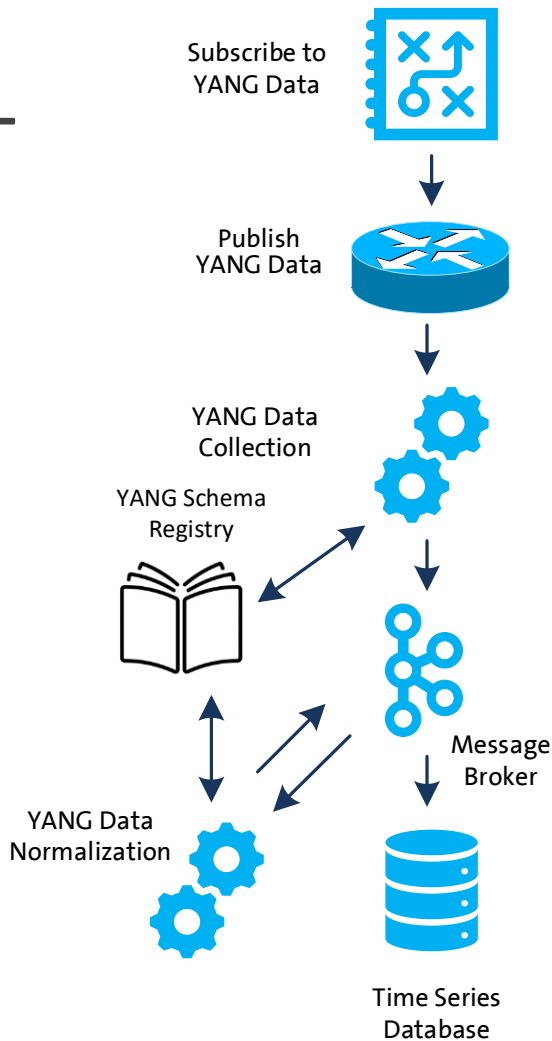


Validate Configured Subscription YANG-Push Publisher Implementations

IETF 123 Hackathon, July 19-20th 2025



Hackathon Plan, Software and Website

Test Plan

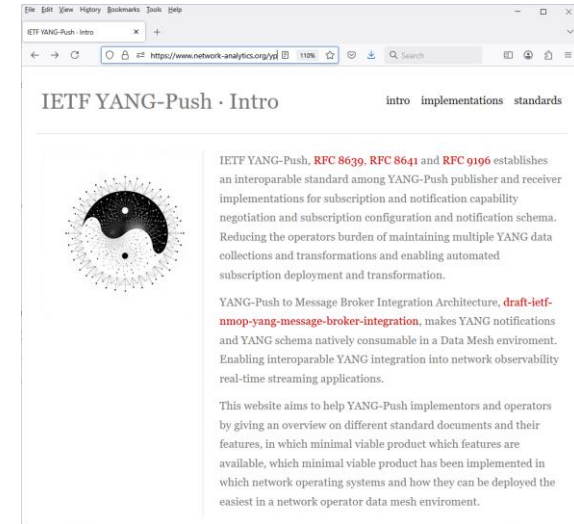
- **Subscription automation**
 - Discover YANG-Push systems and notifications capabilities and configure periodical and on-change subscriptions with netconf.
- **Notification integration**
 - Validate subscription state change and push-update and push-change-update notifications against schema with yanglint
 - Validate [draft-ietf-nmop-message-broker-telemetry-message](#) for [draft-ietf-nmop-yang-message-broker-integration](#) integration

Development Plan

- MVP 1 – Basic Requirements (9)
- MVP 2 – Scale and Secure (3)
- MVP 3 – Optimizations (2)

Software

- YANG-Push Publisher - Cisco IOS XR
- YANG-Push Publisher - 6WIND VSR
- YANG-Push Publisher - Huawei NE (Router) and MA (OLT)
- YANG-Push Receiver – Netgauze
- udp-notif dissector - Wireshark

