



Nephio Developer Summit - R2

Day 1 - October 9th

 **OPENFLOW** NETWORKING

 **THE LINUX** FOUNDATION



Welcome Note from Linux Foundation

Ranny Haiby

CTO, LF Networking, Edge & IoT, The Linux Foundation

8:00-8:05 AM PT

Welcome everyone to the Nephio R2 summit



Antitrust Policy Notice

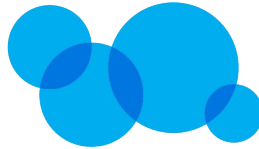
- › Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.
- › Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at <http://www.linuxfoundation.org/antitrustpolicy>. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrave of the firm of Gesmer Updegrave LLP, which provides legal counsel to the Linux Foundation.

Code of Conduct

- › The Linux Foundation and its project communities are dedicated to providing a harassment-free experience for participants at all of our events, whether they are held in person or virtually. Linux Foundation events are working conferences intended for professional networking and collaboration within the open source community. They exist to encourage the open exchange of ideas and expression and require an environment that recognizes the inherent worth of every person and group. While at Linux Foundation events or related ancillary or social events, any participants, including members, speakers, attendees, volunteers, sponsors, exhibitors, booth staff and anyone else, should not engage in harassment in any form.
- › To report an issue, please contact Emily Ruff (eruff@linuxfoundation.org)
- › For the complete Code of Conduct, please see <https://events.linuxfoundation.org/about/code-of-conduct>

Welcome Nephio to LFN!

LFN NETWORKING



ODIM
OPEN DISTRIBUTED
INFRASTRUCTURE MANAGEMENT



NEPHIO



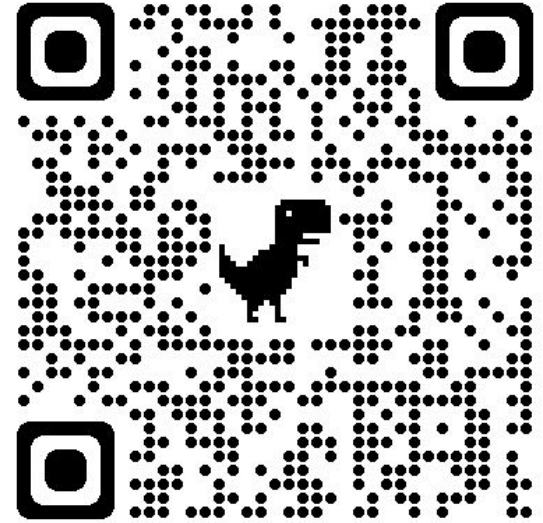
5G Super Blueprint

Logistics for Today

- Building protocols
 - Wear the visitor badge all time within the building
- Meeting format and logistics
 - Live & online
- Summit etiquette
 - Stay within the meeting area.
 - Please do not take photos outside of the conference room
- Quick overview of Agenda
 - <https://wiki.nephio.org/display/HOME/R2+Developer+Summit+Agenda>
 - Meeting is recorded and will be uploaded to Nephio wiki

Virtual Attendee Logistics

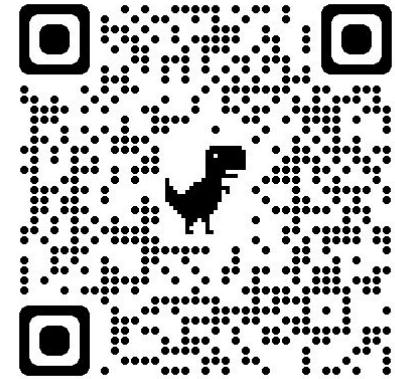
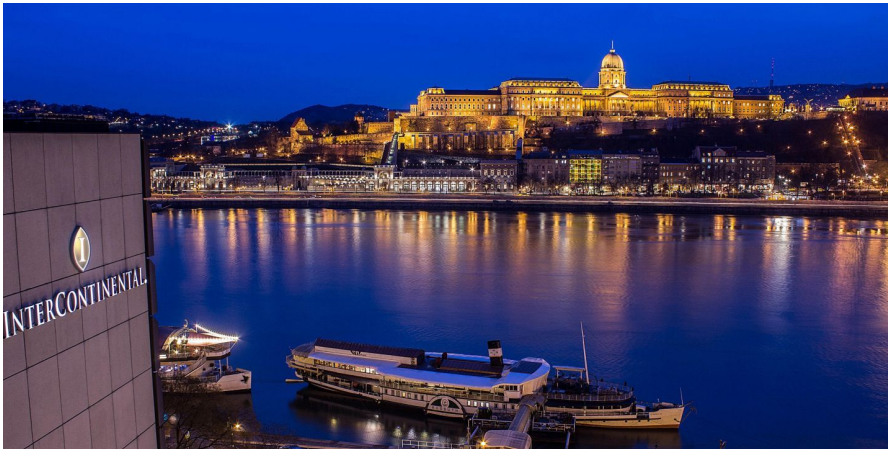
- › PLEASE REGISTER if you haven't done so <https://cvent.me/ZvkDzE>
- › Please stay muted unless talking
- › Cameras off unless you are presenting or you are on a panel
- › Kenny Paul will be monitoring the zoom side of things
- › In-room Q&A will be given the priority over remote Q&A



LFN Developer & Testing Forum (D&TF)

- › November 13-16, Budapest, Hungary
- › [Registration](#)
- › [Add a session proposal](#)
- › [Convince Your Boss!](#)

- › Free to all attendees
- › Developer led & managed
- › Focused on interactive problem solving, execution and collaboration



ONE Summit Regional Day India

- › Nov. 30, 2023, Infosys Electronics City, Bangalore
- › Theme: “AI Powered Networks”
- › LFN keynote by Arpit Joshipura
- › [Register](#)



Summit Agenda Overview

Nephio R2 & Beyond

8:05-8:30 AM PT



Kandan Kathirvel

Group Product Manager, Google Cloud
TSC Chair, Nephio



Sana Tariq

Principal Technology Architect, Telus
TSC Vice Chair, Nephio

Goals of this Development summit - R2



Discover Nephio

- Overview of Nephio, concepts and objectives for newcomers



Plan for R2

- Focused community discussion to make progress towards R2



Build a Community

- TSC & SIG get together: Plan for R2 and beyond

Day 1 Agenda

Time Slot	Topic	Distinguished Speakers
8:30-8:45 AM PT	Welcome Note and Executive Keynote Community Awards	Gabriele Di Piazza (Sr. Director Telecom Products, Google Cloud)
8:45-9:00 AM PT	Executive Keynote	Ankur Jain (Vice President, Engineering, Telecom, Google Cloud)
9:00-9:10 AM PT	Executive Keynote	Jago Macleod , Director Of Engineering, Kubernetes at Google
9:10 -9:50 AM PT	Executive Panel: Telecoms	Moderator: Sana Tariq (Principal Technical Architect, Telus) <ul style="list-style-type: none"> • Daniel Bernier (Technical Director, Bell Canada) • Eric Debeau (Head of R&D team, Orange) • Bernard Tsai (Senior Business Architect, DT) • Iain Wilkinson (Head of Network Cloud & Automation, Vodafone) • Santosh Kumar (General Manager, Reliance Jio)
9:50-10:30 AM PT	Executive Panel: Network Function Providers and Cloud Providers	Moderator: Gabriele Di Piazza (Sr. Director Telecom Products, Google Cloud) <ul style="list-style-type: none"> • Daran Johnston (Senior Expert OSS, Ericsson) • Vach Kompella (VP IP Networking, Nokia) • Jane Shen (VP, Mavenir) • Moshe Lav (Sr. Director, VMware) • Seshu Kumar (Principal Cloud Architect, WindRiver) • Andrew McLachlan (Director, Engineering, Red Hat)
10:45-11:10 AM PT	Executive Panel: Startups in Nephio	Moderator: Tina Tsou (Director, Arm & Co-chair SIG 3) <ul style="list-style-type: none"> • Amar Kapadia (Co-Founder & CEO, Aarna Networks) • Nat Natraj (CEO & Co-Founder, AccuKnox) • Nilesh Kokate (Telecom Strategist, GS Lab) • Chris Lauwers (CEO, Ubicity)
11:10-11:30 AM PT	Executive Panel: AI Trends and How Nephio Can Benefit from Them?	Moderator: Jane Shen (VP, Mavenir & TSC Member Nephio) <ul style="list-style-type: none"> • MuckAI Girish (Co-founder & CEO, Rockfish Data) • Yamshi Ambati (Founder & CEO, PredEra) • Anshuman Pandey (Founder and CEO, NimbleBox.ai)
11:30-5:00 PM PT	Multiple SIG presentations & R1 Workshop	See full agenda here: https://wiki.nephio.org/display/HOME/R2+Developer+Summit+Agenda
5:30 PM to 7:30 PM PT	Social Hours	

We wanted to solve Telco Industry Challenges!

