

Akraino API Subcommittee Weekly Meetings

Meeting Info

Akraino API Subcommittee meetings are open to qualified technical personnel working in telecom and cloud provider areas.

When: Occurs every Friday effective 10/4/2019 from 9:00 AM to 10:00 AM (UTC-08:00) Pacific Standard Time (US & Canada).

Where: <https://zoom.us/j/294712016?pwd=dWVkME5XQUlhQTU3bmRBdDJ3V1hDUT09>

Reminded during 21Oct2020 TSC call

17 February 2023 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Updated Akraino spring summit planning page is now showing available time-slots:

<https://wiki.akraino.org/display/AK/2023+Akraino+Spring+Summit>

Date seems to be fixed at 28 Mar

Location tentatively mentioned in yesterday's TSC meeting as ByteDance (TikTok) office in San Jose

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Minutes

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Action Items

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10 February 2023 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- PCEI blueprint has no changes from R6 to R7
- CFN blueprint API info form approved last meeting, they presented during TSC weekly call, should be ready for voting
- Akraino spring summit planning page here:

<https://wiki.akraino.org/display/AK/2023+Akraino+Spring+Summit>

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Minutes

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Action Items

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3 February 2023 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- CFN blueprint PTL (Hanyu Ding) uploaded API info form, we need to review and approve if ok
- The CFN form is showing an API hierarchy of Application Enabler, Feature Stacks, Streaming, and Semantic AI Analysis. The last category (Semantic AI Analysis) they appear to have added ... we should ask them for more info and include this in the AI map

Minutes

- CFN blueprint API info form approved

Action Items

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27 January 2023 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- [ONE Summit blog](#) published. I included a comment about strongly urging the LF Edge board to organize and promote more combined technical + exhibit events. I'm looking for

suggestions on upcoming conferences in Dallas, San Jose, or Seattle where LF Edge can co-host or co-exhibit

- CFN Blueprint has not updated API info. I will e-mail them
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Minutes

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Action Items

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4 November 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Possible changes to TSC meeting schedule and format, cont. Can we propose new TSC rules (i) about attendance (ii) about TSC member work assignments (to help the chair and co-chair) and (iii) Blueprint demo for each release cycle ?
- CFN Blueprint appears to be using a number of new upstream open sources; API Info form will need to be updated
- Kick off release 7 – get people moving

Minutes

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Action Items

- Jeff - ask Haihui Wang (haihwang@cn.ibm.com) from IBM where to put Federated Machine Learning on AI map (request from Mehant Kammakomati @ IBM)

14 October 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Possible changes to TSC meeting schedule and format
- TSC Chair and Co-Chair - no nominees yet
- LF Edge Industry Solutions preparation
- CFN Blueprint appears to be using a number of new upstream open sources; API Info form will need to be updated
- Kick off release 7 – get people moving

Minutes

- Discussion - one TSC meeting per week on Thursdays? 1 hr to 1.5 hr, with more efficient format, time limits for one person talking, firm limits on number of meetings that can be missed; e.g. miss 2 consecutively is probation, miss a 3rd then new TSC member is elected
- Help for Chair and Co-Chair to reduce high amount of time needed - an admin? maybe month rotating period? is there LF budget for this?

Action Items

- None

7 October 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- LF Edge Industry Solutions preparation
- CFN Blueprint appears to be using a number of new upstream open sources; API Info form will need to be updated
- Kick off release 7 – get people moving

Minutes

- None - general discussion of industry trend
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Action Items

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23 September 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Follow-up to Fall Summit ...make sure Annual Report is correct
- Possibly add standards compliance and upstream “second source” fields to API information gathering form ... maybe the form should be renamed to “API and xx” where xx indicates something about sustainability, viability, standards compliance ...

Minutes

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Action Items

- [Done] Jeff - fix error in “China north” vs “China south” in Annual Report

16 September 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- With the Fall Summit location now finalized, to who else can we promote the summit ?
- Possibly add standards compliance and upstream “second source” fields to API information gathering form ... maybe the form should be renamed to “API and xx” where xx indicates something about sustainability, viability, standards compliance ...

Minutes

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Action Items

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9 September 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- With the Fall Summit location now finalized, to who else can we promote the summit ?
- Possibly add standards compliance and upstream “second source” fields to API information gathering form ... maybe the form should be renamed to “API and xx” where xx indicates something about sustainability, viability, standards compliance ...

Minutes

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Action Items

- [DONE] Jeff to ask Samsung guys (Peter &) if they will attend Jeju Univ location on Day 2 of Akraino Fall summit. Should I mention Asif Mehmood and his Professor ?
- [DONE] Jeff to email Zhao Yantao at OpenGCC (zhaoyantao at opengcc dot org) and (i) make sure they're ok with recent changes to the Regional Communities wiki page and (ii) ask when they want to present to the TSC
- Jeff to make API related edits to Release 7 wiki page, and help with other edits

2 September 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- With the Fall Summit location now finalized, to who else can we promote the summit ?
- Possibly add standards compliance and upstream “second source” fields to API information gathering form ... maybe the form should be renamed to “API and xx” where xx indicates something about sustainability, viability, standards compliance ...

Minutes

- discussion of Fall Summit promotion and marketing – who can we reach out to ? TSC members can reach out to their coworkers, customers, vendors, etc. Be sure to mention the Mountain View campus location and free lunch !
- as of the morning of 2 Sep we are at 19 registrants, we’d like to hit 20 before giving Vikram at Google the first list of registrants
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Action Items

- Did we ask John Bellameric @ Google (see previous meeting notes) ?
- [DONE] Jeff to ask Samsung guys (Peter &) if they will attend Jeju Univ location on Day 2 of Akraino Fall summit. Should I mention Asif Mehmood and his Professor ?
- [DONE] Jeff to email Zhao Yantao at OpenGCC (zhaoyantao at opengcc dot org) and (i) make sure they’re ok with recent changes to the Regional Communities wiki page and (ii) ask when they want to present to the TSC
- Jeff to make API related edits to Release 7 wiki page, and help with other edits

26 August 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Akraino Fall Summit agenda and location
- Possibly add standards compliance and upstream “second source” fields to API information gathering form ... maybe the form should be renamed to “API and xx” where xx indicates something about sustainability, viability, standards compliance ...

Minutes

- Location:
 - Google “Atmosphere” building is the location – confirmed. 40 persons live, 100+ remote. YouTube live-streaming
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Action Items

- Did we ask John Bellameric @ Google (see previous meeting notes) ?
- Jeff to ask Samsung guys (Peter &) if they will attend Jeju Univ location on Day 2 of Akraino Fall summit. Should I mention Asif Mehmood and his Professor ?
- Jeff to email Zhao Yantao at OpenGCC (zhaoyantao at opengcc dot org) and (i) make sure they’re ok with recent changes to the Regional Communities wiki page and (ii) ask when they want to present to the TSC
- Jeff to make API related edits to Release 7 wiki page, and help with other edits

19 August 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Akraino Fall Summit agenda and location
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Minutes

- Location:
 - Google location continues to be most likely, waiting on application / paperwork approval; it might be indoor or outdoor. Zedada continues to be backup location
 - ask John Bellameric @ Google if Akraino can combine with Hive meetings and use an indoor option
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Action Items

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12 August 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Akraino Fall Summit agenda and location

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Minutes

- Fall Summit agenda - nearly filled up. 3rd day still has slots
- Location:
 - will either be Google or Zedada, most likely Google outdoor option (Mountain View)
 - ask John Bellameric @ Google if Akraino can combine with Hive meetings and use an indoor option
- Tina had a meeting with Google where Smart Edge Open + O-RAN was discussed. Google is working on extending "Distributed Google Cloud Edge" for wireless access. They are working with Mavenir on this, so somewhat O-RAN related
- Sukhdev (Juniper Networks) is very active in O-RAN WG6, ask him to join TSC meetings, see if he can help with Smart Edge Open

Action Items

- Jeff to help with LF Edge Award proposal on LF wiki page
- Doug and Jeff should register for the Fall Summit

05 August 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Akraino Fall Summit location - what steps to take next week ?
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Minutes

- All - discussion of Fall Summit location, we are still hoping for Google, Arm, Zedada, or Samsung. Have not heard back yet from Samsung guys about our suggestion to host Home Edge meeting at same time/place (a Samsung person is TSC chair of Home Edge)

- All - discussion of Fall Summit location, cont. Regional organizations hosting at same time: Japan (Fujitsu), Africa (EdgeHub), China
- Fall Summit agenda will include 20-30 min “forward looking and planning” presentations from Subcommittees

Action Items

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29 July 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Discussion of Technical Community subcommittee web page mods to describe steps for the subcommittee and PTLs when reviewing a new blueprint; i.e. blueprint in incubation stage
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Minutes

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Action Items

- Brief discussion of Tech Community web page mods

22 July 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Discussion of Technical Community subcommittee web page mods to describe steps for the subcommittee and PTLs when reviewing a new blueprint; i.e. blueprint in incubation stage
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Minutes

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Action Items

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15 July 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Discussion of what needs to be done to handle Technical Community subcommittee business while Doug is off for month of July - specifically need info on new Fujitsu BP (PTL Colin Peters)
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Minutes

- Discussion on Tech Community subcommittee items
- Discussion about finding host for LF Edge Fall Summit
- Discussion about Call for Proposals for LF Edge Fall Summit

Action Items

- Jim to send to Jeff link for Fujitsu new blueprint in incubation state that needs Tech Community subcommittee review. Jeff to set up meeting time with blueprint applicant
- Jim to send Jeff link for LF Edge Fall Summit wiki page
- Stephen Ozoigbo to send link/info on US govt climate initiative program

08 July 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jim Xu, Tina Tsou, Stephen Ozoigbo
Meeting Notes - Jeff Brower

Agenda

- Brief discussion of what needs to be done to handle Technical Community subcommittee business while Doug is off for month of July
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Minutes

- Brief discussion of Tech Community subcommittee activities / upcoming business
- Brief discussion of regional Akraino org status and applications, including SDNLAB (China) and domain name transfer (the edgehub.org, Africa)
- Stephen mentioned US govt initiative (with Arm being one of 4 main co-sponsors) for climate-related projects. Jeff mentioned high performance computing (needed for example in robotics) that reduces reliance on cloud computing, which is inefficient and consumes huge amounts of electricity

Action Items

- Jeff to send Stephen (i) Signallogic's GoDaddy customer number, (ii) Jeff's cell number
- Jim to send to Jeff info on new blueprint in incubation state that needs Tech Community subcommittee review. Jeff to set up meeting time with blueprint applicant
- Jim to forward to Jeff SDNLAB presentation material (for regional Akraino org application)
- Tina to forward info from Fujitsu's application for LF Edge Open NW Edge summit 2022 presenter (Nov 2022)
- Stephen to send link/info on US govt climate initiative program

01 July 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Brief discussion of Linux Foundation legal counsel review of Regional Communities wiki page
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Minutes

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Action Items

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24 June 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- None
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Minutes

- Brief discussion of “Smart Edge Open” - nature of this group, participants, O-RAN involvement

Action Items

- Jeff to follow up with Linux Foundation legal counsel (Andy Updegrave) regarding changes to Regional Communities wiki page

17 June 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Review blueprint “MEC-based Stable Topology Prediction for Vehicular Networks” API info reporting form
- Discuss logistics for LF Edge workshop 20Jun Austin TX
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Minutes

- “MEC-based Stable Topology Prediction for Vehicular Networks” blueprint approved

Action Items

- Jeff to contact Linux Foundation legal counsel (Andy Updegrave) regarding changes to Regional Communities wiki page

3 June 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Jim Xu, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- [repeating some agenda and action items, Jeff has been on business travel in Wash state and not keeping up with everything]
- Discuss LF Edge white paper – unifying Akraino theme ideas are being discussed at TSC meetings, e.g. “Enabling the Edge”, “super blueprint”, etc
- Akraino Africa regional org post-approval work seems to be progressing. Stephen Ozoigbo says that Inq and Cortex Hub will use both thecortexhub.africa and theedgehub.org to promote Akraino. He asks that Jeff proceed with transferring theedgehub.org domain name
- Need to modify API Map to match 4th and 5th level changes to API info form, including Parsec, EdgeX, ETSI MEC, others. Jeff is working on this

Minutes

- Discussion of Regional Communities wiki page; see first action item below
- Discussion of remaining seven (7) blueprints
- Doug - standalone robotics may not be an edge application

Action Items

- Jeff will modify Regional Communities wiki page regarding “US legal” and then add TSC meeting agenda item 8Jun to vote on Tech Community doc mod, Regional Communities wiki page mod
- Jeff to e-mail Oleg Berzin about 2nd pass filling of modified R6 API info form
- Jeff to e-mail Barg Dong and confirm no API changes for AR/VR oriented Edge Stack for Integrated Edge Cloud blueprint

27 May 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Discuss LF Edge white paper
- Akraino Africa regional org post-approval work seems to be progressing. Stephen Ozoigbo says that Inq and Cortex Hub will use both thecortexhub.africa and theedgehub.org to promote Akraino. He asks that Jeff proceed with transferring theedgehub.org domain name
- Oleg provided feedback on modified API info form for R6 and subsequent use – he reports a couple more mods were needed. Those have been made and a “Rev R6b” form sent to Oleg to verify that mods are correct
- Need to modify API Map to match 4th and 5th level changes to API info form, including Parsec, EdgeX, ETSI MEC, others. Jeff is working on this

Minutes

- Brief discussion on LF Edge white paper. Doug provided a brief summary / analysis of yesterday’s TSC meeting discussion on this subject
- Looks like most BPs are ready for R6, only waiting for (i) Oleg to return modified R6 API form, (ii) e-mail from Bart Dong (IEC Type 4: AR/VR oriented Edge Stack) confirming no API changes
- Brief discussion of Africa regional org post-approval progress

Action Items

- Jeff to add TSC meeting agenda item 3Jun to vote on Tech Community doc mod, Regional Communities wiki page mod
- Jeff to e-mail Oleg and check status of 2nd pass at filling out R6 API form
- Jeff to e-mail Jason Shepherd and ask where he might need help clarifying / editing Akraino areas of the LF Edge white paper

20 May 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- Akraino Africa regional org was approved yesterday in TSC vote. Any follow-up needed at this time? Do we need to vote on the one-line mod made to Tech Community doc that points at Upstream/Downstream page? (see notes in TSC meeting agenda for 10May for details on this, and what was sent to TSC members asking them to review)
- Oleg provided feedback on modified API info form for R6 and subsequent use – he reports a couple more mods were needed. Those have been made and a “Rev R6b” form sent to Oleg to verify that mods are correct
- Need to modify API Map to match 4th and 5th level changes to API info form, including Parsec, EdgeX, ETSI MEC, others. Jeff is working on this

Minutes

- Tina joined after 30 min
- discussed draft agenda for LF Edge Workshop
- discussed voting on modified Technical Community Document, Regional Communities wiki page

Action Items

- Jeff to add TSC meeting agenda item 27May to vote on Tech Community doc mod, Regional Communities wiki page mod

- Jeff to add summary for Robotics section of LF Eddge Workshop agenda (<https://docs.google.com/document/d/10eHDneIZVyr-KUQp33gw8ZwEhEq7oz4-CTDIkQzt3tA/edit>)

