DIAMOND SPONSORS

State of Networking & Edge

What a Year!

Arpit Joshipura

GM, Networking, Edge & IOT

The Linux Foundation

THE LINUX FOUNDATION

1

2

3

4

5

We have answered 5 hard questions

Thank You Community!

1 Why Open?

“Open-Sourcification” of Vertical Industries

Telecom at the forefront

+

Automotive

+

Motion Pictures

+

Fintech

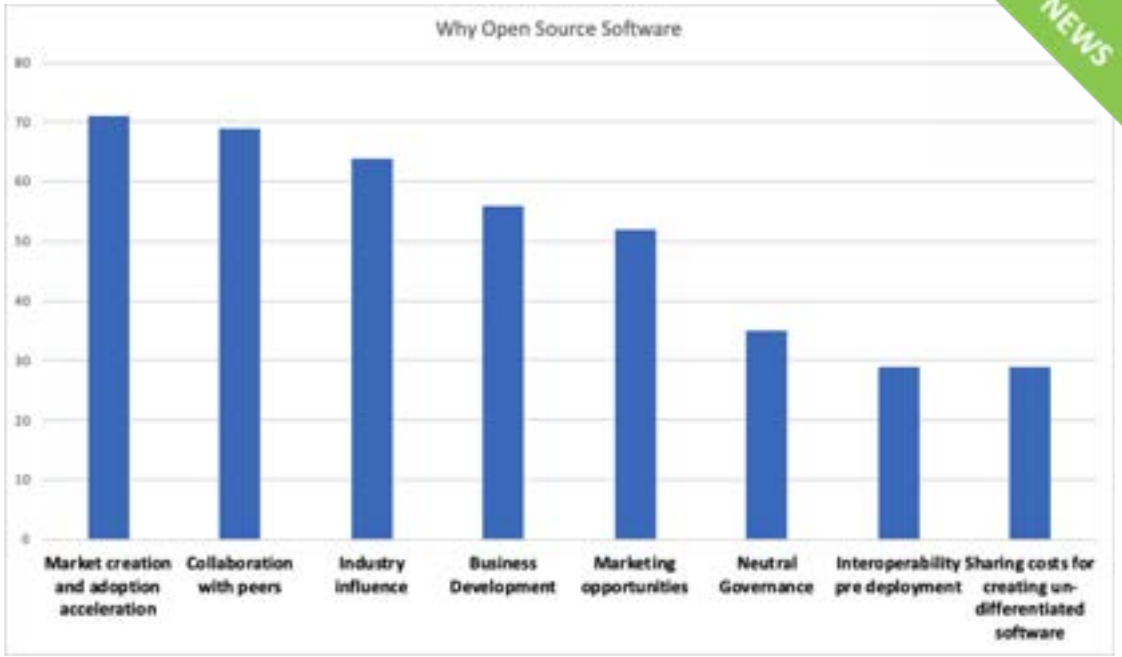
+

Public Health

Why Open

Networking & Edge

“From Cost Savings to Market Adoption”



NEWS

Source: LF Edge Community Survey, Sept 2020

Top Reasons

Market Creation, Adoption Acceleration & Collaboration

2 SDO or OSS

Is it Standards OR Open Source?

"Harmonize" was a hot word 3 years ago

Unification well beyond Standards - now Open Source communities, Markets, Verticals are taking direction from the LFN playbook

Linux Foundation Projects are harmonized with Standards

3 Why Contribute?

Open Networking

Open Edge/IOT

Open RAN

Open Enterprise

Open Cloud

Open Source Software

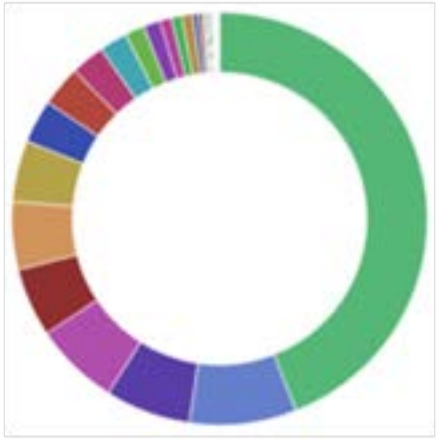
Open Testing & Interop

accelerated by

ONAP, OPNFV, CNTT, ODL, O-RAN, Akraino, EdgeX, CNTT, OpenStack and Kubernetes among other projects

