

# Meeting 02-08-22 - 5G SBP

Meeting Recording

Chat File

## 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
<a href="#">Brandon Wick</a>	Linux Foundation
<a href="#">Heather Kirksey</a>	Linux Foundation
<a href="#">Andy Tran</a>	NIWC PAC
<a href="#">@suresh</a>	Wavelabs
<a href="#">Josh Hicks</a>	Turnium
<a href="#">Amar Kapadia</a>	Aarna Networks
<a href="#">Christina Do</a>	NIWC PAC
<a href="#">Catherine Lefevre</a>	ONAP TSC
<a href="#">Christophe Closset</a>	ONAP - AT&T
<a href="#">Gervais-Martial Ngueko</a>	ONAP - AT&T
<a href="#">Ganesh Venkatraman</a>	Kaloom

## Proposed Agenda:

- Start sending formal Invitation (using the mail list calendar) to invite community members to add to the bi-weekly Agenda
- Start Recording- helps facilitate minutes and Action Items
- [Antitrust](#)
- Welcome 1st Time Attendees
- Marketing Update
- 5G Cloud Native Demo Documentation
- LFN Developer & Testing Forum in the March timeframe (Tentative)
- Architecture:
  - ONAP/EMCO leadership meeting readout (AI from 01/25)
  - Need RAN vendor
- Workplan Updates
- AOB

#####

## 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

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

## Marketing Update

5G Super Blueprint will be key feature of the LF Networking Website revamp and will be added to the LFN Landscape tool (end of Q1). We'll cover more on future calls.

## 5G Cloud Native Demo Documentation - underway (Wavelabs Team)

- **Community participation & input will be key to success**
- Status: Writer team working with Aarna, Kaloom, Red Hat on developer interviews
- Next Steps:
  - Interviews: A10, Cap Gemini Engineering, Turnium, GenXComm, Intel, UNH
  - [Rebaca documents](#) previously provided. Any other documentation opportunities from Rebaca?
- Reference:
  - 2020 Documentation Link: [How to Set Up the 5G Cloud Native Network Demo](#) - reference EMCO information on this page

Interviews under way led by the Wavelabs team. If contacted, please help provide the info that will help us create good documentation and make the project replicable by interested parties.

## LFN Developer & Testing Forum in the March timeframe (tentative) (Heather)

- This virtual event is intended to be centered on cross-community collaboration topics, rather than project centric. At this time LFN is measuring interest in such an event.

January event was a success (525 attendee)! thank you to the Magma team for your tutorials! F2F Event scheduled for Porto, Portugal in June 13-16: Registration now live: <https://events.linuxfoundation.org/lfn-developer-testing-forum/>. Please save the date.

Cross-project discussions from January will be continued in March as we're planning a 2-day interim DTF in March. Programming Committee convening this week on the agenda. 5G Super Blueprint will be a key part of this event. Looking for 1-2 volunteers from this working group to participate. [Catherine Lefevre](#) will help represent ONAP. [Bob Monkman](#) volunteered as well. Heather will bring in Anuket representatives (Beth C, Scot S), Ranny for ONAP, and Scott Smith (CVC) has also expressed an interest. Anuket Assured will be the verification method.

Look for the March website coming soon.

