

TWAMP Data Model

(YANG for TWAMP)

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Motivation:

Why Now?

- Large Scale Measurements
- Network Virtualization
- Multi-vendor management harmonization

Why YANG?

- YANG modeling language represents a very popular choice for configuration and management.

YANG + NETCONF/RESTCONF meet RFC 5357

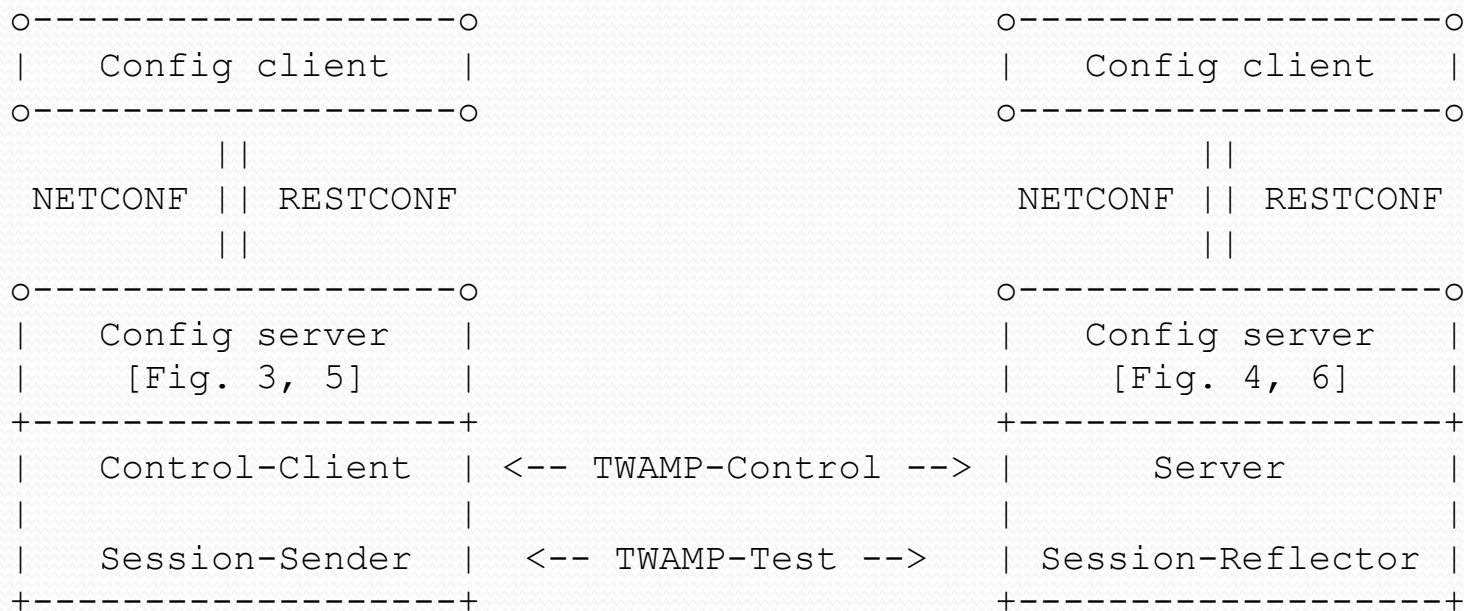


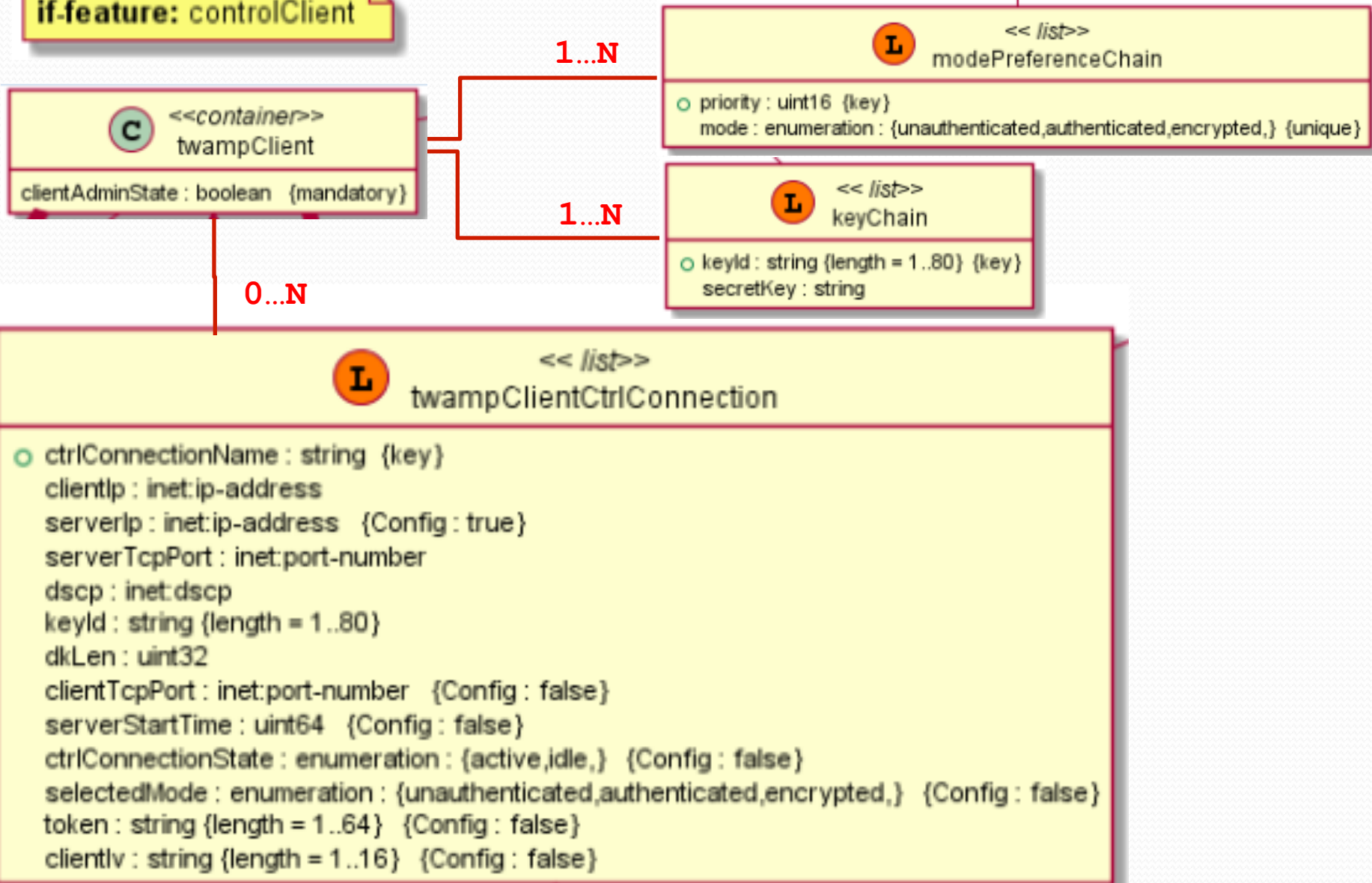
Figure 2: Simplified TWAMP model and protocols