Telecom under several transitions



VNF to CNF



Private to Public Cloud



Centralized to highly distributed network

Telecom in need of transformation



Zero-touch automation with human-free control-loop



Reduce Opex and optimize scarce edge resources

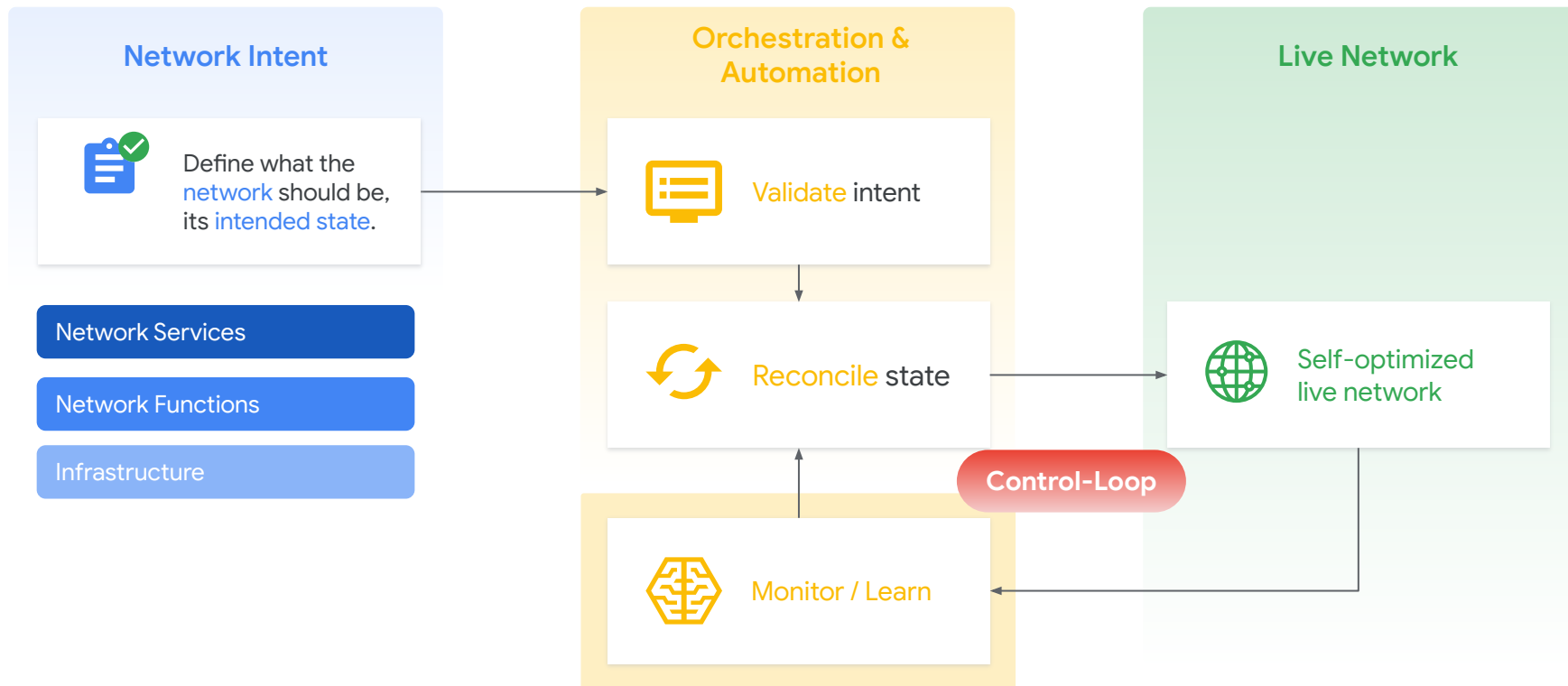


Addressing limitations of legacy methods & out-of-band network automation

We started with this Mission!

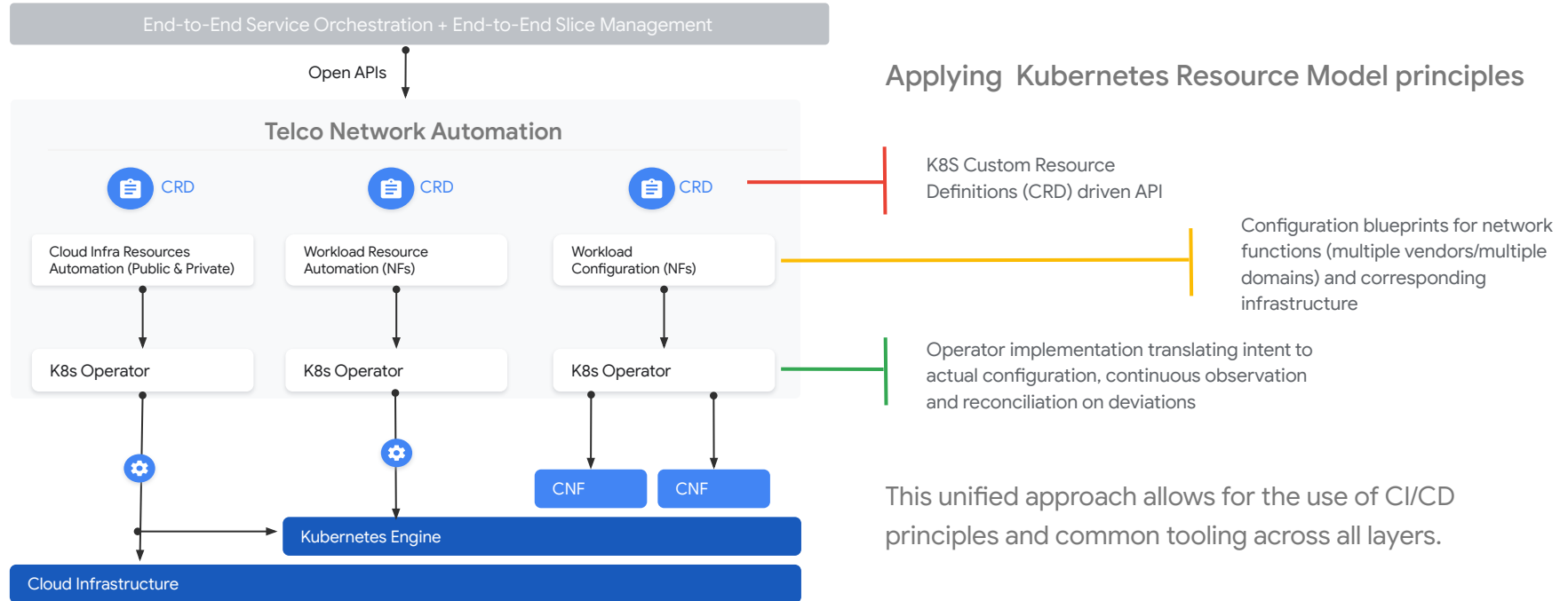
Nephio's goal is to deliver carrier-grade, simple, open, Kubernetes-based cloud-native intent automation and common automation templates that materially simplify the deployment and management of multi-vendor cloud infrastructure and network functions across large scale edge deployments. Nephio enables faster onboarding of network functions to production including provisioning of underlying cloud infrastructure with a true cloud native approach, and reduces costs of adoption of cloud and network infrastructure.

Nephio introduced: An intent driven network architecture



Solves the real problem!

Efficient Multi-cloud Infrastructure and Multi-vendor Network Function Configuration Management



Nephio: Design Principles - Brings the best!

