                        An I2RS BGP Data Modell
                     draft-hares-i2rs-bgp-dm-00.txt

Abstract

   This document introduces a yang data for i2RS BGP protocol and
   network policy that aligns with the I2RS BGP use cases. This draft
   utilizes the general Policy based routing structured found in the RIB
   Information Model (IM) and Policy Base Policy.

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1. Introduction

   The Interface to the Routing System (I2RS) provides read and write
   access to the information and state within the routing process within
   routing elements via protocol message exchange between an I2RS Client
   and an I2RS Agent associated with the a routing system. The
   [I-D.ietf-i2rs-architecture] describes the basic interactions of this
   exchange. One of the important functions of this messages exchange
   is for the I2RS client to interact with one or more I2RS agents to
   collect information from network routing systems.

   One of the key information pieces that I2RS clients may collect from
   I2RS agents is the BGP information regarding BGP peers, BGP routes,
   and network topologies created within BGP. This document introduces
   a basic information model for BGP policies. This policy model can be
   linked with other information models such as the I2RS RIB
   informational model [I-D.ietf-i2rs-rib-info-model], and uses the
   generic policy found in the Policy Routing modules in
   [I-D.hares-i2rs-bnp-info-model]. This basic BGP Information Model is
   an extendable policy model is a product of the industry approach to
   I2RS.

2. Definitions and Acronyms

      BGP: Border Gateway Protocol

      Information Model: An abstract model of a conceptual domain,
      independent of a specific implementation or data representation

      NETCONF:The Network Configuration Protocol as defined in [RFC6536]

      RESTCONF: The REST-like protocol that provides a programmatic
      interface over HTTP for accesing data defined in YANG, using
      datastores defined in NETCONF Protocol [I-D.ietf-netconf-restconf]
      as defined in RBNF: Routing Backus-Naur Form [RFC5511].

