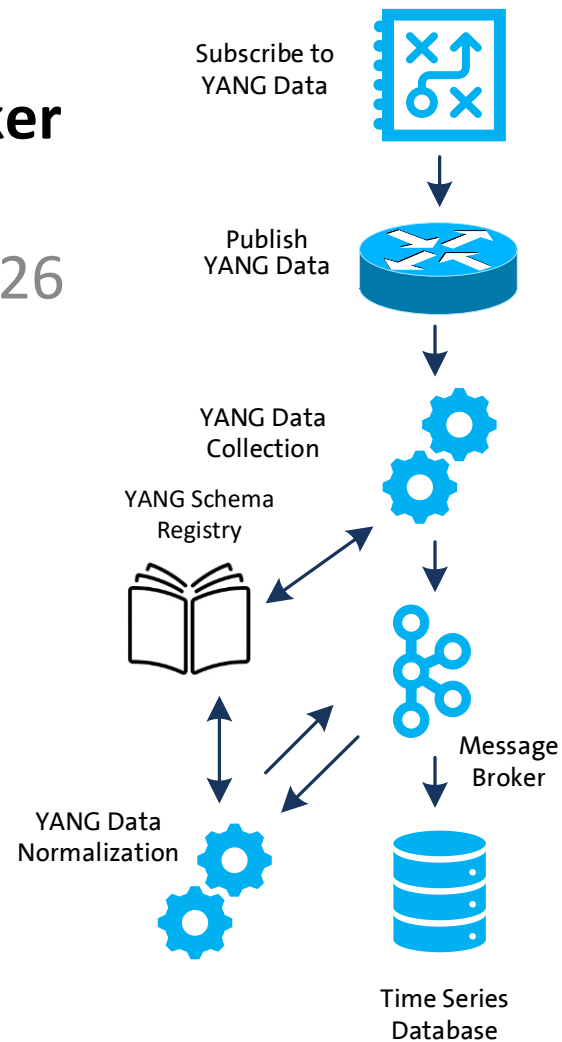
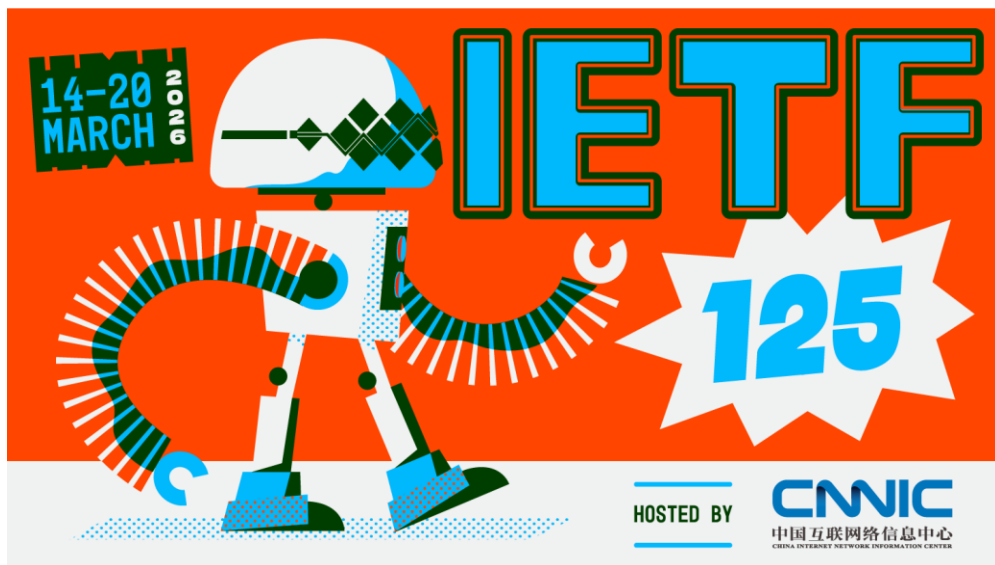


Validate YANG-Push to Message Broker End-To-End Data Processing Chain

IETF 125 Hackathon, March 14-15th 2026



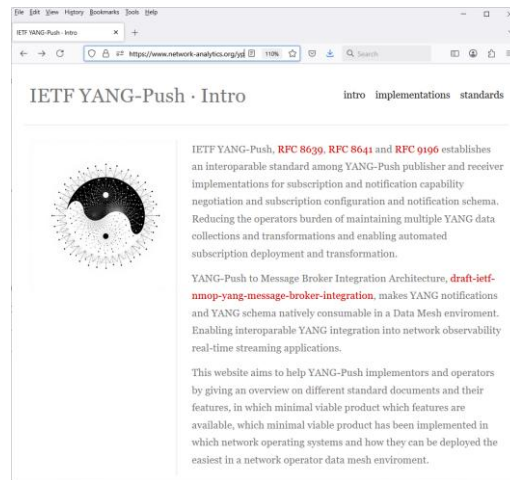
Hackathon Plan, Software and Website

Test Plan

Validate and verify

- 5 YANG-Push Publishers
- 2 YANG-Push Receivers
- 2 YANG-Push Network Telemetry Message
- 1 YANG Message Broker Producer and Schema Registry
- 3 YANG Message Broker Consumers

implementation in YANG data integration automation. Subscribe to YANG data on YANG-Publisher, obtain and register all YANG modules necessary to build YANG schema tree, register YANG schemas to Schema Registry and verify YANG notifications against scheme trees and produce and consume from Message Broker.



