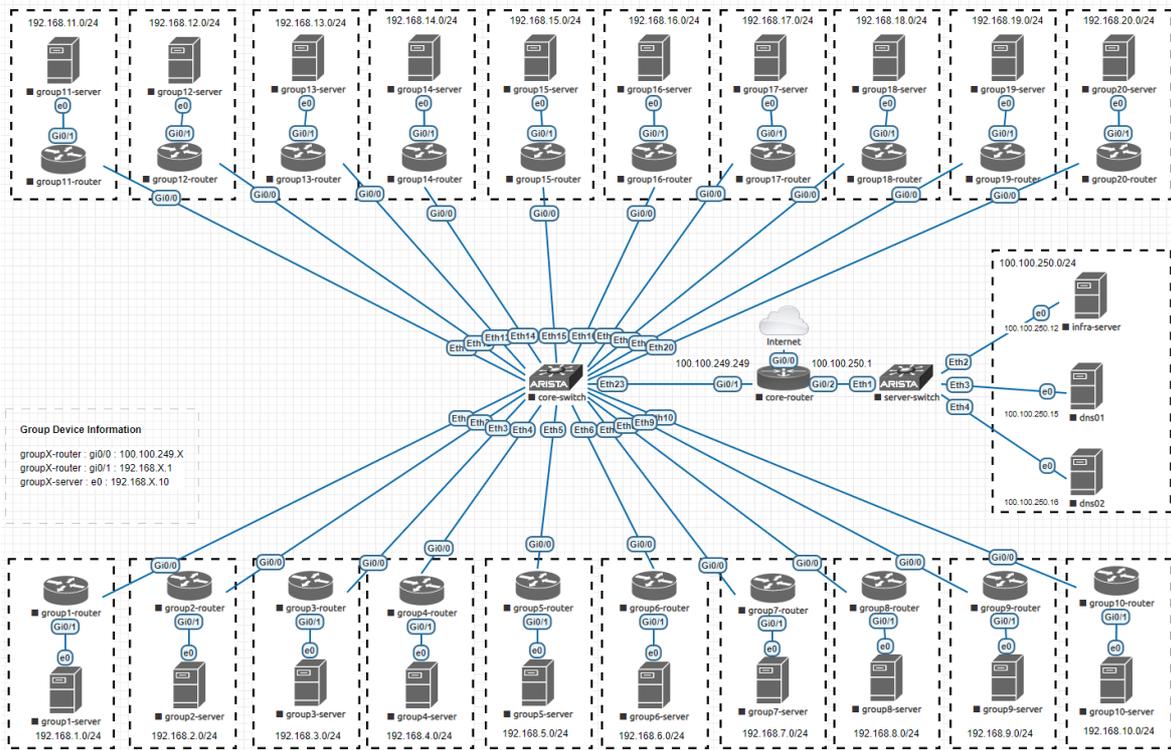




# Network Management and Monitoring : LAB

## 1. Lab Topology

APNIC NMM Workshop Topology



## Device List

Device Name	Function	IP Address	FQDN
core-router	Access to internet	100.100.249.249	core-router.apnictraining.net
core-switch	Connect group routers	100.100.250.3	core-switch.apnictraining.net
server-switch	Connect infrastructure server	100.100.250.2	server-switch.apnictraining.net
infra-server	Infrastructure server for automation	100.100.250.12	infra-server.apnictraining.net
dns01	Primary DNS Server	100.100.250.15	dns01.apnictraining.net
dns02	Secondary DNS Server	100.100.250.16	dns02.apnictraining.net
group1-router	Router for group1	192.168.1.1	group1-router.apnictraining.net
group1-server	Server for group1	192.168.1.10	group1-server.apnictraining.net
group2-router	Router for group2	192.168.2.1	group2-router.apnictraining.net
group2-server	Server for group2	192.168.2.10	group2-server.apnictraining.net
group3-router	Router for group3	192.168.3.1	group3-router.apnictraining.net
group3-server	Server for group3	192.168.3.10	group3-server.apnictraining.net
.....	.....	.....	.....
groupNN-router	Router for groupNN	192.168.NN.1	groupNN-router.apnictraining.net
groupNN-server	Server for groupNN	192.168.NN.10	groupNN-server.apnictraining.net

## Credentials

Command	Description
routers	username: apnic
	password: training
	enable: training
servers	username: apnic
	password: training
	sudo: training

## 2. Lab Access

Lab Access is Via a Jumphost

To connect to the lab we will connect first to the jumphost then to our nominated `group-XX` server.

