# LFN Governing Board Meeting

Day 2 - (Oct 20) Project Reviews

LF NETWORKING

THE LINUX FOUNDATION

# Meeting Bridge Information

**https://zoom.us/j/95697559890?pwd=TmNjemZRMno0UDc4TDIzREE4YTBuQT09**

Meeting ID: 956 9755 9890
Passcode: 584917

One tap mobile +16699006833,,95697559890# US (San Jose)

Dial by your location +1 877 369 0926 US Toll-free

Find your local number: https://zoom.us/u/antyJfnVz

# Antitrust Compliance Notice

Meetings of the LF Networking Fund involve participation by industry competitors, and it is the intention of the Project to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of and not participate in any activities that are prohibited under applicable U.S. state, federal or foreign antitrust and competition laws. Examples of types of actions that are prohibited at LF Networking Fund meetings and in connection with LF Networking Fund activities are described in the The Linux Foundation Antitrust Policy. If you have questions about these matters, please contact your company counsel or Andrew Updegrove, of the firm of Gesmer Updegrove LLP, which provides legal counsel to The Linux Foundation.

Linux Foundation Antitrust Policy: https://www.linuxfoundation.org/antitrust-policy.

# Agenda PT, Day 2 Strategy Meeting, Technical Projects

| | | |
|---|---|---|
| 06:00 | TAC | Jason Hunt, LFN TAC Chair, Distinguished Engineer, IBM |
| 06:15 | ONAP | Catherine Lefevre, AVP Network Cloud and SDN Integration, AT&T |
| 06:45 | Anuket | Al Morton, Lead Member of Technical Staff, AT&T |
| 07:15 | ODL | Guillaume Lambert, Network & Software Engineer, Orange |
| 07:30 | FD.io | Ed Warnicke, Distinguished Engineer, Cisco |
| 07:45 | TF | Szymon Gołębiewski,  Senior Engineering Manager, Codete |
| 08:00 | XGVela | Qihui Zhao,  NFV Researcher & Network Engineer, China Mobile |
| 08:15 | ODIM | Bob Monkman, Director, Networking Open Source Strategy, Intel |
| 08:30 | 5G Super Blueprint | Heather Kirksey, VP Community & Ecosystem, LFN |
| 08:45 | EMCO | Bob Monkman, Director, Networking Open Source Strategy, Intel |
| 08:50 | L3AF | Karan Dalal, Sr. Engineering Manager, Walmart |

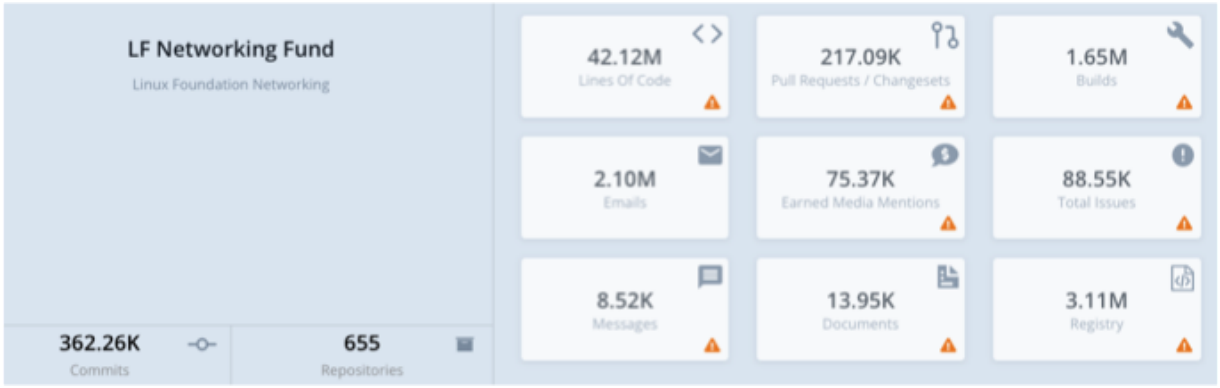
# TAC Input and Strategy

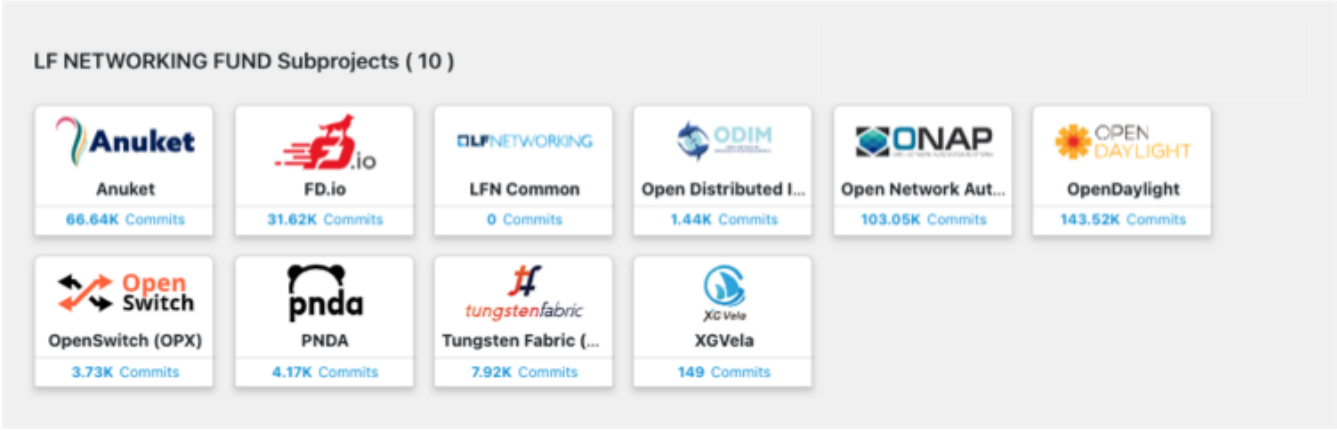
THE LINUX FOUNDATION
LF NETWORKING

# TAC Overview

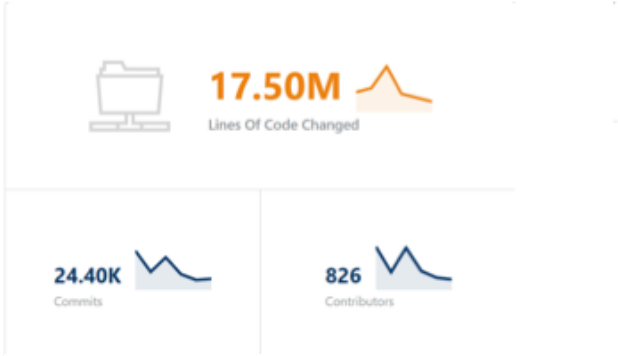
- 2022 Priorities
  - LFN Badging and Recognition program
  - Foster deeper cross-project collaboration initiatives
    - Security forum
    - Whitepapers
    - Software supply chain
    - 5G Super Blueprint
- Governing Board help needed
  - Encourage and incentivise upstream developer contributions to community projects and cross-project initiatives

