FLEXIBLE PIC CONCENTRATOR (FPC)

CONFIGUTRATION EXAMPLE:

RESTRICTIONS:

- sFlow sampling on ingress interfaces does not capture CPU-bound traffic
- sFlow sampling on egress interfaces does not support broadcast and multicast packets
- sampling can be configured only on physical unterfaces et,xe and etc. to collect samples for LAG configure sflow for each member
- sampling rate can be N = 1..65535,
- CPU can handle maximum 9500 samples per second without chance to overload, all samples that exceeds sw rate limiter are droped

The most accurate sampling rate can be calculated from current perfomance.
Example:
Current permfonace is 2Mpps. Then most accurate sampling rate is :
9500/2000000 ~= 210 samples per second

If samples per second rate exceeds SW rate limiter extra samples are dropped and sampling rates(N) are reduced for top five interfaces. The reduced sampling rate is used until the device is rebooted or when a new sampling rate is configured.
SW rate limiter can be set to 300..9500 samples per second

```
protocols {
    sflow {
        agent-id 192.168.168.1;
        polling-interval 5;
        sample-rate {
            ingress 1024;
            egress 1024;
        }
        source-ip 192.168.168.1;
        collector 172.31.0.1 {
            udp-port 6343;
        }
        interfaces xe-0/0/70:0.0;
        interfaces xe-0/0/70:1.0;
    }
}
```

FPC CPU

MAX 9500 SAMPLES/SEC

SW RATE LIMITER

SAMPLES PER SECOND
$sum(n_{1..6}/N_{1..6})$

SAMPLE   SAMPLE   SAMPLE   SAMPLE   SAMPLE   SAMPLE

PFE   PFE   PFE   PFE   PFE   PFE

INTERFACE XE,ET   INTERFACE XE,ET   INTERFACE XE,ET   INTERFACE XE,ET   INTERFACE XE,ET   INTERFACE XE,ET

PACKET   PACKET   PACKET   PACKET   PACKET   PACKET

PACKET   PACKET   PACKET   PACKET   PACKET   PACKET

n is a number of packets PFE handles on interfaces for wich sFlow sampling is configured(ingress,egress)

PFE takes sample from every N packet and sends this sample to FPC CPU every sample includes fist 128 bytes of packet
sampling rate N can be individual configured for each interface

.... n_1 .... n_2 .... n_3 .... n_4 .... n_5 .... n_6

PACKET   PACKET   PACKET   PACKET   PACKET   PACKET