Advisory Group Meeting Minutes

16 Oct 2023

- November D&TF Planning
  - Opportunities-
    - 2023-11 - 5G SBP: Orchestration of OAI Core and Amarisoft gNB with EMCO
    - End-to-End deployment of an eBPF-based Free5GC Core
      - 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)
      - How to get involved
      - Process- how to submit a proposal
      - Build out talking points; work with Muddasar

02 Oct 2023

Attendance: LJ Illuzzi

Agenda:

- 5GSBP Library is ready to go
  - Proposal to add a column for higher level network function associated with each entry, example; slicing, security, UPF integration, IoT (visual inspection), etc.
- End-to-End deployment of an eBPF-based Free5GC Core - Library inclusion?
  - Might be of interest to orgs with sensitive standards for deployment (sensitive workload segmentation), finance, government, etc.
- November D&TF Planning
  - Opportunities-
    - End-to-End deployment of an eBPF-based Free5GC Core
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    - 5G SBP Library - LJ
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      - High level overview of each project currently in development (SABREs, SEDIMENT, ORAN SMO, Edge site selection)
      - How to get involved
      - Process- how to submit a proposal
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21 Aug 2023

Attendance: LJ Illuzzi Muddasar Ahmed Ranny Haiby

Agenda:

- LFN Antitrust Policy
- 5G Super Blueprint Library

  - Additional Inputs -
    - May need to adjust titles to make it more intuitive- gear it toward the end user, (IT manager, busines need)
    - RA can be/may be split into 2 titles
  - Rollout Plan
- November D&TF Planning
  - Opportunities-
    - RA with Accuknox and KubeArmor - show existing demo to larger audience.
    - SABREs
    - ORAN SMO (Aarna)
    - Nephio- deploying RAN work loads, etc. (Muddasar). Interest from Research Group in India (NgKore.io?). Funding for intership.
- What are the SABREs capabilities plan for 2024, as needed for DARPA. Sync with David
- Simplified Slicing- what are the baselines for 5G?

12 Jun 2023

Attendance: LJ Illuzzi ,Rodney Elder , Ganesh Venkatraman

- Turn "finished" 5G SBP D&TF sessions into deliverables:
  - 2023-06 - 5G SBP: Simplified E2E Network Slicing. Cannot be scaled. Free5GC not a production platform. Shows orchestration and slicing end-to-end.
  - 2023-06 - L3AF: Integration with 5G-UPF(User Plane Function) - potential Use Cases from Equinix (Rodney/Oleg)

Blueprint Outputs	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
	☑ Presentation

- Input on Wednesday meeting (instead of Tuesday)

15 May 2023

Attendance: LJ Illuzzi Rodney Elder Ranny Haiby Ganesh Venkatraman David McBride

- New wednesday meeting time starting 05/17
- June D&TF - need to urge session topics and registration:
  - Potential 5G SBP Topics: not intended to be finished PoC; rather discussions on current work with the intent to promote collaboration and interest.
    - Edge Placement - "Deploying and Scaling Edge Infrastructure from an Operator Perspective"
    - 5G SBP: KubeArmor + SEDIMENT project - "SEDIMENT + KubeArmor = IoT Device Authenication & Security"
    - Slicing Free5GC and EMCO
    - Lab setup?- Kaloom
- 5G SBP Whitepaper/eBook: Lessions Learned- input from the community
- Wednesday 05/17 meeting will include SABRES presentation

01 May 2023

Attendance:Rodney Elder Ranny Haiby David McBride LJ Illuzzi

How do we jump start Edge Placement Project?

- 5G SBP: KubeArmor + SEDIMENT project
- Enterprise Multi Cloud NaaS

17 Apr 2023

Attendance:

Agenda-

2023 events planning on 04/18 call - Heather

- Virtual D&TF session guidelines

New Projects (Equinix/Accuknox)- updates

- Edge Placement - link to Use Case
- SEDIMENT packaging for Accuknox deployment for 5G SBP use case

PCEI Project Updates

03 Apr 2023

Attendance:

LJ Illuzzi Rodney Elder Ranny Haiby

Agenda:

- Central Use Case for next work sprint
- 5G SBP community survey
- Public Cloud Edge Interface as a new project
    - Starting point: 5G SBP Use Case - Public Cloud Edge Interface

20 Mar 2023

Attendance:

LJ Illuzzi Ranny Haiby Rodney Elder

Agenda

- Proposal for a 5G SBP community survey
- Work Activities- defining and laying out a workplan
- LFN Mentorship Program

Initial Thoughts:

- Proposal for a 5G SBP community survey.
    - Purpose- to identify community skill-sets, time availability to contribute (more then just meeting attendance), interest areas, ...

