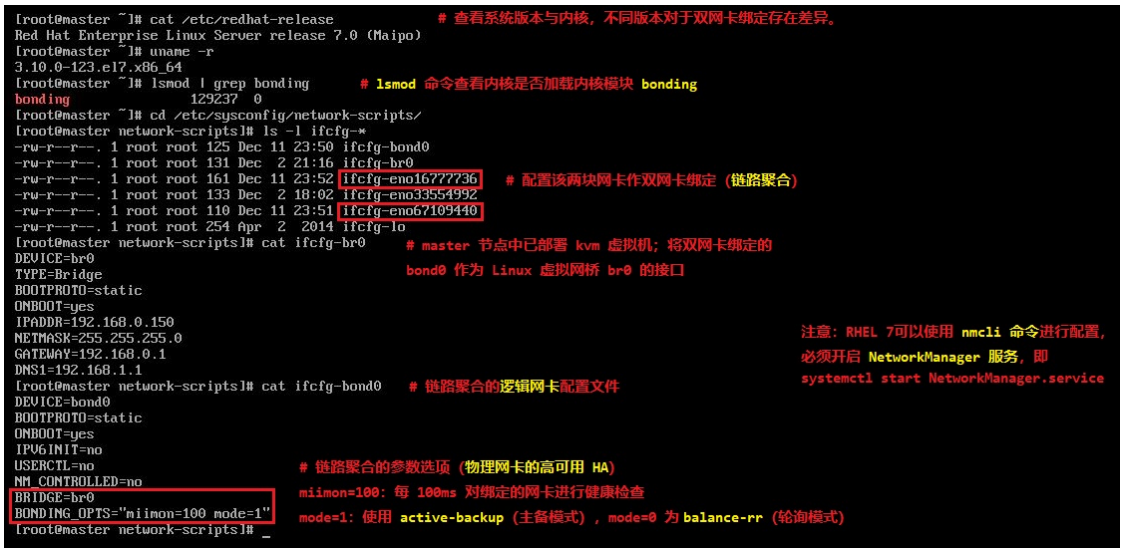
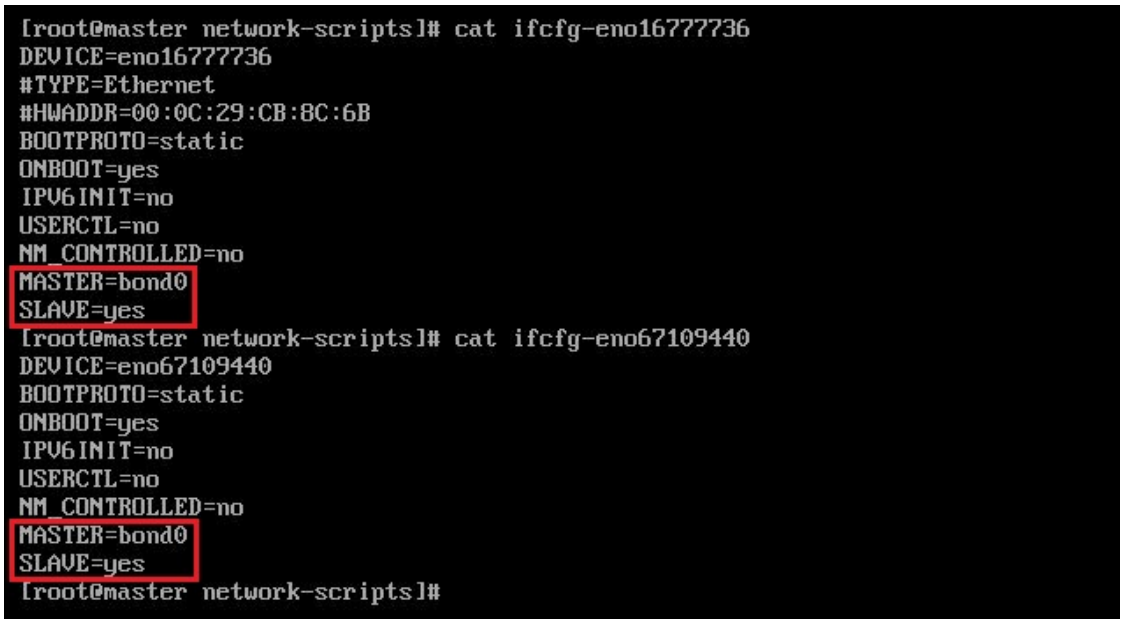
Linux链路聚合配置汇总

- RHEL 7.x/RHEL 6.x链路聚合配置（双网口绑定）：





```
[root@master network-scripts]# systemctl status NetworkManager    # 关闭 NetworkManager 服务，否则干扰 network 服务的网络配置。
NetworkManager.service
   Loaded: masked (/dev/null)
   Active: inactive (dead)


Warning: Unit file changed on disk, 'systemctl daemon-reload' recommended.
[root@master network-scripts]# systemctl restart network      # 重启网络服务
[root@master network-scripts]# systemctl status network
network.service - LSB: Bring up/down networking
   Loaded: loaded (/etc/rc.d/init.d/network)
   Active: active (exited) since Wed 2017-12-13 10:08:17 CST; 10s ago
  Process: 5947 ExecStop=/etc/rc.d/init.d/network stop (code=exited, status=0/SUCCESS)
  Process: 6338 ExecStart=/etc/rc.d/init.d/network start (code=exited, status=0/SUCCESS)

Dec 13 10:08:12 master.domain12.example.com network[6338]: Bringing up loopback interface:  [  OK  ]
Dec 13 10:08:12 master.domain12.example.com network[6338]: Bringing up interface bond0:  [  OK  ]
Dec 13 10:08:15 master.domain12.example.com network[6338]: Bringing up interface eno33554992:  [  OK  ]
Dec 13 10:08:17 master.domain12.example.com network[6338]: Bringing up interface br0:  [  OK  ]
Dec 13 10:08:17 master.domain12.example.com systemd[1]: Started LSB: Bring up/down networking.
[root@master network-scripts]# cat /proc/net/bonding/bond0      # 查看 /proc 虚拟文件系统中双网卡绑定的状态
Ethernet Channel Bonding Driver: v3.7.1 (April 27, 2011)

Bonding Mode: fault-tolerance (active-backup)      # 主备模式（active-backup）
Primary Slave: None
Currently Active Slave: eno16777736
MII Status: up
MII Polling Interval (ms): 100
Up Delay (ms): 0
Down Delay (ms): 0

Slave Interface: eno16777736
MII Status: up
Speed: 1000 Mbps
Duplex: full
Link Failure Count: 0
Permanent HW addr: 00:0c:29:cb:8c:6b
Slave queue ID: 0

Slave Interface: eno67109440
MII Status: up
Speed: 1000 Mbps
Duplex: full
Link Failure Count: 0
Permanent HW addr: 00:0c:29:cb:8c:89
Slave queue ID: 0
[root@master network-scripts]# _
```

```
[root@master network-scripts]# ip addr show          # 查看双网卡绑定后的网卡信息
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eno16777736: <BROADCAST,MULTICAST,SLAVE,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast master bond0 state UP qlen 1000
    link/ether 00:0c:29:cb:8c:6b brd ff:ff:ff:ff:ff:ff
3: eno33554992: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP qlen 1000
    link/ether 00:0c:29:cb:8c:75 brd ff:ff:ff:ff:ff:ff
    inet 192.168.10.1/24 brd 192.168.10.255 scope global eno33554992
       valid_lft forever preferred_lft forever
    inet6 fe80::20c:29ff:fecb:8c75/64 scope link
       valid_lft forever preferred_lft forever
4: eno67109440: <BROADCAST,MULTICAST,SLAVE,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast master bond0 state UP qlen 1000
    link/ether 00:0c:29:cb:8c:6b brd ff:ff:ff:ff:ff:ff
5: bond0: <BROADCAST,MULTICAST,MASTER,UP,LOWER_UP> mtu 1500 qdisc noqueue master br0 state UP
    link/ether 00:0c:29:cb:8c:6b brd ff:ff:ff:ff:ff:ff
    inet6 fe80::20c:29ff:fecb:8c6b/64 scope link
       valid_lft forever preferred_lft forever
7: virbr0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN
    link/ether 3e:9a:d3:cb:7c:16 brd ff:ff:ff:ff:ff:ff
    inet 192.168.122.1/24 brd 192.168.122.255 scope global virbr0
       valid_lft forever preferred_lft forever
8: br0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP
    link/ether 00:0c:29:cb:8c:6b brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.150/24 brd 192.168.0.255 scope global br0
       valid_lft forever preferred_lft forever
    inet6 fe80::20c:29ff:fecb:8c6b/64 scope link
       valid_lft forever preferred_lft forever
[root@master network-scripts]# _
```

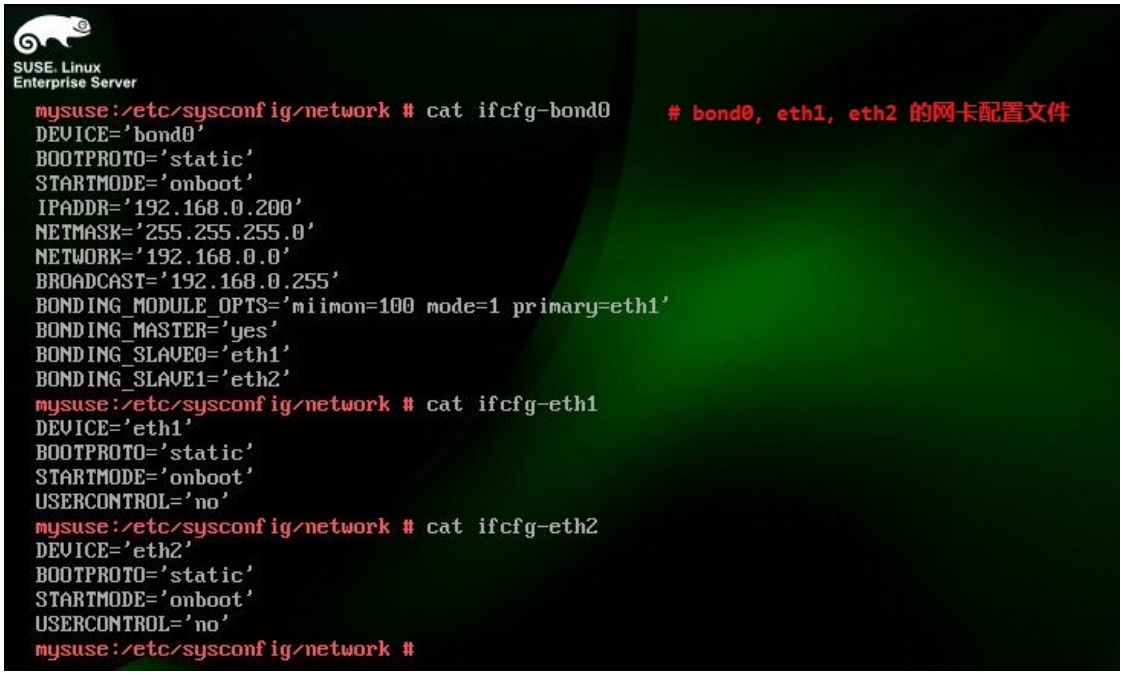
注意：
两块物理网卡通过绑定后与逻辑网卡具有相同的 MAC 地址，防止地址冲突，实现物理网卡高可用。

