

Meeting 081721 (Deep Dive)

Attendees: PLEASE ADD YOUR NAME HERE USING YOUR LF ID. IF YOU DON'T HAVE ONE, GET IT HERE: <https://myprofile.lfx.linuxfoundation.org/>.

Meeting Bridge: Join Zoom Meeting: <https://zoom.us/j/99018479008>, Meeting ID: 990 1847 9008, Find your local number: <https://zoom.us/u/abRK2FZl1>

Name	Representing
Louis Illuzzi	LFN
Brandon Wick	LFN
amit kapoor	Capgemini
Amar Kapadia	Aarna Networks
Sveto Ignjatovic	Kaloom
Ganesh Venkatraman	Kaloom
Rajat Gupta	Capgemini
Sam Diep	Intel
Sriram Rupanagunta	Aarna Networks
Rajendra Prasad Mishra	Aarna Networks
Yogendra Pal	Aarna Networks
Jamie Liu	Kaloom
Damini Chauhan	
Raja Mitra	Rebaca
Jacobus Venter	Kaloom
Indranil Chowdhury	Rebaca
Konstantin Dunaec	A10
Rajarshi Halder	
Samit	

NOTE: This is the weekly technical deep dive call to prep the latest version of the 5G Cloud Native Network Demo for ONE Summit 2021, Oct 11-12. If you would like the meeting invite, please email bwick@linuxfoundation.org and lilluzzi@linuxfoundation.org.

Program Management

A daily standup call as been established on Slack:

Logistics:

Time- 10am ET/7am PT Daily

Location- <https://lfn-demo.slack.com/archives/C01J7F0GXFH>

Slack Communications:

Great traction on the Slack Channel. Let's keep it up! https://join.slack.com/t/lfn-demo/shared_invite/zt-pcf5086a-l0i926B0hc9pzf5_mVDhtA.

ONE Summit Keynote Planning Call:

Group met last week and had a productive conversation.

Meeting Time: Weekly on Fridays, 9:30 - 10: 30 AM PT

Let Brandon+Louis know if you'd like to join this call.

Status Check / Open Questions

Slicing:

Yogendra: "#1. A10 FW is up and running now. Kaloom team need to share the IP details for N6 interface and other IPs belonging towards trusted and non-trusted n/w. #2. SMF and UPF connectivity debugging is ON (Jamie, Rajat, Yogen, RP) are looking into it.

Rebaca pieces being installed: Abot, Video Client, Video Server.

1 Ingress (UPF to FW) to A10, 1 Egress (FW to Video Server) to A10. Open Item: Need to know interface IP (to be provisioned for testing). Jamie: Would like to deploy A10 on Server 11. Sveto: On Egress, connect with Rebaca video server. Raja: Talked through the connections. At minimum 2 interfaces to meet on ABot. (Raja/Samit). Jamie to share network information. SMF and UPF connectivity been made, not tested a session.

Step 1 Testing: Video Session. N1, N2, N3 on different VLANs. Proposal: Separate call to cover details. Will also require ONAP Slice integration. Rajendra to schedule (once basics in place). Ganesh: Add to original diagram – meld into 1 picture.

RAN:

Sam: "I've tested the new ACC100 card installed on the platform and everything is working properly. I'm running stability test with FlexRAN+ORAN-FH and will debug any issues, but we are now ready to integrate with L2. Thanks."

Running Stability: L1 working as expected, integrating with L2. Once radio arrives, additional testing once integrated with full stack and radio.

Amit/Sveto: "We are now through with the ADMIN rights and can get the OpenVPN access to our official laptops. But, unfortunately the QR code is showing as INVALID.

Sveto: Looking to connect master clock this week with instructions from Hanen:

Amit: CU/DU binaries. Need to fix QR code issue. (Martin helping on this piece). Need the clock for E2E connection.

Radio:

Per Hardik: "We are planning to ship the radio units to Kaloom lab this week."