3. BGP Yang top-level description

    Below is the full BGP Yang top-level description for the
    configuration portion of I2RS configuration model. Additional
    information on the structure of the information model is described in
    [I-D.hares-i2rs-bnp-info-model].

```
module: bgp-protocol
   +--rw bgp-protocol
      +--rw router-id?                        inet:ip-address
      +--rw as-number?                        uint32
      +--ro protocol-status?                  enumeration
      +--rw shutdown-protocol?                boolean
      +--ro bgp-role?                         enumeration
      +--rw bgp-ipv4-uni-instance
      |  +--rw bgp-instance-name?      string
      |  +--rw bgp-instance-create?    enumeration
      |  +--rw bgp-instance-type?      enumeration
      |  +--rw bgp-vendor-type?        enumeration
      |  +--rw afi?                    afi-def
      |  +--rw safi?                   safi-def
      |  +--rw bgp-local-rib
      |  |  +--rw bgp-route-list* [ipv4-route ipv4-prefix-length]
      |  |     +--rw ipv4-route             inet:ipv4-prefix
      |  |     +--rw ipv4-prefix-length     uint8
      |  |     +--rw bgp-route-type?        enumeration
      |  |     +--rw bgp-attribute-list
      |  |     |  +--rw bgp-origin?                 enumeration
      |  |     |  +--rw bgp-aspath
      |  |     |  |  +--rw usascount?        uint16
      |  |     |  |  +--rw ulrefcount?       uint16
      |  |     |  |  +--rw asstring?         string
      |  |     |  |  +--ro usascountfrcomp?  uint16
      |  |     |  |  +--rw usastotalcount?   uint16
      |  |     |  |  +--rw usas4pathlen?     uint16
      |  |     |  |  +--rw as4pathvalue?     string
      |  |     |  +--rw bgp-nexthop?                inet:ip-address
      |  |     |  +--rw bgp-med?                    uint32
      |  |     |  +--rw bgp-localpref?              uint32
      |  |     |  +--rw bgp-atomic-aggregate?       uint32
      |  |     |  +--rw bgp-aggregator
      |  |     |  |  +--rw ulipaddress?   uint32
      |  |     |  |  +--rw ulasnumber?    uint32
      |  |     |  +--rw bgp-commattr
      |  |     |  |  +--rw uscommsize?        uint16
      |  |     |  |  +--rw ulrefcomm?         uint32
      |  |     |  |  +--rw commattr-value?    string
      |  |     |  +--rw bgp-extcommattr
```

```
│  │     │     │  +--rw usextcommsize?       uint16
│  │     │     │  +--rw ulrefcount?          uint32
│  │     │     │  +--rw extcommattr-value?   string
│  │     │  +--rw bgp-clusterlist
│  │     │  │  +--rw uscluslen?          uint16
│  │     │  │  +--rw ulrefclus?          uint32
│  │     │  │  +--rw clusterlist-value?  string
│  │     │  +--rw bgp-originator-id?    uint32
│  │     +--ro bgp-route-create?    enumeration
│  │     +--ro bgp-rt-state-info
│  │        +--ro rib-current-state?    rib-state-def
│  │        +--ro rib-last-state?       rib-state-def
│  │        +--ro rib-rejected-reason?  enumeration
│  │        +--ro not-preferred-reason? enumeration
│  +--rw bgp-peer-list* [bgp-peer-name]
│     +--rw peer-session-address
│     │  +--rw local-ipv4-address?   inet:ipv4-prefix
│     │  +--rw remote-ipv4-address?  inet:ipv4-prefix
│     +--rw bgp-peer-name            string
│     +--ro bgp-peer-type?           enumeration
│     +--ro bgp-peer-create?         enumeration
│     +--rw bgp-policy-in
│     +--rw bgp-policy-out
│     +--ro peer-policy-in-pset
│     +--ro peer-policy-out-pset
│     +--rw peer-state-info
│     │  +--ro peer-current-state?       peer-state
│     │  +--ro peer-last-state?          peer-state
│     │  +--ro peer-down-reason
│     │  │  +--ro error-code?       enumeration
│     │  │  +--ro sub-error-code
│     │  │     +--ro (sub-error-code-type)?
│     │  │        +--:(head-error-sub-code)
│     │  │        │  +--ro head-error-sub-value?         enumeratio
n
│     │  │        +--:(open-error-sub-code)
│     │  │        │  +--ro open-error-sub-value?         enumeratio
n
│     │  │        +--:(update-error-sub-code)
│     │  │        │  +--ro update-error-sub-value?       enumeratio
n
│     │  │        +--:(route-refresh-error-sub-code)
│     │  │           +--ro route-refresh-error-sub-value? enumeratio
n
│     │  +--ro peer-received-update-cnt?   uint64
│     │  +--ro peer-transmit-update-cnt?   uint64
│     │  +--ro peer-received-route-cnt?    uint64
│     │  +--ro peer-send-route-cnt?        uint64
│     │  +--rw max-prefix-rcv-limit?       uint64
│     │  +--rw max-prefix-xmt-limit?       uint64
│     │  +--ro peer-prefix-high?           uint64
│     │  +--ro peer-prefix-low?            uint64
```

```
    │     │  +--ro peer-perfix-ave?            uint64
    │     │  +--ro peer-prefix-time?           uint64
    │     │  +--ro peer-prefix-max?            uint64
    │     │  +--ro publish-version?            uint64
    │     +--rw bgp-rib-in
    │     │  +--rw bgp-rib-in-list* [ipv4-route ipv4-prefix-length]
    │     │     +--rw ipv4-route            inet:ipv4-prefix
    │     │     +--rw ipv4-prefix-length    uint8
    │     │     +--rw bgp-route-type?       enumeration
    │     │     +--rw bgp-attribute-list
    │     │     │  +--rw bgp-origin?               enumeration
    │     │     │  +--rw bgp-aspath
    │     │     │  │  +--rw usascount?        uint16
    │     │     │  │  +--rw ulrefcount?       uint16
    │     │     │  │  +--rw asstring?         string
    │     │     │  │  +--ro usascountfrcomp?  uint16
    │     │     │  │  +--rw usastotalcount?   uint16
    │     │     │  │  +--rw usas4pathlen?     uint16
    │     │     │  │  +--rw as4pathvalue?     string
    │     │     │  +--rw bgp-nexthop?             inet:ip-address
    │     │     │  +--rw bgp-med?                 uint32
    │     │     │  +--rw bgp-localpref?           uint32
    │     │     │  +--rw bgp-atomic-aggregate?    uint32
    │     │     │  +--rw bgp-aggregator
    │     │     │  │  +--rw ulipaddress?    uint32
    │     │     │  │  +--rw ulasnumber?     uint32
    │     │     │  +--rw bgp-commattr
    │     │     │  │  +--rw uscommsize?        uint16
    │     │     │  │  +--rw ulrefcomm?         uint32
    │     │     │  │  +--rw commattr-value?    string
    │     │     │  +--rw bgp-extcommattr
    │     │     │  │  +--rw usextcommsize?       uint16
    │     │     │  │  +--rw ulrefcount?          uint32
    │     │     │  │  +--rw extcommattr-value?   string
    │     │     │  +--rw bgp-clusterlist
    │     │     │  │  +--rw uscluslen?           uint16
    │     │     │  │  +--rw ulrefclus?           uint32
    │     │     │  │  +--rw clusterlist-value?   string
    │     │     │  +--rw bgp-originator-id?       uint32
    │     │     +--ro bgp-route-create?     enumeration
    │     │     +--ro bgp-rt-state-info
    │     │        +--ro rib-current-state?     rib-state-def
    │     │        +--ro rib-last-state?        rib-state-def
    │     │        +--ro rib-rejected-reason?   enumeration
    │     │        +--ro not-preferred-reason?  enumeration
    │     +--rw bgp-rib-out
    │        +--rw bgp-rib-out-list* [ipv4-route ipv4-prefix-length]
    │           +--rw ipv4-route            inet:ipv4-prefix
```

```
|                +--rw ipv4-prefix-length    uint8
|                +--rw bgp-route-type?        enumeration
|                +--rw bgp-attribute-list
|                |  +--rw bgp-origin?                enumeration
|                |  +--rw bgp-aspath
|                |  |  +--rw usascount?        uint16
|                |  |  +--rw ulrefcount?       uint16
|                |  |  +--rw asstring?         string
|                |  |  +--ro usascountfrcomp?  uint16
|                |  |  +--rw usastotalcount?   uint16
|                |  |  +--rw usas4pathlen?     uint16
|                |  |  +--rw as4pathvalue?     string
|                |  +--rw bgp-nexthop?               inet:ip-address
|                |  +--rw bgp-med?                   uint32
|                |  +--rw bgp-localpref?             uint32
|                |  +--rw bgp-atomic-aggregate?   uint32
|                |  +--rw bgp-aggregator
|                |  |  +--rw ulipaddress?   uint32
|                |  |  +--rw ulasnumber?    uint32
|                |  +--rw bgp-commattr
|                |  |  +--rw uscommsize?       uint16
|                |  |  +--rw ulrefcomm?        uint32
|                |  |  +--rw commattr-value?   string
|                |  +--rw bgp-extcommattr
|                |  |  +--rw usextcommsize?      uint16
|                |  |  +--rw ulrefcount?         uint32
|                |  |  +--rw extcommattr-value?  string
|                |  +--rw bgp-clusterlist
|                |  |  +--rw uscluslen?        uint16
|                |  |  +--rw ulrefclus?        uint32
|                |  |  +--rw clusterlist-value?  string
|                |  +--rw bgp-originator-id?    uint32
|             +--ro bgp-route-create?     enumeration
|             +--ro bgp-rt-state-info
|                +--ro rib-current-state?     rib-state-def
|                +--ro rib-last-state?        rib-state-def
|                +--ro rib-rejected-reason?   enumeration
|                +--ro not-preferred-reason?  enumeration
+--rw bgp-labeled-ipv4-instance
|  +--rw bgp-instance-name?      string
|  +--rw bgp-instance-create?   enumeration
|  +--rw bgp-instance-type?     enumeration
|  +--rw bgp-vendor-type?       enumeration
|  +--rw afi?                   afi-def
|  +--rw safi?                  safi-def
|  +--rw bgp-local-rib
|  |  +--rw bgp-route-list* [ipv4-route ipv4-prefix-length mpls-label]
|  |     +--rw ipv4-route            inet:ipv4-prefix
```

```
│  │         +--rw ipv4-prefix-length    uint8
│  │         +--rw mpls-label            mpls-label-def
│  │         +--rw bgp-route-type?       enumeration
│  │         +--rw bgp-attribute-list
│  │         │  +--rw bgp-origin?               enumeration
│  │         │  +--rw bgp-aspath
│  │         │  │  +--rw usascount?         uint16
│  │         │  │  +--rw ulrefcount?        uint16
│  │         │  │  +--rw asstring?          string
│  │         │  │  +--ro usascountfrcomp?   uint16
│  │         │  │  +--rw usastotalcount?    uint16
│  │         │  │  +--rw usas4pathlen?      uint16
│  │         │  │  +--rw as4pathvalue?      string
│  │         │  +--rw bgp-nexthop?              inet:ip-address
│  │         │  +--rw bgp-med?                  uint32
│  │         │  +--rw bgp-localpref?            uint32
│  │         │  +--rw bgp-atomic-aggregate?   uint32
│  │         │  +--rw bgp-aggregator
│  │         │  │  +--rw ulipaddress?   uint32
│  │         │  │  +--rw ulasnumber?    uint32
│  │         │  +--rw bgp-commattr
│  │         │  │  +--rw uscommsize?        uint16
│  │         │  │  +--rw ulrefcomm?         uint32
│  │         │  │  +--rw commattr-value?    string
│  │         │  +--rw bgp-extcommattr
│  │         │  │  +--rw usextcommsize?       uint16
│  │         │  │  +--rw ulrefcount?          uint32
│  │         │  │  +--rw extcommattr-value?   string
│  │         │  +--rw bgp-clusterlist
│  │         │  │  +--rw uscluslen?         uint16
│  │         │  │  +--rw ulrefclus?         uint32
│  │         │  │  +--rw clusterlist-value?   string
│  │         │  +--rw bgp-originator-id?      uint32
│  │         +--ro bgp-route-create?     enumeration
│  │         +--ro bgp-rt-state-info
│  │            +--ro rib-current-state?     rib-state-def
│  │            +--ro rib-last-state?        rib-state-def
│  │            +--ro rib-rejected-reason?   enumeration
│  │            +--ro not-preferred-reason?  enumeration
│  +--rw bgp-peer-list* [bgp-peer-name]
│     +--rw peer-session-address
│     │  +--rw local-ipv4-address?    inet:ipv4-prefix
│     │  +--rw remote-ipv4-address?   inet:ipv4-prefix
│     +--rw bgp-peer-name              string
│     +--ro bgp-peer-type?            enumeration
│     +--ro bgp-peer-create?          enumeration
│     +--rw bgp-policy-in
│     +--rw bgp-policy-out
```

```
         │       +--ro peer-policy-in-pset
         │       +--ro peer-policy-out-pset
         │       +--rw peer-state-info
         │       │  +--ro peer-current-state?        peer-state
         │       │  +--ro peer-last-state?           peer-state
         │       │  +--ro peer-down-reason
         │       │  │  +--ro error-code?       enumeration
         │       │  │  +--ro sub-error-code
         │       │  │     +--ro (sub-error-code-type)?
         │       │  │        +--:(head-error-sub-code)
         │       │  │        │  +--ro head-error-sub-value?        enumeratio
n
         │       │  │        +--:(open-error-sub-code)
         │       │  │        │  +--ro open-error-sub-value?        enumeratio
n
         │       │  │        +--:(update-error-sub-code)
         │       │  │        │  +--ro update-error-sub-value?      enumeratio
n
         │       │  │        +--:(route-refresh-error-sub-code)
         │       │  │           +--ro route-refresh-error-sub-value?   enumeratio
n
         │       │  +--ro peer-received-update-cnt?    uint64
         │       │  +--ro peer-transmit-update-cnt?    uint64
         │       │  +--ro peer-received-route-cnt?     uint64
         │       │  +--ro peer-send-route-cnt?         uint64
         │       │  +--rw max-prefix-rcv-limit?        uint64
         │       │  +--rw max-prefix-xmt-limit?        uint64
         │       │  +--ro peer-prefix-high?            uint64
         │       │  +--ro peer-prefix-low?             uint64
         │       │  +--ro peer-perfix-ave?             uint64
         │       │  +--ro peer-prefix-time?            uint64
         │       │  +--ro peer-prefix-max?             uint64
         │       │  +--ro publish-version?             uint64
         │       +--rw bgp-rib-in
         │       │  +--rw bgp-rib-in-list* [ipv4-route ipv4-prefix-length mpls-la
bel]
         │       │        +--rw ipv4-route            inet:ipv4-prefix
         │       │        +--rw ipv4-prefix-length    uint8
         │       │        +--rw mpls-label            mpls-label-def
         │       │        +--rw bgp-route-type?       enumeration
         │       │        +--rw bgp-attribute-list
         │       │        │  +--rw bgp-origin?            enumeration
         │       │        │  +--rw bgp-aspath
         │       │        │  │  +--rw usascount?        uint16
         │       │        │  │  +--rw ulrefcount?       uint16
         │       │        │  │  +--rw asstring?         string
         │       │        │  │  +--ro usascountfrcomp?  uint16
         │       │        │  │  +--rw usastotalcount?   uint16
         │       │        │  │  +--rw usas4pathlen?     uint16
         │       │        │  │  +--rw as4pathvalue?     string
         │       │        │  +--rw bgp-nexthop?           inet:ip-address
         │       │        │  +--rw bgp-med?               uint32
         │       │        │  +--rw bgp-localpref?         uint32
```

```
|   |   |   +--rw bgp-atomic-aggregate?    uint32
|   |   |   +--rw bgp-aggregator
|   |   |   |  +--rw ulipaddress?    uint32
|   |   |   |  +--rw ulasnumber?     uint32
|   |   |   +--rw bgp-commattr
|   |   |   |  +--rw uscommsize?         uint16
|   |   |   |  +--rw ulrefcomm?          uint32
|   |   |   |  +--rw commattr-value?     string
|   |   |   +--rw bgp-extcommattr
|   |   |   |  +--rw usextcommsize?      uint16
|   |   |   |  +--rw ulrefcount?         uint32
|   |   |   |  +--rw extcommattr-value?  string
|   |   |   +--rw bgp-clusterlist
|   |   |   |  +--rw uscluslen?          uint16
|   |   |   |  +--rw ulrefclus?          uint32
|   |   |   |  +--rw clusterlist-value?  string
|   |   |   +--rw bgp-originator-id?      uint32
|   |   +--ro bgp-route-create?      enumeration
|   |   +--ro bgp-rt-state-info
|   |       +--ro rib-current-state?      rib-state-def
|   |       +--ro rib-last-state?         rib-state-def
|   |       +--ro rib-rejected-reason?    enumeration
|   |       +--ro not-preferred-reason?   enumeration
|   +--rw bgp-rib-out
|      +--rw bgp-rib-out-list* [ipv4-route ipv4-prefix-length mpls-l
abel]
|            +--rw ipv4-route              inet:ipv4-prefix
|            +--rw ipv4-prefix-length     uint8
|            +--rw mpls-label             mpls-label-def
|            +--rw bgp-route-type?        enumeration
|            +--rw bgp-attribute-list
|            |  +--rw bgp-origin?              enumeration
|            |  +--rw bgp-aspath
|            |  |  +--rw usascount?        uint16
|            |  |  +--rw ulrefcount?       uint16
|            |  |  +--rw asstring?         string
|            |  |  +--ro usascountfrcomp?  uint16
|            |  |  +--rw usastotalcount?   uint16
|            |  |  +--rw usas4pathlen?     uint16
|            |  |  +--rw as4pathvalue?     string
|            |  +--rw bgp-nexthop?             inet:ip-address
|            |  +--rw bgp-med?                 uint32
|            |  +--rw bgp-localpref?           uint32
|            |  +--rw bgp-atomic-aggregate?    uint32
|            |  +--rw bgp-aggregator
|            |  |  +--rw ulipaddress?    uint32
|            |  |  +--rw ulasnumber?     uint32
|            |  +--rw bgp-commattr
|            |  |  +--rw uscommsize?         uint16
```

```
   |            |   |   +--rw ulrefcomm?          uint32
   |            |   |   +--rw commattr-value?     string
   |            |   +--rw bgp-extcommattr
   |            |   |   +--rw usextcommsize?       uint16
   |            |   |   +--rw ulrefcount?          uint32
   |            |   |   +--rw extcommattr-value?   string
   |            |   +--rw bgp-clusterlist
   |            |   |   +--rw uscluslen?           uint16
   |            |   |   +--rw ulrefclus?           uint32
   |            |   |   +--rw clusterlist-value?   string
   |            |   +--rw bgp-originator-id?       uint32
   |            +--ro bgp-route-create?     enumeration
   |            +--ro bgp-rt-state-info
   |               +--ro rib-current-state?       rib-state-def
   |               +--ro rib-last-state?          rib-state-def
   |               +--ro rib-rejected-reason?     enumeration
   |               +--ro not-preferred-reason?    enumeration
   +--rw bgp-ipv4-multi-instance
   |   +--rw bgp-instance-name?       string
   |   +--rw bgp-instance-create?     enumeration
   |   +--rw bgp-instance-type?       enumeration
   |   +--rw bgp-vendor-type?         enumeration
   |   +--rw afi?                     afi-def
   |   +--rw safi?                    safi-def
   |   +--rw bgp-local-rib
   |   |   +--rw bgp-route-list* [ipv4-route ipv4-prefix-length]
   |   |      +--rw ipv4-route              inet:ipv4-prefix
   |   |      +--rw ipv4-prefix-length      uint8
   |   |      +--rw bgp-route-type?         enumeration
   |   |      +--rw bgp-attribute-list
   |   |      |   +--rw bgp-origin?              enumeration
   |   |      |   +--rw bgp-aspath
   |   |      |   |   +--rw usascount?        uint16
   |   |      |   |   +--rw ulrefcount?       uint16
   |   |      |   |   +--rw asstring?         string
   |   |      |   |   +--ro usascountfrcomp?  uint16
   |   |      |   |   +--rw usastotalcount?   uint16
   |   |      |   |   +--rw usas4pathlen?     uint16
   |   |      |   |   +--rw as4pathvalue?     string
   |   |      |   +--rw bgp-nexthop?             inet:ip-address
   |   |      |   +--rw bgp-med?                 uint32
   |   |      |   +--rw bgp-localpref?           uint32
   |   |      |   +--rw bgp-atomic-aggregate?    uint32
   |   |      |   +--rw bgp-aggregator
   |   |      |   |   +--rw ulipaddress?   uint32
   |   |      |   |   +--rw ulasnumber?    uint32
   |   |      |   +--rw bgp-commattr
   |   |      |   |   +--rw uscommsize?          uint16
```

```
|  |       |  |  +--rw ulrefcomm?          uint32
|  |       |  |  +--rw commattr-value?     string
|  |       |  +--rw bgp-extcommattr
|  |       |  |  +--rw usextcommsize?       uint16
|  |       |  |  +--rw ulrefcount?          uint32
|  |       |  |  +--rw extcommattr-value?   string
|  |       |  +--rw bgp-clusterlist
|  |       |  |  +--rw uscluslen?           uint16
|  |       |  |  +--rw ulrefclus?           uint32
|  |       |  |  +--rw clusterlist-value?   string
|  |       |  +--rw bgp-originator-id?     uint32
|  |    +--ro bgp-route-create?    enumeration
|  |    +--ro bgp-rt-state-info
|  |       +--ro rib-current-state?      rib-state-def
|  |       +--ro rib-last-state?         rib-state-def
|  |       +--ro rib-rejected-reason?    enumeration
|  |       +--ro not-preferred-reason?   enumeration
|  +--rw bgp-peer-list* [bgp-peer-name]
|     +--rw peer-session-address
|     |  +--rw local-ipv4-address?    inet:ipv4-prefix
|     |  +--rw remote-ipv4-address?   inet:ipv4-prefix
|     +--rw bgp-peer-name               string
|     +--ro bgp-peer-type?              enumeration
|     +--ro bgp-peer-create?            enumeration
|     +--rw bgp-policy-in
|     +--rw bgp-policy-out
|     +--ro peer-policy-in-pset
|     +--ro peer-policy-out-pset
|     +--rw peer-state-info
|     |  +--ro peer-current-state?          peer-state
|     |  +--ro peer-last-state?             peer-state
|     |  +--ro peer-down-reason
|     |  |  +--ro error-code?       enumeration
|     |  |  +--ro sub-error-code
|     |  |     +--ro (sub-error-code-type)?
|     |  |        +--:(head-error-sub-code)
|     |  |        |  +--ro head-error-sub-value?            enumeratio
n
|     |  |        +--:(open-error-sub-code)
|     |  |        |  +--ro open-error-sub-value?            enumeratio
n
|     |  |        +--:(update-error-sub-code)
|     |  |        |  +--ro update-error-sub-value?          enumeratio
n
|     |  |        +--:(route-refresh-error-sub-code)
|     |  |           +--ro route-refresh-error-sub-value?   enumeratio
n
|     |  +--ro peer-received-update-cnt?    uint64
|     |  +--ro peer-transmit-update-cnt?    uint64
|     |  +--ro peer-received-route-cnt?     uint64
|     |  +--ro peer-send-route-cnt?         uint64
|     |  +--rw max-prefix-rcv-limit?        uint64
```

```
│      │   +--rw max-prefix-xmt-limit?       uint64
│      │   +--ro peer-prefix-high?          uint64
│      │   +--ro peer-prefix-low?           uint64
│      │   +--ro peer-perfix-ave?           uint64
│      │   +--ro peer-prefix-time?          uint64
│      │   +--ro peer-prefix-max?           uint64
│      │   +--ro publish-version?           uint64
│      +--rw bgp-rib-in
│      │   +--rw bgp-rib-in-list* [ipv4-route ipv4-prefix-length]
│      │      +--rw ipv4-route             inet:ipv4-prefix
│      │      +--rw ipv4-prefix-length     uint8
│      │      +--rw bgp-route-type?        enumeration
│      │      +--rw bgp-attribute-list
│      │      │   +--rw bgp-origin?             enumeration
│      │      │   +--rw bgp-aspath
│      │      │   │   +--rw usascount?        uint16
│      │      │   │   +--rw ulrefcount?       uint16
│      │      │   │   +--rw asstring?         string
│      │      │   │   +--ro usascountfrcomp?  uint16
│      │      │   │   +--rw usastotalcount?   uint16
│      │      │   │   +--rw usas4pathlen?     uint16
│      │      │   │   +--rw as4pathvalue?     string
│      │      │   +--rw bgp-nexthop?           inet:ip-address
│      │      │   +--rw bgp-med?               uint32
│      │      │   +--rw bgp-localpref?         uint32
│      │      │   +--rw bgp-atomic-aggregate?  uint32
│      │      │   +--rw bgp-aggregator
│      │      │   │   +--rw ulipaddress?   uint32
│      │      │   │   +--rw ulasnumber?    uint32
│      │      │   +--rw bgp-commattr
│      │      │   │   +--rw uscommsize?       uint16
│      │      │   │   +--rw ulrefcomm?        uint32
│      │      │   │   +--rw commattr-value?   string
│      │      │   +--rw bgp-extcommattr
│      │      │   │   +--rw usextcommsize?       uint16
│      │      │   │   +--rw ulrefcount?          uint32
│      │      │   │   +--rw extcommattr-value?   string
│      │      │   +--rw bgp-clusterlist
│      │      │   │   +--rw uscluslen?          uint16
│      │      │   │   +--rw ulrefclus?          uint32
│      │      │   │   +--rw clusterlist-value?  string
│      │      │   +--rw bgp-originator-id?      uint32
│      │      +--ro bgp-route-create?     enumeration
│      │      +--ro bgp-rt-state-info
│      │         +--ro rib-current-state?       rib-state-def
│      │         +--ro rib-last-state?          rib-state-def
│      │         +--ro rib-rejected-reason?     enumeration
│      │         +--ro not-preferred-reason?    enumeration
```

```
    |        +--rw bgp-rib-out
    |           +--rw bgp-rib-out-list* [ipv4-route ipv4-prefix-length]
    |              +--rw ipv4-route            inet:ipv4-prefix
    |              +--rw ipv4-prefix-length    uint8
    |              +--rw bgp-route-type?        enumeration
    |              +--rw bgp-attribute-list
    |                 |  +--rw bgp-origin?                 enumeration
    |                 |  +--rw bgp-aspath
    |                 |  |   +--rw usascount?         uint16
    |                 |  |   +--rw ulrefcount?        uint16
    |                 |  |   +--rw asstring?          string
    |                 |  |   +--ro usascountfrcomp?   uint16
    |                 |  |   +--rw usastotalcount?    uint16
    |                 |  |   +--rw usas4pathlen?      uint16
    |                 |  |   +--rw as4pathvalue?      string
    |                 |  +--rw bgp-nexthop?               inet:ip-address
    |                 |  +--rw bgp-med?                   uint32
    |                 |  +--rw bgp-localpref?             uint32
    |                 |  +--rw bgp-atomic-aggregate?      uint32
    |                 |  +--rw bgp-aggregator
    |                 |  |   +--rw ulipaddress?   uint32
    |                 |  |   +--rw ulasnumber?    uint32
    |                 |  +--rw bgp-commattr
    |                 |  |   +--rw uscommsize?        uint16
    |                 |  |   +--rw ulrefcomm?         uint32
    |                 |  |   +--rw commattr-value?    string
    |                 |  +--rw bgp-extcommattr
    |                 |  |   +--rw usextcommsize?         uint16
    |                 |  |   +--rw ulrefcount?            uint32
    |                 |  |   +--rw extcommattr-value?     string
    |                 |  +--rw bgp-clusterlist
    |                 |  |   +--rw uscluslen?             uint16
    |                 |  |   +--rw ulrefclus?             uint32
    |                 |  |   +--rw clusterlist-value?     string
    |                 |  +--rw bgp-originator-id?         uint32
    |              +--ro bgp-route-create?     enumeration
    |              +--ro bgp-rt-state-info
    |                 +--ro rib-current-state?    rib-state-def
    |                 +--ro rib-last-state?       rib-state-def
    |                 +--ro rib-rejected-reason?  enumeration
    |                 +--ro not-preferred-reason? enumeration
    +--rw bgp-vpnv4-instance
    |  +--rw bgp-instance-name?      string
    |  +--rw bgp-instance-create?    enumeration
    |  +--rw bgp-instance-type?      enumeration
    |  +--rw bgp-vendor-type?        enumeration
    |  +--rw afi?                    afi-def
    |  +--rw safi?                   safi-def
```

```
     |      +--rw bgp-local-rib
     |      |  +--rw bgp-route-list* [ipv4-route ipv4-prefix-length route-disti
nguisher]
     |      |        +--rw ipv4-route              inet:ipv4-prefix
     |      |        +--rw ipv4-prefix-length      uint8
     |      |        +--rw mpls-label?             mpls-label-def
     |      |        +--rw route-distinguisher     route-distinguisher-def
     |      |        +--rw bgp-route-type?         enumeration
     |      |        +--rw bgp-attribute-list
     |      |        |  +--rw bgp-origin?              enumeration
     |      |        |  +--rw bgp-aspath
     |      |        |  |  +--rw usascount?        uint16
     |      |        |  |  +--rw ulrefcount?       uint16
     |      |        |  |  +--rw asstring?         string
     |      |        |  |  +--ro usascountfrcomp?  uint16
     |      |        |  |  +--rw usastotalcount?   uint16
     |      |        |  |  +--rw usas4pathlen?     uint16
     |      |        |  |  +--rw as4pathvalue?     string
     |      |        |  +--rw bgp-nexthop?            inet:ip-address
     |      |        |  +--rw bgp-med?               uint32
     |      |        |  +--rw bgp-localpref?         uint32
     |      |        |  +--rw bgp-atomic-aggregate?  uint32
     |      |        |  +--rw bgp-aggregator
     |      |        |  |  +--rw ulipaddress?   uint32
     |      |        |  |  +--rw ulasnumber?    uint32
     |      |        |  +--rw bgp-commattr
     |      |        |  |  +--rw uscommsize?        uint16
     |      |        |  |  +--rw ulrefcomm?         uint32
     |      |        |  |  +--rw commattr-value?    string
     |      |        |  +--rw bgp-extcommattr
     |      |        |  |  +--rw usextcommsize?     uint16
     |      |        |  |  +--rw ulrefcount?        uint32
     |      |        |  |  +--rw extcommattr-value? string
     |      |        |  +--rw bgp-clusterlist
     |      |        |  |  +--rw uscluslen?         uint16
     |      |        |  |  +--rw ulrefclus?         uint32
     |      |        |  |  +--rw clusterlist-value? string
     |      |        |  +--rw bgp-originator-id?     uint32
     |      |        +--ro bgp-route-create?       enumeration
     |      |        +--ro bgp-rt-state-info
     |      |           +--ro rib-current-state?     rib-state-def
     |      |           +--ro rib-last-state?        rib-state-def
     |      |           +--ro rib-rejected-reason?   enumeration
     |      |           +--ro not-preferred-reason?  enumeration
     |      +--rw bgp-peer-list* [bgp-peer-name]
     |         +--rw peer-session-address
     |         |  +--rw local-ipv4-address?    inet:ipv4-prefix
     |         |  +--rw remote-ipv4-address?   inet:ipv4-prefix
     |         +--rw bgp-peer-name              string
```

```
         │          +--ro bgp-peer-type?          enumeration
         │          +--ro bgp-peer-create?        enumeration
         │          +--rw bgp-policy-in
         │          +--rw bgp-policy-out
         │          +--ro peer-policy-in-pset
         │          +--ro peer-policy-out-pset
         │          +--rw peer-state-info
         │          │  +--ro peer-current-state?         peer-state
         │          │  +--ro peer-last-state?            peer-state
         │          │  +--ro peer-down-reason
         │          │  │  +--ro error-code?       enumeration
         │          │  │  +--ro sub-error-code
