LFNETWORKING

2019 Year In Review

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2019 LFN Technical Community Metrics

11 Major Releases across all LFN projects

FD.io

Git Commits	Git Authors	Git Repos	Contributing Orgs	Approved Projects	Major Releases
3,204	**150+**	**25**	**20+**	**16**	**3**

ONAP

Git Commits	Git Authors	Git Repos	Contributing Orgs	Approved Projects	Major Releases
29,651	**577**	**225**	**40+**	**32**	**2**

OPNFV

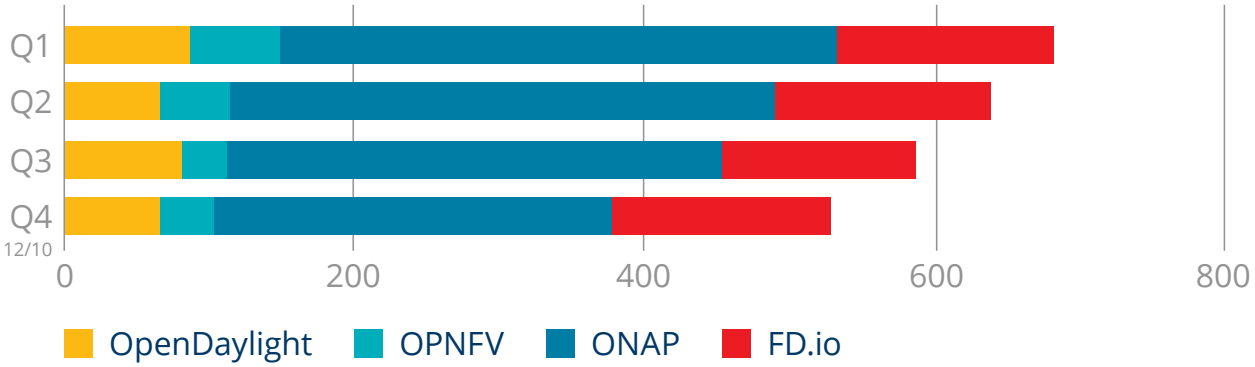
Git Commits	Git Authors	Git Repos	Contributing Orgs	Approved Projects	Major Releases
3,320	**88**	**31**	**20**	**38**	**1**

OPEN DAYLIGHT

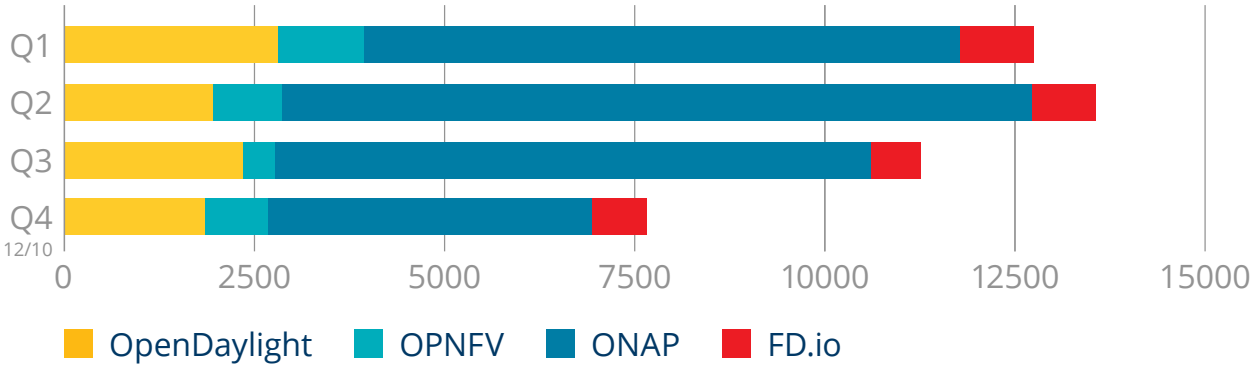
Git Commits	Git Authors	Git Repos	Contributing Orgs	Approved Projects	Major Releases
8,934	**145**	**46**	**16**	**91**	**2**

Note: As with many OSS projects, the maturity of instrumentation and automation around community metrics varies across the LFN project portfolio and therefore not all data may be available for inclusion in this report. All metrics include LF repo and tool chain activity. We anticipate all LFN projects (including Tungsten Fabric) moving to a common metrics platform in 2020.