From Consumption to Contribution

14,132 Commits
439 Code Authors
200 Repositories



34 Organizations
Contributing Code

4 of the Top 10 Contributions in ONAP Frankfurt release from End Users

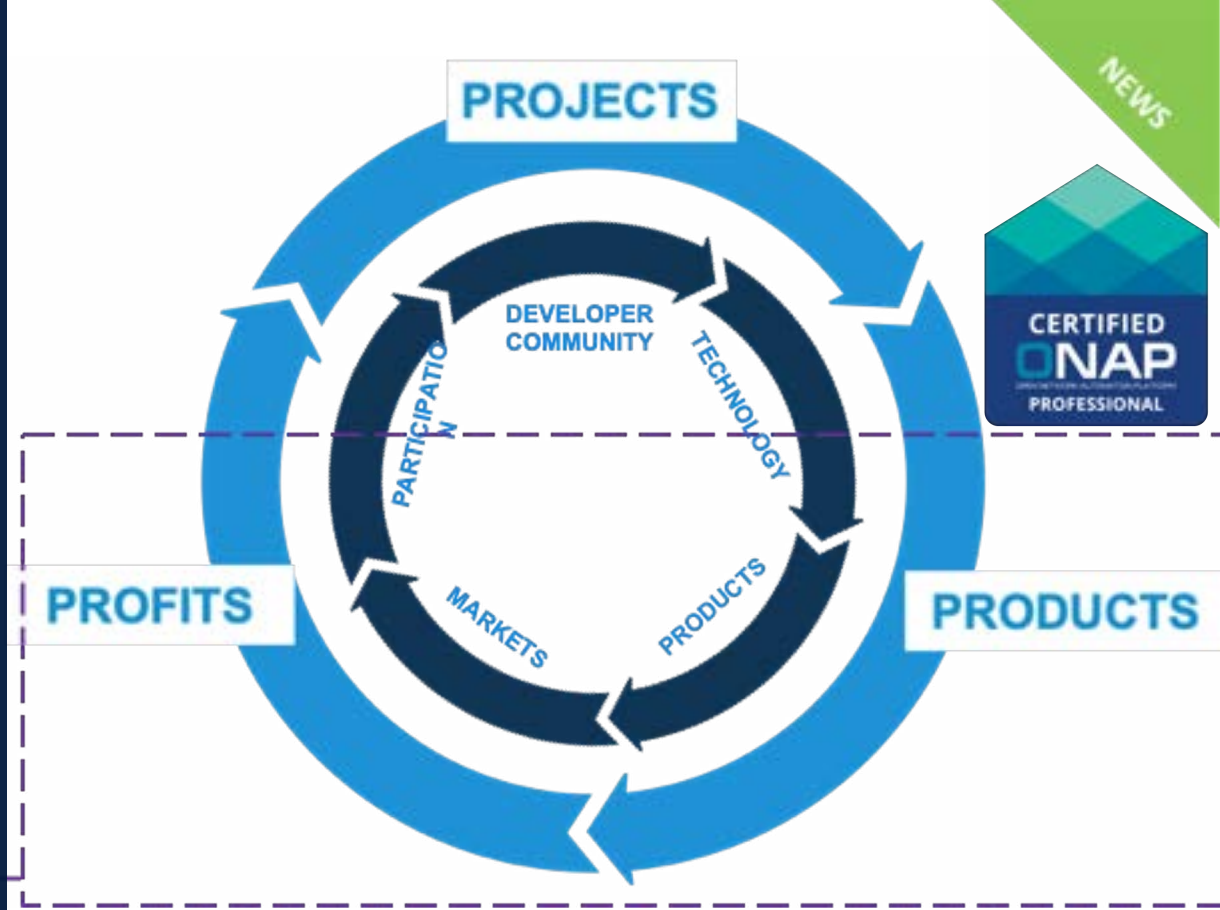
4 POC to Production

Open Compliance & Verification

Open Interop & Testing

Open Training & Certification

1. LFN EUAG (operational)
2. (NEW) End User Edge Vertical Solutions Group
3. (NEW) Certified ONAP Professional



OPNFV, CNTT, Akraino Blueprints leading Open Interop & compliance

5 Money?

Value of Open Source Software created in LF Networking

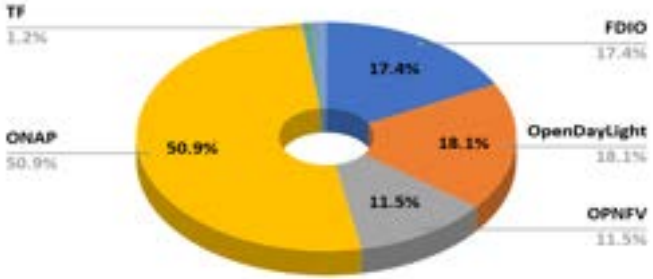
8 Projects

6+ Years

2000+ Developers

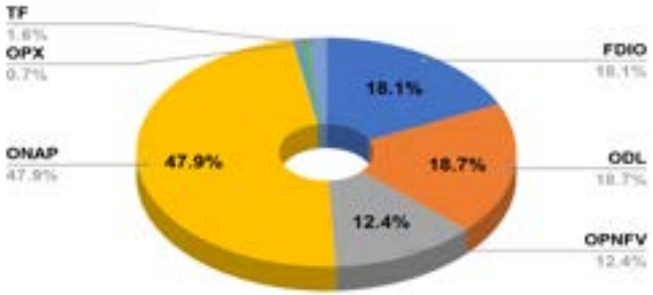
Value of Open Source Software

NEWS



Total Value

$7.3B



Total LOC

87.6M

Source: https://lfanalytics.io/projects/lfn & COCOMO II model of estimation

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2020 Priorities

By/For the Communities

THE LINUX FOUNDATION

Open Interop & Compliance

“The Acronyms”

LFN/OVP/CNTT/OPNFV/CVC

CNTT + OPNFV: Announcing a merger

NEWS

CNTT

- Reference Model **RM**
- Reference Architecture **RA**

+

OPNFV

- Tests & Tools
- Reference Implementations **RI**
- Verification Program **OVP**

LF NETWORKING

Industry Collaboration
Integration
Single Entity *for allocating resources*

"MERGED PROJECT"

Join Us!

http://bit.ly/CNTTOPNFVMELD

Global Community collaboration

From Specifications to Deployments

CNTT

+

“Everyone benefits, vendors don't have to build one-off architectures for every single telecom customers, and operators don't have to devote resources to building potentially unsupportable infrastructures”
- Beth Cohen, Verizon

“This project has a significant impact on both CNTT and OPNFV, and much is at stake. I look forward to seeing this project through to a successful conclusion.”
- Scot Steele, AT&T

