# Nephio TSC Meeting

August 17, 2023

# Antitrust Policy Notice

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# Meeting Information

Zoom Meeting Information

https://zoom-lfx.platform.linuxfoundation.org/meeting/91267803435

Note: Anyone that accesses the link will be prompted to register for the meeting at which point they also add themselves to the invite list.

# Etherpad - Meeting Minutes

- https://etherpad.lfnetworking.org/p/Nephio-TSC-2023-08-17

- Join the etherpad and set up your name and text color
  - Meeting attendance - no longer needed, tracked by LFX tools

- Please help: The more that participate, the better the minutes

# Using the Mail Lists

All groups.io email lists are <list name>+subscribe to subscribe, just email it (content does not matter)

- TSC
  - Post: nephio-tsc@lists.nephio.org
  - Subscribe: nephio-tsc+subscribe@lists.nephio.org
- Development
  - Post: nephio-dev@lists.nephio.org
  - Subscribe: nephio-dev+subscribe@lists.nephio.org
- SIG Automation
  - Post: sig-automation@lists.nephio.org
  - Subscribe: sig-automation+subscribe@lists.nephio.org
- SIG NetArch
  - Post: sig-netarch@lists.nephio.org
  - Subscribe: sig-netarch+subscribe@lists.nephio.org
- SIG Release
  - Post: sig-release@lists.nephio.org
  - Subscribe: sig-release+subscribe@lists.nephio.org

Once you have subscribed, login to lists.nephio.org (ask for a link to be sent), then edit account details

# TSC Members

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

# Agenda

- Antitrust Policy, Minutes, and Action Items
- [Kenny Paul] Introduction
- [Update] R1 Press Release - Complete
- Date Selection for Nephio Developer Summit 2023
- SIG Status
    - [Sana & Kaushik] NetArch
    - [John & Wim] Automation
    - [Stephen & Tina] Release
- TSC Induction Requests
    - Red Hat ( Bala Varadaraju )
    - Samsung ( Victor Morales )
    - AccuKnox ( Raj Panchapakesan )
- [Kandan] Discussion of Nephio Organizational Direction
- [Tal] Discussion: How to accept "adjacent" code contributions?
- Q&A

# TSC Induction Requests

› Red Hat ( Bala Varadaraju )  https://lists.nephio.org/g/nephio-tsc/message/99
› Samsung ( Victor Morales ) https://lists.nephio.org/g/nephio-tsc/message/103
› AccuKnox (Raj Panchapakesan ) https://lists.nephio.org/g/nephio-tsc/message/106


› **Charter** *TSC Composition: i. Start-Up Period.* *At the inception of the Project, the initial voting members of the TSC are those individuals named as TSC members in the "CONTRIBUTING" file within the Project's repository. During the first six months following the inception of the Project or until such other time as determined by the TSC (the "Start-Up Period"), the TSC may appoint additional voting members to the TSC to recognize organizations that have indicated their intent to make significant technical and/or resource contributions to the Project, provided, however, that at no time prior to the conclusion of the Start-Up Period will there be more than 25 voting members on the TSC, with 5 of the 25 TSC seats to be reserved for representatives of telecom service providers.*


*Things to consider:*

a)  *Initial TSC formed with the commitment to contribute/participate by the participants*
b)  *Given we passed R1, we should plan for the new TSC election in October [after Board formation]*
c)  *Meantime TSC to consider and accommodate above request from Red Hat, Samsung, Accuknox*

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# R1 Updates

- R1 Press Release was issued on August 8th.
- Multiple media entity covered the release
  - Thanks to Sunny, Jill and Arpit for coordinating it
- R1 was well received by the industry. Lot of excitement in the Social media.
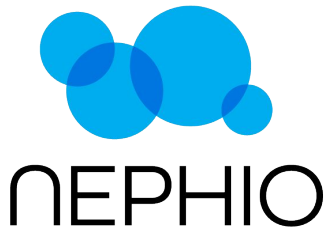
# NEPHIO

- *Linux Foundation telco automation project triples participant base as telecom, network equipment, and cloud service providers embrace cloud native automated networks to revolutionize deployments.*

