Project Summary

1) Assist in Setting up Python on a Windows 7 Workstation. python-3.7.4-amd64.exe is installed on the machine but will require assistance with any additional configurations needed for this project.
2) Assist in setting up Authentication, on the Windows 7 Workstation, to allow the Scripts to execute successfully.
3) Create Python Scripts based on the 2 scenarios detailed below in the "Project Details" section.
4) Provide the matching configurations of the Python scripts that were create in step #3 that can be used to verify the functionality using POSTMAN.

Resource

- Attached Document
"Testing & Configuration Guide for Cisco pxGrid 20.pdf"

- Pxgrid 2.0 Documentation
https://developer.cisco.com/docs/pxgrid/#!introduction-to-pxgrid-2-0/introduction-to-pxgrid-2-0

- Github.com Sample Code
https://github.com/cisco-pxgrid/pxgrid-rest-ws

Test Environment Details

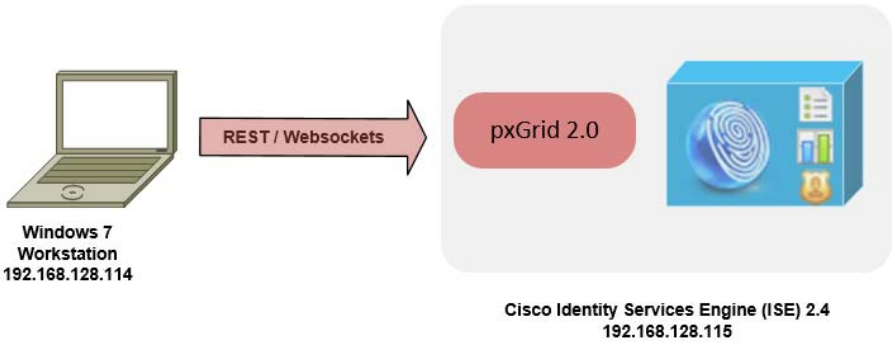
- Workstation running Windows 7 with python-3.7.4-amd64.exe & Postman-win64-7.7.3-Setup.exe for testing if needed.
- Cisco ISE installed and configured.
- The systems will be configured with TCTP/IP and all necessary initialization.

Project Details

Develop a python script (Script #1) that uses Websocket for pubsub components of the Cisco Identity Services Engine (ISE) to retrieve endpoints with the ANC policy applied [using ANCGetEndpoints] (See attached Configuration Guide - Testing & Configuration Guide for Cisco pxGrid 20.pdf).

Develop a separate python script (Script #2) that uses Websocket for pubsub components of the Cisco Identity Services Engine (ISE) to add endpoints with the ANC policy applied by IP Address [using ANCApplyByIP] (See attached Configuration Guide - Testing & Configuration Guide for Cisco pxGrid 20.pdf).

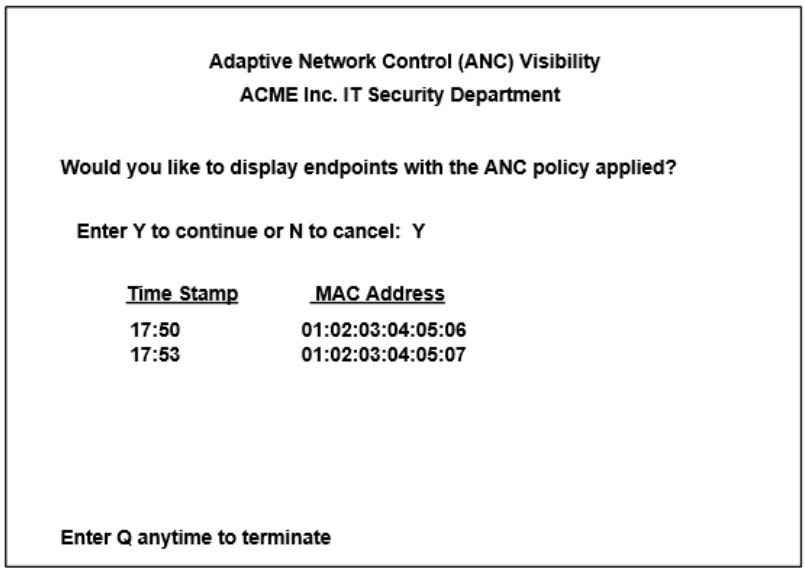
** Developer does not need to have a deep understanding of the Cisco Identity Service (ISE) Architecture. A resource, with understanding of the Cisco ISE Architecture, will available to provide assistance and support as needed. In addition, a test lab is available (accessible remotely) is available for the Developer to test as needed; a test procedure guide will also be provided to assist with testing.



Python Script #1 Details:
Python Script #1, when run, will use Websocket for pubsub components of the Cisco Identity Services Engine (ISE) to retrieve endpoints with the ANC policy applied [using ANCGetEndpoints].

No validation is required.

The user interface will be as shown below. The script will act as a subscriber collecting entries from Cisco ISE acting as a Publisher. If the ANC policy is applied to a device (using the Cisco ISE Management Interface), the device will display on the screen until the end user enters Q to quit.



Python Script #2 Details:
Python Script #2, when run, will use Websocket for pubsub components of the Cisco Identity Services Engine (ISE) to add to add endpoints with the ANC policy applied by IP Address [using ANCApplyByIP].

No validation is required.

The user interface will be as shown below. The script will act as a Publisher collecting entries from the user and when the user terminates the list of devices ware sent to Cisco ISE acting as a Subscriber.