

ROLL working group

YANG MPL model
draft-ietf-roll-mpl-yang-02

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Recent changes

YANG doctor review; thanks to Radi Krejci

- Added a section on Network Management Data Architecture (NMDA)
- Updated the Description texts
- Added units where appropriate
- Three modules (ops, seeds, statistics) “augment” domain module
- Assigned SIDs to YANG identifiers to reduce payload

SID: YANG Schema Item iDentifier

TODO

More reviews

Augmented modules should relate to domain instances of domain module

WGLC

REMINDER MODULE contents

Domain spans MC addresses

MC addresses are assigned to interfaces

```
+--rw mpl-domain
  +--rw domains* [domainID]
    +--rw domainID          uint16
    +--rw MClist*           yang:ipv6-address
  +--rw addresses* [MCaddress]
    +--rw MCaddress          yang:ipv6-address
    +--rw interfaces*        string
```

* : list

[key] : key attribute(s) of list

Operational parameters

Per domain assign MPL parameters

```
+--rw mpl-op
  +--rw SE_LIFETIME                               uint16
  +--rw PROACTIVE_FORWARDING                     boolean
  +--rw SEED_SET_ENTRY_LIFETIME                   uint64
  +--rw mpl-parameter* [domainID]
    +--rw domainID                               uint16
    +--rw DATA_MESSAGE_IMIN                     uint16
    +--rw DATA_MESSAGE_IMAX                     uint16
    +--rw DATA_MESSAGE_K                         uint16
    +--rw DATA_MESSAGE_TIMER_EXPIRATIONS         uint16
    +--rw CONTROL_MESSAGE_IMIN                   uint16
    +--rw CONTROL_MESSAGE_IMAX                   uint16
    +--rw CONTROL_MESSAGE_K                       uint16
    +--rw CONTROL_MESSAGE_TIMER_EXPIRATIONS       uint16
    +--rw MC_address*                             yang:ipv6-address
```

Operational statistics

Per domain and seed progress in packets

```
+--ro mpl-seeds* [seedID, domainID]
  +--ro seedID          uint64
  +--ro domainID        uint16
  +--ro local           boolean
  +--ro life-time       uint64
  +--ro min-seqno       uint8
  +--ro data-number     uint8
  +--ro control-number  uint8
  +--ro nr-of-timers    uint8
  +--ro seed_timers* [seqno]
    +--ro seqno         uint8
    +--ro I             uint8
    +--ro c             uint8
    +--ro e             uint8
    +--ro t             uint8
```

Operational statistics

Per domain and seed, MPL counters

```
+--ro mpl-statistics* [seedID, domainID]
    +--ro seedID                               uint64
    +--ro domainID                             uint16
    +--ro c-too-high                           uint64
    +--ro nr-forwarded                         uint64
    +--ro nr-not-forwarded                     uint64
    +--ro nr-of-messages-received              uint64
    +--ro nr-of-copies-received                uint64
    +--ro nr-of-messages-forwarded             uint64
    +--ro nr-of-copies-forwarded               uint64
    +--ro nr-of-refused                        uint64
    +--ro nr-of-notreceived                    uint64
    +--ro nr-of-missing                        uint64
    +--ro nr-of-inconsistent-data              uint64
    +--ro nr-of-consistent-data               uint64
    +--ro nr-of-inconsistent-control           uint64
    +--ro nr-of-consistent-control            uint64
```