The Jumphost IP addresses are `202.125.97.7X` where X is your Jumphost number

```
username: lab
password: training

ssh lab@202.125.97.7X
```

Once connected to the jumphost you will connect to your group server

```
ssh apnic@172.18.30.XX
```

 where XX is your group number

### SSH Dynamic Tunnel instructions

To Enable easy access to the Web interfaces of the Labs. It is recommended that you setup a SOCKS Proxy tunnel via SSH.

Whilst the steps may seem complex, once you have set it up once, you will probably find other uses for it in your day to day working environments as well!

If you use this method, when you need to access browser based interfaces in the lab, you will just need to specify the *group-ip* address in the web url eg `http://172.16.30.x:9000` would take you to your Graylog web UI in the later labs.

If you are running WIN10, MacOS, or Linux, you can setup a new session to the jumphost. In the below example I am using *port 3000* as my local SOCKS Proxy Port.

```
ssh lab@202.125.97.7X -D 3000
```

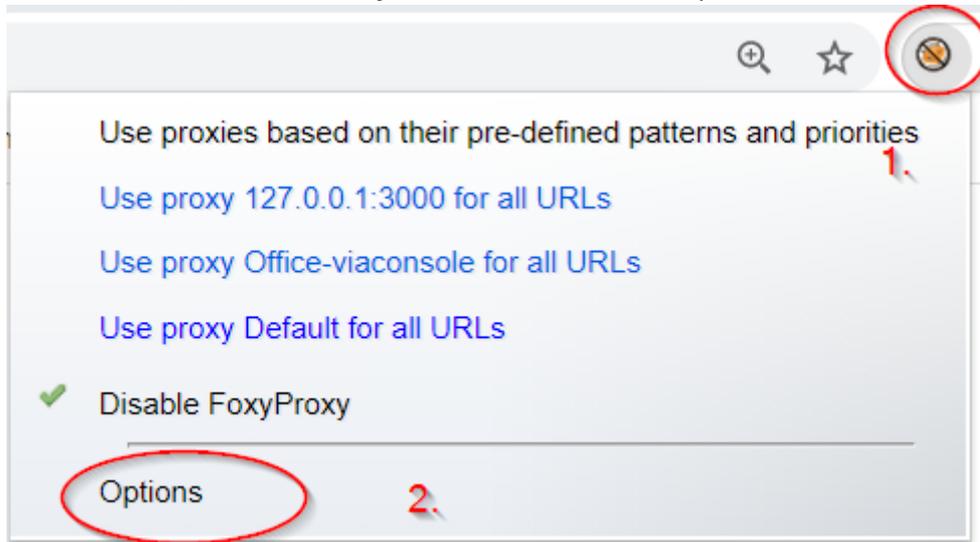
### Using the SOCKS Proxy in your browser

You have a couple of options here.

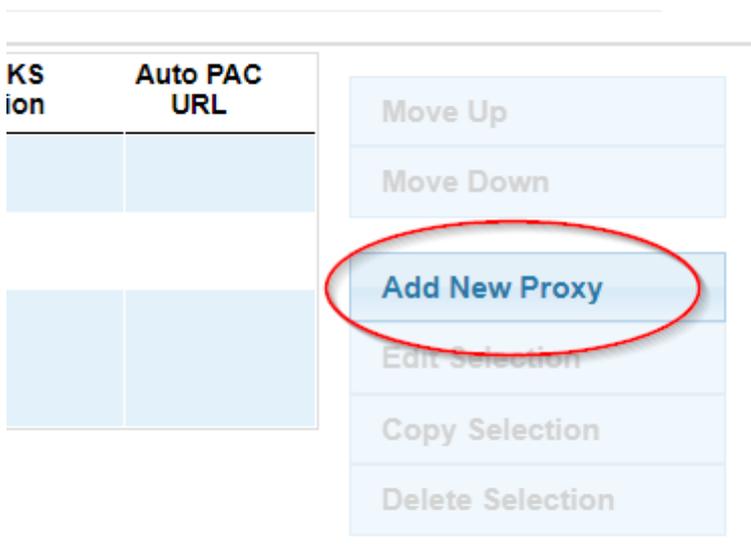
1. Change the proxy settings of your operating system to use a socks Proxy address of `127.0.0.1:3000`
2. Install the foxyproxy add-on for Chrome or Firefox  
For simplicity, Option 2 is the best option, as you can quickly switch between proxy and non-proxy connections.