Git Authors



Git Commits



Message from the LFN Board

Chris Rice, Senior Vice President, AT&T Labs; Chair, LFN Board of Directors

In the fourth quarter of 2017, the decision was made to combine a variety of key Linux Foundation initiatives under the LF Networking (LFN) project umbrella. The thought process at the time was that despite the success of the individual projects, combining them would provide the ability to better leverage the momentum that had already started, would better provide for synergies between different networking projects, and would enable service providers and enterprises to better redefine how networks are created and services delivered.

The results of the combined project have exceeded expectations, as we have 20 service provider members that represent over 70% of the world's mobile subscribers alongside the top 10 networking vendors; all of these folks are working toward a common goal of building better, more open networks in the future.

Further, the LFN Board has seen that all members, no matter what area they represent, realize that they must work in harmony to keep up with the changing needs of ever-evolving technology which impacts networking. Projects are working together, both within and outside of the LF, in a collaborative manner and in ways that we have not seen before within the telecommunications industry.

The Board anticipates that the new year will continue to build on success from last year including, increased training opportunities, more use cases on 5G cloud native networking, and on collaboration with GSMA to publish specifications for Common NFV Infrastructure, amongst other efforts.

The LF Networking team would like to thank all of our members for their efforts during this past year. We hope by working together and by fostering collaboration and innovation across the entire open networking stack, that we all benefit from

the innovation that we co-create. This innovation touches all aspects of the networking stack, from the data plane, within the management plane, into the control plane, and across orchestration, automation, and end-to-end testing.

We look forward to the contributions the entire team will make in 2020 and hope that, just like in 2019, we exceed all expectations on delivery of open technology.

Junlan Feng, Chief Scientist & General Manager of AI and Intelligent Operations R&D Center & Chief Scientist, China Mobile; Vice Chair, LFN Board of Directors

The year 2019 is waving good-bye to LF Networking (LFN), to ONAP, to all of our developers and members in this community. What have we jointly achieved? Do our efforts still tightly align with the LFN Mission: "Create a sustainable Open Source Networking ecosystem that fosters the greatest shared technology investment, fosters a developer community resulting in value and solutions that are the basis of communications."?

The answer is YES. We are on our track and pushing hard to create key components for the basis of telecommunications.

After being hyped for years and years, 5G became a reality in 2019. In 2019, LFN also established formal collaboration with 3GPP. Through this collaboration, we delivered the first implementation of an end-to-end slicing automation and management component for 5G networks as a reference for the industry. LFN also collaborates with the ORAN community to showcase the white-box solution for network functions and proposes an integrated operation and management architecture.

One differential feature of 5G is intelligence. Both individual and business customers are wanting an intelligent network in order to meet their expectations for 5G. With this market change, the Linux Foundation strengthens internal cooperation between LFN, LF Edge, and LF AI. LFN accomplished a reference implementation for data analysis and data acquisition for 5G.

Another trend in 2019 is the increasing deployment of SDN and NFV. To better support this strategic change, LFN formed a Common NFVi Telco Taskforce (CNTT) collaboration with GSMA. We are driving the effort towards a standard VNF and NFVi compliance and verification mechanism based on the technologies of ONAP and OPNFV.

As one of the key projects of LFN, ONAP continues improving its capabilities, architectures, and models as well as source code from various components. Five releases have been formally launched. Warm welcome to the newcomers! Welcome on board!

LFN is a growing community filled with infinite passion. Our mission continues.

