

Bridge Network for Virtualization

...

The [bridge-utils-interface](#) man pages describe the options.

Create and link to article covering fundamental bridging btw existing network interface... the original use of a bridge.

Creating a Simple Bridge

I'm frankly still fuzzy on what's happening here. But this bridge works for my LXD host to allow my containers to interface with my hosts network directly.

Here is the default dhcp network interface...

Here is the network interface with modifications to make it static...

Here is we've added a bridge **br0** that interfaces with the host's primary network card **ens3**,

```
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto br0
iface br0 inet static
    address 192.168.0.50
    netmask 255.255.255.0
    gateway 192.168.0.1
    dns-nameservers 192.168.0.1
    bridge-ports ens3
    bridge-stp off
```

Bridge File

Common to to all,

```
auto br0
iface br0 inet dhcp # or static but keeping simple for now

# Required
bridge_ports eth0 # Binds the bridge to your existing ethernet

# Looks to be options
bridge_maxwait 0
bridge_stp off
bridge_fd 0      # ?
```

Reference

Differences between articles,

<https://insights.ubuntu.com/2015/11/10/converting-eth0-to-br0-and-getting-all-your-lxc-or-lxd-onto-your-lan/> - LXC/LXD specific bridging. This looks quite different than the other examples and not sure why

```
auto br0
iface br0 inet dhcp
    bridge-ifaces eth0 # Different than other examples.
    bridge-ports eth0
    up ifconfig eth0 up # Different than other examples.

iface eth0 inet manual # Different than other examples.
```

<https://help.ubuntu.com/community/KVM/Networking> - KVM specific, but also explains each item more,

```
auto lo
iface lo inet loopback

auto br0
iface br0 inet static
    address 192.168.0.10
    network 192.168.0.0
    netmask 255.255.255.0
    broadcast 192.168.0.255
    gateway 192.168.0.1
    dns-nameservers 192.168.0.5 8.8.8.8
    dns-search example.com
    bridge_ports eth0
    bridge_stp off
    bridge_fd 0
    bridge_maxwait 0
```

<https://www.theurbanpenguin.com/ubuntu-server-creating-a-bridge-interface/> - mentions for KVM too,

```
auto br0
iface br0 inet static
    address 192.168.0.201
    netmask 255.255.255.0
    gateway 192.168.0.1
    dns-nameservers 8.8.8.8 8.8.4.4
    bridge_ports eth0
    bridge_stp off
```

<https://help.ubuntu.com/community/NetworkConnectionBridge> - Bridge article, shows how to also do as straight command line (which does not persist after reboot) for testing,

```
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

# The loopback network interface
auto lo
iface lo inet loopback

# Bridge between eth0 and eth1
auto br0
iface br0 inet dhcp
# For static configuration delete or comment out the above line and
uncomment the following:
# iface br0 inet static
#   address 192.168.1.10
#   netmask 255.255.255.0
#   gateway 192.168.1.1
#   dns-nameservers 192.168.1.5
#   dns-search example.com
#   bridge_ports eth0 eth1
#   bridge_stp off
#   bridge_fd 0
#   bridge_maxwait 0
```

<https://www.cyberciti.biz/faq/how-to-create-bridge-interface-ubuntu-linux/> - shows bridging with multiple cards... more complicated,

```
# br1 setup with static wan IPv4 with ISP router as gateway
auto br1
iface br1 inet static
    address 208.43.222.51
    network 255.255.255.248
    netmask 255.255.255.0
    broadcast 208.43.222.55
    gateway 208.43.222.49
    bridge_ports eth1
    bridge_stp off
    bridge_fd 0
    bridge_maxwait 0
```

```
auto br0
iface br0 inet static
    address 10.18.44.26
    netmask 255.255.255.192
    broadcast 10.18.44.63
    dns-nameservers 10.0.80.11 10.0.80.12
    # set static route for LAN
post-up route add -net 10.0.0.0 netmask 255.0.0.0 gw 10.18.44.1
post-up route add -net 161.26.0.0 netmask 255.255.0.0 gw 10.18.44.1
    bridge_ports eth0
    bridge_stp off
    bridge_fd 0
    bridge_maxwait 0
```