

RedHat ??? RHEL5.4 ?????? KVM Virtualization?? 5.4 ??? Xen + KVM ?????????????????????? KVM ?????
RedHat ??????????

RHEL KVM ?????? 16 vCPU/per guest?? VMware vSphere ? Citrix XenServer for free ??? 8 vCPU?

RHEL 5.4 ??? KVM Hypervisor ?????? virt ???
????????????????????? Live Migration(?? vmware ? live-motion)?HA????????? RHEV(RedHat Enterprise
Virtualization) Server ?????????? KVM Hypervisor?RHEV Manager?
?????? <http://www.redhat.com/virtualization...ures-benefits/>
???? <http://www.redhat.com/v/swf/rhev/demo.html>

RedHat ??????
<http://www.redhat.com/docs/en-US/Red...ide/index.html>

???????

?? 64 bit ????

?????????? KVM ?????????? 64-bit ?????????? KVM ?????????????????????? 64-bit??????

Note: ?????? 64-bit RHEL?CPU ?????? 64-bit?



RED HAT ENTERPRISE LINUX 5

- Desktop Environments
- Applications
- Development
- Servers
- Base System
- Cluster Storage
- Clustering
- Virtualization**
 - KVM
 - Virtualization

Virtualization Support with KVM

4 of 18 optional packages selected

Optional packages

Release Notes Back Next

Guest OS ????

Supported fully virtualized guests

Operating system	Support level
Red Hat Enterprise Linux 3 x86	Optimized with para-virtualized drivers
Red Hat Enterprise Linux 4 x86	Optimized with para-virtualized drivers
Red Hat Enterprise Linux 4 AMD 64 and Intel 64	Optimized with para-virtualized drivers
Red Hat Enterprise Linux 5 x86	Optimized with para-virtualized drivers
Red Hat Enterprise Linux 5 AMD 64 and Intel 64	Optimized with para-virtualized drivers
Windows Server 2003 R2 32-Bit	Optimized with para-virtualized drivers
Windows Server 2003 R2 64-Bit	Optimized with para-virtualized drivers
Windows Server 2003 Service Pack 2 32-Bit	Optimized with para-virtualized drivers
Windows Server 2003 Service Pack 2 64-Bit	Optimized with para-virtualized drivers
Windows XP 32-Bit	Optimized with para-virtualized drivers (network driver only)
Windows Vista 32-Bit	Supported
Windows Vista 64-Bit	Supported
Windows Server 2008 32-Bit	Optimized with para-virtualized drivers
Windows Server 2008 64-Bit	Supported

???????

Per Host:

- Max physical CPUs = 64
- Max logical CPUs = 256
- Max RAM = 1 TB

Per Guest:

- Max vCPU/guest = 16
- Max RAM/guest = 256 GB

? VMware, Hyper-V ??



虚拟化功能对比

	Red Hat Enterprise Virtualization Hypervisor	VMware ESX	Microsoft Hyper-V
Support for Windows guests	● Windows 2000, 2003, 2008	● Windows 2000, 2003, 2008	● Windows 2000, 2003, 2008
Support for Linux guests	◐ RHEL3-5*	● RHEL3-5 SLES 8-10	◐ SLES 9-10, RHEL 5.2, 5.3
Hypervisor scalability	● 96 cores 1TB RAM	◐ 32 cores 256 GB RAM	◐ 16 cores 1TB RAM
Guest Scalability	● 16 vCPUs 64 GB Ram	◐ 4 vCPUs 64 GB RAM	◐ 4 vCPUs 64 GB Ram
Memory page-sharing	● Yes	● Yes	○ No
Advanced features (NUMA, Power Mgmt. etc.)	● Yes. Supported in Linux	◐ Limited Functionality	○ No

* Other Linux platforms planned for 2010

Non-existent ○ → ● Good

????
 ?? RHEL for x86_64 ????????????????????????????????? Virtualization????????????????? Customize Now??? KVM???
 Virtualization(?? Xen ??)?

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Virtualization Support with KVM

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???????????