13 May 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Akraino Africa regional org was approved yesterday in TSC vote. Any follow-up needed at this time? Do we need to vote on the one-line mod made to Tech Community doc that points at Upstream/Downstream page? (see notes in TSC meeting agenda for 10May for details on this, and what was sent to TSC members asking them to review)
- Oleg provided feedback on modified API info form for R6 and subsequent use – he reports a couple more mods were needed. Those have been made and a “Rev R6b” form sent to Oleg to verify that mods are correct
- Need to modify API Map to match 4th and 5th level changes to API info form, including Parsec, EdgeX, ETSI MEC, others. Jeff is working on this

Minutes

- no official business conducted ... Doug joined briefly after 20 min or so

Action Items

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06 May 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jim Xu
Meeting Notes - Jeff Brower

Agenda

- Review Upstream/Downstream subcommittee modified page for regional communities (presented by Jim Xu, subcommittee chair)
- Akraino Africa regional org follow-up, finalize (after out-of-band call yesterday)
- Still waiting to hear from Oleg on modified API info form. We can review today depending on attendance
- Need to modify API Map to match 4th and 5th level changes to API info form, including Parsec, EdgeX, ETSI MEC, others. Jeff is working on this

Minutes

- Jim went over recent mods to Up/Down stream regional communities page, including LF Edge requirements for US legal compliance, open policy, vendor neutrality, and more
- Jeff summarized yesterday's Akraino Africa related call for Doug and Jim
- Jeff suggested to Jim to use "pseudo track changes" on his page modifications; i.e. show recent changes in orange or other color, so it's easy for TSC members to see when the modified page comes up for a vote and/or consensus approval

Action Items

- Jeff will send mail to TSC showing mod to Technical Community doc:
"The organization must agree to comply with Linux Foundation, US legal, Open Policy, Vendor Neutrality, and other rules as listed on the [Akraino Regional Communities page](#)"
- Jeff will e-mail summary of yesterday's call, including meeting notes, and mention Upstream/Downstream rules update so that TSC members, Akraino Africa stakeholders, and other recent participants are aware

05 May 2022 / 1:30 PM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Kural Ramakirshnan, Oleg Berzin, Jim St. Leger
Meeting Notes - Jim St Leger, Jeff Brower (edit)

Agenda

- "out of schedule" call to finalize the Akraino Africa application before a TSC vote

Minutes

- Stephen can add a few pages to the Cortex Hub web pages and INQ presentation pages to show the lab hardware including the Arm lab hardware and currently not mentioned x86 servers in their bare metal lab.
- Naming: Are we okay with the "Cortex Hub" name as the landing page?
<https://www.thecortexhub.africa/>
- The current home page was created in 2020. Can it be changed? Should we use a .org page instead? How do we present a page that aligns to the Akraino and LF Edge architecture and neutrality elements?
- TheEdgeHub.org is an alternative landing page for the effort. (Jeff secured the domain for possible use.) Would be used just for Africa Akraino community efforts.
- **Team Recommendations:**
- 1. Create a landing page for the Akraino/CortexHub Africa regional work that is hosted at <https://www.thecortexhub.africa/akraino>. The site should reflect the neutrality of Akraino and LF Edge, act as the centralized landing page for all of the joint work, and have links both to the appropriate CortexHub pages as well as the relevant and current Akraino pages. These pages should reflect the diversity of hardware available in the regional lab including both Arm and x86 platforms
- 2. Modify the INQ presentation that is an overview of The Cortex Hub. Modifications should include highlighting the Arm Ecosystem Lab and the Bare Metal Lab, showcasing and listing examples of the Arm and x86 hardware in these labs

[Meeting Recording](#)

29 April 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Stephen Ozoigbo, Pramod Venkatesh
Meeting Notes - Jeff Brower

Agenda

- Africa Akraino regional org:
- -x86 servers and embedded systems deployed / available
 - can we go forward with (present to TSC) The Cortex Hub + Inq as Africa regional Akraino org, if not what changes are needed
- Review API forms recently uploaded by blueprint teams:
- -IEC Type 3, Android cloud native app on Arm servers
- -Cassini Smart Cities
- Re. Oleg's PCEI blueprint API needs, Jeff has modified the API info form, so we now have a new release of this for R6 and beyond. If we have time during the meeting we can review this
- Need to modify API Map to match 4th and 5th level changes to API info form, including Parsec, EdgeX, ETSI MEC, others. Jeff is working on this

Minutes

- Pramod: the Cortex Hub is a non-profit with multiple labs, bare-metal servers, automotive lab, fiber optic lab, Arm lab
- Pramod: Inq maintains several Africa locations with universal CPE systems with 90% x86 10% Arm. Future roadmap is 60 - 40
- Jeff: does Inq plan to add an x86 lab? Pramod: bare-metal lab already contains x86 servers
- Stephen: let's take this info and proceed promptly. Several pan-Africa edge related events are planned over next few months, Akraino / LF Edge should take advantage of these and maintain momentum
- Stephen: if a couple of additional pages are needed in the Inq presentation and websites that address x86 capabilities, that's fine and do-able
- Jeff: suggest to get with Jim St Leger and see if we can resolve this early next week

- Jeff: last week purchased theedgehub.org in case its needed for an Akraino regional “Landing Page”
- Tina: hopefully TSC can vote on the Africa regional application 5 May
- Approx 9:30a PDT Stephen, Kural, Pramod dropped off the call. Call continues with routine business ...
- Review of Cassini Smart Cities and IEC Type 3d blueprints, both are approved by unanimous consent
- Tina: discuss details LF Edge and Akraino participation at Open Source Summit 20 June in Austin

Action Items

- Jeff to set up an “out of schedule” Akraino/TSC meeting early next week and invite Tina, Kural, Jim St Leger, Stephen, Doug, Jane, etc. Summarize today’s meeting and get a read on whether Jim is ok to move forward and if not what mod(s) he’s seeking

22 April 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Stephen Ozoigbo, Jim Xu
Meeting Notes - Jeff Brower

Agenda

- No API forms to review ... was expecting one from “Smart Cities” blueprint guys, but they did not upload yet
- Discuss The Cortex Hub / Inq regional Akraino org status
- Address Oleg’s PCEI blueprint API needs. Here is what he says:

“North Bound Interface APIs for:

1. Kubernetes Edge Cluster Registration into Multi-Cluster Orchestrator (ONAP/EMCO). This API will allow retrieval of the K8S cluster config from Git and onboard it onto the orchestrator’s cluster provider registry.
2. Terraform Plan Execution against target providers (Cloud, Equinix, Openstack). This API will allow retrieval of the Terraform plans from a Git repository and run them from the orchestrator’s workflow engine (CDS).

3. Helm Chart Onboarding into ONAP for Service and App Registration. This API will allow retrieval of Helm charts from a Git repository and create a Service and Application definitions within the Orchestrator for a specific tenant.

4. Service Instance creation and App deployment onto target Kubernetes clusters. This API will allow creation of Service Instances based on the Services/Apps defined (as in point 3 above) in the orchestrator and deploy the Apps onto the target Kubernetes clusters (onboarded using point 1 above).

I believe that the closest API category from the API Mind Map is “Management and Orchestration”.

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- Add Oleg’s new APIs to the API map ... also Parsec, EdgeX, ETSI MEC updates, what else ?

Minutes

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Action Items

- Jeff to modify API upload form to meet Oleg’s needs

25 March 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Any items to follow up on from 11Mar meeting ?
- Review API info form for “Smart Data Transaction” blueprint (PTL Colin Peters)
- Cleanup after spring technical meeting ... anything needs to be done ? Live site day blog needs work, Jeff has committed to that
- Can I get a list of general API providers that we see if multiple blueprints, and I need to add to API map ? Parsec, EdgeX, ETSI MEC updates, what else ?

Minutes

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Action Items

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18 March 2022 / 9:00 AM PST / Zoom meeting

Attendees

Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Cleanup after spring technical meeting ... anything needs to be done ? Live site day blog needs work, Jeff has committed to that
- Release 6 API info collection – I assume I need (i) to edit API column in the R6 wiki page (the notes there are all copied from R5) and (ii) make an R6 page matching the main page, as we did before ?
- Can I get a list of general API providers that we see in multiple blueprints, and I need to add to API map ? Parsec, EdgeX, ETSI MEC updates, what else ?

Minutes

- Jeff missed most of the meeting and signed in around 8:45a

Action Items

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11 March 2022 / 9:00 AM PST / Zoom meeting

Attendees

Tina Tsou, Doug Eng, Jeff Brower
Meeting Notes - Jeff Brower

Agenda

- Cleanup after spring technical meeting ... anything needs to be done ?
- Release 6 API info collection – I assume I need (i) to edit API column in the R6 wiki page (the notes there are all copied from R5) and (ii) make an R6 page matching the main page, as we did before ?
- Can I get a list of general API providers that we see if multiple blueprints, and I need to add to API map ? Parsec, EdgeX, ETSI MEC updates, what else ?

Minutes

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Action Items

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4 March 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen, Wenhui Zhang
Meeting Notes - Jeff Brower

Agenda

- Any remaining discussion of Akraino Technical Spring Meeting before it happens next week ?
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Minutes

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Action Items

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25 February 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen, Wenhui Zhang
Meeting Notes - Jeff Brower

Agenda

- Continued discussion of Akraino Technical Spring Meeting
- Per Tina's prompt, I asked Beth @ HanaHaus about "large group" options and said Tina knows about this. That seemed to prompt Beth to start talking, haha. She says they have a "Lounge Cape Town" semi-private option that accommodates up to 25 people, for \$100/hr. Do we want to transfer our reservation to that? Cost would actually be less, \$600 vs current \$670 Signallogic has reserved. I didn't ask her yet about tables / working space for this option, which would be an obvious need for us (most people have their laptops out). What other questions do we want to ask Beth about this?

Minutes

-

Action Items

-

18 February 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Wenhui Zhang
Meeting Notes - Jeff Brower

Agenda

- Discuss upcoming Akraino Technical Spring Meeting, including preparations for live day (9Mar)

Minutes

- Jeff - status update on HanaHaus reservations, questions for Tina
- Wenhui - status update on number of live day attendees

Action Items

- Jeff - pull trigger on reservations

11 February 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Discuss API related talks, presentations, or other info at Akraino spring meeting - can we introduce updated version of API map?
- Is there any API related new trends in services, security, acceleration?

Minutes

-

Action Items

-

4 February 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower
Meeting Notes - Jeff Brower

Agenda

- No meeting

28 January 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- continued discussion of Akraino spring meeting to 8-10 Mar
- continued discussion of proposed Akraino technical community document section 4.5.1

Minutes

- moving spring meeting dates to 8-10 Mar seems to be acceptable. So far speakers Tina has contacted are fine with it, avoids MWC dates, a few days before time zone change in US

Action Items

- Jeff - make HanaHaus reservations for Akraino spring meeting 9:00a - 3:00p Wed 9Mar, talk with Beth about flexible room vs table scheduling, improved video equip

21 January 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- continued discussion of Akraino spring meeting Mar 1-3
 - Jeff - need to know final decision on start/stop times for 2 Mar so I can help with HanaHaus reservations
- continued discussion of proposed Akraino technical community document section 4.5.1
- some items from 3 Dec meeting still pending

Minutes

- discussion of proposed Akraino technical community document section 4.5.1
 - Jeff - solicit feedback from API subcommittee members
- discussion of Akraino spring meeting Mar 1-3
 - Doug - improve video equipment options at HanaHaus
- discussion of 2022 Akraino 5G Hackathon
 - ETSI MEC is a co-sponsor
 - Tina - date / location to-be-determined. Current working link (needs access grant): https://st1.zoom.us/web_client/yckmkh4/html/externalLinkPage.html?ref=https://docs.google.com/document/d/1XrFJ9rebgftKSgEZCatrRxqvf0_1GsepyYFcL74w8xA/edit
 - Jane - is it more workshop than a hackathon? Could we co-locate / associate with a hardware-oriented trade show / conference (network, edge servers, robotics). Possibilities include OCP Summit, an LFN (Linux Foundation Networking) event
 - Jeff - would we try to pull in University groups again, like in 2019?
 - Doug - target industry groups as well as University
- Jane - discussion of adding ETSI MEC APIs to API Map

Action Items

- Jeff - make HanaHaus reservations for Akraino spring meeting, talk with Beth about flexible room vs table scheduling, improved video equip
- Jane - provide Jeff with list of ETSI MEC APIs to add to API Map

14 January 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- None - some items from 3 Dec meeting still pending

Minutes

- discussion of proposed Akraino technical community document section 4.5.1
- discussion of Akraino spring meeting Mar 1-3

Action Items

-

7 January 2022 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- None - some items from 3 Dec meeting still pending

Minutes

-

Action Items

-

10 December 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- None - some items from 3 Dec meeting still pending

Minutes

- General discussion of adding step-by-step procedure to Akraino technical community documentation for adding regional Akraino communities

Action Items

-

3 December 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Follow-up discussion to 23Nov F2F meeting. Is bitcoin mining a good initial answer to the question of “where’s the money” in edge computing ?
- Need to start including MEC specs in LF Edge Akraino API map, using either the existing Blueprint-organized map or a different basis of organization. Jane has made (or is still in process of making) some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

- Suggestions for HanaHaus feedback - better video call equipment, discount for Blue Bottle stuff, plus not fast
- Jeff will add PARSEC to API map and send to Jane for review (make sure he’s editing the map correctly)

Action Items

- Jeff - edit API map

26 November 2021 / 9:00 AM PST / NO MEETING, Thanksgiving Day holiday

19 November 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- What API related items can we add to the agenda for 23Nov F2F meeting ?
- Oleg gave a TSC presentation "[Akraino Collaboration with ETSI MEC Planning Document](#)" which was very interesting. One of the current goals and objectives listed is "Include MEC specs in LF Edge Akraino API map, using either the existing Blueprint-organized map or a different basis of organization"
- Jane has made (or is still in process of making) some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

- Jeff will add PARSEC to API map and send to Jane for review (make sure he's editing the map correctly)

Action Items

- Jeff - edit API map

12 November 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- What API related items can we add to the agenda for 23Nov F2F meeting ?
- Oleg gave a TSC presentation "[Akraino Collaboration with ETSI MEC Planning Document](#)" which was very interesting. One of the current goals and objectives listed is "Include MEC specs in LF Edge Akraino API map, using either the existing Blueprint-organized map or a different basis of organization"
- Jane has made (or is still in process of making) some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

- Jeff will add PARSEC to API map and send to Jane for review (make sure he's editing the map correctly)

Action Items

- Jeff - edit API map

5 November 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower
Meeting Notes - Jeff Brower

Agenda

- Per e-mail, Doug will not be attending today and 12Nov
- What API related items can we add to the agenda for 23Nov F2F meeting ?
- Oleg gave a TSC presentation "[Akraino Collaboration with ETSI MEC Planning Document](#)" which was very interesting. One of the current goals and objectives listed is "Include MEC specs in LF Edge Akraino API map, using either the existing Blueprint-organized map or a different basis of organization"
- Jane has made (or is still in process of making) some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

- Started the meeting at 9:00a and waited until 9:30a but no other attendees

Action Items

-

29 October 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Doug Eng, Deepak Vij
Meeting Notes - Jeff Brower

Agenda

- Meeting start moved to 9:30a
- Deepak Vij, PTL for the Federated Multi-Access Edge Cloud Platform blueprint, will attend so we can ask questions about his blueprint and its possible ETSI MEC interfaces
- Jane has made (or is still in process of making) some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

