Changing a Routers' IP Address

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Revision: A

How to change a Routers IP address

The Thinklogical® family of routers each use three static IP address. Two for the Primary CPU card and one for the Secondary CPU card. These addresses are normally controlled by a DIP switch located on the router backplane. The location varies by router model, so please refer to the router user manual for the switch location.

By default, the primary card uses address 192.168.13.15 and alternate address 192.168.13.115. The secondary card uses address 192.168.13.16. If you need to modify the addresses used by the router, then several files located on the router must be modified. The instructions to make these changes are below.

You must have access the the router's command line interface. You may connect to the serial console port of the CPU card or connect to the router via the network using SSH. (SSH access may not be practical since you will be changing the IP address of the router.)

The router serial console port is set to 115200 baud, no parity, one stop and no flow control. No user name or password is required.

A working knowledge of the 'vi' editor is assumed. The command to edit a file is: **vi FILENAME**

A) One CPU card installed

You must modify two files on the Primary Controller Card with the address and netmask as shown below, then reboot the VX Router using the command: **reboot**

1) First file to be edited: */etc/sysconfig/network*

change	AUTO_CFG=yes
to	AUTO_CFG=no

When AUTO_CFG is set to 'no', the rest of the entries in the file are ignored.

Original contents of */etc/sysconfig/network*:

```
NETWORKING=yes
AUTO_CFG=yes                    <<< original line
NETMASK=255.255.255.0
NETWORK=192.168.13.0
BROADCAST=192.168.13.255
HOST=15
HOST_ALIAS=115
```

New contents:

```
NETWORKING=yes
AUTO_CFG=no                     <<< new line
NETMASK=255.255.255.0
NETWORK=192.168.13.0
BROADCAST=192.168.13.255
HOST=15
HOST_ALIAS=115
```

2) Second file to be edited: */etc/network/interfaces*
modify eth0 as needed for ***address*** and ***netmask*** lines
delete eth0 ***broadcast*** and ***network*** lines
delete all of eth0:1

NOTE: You may ignore the 'Do not edit' warning.

Original contents of */etc/network/interfaces*:

 # Do not edit! This file is modified by /etc/S20network.

auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
address 192.168.13.15 <<< original line
netmask 255.255.255.0 <<< original line
network 192.168.13.0 <<< delete this line
broadcast 192.168.13.255 <<< delete this line

auto eth0:1 <<< delete this line
iface eth0:1 inet static <<< delete this line
address 192.168.13.115 <<< delete this line
netmask 255.255.255.0 <<< delete this line

New contents:

 # Do not edit! This file is modified by /etc/S20network.

auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
address xxx.xxx.xxx.xxx <<< new line, replace XXX with your new IP address
netmask xxx.xxx.xxx.xxx <<< new line, replace XXX with your netmask value

B) Two CPU cards installed (Primary and Secondary)

For applications using a router with two CPU cards, one in the Primary Card slot and the other in the Secondary slot, you must modify four files on both CPU cards. Note that the IP addresses will be “hard coded” for each CPU card and therefore must be used in their respective card slots (Primary and Secondary). This configuration requires four IP addresses; two for the Primary Controller, one for the Secondary Controller, and one for the external control server. During a failed condition when the Secondary Controller has taken control of the system from the Primary Controller, the Secondary Controller will use the Primary Controller's IP address so that all external control servers will be unaffected by the failure. During this condition, the failed Primary Controller can still be reached using its alternate IP address.

The following instructions are for modifying the four files on the Primary Controller using the primary IP address in the */etc/network/interfaces* file:

1) First file to be edited: */etc/sysconfig/network*

change	AUTO_CFG=yes
to	AUTO_CFG=no

When AUTO_CFG is set to 'no', the rest of the entries in the file are ignored.

Original contents of */etc/sysconfig/network*:

```
NETWORKING=yes
AUTO_CFG=yes                    <<< original line
NETMASK=255.255.255.0
NETWORK=192.168.13.0
BROADCAST=192.168.13.255
HOST=15
HOST_ALIAS=115
```

New contents:

```
NETWORKING=yes
AUTO_CFG=no                     <<< new line
NETMASK=255.255.255.0
NETWORK=192.168.13.0
BROADCAST=192.168.13.255
HOST=15
HOST_ALIAS=115
```

2) Second file to be edited: */etc/network/interfaces*
modify eth0 as needed for ***address*** and ***netmask*** lines
delete eth0 ***broadcast*** and ***network*** lines
modify eth0:1 as needed for ***address*** and ***netmask*** lines

NOTE: You may ignore the 'Do not edit' warning.