# LFN Insights (Lifetime Stats Cumulative)

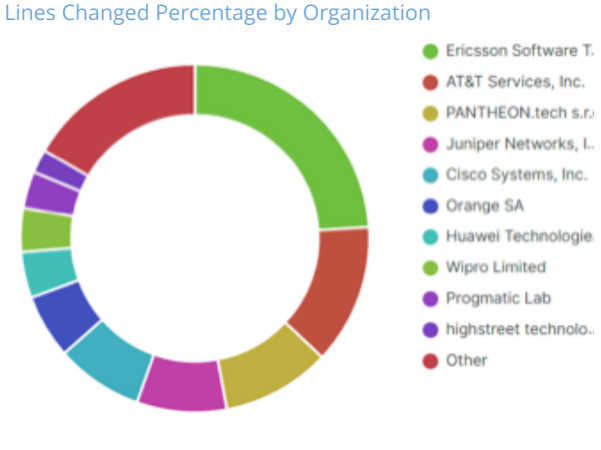


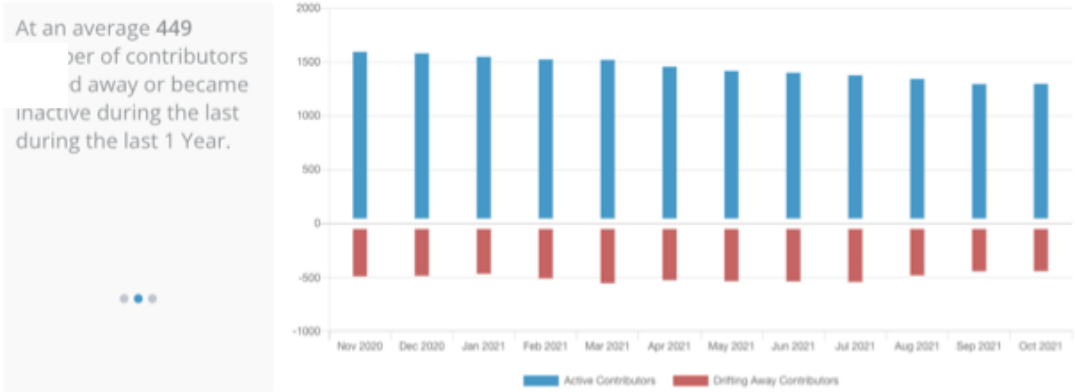



# LFN Insights (Past 12 months)





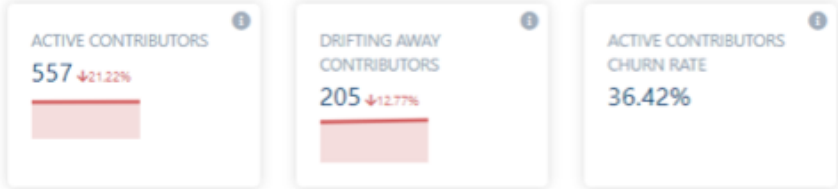


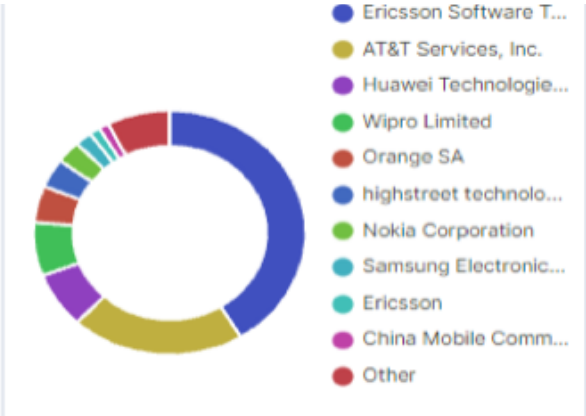
# Common Stats: ONAP (Past 12 Months)


## Contributor Growth And Retention

The aggregated count of unique contributors that are active and drifting away for each time interval selected. A contributor performing code activity (Commits,PRs/Changeset) within the last 1 year is marked "active" whereas a contributor not performing any code activity in the last 6 months is marked "drifting away".




Lines Changed Percentage by Organization

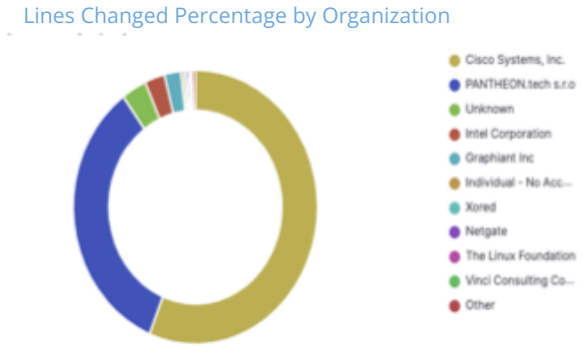



LFX Insights

The average count of active contributors was 624 during the last 1 Year.

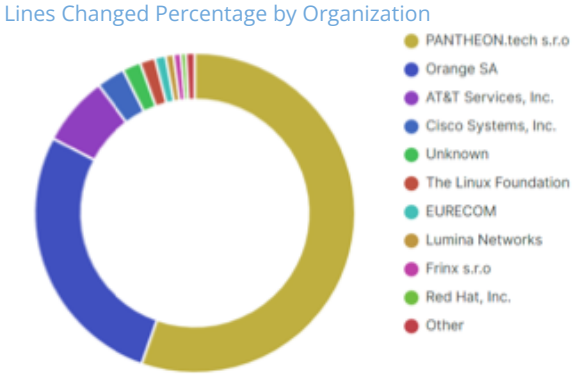
# Common Stats: Anuket (Past 12 Months)





# Common Statistics: ODL (Past 12 months)



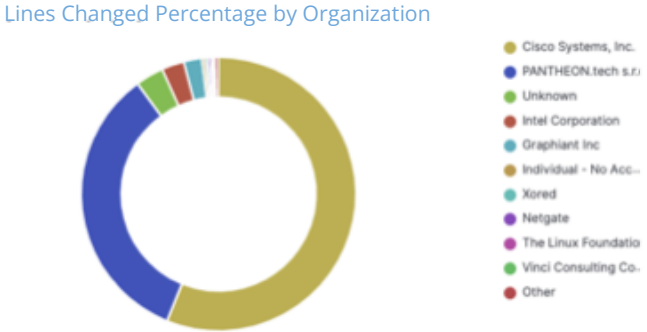



THE LINUX FOUNDATION

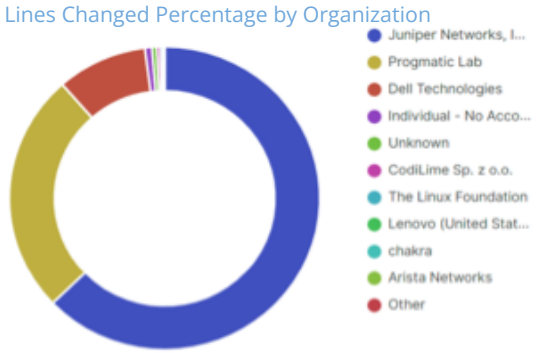
LF NETWORKING

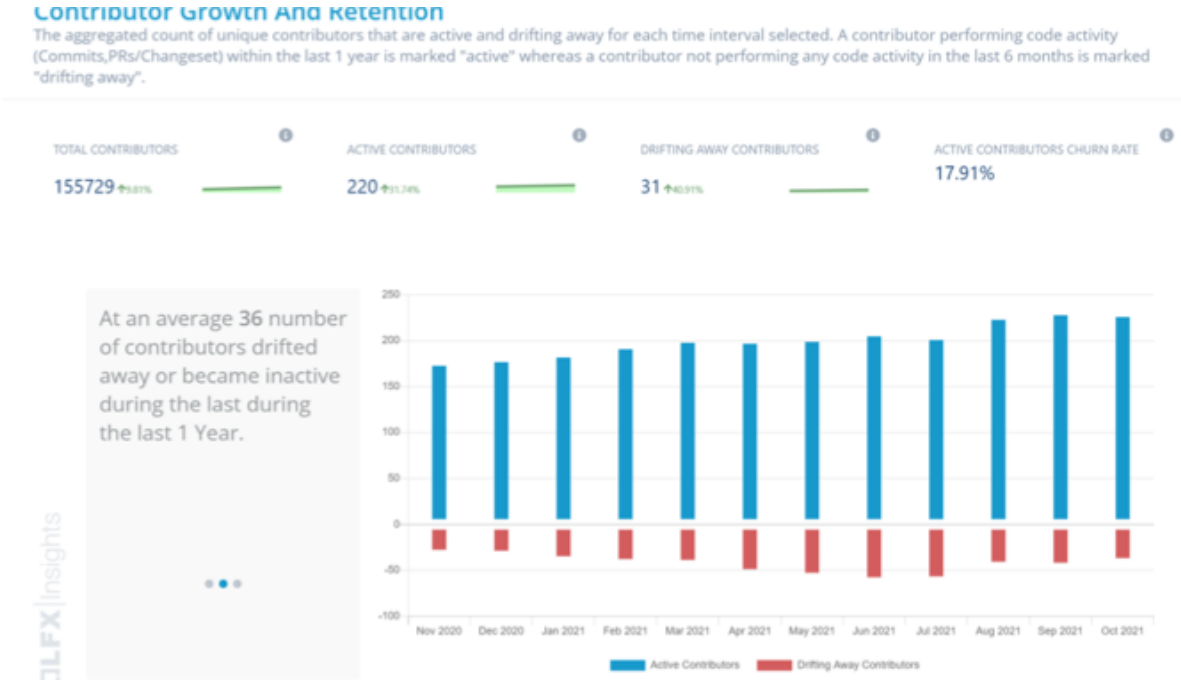
# Common Statistics: FD.io (Past 12 months)



