Part 3 - Install SmokePing

Install the SmokePing Server

In this step, we will install the required software to use smokeping which utilises the Round Robin Database tool (RRDtool). For more information refer to https://oss.oetiker.ch/smokeping/index.en.html

The steps to complete this section are:

- Update software

- Install smokeping

- Install apache2 (web server)

- Configure smokeping

- Add targets to monitor

- Create smokeping probes

  To install the required files open a terminal window and ssh to the server that will be used to install SNMP.

  ```
  ssh apnic@192.168.30.10
  ```

  NOTE: Type   yes if asked about wanting to continue connecting

  Password =   training

  Update the software repository for Ubuntu

  ```
  sudo apt-get update && sudo apt-get -y dist-upgrade
  ```
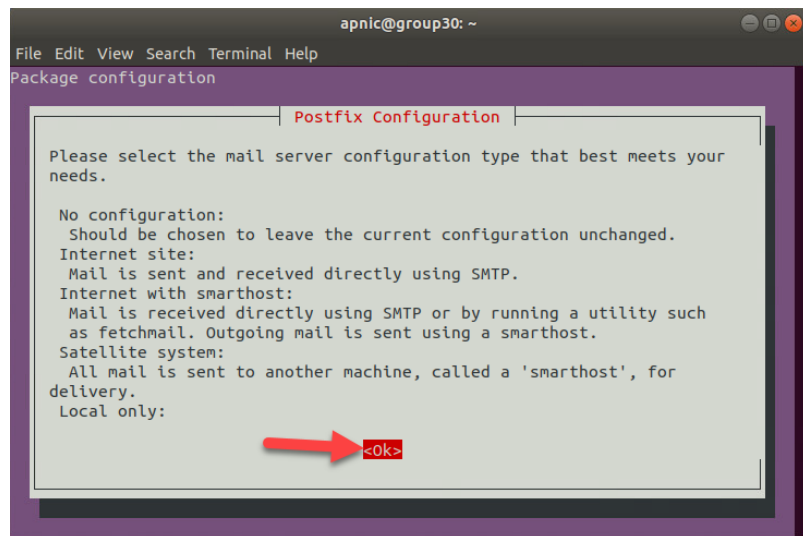
  Password =   training

  Install smokeping software

  ```
  sudo apt-get install -y smokeping
  ```

 Use the Tab key to move and highlight selection and press spacebar or Enter key to click

When the Postfix configuration message is displayed Select Ok by pressing Tab key once and press spacebar to continue.

When prompted for what type of mail server to set up for the postfix configuration, select **Internet Site**.
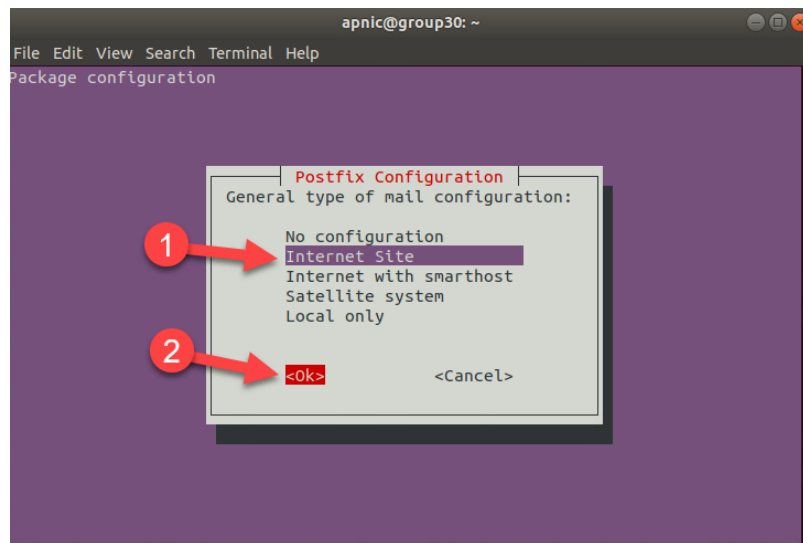
When prompted for what the mail name to set up for the postfix configuration, leave the recommendation as **group30.apnictraining.net**.
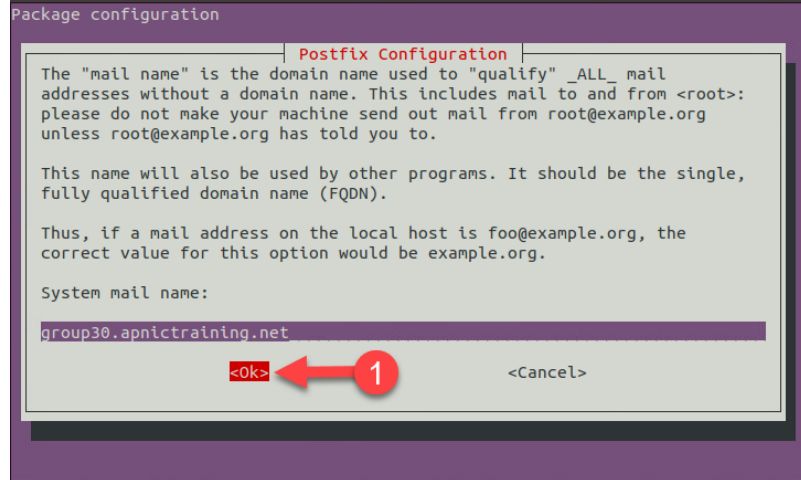
Install Apache2 web server software and enable the cgi module

```
sudo apt-get install -y apache2
```

```
sudo a2enmod cgi
sudo systemctl restart apache2
```

This may have been completed in a previous step. Ignore any messages about already installed, enabled or using a different module.