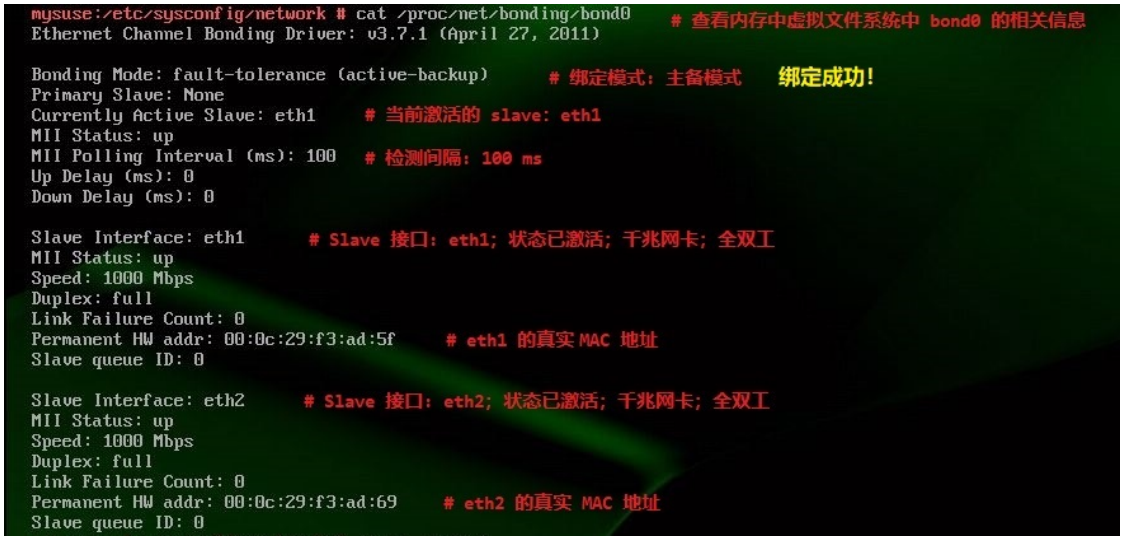
```
[root@master network-scripts]# ping -c3 192.168.0.200
PING 192.168.0.200 (192.168.0.200) 56(84) bytes of data.
64 bytes from 192.168.0.200: icmp_seq=1 ttl=64 time=0.284 ms
64 bytes from 192.168.0.200: icmp_seq=2 ttl=64 time=0.687 ms
64 bytes from 192.168.0.200: icmp_seq=3 ttl=64 time=0.668 ms

--- 192.168.0.200 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2011ms
rtt min/avg/max/mdev = 0.284/0.546/0.687/0.186 ms
[root@master network-scripts]# ifconfig eno67109440 down
[root@master network-scripts]# ping -c3 192.168.0.200
PING 192.168.0.200 (192.168.0.200) 56(84) bytes of data.
64 bytes from 192.168.0.200: icmp_seq=1 ttl=64 time=0.312 ms
64 bytes from 192.168.0.200: icmp_seq=2 ttl=64 time=0.651 ms
64 bytes from 192.168.0.200: icmp_seq=3 ttl=64 time=1.39 ms

--- 192.168.0.200 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2016ms
rtt min/avg/max/mdev = 0.312/0.787/1.398/0.453 ms
[root@master network-scripts]# ifconfig eno67109440 up
[root@master network-scripts]# ifconfig eno16777736 down
[root@master network-scripts]# ping -c3 192.168.0.200
PING 192.168.0.200 (192.168.0.200) 56(84) bytes of data.
64 bytes from 192.168.0.200: icmp_seq=1 ttl=64 time=0.280 ms
64 bytes from 192.168.0.200: icmp_seq=2 ttl=64 time=1.14 ms
64 bytes from 192.168.0.200: icmp_seq=3 ttl=64 time=1.03 ms

--- 192.168.0.200 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2019ms
rtt min/avg/max/mdev = 0.280/0.818/1.143/0.384 ms
[root@master network-scripts]# ifconfig eno16777736 up
[root@master network-scripts]# _
```