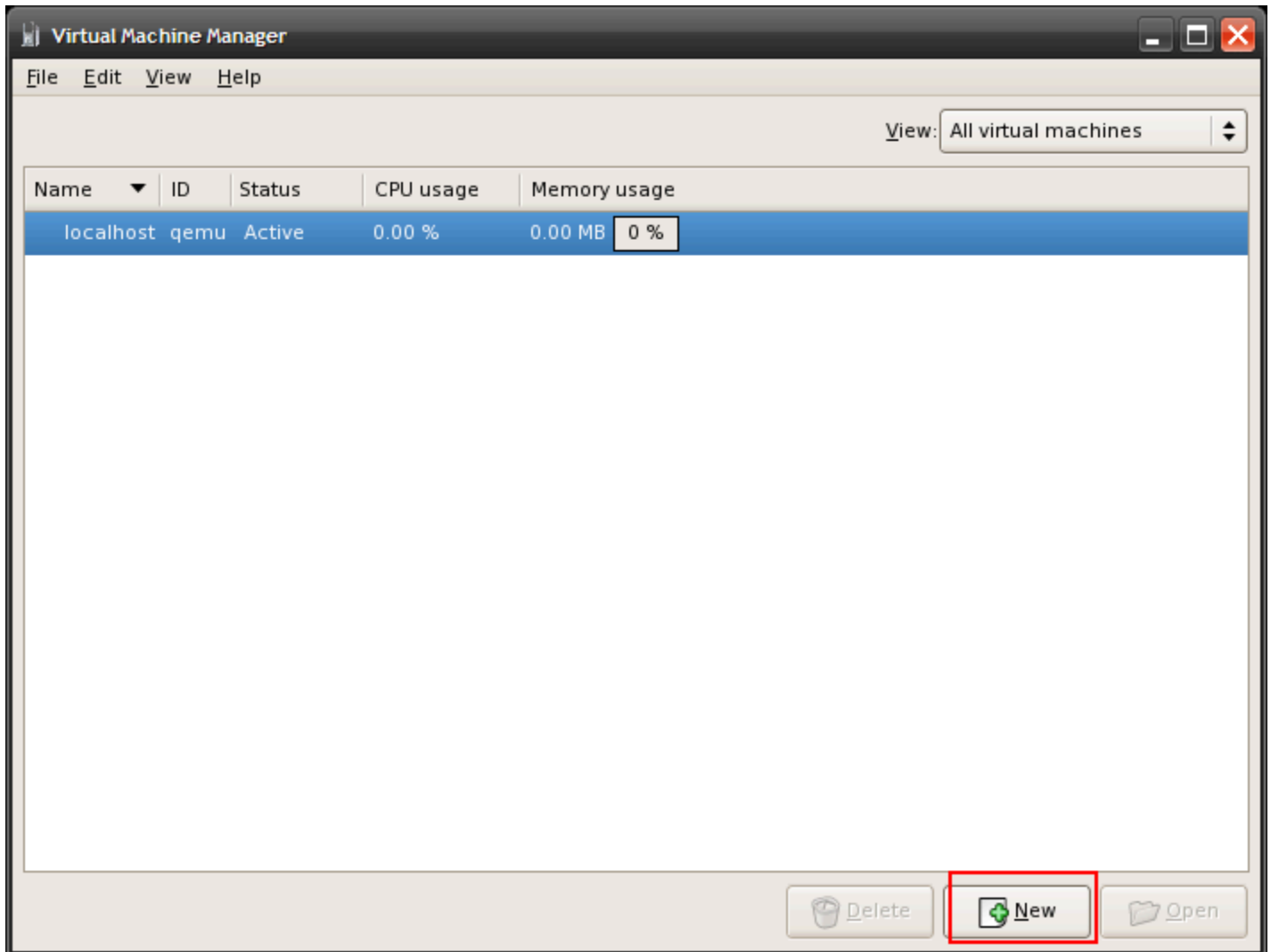
?? Guest OS - RHAS3

? root ?? Host OS???????????????

virt-manager &

1. ? New ?? Guest OS(virtual machine)?

Notes: KVM ???? **Fully Virtualized?**





2. ?? Guest OS Type

Create a new virtual machine

Installation Method

Please indicate where installation media is available for the operating system you would like to install on this virtual machine:

Local install media (ISO image or CDRROM)

Network install tree (HTTP, FTP, or NFS)

Network boot (PXE)

Please choose the operating system you will be installing on the virtual machine:

OS Type: Linux

OS Variant: Red Hat Enterprise Linux 3

⚠ Not all operating system choices are supported by Red Hat. Please see the link below for supported configurations:

[Red Hat Enterprise Linux 5 virtualization support](#)