Nephio Design Principles

- ***KRM and CaD-based common & consistent automation framework*** with vendor extensibility for life-cycle management of Infrastructure (IaaS), Network Functions and Network Function configuration
- Inter-NF and NF to Infrastructure dependency management using **declarative techniques** to specify and enforce dependencies
- **Distributed actuation and reconciliation of Intent** as a scalable approach for large-scale edge cluster deployments
- **User friendliness** of deployment and management

Nephio Design Goals

- ***Standardize Custom Resource Definitions (CRDs) for Infrastructure and NF deployment***, while allowing flexibility for vendor extensions
- ***Define interfaces and pluggability*** for Kubernetes Operators that operate on the Nephio CRDs
- Define an ***end-to-end automation framework*** for infrastructure orchestration, NF deployment and configuration in declarative manner

Nephio: Progress Report

Journey started here

Launched on April 22nd, 2022

Make Cloud-Native automation as a reality:



25+ founding members



Seed code from Google



Linux Foundation community



Foster Kubernetes benefits

Today

Fully established community

Broader participation from Telco,
Vendors and Cloud Providers:



70+ participating members,
and growing



Inducted as an LFN project



100+ developers & architects
actively participating



Release 1 delivered

Delivered: Nephio R1

Building blocks much needed

- **Core Principles:**
 - Configuration-as-Data
 - Leveraging intent-driven, active-reconciliation nature of Kubernetes
- **Infrastructure**
- **Orchestration/Automation:**
 - Utilizing Cluster API for KIND cluster creation
- **5G Core Network Functions:**
 - Demonstrating orchestration/automation of network functions from free5gc

Nephio Release 1 PR Highlights

 **85K**
Social Media Impressions

 **12**
Press Coverage

 **20**
Community Quotes

 **5**
Press Interviews

“By simplifying the complexity of orchestrating interconnected workloads across large-scale edge deployments, R1 represents significant progress managing large systems within the cloud-native ecosystem.”

Arpit Joshipura, GM/SVP Networking + Edge/IOT + Energy
at Linux Foundation



Articles / News

sdxccentral

Nephio R1 aims to simplify open-source cloud-native automation for telcos



AI & MACHINE LEARNING

 LightReading

Project Nephio announces Release 1



Nephio Release 1 & 2 Highlights

R1

Key Features

R2+

Scope and Plans

- A Framework to orchestrate cloud native network functions (CNF), infrastructure, and cross-domain lifecycle management
- Core Nephio principles and Kubernetes integration with custom resource definitions (CRDs).
- Enhanced user experience and sandbox environment.
- **Infrastructure Orchestration/Automation**
 - **Multi-Cloud:** Evolving tools and process for Infrastructure capabilities exposure and seamless integration of services across multi-cloud
- **Network Functions and Use-cases**
 - **Multi-vendor NFs:** O-RAN NFs, 5G NFs, Transport, cross functional integration, LCM with service assurance and Policy
- **Nephio Control Plane**
 - **Simple and robust:**
 - Operators SDKs for vendor extensions
 - GUI, APIs for SO, O-RAN Design Studio
 - Explore: Gen AI for automation and operational simplification
- **Much more....**

Nephio: Backlog



User Stories

- Multi-cloud
- Multi-vendor NFs
- Multi-domain (RAN, Wireline, Transport)
- Day 0, 1, 2 focus
- Higher-level constructs (e.g. LCM for slices)
- Scalability (large scale deployments)



CRD/Operators

- Establish CRD schema
- Operators SDK
- Helm & YANG/TOSCA support
- Vendor extensions
- Compliance and certification program



Control-Plane

- UI: GUI & APIs
- UI: Design Studio
- Integration APIs to MSO, Inventory systems, BSS

Global Community Collaboration - We are all together!

Cloud Providers



- Kubernetes Variations
- Common CRDs and Plugins

NF Vendors



- Support for Operators and CRDs
- Cloud native NFs
- Open culture and commercial models

Service Providers



- Driving Nephio and Vendors roadmap
- Horizontal, open and self-serve automation model

Standards and Open Source



- ONAP, CNCF, Edge, AI
- ETSI, 3GPP, NGMN, O-RAN



NEPHIO

Join us

Project Resources

- Website - <https://nephio.org/> , <https://nephio.org/about/>
- Wiki - <https://wiki.nephio.org/>
- Blog Postings - <https://nephio.org/blog/>
- Project Github - <https://github.com/nephio-project> (Please note **“nephio-project”** is right one)
- More resources at <https://github.com/nephio-project/docs>
- Project email distro - <https://lists.nephio.org>
 - [nephio-tsc](#) (for TSC members and interested parties)
 - [nephio-dev](#) (for all)
- SIG lists: [sig-netarch](#), [sig-automation](#), [sig-release](#)



