TAP CISCO MPP Packet Capture Service

Test Plan Name: TAP_CiscoMPP_PCS_TestSuite

Introduction

➢ This test plan pertains to Cisco MPP Packet Capture Service (PCS) testing facilitates intercepting data packets that travel over a network. The network packets can validate, store, and analyze with test calls conducted between Cisco MPP phones utilizing the Tekvizion Automation Platform. To use this test plan effectively, the following steps must be followed:

Prerequisites:

➢ The Test Plan Required minimum of **3 MPP phones**.
➢ The minimum software version on the MPP phones for use with the 360 Automation Platform is **11.3.1 and higher**.

➢ "**Dial Plan**" should be configured in MPP phone as below.
  ⇨ *(*xx|[3469]11|0|00|[2-9]xxxxxx|1xxx[2-9]xxxxxxS0|xxxxxxxxxxxx.)*
  ⇨ *Login to MPP phone-> Admin-> Advanced-> Voice-> Ext1 -> Dial Plan.*

➢ "**Auto Answer**" should be disabled for all the respective MPP phones.

➢ **WebSocket connection** should be established between **tap and MPP phone**. (This applies for all available phones. Refer **"360 Automation Platform Prerequisites Document -> Section No. 2.Prerequisites on MPP -> Pg No.2")**
  i. *Access the phone Web UI: /admin/advanced.*
  ii. *Navigate to Voice-> Phone-> WebSocket API fields a. Configure the Control Server URL to: ws://:80/onPOINTLink/sockserver b. Allowed APIs: .**
  iii. *Upon completing the aforementioned configuration, the respective MPP phones should be displayed in "Phone Manager" under "Unmanaged."*

Packet Capture Services (Refer "*360 Automation Platform User Guide Document -> Section No. 8.1.1.7.2 Trace Capture using Packet Capture Service*"):

➢ To analyze the captured network packets, port mirroring concept is extensively used in test environment. Need to create a mirroring port on a switch and connect PCS to that mirroring port. The mirroring port helps to monitor all the traffic going through the rest of the ports configured to the mirroring port in that switch. This enables us to analyze the traffic between different network components. (Refer **"360 Automation Platform User Guide Document -> Section No. 8.1.1.7.2 Trace Capture using Packet Capture Service"**)

Prerequisites:

To work with the Packet Capture Service, ensure that:
   i. You created a mirroring port on a network switch.
   ii. The PCS server monitors the mirroring port.
   iii. There are no duplicate packets and retransmissions in the network for the packet filtering to work as expected.
   iv. Required ports to be enabled in firewall. i.e.: Source-PCS, Destination-TAP, Port-80/443 (Refer "**360 Automation Platform Release Notes Document -> Section No. 3 Hardware and Software Requirements**)

Hardware and Software Requirements:

➢ The recommended system specifications for PCS are as follows:

➢ The recommended system specification to deploy Automation Platform for PCS collocated with Automation Platform is as follows:

CPUs	Memory
4 vCPUs	16GB

➢ The recommended system specification to deploy PCS in a standalone Linux machine with Automation Platform is as follows:

Model Name	CPUs	Operating System	Memory
Intel® Core™ i3-6100 CPU @ 3.70 GHz	4	CentOS Linux / CentOS Linux 7 (Core)	8GB

➢ To install a new Packet Capture Service (PCS), perform as follows:
   1. Navigate to 360 Automation Platform > Admin Panel > Packet Capture Service and download the Packet Capture Service Installer.
      The PCS gets pointed to the same 360 AP computer from where you download the Packet Capture Service Installer.
      You may install a Packet Capture Service (PCS), in one of the modes as follows:

- PCS standalone mode: Install the PCS installer in a separate Linux machine/VM.
- PCS Co-located with 360 AP: Install the PCS installer on the same VM where you install the 360 AP.

2. Copy the downloaded Packet Capture Service Installer onto a CentOS Linux machine (VM or Computer).
3. Navigate to the path where you saved the PCS Installer on to the system, for example, cd/tmp.
4. Provide read-write permissions to the PCS Installer file using the command:
   - **chmod +x <filename of the PCS Installer>**
5. Execute the PCS installer file using the command:
   - **./ <filename of the PCS Installer>**

➢ After installation, the PCS installer performs as follows:
1. Creates the Properties file, (if it does not exist) in the path <home/onPOINT/conf>, installs the Properties file, and then configures it to 360 AP.
2. Installs the required dependent software as follows:
   - **Jdk v 1.8.0**
   - **TShark v 2.6.6**

➢ An instance of the Packet Capture Service appears on the "Packet Capture Service" screen with the details as follows:
   i. Once the properties file is pointed to TAP, PCS machine will be displayed in below navigation.
      - **Login to TAP -> Admin Panel -> Packet Capture Service.**
   ii. Associated unique identifier listed under the "UUID" (Universally unique identifier) column.
   iii. Interface "any" appears, by default under the "Interface" column. You need to change the interface, identify the interface that is connected to the mirroring port and select it from the drop-down list.
   iv. Status of the PCS "Available" under the "Status" column.
      - An "Offline" status typically indicates a VM that is either shut down or lost connectivity to the 360 AP.

Broadworks Services:
➢ In accordance with the **Test Plan**, the following BroadWorks services must be enabled for the corresponding Cisco MPP phone variables in order to conduct comprehensive testing.

Phone Variables	BWK Services
DUT	Calling Name Delivery, Calling Number Delivery, Three-Way Call
A	Calling Name Delivery, Calling Number Delivery, Three-Way Call
B	Calling Name Delivery, Calling Number Delivery