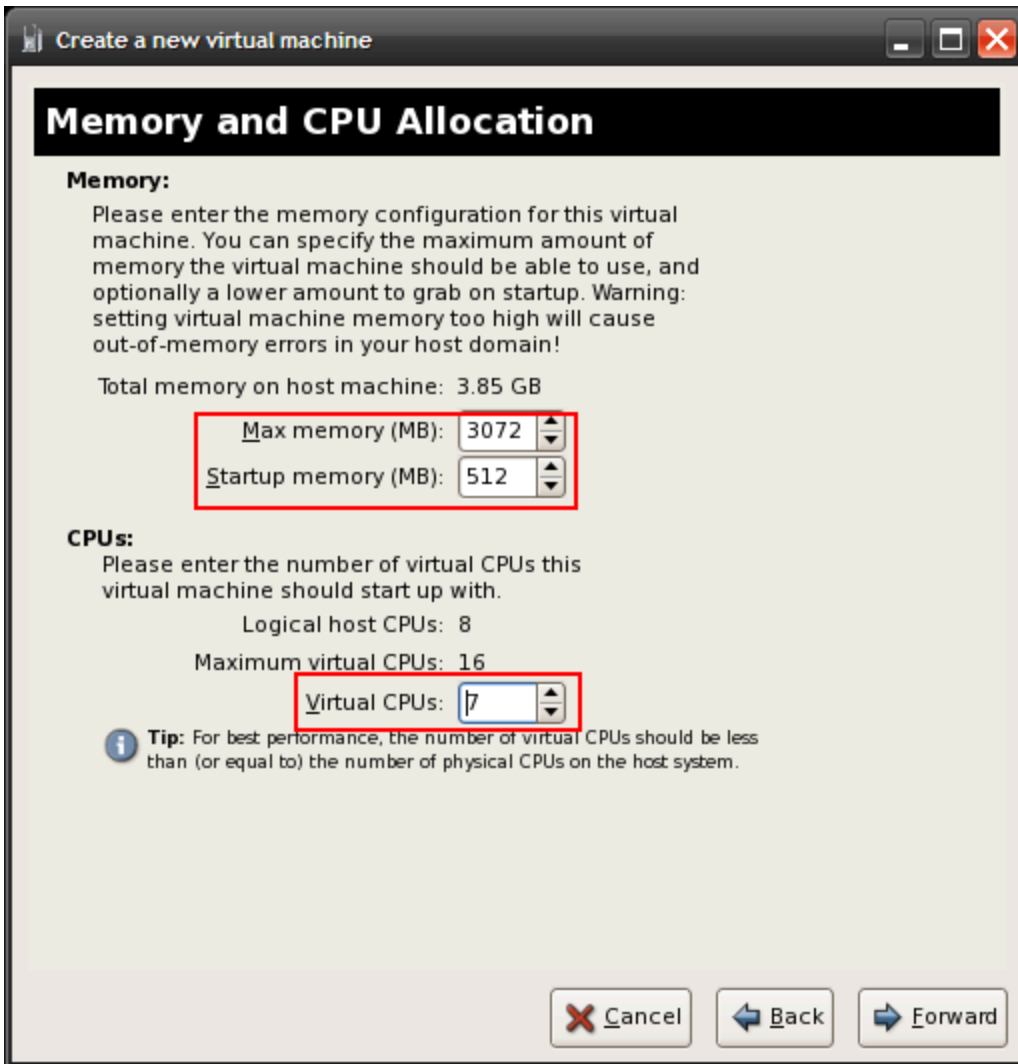
Cancel Back Forward

3. ?? ????? ISO ????

Tip: ISO ?????????????? FTP ???



4. ?? CPU & Memory ??



5. ?????????????????? NAT ????????

Tip: ?????????????????? NAT????? Bridge ????? LAN ????????????

???? Bridged Network ?????

// ?? Xen network scripts, ?????? Xen, ???

?? /etc/xen/xend-config.sxp

(network-script network-bridge)

???

(network-script /bin/true)

// ?? NetworkManager ??

#chkconfig NetworkManager off

#chkconfig network on

#service NetworkManager stop

#service network start

// ??????????