### Configuring FoxyProxy

1. Once installed, click on icon in your browser and select Options



2. Select *add New Proxy*



3. Enter the IP and Port as shown. Make sure that the Socks Proxy is checked and SOCKSv5 is Selected, then click General.

**FoxyProxy - Proxy settings**

General Proxy Details URL Patterns

Direct internet connection (no proxy)

Manual Proxy Configuration  
 Help! Where are settings for HTTP, SSL, FTP, Gopher, and SOCKS?  
 Host for IP Address: 127.0.0.1 Port: 3000

SOCKS proxy?  SOCKS v4/4a  SOCKS v5

Save Login Credentials

Authentication  
 Username: Password: Password - again:

Automatic proxy configuration URL  
 View Test

Notify me about proxy auto-configuration file loads  
 Notify me about proxy auto-configuration file errors

Save Cancel

4. Give it a meaningful name and click save

**FoxyProxy - Proxy settings**

General Proxy Details URL Patterns

Enabled

Proxy Name: Lab Proxy

Proxy Notes:

Color:

Save Cancel

## Using FoxyProxy

1. Click on the Icon in your browser tool bar and select the Proxy you configured previously.

**FoxyProxy - Proxy settings**

General Proxy Details URL Patterns

Enabled

Proxy Name: Lab Proxy

Proxy Notes:

Color:

Save Cancel

2. Browse to the *Group-IP* and port of your server.

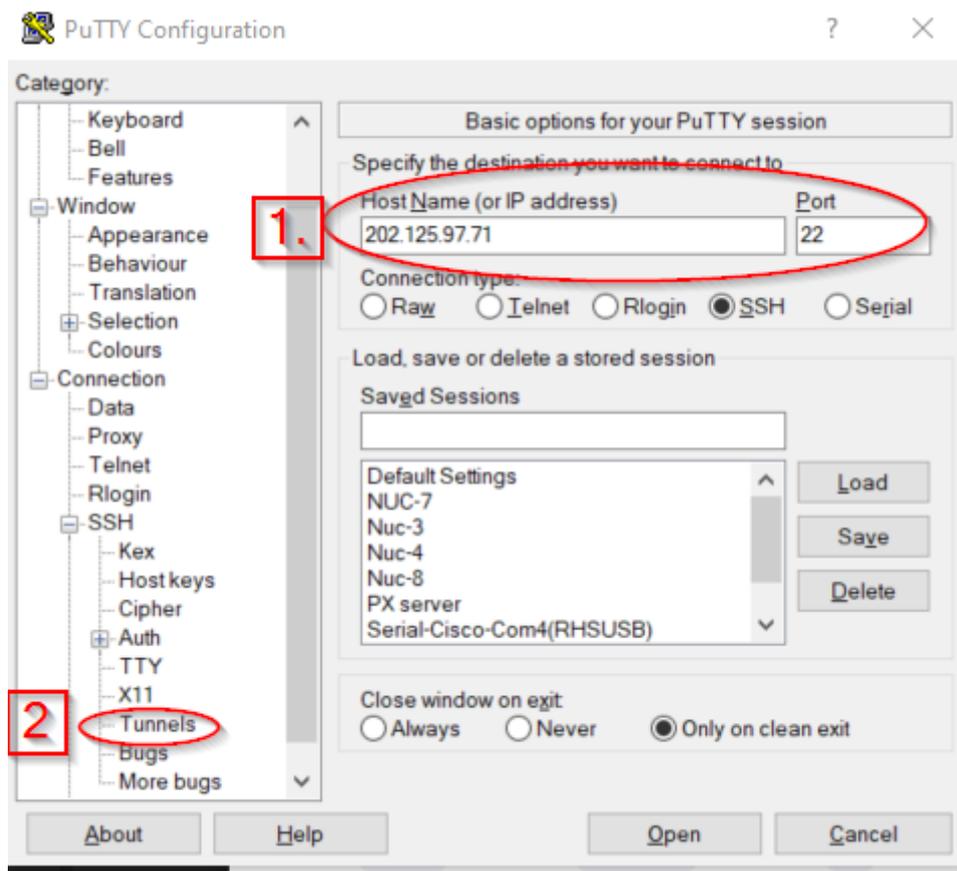
3. When finished, click on the Icon again and disable your proxy session.