- Opening- *Thank you for being part of the 5G Super Blueprint community and taking this brief 8 question survey. The purpose of this survey is to discover additional skill-sets within the community, interest areas within the community, and gain insights into what accomplishments the community would like the 5G Super Blueprint to achieve in the next 12 months.*

    - Types of questions:
        - Page 1- anonymity
            - What originally drew you to attend 5G SBP meetings - pick list of reasons + other (fill-in)
                - Business development for my company (getting in touch with potential customers)
                - Providing expertise and positioning myself/my company as a thought leader
                - Participating in a common learning experience with a community
                - Driving the technology solution in a direction that is aligned with my/my company's vision
                - Just curious
                - Other (please specify)
            - What are your current interest areas in the 5G SBP if different?
                - 5G RAN
                - Mobile packet core
                - Automation
                - NaaS
                - Enterprise Networking
                - Public Cloud/Edge Cloud
                - Networking apps
                - Edge workloads
                - Other (please specify)
            - How does your company benefit from the 5G SBP?
                - Leveraging community shared knowledge
                - Showcasing our leadership
                - External exposure
                - Other (please specify)
            - List 3 things you and/or your company would like to see the 5G SBP community accomplish in the next 12 months?
                - Use cases:_____
                - Software components:_____
                - Target market:_____
                - Publications:_____
                - Industry event participation:_____
                - Other:_____
        - Page 2 - no anonymity
            - What specific contributions would you and/or your company like to make to the 5G SBP in the next 12 months?
                - Engineering resources to build and document the solution
                - Physical lab
                - Cloud/Edge infrastructure resources
                - Other (please specify)
            - What skill sets can you and/or your company bring to the 5G SBP?
                - Solution Architecture Expertise
                - System Integration Engineering
                - Technical writing and marketing (Whitepapers, blogs, e-book, webinars)

- - - Other (please specify)
    - Do you have experience with automation?
      - ONAP
      - Nephio
      - EMCO
      - Closed source automation/orchestration
      - Other (please specify)
    - Can you and/or your company commit development time in the 5G SBP labs? If so quantify
    - ~~multiple choice options~~
    - Can we followup with you with an email?

- Work Activities- defining and laying out a workplan:

1. Establish/Re-establish permanet 5G Network capability in the labs
    - Must have requirments:
        a. Core
        b. RAN
        c. Automation end-to-end
        d. .....
    - Workplan:
        a. Step 1
            - Task
            - Technical resources needed
        b. Step2
            - Task
            - Technical resources needed
        c. Step 3 ....
2. NaaS
    - Must have requirments:
        a. LFN and LF Edge projects at the core, cloud, & edge
        b. Enterprise Use Case(s)
        c. ...
3. Enterprise Use Cases

- Potential for the a 5G SBP project under the LFN Mentorship Program
    - During the LFN TAC meeting on 03/01 the question was asked if the 5G SBP could benefit from the mentorship program and vise-verse.
    - Considerations:
        - Will need a community member to serve as "Mentor"
        - Draft a project proposal:
            - Bring Nehio into the lab?
            - Automation? Leverage EMCO in Hyderabad (Wavelabs)
   - Time is of the essense (program deadlines)

20 Feb 2023

Attendance:

LJ Illuzzi Muddasar Ahmed Kenny Paul

Agenda/Notes

- Ops5G Demo- "Over the Air 5G UE Connection to SD-Core". The Ops-5G team would like to present this demop to the 5G SBP community. Potential for a Deep Dive call
    - Value statement . Ask for a preview
- NaaS Use Cases
- 2023-02 - 5G SBP: Birds of Feather: Is there value in adding Nephio?