Original contents of */etc/network/interfaces*:

```
# Do not edit! This file is modified by /etc/S20network.

auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
address 192.168.13.15                    <<< original line
netmask 255.255.255.0                    <<< original line
network 192.168.13.0                     <<< delete this line
broadcast 192.168.13.255                 <<< delete this line

auto eth0:1
iface eth0:1 inet static
    address 192.168.13.115               <<< original line
    netmask 255.255.255.0                <<< original line
```

New contents:

```
# Do not edit! This file is modified by /etc/S20network.

auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
    address xxx.xxx.xxx.xxx              <<< new line, replace XXX with your new IP address
    netmask xxx.xxx.xxx.xxx              <<< new line, replace XXX with your netmask value

auto eth0:1
iface eth0:1 inet static
    address yyy.yyy.yyy.yyy              <<< new line, replace YYY with your new IP address
    netmask xxx.xxx.xxx.xxx              <<< new line, replace XXX with your netmask value
```

3) Third file to be edited: */etc/hosts*

modify vxcontrol.vx.net as needed for the external control server ***address***
modify primary.vx.net as needed for Primary ***address***
modify secondary.vx.net as needed for Secondary ***address***
modify alternate.vx.net as needed for Primary alternate ***address***

NOTE: You may ignore the 'Do not edit' warning and anything after the '**### primary VX addresses Vxnc?**' line.

Original contents of */etc/hosts*:

```
127.0.0.1   localhost.localdomain localhost
# The following lines are desirable for IPv6 capable hosts
::1     localhost
::1     ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts

127.0.0.1       snmp.trap
127.0.0.1       syslogger

192.168.13.9          vxcontrol.vx.net        vxcontrol                <<< original line

### Do not edit! These hosts are modified by /etc/S20network.
192.168.13.15         primary.vx.net          primary                  <<< original line
192.168.13.16         secondary.vx.net        secondary                <<< original line
192.168.13.115        alternate.vx.net        alternate                <<< original line
## End auto config mods.

### primary VX addresses VXnc?
##      n = VX number: 1 for 1st VX, 2 for 2nd VX, ... 9 for 9th VX, etc
```

New contents:

```
127.0.0.1   localhost.localdomain localhost
# The following lines are desirable for IPv6 capable hosts
::1     localhost
::1     ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts

127.0.0.1       snmp.trap
127.0.0.1       syslogger

xxx.xxx.xxx.xxx       vxcontrol.vx.net        vxcontrol                <<< new line

### Do not edit! These hosts are modified by /etc/S20network.
xxx.xxx.xxx.xxx       primary.vx.net          primary                  <<< new line
xxx.xxx.xxx.xxx       secondary.vx.net        secondary                <<< new line
xxx.xxx.xxx.xxx       alternate.vx.net        alternate                <<< new line
## End auto config mods.

### primary VX addresses VXnc?
##      n = VX number: 1 for 1st VX, 2 for 2nd VX, ... 9 for 9th VX, etc
```

4) Fourth file to be edited: */etc/fake/instance_config/primary.cfg*
modify SPOOF_NETMASK as needed
modify SPOOF_BROADCAST as needed

NOTE: You may ignore the 'Do not edit' warning.

Original contents of */etc/fake/instance_config/primary.cfg*:

 # Do not edit! This file is modified by /etc/S24vxrouter.

IFCONFIG=TRUE
SPOOF_IP=primary
SPOOF_NETMASK=255.255.255.0 <<< original line
SPOOF_BROADCAST=192.168.13.255 <<< original line
TARGET_INTERFACE=eth0:1
FOREIGN_INTERFACE=eth0:1

New contents:

 # Do not edit! This file is modified by /etc/S24vxrouter.

IFCONFIG=TRUE
SPOOF_IP=primary
SPOOF_NETMASK=255.xxx.xxx.xxx <<< new line
SPOOF_BROADCAST=xxx.xxx.xxx.xxx <<< new line
TARGET_INTERFACE=eth0:1
FOREIGN_INTERFACE=eth0:1

Repeat the above steps for modifying the four files on the Secondary Controller using the Secondary Controller IP address in the */etc/network/interfaces* file:

When file modifications are complete, reboot the router.