         │          │  │     +--ro (sub-error-code-type)?
         │          │  │        +--:(head-error-sub-code)
         │          │  │        │  +--ro head-error-sub-value?         enumeratio
n
         │          │  │        +--:(open-error-sub-code)
         │          │  │        │  +--ro open-error-sub-value?         enumeratio
n
         │          │  │        +--:(update-error-sub-code)
         │          │  │        │  +--ro update-error-sub-value?        enumeratio
n
         │          │  │        +--:(route-refresh-error-sub-code)
         │          │  │           +--ro route-refresh-error-sub-value?  enumeratio
n
         │          │  +--ro peer-received-update-cnt?   uint64
         │          │  +--ro peer-transmit-update-cnt?   uint64
         │          │  +--ro peer-received-route-cnt?    uint64
         │          │  +--ro peer-send-route-cnt?        uint64
         │          │  +--rw max-prefix-rcv-limit?       uint64
         │          │  +--rw max-prefix-xmt-limit?       uint64
         │          │  +--ro peer-prefix-high?           uint64
         │          │  +--ro peer-prefix-low?            uint64
         │          │  +--ro peer-perfix-ave?            uint64
         │          │  +--ro peer-prefix-time?           uint64
         │          │  +--ro peer-prefix-max?            uint64
         │          │  +--ro publish-version?            uint64
         │          +--rw bgp-rib-in
         │          │  +--rw bgp-rib-in-list* [ipv4-route ipv4-prefix-length route-d
istinguisher]
         │          │          +--rw ipv4-route            inet:ipv4-prefix
         │          │          +--rw ipv4-prefix-length    uint8
         │          │          +--rw mpls-label?           mpls-label-def
         │          │          +--rw route-distinguisher   route-distinguisher-def
         │          │          +--rw bgp-route-type?       enumeration
         │          │          +--rw bgp-attribute-list
         │          │          │  +--rw bgp-origin?            enumeration
         │          │          │  +--rw bgp-aspath
         │          │          │  │  +--rw usascount?       uint16
         │          │          │  │  +--rw ulrefcount?      uint16
         │          │          │  │  +--rw asstring?        string
         │          │          │  │  +--ro usascountfrcomp? uint16
         │          │          │  │  +--rw usastotalcount?  uint16
```

```
|   |     |   |   +--rw usas4pathlen?        uint16
|   |     |   |   +--rw as4pathvalue?        string
|   |     |   +--rw bgp-nexthop?                inet:ip-address
|   |     |   +--rw bgp-med?                    uint32
|   |     |   +--rw bgp-localpref?              uint32
|   |     |   +--rw bgp-atomic-aggregate?   uint32
|   |     |   +--rw bgp-aggregator
|   |     |   |   +--rw ulipaddress?   uint32
|   |     |   |   +--rw ulasnumber?    uint32
|   |     |   +--rw bgp-commattr
|   |     |   |   +--rw uscommsize?        uint16
|   |     |   |   +--rw ulrefcomm?         uint32
|   |     |   |   +--rw commattr-value?    string
|   |     |   +--rw bgp-extcommattr
|   |     |   |   +--rw usextcommsize?        uint16
|   |     |   |   +--rw ulrefcount?           uint32
|   |     |   |   +--rw extcommattr-value?    string
|   |     |   +--rw bgp-clusterlist
|   |     |   |   +--rw uscluslen?            uint16
|   |     |   |   +--rw ulrefclus?            uint32
|   |     |   |   +--rw clusterlist-value?    string
|   |     |   +--rw bgp-originator-id?       uint32
|   |     +--ro bgp-route-create?       enumeration
|   |     +--ro bgp-rt-state-info
|   |         +--ro rib-current-state?       rib-state-def
|   |         +--ro rib-last-state?          rib-state-def
|   |         +--ro rib-rejected-reason?     enumeration
|   |         +--ro not-preferred-reason?    enumeration
|       +--rw bgp-rib-out
|         +--rw bgp-rib-out-list* [ipv4-route ipv4-prefix-length route-
distinguisher]
|             +--rw ipv4-route              inet:ipv4-prefix
|             +--rw ipv4-prefix-length      uint8
|             +--rw mpls-label?             mpls-label-def
|             +--rw route-distinguisher     route-distinguisher-def
|             +--rw bgp-route-type?         enumeration
|             +--rw bgp-attribute-list
|             |   +--rw bgp-origin?             enumeration
|             |   +--rw bgp-aspath
|             |   |   +--rw usascount?        uint16
|             |   |   +--rw ulrefcount?       uint16
|             |   |   +--rw asstring?         string
|             |   |   +--ro usascountfrcomp?  uint16
|             |   |   +--rw usastotalcount?   uint16
|             |   |   +--rw usas4pathlen?     uint16
|             |   |   +--rw as4pathvalue?     string
|             |   +--rw bgp-nexthop?             inet:ip-address
|             |   +--rw bgp-med?                 uint32
|             |   +--rw bgp-localpref?           uint32
```

```
     |            |  +--rw bgp-atomic-aggregate?    uint32
     |            |  +--rw bgp-aggregator
     |            |  |  +--rw ulipaddress?    uint32
     |            |  |  +--rw ulasnumber?     uint32
     |            |  +--rw bgp-commattr
     |            |  |  +--rw uscommsize?        uint16
     |            |  |  +--rw ulrefcomm?         uint32
     |            |  |  +--rw commattr-value?    string
     |            |  +--rw bgp-extcommattr
     |            |  |  +--rw usextcommsize?       uint16
     |            |  |  +--rw ulrefcount?          uint32
     |            |  |  +--rw extcommattr-value?   string
     |            |  +--rw bgp-clusterlist
     |            |  |  +--rw uscluslen?            uint16
     |            |  |  +--rw ulrefclus?            uint32
     |            |  |  +--rw clusterlist-value?    string
     |            |  +--rw bgp-originator-id?      uint32
     |          +--ro bgp-route-create?        enumeration
     |          +--ro bgp-rt-state-info
     |             +--ro rib-current-state?       rib-state-def
     |             +--ro rib-last-state?          rib-state-def
     |             +--ro rib-rejected-reason?     enumeration
     |             +--ro not-preferred-reason?    enumeration
     +--rw bgp-ipv4-l3vpn-instance-list* [bgp-l3vpn-instance-name]
     |  +--rw bgp-l3vpn-instance-name    string
     |  +--rw bgp-instance-name?         string
     |  +--rw bgp-instance-create?       enumeration
     |  +--rw bgp-instance-type?         enumeration
     |  +--rw bgp-vendor-type?           enumeration
     |  +--rw afi?                       afi-def
     |  +--rw safi?                      safi-def
     |  +--rw bgp-local-rib
     |  |  +--rw bgp-route-list* [ipv4-route ipv4-prefix-length]
     |  |     +--rw ipv4-route            inet:ipv4-prefix
     |  |     +--rw ipv4-prefix-length    uint8
     |  |     +--rw bgp-route-type?       enumeration
     |  |     +--rw bgp-attribute-list
     |  |     |  +--rw bgp-origin?            enumeration
     |  |     |  +--rw bgp-aspath
     |  |     |  |  +--rw usascount?        uint16
     |  |     |  |  +--rw ulrefcount?       uint16
     |  |     |  |  +--rw asstring?         string
     |  |     |  |  +--ro usascountfrcomp?  uint16
     |  |     |  |  +--rw usastotalcount?   uint16
     |  |     |  |  +--rw usas4pathlen?     uint16
     |  |     |  |  +--rw as4pathvalue?     string
     |  |     |  +--rw bgp-nexthop?           inet:ip-address
     |  |     |  +--rw bgp-med?               uint32
```

```
|  |        |  +--rw bgp-localpref?              uint32
|  |        |  +--rw bgp-atomic-aggregate?       uint32
|  |        |  +--rw bgp-aggregator
|  |        |  |  +--rw ulipaddress?    uint32
|  |        |  |  +--rw ulasnumber?     uint32
|  |        |  +--rw bgp-commattr
|  |        |  |  +--rw uscommsize?         uint16
|  |        |  |  +--rw ulrefcomm?          uint32
|  |        |  |  +--rw commattr-value?     string
|  |        |  +--rw bgp-extcommattr
|  |        |  |  +--rw usextcommsize?         uint16
|  |        |  |  +--rw ulrefcount?            uint32
|  |        |  |  +--rw extcommattr-value?     string
|  |        |  +--rw bgp-clusterlist
|  |        |  |  +--rw uscluslen?             uint16
|  |        |  |  +--rw ulrefclus?             uint32
|  |        |  |  +--rw clusterlist-value?     string
|  |        |  +--rw bgp-originator-id?      uint32
|  |     +--ro bgp-route-create?     enumeration
|  |     +--ro bgp-rt-state-info
|  |        +--ro rib-current-state?      rib-state-def
|  |        +--ro rib-last-state?         rib-state-def
|  |        +--ro rib-rejected-reason?    enumeration
|  |        +--ro not-preferred-reason?   enumeration
|  +--rw bgp-peer-list* [bgp-peer-name]
|     +--rw peer-session-address
|     |  +--rw local-ipv4-address?     inet:ipv4-prefix
|     |  +--rw remote-ipv4-address?    inet:ipv4-prefix
|     +--rw bgp-peer-name          string
|     +--ro bgp-peer-type?         enumeration
|     +--ro bgp-peer-create?       enumeration
|     +--rw bgp-policy-in
|     +--rw bgp-policy-out
|     +--ro peer-policy-in-pset
|     +--ro peer-policy-out-pset
|     +--rw peer-state-info
|     |  +--ro peer-current-state?            peer-state
|     |  +--ro peer-last-state?               peer-state
|     |  +--ro peer-down-reason
|     |  |  +--ro error-code?        enumeration
|     |  |  +--ro sub-error-code
|     |  |     +--ro (sub-error-code-type)?
|     |  |        +--:(head-error-sub-code)
|     |  |        |  +--ro head-error-sub-value?        enumeratio
n
|     |  |        +--:(open-error-sub-code)
|     |  |        |  +--ro open-error-sub-value?        enumeratio
n
|     |  |        +--:(update-error-sub-code)
|     |  |        |  +--ro update-error-sub-value?      enumeratio
n
```

```
  |     |  |              +--:(route-refresh-error-sub-code)
  |     |  |                 +--ro route-refresh-error-sub-value?    enumeratio
n
  |           |  +--ro peer-received-update-cnt?    uint64
  |           |  +--ro peer-transmit-update-cnt?    uint64
  |           |  +--ro peer-received-route-cnt?     uint64
  |           |  +--ro peer-send-route-cnt?         uint64
  |           |  +--rw max-prefix-rcv-limit?        uint64
  |           |  +--rw max-prefix-xmt-limit?        uint64
  |           |  +--ro peer-prefix-high?            uint64
  |           |  +--ro peer-prefix-low?             uint64
  |           |  +--ro peer-perfix-ave?             uint64
  |           |  +--ro peer-prefix-time?            uint64
  |           |  +--ro peer-prefix-max?             uint64
  |           |  +--ro publish-version?             uint64
  |        +--rw bgp-rib-in
  |        |  +--rw bgp-rib-in-list* [ipv4-route ipv4-prefix-length]
  |        |     +--rw ipv4-route              inet:ipv4-prefix
  |        |     +--rw ipv4-prefix-length      uint8
  |        |     +--rw bgp-route-type?         enumeration
  |        |     +--rw bgp-attribute-list
  |        |        |  +--rw bgp-origin?              enumeration
  |        |        |  +--rw bgp-aspath
  |        |        |  |  +--rw usascount?          uint16
  |        |        |  |  +--rw ulrefcount?         uint16
  |        |        |  |  +--rw asstring?           string
  |        |        |  |  +--ro usascountfrcomp?    uint16
  |        |        |  |  +--rw usastotalcount?     uint16
  |        |        |  |  +--rw usas4pathlen?       uint16
  |        |        |  |  +--rw as4pathvalue?       string
  |        |        |  +--rw bgp-nexthop?             inet:ip-address
  |        |        |  +--rw bgp-med?                 uint32
  |        |        |  +--rw bgp-localpref?           uint32
  |        |        |  +--rw bgp-atomic-aggregate?    uint32
  |        |        |  +--rw bgp-aggregator
  |        |        |  |  +--rw ulipaddress?    uint32
  |        |        |  |  +--rw ulasnumber?     uint32
  |        |        |  +--rw bgp-commattr
  |        |        |  |  +--rw uscommsize?        uint16
  |        |        |  |  +--rw ulrefcomm?         uint32
  |        |        |  |  +--rw commattr-value?    string
  |        |        |  +--rw bgp-extcommattr
  |        |        |  |  +--rw usextcommsize?        uint16
  |        |        |  |  +--rw ulrefcount?           uint32
  |        |        |  |  +--rw extcommattr-value?    string
  |        |        |  +--rw bgp-clusterlist
  |        |        |  |  +--rw uscluslen?           uint16
  |        |        |  |  +--rw ulrefclus?           uint32
  |        |        |  |  +--rw clusterlist-value?   string
```

```
│       │      │   +--rw bgp-originator-id?        uint32
│       │      +--ro bgp-route-create?       enumeration
│       │      +--ro bgp-rt-state-info
│       │         +--ro rib-current-state?       rib-state-def
│       │         +--ro rib-last-state?          rib-state-def
│       │         +--ro rib-rejected-reason?     enumeration
│       │         +--ro not-preferred-reason?    enumeration
│       +--rw bgp-rib-out
│          +--rw bgp-rib-out-list* [ipv4-route ipv4-prefix-length]
│             +--rw ipv4-route               inet:ipv4-prefix
│             +--rw ipv4-prefix-length    uint8
│             +--rw bgp-route-type?        enumeration
│             +--rw bgp-attribute-list
│             │  +--rw bgp-origin?                enumeration
│             │  +--rw bgp-aspath
│             │  │  +--rw usascount?        uint16
│             │  │  +--rw ulrefcount?       uint16
│             │  │  +--rw asstring?         string
│             │  │  +--ro usascountfrcomp?  uint16
│             │  │  +--rw usastotalcount?   uint16
│             │  │  +--rw usas4pathlen?     uint16
│             │  │  +--rw as4pathvalue?     string
│             │  +--rw bgp-nexthop?              inet:ip-address
│             │  +--rw bgp-med?                  uint32
│             │  +--rw bgp-localpref?            uint32
│             │  +--rw bgp-atomic-aggregate?   uint32
│             │  +--rw bgp-aggregator
│             │  │  +--rw ulipaddress?   uint32
│             │  │  +--rw ulasnumber?    uint32
│             │  +--rw bgp-commattr
│             │  │  +--rw uscommsize?       uint16
│             │  │  +--rw ulrefcomm?        uint32
│             │  │  +--rw commattr-value?   string
│             │  +--rw bgp-extcommattr
│             │  │  +--rw usextcommsize?       uint16
│             │  │  +--rw ulrefcount?          uint32
│             │  │  +--rw extcommattr-value?   string
│             │  +--rw bgp-clusterlist
│             │  │  +--rw uscluslen?           uint16
│             │  │  +--rw ulrefclus?           uint32
│             │  │  +--rw clusterlist-value?   string
│             │  +--rw bgp-originator-id?        uint32
│             +--ro bgp-route-create?       enumeration
│             +--ro bgp-rt-state-info
│                +--ro rib-current-state?       rib-state-def
│                +--ro rib-last-state?          rib-state-def
│                +--ro rib-rejected-reason?     enumeration
│                +--ro not-preferred-reason?    enumeration
```

```
      +--rw bgp-ipv6-uni-instance
      |  +--rw bgp-instance-name?      string
      |  +--rw bgp-instance-create?    enumeration
      |  +--rw bgp-instance-type?      enumeration
      |  +--rw bgp-vendor-type?        enumeration
      |  +--rw afi?                    afi-def
      |  +--rw safi?                   safi-def
      |  +--rw bgp-local-rib
      |  |  +--rw bgp-route-list* [ipv6-route ipv6-prefix-length]
      |  |     +--rw ipv6-route            inet:ipv6-prefix
      |  |     +--rw ipv6-prefix-length    uint8
      |  |     +--rw bgp-route-type?       enumeration
      |  |     +--rw bgp-attribute-list
      |  |     |  +--rw bgp-origin?              enumeration
      |  |     |  +--rw bgp-aspath
      |  |     |  |  +--rw usascount?        uint16
      |  |     |  |  +--rw ulrefcount?       uint16
      |  |     |  |  +--rw asstring?         string
      |  |     |  |  +--ro usascountfrcomp?  uint16
      |  |     |  |  +--rw usastotalcount?   uint16
      |  |     |  |  +--rw usas4pathlen?     uint16
      |  |     |  |  +--rw as4pathvalue?     string
      |  |     |  +--rw bgp-nexthop?            inet:ip-address
      |  |     |  +--rw bgp-med?                uint32
      |  |     |  +--rw bgp-localpref?          uint32
      |  |     |  +--rw bgp-atomic-aggregate?   uint32
      |  |     |  +--rw bgp-aggregator
      |  |     |  |  +--rw ulipaddress?    uint32
      |  |     |  |  +--rw ulasnumber?     uint32
      |  |     |  +--rw bgp-commattr
      |  |     |  |  +--rw uscommsize?        uint16
      |  |     |  |  +--rw ulrefcomm?         uint32
      |  |     |  |  +--rw commattr-value?    string
      |  |     |  +--rw bgp-extcommattr
      |  |     |  |  +--rw usextcommsize?       uint16
      |  |     |  |  +--rw ulrefcount?          uint32
      |  |     |  |  +--rw extcommattr-value?   string
      |  |     |  +--rw bgp-clusterlist
      |  |     |  |  +--rw uscluslen?           uint16
      |  |     |  |  +--rw ulrefclus?           uint32
      |  |     |  |  +--rw clusterlist-value?   string
      |  |     |  +--rw bgp-originator-id?      uint32
      |  |     +--ro bgp-route-create?     enumeration
      |  |     +--ro bgp-rt-state-info
      |  |        +--ro rib-current-state?      rib-state-def
      |  |        +--ro rib-last-state?         rib-state-def
      |  |        +--ro rib-rejected-reason?    enumeration
      |  |        +--ro not-preferred-reason?   enumeration
```

```
          │    +--rw bgp-peer-list* [bgp-peer-name]
          │       +--rw peer-session-address
          │       │   +--rw local-ipv6-address?    inet:ipv6-prefix
          │       │   +--rw remote-ipv6-address?   inet:ipv6-prefix
          │       +--rw bgp-peer-name              string
          │       +--ro bgp-peer-type?             enumeration
          │       +--ro bgp-peer-create?           enumeration
          │       +--rw bgp-policy-in
          │       +--rw bgp-policy-out
          │       +--ro peer-policy-in-pset
          │       +--ro peer-policy-out-pset
          │       +--rw peer-state-info
          │       │   +--ro peer-current-state?         peer-state
          │       │   +--ro peer-last-state?            peer-state
          │       │   +--ro peer-down-reason
          │       │   │   +--ro error-code?      enumeration
          │       │   │   +--ro sub-error-code
          │       │   │      +--ro (sub-error-code-type)?
          │       │   │         +--:(head-error-sub-code)
          │       │   │         │  +--ro head-error-sub-value?        enumeratio
n
          │       │   │         +--:(open-error-sub-code)
          │       │   │         │  +--ro open-error-sub-value?        enumeratio
n
          │       │   │         +--:(update-error-sub-code)
          │       │   │         │  +--ro update-error-sub-value?      enumeratio
n
          │       │   │         +--:(route-refresh-error-sub-code)
          │       │   │            +--ro route-refresh-error-sub-value?  enumeratio
n
          │       │   +--ro peer-received-update-cnt?   uint64
          │       │   +--ro peer-transmit-update-cnt?   uint64
          │       │   +--ro peer-received-route-cnt?    uint64
          │       │   +--ro peer-send-route-cnt?        uint64
          │       │   +--rw max-prefix-rcv-limit?       uint64
          │       │   +--rw max-prefix-xmt-limit?       uint64
          │       │   +--ro peer-prefix-high?           uint64
          │       │   +--ro peer-prefix-low?            uint64
          │       │   +--ro peer-perfix-ave?            uint64
          │       │   +--ro peer-prefix-time?           uint64
          │       │   +--ro peer-prefix-max?            uint64
          │       │   +--ro publish-version?            uint64
          │       +--rw bgp-rib-in
          │       │   +--rw bgp-rib-in-list* [ipv6-route ipv6-prefix-length]
          │       │      +--rw ipv6-route            inet:ipv6-prefix
          │       │      +--rw ipv6-prefix-length    uint8
          │       │      +--rw bgp-route-type?       enumeration
          │       │      +--rw bgp-attribute-list
          │       │      │   +--rw bgp-origin?              enumeration
          │       │      │   +--rw bgp-aspath
          │       │      │   │   +--rw usascount?       uint16
          │       │      │   │   +--rw ulrefcount?      uint16
```

```
|   |   |   |   | +--rw asstring?          string
|   |   |   |   | +--ro usascountfrcomp?   uint16
|   |   |   |   | +--rw usastotalcout?     uint16
|   |   |   |   | +--rw usas4pathlen?      uint16
|   |   |   |   | +--rw as4pathvalue?      string
|   |   |   | +--rw bgp-nexthop?              inet:ip-address
|   |   |   | +--rw bgp-med?                  uint32
|   |   |   | +--rw bgp-localpref?            uint32
|   |   |   | +--rw bgp-atomic-aggregate?     uint32
|   |   |   | +--rw bgp-aggregator
|   |   |   |   | +--rw ulipaddress?   uint32
|   |   |   |   | +--rw ulasnumber?    uint32
|   |   |   | +--rw bgp-commattr
|   |   |   |   | +--rw uscommsize?        uint16
|   |   |   |   | +--rw ulrefcomm?         uint32
|   |   |   |   | +--rw commattr-value?    string
|   |   |   | +--rw bgp-extcommattr
|   |   |   |   | +--rw usextcommsize?        uint16
|   |   |   |   | +--rw ulrefcount?           uint32
|   |   |   |   | +--rw extcommattr-value?    string
|   |   |   | +--rw bgp-clusterlist
|   |   |   |   | +--rw uscluslen?          uint16
|   |   |   |   | +--rw ulrefclus?          uint32
|   |   |   |   | +--rw clusterlist-value?  string
|   |   |   | +--rw bgp-originator-id?        uint32
|   |   +--ro bgp-route-create?       enumeration
|   |   +--ro bgp-rt-state-info
|   |       +--ro rib-current-state?       rib-state-def
|   |       +--ro rib-last-state?          rib-state-def
|   |       +--ro rib-rejected-reason?     enumeration
|   |       +--ro not-preferred-reason?    enumeration
|   +--rw bgp-rib-out
|       +--rw bgp-rib-out-list* [ipv6-route ipv6-prefix-length]
|           +--rw ipv6-route                inet:ipv6-prefix
|           +--rw ipv6-prefix-length        uint8
|           +--rw bgp-route-type?           enumeration
|           +--rw bgp-attribute-list
|               | +--rw bgp-origin?               enumeration
|               | +--rw bgp-aspath
|               |   | +--rw usascount?         uint16
|               |   | +--rw ulrefcount?        uint16
|               |   | +--rw asstring?          string
|               |   | +--ro usascountfrcomp?   uint16
|               |   | +--rw usastotalcout?     uint16
|               |   | +--rw usas4pathlen?      uint16
|               |   | +--rw as4pathvalue?      string
|               | +--rw bgp-nexthop?              inet:ip-address
|               | +--rw bgp-med?                  uint32
```

```
  |         |    +--rw bgp-localpref?           uint32
  |         |    +--rw bgp-atomic-aggregate?    uint32
  |         |    +--rw bgp-aggregator
  |         |    |  +--rw ulipaddress?    uint32
  |         |    |  +--rw ulasnumber?     uint32
  |         |    +--rw bgp-commattr
  |         |    |  +--rw uscommsize?        uint16
  |         |    |  +--rw ulrefcomm?         uint32
  |         |    |  +--rw commattr-value?    string
  |         |    +--rw bgp-extcommattr
  |         |    |  +--rw usextcommsize?       uint16
  |         |    |  +--rw ulrefcount?          uint32
  |         |    |  +--rw extcommattr-value?   string
  |         |    +--rw bgp-clusterlist
  |         |    |  +--rw uscluslen?           uint16
  |         |    |  +--rw ulrefclus?           uint32
  |         |    |  +--rw clusterlist-value?   string
  |         |    +--rw bgp-originator-id?       uint32
  |         +--ro bgp-route-create?      enumeration
  |         +--ro bgp-rt-state-info
  |            +--ro rib-current-state?     rib-state-def
  |            +--ro rib-last-state?        rib-state-def
  |            +--ro rib-rejected-reason?   enumeration
  |            +--ro not-preferred-reason?  enumeration
  +--rw bgp-labeled-ipv6-instance
  |  +--rw bgp-instance-name?      string
  |  +--rw bgp-instance-create?    enumeration
  |  +--rw bgp-instance-type?      enumeration
  |  +--rw bgp-vendor-type?        enumeration
  |  +--rw afi?                    afi-def
  |  +--rw safi?                   safi-def
  |  +--rw bgp-local-rib
  |  |  +--rw bgp-route-list* [ipv6-route ipv6-prefix-length mpls-label]
  |  |     +--rw ipv6-route             inet:ipv6-prefix
  |  |     +--rw ipv6-prefix-length     uint8
  |  |     +--rw mpls-label             mpls-label-def
  |  |     +--rw bgp-route-type?        enumeration
  |  |     +--rw bgp-attribute-list
  |  |     |  +--rw bgp-origin?             enumeration
  |  |     |  +--rw bgp-aspath
  |  |     |  |  +--rw usascount?        uint16
  |  |     |  |  +--rw ulrefcount?       uint16
  |  |     |  |  +--rw asstring?         string
  |  |     |  |  +--ro usascountfrcomp?  uint16
  |  |     |  |  +--rw usastotalcount?   uint16
  |  |     |  |  +--rw usas4pathlen?     uint16
  |  |     |  |  +--rw as4pathvalue?     string
  |  |     |  +--rw bgp-nexthop?            inet:ip-address
```

```
   |  |        |        +--rw bgp-med?                   uint32
   |  |        |        +--rw bgp-localpref?             uint32
   |  |        |        +--rw bgp-atomic-aggregate?      uint32
   |  |        |        +--rw bgp-aggregator
   |  |        |        |  +--rw ulipaddress?    uint32
   |  |        |        |  +--rw ulasnumber?     uint32
   |  |        |        +--rw bgp-commattr
   |  |        |        |  +--rw uscommsize?         uint16
   |  |        |        |  +--rw ulrefcomm?          uint32
   |  |        |        |  +--rw commattr-value?     string
   |  |        |        +--rw bgp-extcommattr
   |  |        |        |  +--rw usextcommsize?          uint16
   |  |        |        |  +--rw ulrefcount?             uint32
   |  |        |        |  +--rw extcommattr-value?      string
   |  |        |        +--rw bgp-clusterlist
   |  |        |        |  +--rw uscluslen?              uint16
   |  |        |        |  +--rw ulrefclus?              uint32
   |  |        |        |  +--rw clusterlist-value?      string
   |  |        |        +--rw bgp-originator-id?         uint32
   |  |        +--ro bgp-route-create?      enumeration
   |  |        +--ro bgp-rt-state-info
   |  |           +--ro rib-current-state?      rib-state-def
   |  |           +--ro rib-last-state?         rib-state-def
   |  |           +--ro rib-rejected-reason?    enumeration
   |  |           +--ro not-preferred-reason?   enumeration
   |  +--rw bgp-peer-list* [bgp-peer-name]
   |     +--rw peer-session-address
   |     |  +--rw local-ipv6-address?    inet:ipv6-prefix
   |     |  +--rw remote-ipv6-address?   inet:ipv6-prefix
   |     +--rw bgp-peer-name              string
   |     +--ro bgp-peer-type?             enumeration
   |     +--ro bgp-peer-create?           enumeration
   |     +--rw bgp-policy-in
   |     +--rw bgp-policy-out
   |     +--ro peer-policy-in-pset
   |     +--ro peer-policy-out-pset
   |     +--rw peer-state-info
   |     |  +--ro peer-current-state?            peer-state
   |     |  +--ro peer-last-state?               peer-state
   |     |  +--ro peer-down-reason
   |     |  |  +--ro error-code?        enumeration
   |     |  |  +--ro sub-error-code
   |     |  |     +--ro (sub-error-code-type)?
   |     |  |        +--:(head-error-sub-code)
   |     |  |        |  +--ro head-error-sub-value?          enumeratio
n
   |     |  |        +--:(open-error-sub-code)
   |     |  |        |  +--ro open-error-sub-value?          enumeratio
n
   |     |  |        +--:(update-error-sub-code)
```

```
     |     |   |            |  +--ro update-error-sub-value?         enumeratio
n
     |     |   |            +--:(route-refresh-error-sub-code)
     |     |   |               +--ro route-refresh-error-sub-value?   enumeratio
n
     |     |   +--ro peer-received-update-cnt?    uint64
     |     |   +--ro peer-transmit-update-cnt?    uint64
     |     |   +--ro peer-received-route-cnt?     uint64
     |     |   +--ro peer-send-route-cnt?         uint64
     |     |   +--rw max-prefix-rcv-limit?        uint64
     |     |   +--rw max-prefix-xmt-limit?        uint64
     |     |   +--ro peer-prefix-high?            uint64
     |     |   +--ro peer-prefix-low?             uint64
     |     |   +--ro peer-perfix-ave?             uint64
     |     |   +--ro peer-prefix-time?            uint64
     |     |   +--ro peer-prefix-max?             uint64
     |     |   +--ro publish-version?             uint64
     |     +--rw bgp-rib-in
     |     |   +--rw bgp-rib-in-list* [ipv6-route ipv6-prefix-length mpls-la
bel]
     |     |      +--rw ipv6-route            inet:ipv6-prefix
     |     |      +--rw ipv6-prefix-length    uint8
     |     |      +--rw mpls-label            mpls-label-def
     |     |      +--rw bgp-route-type?       enumeration
     |     |      +--rw bgp-attribute-list
     |     |      |  +--rw bgp-origin?             enumeration
     |     |      |  +--rw bgp-aspath
     |     |      |  |  +--rw usascount?        uint16
     |     |      |  |  +--rw ulrefcount?       uint16
     |     |      |  |  +--rw asstring?         string
     |     |      |  |  +--ro usascountfrcomp?  uint16
     |     |      |  |  +--rw usastotalcount?   uint16
     |     |      |  |  +--rw usas4pathlen?     uint16
     |     |      |  |  +--rw as4pathvalue?     string
     |     |      |  +--rw bgp-nexthop?            inet:ip-address
     |     |      |  +--rw bgp-med?                uint32
     |     |      |  +--rw bgp-localpref?          uint32
     |     |      |  +--rw bgp-atomic-aggregate?   uint32
     |     |      |  +--rw bgp-aggregator
     |     |      |  |  +--rw ulipaddress?   uint32
     |     |      |  |  +--rw ulasnumber?    uint32
     |     |      |  +--rw bgp-commattr
     |     |      |  |  +--rw uscommsize?        uint16
     |     |      |  |  +--rw ulrefcomm?         uint32
     |     |      |  |  +--rw commattr-value?    string
     |     |      |  +--rw bgp-extcommattr
     |     |      |  |  +--rw usextcommsize?       uint16
     |     |      |  |  +--rw ulrefcount?          uint32
     |     |      |  |  +--rw extcommattr-value?   string
     |     |      |  +--rw bgp-clusterlist
     |     |      |  |  +--rw uscluslen?           uint16
```

```
   |      |       |  |  +--rw ulrefclus?          uint32
   |      |       |  |  +--rw clusterlist-value?   string
   |      |       |  +--rw bgp-originator-id?      uint32
   |      |    +--ro bgp-route-create?      enumeration
   |      |    +--ro bgp-rt-state-info
