BMP YANG Module
draft-cptb-grow-bmp-yang

Camilo Cardona, NTT
Paolo Lucente, NTT
Thomas Graf, Swisscom
Benoit Claise, Huawei

23 March 2022, GROW WG, IETF 113
Main objective

- Provide a standard module for managing BMP on a device.
Basic points

• Configure and monitor BMP
• It includes an action to clear a BMP station
• Explicit configuration of the source of data to send to each station:
  • RIB 'modes'
  • Address-families
  • Peers (for the RIBs where it applies)
    • Identified individually, based on peer type (e.g. external, internal), or "all-peer"
Feedback

Thanks to Tim Evens, Jeffrey Haas, Tom Petch for their valuable feedback

A few observations we already addressed in version -02:

• Wrong port type
• Counter units
• NACM default deny-all
• discontinuity leaf in the stats container
Some pending points:
• Extend the BMP session options (initiation delay, backoff times)
• How to use leverage the TCP module
• Units for stats
• Where to place the model in the routing tree
• Add examples to help with the previous discussions
draft-cptb-grow-bmp-yang

• Does the draft make sense for the group?
• Any other question/comments?
module: ietf-bmp

+-rw bmp
  +--rw stations
    |  +--rw station* [id]
    |    +--rw id      string
    |    +--rw connection
    |    |    +--rw destination-address  inet:ip-address
    |    |    +--rw local-address?  inet:ip-address
    |    |    +--rw destination-port?  inet:port-number
    +--rw bmp_session
    |    +--rw initiation-message?  string
    |    +--rw statistics-interval?  uint32
  +--rw bmp_sources
    |    +--rw adj-rib-in-pre
    |    |    +--rw enabled?  boolean
    |    |    +--rw address-families
    |    |    |    +--rw address-family* [name]
    |    |    |    |    +--rw name  -> /rt:routing/control-plane-protocols/control-plane-protocol/bgp:bgp/global/afi-safis/afi-safi/name
    |    |    |    |    +--rw peers*  union
    |    |    +--rw adj-rib-in-post
    |    |    |    +--rw enabled?  boolean
    |    |    |    +--rw address-families
    |    |    |    |    +--rw address-family* [name]
    |    |    |    |    |    +--rw name  -> /rt:routing/control-plane-protocols/control-plane-protocol/bgp:bgp/global/afi-safis/afi-safi/name
    |    |    |    |    |    +--rw peers*  union
    |    +--rw local-rib
    |    |    +--rw enabled?  boolean
    |    |    +--rw address-families*  identityref
    |    +--rw adj-rib-out-pre
    |    |    +--rw enabled?  boolean
    |    |    +--rw address-families
    |    |    |    +--rw address-family* [name]
    |    |    |    |    +--rw name  -> /rt:routing/control-plane-protocols/control-plane-protocol/bgp:bgp/global/afi-safis/afi-safi/name
    |    |    |    +--rw peers*  union
rw adj-rib-out-post
  rw enabled?  boolean
  rw address-families
    rw address-family* [name]
      rw name  -> /rt:routing/control-plane-protocols/control-plane-protocol/bgp:bgp/global/afi-safis/afi-safi/name
      rw peers*  union
  rw session-stats
    rw discontinuity-time  yang:date-and-time
    ro established-session?  boolean
    ro total-route-monitoring-messages?  uint64
    ro total-statistics-messages?  uint64
    ro total-peer-down-messages?  uint64
    ro total-peer-up-messages?  uint64
    ro total-initiation-messages?  uint64
    ro total-route-mirroring-messages?  uint64
  x actions
    x session-reset
      w input
        w station?  -> /bmp/stations/station/id
      w output
        ro (outcome)?
          ro (success)
            ro success?  empty
            ro (failure)
          ro failure?  string