#cd /etc/sysconfig/network-scripts


```
#vi ifcfg-eth0
```

```
DEVICE=eth0
```

```
...
```

```
ONBOOT=yes
```

```
BRIDGE=br0
```

```
MTU=9000
```

```
Note: ?? BRIDGE, MTU ??????
```

```
#vi ifcfg-br0
```

```
DEVICE=br0
```

```
TYPE=Bridge
```

```
BOOTPROTO=dhcp
```

```
ONBOOT=yes
```

```
DELAY=0
```

```
Notes: TYPE=Bridge??????????????
```

```
#service network restart
```

```
// ?? iptables
```

```
#iptables -I FORWARD -m physdev --physdev-is-bridged -j ACCEPT
```

```
#services iptables save
```

```
#services iptables restart
```

```
#vi /etc/sysctl.conf
```

```
?????
```

```
net.bridge.bridge-nf-call-ip6tables = 0
```

```
net.bridge.bridge-nf-call-iptables = 0
```

```
net.bridge.bridge-nf-call-arptables = 0
```

```
#sysctl -p /etc/sysctl.conf
```

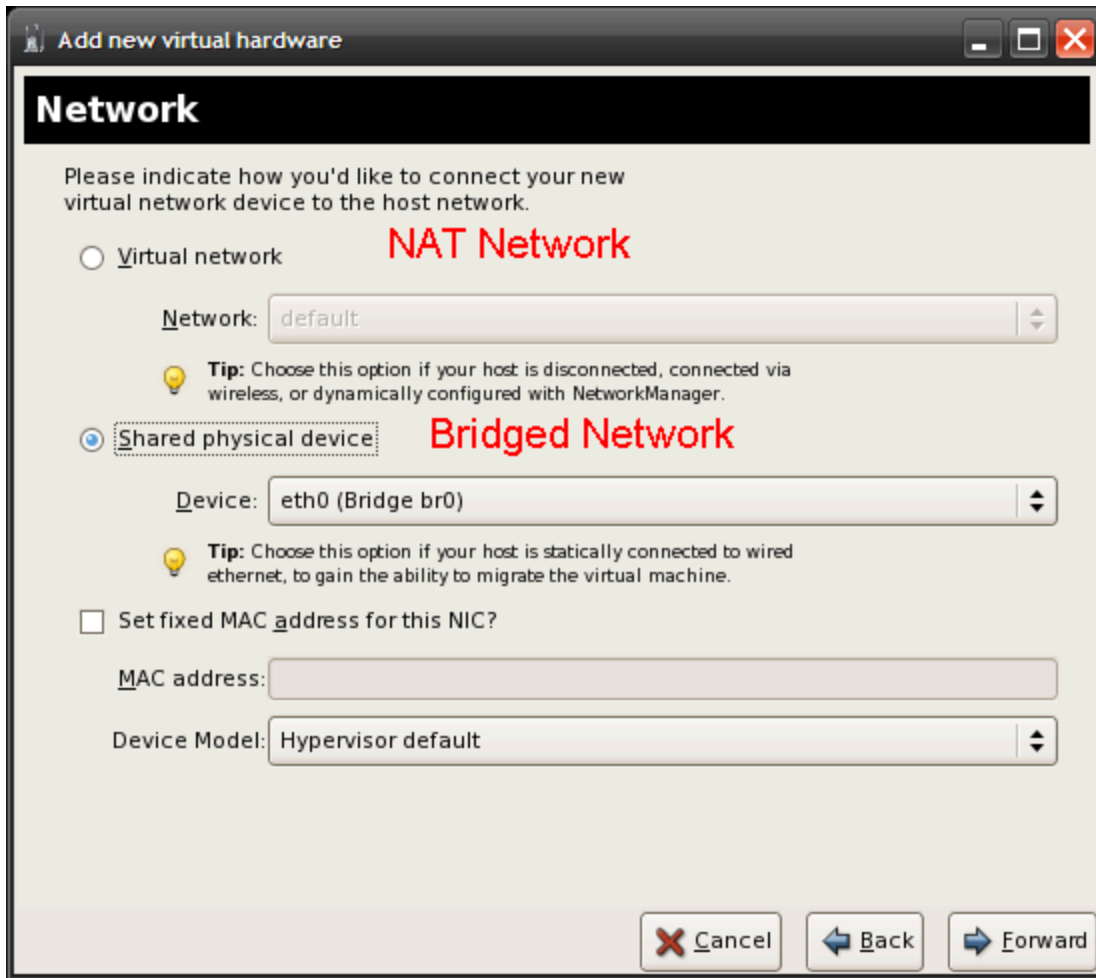
```
#service libvirtd reload
```

```
// ?? ????
```

```
#brctl show
```

bridge name	bridge id	STP enabled	interfaces
br0	8000.0a4e52d7f15c	no	eth0
virbr0	8000.000000000000	yes	

