Threshold PPM Logic Improvement for Managed WAN (Cisco, Versa)

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Example Problem: Large number of performance tickets (one customer 500/month)

	INCIDENTTYPE	Aug '24	Sept '24	Oct '24	Nov '24	Dec '24	Jan '25	Feb '25	Grand Total
MPLS	PPM_SDSB_Versa_-_Path_Packet_Loss_>_1%sdwan	546	387	379	390	334	243	14	2,293
IDE	PPM_SDSB_Versa_-_Path_Packet_Loss_>_5%sdwan	388	213	247	339	237	128	3	1,555
IDE	PPM_SDSB_Versa_-_Path_Delay_Variation_>_50mssdwan			3	41	20	31	1	96
MPLS	PPM_SDSB_Versa_-_Path_Delay_Variation_>_30mssdwan			6	23	24	18	3	74
	Grand Total	934	600	635	793	615	420	21	4,018

Scope of New Logic

The new logic is applicable for Threshold PPM

- Latency
- Jitter
- Packet Loss

Time above Threshold

- PIP - 3 consecutive samples of 5 mins
- IDE - 4 consecutive samples of 5 mins

Versa SDSB: New Logic (Option-1)

- **MPLS**
  - Raise P2 for the following cases for a given site
    - packet loss > 1% for 3 consecutive samples of 5 mins (aka time above threshold)
      - forward packet loss (irrespective of reverse loss, PDU loss)
      - reverse packet loss (irrespective of forward loss, PDU loss)
  - Raise P4 for the following cases:
    - PDU Loss > 5% for 3 consecutive samples of 5 mins
- **IDE**
  - Raise P2 for the following cases for a give site
    - packet loss > 5% for 4 consecutive samples of 5 mins
      - forward packet loss(irrespective of reverse loss, PDU loss)
      - reverse packet loss(irrespective of reverse loss, PDU loss)
  - Raise P4 for the following cases:
    - PDU Loss > 10% for 4 consecutive samples of 5 mins (irrespective of forward or reverse loss)

** Current logic for Versa: (forward loss + reverse loss)/2, based on the actual loss %age and for three consecutive intervals*

Versa SDSB: New Logic (Option-2)

- **MPLS**
  - Raise P2 for the following cases for a given site
    - packet loss > 1% for 3 consecutive samples of 5 mins
      - forward packet loss (irrespective of reverse loss, PDU loss)
      - ~~reverse packet loss (irrespective of forward loss, PDU loss)~~
  - Raise P4 for the following cases:
    - PDU Loss > 5% for 3 consecutive samples of 5 mins
- **IDE**
  - Raise P2 for the following cases for a give site
    - packet loss > 5% for 4 consecutive samples of 5 mins
      - forward packet loss(irrespective of reverse loss, PDU loss)
      - ~~reverse packet loss(irrespective of reverse loss, PDU loss)~~
  - Raise P4 for the following cases:
    - PDU Loss > 10% for 4 consecutive samples of 5 mins (irrespective of forward or reverse loss)

** Current logic for Versa: (forward loss + reverse loss)/2, based on the actual loss %age and for three consecutive intervals*

Versa SDSB: New Logic (Option-3)

- **MPLS**
  - Raise P2 for the following cases for a given site
    - packet loss > 1% for 3 consecutive samples of 5 mins
      - (forward packet loss + reverse loss)/2 (current logic)
    - Raise P4 for the following cases:
      - PDU Loss > 5% for 3 consecutive samples of 5 mins
- **IDE**
  - Raise P2 for the following cases for a give site
    - packet loss > 5% for 4 consecutive samples of 5 mins
      - (forward packet loss + reverse loss)/2 (current logic)
    - Raise P4 for the following cases:
      - PDU Loss > 5% for 3 consecutive samples of 5 mins

Cisco SD-WAN: New Logic (PARKED)

- **MPLS**
  - Raise P2 for the following cases for a given site
    - packet loss > 1% for 3 consecutive samples of 5 mins
- **IDE**
  - Raise P2 for the following cases for a give site
    - packet loss > 5% for 4 consecutive samples of 5 mins


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