Network Management Operations (nmop) WG

July 26, 2024

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Note Well

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In-person participants
- Make sure to sign into the session via Datatracker or the QR Code in this session.
- Use Meetecho (usually the “Meetecho lite”) client to:
  - join the mic queue
  - participate in shows of hands
- *Keep audio and video off if not using the onsite version.*

Remote participants
- Make sure your audio and video are off unless you are chairing or presenting during a session.
- Use of a headset is strongly recommended.
## Agenda

<table>
<thead>
<tr>
<th>Slot</th>
<th>Priority Label</th>
<th>Topic</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>13:00 - 13:05</td>
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<td>Agenda Bashing &amp; Introduction</td>
<td>Chairs</td>
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<tr>
<td>13:05 - 13:30</td>
<td>P1</td>
<td>YANG-Push to Message Broker Integration</td>
<td>Thomas</td>
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<td>13:30 - 13:50</td>
<td>P2</td>
<td>NMOP Terminology</td>
<td>Adrian</td>
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<td>13:50 - 14:10</td>
<td>P2</td>
<td>Anomaly detection: Experiments &amp; Roadmap</td>
<td>Thomas/Pierre/Vincenzo</td>
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<td>14:10 - 14:25</td>
<td>P3</td>
<td>Digital Map Concepts &amp; Requirements</td>
<td>Olga</td>
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<td>14:25 - 14:30</td>
<td>P4</td>
<td>NEMOPS Workshop</td>
<td>Chairs</td>
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<td>14:30 - 14:45</td>
<td>P4</td>
<td>Updates to Operators Requirements</td>
<td>Luis</td>
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<td>14:45 - 15:55</td>
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<td>Knowledge Graphs</td>
<td>Nacho</td>
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<td>14:55 - 15:00</td>
<td></td>
<td>Wrap-up &amp; Future Meetings</td>
<td>Chairs</td>
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## Documents Status

### Active Internet-Drafts (3 hits)

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<thead>
<tr>
<th>Document</th>
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<tr>
<td>draft-ietf-nmop-yang-message-broker-integration-04</td>
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<tr>
<td>draft-ietf-nmop-network-incident-yang-01</td>
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<tr>
<td>A YANG Data Model for Network Incident Management</td>
<td>2024-06-28</td>
<td>I-D Exists WG Document May 2024</td>
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<tr>
<td>draft-ietf-nmop-terminology-01</td>
<td></td>
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<tr>
<td>Some Key Terms for Network Incident and Problem Management</td>
<td>2024-06-10</td>
<td>I-D Exists WG Document Jun 2024</td>
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## Milestones

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<tr>
<th>Date</th>
<th>Milestone</th>
<th>Associated documents</th>
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<tbody>
<tr>
<td>Dec 2025</td>
<td>Submit NMOP Terminology to the IESG</td>
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<td>Dec 2025</td>
<td>Submit Network Incident Management to the IESG</td>
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<td>Dec 2025</td>
<td>Submit Network Anomaly Management to the IESG</td>
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<td>Sep 2025</td>
<td>Submit Architecture for YANG-Push to Message Broker Integration to the IESG</td>
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<td>Sep 2024</td>
<td>Adopt a document on updated operators requirements</td>
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<tr>
<td>Sep 2024</td>
<td>Adopt a document on network anomaly management</td>
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A plan will be discussed during this session

## Done milestones

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<th>Date</th>
<th>Milestone</th>
<th>Associated documents</th>
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<tr>
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<td>Adopt a terminology document for anomaly and incident management</td>
<td>draft-ietf-nmop-terminology</td>
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<tr>
<td></td>
<td>Adopt a document on network incident management</td>
<td>draft-ietf-nmop-network-incident-yang</td>
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<tr>
<td></td>
<td>Adopt a document describing how to integrate YANG Push with Apache Kafka</td>
<td>draft-ietf-nmop-yang-message-broker-integration</td>
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Pending APs:
• Follow-up with TMF
• Authors of terminology to assess/raise any terminology misalignment
• Authors of incident management to check the objects mapping, in particular
An additional interim is likely to be scheduled before IETF#121 (likely on Digital Map).
Drop us an email if you have comments/suggestions about interims.
IETF#120 Hackathons

- Validate Configured Subscription YANG-Push Publisher Implementations
- Antagonist (ANomaly TAGging ON hISTorical data)
- Digital Map for ISIS and OSPF
- Implement find relationship solution with Augmented-by list in ietf-yang-library

**Three** of current WG’s priorities are covered by hackathons, with **on site participants**

*Big thanks to all champions for their dedication and reporting to the WG!*

*@all: Feel free to reach out the teams or propose new experiments*
Misc.