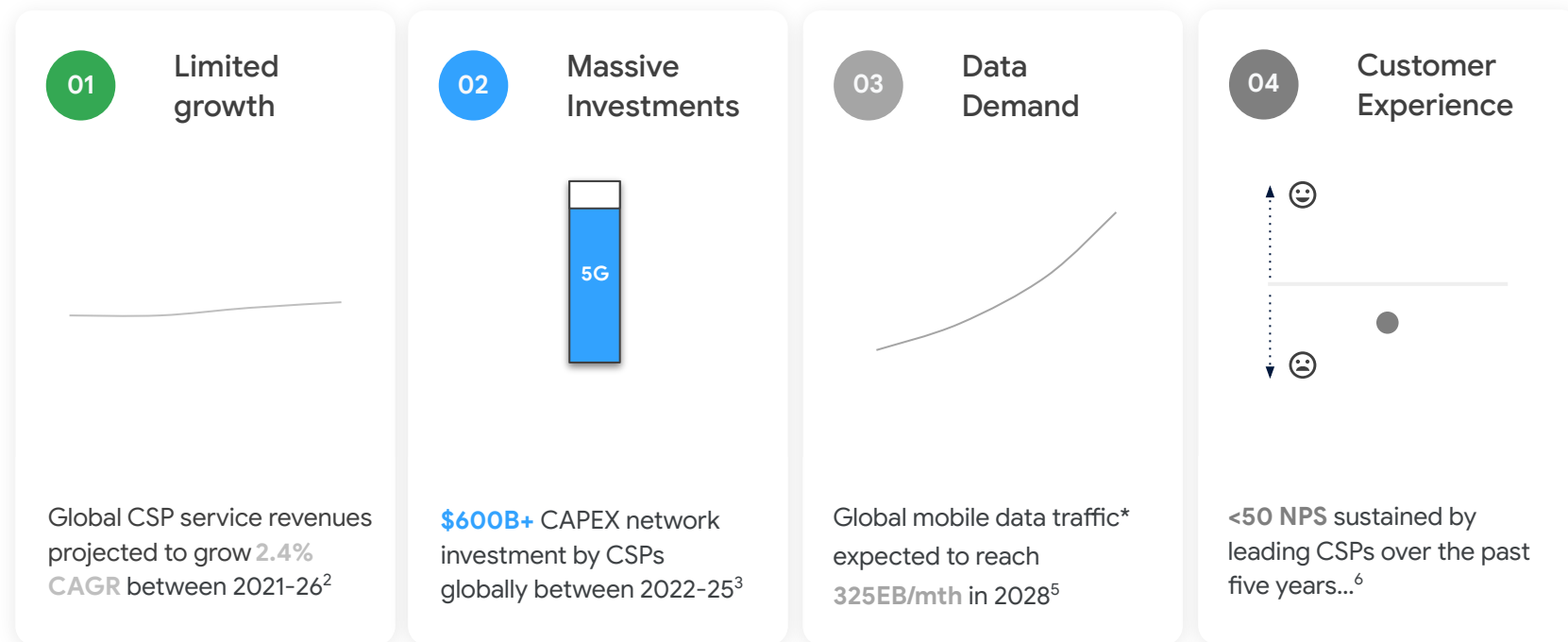
Welcome Note from Google

Gabriele Di Piazza

Sr. Director Telco Product Management, Google Cloud

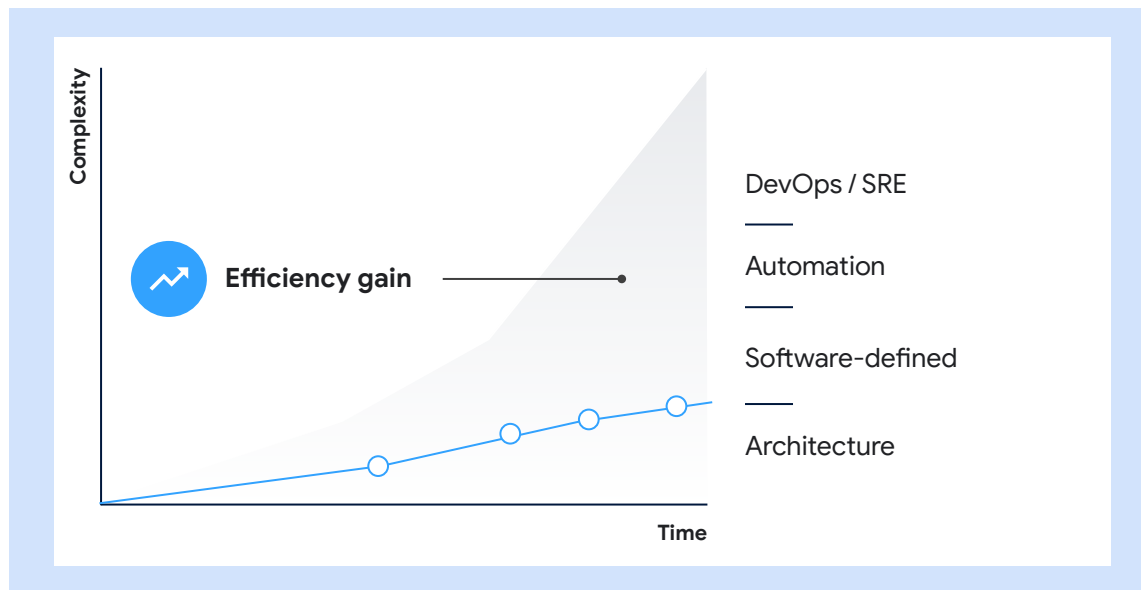
8:30-8:45 AM PT

Telecom: undergoing an epic disruption



Sources: 1. [TM Forum](#), September 2022, 2. [Analysys Mason](#), August 2022, 3. [GSMA](#), February 2022, 4. [Google Cloud](#), March 2021, 5. [Ericsson](#), November 2022, 6. [Bain](#), May 2020 *Excludes traffic generated by Fixed Wireless Access

Automation is a fundamental pillar to network transformation



*Illustrative visual only

Status of the CSP cloud-native journey

50%

of CSPs will have implemented CNFs in key domains by 2024

#1

Automation is the top initiative driving CSP cloud-native transformation



Cloud-native automation is expected to bring change to CSP fragmented organizations



CSPs want to implement 5G RAN CNFs quicker than initially anticipated



CSPs are looking for cross-domain automation convergence



Standard and open approaches are needed to enable better portability and limit possible lock-in

Target benefits

Unlocking new value for CSPs



Reduced infrastructure and Network Function operating costs through **task automation**



Reduced need of Network Function **proprietary** management systems (VNFM/EMS)



Increased network availability with resiliency and reduced maintenance downtimes



Simplified error-prone configuration management and version controls with integrated CI/CD

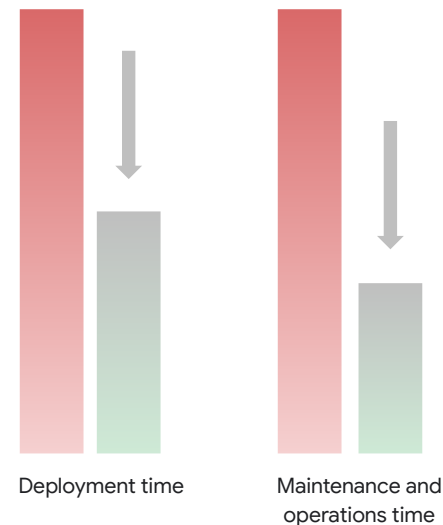


Remove the overhead of managing multiple automation platforms and frameworks removed



Scalable network management to meet 5G ^ beyond, Edge, and RAN requirements

Target benefits - enhancing efficiency*



Nephio community trajectory



Nephio community trajectory

The Linux Foundation and Google Cloud Launch Nephio to Enable and Simplify Cloud Native Automation of Telecom Network Functions

THE LINUX FOUNDATION | 10 APRIL 2022

New Open Source Project at the Linux Foundation brings Cloud, Telecom and Network Functions providers together in a Kubernetes spirit

San Francisco—April 12, 2022. Today, the Linux Foundation, the nonprofit organization enabling mass innovation through open source, announced the formation of *Project Nephio* in partnership with Google Cloud and leaders across the telecommunications industry. The Linux Foundation provides a venue for continued ecosystem, developer growth and diversity, as well as collaboration across the open source ecosystem.

Building, managing and deploying scalable 5G networks across multiple edge locations is complex. The Telco industry needs that cloud native automation to be faster, simpler and safer while achieving agility and optimization in cloud based deployments. To address these challenges, Google Cloud and the Linux Foundation have founded "Nephio". The project has support from several founding organizations including Service providers: Airtel, Bell Canada, Elisa, Equinix, Jio, Orange, Rakuten Mobile, TIM, TELUS, Vapor IO, Virgin Media O2, WINDTRE as well as Network Function Service and Infrastructure Vendors: Aarna Networks, ARM, Calixsystems, CDS, Ericsson, FI, Inet, Juniper, Mavenir, Nokia, Parallel Wireless, VMware.

Cloud Native Principles have come a long way and as we see Cloud Service Providers collaborating with Telecom Service Providers and Enterprises, a new way of simplifying automation of network functions is emerging.



Key NF & infra vendors collaboration



15+ Global CSP participation



Community-driven R1 release

From 24 founding members to...