2019 Governing Board

Ahmed Murad
Lenovo

Alan Clark
SUSE

Amol Phadke
Accenture

Andrew Aitken
Wipro

Cecilia Corbi
Telecom Italia

Chris Rice
AT&T

Chris Wright
Red Hat

Dave Ward
Cisco Systems

Eyal Felstaine
Amdocs

Ignacio Más
Ericsson

Jason Hunt
(TAC Board Rep)
IBM

Jie Hu
ZTE

Jonne Soininen
Nokia

Junlan Feng
China Mobile

Kevin Ryan
Arm

Lisa Lammens
Qualcomm Technologies, Inc

Manish Mangal
Tech Mahindra

Marisa Viveros
IBM

Matt Beal
Vodafone

Muhammed Ozhan
Türk Telekom

Rajesh Gadiyar
Intel

Randy Bias
Juniper

Robert Pippert
Reliance Jio

Sebastian Zechlin
Deutsche Telekom

Sohyong Chong
Samsung Electronics

Srinivasa Kalapala
Verizon

Sun Qiong
China Telecom

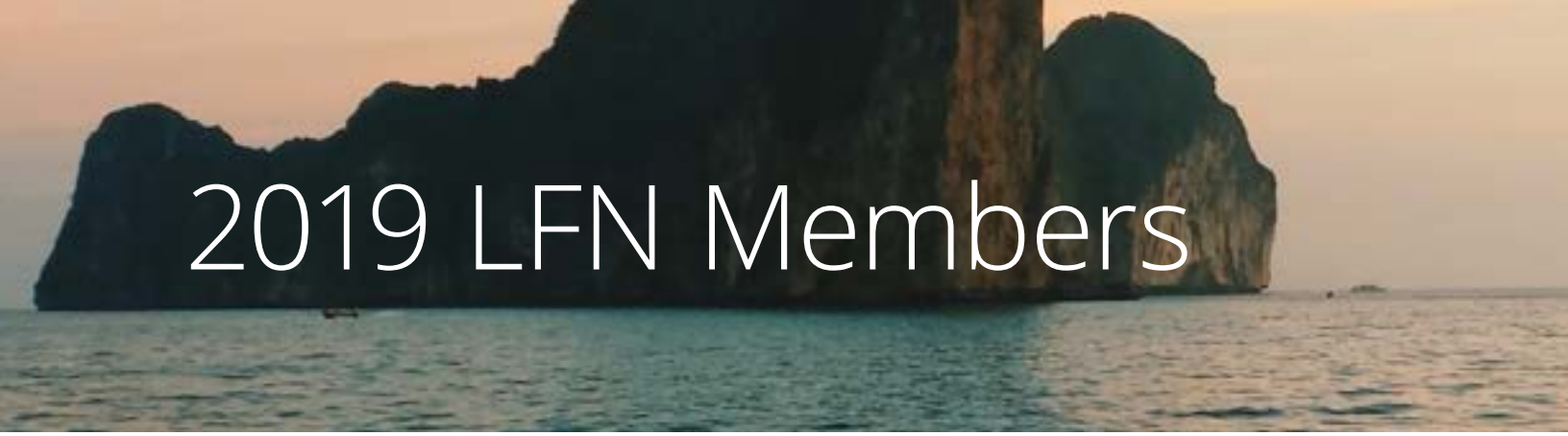
Tamer Shenouda
Bell

Vanessa Little
VMware

Vincent Danno
Orange

Xudong Ren
Huawei

Yukio Ito
NEC



2019 LFN Members

Platinum

amdocs
arm
AT&T
Bell
中国移动 China Mobile
中国电信 CHINA TELECOM
cisco
Deutsche Telekom
ERICSSON
HUAWEI
IBM
intel
JUNIPER NETWORKS
Lenovo
NEC/Netcracker SDN/NFV Solutions
NOKIA
orange
Qualcomm Qualcomm Technologies, Inc.
Red Hat
Jio
SAMSUNG
SUSE
Tech Mahindra
Türk Telekom
verizon
vmware
vodafone
ZTE

Gold

accenture
lumina networks
Microsoft
wipro

Silver

Aarna Networks
ADTRAN
ADVA Optical Networking
affirmed
ARISTA
ats
BDCOM Inter-Telecom
CableLabs
CANONICAL
CertusNet
China unicom中国联通
ciena
Cloudify
CloudOps
COMCAST
COMMSCOPE
DELL EMC
东信软件 Eastcom Software
ENEA
EQUINIX
EQUINOX
f5
FUJITSU
Globe
globo.com
HCL
Hewlett Packard Enterprise
iconectiv
infinera
JMA WIRELESS
kaloom
KDDI
kontron
in
loodse

MATRIXX Software
MAVENIR
mycomOSI
netgate
NETSCOUT
NETSIA
H3C
OPENET
packet
PANTHEON.tech
RAISECOM
ribbon communications
RIFT
SDN Essentials
SES Networks
SK telecom
snaproute
SPIRENT Communications
Sprint
STL
swisscom
TATA COMMUNICATIONS
TIM
Tencent 腾讯
VoerEir
WIND
Windmill Enterprise

Associate

CAICT 中国信通院
CENGN
LIONS Center
MEF
ONF
OPEN AIR interface
SDxFV
SDNLAB
iol

State of the Open Source Networking Industry

Arpit Joshipura, General Manager, Networking, Edge & IOT, Linux Foundation

We started LF Networking (LFN) in 2018 with an audacious mission to build a sustainable open source networking ecosystem to create value and solutions that are the basis of modern communications.