    - Next Steps-
        - Community participation. Top priority
            - GXC- Hardik
            - Amar
            - Satish (IBM)
            - Wavelabs (K8?)
            - Kaloom
            - Needed skills: K8 (Wavelabs/UNH), RAN (GXC/Kaloom), Core (Amar/Kaloom)
            - As needed support
            - Project Plan & Skills needed per phase.
            - Phases

- - - Where do we get network. Who is supplying the network, IP pool, VLAN design
  - Build K8 (or VM)
  - Nephio/EMCO
  - Network Functions; RAN and Core
  - Network Functions Day 1 configurations
  - Enterprise Application(s)/Use Case(s)
  - MEC Use Case/application (agriculture, medical, retail, etc.)
  - NaaS tie-in
    - IP Transport as a Service. Front haul/backhaul
    - RAN as a service
    - Core as a Service
    - MEC as a Service
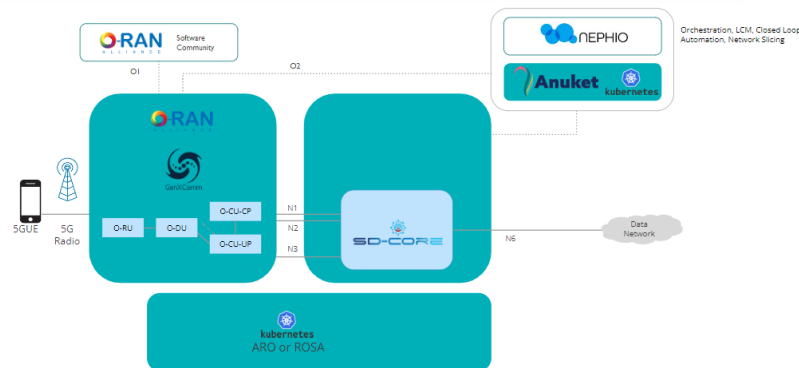
06 Feb 2023

Attendance:

LJ Illuzzi Ranny Haiby Muddasar Ahmed Ganesh Venkatraman

Notes:

- NaaS Use Cases
  - how do we break down NaaS in terms of 5G
    - Slicing & sub-components
  - What are the User Story(s)
    - MNOs will have order fulfillment self- service portal
    - 5G needs- network connectivity, need edge compute facitlities, intelligent data sharing
    - What are the network components/sub-components?: RAN, backhaul, edge cloud, 5G application services
    - varying SLAs
- Next steps with IBM Use Cases
  - Ganesh- IBM has disconnected and is reusing training server for MWC. Working with Jason Hunt
  - IoT Use Case weather and agriculture (soil testing, moisture, etc)
    - Develop User Story- need to highlight 5G attributes. how do we build on hard hat Use Case to add open source platforms, automation, etc.
    - Develop architecture- currently in prelim stage
  - Retail Use Cases- (after MWC)
    - IBM/Walmart
    - IBM/TMobile
- Self-Assessing SLAs with Hyperledger Fabric
  - Webinar on Feb 9
  - Post Webinar questions:
    - Is there value/Use Case(s) for 5G SBP?
    - What is the LOE to include in 5G SBP?
    - High level of technical guidance needed- Hyperledger Telecom SIG as use case owner?
  - Assessment- this is very forward looking technology. Nice-to-have
    - consider roadmapping this technology
- 02-07-23 - Bi-Weekly Status Meeting - Draft Agenda

12 Dec 2022

Attendance:

LJ Illuzzi

Muddasar Ahmed

Ganesh Venkatraman

Agenda:

- Antitrust Policy
- Lab Updates (Ganesh):
  - RAN solution- eliminate faraday cage
  - Creation of BOM as consumable for end-users
    - Each participating company provide a BOM, then consolidate into an overall
  - Next steps with IBM use case(s) - demo at IBM Dallas lab
  - How to position ORAN-SC
  - How to utilize Wavelabs lab in Hydrabad- lacency may be an issue
    - potential to install ORAN-SC to create gNB
    - automation dev and test
    - Setup call with Wavelabs call after documentation.
- Looking ahead to 2023:
  - Tigher alignment with the LFN TAC
  - Lab automation and creation of consumable collateral for end-users (DoD)
  - Network as a Service (NaaS) Use Case
    - NaaS e-book https://lfnetworking.org/resources/research/ebook-network-as-a-service/
- Next Advisory Group meeting January 9, 2023

28 Nov 2022

Agenda:

