

PROBLEM 3 – READ-ME FILE FOR SCRIPT “QUES3.py”

The python script is attached in the submission folder. (QUES3.py is the name of the script)

HOW TO RUN THE SCRIPT

STEP1:

Before running the script ensure that the module “paramiko” is present on the host that you are executing this script from.

If not, please execute the following commands to install pip and further install the modules using pip.

- `sudo apt-get install python-pip`
- `pip install paramiko`

STEP2:

Use **python 2.7** to run this script.

```
$ /usr/bin/python --version  
Python 2.7.14
```

Sample command to execute:

```
python <script.py> <No. of devices> <IP addresses>  
python Ques3.py 3 '["1.1.1.3","1.1.1.2","1.1.1.4"]'
```

STEP3:

After you run the command, script would make a secure shell connection to each of IP addresses provided in the command line by the user. It then runs some CISCO CLI commands on the switches and extracts the output. Then the output is stored into a file and parsed to display the required output.

OUTPUT:

Output will show all adjacency lists of the switches that we connect to via SSH. Adjacency list will basically show the information of the local hostname, local interface, local VLAN, adjacent hostname, adjacent interface and adjacent VLAN.

Sample output can be seen from the screenshot below:

```
User@hp /cygdrive/c/Users/User/Desktop
$ python Ques3.py 3 '["1.1.1.3","1.1.1.2","1.1.1.4"]'
Usage : python <script.py> <No. of devices> <IP addresses>
SW2(node)->
    Adjacent Host Name : SW3.cisco.com
    Local Node Interface : FastEthernet0/23
    Local VLAN : 2,3
    Adjacent Neighbor Interface : FastEthernet0/1
    Adjacent Neighbor VLAN : 2,3

    Adjacent Host Name : s1
    Local Node Interface : FastEthernet0/19
    Local VLAN : 1 (default)
    Adjacent Neighbor Interface : FastEthernet0/47
    Adjacent Neighbor VLAN : 1 (default)
```