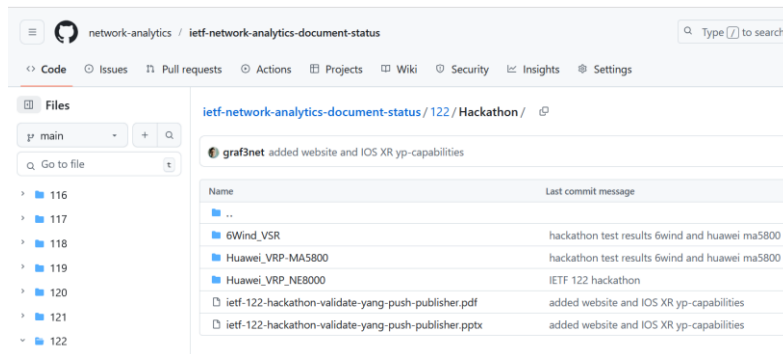


<https://www.network-analytics.org/yp/how-to-deploy.html>

Hackathon – Repositories

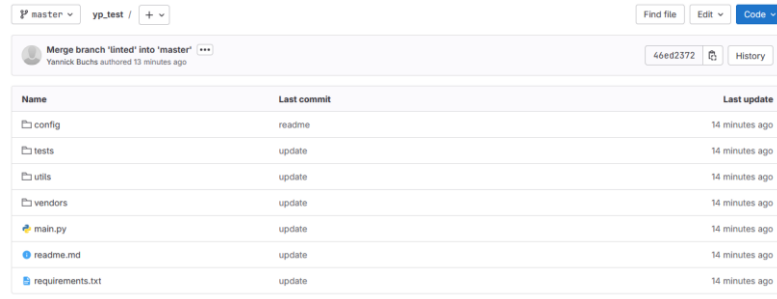
Test Result Repository

- <https://github.com/network-analytics/ietf-network-analytics-document-status/tree/main/123/Hackathon>
- Contains
 - Packet capture on the wire
 - Netconf RPCs and YANG-Push JSON and CBOR encoded messages



Test Tool Repository

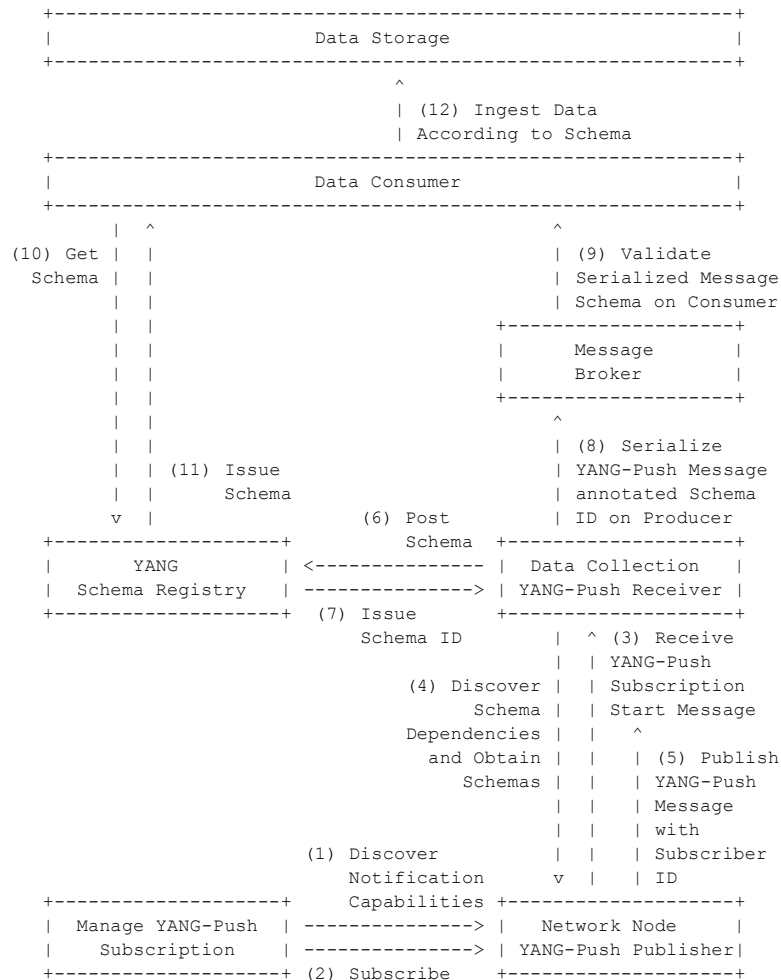
- https://github.com/network-analytics/yp_test
- Contains
 - YANG-Push Test Automation Tool
 - Vendor deviations configuration