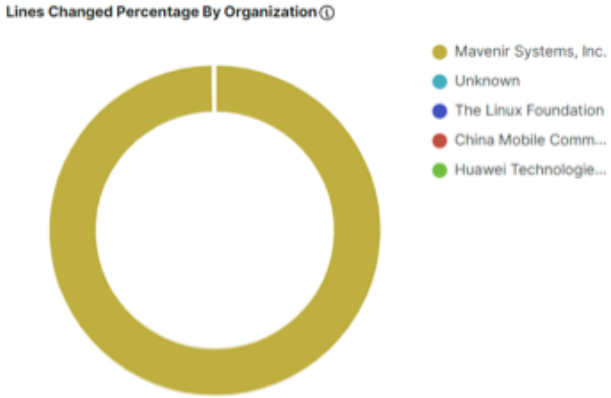


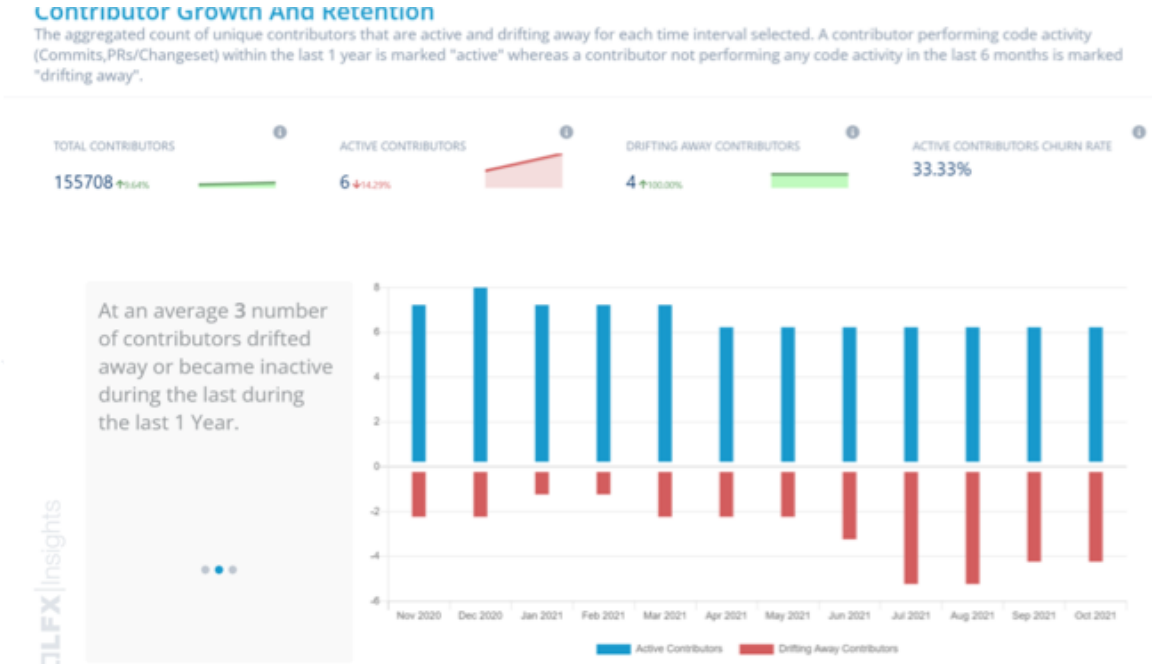
# Common Statistics: TF (Past 12 months)

# Common Statistics: XGVela (Past 12 months)


THE LINUX FOUNDATION

LF NETWORKING

# Common Statistics: ODIM (Past 12 months)

396.44K

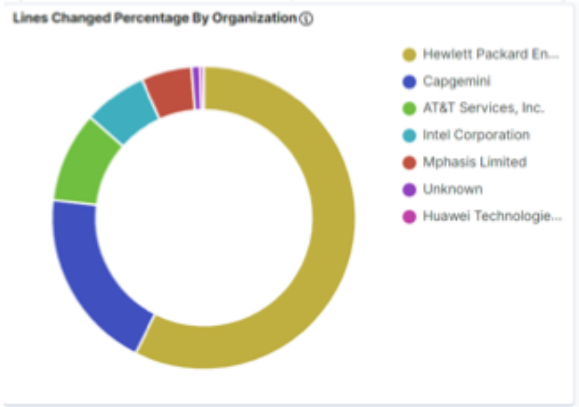
Lines Of Code Changed

975

Commits

32

Contributors

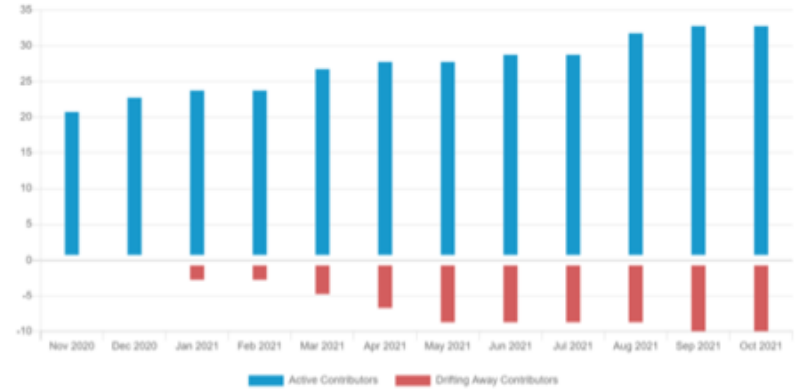



## Contributor Growth And Retention

The aggregated count of unique contributors that are active and drifting away for each time interval selected. A contributor performing code activity (Commits,PRs/Changeset) within the last 1 year is marked "active" whereas a contributor not performing any code activity in the last 6 months is marked "drifting away".

| TOTAL CONTRIBUTORS | ACTIVE CONTRIBUTORS | DRIFTING AWAY CONTRIBUTORS | ACTIVE CONTRIBUTORS CHURN RATE |
|---|---|---|---|
| 135599 ↑6.24% | 32 ↑60.00% | 10 ↑400.00% | 11.11% |

At an average 7 number of contributors drifted away or became inactive during the last during the last 1 Year.