- Deepak gave an overview of the Federated Multi-Access Edge Cloud Platform blueprint, its use of KubeEdge, edge-to-edge mesh method to communicate state information, and need to avoid cloud latency when updating state, for example a multiplayer game with some users on mobile devices
- Deepak explained they're aware of ETSI MEC is doing for edge-to-edge mesh communication of device location info, but for the time being they're not sure whether this is ready so they are working on their own mesh communication
- Jane asked whether ETSI MEC can list the blueprint as a "short term work item", then after 3-4 months Deepak can give some analysis of whether ETSI MEC interfaces will work with their application
- per Deepak, BP relies on KubeEdge, which continues to be developed and make progress. KubeEdge project lead is still Kevin (?), Futurewei still operating one building in Santa Clara

Action Items

-

22 October 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- “IEC Type 3 Android Cloud native applications on Arm servers” blueprint has no APIs offered or consumed. Their uploaded API info form says only “the Blueprint constructs and provides an Android cloud run-time environment for user applications” ... is that Ok ?
- Formally review “Smart Cities” blueprint API info form. Jeff has already reviewed informally. Also known as “Cassini”, the BP does not offer APIs and consumes Parsec APIs
- Formally review “Federated Multi-Access Edge Cloud” blueprint API info form. Jeff has already reviewed informally. Their code seems to reside completely inside Kubernetes environment
- Jane has made (or is still in process of making) some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

- Further discussion of Akraino Reunion meeting 23Nov - timing, agenda
- Formal review of 3 BPs listed in agenda
- Jane - need better understanding of Federated Multi-Access Edge Cloud BP (Deepak Vij). Ask them to attend API subcommittee meeting and give a brief presentation on their interface with ETSI MEC APIs

Action Items

- Jeff - send e-mail to Deepak Vij, invite to API subcommittee meeting (see minutes above). Copy Jane, Tina, Doug

15 October 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- “IEC Type 3 Android Cloud native applications on Arm servers” blueprint has no APIs offered or consumed. Their uploaded API info form says only “the Blueprint constructs and provides an Android cloud run-time environment for user applications” ... is that Ok ?
- Formally review “Smart Cities” blueprint API info form. Jeff has already reviewed informally
- Formally review “Federated Multi-Access Edge Cloud” blueprint API info form. Jeff has already reviewed informally. Their code seems to reside completely inside Kubernetes environment
- Jane has made some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

- Tina and Jeff only on the call. We discussed possible Akraino Reunion F2F meeting 23Nov

Action Items

- Jeff - send to Tina e-mail with proposed agenda outline for Akraino Reunion F2F meeting

8 October 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- “IEC Type 3 Android Cloud native applications on Arm servers” blueprint has no APIs offered or consumed. Their uploaded API info form says only “the Blueprint constructs and provides an Android cloud run-time environment for user applications” ... is that Ok ?
- Formally review “Smart Cities” blueprint API info form. Jeff has already reviewed informally
- Jane has made some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

-

Action Items

-

-

1 October 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Formally review "Smart Cities" blueprint API info form. Jeff has already reviewed informally
- Jane has made some API map mods, I will be reviewing these
- We need to add PARSEC to API map

Minutes

-

Action Items

-

-

24 September 2021 / 9:00 AM PST / Zoom meeting

Attendees

No meeting held

Agenda

-

Minutes

-

Action Items

-

17 September 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- No API info forms to review
- Jane has made some API map mods, I will be reviewing these

Minutes

-

Action Items

-

-

10 September 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Review API info form uploaded by Ashwin Kumar for IEC Type 2 blueprint

Notes:

- my previous reference to “Micro MEC” for this blueprint was incorrect -- Ashvin had mis-labeled the .xlsx filename)
- Ashwin re-uploaded their API info form, I verified the .xlsx file is not corrupted
- PTL for the project is Vinothini Raju

Minutes

- Jane - asked whether we have additional new info from other Blueprints (besides PCEI / Oleg) needed to update API info form and API map. Answer (Jeff) is yes I think we have collected all possible new info relevant to R5
- general discussion on O-RAN “pause” / politics
- Doug - general discussion of base station hardware suitable for very small packages (servers), e.g. PCIe card approach

Action Items

- Jeff - move forward with making API Map a feature project
- Jane - include first couple of ETSI MEC APIs along with Oleg’s suggestions in API Map updates

3 September 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Review API info form uploaded by Ashwin Kumar for Micro MEC blueprint

Minutes

- Ashwin's API info form .xlsx file is corrupted, Jeff has e-mailed him and asked to re-upload

Action Items

-

27 August 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Cover status of R5 API info for several blueprints
- Review API info form uploaded by Ashwin Kumar for Micro MEC blueprint

Minutes

- Discussion of PTLs sending e-mail or other notification of API status from R4 to R5

- Jane asked about possible new RAN related Akraino projects
- Discussion of ORAN - Akraino relationship, participation in ORAN by Akraino members

Action Items

-

20 August 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Review info from Oleg in e-mail exchange about API needs in R5 version of PCEI blueprint
- Review API info forms uploaded by Ricardo for KNI blueprints

Minutes

- Discussion of Oleg's e-mail

Action Items

- Jane will modify API map to accommodate Oleg's suggestions

13 August 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Review from Oleg in e-mail exchange about API needs in R5 version of PCEI blueprint

Minutes

-

Action Items

-

6 August 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Review changes Jeff made to the subcommittee's "Blueprint Projects R4 and R5" page

- Review Oleg concerns about API info form (categories either not sufficient or need additional)
- Review API document submitted by PCEI blueprint team

Minutes

- PCEI API doc review -- general agreement they have good documentation
- Tina - Akraino summit Sep 22-24 (probably virtual)
- Jeff - general discussion about detecting RTP malware for Akraino security focused apps. Tina suggested contacting AI Edge family PTLs

Action Items

-

30 July 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Review changes Jeff made to the subcommittee's "Blueprint Projects R4 and R5" page
- Review Oleg concerns about API info form (categories either not sufficient or need additional)

Minutes

-

Action Items

- Jeff - need some R5 related updates to API subcommittee API requirements wiki page

23 July 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- Review API Info form submitted by Multi-Tenant Secure Cloud Blueprint team (PTL Salvador Fuentes, Intel)
- Update from Jane on presentation to ETSI MEC API 13Jul by her and Oleg

Minutes

- Multitenant Secure Cloud Blueprint review, looks ok
- 15 min discussion on future of REC blueprint -- whether to modify for a new effort proposed by Altran guys

Action Items

- Jeff - need some R5 related updates to API subcommittee API requirements wiki page

16 July 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Doug Eng, Dr. Mehmet Toy
Meeting Notes - Jeff Brower

Agenda

- Update from Jane on presentation to ETSI MEC API by her and Oleg

Minutes

- Doug now at Raeden
- Free-flowing discussion on direction of edge computing - rethinking of importance of latency, still no emergence of consensus killer app(s), increase in localized compute performance, improvements in real-time video analytics/processing algorithms and work-arounds to latency constraints

Action Items

-

9 July 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Biswajit De, Tina Tsou, Jane Shen, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Brief discussion with Biswajit (Process Subcommittee chair) about updating Feature Project approval process to allow a general (non Blueprint) project, and how that applies to our plans for the API Map. Possible updates include:
 - (i) modifying section 3.3.2.1 on this page
<https://wiki.akraino.org/display/AK/Akraino+Technical+Community+Document>
 - (ii) creating a new wiki page, if needed
- Update from Jane on ETSI MEC API outreach/liaison activity. She is now listed as a Technical Expert on this ETSI MEC page
<https://portal.etsi.org/tb.aspx?tbid=826&SubTB=826,874#/>

Minutes

- Biswajit - discussion about what he needs for wiki page modifications and specifics for Process Subcommittee approval
- API Subcommittee blog ideas:
 - API Map Feature Project
 - GSMA OPG v2 requirements document just released (edge federation getting serious)
 - Jane's appointment as "Technical Expert" within ETSI MEC
- Jane - update previous white paper re. edge federation
- Doug - possibly bring some Open Grid Alliance use cases into whitepaper. VaporIO is saying they can expose physical infrastructure APIs to higher level

Action Items

- Jeff - modify section 3.3.2.1 in a Word doc (with track changes), send to Biswajit for review

2 July 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- update from Jane on ETSI MEC presentation with Oleg
- update from Jeff re. action item with Biswajit (24 Jun meeting notes)

Minutes

-

Action Items

-

24 June 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- continue discussion about ONES presentation Oct 2021 (submissions due 20 Jun, maybe they can accept late submission)

- continue discussion about new efforts, white paper, API map related, etc
- update from Jane on ETSI MEC 1) Akraino collaboration, 2) ETSI MEC participation in PCEI Blueprint project

Minutes

- Jane - 29Jun presentation during ETSI MEC meeting, Oleg and Jane will present
- discussion on creating Feature Project based on API Map
- Doug - currently nine (9) Featured Projects. One is called API Gateway, but that one may be paused
- Tina - Feature Project includes weekly meeting, long-term (not bound to release dates), established procedure for approval

Action Items

Jeff - ask Biswajit, Chair of Process Subcommittee, for more info and clarification on creation and approval of Feature Project. Reference section 3.3.2.1 on this page
<https://wiki.akraino.org/display/AK/Akraino+Technical+Community+Document>

18 June 2021 / 9:00 AM PST / Zoom meeting

No Meeting

11 June 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Jane Shen, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- Doug e-mailed earlier in the week and said he is not attending. Probably we can make the meeting short - 20 min or so
- update -- Jeff cleaned up wiki pages for API subcommittee meeting notes. Prior "per meeting" links now labeled as legacy (in red) with obvious and clear link to this page (Google docs)

- continue discussion about ONES presentation Oct 2021 (submissions due 20 Jun)
- continue discussion about new efforts, white paper, API map related, etc

Minutes

- Jane - revive Slack thread with Jim White about including EdgeX APIs in API map, possibly ask for a short call
- Jane - this coming week ETSI MEC has virtual meeting about their edge federation efforts, possibly give an overview at TSC level of this effort (part of ongoing info sharing between ETSI MEC and Akraino)
- Jeff - thinking of ways to document and simplify procedures for external groups to add their API related info to the API map. Objective being to minimize long-term effort by API subcommittee when expanding / adding detail to the map. Like creating a “template” for work by others
- Jane - elevate this work to Akraino “feature project” level (TSC level)
- Continued discussion on this -- approach, steps to take before TSC proposal, etc

Action Items

- Jeff - unpause Slack thread with Jim White about including EdgeX APIs in API map

4 June 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Doug Eng, Tina Tsou, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- update -- Jeff gave a MindManager + API Map presentation to TAC on Wed (2Jun). Link is here:
https://wiki.akraino.org/download/attachments/24084568/MindManager_Update_for_TA_C_Jun2021.pdf?api=v2
- update -- Oleg was approved by TSC (yesterday) as Akraino level contact person for ETSI MEC related efforts
- continue discussion about ONES presentation Oct 2021 (submissions due 20 Jun)
- continue discussion about new efforts, white paper, API map related, etc

Minutes

- discussion and general agreement about limiting API map flow / node visual presentation for external API owners to “category level”
- Jane - perspective on her role as ETSI MEC rep for API-related external outreach, Oleg’s role as Akraino level ETSI MEC contact person (and in particular his role as PCEI PTL)
- Dr. Toy - first need to map between ETSI MEC reference architectures and PCEI architecture, identify if some APIs can be shared / used / overlap etc
- Dr. Toy - also need mapping between MEF and PCEI project
- Dr. Toy - leading team inside MEF to define edge services (Edge Computing Services Incubation Group), based on cloud services architecture he’s developed

Action Items

- Jane to give ideas at PCEI meeting on architecture mapping between ETSI MEC and PCEI
- Jeff - clean up wiki pages for API subcommittee meeting notes. Label the prior “per meeting” links as legacy and insert obvious and clear link to this page (Google docs)

28 May 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Doug Eng, Tina Tsou, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- update -- TSC approval obtained for API subcommittee to designate a member to be contact person with ETSI MEC for API related collaboration
- continue discussion about ONES presentation Oct 2021 (submissions due 20 Jun)
- continue discussion about new efforts, white paper, API map related, etc

Minutes

- Jane - update on ETSI MEC interest in working with Akraino: 1) adding ETSI MEC API specs to API map, 2) getting their APIs adopted by PCEI BP

- Tina - PCEI BP has ongoing discussion with GSMA OP (Operator Platform), about using GSMA reference architecture and/or APIs. Operator participants in the discussion include Telefonica and China Unicom
- Tina - PCEI BP participants include MS Azure and AWS
- Tina - Kandan is now at Google (from AT&T)
- Doug - discussion at VMWare about environmental aspects of edge applications, for example controlling / negotiating energy usage (amount, type)
- Doug - API layers: infrastructure, management/Kubernetes, services with specialization
- Jane - big portion of MEC APIs are infrastructure / platform related, but platform related apps for x2B are likely to be supplied by public cloud guys, with Kubernetes being the basis for edge apps
- Doug -- unlikely for operators to develop NEFs without revenue, cost reduction, or other compelling basis

Action Items

- Jeff - check with Ike to see if its Ok for Jeff to start off as ETSI MEC contact person
- Jeff - write outline / rough draft of API subcommittee blog for Akraino

21 May 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Doug Eng, Tina Tsou, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- Discuss possible white paper topics:
 - 1) interface between operator networks and applications
 - 2) making “far edge” networks more useful. VMWare + Mavenir have complementary product offerings in far edge applications -- maybe a particular use case is a white paper topic.
 - Per Ike - *make sure new white paper is targeted at something useful to Akraino*

- Jeff will give API Map demo to TAC on June 2nd (Wed) at 7:00a PDT

Minutes

- Ike - gave an overview of recent TAC discussions about using available Mind Manager seats (due to LF Edge licensing 5 seats annual from Corel Software) to document overall LF Edge groups / projects / activities. Ike indicates Jim St Ledger is driving this interest
- Jane - mentioned recent interest from ETSI MEC (Dario Sabella) in the API Map, possibly adding ETSI MEC APIs to the map
- Jeff - how would we do that -- add a separate high level node? create a separate "Spec View" map that organizes blueprints by specs complied with?
- Ike - Dario is looking beyond the API Map and seeking ways to promote ETSI MEC specs, APIs, and activities, including their "Decode" project (Walter Featherstone, Samsung)
- Jane - appointed as ETSI MEC "open source technical expert" liaison (or similar), which would include Akraino
- Jane - Dario's recent e-mail is asking about an Akraino-side contact person for ETSI MEC
- Jane - ONES asking for an Akraino presentation/talk Oct 2021 (submissions due 20Jun). Possibly include 1) API Map, 2) ETSI MEC - Akraino collaboration, 3) summarize 2020 White Paper and further publicize main points in the paper
- Tina - propose to TSC an Akraino contact person to ETSI MEC, get approval

Action Items

- Jeff - raise with TSC exploring with ETSI MEC closer collaboration with API subcommittee, and make sure this is Ok; include Tina's suggestion to get contact person approval. Add as agenda item for 25May (Tues)

14 May 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Doug Eng, Tina Tsou, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- Discuss possible white paper topics:
 - 1) interface between operator networks and applications

- 2) making “far edge” networks more useful. VMWare + Mavenir have complementary product offerings in far edge applications -- maybe a particular use case is a white paper topic.
- Per Ike - *make sure new white paper is targeted at something useful to Akraino*

