Virtual Network Function Configuration

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NFV Basics

- Cloud computing technology used in the network function context
- Replace existing dedicated hardware boxes, so as to improve reusability and flexibility

- Resources: Physical Machines, Virtual Machines, Physical Routers/Switches, Virtual Router/Switches, Network Resources

- On going NFV work in ETSI
  - MANO
  - SWA
  - INF
  - REL
  - SEC
  - …

The problems of NFV Configuration

History

- NFV service template was presented at IETF 87
  - Draft-song-appsawg-service-template-00
  - Different than the Aggregated Service Discovery effort in IETF

Lack of Remote Provisioning

- Components selection
  - Which components for selection, parent component and child component
  - User interface, Software vendor interface for components description
- Resource allocation for VNF
  - # of replicas, etc.
  - Operating System requirement
  - CPU, bandwidth (VNF level, not VM level), etc
  - Automatic scale-out/scale-in demand

Lack of Remote Dynamic Configuration

- ## Service configuration
  - User defined service parameters
  - Control on when to apply, which VNFs to apply… via the controller
  - Controller is agnostic of the service logic, so as to reduce complexity
- ## Service graph/forwarding graph
  - Chaining of network functions (virtual/physical)
  - Forwarding graph w.r.t the link layer entities
  - Service graph with only service entities

Standardization Space

- Remote provisioning and configuration protocol
  - Remote provisioning protocol
    - User interface, vendor interface
  - Controller is agnostic of the service parameters?

- Related data models
  - Description
  - Monitoring
  - Policies: automatic scale-out/scale-in, and etc.
  - Language: JSON/YANG?

Thanks!

Next Step

- How many people believe this is the work that IETF should work on?

- How many people are interested in this work?

- How many people would like to write drafts?