We built LFN by bringing together several open source projects under a common umbrella to increase operational excellence and foster the communities innovating across the open source networking stack—in dataplane, SDN, NFV, orchestration, analytics, and more. These projects provide platforms and building blocks for network infrastructure and services across service providers, cloud providers, enterprises, vendors, and system integrators that enable rapid interoperability, deployment, and adoption. Together, we are supporting and fostering innovation from the eight projects that make up LFN—FD.io, ONAP, OPNFV, OpenDaylight, OpenSwitch, PNDA, SNAS, and Tungsten Fabric.

Open source is now the de facto way to innovate and build business models for next-generation networks. This year, LFN experienced robust growth, with new deployments, new commercial adoption, and new members. The ONAP project, for instance, is the most diverse and largest automation platform in production globally and is now the focal point for industry alignment around MANO, Zero Touch, Closed Loop Automation, and Analytics—enabling conformance and verification, with standards collaboration. As the industry moves towards 5G and IOT, telecom

providers are mandating automation and harnessing the opportunity to innovate at a layer above the network plumbing, life-cycle management, etc.

LFN is able to achieve success because it brings together the top network vendors as well as a number of the world's leading service providers to work side-by-side and collaborate across common industry challenges and opportunities. In fact, LFN membership includes the 10 largest networking vendors and 20 leading communications service providers (CSPs) that represent more than 70 percent of the world's mobile subscribers. It's also noteworthy that CSPs participating in LFN perform 6 times better than the market as a whole in gaining mobile subscribers.

This work is leading to ground-breaking innovation in some exciting areas. Standards have long been important in the telecommunications industry to enable wide scale multi-vendor interoperability and high performance, and LFN is harmonizing the worlds of standards and open source with formal collaborations that ensure alignment, consistent APIs, and models. A great example is the creation this year of the Common NFVi Telco Taskforce (CNTT) jointly hosted by the GSMA and the Linux Foundation that published its initial common Reference Model and first Reference Architecture in September. CNTT also enhances the OPNFV Verification Program (OVP) which combines open source-based automated compliance and verification testing for NFV stack specifications established by ONAP, multiple SDOs such as ETSI and GSMA, and the LF Networking End User Advisory Group (EUAG).

LF Networking is also jointly collaborating with GSMA, OpenStack, and the Cloud Native Computing Foundation (CNCF) to enable cloud native network functions (CNFs) to shift some workloads into Kubernetes clusters, and to use ONAP to orchestrate a variety of functions and services. A great example of industry collaboration was seen at KubeCon with 5G cloud native network live demonstration built on open source infrastructure with contributions from six open source projects and standards groups, 14 companies, and more than 80 volunteers. LFN is also working to integrate with other exciting adjacent technologies at the network edge, with Radio Access Networks, blockchain, and AI-enabled use cases. A good example is the new solution brief on wholesale intercarrier settlements with Hyperledger fabric blockchain. LFN also receives great support from Linux Foundation training where the community can now access 11 free and paid training courses on networking, including a Certified ONAP Program coming soon.

As we move into 2020, I want to thank all of the LFN members, projects, communities, and our 8 LFN Interns for all their hard work and achievements to date. LFN has now firmly established itself as the center of gravity of open source networking and I look forward to a great year to come. It's safe to say that there's never been a more exciting time to be in networking.

LFN Project Updates

"In 2019 FD.io continued its regular cadence of high-quality (zero Coverity warnings), high-performance (TB level), high-scalability (multi-millions of routes, nat rules, etc.) releases of the world's most feature-rich packet forwarder. We saw major inroads in Cloud-Native NFV (CNF Testbed, Network Service Mesh). In 2020 we expect to continue that momentum."

— Ed Warnike, FD.io TSC Chair

"On behalf of the ONAP TSC, I want to thank our Community for their outstanding 2019 contribution.

Two major releases (Dublin, El Alto) and two maintenance releases have been delivered this year. Dublin represented a 62% increase in requirements, demonstrating the significant progress made in the maturity of the ONAP community. This release brought an uptick in commercial activity including new deployment plans from major operators and ONAP-based products/solutions from more than a dozen leading vendors. El Alto was a major release under a compressed timeline addressing three major areas of enhancements: Security by Design, Document As You Code, and Don't Break the Build.

ONAP has become the focal point for industry alignment around management and orchestration of the open networking stack, standards, and more."