Minutes

- Discussion about hype vs. actual customer need low latency, connected vehicles

Action Items

-

30 April 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Doug Eng, Tina Tsou, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- LF Edge has activated MindManager 5-person annual subscription license. Jeff was the first person that Brett added -- I tested and it's working. Basically you install the app on your laptop and then log-in using your MindManager account (in my case I had the trial already installed, and the license info dialog correctly shows the trial expired on 1 Apr and the annual subscription was activated on 19 Apr). Jane do you want to be added? Tina do you have ideas on who we might add?
- Is there a whitepaper subject we might tackle?
- [This item still pending -- needs discussion with Jane + Doug] Status update on multicloud service API working group -- review our list of who we might ask to join (so far API subcommittee, possibly PCEI BP, possibly private LTE/5G BP, possibly someone from ETSI MEC)

Minutes

- Jane - ok for MindManager license seat #2
- Jeff - update on MindManager license status and ideas for seats # 3-5

- Jane - possible white paper topics: 1) interface between operator networks and applications, 2) make “far edge” networks more useful
- Ike - make sure new white paper is targeted at something useful to Akraino
- Doug - VMWare + Mavenir have complementary product offerings in far edge applications. Maybe a particular use case is a white paper topic
- Doug - brief overview of OGA (Open Grid Alliance) for re-architecting Internet

Action Items

-

23 April 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Doug Eng, Tina Tsou
Meeting Notes - Jeff Brower

Agenda

- [“Release 5 Planning” wiki page](#) authored by Sukhdev Kapur (Juniper Networks) and Jeff’s edits to it (highlighted in red on the page) was voted on and approved by TSC on 15 Apr. We should be good to continue with our API info gathering procedure going forward
- LF Edge purchase of annual subscription license for MindManager was voted on and approved by TSC on 15 Apr. This is a 5-person license with an “Admin Portal” administered by LF Edge, which avoids tying licenses to individual laptops and PCs. currently Brett Preston has signed the invoice and is working with MindManager guys to get MindManager installed and up and running
- Status update on multicloud service API working group -- review our list of who we might ask to join (so far API subcommittee, possibly PCEI BP, possibly private LTE/5G BP, possibly someone from ETSI MEC)

Minutes

-

Action Items

- Prior items continued

16 April 2021 / 9:00 AM PST / Zoom meeting

Attendees

Doug Eng, Tina Tsou
Meeting Notes - None

Agenda

- [“Release 5 Planning” wiki page](#) authored by Sukhdev Kapur (Juniper Networks) and Jeff’s edits to it (highlighted in red on the page) was voted on and approved by TSC yesterday (15Apr). We should be good to continue with our API info gathering procedure going forward
- LF Edge purchase of annual subscription license for MindManager was voted on and approved by TSC yesterday (15Apr). This is a 5-person license with an “Admin Portal” administered by LF Edge, which avoids tying licenses to individual laptops and PCs.. I will work with Brett Preston to get MindManager installed and up and running
- Status update on multicloud service API working group -- review our list of who we might ask to join (so far API subcommittee, possibly PCEI BP, possibly private LTE/5G BP, possibly someone from ETSI MEC)

Minutes

-

Action Items

- Prior items continued

9 April 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- Review [“Release 5 Planning” wiki page](#) authored by Sukhdev Kapur (Juniper Networks) and Jeff’s edits to it (highlighted in red on the page). Are these mods Ok ? Anything left out or needs to be revised >
- Checked with Jane -- draft not ready yet of her presentation to Open 5G Innovation Lab execs for partners, VCs, and other stakeholders, but she expects to work on it
- Status update on multicloud service API working group -- review our list of who we might ask to join (so far API subcommittee, possibly PCEI BP, possibly private LTE/5G BP, possibly someone from ETSI MEC)
- Aim for 30 min meeting today. Note that 2 April meeting was canceled due to Jeff traveling Friday morning for a business trip

Minutes

-

Action Items

- Prior items continued

26 March 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Is a draft ready yet of Jane's presentation to Open 5G Innovation Lab execs for partners, VCs, and other stakeholders ?
- Status update on multicloud service API working group -- review our list of who we might ask to join (so far API subcommittee, possibly PCEI BP, possibly private LTE/5G BP, possibly someone from ETSI MEC)
- Aim for 30 min meeting today

Minutes

-

Action Items

- Prior items continued

19 March 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Continue discussion on working group exploring
 - common APIs / interfaces needed for both private and cloud networks, combining on-prem with public cloud
 - BSS commonality among public cloud APIs

- private LTE/5G services and APIs
- Who should be involved in the working group? So far API subcommittee, possibly PCEI BP, possibly private LTE/5G BP [plus Jane talk to new ETSI MEC chair (Dario @ Intel)]
- Aim for 30 min meeting today

Minutes

- Jane - focus on operator side
- Jane - maybe participate in PCEI meeting, see where they're headed on mapping of MEF Sonata APIs
- Discussion of Tom Nolle (CIMI Corp) blog conclusions about AT&T direction in edge computing, ONAP (<https://blog.cimicorp.com/?p=4523>)
- Jeff - mentioned prior mid-Jan meeting with Faisal Lakhani and start-up APIsec (apisec.ai), doing automated API security monitoring and analysis. They took a look at Akraino but didn't engage, maybe in future we can present Akraino to startups in ways that make it more clear what are the benefits

Action Items

- Prior items continued

12 March 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Discuss next API Subcommittee project, need ideas
- If we did another whitepaper, what would be the main subject?
- Question - for a set of edge computing related APIs not currently associated with a BP project, how would we add to the API map? For example, MobileEdgeX APIs -- where to place those. Another example might be specific ETSI MEC APIs, for example how would we modify the map so someone could find the ETSI Decode location simulator

Minutes

- Jane - two work suggestions: (i) organize/format gathered API info into slides, (ii) explore API interfaces we would like to work on as a subcommittee
- Doug - seeing more interest (customer interest) in Kubernetes based open API multi-cloud frameworks (hybrid clouds)
- Doug - what are common APIs / interfaces needed for both private and cloud networks, combining on-prem with public cloud
- Jane - at BSS level seeing some commonality among public cloud APIs, but is there a gap? should we start a small working group to explore this
- Doug - private LTE/5G outfits trying to figure out what services they should provide, for example sensors for HVAC, water, elevators. IT crowd could be driving requirements (IT → e-mail, security, cameras, other IT services, augmenting “WiFi type stuff”)
- Jane - talk to Dario (Intel), new ETSI MEC chair to see if he’s interested in working group idea
- Doug - can PCEI be involved in the working group?
- Jane - MobileEdgeX APIs can fit into a general group of industry wide/available APIs (in this case resource management / orchestration APIs)

Action Items

- Jane - convert one-page summary of API info analysis results to slides, present to TSC
- Jane - draft initial slides for 5G IT services/APIs overview
- Jeff - present gathered MindManager licensing and pricing info at next week TSC meeting
- Jeff - write short (2-3 para) press release about publication of improved API map. Use wiki page and send to Tina for LF publishing
- Jeff - modify MindManager generated HTML to handle notification for external pages (e.g. “you are leaving this page is that ok”)
- Jane - prepare to present to Open 5G Innovation Lab execs for partners, VCs, and other stakeholders
- Jeff - add TSC agenda item to discuss status of MobileEdgeX APIs

5 March 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- Review v2 API map at apiportal.akraino.org
 - Published late last week prior to F2F meetings
 - Blueprint project links and code repository links need to be updated (Jeff is working on that)
 - Discuss existing interactive map features, especially search function. Think through possible external customer scenarios -- how would they search? By functionality? Tech buzzword? Upstream project?

Minutes

- Jane - need to account for possible broken BP links in API map, is there a scan/integrity tool for that?
- Jane - create possible Use Case view in the map, in addition to the existing Functional Architecture view
- Doug - searching from research / patent / IP rights perspective can happen
- Jane - for telcos and their vendors to use standard APIs for telco services is a new, emerging area (very early stages). Can we add APIs from other communities? 3GPP, ETSI MEC, 5GAA etc. Make the API portal more general, an "Edge Portal"
- Doug - would that include RAN? SMO (service management orchestration) as northbound RAN interface
- Jane - 5GC (5G core), or "upper layer RAN" APIs would be map candidates
- Ike - concerns about lightweight 5GC implementations that are not fully compliant with existing UPF related APIs

Action Items

- Jeff - present gathered MindManager licensing and pricing info at next week TSC meeting

- Jeff - write short (2-3 para) press release about publication of improved API map. Use wiki page and send to Tina for LF publishing
- Jeff - modify MindManager generated HTML to handle notification for external pages (e.g. "you are leaving this page is that ok")
- Jane - prepare to present to Open 5G Innovation Lab execs for partners, VCs, and other stakeholders

26 February 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson, Doug Eng, Prem Sankar Gopannan
Meeting Notes - Jeff Brower

Agenda

- Review API info for the [Private LTE/5G](#) BP. Prem, the project PTL, is attending the meeting so we can ask questions
- Review API info for the [AI Edge: Intelligent Vehicle-Infrastructure Cooperation System](#) (I-VICS) BP (PTL Hechun Zhang, key team members Zhuming Zhang and Zhongwan Hao)
- Notes for reference during the meeting:
 - Both BPs we are reviewing have received R4 release approval from the TSC, contingent upon their teams finishing up security related items and, for I-VICS, API info review
 - The [current, fully expanded API map is posted here in PDF format](#) for review by subcommittee members prior to publishing on apiportal.akraino.org

Minutes

- Prem - they are using Free5GC; they've hardened it and created Helm Charts for it. They are enhancing UPF performance. Close to 5 people involved, including part-time team members from Nokia, Aarna Networks, Juniper Networks, Cohere Technologies (Prem's company)
- Prem - screen shared data flow and system architecture diagrams. They are using Tungsten Fabric for data plane (collaborating with Sukhdev / Juniper), which brings in Kubernetes, and EMCO to orchestrate Free5GC
- Prem - collaborating with Oleg / PCEI for release 5

- Prem - network slicing not in the scope of the BP
- Prem - they started with EPC - Facebook Magma, but in Apr/May 2020 Facebook was moving towards a closed source model. Now recently (last few weeks) Facebook has donated the project to Linux Foundation (called "OpenCore"), so it's open source again (additional comments from Doug and Ike on this). The BP plans to bring back Magma, and give users both options
- Ike - Santiago (Tiago) Tenorio, Vfe UK, CTO, using personal server as a RAN base station
- Prem - Facebook's Sharaman will present at Akraino F2F
- Ike - I-VICS is using ROS2 (Robot OS v2)
- Tina - I-VICS lead contributors Zhuming Zhang and Zhongwang Hao are from Yishi, parent company is Xinhong
- Ike - we need to think about ways to quantify API info/data we are gathering from BPs, to make our analysis less subjective. Although that's difficult anything in that direction is a positive

Action Items

- Jeff - email Zhuming and ask what category should be added to be an exact match for Level 3 in the API map (instead of Robotics, which they selected as "closest match")

19 February 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson, Doug Eng, Dr. Mehmet Toy, Xinhui Li
Meeting Notes - Jeff Brower

Agenda

- The only BP that has not uploaded an API info form is [AI Edge: Intelligent Vehicle-Infrastructure Cooperation System](#) (PTL Hechun Zhang, secondary contact Zhongwan Hao). They are having some non-API related issues with R4. There are four (4) BPs in this boat, Tina has placed them in a "Batch 2" group that will be released after the official R4 release. This appears to be due to LF Edge deadline pressure for press release, web pages, F2F meetings, etc
- We have received detailed options and pricing from MindManager, we can review and then present to the TSC next week. After LF Edge obtains a MindManager license we can publish the updated API Map

- Regarding this from 5Feb meeting: “Jeff to contact Tim Epkes and make sure he’s receiving API related mail-outs from api@lists.akraino.org”, Tim has not replied
- Summary and Q&A about Ike’s presentation about API-related developments in 5G/MEC areas earlier this morning
- The [current, fully expanded API map is posted here in PDF format](#) for review by subcommittee members prior to publishing on apiportal.akraino.org

Minutes

- Discussion of Ike’s presentation
- Discussion of LF Edge / Akraino usage of MindManager -- physical install, MS Teams (mentioned in the hard copy quotation), license key, other details

Action Items

- Ike - post link for his presentation on Documentation subcommittee page
- Jeff - download MindManager trial and publish current version of API map in HTML format, upload to AWS site hosting apiportal.akraino.org
- Jeff - obtain clarification from Corel sales guy on MindManager physical install, MS Teams, license key, other details
- Jeff - propose to the subcommittee an idea for incorporating specification compliance (including security and privacy), as well as other BP “attributes”, into the next version of API map. The objective is to reduce duplicate appearances of BP projects in different map paths and make the primary way a BP is located on the map based on functionality, with some click or hover way to see attributes. This info organization would be a precursor to adding search capability -- each BP has a single record, with search filters that can be applied
- Jeff - schedule Prem to present to the API subcommittee; during Q&A we can ask which Magma and Free5GC APIs they are using, with a view to possibly modifying the API map. Also ask any questions needed about EMCO orchestration per Xinhui’s questions (**Note** - this item remains from last week, as it looked like Prem was spending a lot of time working on getting their BP through R4 acceptance. Currently they seem to be in “Batch 2”)

12 February 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson, Doug Eng, Dr. Mehmet Toy, Xinhui Li
Meeting Notes - Jeff Brower

Agenda

- The only BP that has not uploaded an API info form is [AI Edge: Intelligent Vehicle-Infrastructure Cooperation System](#) (PTL Hechun Zhang, secondary contact Zhongwan Hao). I had sent an e-mail to them earlier this week, will send another. Although I think they have additional issues for R4 release besides completing the API form
- During yesterday's TSC meeting, the Private LTE/5G PTL (Prem Sankar Gopannan) gave a presentation and mentioned that their project is using Free5GC and Facebook Magma, but he did not include those in the API form because the API map did not have an "infra" category (as I recall he mentioned). I'm not completely clear on this -- need to discuss without experts Jane, Doug, Ike, et. al. Do we need to add a category? I added a link to his slides on the API subcommittee page, we can look those over during the meeting
- Reminder - Ike's presentation is 19Feb during the documentation subcommittee time slot, 7:00a Friday (2 hours before API subcommittee meeting). His presentation includes ideas on additional API information requirements for Release 5, including rationale for API type and interface (e.g. security, data rate, connectivity, ease-of-use), compliance with applicable specs (or for "example only" cases compliance with a *likely* spec or area of a spec)
- -Lunar New Year Holiday -- no other items today :-)

Minutes

- Jeff - screen shared [Private LTE/5G slides presented to TSC yesterday](#), including "Scope for R4 Release (slide 6) that mentions Facebook Magma and Free5GC and "Enterprise 5G Use Case" (slide 8) that has a data flow diagram
- Ike - asks how Private LTE/5G is actually related to 5G, at underlying level
- Doug - Facebook Magma started a few years ago as a sort of "EPC (evolved packet core) in a box", an application target example being rural area cell sites. Mentioned they are now better aligned with ONF, but ONF community still has some concerns about "black box" nature of some Magma components
- Jane - Magma is more on LTE side, the Private LTE/5G BP primary focus is a use case for Tungsten Fabric (Ike mentioned this is in part because of work being done by Juniper Networks)

- Xinhui - questions re. how they are using EMCO for orchestration
- Jane - we always need to be careful to not to pick winners or make recommendations in our API committee info
- Doug - is working on “5G Open Innovation Lab” (<https://5goilab.com>) at VMWare. Microsoft, Intel, Dell/VMWare, other partners are helping startups build applications, he might want Akraino API subcommittee expert (Jane) to present to executives (both 5G OIL staff and startup executives). They currently have two outdoor labs set up (one is agricultural cell site), and are going through startup interviews that include VC participation

