? 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.xm

```
<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
```

??????? eth0(bri0) ? Virtual Machine ??????!!?????????? /etc/rc.local,??????????.

5.reload libvirt

[root@benjr ~]# service libvirtd reload

???? Virtual Machine ?????? "Shared physical device" ?? libvirtd ?????????.

- **Set fixed MAC address for your virtual system**

????????????????????????? MAC address ,?????????? mac ?????????. mac :XY:XX:XX:XX:XX:XX ,mac ??16?????
X ?????16??(0~9,A,B,C,D,E,F), Y ????? 2, 6, A ? E.