MDKP Kickoff mtg: June 22, 2023 –

Attendees: 19

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| Battou, Abdella  |
| Baw Chng |
| Benmohamed, Lotfi  |
| Bohn, Robert B.  |
| Chaparadza, Ranganai |
| Davis, Nigel |
| D'Oro, Salvatore |
| Hu, Bin  |
| Kishor Narnix |
| Lee, Craig  |
| Mahmoudi, Charif  |
| Mai, Van Sy  |
| Messina, John V.  |
| Michel, Martial |
| Ong, Lyndon |
| Pesavento, Davide |
| Polk, Craig |
| Said  |
| Tayeb  |

* **Opening** - Robert Bohn: Introduction to this PWG, discussion of charter (10 min)
* **Knowledge Plane Concept & Federations, Autonomic/Autonomous Networks (ANs)** – Ranganai Chaparadza (15 min)
* **Introduction** - 4 PWG chairs (one per deliverable) (60 min)
* **Scheduling of meetings** – (15 min)
* **Scheduling of Deliverables** – (15 min)
* **Questions from participants** (5 min)
* **Adjourn**

Few words on link with the working group and the GANA (Generic Autonomic Networking Architecture) Framework standard (created out as a “Unified Holistic Hybrid Model/Framework for Multi-Layer Autonomic Management & Control (AMC)/Autonomics & Multi-Layer AI/ML for AMC” that fuses concepts and principles from various models for autonomics, as was presented in the Kick off slides by RC, and in the standard ETSI TS 103 195-2) -–

* The MDKP-PWG’s work will leverage work done in ETSI TC INT AFI WG (such as ETSI TS 103 195-2, ETSI TR 103 747, ETSI TR 103 473 V1.1.2, ETSI TR 103 857, ETSI TR 103 858,); and the work done IEEE INGR Future Networks Systems Optimization WG Chapter; NGMN E2E 5G Architecture Framework & Autonomic Networking; and BBF AIM Framework; and work in ITU-T linked to Knowledge Planes for Autonomic Management & Control (AMC) paradigm; IEEE work on Cloud Federations; other relevant work; ongoing work on IEEE White Paper on Common Operational Principles for Autonomic/Autonomous Networks (ANs) i.e. the WP being driven by IEEE and TM Forum in the context of Multi-SDO initiative on ANs.

Said (KP and autonomics, use of KP for implementing security management, self\* activities) – I will wait until next time for this. Need some approvals.

Said – contribution will be focused on the security aspect.

RC: Relationship between KP and security – Work on TR in ETSI around the self-protection and self-defense as a security function. Security Management DE.

Craig Lee: in other conversations, we use Trust Plane (underlies a KP).

RC (1749) D1 of the WG shalldescribe how can different KPs designed for RAN, transport, core, etc, should federate with each other to drive E2E Self-\* across multiple network segments and domains, e.g. E2E Self-Optimization of Networks and Services, E2E Self-Protection and E2E Self-Defense against Security attacks, threats and risks

Look at Generic arch framework that enables the KPs federations

Inputs to that - > NGMN reqs for disaggregated KPs in specific segments (see in RC’s Slides), also use requirements captured reqs for federated autonomics in the IEEE SysOpt chapter. Need to start to get determine and possibly specific protocols for diff KPs to federate with other e.g., each publish/subscribe protocols.

2> Use Cases for KP/KP federations, KP integrations – The presentation that was to be given by Taesang from ETRI (South Korea) had to be postponed. Along with that presentation, a presentation of how KP Platform can be implemented shall be given in the next meeting based on an implementation of a GANA KP Platform and its role in Network Federation Management and Orchestration.

3: Reqs for KP Platforms Driven Networking (including KP governance and KP-KP Federations).

4. Discuss how zero trust principles can be applied in GANA KP-KP Federations.

The eco system we are fostering (service agility, composition, delivery).

Tayeb/Agile service delivery, innovation – a CSP with some conditions: once a CSP has a duplication in a geography, but does not own infra, but has only the catalog of services and application & wants to monetize them in another region in which the CSP does not own infra but intends to use infra leased by owner in the region. In such a case the CSP has to rely on local SP to build his own network to deliver to customer. There are 2 aspects between asset providers and catalog providers.

Charif: hardware sensitive? Can you verify the hardware here?

Tayeb: if you want to provision assets, you need to config regulator. Also for the data and make sure the regulatory framework for the data is enforced.

RC: emergence of telco data space will need to be considered in the work, the KP are anchors as enablers for assets sharing, while at the same time KPs being consumers of certain data that could be shared through the telco data space framework. When looking at Sec, KPs can exchange info and AI models too. How can the KPs facilitate the AI models as well?

The fundamental things here – different infrastructures, different owners

**Schedule of Deliverables**

Abdella Battou (AB): How do we get requests? Where does that request go?

RC: Interface and integration issues for a KP platform are among the key aspects to be addressed, . There is a kind of publish--subscribe protocol (DDS) that we can apply for KP-to-KP Federations (produced by OMG), we want to characterize those KP interfaces and KPs Federations for federated autonomic management and control across network segments and domains.

**Inputs to the Work on the Deliverables**:

1. Inputs to the work on Generic Architecture Framework Blueprint (GAFB) that articulates the role GANA Knowledge Planes (KPs) Platforms should play as Anchors for the Federation of ANs (See Draft of the GAFB in the Kick Off Slides presented by RC):
* ETSI TC INT AFI WG (such as ETSI TS 103 195-2, ETSI TR 103 747, ETSI TR 103 473 V1.1.2, ETSI TR 103 857, ETSI TR 103 858,);
* the work done IEEE INGR Future Networks Systems Optimization WG Chapter;
* NGMN E2E 5G Architecture Framework & Autonomic Networking;
* BBF AIM Framework;
* work in ITU-T linked to Knowledge Planes for Autonomic Management & Control (AMC) paradigm;
* IEEE work on Cloud Federations;
* ongoing work on IEEE White Paper on Common Operational Principles for Autonomic/Autonomous Networks (ANs) i.e. the WP being driven by IEEE and TM Forum in the context of Multi-SDO initiative on ANs.
* GANA KP for RAN as C-SON; GANA KPs for O-RAN Alliance architecture as O-RAN RICs/xApps/rAPPs (see in the Kick Off Slides presentation by RC): and the Federations for E2E Self-\* needed between RAN KPs and KP for Transport and KP for Core Network
* Inputs compiled into the Kick of Slides by RC on Overview of Requirements for Knowledge Plane (KP) Platforms Driven Networking—Anchor for Federation of Autonomic/Autonomous Networks (ANs) Across Industry Sectors
1. Inputs to the work on the other deliverables is yet to be discussed and outlined in the next call

**Clarification made by Bob**: This is a Public Working Group and any interested party is interested to join. Contributors have responsibility to take care of any IPR disclosure handling

AB: More on the admin side –

**Next Meeting scheduled for Thursday July 20, 2023 at 10:00am ET (DC time).**