IAB Workshop: Next Era of Network Management Operations (NEMOPS)

NMOP Chairs: Med Boucadair, Benoît Claise
IAB: Wes Hardaker, Qin Wu, Suresh Krishnan, Dhruv Dhody
OPS AD: Mahesh Jethanandani
The IAB organized a workshop in June 2002 to establish a dialog between network operators and protocol developers, and to guide IETF when working on network management protocols.

2. Network Management Technologies
   2.1 SNMP / SMI / MIBs
   2.2 COPS-PR / SPPI / PIBs
   2.3 CIM / MOF / UML / PCIM
   2.4 CLI / TELNET / SSH
   2.5 HTTP / HTML
   2.6 XML

3. Operator Requirements
4. SNMP Framework Discussions
5. Consolidated Observations
6. Recommendations
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RFC 3535 (In)Direct Outcomes

- NETCONF
- RESTCONF
- CORECONF
- YANG data modeling language
- Etc.

• => NETCONF, NETMOD, and other WGs

In summary: New protocol (NETCONF) and new data model (YANG)
RFC3535, 22 Years Later

NMOP Working Group: 4 Experiments

The current topics of focus for the working group are:

- NETCONF/YANG Push integration with Apache Kafka & time series databases
- Anomaly detection and incident management
- Issues related to deployment/usage of YANG topology modules (e.g., to model a Digital Map)
- Consider/planning an approach for updating RFC 3535-bis (collecting updated operator requirements for IETF network management solutions)
It’s time to review where we are (again)

An(other) IAB Workshop
Next Era of Network Management Operations (NEMOPS)
Objectives:

• **Review the outcomes** and results of the 2002 workshop (current deployments, state of the art) and **identify any operational barriers** that prevent these technologies from being widely implemented (limitations, hurdles).

• **Sketch new requirements** for future network management operations in a collaborative manner with the industry, network operators, and protocol engineers.

• Develop a **plan of action and recommendations** for the IETF.

Interested participants in this area are invited to submit position papers on the workshop topics.
IAB Workshop Proposal: Topics

Discussion topics:
• Tooling, open-source, experimentation, proof of concept, multi-vendor interoperability test (e.g., EANTC), and system integration
• Data consistency to support richer observability (Data & Knowledge)
• Integration issues with the business layer
• Automation, orchestration, and autonomy
• ... etc ...

Outreach efforts:
• Information and requirement gathering sessions.
• RIPE, NANOG, APRICOT, AutoConn, etc.
Currently Finalizing the Details (many TBD-ish)

- Datatracker: [https://datatracker.ietf.org/group/nemopsws/](https://datatracker.ietf.org/group/nemopsws/)
- E-mail list: nemops-interest@iab.org
- Workshop Dates: 2024-12-03, 2024-12-04, 2024-12-05
- Program Committee:
  - Wes Hardaker, Qin Wu, Suresh Krishnan,
  - Benoît Claise, Mohamed Boucadair
  - Mahesh Jethanandani, Dhruv Dhody
- Feel free to contact them: nemops-workshop-pc@iab.org.