

TRILL Yang OAM

draft-hao-trill-yang-01

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Introduction

- “ YANG [RFC6020] is a data definition language that was introduced to define the contents of a conceptual data store that allows networked devices to be managed using NETCONF [RFC6241].
- “ This draft only includes the data model of TRILL base protocol [RFC6325], TRILL extended features (such as TRILL active-active connection, TRILL Fine Grained Label, and etc) are not included.

Overview

” TRILL Yang Model

- . rw configuration data
 - per Rbridge
 - per nickname per Rbridge
 - per port per Rbridge
 - per VLAN per RBridge
- . ro non-configuration data
 - information of LSDB
 - unicast routing table
 - multicast routing table
 - RPF check information
 - Nickname information
 - peer information
 - statistics

Per Rbridge and per nickname per Rbridge configuration

module: trill

+--rw trillSite

+--rw trillSite* [instanceId]

+--rw instanceId uint32

+--rw name string

+--rw systemID* uint8

+--rw lspTimer

| +--rw lspLife uint16

| +--rw lspRefresh uint16

| +--rw lspGeneration uint8

+--rw nickNumber uint16

+--rw treeNumber uint16

+--rw referenceBandwidth uint32

+--rw nativeConfidence uint8

+--rw remoteConfidence uint8

+--rw minLinkMTU uint16

+--rw MTUProbes uint8

+--rw Nicknames

| +--rw Nickname* [nickName]

| +--rw nickName uint16

| +--rw priority uint8

| +--rw rootPriority uint16

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Per port per Rbridge and per VLAN configuration

+--rw trillPorts

```
| +--rw trillPort* [ifName]
|   +--rw ifName          string
|   +--rw portMode        enumeration
|   +--rw timer
|   ...
|   +--rw drbConfig
|   | +--rw drbPriority    uint8
|   | +--rw holdingTimer  uint8
|   +--rw macLearningFlag boolean
|   +--rw trillFrameReceiveFlag boolean
|   +--rw cost             uint32
|   +--rw enabledVlans     binary
|   +--rw announcingVlans  binary
|   +--rw forwardingVlans  binary
|   +--ro circuitId        uint8
|   +--ro circuitMTU        uint32
|   +--rw designatedVlan   uint16
|   +--ro drbStatus         enumeration
```

+--rw vlanConfigs

```
| +--rw vlanConfig* [vlanID]
|   +--rw vlanID          uint16
|   +--rw participationFlag boolean
|   +--rw priority         uint8
|   +--rw holdingTimer     uint8
```

+--rw timer

```
| +--rw csnp             uint16
| +--rw hello            uint8
| +--rw holdingMultiplier uint16
| +--rw lspRetransmit     uint16
| +--rw lspThrottle
| | +--rw throttleInterval uint16
| | +--rw countNumber      uint16
| +--rw inhibitionTimer  uint8
```

Information of unicast, multicast routing table and RPF check

+--rw trillRouteInfos

```
| +--ro trillRouteInfo* [nickName nextHop]
|   +--ro nickName      uint16
|   +--ro cost          uint32
|   +--ro outInterface  string
|   +--ro outVlan       uint16
|   +--ro nextHop       string
|   +--ro hopCount      uint32
```

+--rw trillMRouteInfos

```
| +--ro trillMRouteInfo* [vlan rootNickname]
|   +--ro vlan          uint16
|   +--ro rootNickname  uint16
|   +--ro hopCount      uint16
|   +--ro outInterfaceinfo
|     +--ro trillMRouteOutInterfaceInfo* [outInterface outVlan]
|       +--ro outInterface  string
|       +--ro outVlan       uint16
```

+--rw trillRpfCheckInfos

```
| +--ro trillRpfCheckInfo* [ingressNickname treeNickname]
|   +--ro ingressNickname  uint16
|   +--ro treeNickname     uint16
|   +--ro interfaceName    string
|   +--ro neighborMac      string
|   +--ro designatedVlan   uint16
```

Peer, LSDB and Nickname information

```
+--rw trillPeerInfos
| +--ro trillPeerInfo* [hostName circuitId]
|   +--ro hostName      string
|   +--ro interfaceName string
|   +--ro circuitId     uint8
|   +--ro status        enumeration
|   +--ro holdTime      uint16
|   +--ro priority      uint8
+--rw trillLsdbInfos
| +--ro trillLsdbInfo* [lspId]
|   +--ro lspId         lspID
|   +--ro sequenceNumber uint32
|   +--ro checksum      uint16
|   +--ro lspLength     uint32
|   +--ro attBit        uint8
|   +--ro partitionBit  uint8
|   +--ro overloadBit   uint8
|   +--ro holdTime      uint16
|   +--ro localLsp      boolean
+--rw trillNicknameInfos
| +--ro trillNicknameInfo* [nickName systemId]
|   +--ro nickName      uint32
|   +--ro priority      uint8
|   +--ro rootPriority  uint32
|   +--ro systemId     string
|   +--ro conflictState enumeration
|   +--ro staticFlag    enumeration
|   +--ro isLocal       boolean
```

TRILL Statistics information

+--rw trillStatistics

```
| +--rw interfaceStat
| | +--ro upNum          uint32
| | +--ro downNum       uint32
| +--rw pktstatistics
| | +--ro reportNum     uint32
| | +--ro detectNum    uint32
| | +--ro twoWayNum    uint32
| +--ro unicastRoutesNum  uint32
| +--ro multicastRoutesNum uint32
| +--ro rpfEntriesNum   uint32
| +--ro remoteNicknamesNum uint32
| +--ro lsdbLSPsNum     uint32
| +--ro selfLSPsNum    uint32
| +--ro multicastTreesNum  uint32
| +--ro unicastNodesNum  uint32
| +--ro multicastNodesNum uint32
```

+--rw pktStatistics

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```
+--ro pktStatistic* [interfaceName]
+--ro interfaceName  string
+--ro sentHellosNum  uint32
+--ro recvedHellosNum uint32
+--ro sentLSPsNum    uint32
+--ro recvedLSPsNum  uint32
+--ro sentCSNPsNum   uint32
+--ro recvedCSNPsNum uint32
+--ro sentPSNPsNum   uint32
+--ro recvedPSNPsNum uint32
+--ro lspRetransmissionsNum uint32
+--ro drbElectionsNum  uint32
```


THANK YOU