

Technical Advisory Council (TAC) Meeting

April 6, 2023

This meeting is being recorded.



**CONFIDENTIAL COMPUTING
CONSORTIUM**

The Confidential Computing Consortium

A community focused on open source licensed projects securing DATA IN USE & accelerating the adoption of Confidential Computing through open collaboration

Every member is welcome; every project meeting our criteria is welcome.
We are a transparent, collaborative community.

We as members, contributors, and leaders pledge to make participation in our community a harassment-free experience for everyone.



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Etherpad - Meeting Minutes

- <https://etherpad.lfnetworking.org/p/CCC-TAC-Minutes-2023-04-06>
- Join the etherpad and set up your name and text color
 - Meeting attendance - please **add yourself**
 - **Voting Attendees just need to put a “+” next to their name**
- **Please** help make the meeting minutes be more accurate

Agenda

1. Welcome, roll call, introduce any first-time attendees
2. Approval of minutes
3. Action item review / 2023 Goals
 - a. Attestation Blog
 - b. Project Progression (Howard)
4. Tech Talk: CDCC - Fan Zhang (Yale)
5. Outreach:
 - a. ~~OG3 and Outreachy (?)~~
6. Project update: GRC - Mark Novak
7. Any other business
 - a. Project website funding
 - b. Conformance to Terminology

Roll Call

Quorum requires 4 or more voting reps:

* TAC chair

<u>Member</u>	<u>Representative / Alternate</u>	<u>Email</u>
Accenture	Giuseppe Giordano	giuseppe.giordano@accenture.com
Arm	Thomas Fossati / Michael	thomas.fossati@arm.com
Meta Platforms	Eric Northup / Shankaran	digitaleric@fb.com
Google	Cfir Cohen / Catalin Sandu	cfir@google.com
Huawei	Zhipeng (Howard) Huang	huangzhipeng@huawei.com
Intel	Dan Middleton * / Simon	dan.middleton@intel.com
Microsoft	Dave Thaler	dthaler@microsoft.com
Red Hat	Lily Sturmann / Yash Mankad	lsturman@redhat.com

Introduction of new attendees?

Approval of TAC Minutes

<https://github.com/confidential-computing/governance/pull/161>

Proposed:

That the minutes of the March 23, 2023 meeting of the Technical Advisory Council meeting of the Confidential Computing Consortium as distributed to the members of the TAC in advance of this meeting are hereby adopted and approved.

Action Item Review

1. [Kurt] 1/12: Direct LF Creative to export the **TAC whitepaper to markdown** so we can put it under TAC source control.
 - a. 1/26: Update request with LF Creative; 3/9: Copy/Paste problem fixed; Will submit PR(s) before 3/23 TAC meeting
 - b. **3/22: Progress, but not clean to convert back to .md, will try editing source and getting help**
 - c. **4/6: Post “source” from LF creative to mail list**
2. [Howard] 1/12: Propose description in pull request for **project state incubation requirements**
 - a. 3/9: Context: More mature lifecycle management.. facilitate more sandbox projects
 - b. **3/23: [All] Please review <https://github.com/confidential-computing/governance/pull/160>; discuss next meeting.**
 - c. **4/6: DISCUSSION**
3. [Alec/Dave] 1/26 : Board recommends a **blog post explaining why we added attestation** verbiage to CC definition.
 - a. 2/9: Alec will sync with Dave / review meeting recording and start blog.
 - b. 3/23: Draft for review <https://docs.google.com/document/d/1Sn-ACEoIDJkzb-xsQpajvf91KnaAd90Xjq7A5tNw4qU/>
 - c. **4/6: Timebomb. No outstanding feedback. Ready to publish.**
4. [Kurt/Helen] 2/9: work with the Gramine project (Mona V and Eric Voit) to plan website (cost problem ~6 months old)
 - a. 2/28: Gramine updating previous brief for website
 - b. 3/21: HL scheduled kickoff meeting for 3/30
 - c. 3/30: Kurt held kickoff meeting, actions and minutes published, making good progress on brief for quote

Action Item Review (Continued)