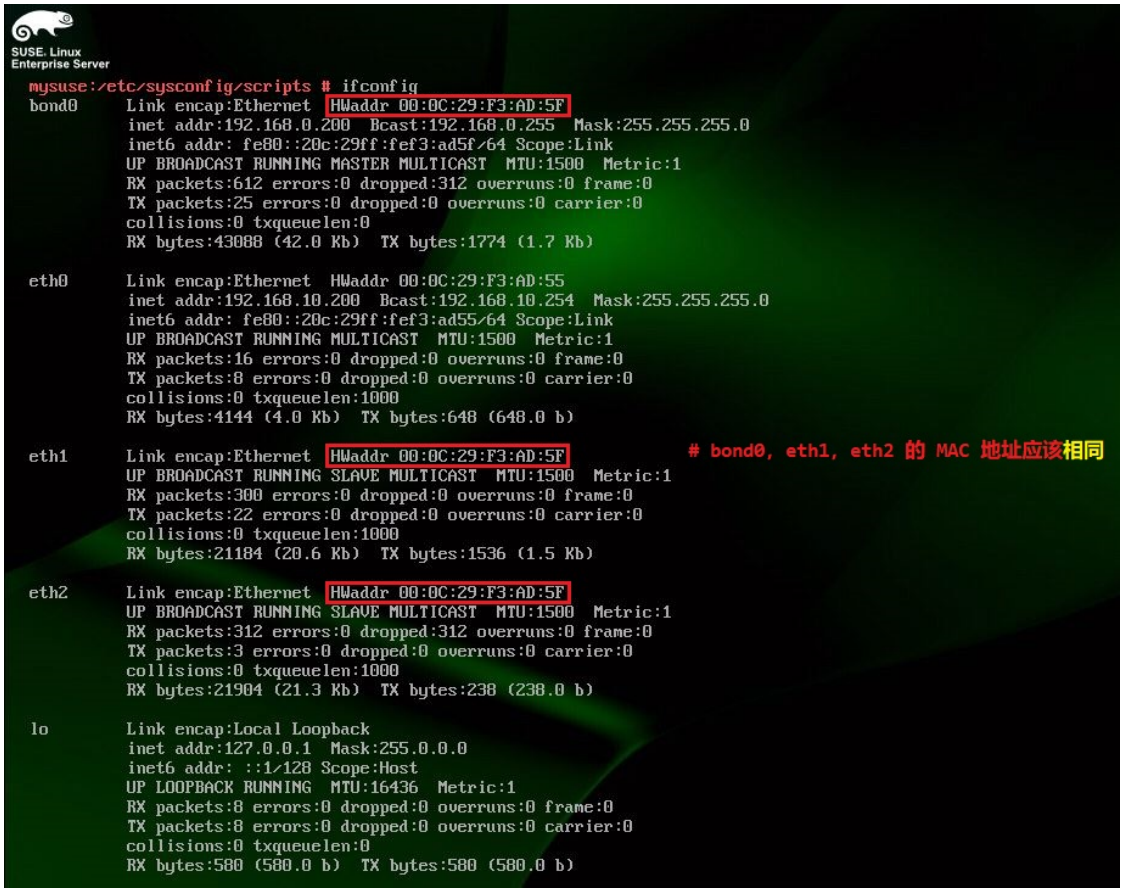
分别手动模拟宕掉任意一块网卡，网络依然正常。

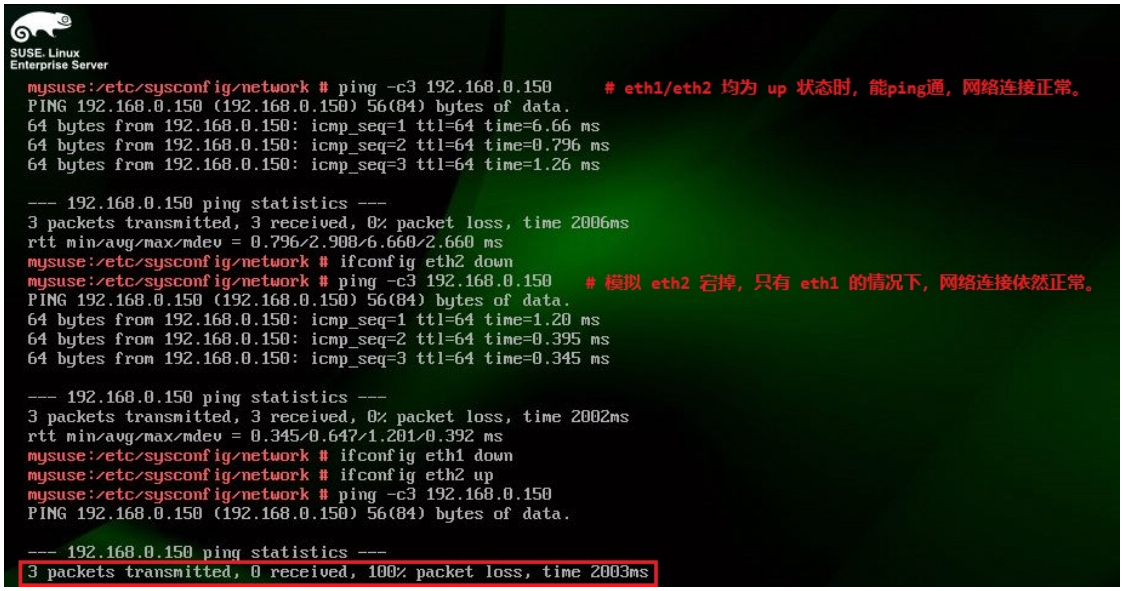
- SLES 11 SP4链路聚合配置（双网口绑定）：

  1. 使用配置文件方式配置：

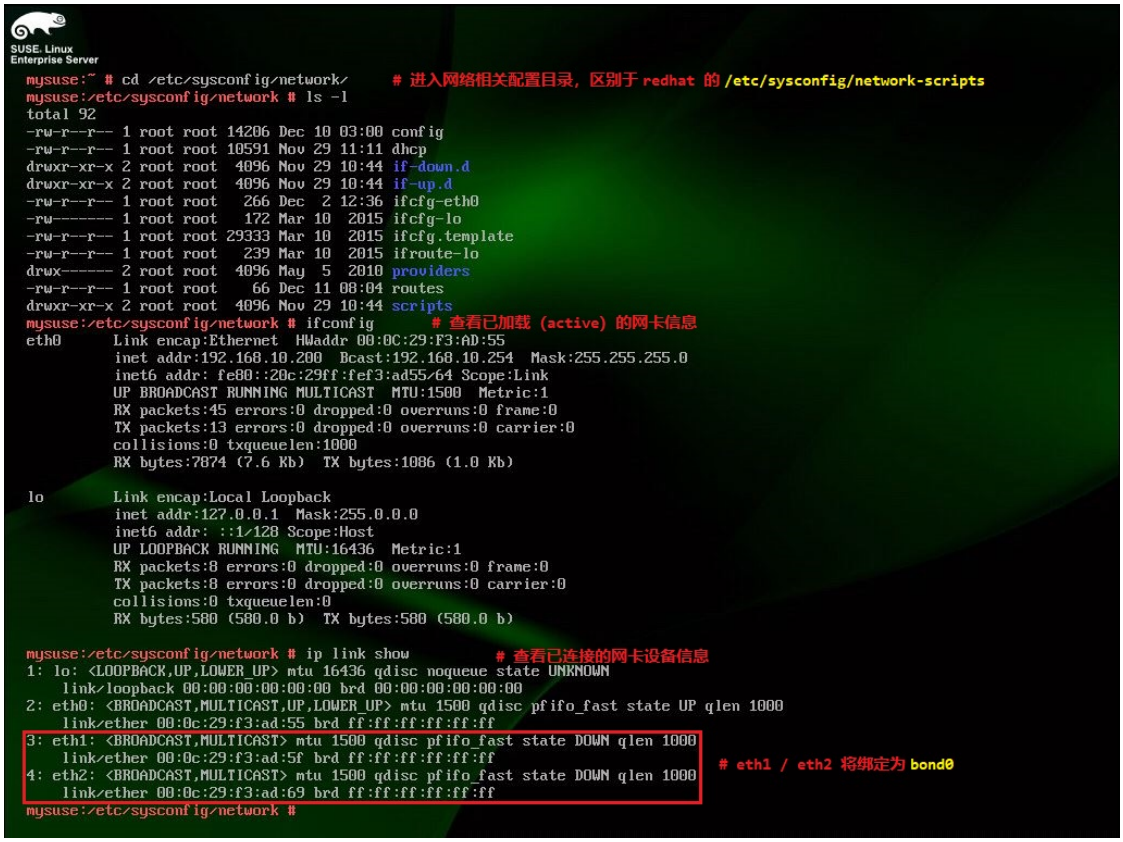

SUSE. Linux
Enterprise Server
mysuse:/etc/sysconfig/network # cat ifcfg-bond0 # bond0, eth1, eth2 的网卡配置文件
DEVICE='bond0'
BOOTPROTO='static'
STARTMODE='onboot'
IPADDR='192.168.0.200'
NETMASK='255.255.255.0'
NETWORK='192.168.0.0'
BROADCAST='192.168.0.255'
BONDING_MODULE_OPTS='miimon=100 mode=1 primary=eth1'
BONDING_MASTER='yes'
BONDING_SLAVE0='eth1'
BONDING_SLAVE1='eth2'
mysuse:/etc/sysconfig/network # cat ifcfg-eth1
DEVICE='eth1'
BOOTPROTO='static'
STARTMODE='onboot'
USERCONTROL='no'
mysuse:/etc/sysconfig/network # cat ifcfg-eth2
DEVICE='eth2'
BOOTPROTO='static'
STARTMODE='onboot'
USERCONTROL='no'
mysuse:/etc/sysconfig/network #

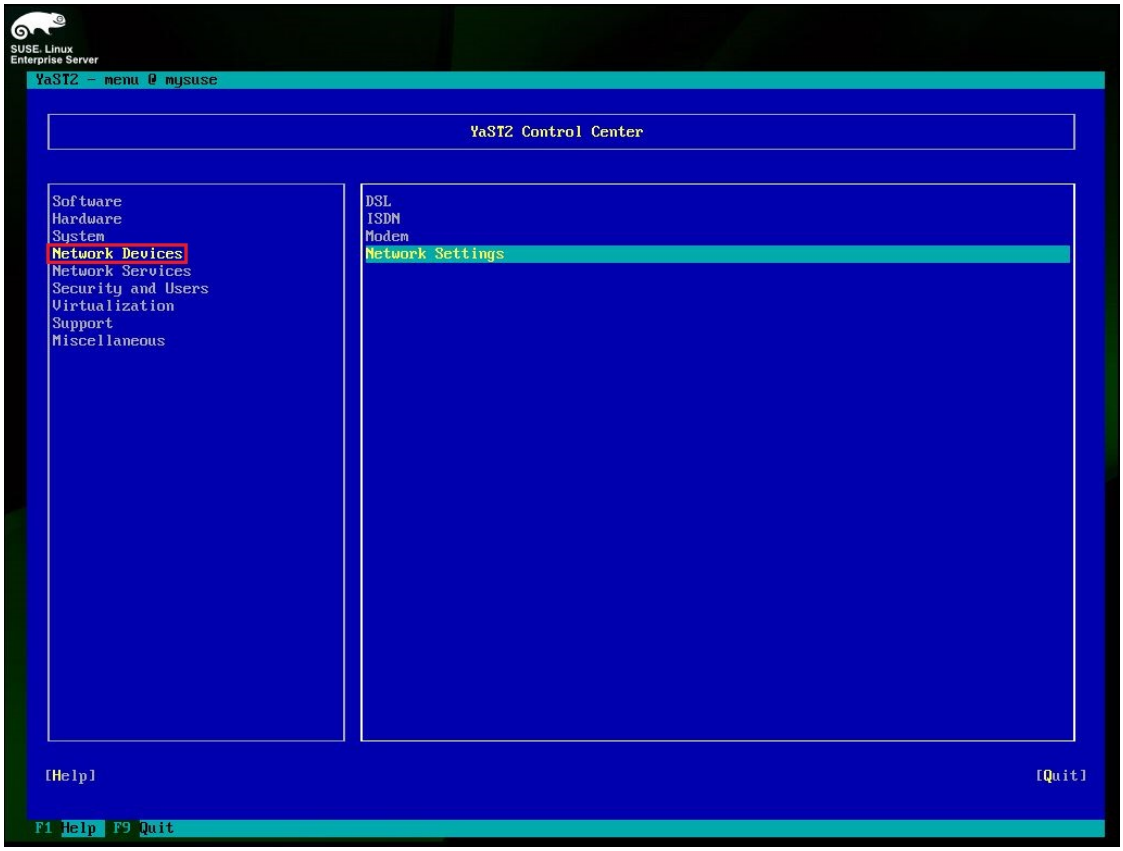

mysuse:/etc/sysconfig/network # cat /proc/net/bonding/bond0 # 查看内存中虚拟文件系统中 bond0 的相关信息
Ethernet Channel Bonding Driver: v3.7.1 (April 27, 2011)
Bonding Mode: fault-tolerance (active-backup) # 绑定模式：主备模式 绑定成功!
Primary Slave: None
Currently Active Slave: eth1 # 当前激活的 slave: eth1
MII Status: up
MII Polling Interval (ms): 100 # 检测间隔：100 ms
Up Delay (ms): 0
Down Delay (ms): 0
Slave Interface: eth1 # Slave 接口：eth1; 状态已激活; 千兆网卡; 全双工
MII Status: up
Speed: 1000 Mbps
Duplex: full
Link Failure Count: 0
Permanent HW addr: 00:0c:29:f3:ad:5f # eth1 的真实 MAC 地址
Slave queue ID: 0
Slave Interface: eth2 # Slave 接口：eth2; 状态已激活; 千兆网卡; 全双工
MII Status: up
Speed: 1000 Mbps
Duplex: full
Link Failure Count: 0
Permanent HW addr: 00:0c:29:f3:ad:69 # eth2 的真实 MAC 地址
Slave queue ID: 0

