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Introduction

This document describes a new CLI, which tracks the presence of a Point-to-Point Protocol (PPP) session over a dialer interface.

Problem

Dialer interface is used widely in Digital Subscriber Line (DSL) world, in different type of deployments like Point-to-Point Protocol over Ethernet (PPPoE), Point-to-Point Protocol over Asynchronous Transfer Mode (PPPoA) and so on. Dialer interface always stay up irrespective of the PPP session on top of it is up or down. One known problem with this behavior is that it can cause black hole in routing in cases where you have multiple outgoing connections, unless you use some additional features such as Internet Protocol Service Level Agreement (IP SLA) tracking to check the reachability over dialer interface.

Solution

A new CLI **dialer down-with-vInterface** has been introduced in recent IOS versions brings the dialer interface down when the PPP session goes down.

A configuration snippet from a DSL Router:

Dialer interface is in up state, even though the PPPoE session is down.

```
Router#show pppoe session
    1 client session

Uniq ID  PPPoE  RemMAC          Port                    VT  VA          State
         SID    LocMAC                                      VA-st       Type
   N/A    58    00c1.64d5.41d1  Gi0/1                   Di1 N/A         PADISNT
                0006.f657.67b1


Router#show interface dialer1
Dialer1 is up, line protocol is up (spoofing)
 Hardware is Unknown
 Internet address will be negotiated using IPCP
 MTU 1500 bytes, BW 56 Kbit/sec, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation PPP, LCP Closed, loopback not set
 Keepalive set (10 sec)
 DTR is pulsed for 1 seconds on reset
 Last input never, output never, output hang never
 Last clearing of "show interface" counters 00:49:48
 Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
```

```
 Queueing strategy: fifo
 Output queue: 0/40 (size/max)
 5 minute input rate 0 bits/sec, 0 packets/sec
 5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes
    538 packets output, 7524 bytes
CLIENT(config-if)
```

You can add the new CLI under Dialer interface configuration as shown:

```
Router(config)#int dialer1
Router(config-if)# dialer down-with-vInterface
```

Once after the **dialer down-with-vInterface** CLI is entered, dialer interface moved to down state as the PPP session is in down state, as shown in the example:

```
Router#show interface dialer1
Dialer1 is down, line protocol is down (spoofing)
 Hardware is Unknown
 Internet address will be negotiated using IPCP
 MTU 1500 bytes, BW 56 Kbit/sec, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation PPP, LCP Closed, loopback not set
 Keepalive set (10 sec)
 DTR is pulsed for 1 seconds on reset
 Last input never, output never, output hang never
 Last clearing of "show interface" counters 00:50:36
 Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
 Queueing strategy: fifo
 Output queue: 0/40 (size/max)
 5 minute input rate 0 bits/sec, 0 packets/sec
 5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes
    538 packets output, 7524 bytes
```

This helps to avoid the need for additional configuration such as IP SLA, tracking and so on for routing failover to work while using dialer interfaces.

Related Information

[PPPoE Configuration Guide](#)