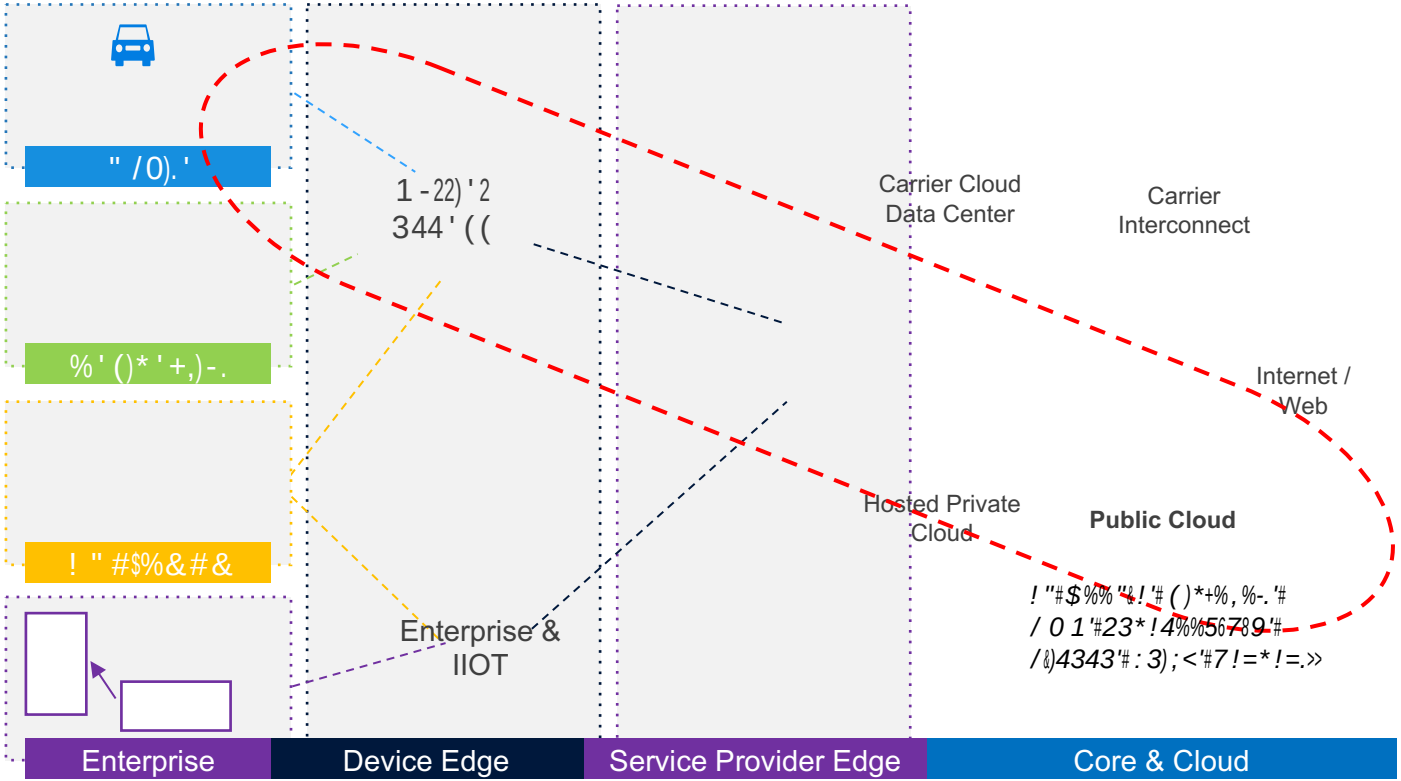
2 End to End Architecture

Unified Edge

Access with ORAN-SC

Collaboration

End to End Architecture: Deployment Ready Open Source



X-Project Collaboration

The Edge

Applications

Infrastructure

EDGE X FOUNDRY™

FLEDGE

HOME EDGE

BAETYL

OPEN HORIZON

Stage 1: At Large Projects
Baetyl, Open Horizon, Secure Device Onboard

Stage 2: Growth Projects
EVE, Fledge, Home Edge, State of the Edge

Stage 3: Impact Projects
Akraino Edge Stack, EdgeX Foundry

STATE OF THE EDGE

Research and Reports

AKRAINO

Distributed Devices and Systems

Buildings / Factories / Smart Homes

MCU-based devices

Embedded compute

