# 07-05-22 - 5G SBP Off-Week Working Group Meeting

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#### 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
Muddasar Ahmed	MITRE
Ganesh Venkatraman	Kaloom
Satish Verma	Spirent
Yogendra Pal	Aarna Networks
Neil Hoff	NIWC Pacific

#### Agenda:

- Start Recording- helps facilitate minutes and Action Items
- Welcome 1st time Attendees
- Agenda Bashing
- 5G SBP Use Cases
- Placeholder Review of 5G SBP Use Case Public Cloud Edge Interface
- DTF Recap
- Upcoming events
- Upcoming 5G SBP MeetingsAny other Business

#### 

#### 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

#### Welcome 1st time Attendees

#### **5G Super Blueprint Use Cases**

#### June Developer & Testing Forum Recap:

- ORAN SMO Package Combining multiple open sources into an E2E package
- 5G SBP: Magma for 5G

#### **Upcoming Events:**

- ONE Summit Nov 15-16 Seattle Washington
  - CFP Closes: Friday, July 8 at 11:59 PM PDT
- 2022 LFN Developer & Testing Forum November 17-18th, Seattle Washington

#### **Upcoming 5G SBP Meetings:**

- Tuesday 07/12- Bi-weekly Status Meeting
- Tuesday 07/19- Off-Week Working & Technical Deep Dive Meeting Call for agenda items

#### **Future Agenda Items:**

- Review of 5G SBP Use Case Public Cloud Edge Interface
- GenXcomm ORAN Overview
- · Basic deployment pipelines proof points Muddasar
  - Commercial cloud deployments
  - K8 Cloud deployment (core and RAN deployment)
  - Edge cloud and public cloud orchestration
  - On premise and commercial cloud deployments

 Parking	Lot	

#### **5G Cloud Native Network Documentation Review**

Reminder to review and comment on the 5G Cloud Native Network Demo documentation, particularly Sections 6, 7, 8 (Issues Encountered, Workarounds, Mitigations). The document review period will end on Friday 05/27.

Link to document access: https://docs.google.com/document/d/1C4Cmr04XDori3EqOEIs977idm6H7yQ\_d/edit?usp=sharing&ouid=105371376604437213307&rtpof=true&sd=true

A.I. Proposal to update the intro section is provide background/intensions/purpose of document. Add links to video, etc. What Cloud Native principals are covered and what were not.

#### **Update on Magma**

Magma TSC is looking at a dual core approach, with the 2nd core being either Free5GC or OAI. Recommendations have been put forth that 5G SBP should wait on a core decision before moving forward.

- Ranny Haiby How will 2nd core benefit evolving Magma and how will the 2nd core interact with existing Magma? Ranny will investigate
- Update from Ranny Haiby Here is some information that Aarna Networks kindly agreed to share:
  - Aarna Networks' analysis of the limitations of the existing Magma code base and possible architecture for a 2nd core Magma Additional Core Proposal.pptx
  - Arana Networks' comparison of potential 2nd core options for Magma Open Source 5GC Comparison Slides May 2022.pptx

#### GenXcomm ORAN Overview (Placeholder)

#### Lab Resources and Utilization

Reference Architecture from 5G Cloud Native Network Demo

- Need lab architecture diagram review 1st draft on 05/10: https://docs.google.com/presentation/d/12Bs-RoH-yKvKTrHocDK57LiHIGvTT3tQKFR10xetSpg/edit#slide=id.g1295cdd58af\_0\_0
- UNH- Faraday cage in place.
  - Understand changes in Kaloom and impacts on UNH
- Kaloom (Montreal) Kaloom previously ran the UPF and fabric). Faraday cage in place
  - Missing radio parts- SW for RAN. If GenXcomm has this, then much easier to deploy
  - GenXcomm/Kaloom- start software install. Hardik sent HW BOM sent, GenXcomm moving lab
    - Space available. Install once move is completed. No ETA on move completion. Ganesh to advise.
  - $^{\circ}\,$  Need to look at SDWAN between UNH and Kaloom. Possible IP addressing will change.
  - o Lab access email Ganesh
  - o 3rd party UPF not compatible with Magma Hardik and Ganesh to discuss and provide readout
- · Wavelabs (India)-
  - Can host Magma and RAN
- Potential for Rancher implemenation, in addition to Red Hat (Haseem Ahmed)
  - o https://www.openlogic.com/blog/rancher-vs-openshift
  - What are the benefits of Rancher?

#### Magma/ONAP integration -

- ONAP/Magma 1.6 working!
  - ONAP Istanbul with Magma orchestrator and AGW
  - O Details steps on docuementation available. Create Phase 1A (1.6)
  - Any other Artifact/colateral can be provided for this integration?
- ONAP/Magma 1.7
  - o 5G is enabled in 1.7
  - o Yogen -
    - There are helm charts for 1.7. Will check quality of charts
    - AGW is containerized in 1.7 (alpha).
  - Test with Rebaca ABot. Louis/Amar/Brandon will frame request to Rebaca (Samir). Wavelabs working with Rebaca and testing Magma with ABot.

