

Nephio Project  
MINUTES OF THE TECHNICAL STEERING COMMITTEE  
April 13, 2023  
10:00 am Pacific Time

Voting Representatives

\*\*\*Please add + after your name if you are attending\*\*\*

Google

-Kandan Kathirvel (Chair) +

Wind River

-Seshu Kumar Mudiganti

Nokia

-Timo Perala +

Wim Henderickx (Nokia) for Timo +

Deutsche Telekom

-Bernard Tsai

Vodafone

-Iain Wilkinson

-Riccardo Gasparetto Stori

Equinix

-Oleg Berzin

Intel

-Sundar Nadathur

TIM

-Fabrizio Moggio

Ericsson

-Ciaran Johnston +

-Peter Woerndle

Casa Systems

-Eric Gaudet

Mavenir

-Jane Shen +

Bell Canada

-Daniel Bernier  
-Marc-Alexandre Choquette

TELUS

-Sana Tariq +

Aarna Networks

-Sandeep Sharma

Orange

-Eric Debeau +

VMware

-Hunor Demeter: present

-Padma Sudarsan

Argela

-Erhan Lokman

Capgemini

-Sandip Sarkar

-Chandra

F5

-Sanju Abraham

-Ravi Ravindran

Kubermatic

-Sebastian Scheele +

Verizon

-Gene Bagwell

Attending

\*\*\*Please add yourself here if you are not a voting representative\*\*\*

Lucy Hyde (LF) +

Sunny Cai (LF) +

Balaji Varadaraju +

Charles Eckel +

John Belamaric

Alexis de Talhouet

Ranny Haiby +

Vishwanath Jayaraman (Red Hat) +  
Tal Liron +  
Reden Martinez +  
Liam Fallon +  
Radoslaw Chmiel+  
Anh Thu Vo  
Stephen Wong +  
Keguang He  
Refael Hamo  
Selcuk Duman  
David Bainbridge (Ciena)  
Wajeeha Hamid  
Mike Woster  
Vance Shipley (SigScale)  
Olivier Smith (MATRIXX)  
Borislav Glozman  
Kaushik Bhandankar  
Philippe Jeurissen  
Senthil Kumar Ganesan  
Subhash Kumar Singh  
Byung Woo-Jun  
John Mechling +  
Phil Porras +  
Reden Martinez +  
Victor Morales (Samsung)  
Vishwanath Jayaraman(Red Hat) +  
Girish Kumar +  
Rahul Jadhav +(AccuKnox)  
Raj Panchapakesan +  
Shekhar C +

#### Call to Order

Kandan Kathirvel (KK) called the meeting to order at 10:03 am. Lucy Hyde (LH) assisted in recording the minutes. LH reviewed the antitrust policy notice.

#### Agenda/Action Items

Kandan Kathirvel (KK) reviewed the agenda for the meeting. There were no changes or additional topics added.

#### Wind River Member Change:

Lucy Hyde (LH) stated that Wind River had a member change and that Seshu Kumar Mudiganti will be the new representative.

## Upcoming R1 Target Dates

Kandan Kathirvel (KK) gave an update of the upcoming release dates (sprints, bug fix sprint, release etc). Balaji Varadaraju (BV) provided a status for SIG Automation/SIG Release. Pkg mgt needed some dependencies upstream. Just concluded sprint 2 (monday); on sprint 3. Started dev with UI, actual implementation/installer is in progress. Pkg spec: merged function runtime (lib component) that will make functions R1+ simpler as Nephio will dev many functions in future; will help ease of dev and maintenance of those functions. Also developing which sits on function SDK, in progress- different funcs developing in Pkg spec are in progress. Since foundational SDKs merged, expect rest of work will ramp up quickly. In addition, will work on list for IPAM/VLAN and will figure out how to iterate. Edge status aggregator (design/dev from seed code from Google); there are several moving parts and depends on other activities. Expect to complete before R1 - if something is out of scope, due to prioritization. Workload Grp: controllers for three major funcs (UPF etc) ongoing and operator for free5gc; expect to make significant progress in sprint 3. For SIG Release: starting dev of testbed and integration test started by end of sprint, or next sprint. Process mgt: titled some of git mgt and process, improve as progress continues.