5. [Dan/Kurt] 2/9: to look into a communication channel (mail list?) for discussing cross-project security concerns
 - a. 3/21: Mail list created, need mentors to contact their projects for the right person to monitor
 - b. 3/23: Kurt to email TAC mentors to find security mail list monitors
6. [Lily] 2/23: ask the Keystone project to get more specifics on their 1) test environment and runners 2) existing types of customization 3) repository overview 4) attestation IETF EAT implementation (Done? email ~4/6)
7. [Mentors] 3/9: get input from their projects for project progression discussion in the next meeting (Done?)
8. [Kurt] 3/9: pose the CCC Terminology enforcement question to the Governing Board for discussion (May 17th)
9. [Mark N] 3/9: agreed to take this plan forward in the GRC in April
10. [Kurt] 3/23: email TAC mentors to find security mail list monitors
11. [Giuseppe Giordano] 3/23: reach out to Cfir Cohen and Eric N for additional input on Outbound Education goals
12. [Kurt] 3/23: revise the Project review timeline slide to show current status
13. [Thomas] 3/23: reach out to Linaro to see if they could help with OP-TEE in OESDK
14. [Kurt] 3/23: get the website graphic removed, copy Outreach committee (Done)
15. [Kurt] 3/23: get LF CS source SVG for this graphic so it may be editable,
<https://github.com/confidential-computing/governance/blob/main/related-terminology.png>

2023 TAC Goals

Working copy: https://docs.google.com/document/d/1BLsl0hv9ybHI-FBNqHp6bJzy6ng8yKs__556bTqBswc

“We have increased the impact of the CCC in the ecosystem such that...”

1. we increased Cross-project Integration [Lily, EricV]
2. the CCC hosts s/w projects adopted by the ecosystem [Dave, Howard, Dan]
3. other organizations reference Confidential Computing [MarkN, Howard, Thomas]
4. grew outbound education [Dave, Nick, Giuseppe]
5. matured community D&I [Dan, Nick]

<td> [Cfir, EricN]

2023 TAC Goals

Working copy: https://docs.google.com/document/d/1BLsI0hv9ybHI-FBNqHp6bJzy6ng8yKs__556bTqBswc Update 1/26: Split out committees.

“We have increased the impact of the CCC in the ecosystem such that...”

1. ... we increased Cross-project Integration, adoption of common code, modules, patterns:
 - a. There exists at least two CCC maintained modules which have been integrated by another CCC project during the year, as measured by being included as part of the installation process.
 - b. The TAC sponsors at least one event with a primary goal cross-project integration which results in the attendance and active participation of code submitters from the majority of CCC projects.
2. ... the CCC hosts s/w projects which fill key roles in the stack and are adopted by the ecosystem.”
 - a. One project has advanced its state of maturity – reflecting adoption by the ecosystem.
 - b. Three new project communities joined rounding out our portfolio with an academic project, a new part of the stack (e.g. hypervisor), and a top level user interaction (or maybe something related to validation & conformance).

Progression discussion

- <https://github.com/confidential-computing/governance/pull/160>
- What additional services do projects want?
 - Gramine: Website
 - Note that existing list came from project requests and voted in by TAC after original policy was created
 - Mentors check in with projects on wishlists (see slide 28)
- Are different tiers / progression levels helpful or necessary?
 - History:
 - initial stage: is it defined enough to accept to the CCC
 - next stage: under development vs in production
 - How to apply criteria to projects with subprojects at different stages?

TAC Tech Talk

- CDCC - Fan Zhang (Yale)

Project Report

- GRC - Mark Novak

Outreach

- OC3 Items (March 15th)
 - Report ?
- Outreachy Internships - Zahra Tarkhani, Mentor

Project Website Funding

Gramine and Veraison have both asked for website updates

- Rough estimate approximately \$5K each (\$16k for github page)
 - Existing budget allocated \$10K total for all projects for “Project IT Services and Collab Tools” which would cover website redesign
 - Gramine also needing VPS Cloud services from the same budget item
- 1) Gramine VPS could be funded out of “Test Infrastructure/Hardware” budget (\$10K) and that would allow all the 10K from Project IT Services to be used on websites
 - 2) The TAC could get Governing Board approval for additional funding for Project IT Services
 - 3) The TAC could also/instead get approval to allow funding to be shifted from Test to IT
 - 4) Seek competitive bid from outside LF?
 - 5) Associate this spend level with progression level