Summary

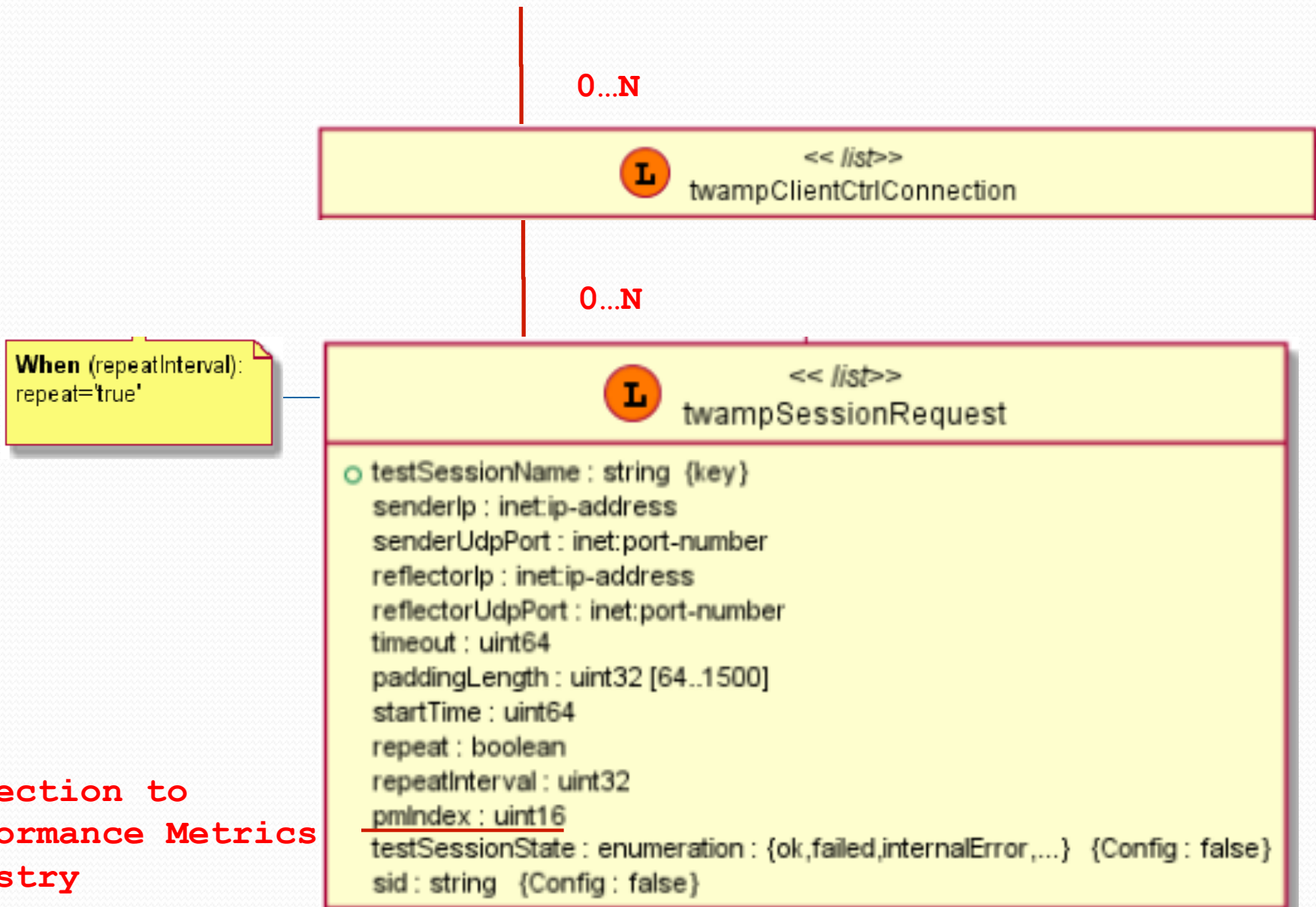
- What's the challenge?
 - Identify the groupings or functions
 - Determine the hierarchy of the groupings/functions
 - Identify the parameters, some are in the RFCs
- One Module
 - Four main Containers:
 - Control-Client, Server, Session-Sender, and Session-Reflector
 - Many Parameters

UML Classes for Control-Client

if-feature: controlClient



UML Classes for Control-Client



Connection to
Performance Metrics
Registry

```

+--rw twamp
  +--rw twampClient {controlClient}?
    | +--rw clientAdminState          boolean
    | +--rw modePreferenceChain* [priority]
    | | +--rw priority                uint16
    | | +--rw mode?                   enumeration
    | +--rw keyChain* [keyId]
    | | +--rw keyId                   string
    | | +--rw secretKey?              string
    | +--rw twampClientCtrlConnection* [ctrlConnectionName]
    |   +--rw ctrlConnectionName      string
    |   +--rw clientIp?                inet:ip-address
    |   +--rw serverIp?                inet:ip-address
    |   +--rw serverTcpPort?           inet:port-number
    |   +--rw dscp?                    inet:dscp
    |   +--rw keyId?                   string
    |   +--rw dkLen?                   uint32
    |   +--ro clientTcpPort?           inet:port-number
    |   +--ro serverStartTime?         uint64
    |   +--ro ctrlConnectionState?    enumeration
    |   +--ro selectedMode?           enumeration
    |   +--ro token?                   string
    |   +--ro clientIv?                string
    |   +--rw twampSessionRequest* [testSessionName]
    |     +--rw testSessionName        string
    |     +--rw senderIp?              inet:ip-address
    |     +--rw senderUdpPort?         inet:port-number
    |     +--rw reflectorIp?           inet:ip-address
    |     +--rw reflectorUdpPort?     inet:port-number
    |     +--rw timeout?               uint64
    |     +--rw paddingLength?         uint32
    |     +--rw startTime?             uint64
    |     +--rw repeat?                boolean
    |     +--rw repeatInterval?        uint32
    |     +--rw pmIndex?               uint16
    |     +--ro testSessionState?     enumeration
    |     +--ro sid?                   string

```

Tree view

Next steps

- Seek Reviewers from the TWAMP community
- Eventually, WG adoption
- Comments?