Action Items

- Jeff - schedule Prem to present to API subcommittee; during Q&A we can ask which Magma and Free5GC APIs they are using, with a view to possibly modifying the API map. Also ask any questions needed about EMCO orchestration per Xinhui’s questions

5 February 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- There are two (2) BPs that have uploaded API info forms earlier this week and we need to review:
 - [AI Edge: School/Education Video Security Monitoring](#) , Hechun Zhang PTL
 - [Private LTE/5G ICN](#), Prem Sankar Gopannan, PTL
- There is one remaining BP that has not uploaded an API info form:
 - [AI Edge: Intelligent Vehicle-Infrastructure Cooperation System](#), Hechun Zhang PTL

is there an alternate contact ? For the other AI Edge BP we e-mailed Hechun and LiYa Yu and that seemed to work, so a similar “tag team” approach might work on this one
- Ike has proposed 19Feb meeting to present slides on additional API information requirements for Release 5, including rationale for API type and interface (e.g. security, data rate, connectivity, ease-of-use), compliance with applicable specs (or for “example only” cases compliance with a *likely* spec or area of a spec)

Minutes

- Review of AI Edge: School/Education Video Security Monitoring BP. They consume Prometheus and Harbor 3p APIs and also export otestack V1 APIs
- For AI Edge: IV-ICS BP, Tina suggested secondary contact Zhongwang Hao
- We can mark both BPs that uploaded API forms earlier this week as accepted for R4 release. We will let Private LTE/5G BP know there is not enough info in their form to be included in the API map as they only list general consumption of Kubernetes APIs and do not export any APIs
- 19Feb 9:00a API subcommittee meeting will be shortened to 20-30 min, and committee members should attend Ike's documentation subcommittee meeting same day at 7:00a for his presentation and Q&A

Action Items

- Jeff will e-mail Hechun Zhang and Zhongwang Hao about uploading an API info form for IV-ICS BP
- Jeff will schedule AI Edge and Private LTE/5G BP PTLs for presentation to API subcommittee and documentation subcommittee to better understand their projects
- Jeff to contact Tim Epkes and make sure he's receiving API related mail-outs from api@lists.akraino.org

29 January 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Jane Shen, Tina Tsou, Ike Alisson, Doug Eng
Meeting Notes - Jeff Brower

Agenda

- There are still five (5) remaining BPs that we need to discuss
 - Jane to report on API info for the Micro-MEC BP, presumably we can mark them as accepted
 - the IEC Type3 BP (Hanyu Ding) has e-mailed their form to me, I uploaded it to our [API info reporting page](#), we need to review it. They consume/offer no APIs, so

mainly we're looking at their comments as to why this is the case and what are their future expectations

- The two (2) AI Edge BPs ([School/Education Video Security Monitoring](#) and [AI Edge: Intelligent Vehicle-Infrastructure Cooperation System](#), Hechun Zhang PTL for both) have not uploaded their form, although Hechun had indicated to Tina during the week they would be doing so
- For the Private LTE/5G BP we're still waiting for their response
- Jane has written a preliminary summary of API info gathered so far, we can review/discuss
- Ike has proposed 10Feb meeting to present slides on additional API information requirements for Release 5, including rationale for API type and interface (e.g. security, data rate, connectivity, ease-of-use), compliance with applicable specs (or for "example only" cases compliance with a *likely* spec or area of a spec)

Minutes

- Screen shared PDF version of fully expanded API map. Improvements made by Jane noted, also some BP trends in upstream project usage and functionality noted
- Extensive discussion of API map next steps from an "external to Akraino" perspective, including search filters noted by Jeff, alternative visual organization of the map; e.g. "use case" view noted by Ike, or "upstream AP" noted by Doug (he mentioned a pivot table)

Action Items

- Jeff will mark Micro-MEC BP info requirements as accepted, it's showing in the revised API map so we assume Jane has seen their info and it's ok (we didn't discuss it during the meeting)
- Jeff will mark IEC Type3 API info requirements as accepted
- Jeff will work on preliminary ideas for search filters and a possible "use case view" diagram

22 January 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Ike Alisson, Dr. Mehmet Toy, Jane Shen
Meeting Notes - Jeff Brower

Agenda

- There are five (5) remaining BPs that we need to discuss
 - Micro-MEC has uploaded their API info form and we need to take a look at it
 - The two (2) AI Edge BPs ([School/Education Video Security Monitoring](#) and [AI Edge: Intelligent Vehicle-Infrastructure Cooperation System](#), Hechun Zhang PTL for both) have not uploaded their form, although I think they are well aware of the need. Perhaps we need to join their weekly meeting
 - IEC Type3 (Hanyu Ding) has been responsive in e-mail, we explained to them they although their BP does not consume or export APIs, they still need to fill out the form, and explain why and future API plans in the Comments field
 - Private LTE/5G we're not sure
- We need to discuss who is handling and what else we can do to finish up these BPs
- Update on API map update publishing schedule with Jane

Minutes

Jeff led discussion on BP API reporting status, as listed in the agenda. See resulting action items below

Tina explained that she and Jiafeng joined the recently weekly meeting for the AI Edge Video Security Monitoring BP and Jiafeng went through steps required to fill out the form. They are using Kubernetes APIs, but not exporting any APIs

Ike led discussion on additional related info that can be added to API map, including specifications, other external API related groups, YAML (declarative, machine readable APIs), etc

Action Items

Jane will look at Micro-MEC uploaded API form

Jeff to ask Brett Preston about attribution requirements for external groups (e.g. ETSI MEC) when quoting API subcommittee-generated material, including API map and whitepapers

Jeff to add TSC meeting agenda item for same (26Jan20)

Jeff to e-mail:

Liya Yu (AI Edge Vid Security Monitoring) and ask status of API info form

Hechun Zhang (AI edge IVICS) and ask who has been assigned to fill out the API form

Prem Sankar Gopannan (Private LTE/5G) about status of their form

15 January 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jeff Brower, Tina Tsou, Ike Alisson
Meeting Notes - Jeff Brower

Agenda

- I (Jeff) looked at latest API info for IoT Workloads at Smart Device Edge (Predictive Maintenance) BP, uploaded by PTL Vladimir Suborov in late Dec. For their remote orchestration APIs, he is showing “CLI” under our “Protocols” column, which I think is fine since we have not added an “interface type” or similar column. We might want to consider adding a column with “GUI, CLI, and App” or similar as CLI interface can use curl or other method to issue RESTful APIs. By App I mean programmatic in some way ... maybe there is a better term

They also list RESTful Application APIs. Overall their form seems fine to me, so I recommend we mark them as Accepted. If anyone has questions I can screen share a software architecture diagram for their project. Hopefully this serves as an example of a “Telco optional” BP we can use as a future reference

- Besides the IoT Workloads at Smart Device Edge BP, there are five (5) remaining BPs that have not yet uploaded their API info. We need to discuss who is handling and what else we can do to prompt the PTLs to get busy
- I discussed the API map update publish schedule briefly with Jane. It looks like we can publish on apiportal.akraino.org end of Jan. My understanding is Jane is close to having it ready

Minutes

- API info for IoT Workloads at Smart Device Edge (Predictive Maintenance) BP is approved

- Micro-MEC BP form has been uploaded since 26Oct, Jeff will look at it and make recommendations for further review or acceptance
- Remaining 3 BPs (#12, 13, 13) we need to pursue. Jiafeng has 11 and 12 and will continue to follow up with Hechun Zhang, PTL (“The AI Edge: School/Education Video Security Monitoring”, and “The AI Edge: Intelligent Vehicle-Infrastructure Cooperation System”)
- Ike discussed additional API information requirements for Release 5, including rationale for API type and interface (e.g. security, data rate, connectivity, ease-of-use), compliance with applicable specs (or for “example only” cases compliance with a *likely* spec or area of a spec)

Action Items

- Jeff will mark IoT Workloads at Smart Device Edge (Predictive Maintenance) BP as accepted on Release 4 Planning TSC page
- Ike to take over assignment of API info for Private LTE/5G BP from Neal Oliver, Jeff will send an e-mail (PTL Prem Sankar Gopannan)
- Jeff will take over from Jane assignment for the “IEC Type 3: Android cloud native applications on Arm servers in edge for Integrated Edge Cloud” BP (PTL Hanyu Ding)
- Ike to work on 5-10 slide PowerPoint presentation proposing additional API info

8 January 2021 / 9:00 AM PST / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Doug Eng, Dr. Mehmet Toy, Oleg Berzin
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- Per API review meeting on 21Dec20, Connected Vehicle (Thor Chin, Tao Wang) and AR/VR (Bart Dong, Thor Chin) blueprints PTLs will add PaaS APIs and re-upload their forms. Jeff sent reminder e-mail to them Thurs evening
- PCEI blueprint API info review (PTL Oleg Berzin, assigned to Jane Shen)
- Can we accept API info for IoT Workloads at Smart Device Edge (Predictive Maintenance, PTL Vladimir Suborov) BP? They re-uploaded their API info form on 21Dec to include orchestration cmd line APIs

- Otherwise that leaves five (5) BPs for which we still need to finish API review:
 - 1) Micro-MEC (PTL Ferenc Székely, assigned to Jane Shen)
 - 2) AI Edge: School/Education Video Security Monitoring (PTL Hechun Zhang, assigned to Jiafeng Zhu)
 - 3) AI Edge: Intelligent Vehicle-Infrastructure Cooperation (PTL Hechun Zhang, assigned to Jiafeng Zhu)
 - 4) IEC Type 3: Android cloud native applications on Arm servers (PTL Hanyu Ding, assigned to Jane Shen)
 - 5) Private LTE/5G ICN (PTL Prem Sankar G, assigned to Neal Oliver)

Minutes

- Connected Vehicle and AR/VR project PTLs did submit their forms, they described the info as TARS API info, of which PaaS is evidently a subset. We can mark these BPs as Accepted
- Reviewed PCEI API (Oleg Berzin attended meeting). We can mark PCEI as Accepted
- Location API discussion -- Ike commented that the PCEI doc, when mentioning its example location API, should reference correct 3GPP text and links

Action Items

- Tina will help get contact info for Hechun Zhang
- Jeff will email Neal regarding API info review status for Private LTE/5G blueprint project. Will cc PTLs Prem Sankar Gopannan and Sukhdev Kapur
- API portal release plan -- Jeff to discuss with Jane

18 December 2020 / 9:00 AM PST / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Sukhdev Kapur
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- R4 release API review for project "[Network Cloud and Tungsten Fabric Integration Project](#)" (PTL is Sukhdev Kapur with Juniper Networks)
- Discussion of how/when to review BPs scheduled for API review (these highlighted in yellow on API subcommittee [Blueprint Projects R4 API Reporting Requirements](#) page).

Currently there are 4 BPs scheduled (not including Sukhdev). Can we move these to 8 Jan and 15 Jan ?

- (IF TIME PERMITS) discussion of Ike's plan for alignment of API and Documentation subcommittee and TSC review process

Minutes

- review R4 BP [Network Cloud and Tungsten Fabric Integration Project](#)

11 December 2020 / 9:00 AM PST / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Doug Eng, khemendra kumar

Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- R4 release API review for project "ELIOT" (2 projects: (1) IoT Gateway and (2) SD-WAN/WAN Edge/uPCE)
- R4 release API review for project "Network Cloud and Tungsten Fabric"
- R4 release API review for project "IIoT at the Smart Device Edge"
- (IF TIME PERMITS) discussion of Ike's plan for alignment of API and Documentation subcommittee and TSC review process

Minutes

- ELIOT review: IoT gateway architecture overview and introduce APIs
 - IOT devices management APIs (EdgeX)
 - IOT data management APIs (EdgeX)
 - IOT system management APIs (EdgeX)
 - Application Orchestration APIs
 - Application Package Management APIs
 - Application Lifecycle Management
 - MEC Service Management.
- ELIOT uCPE API review
- ELIOT gateway API report and uCPE API report are reviewed and accepted

- IIoT at the Smart Device Edge API will update the API report table

4 December 2020 / 9:00 AM PST / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Mehmet Toy, Doug Eng, Mehmet Toy, Ramakrishnan Kural

Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- ICN R4 API review (Ramakrishnan)
- R4 API review status report
- Share IIoT Smart Device Edge Architecture diagram, showing where API and CLI interfaces are used - Jeff Brower
- Discussion -- one-to-one matching of [TSC R4 release planning page](#) with API subcommittee [API reporting status page](#). The main need is for concise, accurate review during TSC meetings (2x per week), although this should be helpful in general - Brower

Minutes

- We received 10 API reports out of 21 R4 Release projects, and 7 reports have been reviewed with PTLs. Status shows in API subcommittee R4 wiki page.
- ICN PTL Ramakrishnan presents ICN APIs, it is accepted by the committee

Action Item:

- Kural (Intel) will post his slides to Akraino API subcommittee wiki page

20 November 2020 / 9:00 AM PST / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Mehmet Toy, Doug Eng, Mehmet Toy

Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- R4 API report status
- Sub-committee chair
- IoT category in API map discussion
- Share IIoT Smart Device Edge Architecture diagram, showing where API and CLI interfaces are used - Jeff Brower

Minutes

- EDGE AI video security monitoring R4 API documentation is a good example.
- R4 API report status: 8 Projects submitted API form, we have reviewed 4 of them one by one with PTLs. Try to understand their architecture and where the APIs are. We expect another 10 projects PTLs to submit their API form. In order to draft the API analytic, we have review meeting minutes.
- Sub-committee chair: Jeff Brower
- IoT category in API map discussion
- Share IIoT Smart Device Edge Architecture diagram, showing where API and CLI interfaces are used - Jeff Brower

Action Items:

- Internal discussion and update projects review
- API analysis Objectives discussion
- IoT category discussion

13 November 2020 / 9:00 AM PST / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Mehmet Toy, Vikram Siwach

Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- R4 API report status - 10min
- Sub-committee chair election discussion - 5min
- IoT category in API map discussion - 10 min (Postponed to next week)
- Share IIoT Smart Device Edge Architecture diagram, showing where API and CLI interfaces are used - Jeff Brower - 10 min (Postponed to next week)

Minutes

- R4 API report status - EALET project API, start to review by Dec 1st. Schedule 3 review meetings with PTLs in the next week. Jane will host another meeting for ETSI MEC API discussion
- Sub-committee chair election discussion

06 November 2020 / 9:00 AM PST / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, khemendra Kumar, Gaurav Agrawal, Mehmet Toy

Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- Telco Edge API trend - Ike Alisson
- EALTE API discussion
- R4 API report status

Minutes

- Telco Edge API trend - Ike Alisson, Edge in 5G Network Mobility, ETSI MEC synergy. NGMN 5G WP Feb. 2015 “5G network mobility at cell and cloud edge”
 - ETSI MEC rename and 3GPP 5G NSA Rel. 15 mobility redefined
 - 5G Enhancements and 5G MEC integration
 - 5GS network capabilities & MEC integration
 - Impact on ETSI MEC management & orchestration - host & system level
 - Support in MEC for AVT (alternative virtualized technologies)
 - 3GPP EDGEAPP & ETSI MEC SW for developing MEC applications
 - * MEC v2X UC in MEC & 5G SST standard value
 - *O-RAN & RNIS
 - *3GPP Rel. 16 NR location methods & 3GPP LCS
 - *3GPP 5G SCEF/SCS for IoT platform integrated with IoT SL across 10 use cases