#### ORAN SMO -

GenXcomm ORAN- Hardik provide detail on 05/10 call. Include ORAN Alliance R2 enhancements. Ben can help on the next call

#### Notes:

#### Agenda items for May 24 off-week meeting

- ORAN SMO options
- · Potential for Unshared slicing (Intel)- core is not aware of slicing. Slicing is achieved through multiple CNFs. Srini/Bob from Intel can help.
- 3GPP use cases
- Test with Rebaca ABot. Louis/Amar/Brandon will frame request to Rebaca (Samir). Wavelabs working with Rebaca and testing Magma 1.7 with ABot. Parthiban to provide youtube links
- 5G SBP Use Case Advisory Group- setup call within that group in May.

#### Reference:

- ONAP/Magma Integration #1
  - o 08 Mar 2022 CBA and Helm repos. Louis/Yogen need to unstick check-in issue.
  - o 22 Feb 2022 Ran out of time for update
  - O8 Feb 2022 Yogendra: Working on a Helm chart issue by splitting them up. Access gateway. Small infra changes. We'll them be taking up the Magma orchestrator. Is there any specific help from Magma needed (Suresh)? Yes, that would be a great help (orchestrator charts). Suresh and Yogendra to synch offline. Helm chart fixes will require namespace changes (the ideal path). There is also a workaround to force all namespaces to be the same. The community agrees this is not the ideal long-term solution. It was requested that the Magma community, led by Suresh (Wavelabs) work with Yogen to package the Helm charts with namespace corrections as the long-term solution. Suresh to consult with Magma community if this will lead to any conflicts with Magma namespace as it exists today.
  - O 22 Mar 2022 Update from Aarna: The action item is to try workaround in Helm charts on ONAP Istanbul release. We have been facing challenges with ONAP (I release) deployment. On one ONAP deployment on the UNH server where we managed to deploy, the ONAP portal is extremely slow, and takes few minutes to respond. We are trying to install on another server but were unable to allocate new servers due to issues with UNH LaaS setup. These are finally resolved, and we are able to allocate a new server on which we will restart ONAP deployment, and then the workaround to deploy Magma with modified Helm charts.
- ONAP/Magma Topic: #2
  - o 22 Mar 2022 Kader have servers and simulators. Waiting on 5G radio.
  - o 08 Mar 2022
  - o 22 Feb 2022 Ran out of time for update
  - O8 Feb 2022 Wavelabs + Rebaca making good progress (in Wavelabs lab) on integration. Before Magma 1.7 come out, we'd like to replicate this in the community labs (by cloning). If using Wavelabs for community use, need to address some issues (e.g. jumphost set up as a trusted host). Can a jumphost be set up at Kaloom and/or UNH? Hanen/Suresh/Amar looking into it. Option may be to connect the labs. Reference- UNH lab is used for 5G resources (Amar).
- ONAP/ORAN -SMO Framework workstream
  - Martin- weekly meeting in place on SMO Framework packages. What ONAP group is involved? https://wiki.onap.org/x/DgmsBw
    - The team is on the way to turn the "ONAP based SMO package" including O-RAN-SC artifacts like 'Non-RT-RIC into a broader package, which includes CNFs like Near-RT-RIC and 5G Core(?)
    - Current feature set available:
      - SMO-Package
        - o from ONAP: O1-Controller (SDN-R), VES-Collector, Message-Router (DMaaP), A1-Controller, Policy
        - o from O-RAN-SC: Non-RT-RIC, hello-world rApp, Topology-service
      - simulated RAN-Package (O-DUs, O-RUs)
      - automated end-to-end O1 (and OFHM) closed loop tests
      - Documentation
      - Please see demo recording (start a 10min)
    - on the roadmap
      - add Near-RT-RICs
      - add 5G Core(s)

Hardik Jain dedicated resource from GenXcomm to work 5G SBP

- deployment of xApps
- develop and add more automated end-to-end test cases
- add traffic analytics tool (e.g. Wireshark)
- Tracy- proposal to show SMO Framework demo to show capabilities
- ORAN/Anuket workstream

LJ IlluzziRoadmap refresh

- 5G RAN:
  - ° 22 Feb 2022 What workstreams can begin now that GenXcomm is onboard?
  - 08 Feb 2022 Need to check in with GennXcom and determine RAN side of 5G SBP (CU/DU). Catherine suggestion: Bring this to the ORAN-SC community (Tracy + Martin). LF Staff to make connection.

### Action Items (open)

Act

	Tracy Van Brakle extend invitation to other operator members of ORAN (i.e. Verizon)
	Heather Kirksey Reach out to outreach committee on Magma Slack #magma-outreach-committee to discuss joint marketing opportunities
	Kader Khan Suresh Krishnan Create requirements document capturing ONAP requirements for Magma (as discussed on 03/08)
	Tracy Van Brakle Any link to Multi-Operator RAN from Dec 2021? Referenced on a previous call.
	Alex Stancu Help with ORAN implementation
	Martin Skorupskican add detail and next steps for SMO Framework
tion	Items (completed)
<b>~</b>	LJ Illuzzi- SMO Framework packages. What ONAP group is involved?
<b>~</b>	LJ Illuzzi Create wiki to look at the various use cases among communities.
<b>~</b>	Martin Skorupski start putting together use cases among open source communities. Starting point> ORAN Alignment
~	Amar Kapadia Will update wiki on roadmap