



- [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](mailto:lilluzzi@linuxfoundation.org)).

## 5G Cloud Native Demo Documentation - underway

- **Community participation & input will be key to success**
- Status: Writer team (WaveLabs) working with Aarna Networks team on developer interviews
- Next Steps:
  - Interviews: Kaloom, Red Hat, 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

## LFN Developer and Testing Forum, January 10-13, 2022 - Recap

- **Topic Recaps**
  - [5G SBP: Realizing multiple network slices & MEC Apps in each slice with LFN/LFE/CNCF projects](#) (thank you Srin, Palani, and the Intel team)
  - [EMCO Orchestration of Magma](#) (thank you Raj, Yogendra, and the Aarna Networks team)
  - Magma sessions:
    - [Plenary: Magma 5G - Exploring future feature development and testing topics](#)
    - [Plenary: Magma 5G - Understanding ongoing feature development and testing](#)

## Architecture

- **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.skorpwski - [martin.skorpwski@highstreet-technologies.com](mailto:martin.skorpwski@highstreet-technologies.com) -- very active O-RAN/ONAP Alignment
- 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

## Reset Plan and Phases for 2022 (proposal)

- **Phase 1: Magma + EMCO + Anuket - integration complete (ABot pending)**
  - Next steps: blueprint creation, documentation/cookbook, ONEEF collateral (tentative in April, virtual)
- **Phase 2: Magma with ONAP CNF/VNF Orchestrator+ E2E + MEC**
- **Phase 3: 5G Slicing + ORAN SC + MEC**
- **Phase X: Magma with ONAP (global orchestrator in a central site) and EMCO (edge domain)**

## Workplan -

- **ONAP/Magma**
  - CBA development to automatically register the Magma AGW with the Magma 'Controller' is complete

- 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.
- Slicing-
  - 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 CENGN?
  - Louis reached out to Kaloom for documentation above and broach lab question.
- Rebeca/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?

### 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.

\*\*\*\*\* 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 CENGN. 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
  - Propriety 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