   |      |       +--ro rib-current-state?     rib-state-def
   |      |       +--ro rib-last-state?        rib-state-def
   |      |       +--ro rib-rejected-reason?    enumeration
   |      |       +--ro not-preferred-reason?   enumeration
   |      +--rw bgp-rib-out
   |         +--rw bgp-rib-out-list* [ipv6-route ipv6-prefix-length mpls-l
   abel]
   |            +--rw ipv6-route             inet:ipv6-prefix
   |            +--rw ipv6-prefix-length     uint8
   |            +--rw mpls-label             mpls-label-def
   |            +--rw bgp-route-type?        enumeration
   |            +--rw bgp-attribute-list
   |            |  +--rw bgp-origin?             enumeration
   |            |  +--rw bgp-aspath
   |            |  |  +--rw usascount?        uint16
   |            |  |  +--rw ulrefcount?       uint16
   |            |  |  +--rw asstring?         string
   |            |  |  +--ro usascountfrcomp?  uint16
   |            |  |  +--rw usastotalcount?   uint16
   |            |  |  +--rw usas4pathlen?     uint16
   |            |  |  +--rw as4pathvalue?     string
   |            |  +--rw bgp-nexthop?            inet:ip-address
   |            |  +--rw bgp-med?                uint32
   |            |  +--rw bgp-localpref?          uint32
   |            |  +--rw bgp-atomic-aggregate?   uint32
   |            |  +--rw bgp-aggregator
   |            |  |  +--rw ulipaddress?   uint32
   |            |  |  +--rw ulasnumber?    uint32
   |            |  +--rw bgp-commattr
   |            |  |  +--rw uscommsize?       uint16
   |            |  |  +--rw ulrefcomm?        uint32
   |            |  |  +--rw commattr-value?   string
   |            |  +--rw bgp-extcommattr
   |            |  |  +--rw usextcommsize?       uint16
   |            |  |  +--rw ulrefcount?          uint32
   |            |  |  +--rw extcommattr-value?   string
   |            |  +--rw bgp-clusterlist
   |            |  |  +--rw uscluslen?          uint16
   |            |  |  +--rw ulrefclus?          uint32
   |            |  |  +--rw clusterlist-value?   string
   |            |  +--rw bgp-originator-id?      uint32
   |            +--ro bgp-route-create?      enumeration
   |            +--ro bgp-rt-state-info
   |               +--ro rib-current-state?       rib-state-def
```

```
    |                +--ro rib-last-state?        rib-state-def
    |                +--ro rib-rejected-reason?   enumeration
    |                +--ro not-preferred-reason?  enumeration
    +--rw bgp-ipv6-multi-instance
    |  +--rw bgp-instance-name?     string
    |  +--rw bgp-instance-create?   enumeration
    |  +--rw bgp-instance-type?     enumeration
    |  +--rw bgp-vendor-type?       enumeration
    |  +--rw afi?                   afi-def
    |  +--rw safi?                  safi-def
    |  +--rw bgp-local-rib
    |  |  +--rw bgp-route-list* [ipv6-route ipv6-prefix-length]
    |  |     +--rw ipv6-route             inet:ipv6-prefix
    |  |     +--rw ipv6-prefix-length     uint8
    |  |     +--rw bgp-route-type?        enumeration
    |  |     +--rw bgp-attribute-list
    |  |     |  +--rw bgp-origin?             enumeration
    |  |     |  +--rw bgp-aspath
    |  |     |  |  +--rw usascount?        uint16
    |  |     |  |  +--rw ulrefcount?       uint16
    |  |     |  |  +--rw asstring?         string
    |  |     |  |  +--ro usascountfrcomp?  uint16
    |  |     |  |  +--rw usastotalcount?   uint16
    |  |     |  |  +--rw usas4pathlen?     uint16
    |  |     |  |  +--rw as4pathvalue?     string
    |  |     |  +--rw bgp-nexthop?            inet:ip-address
    |  |     |  +--rw bgp-med?               uint32
    |  |     |  +--rw bgp-localpref?         uint32
    |  |     |  +--rw bgp-atomic-aggregate?  uint32
    |  |     |  +--rw bgp-aggregator
    |  |     |  |  +--rw ulipaddress?   uint32
    |  |     |  |  +--rw ulasnumber?    uint32
    |  |     |  +--rw bgp-commattr
    |  |     |  |  +--rw uscommsize?       uint16
    |  |     |  |  +--rw ulrefcomm?        uint32
    |  |     |  |  +--rw commattr-value?   string
    |  |     |  +--rw bgp-extcommattr
    |  |     |  |  +--rw usextcommsize?       uint16
    |  |     |  |  +--rw ulrefcount?          uint32
    |  |     |  |  +--rw extcommattr-value?   string
    |  |     |  +--rw bgp-clusterlist
    |  |     |  |  +--rw uscluslen?           uint16
    |  |     |  |  +--rw ulrefclus?           uint32
    |  |     |  |  +--rw clusterlist-value?   string
    |  |     |  +--rw bgp-originator-id?      uint32
    |  |     +--ro bgp-route-create?     enumeration
    |  |     +--ro bgp-rt-state-info
    |  |        +--ro rib-current-state?      rib-state-def
```

```
      |   |            +--ro rib-last-state?          rib-state-def
      |   |            +--ro rib-rejected-reason?     enumeration
      |   |            +--ro not-preferred-reason?    enumeration
      |   +--rw bgp-peer-list* [bgp-peer-name]
      |      +--rw peer-session-address
      |      |  +--rw local-ipv6-address?    inet:ipv6-prefix
      |      |  +--rw remote-ipv6-address?   inet:ipv6-prefix
      |      +--rw bgp-peer-name             string
      |      +--ro bgp-peer-type?            enumeration
      |      +--ro bgp-peer-create?          enumeration
      |      +--rw bgp-policy-in
      |      +--rw bgp-policy-out
      |      +--ro peer-policy-in-pset
      |      +--ro peer-policy-out-pset
      |      +--rw peer-state-info
      |      |  +--ro peer-current-state?       peer-state
      |      |  +--ro peer-last-state?          peer-state
      |      |  +--ro peer-down-reason
      |      |  |  +--ro error-code?       enumeration
      |      |  |  +--ro sub-error-code
      |      |  |     +--ro (sub-error-code-type)?
      |      |  |        +--:(head-error-sub-code)
      |      |  |        |  +--ro head-error-sub-value?        enumeratio
 n
      |      |  |        +--:(open-error-sub-code)
      |      |  |        |  +--ro open-error-sub-value?        enumeratio
 n
      |      |  |        +--:(update-error-sub-code)
      |      |  |        |  +--ro update-error-sub-value?      enumeratio
 n
      |      |  |        +--:(route-refresh-error-sub-code)
      |      |  |           +--ro route-refresh-error-sub-value?   enumeratio
 n
      |      |  +--ro peer-received-update-cnt?    uint64
      |      |  +--ro peer-transmit-update-cnt?    uint64
      |      |  +--ro peer-received-route-cnt?     uint64
      |      |  +--ro peer-send-route-cnt?         uint64
      |      |  +--rw max-prefix-rcv-limit?        uint64
      |      |  +--rw max-prefix-xmt-limit?        uint64
      |      |  +--ro peer-prefix-high?            uint64
      |      |  +--ro peer-prefix-low?             uint64
      |      |  +--ro peer-perfix-ave?             uint64
      |      |  +--ro peer-prefix-time?            uint64
      |      |  +--ro peer-prefix-max?             uint64
      |      |  +--ro publish-version?             uint64
      |      +--rw bgp-rib-in
      |      |  +--rw bgp-rib-in-list* [ipv6-route ipv6-prefix-length]
      |      |     +--rw ipv6-route            inet:ipv6-prefix
      |      |     +--rw ipv6-prefix-length    uint8
      |      |     +--rw bgp-route-type?       enumeration
      |      |     +--rw bgp-attribute-list
      |      |     |  +--rw bgp-origin?              enumeration
```

```
|     |     |     | +--rw bgp-aspath
|     |     |     | | +--rw usascount?          uint16
|     |     |     | | +--rw ulrefcount?         uint16
|     |     |     | | +--rw asstring?           string
|     |     |     | | +--ro usascountfrcomp?    uint16
|     |     |     | | +--rw usastotalcount?     uint16
|     |     |     | | +--rw usas4pathlen?       uint16
|     |     |     | | +--rw as4pathvalue?       string
|     |     |     | +--rw bgp-nexthop?          inet:ip-address
|     |     |     | +--rw bgp-med?              uint32
|     |     |     | +--rw bgp-localpref?        uint32
|     |     |     | +--rw bgp-atomic-aggregate? uint32
|     |     |     | +--rw bgp-aggregator
|     |     |     | | +--rw ulipaddress?   uint32
|     |     |     | | +--rw ulasnumber?    uint32
|     |     |     | +--rw bgp-commattr
|     |     |     | | +--rw uscommsize?       uint16
|     |     |     | | +--rw ulrefcomm?        uint32
|     |     |     | | +--rw commattr-value?   string
|     |     |     | +--rw bgp-extcommattr
|     |     |     | | +--rw usextcommsize?       uint16
|     |     |     | | +--rw ulrefcount?          uint32
|     |     |     | | +--rw extcommattr-value?   string
|     |     |     | +--rw bgp-clusterlist
|     |     |     | | +--rw uscluslen?          uint16
|     |     |     | | +--rw ulrefclus?          uint32
|     |     |     | | +--rw clusterlist-value?  string
|     |     |     | +--rw bgp-originator-id?    uint32
|     |     +--ro bgp-route-create?      enumeration
|     |     +--ro bgp-rt-state-info
|     |        +--ro rib-current-state?      rib-state-def
|     |        +--ro rib-last-state?         rib-state-def
|     |        +--ro rib-rejected-reason?    enumeration
|     |        +--ro not-preferred-reason?   enumeration
|     +--rw bgp-rib-out
|        +--rw bgp-rib-out-list* [ipv6-route ipv6-prefix-length]
|           +--rw ipv6-route              inet:ipv6-prefix
|           +--rw ipv6-prefix-length      uint8
|           +--rw bgp-route-type?         enumeration
|           +--rw bgp-attribute-list
|           | +--rw bgp-origin?              enumeration
|           | +--rw bgp-aspath
|           | | +--rw usascount?          uint16
|           | | +--rw ulrefcount?         uint16
|           | | +--rw asstring?           string
|           | | +--ro usascountfrcomp?    uint16
|           | | +--rw usastotalcount?     uint16
|           | | +--rw usas4pathlen?       uint16
```

```
|               |  |  +--rw as4pathvalue?        string
|               |  +--rw bgp-nexthop?            inet:ip-address
|               |  +--rw bgp-med?                uint32
|               |  +--rw bgp-localpref?          uint32
|               |  +--rw bgp-atomic-aggregate?   uint32
|               |  +--rw bgp-aggregator
|               |  |  +--rw ulipaddress?   uint32
|               |  |  +--rw ulasnumber?    uint32
|               |  +--rw bgp-commattr
|               |  |  +--rw uscommsize?        uint16
|               |  |  +--rw ulrefcomm?         uint32
|               |  |  +--rw commattr-value?    string
|               |  +--rw bgp-extcommattr
|               |  |  +--rw usextcommsize?        uint16
|               |  |  +--rw ulrefcount?           uint32
|               |  |  +--rw extcommattr-value?    string
|               |  +--rw bgp-clusterlist
|               |  |  +--rw uscluslen?          uint16
|               |  |  +--rw ulrefclus?          uint32
|               |  |  +--rw clusterlist-value?  string
|               |  +--rw bgp-originator-id?     uint32
|             +--ro bgp-route-create?    enumeration
|             +--ro bgp-rt-state-info
|                +--ro rib-current-state?      rib-state-def
|                +--ro rib-last-state?         rib-state-def
|                +--ro rib-rejected-reason?    enumeration
|                +--ro not-preferred-reason?   enumeration
+--rw bgp-vpnv6-instance
|  +--rw bgp-instance-name?     string
|  +--rw bgp-instance-create?   enumeration
|  +--rw bgp-instance-type?     enumeration
|  +--rw bgp-vendor-type?       enumeration
|  +--rw afi?                   afi-def
|  +--rw safi?                  safi-def
|  +--rw bgp-local-rib
|  |  +--rw bgp-route-list* [ipv6-route ipv6-prefix-length route-disti
nguisher]
|  |        +--rw ipv6-route              inet:ipv6-prefix
|  |        +--rw ipv6-prefix-length      uint8
|  |        +--rw mpls-label?             mpls-label-def
|  |        +--rw route-distinguisher     route-distinguisher-def
|  |        +--rw bgp-route-type?         enumeration
|  |        +--rw bgp-attribute-list
|  |        |  +--rw bgp-origin?            enumeration
|  |        |  +--rw bgp-aspath
|  |        |  |  +--rw usascount?       uint16
|  |        |  |  +--rw ulrefcount?      uint16
|  |        |  |  +--rw asstring?        string
|  |        |  |  +--ro usascountfrcomp?  uint16
```

```
│ │    │  │  +--rw usastotalcount?    uint16
│ │    │  │  +--rw usas4pathlen?      uint16
│ │    │  │  +--rw as4pathvalue?      string
│ │    │  +--rw bgp-nexthop?             inet:ip-address
│ │    │  +--rw bgp-med?                 uint32
│ │    │  +--rw bgp-localpref?           uint32
│ │    │  +--rw bgp-atomic-aggregate?    uint32
│ │    │  +--rw bgp-aggregator
│ │    │  │  +--rw ulipaddress?    uint32
│ │    │  │  +--rw ulasnumber?     uint32
│ │    │  +--rw bgp-commattr
│ │    │  │  +--rw uscommsize?        uint16
│ │    │  │  +--rw ulrefcomm?         uint32
│ │    │  │  +--rw commattr-value?    string
│ │    │  +--rw bgp-extcommattr
│ │    │  │  +--rw usextcommsize?       uint16
│ │    │  │  +--rw ulrefcount?          uint32
│ │    │  │  +--rw extcommattr-value?   string
│ │    │  +--rw bgp-clusterlist
│ │    │  │  +--rw uscluslen?          uint16
│ │    │  │  +--rw ulrefclus?          uint32
│ │    │  │  +--rw clusterlist-value?  string
│ │    │  +--rw bgp-originator-id?     uint32
│ │    +--ro bgp-route-create?     enumeration
│ │    +--ro bgp-rt-state-info
│ │       +--ro rib-current-state?     rib-state-def
│ │       +--ro rib-last-state?        rib-state-def
│ │       +--ro rib-rejected-reason?   enumeration
│ │       +--ro not-preferred-reason?  enumeration
│ +--rw bgp-peer-list* [bgp-peer-name]
│    +--rw peer-session-address
│    │  +--rw local-ipv6-address?    inet:ipv6-prefix
│    │  +--rw remote-ipv6-address?   inet:ipv6-prefix
│    +--rw bgp-peer-name            string
│    +--ro bgp-peer-type?           enumeration
│    +--ro bgp-peer-create?         enumeration
│    +--rw bgp-policy-in
│    +--rw bgp-policy-out
│    +--ro peer-policy-in-pset
│    +--ro peer-policy-out-pset
│    +--rw peer-state-info
│    │  +--ro peer-current-state?        peer-state
│    │  +--ro peer-last-state?           peer-state
│    │  +--ro peer-down-reason
│    │  │  +--ro error-code?        enumeration
│    │  │  +--ro sub-error-code
│    │  │     +--ro (sub-error-code-type)?
│    │  │        +--:(head-error-sub-code)
```

```
      |     |   |                 |  +--ro head-error-sub-value?                enumeratio
n
      |     |   |           +--:(open-error-sub-code)
      |     |   |           |  +--ro open-error-sub-value?                enumeratio
n
      |     |   |           +--:(update-error-sub-code)
      |     |   |           |  +--ro update-error-sub-value?                enumeratio
n
      |     |   |           +--:(route-refresh-error-sub-code)
      |     |   |              +--ro route-refresh-error-sub-value?    enumeratio
n
      |     |   +--ro peer-received-update-cnt?    uint64
      |     |   +--ro peer-transmit-update-cnt?    uint64
      |     |   +--ro peer-received-route-cnt?    uint64
      |     |   +--ro peer-send-route-cnt?        uint64
      |     |   +--rw max-prefix-rcv-limit?       uint64
      |     |   +--rw max-prefix-xmt-limit?       uint64
      |     |   +--ro peer-prefix-high?           uint64
      |     |   +--ro peer-prefix-low?            uint64
      |     |   +--ro peer-perfix-ave?            uint64
      |     |   +--ro peer-prefix-time?           uint64
      |     |   +--ro peer-prefix-max?            uint64
      |     |   +--ro publish-version?            uint64
      |     +--rw bgp-rib-in
      |     |   +--rw bgp-rib-in-list* [ipv6-route ipv6-prefix-length route-d
istinguisher]
      |     |      +--rw ipv6-route            inet:ipv6-prefix
      |     |      +--rw ipv6-prefix-length    uint8
      |     |      +--rw mpls-label?           mpls-label-def
      |     |      +--rw route-distinguisher   route-distinguisher-def
      |     |      +--rw bgp-route-type?       enumeration
      |     |      +--rw bgp-attribute-list
      |     |      |  +--rw bgp-origin?             enumeration
      |     |      |  +--rw bgp-aspath
      |     |      |  |  +--rw usascount?        uint16
      |     |      |  |  +--rw ulrefcount?       uint16
      |     |      |  |  +--rw asstring?         string
      |     |      |  |  +--ro usascountfrcomp?  uint16
      |     |      |  |  +--rw usastotalcount?   uint16
      |     |      |  |  +--rw usas4pathlen?     uint16
      |     |      |  |  +--rw as4pathvalue?     string
      |     |      |  +--rw bgp-nexthop?        inet:ip-address
      |     |      |  +--rw bgp-med?            uint32
      |     |      |  +--rw bgp-localpref?      uint32
      |     |      |  +--rw bgp-atomic-aggregate?   uint32
      |     |      |  +--rw bgp-aggregator
      |     |      |  |  +--rw ulipaddress?   uint32
      |     |      |  |  +--rw ulasnumber?    uint32
      |     |      |  +--rw bgp-commattr
      |     |      |  |  +--rw uscommsize?        uint16
      |     |      |  |  +--rw ulrefcomm?         uint32
      |     |      |  |  +--rw commattr-value?    string
      |     |      |  +--rw bgp-extcommattr
```

```
│   │       │     │   +--rw usextcommsize?       uint16
│   │       │     │   +--rw ulrefcount?          uint32
│   │       │     │   +--rw extcommattr-value?   string
│   │       │   +--rw bgp-clusterlist
│   │       │     │   +--rw uscluslen?           uint16
│   │       │     │   +--rw ulrefclus?           uint32
│   │       │     │   +--rw clusterlist-value?   string
│   │       │   +--rw bgp-originator-id?         uint32
│   │       +--ro bgp-route-create?       enumeration
│   │       +--ro bgp-rt-state-info
│   │          +--ro rib-current-state?    rib-state-def
│   │          +--ro rib-last-state?       rib-state-def
│   │          +--ro rib-rejected-reason?    enumeration
│   │          +--ro not-preferred-reason?   enumeration
│       +--rw bgp-rib-out
│          +--rw bgp-rib-out-list* [ipv6-route ipv6-prefix-length route-
distinguisher]
│             +--rw ipv6-route             inet:ipv6-prefix
│             +--rw ipv6-prefix-length     uint8
│             +--rw mpls-label?            mpls-label-def
│             +--rw route-distinguisher    route-distinguisher-def
│             +--rw bgp-route-type?        enumeration
│             +--rw bgp-attribute-list
│                │   +--rw bgp-origin?              enumeration
│                │   +--rw bgp-aspath
│                │     │   +--rw usascount?        uint16
│                │     │   +--rw ulrefcount?       uint16
│                │     │   +--rw asstring?         string
│                │     │   +--ro usascountfrcomp?  uint16
│                │     │   +--rw usastotalcount?   uint16
│                │     │   +--rw usas4pathlen?     uint16
│                │     │   +--rw as4pathvalue?     string
│                │   +--rw bgp-nexthop?             inet:ip-address
│                │   +--rw bgp-med?                 uint32
│                │   +--rw bgp-localpref?           uint32
│                │   +--rw bgp-atomic-aggregate?    uint32
│                │   +--rw bgp-aggregator
│                │     │   +--rw ulipaddress?   uint32
│                │     │   +--rw ulasnumber?    uint32
│                │   +--rw bgp-commattr
│                │     │   +--rw uscommsize?       uint16
│                │     │   +--rw ulrefcomm?        uint32
│                │     │   +--rw commattr-value?   string
│                │   +--rw bgp-extcommattr
│                │     │   +--rw usextcommsize?       uint16
│                │     │   +--rw ulrefcount?          uint32
│                │     │   +--rw extcommattr-value?   string
│                │   +--rw bgp-clusterlist
│                │     │   +--rw uscluslen?           uint16
```

```
      |              |  |  +--rw ulrefclus?              uint32
      |              |  |  +--rw clusterlist-value?    string
      |              |  +--rw bgp-originator-id?        uint32
      |              +--ro bgp-route-create?       enumeration
      |              +--ro bgp-rt-state-info
      |                 +--ro rib-current-state?      rib-state-def
      |                 +--ro rib-last-state?         rib-state-def
      |                 +--ro rib-rejected-reason?    enumeration
      |                 +--ro not-preferred-reason?   enumeration
      +--rw bgp-ipv6-l3vpn-instance-list* [bgp-l3vpn-instance-name]
      |  +--rw bgp-l3vpn-instance-name     string
      |  +--rw bgp-instance-name?          string
      |  +--rw bgp-instance-create?        enumeration
      |  +--rw bgp-instance-type?          enumeration
      |  +--rw bgp-vendor-type?            enumeration
      |  +--rw afi?                        afi-def
      |  +--rw safi?                       safi-def
      |  +--rw bgp-local-rib
      |  |  +--rw bgp-route-list* [ipv6-route ipv6-prefix-length]
      |  |     +--rw ipv6-route           inet:ipv6-prefix
      |  |     +--rw ipv6-prefix-length   uint8
      |  |     +--rw bgp-route-type?      enumeration
      |  |     +--rw bgp-attribute-list
      |  |     |  +--rw bgp-origin?            enumeration
      |  |     |  +--rw bgp-aspath
      |  |     |  |  +--rw usascount?       uint16
      |  |     |  |  +--rw ulrefcount?      uint16
      |  |     |  |  +--rw asstring?        string
      |  |     |  |  +--ro usascountfrcomp?  uint16
      |  |     |  |  +--rw usastotalcount?  uint16
      |  |     |  |  +--rw usas4pathlen?    uint16
      |  |     |  |  +--rw as4pathvalue?    string
      |  |     |  +--rw bgp-nexthop?          inet:ip-address
      |  |     |  +--rw bgp-med?              uint32
      |  |     |  +--rw bgp-localpref?        uint32
      |  |     |  +--rw bgp-atomic-aggregate?  uint32
      |  |     |  +--rw bgp-aggregator
      |  |     |  |  +--rw ulipaddress?   uint32
      |  |     |  |  +--rw ulasnumber?    uint32
      |  |     |  +--rw bgp-commattr
      |  |     |  |  +--rw uscommsize?       uint16
      |  |     |  |  +--rw ulrefcomm?        uint32
      |  |     |  |  +--rw commattr-value?   string
      |  |     |  +--rw bgp-extcommattr
      |  |     |  |  +--rw usextcommsize?      uint16
      |  |     |  |  +--rw ulrefcount?         uint32
      |  |     |  |  +--rw extcommattr-value?  string
      |  |     |  +--rw bgp-clusterlist
```

```
   │  │        │    │  +--rw uscluslen?               uint16
   │  │        │    │  +--rw ulrefclus?               uint32
   │  │        │    │  +--rw clusterlist-value?       string
   │  │        │    +--rw bgp-originator-id?          uint32
   │  │     +--ro bgp-route-create?       enumeration
   │  │     +--ro bgp-rt-state-info
   │  │        +--ro rib-current-state?          rib-state-def
   │  │        +--ro rib-last-state?             rib-state-def
   │  │        +--ro rib-rejected-reason?        enumeration
   │  │        +--ro not-preferred-reason?       enumeration
   │  +--rw bgp-peer-list* [bgp-peer-name]
   │     +--rw peer-session-address
   │     │  +--rw local-ipv6-address?     inet:ipv6-prefix
   │     │  +--rw remote-ipv6-address?    inet:ipv6-prefix
   │     +--rw bgp-peer-name             string
   │     +--ro bgp-peer-type?            enumeration
   │     +--ro bgp-peer-create?          enumeration
   │     +--rw bgp-policy-in
   │     +--rw bgp-policy-out
   │     +--ro peer-policy-in-pset
   │     +--ro peer-policy-out-pset
   │     +--rw peer-state-info
   │     │  +--ro peer-current-state?           peer-state
   │     │  +--ro peer-last-state?              peer-state
   │     │  +--ro peer-down-reason
   │     │  │  +--ro error-code?       enumeration
   │     │  │  +--ro sub-error-code
   │     │  │     +--ro (sub-error-code-type)?
   │     │  │        +--:(head-error-sub-code)
   │     │  │        │  +--ro head-error-sub-value?              enumeratio
n
   │     │  │        +--:(open-error-sub-code)
   │     │  │        │  +--ro open-error-sub-value?              enumeratio
n
   │     │  │        +--:(update-error-sub-code)
   │     │  │        │  +--ro update-error-sub-value?            enumeratio
n
   │     │  │        +--:(route-refresh-error-sub-code)
   │     │  │           +--ro route-refresh-error-sub-value?   enumeratio
n
   │     │  +--ro peer-received-update-cnt?    uint64
   │     │  +--ro peer-transmit-update-cnt?    uint64
   │     │  +--ro peer-received-route-cnt?     uint64
   │     │  +--ro peer-send-route-cnt?         uint64
   │     │  +--rw max-prefix-rcv-limit?        uint64
   │     │  +--rw max-prefix-xmt-limit?        uint64
   │     │  +--ro peer-prefix-high?            uint64
   │     │  +--ro peer-prefix-low?             uint64
   │     │  +--ro peer-perfix-ave?             uint64
   │     │  +--ro peer-prefix-time?            uint64
   │     │  +--ro peer-prefix-max?             uint64
   │     │  +--ro publish-version?             uint64
```

```
   |            +--rw bgp-rib-in
   |            |  +--rw bgp-rib-in-list* [ipv6-route ipv6-prefix-length]
   |            |     +--rw ipv6-route          inet:ipv6-prefix
   |            |     +--rw ipv6-prefix-length   uint8
   |            |     +--rw bgp-route-type?      enumeration
   |            |     +--rw bgp-attribute-list
   |            |     |  +--rw bgp-origin?            enumeration
   |            |     |  +--rw bgp-aspath
   |            |     |  |  +--rw usascount?        uint16
   |            |     |  |  +--rw ulrefcount?       uint16
   |            |     |  |  +--rw asstring?         string
   |            |     |  |  +--ro usascountfrcomp?  uint16
   |            |     |  |  +--rw usastotalcount?   uint16
   |            |     |  |  +--rw usas4pathlen?     uint16
   |            |     |  |  +--rw as4pathvalue?     string
   |            |     |  +--rw bgp-nexthop?          inet:ip-address
   |            |     |  +--rw bgp-med?              uint32
   |            |     |  +--rw bgp-localpref?        uint32
   |            |     |  +--rw bgp-atomic-aggregate?  uint32
   |            |     |  +--rw bgp-aggregator
   |            |     |  |  +--rw ulipaddress?   uint32
   |            |     |  |  +--rw ulasnumber?    uint32
   |            |     |  +--rw bgp-commattr
   |            |     |  |  +--rw uscommsize?       uint16
   |            |     |  |  +--rw ulrefcomm?        uint32
   |            |     |  |  +--rw commattr-value?   string
   |            |     |  +--rw bgp-extcommattr
   |            |     |  |  +--rw usextcommsize?       uint16
   |            |     |  |  +--rw ulrefcount?          uint32
   |            |     |  |  +--rw extcommattr-value?   string
   |            |     |  +--rw bgp-clusterlist
   |            |     |  |  +--rw uscluslen?          uint16
   |            |     |  |  +--rw ulrefclus?          uint32
   |            |     |  |  +--rw clusterlist-value?  string
   |            |     |  +--rw bgp-originator-id?     uint32
   |            |     +--ro bgp-route-create?    enumeration
   |            |     +--ro bgp-rt-state-info
   |            |        +--ro rib-current-state?    rib-state-def
   |            |        +--ro rib-last-state?       rib-state-def
   |            |        +--ro rib-rejected-reason?  enumeration
   |            |        +--ro not-preferred-reason? enumeration
   |            +--rw bgp-rib-out
   |               +--rw bgp-rib-out-list* [ipv6-route ipv6-prefix-length]
   |                  +--rw ipv6-route          inet:ipv6-prefix
   |                  +--rw ipv6-prefix-length   uint8
   |                  +--rw bgp-route-type?      enumeration
   |                  +--rw bgp-attribute-list
   |                  |  +--rw bgp-origin?            enumeration
```

```
   |              |     +--rw bgp-aspath
   |              |     |  +--rw usascount?         uint16
   |              |     |  +--rw ulrefcount?        uint16
   |              |     |  +--rw asstring?          string
   |              |     |  +--ro usascountfrcomp?   uint16
   |              |     |  +--rw usastotalcount?    uint16
   |              |     |  +--rw usas4pathlen?      uint16
   |              |     |  +--rw as4pathvalue?      string
   |              |     +--rw bgp-nexthop?             inet:ip-address
   |              |     +--rw bgp-med?                 uint32
   |              |     +--rw bgp-localpref?           uint32
   |              |     +--rw bgp-atomic-aggregate?    uint32
   |              |     +--rw bgp-aggregator
   |              |     |  +--rw ulipaddress?   uint32
   |              |     |  +--rw ulasnumber?    uint32
   |              |     +--rw bgp-commattr
   |              |     |  +--rw uscommsize?        uint16
   |              |     |  +--rw ulrefcomm?         uint32
   |              |     |  +--rw commattr-value?    string
   |              |     +--rw bgp-extcommattr
   |              |     |  +--rw usextcommsize?        uint16
   |              |     |  +--rw ulrefcount?           uint32
   |              |     |  +--rw extcommattr-value?    string
   |              |     +--rw bgp-clusterlist
   |              |     |  +--rw uscluslen?         uint16
   |              |     |  +--rw ulrefclus?         uint32
   |              |     |  +--rw clusterlist-value?    string
   |              |     +--rw bgp-originator-id?    uint32
   |              +--ro bgp-route-create?     enumeration
   |              +--ro bgp-rt-state-info
   |                 +--ro rib-current-state?     rib-state-def
   |                 +--ro rib-last-state?        rib-state-def
   |                 +--ro rib-rejected-reason?   enumeration
   |                 +--ro not-preferred-reason?  enumeration
   +--rw bgp-ipv4-mvpn-instance
   |  +--rw bgp-instance-name?      string
   |  +--rw bgp-instance-create?    enumeration
   |  +--rw bgp-instance-type?      enumeration
   |  +--rw bgp-vendor-type?        enumeration
   |  +--rw afi?                    afi-def
   |  +--rw safi?                   safi-def
   |  +--rw bgp-local-rib
   |  |  +--rw bgp-route-type?                enumeration
   |  |  +--rw bgp-attribute-list
   |  |  |  +--rw bgp-origin?            enumeration
   |  |  |  +--rw bgp-aspath
   |  |  |  |  +--rw usascount?         uint16
   |  |  |  |  +--rw ulrefcount?        uint16
```

```
│  │  │     │  +--rw asstring?              string
│  │  │     │  +--ro usascountfrcomp?       uint16
│  │  │     │  +--rw usastotalcount?        uint16
│  │  │     │  +--rw usas4pathlen?          uint16
│  │  │     │  +--rw as4pathvalue?          string
│  │  │  +--rw bgp-nexthop?                 inet:ip-address
│  │  │  +--rw bgp-med?                     uint32
│  │  │  +--rw bgp-localpref?               uint32
│  │  │  +--rw bgp-atomic-aggregate?        uint32
│  │  │  +--rw bgp-aggregator
│  │  │  │  +--rw ulipaddress?    uint32
