Contents

Introduction

This document describes how to capture Point-to-Point Packet over Ethernet (PPPoE) packet on an ingress interface of ASR1000 box.

Prerequisites

Requirements

Cisco recommends that you meet these requirements before you attempt this configuration:

- Layer 1 connectivity between ASR1k and the client router is up

Components Used

This document is restricted to XE version 3.13 and above.

PPPoE Server - ASR1006

PPPoE Client - Any Cisco Router

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Background

This document help a techinician to determine if PPPoE packets are actually hitting the interface of the ASR1k router acting as a PPPoE Server. This is usefull in scenarios where we troubleshoot PPPoE failures.

Configure

Note: Use the Command Lookup Tool (registered customers only) in order to obtain more information on the commands used in this section.

Configuration on the ASR1006 that acts as a Server

A sample of the configuration on ASR1006 that acts as a server is shown here:

```
interface GigabitEthernet0/0/2 >>>> Interface connecting towards the
PPPoE Client
 no ip address
 negotiation auto
 pppoe enable group global
 cdp enable

bba-group pppoe global
 virtual-template 1

interface Virtual-Template1
 ip unnumbered Loopback0
 peer default ip address pool test
 ppp authentication chap
end

interface Loopback0
 ip address 10.1.1.1 255.255.255.255
end
```

Capturing PPPoE packet on ASR1006

Enable below commands on exec prompt of the ASR1006 router:

```
ASR# debug platform condition interface GigabitEthernet0/0/2 ingress
ASR# debug platform packet-trace packet 256 fia-trace
ASR# debug platform condition start
ASR# debug platform packet-trace enable
```

Initiate PPPoE session from the PPPoE Client

```
ASR# show platform packet-trace summary

ASR# show platform packet-trace summary
Pkt    Input            Output           State  Reason
0      Gi0/0/2          internal0/0/rp:0  PUNT   3    (Layer2 control and
legacy)
1      Gi0/0/2          internal0/0/rp:0  PUNT   27   (Subscriber session
control)
2      Gi0/0/2          internal0/0/rp:0  PUNT   27   (Subscriber session
control)
3      Gi0/0/2          internal0/0/rp:0  PUNT   27   (Subscriber session
control)
4      Gi0/0/2          internal0/0/rp:0  PUNT   27   (Subscriber session
```

```
control)
5     Gi0/0/2          internal0/0/rp:0  PUNT   27  (Subscriber session
control)
6     Gi0/0/2          internal0/0/rp:0  PUNT   27  (Subscriber session
control)
7     Gi0/0/2          internal0/0/rp:0  PUNT   27  (Subscriber session
control)
8     Gi0/0/2          internal0/0/rp:0  PUNT   27  (Subscriber session
control)
```

Now we can check a specific packet above using:

```
ASR# show platform packet-trace packet 8

Packet: 8           CBUG ID: 8
Summary
  Input     : GigabitEthernet0/0/2
  Output    : internal0/0/rp:0
  State     : PUNT 27  (Subscriber session control
  Timestamp
    Start   : 1732092767453258 ns (11/25/2015 09:27:01.520615 UTC)
    Stop    : 1732092767494466 ns (11/25/2015 09:27:01.520656 UTC)
Path Trace
  Feature: FIA_TRACE
    Entry      : 0x802655e0 - PPPOE_GET_SESSION
    Lapsed time: 2493 ns
  Feature: FIA_TRACE
    Entry      : 0x805ce9e4 - ESS_ENTER_SWITCHING
    Lapsed time: 1293 ns
```

The above packet shows that PPPoE packets are hitting the interface.

You can disable the packet tracer as below:

```
ASR# no debug platform condition interface GigabitEthernet0/0/2 ingress
ASR# no debug platform packet-trace packet 256 fia-trace
ASR# debug platform condition stop
ASR# no debug platform packet-trace enable
```

Related Information

Embedded Packet Capture