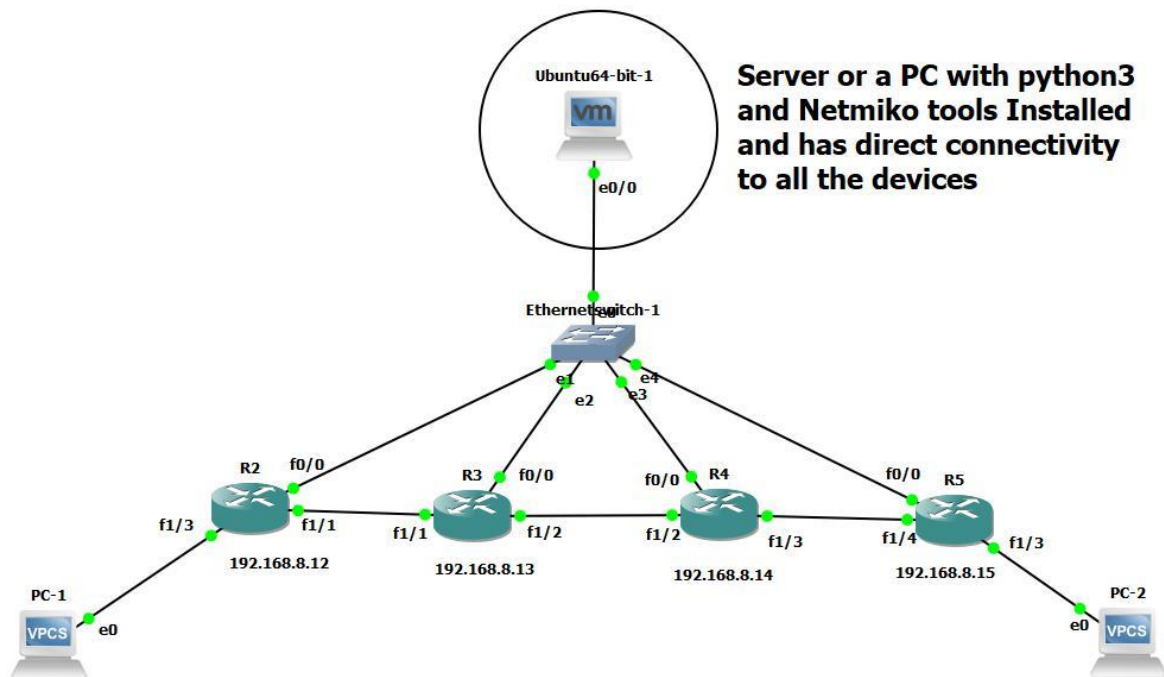


VLAN Troubleshooter

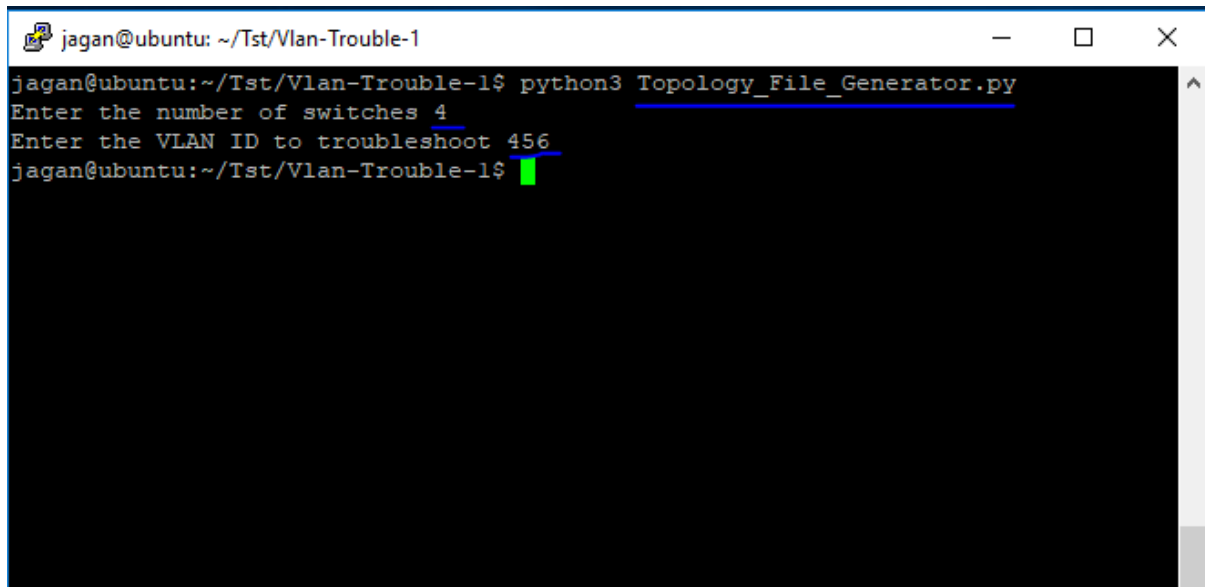
The following image is a sample network topology with an Ubuntu server and four switches. The port details and IP Addresses details are shown in the screenshot.