│  │  │  │  +--rw ulasnumber?     uint32
│  │  │  +--rw bgp-commattr
│  │  │  │  +--rw uscommsize?          uint16
│  │  │  │  +--rw ulrefcomm?           uint32
│  │  │  │  +--rw commattr-value?      string
│  │  │  +--rw bgp-extcommattr
│  │  │  │  +--rw usextcommsize?       uint16
│  │  │  │  +--rw ulrefcount?          uint32
│  │  │  │  +--rw extcommattr-value?   string
│  │  │  +--rw bgp-clusterlist
│  │  │  │  +--rw uscluslen?           uint16
│  │  │  │  +--rw ulrefclus?           uint32
│  │  │  │  +--rw clusterlist-value?   string
│  │  │  +--rw bgp-originator-id?      uint32
│  │  +--ro bgp-route-create?             enumeration
│  │  +--ro bgp-rt-state-info
│  │  │  +--ro rib-current-state?     rib-state-def
│  │  │  +--ro rib-last-state?        rib-state-def
│  │  │  +--ro rib-rejected-reason?   enumeration
│  │  │  +--ro not-preferred-reason?  enumeration
│  │  +--rw (bgp-mvpn-route-type)?
│  │     +--:(INTRA_AS_I_PMSI_AD)
│  │     │  +--rw intra-as-i-pmsi-ad-route* [route-type route-distingu
isher origin-router-ip-addr]
│  │     │        +--rw route-type              mvpn-route-type
│  │     │        +--rw route-distinguisher     route-distinguisher-def
│  │     │        +--rw origin-router-ip-addr   inet:ip-prefix
│  │     +--:(INTER_AS_I_PMSI_AD)
│  │     │  +--rw inter_as_i_pmsi_as_route* [route-type route-distingu
isher source-as]
│  │     │        +--rw route-type              mvpn-route-type
│  │     │        +--rw route-distinguisher     route-distinguisher-def
│  │     │        +--rw source-as               inet:as-number
│  │     +--:(S_PMSI_AD)
│  │     │  +--rw s-pmsi-ad-route* [route-type route-distinguisher mul
ticast-source multicast-group origin-router-ip-addr]
│  │     │        +--rw route-type              mvpn-route-type
│  │     │        +--rw route-distinguisher     route-distinguisher-def
│  │     │        +--rw multicast-source        inet:ip-prefix
│  │     │        +--rw multicast-group         inet:ip-prefix
```

```
        |   |      |    +--rw origin-router-ip-addr    inet:ip-prefix
        |   |      +--:(LEAF_AD)
        |   |      |  +--rw leaf-ad-route* [route-type route-key origin-router-i
p-addr]
        |   |      |     +--rw route-type                 mvpn-route-type
        |   |      |     +--rw route-key                  binary
        |   |      |     +--rw origin-router-ip-addr    inet:ip-prefix
        |   |      +--:(SOURCE_ACTIVE_AD)
        |   |      |  +--rw source-active-ad-route* [route-type route-distinguis
her multicast-source multicast-group]
        |   |      |     +--rw route-type               mvpn-route-type
        |   |      |     +--rw route-distinguisher      route-distinguisher-def
        |   |      |     +--rw multicast-source         inet:ip-prefix
        |   |      |     +--rw multicast-group          inet:ip-prefix
        |   |      +--:(SHARED_TREE_JOIN)
        |   |      |  +--rw shared-tree-join-route* [route-type route-distinguis
her source-as multicast-source multicast-group]
        |   |      |     +--rw route-type               mvpn-route-type
        |   |      |     +--rw route-distinguisher      route-distinguisher-def
        |   |      |     +--rw source-as                inet:as-number
        |   |      |     +--rw multicast-source         inet:ip-prefix
        |   |      |     +--rw multicast-group          inet:ip-prefix
        |   |      +--:(SOURCE_TREE_JOIN)
        |   |         +--rw source-tree-join-route* [route-type route-distinguis
her source-as multicast-source multicast-group]
        |   |            +--rw route-type               mvpn-route-type
        |   |            +--rw route-distinguisher      route-distinguisher-def
        |   |            +--rw source-as                inet:as-number
        |   |            +--rw multicast-source         inet:ip-prefix
        |   |            +--rw multicast-group          inet:ip-prefix
        |   +--rw bgp-peer-list* [bgp-peer-name]
        |      +--rw peer-session-address
        |      |  +--rw local-ipv4-address?     inet:ipv4-prefix
        |      |  +--rw remote-ipv4-address?    inet:ipv4-prefix
        |      +--rw bgp-peer-name              string
        |      +--ro bgp-peer-type?            enumeration
        |      +--ro bgp-peer-create?         enumeration
        |      +--rw bgp-policy-in
        |      +--rw bgp-policy-out
        |      +--ro peer-policy-in-pset
        |      +--ro peer-policy-out-pset
        |      +--rw peer-state-info
        |      |  +--ro peer-current-state?           peer-state
        |      |  +--ro peer-last-state?              peer-state
        |      |  +--ro peer-down-reason
        |      |  |  +--ro error-code?        enumeration
        |      |  |  +--ro sub-error-code
        |      |  |     +--ro (sub-error-code-type)?
        |      |  |        +--:(head-error-sub-code)
        |      |  |        |  +--ro head-error-sub-value?          enumeratio
n
        |      |  |        +--:(open-error-sub-code)
        |      |  |        |  +--ro open-error-sub-value?          enumeratio
n
```

```
     |     |   |               +--:(update-error-sub-code)
     |     |   |               |  +--ro update-error-sub-value?         enumeratio
n
     |     |   |               +--:(route-refresh-error-sub-code)
     |     |   |                  +--ro route-refresh-error-sub-value?   enumeratio
n
     |     |         +--ro peer-received-update-cnt?    uint64
     |     |         +--ro peer-transmit-update-cnt?    uint64
     |     |         +--ro peer-received-route-cnt?     uint64
     |     |         +--ro peer-send-route-cnt?         uint64
     |     |         +--rw max-prefix-rcv-limit?        uint64
     |     |         +--rw max-prefix-xmt-limit?        uint64
     |     |         +--ro peer-prefix-high?            uint64
     |     |         +--ro peer-prefix-low?             uint64
     |     |         +--ro peer-perfix-ave?             uint64
     |     |         +--ro peer-prefix-time?            uint64
     |     |         +--ro peer-prefix-max?             uint64
     |     |         +--ro publish-version?             uint64
     |       +--rw bgp-rib-in
     |     |   +--rw bgp-route-type?               enumeration
     |     |   +--rw bgp-attribute-list
     |     |   |   +--rw bgp-origin?               enumeration
     |     |   |   +--rw bgp-aspath
     |     |   |   |   +--rw usascount?        uint16
     |     |   |   |   +--rw ulrefcount?       uint16
     |     |   |   |   +--rw asstring?         string
     |     |   |   |   +--ro usascountfrcomp?  uint16
     |     |   |   |   +--rw usastotalcount?   uint16
     |     |   |   |   +--rw usas4pathlen?     uint16
     |     |   |   |   +--rw as4pathvalue?     string
     |     |   |   +--rw bgp-nexthop?             inet:ip-address
     |     |   |   +--rw bgp-med?                 uint32
     |     |   |   +--rw bgp-localpref?           uint32
     |     |   |   +--rw bgp-atomic-aggregate?    uint32
     |     |   |   +--rw bgp-aggregator
     |     |   |   |   +--rw ulipaddress?    uint32
     |     |   |   |   +--rw ulasnumber?     uint32
     |     |   |   +--rw bgp-commattr
     |     |   |   |   +--rw uscommsize?       uint16
     |     |   |   |   +--rw ulrefcomm?        uint32
     |     |   |   |   +--rw commattr-value?   string
     |     |   |   +--rw bgp-extcommattr
     |     |   |   |   +--rw usextcommsize?       uint16
     |     |   |   |   +--rw ulrefcount?          uint32
     |     |   |   |   +--rw extcommattr-value?   string
     |     |   |   +--rw bgp-clusterlist
     |     |   |   |   +--rw uscluslen?           uint16
     |     |   |   |   +--rw ulrefclus?           uint32
     |     |   |   |   +--rw clusterlist-value?   string
     |     |   |   +--rw bgp-originator-id?       uint32
```

```
   |      |      +--ro bgp-route-create?           enumeration
   |      |      +--ro bgp-rt-state-info
   |      |      |  +--ro rib-current-state?       rib-state-def
   |      |      |  +--ro rib-last-state?          rib-state-def
   |      |      |  +--ro rib-rejected-reason?     enumeration
   |      |      |  +--ro not-preferred-reason?    enumeration
   |      |      +--rw (bgp-mvpn-route-type)?
   |      |         +--:(INTRA_AS_I_PMSI_AD)
   |      |         |  +--rw intra-as-i-pmsi-ad-route* [route-type route-disti
nguisher origin-router-ip-addr]
   |      |         |        +--rw route-type              mvpn-route-type
   |      |         |        +--rw route-distinguisher     route-distinguisher-d
ef
   |      |         |        +--rw origin-router-ip-addr   inet:ip-prefix
   |      |         +--:(INTER_AS_I_PMSI_AD)
   |      |         |  +--rw inter_as_i_pmsi_as_route* [route-type route-disti
nguisher source-as]
   |      |         |        +--rw route-type              mvpn-route-type
   |      |         |        +--rw route-distinguisher     route-distinguisher-def
   |      |         |        +--rw source-as               inet:as-number
   |      |         +--:(S_PMSI_AD)
   |      |         |  +--rw s-pmsi-ad-route* [route-type route-distinguisher
multicast-source multicast-group origin-router-ip-addr]
   |      |         |        +--rw route-type              mvpn-route-type
   |      |         |        +--rw route-distinguisher     route-distinguisher-d
ef
   |      |         |        +--rw multicast-source        inet:ip-prefix
   |      |         |        +--rw multicast-group         inet:ip-prefix
   |      |         |        +--rw origin-router-ip-addr   inet:ip-prefix
   |      |         +--:(LEAF_AD)
   |      |         |  +--rw leaf-ad-route* [route-type route-key origin-route
r-ip-addr]
   |      |         |        +--rw route-type              mvpn-route-type
   |      |         |        +--rw route-key               binary
   |      |         |        +--rw origin-router-ip-addr   inet:ip-prefix
   |      |         +--:(SOURCE_ACTIVE_AD)
   |      |         |  +--rw source-active-ad-route* [route-type route-disting
uisher multicast-source multicast-group]
   |      |         |        +--rw route-type              mvpn-route-type
   |      |         |        +--rw route-distinguisher     route-distinguisher-def
   |      |         |        +--rw multicast-source        inet:ip-prefix
   |      |         |        +--rw multicast-group         inet:ip-prefix
   |      |         +--:(SHARED_TREE_JOIN)
   |      |         |  +--rw shared-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
   |      |         |        +--rw route-type              mvpn-route-type
   |      |         |        +--rw route-distinguisher     route-distinguisher-def
   |      |         |        +--rw source-as               inet:as-number
   |      |         |        +--rw multicast-source        inet:ip-prefix
   |      |         |        +--rw multicast-group         inet:ip-prefix
   |      |         +--:(SOURCE_TREE_JOIN)
   |      |            +--rw source-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
   |      |               +--rw route-type                 mvpn-route-type
```

```
|    |                    +--rw route-distinguisher    route-distinguisher-def
|    |                    +--rw source-as             inet:as-number
|    |                    +--rw multicast-source      inet:ip-prefix
```

```
         |        |               +--rw multicast-group        inet:ip-prefix
         |     +--rw bgp-rib-out
         |        +--rw bgp-route-type?              enumeration
         |        +--rw bgp-attribute-list
         |        |  +--rw bgp-origin?              enumeration
         |        |  +--rw bgp-aspath
         |        |  |  +--rw usascount?          uint16
         |        |  |  +--rw ulrefcount?         uint16
         |        |  |  +--rw asstring?           string
         |        |  |  +--ro usascountfrcomp?    uint16
         |        |  |  +--rw usastotalcount?     uint16
         |        |  |  +--rw usas4pathlen?       uint16
         |        |  |  +--rw as4pathvalue?       string
         |        |  +--rw bgp-nexthop?            inet:ip-address
         |        |  +--rw bgp-med?                uint32
         |        |  +--rw bgp-localpref?          uint32
         |        |  +--rw bgp-atomic-aggregate?   uint32
         |        |  +--rw bgp-aggregator
         |        |  |  +--rw ulipaddress?   uint32
         |        |  |  +--rw ulasnumber?    uint32
         |        |  +--rw bgp-commattr
         |        |  |  +--rw uscommsize?         uint16
         |        |  |  +--rw ulrefcomm?          uint32
         |        |  |  +--rw commattr-value?     string
         |        |  +--rw bgp-extcommattr
         |        |  |  +--rw usextcommsize?      uint16
         |        |  |  +--rw ulrefcount?         uint32
         |        |  |  +--rw extcommattr-value?  string
         |        |  +--rw bgp-clusterlist
         |        |  |  +--rw uscluslen?          uint16
         |        |  |  +--rw ulrefclus?          uint32
         |        |  |  +--rw clusterlist-value?  string
         |        |  +--rw bgp-originator-id?      uint32
         |        +--ro bgp-route-create?           enumeration
         |        +--ro bgp-rt-state-info
         |        |  +--ro rib-current-state?    rib-state-def
         |        |  +--ro rib-last-state?       rib-state-def
         |        |  +--ro rib-rejected-reason?  enumeration
         |        |  +--ro not-preferred-reason? enumeration
         |        +--rw (bgp-mvpn-route-type)?
         |           +--:(INTRA_AS_I_PMSI_AD)
         |           |  +--rw intra-as-i-pmsi-ad-route* [route-type route-disti
nguisher origin-router-ip-addr]
         |           |        +--rw route-type            mvpn-route-type
         |           |        +--rw route-distinguisher   route-distinguisher-d
ef
         |           |        +--rw origin-router-ip-addr   inet:ip-prefix
         |           +--:(INTER_AS_I_PMSI_AD)
         |           |  +--rw inter_as_i_pmsi_as_route* [route-type route-disti
nguisher source-as]
         |           |        +--rw route-type            mvpn-route-type
```

```
              |           |        +--rw route-distinguisher    route-distinguisher-def
              |           |        +--rw source-as              inet:as-number
              |           +--:(S_PMSI_AD)
              |           |  +--rw s-pmsi-ad-route* [route-type route-distinguisher
multicast-source multicast-group origin-router-ip-addr]
              |           |        +--rw route-type             mvpn-route-type
              |           |        +--rw route-distinguisher    route-distinguisher-d
ef
              |           |        +--rw multicast-source       inet:ip-prefix
              |           |        +--rw multicast-group        inet:ip-prefix
              |           |        +--rw origin-router-ip-addr  inet:ip-prefix
              |           +--:(LEAF_AD)
              |           |  +--rw leaf-ad-route* [route-type route-key origin-route
r-ip-addr]
              |           |        +--rw route-type             mvpn-route-type
              |           |        +--rw route-key              binary
              |           |        +--rw origin-router-ip-addr  inet:ip-prefix
              |           +--:(SOURCE_ACTIVE_AD)
              |           |  +--rw source-active-ad-route* [route-type route-disting
uisher multicast-source multicast-group]
              |           |        +--rw route-type             mvpn-route-type
              |           |        +--rw route-distinguisher    route-distinguisher-def
              |           |        +--rw multicast-source       inet:ip-prefix
              |           |        +--rw multicast-group        inet:ip-prefix
              |           +--:(SHARED_TREE_JOIN)
              |           |  +--rw shared-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
              |           |        +--rw route-type             mvpn-route-type
              |           |        +--rw route-distinguisher    route-distinguisher-def
              |           |        +--rw source-as              inet:as-number
              |           |        +--rw multicast-source       inet:ip-prefix
              |           |        +--rw multicast-group        inet:ip-prefix
              |           +--:(SOURCE_TREE_JOIN)
              |              +--rw source-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
              |                    +--rw route-type             mvpn-route-type
              |                    +--rw route-distinguisher    route-distinguisher-def
              |                    +--rw source-as              inet:as-number
              |                    +--rw multicast-source       inet:ip-prefix
              |                    +--rw multicast-group        inet:ip-prefix
        +--rw bgp-ipv6-mvpn-instance
           |  +--rw bgp-instance-name?     string
           |  +--rw bgp-instance-create?   enumeration
           |  +--rw bgp-instance-type?     enumeration
           |  +--rw bgp-vendor-type?       enumeration
           |  +--rw afi?                   afi-def
           |  +--rw safi?                  safi-def
           |  +--rw bgp-local-rib
           |  |  +--rw bgp-route-type?              enumeration
           |  |  +--rw bgp-attribute-list
           |  |  |  +--rw bgp-origin?             enumeration
           |  |  |  +--rw bgp-aspath
           |  |  |  |  +--rw usascount?       uint16
           |  |  |  |  +--rw ulrefcount?      uint16
```

```
│  │  │     │  +--rw asstring?              string
│  │  │     │  +--ro usascountfrcomp?       uint16
│  │  │     │  +--rw usastotalcount?        uint16
│  │  │     │  +--rw usas4pathlen?          uint16
│  │  │     │  +--rw as4pathvalue?          string
│  │  │  +--rw bgp-nexthop?                 inet:ip-address
│  │  │  +--rw bgp-med?                     uint32
│  │  │  +--rw bgp-localpref?               uint32
│  │  │  +--rw bgp-atomic-aggregate?        uint32
│  │  │  +--rw bgp-aggregator
│  │  │  │  +--rw ulipaddress?    uint32
│  │  │  │  +--rw ulasnumber?     uint32
│  │  │  +--rw bgp-commattr
│  │  │  │  +--rw uscommsize?        uint16
│  │  │  │  +--rw ulrefcomm?         uint32
│  │  │  │  +--rw commattr-value?    string
│  │  │  +--rw bgp-extcommattr
│  │  │  │  +--rw usextcommsize?        uint16
│  │  │  │  +--rw ulrefcount?           uint32
│  │  │  │  +--rw extcommattr-value?    string
│  │  │  +--rw bgp-clusterlist
│  │  │  │  +--rw uscluslen?            uint16
│  │  │  │  +--rw ulrefclus?            uint32
│  │  │  │  +--rw clusterlist-value?    string
│  │  │  +--rw bgp-originator-id?           uint32
│  │  +--ro bgp-route-create?                enumeration
│  │  +--ro bgp-rt-state-info
│  │  │  +--ro rib-current-state?     rib-state-def
│  │  │  +--ro rib-last-state?        rib-state-def
│  │  │  +--ro rib-rejected-reason?   enumeration
│  │  │  +--ro not-preferred-reason?  enumeration
│  │  +--rw (bgp-mvpn-route-type)?
│  │     +--:(INTRA_AS_I_PMSI_AD)
│  │     │  +--rw intra-as-i-pmsi-ad-route* [route-type route-distingu
isher origin-router-ip-addr]
│  │     │        +--rw route-type              mvpn-route-type
│  │     │        +--rw route-distinguisher     route-distinguisher-def
│  │     │        +--rw origin-router-ip-addr   inet:ip-prefix
│  │     +--:(INTER_AS_I_PMSI_AD)
│  │     │  +--rw inter_as_i_pmsi_as_route* [route-type route-distingu
isher source-as]
│  │     │        +--rw route-type              mvpn-route-type
│  │     │        +--rw route-distinguisher     route-distinguisher-def
│  │     │        +--rw source-as               inet:as-number
│  │     +--:(S_PMSI_AD)
│  │     │  +--rw s-pmsi-ad-route* [route-type route-distinguisher mul
ticast-source multicast-group origin-router-ip-addr]
│  │     │        +--rw route-type              mvpn-route-type
│  │     │        +--rw route-distinguisher     route-distinguisher-def
│  │     │        +--rw multicast-source        inet:ip-prefix
│  │     │        +--rw multicast-group         inet:ip-prefix
```

```
    |  |     |     +--rw origin-router-ip-addr    inet:ip-prefix
    |  |        +--:(LEAF_AD)
    |  |     |  +--rw leaf-ad-route* [route-type route-key origin-router-i
p-addr]
    |  |     |     +--rw route-type               mvpn-route-type
    |  |     |     +--rw route-key                binary
    |  |     |     +--rw origin-router-ip-addr    inet:ip-prefix
    |  |        +--:(SOURCE_ACTIVE_AD)
    |  |     |  +--rw source-active-ad-route* [route-type route-distinguis
her multicast-source multicast-group]
    |  |     |     +--rw route-type            mvpn-route-type
    |  |     |     +--rw route-distinguisher   route-distinguisher-def
    |  |     |     +--rw multicast-source      inet:ip-prefix
    |  |     |     +--rw multicast-group       inet:ip-prefix
    |  |        +--:(SHARED_TREE_JOIN)
    |  |     |  +--rw shared-tree-join-route* [route-type route-distinguis
her source-as multicast-source multicast-group]
    |  |     |     +--rw route-type            mvpn-route-type
    |  |     |     +--rw route-distinguisher   route-distinguisher-def
    |  |     |     +--rw source-as             inet:as-number
    |  |     |     +--rw multicast-source      inet:ip-prefix
    |  |     |     +--rw multicast-group       inet:ip-prefix
    |  |        +--:(SOURCE_TREE_JOIN)
    |  |           +--rw source-tree-join-route* [route-type route-distinguis
her source-as multicast-source multicast-group]
    |  |              +--rw route-type            mvpn-route-type
    |  |              +--rw route-distinguisher   route-distinguisher-def
    |  |              +--rw source-as             inet:as-number
    |  |              +--rw multicast-source      inet:ip-prefix
    |  |              +--rw multicast-group       inet:ip-prefix
    |  +--rw bgp-peer-list* [bgp-peer-name]
    |     +--rw peer-session-address
    |     |  +--rw local-ipv6-address?    inet:ipv6-prefix
    |     |  +--rw remote-ipv6-address?   inet:ipv6-prefix
    |     +--rw bgp-peer-name           string
    |     +--ro bgp-peer-type?          enumeration
    |     +--ro bgp-peer-create?        enumeration
    |     +--rw bgp-policy-in
    |     +--rw bgp-policy-out
    |     +--ro peer-policy-in-pset
    |     +--ro peer-policy-out-pset
    |     +--rw peer-state-info
    |     |  +--ro peer-current-state?         peer-state
    |     |  +--ro peer-last-state?            peer-state
    |     |  +--ro peer-down-reason
    |     |  |  +--ro error-code?        enumeration
    |     |  |  +--ro sub-error-code
    |     |  |     +--ro (sub-error-code-type)?
    |     |  |        +--:(head-error-sub-code)
    |     |  |        |  +--ro head-error-sub-value?              enumeratio
n
    |     |  |        +--:(open-error-sub-code)
    |     |  |        |  +--ro open-error-sub-value?              enumeratio
n
```

```
       |    |    |                  +--:(update-error-sub-code)
       |    |    |                  |  +--ro update-error-sub-value?        enumeratio
n
       |    |    |                  +--:(route-refresh-error-sub-code)
       |    |    |                     +--ro route-refresh-error-sub-value?   enumeratio
n
       |    |       +--ro peer-received-update-cnt?   uint64
       |    |       +--ro peer-transmit-update-cnt?   uint64
       |    |       +--ro peer-received-route-cnt?    uint64
       |    |       +--ro peer-send-route-cnt?        uint64
       |    |       +--rw max-prefix-rcv-limit?       uint64
       |    |       +--rw max-prefix-xmt-limit?       uint64
       |    |       +--ro peer-prefix-high?           uint64
       |    |       +--ro peer-prefix-low?            uint64
       |    |       +--ro peer-perfix-ave?            uint64
       |    |       +--ro peer-prefix-time?           uint64
       |    |       +--ro peer-prefix-max?            uint64
       |    |       +--ro publish-version?            uint64
       |    +--rw bgp-rib-in
       |    |    +--rw bgp-route-type?               enumeration
       |    |    +--rw bgp-attribute-list
       |    |    |    +--rw bgp-origin?              enumeration
       |    |    |    +--rw bgp-aspath
       |    |    |    |    +--rw usascount?         uint16
       |    |    |    |    +--rw ulrefcount?        uint16
       |    |    |    |    +--rw asstring?          string
       |    |    |    |    +--ro usascountfrcomp?   uint16
       |    |    |    |    +--rw usastotalcount?    uint16
       |    |    |    |    +--rw usas4pathlen?      uint16
       |    |    |    |    +--rw as4pathvalue?      string
       |    |    |    +--rw bgp-nexthop?            inet:ip-address
       |    |    |    +--rw bgp-med?                uint32
       |    |    |    +--rw bgp-localpref?          uint32
       |    |    |    +--rw bgp-atomic-aggregate?   uint32
       |    |    |    +--rw bgp-aggregator
       |    |    |    |    +--rw ulipaddress?   uint32
       |    |    |    |    +--rw ulasnumber?    uint32
       |    |    |    +--rw bgp-commattr
       |    |    |    |    +--rw uscommsize?        uint16
       |    |    |    |    +--rw ulrefcomm?         uint32
       |    |    |    |    +--rw commattr-value?    string
       |    |    |    +--rw bgp-extcommattr
       |    |    |    |    +--rw usextcommsize?      uint16
       |    |    |    |    +--rw ulrefcount?         uint32
       |    |    |    |    +--rw extcommattr-value?  string
       |    |    |    +--rw bgp-clusterlist
       |    |    |    |    +--rw uscluslen?          uint16
       |    |    |    |    +--rw ulrefclus?          uint32
       |    |    |    |    +--rw clusterlist-value?  string
       |    |    |    +--rw bgp-originator-id?       uint32
```

```
    |     |        +--ro bgp-route-create?            enumeration
    |     |        +--ro bgp-rt-state-info
    |     |        |  +--ro rib-current-state?      rib-state-def
    |     |        |  +--ro rib-last-state?         rib-state-def
    |     |        |  +--ro rib-rejected-reason?    enumeration
    |     |        |  +--ro not-preferred-reason?   enumeration
    |     |        +--rw (bgp-mvpn-route-type)?
    |     |           +--:(INTRA_AS_I_PMSI_AD)
    |     |           |  +--rw intra-as-i-pmsi-ad-route* [route-type route-disti
nguisher origin-router-ip-addr]
    |     |           |        +--rw route-type            mvpn-route-type
    |     |           |        +--rw route-distinguisher   route-distinguisher-d
ef
    |     |           |        +--rw origin-router-ip-addr   inet:ip-prefix
    |     |           +--:(INTER_AS_I_PMSI_AD)
    |     |           |  +--rw inter_as_i_pmsi_as_route* [route-type route-disti
nguisher source-as]
    |     |           |        +--rw route-type            mvpn-route-type
    |     |           |        +--rw route-distinguisher   route-distinguisher-def
    |     |           |        +--rw source-as             inet:as-number
    |     |           +--:(S_PMSI_AD)
    |     |           |  +--rw s-pmsi-ad-route* [route-type route-distinguisher
multicast-source multicast-group origin-router-ip-addr]
    |     |           |        +--rw route-type            mvpn-route-type
    |     |           |        +--rw route-distinguisher   route-distinguisher-d
ef
    |     |           |        +--rw multicast-source      inet:ip-prefix
    |     |           |        +--rw multicast-group       inet:ip-prefix
    |     |           |        +--rw origin-router-ip-addr   inet:ip-prefix
    |     |           +--:(LEAF_AD)
    |     |           |  +--rw leaf-ad-route* [route-type route-key origin-route
r-ip-addr]
    |     |           |        +--rw route-type            mvpn-route-type
    |     |           |        +--rw route-key             binary
    |     |           |        +--rw origin-router-ip-addr   inet:ip-prefix
    |     |           +--:(SOURCE_ACTIVE_AD)
    |     |           |  +--rw source-active-ad-route* [route-type route-disting
uisher multicast-source multicast-group]
    |     |           |        +--rw route-type            mvpn-route-type
    |     |           |        +--rw route-distinguisher   route-distinguisher-def
    |     |           |        +--rw multicast-source      inet:ip-prefix
    |     |           |        +--rw multicast-group       inet:ip-prefix
    |     |           +--:(SHARED_TREE_JOIN)
    |     |           |  +--rw shared-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
    |     |           |        +--rw route-type            mvpn-route-type
    |     |           |        +--rw route-distinguisher   route-distinguisher-def
    |     |           |        +--rw source-as             inet:as-number
    |     |           |        +--rw multicast-source      inet:ip-prefix
    |     |           |        +--rw multicast-group       inet:ip-prefix
    |     |           +--:(SOURCE_TREE_JOIN)
    |     |              +--rw source-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
    |     |                    +--rw route-type            mvpn-route-type
```

```
|     |                  +--rw route-distinguisher    route-distinguisher-def
|     |                  +--rw source-as              inet:as-number
|     |                  +--rw multicast-source       inet:ip-prefix
```

```
      |         |              +--rw multicast-group       inet:ip-prefix
      |     +--rw bgp-rib-out
      |        +--rw bgp-route-type?              enumeration
      |        +--rw bgp-attribute-list
      |        |  +--rw bgp-origin?              enumeration
      |        |  +--rw bgp-aspath
      |        |  |  +--rw usascount?        uint16
      |        |  |  +--rw ulrefcount?       uint16
      |        |  |  +--rw asstring?         string
      |        |  |  +--ro usascountfrcomp?  uint16
      |        |  |  +--rw usastotalcount?   uint16
      |        |  |  +--rw usas4pathlen?     uint16
      |        |  |  +--rw as4pathvalue?     string
      |        |  +--rw bgp-nexthop?            inet:ip-address
      |        |  +--rw bgp-med?               uint32
      |        |  +--rw bgp-localpref?         uint32
      |        |  +--rw bgp-atomic-aggregate?  uint32
      |        |  +--rw bgp-aggregator
      |        |  |  +--rw ulipaddress?   uint32
      |        |  |  +--rw ulasnumber?    uint32
      |        |  +--rw bgp-commattr
      |        |  |  +--rw uscommsize?        uint16
      |        |  |  +--rw ulrefcomm?         uint32
      |        |  |  +--rw commattr-value?    string
      |        |  +--rw bgp-extcommattr
      |        |  |  +--rw usextcommsize?     uint16
      |        |  |  +--rw ulrefcount?        uint32
      |        |  |  +--rw extcommattr-value?    string
