

Network Slicing and NFVRG

[Updates From IETF 98]

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- Activities and next steps of NFVRG
- Motivation and progress on the formation of the Network Slicing Working Group

- There are some recent efforts to exploit the benefits of microservices in NFV:
 - At IETF 98, a new approach was presented:
 - Edge Computing IoT Microservices.
- A new I-D re-takes the work on the definition of a reference architecture for NFV:
 - The latest proposal (actually a new version of an old I-D):
 - Adds support for "multidomain".
 - Updates the interfaces they have defined previously.
- News from the "Open Source MANO" (OSM):
 - It is supported by a wide set of partners.
 - It is using "juju" to deploy the VNFs underneath.
 - R2 will probably be able to interoperate with public clouds.
 - As it is based on OpenStack, it is compatible with OPNFV.

- Updates and next steps on the gap analysis:
 - It is fundamental for the evolution of the NFVRG but:
 - A strong and important voice is against it...
- A practical application of NFV was presented: The SHINE project (Secure Hybrid In Network caching Environment) [1]:
 - Proposes a mechanism for satellite communications that achieves E2E using a combination of multicast and unicast. It might be better to use ICN, as it makes sense for the qualities of a satellite environment.
- The need of standardization efforts on Network Slicing was defended (by A. Galis):
 - Here a slice is defined as a union of subsets of resources, VNFs, and services.

[1] slides-98-nfvrg-sessb-11-network-coding-in-the-shine-esa-project-00.pdf
<https://www.ietf.org/proceedings/98/slides/slides-98-nfvrg-sessb-11-network-coding-in-the-shine-esa-project-00.pdf>

- Change in NFVRG meeting structure...
- Will be shortened.
- Each will be focused on a particular issue:
 - ~3 presentations on such issue.
 - In-depth discussions.
- There will be (short) time for I-D updates:
 - Discussion **SHOULD** be on the mailing list.

- Topics of interest:
 - Re-architecting functions:
 - New architectural and design patterns: Containerization, *-lessness, *-plane separation, etc.
 - SDN integration.
 - Programmability.
 - New management frameworks:
 - New OAM mechanisms: Configuration control, hybrid descriptors, etc.
 - Lightweight MANO proposals.
 - Guarantee of key features (e.g. low latency and resource isolation):
 - New hardware acceleration schemes.
 - Offloading functions to dataplane elements.
 - Other related approaches...
 - Measurement and benchmarking.

- History and next steps:
 - Network Slicing was presented at IETF 97:
 - At IETF 98 we defended the need to standardize the concept.
 - At IETF 99 we will form the BoF with a set of I-Ds...
- Other standardization groups already have incorporated slicing into their standards:
 - NS in 3GPP claims to have the "good" definition and architecture:
 - It has an incomplete definition and mismatch to some definitions from operators and carriers.
 - But it can be a good starting point for the IETF reference architecture and protocol (interfaces).
- Updates on the reference architecture (by China Mobile):
 - Does not differentiate between resources consumed by VNO and ASP.
 - Operators prefer to define and rule the final services, using VNO and ASP just to commercialize them, avoiding them to get "value added".
 - Pure InPs (e.g. carriers) together with VNOs will get value added services so that both InPs and VNOs will benefit and compete with current operators.

Q & A

**Thanks for Your
Attention**

- EOF -