LAB :: SNORT (IDS)

- In this example we are using apnictraining.net as domain name.
- # super user command.
- $ normal user command.
- X replace with your group no.
- Username `apnic` and password `training`

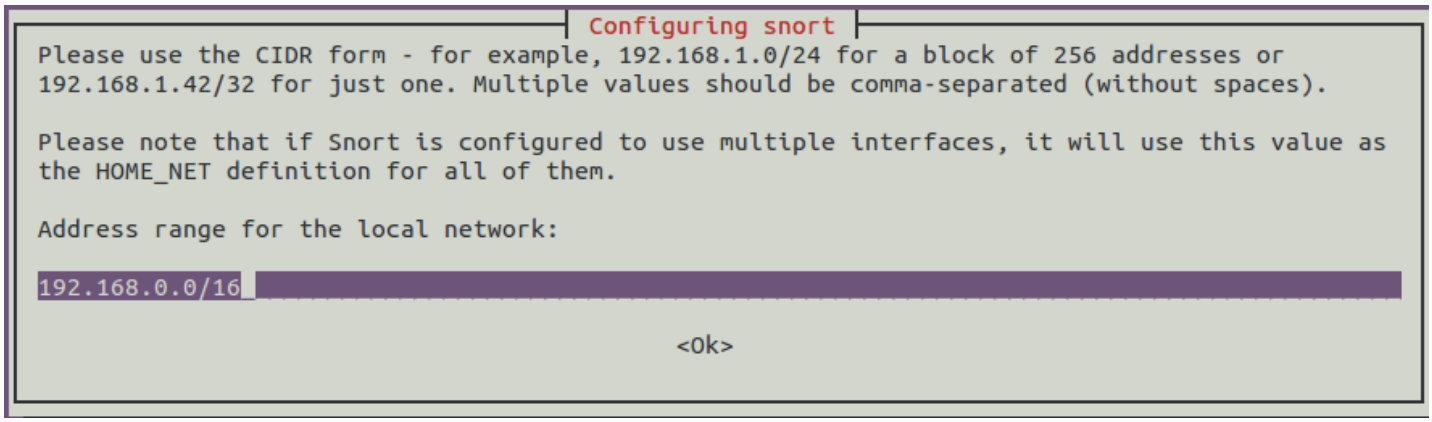
Topology

```
[group1.apnictraining.net] [192.168.30.1]
[group2.apnictraining.net] [192.168.30.2]
[group3.apnictraining.net] [192.168.30.3]
.................
[group30.apnictraining.net] [192.168.30.30]
```

Install SNORT

```
sudo apt-get update
sudo apt-get install snort
```

It will ask for your HOME_NET address. For this lab define it as your host IP. Example, for `group 11` it will `192.168.30.11/32`. If required we can change it from `snort.debian.conf` file also.



After installation check the installation location of SNORT

```
whereis snort
```

Few important location

1. SNORT configuration : `/etc/snort/snort.conf`
2. SNORT debian configuration : `/etc/snort/snort.debian.conf`

3. SNORT rules : `/etc/snort/rules`
4. SNORT exuecuble : `/usr/sbin/snort`

Configure SNORT

Check HOME_NET and Interface related configuration from `/etc/snort/snort.debian.conf` . During installation process if you define your HOME_NET properly; no need to edit it. Or you can edit this file.

The main configuration file for SNORT is `/etc/snort/snort.conf` file.

```
sudo vi /etc/snort/snort.conf
```

This is a big configuration file; for lab purpose we will disable all predefined rules (ruleset). Disable (put `#`) all the line having `include $RULE_PATH` (in Step 7 of configuration file) except `include $RULE_PATH/local.rules` . We will put all our local rules in `include $RULE_PATH/local.rules`

To enable alert log; comment out (adding `#` before the line) the following line (Step 6 in the configuration file):

```
output unified2: filename snort.log, limit 128, nostamp, mpls_event_types, vlan_ev
ent_types
```

Save and quit from `snort.conf` file `:wq`
Start SNORT `sudo /etc/init.d/snort start`
Check whether SNORT is running `# ps -ef|grep snort`

SNORT Rules

Snort rules are divided into two logical sections:

1. Rule Header : The rule header contains the rule's action, protocol, source and destination IP addresses and netmasks, and the source and destination ports information.

2. Rule Options : The rule option section contains alert messages and information on which parts of the packet should be inspected to determine if the rule action should be taken.

- Here is a good reference to learn about writing snort rules:

  ```
  http://manual-snort-org.s3-website-us-east-1.amazonaws.com/node28.html
  ```

The First Bad Rule

Add the following rules in `/etc/snort/rules/local.rules`

```
sudo vi /etc/snort/rules/local.rules

alert ip any any -> any any (msg: "IP Packet detected"; sid: 10000;)
```

Save and exit. Restart `snort` service

```
sudo /etc/init.d/snort restart
```

This rules will generate alert for every packet. Try to ping any destination and check `alert` log file:

```
sudo su
tail -f /var/log/snort/alert
```

- REMOVE (or comment out) the bad rule from `local.rules` once you have seen the alert!

SNORT Exercise

Excercise 1 : Write a rule to check XMAS scan on your server from external network
Exercise 2 : Write a rule to check any external network access your webserver /admin pages
Exercise 3 : Write a rule to check SSH brute force attack and log IP trying to connect more than 3 times in 60 seconds (the threshold option may be deprecated*)

```
***END OF EXERCISE***
```