An Architecture for YANG-Push to Message Broker Integration

draft-ietf-nmop-yang-message-broker-integration
draft-ietf-nmop-message-broker-telemetry-message

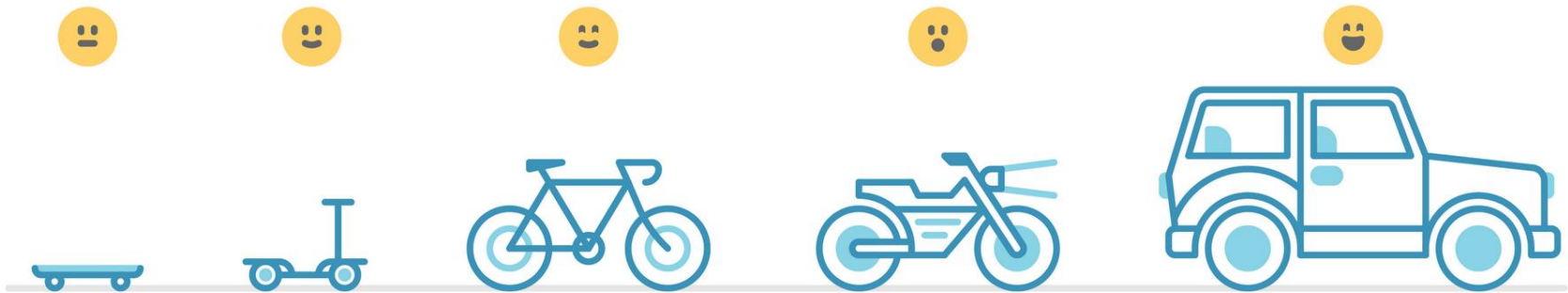
- Subscription to YANG Notifications
[RFC 8639](#)
- Subscription to YANG Notifications for Datastore Updates
[RFC 8641](#)
- UDP-based Transport for Configured Subscriptions
[draft-ietf-netconf-udp-notif](#)
- Subscription to Distributed Notifications
[draft-ietf-netconf-distributed-notif](#)
- Extensible YANG Model for YANG-Push Notifications
[draft-ietf-netconf-notif-envelope](#)
- Support of Versioning in YANG Notifications Subscription
[draft-ietf-netconf-yang-notifications-versioning](#)
- YANG Modules Describing Capabilities for Systems and Datastore Update Notifications
[RFC 9196](#)
- YANG Notification Transport Capabilities
[draft-ietf-netconf-yp-transport-capabilities](#)
- YANG Library
[RFC 8525](#)
- Augmented-by Addition into the IETF-YANG-Library
[draft-ietf-netconf-yang-library-augmentation](#)
- Encoding of Data Modeled with YANG in the CBOR
[RFC 9254](#)



Thanks to...

- Rob Wilton – Cisco
- Nick Corran – Cisco (remote)
- Emma Rankin – Cisco (remote)
- Mathew Green – Cisco (remote)
- Samuel Gauthier – 6WIND (remote)
- J  r  mie Leska – 6WIND (remote)
- Liu Bin – Huawei (remote)
- Benoit Claise – Huawei
- Zhuoyao Lin – Huawei (remote)
- Jiale Li – Huawei (remote)
- Jian Ping– Huawei (remote)
- Xiao Chen– Huawei (remote)
- Paolo Lucente – Pmacct
- Holger Keller – DT
- Nils Warnke - DT
- Alex Huang-Feng – INSA Lyon
- Yannick Buchs – Swisscom (remote)
- Thomas Graf – Swisscom





Today, subscribing to a YANG datastore, publishing a YANG modeled notifications message from the network and viewing the data in a time series database, **manual labor is needed to perform data transformation** to make a message broker and its data processing components with YANG notifications interoperable.

State of the Union

From data **mess** to data **mesh**