Support of **Network Observation Timestamping** in YANG Notifications
draft-tgraf-netconf-yang-push-observation-time-02

Adds observation timestamp and point-in-time objects to describe when metrics were observed

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Extend YANG-Push Notifications with Observation Timestamping

For push-update and push-change-update

- To correlate network data among different Network Telemetry planes as described in Section 3.1 of RFC 9232 or among different YANG push subscription types defined in Section 3.1 of RFC 8641, network observation timestamping is needed to understand the timely relationship among these different planes and YANG push subscription types.

- draft-tgraf-netconf-yang-push-observation-time extends the YANG push streaming update notification defined in RFC 8641 with:
  - **observation-time**: Describes the measurement observation time for the "push-update" notification in a "periodical" and for the "push-change-update" notification in a "on-change" subscription.
  - **point-in-time**: Describes at which point in time the value of observation-time was observed.
Current Status

- Changed semantics:
  - One observation-time timestamp describing when the metric was observed eases end to end integration into streaming processor and time series database.
  - Point-in-time describes at which point in time the value of observation-time was observed.
    - For "periodical" subscription, the "current-accounting" describes the point in time where the metrics were polled and observed.
    - For "on-change" subscriptions, the value of point-in-time is "state-changed", when the state change was observed in real-time.
    - For "on-change" subscriptions with the "sync on start option", the value of point-in-time for the initial state is "initial-state".
  - YANG-Push observation timestamping capability is now discoverable by extending YANG-related system capabilities defined in RFC 9196.
  - Minor editorial changes and operational considerations and implementation status section added.

Next Steps

- Requesting feedback from the netconf working group and YANG-Push implementers.
## YANG-Push Implementation Status

### IETF 120

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<thead>
<tr>
<th>RFC/Specification</th>
<th>6WIND VSR</th>
<th>Huawei VRP</th>
<th>Cisco IOS XR</th>
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<tbody>
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Address YANG Specification and Integration Gaps
Aiming for an automated data processing pipeline

YANG Specifications Gaps:
• YANG model for NETCONF Event Notifications
draft-ahuang-netconf-notif-yang
• Validating anydata in YANG Library context
draft-aelhassany-anydata-validation

YANG Integration Gaps:
• Support of Network Observation Timestamping in YANG Notifications
draft-tgraf-netconf-yang-push-observation-time
• Support of Hostname and Sequencing in YANG Notifications
draft-tgraf-netconf-notif-sequencing
• Support of Versioning in YANG Notifications Subscription
draft-ietf-netconf-yang-notifications-versioning
• Augmented-by Addition into the IETF-YANG-Library
draft-lincla-netconf-yang-library-augmentation

« Addressing those gaps are a prerequisite to enable an automated data processing chain as described in draft-ietf-nmop-yang-message-broker-integration.
Please consider to attend IETF 120 NMOP working group session on Friday 13:00 – 15:00 or go onto the mailing list and contribute to the discussion. »