Hewlett Packard Enterprise

HPE aruba networking

AOS-CX 10.13 Update: CX rate collection interval

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CX rate collection interval

Goal : Ability to customize interface rate collection interval

What is Rate collection Interval ?

Rate collection Interval is the pace at which the statistics of the Interface is refreshed.

What's New?

-Addition of "rate-interval <seconds>" CLI
-Intervals are in multiple of 5 seconds.
-Supported across all CX-Platforms
-Rate Interval is now Configurable.

Before 10.12.1000 - Rate interval was not configurable

```
Interface 1/1/27 is up
 Admin state is up
 Link state: up for 21 hours (since Mon Oct 23 14:06:43 PDT
2023)
 Link transitions: 1
 Description:
 Persona:
 Hardware: Ethernet, MAC Address: 8c:85:c1:c0:53:25
 MTU 1500
 Type 10G-DAC1 / 10G SFP+ 1m DAC
 Full-duplex
 qos trust cos
 Speed 10000 Mb/s
 Auto-negotiation is off
 Flow-control: off
 Error-control: off
 VLAN Mode: native-untagged
 Native VLAN: 1
 Allowed VLAN List: 5-6

 Rate collection interval: 300 seconds
```

```
Rate                                RX                  TX        Total (RX+TX)
 ---------------- -------------------- -------------------- --------------------
 Mbits / sec                      0.00                 0.00                 0.00
 KPkts / sec                      0.00                 0.00                 0.00
   Unicast                        0.00                 0.00                 0.00
   Multicast                      0.00                 0.00                 0.00
   Broadcast                      0.00                 0.00                 0.00
 Utilization %                    0.00                 0.00                 0.00


 Statistic                          RX                   TX                Total
 ---------------- -------------------- -------------------- --------------------
 Packets                        171037                 2862               173899
   Unicast                           0                    0                    0
   Multicast                    171037                 2862               173899
   Broadcast                         0                    0                    0
 Bytes                        13517341               549375             14066716
 Jumbos                            0                    0                    0
 Dropped                           0                    0                    0
 Pause Frames                      0                    0                    0
 Errors                            0                    0                    0
   CRC/FCS                         0                  n/a                    0
   Collision                     n/a                    0                    0
   Runts                           0                  n/a                    0
   Giants                          0                  n/a                    0
```

Existing CLI with default interval of 300 seconds

In 10.12.1000 - Configurable Rate intervals in Chassis

- 30-300 seconds | The statistics rate collection interval in seconds
- Rate interval under 30 seconds is not supported on 6400,8400 platforms

```
Bldg2-Acc-6405(config)#  int 1/3/51
Bldg2-Acc-6405(config-if)# rate
  rate-interval  Configure the statistics rate collection interval
  rate-limit     Apply a rate-limit to a specific traffic type for this port
Bldg2-Acc-6405(config-if)# rate-interval
  <30-300>  The rate collection interval in seconds (default: 300)
Bldg2-Acc-6405(config-if)# rate-interval 30
Bldg2-Acc-6405(config-if)# show int 1/3/51

Interface 1/3/51 is up
 Admin state is up
 Link state: up for 2 days (since Mon Oct 23 21:05:47 UTC 2023)
 Link transitions: 1
 Description:
 Persona:
 Hardware: Ethernet, MAC Address: 90:20:c2:dc:57:ce
 MTU 1500
 Type 10G-DAC3 / 10G SFP+ 3m DAC
 Full-duplex
 qos trust none
 Speed 10000 Mb/s
 Auto-negotiation is off
 Flow-control: off
 Error-control: off
 Rate collection interval: 30 seconds
```

Configurable Rate intervals in Other CX platforms

- 5-300 | The statistics rate collection interval in seconds
- Rate interval under 5 seconds is not supported on AOS-CX platforms

```
Bldg4-Acc-6300M-A0(config-if)# int 1/1/3
Bldg4-Acc-6300M-A0(config-if)# rate-interval
  <5-300>  The rate collection interval in seconds (default: 300)
Bldg4-Acc-6300M-A0(config-if)# rate-interval 10
Bldg4-Acc-6300M-A0(config-if)# show int 1/1/3


Interface 1/1/3 is up
 Admin state is up
 Link state: up for 2 days (since Mon Oct 23 14:03:36 PDT 2023)
 Link transitions: 1
 Description: IXIA Cd2Pt8
 Persona:
 Hardware: Ethernet, MAC Address: 18:7a:3b:1b:2d:bd
 MTU 1500
 Type 5G-SmartRate
 Full-duplex
 qos trust none
 Speed 1000 Mb/s
 Auto-negotiation is on
 Flow-control: off
 Error-control: off
 MDI mode: MDI
 VLAN Mode: access
 Access VLAN: 180

 Rate collection interval: 10 seconds
```

Configurable Rate intervals- Best Practices

- In any of the products, smaller refresh interval is going to consume additional resources.
- These resources could be CPU utilization calculating rates, or communication bandwidth to each ASIC.
- While the impact to changing rate interval is likely small, the default value of 300 seconds is preferred when not actively debugging an issue.

In 10.12.1000 - Configurable Rate intervals -Rest API

Responses

Curl

```
curl -X GET "https://10.6.10.6/rest/v10.13/system/interfaces/1%2F1%2F1?attributes=rate_interval&depth=1" -H  "accept: application/json" -H  "x-csrf-token: 1ev3oHYvavsiNSZ5vmo5tA==" 
```

Request URL

```
https://10.6.10.6/rest/v10.13/system/interfaces/1%2F1%2F1?attributes=rate_interval&depth=1
```

Server response

Code	Details
200	Response body

```
{
  "rate_interval": 20
}
```

Download

Response headers

```
cache-control: no-cacheno-store
connection: keep-alive
content-length: 25
content-security-policy: script-src 'self' 'unsafe-inline'; object-src 'none'; font-src *; media-src 'none'; form-action 'self';
content-type: application/json; charset=utf-8
date: Mon20 Nov 2023 19:43:37 GMT
etag: 94e8fa3cae981d5820e8a871872e35a6
server: nginx
strict-transport-security: max-age=31536000; includeSubdomains;
x-content-type-options: nosniff
x-frame-options: SAMEORIGIN
x-xss-protection: 1; mode=block
```

Responses

Code	Description	Links
200	OK	*No links*

Thank you

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