## Architecture

- **ONAP/EMCO leadership meeting readout (AI from 01/25)**
- US Navy Use Cases:
  - In a centralized site, they want to use ONAP for the 5G SBP
  - For remote/smaller sites with limited IT staff, they want something lighter. So they want to go with EMCO.
  - There is also the issue that remote sites may not always have good connectivity. So in that case, ONAP will be the global orchestrator in a central site. EMCO will be the edge domain orchestrator. When connectivity is there, ONAP can manage EMCO as a southbound controller.
  - Next Steps: architecture diagrams, and end to end flows. ONAP + EMCO + Magma meeting then include Anuket.
- US Navy use cases above as well as demonstrations from DTF lead to potential 5G Orchestration Blueprints:
  - Magma with ONAP CNF Orchestrator
  - Magma with EMCO
  - Magma with ONAP (global orchestrator in a central site) and EMCO (edge domain). Roadmap item. Navy Resources?
- **Need RAN vendor - community input. Qualifications? Criteria? Help grow ORAN. Explore vendor(s) in ORAN community. Bob M. can help.**
  - Catherine contacts: Tracy Van Brackle - [tv8394@att.com](mailto:tv8394@att.com); very active in Plugfest; [martin.skorupski@highstreet-technologies.com](mailto:martin.skorupski@highstreet-technologies.com) -- very active O-RAN/ONAP Alignment
  - [GenXcomm is an option](#)
- ONAP Honolulu vs Istanbul. Current testing with Honolulu. Continue with Honolulu, then move to Istanbul
- Use Case: Private LTE Network security. Need Magma and ONAP SMEs
  - Kader/Wavelabs can help with secure aspects with slicing and private mobile network. Setup separate call. Include Neil Huff. Need R&D from Magma.
- 2 flows: EMCO under ONAP and EMCO standalone (SA)
- Anuket as cloud infrastructure
- Rebaca interop testing / synch with Wavelabs (Kader/Samir)
  - Show Magma/ABot testing on 11/30
  - End to end slicing- pickup where it was left off on 5G demo. Issue with firewall may be key issue. Jamie, Constanten, Jason, Samir. Samir to update on Nov 30.
- Physical radio integration: Is the RAN ready for testing on GenXcom? Cap Gemini/Intel to confirm (Sam/Utkash).
- Consider other RAN options

Meeting last week. An open dialog with ONAP & EMCO, both doing orchestration but a different layer. Using 5G SBP as vehicle to make proposals back to their communities. EMCO is offering a cloud agnostic layer and ONAP benefits from this. We intend to develop a joint message/positioning statement to be reviewed in the ONAP and EMCO TSCs. Goal: Identify the integration points. There may be some areas of overlap for some use cases and these are being worked through. Catherine to start a draft message as a start (end to end flow will come later). Open Question: Will there be profile/blueprint variations? We are building an E2E Stack Framework. Naming will be important. Example: Emergency services blueprint, supply chain blueprint, etc. Open Question: What can we do within this context/resources as a Linux Foundation initiative. We need to define what we are doing and set expectations accordingly.

## Workplan -

- **ONAP/Magma Integration - Service Delivery**
  - 08 Feb 2022 :
  - 25 Jan 2022 CBA development to automatically register the Magma AGW with the Magma 'Controller' is complete
  - 25 Jan 2022 Trying out the Magma Helm Chart workaround while Wavelabs works on updating the Helm Charts
    - On the Helm Charts, there are two paths: short-term (Aarna) Yogen will try to workaround forcing the namespaces to be the same. Long-term fix; K8s resources need to be installed in different namespaces, and therefore be split into separate Helm packages (Wavelabs). The long term fix is a best practice offered on ONAP for Enterprise community and should be documented.
- **ONAP/Magma Integration - Service Assurance - KPI Network Slicing**
  - From ONAP for Enterprise 02 Feb 2022 Meeting: Jorge Hernandez Review any KPI Network Slicing requirement to be submitted to the Magma team - working with Kader Khan 's team.
    - Principle/approach to consider VES as ONAP/Magma segways for KPI Collection sounds to be OK - no push back
    - Suggestion was to work with Kader Khan 's team to define requirements, architecture (high/low) and E2E flows but no commitment about implementation
    - Potential POC with basic flows between ONAP/Magma including DCAE/VES collectors
    - Potential ONAP contribution to Magma code directly to support this use case?
  - 25 Jan 2022 Kaloom was able to fix the firewall issues and now we have the high and low video use case working through the 2 different slices
    - Next Step: gather requirements for slicing. Working with the Magma team.
- **Radio**
  - GenXComm Radio. Can we start using it? Intel/integration issue. GenXComm coming on as a member.
- **Labs for 2022: UNH Solid, Kaloom still on board? Do we need CENG?**
  - Louis reached out to Kaloom for documentation above and broach lab question.
- **Rebaca/Magma:**
  - Kader (Wavelabs)- successfully tested ABoT with basic 5G Magma call. Youtube demo (timestamp 11:49): <https://www.youtube.com/watch?v=E03Qu9btX3o&list=PLQ88zlc9KWGfhOZsRdtqs6UbP9vEeUExz&index=4>
  - Next Step- integrate ABoT with Magma CICD - in progress
    - CICD pipeline running. Parthiban to share links
- **Document as you build**
- Placeholder - Do we need separate call for 5GSPB phase Next for execution? (similar to weekly 5G Cloud Native Network demo). Alternate Tuesdays?