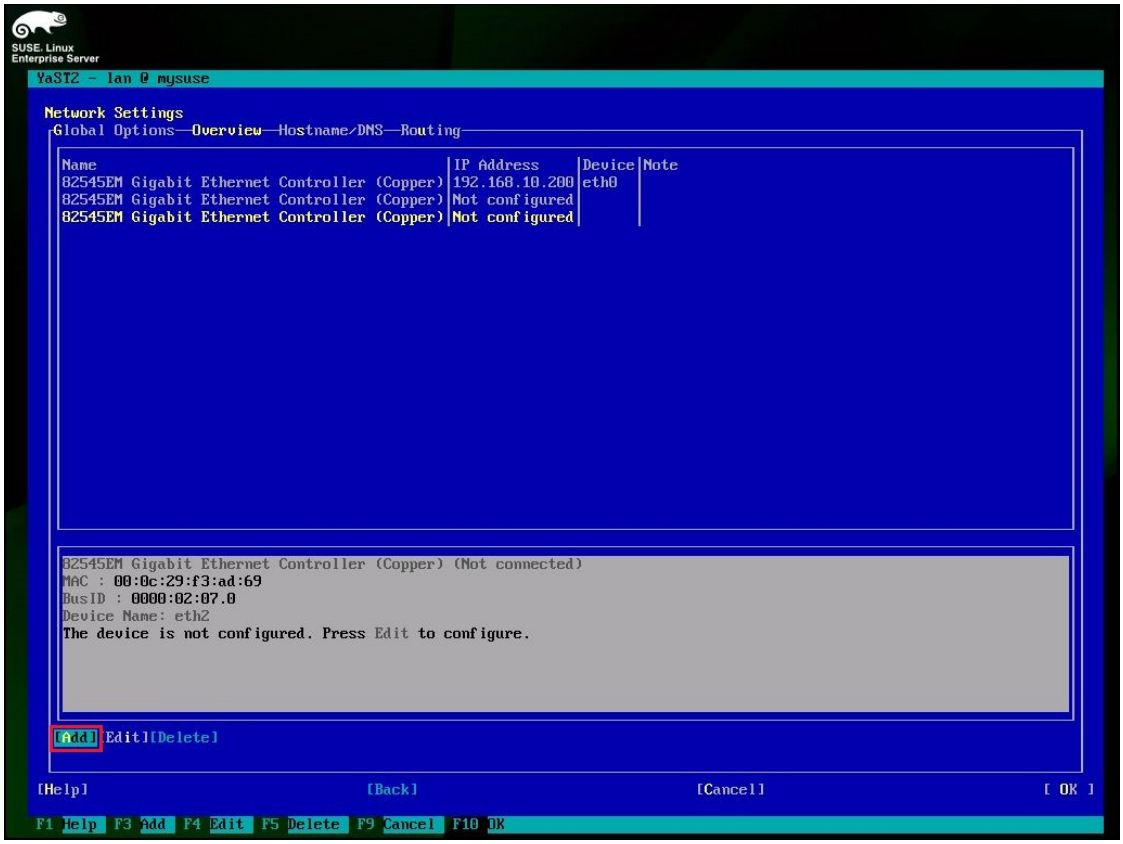


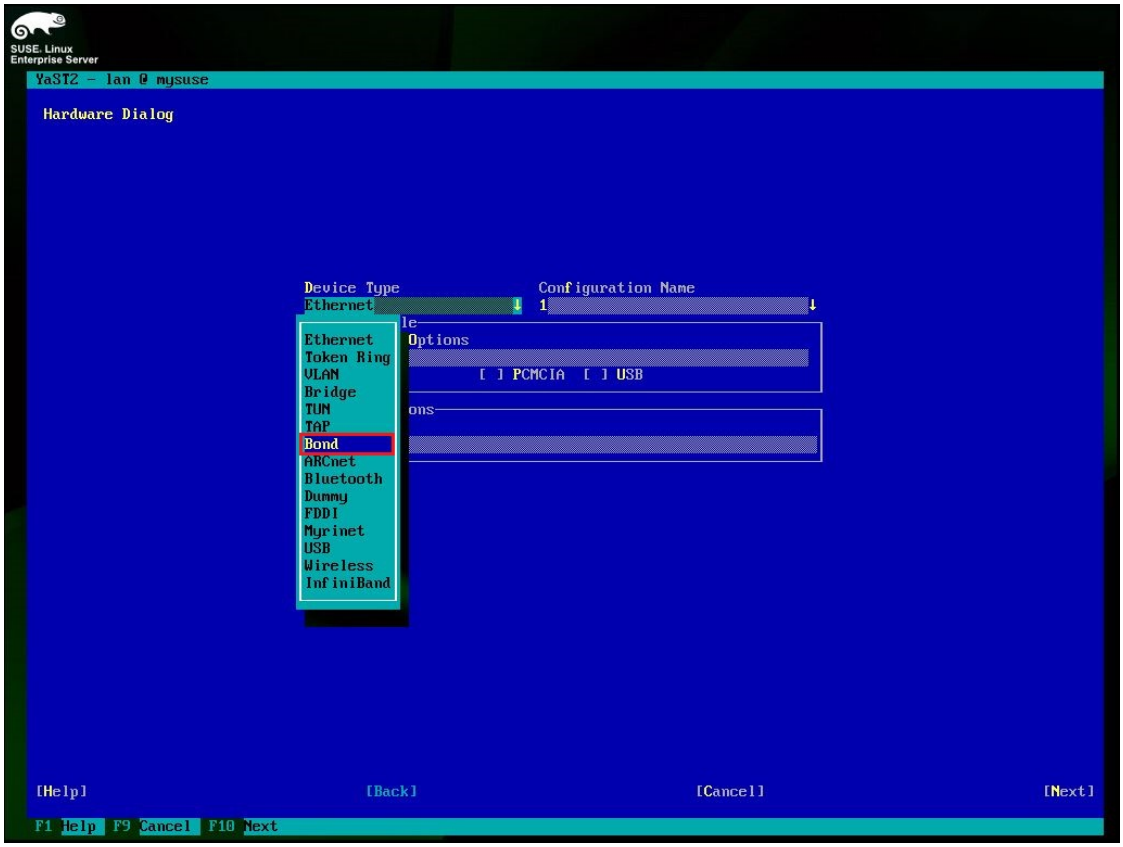


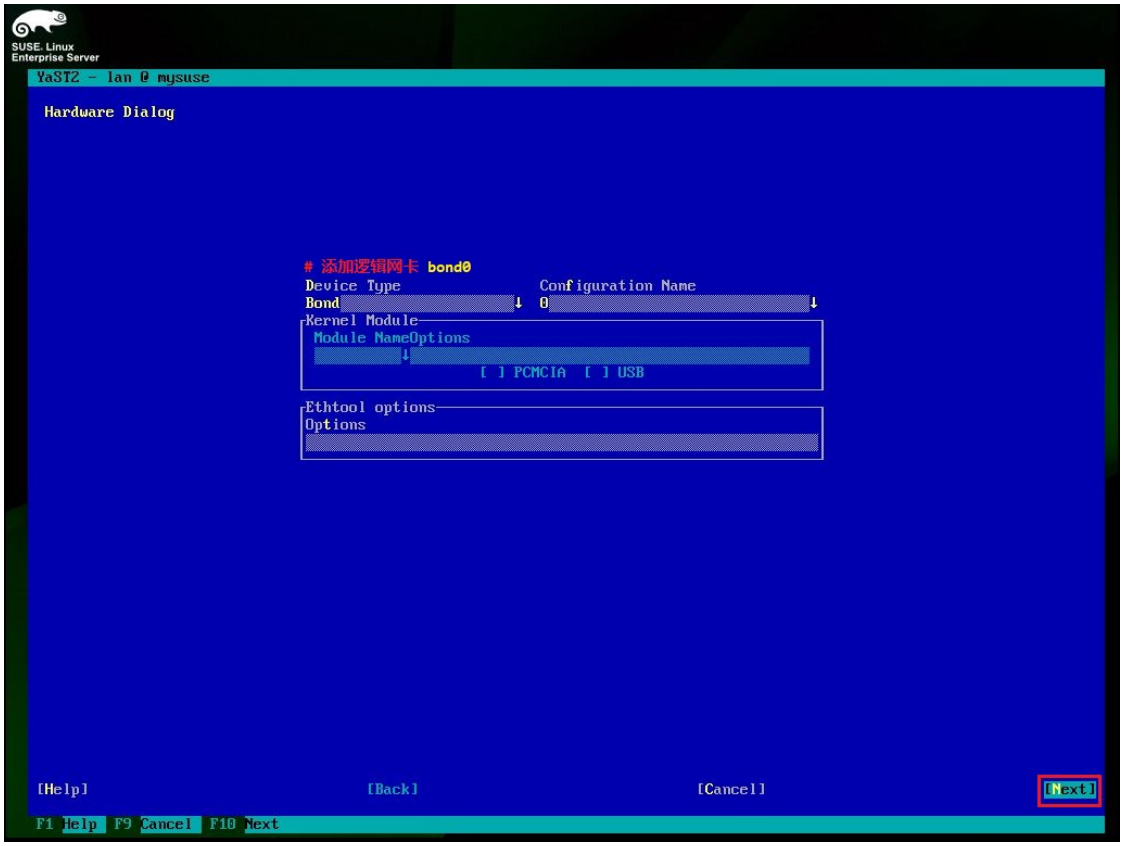
2．使用YaST2方式配置：

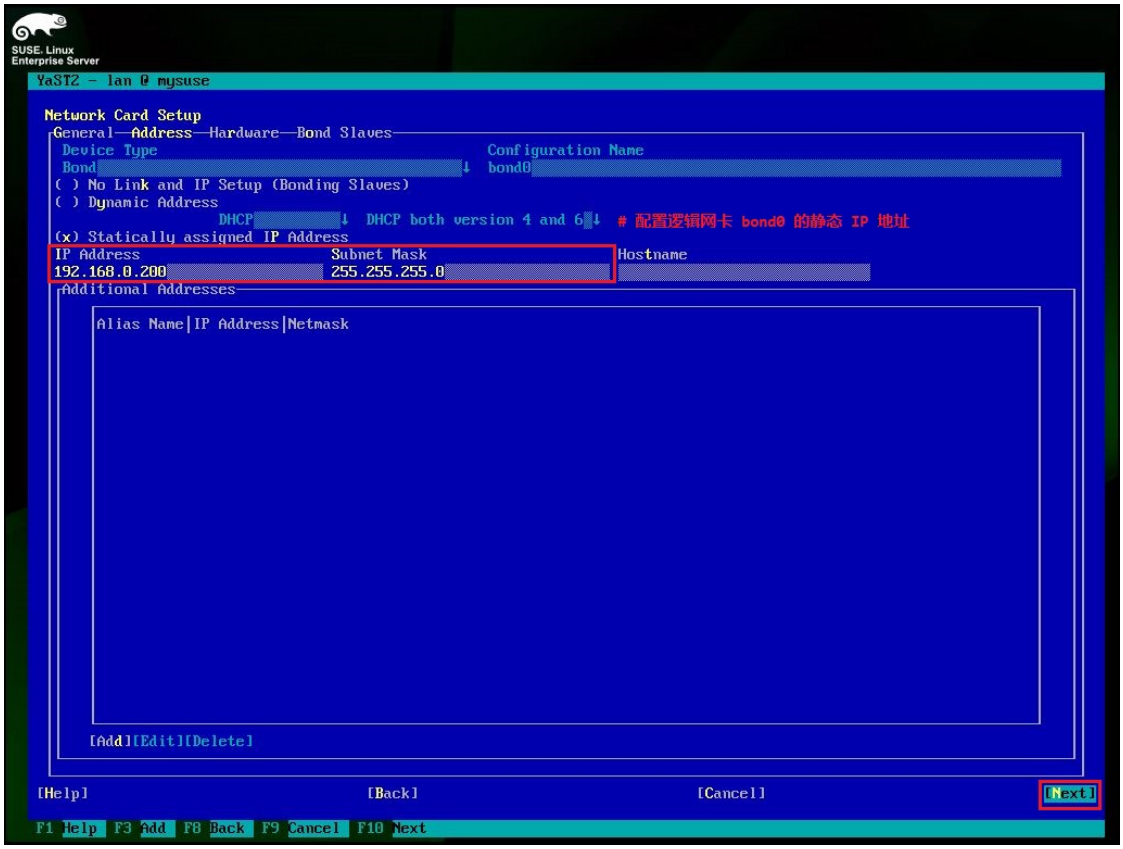

SUSE. Linux
Enterprise Server
mysuse:~ # cd /etc/sysconfig/network/ # 进入网络相关配置目录，区别于 redhat 的 /etc/sysconfig/network-scripts
mysuse:/etc/sysconfig/network # ls -l
total 92
-rw-r--r-- 1 root root 14206 Dec 10 03:00 config
-rw-r--r-- 1 root root 10591 Nov 29 11:11 dhcp
drwxr-xr-x 2 root root 4096 Nov 29 10:44 if-down.d
drwxr-xr-x 2 root root 4096 Nov 29 10:44 if-up.d
-rw-r--r-- 1 root root 266 Dec 2 12:36 ifcfg-eth0
-rw------- 1 root root 172 Mar 10 2015 ifcfg-lo
-rw-r--r-- 1 root root 29333 Mar 10 2015 ifcfg.template
-rw-r--r-- 1 root root 239 Mar 10 2015 ifroute-lo
drwx------ 2 root root 4096 May 5 2010 providers
-rw-r--r-- 1 root root 66 Dec 11 08:04 routes
drwxr-xr-x 2 root root 4096 Nov 29 10:44 scripts
mysuse:/etc/sysconfig/network # ifconfig # 查看已加载 (active) 的网卡信息
eth0 Link encap:Ethernet HWaddr 00:0C:29:F3:AD:55
inet addr:192.168.10.200 Bcast:192.168.10.254 Mask:255.255.255.0
inet6 addr: fe80::20c:29ff:fef3:ad55/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:45 errors:0 dropped:0 overruns:0 frame:0
TX packets:13 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:7874 (7.6 Kb) TX bytes:1086 (1.0 Kb)
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:8 errors:0 dropped:0 overruns:0 frame:0
TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:580 (580.0 b) TX bytes:580 (580.0 b)