LFX Insights

THE LINUX FOUNDATION

LF NETWORKING

# ONAP GB Update

THE LINUX FOUNDATION
LF NETWORKING

# 2021 Project Objectives

- Define/Implement new TSC Composition
- Implement New Release Cadence Strategy
- Rationalize ONAP Projects
- Engage TSC members as liaison(s) with other LF projects, OS communities & SDOs
- Define/Implement our CNF/Cloud Native Roadmap
- Leveraging ONAP proven automation capabilities beyond the Network domain i.e. Enterprise/Vertical Market
- Formalize ONAP as key player in open RAN (used by the O-RAN-SC SMO)
- Promote “What We Have Done” & “How We Collaborate with Others”
- Secure Integration activities (People, Environment)

# Progress Against the 2021 Objectives

- Define/Implement new TSC Composition Done
- Implement New Release Cadence Strategy Done
- Rationalize ONAP Projects Partial (Implemented 'Unmaintained" Projects)
- Engage TSC members as liaison(s) with other LF projects Done
- Define our CNF/Cloud Native, Enterprise/Vertical Roadmaps Done
- Formalize ONAP as key player in open RAN – Partial Technical approval but not at the ORAN-SC TOC Level
- Secure Integration activities (People, Environment) Done
- How to attract new contributors (Doc, Integration, OOM, etc.) Partial - Input into TAC Badging Proposal

# Metrics (Sep. 30, 2020 - Sept. 29, 2021)

**5**
Releases
3 Major
2 Maintenance

**38**
Contributing Organizations

**374**
Contributors

**10.63M**
Lines of Code Changed

**~17K**
Builds

**23**
Active Projects

# 2022 Project Objectives

- Pursue ‘Unmaintained” Project recommendation implementation
- Accelerate our CNF/Cloud Native & Enterprise Roadmaps
- Migrate to Gitlab
- Promote “What We Have Done” (Webinars, Trainings, Demos, Certifications) & “How We Collaborate with Others” & Rewards
- Implement TAC Badging Proposal
- Continued evolution to leverage emerging technologies to support DMAAP/DCAE, CNF-O Transformation, ONAP package for SMO, etc. and IBN, 5G/Network Slicing Use Cases.

# Key Call Outs for the LFN Governing Board

- **What is working well**
  - No human conflict, only different opinions
  - Quality improvements by investing in CI/CD innovations such as our Gating Process
  - Continuously improving interoperability with SDO synergy
- **What we need to improve**
  - Accelerating our CNF/Cloud Native & Enterprise Roadmaps
  - Promoting “What We Have Done” & “How We Collaborate “
- **Where we need help from the GB**
  - Continuous budget to ensure 24/5 support availability for ONAP toolchain regardless of a developer’s local region (EMEA, APAC, NAR)
  - Formalize ONAP as key partner @ O-RAN SC TOC Level
  - How to connect with Google, Walmart?
  - Additional infrastructure budget to expand our MS Azure Gating
  - Additional company support focusing on non-functional requirements (Security, Integration, OOM)

# Anuket GB Update

THE LINUX FOUNDATION
LF NETWORKING

# Progress Against the 2021 Objectives


COMPLETED:

› 2021/Transition TSC Seated
› Branding/logo/look-and-feel
› Finalize top-level org struct.
› Retain Dev Project and Specification workstreams
› Expanded Release process (for Lakelse, Dec 2021)
› Wiki/tool migrate > anuket.io
› Approval of Revised Charter

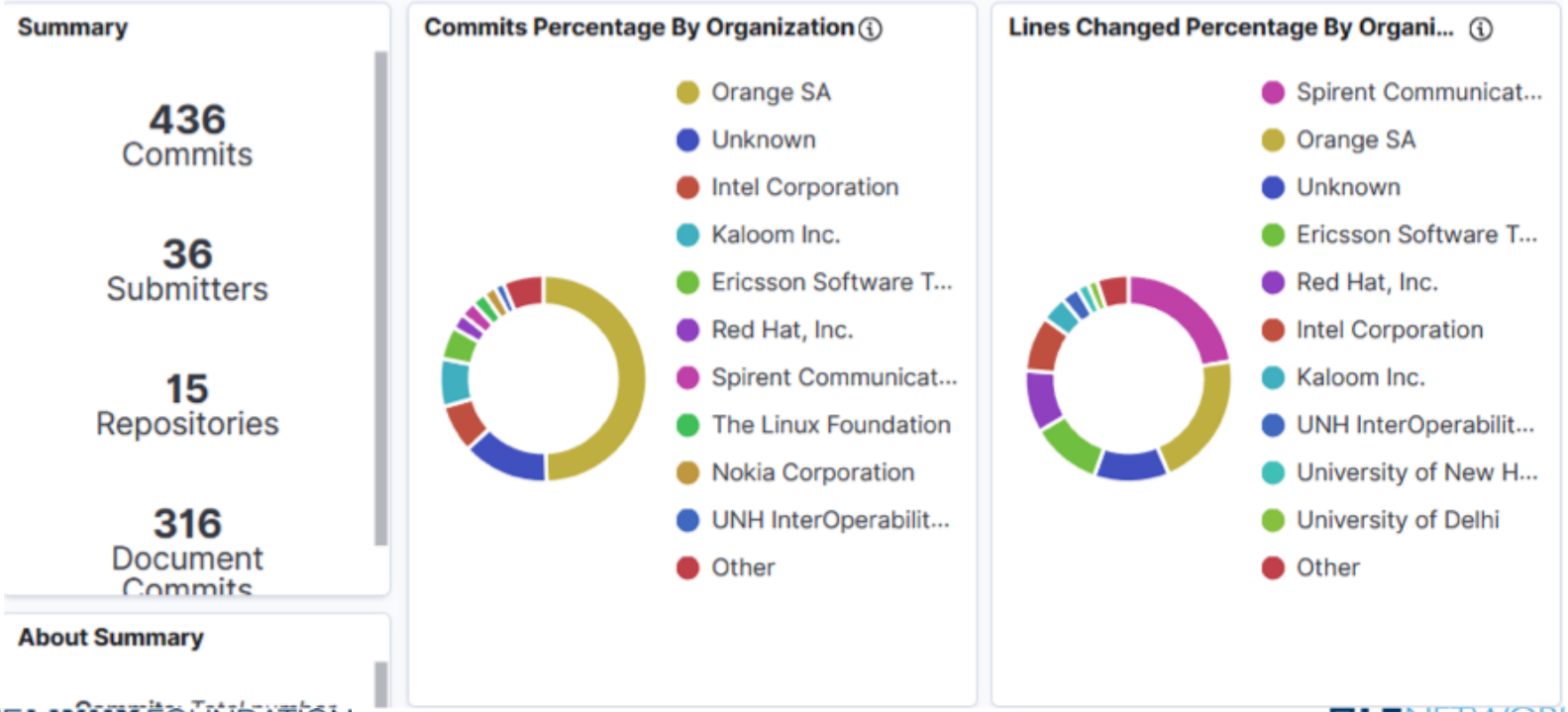
PLUS

› New Dev Project = Thoth: AI/ML for NFV use cases
› 3 Projects used GitLAB
› Successful Intern program + Student Volunteers
› PM change has been smooth

› Continuing Interaction with GSMA, ETSI NFV, MEF and LFN EUAG
› Elections for 2022 TSC and Leadership in-progress

# Metrics (Sep. 30, 2020 - Oct. 1, 2021)

1-year Summary from Insights (No data from for Confluence)



# 2022 Project Objectives (Strategic or Technical)

- Two Releases on 6-month Cadence: “M” and “N”=Nile
- Grow the active technical community
- Continue Tools and Artifact conversion and evolution
- Validation of the Anuket project
  - Can the EUAG fill the role of supporting and validating the requirements?
  - Establish whether RC Test Case Lists are sufficient or whether more information is needed (e.g., requirement traceability)
- Link RCs and Anuket Assured: Extend documentation to make it easy to operate test cases as part of the program

# Key Call Outs for the LFN Governing Board


- **What is working well**
  - Communications, Spirit of “all-brains-on-deck” in a crisis
  - Merged community operates and collaborates well
- **What we need to improve**
  - Overall need more support for Workstream and Development Project activities
  - RC1-2 workstreams understaffed, req. traceability in RC2 (K8s) is down & PTL vacancy
  - Shifting GB Member priorities immediately affect subproject viability in many cases
  - Seeking: Better Marketing for Lakelse (Dec 2021); Broader participation (non-silo)
- **Where we need help from the GB**
  - Anuket Assured - needs confirmation of mission and support from board member companies to be successful (see “not working well”)

# OpenDaylight GB Update

THE LINUX FOUNDATION
LF NETWORKING

# 2021 Project Priorities

- Publish ODL Docker
- Publish ODL Helm Chart
- Improve developer documentation
- Update and maintain ODL Architype
- Infrastructure Optimization
- Continued enhancements for scalability, stability, security & performance (S3P)
- Attracting more developers - Particularly from the companies which use, sell and deploy ODL

# 2021 Project Accomplishments

- Improved developer documentation
- Dramatically improved CSIT testing, reducing overall costs
  - Optimized job run times to balance workloads
  - Improved job efficiency to reduce resource consumption
- Completed migration from MediaWiki to Confluence
- New contributors to the development community
- Pruned legacy code
- Improved memory footprint
- Improved RESTCONF compliance and features

# 2022 Project Priorities

- Continue to optimize infrastructure to improve build efficiency and performance.
- Attracting more developers - Particularly from the companies which use, sell, and deploy ODL.
- Introduce BGPLS and ODL-Micro into the formal deployment. (longshot)
- Continued enhancements for scalability, stability, security & performance (S3P)

# 2022 Project Priorities (cont.d)

- 30% reduction of YANG Tools memory footprint
- Improvements to NETCONF scalability
- Improvements to RESTCONF capabilities and scalability
- Packaging improvements

# Key Call Outs for the LFN Governing Board

- **What is working well**
  - Release cadence continues to be on time
- **What we need to improve**
  - The chat services and blue ocean maintenance delay
- **Where we need help from the GB**
  - While key areas of development are still being maintained, development resources are stretched dangerously thin. Need new development resources assigned specifically to core services.