If Part 1 SNMP Lab was skipped, the router will need to be setup before continuing to the next section - Configure SNMP on a Cisco device

Access the Web Interface

Use Firefox and browse to the SmokePing HTTP server   http://group30-server.apnictraining.net/smokeping/smokeping.cgi
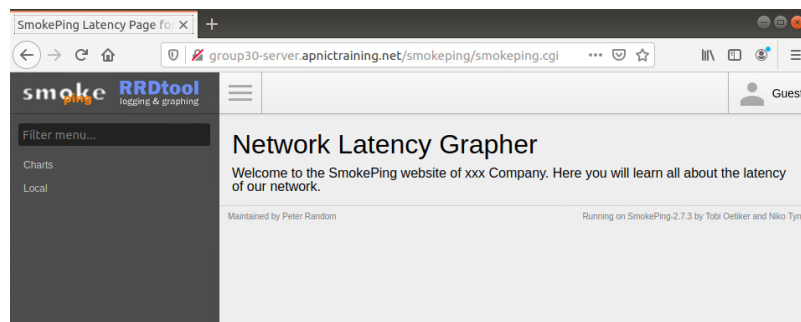
Review the SmokePing configuration files.

Change into the SmokePing configuration folder

```
cd /etc/smokeping/config.d
ls -l
```


Edit the various files to update details:

- Alerts - set email address where alerts are sent to.

- General - set name and contact details.

- Probes - mechanism used to test and monitor connectivity.

- Targets - add resources to monitor.

Update contact and other details in the **General** file. Such as:

- owner

- contact

- mailhost

- cgiurl

```
cat General
sudo sed -i 's/Peter Random/John Doe/' General
sudo sed -i 's/some\@address\.nowhere/group30\@apnictraining\.net/' General
sudo sed -i 's/my\.mail\.host/group30\.apnictraining\.net/' General
sudo sed -i 's/some\.url/group30\-server\.apnictraining\.net\/smokeping/' General
```

Update to and from details in the **Alerts** file.

```
cat Alerts
sudo sed -i 's/alertee\@address\.somewhere/noc\@apnictraining\.net/' Alerts
sudo sed -i 's/smokealert\@company\.xy/smokealert\@apnictraining\.net/' Alerts
```

To add a target to monitor, edit the Targets configuration file

```
sudo nano Targets
```

Add the following to the end of the file

```
+ Internet
menu = Internet
title = Internet
++ Google
host = www.google.com
++ Yahoo
host = www.yahoo.com

+ NMMLab
menu = NMMLab
title = NMMLab
++ CoreRouter
host = core-router.apnictraining.net
++ CoreSwitch
host = core-switch.apnictraining.net
```

This will add **Internet** and **NMMLab** section and monitor related hosts.

When changes are made to these files, run the following to update the running configuration.

```
sudo systemctl restart smokeping
```

Return to Firefox and refresh the SmokePing HTTP server page at   http://group30-server.apnictraining.net/smokeping/smokeping.cgi .

This may take 15 or more minutes to start to populate data. Click on any of the URLs to get a more detail resolution of the graph, such as the past 3 hours. Or you can confirm data collection by viewing the RRD files exist, using the following command:

```
ls -lah /var/lib/smokeping/Internet/ /var/lib/smokeping/NMMLab/
```

By default Smokeping only installs the **fping** tool as a probe to monitor resources. To monitor Domain Name Services (DNS) an additional probe needs to be added to smokeping configuration files.

Test that DNS is working as expected by using the dig command to query for **core-router.apnictraining.net**

```
dig @dns01.apnictraining.net core-router.apnictraining.net
```

Repeat the above command but use dns02.apnictraining.net as the DNS server

To create a DNS probe, edit the **Probes** file

```
sudo nano Probes
```

Password =   training

Add the following to the end of the file

```
+ DNS
binary = /usr/bin/dig
lookup = core-router.apnictraining.net
pings = 5
step = 180
```

Refer to the documentation for more detail about Probes:

Add a new target to monitor for DNS latency for two DNS name servers. To add the DNS servers to monitor, edit the Targets configuration file

```
sudo nano Targets
```

Add the following to the end of the file

```
+ DNS
probe = DNS
menu = DNS latency

++ DNS01
title = dns01.apnictraining.net
host = dns01.apnictraining.net

++ DNS02
title = dns02.apnictraining.net
host = dns02.apnictraining.net
```
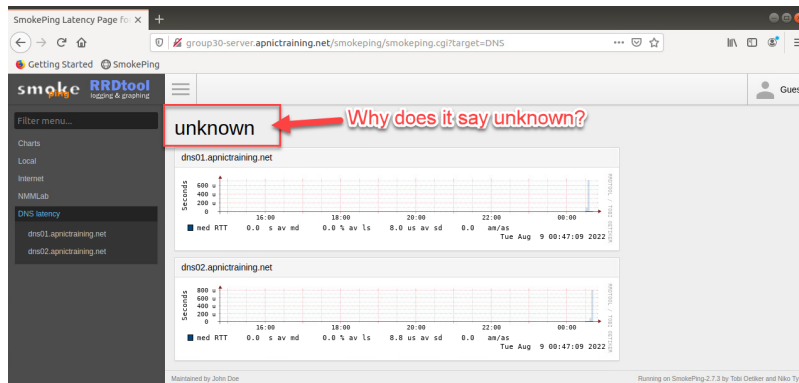
Remember, when changes are made to these files, run the following to update the running configuration.

```
sudo systemctl restart smokeping
```

Return to Firefox and refresh the SmokePing HTTP server page at `http://group30-server.apnictraining.net/smokeping/smokeping.cgi` and click on **DNS latency** to display the graphs.

Why does it have unknown at the top of the page? Review the **/etc/smokeping/config.d/Targets** file and compare with previous changes to figure out what is missing.

Please click the Next button to continue.