

# OpenVPN Bridges

## Prepare Coova Chilli

### Building and Installing Coova Chilli

- Download the latest release of Coova Chilli. (Version 1.3.1.4 at the time of this writing)
- [Coova Chilli Releases](#)

```
wget https://github.com/coova/coova-chilli/archive/1.3.1.4.tar.gz
```

- Extract the source and edit the **debian/control** file to remove the dependency on the **haserl** package.

```
tar -xzvf 1.3.1.4.tar.gz
vi coova-chilli-1.3.1.4/debian/control
#Look for this line
Depends: iptables, haserl
#Remove haserl so that it looks like this:
Depends: iptables
#Save your changes
```

- Install the packages that is required for building **debs**.

```
sudo apt-get update
sudo apt-get install build-essential linux-headers-server libssl-dev
sudo apt install devscripts debhelper gengetopt libtool automake
```

- Build and install the package:

```
cd coova-chilli-1.3.1.4/
debuild -i -us -uc -b
cd ..
sudo dpkg --install coova-chilli_1.3.0_amd64.deb
```

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## Configuring Coova Chilli

### Enable CoovaChilli

- Edit the following file

```
sudo vi /etc/default/chilli
```

- Change it to look like this

```
START_CHILLI=1
CONFFILE="/etc/chilli.conf"
HS_USER="chilli"
```

- Save the file.

## Create the main config file

- Create a file called **/etc/chilli/config** and use the following as reference:

[/etc/chilli/config](#)

```
HS_WANIF=eth1           # WAN Interface toward the Internet
HS_DNS1=4.4.4.4
HS_DNS2=8.8.8.8
HS_RADIUS=198.27.111.78
HS_RADIUS2=198.27.111.78
HS_RADSECRET=testing123 # Set to be your RADIUS shared secret
HS_UAMSECRET=greatsecret # Set to be your UAM secret
HS_UAMALIASNAME=chilli
HS_UAMSERVER=$HS_UAMLISTEN
HS_UAMFORMAT=http://198.27.111.78/cake2/rd_cake/dynamic_details/chilli_
browser_detect/
HS_UAMHOMEPAGE=http://\ $HS_UAMLISTEN:\ $HS_UAMPORT/www/coova.html
HS_MODE=hotspot
HS_TYPE=coovachilli
HS_WWWDIR=/etc/chilli/www
HS_WWWBIN=/etc/chilli/wwwsh
HS_PROVIDER=Coova
HS_PROVIDER_LINK=http://coova.github.io/
HS_LOC_NAME="My HotSpot" # WISPr Location Name and used in
portal
```

- Create the VLAN config directories

```
sudo su
cd /etc/chilli
./newmulti.sh br0.101
./newmulti.sh br0.102
./newmulti.sh br0.103
```

- Create the three VLAN configs

[/etc/chilli/br0.101/config](#)

```
HS_LANIF=br0.101           # WAN Interface toward the Internet
HS_NETWORK=10.101.0.0      # HotSpot Network (must include
HS_UAMLISTEN)
```

```
HS_NETMASK=255.255.0.0 # HotSpot Network Netmask
HS_UAMLISTEN=10.101.0.1 # HotSpot IP Address (on subscriber network)
HS_UAMPOR=3990 # HotSpot UAM Port (on subscriber network)
HS_UAMUIPORT=4990 # HotSpot UAM "UI" Port (on subscriber
network, for embedded portal)

HS_DYNIP=10.101.1.1
HS_DYNIP_MASK=255.255.0.0
HS_STATIP=10.101.0.1
HS_STATIP_MASK=255.255.255.0
# HS_DNS_DOMAIN=

HS_NASID=rd-vlan101
HS_SSID=rd-vlan101-ssid
```

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### [/etc/chilli/br0.102/config](#)

```
HS_LANIF=br0.102 # WAN Interface toward the Internet
HS_NETWORK=10.102.0.0 # HotSpot Network (must include
HS_UAMLISTEN)
HS_NETMASK=255.255.0.0 # HotSpot Network Netmask
HS_UAMLISTEN=10.102.0.1 # HotSpot IP Address (on subscriber network)
HS_UAMPOR=3991 # HotSpot UAM Port (on subscriber network)
HS_UAMUIPORT=4991 # HotSpot UAM "UI" Port (on subscriber
network, for embedded portal)

HS_DYNIP=10.102.1.1
HS_DYNIP_MASK=255.255.0.0
HS_STATIP=10.102.0.1
HS_STATIP_MASK=255.255.255.0
# HS_DNS_DOMAIN=

HS_NASID=rd-vlan102
HS_SSID=rd-vlan102-ssid
```

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### [/etc/chilli/br0.103/config](#)

```
HS_LANIF=br0.103 # WAN Interface toward the Internet
HS_NETWORK=10.103.0.0 # HotSpot Network (must include
HS_UAMLISTEN)
HS_NETMASK=255.255.0.0 # HotSpot Network Netmask
HS_UAMLISTEN=10.103.0.1 # HotSpot IP Address (on subscriber network)
HS_UAMPOR=3992 # HotSpot UAM Port (on subscriber network)
HS_UAMUIPORT=4992 # HotSpot UAM "UI" Port (on subscriber
```

```
network, for embedded portal)
```

```
HS_DYNIP=10.103.1.1
HS_DYNIP_MASK=255.255.0.0
HS_STATIP=10.103.0.1
HS_STATIP_MASK=255.255.255.0
# HS_DNS_DOMAIN=

HS_NASID=rd-vlan103
HS_SSID=rd-vlan103-ssid
```

## Add NAT Support

- By default CoovaChilli does not do NAT between the two interfaces. We have to add NAT support during start-up in order to have a working system.



Failing to do this step will leave you with a broken system.

- Edit the `/etc/init.d/chilli` file and add the following:

```
test ${HS_ADMINTERVAL:-0} -gt 0 && {
  ( crontab -l 2>&- | grep -v $0
    echo "*/$HS_ADMINTERVAL * * * * $0 radconfig"
    ) | crontab - 2>&-
}

#NAT mod
iptables -F POSTROUTING -t nat
iptables -I POSTROUTING -t nat -o $HS_WANIF -j MASQUERADE
#END NAT mod

ifconfig $HS_LANIF 0.0.0.0
```

## Test it out

- Restart CoovaChilli for the latest changes to be effected.

```
sudo /etc/init.d/chilli stop
sudo /etc/init.d/chilli start
```

## Making things permanent

- Ensure that CoovaChilli will start up after reboots.
- If your server only has one interface card, add this line to the **/etc/rc.local** file:

```
#Add the startup of OpenVPN
/usr/sbin/service openvpn start

#Start up Chill
/etc/init.d/chilli start

exit 0
```

- If your server has two interface cards, issue the following command:

```
sudo update-rc.d chilli start 99 2 3 4 5 . stop 20 0 1 6 .
```

- Reboot the system and make sure CoovaChilli started up fine

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