YANG Model for IP Traffic Flow Security

IETF 111 – “draft-ietf-ipsecme-yang-iptfs-00”
No Changes since IETF110

• Base spec draft-ipsecme-iptfs-09.txt progressing since WG last call
• Augmented YANG *draft-ietf-i2nsf-sdn-ipsec-flow-protection* now *RFC 9061*

Next Steps
• Asking for WG last call
Current Tree (ike version shown)

module: ietf-ipsecme-iptfs
augment /nsfike:ipsec-ike/nsfike:conn-entry/nsfike:spd
   /nsfike:spd-entry/nsfike:ipsec-policy-config
   /nsfike:processing-info/nsfike:ipsec-ipsec-sa-cfg:
   +--rw traffic-flow-security
   |  +--rw congestion-control? boolean
   |  +--rw packet-size
   |  |  +--rw use-path-mtu-discovery? boolean
   |  |  +--rw outer-packet-size? uint16
   |  +--rw (tunnel-rate)?
   |  |  +--:(12-fixed-rate)
   |  |  |  +--rw l2-fixed-rate? uint64
   |  |  +--:(13-fixed-rate)
   |  +--rw l3-fixed-rate? uint64
   +--rw dont-fragment? boolean
   +--rw max-aggregation-time? decimal64
augment /nsfike:ipsec-ike/nsfike:conn-entry/nsfike:child-sa-info:
   +--ro traffic-flow-security
   |  +--ro congestion-control? boolean
   |  +--ro packet-size
   |  |  +--ro use-path-mtu-discovery? boolean
   |  |  +--ro outer-packet-size? uint16
   |  +--ro (tunnel-rate)?
   |  |  +--:(12-fixed-rate)
   |  |  |  +--ro l2-fixed-rate? uint64
   |  |  +--:(13-fixed-rate)
   |  +--ro l3-fixed-rate? uint64
   +--ro dont-fragment? boolean

augment /nsfike:ipsec-ike/nsfike:conn-entry/nsfike:child-sa-info:
   +--ro ipsec-stats {ipsec-stats}?
   |  +--ro tx-pkts? uint64
   |  +--ro tx-octets? uint64
   |  +--ro tx-drop-pkts? uint64
   |  +--ro rx-pkts? uint64
   |  +--ro rx-octets? uint64
   |  +--ro rx-drop-pkts? uint64
   +--ro iptfs-inner-pkt-stats {iptfs-stats}?
   |  +--ro tx-pkts? uint64
   |  +--ro tx-octets? uint64
   |  +--ro rx-pkts? uint64
   |  +--ro rx-octets? uint64
   |  +--ro rx-incomplete-pkts? uint64
   +--ro iptfs-outer-pkt-stats {iptfs-stats}?
   |  +--ro tx-all-pad-pkts? uint64
   |  +--ro tx-all-pad-octets? uint64
   |  +--ro tx-extra-pad-pkts? uint64
   |  +--ro tx-extra-pad-octets? uint64
   |  +--ro rx-all-pad-pkts? uint64
   |  +--ro rx-all-pad-octets? uint64
   |  +--ro rx-extra-pad-pkts? uint64
   |  +--ro rx-extra-pad-octets? uint64
   |  +--ro rx-errored-pkts? uint64
   |  +--ro rx-missed-pkts? uint64

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Definitions of Managed Objects for IP Traffic Flow Security

IETF 111 – “draft-ietf-ipsecme-mib-iptfs-00”
Objective: Provide a read only SNMP MIB

- Some operators still require read-only SNMP support
- Mechanically derived from the YANG model
- Adopted by WG

Next Steps
- Asking for WG last call

```plaintext
leaf l2-fixed-rate {
    type uint64;
    description
        "Target bandwidth/bit rate in bps for iptfs tunnel. This
        fixed rate is the nominal timing for the fixed size packet.
        If congestion control is enabled the rate may be adjusted
        down (or up if unset).";
    reference
        "draft-ietf-ipsecme-iptfs section 4.1";
}
```

```plaintext
l2FixedRate OBJECT-TYPE
SYNTAX      Counter64
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "TFS bit rate may be specified at layer 2 wire rate.
    Target bandwidth/bit rate in bps for iptfs tunnel.
    This rate is the nominal timing for the fixed size
    packet. If congestion control is enabled the rate may
    be adjusted down (or up if unset)."
 ::= { iptfsConfigTableEntry 5 }
```
Comments / Questions?