Now 70+ community strong

Nephio R1 Contribution Awards



Sana Tariq



Balaji (Bala) Varadaraju



Wim Henderikx



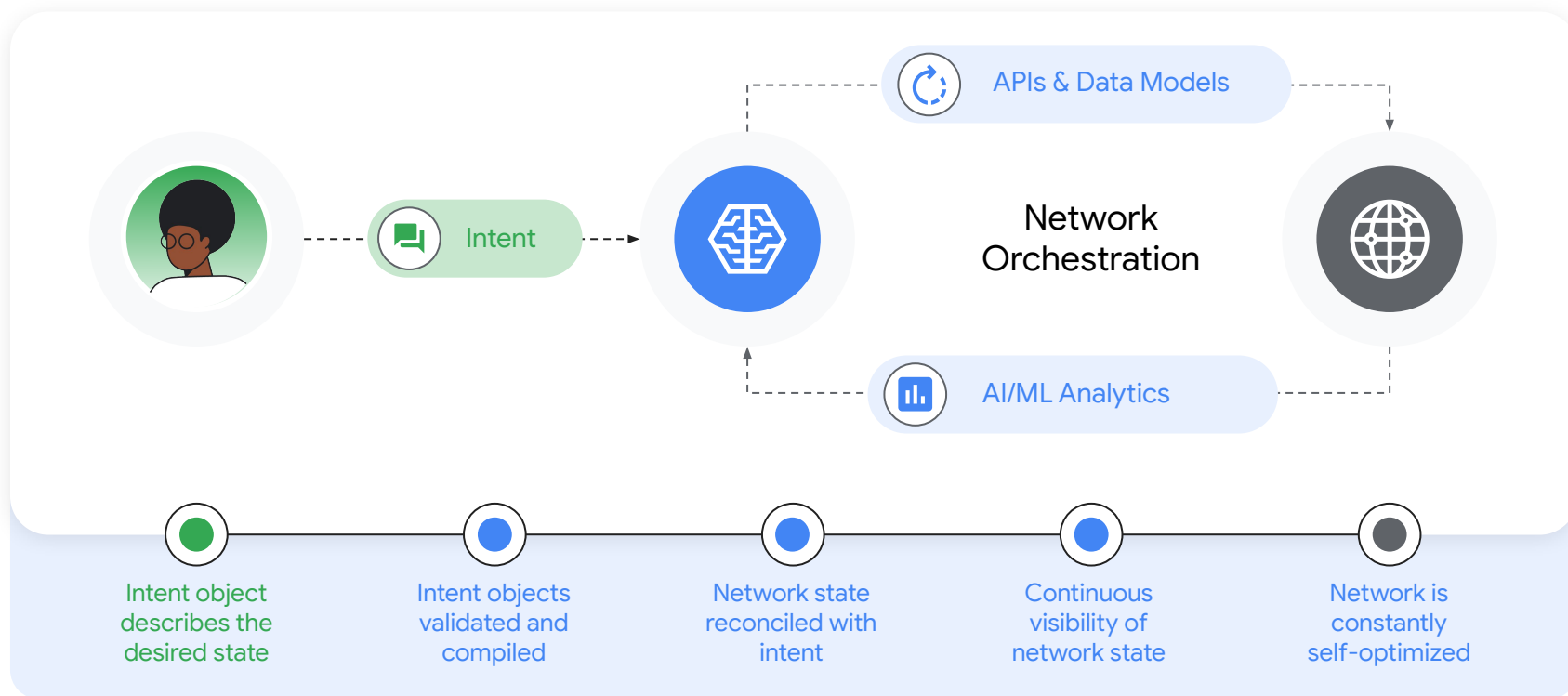
Executive Keynote

Ankur Jain

VP Google Distributed Cloud and Telecom, Google Cloud

8:45-9:00 AM PT

Google Global Network & Nephio fundamentals



Automation that stood the test of time at Google

Centralized Network Intent



Data models describing desired state of network

Distributed Actions



Device-type specific actuators

Common Systems



Platform, micro-services and configs

Accessible Codebase



Developers to extend to other domains

Scale Better

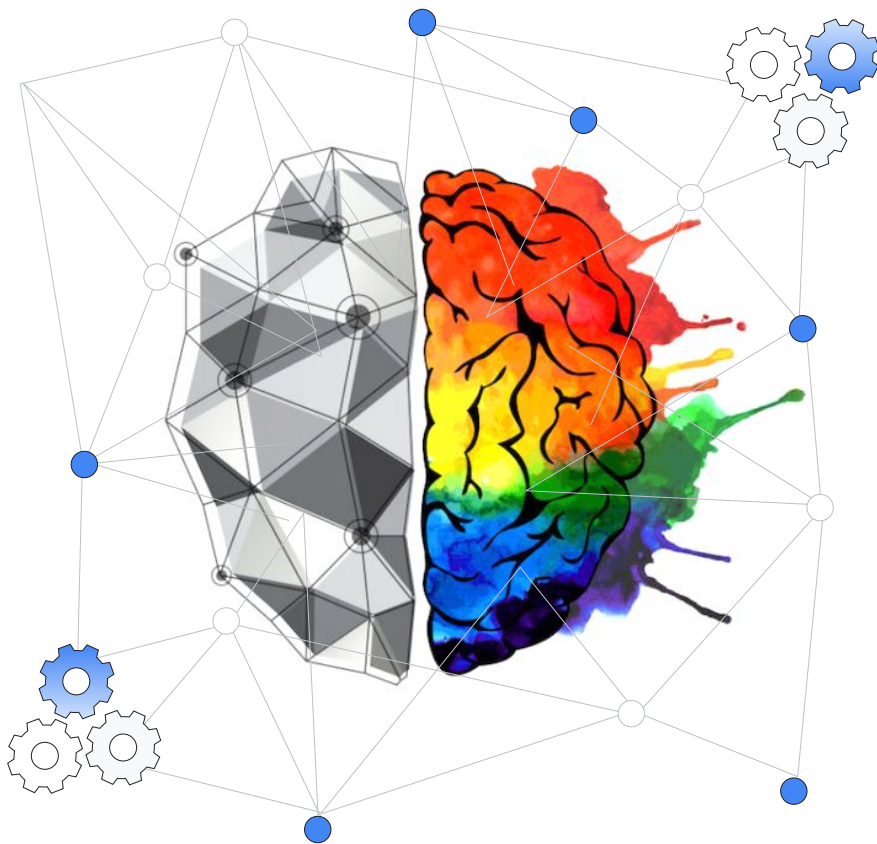
Cognitively Simpler

Extensible Architecture

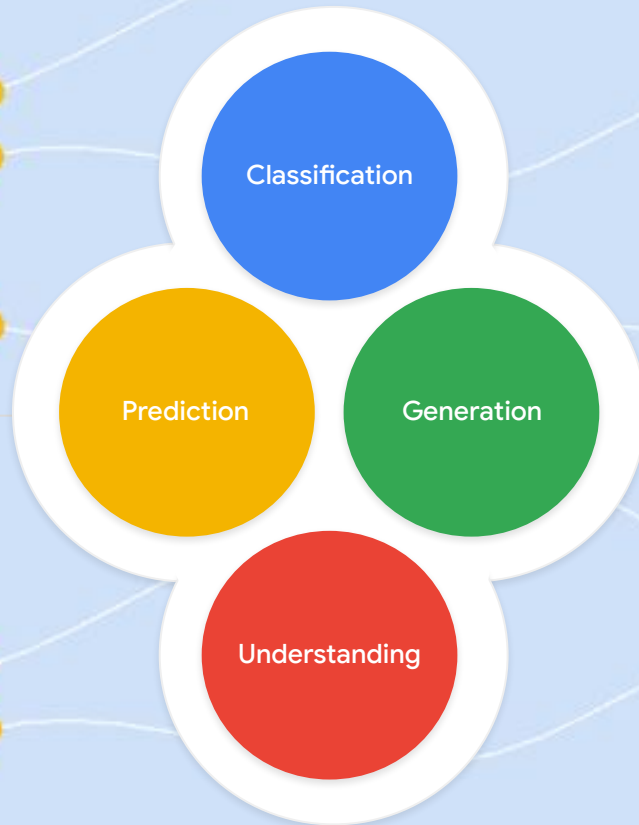
A year+ with Nephio, market **feedback** and new trends



AI is undergoing a
paradigm shift with the
rise of large models...

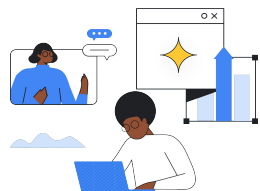


AI is evolving from analysis to creation

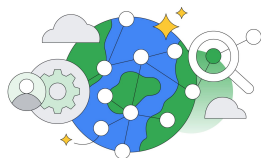


Generative AI for CSPs

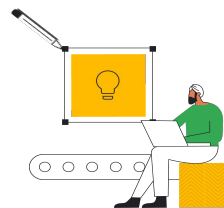
Transforming
customer/
employee
experiences



Improving
network
planning and
operations



Advertising
and content/
creative
assistance



Enhancing
Enterprise IT
functions



Enhancing
back-office
functions



Generative AI for CSPs

What's next in network automation?

Centralized Network Intent



Data models describing desired state of network

Distributed Actions



Device-type specific actuators

Common Systems

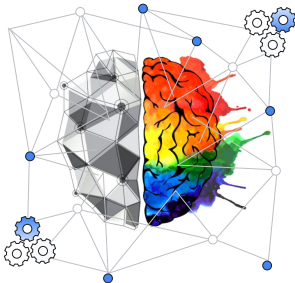


Platform, micro-services and configs

Accessible Codebase



Developers to extend to other domains



Automated legacy artifacts conversion to Nephio/Kubernetes KRM framework

Intent generation & handling through conversational AI

Auto-generation of configurations to support intent & Ops documentations of all sort

Self-optimize operational configurations based on live context & CSP knowledge-base



Nephio launch contribution & support



Nephio seed code



TSC & SIG community leadership

Google Cloud continues its commitment to Nephio

Thank you.