—Catherine Lefevre, ONAP TSC Chair

"2019 marked a significant milestone for OPNFV's renewed focus on addressing end user needs, evaluating cutting-edge technologies from various open source communities, providing the industry with a Common Telco NFVi, and supporting VNF testing and verification. The CNTT released the first version of Reference Architecture and Reference Model through close collaboration with OPNFV. Lab-as-a-Service was elevated to be a project in OPNFV for better lab support. A new Airship Installer project was introduced to fill the gap where four original installers have been terminated or ceased operation. Furthermore, the Common Infrastructure Realization Verification project was established to implement the CNTT specifications.

We are better equipped than ever to help industry stakeholders improve business agility, accelerate time-to-market and thus reduce TCO in their respective business domains. I really appreciate everyone that has been working very hard to make this happen throughout 2019."

—Bin Hu, OPNFV TSC Chair

"2019 was a landmark year for OpenDaylight in terms of its longevity as the world's most pervasive open source SDN controller. This year, OpenDaylight delivered two important releases—Neon and Sodium. Neon was the 10th release for OpenDaylight, marking a great ongoing 6+ year journey and is a testament to the project's longevity.

Both releases included updated features important to networking use cases, such as optical transport networking, WAN connectivity and routing, as well as virtual networking in cloud and edge environments. The two releases also featured new stability and scalability enhancements.

In the year 2020 and beyond, OpenDaylight would like to work on micro services friendly nimble distribution which can be scaled horizontally in the future.

On the governance front, OpenDaylight has simplified the TSC elections format to have all the TSC members be directly elected by the entire committer pool instead of by sub-project categories. The 2020 elections also produced five new members to the TSC."

— Abhijit Kumbhare, OpenDaylight Chair

Open Switch

"OPX (OpenSwitch) joined the LF Networking project portfolio in September 2019.

OPX Release 3.1.0 has been available from the beginning of 2019, and Release 3.2.0 in July 2019. These releases have added support for new hardware platforms, and added supplementary software features, such as persistence tools and enhanced configuration, and show CLI utilities.

After a transition period during the second half of 2019, OPX is looking forward to an exciting 2020, with new features and integration with other projects included in the LFN portfolio."

—Joe Ghalam, OPX Project Representative

pnda

"PNDA is an integrated big data platform for the networking world, curated from the best of the Hadoop ecosystem. The PNDA project is striving to align with other LFN projects by becoming a cloud native solution running on Kubernetes. Our focus this year has been migrating to a containerized and helm orchestrated set of components, which has simplified PNDA development and deployment as well as lowering our project maintenance cost. Our current goal with the Cloud-native PNDA project is to deliver the PNDA big data experience on Kubernetes in the first half of 2020."

— Donald Hunter, PNDA Project Representative

SNAS.io

"This year has seen the SNAS project undergo significant changes with UC San Diego taking over from Cisco as technical and project leader. In consultation with other project stakeholders, we developed a new project architecture designed to be compatible and synergistic with other open source BGP analysis projects (e.g. BGPStream). The University of Oregon has also begun development of a new OpenBMP collector version currently undergoing testing by RouteViews. Next year we plan a public release of the new OpenBMP collector code, promoting the use of SNAS with the BGP operator, updating the project website and documentation, and further growing the SNAS community.

— Alistair King, SNAS Project Representative

tungsten fabric

"2019 was Tungsten Fabric's first full year as part of LF Networking and we've made significant progress toward the TSC goals, such as ease of use and community building. In June we released Tungsten Fabric 5.1, a significant advance in helping operators address their multi-cloud environments. We've also improved documentation and the website, and continued to build a successful intern program."

— Randy Bias, Tungsten Fabric TSC Chair

Strategic Planning Committee Chair Update

Jonne Soininen, Head of Open Source Initiatives, Nokia; Chair, LFN Strategic Planning Committee

In June 2019, the LFN Governing Board formed the Strategic Planning Committee (SPC).

The goal of the committee is twofold—to work on and propose a new strategy for LFN to the Governing Board and oversee its implementation, and to bring the LFN projects and the LFN board closer together. The SPC composition was selected to have a working balance between Governing Board and LFN community representation to fulfill its charter.

LFN has now existed for two years. There is no question about the successes and results the different communities under the LFN umbrella have delivered, including 11 major releases from LFN projects in 2019. It goes without saying that the new model of putting similar projects with synergies under one umbrella has been a resounding success!