Conformance to Terminology

- [Spreadsheet](#) - Dave Thaler
 - Reactions to a recent post

Time permitting: Review of open issues and PRs

Current open issues in the Governance repo:

<https://github.com/confidential-computing/governance/issues>

Current open PRs in the Governance repo:

<https://github.com/confidential-computing/governance/pulls>

Any other business / Schedule

Date	CCC Project Review	TAC Goal Topic	TAC Tech Talk
9 Feb 2023	Gramine - Michal, Mona, Woju		
23 Feb 2023	Keystone - Lily (Dayeol)		AP-TEE - Ravi Sahita
9 Mar 2023			eBPF - Dave Thaler
23 Mar 2023	OE SDK - Radhika		SGX Assurance Tool - Alex Berenzon
6 April 2023	GRC - Mark Novak	Progression - Howard	CDCC - XiaoFeng Wang
20 April 2023		xProject - Lily / EricV	TBD <virTEE or Fan Zhang to give second talk>
4 May 2023		Education - Giuseppe et al	
18 May 2023	Veraison?		

Next Agenda (2023-04-20)

1. Welcome, roll call, introduce any first-time attendees
2. Approval of minutes
3. Action item review
4. 2023 Goals
 - a. TAC Goals: XProject - Lily / Eric V
5. Annual Report/Update:
6. Tech Talk:
7. Any other business
 - a.
 - b.

Project	Proposed by	TAC Approved	Tech. Charter	IP Assigned	Board Presentation	Board Approved	Annual Review	Mentor	Webinar
Enarx	Red Hat	31 OCT 2019	Yes	Yes	31 OCT 2019	Yes	10 MAR 2022	Nick Vidal	JAN 2021
OE SDK	Microsoft	31 OCT 2019	Yes	Yes	31 OCT 2019	Yes	24 FEB 2022	Dave Thaler	MAR 2021
Gramine	UNC Chapel Hill	2 APR 2020	Yes	Yes	1 DEC 2021	15 SEP 2021	4 NOV 2021	Eric V	FEB 2022
Keystone	UC Berkeley	23 JUL 2020	Yes	Yes	24 JUN 2021	MAR 2021	13 JAN 2022	Lily	JUN 2021
Occlum	Ant Financial	20 AUG 2020	Yes	Yes	10 SEP 2020	15 SEP 2021	17 NOV 2022	Tate Tian	MAY 2021
Veracruz	Arm	3 SEP 2020	Yes	Yes	19 NOV 2020	14 APR 2021	18 NOV 2021	Thomas F	APR 2021
Veraison	Arm	4 FEB 2022	Yes	Yes	16 MAR 2022	18 May 2022	TBD	Howard Huang	NOV 2021

SIG / WG	Proposed by	TAC Approved	Tech. Charter	Board Presentation	Annual Review	Mentor	Webinar
CCC-Attestation SIG	TAC	Yes	Yes	18 MAR 2021	21 APR 2022	Dan	21 JUNE 2022
GRC SIG	TAC	Yes	Yes	21 SEP 2022	Quarterly	Mark Novak	

Deferred topics / Backup

Conformance to terminology - Dave

Various examples across industry:

- IEC 62443
- Vendor self-assertion
- OCF: OCF-generated requirements and contracted certification
- IPv6Ready: IETF-generated requirements but external lab vendor certification
- DISA, NIST: Regulatory body requirements
- NISTIR 8259A: Regulatory body recommendations (not requirements)
- CCC Wikipedia article should follow TAC definitions
- ...