mysuse:/etc/sysconfig/network # ip link show # 查看已连接的网卡设备信息
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP qlen 1000
link/ether 00:0c:29:f3:ad:55 brd ff:ff:ff:ff:ff:ff
3: eth1: <BROADCAST,MULTICAST> mtu 1500 qdisc pfifo_fast state DOWN qlen 1000
link/ether 00:0c:29:f3:ad:5f brd ff:ff:ff:ff:ff:ff
4: eth2: <BROADCAST,MULTICAST> mtu 1500 qdisc pfifo_fast state DOWN qlen 1000
link/ether 00:0c:29:f3:ad:69 brd ff:ff:ff:ff:ff:ff
eth1 / eth2 将绑定为 bond0
mysuse:/etc/sysconfig/network #

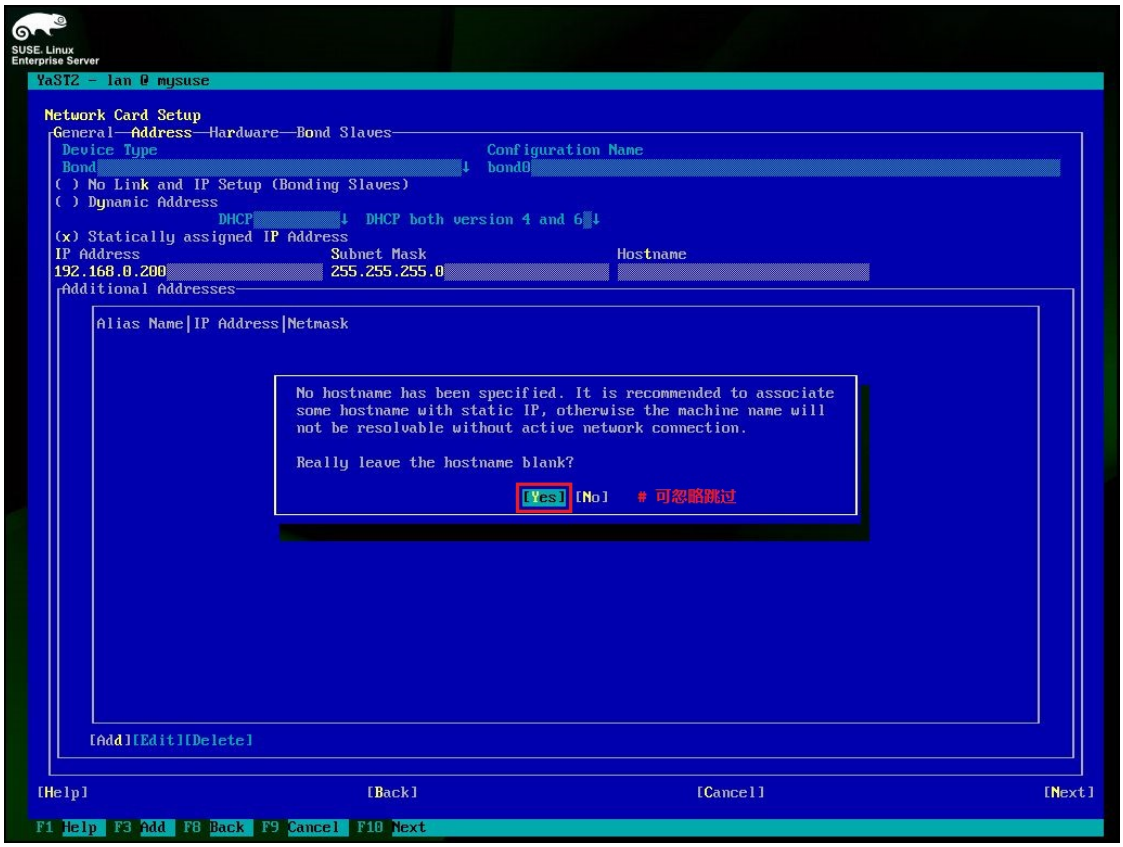

SUSE. Linux
Enterprise Server
YaST2 - menu @ mysuse
YaST2 Control Center
Software
Hardware
System
Network Devices
Network Services
Security and Users
Virtualization
Support
Miscellaneous
DSL
ISDN
Modem
Network Settings
[Help]
[Quit]
F1 Help F9 Quit

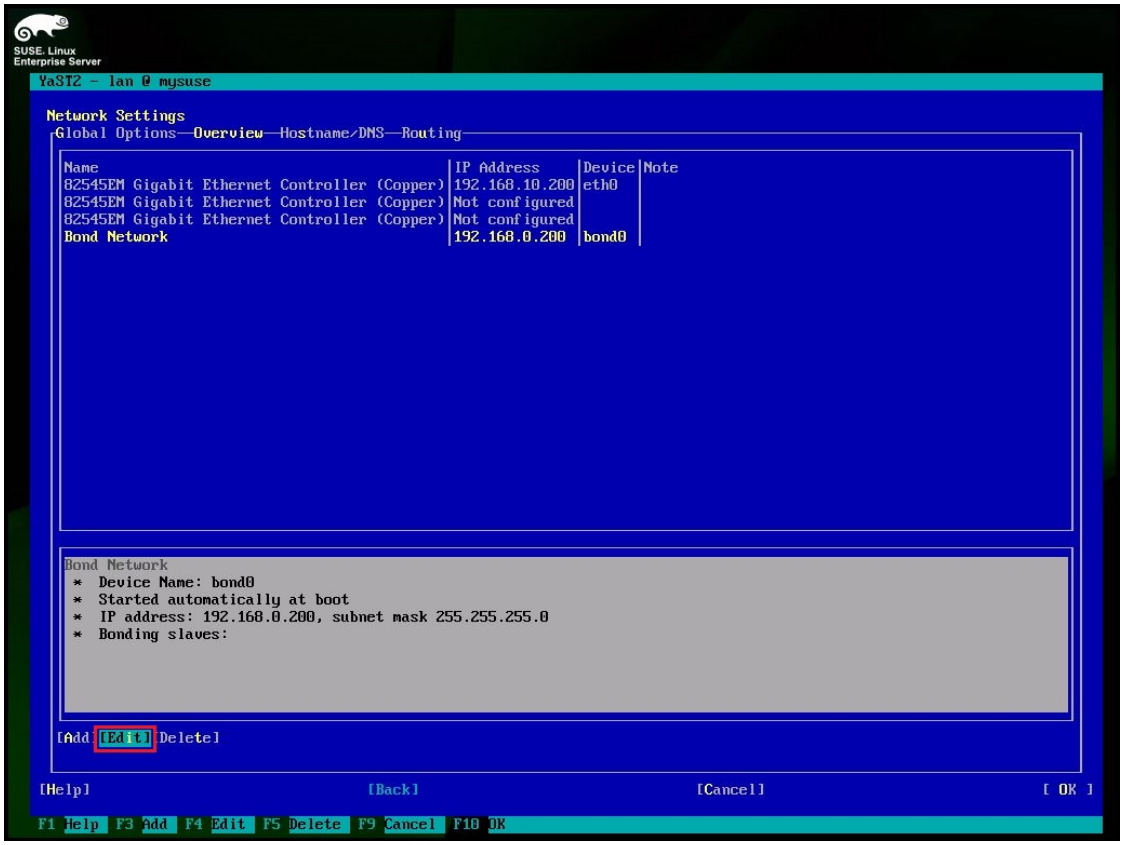

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Settings
Global Options—Overview—Hostname/DNS—Routing
Name
IP Address
Device
Note
82545EM Gigabit Ethernet Controller (Copper)
192.168.10.200
eth0
82545EM Gigabit Ethernet Controller (Copper)
Not configured
82545EM Gigabit Ethernet Controller (Copper)
Not configured
82545EM Gigabit Ethernet Controller (Copper) (Not connected)
MAC : 00:0c:29:f3:ad:69
BusID : 0000:02:07.0
Device Name: eth2
The device is not configured. Press Edit to configure.
[Add] [Edit] [Delete]
[Help]
[Back]
[Cancel]
[OK]
F1 Help F3 Add F4 Edit F5 Delete F9 Cancel F10 OK