# FD.io GB Update

THE LINUX FOUNDATION
LF NETWORKING

# FDIO SPC Priorities & Feedback - 2021

2021

## Priorities

1. Content: Highlight usage and deployment, elevate positioning
2. Container Integration with CNCF projects
3. Continue Perf and testing evolution across 2021 releases

## Collaboration Requested

1. CNCF projects
2. OVP/CNTT potential

## Key Highlights from 2020 spreadsheet

1. Marketing - Increase Project Specific Marketing –eg Tech Whitepaper, Digital,
2. Dev Collaboration – High – maintain course, new hardware CSIT, Documentation
3. LF Resources – the same

# Progress Against the 2021 Objectives

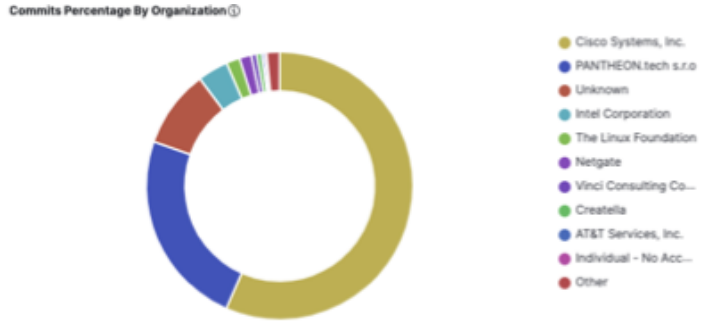
- Governance: TSC Evolution:
  - Reworked TSC Composition Governance
  - +2 Committer at Large Reps
  - +1 PTL (CSIT)
- Marketing: Webinars:
  - VPP in your home lab? Yep. Right now.
  - How to build Secure Terabit Network Services with FD.io technologies.
  - Calico/VPP : Kubernetes networking with boosters
- Continued Release Cadence: 20.09, 21.01, 21.06, 21.10
- Upstream Community Engagement
  - Calico/VPP
  - Network Service Mesh [CNCF]
- Lab Expansion:
  - Formalizing Lab Contribution Policy
  - Upgraded Lab
  - Expanded into Virtual Testing using Amazon Infra
- Optimized CI Infrastructure to reduce costs

# Progress Against the 2021 Objectives: Performance

| IPsec Encryption and Decryption | | | |
|---|---|---|---|
| FD.io Data Plane Efficiency<br>Metrics: { + } higher is better<br>{ - } lower is better | YESTERDAY | TODAY | |
| | Intel® Xeon® 6252N | Intel® Xeon® 8360Y D stp | Improvement |
| { + } 2 Socket forwarding rate [Gbps] | 460 Gbps | 1000 Gbps | **+117 %** |
| { - } Cycles / Packet | 1147 | 612 | -47 % |
| { + } Instructions / Cycle | 2.89 | 2.96 | +2 % |
| { - } Instructions / Packet | 3313 | 1815 | -45 % |

| IPv4 Routing | | | |
|---|---|---|---|
| FD.io Data Plane Efficiency<br>Metrics: { + } higher is better<br>{ - } lower is better | YESTERDAY | TODAY | |
| | Intel® Xeon® 6252N | Intel® Xeon® 6338N | Improvement |
| { + } 2 Socket forwarding rate [Gbps] | 640 Gbps | 1200 Gbps* | **+88 %** |
| { - } Cycles / Packet | 139 | 124 | -11 % |
| { + } Instructions / Cycle | 2.90 | 3.29 | +13 % |
| { - } Instructions / Packet | 405 | 409 | +1 % |

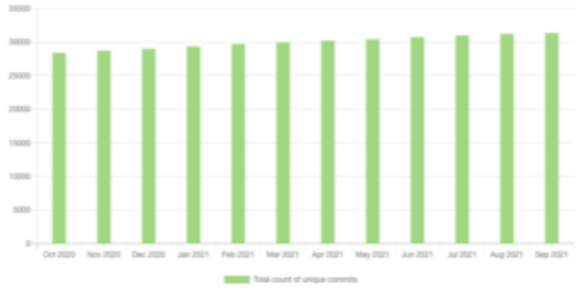
# Metrics (Sep. 30, 2020 - Oct. 1, 2021)




## Commits Growth

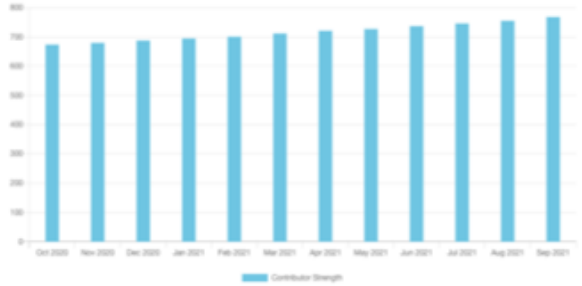
The growth in terms of the aggregated count of total number of unique commits during the selected time period.

An average of 30.04K commits were pushed by active code contributors during the last 1 Year.



## Contributor Strength

The growth in the aggregated count of unique contributors analyzed during the selected time period. A contributor is anyone who is associated to the project by means of a commit or any activity on PRs/Changesets/Issues.



The contributor strength **increased** by **13%** during the last 1 Year.

# 2022 Project Objectives (Strategic or Technical)

- Continue Release Cadence
- Physical Mini-summit (if possible)
- Expanding Testing Coverage into latest generation chips and virtual
- Continued outreach and collaboration with other Open Source Communities
- Continue and expand webinar series
- Continue internship program
- Rework website

# Key Call Outs for the LFN Governing Board

- **What is working well**
  - CSIT Lab
- **What we need to improve**
  - End user engagement from deployment/consumption perspective
- **Where we need help from the GB**
  - 2022 Lab Funding Request
  - Encourage engagement and visibility by ‘non-contributing’ consumers
    - Blog Posts/Webinars/Public Acknowledgement

# Tungsten Fabric GB Update

THE LINUX FOUNDATION
LF NETWORKING

# 2021 Project Priorities

- Increase communication regarding the development of TF features and bugs in TF JIRA
- Build procedure, and test/CI documentation is written down and it's stored in docs.tungsten.io
- Establish clear documentation of where release artifacts are stored, and the process for managing release artifacts (docker hub etc.) in docs.tungsten.io
- Engage PTL's responsible for the development of new features to ensure documentation for new features adhere to milestone requirements, and follow project procedures.
- Ensure all documents/blueprints/tests/code added to TF repo doesn't use naming other than Tungsten Fabric/TF
- Improve TF unit test coverage and establish test automation criteria in development process
- Actively manage marketing channels (twitter, linkedin etc.) through TF TSC and marketing SPOC
- Establish predictable project roadmap for upcoming releases

# 2021 Project Accomplishments

- Dramatic improvement in project documentation
- Gerrit, Single Sign On, EasyCLA, self-service committer management implementation
- Established release cadence and new release process
- Fostered initial cross community collaboration
  - Akraino, Anuket

# 2022 Project Priorities

- Maintain cadence of release and process compliance through 2022
- Lower barriers to entry through more/better quickstart documentation
- More active participation in Blueprint activities
  - 5G Super Blueprint
  - Akraino
  - Anuket
- Build community of diverse contributors and users

# Key Call Outs for the LFN Governing Board

- **What is working well**
  - Release cadence is being maintained, and release milestones are being achieved
  - Migration of docs/CI has been successful
- **What we need to improve**
  - Participation of PTL / feature developers in community activities (meetings, slack discussions, etc.)
  - Challenges attracting a developers from a diverse set of organizations
- **Where we need help from the GB**
  - Increasing awareness of Tungsten Fabric across the portfolio of LFN projects.