      |        |  +--rw bgp-clusterlist
      |        |  |  +--rw uscluslen?         uint16
      |        |  |  +--rw ulrefclus?         uint32
      |        |  |  +--rw clusterlist-value?    string
      |        |  +--rw bgp-originator-id?     uint32
      |        +--ro bgp-route-create?           enumeration
      |        +--ro bgp-rt-state-info
      |        |  +--ro rib-current-state?    rib-state-def
      |        |  +--ro rib-last-state?       rib-state-def
      |        |  +--ro rib-rejected-reason?  enumeration
      |        |  +--ro not-preferred-reason?    enumeration
      |        +--rw (bgp-mvpn-route-type)?
      |           +--:(INTRA_AS_I_PMSI_AD)
      |           |  +--rw intra-as-i-pmsi-ad-route* [route-type route-disti
nguisher origin-router-ip-addr]
      |           |        +--rw route-type            mvpn-route-type
      |           |        +--rw route-distinguisher   route-distinguisher-d
ef
      |           |        +--rw origin-router-ip-addr    inet:ip-prefix
      |           +--:(INTER_AS_I_PMSI_AD)
      |           |  +--rw inter_as_i_pmsi_as_route* [route-type route-disti
nguisher source-as]
      |           |        +--rw route-type            mvpn-route-type
```

```
                    |      |          +--rw route-distinguisher    route-distinguisher-def
                    |      |          +--rw source-as              inet:as-number
                    |      +--:(S_PMSI_AD)
                    |      |   +--rw s-pmsi-ad-route* [route-type route-distinguisher
multicast-source multicast-group origin-router-ip-addr]
                    |      |          +--rw route-type             mvpn-route-type
                    |      |          +--rw route-distinguisher    route-distinguisher-d
ef
                    |      |          +--rw multicast-source       inet:ip-prefix
                    |      |          +--rw multicast-group        inet:ip-prefix
                    |      |          +--rw origin-router-ip-addr  inet:ip-prefix
                    |      +--:(LEAF_AD)
                    |      |   +--rw leaf-ad-route* [route-type route-key origin-route
r-ip-addr]
                    |      |          +--rw route-type             mvpn-route-type
                    |      |          +--rw route-key              binary
                    |      |          +--rw origin-router-ip-addr  inet:ip-prefix
                    |      +--:(SOURCE_ACTIVE_AD)
                    |      |   +--rw source-active-ad-route* [route-type route-disting
uisher multicast-source multicast-group]
                    |      |          +--rw route-type             mvpn-route-type
                    |      |          +--rw route-distinguisher    route-distinguisher-def
                    |      |          +--rw multicast-source       inet:ip-prefix
                    |      |          +--rw multicast-group        inet:ip-prefix
                    |      +--:(SHARED_TREE_JOIN)
                    |      |   +--rw shared-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
                    |      |          +--rw route-type             mvpn-route-type
                    |      |          +--rw route-distinguisher    route-distinguisher-def
                    |      |          +--rw source-as              inet:as-number
                    |      |          +--rw multicast-source       inet:ip-prefix
                    |      |          +--rw multicast-group        inet:ip-prefix
                    |      +--:(SOURCE_TREE_JOIN)
                    |          +--rw source-tree-join-route* [route-type route-disting
uisher source-as multicast-source multicast-group]
                    |                 +--rw route-type             mvpn-route-type
                    |                 +--rw route-distinguisher    route-distinguisher-def
                    |                 +--rw source-as              inet:as-number
                    |                 +--rw multicast-source       inet:ip-prefix
                    |                 +--rw multicast-group        inet:ip-prefix
         +--rw bgp-mcast-vpls-instance
         |   +--rw bgp-instance-name?     string
         |   +--rw bgp-instance-create?   enumeration
         |   +--rw bgp-instance-type?     enumeration
         |   +--rw bgp-vendor-type?       enumeration
         |   +--rw afi?                   afi-def
         |   +--rw safi?                  safi-def
         |   +--rw bgp-local-rib
         |   |   +--rw bgp-route-type?            enumeration
         |   |   +--rw bgp-attribute-list
         |   |   |   +--rw bgp-origin?            enumeration
         |   |   |   +--rw bgp-aspath
         |   |   |   |   +--rw usascount?         uint16
         |   |   |   |   +--rw ulrefcount?        uint16
```

```
      │  │  │     │  +--rw asstring?           string
      │  │  │     │  +--ro usascountfrcomp?    uint16
      │  │  │     │  +--rw usastotalcount?     uint16
      │  │  │     │  +--rw usas4pathlen?       uint16
      │  │  │     │  +--rw as4pathvalue?       string
      │  │  │     +--rw bgp-nexthop?           inet:ip-address
      │  │  │     +--rw bgp-med?               uint32
      │  │  │     +--rw bgp-localpref?         uint32
      │  │  │     +--rw bgp-atomic-aggregate?  uint32
      │  │  │     +--rw bgp-aggregator
      │  │  │     │  +--rw ulipaddress?   uint32
      │  │  │     │  +--rw ulasnumber?    uint32
      │  │  │     +--rw bgp-commattr
      │  │  │     │  +--rw uscommsize?        uint16
      │  │  │     │  +--rw ulrefcomm?         uint32
      │  │  │     │  +--rw commattr-value?    string
      │  │  │     +--rw bgp-extcommattr
      │  │  │     │  +--rw usextcommsize?     uint16
      │  │  │     │  +--rw ulrefcount?        uint32
      │  │  │     │  +--rw extcommattr-value? string
      │  │  │     +--rw bgp-clusterlist
      │  │  │     │  +--rw uscluslen?         uint16
      │  │  │     │  +--rw ulrefclus?         uint32
      │  │  │     │  +--rw clusterlist-value? string
      │  │  │     +--rw bgp-originator-id?     uint32
      │  │  +--ro bgp-route-create?            enumeration
      │  │  +--ro bgp-rt-state-info
      │  │  │  +--ro rib-current-state?    rib-state-def
      │  │  │  +--ro rib-last-state?       rib-state-def
      │  │  │  +--ro rib-rejected-reason?  enumeration
      │  │  │  +--ro not-preferred-reason? enumeration
      │  │  +--rw (bgp-mcast-vpls-route-type)?
      │  │     +--:(SELECTIVE_TREE_AD_ROUTE)
      │  │     │  +--rw selective-tree-ad-route* [route-type route-distingui
sher multicast-source multicast-group origin-router-ip-addr]
      │  │     │     +--rw route-type            mcast-vpls-route-type
      │  │     │     +--rw route-distinguisher   route-distinguisher-def
      │  │     │     +--rw multicast-source      inet:ip-prefix
      │  │     │     +--rw multicast-group       inet:ip-prefix
      │  │     │     +--rw origin-router-ip-addr inet:ip-prefix
      │  │     +--:(LEAF_AD)
      │  │        +--rw leaf-ad-route* [route-type route-key origin-router-i
p-addr]
      │  │           +--rw route-type            mcast-vpls-route-type
      │  │           +--rw route-key             binary
      │  │           +--rw origin-router-ip-addr inet:ip-prefix
      │  +--rw bgp-peer-list* [bgp-peer-name]
      │     +--rw peer-session-address
      │     │  +--rw local-ipv4-address?   inet:ipv4-prefix
      │     │  +--rw remote-ipv4-address?  inet:ipv4-prefix
```

```
        │          +--rw bgp-peer-name           string
        │          +--ro bgp-peer-type?          enumeration
        │          +--ro bgp-peer-create?        enumeration
        │          +--rw bgp-policy-in
        │          +--rw bgp-policy-out
        │          +--ro peer-policy-in-pset
        │          +--ro peer-policy-out-pset
        │          +--rw peer-state-info
        │          │  +--ro peer-current-state?        peer-state
        │          │  +--ro peer-last-state?           peer-state
        │          │  +--ro peer-down-reason
        │          │  │  +--ro error-code?        enumeration
        │          │  │  +--ro sub-error-code
        │          │  │     +--ro (sub-error-code-type)?
        │          │  │        +--:(head-error-sub-code)
        │          │  │        │  +--ro head-error-sub-value?        enumeratio
n
        │          │  │        +--:(open-error-sub-code)
        │          │  │        │  +--ro open-error-sub-value?        enumeratio
n
        │          │  │        +--:(update-error-sub-code)
        │          │  │        │  +--ro update-error-sub-value?        enumeratio
n
        │          │  │        +--:(route-refresh-error-sub-code)
        │          │  │           +--ro route-refresh-error-sub-value?   enumeratio
n
        │          │  +--ro peer-received-update-cnt?    uint64
        │          │  +--ro peer-transmit-update-cnt?    uint64
        │          │  +--ro peer-received-route-cnt?     uint64
        │          │  +--ro peer-send-route-cnt?         uint64
        │          │  +--rw max-prefix-rcv-limit?        uint64
        │          │  +--rw max-prefix-xmt-limit?        uint64
        │          │  +--ro peer-prefix-high?            uint64
        │          │  +--ro peer-prefix-low?             uint64
        │          │  +--ro peer-perfix-ave?             uint64
        │          │  +--ro peer-prefix-time?            uint64
        │          │  +--ro peer-prefix-max?             uint64
        │          │  +--ro publish-version?             uint64
        │          +--rw bgp-rib-in
        │          │  +--rw bgp-route-type?              enumeration
        │          │  +--rw bgp-attribute-list
        │          │  │  +--rw bgp-origin?               enumeration
        │          │  │  +--rw bgp-aspath
        │          │  │  │  +--rw usascount?        uint16
        │          │  │  │  +--rw ulrefcount?       uint16
        │          │  │  │  +--rw asstring?         string
        │          │  │  │  +--ro usascountfrcomp?  uint16
        │          │  │  │  +--rw usastotalcount?   uint16
        │          │  │  │  +--rw usas4pathlen?     uint16
        │          │  │  │  +--rw as4pathvalue?     string
        │          │  │  +--rw bgp-nexthop?              inet:ip-address
        │          │  │  +--rw bgp-med?                  uint32
```

```
       │    │    │    +--rw bgp-localpref?            uint32
       │    │    │    +--rw bgp-atomic-aggregate?     uint32
       │    │    │    +--rw bgp-aggregator
       │    │    │    │  +--rw ulipaddress?    uint32
       │    │    │    │  +--rw ulasnumber?     uint32
       │    │    │    +--rw bgp-commattr
       │    │    │    │  +--rw uscommsize?        uint16
       │    │    │    │  +--rw ulrefcomm?         uint32
       │    │    │    │  +--rw commattr-value?    string
       │    │    │    +--rw bgp-extcommattr
       │    │    │    │  +--rw usextcommsize?       uint16
       │    │    │    │  +--rw ulrefcount?          uint32
       │    │    │    │  +--rw extcommattr-value?   string
       │    │    │    +--rw bgp-clusterlist
       │    │    │    │  +--rw uscluslen?          uint16
       │    │    │    │  +--rw ulrefclus?          uint32
       │    │    │    │  +--rw clusterlist-value?  string
       │    │    │    +--rw bgp-originator-id?      uint32
       │    │    +--ro bgp-route-create?           enumeration
       │    │    +--ro bgp-rt-state-info
       │    │    │    +--ro rib-current-state?      rib-state-def
       │    │    │    +--ro rib-last-state?         rib-state-def
       │    │    │    +--ro rib-rejected-reason?    enumeration
       │    │    │    +--ro not-preferred-reason?   enumeration
       │    │    +--rw (bgp-mcast-vpls-route-type)?
       │    │       +--:(SELECTIVE_TREE_AD_ROUTE)
       │    │       │  +--rw selective-tree-ad-route* [route-type route-distin
guisher multicast-source multicast-group origin-router-ip-addr]
       │    │       │       +--rw route-type                 mcast-vpls-route-type
       │    │       │       +--rw route-distinguisher        route-distinguisher-d
ef
       │    │       │       +--rw multicast-source           inet:ip-prefix
       │    │       │       +--rw multicast-group            inet:ip-prefix
       │    │       │       +--rw origin-router-ip-addr      inet:ip-prefix
       │    │       +--:(LEAF_AD)
       │    │          +--rw leaf-ad-route* [route-type route-key origin-route
r-ip-addr]
       │    │             +--rw route-type                 mcast-vpls-route-type
       │    │             +--rw route-key                  binary
       │    │             +--rw origin-router-ip-addr      inet:ip-prefix
       │    +--rw bgp-rib-out
       │       +--rw bgp-route-type?              enumeration
       │       +--rw bgp-attribute-list
       │       │  +--rw bgp-origin?              enumeration
       │       │  +--rw bgp-aspath
       │       │  │  +--rw usascount?        uint16
       │       │  │  +--rw ulrefcount?       uint16
       │       │  │  +--rw asstring?         string
       │       │  │  +--ro usascountfrcomp?  uint16
       │       │  │  +--rw usastotalcount?   uint16
       │       │  │  +--rw usas4pathlen?     uint16
```

```
│              │  │  +--rw as4pathvalue?        string
│              │  +--rw bgp-nexthop?              inet:ip-address
│              │  +--rw bgp-med?                  uint32
│              │  +--rw bgp-localpref?            uint32
│              │  +--rw bgp-atomic-aggregate?     uint32
│              │  +--rw bgp-aggregator
│              │  │  +--rw ulipaddress?    uint32
│              │  │  +--rw ulasnumber?     uint32
│              │  +--rw bgp-commattr
│              │  │  +--rw uscommsize?         uint16
│              │  │  +--rw ulrefcomm?          uint32
│              │  │  +--rw commattr-value?     string
│              │  +--rw bgp-extcommattr
│              │  │  +--rw usextcommsize?       uint16
│              │  │  +--rw ulrefcount?          uint32
│              │  │  +--rw extcommattr-value?   string
│              │  +--rw bgp-clusterlist
│              │  │  +--rw uscluslen?           uint16
│              │  │  +--rw ulrefclus?           uint32
│              │  │  +--rw clusterlist-value?   string
│              │  +--rw bgp-originator-id?        uint32
│           +--ro bgp-route-create?              enumeration
│           +--ro bgp-rt-state-info
│           │  +--ro rib-current-state?      rib-state-def
│           │  +--ro rib-last-state?         rib-state-def
│           │  +--ro rib-rejected-reason?    enumeration
│           │  +--ro not-preferred-reason?   enumeration
│           +--rw (bgp-mcast-vpls-route-type)?
│              +--:(SELECTIVE_TREE_AD_ROUTE)
│              │  +--rw selective-tree-ad-route* [route-type route-distin
guisher multicast-source multicast-group origin-router-ip-addr]
│              │        +--rw route-type             mcast-vpls-route-type
│              │        +--rw route-distinguisher    route-distinguisher-d
ef
│              │        +--rw multicast-source       inet:ip-prefix
│              │        +--rw multicast-group        inet:ip-prefix
│              │        +--rw origin-router-ip-addr  inet:ip-prefix
│              +--:(LEAF_AD)
│                 +--rw leaf-ad-route* [route-type route-key origin-route
r-ip-addr]
│                       +--rw route-type             mcast-vpls-route-type
│                       +--rw route-key              binary
│                       +--rw origin-router-ip-addr  inet:ip-prefix
+--rw bgp-evpn-instance
   +--rw bgp-instance-name?     string
   +--rw bgp-instance-create?   enumeration
   +--rw bgp-instance-type?     enumeration
   +--rw bgp-vendor-type?       enumeration
   +--rw afi?                   afi-def
   +--rw safi?                  safi-def
   +--rw bgp-local-rib
```

```
        | |  +--rw bgp-route-type?               enumeration
        | +--rw bgp-attribute-list
        | |  +--rw bgp-origin?             enumeration
        | |  +--rw bgp-aspath
        | |  |  +--rw usascount?         uint16
        | |  |  +--rw ulrefcount?        uint16
        | |  |  +--rw asstring?          string
        | |  |  +--ro usascountfrcomp?   uint16
        | |  |  +--rw usastotalcount?    uint16
        | |  |  +--rw usas4pathlen?      uint16
        | |  |  +--rw as4pathvalue?      string
        | |  +--rw bgp-nexthop?           inet:ip-address
        | |  +--rw bgp-med?              uint32
        | |  +--rw bgp-localpref?         uint32
        | |  +--rw bgp-atomic-aggregate?   uint32
        | |  +--rw bgp-aggregator
        | |  |  +--rw ulipaddress?   uint32
        | |  |  +--rw ulasnumber?    uint32
        | |  +--rw bgp-commattr
        | |  |  +--rw uscommsize?        uint16
        | |  |  +--rw ulrefcomm?         uint32
        | |  |  +--rw commattr-value?    string
        | |  +--rw bgp-extcommattr
        | |  |  +--rw usextcommsize?        uint16
        | |  |  +--rw ulrefcount?        uint32
        | |  |  +--rw extcommattr-value?    string
        | |  +--rw bgp-clusterlist
        | |  |  +--rw uscluslen?         uint16
        | |  |  +--rw ulrefclus?         uint32
        | |  |  +--rw clusterlist-value?    string
        | |  +--rw bgp-originator-id?      uint32
        | +--ro bgp-route-create?         enumeration
        | +--ro bgp-rt-state-info
        | |  +--ro rib-current-state?    rib-state-def
        | |  +--ro rib-last-state?       rib-state-def
        | |  +--ro rib-rejected-reason?   enumeration
        | |  +--ro not-preferred-reason?  enumeration
        | +--rw (bgp-evpn-route-type)?
        |    +--:(EVPN_AD_ROUTE)
        |    |  +--rw evpn-ad-route* [route-type route-distinguisher esi e
th-tag-id]
        |    |        +--rw route-type          evpn-route-type
        |    |        +--rw route-distinguisher   route-distinguisher-def
        |    |        +--rw esi                 string
        |    |        +--rw eth-tag-id          uint32
        |    +--:(EVPN_MAC_ROUTE)
        |    |  +--rw evpn-mac-route* [route-type route-distinguisher esi
eth-tag-id mac-length mac-address ip-address-length ip-address]
        |    |        +--rw route-type          evpn-route-type
        |    |        +--rw route-distinguisher   route-distinguisher-def
```

```
       |       |             +--rw esi                      string
       |       |             +--rw eth-tag-id               uint32
       |       |             +--rw mac-length               uint8
       |       |             +--rw mac-address              yang:mac-address
       |       |             +--rw ip-address-length        uint8
       |       |             +--rw ip-address               inet:ip-address
       |       |             +--rw label1?                  uint32
       |       |             +--rw label2?                  uint32
       |       +--:(EVPN_INC_MCAST_TREE)
       |       |   +--rw evpn-inc-mcast-tree-route* [route-type route-disting
uisher eth-tag-id ip-address-length origin-router-ip-addr]
       |       |             +--rw route-type               evpn-route-type
       |       |             +--rw route-distinguisher      route-distinguisher-def
       |       |             +--rw eth-tag-id               uint32
       |       |             +--rw ip-address-length        uint8
       |       |             +--rw origin-router-ip-addr    inet:ip-prefix
       |       +--:(EVPN_ETH_SEGMENT_ROUTE)
       |           +--rw evpn-eth-segment-route* [route-type route-distinguis
her esi ip-address-length origin-router-ip-addr]
       |             +--rw route-type               evpn-route-type
       |             +--rw route-distinguisher      route-distinguisher-def
       |             +--rw esi                      string
       |             +--rw ip-address-length        uint8
       |             +--rw origin-router-ip-addr    inet:ip-prefix
       +--rw bgp-peer-list* [bgp-peer-name]
          +--rw peer-session-address
          |   +--rw local-ipv4-address?    inet:ipv4-prefix
          |   +--rw remote-ipv4-address?   inet:ipv4-prefix
          +--rw bgp-peer-name            string
          +--ro bgp-peer-type?           enumeration
          +--ro bgp-peer-create?         enumeration
          +--rw bgp-policy-in
          +--rw bgp-policy-out
          +--ro peer-policy-in-pset
          +--ro peer-policy-out-pset
          +--rw peer-state-info
          |   +--ro peer-current-state?        peer-state
          |   +--ro peer-last-state?           peer-state
          |   +--ro peer-down-reason
          |   |   +--ro error-code?        enumeration
          |   |   +--ro sub-error-code
          |   |       +--ro (sub-error-code-type)?
          |   |           +--:(head-error-sub-code)
          |   |           |   +--ro head-error-sub-value?          enumeratio
n
          |   |           +--:(open-error-sub-code)
          |   |           |   +--ro open-error-sub-value?          enumeratio
n
          |   |           +--:(update-error-sub-code)
          |   |           |   +--ro update-error-sub-value?        enumeratio
n
          |   |           +--:(route-refresh-error-sub-code)
          |   |               +--ro route-refresh-error-sub-value?    enumeratio
n
```

```
          |  +--ro peer-received-update-cnt?    uint64
          |  +--ro peer-transmit-update-cnt?    uint64
          |  +--ro peer-received-route-cnt?     uint64
          |  +--ro peer-send-route-cnt?         uint64
          |  +--rw max-prefix-rcv-limit?        uint64
          |  +--rw max-prefix-xmt-limit?        uint64
          |  +--ro peer-prefix-high?            uint64
          |  +--ro peer-prefix-low?             uint64
          |  +--ro peer-perfix-ave?             uint64
          |  +--ro peer-prefix-time?            uint64
          |  +--ro peer-prefix-max?             uint64
          |  +--ro publish-version?             uint64
          +--rw bgp-rib-in
          |  +--rw bgp-route-type?                 enumeration
          |  +--rw bgp-attribute-list
          |  |  +--rw bgp-origin?             enumeration
          |  |  +--rw bgp-aspath
          |  |  |  +--rw usascount?          uint16
          |  |  |  +--rw ulrefcount?         uint16
          |  |  |  +--rw asstring?           string
          |  |  |  +--ro usascountfrcomp?    uint16
          |  |  |  +--rw usastotalcount?     uint16
          |  |  |  +--rw usas4pathlen?       uint16
          |  |  |  +--rw as4pathvalue?       string
          |  |  +--rw bgp-nexthop?            inet:ip-address
          |  |  +--rw bgp-med?                uint32
          |  |  +--rw bgp-localpref?          uint32
          |  |  +--rw bgp-atomic-aggregate?   uint32
          |  |  +--rw bgp-aggregator
          |  |  |  +--rw ulipaddress?   uint32
          |  |  |  +--rw ulasnumber?    uint32
          |  |  +--rw bgp-commattr
          |  |  |  +--rw uscommsize?        uint16
          |  |  |  +--rw ulrefcomm?         uint32
          |  |  |  +--rw commattr-value?    string
          |  |  +--rw bgp-extcommattr
          |  |  |  +--rw usextcommsize?       uint16
          |  |  |  +--rw ulrefcount?          uint32
          |  |  |  +--rw extcommattr-value?   string
          |  |  +--rw bgp-clusterlist
          |  |  |  +--rw uscluslen?           uint16
          |  |  |  +--rw ulrefclus?           uint32
          |  |  |  +--rw clusterlist-value?   string
          |  |  +--rw bgp-originator-id?      uint32
          |  +--ro bgp-route-create?              enumeration
          |  +--ro bgp-rt-state-info
          |  |  +--ro rib-current-state?      rib-state-def
          |  |  +--ro rib-last-state?         rib-state-def
```

```
               |   | +--ro rib-rejected-reason?     enumeration
               |   | +--ro not-preferred-reason?    enumeration
               |   +--rw (bgp-evpn-route-type)?
               |      +--:(EVPN_AD_ROUTE)
               |      |  +--rw evpn-ad-route* [route-type route-distinguisher es
i eth-tag-id]
               |      |        +--rw route-type             evpn-route-type
               |      |        +--rw route-distinguisher    route-distinguisher-def
               |      |        +--rw esi                    string
               |      |        +--rw eth-tag-id             uint32
               |      +--:(EVPN_MAC_ROUTE)
               |      |  +--rw evpn-mac-route* [route-type route-distinguisher e
si eth-tag-id mac-length mac-address ip-address-length ip-address]
               |      |        +--rw route-type             evpn-route-type
               |      |        +--rw route-distinguisher    route-distinguisher-def
               |      |        +--rw esi                    string
               |      |        +--rw eth-tag-id             uint32
               |      |        +--rw mac-length             uint8
               |      |        +--rw mac-address            yang:mac-address
               |      |        +--rw ip-address-length      uint8
               |      |        +--rw ip-address             inet:ip-address
               |      |        +--rw label1?                uint32
               |      |        +--rw label2?                uint32
               |      +--:(EVPN_INC_MCAST_TREE)
               |      |  +--rw evpn-inc-mcast-tree-route* [route-type route-dist
inguisher eth-tag-id ip-address-length origin-router-ip-addr]
               |      |        +--rw route-type             evpn-route-type
               |      |        +--rw route-distinguisher    route-distinguisher-d
ef
               |      |        +--rw eth-tag-id             uint32
               |      |        +--rw ip-address-length      uint8
               |      |        +--rw origin-router-ip-addr  inet:ip-prefix
               |      +--:(EVPN_ETH_SEGMENT_ROUTE)
               |         +--rw evpn-eth-segment-route* [route-type route-disting
uisher esi ip-address-length origin-router-ip-addr]
               |            +--rw route-type             evpn-route-type
               |            +--rw route-distinguisher    route-distinguisher-d
ef
               |            +--rw esi                    string
               |            +--rw ip-address-length      uint8
               |            +--rw origin-router-ip-addr  inet:ip-prefix
          +--rw bgp-rib-out
             +--rw bgp-route-type?              enumeration
             +--rw bgp-attribute-list
             |  +--rw bgp-origin?            enumeration
             |  +--rw bgp-aspath
             |  |  +--rw usascount?        uint16
             |  |  +--rw ulrefcount?       uint16
             |  |  +--rw asstring?         string
             |  |  +--ro usascountfrcomp?  uint16
             |  |  +--rw usastotalcount?   uint16
             |  |  +--rw usas4pathlen?     uint16
             |  |  +--rw as4pathvalue?     string
             |  +--rw bgp-nexthop?            inet:ip-address
```

```
               │  +--rw bgp-med?                  uint32
               │  +--rw bgp-localpref?            uint32
               │  +--rw bgp-atomic-aggregate?     uint32
               │  +--rw bgp-aggregator
               │  │  +--rw ulipaddress?   uint32
               │  │  +--rw ulasnumber?    uint32
               │  +--rw bgp-commattr
               │  │  +--rw uscommsize?        uint16
               │  │  +--rw ulrefcomm?         uint32
               │  │  +--rw commattr-value?    string
               │  +--rw bgp-extcommattr
               │  │  +--rw usextcommsize?        uint16
               │  │  +--rw ulrefcount?           uint32
               │  │  +--rw extcommattr-value?    string
               │  +--rw bgp-clusterlist
               │  │  +--rw uscluslen?            uint16
               │  │  +--rw ulrefclus?            uint32
               │  │  +--rw clusterlist-value?    string
               │  +--rw bgp-originator-id?        uint32
               +--ro bgp-route-create?            enumeration
               +--ro bgp-rt-state-info
               │  +--ro rib-current-state?     rib-state-def
               │  +--ro rib-last-state?        rib-state-def
               │  +--ro rib-rejected-reason?   enumeration
               │  +--ro not-preferred-reason?  enumeration
               +--rw (bgp-evpn-route-type)?
                  +--:(EVPN_AD_ROUTE)
                  │  +--rw evpn-ad-route* [route-type route-distinguisher es
i eth-tag-id]
                  │     +--rw route-type              evpn-route-type
                  │     +--rw route-distinguisher      route-distinguisher-def
                  │     +--rw esi                      string
                  │     +--rw eth-tag-id               uint32
                  +--:(EVPN_MAC_ROUTE)
                  │  +--rw evpn-mac-route* [route-type route-distinguisher e
si eth-tag-id mac-length mac-address ip-address-length ip-address]
                  │     +--rw route-type              evpn-route-type
                  │     +--rw route-distinguisher      route-distinguisher-def
                  │     +--rw esi                      string
                  │     +--rw eth-tag-id               uint32
                  │     +--rw mac-length               uint8
                  │     +--rw mac-address              yang:mac-address
                  │     +--rw ip-address-length        uint8
                  │     +--rw ip-address               inet:ip-address
                  │     +--rw label1?                  uint32
                  │     +--rw label2?                  uint32
                  +--:(EVPN_INC_MCAST_TREE)
                  │  +--rw evpn-inc-mcast-tree-route* [route-type route-dist
inguisher eth-tag-id ip-address-length origin-router-ip-addr]
                  │     +--rw route-type               evpn-route-type
                  │     +--rw route-distinguisher       route-distinguisher-d
ef
```

```
                     |     +--rw eth-tag-id               uint32
                     |     +--rw ip-address-length         uint8
                     |     +--rw origin-router-ip-addr    inet:ip-prefix
                  +--:(EVPN_ETH_SEGMENT_ROUTE)
                     +--rw evpn-eth-segment-route* [route-type route-disting
uisher esi ip-address-length origin-router-ip-addr]
                        +--rw route-type                evpn-route-type
                        +--rw route-distinguisher       route-distinguisher-d
ef
                        +--rw esi                       string
                        +--rw ip-address-length         uint8
                        +--rw origin-router-ip-addr    inet:ip-prefix
```