Executive Keynote

Jago Macleod

Engineering Director, Kubernetes and GKE, Google Cloud

9:00-9:10 AM PT

Certified Kubernetes conformance program



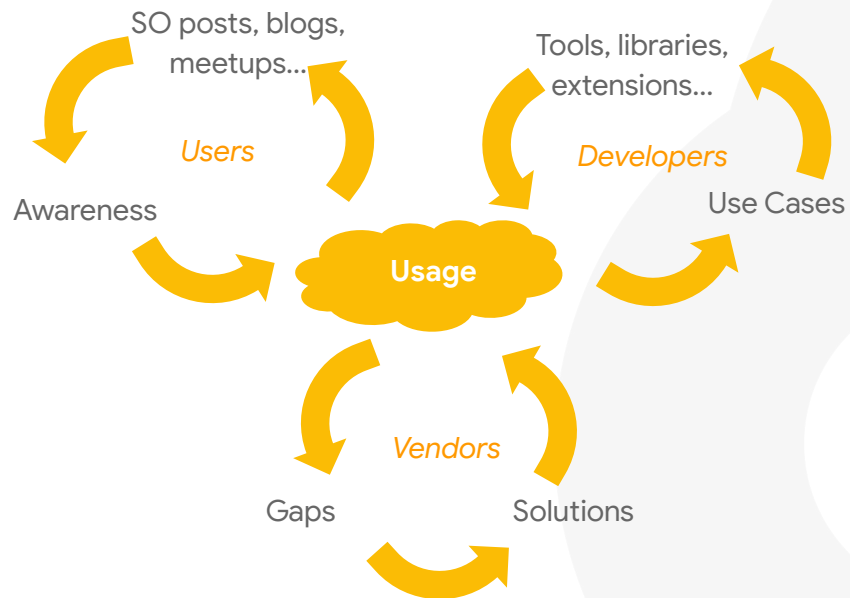
The team



- 1 Velocity
- 2 Teamwork
- 3 Inclusivity
- 4 Diversity



OSS engagement yields network effects



Reconciliation

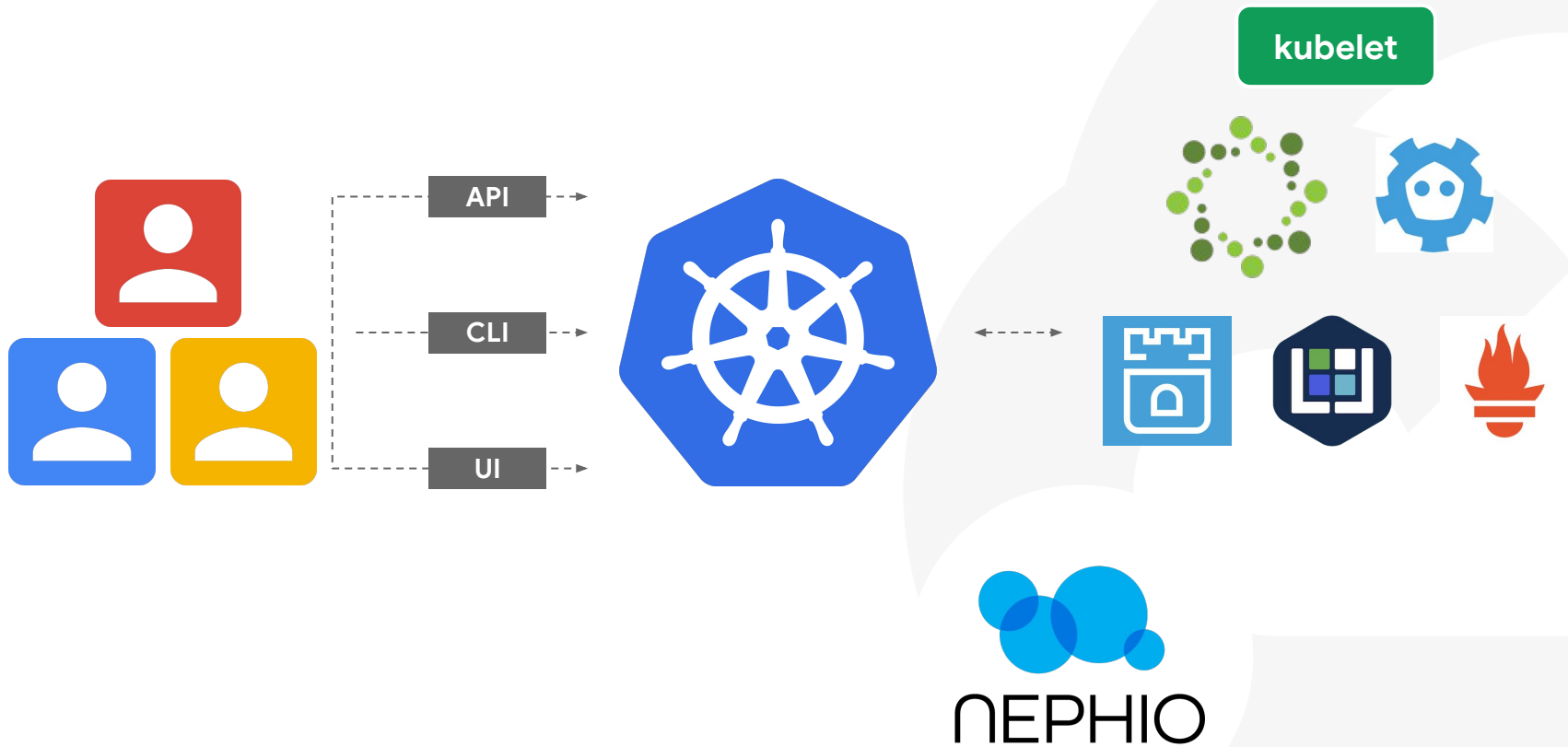
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Accelerate innovation



Executive Panel : Voice of Telecom

Day 1 9:10-9:50 AM PT



Moderator

Sana Tariq, Telus



Santosh Kumar

GM, Cloud Engineering, **Jio**



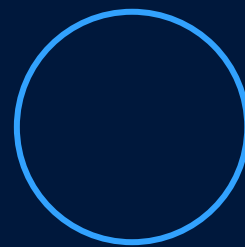
Daniel Bernier,

Technical Director,
Bell Canada



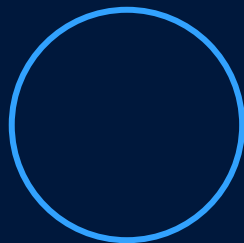
Eric Debeau

Head of R&D team,
Orange



Iain Wilkinson

Head of Network
Cloud &
Automation,
Vodafone



Bernard Tsai

Senior Business
Architect, **DT**

Executive Panel : Voice of NF and Cloud providers

Day 1 9:50-10:30 AM PT



Moderator

Gabriele Di Piazza,
Google Cloud



Vach Kompella

VP IP Networking,
Nokia



Jane Shen

VP Technology Strategy,
Mavenir



Ciaran Johnston

Senior Expert OSS,
Ericsson



Seshu Kumar

Principal Cloud
Architect, **Windriver**



Hunor Demeter

Technical Product Manager,
VMware



Andrew Mclachlan

Principal Cloud
Architect, **Red Hat**



Break

10:30-10:45 AM PT

Executive Panel : Voice of Startups

Day 1 10:45-11:10 AM PT



Moderator

Tina Tsou,

LF Edge Board Chair

Nephio SIG Release Vice Chair



Amar Kapadia

Co-founder & CEO,
Aarna Networks



Nilesh Kokate

Telecom Strategist,
GS Lab



Nat Natraj

Co-founder & CEO,
AccuKnox



Chris Lauwers

CEO,
Ubicity

Executive Panel : Voice of AI Startups

Day 1 11:10-11:30 AM PT



Moderator

Jane Sen

VP Technology Strategy, **Mavenir**



MuckAI Girish

Co-founder & CEO,
Rockfish Data



Vamshi Ambati

Founder & CEO
PredEra



Anshuman Pandey

Founder & CEO,
NimbleBox.ai

What's in Nephio R2 and Beyond?

Day 1 11:30-12:15 AM PT

- Introduction
- Nephio Architecture Industry (WG1)
- Nephio & O-RAN Roadmap (WG2)
- UX and modelling (WG4)



Sana Tariq

Principal Technology Architect, Telus



Kaushik Bhandankar

Principal Engineer, Google Cloud



Timothy Carey

Systems Architect, Qualcomm



Tal Liron

Software Engineer, Google Cloud



Lunch!

12:15-1:15 PM PT

What's in Nephio R2 and Beyond?

Day 1 1:15-2:00 PM PT

- Introduction to OpenAirInterface network functions and operators
- Topology controller and status aggregation
- NF2Infra
- Iterative improvements and future plans



Alexis de Talhouët

Associate Principal Technology Architect, RedHat



Stephen Wong

Staff Software Engineer, Google Cloud



Wim Henderickx

Head of architecture & technology IP, Nokia



John Belamaric

Senior Staff Software Engineer, Google Cloud



Balaji Varadaraju

Principal Engineer, RedHat

What's in Nephio R2 and Beyond?

Day 1 2:00-2:45 PM PT

Vendor Onboarding: Nephio SDK & Helm

- Overview
- Kpt SDK and NFDeploy
- Helm Onboarding
- Helm-to-operator generator

Nephio-experimental on GitHub



Stephen Wong

Staff Software Engineer,
Google Cloud



Wim Henderickx

Head of architecture &
technology IP, Nokia



Liam Fallon

Principal Engineer, Ericsson



Sandeep Jaisawal

Senior Chief Engineer,
Samsung



Tal Liron

Software Engineer, Google
Cloud



Break

3:00-3:15 PM PT

Live Workshop

Day 1 3:15-4:40 PM PT

From Zero to a Free5GC with Nephio R1

Stepping through how Nephio R1 deploys clusters and workloads to create a free5GC core

Q&A, Next steps, a summary of day 1, and Day 2 agenda overview



We would like to hear your exciting Nephio user stories!

Share your story about Nephio.

Selected submissions will be considered for content opportunities such as

- Blogs
- Speaking sessions
- Videos and more!

