.3
[root@benjr ~]# ifconfig bri0
bri0  Link encap:Ethernet HWaddr 00:15:17:78:5D:D6
      inet addr:192.8.1.3 Bcast:192.8.1.255 Mask:255.255.255.0
      inet6 addr: fe80::215:17ff:fe78:5dd6/64 Scope:Link
      UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
      RX packets:14767 errors:0 dropped:0 overruns:0 frame:0
      TX packets:34 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:0
      RX bytes:679328 (663.4 KiB) TX bytes:9626 (9.4 KiB)
```

**4.?? Allow IP forwarding**

```
[root@benjr ~]# vi /etc/sysctl.conf
net.ipv4.ip_forward = 1
[root@benjr ~]#sysctl -p
```