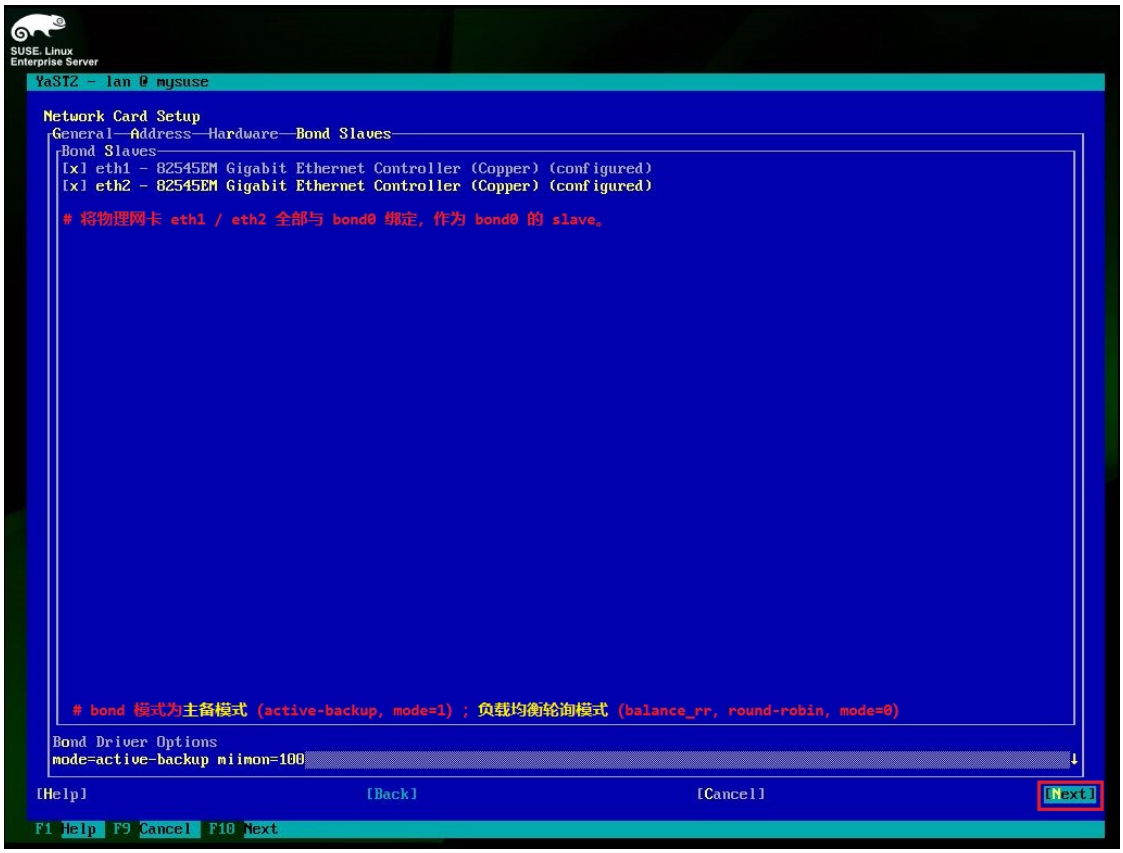

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Hardware Dialog
Device Type
Configuration Name
Ethernet
1
Ethernet
Token Ring
VLAN
Bridge
TUN
TAP
Bond
ARCnet
Bluetooth
Dummy
FDDI
Myrinet
USB
Wireless
InfiniBand
Options
[ ] PCMCIA [ ] USB
[Help]
[Back]
[Cancel]
[Next]
F1 Help F9 Cancel F10 Next

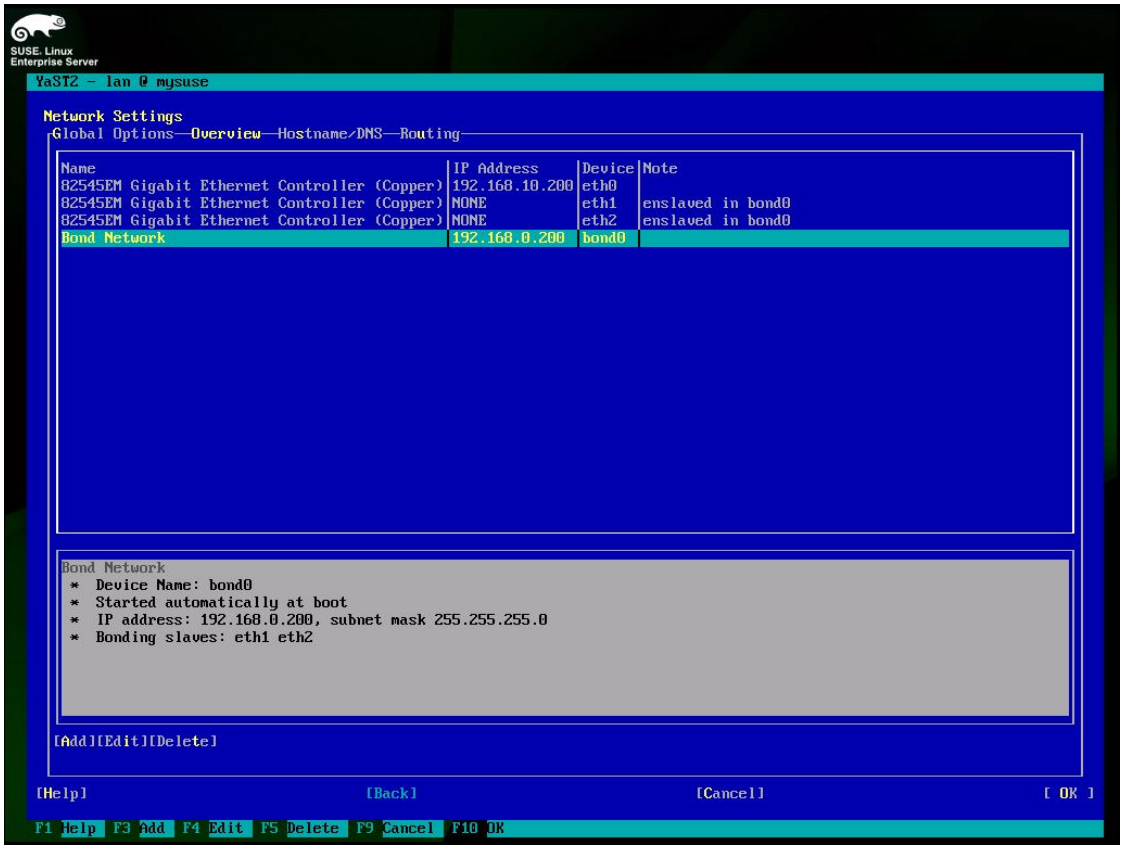

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Hardware Dialog
添加逻辑网卡 bond0
Device Type
Bond
Configuration Name
0
Kernel Module
Module Name
Options
[ ] PCMCIA [ ] USB
Ethtool options
Options
[Help]
[Back]
[Cancel]
[Next]
F1 Help F9 Cancel F10 Next

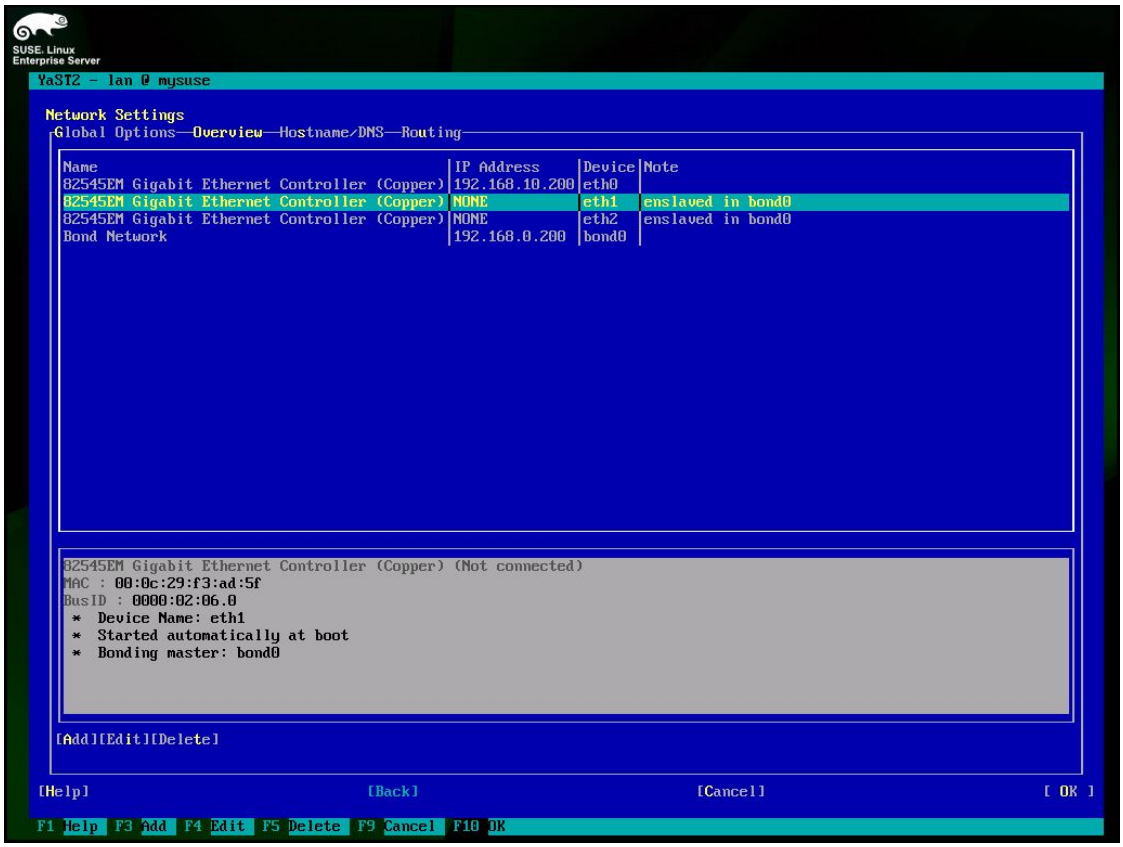

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Card Setup
General Address Hardware Bond Slaves
Device Type
Bond
Configuration Name
bond0
( ) No Link and IP Setup (Bonding Slaves)
( ) Dynamic Address
DHCP
DHCP both version 4 and 6
配置逻辑网卡 bond0 的静态 IP 地址
(x) Statically assigned IP Address
IP Address
192.168.0.200
Subnet Mask
255.255.255.0
Hostname
Additional Addresses
Alias Name|IP Address|Netmask
[Add][Edit][Delete]
[Help]
[Back]
[Cancel]
[Next]
F1 Help F3 Add F8 Back F9 Cancel F10 Next