# XGVela GB Update

THE LINUX FOUNDATION
LF NETWORKING

# 2021 Project Priorities

- Enter LFN as Sandbox project
- Release 1
  - Architecture Doc
    - Complete General PaaS and Telco PaaS feature definition
    - Define PaaS framework and PaaS capability integration mechanism
  - Code
    - Generate PaaS prototype with seedcode
- Demo

# 2021 Project Accomplishments

## Within the plan

- Enter LFN Sandbox -- *Completed*
- Release
  - Architecture Doc -- *Completed (Under review)*
    - Integration mechanism not covered
  - Code
    - Runnable seedcode -- *Completed (CMaaS will use open-source solution for Netconf in next release)*
    - Developer guide -- *70% (Need reorganize)*
    - Prototype -- *40% (Features are set but integration has not start yet)*
  - Use case
    - Started with network slicing -- *20%*

## Beyond the plan

- Cross community collaboration
  - Anuket & XGVela joint PaaS Survey -- *Complete*
  - ITU standard: cloud native PaaS reqts -- *in progress*
  - ETSI standard: EVE019 & new standard (OAM as PaaS) -- *in progress*
  - TM Forum Open Digital Architecture (ODA) -- *in progress*
- Establish use case sub working group -- *in operation*
- Summit speech to promote XGVela:
  - LFN DTF: 9
  - Open Infrastructure Asia: 1
  - GOTC: 1
  - ONES : 2

# 2022 Project Priorities

- Open-source Netconf solution for CMaaS (Netopeer?)
  - CMaaS now requires ConfD as NetConf server which is a commercial solution and missing in release 1 code. For Release 1, XGVela team use ConfD integration instruction to replace actual ConfD code. For next release, an open-source solution would be implemented.
- CI/CD pipeline
  - XGVela now lacks a CI/CD pipeline for developers to easily build environment and play with the code, which is planned to be solved in 2022.
- Prototype build
  - XGVela functionalities integration with General PaaS implementations to build complete prototype.
- Demo involves seedcode + CNF + ONAP
- Continuously Telco PaaS functionality and Adaptation Layer exploration

# Key Call Outs for the LFN Governing Board

- **What is working well**
  - -- Good support from LFN project managers: Louis and Casey.
  - -- Cross community & SDO collaboration
- **What we need to improve**
  - -- Lack CI/CD pipeline and stable environment for developers to play
- **Where we need help from the GB**
  - Long term available servers

# ODIM GB Update

THE LINUX FOUNDATION
LF NETWORKING

# 2021 Project Priorities

- Create industry traction
- Establish regular cadence of releases
- Deliver core functionality
  - Aggregation
  - Fabrics Support
  - BMC Emulator
  - Vendor Specific plugins (Dell, Cisco, etc)

# 2021 Project Accomplishments

- Regular release cadence
- Delivered core functionality
- Showcased demo at LFN Developer and Testing Forum

# 2022 Project Priorities

- Collaboration with OCP
- Add additional core functionality
  - Composition
  - Analytics
  - Telemetry
- Augment OCP Redfish profiles

# Key Call Outs for the LFN Governing Board

- **What is working well**
  - Release cadence
- **What we need to improve**
  - Industry traction
- **Where we need help from the GB**

# 5G Super Blueprint Initiative

THE LINUX FOUNDATION
LF NETWORKING

# 5G Super Blue Print

## Program Status

- High level timeline. Phases 1, 2. 3
- Use Cases
- Lab resources created/reserved
- Technical Gains to date:
  - ONAP Honolulu deployed
  - ONAP/Anuket integration
  - ….
- Next Steps (Placeholder)
  - Onboarding and orchestrating Magma onto KuD using ONAP
  - ...

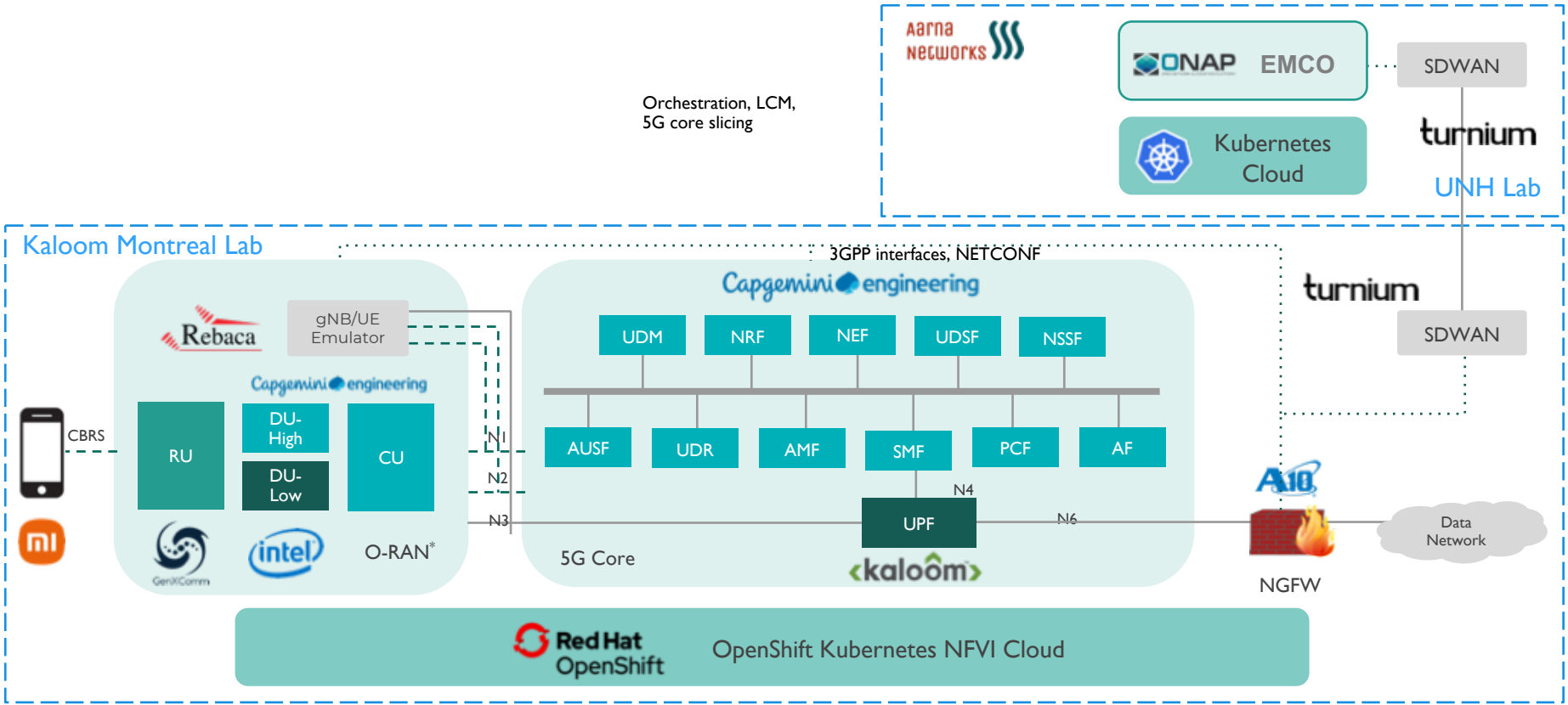
## Marketing Status

- Demo was showcased in Keynote and virtual pavilion during ONE Summit October 10-11