Smartphones, PCs, ruggedized IoT gateways and servers in accessible to semi-secure areas

Servers in secure on-prem data centers, MDCs

Constrained Device Edge

Smart Device Edge

On-Prem Data Center Edge

Last Mile Networks

Access Networks

Aggregation Hubs/COs

Regional Data Centers

Centralized Data Centers

LOCATIONS

Server-based compute at Telco Network and Edge Exchange Sites

Server-based compute at Regional Telco and Direct Peering Sites

Servers in traditional cloud data centers

Access Edge

Regional Edge

User Edge

Dedicated, Operated

Service Provider Edge

Shared, XaaS

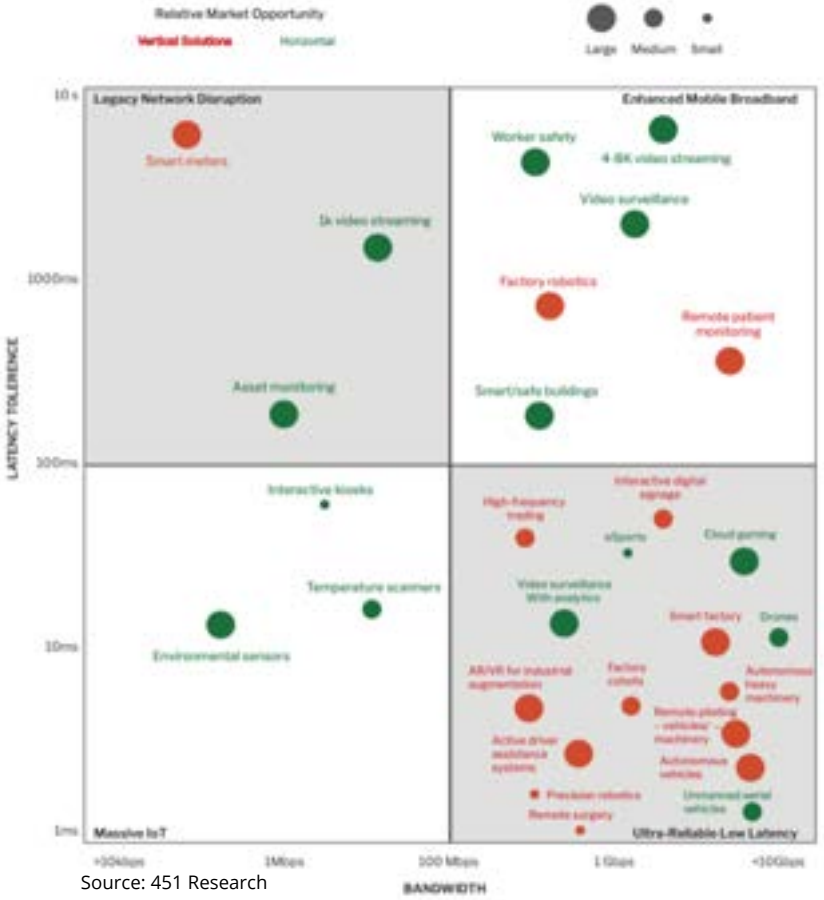
5G and Edge Critical in the Next Battle, a new normal!