However, succeeding in the creation of the umbrella is not enough. We need to look into the future and see what LFN can do to support the LFN community continuing success and we also need to enable inclusion of new projects under the umbrella in a scalable fashion. Therefore, LFN needs to continue to improve itself and the support it provides to the projects under the umbrella in a changing world with changing requirements.

During the second half of 2019, the SPC worked on a new strategy proposal for the LFN. This strategy is mainly focused on examining what support LFN provides its

community and how that support is provided. The SPC proposed the first version of the strategy to the Board during the face-to-face meeting in September and it is currently updating that proposal. This work has already influenced LFN through introduction of the LFN Developer & Testing Forum—a centrally funded technical event where developers from different communities can work together face-to-face.

The SPC is working hard to ensure that the LFN continues to be the central place for open source networking projects to work together and to foster a vibrant ecosystem of open source projects building useful technology for the industry in an open source ecosystem.

Technical Advisory Council Chair Update

Jason Hunt, Distinguished Engineer, IBM; Chair, LFN Technical Advisory Council (TAC)

The Technical Advisory Council within LFN is tasked with facilitating communication and collaboration among all the technical projects that comprise LFN.

The TAC has 31 members—senior technical talents representing our member companies as well as a representative from each of the TAC projects (FD.io, ONAP, OPNFV, and OpenDaylight).

LFN was created as an umbrella organization encompassing many of the leading open source networking projects. In order to grow this ecosystem of projects and encourage new projects to join, the TAC updated the LFN project lifecycle this year. We included a new Sandbox phase which lowers the barrier to entry for new projects and includes regular reviews by the TAC of the project's health and growth. The new Incubation phase follows on for projects that have progressed in their adoption of open source best practices and marketplace adoption. Projects that mature even further are named TAC projects and have representatives on both the TAC and the Strategic Planning Committee.

Once projects are in LFN, the TAC is working to ensure that they receive the best support possible. We have an infrastructure working group that is analyzing a wide range of tooling provided and supported by Linux Foundation to ensure it meets the needs of today's developer. Whether those tools are code repositories, build pipelines, or code scanning, our goal is to make it as easy as possible for LFN developers to work on their projects while being responsible stewards of the foundation's resources. Additionally, the TAC has a technical advisory office which acts as a "matchmaker" across LFN projects, where projects can look for technical expertise that might be resident in other projects.

Finally, the TAC is looking at LFN as a whole to determine how we fit into the larger ecosystem. We are currently developing an LFN technical whitepaper to describe all of our projects, their architectures, and how they are positioned in open source networking. We also have a number of strong touchpoints between LFN projects and other open source projects or standards organizations. In the next year, we will look at how to formalize and further foster those touchpoints for the benefit of everyone. We welcome those developing open source networking code to bring your projects to LFN.

Marketing Advisory Council Chair Update

Bryan Madden, Director of Marketing, Network & Edge, Data Platforms Group, Intel Corporation; Chair, LFN Marketing Advisory Council (MAC)

The LFN Marketing Advisory Council is comprised of members from leading companies across our industry.

Our primary purpose is to drive awareness, engagement, and support of the diverse group of projects within LFN. We develop strategies, campaigns, and execute key programs and events to help accelerate the availability and deployment of solutions hardened for commercial availability. We do this by telling compelling stories about users and successes, increasing developer engagement by collaborating with the technical community through community events, major trade shows, and DDFs/Plugfests, and positioning LFN as a thought leader and integration point in the evolution of the ecosystem. This includes VNF compliance, DevOps and automation processes, cloud native NFV, and 5G/Edge/IoT.

An adage comes to mind when thinking of the journey that our communities have been on over the past couple of years. “Start with what is necessary, then what’s possible, and suddenly you are doing the impossible.” Our communities and industry have been on an amazing journey to make open source and cross-industry collaboration the tent poles for network transformation. Marketing within our community is no different. The recent 5G Cloud Native Network (Virtual Central Office 3.0) demonstration is a really great example of coming together and demonstrating solutions that solve business and technical challenges in our Industry. I want to offer my sincere appreciation for everyone who worked on this version of the demo. But as the aforementioned adage goes, you need to start with what is necessary. This demo was built upon

the shoulders of the teams who built the VCO 1.0 and VCO 2.0 versions. Their work is truly helping to build a foundation for open source software in the networks of today and tomorrow.

