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

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Summary of diffs in the model

- Added a set of options for connections
  - Active/passive
  - MSS
  - Keepalives
  - Session-Security
- Added Network-instance to the BMP-sources

Summary of diffs in the draft

- Included an example of configuring a BMP monitoring station

BMP sources

- Explicit configuration of the source of data to send to each station:
  - Network instances
    - Name of the Network instance or all of them with **bmp-ni-types-all-ni-idty**
  - RIB 'modes'
  - Address-families
  - Peers (for the RIBs where it applies)
    - Identified individually, based on peer type (e.g., external, internal), or all peers (**bmp-peer-types-all-peers-idty**)
- Provide a method for operators to select the data they require

Example of BMP sources

```xml
<bmp xmlns="urn:ietf:params:xml:ns:yang:ietf-bmp">
   <stations>
   ¦ <station>
…
   ¦   <bmp_sources>
   ¦   ¦ <network-instances>
   ¦   ¦   <network-instance>
   ¦   ¦   ¦ <network-instance-id>global</network-instance-id>
   ¦   ¦   ¦ <adj-rib-in-pre>
   ¦   ¦   ¦   <enabled>true</enabled>
   ¦   ¦   ¦   <address-families>
   ¦   ¦   ¦   ¦ <address-family>
   ¦   ¦   ¦   ¦   ¦ <name xmlns:bt="urn:ietf:params:xml:ns:yang:\/
   ¦   ¦   ¦   ¦   ¦ ietf-bgp-types">bt:ipv4-unicast</name>
   ¦   ¦   ¦   ¦   <peers>external</peers>
   ¦   ¦   ¦   ¦ </address-family>
   ¦   ¦   ¦   </address-families>
   ¦   ¦   ¦ </adj-rib-out-pre>
   ¦   ¦   </network-instance>
   ¦   ¦ </network-instances>
   ¦   </bmp_sources>
   ¦ </station>
   </stations>
</bmp>
```

Gaps

- We still haven't introduced initiation-delay and backoff timers.
- Do we need more extensive options in BMP sources (e.g. filtering)? For instance, filtering which updates to send using a prefix lists?
  - Thanks to Yimin Shen for his comments and suggestions about this.

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Feedback

- Working group adoption?

```
module: ietf-bmp
  +--rw bmp
    +--rw stations
      +--rw station* [id]
      | +--rw id            string
      | +--rw connection
      | | +--rw (passive_or_active)?
      | | | +--:(active)
      | | | | +--rw active
      | | | |    +--rw network-instance   leafref
      | | | |    +--rw station-address    inet:ip-address
      | | | |    +--rw station-port       inet:port-number
      | | | |    +--rw local-address      inet:ip-address
      | | | |    +--rw local-port?        inet:port-number
      | | | +--:(passive)
      | | |    +--rw passive
      | | |       +--rw network-instance   leafref
      | | |       +--rw station-address    inet:ip-address
      | | |       +--rw station-port?      inet:port-number
      | | |       +--rw local-address?     inet:ip-address
      | | |       +--rw local-port?        inet:port-number
      | | +--rw maximum-segment-size?   uint16
      | | +--rw mtu-discovery?          boolean
      | | +--rw keepalives! {keepalives-supported}?
      | | | +--rw idle-time        uint16
      | | | +--rw max-probes       uint16
      | | | +--rw probe-interval   uint16
      | | +--rw secure-session-enable?   boolean
      | | +--rw secure-session
      | |    +--rw (authentication)?
      | |       +--:(ao)
      | |       | +--rw enable-ao?           boolean
      | |       | +--rw send-id?             uint8
      | |       | +--rw recv-id?             uint8
      | |       | +--rw include-tcp-options?  boolean
      | |       | +--rw accept-key-mismatch?  boolean
      | |       +--:(md5)
      | |          +--rw enable-md5?          boolean
      |
```

```
+--rw bmp_session
|  |  +--rw initiation-message?   string
|  |  +--rw statistics-interval?  uint32
|  +--rw bmp_sources
|  |  +--rw network-instances
|  |     +--rw network-instance* [network-instance-id]
|  |        +--rw network-instance-id   union
|  |        +--rw adj-rib-in-pre
|  |        |  +--rw enabled?          boolean
|  |        |  +--rw address-families
|  |        |     +--rw address-family* [name]
|  |        |        +--rw name    leafref
|  |        |        +--rw peers*  union
|  |        +--rw adj-rib-in-post
|  |        |  +--rw enabled?          boolean
|  |        |  +--rw address-families
|  |        |     +--rw address-family* [name]
|  |        |        +--rw name    leafref
|  |        |        +--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    leafref
|  |        |        +--rw peers*  union
|  |        +--rw adj-rib-out-post
|  |           +--rw enabled?          boolean
|  |           +--rw address-families
|  |              +--rw address-family* [name]
|  |                 +--rw name    leafref
|  |                 +--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
|     +--rw actions
|        +---x session-reset
|           +--ro output
|              +--ro (outcome)?
|                 +--:(success)
|                 |  +--ro success?   empty
|                 +--:(failure)
|                    +--ro failure?   string
```