Edge is 4X the size* of Cloud Market!

"As businesses and governments establish their own new normal, **5G and Edge computing** will be necessary to deliver the automation, performance and cognitive insight required by many industries—including manufacturing, healthcare, energy and utilities, among others. Telecom operators will need to embrace open ecosystems to externalize innovation and accelerate new services."

Forbes

http://www.chetansharma.com/publications/edge-internet-economy/



Source: 451 Research

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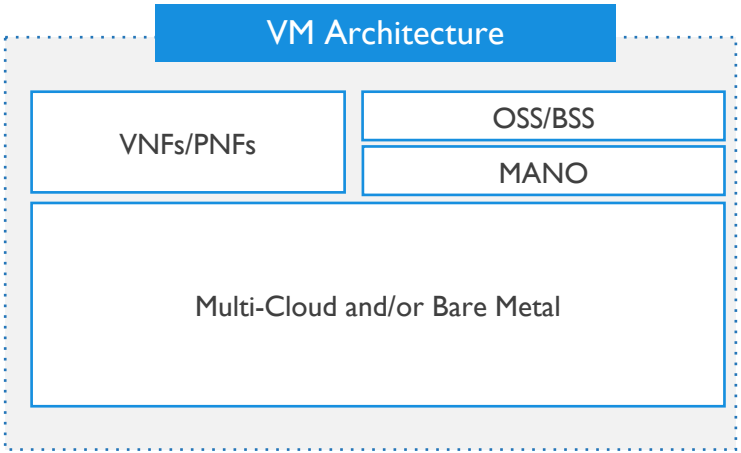
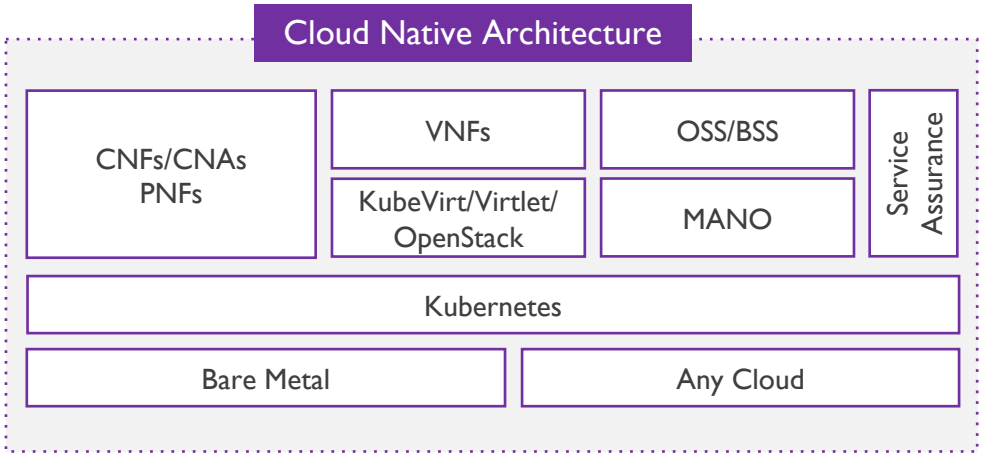
Cloud and Telecom Harmonization

Fueled by 5G, Edge and IOT

A new hybrid world: PNF+VNF+CNF + Cloud Native Applications





Welcome

Amol Phadke

Managing Director

Global Telecom Industry Solutions

NEWS

Google Cloud Joins Linux Foundation Networking at Platinum Level

Google Cloud

LF NETWORKING

Cloud Native Network Automation in Action

Focus areas

In Action

Kubernetes Usage in Telecommunications

Top challenge
Networking

Top features
Performance & VNF+CNF

Source: Survey of Linux Foundation Dev Communities, Sept 2020

OPEN NETWORKING & EDGE SUMMIT

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