45th NMRG Meeting - IETF 100

Session 2

Laurent Ciavaglia, Lisandro Z. Granville
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Useful links

**Agenda**

https://datatracker.ietf.org/doc/agenda-98-nmrg

**Materials**

https://datatracker.ietf.org/meeting/100/session/nmrg

**Remote participation (Meetecho)**

http://www.meetecho.com/ietf100/nmrg
Volunteers ?!

Minutes taker(s)
Meetecho / Jabber scribe
Special session

Use of Artificial Intelligence (AI) for Network Management
Agenda
Session 2 - Tuesday, November 14th, 9:30 - 12:00

2.a) Scope and Objectives (5 min.)
    presenters: NMRG chairs

2.b) Use cases and research results (~70 min.)
    A deep-reinforcement learning approach for software-defined networking routing optimization (10 min.)
    presenter: Albert Cabellos

    Use of CVAE for Network QoS Management (10 min.)
    presenter: Shen Yan

    Network traffic analysis for encrypted traffic and security monitoring (10 min.)
    presenter: Jérôme François

    Model-free Resource Management of Cloud-based applications using Reinforcement Learning (10 min.)
    presenter: Armen Aghasaryan

    The CogNet Report. Addressing data-enabled network management (10 min.)
    presenter: Diego Lopez

    Q&A and discussion (20 min.)
Agenda
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2.c) Emerging landscape of AI in Networks (~50 min.)
   IEEE ComSoc ETC on Network Intelligence (10 min.)
   presenter: Laurent Ciavaglia

   ETSI ISG Experiential Network Intelligence (ENI) (10 min.)
   presenter: Will Liu

   IETF/IRTF Intelligence Driven Networks (10 min.)
   presenter: Sheng Jiang

   Q&A and discussion (20 min.)

2.d) Discussion, conclusions and way forward (~20 minutes)
   What have we learned? What's important for the next steps?
   - Research items
   - Standardization path(s)

   How do we structure the work to be done
   - Collective roadmap, work plan, deliverables
Scope and Objective

• AI for network management is not a new topic per se
  – The literature in the area shows that
• On the other hand, AI has matured a lot, finding applications is several areas
• People interested in the subject also formed communities that can contribute
  – Call for contributions sent to various mailing lists
• ”Revisiting” AI for network management is not only appropriate but also timely
Use cases and research results

Presentations and Discussion
Emerging landscape of AI in Networks

Presentations and Discussion
Discussion, conclusions and way forward
What have we learned? What’s important for the next steps?

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