4. BGP Yang description

//<code begins> file "i2rs bgp@2014-09-30.yang"

module bgp-protocol {

  namespace "urn:huawei:params:xml:ns:yang:rt:i2rs:bgp";
    // replace with iana namespace when assigned
    prefix "bgp-protocol";

  import ietf-inet-types {
    prefix inet;
    //rfc6991
  }
  import ietf-yang-types {
    prefix yang;
    //RFC6991
  }

  organization
    "huawei technologies co., ltd. ";
  contact
      "email: wanglixing@huawei.com
       email: shares@ndzh.com
       email: zhuangshunwan@huawei.com";

    description
      "
        terms and acronyms

        isis (isis):

        ip (ip): internet protocol

        ipv4 (ipv4):internet protocol version 4
```

```
        ipv6 (ipv6): internet protocol version 6

        metric(metric): multi exit discriminator

        igp (igp): interior gateway protocol

        mtu (mtu) maximum transmission unit
        ";


  revision "2014-08-22" {
    description "initial revision";
    reference "draft-hares-i2rs-bgp-im-00";
  }
/*common definition wanglixing*/
  typedef afi-def {
    description
      "afi is address family,it can be write and read.";
    type enumeration {
      enum "ipv4";
      enum "ipv6";
      enum "l2vpn";
    }
  }

  typedef safi-def {
    description
      "afi is sub-address family,it can be write and read. ";
    type enumeration {
      enum "unicast";
      enum "multicast";
      enum "l3vpn";
      enum "mpls";
      enum "mvpn";
      enum "rt-constrain";
      enum "ipv4-flow-spec";
      enum "vpnv4-flow-spec";
      enum "clns-vpn";
      enum "ng-mvpn";
      enum "mdt-safi";
    }
  }

  typedef mvpn-route-type {
    reference "http://tools.ietf.org/html/rfc6514#section-4";
      type enumeration {
        enum INTRA_AS_I_PMSI_AD {
```

```
            value 1;
          }
          enum INTER_AS_I_PMSI_AD {
            value 2;
          }
          enum S_PMSI_AD {
            value 3;
          }
          enum LEAF_AD {
            value 4;
          }
          enum SOURCE_ACTIVE_AD {
            value 5;
          }
          enum SHARED_TREE_JOIN {
            value 6;
          }
          enum SOURCE_TREE_JOIN {
            value 7;
          }
      }
    }

    typedef mcast-vpls-route-type {
      reference "http://tools.ietf.org/html/rfc7117#section-9.2";
        type enumeration {
          enum SELECTIVE_TREE_AD_ROUTE {
            value 3;
          }
          enum LEAF_AD {
            value 4;
          }
      }
    }

    typedef evpn-route-type {
      reference "draft-ietf-l2vpn-evpn-08";
        type enumeration {
          enum EVPN_AD_ROUTE {
            value 1;
          }
          enum EVPN_MAC_ROUTE {
            value 2;
          }
          enum EVPN_INC_MCAST_TREE {
            value 3;
          }
          enum EVPN_ETH_SEGMENT_ROUTE {
```

```
         value 4;
       }
     }
   }

   typedef bgp-route-create-mode {
     description
       "the way of creating of bgp route.";
     type enumeration {
       enum "not-i2rs-route";
       enum "i2rsclient-create-bgp-route";
       enum "i2rsagent-fails-bgp-route-create";
       enum "i2rsagent-created-bgp-route";
       enum "i2rsagent-bgp-route-create";
       enum "i2rsagent-rejects-bgp-route-create";
       enum "i2rsagent-attempts-bgp-route-create";
     }
   }

   typedef bgp-route-type-def {
     type enumeration {
       enum "bgp-route-type-rd";
       enum "bgp-route-type-ipv4";
       enum "bgp-route-type-ipv6";
       enum "bgp-labeled-ipv4";
       enum "bgp-labeled-ipv6";
       enum "bgp-route-type-flow";
       enum "bgp-route-type-evpn";
       enum "bgp-route-type-mvpn";
       enum "bgp-route-type-vpls";
       enum "bgp-route-type-bgp-ls";
       enum "bgp-route-type-l2vpn-signaling-nlri";
       enum "bgp-rt-constraint";
       enum "pw-route";
     }
   }
   typedef peer-state {
     type enumeration {
       enum "established";
       enum "idle";
       enum "connect";
       enum "active";
       enum "open-send";
       enum "open-confirm";
     }
   }

   typedef rib-state-def {
```

```
    type enumeration {
      enum "active";
      enum "in-active";
      enum "primary";
      enum "backup";
      enum "suppress";
    }
  }

    typedef mpls-label-def {
      description
        "label of the vrf.";
      type uint32 {
        range "16..1048574";
      }
    }

    typedef route-distinguisher-def {
    description
      "the route-distinguisher command configures a route distinguisher (rd)
       for the ipv4 or ipv6 address family of a vpn instance.
       format is asn:nn or ip-address:nn.";
    type string {
      length "3..21";
    }
  }

  grouping bgp-instance-commom {
    description
      "the common structure of bgp instance.";

    leaf bgp-instance-name {
      type string;
    }

    leaf bgp-instance-create {
    type enumeration {
      enum "not-i2rs";
      enum "i2rsclient-create-bgp-instance";
      enum "i2rsagent-fails-bgp-instance-create";
      enum "i2rsagent-created-bgp-instance";
      enum "i2rsagent-bgp-instance-create";
      enum "i2rsagent-rejects-bgp-instance-create";
      enum "i2rsagent-attempts-bgp-instance-create";
    }
    }
```

```
    leaf bgp-instance-type {
      type enumeration {
        enum "bgp-ipv4-uni";
        enum "bgp-ipv4-multi";
        enum "bgp-ipv4-l3vpn";
        enum "bgp-ipv4-mvpn";
        enum "bgp-vpls";
        enum "bgp-mdt";
        enum "bgp-evpn";
        enum "bgp-ls";
        enum "bgp-ipv4-mpls-vpn";
        enum "bgp-ipv4-mpls-mvpn";
        enum "bgp-route-target";
        enum "bgp-ipv4-flow";
        enum "bgp-ipv4-vpn-flow";
        enum "bgp-ipv4-vrf-list";
        enum "bgp-ipv6-vrf-list";
        enum "bgp-ipv6-uni";
        enum "bgp-ipv6-vpnv6";
      }
    }

    leaf bgp-vendor-type {
      type enumeration {
        enum "cisco";
        enum "huawei";
      }
    }

    leaf afi {
      type afi-def;
    }

    leaf safi {
      type safi-def;
    }

  }


  grouping bgp-route-common {
    leaf bgp-route-type {
      type enumeration {
      enum "bgp-route-type-rd";
      enum "bgp-route-type-ipv4";
      enum "bgp-route-type-ipv6";
      enum "bgp-labeled-ipv4";
```

```
      enum "bgp-labeled-ipv6";
      enum "bgp-route-type-flow";
      enum "bgp-route-type-evpn";
      enum "bgp-route-type-mvpn";
      enum "bgp-route-type-vpls";
      enum "bgp-route-type-bgp-ls";
      enum "bgp-route-type-l2vpn-signaling-nlri";
      enum "bgp-rt-constraint";
      enum "pw-route";
      }
    }

    container bgp-attribute-list {
      leaf bgp-origin {
        type enumeration {
          enum "bgp-originattr-igp";
          enum "bgp-originattr-egp";
          enum "bgp-originattr-incomplete";
        }
      }

    container bgp-aspath {
      leaf usascount {
        description
          "number of as's in the as path, exclude
           confed-sequence and confed-set.";

        type uint16;
      }
      leaf ulrefcount {
        description
          "reference count to this aspath.";

        type uint16;
      }
      leaf asstring {
        type string;
      }

      leaf usascountfrcomp {
        description
          "the count used for selecting best route,
          all as-seq + 1(if exist as-set) or 0 (if no as-set),
          ignore conf-as type.";

        config "false";
        type uint16;
      }
```

```
       leaf usastotalcount {
         description
           "for as-path-limit.";
         type uint16;
       }
       leaf usas4pathlen {
         description
           " length of pucas4pathvalue, tlv's l.";
         type uint16;
       }

       leaf as4pathvalue {
         type string;
       }

     }//end of "container bgp-aspath"

     leaf bgp-nexthop {
       type inet:ip-address;
     }

     leaf bgp-med {
       type uint32;
     }

     leaf bgp-localpref {
       type uint32;                }

     leaf bgp-atomic-aggregate {
       type uint32;
     }

     container bgp-aggregator {
       leaf ulipaddress {
         description
           "ip address formed the aggregate route.";
         type uint32;
       }
       leaf ulasnumber {
         description
           "last as number that formed the aggregate route";
         type uint32;
       }
     }

     container bgp-commattr {
       leaf uscommsize {
         description
```

```
              "number of communities.";

            type uint16;
          }
        leaf ulrefcomm {
          description
            "number of routes having the same community value.";

            type uint32;
          }
        leaf commattr-value {
          description
            "community value.";

            type string;
          }
        }

      container bgp-extcommattr {
        leaf usextcommsize {
          description
            "number of communities.";

            type uint16;
          }
        leaf ulrefcount {
          description
            "number of routes having the same community value.";

            type uint32;
          }
        leaf extcommattr-value {
          description
            "community value.";

            type string;
          }
        } //end of "container bgp-extcommattr"

      container bgp-clusterlist {
        leaf uscluslen {
          description
            "length of cluster list.";

            type uint16;
          }
        leaf ulrefclus {
          description
```

```
            "count of number of routes referring to this
             cluster list.";

          type uint32;
        }
        leaf clusterlist-value {
          description
            "cluster list values.";

          type string;
        }
      }

      leaf bgp-originator-id {
        description
          "ip address of the originator id.";

        type uint32;
      }

    }


    leaf bgp-route-create {
      description
        "the way of creating of bgp route.";
      type enumeration {
        enum "not-i2rs-route";
        enum "i2rsclient-create-bgp-route";
        enum "i2rsagent-fails-bgp-route-create";
        enum "i2rsagent-created-bgp-route";
        enum "i2rsagent-bgp-route-create";
        enum "i2rsagent-rejects-bgp-route-create";
        enum "i2rsagent-attempts-bgp-route-create";
      }
      config false;
    }

    container bgp-rt-state-info {
      config false;
      leaf rib-current-state{
        type rib-state-def;
        config false;
      }
      leaf rib-last-state{
        type rib-state-def;
        config false;
      }
```

```
       leaf rib-rejected-reason {
         description
           "the way of creating of bgp route.";
         type enumeration {
           enum "peer-withdraw";
           enum "policy-results";
           enum "nexthop-unreachable";
           enum "malformed-peer-down";
           enum "malformed-discard";
           enum "malformed-ignore";
         }
         config false;
       }
       leaf not-preferred-reason {
         type enumeration {
           enum "peer-address";
           enum "router-id";
           enum "cluster-list-length";
           enum "igp-metric";
           enum "peer-type";
           enum "origin";
           enum "weight-or-preferred-value";
           enum "local-preference";
           enum "route-type";
           enum "as-path-length";
           enum "med";
         }
         config false;
       }
     }


   }



   grouping bgp-peer-common {

     leaf bgp-peer-name {
       type string;
     }

     leaf bgp-peer-type {
       description
         "the bgp-peer-type provides a list of bgp peer type found within the
 bgp instances
         associated with the bgp protocol function on the device  associated
with the i2rs agent.
         these can be asbr (as border router e-bgp), pe (provider edge e-bgp)
, ibgp peer,
```

```
          or rr (route reflector).";
     type enumeration {
       enum "asbr";
       enum "ibgp";
       enum "rr";
       enum "rr-client";
       enum "pe";
       enum "ce";
       enum "bgp-vendor-types";
       enum "bgp-vendor-type";
     }
     config false;
   }

   leaf bgp-peer-create {
     description
       "provides the i2rs creation status for this peer as: not-created by
       i2rs, requested by client but not processed, or an i2rs agent's
       response to the request: (agent reject peer creation, agent
       attempting peer creation, agent failed peer creation, and agent
       created bgp peer).";
     type enumeration {
       enum "not-i2rs-created-peer";
       enum "i2rsclient-bgp-peer-create-request";
       enum "i2rsagent-rejects-bgp-peer-create";
       enum "i2rsagent-attempts-bgp-instance-create";
       enum "i2rsagent-fails-bgp-instance-create";
       enum "i2rsagent-created-bgp-peer";
     }
     config false;
   }
   container bgp-policy-in {

   }
   container bgp-policy-out {

   }
   container peer-policy-in-pset {
     description "this is the variable the i2rs client reads to receive the
 full policy-
     set used for this bgp peers inbound policy.  the i2rs agent must
     to keep this policy variable in-sync with the i2rs peer-policy-in.";
     config false;
   }
   container peer-policy-out-pset {
     description "this is the variable the i2rs client reads to receive the
 full policy-
     set used for this bgp peers inbound policy.  the i2rs agent must
     to keep this policy variable in-sync with the i2rs peer- policy-out.";
     config false;
```

```
      }
    container peer-state-info {
      description "the  current state of the bgp peer in the bgp state machi
ne.";
      leaf peer-current-state {
        type peer-state;
        config false;
      }
      leaf peer-last-state {
        description "the  last state of the bgp peer according to the bgp st
ate machine.";
        type peer-state;
        config false;
      }

      container peer-down-reason {
        description "the error code and sub-error code of the last peer down
.";
        leaf error-code {
          type enumeration {
            enum message-header-error {
              value "1";
            }
            enum open-message-error {
              value "2";
            }
            enum update-message-error {
              value "3";
            }
            enum hold-timer-expired {
              value "4";
            }
            enum finite-state-machine-error {
              value "5";
            }
            enum cease {
              value "6";
            }
            enum route-refresh-error {
              value "7";
            }
          }
        }
        container sub-error-code {
          choice sub-error-code-type {
            case head-error-sub-code{
              leaf head-error-sub-value {
                type enumeration {
                  enum connection-not-synchronized {
                    value "1";
                  }
```

```
              enum bad-message-length {
                value "2";
              }
              enum bad-message-type {
                value "3";
              }
            }
          }
        }
        case open-error-sub-code{
          leaf open-error-sub-value {
            type enumeration {
              enum unsupported-version-number {
                value "1";
              }
              enum bad-peer-as {
                value "2";
              }
              enum bad-bgp-identifier {
                value "3";
              }
              enum unsupported-optional-parameter {
                value "4";
              }
              enum deprecated-see-appendix-a {
                value "5";
              }
              enum unacceptable-hold-time {
                value "6";
              }
            }
          }
        }
        case update-error-sub-code{
          leaf update-error-sub-value {
            type enumeration {
              enum malformed-attribute-list {
                value "1";
              }
              enum unrecognized-well-known-attribute {
                value "2";
              }
              enum missing-well-known-attribute {
                value "3";
              }
              enum attribute-flags-error {
                value "4";
              }
```