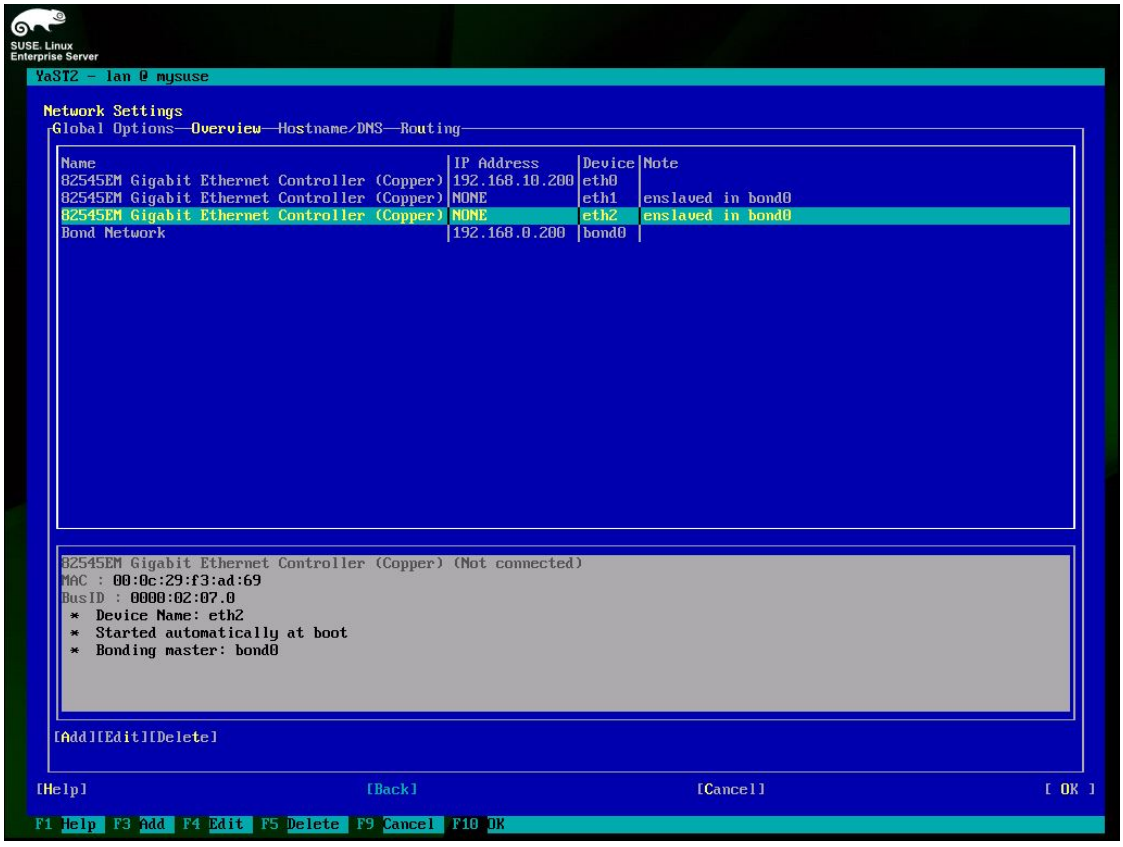

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Card Setup
General Address Hardware Bond Slaves
Device Type
Bond
Configuration Name
bond0
( ) No Link and IP Setup (Bonding Slaves)
( ) Dynamic Address
DHCP
DHCP both version 4 and 6
(x) Statically assigned IP Address
IP Address
Subnet Mask
Hostname
192.168.0.200
255.255.255.0
Additional Addresses
Alias Name|IP Address|Netmask
No hostname has been specified. It is recommended to associate
some hostname with static IP, otherwise the machine name will
not be resolvable without active network connection.
Really leave the hostname blank?
[Yes] [No]
可忽略跳过
[Add][Edit][Delete]
[Help]
[Back]
[Cancel]
[Next]
F1 Help F3 Add F8 Back F9 Cancel F10 Next

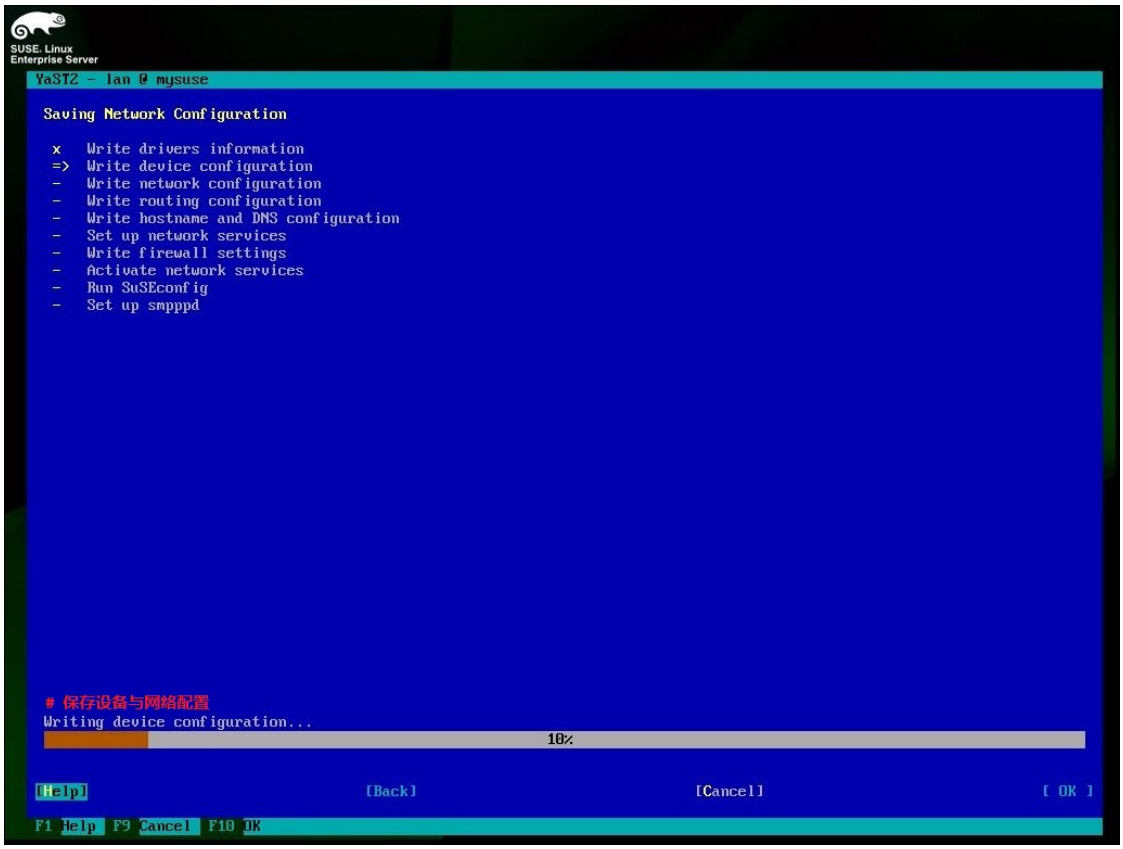

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Settings
Global Options Overview Hostname/DNS Routing
Name
IP Address
Device
Note
82545EM Gigabit Ethernet Controller (Copper)
192.168.10.200
eth0
82545EM Gigabit Ethernet Controller (Copper)
Not configured
82545EM Gigabit Ethernet Controller (Copper)
Not configured
Bond Network
192.168.0.200
bond0
Bond Network
* Device Name: bond0
* Started automatically at boot
* IP address: 192.168.0.200, subnet mask 255.255.255.0
* Bonding slaves:
[Add] [Edit] Delete
[Help]
[Back]
[Cancel]
[OK]
F1 Help F3 Add F4 Edit F5 Delete F9 Cancel F10 OK


SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Card Setup
General Address Hardware Bond Slaves
Bond Slaves
[x] eth1 - 82545EM Gigabit Ethernet Controller (Copper) (configured)
[x] eth2 - 82545EM Gigabit Ethernet Controller (Copper) (configured)
将物理网卡 eth1 / eth2 全部与 bond0 绑定，作为 bond0 的 slave。
bond 模式为主备模式 (active-backup, mode=1) ; 负载均衡轮询模式 (balance_rr, round-robin, mode=0)
Bond Driver Options
mode=active-backup miimon=100
[Help]
[Back]
[Cancel]
[Next]
F1 Help F9 Cancel F10 Next


SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Settings
Global Options Overview Hostname/DNS Routing
Name
IP Address
Device
Note
82545EM Gigabit Ethernet Controller (Copper) 192.168.10.200 eth0
82545EM Gigabit Ethernet Controller (Copper) NONE eth1 enslaved in bond0
82545EM Gigabit Ethernet Controller (Copper) NONE eth2 enslaved in bond0
Bond Network 192.168.0.200 bond0
Bond Network
* Device Name: bond0
* Started automatically at boot
* IP address: 192.168.0.200, subnet mask 255.255.255.0
* Bonding slaves: eth1 eth2
[Add][Edit][Delete]
[Help]
[Back]
[Cancel]
[OK]
F1 Help F3 Add F4 Edit F5 Delete F9 Cancel F10 OK

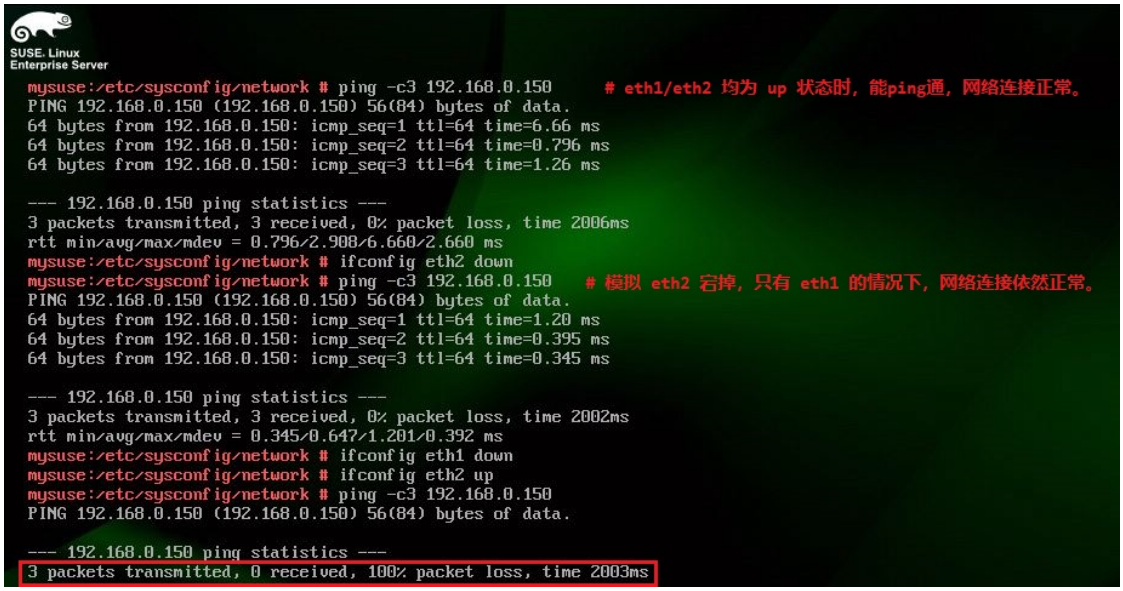

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Settings
Global Options—Overview—Hostname/DNS—Routing
Name | IP Address | Device | Note
82545EM Gigabit Ethernet Controller (Copper) | 192.168.10.200 | eth0 |
82545EM Gigabit Ethernet Controller (Copper) | NONE | eth1 | enslaved in bond0
82545EM Gigabit Ethernet Controller (Copper) | NONE | eth2 | enslaved in bond0
Bond Network | 192.168.0.200 | bond0 |
82545EM Gigabit Ethernet Controller (Copper) (Not connected)
MAC : 00:0c:29:f3:ad:5f
BusID : 0000:02:06.0
* Device Name: eth1
* Started automatically at boot
* Bonding master: bond0
[Add][Edit][Delete]
[Help]
[Back]
[Cancel]
[OK]
F1 Help F3 Add F4 Edit F5 Delete F9 Cancel F10 OK