Software

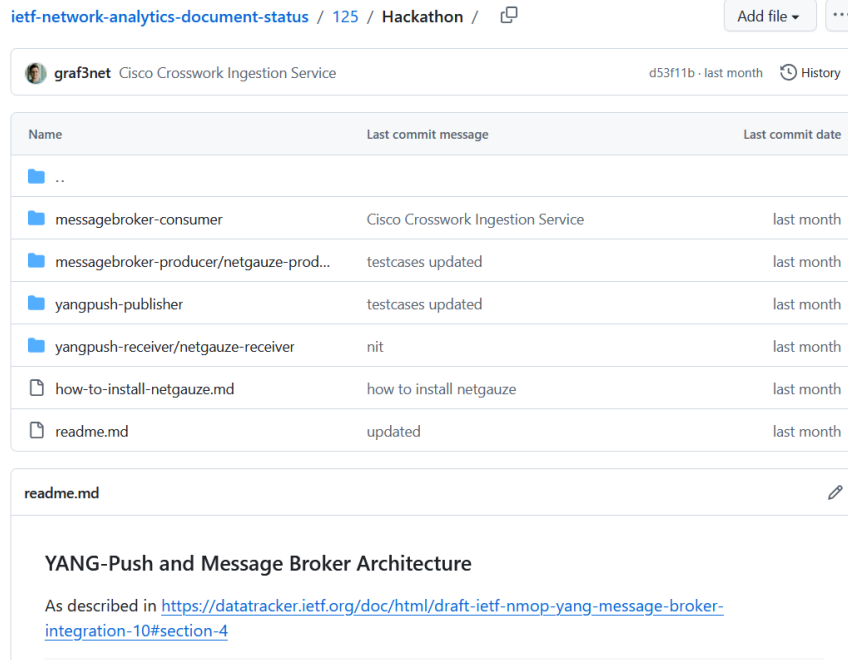
<https://www.network-analytics.org/yp/how-to-deploy.html>

- YANG-Push Publisher - Cisco IOS XR, 6WIND VSR, Huawei NE (Router) and MA (OLT) and **Arrcus Arcos**
- YANG-Push Receiver – [Netgauze](#) and [Pmacct](#)
- YANG Message Broker Producer – [Netgauze](#)
- YANG Message Broker Consumer – [Netgauze](#), Ciena Blueplanet UAA Workflow Engine, Cisco Crosswork Ingestion Service
- YANG Schema Registry – [Apache Kafka YANG Plugin](#)
- Libyang - <https://github.com/CESNET/libyang/compare/master...devel>
- Yangkit - <https://github.com/yang-central/yangkit/pull/41>
- Wireshark - [udp-notif dissector](#)

Hackathon – Repositories

Test Results on End to End Tests

- Netconf RPCs and YANG-Push JSON encoded notifications with wire captures from receiver
- YANG-Push Receiver cache content generation with YANG library context, YANG modules, metadata and notification schema validation logs
- YANG Message Broker Producer serialization logs
- YANG Schema Registry schema examples
- YANG Message Broker Consumer, serialization logs, YANG library context, YANG modules and message schema validation



Screenshot of a GitHub repository page for 'ietf-network-analytics-document-status' (125 / Hackathon /). The repository is owned by 'graf3net' and is titled 'Cisco Crosswork Ingestion Service'. The last commit was made by 'd53f11b' last month. The repository contains a directory listing with the following files and folders:

Name	Last commit message	Last commit date
..		
messagebroker-consumer	Cisco Crosswork Ingestion Service	last month
messagebroker-producer/netgauze-prod...	testcases updated	last month
yangpush-publisher	testcases updated	last month
yangpush-receiver/netgauze-receiver	nit	last month
how-to-install-netgauze.md	how to install netgauze	last month
readme.md	updated	last month

The 'readme.md' file is selected and its content is displayed below:

readme.md

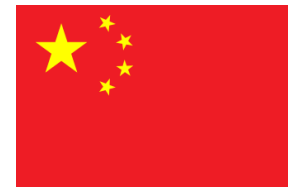
YANG-Push and Message Broker Architecture

As described in <https://datatracker.ietf.org/doc/html/draft-ietf-nmop-yang-message-broker-integration-10#section-4>

<https://github.com/network-analytics/ietf-network-analytics-document-status/tree/main/125/Hackathon/>