- Antitrust Policy
- Visual Inspection Use Case Documentation: https://docs.google.com/document/d/1dkk84woawkCiLBGSDrcEddXypmD5JFk6/edit?usp=sharing&ouid=115348460061026676315&rtpof=true&sd=true
  - Ask- review and provide commentary.
  - Release date is Dec 08
- Remote Attestation exploratory call with Peraton Labs; 11/28, 10am PT/1pm ET
- Planning for next work streams:
  - Automate existing Use Case with EMCO
    - Use Case- deploy & manage edge compute
    - LOE - 6 months?
    - Whats needed for documentation so that at least EMCO orchestration of Free5GC is consumable?
      - Identify integration points
  - ORAN-SC SMO (Martial/AT&T)
    - LOE
    - Needed for deploy & manage edge compute (O-cloud)/(O2 interface) Use Case

Attendance:

LJ Illuzzi

Muddasar Ahmed

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17 Oct 2022

Attendance:

LJ Illuzzi

Martial

Muddasar

Ganesh

- Antitrust Policy
- Current Proof Point in progress: 5G SBP Use Case - Factory Floor Visual Inspection - ONE Summit Demo (November 2022)
- Looking ahead:
  - Kaloom has committed to providing the 5G SBP Lab on a permanent basis.
  - Potential for quarterly 5G SBP webinars. Potential Issue- webinar/Zoom fatigue; is this the right platform
  - Use Cases and Placeholders
- Flush out: 5G SBP Use Case -ORAN-SC: RAN Slice SLA Assurance on 10/31 meeting

19 Sep 2022

Attendance:

LJ Illuzzi

Heather Kirksey

Rodney Elder

David Armbrust (Mitre)

Ben Posthuma (GXC)

Ranny Haiby

Abhijit Patil

Martial Ngueko (AT&T)

Sundar Nadathur (Intel, EMCO)

Bob Heinemann

Ganesh Venkatraman (Kaloom)

Muddasar Ahmed (Mitre)

- Antitrust Policy
- 5G Super Blueprint Work Tracks (Buckets) - DRAFT
- Current work item: 5G SBP Use Case - Factory Floor Visual Inspection - ONE Summit Demo (November 2022)
- Use Case Wiki Clean Up

25 Jul 2022

Attendance:

Agenda;

- Antitrust Policy
- What are the core requirements of a 5G Super Blueprint and Use Case?
  - Open Source Core?
  - Open Source Orchestration?
  - ORAN?
  - Reference: https://wiki.lfnetworking.org/x/4wAyAw
  - Are the right questions being asked to get to the core requirements?
- How is a 5G Super Blueprint documented?
  - Are the right questions being asked to get to a documentation process?

Action Items:

- [ ] Muddasar Ahmed Fishbone diagram for foundational Use Cases

11 Jul 2022

Attendance:

Agenda:

- [Antitrust Policy](#)
- Review [Use Case wiki page](#) and Use Case submission template
- Security Lead
- Meeting day/time and cadence
- Next 5G SBP meeting: [07-12-22 - 5G SBP Regular Bi-weekly Status Meeting](#)
- Michael August (DoD) ONE Summit CPF submission
    - Demo- Secure slicing, and DDoS

Action Items:

- [ ] [Muddasar Ahmed](#) Fishbone diagram for foundational Use Cases

06 Jun 2022 Next meeting 11:30am ET, 8:30am PST

Recording

Chat File

Attendance:

@Abhi Patil

Neil Hoff

@lawrence Kerr

Brandon Wick

Nadathur Sundar

Oleg Berzin

Ranny Haiby

Bob Monkman

Muddasar Ahmed

@Ryan McAllister

Haseem Ahmed

Michael August

Heather Kirksey

Agenda:

- Review Use Case Wiki Page and Use Case submission template
- Proposal- 5G SBP "Releases"- New use cases, updated use cases, etc. Proposal for every quarter: "5G SBP Fall2022 Release", "5G SBP Winter2023 Release", "5G SBP Spring2023 Release", etc.
- Proposal- "Tracks" and "Use Cases"
    - Track: Orchestration