So, what is possible? In 2019, we had 11 releases from LFN projects based on cross-community collaborations, technical contributions, and industry innovations. Releases such as FD.io 19.01, 19.04, 19.08, ONAP Dublin and El Alto, OPNFV Hunter, ODL Neon and Sodium, and Tungsten Fabric 5.1. These show what is possible when our industry focuses and collaborates, solving challenges and innovating together. I especially want to call out the power of collaboration when making things possible. We saw this aplenty with the cross-group commitment to the OPNFV Verification Program (OVP)'s 2019.04 badge for VNFs, the collaboration with GSMA on the Common NFVi Telco Taskforce (CNTT)'s initial common Reference Model and first Reference Architecture, and will continue to see this into 2020.

2020 is an exciting year for LFN and we are evolving how we approach marketing to ensure we can hit our key KPIs. To best articulate our cross-group value and amplify our projects' relevance, we created messaging strategies to develop meaningful content, campaigns, and communications. Out of this exercise, we recognized the need to develop specific messaging and campaigns on three topics into 2020; 5G, Cloud Native, and Edge, and will market our combined values within LFN and with partner foundations in these three areas of focus.

In 2020, we will focus on growing our digital presence and marketing through channels that will influence the audience of developers, vendors, and open source consumers that we are targeting. We will institute a robust content creation engine in support of LFN and its projects. Events are an important focus area for our communities that can accelerate collaboration, build awareness, and drive results. We'll focus on events that drive ROI for our communities—ONES events, OSN Days, OSN User Group Meetups, and centrally-funded technical community events.

Thank you to all MAC members for helping us deliver such a high-impact year. LFN's continued success is driven by active engagement and you are a key part of our vibrant, growing community. We look forward to your contributions in 2020 as we challenge ourselves to achieve even more ambitious goals and successes.

Exciting times ahead for our industry. Suddenly we are doing the impossible!

End User Advisory Group Chair Update

Atul Purohit, Principal Architect & Senior Manager, Group Networks Strategy, Vodafone Group; Chair, LFN EUAG

2019 saw coming together of all projects as one cohesive unit under the LFN umbrella, accelerating the pace of network automation from various angles.

While 2018 was the year we created the core capabilities of automation platforms like ONAP, this year we focussed on enhancing the usability and maturity of these platforms. A community that is more dynamic and focused on extreme network automation needs a focused group of end users to formulate a continuous improvement mechanism. Starting as a small ONAP-focussed user group, the EUAG has now transformed itself into a comprehensive representation forum of over 23 communications service providers.

The EUAG re-boot started with three key focus areas at ONS NA for the year:

- To gather top priorities from member CSPs of what they want to see in ONAP, and what support they needed to help achieve them;
- To share their production / PoC experience amongst various like-minded CSPs; and
- To detail / discuss / ideate cross-carrier initiatives, such as CCVPN and BBS

The role of the chair was formalized in June 2019, which led to a more structured approach around various activities of the community.

The EUAG also saw a significant boost at the LFN Technical Meetings in Antwerp in September 2019, with a number of new key activities agreed by member companies and the agreement, in principle, by the Board of a new plan as read out by the Strategic Planning Committee (SPC).

For the rest of the financial year, we are now charging ahead with:

- A proposed “Consumption Model” white paper on ONAP, with the member companies contributing an end user perspective on various available consumption models, options, and dependencies associated with consuming ONAP in their organization;
- The creation of a Common NFVi Telco Task force (CNTT) EUAG chapter, where the member companies are contemplating CNTT consumption, various dependencies, and at the same time asking CNTT leadership to provide crystal clear guidance on questions such as, what it means to adopt CNTT from a service provider perspective and what it may mean for their vendors;
- The definition of the EUAG operating model, covering things such as the mechanism for this community to exercise its adjacencies, the interaction model with other communities, and how can the interests of end users be taken into account and incorporated in various LFN programs

I cannot be more proud of what we have achieved as a community. The white paper is shaping up extremely well and we have set ourselves an ambitious target of a January 2020 release; and the community is also seeing heightened activity from all corners of the world. A big shout out to, amongst others, Saad from STC; Javier from Telecom Argentina; Ryan, Brian and Scott from AT&T; Beth and Fred from Verizon; Marc from Bell; David from Swisscom; Rabi from Vodafone; Cecilia from TIM, and Lei and Lingli from China Mobile—as well as to our facilitators Jim and Kenny for being ever helpful.

I am looking forward to a fantastic 2020 and beyond from LFN End Users...