- *Nephio's Release 1 delivers cloud native intent-based automation using Kubernetes with Gitops to boost telecom network deployment and efficiency*

- *R1 provides a solid basis of interoperability with LF Networking, CNCF, Project Sylva and CAMARA, further enabling rapid deployment.*

**SAN FRANCISCO – August 8** – Project Nephio, an open source initiative of partners across the telecommunications industry working towards true cloud-native automation under the Linux Foundation, today announced the availability of its Release 1 (R1). Nephio R1 brings revolutionary advancements in deployment, life cycle management and scaling of telecom cloud infrastructure and network functions by using Kubernetes cloud native technologies and intent- based automation.

Nephio delivers 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. It brings zero-touch provisioning of cloud infrastructure and network functions, which can offer increased network availability and resiliency while reducing maintenance downtime.

Since its launch in April 2022 in partnership with Google Cloud, cloud, telecom and network function providers have embraced Nephio by expanding the seed code provided by Google Cloud to deliver R1. The community is further committed to enhance Nephio with additional use cases in future releases.

## www.nephio.org

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## Release 1 Highlights

- Common configuration templates to provision and life-cycle management of cloud infrastructure, Kubernetes clusters, 5G Network functions and network configurations
- Gitops based package management and scaled deployment using Kubernetes Resource Model (KRM) and Configuration as data (CaD)
- Uniform Kubernetes CRD and operator-based deployment of multi-cloud infrastructure and multi-vendor network functions
- Kubernetes based Nephio control-plane which supports single pane of management of large scale deployments
- Common set of User interface and APIs for integration with Service orchestration layers
- Multiple personas based management and approval of configurations and much more

# Sunnyvale Event

- Upcoming Nephio Event in Sunnyvale, CA (Google Campus)
  - Day 1: Celebration of R1; R2 Topics
  - Day 2: Birds-of-a-Feather Session

- Tentative Dates
  - Week of August 21st
  - Week of August 28th
  - Week of September 4th [ Labor day week]

Option 1: September 4th virtually

Option 2: October 1st week

- Please expect emails regarding date selection/voting and keynote/presentation topics

- Information will be periodically updated on Nephio's Wiki Page

# Summary of Nephio next steps

› At launch Google agreed to fund the 1st year of Nephio's Project operations
› Nephio is now 18 months into that "*1st year*" - Google has continued to provide funding throughout
› As previously discussed in the TSC, as requested by the community members, we would like to establish community funding for the Nephio.
› We evaluated multiple options and inducting with LFN is recommended after the multiple TSC members & LF's feedback
› TSC to provide conditional approval to join Nephio as "*Graduated*" *Project of LFN.*

# Project Option Matrix

| Join LFN | Join CNCF | Standalone Directed Fund |
|---|---|---|
| **Pros** <br> • Funding immediately provided for - nearly all Nephio contributors are already LFN Members <br><br> • No fragmentation <br><br> • No disruption to current service levels <br><br> **Cons** <br> • Higher membership fees for companies that are not already in LFN <br><br> • Budget is managed by the LFN GB and not at the Project level | **Pros** <br> • K8s Community is hot <br><br> • Better leverage at KubeCon <br><br> **Cons** <br> • Fragmentation <br><br> • **Still treated as a non-funded Project** at the Sandbox level <br><br> • Loss of most of the current Advanced Service levels for at least a year <br><br> • CNCF focus is not on networking | **Pros** <br> • Budget control via self funded memberships <br><br> • Project has its own Governing Board <br><br> **Cons** <br> • Fragmentation <br><br> • A funding gap till Q1-2024 - Service will be impacted <br><br> • Eventual funding may still fail to cover the current LF Advanced Service levels <br><br> • Challenges to overall solutions Integration across ecosystem |

**Recommendation after considering several facts: Join LFN**

# Joining LFN Community and Services

› Benefit to the community members with one membership cost. There is a huge overlap between Nephio contributors and LFN's existing membership roster
› Least disruptive of the four choices
  › Work involved is little more than the TSC making the decision
  › No need to navigate the application process alone -LFN resource provided facilitator
  › Support level transitions without a lapse in service
  › LFN Board already approved the funding for Nephio (with the assumption that it will be inducted as part of the LFN)