        Use Case (under Orchestration Track): Orchestration of Magma with ONAP

        Use Case (under Orchestration Track): Orchestration of Free5GC with EMCO
- Security SIG- Muddasar Ahmed (Mitre)- asked about non-functional reuirements; "security orchestration". Ranny suggests we will need to have the capability to demostrate security capabilities. Ranny suggests a security "champion" needs to step foreward. Potential for a security SIG under the Advisory Council - add to June 6 agenda
- Meeting day/time and cadence
- June 5G SBP Meetings

Attendance:

23 May 2022 Kickoff Meeting

Recording not available

Attendance:

@Haseem Ahmed

Bob Monkman
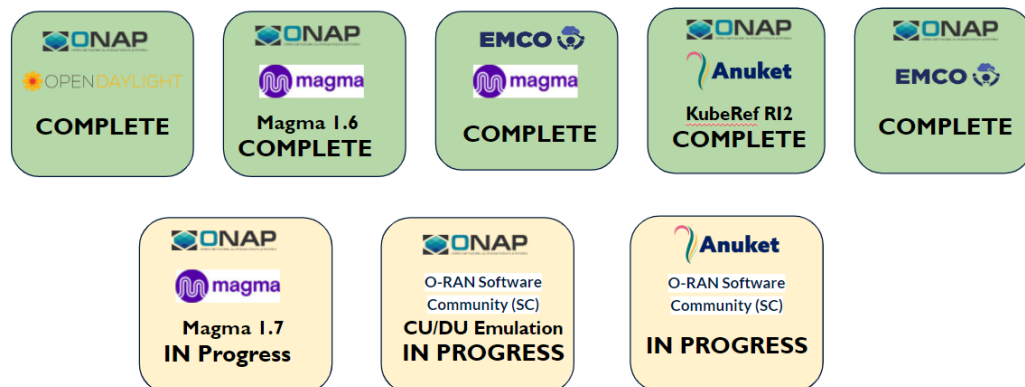
@Oleg Berzin

LJ Illuzzi(LFN)

Ranny Haiby (LF)

@martialNgueko(AT&T)

Nadathur Sundar(Intel)

Proposed Agenda:

- Meeting recording to facilitate meeting notes
- Introductions
- Level set on Advisory Group purpose
- Proposed Use Cases
  - Use Case: 3Gpp NTN (Haseem)
  - Fixed Wireless Access (FWA)
- Process for use case submission and review
- How is the proposal to be documented? (INPUTS)
  - Use Case discription
  - Problem statement/ what probel is solved?
  - Users stories
  - Demo storyline
  - Interaction with other Open-source components
  - Links to existing documentation (Build Guide, Slideware, etc), if available.
  - Links to existing demo/video, if available.
  - Links to existing code/repos, if available
- What does a 5G Super Blueprint look like? How is it documented? (OUTPUTS)
  - Use Case discription
  - Problem statement/ what problem is solved?
  - Users stories
  - Build Guide
  - Slideware
  - Demo Video
- Can we leverage existing Proof Points?
  - 5G SBP: Realizing multiple network slices & MEC Apps in each slice with LFN/LFE/CNCF projects
  - 5G SBP: ORAN SMO Package - Combining multiple open sources into an E2E package
    - documentation links:
      - https://wiki.o-ran-sc.org/display/IAT/Automated+deployment+and+testing+-+using+SMO+package+and+ONAP+Python+SDK
      - https://gerrit.o-ran-sc.org/r/gitweb?p=it/dep.git;a=blob;f=smo-install/README.md;h=7c76d09658b5642907b1f40342d878a084b15444;hb=HEAD

5G SBP – Key Integration Achievements

- Discussion on 5G Core- Magma TSC is looking at a dual core approach, with the 2nd core being Free5GC or OAI. Recommendations have been put forth that 5G SBP should wait on a core decision until this is sorted out.

- - Magma
    - Magma TSC is looking at a dual core approach, with the 2nd core being Free5GC or OAI
  - Free5GC
  - OAI
  - Open5GS
  - Reference: Lab Architecture Draft
- Meeting Cadence and Next Meeting - June 6, 11:30am EST

Action Items:

- ☑ @martialNgueko(AT&T) - provide documentation/code links to 5G SBP: ORAN SMO Package - Combining multiple open sources into an E2E package
- ☑ LJ Illuzzicreate Use Cae wiki and Use Case submission template
- ☐ Test case for "New" Use Case
- ☐ Test case for "Existing" Use Case