## ONAP/Magma Integration

#1 Yogendra: Working on a Helm chart issue by splitting them up. Access gateway. Small infra changes. We'll then 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.

## #2 Other ONAP/Magma Topic:

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).

## #3 ONAP/Magma Integration - Service Assurance - KPI Network Slicing - No update

5G Radio Status: 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.

## Adjacent Communities 5G Super Blueprint Integration (All)

- **Magma - network slicing and slicing security**
  - This work is just starting in the Magma community.
  - Meeting from 11/23/2021 on Slicing and slicing security: <https://wiki.lfnetworking.org/x/fwfoAw>
    - key message- this is the right time to collaborate on market requirements and align on roadmap with respect to your organization. Join the conversation on **#project-5g-slicing**: <https://magmacore.slack.com/archives/C01PC1QA3QF>
  - Kader- starting with static configuration of a network slice; basic orchestration onboarding
- **ONAP + Magma (orchestrate Magma CNFs using ONAP) - See Above**
  - 30 Nov 2021 see Workplan above
  - 02 Nov 2021
    - Aarna moving to ONAP Honolulu for this work.
    - ONAP Istanbul is due out on Nov 4. This release brings improvements for deployment and day2 of more complex CNFs. What is the LOE to move from Honolulu to Istanbul? Or wait for Istanbul?
  - 21 Sep 2021 - Pending Seshu meeting.

- ONAP+Magma integration- issue at TOSCA packaging level. ONAP community to assist in debugging TOSCA issues, starting 08/25. Helms charts working
- Enterprise Task Force (Amar, Prabhjot, Siraram, Catherine, Kader, Phil)
- Meeting Details Here: <https://wiki.onap.org/display/DW/TSC+Task+Force%3A+ONAP+for+Enterprise+Business>
- Align with ONAP + Magma Milestones / Timeline
- Onboard Magma Controller (gateway) with ONAP (currently as VNF)
- Network Slicing. Reminder: Monthly meeting on how to align with other communities, address pain points. Next meeting: Friday, Aug 13, 10-11 AM CST time. Details in Magma community calendar: [https://calendar.google.com/calendar/u/0/embed?src=c\\_gbiu1t7a67ika1th2smldeh19s@group.calendar.google.com&ctz=America/Chicago](https://calendar.google.com/calendar/u/0/embed?src=c_gbiu1t7a67ika1th2smldeh19s@group.calendar.google.com&ctz=America/Chicago)
- Networking Slicing Meeting last week including security efforts, breaking out into a separate meeting series. Working toward service assurance kickoff based on Magma capability. Meeting Details Here: TBD
- LF Edge (Amar, Ike, Joe)
  - 09/07 Heather- Use case discussion with TSC upcoming in September. Ike can also provide insights.
  - Goal: Private network slide to integrate with IoT use cases (eventually). Which projects involved, which integrations needed with other projects, etc. Volunteers welcome to contribute, join discussion on the TSC.
  - 9/7: Modeling 5G Super Blueprints roughly on Akraino blueprints template (5G integration work ongoing). Ike to provide links.
  - Any other LF Edge integration at this time?
    - 9/7: EdgeX (tomorrow a presentation with customer example), Open Horizon?
    - Fledge, EVE (Energy use case)
  - IoT/EdgeX possibilities. Ike: Suggest contacting Jim White, EdgeX TSC Chair. Brandon to follow up. Akraino has more than 20 blueprints across many areas including 5G integration. (insights on 5G Core). Brandon to follow up Energy/EVE/Fledge Communities.
  - Prabhjot: PCI blueprint could be a value add in terms of service assurance (includes ONAP/EMCO), MANO, cloud provider integration. Good documentation coming soon. Oleg/Tina, TSC Chair (Akraino).
- Anuket (Amar, Heather)
  - 12/14: updates from Kuberef team. Need status on Plugins Virtlet to support Anuket workloads. Check with Amar. Bob M. may also have input.
  - 9/21: We have just deployed ONAP on Anuket at UNH! Congrats to the team. Docs to follow.
  - Anuket (Heather)- deployment- 2 servers at UHN. ONAP on 1, orchestrate MAGMA on other.
  - Kali Release RI2 on UNH Servers, deploying the Magma Core
  - 2 instances of Kuberef (1 per server) being installed. We will use one to host ONAP and one to deploy Magma Core onto. Confirming support for Kubevirt/Virtlet, we need this since one of the Magma functions is still a VM.
  - Status: Servers are up and we have asked the Kuberef team to install pending instructions from Sriram on how to access the servers.
- L3AF: members of the L3AF community attended the 11/16 5G SBP call
  - Security (eBPFs enhancements in data path)
  - Idea: Walmart testing of 5G Super Blueprint
  - Talk to Anuket around eBPF reference
- ORAN Alliance / ORAN SC (Trishan)
  - What is the time frame where ORAN might participate in 5G SBP?
- Other? Feel free to add here.
- Heather: Integrated CI/CD (down the road).
- Ike: M2M standards + ETSI use cases. Ike to share more information, working with companies in this space.