Tentative TAC Tech Talk topics

- Trust domains - Mike?
- Defined-Trust Transport (DeftT) Protocol for Limited Domains - Kathleen Nichols, Van Jacobson, Randy King
- CDCC research updates
- Relationship between eBPF and Confidential Computing - Dave Thaler

TAC Budget

Description	2022 Approved Budget	2022 September YTD	2023 Draft Budget	Notes	Area
License Scanning	\$12,000	\$0	\$0		Project support
Test infrastructure (capital or non-capital)	\$75,000	\$9922	\$60,000	\$10k/project x 6 projects	Project support
IT Services and Collab Tools	\$3,864	\$6,507	\$8,000	website, slack, groups,io	Project support Community development & DCI
Consortium IT Services and Collab Tools	\$100,000	\$0	\$10,000	Misc. budget for use by projects	Project support
Travel expenses	\$0	\$0	\$80,000	\$10k/project x 8 projects	Project support Cross-org coordination
Software licenses	\$10,000	\$0	\$0		Project support
Outreachy (internships/community support)	\$52,000	\$8,000	\$32,000	Outreachy (\$8k x 4 projects)	Community development & DCI Project support
Community management for projects			\$100,000		Community development & DCI Project support
Subtotal	\$257,781	\$17,952	\$290,000		

Annual report

[governance/project-progression-policy.md at main · confidential-computing/governance \(github.com\)](https://github.com/confidential-computing/governance/blob/main/governance/project-progression-policy.md)

“The review includes the following:

1. Review whether any answers to the project's submission template or Technical Charter have changed, and if so, review the new answers. A representative from the project is responsible for presenting any deltas to the template answers since the last review, if any. If there are no changes, there is nothing to review here.
2. Review the project's progression status to determine whether the project is in the stage that accurately reflects its needs and goals. For example, is it already ready to move to another progression level? Is it on track at the current level? Is any action needed from the TAC (e.g., change in or addition to any project mentor(s))? If nothing has changed significantly, there may be nothing to review here.
3. Review any budget allocations relevant to the project, and whether any adjustments are needed.
4. Review license scans provided by the Linux Foundation. Provide feedback on any outstanding issues and evaluate the scanning service from the project's perspective.

Projects are encouraged to proactively inform the TAC when something changes that affects their submission template or Technical Charter (changing a License, security reporting process, CoC, etc.), rather than waiting for the next annual review.”

Reference: past TAC tech talk topics

- 2021-10-07: Kata containers
- 2021-10-21: Protecting critical infrastructure
- 2021-12-02: RISC-V security overview
- 2022-01-13: Homomorphic Encryption
- 2022-01-27: OP-TEE and Trusted Services
- 2022-02-10: Confidential computing mentorship
- 2022-03-10: Overview of TCG confidential computing
- 2022-04-07: Governance
- 2022-05-05: IETF Trusted Execution Environment Provisioning
- 2022-05-19: Logging and error reporting in confidential computing
- 2022-06-02: Multi-TEE systems: PCI-SIG WG
- 2022-06-30: Blueprints for Enclaves
-

Reference: CCC project expectations

CCC projects are expected to:

- Participate actively in CCC activities (webinars, newsletters, events, etc.)
- Notify the TAC and Outreach committees of relevant news
- Participate in an [annual review with the TAC](#)
- Inform the TAC when [dependencies change so records can be updated](#)
- Maintainers should take the Linux Foundation's free [Inclusive Open Source Community Orientation](#) training course
- Transfer trademarks and domain registrations to the Linux Foundation

Reference: CCC project benefits

CCC projects have access to a number of benefits:

- Up to \$10K in budget for hardware and software per year
- Funding for one Outreachy intern
- TAC mentor assigned to the project
- Collaboration tools (contact operations@confidentialcomputing.io):
 - Zoom
 - Domain registration and renewals
 - Mailing lists
 - YouTube playlists
 - Slack
- Optional security scanning
- LFX tools (<https://lfx.linuxfoundation.org>)

Reference Common Test Infrastructure

- **Summary:**
 - Projects preferred per project funding. No demand for common infrastructure. Approvals retained here for reference.
- **Needing:**
 - LF IT ready to meet for sizing and technical requirements
- Approved: 50K for infrastructure management and 15K for hardware
- Would any project use such infrastructure if it existed?
 - Projects: Enarx yes, OE no, Gramine no, **Occlum ?? (Annual Report)**

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