YANG-Push

IETF 125 Publisher Implementation Status



	6WIND VSR	Huawei NE	Huawei MA	Cisco IOS XR	Arrcus Arcos	Open- Source
RFC 8639 YANG-Push Subscription	✓	✓	✓	✓	✓	
RFC 8641 YANG-Push Notification	✓	✓	✓	✓	✓	
draft-ietf-netconf-udp-notif	✓	✓	✓	✓	✓	✓
draft-ietf-netconf-distributed-notif	✓	✓	✓		na	
draft-ietf-netconf-notif-envelope	✓	✓	✓	✓	✓	
draft-ietf-netconf-yang-notifications-versioning	✓	✓	✓	✓	✓	
RFC 8525 YANG Library	✓	✓	✓	✓	✓	
draft-ietf-netconf-yang-library-augmentation	✓	✓	✓	✓		✓
RFC 9196 System and Notification Capabilities			✓	P	✓	
draft-netana-netconf-yp-transport-capabilities			✓	✓	✓	
RFC 9254 CBOR Named Identifiers	✓					

[NetGauze](#)
[Pmacct](#)
[udp-notif-c-collector](#)
[yang-library-augmentedby](#)

Green marked describes new capability at IETF 125. "P" to partially implemented.

Operational IETF/IEEE YANG

IETF 125 Module Implementation Status

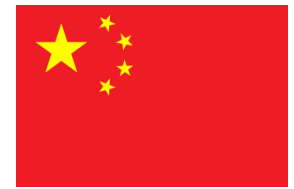


	6WIND VSR	Huawei NE	Huawei MA	Cisco IOS XR	Arrcus Arcos
ietf-interfaces.yang (inventory, state and statistic)	✓	P	✓		
ietf-hardware.yang (inventory, state and statistic)	(✓)		✓		
ietf-alarms.yang (state)	✓		✓		
ieee802-dot1ab-lldp.yang (inventory and state)	(✓)				
ieee802-dot1ax.yang (inventory, state and statistic)					
ietf-bfd-ip-sh.yang (state)					
ietf-bfd-ip-mh.yang (state)					
ietf-bfd-lag.yang (state)					
ietf-isis.yang (state)					

Green marked describes new capability at IETF 125. "P" to partially implemented.

YANG Message Broker

IETF 125 Implementation Status



	NetGauze	Pmacct	Apache Kafka	Ciena Blueplanet	Cisco Crosswork
draft-ietf-nmop-message-broker-telemetry-message	✓	✓			
YANG-Push Receiver	✓	✓			
YANG Schema Retrieval	✓				
YANG Message Broker Producer	✓				
YANG Schema Registry	na	na	✓	na	na
YANG Message Broker Consumer	✓			(✓)	✓
Validate Telemetry Message against YANG Schema	✓			(✓)	✓
draft-ietf-netmod-yang-anydata-validation	✓				
YANG Schema Comparison	na	na	✓	na	na

[NetGauze](#)
[Pmacct](#)

Green marked describes new capability at IETF 125. "P" to partially implemented.

Next Steps from IETF 124 Hackathon...

- [Yanglint](#), misses anydata validation support within YANG structures
- [Pmacct](#) corrects collection-timestamp to be typedef date-and-time compliant.
- [Pmacct](#) corrects encoding value to include ietf-subscribed-notifications namespace in JSON encoding.
- [Pmacct](#) corrects network-operator-metadata/labels/anydata-values anydata statement to be valid I-JSON.
- [YANG schema registry](#) supporting YANG features
- [NetGauze](#) supporting
 - netconf <get> to obtain YANG library content,
 - YANG validation for YANG-Push notifications,
 - YANG schema registration.



Next Steps for IETF 126 and 127 Hackathon...

- Re-do YANG Message Broker Consumer tests on updated testbed with Ciena Blue Planet UAA Workflow Engine
- Complete IETF YANG module subscription tests with 6Wind VSR
- Compare YANG feature coverage between [libyang](#), [yangkit](#) and [yangtools](#)
- Support [draft-ietf-netmod-yang-anydata-validation](#) in yangkit
- Revert [import only modules for augmented-by](#) workaround
- [Preserve cached YANG-Push subscription state across receiver reload](#)
- [Obtain YANG-Push subscription state from publisher if missing](#)
- Support Netconf session queuing for schema retrieval
- Support [YANG-Push Message Broker Topic Naming](#) with [dynamic Apache Kafka topic creation API](#)



Thanks to...

- Paolo Lucente – Pmacct
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- Rob Wilton – Cisco
- Dan Voyer – Cisco
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- IJsbrand Wijnands – Arccus
- Irfan Mohammad – Arccus
- Benoit Claise - Everything OPS
- Wanting Du – Swisscom
- Rafael Julio – Swisscom
- Leonardo Rodoni - Swisscom
- Ahmed Elhassany – Swisscom
- Thomas Graf – Swisscom



Want to know more than join us at...

- NMOP on **Friday 09:00 – 11:00** at the Grand Ballroom 1 for Message Broker, Telemetry Message and Message Key document updates and hackathon related details.