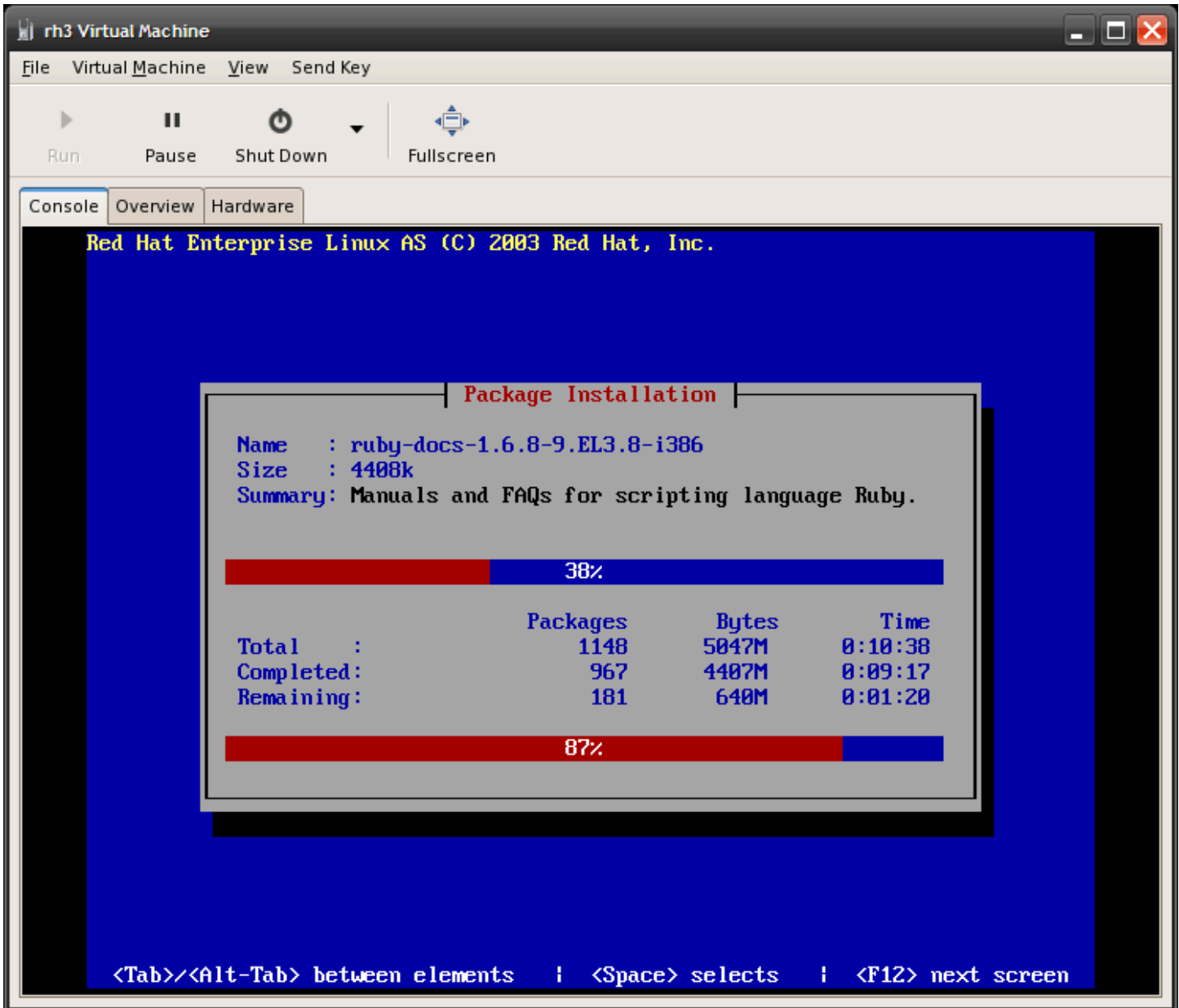
```
Notes: br0 ? bridged network; virbr0 ? NAT network?????????????
```



VM ?????

???? Guest OS





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- [????](#)
- [OSSLab FAQ](#)
- [????? ????](#)
- [????](#)
- [??? - Virtualization](#)
- [VoIP](#)
- [????](#)