Seshu Kumar Mudiganti: blog update - working on ORAN integration (present next TSC call) - Lucy grab details from recording

## June D&TF Event:

Timo Perala (TP) gave an overview of the Developer and Testing Forum (D&TF) in June. The event will take place on June 6-8 virtually, similar the event in February. Registration is open; (Lucy will add links). Topic proposal deadline is May 19th, and LFN community is interested in more Nephio presentations. Same process as last D&TF. Proposals could cover R1 contents/R1 demo, current state of R2 planning. SIG leaders would drive the proposals and content creation. KK requested a presentation from D&TF/LFN about what they would like to see with cross community contributions/cooperations. Wim: clearly important to discuss Nephio to promote understanding, did not see much feedback on previous D&TF sessions but would be helpful given attendance was high (50-100 per session). Wim: topic that came up at Kubecon- Reference architecture for 5G/6G?

## SIG Updates

NetArch: Sana Tariq - went through agenda doc and have been coming up with working groups. Thinking to propose 4: netarch working group (standards body), RX focused sig group (requirements for next release), use case working group (interact with RX and ORAN), UI/UX working group (looking to propose inputs to RX and beyond). Next meeting is on May 2nd due to holiday- please check slack channel.

Hunor: subgroups in arch, who will create arch pictures? KK should coord with SIG1 to put together. Sana confirmed; will take as task.

## Automation:

Release:

Kandan: would like to bring in technical topics for TSC calls. Topics can be relevant to Nephio (no marketing material involved) and Tal will create a Wiki page to host agenda so community can add topics.

Tech Overview: Cloud Native Development with Prow

Rado Chmiel (RC) provided a presentation regarding cloud native development for prow. Prow is a Kubernetes based CI/CD solution; besides job execution and monitoring, it integrates with Github through automation like policy enforcement, cat-ops via /foo style commands and automatic PR merging.

Job execution for testing, batch processing, artifact publishing.

GitHub events are used to trigger post pr merge (postsubmit) jobs and on -PR-update (presubmit) jobs

Support for multiple exec platforms and source code review sites

Pluggable github bot automation that implements /foo style commands and enforces configured policies/processes - assign tasks using /assign command - approved pull requests using /pull comment. You can easily see what transpired during total flow, and comments/what occurred during PR.

Github merge automation and batch testing logic

front end for viewing jobs, merge queue status, dynamically generated help information. - nice UI/log viewer

Config-as-a-code with auto applying changes

automatic github org/repo admin configured in source control - can control many aspects of repos and organization through config file. will bring to state every time job runs. very flexible/scalable

designed for multi-org scale with dozens of repositories (kubernetes ci/cd, origin of prow- 10k jobs per day)

all benefits of running on k8s- replication, load balancing, rolling updates, addons like Istio JSON structured logs

Prom metrics - most components in Prow expose metrics

Uses:

- Code checking for syntax, common errors, security

- license scanning, implemented in several different ways (job that checks commits for header that contains license and CR, general scan of licensing) - working to extend to include components that are incompatible

- artifact building/delivery - currently in progress to build resulting docker images and upload to dockerhub

testing env provisioning - pushed PR for integration/E2E testbed  
keeping Github policies applied 0 can also work as a guard/enforcing policies on repo

Future:

- extend code checks (i.e. licensing)

- enforce best practices further (blocking PRs containing files that do not have correct header)

- capacity and availability monitoring (just need repo owner)

Bala inquired about the OS Docker account

Girish Kumar - from LFN, especially in ONAP area - closely look at Nephio in container orchestration space. In arch reference, would like to start working with community in that area.

Sana said SIG1 (NetArch) is dedicated to create that vision and interactions/interfaces. Will connect with working group 1; Girish will join next meeting (monday).

Rahul: has there been any discussion re: security etc?

Kandan Kathirvel (KK) adjourned the meeting at 10:35am PT.