## Community Health

- Wiki: https://wiki.lfnetworking.org/display/LN/LFN+Demos
- Bi-weekly community meetings underway (Tuesday)
  - Typical attendance per meeting: 33 participants
- Mailing List Established: lfn-demo@lists.lfnetworking.org
  - Individual Participants: 127
  - Participating companies: 53
- Repos
  - Proposed upstreaming of code to ONAP source code repositories
  - GitHub for image, container, installation files
- Slack Channel: lfn-demo.slack.com

# Networking Innovation: Cloud Native 5G Blueprint Network Architecture



# Community Collaboration is Key

# Thanks: Participating Organizations










# Thanks! The People Are the Power

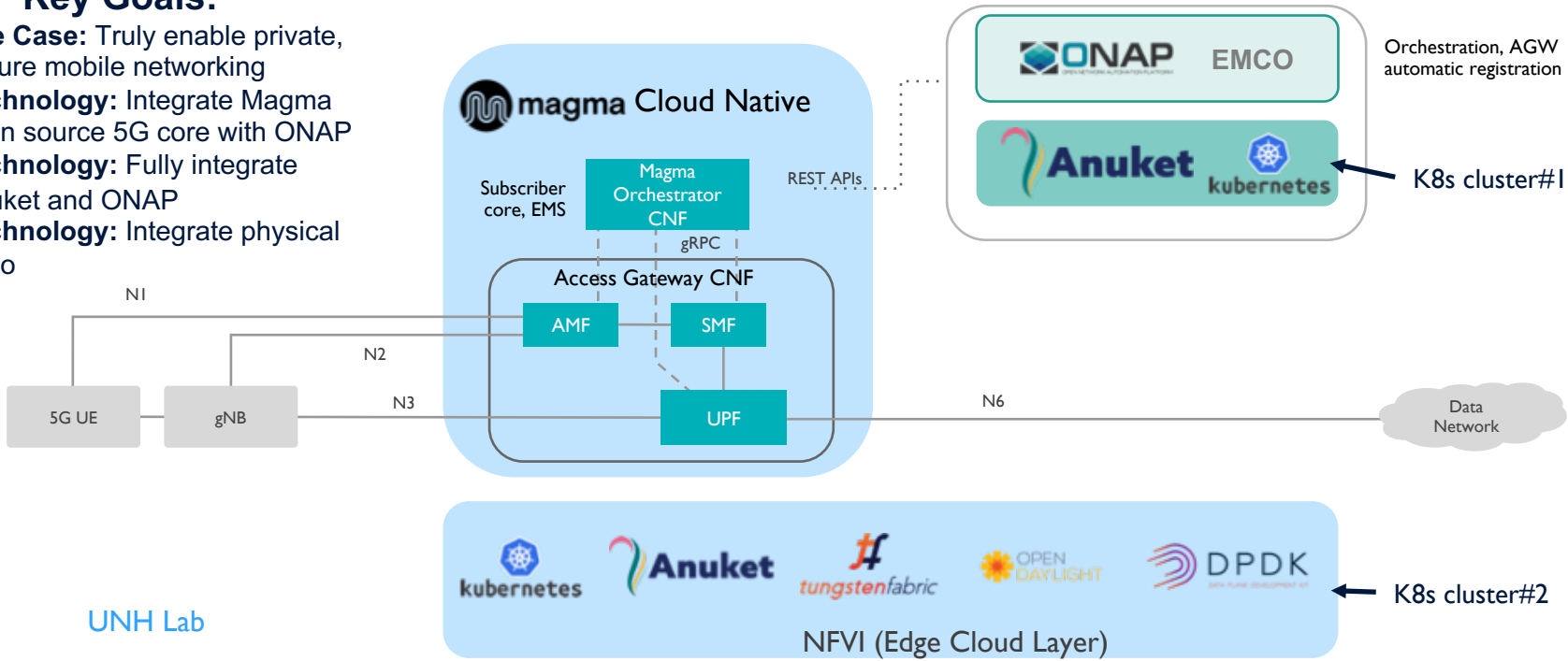
Raja Mittra, Rebaca
Samir Chatterjee, Rebaca
Soumya Pal, Rebaca
Pradnesh Dange, Rebaca
Indranil Chowdhury, Rebaca
Anindita Raychoudhuri, Rebaca
Amit Kapoor, Capgemini Engineering
Rajat Gupta, Capgemini Engineering
Utkarsh Makik, Capgemini Engineering
Rajarshi Haldar, Capgemini Engineering
Jacobus Venter, Kaloom
Jamie Liu, Kaloom
Martin Gignac, Kaloom
Dan Stroila, Kaloom
Ganesh Venkatraman, Kaloom
Per Andersson, Kaloom
Sveto Ignjatovic, Kaloom
Navandeep Singh, Kaloom
Robert-Jun Corpus, Kaloom
Konstantin Dunaev, A10
Yogendra Pal, Aarna Networks
Rajendra Mishra, Aarna Networks
Sriram Rupanagunta, Aarna Networks
Amar Kapadia, Aarna Networks
Sriram Vishwanath, GenXComm
Hardik Jain, GenXComm
Marco Hernandez, GenXComm
Marco Hernandez, GenXComm
Anand Gorti, Lenovo
Mark Wallis, Lenovo
Hanen Garcia, Red Hat
Dylan Wong, Red Hat
Nidhi Shivashankara, Intel
Sam Diep, Intel
Sandeep Panesar, Turnium
Josh Hicks, Turnium
James Oakley, Turnium
Boris Mimeur, CENGN
Lincoln Lavoie, IOL-UNH
Sawyer Bergeron, IOL-UNH
Brandon Wick, Linux Foundation
Louis Illuzzi, Linux Foundation

*Active participants for this version of the 5G Super Blueprint*

# 5G Super Blueprint Next Phase

## Key Goals:

- **Use Case:** Truly enable private, secure mobile networking
- **Technology:** Integrate Magma open source 5G core with ONAP
- **Technology:** Fully integrate Anuket and ONAP
- **Technology:** Integrate physical radio