# Joining LFN: high-level process overview

› A Project submits a request to the Technical Advisory Council (TAC) for an induction review along with a slide deck that summarizes the current state of the Project
   › *The objective would be to apply as a Graduated Tier Project*

› The TAC conducts the review at a regular meeting, consisting of the Project walking through their application deck along with Q&A

› TAC makes a recommendation to the LFN Governing Board (GB) as to where they think the Project would fit within LFN

› The GB has the actual decision making authority regarding the induction- ultimately this a budget impact decision

# Joining LFN: who does what?

› **LFN Technical Community Architect (TCA)**
  › Plays the key role in assembling the induction deck
  › Helps guide the Project to remove as much friction from the process as possible and ensure things go smoothly with the TAC and GB

› **Project TSC**
  › Provide information as requested by the TCA
  › Prioritize work to address Project process, governance or technical gaps if any
  › At least one TSC member must attend the TAC review to speak on behalf of the Project
  › It is recommended that a member is present for the actual induction "pitch" to the GB

› **Community at large**
  › Respond and align to the TSC's prioritization to close the gaps if any

# Joining LFN: common questions

› **Does the structure of the TSC need to change?**
  › **Not as a result of joining LFN.** <u>However</u>, moving the TSC to a meritocratic model is codified in the Charter: *The TSC will institute a plan to transition to election-based membership on the TSC from among the Active Contributors to the Project by the conclusion of the [6 month] Start-Up Period*. That needs to be done in the near future irrespective of the Project's organizational alignment

› **Does any work-in-progress or community activity need to be placed on hold?**
  › **Nope.** Continue with whatever you had on your roadmap.

› **What level of autonomy do we maintain?**
  › **The TSC remains the top level authority for their Project.** The GB controls the budget allocation for all the Projects, but none of the technical or non-technical decision making for member Projects.

› **Can the TAC or GB require that our Project does something?**
  › **No they can't.** The GB, TAC or MAC (Marketing) can only make guidance recommendations regarding the Project's operations. The Project can heed or disregard that guidance.

# Joining LFN: common questions

› **Is participation/attendance on the TAC or MAC mandatory?**
  › **It is completely optional**, but taking advantage of these resources is encouraged.

› **Do all of the perceived gaps (if any) need to be "fixed" before applying?**
  › **No,** but you should share a plan and/or a timeline for addressing it, even if the answer is, "We don't plan to do that."
  ›

› **Is there a requirement for cross-collaboration with other LFN Projects?**
  › **It is certainly encouraged**, but there is no mandatory collaboration requirement.

# TAC Induction Gaps

| Nephio Current State | Guidance | Suggested Response |
|---|---|---|
| Strict code standards | Strict coding standards are enforced to ensure high code quality, maintainability, and consistency. Regular code reviews are conducted to ensure these standards are adhered to. | Need documented code standards |
| 1. Mandatory add/remove committers/Proj Tech Leads (PTLs)<br>2. archive a subproject | The need for committers/PTLs may shift as the project grows and evolves, hence it's necessary to have a mechanism for adding/removing them. | 1. Need established GitHub admin docs<br>2. Recommend that it simply be noted as a TO-DO and move on. |
| 1. Upgrade<br>2. Mostly integrated CI/CD | Mostly Integrated - Most parts of the development process are automated through CI/CD, improving efficiency and reliability. | 1. Upgrade missing due to only one release - Note as TO-DO for R2 and move on<br>2. Need to determine quality/specs of CI/CD (unit tests, E2E etc)- CI/CD in PROW |
| OSSF Scorecard | OSSF Scorecard is "Passing" better - Mature projects are expected to maintain or improve their OSSF Scorecard performance, demonstrating a continuous focus on security | https://bestpractices.coreinfrastructure.org   and https://github.com/coreinfrastructure/best-practices-badge<br><br>https://securityscorecards.dev/<br><br>https://github.com/ossf/scorecard-action#scorecard-badge<br><br>https://openssf.org/blog/2022/09/08/show-off-your-security-score-announcing-scorecards-badges/ |

