在安装虚拟化环境的时候，首先查看下该服务器的硬件配置和环境，具体操作如下：

(一)检查硬件的相关情况：

1，查看cpu型号，物理cpu颗数,

[root@KVM ~]# cat /proc/cpuinfo | grep name | cut -d: -f2 | uniq -c

2 Intel(R) Core(TM) i3-4150 CPU @ 3.50GHz

[root@KVM ~]# cat /proc/cpuinfo | grep physical | sort -n | uniq -c

2 address sizes : 42 bits physical, 48 bits virtual

16 physical id : 0 ###说明有一颗cpu,颗数是从0开始的

2，查看内存

[root@KVM ~]# dmidecode|grep -A5 "Memory Device"|grep Size | cut -d: -f2 | sort -n | uniq -c

63 No Module Installed

63 1 kB

1 8 GB

1 8192 MB ###接了一根内存，每根内存的大小为8G

3，查看其它的相关参数:

[root@KVM ~]# dmidecode | grep -A16 "Memory Device" | grep Speed | sort -n | uniq -c

64 Speed: Unknown

[root@KVM ~]# dmidecode|grep 'Maximum Capacity'

Maximum Capacity: 1 TB

[root@KVM ~]#

（二）安装kvm

1，查看服务器是否支持虚拟化

[root@KVM ~]# grep -E -o 'vmx|svm' /proc/cpuinfo

vmx

2，安装kvm软件包

[root@KVM ~]# yum -y install kvm python-virtinst libvirt tunctl bridge-utils virt-manager qemu-kvm-tools virt-viewer virt-v2v

3，安装kvm虚拟化管理工具包

[root@KVM ~]# yum install libguestfs-tools -y

4，查看虚拟机的相关环境

[root@KVM ~]# /etc/init.d/libvirtd restart

Stopping libvirtd daemon: [ OK ]

Starting libvirtd daemon: [ OK ]

[root@KVM ~]# virsh -c qemu:///system list

Id Name State

----------------------------------------------------

1 hadoop4 running

[root@KVM ~]# virsh --version ###查看虚拟机的版本

0.10.2

[root@KVM ~]# virt-install --version ###查看虚拟机工具的版本

0.600.0

[root@KVM ~]# ln -s /usr/libexec/qemu-kvm /usr/bin/qemu-kvm

[root@KVM ~]# qemu-kvm -version

QEMU PC emulator version 0.12.1 (qemu-kvm-0.12.1.2-2.479.el6\_7.3), Copyright (c) 2003-2008 Fabrice Bellard

[root@KVM ~]#

5，手动创建虚拟网桥：

a,首先NetworkManager服务：

[root@KVM network-scripts]# /etc/init.d/NetworkManager status

NetworkManager (pid 1132) is running...

[root@KVM network-scripts]# /etc/init.d/NetworkManager stop

Stopping NetworkManager daemon: [ OK ]

[root@KVM network-scripts]# /etc/init.d/NetworkManager status

NetworkManager is stopped

[root@KVM network-scripts]# chkconfig NetworkManager off

b,创建br0网桥：

[root@KVM network-scripts]# cp ifcfg-eth0 ifcfg-br0

[root@KVM network-scripts]# vi ifcfg-eth0

DEVICE=eth0

BOOTPROTO=static

NM\_CONTROLLED="no"

ONBOOT=yes

TYPE=Ethernet

BRIDGE=br0

IPADDR=10.1.156.201

PREFIX=24

GATEWAY=10.1.156.1

DNS1=10.1.156.1

DNS2=114.114.114.114

DEFROUTE=yes

IPV4\_FAILURE\_FATAL=yes

IPV6INIT=no

NAME=Systemeth0

[root@KVM network-scripts]# vi ifcfg-br0

DEVICE=br0

HWADDR=00:0C:29:75:92:CF

TYPE=Bridge

ONBOOT=yes

BOOTPROTO=static

IPADDR=10.1.156.200

NETMASK=255.255.255.0

GATEWAY=10.1.156.1

DNS1=10.1.156.1

DNS2=114.114.114.114

c，关闭了networkmanager服务之后，才能通过service networkrestart管理网络

[root@KVM ~]# /etc/init.d/network restart

Shutting down interface br0: [ OK ]

Shutting down interface eth0: [ OK ]

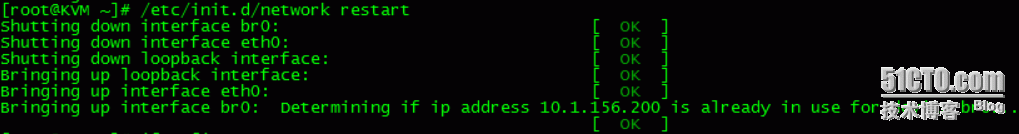
Shutting down loopback interface: [ OK ]

Bringing up loopback interface: [ OK ]

Bringing up interface eth0: [ OK ]

Bringing up interface br0: Determining if ip address 10.1.156.200 is already in use for device br0...

[ OK ]

如图：[](http://s1.51cto.com/wyfs02/M00/7A/AD/wKiom1awEwbwAJIcAABnlasQdOE364.png)d,查看网桥br0

[root@KVM ~]# ifconfig

br0 Link encap:Ethernet HWaddr 00:0C:29:75:92:CF

inet addr:10.1.156.200 Bcast:10.1.156.255 Mask:255.255.255.0

inet6 addr: fe80::20c:29ff:fe75:92cf/64 Scope:Link

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

RX packets:181 errors:0 dropped:0 overruns:0 frame:0

TX packets:28 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:17908 (17.4 KiB) TX bytes:3068 (2.9 KiB)

eth0 Link encap:Ethernet HWaddr 00:0C:29:75:92:CF

inet6 addr: fe80::20c:29ff:fe75:92cf/64 Scope:Link

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

RX packets:183 errors:0 dropped:0 overruns:0 frame:0

TX packets:32 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:1000

RX bytes:20562 (20.0 KiB) TX bytes:3396 (3.3 KiB)

lo Link encap:Local Loopback

inet addr:127.0.0.1 Mask:255.0.0.0

inet6 addr: ::1/128 Scope:Host

UP LOOPBACK RUNNING MTU:16436 Metric:1

RX packets:1033 errors:0 dropped:0 overruns:0 frame:0

TX packets:1033 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:62322 (60.8 KiB) TX bytes:62322 (60.8 KiB)

virbr0 Link encap:Ethernet HWaddr 52:54:00:F1:6D:D1

inet addr:192.168.122.1 Bcast:192.168.122.255 Mask:255.255.255.0

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)

vnet0 Link encap:Ethernet HWaddr FE:54:00:FE:F5:A3

inet6 addr: fe80::fc54:ff:fefe:f5a3/64 Scope:Link

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:31517 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:500

RX bytes:0 (0.0 b) TX bytes:1639040 (1.5 MiB)

e,查看网桥

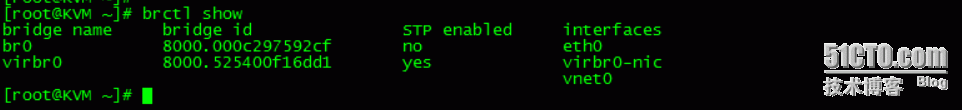
[root@KVM ~]# brctl show

bridge name bridge id STP enabled interfaces

br0 8000.000c297592cf no eth0

virbr0 8000.525400f16dd1 yes virbr0-nic

vnet0

[](http://s3.51cto.com/wyfs02/M02/7A/AD/wKiom1awEnGDpnjbAAA_-_oU3iE166.png)

kvm环境安装完成。