30 October 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Doung Eng, Mehmet Toy
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- API reporting requirements for R4

Minutes

- Akraino release 4 API info TSC review meeting
- Ike will present Telco and Edge API trend in the next weekly meeting

23 October 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Ike Alisson, Doung Eng, Mehmet Toy
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- API reporting requirements for R4
- ETSI MEC collaboration

Minutes

- Update release 4 API info form collection status
- Add 2 categories for IIOT in API map, User Edge, service provider edge
- In the API map, add a link to the whitepaper
- ETSI MEC decode group collaboration , compare Akraino API map to mec decode table, Highlight Edge enabler and general PaaS in application enabler. Those two fields are the major collaboration interests (DNS service and location)

16 October 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Neal Oliver, Ike Alisson
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- API reporting requirements for R4
- Update on ETSI MEC DECODE collaboration

Minutes

- R4 API Info Collection Status

| R4 Project Names | API Subcommittee member name | Status | Notes |
|--|------------------------------|---|-------|
| Connected Vehicle Blueprint | Jiafeng Zhu | Email sent: 10/10 replied | |
| ELIOT IoT Gateway Blueprint | Jiafeng Zhu | Email sent: 10/10 and 10/15 Try to join their weekly meeting, but none was in the meeting | |
| ELIOT SD-WAN/WAN Edge/uCPE Blueprint | Jiafeng Zhu | Email sent: 10/10 and 10/15 Try to join their weekly meeting, but none was in the meeting | |
| ELIOT AIoT in Smart Office | Jiafeng Zhu | Email sent: 10/10 and 10/15 | |
| IoT Workloads at the Smart Device Edge - Predictive Maintenance (with a Thermal Imaging Camera, vibration sensors, etc.) | Jeff Brower | | |
| ICN - Integrated Cloud-Native Family | Neal Oliver | Working with Kuralamudhan Ramakrishnan offline | |
| Private LTE/5G ICN | Neal Oliver | Have not joined their group meeting yet, as it is a double-conflict in meeting schedule. Will attempt to work with them offline. | |
| 5G MEC/Slice System to Support Cloud Gaming, HD Video and Live Broadcasting Blueprint | Jane Shen | Email sent: 10/15 | |
| Micro-MEC | Jane Shen | Email sent: 10/15 Reminded during 10/21 TSC call | |
| Radio Edge Cloud (REC) | Jane Shen | Email sent: 10/15 Reminded during 10/21 TSC call | |
| Enterprise Applications on Lightweight 5G Telco Edge | Jane Shen | Email sent: 10/15; replied Received 10/21 | |
| Public Cloud Edge Interface (PCEI) Blueprint | Jane Shen | Email sent: 10/15 Reminded during 10/21 TSC call | |
| IEC Type 3: Android cloud native applications on Arm | ? | | |

| | | | |
|--|---|--|--|
| servers in edge for Integrated Edge Cloud (IEC) Blueprint Family | | | |
| IEC Type 5: SmartNIC for Integrated Edge Cloud (IEC) | ? | | |

09 October 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tina Tsou, Neal Oliver, Ike Alisson
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- API reporting requirements for R4
- API Mock server generation

Minutes

- API Reporting requirement for R4:
While we count on PTLs to follow the procedure of API requirements, we will contact and proactively work with PTLs together. We will help PTL project by project, the plan is to send emails to individual PTL, and invite them to API weekly meetings, or other time frames. We will also discuss the content that PTL filled in if API info is hard to understand. Below is a table, and each API subcommittee member can pick several projects, and start to work with PTLs.

| R4 Project Names | API Subcommittee member name | Notes |
|---|------------------------------|-------|
| Connected Vehicle Blueprint | Jiafeng Zhu | |
| ELIOT IoT Gateway Blueprint | Jiafeng Zhu | |
| ELIOT SD-WAN/WAN Edge/uCPE Blueprint | Jiafeng Zhu | |
| ELIOT AIoT in Smart Office | Jiafeng Zhu | |
| IoT Workloads at the Smart Device Edge - Predictive Maintenance (with a | Jeff Brower | |

| | | |
|---|-------------|--|
| Thermal Imaging Camera, vibration sensors, etc.) | | |
| ICN - Integrated Cloud-Native Family | Neal Oliver | |
| Private LTE/5G ICN | Neal Oliver | |
| 5G MEC/Slice System to Support Cloud Gaming, HD Video and Live Broadcasting Blueprint | Jane Shen | |
| Micro-MEC | Jane Shen | |
| Radio Edge Cloud (REC) | Jane Shen | |
| Enterprise Applications on Lightweight 5G Telco Edge | Jane Shen | |
| Public Cloud Edge Interface (PCEI) Blueprint | Jane Shen | |
| IEC Type 3: Android cloud native applications on Arm servers in edge for Integrated Edge Cloud (IEC) Blueprint Family | ? | |
| IEC Type 5: SmartNIC for Integrated Edge Cloud (IEC) | ? | |

- API Mock server generation
There are three levels of API testing categories,(Syntax testing, with static pre-configured value, dynamic testing simulation e.g. MEC Sandbox try-me.stsi.org). We propose a new project which simulates the MEC environment , including Edge and app enablement parts. The MEC simulation platform is designed to help MEC application developers.

02 October 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Doug Eng, Tina Tsou, Neal Oliver, Ike Alisson
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- API reporting requirements for R4
- Whitepaper #2 published

- API Mock server generation

Minutes

- API Reporting requirement for R4:
It is a requirement from the TSC. The report will identify similarities of APIs, (content, definition, etc.) and more. The complete proposal will be present to the next week TSC meeting. There are 15 to 20 blueprint projects in R4, their PTLs need to fill in the API information form. Once we collected those API info, we can start to analysis the commonality, and others. It is also valuable information if 3rd parties APIs are consumed by Akraino projects. It will help us to identify what API is commonly used. All collected API info will be reviewed in TSC meetings. We will reach out PTLs if we have any questions about the API info form. Each sub committee member will share some projects review job.
- White paper #2 has been published in <http://lfedge.org/resources/publications>. Since this year ONES conference is delayed, there is only time slot for the white paper.
- API testing verifications is the next proposal, How do we generate mock servers for those API? We will make a few examples using the mock server. To generate mock servers from swagger, customers will use it to test their syntax.

18 September 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Doug Eng, Tina Tsou, Ike Alisson
Meeting Notes - Jiafeng Zhu, Jeff Brower

Agenda

- Whitepaper #2 final prep (style/format), publication status update
- API Portal status update - Alpha version
- Propose API reporting requirements for R4

Minutes

- Whitepaper #2 final prep (style/format), publication status update
Received a copy from LF Edge, will be published on ONES event. May set a chat room for discussion in the event. Will be a link to this white paper.
- API Portal status update
Jane will report to the API portal in the next week's annual meeting. We all need to register the annual event.
- Propose API reporting requirements for R4
On top of API documentation requirements, we will focus on interfaces, including mandatory and optional information. We propose a one-stop entry point for API presentation, including API analysis and comparison, finding common ground for APIs alike, sandbox and sample code. This sub-committee will NOT propose or try to define API specifications.

11 September 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Doug Eng, Neal Oliver, Tina Tsou, Ike Alisson
Meeting Notes - Jiafen Zhu, Jeff Brower

Agenda

- API Portal status update - Alpha version
- Whitepaper #2 final prep (style/format), publication status update
- Propose API reporting requirements for R4
- Ike's inputs on Whitepaper #3

Minutes

- API Portal status update - will update the Alpha version, and collect feedback.
It will be presented in the next week's TSC meeting. It is hosted on AWS, owned by LF Edge IT. The code will be put in a public repository.
- White paper #2 final prep (style/format), publication status update. It will be published in the ONES event.
- Propose API reporting requirements for R4
Since API is not a hard requirement in BP projects before, Jane proposes a baseline question of Key API

information (format ,category, sample code etc.) from projects who will expose API. We will require further information if projects use Telco network information API or extend K8S framework.

- Ike's inputs on Whitepaper #3
 1. Infographic nr 1. Attached info on the various Roles of CSP (Communication Service Providers) & Communication Service Customers) in the Next Generation Networks (incl. 5G) so that the Akraino BPs owners can determine what their role or roles might be in the Next Generation Networks incl. 5G.
 2. Infogr nr. 2. Attached info on the MEC support for the use of nested Virtualization Technologies so that 3rd Parties VNF applications can be run in MEC Host Environment, but managed by the 3rd Party's own Management in their Application Environment on top of the MEC Host so that the Akraino BP providers can assess the possibility for interaction with each other following the respective Solution Architecture Guidelines (defined APIs are Open & Standard).
 3. Infographic Nr 3 on MEC support for Slicing in 5G due to 5G Network use of Cloud Native Technologies (defined as Scalable Applications in Environment defined use of Public, Private & Hybrid Clouds) with use of Containers, Service Mesh, Microservices, Immutable Infrastructure & Declarative APIs) and NSI (Network Slice Instance) defined as Network Function Instance and necessary Resources (as compute, storage and networking) that form a Network Slice (that is defined as a Logical Network that provides specific (over SBA/SBI) Network Characteristics and Network Capabilities).
 4. Infographic Nr 4 on Data Storage Layer for NF deployment as VNFs by separation of the Business Logic of the Application (stored as Public Data in 5G UDR Rel 15) from the Application related Data Session/Context (and stored as Private and unstructured Data in UDSF (Unstructured Data Storage Function) to reuse in Virtualization of NF as VNFs (and use NFs as Consumer and/or producer).

04 September 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Su Gu, Neal Oliver, Tina Tsou, Ike Alisson
Meeting Notes - Jiafen Zhu, Jeff Brower

Agenda

- API Portal status update - Alpha version
- Future weekly meeting notes plan (Google Doc vs. Akraino Wiki)
- Whitepaper #2 final prep (style/format), publication status update
- Propose API reporting requirements for R4
- Ike's inputs on Whitepaper #3

Minutes

- API Portal status update - Alpha version
apiportal.akraino.org sub domain is ready, we have a landing page, api map can support R4 release and other BP projects. Technical Docs from Akraino, it also includes spec.

- Future weekly meeting notes plan (Google Doc vs. Akraino Wiki)
We create a wiki link from confluence to Google meeting minutes
- Whitepaper #2 final prep (style/format), publication status update
Jeff will request the status update from the marketing team.
- Propose API reporting requirements for R4
Will be discussed in the next Thursday TSC meeting, we will NOT host API, but we provide links to each BP projects' api wiki pages.
- Ike's inputs on Whitepaper #3
After we have the API portal launched, we will plan the white paper #3, we brainstorm and collect ideas for now.
- TSC election link has been sent by email
- Call for speakers: ONES and Edge Computing World

21 August 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Doug Eng, Neal Oliver, Tina Tsou, Wenhui Zhang
Meeting Notes - Zhu, Brower

Agenda

- API Portal status update
- Whitepaper #2 final prep (style/format), publication status update
- Propose API reporting requirements for R4

14 August 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Doug Eng, Neal Oliver, Tina Tsou, Wenhui Zhang
Meeting Notes - Zhu, Brower

Agenda

- API Portal status update
- Whitepaper #2 final prep (style/format), publication status update
- Propose API reporting requirements for R4
- API NBI vs. edge enabler (GSMA and PCEI and API)

07 August 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Doug Eng, Neal Oliver, Tina Tsou, Wenhui Zhang
Meeting Notes - Zhu, Brower

Agenda

- Status update
- Wipro customer inquiry
- API portal discussion

Notes

- 1) Updates and Status
 - Jane - TSC approved our API portal server budget request
 - Jane - Regarding dual or single landing page, they want API subcommittee to decide at some later point
 - Jane - TSC election upcoming 1 Sep -- Jeff Brower (API subcommittee member) is running
 - Jeff - Jason with Zededa and Aaron recommended adding LF Edge "Edge Access"

taxonomy graphic to Scope and Assumptions section of WP, we did that. TSC approved the WP #2 for final style/format prep and publication

2) Wipro customer inquiry about API related info

Jane - email received from Abhi with Wipro (forwarded to api@lists.akraino.org). He's looking for API related information, including (quotes in blue text):

1. How does the API work end to end?
2. What are the pre-requisites before I can call these APIs? Like- some action from Operators
3. Do we have any open source product/solution where these APIs are already implemented and ready for use within MEC app? E.g. Nokia MEC has these platform APIs (Location Service, RNI, QoE, etc.) but it is not opensource.
4. Do we need different APIs for LTE, LTE-CUPS and 5G?
5. API test framework (in simulated environment)
6. Sandbox with supported APIs

Jane replied, Tapio replied

Jane - good example of where API portal might be able to help

Jeff - highlighted Aaron's email about API portal. He likes the idea

3) API Portal update

Jane - notes on page construction, disclaimers when leaving to 3rd party sites. xmind vs. mindmanager discussion

Jeff - let's get the portal organized and to point where it can help customers

Jane - suggest to focus initially on Edge Enabler API related content

Doug - can we build in some type of API normalization; i.e. for APIs that do similar thing but have different parameter formats

Jane, Doug - discussion on fixed 5G

Tina - what is difference between WP #2 Edge Enabler and Edge Enabler presented in PCEI blueprint architecture ?

Group discussion - PCEI hyperscaler oriented, WP #2 Telco 5G oriented

Jeff - is the PCEI enabler more like an application enabler ?

24 July 2020 / 9:00 AM PDT / Zoom meeting

- White paper Neal's comments discussion
- Jeff presents Akraino API URL,
 - Dual URL options: api.akraino.org, apiportal.akraino.org
 - Single URL option: many URLs under one subdomain name
- Collaboration with ETSI MEC in two fields, API content (analysis and comparison) and API adaptation (sandbox ,workshop, validation)

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Doug Eng, Neal Oliver, Tina Tsou

Minutes

- API portal discussion:
 - Requirement and engineering support we may need
 - Opinion for two approaches
 - List all hosting options
- API development related to blueprint projects leaders, and have them to fill in the API portal
- Future projects:
 - Design of 5G edge enabler (control plane, user plane)
 - Brainstorm in the next week meeting

Notes

- 1) Review of API landing page proposal slides (to be presented to TSC)
 - Jane - change API portal website server ownership to “LF Edge / Akraino owned”
 - Jane - mention either member contribution or LF Edge budget may be needed for the API portal website server
 - Jane - reorganize Servers, and Eng/Dev support as sub-items under “Resources”
 - Jane - add need for IT admin support
- 2) Further discussion on single URL vs. dual URL approach
 - Tina - get busy on single URL (API portal landing page) now, ask for approval and budget needs with TSC now, worry later about merging with api.akraino.org into one landing page
 - Jeff - clarify next steps with TSC: open ticket with LF Edge IT support, send modified slides to API subcommittee for approval, present slides at next week’s TSC call Tues (or Thurs depending on agenda timeslots)
- 3) All committee members - try to get customer feedback for Edge Enabler contents, both for API portal purposes, and also possible follow-on whitepaper efforts

17 July 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Tina Tsou, Jeff Brower, Neal Oliver, Wenhui Zhang

Meeting notes -- Zhu, Brower

Agenda

- Present Akraino API URL proposal (dual URL vs single URL)
- New work item proposals, cont.
- WP #2 final review prior to TSC voting for approval on 14 July. All comments and resolutions presented for subcommittee approval

Minutes:

- White paper Neal's comments discussion
- Jeff presents Akraino API URL,
 - Dual URL options: api.akraino.org, apiportal.akraino.org
 - Single URL option: many URLs under one subdomain name
- Collaboration with ETSI MEC in two fields, API content (analysis and comparison) and API adaptation (sandbox, workshop, validation)

Notes

- 1) WP#2 final review
Neal - will be editing next few days
- 2) API Portal landing page / URL proposal
Jane - change 2nd and 3rd link examples to API wiki and API testing
Neal - walk through 3GPP APIs CAF, NEF (traffic influencing). What other Akraino BP groups are using?
Tina - should be hosted on LF Edge owned server
Jane - showed API portal mind map prototype. Idea is to make it easy for developers to zero in on API related info they need
Neal / Jane - back and forth on OpenNESS NEF vs. 3GPP version
Neal - suggest to present single URL landing page to TSC, but keep working within existing dual URL framework
- 3) ETSI MEC DECODE activity
Jane - collect thoughts on ETSI MEC collaboration
Neal - Intel is taking part, focus on actual implementations
Jane - possibly work with them on API validation, but we have limited resources
Jeff - how does ETSI MEC fit in with other new work item proposals?
Neal - does outside collaboration help move ETSI MEC along faster?

