10-04-23 - 5G SBP Bi-weekly Status Meeting

- Add Recording
- Add Chat

Attendance

Please enter you name and company. Tag yourself using LF ID User Name. Don't have an LF ID yet? Go here: https://myprofile.lfx.linuxfoundation.org/.

Name	Company
LJ Illuzzi	Linux Foundation
Rajesh Krishnan	Peraton Labs
Lincoln Thurlow	University of Southern California, Information Sciences Institute
Ranny Haiby	LF
David McBride	LF
Brandon Wick	Aarna
Yogendra Pal	Aarna Networks
Yow-Jian Lin	Peraton Labs

Agenda:

- Antitrust
- Start Recording- helps facilitate minutes and Action Items
- Reminder to sign is on this page
- Welcome 1st Time Attendees
- 5G Super Blueprint Library Update
- Events
- Project Updates
- Upcoming Meetings
- Documentation (reference)
- Any Other Business
    - Look for a new Zoom bridge on the LFX Meeting platform

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LF Anti-trust

- We will start by mentioning the project's Antitrust Policy, which you can find linked from the LF and project websites. The policy is important where multiple companies, including potential industry competitors, are participating in meetings. Please review and if you have any questions, please contact your company legal counsel. Members of the LF may contact Andrew Updegrove at the firm Gesmer Updegrove LLP, which provides legal counsel to the LF.
    - Antitrust Policy

Start Recording

Welcome 1st Time Attendees

Welcome all. new attendees. If you have any questions about participating in this community, please contact Louis Illuzzi (lilluzzi@linuxfoundation.org).

5G Super Blueprint Overview and Getting Started

Project Updates:

SEDIMENT+KubeArmor

- Initial PoC:
    - https://github.com/5G-Super-Blue-Print/KubeArmor-SEDIMENT-Demo
- Kaloom lab- VMs built - *Risk*
    - *Do we have a risk? What is the mitigation?*
- Potential Hex Five sub project - Cesare/Rajesh
    - Investigative meeting took place between Peraton and Hex Five (Cesare).
    - Next Step- Hex Five to come back with a proposal
- Next Steps:
    - Rajesh- Set back. Need to revaluate camera wrt memory
        - Options
            - Shift to a weather sensor instead of camera
    - Aarno Labs has implemented SEDIMENT for a government funded project
        - Can they provide a demo or overview to the community? This is a government funded project, and is looking into what can be shared with this community
    - Looking to create an easy to use guidebook (Raj)
        - Would have to go through DARPA Public Release process
        - Aarno Labs- an MIT spin-off. Provides security for (currently) Java script. Whereas KubeArmor protects at the container level, Aarno protects at the Java script program level. SEDIMENT offers them an alternative where they may not be deploying on SGX (Software Guard Extensions). Contact Eric and Jeff Perkins also on SEDIMENT project. Raj to make introduction. Presented on Sept PI meeting.
    - Identify and develop a security Use Case
        - ☐ Yogendra Pal @rajesh- discuss during a deep-dive meeting

SABRES: Slice Selection, Path Validation, Multiparty Management

- Three use cases will have separate services associated
- What orchestrator will/can be used?
    - potential to duplicate Simplified E2E Network Slicing (Aarna) using EMCO
        - Aarna confirms all Simplified network slicing solution will be open source and NDA will not be required.
        - License - Apache 2
    - potential to leverage Wavelabs slicing using EMCO
- ICCCN paper: ICCCN_2023_paper_187.pdf
- Code repository (https://pulwar.isi.edu/sabres/cbs/cbs) that was used during the last government demonstration. This is the initial code base (src directory), which will not be the final product (as this version only works on 2-3 variables, rather than arbitrary). This code was used to replace ETSI's OSM's PLA module (using minizinc constraint solver) with CBS [https://osm.etsi.org/gitlab/osm/pla].
- Lincoln tried setting up EMCO using documentation and it failed to come up.
- SD-Core setup at ICI
- Next Steps:
    - Open question on open sourcing SABREs (university policy) - still open - *Risk*
    - Replicate Simplified Slicing demo locally in ISI lab (Lincoln)
        - Simplified Slicing repo: https://github.com/5G-Super-Blue-Print/SimplifiedNetworkSlicing. Yogen to check-in the code.
    - Debug the environment (Lincoln)
    - Setup SD-Core at ICI (demonstrate slicing using SD-Core)
        - rewriting parts of the UPF to integrate SABREs code
    - Set up a drop-in replacement for the current slicing algorithm with CBS algorithm (Lincoln)
    - Leverage UNH and ~~Kaloom. Ganesh~~ and Lincoln?