```
                    enum attribute-length-error {
                      value "5";
                    }
                    enum invalid-origin-attribute {
                      value "6";
                    }
                    enum deprecated-see-appendix {
                      value "7";
                    }
                    enum invalid-next-hop-attribute {
                      value "8";
                    }
                    enum optional-attribute-error {
                      value "9";
                    }
                    enum invalid-network-field {
                      value "10";
                    }
                    enum malformed-as-path {
                      value "11";
                    }
                  }
                }
              }
            case route-refresh-error-sub-code{
              leaf route-refresh-error-sub-value {
                type enumeration {
                  enum invalid-message-length {
                    value "1";
                  }
                }
              }
            }
          }
        }
      config false;
    }

    leaf peer-received-update-cnt {
      description
        "the count of the received update packets..";
      type uint64;
      config false;
    }
    leaf peer-transmit-update-cnt {
      description
        "the count of the transmit update packets.";
      type uint64;
```

```
          config false;
        }
      leaf peer-received-route-cnt {
        description
          "contains current total number of unique prefix routes received fr
om peer.";
        type uint64;
        config false;
      }
      leaf peer-send-route-cnt {
        description
          "contains current total number prefix routes sent to peer.";
        type uint64;
        config false;
      }

      leaf max-prefix-rcv-limit {
        description
          "maximum unique prefix routes accepted from peer.";
        type uint64;
      }
      leaf max-prefix-xmt-limit {
        description
          "maximum unique prefix routes transmit to peer.";
        type uint64;
      }

      leaf peer-prefix-high {
        description
          "contains high water mark count of total unique routes by prefix r
eceived from peer.";
        type uint64;
        config false;
      }
      leaf peer-prefix-low {
        description
          "contains the low water mark count of total unique routes by prefi
x received from peer.";
        type uint64;
        config false;
      }
      leaf peer-perfix-ave {
         description
          "contains the average number of prefix routes from peer (running).
";
        type uint64;
        config false;
      }
      leaf peer-prefix-time {
        type uint64;
        config false;
      }
```

```
      leaf peer-prefix-max {
        type uint64;
        config false;
      }
      leaf publish-version {
        type uint64;
        config false;
      }
    }
  }
  }//end of "container bgp-peer-list"


  grouping bgp-mvpn-rib {
    uses bgp-route-common;

    choice bgp-mvpn-route-type {
      case INTRA_AS_I_PMSI_AD {
        list intra-as-i-pmsi-ad-route{
          key "route-type route-distinguisher origin-router-ip-addr";

          leaf route-type{
            type mvpn-route-type;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          leaf origin-router-ip-addr{
            type inet:ip-prefix;
          }
        }
      }
      case INTER_AS_I_PMSI_AD {
        list inter_as_i_pmsi_as_route {
          key "route-type route-distinguisher source-as";

          leaf route-type{
            type mvpn-route-type;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          leaf source-as{
            type inet:as-number;
          }
        }
      }
      case S_PMSI_AD {
        list s-pmsi-ad-route {
```

```
        key "route-type route-distinguisher multicast-source
         multicast-group origin-router-ip-addr";

        leaf route-type{
          type mvpn-route-type;
        }
        leaf route-distinguisher{
          type route-distinguisher-def;
        }
        leaf multicast-source{
          type inet:ip-prefix;
        }
        leaf multicast-group{
          type inet:ip-prefix;
        }
        leaf origin-router-ip-addr{
          type inet:ip-prefix;
        }
      }
    }
    case LEAF_AD{
      list leaf-ad-route {
        key "route-type route-key origin-router-ip-addr";

        leaf route-type{
          type mvpn-route-type;
        }
        leaf route-key{
          type binary;
        }
        leaf origin-router-ip-addr{
          type inet:ip-prefix;
        }
      }
    }
    case SOURCE_ACTIVE_AD {
      list source-active-ad-route {
        key "route-type route-distinguisher
          multicast-source multicast-group";

        leaf route-type{
          type mvpn-route-type;
        }
        leaf route-distinguisher{
          type route-distinguisher-def;
        }
        leaf multicast-source{
          type inet:ip-prefix;
```

```
              }
              leaf multicast-group{
                type inet:ip-prefix;
              }
            }
          }
        }
      case SHARED_TREE_JOIN {
        list shared-tree-join-route {
          key "route-type route-distinguisher source-as
            multicast-source multicast-group";

          leaf route-type{
            type mvpn-route-type;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          leaf source-as{
            type inet:as-number;
          }
          leaf multicast-source{
            type inet:ip-prefix;
          }
          leaf multicast-group{
            type inet:ip-prefix;
          }
        }
      }
      case SOURCE_TREE_JOIN {
        list source-tree-join-route {
          key "route-type route-distinguisher source-as
            multicast-source multicast-group";

          leaf route-type{
            type mvpn-route-type;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          leaf source-as{
            type inet:as-number;
          }
          leaf multicast-source{
            type inet:ip-prefix;
          }
          leaf multicast-group{
            type inet:ip-prefix;
          }
```

```
      }
     }

    }
  }

  grouping bgp-mcast-vpls-rib {
    uses bgp-route-common;

    choice bgp-mcast-vpls-route-type {
      case SELECTIVE_TREE_AD_ROUTE {
        list selective-tree-ad-route{
          key "route-type route-distinguisher multicast-source
           multicast-group origin-router-ip-addr";

          leaf route-type{
            type mcast-vpls-route-type;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          leaf multicast-source{
            type inet:ip-prefix;
          }
          leaf multicast-group{
            type inet:ip-prefix;
          }
          leaf origin-router-ip-addr{
            type inet:ip-prefix;
          }
        }
      }
      case LEAF_AD {
        list leaf-ad-route {
          key "route-type route-key origin-router-ip-addr";

          leaf route-type{
            type mcast-vpls-route-type;
          }
          leaf route-key{
            type binary;
          }
          leaf origin-router-ip-addr{
            type inet:ip-prefix;
          }
        }
      }
```

```
      }
    }

  grouping bgp-evpn-rib {
    uses bgp-route-common;

    choice bgp-evpn-route-type {
      case EVPN_AD_ROUTE {
        list evpn-ad-route{
          key "route-type route-distinguisher esi eth-tag-id";

          leaf route-type{
            type evpn-route-type;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          leaf esi{
            type string{
              length "24";
              pattern "(^00([0-9a-fA-F]){2}\.(([0-9a-fA-F]){4}\.){3}
              (([0-9a-fA-F]){4})$)";
            }
          }
          leaf eth-tag-id {
            type uint32 {
              range "1..4294967295";
            }
          }
        }
      }
      case EVPN_MAC_ROUTE {
        list evpn-mac-route {
          key "route-type route-distinguisher esi eth-tag-id
          mac-length mac-address ip-address-length ip-address";

          leaf route-type{
            type evpn-route-type;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          leaf esi{
            type string{
              length "24";
              pattern "(^00([0-9a-fA-F]){2}\.(([0-9a-fA-F]){4}\.){3}
              (([0-9a-fA-F]){4})$)";
            }
```

```
          }
          leaf eth-tag-id {
            type uint32 {
              range "1..4294967295";
            }
          }
          leaf mac-length {
            type uint8 {
              range "48";
            }
          }
          leaf mac-address {
            type yang:mac-address;
          }
          leaf ip-address-length {
            type uint8 {
              range "0..32";
            }
          }
          leaf ip-address {
            type inet:ip-address;
          }
          leaf label1{
            type uint32 {
                range "16..1048574";
            }
          }
          leaf label2{
            type uint32 {
                range "16..1048574";
            }
          }
        }
      }
    }
    case EVPN_INC_MCAST_TREE {
      list evpn-inc-mcast-tree-route {
        key "route-type route-distinguisher eth-tag-id
         ip-address-length origin-router-ip-addr";

        leaf route-type{
          type evpn-route-type;
        }
        leaf route-distinguisher{
          type route-distinguisher-def;
        }
        leaf eth-tag-id {
          type uint32 {
            range "1..4294967295";
```

```
          }
        }
        leaf ip-address-length {
          type uint8; //4 or 16 octets
        }
        leaf origin-router-ip-addr{
          type inet:ip-prefix;
        }
      }
    }
  }
  case EVPN_ETH_SEGMENT_ROUTE{
    list evpn-eth-segment-route {
      key "route-type route-distinguisher esi
      ip-address-length origin-router-ip-addr";

      leaf route-type{
        type evpn-route-type;
      }
      leaf route-distinguisher{
        type route-distinguisher-def;
      }
      leaf esi{
        type string{
          length "24";
          pattern "(^00([0-9a-fA-F]){2}\.(([0-9a-fA-F]){4}\.){3}
          (([0-9a-fA-F]){4})$)";
        }
      }
      leaf ip-address-length {
        type uint8; //4 or 16 octets
      }
      leaf origin-router-ip-addr{
        type inet:ip-prefix;
      }
    }
  }
}
}
}

container bgp-protocol {
  leaf router-id {
    type inet:ip-address;
  }
  leaf as-number {
    type uint32;
  }

  leaf protocol-status {
```

```
      description
        "administartive status of bgp protocol.";
      type enumeration {
         enum "unknown";
         enum "up";
         enum "down";
      }
      config false;
    }

    leaf shutdown-protocol {
      type boolean;
    }

    leaf bgp-role {
      type enumeration {
         enum "asbr";
         enum "pe";
         enum "ibgp";
         enum "rr";
      }
      config false;
    }

    container bgp-ipv4-uni-instance {
      uses bgp-instance-commom;
      container bgp-local-rib{
        list bgp-route-list{
          key "ipv4-route ipv4-prefix-length";
          leaf ipv4-route{
            type inet:ipv4-prefix;
          }
          leaf ipv4-prefix-length{
            type uint8;
          }
          uses bgp-route-common;
        }
      }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv4-address{
            type inet:ipv4-prefix;
          }
          leaf remote-ipv4-address{
            type inet:ipv4-prefix;
          }
        }
```

```
        uses bgp-peer-common;
        container bgp-rib-in{
          list bgp-rib-in-list{
            key "ipv4-route ipv4-prefix-length";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
        container bgp-rib-out{
          list bgp-rib-out-list{
            key "ipv4-route ipv4-prefix-length";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
      }
    }
    container bgp-labeled-ipv4-instance {
      uses bgp-instance-commom;
      container bgp-local-rib{
        list bgp-route-list{
          key "ipv4-route ipv4-prefix-length mpls-label";
          leaf ipv4-route{
            type inet:ipv4-prefix;
          }
          leaf ipv4-prefix-length{
            type uint8;
          }
          leaf mpls-label{
            type mpls-label-def;
          }
          uses bgp-route-common;
        }
      }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv4-address{
```

```
            type inet:ipv4-prefix;
          }
          leaf remote-ipv4-address{
            type inet:ipv4-prefix;
          }
        }
      uses bgp-peer-common;
      container bgp-rib-in{
        list bgp-rib-in-list{
          key "ipv4-route ipv4-prefix-length mpls-label";
          leaf ipv4-route{
            type inet:ipv4-prefix;
          }
          leaf ipv4-prefix-length{
            type uint8;
          }
          leaf mpls-label{
            type mpls-label-def;
          }
          uses bgp-route-common;
        }
      }
      container bgp-rib-out{
        list bgp-rib-out-list{
          key "ipv4-route ipv4-prefix-length mpls-label";
          leaf ipv4-route{
            type inet:ipv4-prefix;
          }
          leaf ipv4-prefix-length{
            type uint8;
          }
          leaf mpls-label{
            type mpls-label-def;
          }
          uses bgp-route-common;
        }
      }
    }
  }


  container bgp-ipv4-multi-instance {
    uses bgp-instance-commom;
    container bgp-local-rib{
      list bgp-route-list{
        key "ipv4-route ipv4-prefix-length";
        leaf ipv4-route{
          type inet:ipv4-prefix;
```

```
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv4-address{
            type inet:ipv4-prefix;
          }
          leaf remote-ipv4-address{
            type inet:ipv4-prefix;
          }
        }
        uses bgp-peer-common;
        container bgp-rib-in{
          list bgp-rib-in-list{
            key "ipv4-route ipv4-prefix-length";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
        container bgp-rib-out{
          list bgp-rib-out-list{
            key "ipv4-route ipv4-prefix-length";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
      }
    }

    container bgp-vpnv4-instance {
      uses bgp-instance-commom;
      container bgp-local-rib{
```

```
          list bgp-route-list{
            key "ipv4-route ipv4-prefix-length route-distinguisher";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            leaf mpls-label{
              type mpls-label-def;
            }
            leaf route-distinguisher{
              type route-distinguisher-def;
            }
            uses bgp-route-common;
          }
        }
        list bgp-peer-list{
          key "bgp-peer-name";
          container peer-session-address{
            leaf local-ipv4-address{
              type inet:ipv4-prefix;
            }
            leaf remote-ipv4-address{
              type inet:ipv4-prefix;
            }
          }
          uses bgp-peer-common;
          container bgp-rib-in{
            list bgp-rib-in-list{
              key "ipv4-route ipv4-prefix-length route-distinguisher";
              leaf ipv4-route{
                type inet:ipv4-prefix;
              }
              leaf ipv4-prefix-length{
                type uint8;
              }
              leaf mpls-label{
                type mpls-label-def;
              }
              leaf route-distinguisher{
                type route-distinguisher-def;
              }
              uses bgp-route-common;
            }
          }
          container bgp-rib-out{
            list bgp-rib-out-list{
```

```
            key "ipv4-route ipv4-prefix-length route-distinguisher";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            leaf mpls-label{
              type mpls-label-def;
            }
            leaf route-distinguisher{
              type route-distinguisher-def;
            }
            uses bgp-route-common;
          }
        }
      }
    }




    list bgp-ipv4-l3vpn-instance-list {
      key "bgp-l3vpn-instance-name";
      leaf bgp-l3vpn-instance-name {
        type string;
      }
      uses bgp-instance-commom;
      container bgp-local-rib{
        list bgp-route-list{
          key "ipv4-route ipv4-prefix-length";
          leaf ipv4-route{
            type inet:ipv4-prefix;
          }
          leaf ipv4-prefix-length{
            type uint8;
          }
          uses bgp-route-common;
        }
      }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv4-address{
            type inet:ipv4-prefix;
          }
          leaf remote-ipv4-address{
            type inet:ipv4-prefix;
```

```
          }
        }
        uses bgp-peer-common;
        container bgp-rib-in{
          list bgp-rib-in-list{
            key "ipv4-route ipv4-prefix-length";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
        container bgp-rib-out{
          list bgp-rib-out-list{
            key "ipv4-route ipv4-prefix-length";
            leaf ipv4-route{
              type inet:ipv4-prefix;
            }
            leaf ipv4-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
      }
    }

    /*ipv6*/
    container bgp-ipv6-uni-instance {
      uses bgp-instance-commom;
      container bgp-local-rib{
        list bgp-route-list{
          key "ipv6-route ipv6-prefix-length";
          leaf ipv6-route{
            type inet:ipv6-prefix;
          }
          leaf ipv6-prefix-length{
            type uint8;
          }
          uses bgp-route-common;
        }
      }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
```

```
         leaf local-ipv6-address{
           type inet:ipv6-prefix;
         }
         leaf remote-ipv6-address{
           type inet:ipv6-prefix;
         }
       }
       uses bgp-peer-common;
       container bgp-rib-in{
         list bgp-rib-in-list{
           key "ipv6-route ipv6-prefix-length";
           leaf ipv6-route{
             type inet:ipv6-prefix;
           }
           leaf ipv6-prefix-length{
             type uint8;
           }
           uses bgp-route-common;
         }
       }
       container bgp-rib-out{
         list bgp-rib-out-list{
           key "ipv6-route ipv6-prefix-length";
           leaf ipv6-route{
             type inet:ipv6-prefix;
           }
           leaf ipv6-prefix-length{
             type uint8;
           }
           uses bgp-route-common;
         }
       }
     }
   }
   container bgp-labeled-ipv6-instance {
     uses bgp-instance-commom;
     container bgp-local-rib{
       list bgp-route-list{
         key "ipv6-route ipv6-prefix-length mpls-label";
         leaf ipv6-route{
           type inet:ipv6-prefix;
         }
         leaf ipv6-prefix-length{
           type uint8;
         }
         leaf mpls-label{
           type mpls-label-def;
         }
```

```
            uses bgp-route-common;
          }
        }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv6-address{
            type inet:ipv6-prefix;
          }
          leaf remote-ipv6-address{
            type inet:ipv6-prefix;
          }
        }
        uses bgp-peer-common;
        container bgp-rib-in{
          list bgp-rib-in-list{
            key "ipv6-route ipv6-prefix-length mpls-label";
            leaf ipv6-route{
              type inet:ipv6-prefix;
            }
            leaf ipv6-prefix-length{
              type uint8;
            }
            leaf mpls-label{
              type mpls-label-def;
            }
            uses bgp-route-common;
          }
        }
        container bgp-rib-out{
          list bgp-rib-out-list{
            key "ipv6-route ipv6-prefix-length mpls-label";
            leaf ipv6-route{
              type inet:ipv6-prefix;
            }
            leaf ipv6-prefix-length{
              type uint8;
            }
            leaf mpls-label{
              type mpls-label-def;
            }
            uses bgp-route-common;
          }
        }
      }
    }
```

```
    container bgp-ipv6-multi-instance {
      uses bgp-instance-commom;
      container bgp-local-rib{
        list bgp-route-list{
          key "ipv6-route ipv6-prefix-length";
          leaf ipv6-route{
            type inet:ipv6-prefix;
          }
          leaf ipv6-prefix-length{
            type uint8;
          }
          uses bgp-route-common;
        }
      }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv6-address{
            type inet:ipv6-prefix;
          }
          leaf remote-ipv6-address{
            type inet:ipv6-prefix;
          }
        }
        uses bgp-peer-common;
        container bgp-rib-in{
          list bgp-rib-in-list{
            key "ipv6-route ipv6-prefix-length";
            leaf ipv6-route{
              type inet:ipv6-prefix;
            }
            leaf ipv6-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
        }
        container bgp-rib-out{
          list bgp-rib-out-list{
            key "ipv6-route ipv6-prefix-length";
            leaf ipv6-route{
              type inet:ipv6-prefix;
            }
            leaf ipv6-prefix-length{
              type uint8;
            }
            uses bgp-route-common;
          }
```

```
        }
      }
    }

    container bgp-vpnv6-instance {
      uses bgp-instance-commom;
      container bgp-local-rib{
        list bgp-route-list{
          key "ipv6-route ipv6-prefix-length route-distinguisher";
          leaf ipv6-route{
            type inet:ipv6-prefix;
          }
          leaf ipv6-prefix-length{
            type uint8;
          }
          leaf mpls-label{
            type mpls-label-def;
          }
          leaf route-distinguisher{
            type route-distinguisher-def;
          }
          uses bgp-route-common;
        }
      }
      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv6-address{
            type inet:ipv6-prefix;
          }
          leaf remote-ipv6-address{
            type inet:ipv6-prefix;
          }
        }
        uses bgp-peer-common;
        container bgp-rib-in{
          list bgp-rib-in-list{
            key "ipv6-route ipv6-prefix-length route-distinguisher";
            leaf ipv6-route{
              type inet:ipv6-prefix;
            }
            leaf ipv6-prefix-length{
              type uint8;
            }
            leaf mpls-label{
              type mpls-label-def;
            }
            leaf route-distinguisher{
```

```
              type route-distinguisher-def;
            }
            uses bgp-route-common;
          }
        }
        container bgp-rib-out{
          list bgp-rib-out-list{
            key "ipv6-route ipv6-prefix-length route-distinguisher";
            leaf ipv6-route{
              type inet:ipv6-prefix;
            }
            leaf ipv6-prefix-length{
              type uint8;
            }
            leaf mpls-label{
              type mpls-label-def;
            }
            leaf route-distinguisher{
              type route-distinguisher-def;
            }
            uses bgp-route-common;
          }
        }
      }
    }


    list bgp-ipv6-l3vpn-instance-list {
      key "bgp-l3vpn-instance-name";
      leaf bgp-l3vpn-instance-name {
        type string;
      }
      uses bgp-instance-commom;
      container bgp-local-rib{
        list bgp-route-list{
          key "ipv6-route ipv6-prefix-length";
          leaf ipv6-route{
            type inet:ipv6-prefix;
          }
          leaf ipv6-prefix-length{
            type uint8;
          }
          uses bgp-route-common;
        }
      }
      list bgp-peer-list{
        key "bgp-peer-name";
```

```
      container peer-session-address{
        leaf local-ipv6-address{
          type inet:ipv6-prefix;
        }
        leaf remote-ipv6-address{
          type inet:ipv6-prefix;
        }
      }
      uses bgp-peer-common;
      container bgp-rib-in{
        list bgp-rib-in-list{
          key "ipv6-route ipv6-prefix-length";
          leaf ipv6-route{
            type inet:ipv6-prefix;
          }
          leaf ipv6-prefix-length{
            type uint8;
          }
          uses bgp-route-common;
        }
      }
      container bgp-rib-out{
        list bgp-rib-out-list{
          key "ipv6-route ipv6-prefix-length";
          leaf ipv6-route{
            type inet:ipv6-prefix;
          }
          leaf ipv6-prefix-length{
            type uint8;
          }
          uses bgp-route-common;
        }
      }
    }
  }

  container bgp-ipv4-mvpn-instance {
    uses bgp-instance-commom;

    container bgp-local-rib{
      uses bgp-mvpn-rib;
    }

    list bgp-peer-list{
      key "bgp-peer-name";
      container peer-session-address{
        leaf local-ipv4-address{
          type inet:ipv4-prefix;
```

```
          }
          leaf remote-ipv4-address{
            type inet:ipv4-prefix;
          }
        }
      uses bgp-peer-common;

      container bgp-rib-in{
          uses bgp-mvpn-rib;
      }
      container bgp-rib-out{
          uses bgp-mvpn-rib;
      }
    }
  }

  container bgp-ipv6-mvpn-instance {
    uses bgp-instance-commom;

    container bgp-local-rib{
      uses bgp-mvpn-rib;
    }

    list bgp-peer-list{
      key "bgp-peer-name";
      container peer-session-address{
        leaf local-ipv6-address{
          type inet:ipv6-prefix;
        }
        leaf remote-ipv6-address{
          type inet:ipv6-prefix;
        }
      }
      uses bgp-peer-common;

      container bgp-rib-in{
          uses bgp-mvpn-rib;
      }
      container bgp-rib-out{
          uses bgp-mvpn-rib;
      }
    }
  }

  container bgp-mcast-vpls-instance {
    uses bgp-instance-commom;

    container bgp-local-rib{
```

```
            uses bgp-mcast-vpls-rib;
        }

      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv4-address{
            type inet:ipv4-prefix;
          }
          leaf remote-ipv4-address{
            type inet:ipv4-prefix;
          }
        }
        uses bgp-peer-common;

        container bgp-rib-in{
            uses bgp-mcast-vpls-rib;
        }
        container bgp-rib-out{
            uses bgp-mcast-vpls-rib;
        }
      }
    }

    container bgp-evpn-instance {
      uses bgp-instance-commom;

      container bgp-local-rib{
        uses bgp-evpn-rib;
      }

      list bgp-peer-list{
        key "bgp-peer-name";
        container peer-session-address{
          leaf local-ipv4-address{
            type inet:ipv4-prefix;
          }
          leaf remote-ipv4-address{
            type inet:ipv4-prefix;
          }
        }
        uses bgp-peer-common;

        container bgp-rib-in{
            uses bgp-evpn-rib;
        }
        container bgp-rib-out{
            uses bgp-evpn-rib;
```

```
          }
        }
      }


    }//end of "container bgp-protocol"

}
//<code ends>
```

5. IANA Considerations

    This draft includes no request to IANA.

6. Security Considerations

    TBD.

7. Informative References

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Authors' Addresses

   Lixing Wang
   Huawei
   Beijing
   PRC

   Email: wanglixing@huawei.com

   Susan Hares
   Huawei
   7453 Hickory Hill
   Saline, MI 48176
   USA

   Email: shares@ndzh.com

   Shunwan Zhuang
   Huawei
   Beijing
   PRC

   Email: Zhuangshunwan@huawei.com