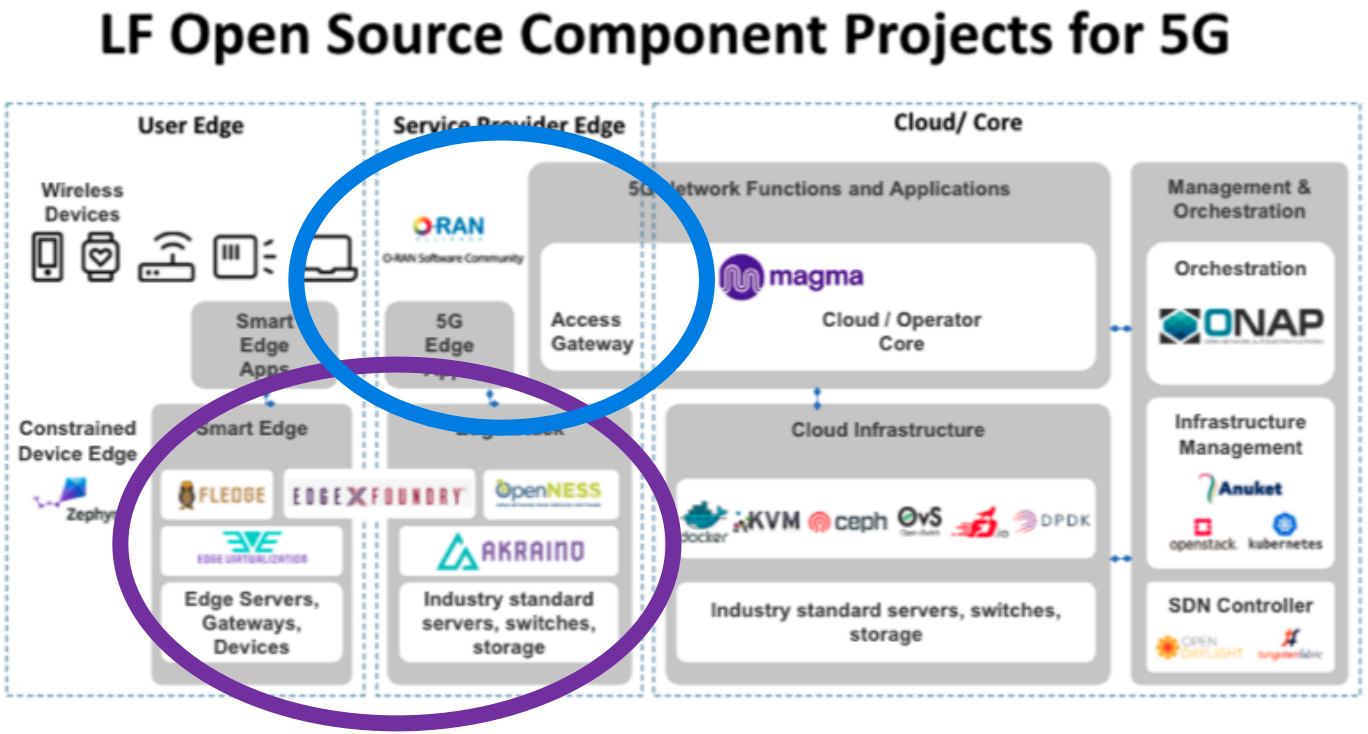
# 5G Super Blueprint: Future Phases

### 5G + IOT

- Full 5G and Edge IOT inter-networking
- Build upon private mobile networking to the Edge
- Fully enable use cases such as Smart Manufacturing and Retail

### Open RAN

- Integration with ORAN SC
- Deploy open source from the core to the radio
- Demonstrate end-to-end open source interoperability
- Set stage for future compliance activities



# Key Call Outs for the LFN Governing Board

- **What is working well**
  - High degree of participation
  - High level of technical expertise
  - Enabling cross-community relationships and integration
  - Daily stand-up on Slack
- **What we need to improve**
  - Documentation
- **Where we need help from the GB**
  - Continued active support (resource intensive initiative)
  - Access to spectrum if remotely possible
  - Documentation support (resource or $)

# New Project

# EMCO Board Update

THE LINUX FOUNDATION
LF NETWORKING

# EMCO

(logo design in progress)

## Program Status

- TAC Approved EMCO for LFN Induction on 09/22/2021: https://wiki.lfnetworking.org/display/LN/2021-09-22+TAC+Minutes
  - Next Step: LFN Board review and vote
- EMCO used in 5G Super Blue Print as a plugin in ONAP
- EMCO is consumer of multiple CNCF projects, namely ISTIO/Envoy, Prometheus, Jaeger, fluentD
- Featured Demo and Panel at ONE Summit
- Potential Collaboration: Deployment of Magnum across multiple clusters and connectivity among them
- Next Steps:
  - December 2021 Release: platform robustness, security, feature updates

## Community Health

- Technical Charter: Sept 02, 2021
- TSC established August 24, 2021 (11 Representatives)
- Seed code dropped September 21, 2021
- Website: https://emco-project.io
- Wiki: https://wiki.lfnetworking.org/display/EMCO/Welcome+to+the+EMCO+Wiki
- Mailing list: https://lists.project-emco.io/g/main
- Community size: 36 members (based on mailing list)
- 12 companies/entities represented in total
- >200 commits by 10+ contributors from Intel, Aarna Networks in 6 months prior to seed code drop
- Active, ongoing assessments with at least 4 ONAP member companies

# Pipeline Project

# L3AF Board Update

THE LINUX FOUNDATION
LF NETWORKING

## Program Status & Updates

- Technical Charter established on July 19, 2021
- Seed code made public on Oct 11
- L3AF introduced as an Open Source project on Oct 11 during One Summit keynote
- L3AF delivered Keynote and Breakout session at ONE Summit
- Press Release on Oct 11; Microsoft, Tech Mahindra, WiPro provided quotes
- 3-Part L3AF Blog released in August
- Delivered Technical Sessions at eBPF Summit (August)
- Infrastructure::
  - Mailing List
  - l3af.io
  - L3AF Wiki
  - L3AF Slack Channel: l3afworkspace.slack.com
  - Repositories: https://github.com/l3af-project

## Next Steps

- Build community
  - Connect with eBPF.io
- Establish TSC
- Prepare for LFN Induction (not there yet)
- Release planning

## Where we need help from the GB

- Increase awareness and promote community engagement

# Backup

THE LINUX FOUNDATION
LF NETWORKING

# 2021 Project Objectives

EMCO
(logo design in progress)

- Establish community, governance, and TSC
- Establish project infrastructure and tools
- Establish as an LFN project
- Releases planning for September (seed) and December
- Use case in 5G Super Blue Print

# Progress Against the 2021 Objectives

EMCO

- Establish community, governance, and TSC - completed
- Establish project infrastructure and tools - completed
- Establish as an LFN project -GB board approval pending
- Releases planning for September (seed) - completed
  - December release - tracking
- Use case in 5G Super Blue Print - tracking

## Collaboration

- EMCO used in 5G Super Blue Print as a plugin in ONAP
- EMCO is consumer of multiple CNCF projects, namely ISTIO/Envoy, Prometheus, Jaeger, fluentD
- Featured Demo and Panel at ONE Summit
- Potential Collaboration: Deployment of Magnum across multiple clusters and connectivity among them

# Metrics (Sep. 30, 2020 - Oct. 1, 2021)

EMCO

- Technical Charter: Sept 02, 2021
- TSC established August 24, 2021 (11 Representatives)
- Community size: 36 members (based on mailing list)
- 12 companies/entities represented in total
- >200 commits by 10+ contributors from Intel, Aarna Networks in 6 months prior to seed code drop
- Active, ongoing assessments with at least 4 ONAP member companies

# 2022 Project Objectives

EMCO

- Platform Robustness
  - Scale-out/Elasticity of EMCO
  - HA of EMCO
- Security
  - Extending ISTIO to secure E-W traffic among EMCO microservices
  - Private key security with TEEs.
- Features
  - Comprehensive traffic controller
  - MEC Support
  - Day 2 App Configuration
  - Integration with Service Assurance
  - More placement controllers

# Key Call Outs for the LFN Governing Board

EMCO

- What is working well
  - Experienced & knowledgeable community
  - Cross project collaboration
- What is not working well
  - Grow community
  - Production deployment
- Where we need help from the GB

# 2021 Project Objectives


- Establish L3AF as an LF project
- Establish community, governance, and TSC
- Establish project infrastructure and tools
- Establish as an LFN project
- Bring on strategic partners and Grow community

# Progress Against the 2021 Objectives

- Establish L3AF as an LF project - complete
- Establish community, governance, and TSC – in progress
- Establish project infrastructure and tools – in progress
- Establish as an LFN project – in progress
- Bring on strategic partners and Grow community – in progress
  - Working with Microsoft, Tech Mahindra, WiPro to onboard as contributing members

# Accomplishments (Sep. 30, 2020 - Oct. 1, 2021)

- Technical Charter established on July 19, 2021
- Seed code made public on Oct 11
- L3AF introduced as an Open Source project on Oct 11 during One Summit keynote
- L3AF delivered Keynote and Breakout session at ONE Summit
- Press Release on Oct 11; Microsoft, Tech Mahindra, WiPro provided quotes
- 3-Part L3AF Blog released in August
- Delivered Technical Sessions at eBPF Summit (August)

# 2022 Project Objectives

- Build community
  - Connect with eBPF.io
- Establish TSC
- Prepare for LFN Induction
- Release planning

# Key Call Outs for the LFN Governing Board

L3AF

- What is working well
  - Walmart technical expertise
  - Walmart resource support
- What is not working well
  - Community growth
- Where we need help from the GB
  - Increase awareness and promote community engagement

# End

THE LINUX FOUNDATION
LF NETWORKING