## AOB?

Next target date to show latest iteration of 5G SBP?

Option 1: ONEEF (12-14 April). Executive Update vs Demo? Idea: Work backward from this date on what we could/should show.

Option 2: Cloud Native Telco Day at KubeCon (May)

Hanen to start a CFP submission. Other working group volunteers welcome.

## \*\*\*\*\* Parking Lot \*\*\*\*\*

9/21: Several Demos from the community are coming in as part of the LF Pavilion at ONE Summit (LF Edge, Magma, ORAN, others). Brandon will add in the details to track these efforts as it relates to the Blueprint.

## 5G SBP Milestones, Timelines, Infra (Louis)

- Reminders:
  - Document as you go
  - [Rules of the Road](#)
- Update: [Integrations Status: Phase 1](#)
- Update: LFN Demo Infra
- Repository: <https://github.com/5G-Super-Blue-Print>.

## 5G SBP Future Labs

Conversations going with CENG. Other community resources welcome.

## 5G SBP Workstreams

Get Involved! Find an area where you can contribute.

- Diagrams
- Build Documentation- video and print
- Rules of the Road
- LFN TAC Whitepaper
- ONAP Enterprise Working Group Alignment + Integration (Prabhjot)
- LFN Project alignment work (Anuket, ODIM, ONAP, etc.)
- Mapping Features & Dependencies
- ONES Demo support
  
- Keeping an eye open for new ways of delivering service (new innovation from practice rather than theory). Working models could help standardize the industry. (Sudhir Iyer)
  
- Legal: Heather in discussions with LF legal team on license types.
- Projects Integration
  - Align with ONAP Enterprise WG Concepts
  - Code will be be upstreamed wherever possible.
  - 2 Types of Artifacts: 1). Contributions to upstream code. 2.) Non-code elements, etc.
  - Legal: Heather in discussions with LF legal team on license types.
- Magma demo integration post ONES
- Leveraging 5G Cloud Native Network Demo (Proof of Concept) 2021
- 5G Super Blueprint Criteria
  - Open source components where available
  - Proprietary components where Open Source component does not exist or is not compatible
  - LFN TAC Consult
- Blueprint Outputs (scrips, docs, mode/Yaml/Yang files). Do it in stages.
  - Establish forcing function
  - Consider leveraging Akraino best practices
- Establish upstreaming process
- 5G Super Blue Print Playbooks
- Establish joint/cross project repos
  - Separate demo and 5G Super BP Jiras
  - Jira cross tagging- need IT discussion