2019 Market Impact Report

By the Numbers

14
Press Releases

12K
Press Clips
(combined LFN + project-specific press clips)

1.9B
Potential Aggregate Reach

50+
Media Briefings

250K
Twitter Impressions

Summary

LFN's narrative evolved in its second year as the umbrella and its projects matured. Having gone from production to POC to commercialization, the focus has shifted to facilitating deployments and integration with adjacent technologies such as AI, cloud native, and edge. Now that it's been declared the "telco industry has moved to open source" and we are seeing more commercial adoption, the community is working to shore up compliance and verification and further work on the Common NFVi Telco Taskforce (CNTT) to ensure the industry is ready for 5G. Press and analysts have picked up on the umbrella project's evolution and continue to see LFN as a leader in the future of networking.

Top Headlines

DZone

[The Telecom Industry Has Moved to Open Source]

2/18/19

TechCrunch

[Open Source Communities Fight over Telco Market]

2/27/19

Enterprise Networking Planet

[OpenDaylight Neon Released as Open Source Software Defined Networking Effort Turns 6]

3/27/19

sdx central

SDxCentral

[LF Networking Releases Compliance, Verification Testing]

4/3/19

Forbes

Forbes

[The Linux Foundation And Its Networking Superpowers]

4/18/19

sdx central

SDxCentral

[LFN 5G Demo Designed to excite Kubernetes community]

11/27/19

Top Quotes

Forbes

"Participation in Linux Foundation networking projects is diverse and standards bodies are coming together to help accelerate adoption.... open source and the Linux Foundation are good for networking!"

Will Townsend, Forbes

The New Stack

“[T]elecom-focused Linux Foundation [Networking] and Cloud Native Computing Foundation working groups... have witnessed — and sometimes driven — telco’s move over the last five years from monolithic hardware appliances toward what’s now known as the cloud.”

Jennifer Riggins

SDxCentral

“We’re starting to see maturity in open networking. Discussions between the various standards and open source groups are active, as was evident on stage [at ONS].”

Roy Chua, AvidThink analyst

DZone

The telecom industry is at the heart of the fourth industrial revolution. Whether it's connected IoT devices or mobile entertainment, the modern economy runs on the Internet... LF Networking is at the heart of this transformation.”

Swapnil Bhartiya

Smarter MSP

“Cloud Native container technologies, including SD-WAN networks built on top of Kubernetes clusters, will transform network services.”

Mike Vizard

LFN On Stage at Industry Events

ONAP DDF & OPNFV Plugfest (Nozay)

QCT NGCO

Mobile World Congress

Open Source Leadership Summit

Open Compute Project Global Summit

Open Networking Summit North America

Big 5G Event

Cloud Native Network Services Day

DSP Leaders Forum

ONAP DDF & OPNFV Plugfest (Stockholm)

Network & Compute Developers Conference

CNTT F2F Meeting (Chatillon)

Open Source Summit North America

FutureNET

OSN Days Bonn

Open Networking Summit Europe

LFN Technical Meetings (Antwerp)

Mobile World Congress (Los Angeles)

AT&T Business Summit

Qualcomm OSS Day

OSN Days Melbourne

OSN Days Taiwan

KubeCon + CloudNativeCon North America

OSN Days Bangalore

Open Source IoT Day 2019

Open Source Networking Days 2019 Tour

Open Source Networking Days (OSN Days) is a series of regional, one-day events hosted and organized by local open source networking ecosystem members—including industry, service providers, academia, and start-ups—with support from LF Networking and its projects. A roster of expert speakers share insights on the state of the industry, the projects that make up the open source networking stack, the integration points between them, the use cases and business opportunities enabled by network transformation, how to get involved, and much more.

OSN Days stops in 2019 included events in Bonn, Melbourne, Taiwan, and Bangalore that hosted over 400 local community members. We would like to offer a sincere thank you to our side hosts Deutsche Telekom, Telstra, National Chiao Tung University, and Tech Mahindra.

Stay tuned for more great events in 2020!

E2E 5G Cloud Native Networks Keynote Demo a Success

A team made up of 80+ volunteers from 6 open source projects and standards groups and 16 companies took a cloud native approach to developing an E2E 5G cloud native network demonstration built on open source infrastructure. The demo from the keynote stage at KubeCon + CloudNativeCon North America 2019 in San Diego showed a live prototype running in labs around the world using Kubernetes and other open source technologies to deliver a fully containerized 5G network. The demo showcases both how the telecom industry is using cloud native software to build out their next-gen networks and shows solution providers what's possible in this exciting new space.

Thank you for a successful 2019!

Learn more and get involved: **www.lfnetworking.org**