10 July 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Tina Tsou, Jeff Brower, Andrew Wilkinson, Doug Eng, Neal Oliver, Su Gu

Meeting notes -- Zhu, Brower

Agenda

- WP #2 final review prior to TSC voting for approval on 14 July. All comments and resolutions presented for subcommittee approval
- Present Akraino API URL proposal (dual URL vs single URL)
- New work item proposals, cont.

Minutes:

White paper discussion:

- o Reviewed the worksheet of white paper #2, listed all comments, responders and responses
- o Went through Neal's comments, 5G terms mentioned in the whitepaper, we may want to add diagram and hyperlinks to 3GPP specifications files archive
- o 5GC is the game changer, not whole 5G
- o Revise the first paragraph, move the last sentence to the beginning
- o Offline review, and discussion, and scheduled another meeting on Monday or Wednesday

26 June 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Tina Tsou, Jeff Brower, Andrew Wilkinson, Dan Druta, Neal Oliver, Tim Epkes, Ike Alisson, Su Gu, Doug Eng. Tianji Jiang, Vikram Siwach (joined briefly and left early)

Meeting notes -- Zhu, Brower

Agenda

- Discussion of whitepaper review comments, definition of MEC etc.
- Present Akraino API URL proposal (dual URL vs single URL) (Postponed to next meeting)
- New work item proposals, cont. (Postponed to next meeting)

Additional Notes

Technical paper review

Jane - summarized comments received during last week, including Sukhdev (Juniper), Su Gu (China Mobile), Andrew (Ericsson), Vikram (MobileEdgeX), Doug (former AT&T), Alex (HPE) and Google Doc reviewers (Pasi Vaananen and Rob Franzo)

Andrew - Fig 7 (Edge stack options) oversimplifies

Andrew - move 5G clarification up, into Motivation section -- or -- insert strict, clarifying definition into Scope & Assumptions

Andrew - "MEC" definition must be super clear, focus on Telco Edge "5GC", specify what MEC *does not* include

Su Gu / Jiafeng -- agree with this -- clarify MEC as early as possible the paper

Ike - include 3GPP definition of service providers; one of 6 different roles defined by 3GPP includes "infrastructure owners"

Neal - removing MEC term entirely can lead to even more confusion, given the widespread use of the term

Tim - point out in definition that any time MEC is used in context of ETSI MEC, the paper will explicitly mention "ETSI MEC"

Andrew -- the Akraino LF Edge board disagrees with ETSI MEC on some things, if the paper advocates alignment with ETSI MEC the board may push back on that

Doug - many docs talk about MEC, only a few reference ETSI MEC

Tim - add footnotes for MEC references if needed

Jane - reviewed Sukhdev's email comments re. "edge cloud", may reflect Juniper CTO article, which has a proposed edge cloud definition. Jane will send attendees a link to this article

Andrew - we should not have any references to GTP

Neal - implementation details such as GTP are beyond the scope of our paper

Jane - briefly reviewed Vikram's email comments, and Doug's email reply

Jane - continued to review Andrew's email comments: point 2, should business model/role be included in the paper ?

Andrew - company and product names should be removed from the paper. Referencing industry groups is ok, anything that is a "wide consortium". Remove comment in section 5.2 about following "ETSI MEC reference architecture"

Neal - agrees, we are talking about operators at that point, that section focus on operators

Andrew - add more references to 3GPP docs in citation section, including 29.522

Neal - should we call out some of the physical realities we have encountered, can we make

a strong statement about APIs that operators should be supporting
Andrew - yes we should

Action Item

Jane -will email attendees link to Juniper CTO's article

19 June 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Tim Epkes, Tina Tsou, Neal Oliver

Meeting notes -- Zhu, Brower

Agenda

- Discuss TSC review process, including their request for open access
- Consider new work item proposals
- API portal -- what subdomain name do we want on akraino.org, interface to other API resources, etc

Meeting Notes

- Whitepaper TSC review process:
 - Jane presented the whitepaper in TSC weekly meeting, some members don't know it
 - It opens to the public from google doc
- API portal

Additional Notes

API URL discussion

Jane - background of akraino.org, 12May20 proposal to TSC mentions
apiportal.akraino.org

Tim - organization such as Akraino should have a single entry point for APIs to avoid
customer confusion

Tina - to change URLs has to go LF Edge level, propose the approach, include 1) Rationale &
Mechanism, 2) Servers, 3) Engineering Support, and 4) Developer Support

Tim -should api.akraino.org point to LF Edge hosted server ? otherwise there is a risk of
private private servers going offline for whatever reasons

Consensus - unified API URL subdomain to minimize confusion, action item assigned to
Brower to generate brief PPT for presentation

TSC review of whitepaper

Only brief updates so far, in depth review postponed again another week

New Work Item Proposals

Jane - some ideas include InterMEC, 2nd whitepaper, consolidated view of application management

Jeff - maybe 2nd whitepaper can focus on webscaler perspective (cloud guys)

Action Item

Jeff - generate PPT as noted and e-mail to group for review

12 June 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Neal Oliver, Tim Epkes, Tina Tsou

Meeting notes -- Zhu, Brower

Agenda

- Whitepaper review (continued)
- API portal integration into akraino.org

Meeting Notes

Update the white paper status, TSC will vote in one/two weeks

- added more info to graphs
- the graph of models will be modified to be mutually exclusive
- the edge enabler focus on 5G MEC (optional), but the application enabler layer is universal, and it can serve different business cases. Suggested to put a diagram in the scope of the white paper to clarify it.
- add an Acronyms list
- add references
- More people involved in the author and contributors with links to their linked web page. If there is no style guide, we can adopt research paper style to show emails. Will send our email for opinions

API portal

- will be hosted under apiportal.akraino.org

Additional Notes

Whitepaper discussion

Jane - how to show attribution for authors, contributors, and acknowledgements. Options include company, e-mail, LinkedIn profile, and combinations

Jane - scope of whitepaper is 5G edge, we need to make it clear we are not describing a platform for everything

Jane - in weekly interactions with other Akraino projects, gets complaints that our WP does not address end user apps

Jeff - in scope and assumptions section, add a simple, non-detailed "landscape" diagram that shows end user applications, enablers, telco network, fixed vs. mobile access etc and then highlight what we cover

Jane - TSC review postponed 1 week

Neal - in scope & assumptions, can we align our scope with ETSI MEC, GSMA, 3GPP

General discussion about developers vs. an "edge box" described by the WP

API Portal

Jane - probably we will use apiportal.akraino.org as a subdomain entry point to a private server that hosts the portal mindmap and other HTML and JS docs. api.akraino.org will continue to point to MobileEdgeX server for end user application developer APIs

Jane - is in discussion with Brett Preston and LF Edge IT support personnel about setting up the subdomain

5 June 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Bower, Tim Epkes, Dan Druta, Tina Tsou, Su Gu, Doug Eng, Neal Oliver

Meeting notes -- Zhu, Brower

Meeting Notes

1. Update of API portal presentation of ETSI MEC, they agreed to collaborate with us, to initiate weekly meetings
2. Change work stream name from infrastructure work stream to platform work stream
3. Whitepaper review, you can find detail comments from the google doc link, https://docs.google.com/document/d/1R2N8sX1_bJ6UNLTr3Pvnls87uIJMbNSj/edit
 - Follow the format of API – subcommittee exist white paper
 - We should give Edge definition in the beginning, what are boundaries of this whitepaper (Telco mobile Edge)
 - The scope covers 5G or more broadly?
 - Functions defines Edge or location defines Edge?

- Decoupling MEC from 3GPP network stack
- Models are not per site, they are not mutually exclusive

Additional Notes

Jane - we will have biweekly meetings with ETSI MEC to collaborate

Jeff - should we change name to "platform and infrastructure" instead of only platform ? the concern is that infrastructure is a key buzzword, people might be looking for it

Whitepaper flow, organization

Su Gu - section 5.1, change heading from "where should the interface be" to something functional; i.e. what enablers can do

Jeff - after making name change suggested by Su Gu, can we insert paragraph that mentions debate over last year about where to draw the line; i.e. reflect Jane's original heading

Doug - we should add a precise definition of MEC and/or edge

Jeff - we need a glossary / Jane - maybe look at LF edge glossary for edge terms

Doug / Dan - be specific about physical components in our edge definition

Dan - exclude IoT other obvious non-platform / non-infrastructure

Jane - we are more focused on mobile edge access, not fixed access

Doug - do we limit to 5G access or more broad than that ? Jane - limit to 5G edge

Dan - 5G gives aggregated RAN and other benefits but doesn't have to be that way. Our architecture allows geographical dispersal, which implicitly ties us to 5G

Tim - maybe we should clarify near edge, far edge, "far far" edge

Jane - UPF is common element in most MEC definitions

Neal - should we rename "Models" to "Roles", try to stay away from business terms. Cited example of GSMA OPG (Operator Platform Group)

Dan - many combinations of model / role diagrams are possible (functional, ownership, topological)

Dan - add comments saying models are not mutually exclusive

Upcoming TSC Review of whitepaper

Jane - expects vendors and companies want to be included but they don't have APIs yet

29 May 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Jeff Brower, Neal Oliver, Tim Epkes, Dan Druta, Swarup Nayak, Ike Alisson, Tina Tsou

Meeting notes -- Zhu, Brower

Agenda

- EALTEdge (Enterprise Application LTE Edge) Blueprint project API introduction and review
 - Swarup Nayak
- API portal and DECODE collaboration discussion - Jane
- API Whitepaper update - Jane

Meeting Notes

1. Swarup Nayak introduced API Documentation of Enterprise Application on Lightweight 5G Telco Edge (EALTEdge)

- a. Suggestion: Strong typing helps in the platform API
- b. Resource management API is not included yet
- c. Many enterprise services are not included in the solution yet
- d. Can fill in the API definition link to Akraino API portal

2. We will invite ETSI MEC decode WG to put the API link to our API portal.

Suggest creating rules for API portal, get consensus across AKraino members.

3. The whitepaper will be published on Monday for review, we will discuss comments in the next weekly meeting.

Additional Notes

EALTE

Swarup - using ETSI MEC APIs

Group discussion about API typing: Neal - protobufs support strong typing. Tim - Python added a library for strong typing to improve anti-hacking/exploit security (called pydantic)

Jane - asked about EALTE resource management APIs

API Portal discussion, cont.

Jane - showed where EALTE would fit in API portal mindmap diagram

Jane - talked about OpenAPI, they use a combination of REST (json + yaml), gRPC (protobuf), and configuration file

Ike - mentioned TMForum "open digital architecture" and API interoperability

Jane - inter MEC communication (between edge nodes) should possibly be included

ETSI MEC "DECODE" effort

Jane - they are publishing ETSI MEC APIs in json / yaml formats

Neal - ETSI MEC supports PoCs, sort of like Akraino blueprints, shared an example slide

Tim - mentioned mockup testing

Jane - API portal can also list companies that commercially support ETSI MEC APIs, and which standards bodies (SBOs) they support

Jeff - suggested creating in advance criteria / guidelines for listing companies on the API portal, to avoid fights and finger pointing issues

API Whitepaper discussion, cont.

Jane - draft with all co-author contributions integrated is complete, will publish Google doc link for review

Jane - review at this point limited to co-authors and subcommittee members

Jane - we should look organization, logical flow, content; grammar review later
Ike -- mentioned Telstra's "network as a service"

Action Items

1. Jane to post Google Doc link with Whitepaper integrated draft
2. Subcommittee members to review

22 May 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Neal Oliver, Tim Epkes, Dan Druta, Jiafeng Zhu, Tina Tsou, Jeff Brower

Meeting notes -- Zhu, Brower

Agenda

- OpenNESS API introduction - Neal
- Infrastructure API portal discussion, continued

Meeting Notes

1. Whitepaper co-authors' draft ready
2. OpenNESS API introduction (Neal): PDF will be uploaded to file archive
 - includes microservices, SDKs, reference hardware specs
 - SDKs include OpenVINO, DPDK, IPP, MKL
3. Present the map and categories of API portal (Jane)
 - Do we consider domain specific (AR/VR) frameworks or applications? How to categorize them?
 - <https://www.khronos.org/openxr/>

- Business aspects makes them unique
- Android native platform running on Edge is different from application enablers

OpenNESS overview and Q&A

- AF and NEF API discussion
- Tim - nature of closed source behind AF and NEF APIs, is it for platform-to-platform communication ?
- Tina - what versioning is used ? Neal - none yet
- Tim - host routing and URI content are options
- discussion about authentication, Neal - APIs must authenticate, Jiafeng - is Intel is using OAUTH protocol, Neal - no
- Jane - how can we avoid incompatibility between application API data models, for example OpenNESS compared to MobileEdgeX

API portal discussion notes

- Jane - shared MindMap generated HTML that she may use for the portal
- Dan - some apps need infrastructure info from APIs, an example is an AR/VR “app manager” or framework. They are still an app but they manage other apps. Should the app enabler in the white paper diagrams reflect this ?
- Dan - Chronos OpenXR is an example
- Jeff - the current API portal content on api.akraino.org is hosted on MobileEdgeX servers. We will need Akraino web guys to add ToC links at top for 2 main categories: APIs for mobile app developers and infrastructure app developers
- Tina - OpenGL ES2.0 and ES3.x APIs are needed by IEC blueprint

Action Items

Neal will post OpenNESS slide presentation on the API subcommittee file archive

15 May 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jiafeng Zhu, Jane Shen, Jeff Brower, Tina Tsou, Neal Oliver, James Li, Colin Hutchinson

Meeting notes -- Zhu, Brower

Agenda

- An update on the whitepaper status - Jane
- Infrastructure API portal discussion, continued

Meeting Notes

1. An update on the whitepaper status:

We will finish the 1st draft by the next week, and ready for internal review, then send it to the editor before we submit it for TSC review. Although there are many aspects regarding MEC telco and public cloud interfacing, we will focus on the telco edge and application enablers in this whitepaper. To help app developers to understand Telco concepts can be very challenging. We use the edge enabler layer to hide 3GPP standard spec, and provide telco APIs; the application enabler interface handles user requests and passes it to edge enabler northbound API. Topics like functional services and MEC infrastructure are essential for the current stage, inter MEC interfaces will be covered by another whitepaper.