Emulator/ Rebaca:

From Slack (Yesterday) Amar:

We had a call with Rebaca about our slicing demo ideas. They are generally quite positive on the video related possibilities. We decided that it makes sense to take this step by step:

- Get Rebaca spun up in the Montreal lab — we can discuss this tomorrow
- Show a demo with their video client and server; initially the "bad" slice and "good" slice demos will be sequential
- Then we can show the "bad" slice and "good" slice in parallel
- We can replace their video client with a drone or something like that over an IP connection (that can be wifi)

Timeline:

Final Testing and Configuration: 27 Jul 2021 - 10 Sep 2021 (Sept 10 ambitious, keep for now to keep things moving)

Presentation Development: 13 Sep 2021 - 01 Oct 2021

Slideware/script/video(s)/animation

ONE Summit: 11 Oct 2021 - 12 Oct 2021

Louis: Have we made up any ground on our timeline? Is Sept 10th a possibility? Sveto: On the the radio side, we need to make up ground. Anything else. Plan B: Show as fancy a slicing demo as we can (still on track).

Video Capture platform options (Louis)- (Loom, Ezvid, FreeCam)

Other:

REMINDER: "Document as you Build" approach would help expand our options.

NExt Week: Brandon OOO. Louis to lead the call.

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Status Check / Open Questions

ONE Summit Keynote Planning Call:

Seeing up a separate, stand alone call to start scoping out the keynote presentation, e.g.

- How do we show the builds/CNF onboarding?
- How do we show slicing? What's running on each slice?
- How do we show telemetry data?
- What can we do with the new radio that we couldn't do before (E2E)?

Currently proposing Friday or Monday. Interested in joining? Take the Doodle Poll here:

<https://doodle.com/meeting/participate/id/BeX6MMIb>

Slicing / RAN/ Radio:

Getting A10 FW set up. Rajenda: Connecting to UPF and Data Network. Rajat. How to work in the simulator? Need to connect to the internet? Kubecon demo was crossing the cluster. Amar: This same demo we will also use for E2E. Samit: Sending traffic toward A10, Rebeca simulator, video server on internet side fo Firewall. Jamie: Deploying system on Cluster 1/Custer 2. Same GNB address or different? 2 Slices of the same UE? Soumya: UE to slice 1 (high-quality), slide 2 (low-quality). Can be the same GNB. Idea: Same UE. 2 videos at the same time using parallel call flow. Samit checking if video client ca render data from video server at same time. Video server location? Sveto: Do we have enough spare capacity on cluster to run it. Yogendra: Data in cluster 2 (one server)? Raja: We need 3 VMs. What resources can you provide? Sveto/Hanen to check on capacity and if it can be expended (perhaps 1 free UE). How much is required? Boris: We may have resources? Is there a networking diagram? Yogendra showed the latest diagram. Boris+Sveto to connect offline with Hanen. Note: Labs are connect with Turnium SD-WAN. Next steps: Spread into 3 parts. Adding video server. Another option could be LaaS. Latency challenges? What levels of throughput are required for the simulator/video traffic? 400 Mbps. Yogendra: setting up the parameters with Rajat /Jamie. Rebeca VMs require 8 cores and 16GB RAM per VM. Might not be able to run on the clusters. 3 VMs needed (vCPUS). 100G disk size should be good. We likely have enough. Hanen/Sveto to confirm. Networking: Need to connect with core and UPF, A10 FW, and routing. Video client VM. Abot should have 2 interfaces. Is there a diagram for the VMs? Can we share the diagram more widely? Rebeca to share latest for minutes and slack channel.

Yogendra: Slicing updates:# Two slices configuration is now completed in MTL cluster01 for NGC under namespace ns-ngc. Ready for integration with Kaloom's UPF.

A10 deployment done in MTL cluster01 under namespace ngfw, pod started to comeup, some more changes required for network-attachment.

Next Steps:

Kaloom's UPF and NGC config update by respective teams for slice-blue and slice-red.

Rebeca integration with NGC (respective teams to take this forward).

[Yogendra shared a demo network diagram](#)

Sam: I've tested XRRAN FH with FlexRRAN v21.03 on the Lenovo server at Kaloom's lab and is working properly. There is an issue with the accelerator, so I'm using SW FEC for now. I will send a replacement board to Sveto to swap out the Pomona Lake ACC board. I don't have any UL traffic to test with XRRAN FH, but L1 link to FH NIC is good at this point.

We can start the L2 integration when you are ready. Thanks

Amit: Sam has updated version on server. Ready with CU/DU binaries. Making some changes and will integrate with L1. Sveto: Has Sam shipped the new FPGA? For the RU part, they were going to test and ship. Need to check in with Hardik. Brandon/Sveto to check in with Hadik from GenXcom.

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