ONAP SMO

- Scope-
    - use ONAP SMO to exercise gNodeB. Showcase RAN connectivity (O1 interface)
    - Showcase orchestration
    - Connect gNodeB
        - Mitigation- UNH can host core but has no resources to implement; Yogen can implement
    - Potential reference point/tie-in with ORAN-SC
- Requirements/Goals
    - Demonstate connectivity and orchestration
    - exercise Amarisoft gNodeB (UNH)
    - Stretch goal- tie-in with ORAN-SC
    - Stretch goal - Showcase RAN connectivity (O1 interface). OAI not ready with O1 interface
- Resources-
    - Aarna Networks

- UNH - gNodeB. Note; gNodeB is T&M gear and will need to be shared among projects.
- Kaloom - Core- Risk
  - UNH has space for a core but no people resources. Potential for a 5G SBP resource to help.
    - Mitigation- Yogen can implement the core at UNH
- Next Steps-
  - Bring up OAI core and orchestrator with Amarisoft gNodeB - UNH lab
    - Create Ansible template / tasks that would deal with the gNodeB - Lincoln/Yogen
    - Bring uo OAI core at UNH using the orchestrator
  - LaaS booking, extend the booking to last longer than 21 days - ping lincoln by email.

Simplified E2E Network Slicing (Aarna)

- Simplified Slicing repo: https://github.com/5G-Super-Blue-Print/SimplifiedNetworkSlicing
- Question to community to bring in OAI stack
- Next Steps:
  - Question to community to bring in OAI stack
    - Potential to demo OAI stack to the community - Yogen
  - Slice selection within Edge Site Selection and Placement use case

Edge Site Selection and Placement (Equinix) - On hold

- From June D&TF - Call to action: What is current state of edge site selection and where does it need to evolve (future state)?
- Tie-in with simplified slicing (Aarna)
- Edge definition talk from the LF? Twitter? LF Edge Taxonomy. https://hubs.la/Q01RnPZh0
- Next Steps
  - Proposal to pause, and focus on E2E slicing
  - Slice selection within edge placement - Yogen

5G Super Blueprint Library -

- Page opened for viewing- send comments to lilluzzi@linuxfoundation.org
- Proposal to add a column for higher level network function associated with each entry, example; slicing, security, UPF integration, IoT (visual inspection), etc.
- Marketing Plan
  - The goal is that each completed project get the same marketing treatment (i.e. Marketing Plan execution) where the technology is highligthed and the participants and contributing companies are recognized.

Events

- LFN Developer & Testing Forum (Budapest, Hungary) this is an on-site event.

  - November 13-16, 2023
  - Registration is open and free
    - Submit Visa letter requests (if needed) ASAP
  - Topic Submissions
  - November D&TF Planning
    - Opportunities-
      - Potential for ONAP SMO session (with OAI)
      - End-to-End deployment of an eBPF-based Free5GC Core - Use Case - addresses sensitive workload requirements (finance, government, etc.), thought workload segmentation.
        - first, generic capabilty of secure workloads
        - then show how secure workloads of eUPF in 5G Use case can be accomplished
      - 5G SBP Library - LJ
        - What is the 5G SBP Library? (mind maps). Inform users/readers and be able to take the next steps with find the right capability and use the information. Different capabilities to put together 5G services
        - High level overview of each project currently in development (SABREs, SEDIMENT, ORAN SMO, Edge site selection).
          - Input will be requested input from the project leads
        - How to get involved
        - Process- how to submit a proposal
        - Build out talking points; work with Muddasar

Upcoming Meetings

- 11 Oct 2023 Off-week working group meeting
  - Topic: D&TF planning?
  - project deep dive - SEDIMENT Security Use Case?
  - Work with OAI
- 18 Oct 2023 Bi-weekly Status Meeting

Any Other Business

- New Zoom bridge on the LFX Meeting platform

Documentation - Deliverables to the 5G SBP

From Use Case Template:

Blueprint Outputs (Mandatory)	check all that apply:
	☐ Code repository
	☐ Configuration files (e.g. Helm charts, etc.)
	☐ Upstreaming to relevant projects
	☐ Continuous Integration
	☐ Test requirements and test results (if applicable)

	☐ Documentation:
	     ☐ Overview and Theory of Operation (i.e., what does it do?)
	     ☐ Deployment and setup

	☐ Videos
	     ☐ demo
	     ☐ lab setup/behind the scenes
	     ☐ other
	     ☐ YouTube

- Create a template for documentation collateral
- Playbook-like theme
- YouTube - independent of any D&TF YouTube postings, but cross-linked

Any Other Business