**Submission are due Submissions are due November 6th,
2023 5:00 PM PST.**



<http://bit.ly/46GhYx8>



Social hours

Social hours location details

- **Social Hours** (Google Sponsored) on October 9th from 5:30 to 7:30 PM PT
- **Venue:** US-MFA-BV200 (Floor 1) - Beefsteak at Bayview - 200 Bay View Drive, Mountain View, CA 94043, US





Nephio Developer Summit - R2

Day 2 - October 10th

 **FLOW** NETWORKING

 **THE LINUX** FOUNDATION



Welcome Note from LF

Arpit Joshipura
GM, Linux Foundation

Technical Panel: OSC, O-RAN, ONAP, NGMN, Sylva

Day 2 8:30-9:00 AM PT



Moderator

Timo Perala, Nokia



Seshu Kumar

Principal Cloud
Architect, **Windriver**



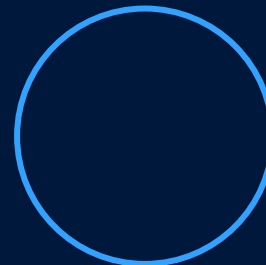
Byung-Woo Jun

Principal Engineer
Ericsson



Tracey Van Brakle

Principal Member of
Technical Staff, **AT&T**



Philippe Ensarguet

VP Software
Engineering, **Orange**

Birds of Feather: Next Steps for the Community

Day 2 9:00-9:40 AM PT

- Under LFN
- Working group structure
- Chair/co-chair elections
- TSC member selections



Khandan Kathirvel

Group Product Manager, Google Cloud



Sana Tariq

Principal Technology Architect, Telus



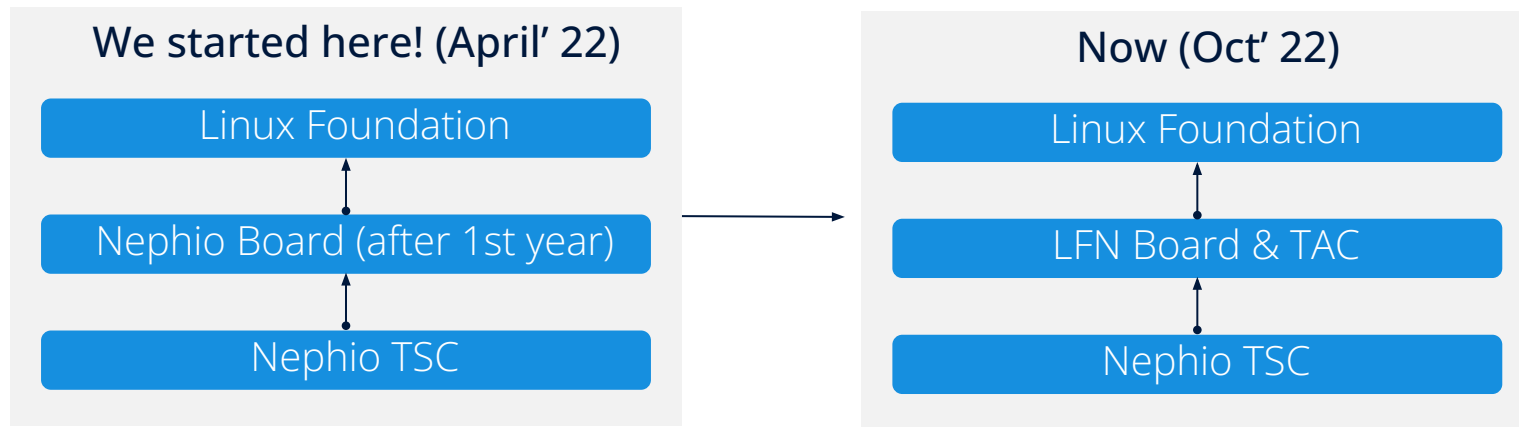
Arpu Joshipura

GM, Linux Foundation

Discussion points

- Under LFN
 - Board
 - TSC
 - TAC
- Election Cadence
 - SIG elections
 - TSC elections
 - TSC Chair/Co-Chair elections
- Current TSC members introduction
- Short term & Mid-term goals
- Q&A

Nephio Governance



- You do not need to be a LFN member to participate in Nephio TSC or community
- Nephio TSC member selection is based on contribution merit (see the charter)
- You do not need to be a TSC member to participate or contribute code to Nephio
- Nephio is governed by the TSC and funded by LFN board. TAC oversees the LFN umbrella level criterias.
- Document links
 - <https://lfnetworking.org/> -> About -> Charter
 - Membership enquiries -> <https://lfnetworking.org/join/>
 - <https://nephio.org/> -> Resources -> Charter
 - Community operational document is located in Nephio wiki

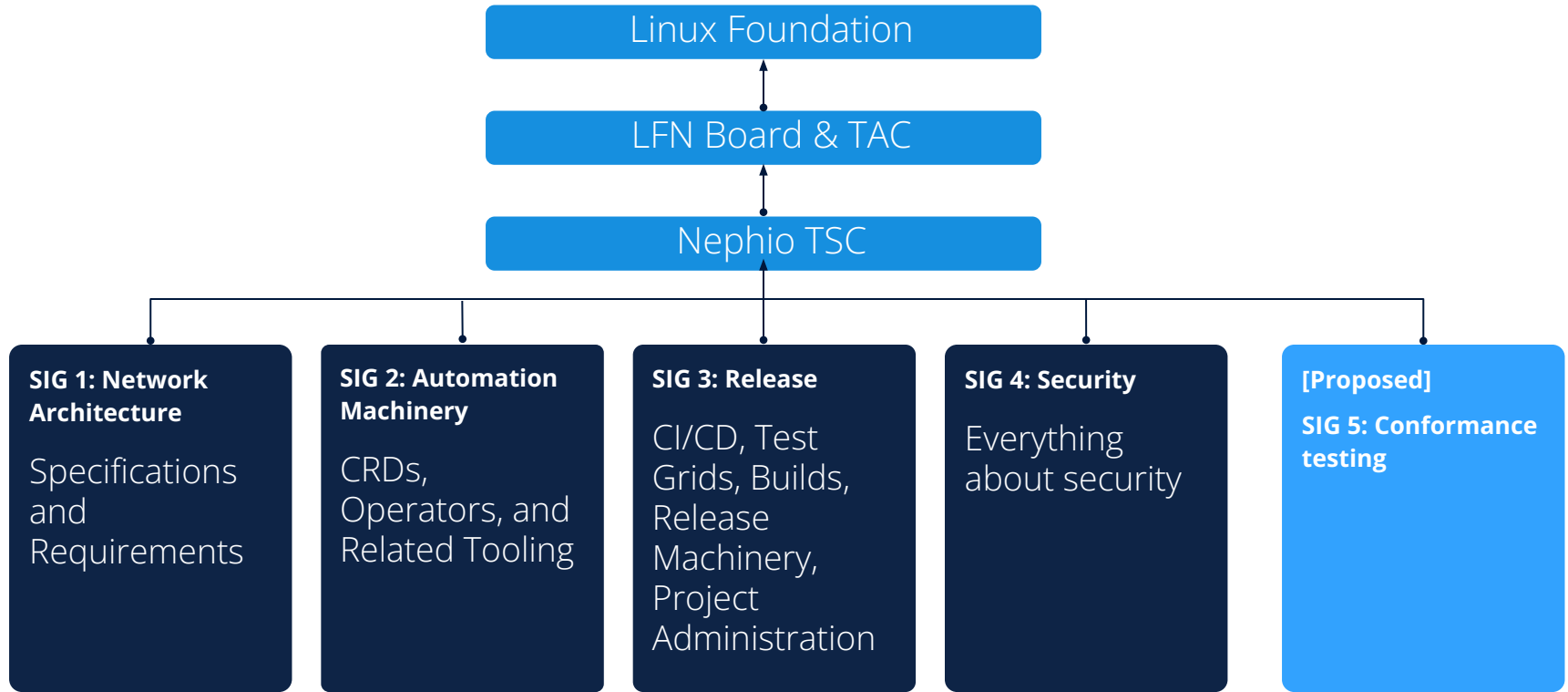
Current TSC members!