### 3. LibreNMS Web Instructions

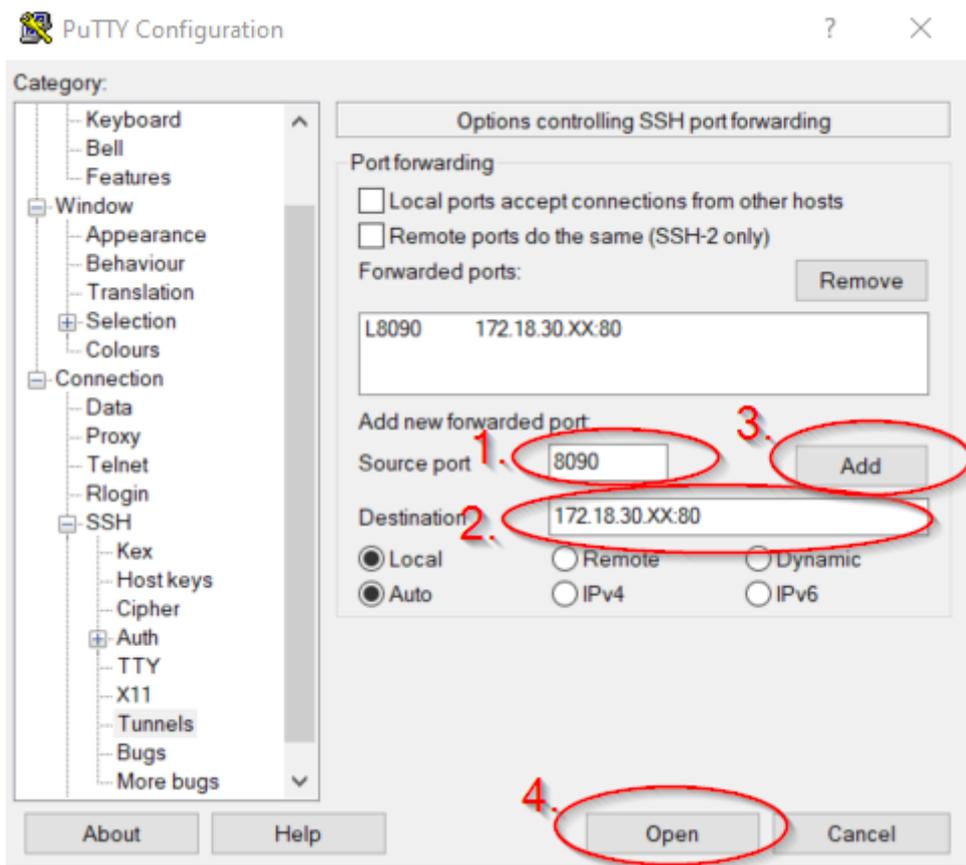
We will need to use a tunnel to access the web interfaces of our group servers. To do this we will create an SSH Tunnel.

What we will do is redirect our local port 8090 to the server port 80

If you are using Putty to connect to your jumphost, please see below (example for JH1)



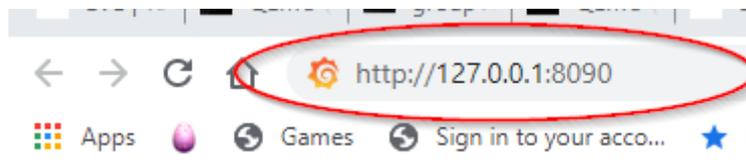
Fill in the below - where XX in the destination is your Group Number



If you are using windows natively (or linux or mac)

```
ssh lab@202.125.97.x -L 8090:172.18.30.xx:80
```

To open the page in your browser.



## 4. Smoking Lab

Create your tunnel as above

Your connection url for your browser will be

```
http://127.0.0.1:8090/smoking/smoking.cgi
```

## 5. Nagios LAB

Create Tunnel as above

Your connection url for your browser will be

```
http://127.0.0.1:8090/nagios
```

## 9. Graylog Lab

Create tunnel similar to previous steps, **BUT** we are using a different destination port

```
ssh lab@202.125.97.7x -L 9000:172.18.30.xx:9000
```

If you are using putty when you create the tunnel please make sure the source port and destination host are edited.

Connecting to the web interface

```
http://127.0.0.1:9000/
```

## 10. FLOW-NFSEN LAB

Create Tunnel as per LibreNMS LAB

Connect to the web interface as per below

```
http://127.0.0.1:8090/nfsen/nfsen.php
```

## 11. FLOW AS-STAT Lab

Create Tunnel as per LibreNMS Lab

Connect to the web interface as per below

```
http://127.0.0.1:8090/as-stats/
```