Support of Versioning in YANG Notifications
Subscription
draft-ietf-netconf-yang-notifications-versioning-01

Adds semantics to the subscription process and notification message to enable automated data mesh integration
Versioning in YANG Notifications Subscription
Status and Next Steps

• -03 NETCONF adoption call concluded
• Feedback from Andy during adoption call
  • xpath can refer to more than one YANG module
  • subscription section 2 is not fully aligned with section 4.1
  • Instead of sn:target, sn:stream-filter, sn:within-subscription and yp:within-subscription should be augmented
• All addressed in -01 revision
  -> Requesting feedback and comments.

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Extend Datastore Selection and Subscription State Change Notifications with *module name, revision and revision-label*

- Network operators need to control semantics in its data processing pipeline. That includes YANG push.
- This is today only possible during YANG push subscription but not when nodes are being upgraded or messages are being published for configured subscription.
- draft-ietf-netconf-yang-notifications-versioning extends the YANG push subscription and publishing mechanism defined in RFC8641:
  - By adding the ability to subscribe to a specific revision or latest-compatible-semversion of one or more yang modules.
  - By extending the YANG push Subscription State Change Notifications Message so that the YANG push receiver learns beside the xpath and the sub-tree filter also the yang module name, revision and revision-label.
Backup
When Big Data and Network becomes one

Marrying two messaging protocols

Data Mesh

- **Data Mesh** is a big data architecture where different domains can exchange data with a **bounded context and SLO's** are defined in Data Products. **Same principle as in networks.**

- **Semantics** are needed to describe the data. A **gauge32 is not the same as counter32**. Values can increase or decrease. Needs monotonic increasing counter normalization or not.

- **Versioning** is needed to not only understand that the semantic has changed, but also wherever the new semantic is backward compatible or not. Preventing to break the data processing pipeline.

- Hostname, publisher ID, sequence numbers and observation timestamping are needed to measure loss and delay for SLO's.

- **YANG push as defined in RFC8641 is missing** hostname, sequence numbers, observation timestamping and versioning. draft-ahuang-netconf-notif-yang, draft-tgraf-netconf-notif-sequencing, draft-tgraf-netconf-yang-push-observation-time and draft-ietf-netconf-yang-notifications-versioning addresses this.