Name / Alternate	Organization
Kandan Kathirvel (Chair)	Google
Sana Tariq (Vice-Chair)	Telus
Sandeep Sharma	Aarna Networks
Raj Panchapakesan	AccuKnox
Erhan Lokman / Erol Ozcan	Argela
Daniel Bernier / Marc-Alexandre Choquette	Bell Canada
Sandip Sarkar / Chandra Thakare	Capgemini
Eric Gaudet	Casa Systems
Bernard Tsai	Deutsche Telekom
Oleg Berzin	Equinix
Ciaran Johnston	Ericsson
Sanju Abraham / Ravi Ravindran	F5
Sundar Nadathur	Intel
Sebastian Scheele	Kubermatic
Jane Shen	Mavenir
Timo Perala / Wim Henderickx	Nokia
Eric Debeau	Orange
Bala Varadaraju	Red Hat
Victor Morales	Samsung
Fabrizio Moggio	TIM
Gene Bagwell	Verizon
Hunor Demeter / Padma Sudarsan	VMware
Iain Wilkinson / Riccardo Gasparetto Stori	Vodafone
Seshu Kumar Mudiganti	Wind River

- Current TSC has 24 members across Telcos and vendors
 - Startup-period 25 seats (status quo)
 - TSC nomination was based on commitment to engage at least two resources by the company
- Steady state maximum of 25 seats
 - Only one person from a company can be elected
 - An active contributor ie. 20+ measurable contributions from their company can self-nominate.
 - Wiki page to be set up.
 - Self nominate with details of contributions (Now vs. future commitments until next election)
- Recommended election cadence (all elections are due, hence in this order)
 - SIG Chair/Co-chair
 - Nomination period - October 16-27 (2 weeks)
 - Election 30th (in case of multiple candidates)
 - TSC election (along with Chair/Co-Chair)
 - Nomination: November 1st - 15th (2 weeks)
 - TSC election on November 16th (stack ranked to 25)
 - TSC Chair & Co-Chair election (November 20th)

Current TSC members: Self-Introduction

Current SIG & Working Structure



Next steps by TSC members - Short-term

- Reminder: TSC regular cadence
 - Call moved to 9 AM PT, Bi-weekly, on Thursdays
 - Hope this slot is Asia & Europe friendly
- Facilitate the SIG elections
- Represent in the LF Board meetings (TSC Chair or Co-Chair)
- Represent in the TAC meetings (TSC Chair & Co-Chair)
- Address the open issues from the TAC review

Next steps by TSC members - Mid-term

- Successfully execute six month release cadence
- Plan & successful delivery of Nephio Release 2 (December end, PR release Target in Jan 2024)
- Welcome more participants
- Set up ambassadors to other communities and establish integrated programs e.g O-RAN & Nephio
- Participate and contribute to SIG, especially new SIGs - Security and information SIG: Conformance testing

Q&A



Break

Deep Dives: North-South-East-West Integrations

Day 2 10:00-10:45 AM PT

- Nephio observability (WG5)



Stephen Wong

Staff Software Engineer, Google Cloud



Sandeep Jaisawal

Senior Chief Engineer, Samsung

- Service assurance & policy (WG5)



Tal Liron

Software Engineer, Google Cloud



Subhash Kumar Singh

Senior Chief Engineer, Samsung

- RAN use case: O-RAN & OpenAirInterface (WG2)



Alexis de Talhouët

Associate Principal Technology Architect, RedHat

Deep Dives: Automation

Day 2 10:45-11:20 AM PT

- Achieving Telco scale with Nephio



Tal Liron

Software Engineer, Google Cloud

- Bare Metal provisioning with Nephio



Sandeep Sharma

Engineer, Aarna Networks

Birds of Feather: Conformance

Day 2 11:20-12:00 AM PT

- Nephio conformance testing
- Example:
<https://www.cncf.io/certification/software-conformance/>



Balaji Varadaraju

Principal Engineer, RedHat



Hunor Demeter

Technical Product Manager, VMware



Akshatha Sathyanarayan

Director R&D, VMware



Lunch!

Birds of Feather: AI

Day 2 1:00-1:30 PM PT

- How Can GenAI Be Used Within Nephio?



Khandan Kathirvel

Group Product Manager, Google Cloud



Wim Henderickx

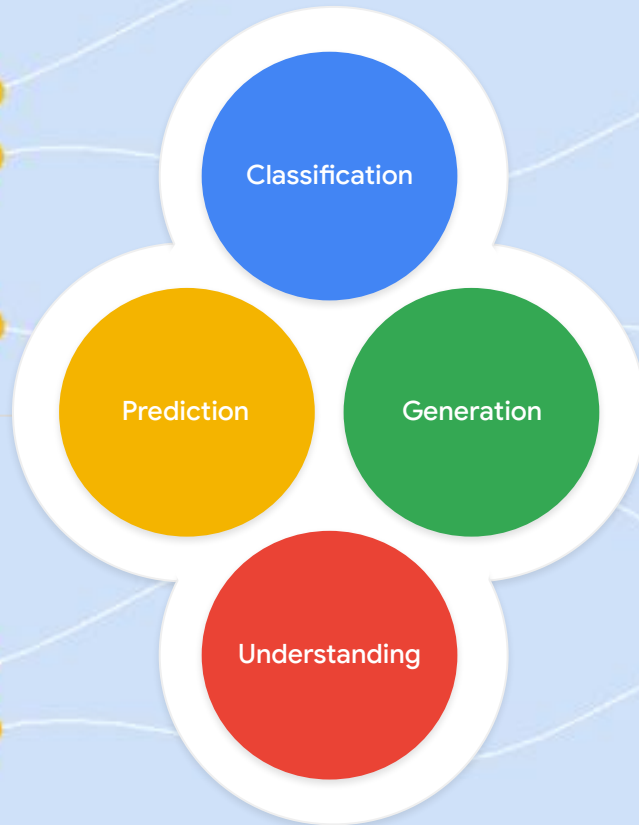
Head of architecture & technology IP,
Nokia



Vamshi Ambati

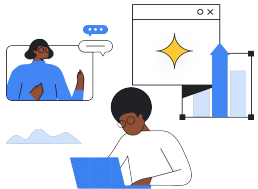
Founder & CEO, PredEra

AI is evolving from analysis to creation

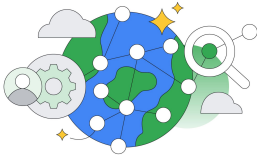


Generative AI for CSPs

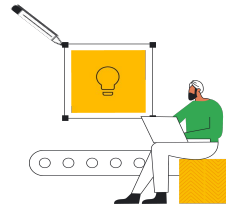
Transforming
customer/
employee
experiences



Improving
network
planning and
operations



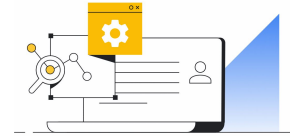
Advertising
and content/
creative
assistance



Enhancing
Enterprise IT
functions



Enhancing
back-office
functions



Generative AI for CSPs

What's next in network automation?

Centralized Network Intent



Data models describing desired state of network

Distributed Actions



Device-type specific actuators

Common Systems

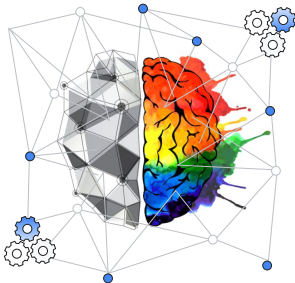


Platform, micro-services and configs

Accessible Codebase



Developers to extend to other domains



Automated legacy artefacts conversion to Nephio/Kubernetes KRM framework

Intent generation & handling through conversational AI

Auto-generation of configurations to support intent & Ops documentations of all sort

Self-optimize operational configurations based on live context & CSP knowledge-base

Discussion

Day 2 1:30-2:15 PM PT

The Enterprise Use Case



Brandon Wick

Sr Director Marketing,
Aarna Networks



Amar Kapadia

Co-founder & CEO,
Aarna Networks



Break

Discussion

Day 2 3:00-3:30 PM PT

Introducing SIG Security



Raj Panchapakesan

Global Head, Partner
Ecosystem & Biz dev,
AccuKnox



John Belamaric

Staff Software Engineer,
Google Cloud



Phil Porras

Chief Scientist, AccuKnox



Rahul Jadhav

Co-founder, Open Source
Lead, AccuKnox

Birds of Feather: What's Next for Nephio?

Day 2 3:00-3:45 PM PT

- Community Voice
- Share use cases, tech proposals, process improvements, etc.

**Moderators:
All chairs & co-chairs**

Full community

Q&A, Closing notes



Thank you!

 THE **LINUX** FOUNDATION

Backup