

Gap Analysis on Network Virtualization Activities

draft-irtf-nfvrg-gaps-network-virtualization-01

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History


- Individual submission (draft-bernardos-nfvrg-gaps-network-virtualization)
 - -01 presented in Prague (93rd IETF)
 - -03 presented in Yokohama (94th IETF)
 - Multiple feedback and support collected at the mailing list
- Adopted as RG document after Yokohama
 - <https://datatracker.ietf.org/doc/draft-irtf-nfvrg-gaps-network-virtualization/>
 - -01 presented in Buenos Aires (95th IETF)
 - Discussion about broadening the scope
 - Include research challenges of interest for the RG
 - Use the gap analysis to help identifying and characterizing these challenges

Objectives

- ~~• Provide an overview and survey of the efforts around virtualization at the IETF/IRTF~~
- Identify and describe open research challenges for network virtualization
 - Based on gap analysis
 - Propose for new activities in IETF/IRTF that could address some of the challenges

New structure (I)

1. Introduction
2. Terminology
3. Background
 1. Network Function Virtualization
 2. Software Defined Networking
 3. Mobile Edge Computing
 4. IEEE 802.1CF (OmniRAN)
 5. Distributed Management Task Force
 6. Open Source initiatives
 7. Internet of Things (IoT)




Same structure,
updated content

New structure (II)

4. Network Virtualization Challenges

1. Introduction
2. Service Guarantees
3. Energy Efficiency
4. Multiple Domains
5. Network Slicing
6. Service Composition
7. Orchestration
8. Self Management
9. Robustness
10. Security and Privacy

5. Summary of Gaps



New structure
and content,
leveraging from
gap analysis

IETF/IRTF initiatives considered

- Different IETF/IRTF WGs and activities considered:
 - SDN RG
 - SFC WG
 - NVO3 WG
 - DMM WG
 - I2RS WG
 - BESS WG
 - BM WG
 - TEAS WG
 - I2NSF WG
 - IPPM WG
 - NFV RG
 - VNFPool BoF
- Different gaps identified
 - From the Network Virtualization challenges
 - Potential new activities at IETF/IRTF to address them

Next steps

- Collect feedback about new structure and content
- Complete the analysis of the network virtualization challenges
 - Any missing challenge?
 - Any missing IETF/IRTF (or external) work tackling an identified challenge?
- Aim is to make the I-D valuable to the community at large