YANG Model for IP Traffic Flow Security
IETF 110 – “draft-fedyk-ipsecme-yang-iptfs-02”
Changes since IETF110

• Updates based on comments received during adoption call
  • Reorganized statistics (separated inner and outer stats)
  • Added max-aggregation-time
  • Tracked name changes from I2NSF YANG model (per IESG publication review)
  • Changes included in draft-fedyk-ipsecme-yang-iptfs-02

• Adopted by WG
  • Republishing as draft-ietf-ipsecme-yang-iptfs-00
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-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 12-fixed-rate?    uint64
        |  +=-(13-fixed-rate)
        |    |  +--rw 13-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 12-fixed-rate?    uint64
      |  +=-(13-fixed-rate)
      |    |  +--ro 13-fixed-rate?    uint64
    +--ro dont-fragment?          boolean
    +--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 rx-all-pad-pkts?       uint64
      |  +=-ro rx-all-pad-octets?     uint64
      |  +=-ro tx-extra-pad-pkts?     uint64
      |  +=-ro tx-extra-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
  3/5/2021
Next Steps

- Track changes in the base IPsec specification
- Solicit feedback from the WG
Definitions of Managed Objects for IP Traffic Flow Security

IETF 110 – “draft-fedyk-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

```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 }
```
Next Steps

• Ready for WG adoption?
Comments / Questions?