# Summary/Next steps

1. TSC to provide conditional approval to join Nephio as *"Graduated" Project of LFN.*
2. *LF (Kenny/Arpit) own the logistics to coordinate with the LFN TAC/Board to induct*
3. *Nephio TSC Chair and Co-chair will coordinate with Arpit for the public announcement*

# SIG Updates

1. SIG NetArch
2. SIG Automation
3. SIG Release

# How to accept "adjacent" code contributions?

**What?**

Experiments,examples, PoCs, solutions, proposals, etc., that are to be <u>covered by Nephio CLA and "Nephio authors" copyright</u>. They are either

1. not intended to be included in a Nephio "R" release
2. intended to be included, but not yet approved ("incubating")

**Why?**

1. Potential contributors have already signed the Nephio CLA and thus have pre-approved avenue for publishing open source code (easing bureaucracy)
2. Potential contributors would like to be counted (lines of code) despite not having a "R"-release-worthy contribution (as a courtesy)

(**Relatedly**: We don't have a proper incubation process for contributions)

# How? 3 options:

1. **(Leaning on this) Separate GitHub group**, e.g. "nephio-experimental", with a lax threshold for approval of contributions and <u>no commitment for quality and maintenance</u>. All repositories in this group will also feature a preamble in their main README clarifying that they are not endorsed by Nephio.
   - **Implication**: The main GitHub group, "nephio-project", can now be understood as our "R" release distribution; everything else should move to "experimental" (there's a bunch of stuff we can move to there already)
   - **Overhead**: We will need to manage user permissions separately for this group (Or do we? Does GitHub have organizational tools?)
   - **TODO**: We still need to decide on the criteria for inclusion, even if they are lax; it should not be "anything goes" because it still has an association with Nephio
2. **Add directories to a "nephio-pocs" repository** in the current group
3. **Refuse**: Any non-distro, non-approved code should simply not live in Nephio. Contributors should use other publishing avenues
   - As a courtesy we can curate a list of such external efforts in the wiki

# Legal Notices

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# Thank you!

# Advanced services currently provided to Nephio

| TSC Support | Marketing | Membership | Tools | Finance |
|---|---|---|---|---|
| Advising on extended needs (community, events, marketing) | Staff attendance for TSC Meetings (ongoing) | Facilitating new member onboarding (via email or meetings) | | |
| Advising the Project on Governance issues | Taking / distributing notes for TSC Meetings | Responding to membership inquiries | | |
| Advising TSC / SIG chairs as appropriate | Build / Lead building Marketing agenda | Set up / managing AutoJoin | | |
| Coordinating the agenda for TSC Meetings | Creating / managing press releases, blogs & mktg campaigns | Updating CRM systems (memberships, special requests, etc.) | | |
| Coordinating with other LF Teams (Marketing, Events, etc.) | Creating / managing surveys | Configuring LFX Suite (insights, security, mentorships, etc.) | | |
| Creating presentation materials for the TSC (as requested) | Creating content for Project social / websites | Creating / managing public mailing lists | | |
| Facilitating updates to Project Charter / Participation Agreement | Event coordination for booth sponsorships, webinars & meetups | Creating / managing restricted mailing lists | | |
| Helping set up Code of Conduct process | Managing Project social media sites | Managing permissions / access to community platforms | | |
| Managing TSC Meeting logistics & facilitation | Managing Project website content | Managing permissions / access to Zoom | | |
| Overseeing / executing Project Lifecycle / maturity | Managing Project website development (adding features) | Facilitating purchase requests | | |
| Participating in planning sessions with the TSC Chair | Creating / Updating membership recruitment materials | Managing contracts and approving expenditures | | |
| Staff attendance for SIG Meetings (ad-hoc) | Document Managingment (Membership documents) | | | |

**Legend**

| TSC Support | Marketing | Membership | Tools | Finance |
|---|---|---|---|---|

Dedicated Program Management