The Automated VLAN Troubleshooter works within the following three simple steps.

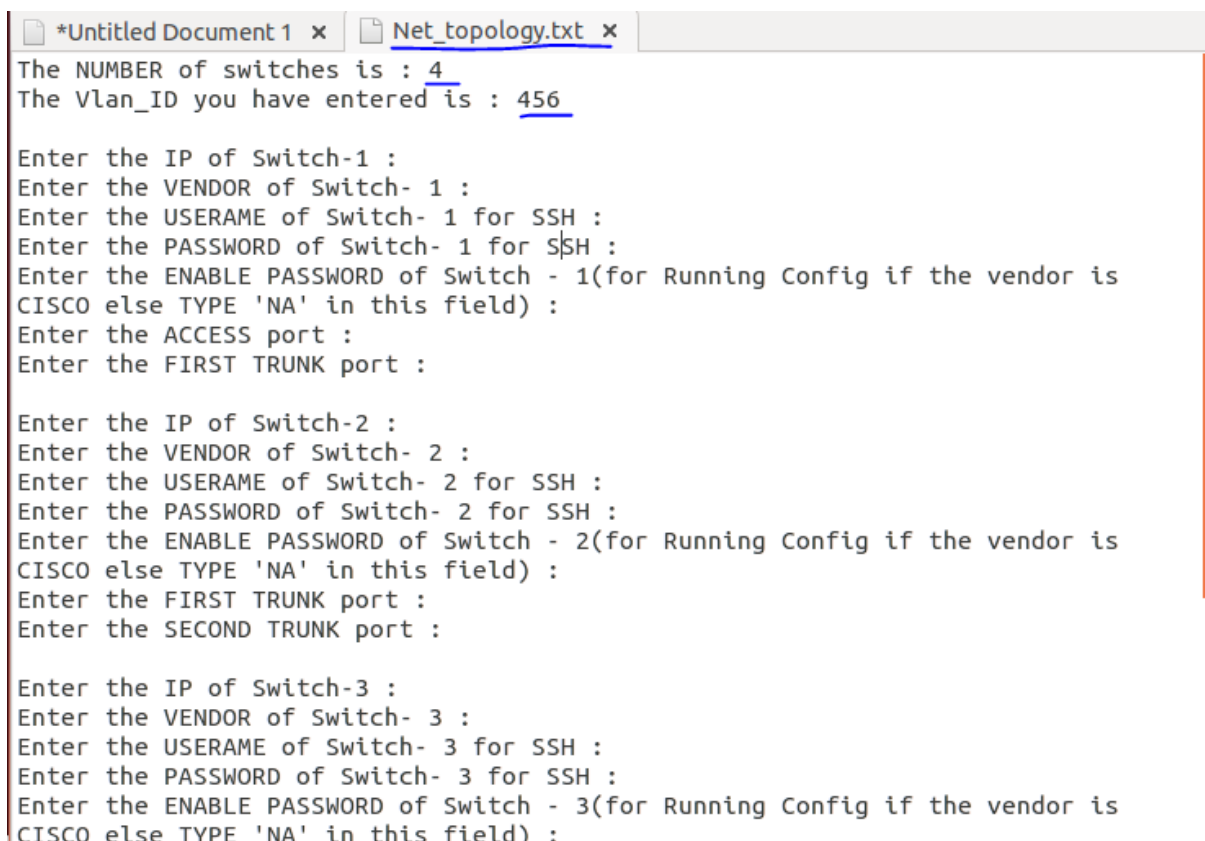
Step-1 :

Execute **Topology_File_Generator.py** and input the details as required and as per the topology.



```
jagan@ubuntu: ~/Tst/Vlan-Trouble-1
jagan@ubuntu:~/Tst/Vlan-Trouble-1$ python3 Topology_File_Generator.py
Enter the number of switches 4
Enter the VLAN ID to troubleshoot 456
jagan@ubuntu:~/Tst/Vlan-Trouble-1$
```

Once the **Topology_File_Generator.py** is run successfully, the following text file will be generated named as **Net_topology.txt**.



```
*Untitled Document 1 x Net_topology.txt x
The NUMBER of switches is : 4
The Vlan_ID you have entered is : 456

Enter the IP of Switch-1 :
Enter the VENDOR of Switch- 1 :
Enter the USERNAME of Switch- 1 for SSH :
Enter the PASSWORD of Switch- 1 for SSH :
Enter the ENABLE PASSWORD of Switch - 1(for Running Config if the vendor is CISCO else TYPE 'NA' in this field) :
Enter the ACCESS port :
Enter the FIRST TRUNK port :

Enter the IP of Switch-2 :
Enter the VENDOR of Switch- 2 :
Enter the USERNAME of Switch- 2 for SSH :
Enter the PASSWORD of Switch- 2 for SSH :
Enter the ENABLE PASSWORD of Switch - 2(for Running Config if the vendor is CISCO else TYPE 'NA' in this field) :
Enter the FIRST TRUNK port :
Enter the SECOND TRUNK port :

Enter the IP of Switch-3 :
Enter the VENDOR of Switch- 3 :
Enter the USERNAME of Switch- 3 for SSH :
Enter the PASSWORD of Switch- 3 for SSH :
Enter the ENABLE PASSWORD of Switch - 3(for Running Config if the vendor is CISCO else TYPE 'NA' in this field) :
```

