A YANG Data Model for NTP

draft-wu-ntp-ntp-cfg-03

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# Introduction

## Yang Data Model

<table>
<thead>
<tr>
<th>Management of NTP demon – client and server</th>
<th>Configurations State</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP as per RFC 5905</td>
<td>Most features of NTPv4 are covered</td>
</tr>
</tbody>
</table>

NTP WG, virtual interim meeting, May 2017
Recent Changes

- Yang tree rearranged as per NMDA
  - Network Management Datastore Architecture
  - `draft-ietf-netmod-revised-datastores-02`

- NTP Interface
  - Corrections in Yang

- Use of presence

- Yang Data-type correction

- Removed auto-key
  - As per WG feedback

NTP WG, virtual interim meeting, May 2017
Yang tree rearranged

- As per NMDA (Network Management Datastore Architecture)
  - draft-ietf-netmod-revised-datastores-02
  - Guidelines to Yang Authors - draft-dsdt-nmda-guidelines
  - Separating operational state from configuration in a separate branch in the data model has been found operationally complicated, and typically impacts the readability of module.
- Changes
  - Clock state is moved before association
  - Leafs of “associations-status” container are merged with “associations” container
## NTP Interface

### Broadcast Server
- Used ‘Presence’ for this container
- Properties could be set

### Broadcast Client
- Used ‘Presence’ for this container

### Multicast Server
- Used ‘list’ to allow multiple multicast address
- Properties could be set

### Multicast Client
- Used ‘list’ to allow multiple multicast address

### Manycast Server
- Used ‘list’ to allow multiple multicast address

### Manycast Client
- Used ‘list’ to allow multiple multicast address
- Properties could be set
Use of “presence”

- The presence of the container itself is configuration data.
- The container acts as both a configuration knob and a means of organizing related configuration.
- Broadcast client/server node
  - Removed the extra field
- Refclock-master node
  - Removed the extra field
- Authentication node
  - Incorrect usage of presence in authentication node
  - Authentication keys can be configured without enabling the authentication.
Yang Data-type correction

- Address data-type is changed -
  - from inet:ip-address
  - to rt-types:ip-multicast-group-address
- for multicast and manycast client/server
Yang Data-type correction (continue ...)

- Date and Time
  - Data-type of originate-time, receive-time, transmit-time, input-time and reference-time is changed from string to `yang:date-and-time`

- Counters
  - Data-type of packet statistic is changed from `uint32` to `yang:counter32`

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Removed auto-key

- Authentication mode
  - Auto-key is removed
  - As per the feedback from the WG during the Chicago meeting
Next Step

• Call for work group adoption!

• More reviews
  • Review comments are always welcome!
Thank You!