- Open Mic (*if time permits*)
Appendix: Session Goals
Initial WG Priorities: Reminder

- The current topics of focus for the working group are:
  - NETCONF/YANG Push integration with Apache Kafka & time series databases (P1)
  - Anomaly detection (P2.A) and incident management (P2.B)
  - Issues related to deployment/usage of YANG topology modules (e.g., to model a Digital Map) (P3)
  - Consider/plan an approach for updating RFC 3535-bis (collecting updated operator requirements for IETF network management solutions) (P4)

IETF#120: Covered by Hackathons, with on site participants
Priority I

2. NETCONF/YANG Push Integration (25 min)

Goals:

- Experiment status update
- Share pending issues
- Next steps

2.1 An Architecture for YANG-Push to Message Broker Integration (20 min)

- **Presenter:** Thomas Graf
- **IETF 120 Hackathon:** [YANG-Push Publisher Implementation Tests](https://datatracker.ietf.org/wg/yang/ pnl/)

2.2 Q&A (5 min)
Priority II.B

3. Anomaly Detection and Incident management (40 min)

Goals:

- Sync on the approach/rationale and discuss issues related to NMOP terminology
- Report the outcome of the side meeting on NMOP terminology
- Structure the anomaly detection work & agree on a roadmap for the items to be delivered

3.1 Some Key Terms for Network Incident and Problem Management (20 min)

- Presenters: Adrian
- Reading Material: draft-ietf-nmop-terminology

3.2 Anomaly Detection (20 min)

3.2.2 An Architecture for a Network Anomaly Detection Framework (15 min)

- Presenters: Thomas Graf, Pierre Francois, and Vincenzo Riccobene
- Reading Material:
  - draft-netana-nmop-network-anomaly-architecture
  - draft-netana-nmop-network-anomaly-semantics
  - draft-netana-nmop-network-anomaly-lifecycle
- IETF 120 Hackathon: Atagonist Experiment

3.2.3 Q&A (5 min)
4. Issues Related to Deployment/Usage of YANG Topology Modules (15 min)

Goals:

- Share status update
- Agree on the next steps

4.1 Digital Map: Concepts & Requirements (10 min)

**Presenters:** Olga Havel

**Reading Material:** [draft-havel-nmop-digital-map-concept](#)

**IETF 120 Hackathon:** Digital Map for ISIS and OSPF

4.2 Q&A (5 min)
Priority IV

5. Collecting Updated Operator Requirements for IETF Network Management Solutions (20 min)

Goals:

- Updates on the NEMOPS IAB Workshop
- Updates and Plans to meet NMOP-specific charter item, especially the following milestone:
  Sep 2024 Adopt a document on updated operators requirements

5.1 NEMOPS IAB Workshop (5 min)

- **Presenter:** Chairs
- **Reading material:** [Workshop Proposal](#)

5.2 An Update of Operators Requirements on Network Management Protocols and Modelling (15 min)

- **Presenter:** Luis
- **Reading material:** [draft-boucadair-nmop-rfc3535-20years-later](#)
- **Discussion:** Whether this will be submitted as a contribution to NEMOPS or reflect starting point to build NMOP-specific consensus.

6.1 Knowledge Graphs for YANG-based Network Management (10 min)

- **Presenter:** Ignacio Dominguez Martinez-Casanueva
- **Reading Material:** draft-marcas-nmop-knowledge-graph-yang
- **Discussion:** Share plans for experiments, hackathons, link with other items/current WG priorities, etc.

🔗 7. Next Meetings & Wrap-up (All) (5 min)

- Next scheduled interim: September 11 (anomaly detection)
- **Discussion:** Preference to have other interims? Monthly interims dedicated to each items?