Step-2 :

Fill the generated **Net_topology.txt** file with the information to identify and access the Switches and Port details in the respective fields without leaving any as below.

```
*Untitled Document 1 x  *Net_topology.txt x
The NUMBER of switches is : 4
The Vlan_ID you have entered is : 456

Enter the IP of Switch-1 : 192.168.8.12
Enter the VENDOR of Switch- 1 : cisco
Enter the USERNAME of Switch- 1 for SSH : jagan
Enter the PASSWORD of Switch- 1 for SSH : jagan
Enter the ENABLE PASSWORD of Switch - 1(for Running Config if the vendor is
CISCO else TYPE 'NA' in this field) : jagan
Enter the ACCESS port : fa1/3
Enter the FIRST TRUNK port : fa1/1

Enter the IP of Switch-2 : 192.168.8.13
Enter the VENDOR of Switch- 2 : cisco
Enter the USERNAME of Switch- 2 for SSH : jagan
Enter the PASSWORD of Switch- 2 for SSH : jagan
Enter the ENABLE PASSWORD of Switch - 2(for Running Config if the vendor is
CISCO else TYPE 'NA' in this field) : jagan
Enter the FIRST TRUNK port : fa1/1
Enter the SECOND TRUNK port : fa1/2

Enter the IP of Switch-3 : 192.168.8.14
Enter the VENDOR of Switch- 3 : cisco
Enter the USERNAME of Switch- 3 for SSH : jagan
Enter the PASSWORD of Switch- 3 for SSH : jagan
Enter the ENABLE PASSWORD of Switch - 3(for Running Config if the vendor is
CISCO else TYPE 'NA' in this field) : jagan
```

Step-3 :

After filling the **Net_topology.txt** file, run **Switch_Data_Generator.py** program to make the troubleshooter complete its job using the data from topology file. The program accesses the switches remotely and outlines the results.

```
jagan@ubuntu:~/Tst/Vlan-Trouble-1$ python3 Switch_Data_Generator.py
-----
data in the SSH Connection  cisco_ios  192.168.8.12  jagan  jagan  jagan  T-port1:  fal/1  T-port2:  A-port3:  fal/3
Connected to  192.168.8.12

For the switch IP 192.168.8.12
Interface FASTETHERNET1/1 IS configured as a TRUNK port
And Vlan 456 IS passed through the Interface FASTETHERNET1/1

For the switch IP 192.168.8.12
Interface FASTETHERNET1/3 is configured as an ACCESS Port
And Vlan 456 IS passed through the Interface FASTETHERNET1/3
-----

data in the SSH Connection  cisco_ios  192.168.8.13  jagan  jagan  jagan  T-port1:  fal/1  T-port2:  fal/2  A-port3:
Connected to  192.168.8.13

For the switch IP 192.168.8.13
Interface FASTETHERNET1/1 IS configured as a TRUNK port
But Vlan 456 IS NOT passed through the Interface FASTETHERNET1/1 kindly configure the port by passing the vlan 456

For the switch IP 192.168.8.13
Interface FASTETHERNET1/2 IS configured as a TRUNK port
But Vlan 456 IS NOT passed through the Interface FASTETHERNET1/2 kindly configure the port by passing the vlan 456
-----

data in the SSH Connection  cisco_ios  192.168.8.14  jagan  jagan  jagan  T-port1:  fal/2  T-port2:  fal/3  A-port3:
Connected to  192.168.8.14

For the switch IP 192.168.8.14
Interface FASTETHERNET1/2 IS configured as a TRUNK port
And Vlan 456 IS passed through the Interface FASTETHERNET1/2

For the switch IP 192.168.8.14
Interface FASTETHERNET1/3 IS configured as a TRUNK port
And Vlan 456 IS passed through the Interface FASTETHERNET1/3
-----

data in the SSH Connection  cisco_ios  192.168.8.15  jagan  jagan  jagan  T-port1:  fal/4  T-port2:  A-port3:  fal/3
Connected to  192.168.8.15

For the switch IP 192.168.8.15
Interface FASTETHERNET1/4 IS configured as a TRUNK port
But Vlan 456 IS NOT passed through the Interface FASTETHERNET1/4 kindly configure the port by passing the vlan 456

For the switch IP 192.168.8.15
Interface FASTETHERNET1/3 is configured as an ACCESS Port
And Vlan 456 IS passed through the Interface FASTETHERNET1/3
```