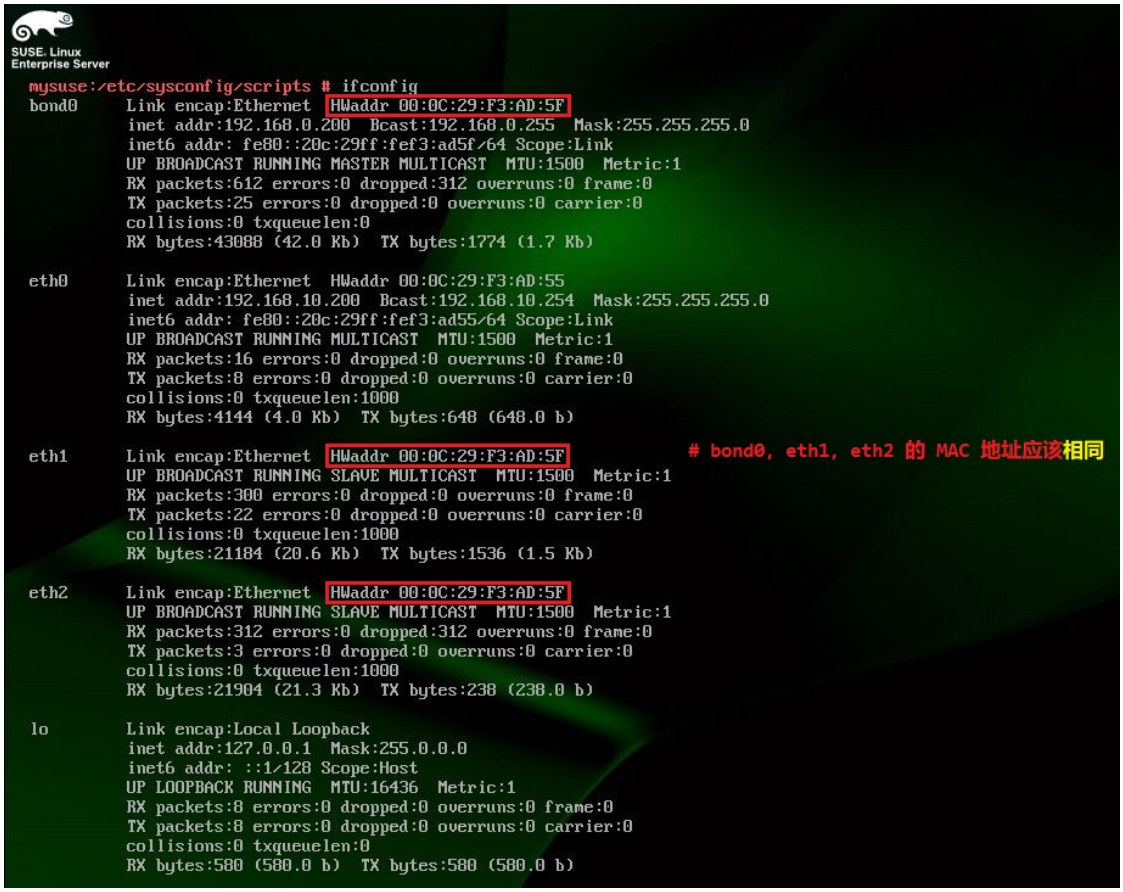

SUSE. Linux
Enterprise Server
YaST2 - lan @ mysuse
Network Settings
Global Options—Overview—Hostname/DNS—Routing
Name | IP Address | Device | Note
82545EM Gigabit Ethernet Controller (Copper) | 192.168.10.200 | eth0 |
82545EM Gigabit Ethernet Controller (Copper) | NONE | eth1 | enslaved in bond0
82545EM Gigabit Ethernet Controller (Copper) | NONE | eth2 | enslaved in bond0
Bond Network | 192.168.0.200 | bond0 |
82545EM Gigabit Ethernet Controller (Copper) (Not connected)
MAC : 00:0c:29:f3:ad:69
BusID : 0000:02:07.0
* Device Name: eth2
* Started automatically at boot
* Bonding master: bond0
[Add][Edit][Delete]
[Help]
[Back]
[Cancel]
[OK]
F1 Help F3 Add F4 Edit F5 Delete F9 Cancel F10 OK




```
mysuse:/etc/sysconfig/network # cat /proc/net/bonding/bond0      # 查看内存中虚拟文件系统中 bond0 的相关信息
Ethernet Channel Bonding Driver: v3.7.1 (April 27, 2011)

Bonding Mode: fault-tolerance (active-backup)      # 绑定模式：主备模式    绑定成功!
Primary Slave: None
Currently Active Slave: eth1     # 当前激活的 slave: eth1
MII Status: up
MII Polling Interval (ms): 100   # 检测间隔：100 ms
Up Delay (ms): 0
Down Delay (ms): 0

Slave Interface: eth1      # Slave 接口：eth1; 状态已激活; 千兆网卡; 全双工
MII Status: up
Speed: 1000 Mbps
Duplex: full
Link Failure Count: 0
Permanent HW addr: 00:0c:29:f3:ad:5f     # eth1 的真实 MAC 地址
Slave queue ID: 0

Slave Interface: eth2      # Slave 接口：eth2; 状态已激活; 千兆网卡; 全双工
MII Status: up
Speed: 1000 Mbps
Duplex: full
Link Failure Count: 0
Permanent HW addr: 00:0c:29:f3:ad:69     # eth2 的真实 MAC 地址
Slave queue ID: 0
mysuse:/etc/sysconfig/network # ls -l ifcfg-*
-rw-r--r-- 1 root root 271 Dec 12 04:15 ifcfg-bond0
-rw-r--r-- 1 root root 266 Dec  2 12:36 ifcfg-eth0
-rw-r--r-- 1 root root 194 Dec 12 04:15 ifcfg-eth1
-rw-r--r-- 1 root root 194 Dec 12 04:15 ifcfg-eth2
-rw------- 1 root root 172 Mar 10  2015 ifcfg-lo
mysuse:/etc/sysconfig/network #
```


SUSE. Linux
Enterprise Server
mysuse:/etc/sysconfig/network # cat ifcfg-bond0
BONDING_MASTER='yes'
BONDING_MODULE_OPTS='mode=active-backup miimon=100'
BONDING_SLAVE0='eth1'
BONDING_SLAVE1='eth2'
BOOTPROTO='static'
BROADCAST=''
ETHTOOL_OPTIONS=''
IPADDR='192.168.0.200/24'
MTU=''
NAME=''
NETWORK=''
REMOTE_IPADDR=''
STARTMODE='auto'
USERCONTROL='no'
mysuse:/etc/sysconfig/network # cat ifcfg-eth1
BOOTPROTO='none'
BROADCAST=''
ETHTOOL_OPTIONS=''
IPADDR=''
MTU=''
NAME='82545EM Gigabit Ethernet Controller (Copper)'
NETMASK=''
NETWORK=''
REMOTE_IPADDR=''
STARTMODE='hotplug'
USERCONTROL='no'
mysuse:/etc/sysconfig/network # cat ifcfg-eth2
BOOTPROTO='none'
BROADCAST=''
ETHTOOL_OPTIONS=''
IPADDR=''
MTU=''
NAME='82545EM Gigabit Ethernet Controller (Copper)'
NETMASK=''
NETWORK=''
REMOTE_IPADDR=''
STARTMODE='hotplug'
USERCONTROL='no'


SUSE. Linux
Enterprise Server
mysuse:/etc/sysconfig/network # ping -c3 192.168.0.150 # eth1/eth2 均为 up 状态时，能ping通，网络连接正常。
PING 192.168.0.150 (192.168.0.150) 56(84) bytes of data.
64 bytes from 192.168.0.150: icmp_seq=1 ttl=64 time=6.66 ms
64 bytes from 192.168.0.150: icmp_seq=2 ttl=64 time=0.796 ms
64 bytes from 192.168.0.150: icmp_seq=3 ttl=64 time=1.26 ms
--- 192.168.0.150 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2006ms
rtt min/avg/max/mdev = 0.796/2.908/6.660/2.660 ms
mysuse:/etc/sysconfig/network # ifconfig eth2 down
mysuse:/etc/sysconfig/network # ping -c3 192.168.0.150 # 模拟 eth2 宕掉，只有 eth1 的情况下，网络连接依然正常。
PING 192.168.0.150 (192.168.0.150) 56(84) bytes of data.
64 bytes from 192.168.0.150: icmp_seq=1 ttl=64 time=1.20 ms
64 bytes from 192.168.0.150: icmp_seq=2 ttl=64 time=0.395 ms
64 bytes from 192.168.0.150: icmp_seq=3 ttl=64 time=0.345 ms
--- 192.168.0.150 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2002ms
rtt min/avg/max/mdev = 0.345/0.647/1.201/0.392 ms
mysuse:/etc/sysconfig/network # ifconfig eth1 down
mysuse:/etc/sysconfig/network # ifconfig eth2 up
mysuse:/etc/sysconfig/network # ping -c3 192.168.0.150
PING 192.168.0.150 (192.168.0.150) 56(84) bytes of data.
--- 192.168.0.150 ping statistics ---
3 packets transmitted, 0 received, 100% packet loss, time 2003ms


SUSE. Linux
Enterprise Server
mysuse:/etc/sysconfig/scripts # ifconfig
bond0 Link encap:Ethernet HWaddr 00:0C:29:F3:AD:5F
inet addr:192.168.0.200 Bcast:192.168.0.255 Mask:255.255.255.0
inet6 addr: fe80::20c:29ff:fef3:ad5f/64 Scope:Link
UP BROADCAST RUNNING MASTER MULTICAST MTU:1500 Metric:1
RX packets:612 errors:0 dropped:312 overruns:0 frame:0
TX packets:25 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:43088 (42.0 Kb) TX bytes:1774 (1.7 Kb)
eth0 Link encap:Ethernet HWaddr 00:0C:29:F3:AD:55
inet addr:192.168.10.200 Bcast:192.168.10.254 Mask:255.255.255.0
inet6 addr: fe80::20c:29ff:fef3:ad55/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:16 errors:0 dropped:0 overruns:0 frame:0
TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:4144 (4.0 Kb) TX bytes:648 (648.0 b)
eth1 Link encap:Ethernet HWaddr 00:0C:29:F3:AD:5F
bond0, eth1, eth2 的 MAC 地址应该相同
UP BROADCAST RUNNING SLAVE MULTICAST MTU:1500 Metric:1
RX packets:300 errors:0 dropped:0 overruns:0 frame:0
TX packets:22 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:21184 (20.6 Kb) TX bytes:1536 (1.5 Kb)
eth2 Link encap:Ethernet HWaddr 00:0C:29:F3:AD:5F
UP BROADCAST RUNNING SLAVE MULTICAST MTU:1500 Metric:1
RX packets:312 errors:0 dropped:312 overruns:0 frame:0
TX packets:3 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:21904 (21.3 Kb) TX bytes:238 (238.0 b)
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:8 errors:0 dropped:0 overruns:0 frame:0
TX packets:8 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:580 (580.0 b) TX bytes:580 (580.0 b)