Title*: Technology Workshop Meeting report "The relation of ENI policy management to network intelligence" – **Friday, 25th September 2020**

from **Source***: ENI Chairman

Contact: Raymond Forbes

Scope: This Workshop will address policy management assistance in ETSI ENI and explore its relation to other SDOs and open-source communities. Understanding the synergies, working together, removal of any overlaps, between ETSI ISGs/OSG and other SDOs. Each organisation is addressing differing aspects. This workshop will investigate the possibilities for technical co-operation between ETSI ISGs/OSG and other SDOs. Also, it will aim to develop a roadmap of future actions and ways of working together.

This workshop made no decision, the workshop's influence is in the ideas generated. There is a clear basis for ENI NFV cooperation in Release 4 Feature 26. And ENI-MANO in Release 9 with MANO closed control loop design.

Session 1: ETSI NFV / MANO — Diego Lopez (Telefonica), Haitao Xia (Huawei), Chen Wang (China Mobile)

1. The NFV IFA Release 4 feature on policy enhancements & new WI
   - Work that is underway to implement ML/AL in NFV
   - Feature 26 shows 4 options for cooperation were presented ENI & NFV IFA
     1. Showing ENI between OSS and NFV
     2. Showing ENI embedded in MANO
     3. Showing ENI closely coupled with MANO
     4. Hybrid

IFA 42 presentation – Yue Wang asked which options would be needed in an implemented system. Answer from Chen: this needs to be explored, there is a need to jointly explore combinations of options (referring to option, ENI work only, ENI external work with NFVO, VNFM and VIM and so on).

2. The Relation to OSM MANO — Ramón Francisco-Javier (Telefonica), Subhankar Pal (Altran)
   - The options of reusing interfaces in MANO - Release 8
     1. AI free to join next OSM call on NB API
     2. Proposal to use VNF descriptor to indicate CPU utilization
     3. Each VNF to add AI module
     4. Policy module already present today in OSM
     5. Prediction is the next frontier
   - Mano presentation – Ideas on Release 9
     1. OSM Architecture
     2. Simplified modules of grouping FBs
     3. Degrees of Automation (6 Level model: 0 KPI & Scrips – 5 full AN)
     4. In Future, next release AI machine learning internal functions
     5. Open loop automation – calls to an assistant system
     6. Today's MANO is KPI driven
     7. Map AI 4 stage decision to OSM: Closed control loops within loops Using OODA
        - AI agent could be resource heavy flexible deployment
     8. AI in policy in Release 8, AI decision making in Release 9, full AI may be later

Session 2: ETSI ENI — Raymond Forbes (Huawei), Yannan Bai (China Telecom), Lilei Wang (Asia Info)

1. The ENI mapping specification
   a. The Mapping to other systems, future possibilities
      9. Interaction between ENI, AS and OS
      10. Deployment of ENI, AS and OS (2 options spate systems – AS embedded in the OS
      11. Mapping between ENI architecture and NWDAF based data analysis system in 5GC
      12. Mapping between ENI architecture and ONAP

   b. Embryonic uses of ENI in relation to 3GPP 5G (SON, NFV, intent service) — Lingli Deng (China Mobile), Haocheng Wang (BUPT), Jiachen Zhang (China Mobile), Chen Wang (China Mobile)
      13. Intent Driven Management Service
      14. Intent Expression (Codifying Intent)
      15. Intent Driven Area Load Balance
      16. Intent driven NF capacity changing
      17. SON Optimization Policy
      18. SON Coordination Methods (Cell State coordination)
      19. NFV Policy management in 4G & 5G

2. The ENI System Architecture: Policy — Ray Forbes (Huawei), Aldo Artigiani (Huawei)
   a. Presentation of the ENI Architecture
   b. Its use as an assisting or integrated system
      1. Class of operation (From No AI in Assisted System to AI cooperation)
   c. The External reference points and interworking with other systems
   d. The Policy Management FB and provisioned services/interfaces

Session 3: Open Source Initiatives — Lingli Deng (China Mobile), Keguang He (China Mobile), Yan Yang (China Mobile)

1. The Relation to ONAP
   - The options of reusing the MANO interfaces and a general policy execution engines in ONAP/Policy
     1. ONAP policy framework has five capabilities
     2. ONAP policy Type
     3. ONAP policy framework architecture

4. APEX policy execution engine
5. VoLTE Auto Healing Scenario
6. Interaction of ONAP Policy Framework and NFV MANO (Policy Model integration)

2. The relation and interworking with O-RAN (proposed by CMCC) — Qi Sun (China Mobile)
   - O-RAN intelligence architecture, use-case & interfaces for policy management
     1. Bringing AI to the RAN
     2. Use Cases of AI empowered RAN optimization
     3. Overview of research
     4. RAN Intelligence with Hierarchical RIC (Radio Intelligence Controller)
     5. Non-RT (real-time) RIC & A1(AI) Interface
     6. Non-RT (real-time) RIC & A1(AI) Standardization
     7. A1 Policy protocols procedures and Data Models
     8. Further Thoughts on the Intent/Policy Modelling Enhancement
     9. Business value Use Cases

ENI rapporteur's call Attendees

Summary

Meeting Date

September 25, 2020 2:19 PM CEST

Details

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