White paper discussion notes

- Jane - showed functional block diagram slide with app enabler and edge enabler as separate blocks
- we can leverage ETSI MEC APIs in edge enabler
- Jeff - can we add a layer inside app enabler that Akraino blueprints can use for interworking between them
- Neal would like to see draft diagrams posted
- Jane - we need to cover 2 dimensions: architecture and how-to-build things (orchestration and management)
- architecture diagram slide is in work

2. Infrastructure API portal has been presented to TSC, pilot projects will be included in the portal (PCEI release 3 with api documentation, KubeEdge). The purpose of the portal is an entry point for users, and provide links to various sources. What about APIs from non-Akraino member projects (Google)? As long as it is open source, under Apache2.0, we can point a link to their websites, BUT we don't market it.

API portal discussion notes

- Jane - mapping API to functional categories is 1st priority, 2nd priority is interworking between Akraino blueprint projects. Jane is working on a MindMap diagram showing API categories
- can the portal include Intel's OpenNESS APIs; Neal suggested links from the portal to Intel's interactive API documentation pages
- Jane - we can use json files to define API interfaces
- portal is somewhere in between documentation and sandbox
- all blueprints should provide some form of API doc

8 May 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Jiafeng Zhu, Tim Epkes, Su Gu, Tina Tsou, Neal Oliver, Jeff Brower, Colin Hutchinson.
Meeting notes -- Zhu, Brower

Agenda

- Infrastructure API portal discussion, continued - Jane
- Ideas for API subcommittee coverage in next Tues Akraino TSC meeting

Meeting Notes

1. Upcoming TSC meeting, Jane asked for ideas on what to include in our update / presentation

1. API portal discussion, cont.

Jane, we need to demonstrate the value the API portal

Tim - well designed APIs can enable blueprints to talk to each other. As a comparison is ETSI MEC is succeeding in API adoption

Jane, presented Edge Application Enabler API Map slide

- group APIs by roles/categories

- app developers

- infrastructure developers

- edge platform/service providers

- we can push this as a map to pilot project PTLs, ask them to contribute to API portal effort

- Neal - Jane's map is showing up in LF Edge continuum slides

- Tim - divide Orchestration/Operations part of map into internal and external facing APIs

- Jeff - box for platform-to-platform APIs needs to be added

Tim - for platform-to-platform APIs we should pay attention to scaling up/down: multiple platforms, multiple nodes

Jane / Neal, discussion about pilot projects and how the API portal helps them

- they don't need the portal to demonstrate their blueprint works

- but the portal can help market their solution
- possibly divide the portal into 3 sections: APIs, examples/tutorials, working demos

Jane / Tim, discussion about REST APIs vs other formats

- REST more widely accepted by web developers, but not so much infrastructure developers
- most Akraino projects currently not using REST, blueprints can't talk to each other
- gRPC scales better, can cover an SDK if needed
- extra effort to support both, should we ?
- for platform-to-platform APIs we can publish suggested data structures for gRTC use

Action Items

1. Continue to document Edge API overall map
2. Tina sent a link for Micro-MEC team, Jane will contact to discuss their API compatibility with the portal

Links and Reminders

Meeting Notes link: <https://wiki.akraino.org/display/AK/API+Sub-committee>

Google Doc link:

https://docs.google.com/document/d/1idWiVe4U_jzpfDA99ZgMf-ghVIIRO7FN/edit#heading=h.gjdgxs

Members are welcome to add discussion topics to the meeting Agenda at any time prior to each meeting

If we miss your name, please add to Attendees section

1 May 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jiafeng Zhu, Jane Shen, Tim Epkes, Doug Eng, Tina Tsou, Wenhui Zhang, Neal Oliver, Tianji Jiang, Jeff Brower. Meeting notes -- Zhu, Brower

Agenda

- Infrastructure API portal proposal - Jane

Meeting Notes

API Portal Discussion

Overview - Jane

Portal is still in prep stage, first APIs shown are from MobileEdgeX, who has acted first

How to define the granularity of APIs for different projects

We will contact three pilot projects (IEC, PCEI, AI Edge, ask them to submit APIs

We will create API categories, initially target high level APIs, try to make it easier for developers

API format

We should consider using Swagger UI and/or ReDoc. ReDoc / Swagger use open API format, but ReDoc offers new features, e.g. auto-sync. ETSI MEC uses Swagger. We will make a group decision

Tim - don't use Redoc just because it's newer. Gave some history of why Swagger succeeded

Neal - we need to pay attention to API semantics and syntax across projects

Tim - Akraino has a number of edge projects but they don't talk to each other. Has concerns about overall API organization and platform-to-platform APIs

Jane - APIs provide services. At a high level services are organized by domain

Neal - organize APIs by content; e.g. Mp1 control plane, Mp2 data plane resources (inside the box), Mp3 internal, up to operators

Tim - Mp1 APIs don't need to be REST, which doesn't always scale well

Jane - has looked at current blueprints, APIs don't have consistency but maybe we can guide that. We need to see what comes out of pilot projects

Tim - mentioned Mp1 RNIS service registered as an example: API consumer registers, gets port numbers, types of connection (socket, web socket, etc). Also he will be helping ETSI MEC with API improvements / redefinitions. We don't want every Akraino blueprint to be an island

Jane - possibly operators will share info at infrastructure level. For example AT&T and China Mobile sharing UPF and edge application info. Possibly they will share some info on Mp3 interface, for example transferring state info

Challenges (summary of above discussion)

How to define the granularity of APIs for different projects, black box

There are many projects under Akraino, but they don't talk to each other

We want projects to open their external and internal API, platform-to-platform API and share with us

Action Items

Swagger / ReDoc comparison

Links and Reminders

Meeting Notes link: <https://wiki.akraino.org/display/AK/API+Sub-committee>

Google Doc link:

https://docs.google.com/document/d/1idWiVe4U_jzpfDA99ZgMf-ghVIIRO7FN/edit#heading=h.gjdgxs

Members are welcome to add discussion topics to the meeting Agenda at any time prior to each meeting

If we miss your name, please add to Attendees section

24 April 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Tina Tsou, Tim Epkes, Doug Eng, Swarup Nyak, Neal Oliver, Jiafen Zhu, Yin Ding, Jeff Brower

Meeting Notes

Brower

Agenda

- Infrastructure API portal (PCEI, IEC, AI Edge.....) - Tina, Sugu
- WP draft planning - Jane

Notes

Jane gave an API subcommittee page overview

- archive, weekly meeting notes
- agenda is new, it will be posted prior to each weekly meeting. Attendees should edit as needed to make sure their inputs are covered during the meeting

Infrastructure API Portal page

Tina - page is currently planned to be organized by project and will include PCEI, AI Edge, IEC, etc. Tina or Jane will send a link

Tim - API versioning is crucial; ETSI MEC had issues with this. RESTful APIs are ok especially for external facing APIs (external to the platform) but internal APIs can be as needed, some combination of REST and other is fine. "Protobuf" APIs are fine

Tim- ETSI MEC Mp1 initially was all REST but they ended up with a mix over time

Neal - "all APIs can be protobuf but not all APIs can be REST"

Jiafeng Zhu asked about ...

ETSI MEC discussion

Jane - can we leverage some of their API work

Tim - we need to be original. Don't let ETSI MEC and Akraino APIs overlap; make sure ours are unique

White paper draft

Jane - skeleton draft should be finished by next Friday

Jane - again invited meeting attendees to review the ToC and draft and select areas in which they might like to contribute

Su Gu -- interested in contributing and will review ToC

Jane -- may contact AI Edge PTL about APIs, Tina mentioned there are two (2) PTLs

Tim - shared some advice about previous ETSI MEC API work, API "best practices"

Tim - suggested to use Swagger for online API documentation

17 April 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Tina Tsou, Tim Epkes, Deepak Kataria, Jiafeng Zhu, Ike Alisson, Jeff Brower, Neal Oliver, Dan Druta, Doug Eng

Meeting Notes

Brower

Agenda

Review of current activities

Jane:

- 1) TSC has reviewed the whitepaper proposal, it was well received
- 2) ONAP architecture group
- 3) Involvement with SDOs, in particular ETSI MEC. Jane will present the white paper proposal in their weekly meeting and ask for feedback and possibly contributions

-Ike Allison commented on key SDO areas to pay attention to:

- TM Forum definitions of telco network slice, "logical network" and "instance storage compute services"
- increasing alignment of ETSI and 3GPP

Notes

Jane slide presentation:

- whitepaper ToC -- outline of sections to be covered, contribution opportunities for subcommittee members
- motivation -- purpose of the whitepaper
- PCEI slide
- ETSI MEC architecture comparison
- Edge service models
 - Azure edge stack
 - ANI (mentioned by Ike)
 - Edge enabler module proposed by Jane

10 April 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Jane Shen, Tim Epkes, Jiafeng Zhu, Swarup Nayak, Jeff Brower, Doug Eng, Yin Ding

Agenda

Last Meeting Follow-up

New Business

Jane:

- Finishing whitepaper preparation form, plan to submit for TSC review
- Discussed ToC in detail
- Proposed multiple releases for whitepaper with the first release focus on challenges and requirements
- Requested 2 MEC related BP projects to participate

Notes

Key topics discussed and agreed:

- Opportunities and gaps on Infrastructure and platform need more inputs. Tim will provide inputs on hardware platform
- Although APIs are important in specifying functions, it's lacking quantitative measurement. KPIs should be an integral part of MEC system
- It's Good Friday! Happy Holiday!

3 April 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Tina Tsou, Jane Shen, Neal Oliver, Tim Epkes, Dan Druta, Jiafeng Zhu, Swarup Nayak, Jeff Brower, Doug Eng (was able to connect later via audio)

Agenda

Last Meeting Follow-up

Jane:

- Updated the TSC in 04/02 weekly meeting on whitepaper status

New Business

Jane:

- Concluded the "Request for Feedback on Proposal" phase. Several helpful feedbacks were received from Intel, Dell, Tencent, AT&T, China Mobile etc. Ike also provided a detailed written feedback
- Presented whitepaper preparation form with drafted ToC (Table of Contents) and tentative timeline of release as 07/01. Plan to submit the proposal to TSC for review
- Explained the co-author policy: based on participation in discussion as well as written contributions
- Requested inputs on ToC and first release scope

Notes

Key topics discussed and agreed:

- Scope of the first release:
 - Neal: The current ToC most likely will take 30+ pages to cover. All point listed are relevant and important, however the first release should be scoped for 7-8 pages to draw better attention
 - Jane: Agreed with Neal's comments and suggested we continue to capture inputs for ToC and take an action item of first release scope

- Neal: should edge information model be considered
- SDO's standards mention and reflection in whitepaper:
 - Tim: we should have our own thoughts on APIs based on real world implementation findings and compare those with SDOs. Gaps can be analyzed and proposed to SDOs for consideration, e.g. in some cases RESTful APIs may not be the suitable protocols. Options like gRPC based protocols can be included.
 - Jane: agreed
- Public cloud edge architecture and APIs required:
 - Jane: Should Edge Enabler be separated as a bridging layer between network and applications and services? We are seeing some effort from Tencent, however that's architected in Tencent's cloud edge internals. Need more investigation and discussions
 - Dan: the architecture options look similar to edge business models in ETSI MEC whitepaper. Suggested a comparison and see whether there can be synergy

Action Items

- All participants should add inputs directly to ToC Preparation Form posted
- Finalize the agreed proposal to TSC for review

27 March 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Tina Tsou, Jane Shen, Jiafeng Zhu, Neal Oliver, Tim Epkes, Dan Druta, Jeff Brower

Agenda

Last Meeting Follow-up

Jane led off by explaining that API subcommittee meetings from this point forward include Developer Facing API and Infrastructure work streams, with 30 min allocated to each, but flexible depending on subjects at hand and members in attendance

New Business

Jane presented slides "API Work Item Request for Feedback". The slide "Mobile Edge Stack Strategies" sparked discussion about the telco - OTT interface and potential "Edge Enabler" APIs exposed by this interface: what do those look like, are they mostly IP bridging functions, or do they include more in order to leverage coming 5G features

Notes

1) The slide presentation showed:

- future 5G functionality supporting MEC in traffic steering and network capability exposure including service continuity and application mobility
- based on Ike's input, a slide on latest development on 3GPP application support
- business relationships between telco and OTT, including service agreements
- architecture overview of a possible 5G slice providing API functionality between edge connectors and edge gateways
- a Tencent Blueprint example showing an edge connector/gateway interface architecture

2) Tim pointed out the slides contain useful new info but lack mention of organization and subdivision based on telco regulatory requirements. For example, OTT app support and infrastructure will likely be run on segregated hardware and systems in order to comply with federally mandated reliability requirements imposed on telco systems. Based on his experience, he gave an example of a "wild west" gaming application that brought down servers handling EPC packet forwarding. This included discussion about:

- Application and edge enabler interface, which allows applications to negotiate services. Security and charging are examples of context in addition to the reg/dereg and LCM etc.
- Other example interfaces (e.g. Mp1) that allow applications to negotiate services

3) Further discussion included different boundaries between an operator on the one hand, and edge apps and services on the other, differentiated by sharing/co-location relationships:

- operator and ETSI MEC cases, where there is strict segregation of apps from network functions
- "edge cloud/private network" cases, where in the limit only the network functions may be operated by the operator, because they are virtualized

4) Looking forward, Jane proposed a series of whitepapers, rather than one big one. No specific timetable or individual responsibilities were given yet. Neal had a number of questions about whitepaper content.

Action Items

1) Request for feedback closes next week.

2) Specifics are needed on whitepaper dates and content.

20 March 2020 / 9:00 AM PDT / Zoom meeting

Attendees

Tina Tsou, Vikram Siwach , Jane Shen, Jiafeng Zhu, Neal Oliver, Swarup Nayak, Jeff Brower

Agenda

Last Meeting Follow-up

Tina clarified that subcommittee chair/co-chair should attend Thursday TSC meeting to provide subcommittee update.

New Business

Jane provided future work item proposal details. The presentation was stopped on slide page 2 when SDO was mentioned.

Notes

1. **Vikram expressed concerns in the following areas:**
 - a. The phase 1 whitepaper content may be diluted or bloated if material related to edge infrastructure is included. The original purpose of the white paper has always been, for over a year, app developer facing APIs for commercial purposes. Including infrastructure API related content is not aligned with that
 - b. The infrastructure work item proposals include SDO architecture which is not open source originated
 - c. The whitepaper should be published on-time and not delayed
2. **Jane responded with the following:**
 - a. Edge infrastructure work item is at the proposal stage to collect feedback. The delivery of this work item will be a separate whitepaper with infrastructure focus only
 - b. SDOs' approach cited in proposals is for solution comparison purposes only. Our work focus is on the open source community's view of edge infrastructure and convergence of APIs across vendors
 - c. It should be emphasized the new work item is not about standards integration or edge architecture recommendation. The subject is about APIs
3. **Tina clarified the following:**
 - a. API sub-committee has 2 work streams set up since June 2019: Application interface APIs and Infrastructure APIs

- b. 2 work streams can have their own focuses and deliver separately focused whitepapers
- c. Weekly meetings can be shared with time split

4. Jeff Brower commented:

- a. Application developers are concerned about latency and other crucial issues controlled by Telcos and need assurance that developer APIs will continue to be compatible with what Telcos and their suppliers are doing in standards development
- b. The developer API whitepaper could have a sidebar to that effect if it would help to keep the group and work streams unified

Action Items

Offline discussions should be facilitated to resolve misunderstandings and maintain group momentum