

5th Meeting of the seL4 Technical Steering Committee

Fri, 16 Dec 2022, 8:00-9:56 AEST, by Zoom

Attendance

TSC members present:

- June Andronick (JA)
- Matthew Brecknell (MB)
- Gernot Heiser (GH)
- Gerwin Klein (GK)
- Rafal Kolanski (RK)
- Ihor Kuz (IK)
- Corey Lewis (CL)
- Kent McLeod (KM)
- Yanyan Shen (YY)

TSC members absent:

- Kevin Elphinstone (KE)
- Anna Lyons (AL)

Reviewers/Committers present:

- Axel Heider

Others present:

- Everton de Matos (EM)
- Nataliya Korovkina
- Jorge Pereira
- Nick Spinale

Minutes

0. Welcome Indan Zupancic as Reviewer

1. Election (or re-election) of TSC chair

Resolved:

- TSC resolves to elect/re-elect the TSC chair every two years
- Gerwin Klein was re-elected as TSC chair
- next election due on 2024-12-16

2. split C-Parser/AutoCorres out from l4v repository

- GK: purpose is to facilitate easier contribution to AutoCorres and C-Parser tools
- RK: generally in favour, but danger of l4v falling out of sync indefinitely. Should all of lib move or only necessary parts?

- JA: if all of lib is factored out, higher danger of I4v breakage on changes

Resolved:

- decision in favour of splitting out the repository
- leave decision of how much of the library is split out to implementation phase, with preference for minimality if feasible.

3. SIG chair nominations

One nomination received for SIG VMM: Everton de Matos (present at the meeting).

Nominations/volunteers received at the meeting for SIG multicore/user-level (Matt Brecknell) and SIG Drivers (Yanyan Shen).

Resolved:

- establish SIG VMM; Everton de Matos elected chair
- establish SIG multicore/user-level; Matt Brecknell elected chair
- establish SIG Drivers; Yanyan Shen elected chair

Action:

- GK: open discourse topic area for each SIG
- SIG chairs: lead discussion on SIG purpose/summary and email to TSC chair when ready to publish on seL4 website.

4. Process for establishing a new SIG

Postponed. Add "if you are interested in starting a SIG, contact us" to website.

5. RFC: SMC calls <https://sel4.atlassian.net/browse/RFC-9>

Resolved:

- RFC approved with following stipulations:
 - clarify in docs and RFC that SMC call happens within kernel lock, i.e. no other cores can be in the kernel during SMC.
 - clarify that option 2 means we invoke the cap, not that we switch off trapping SMC instruction

6. RFC: MCS: Improve constraints on grant via reply

<https://sel4.atlassian.net/browse/RFC-13>

Resolved:

- RFC option without grant rights on reply caps approved

7. RFC: MCS: set fault and timeout handler parameters while configuring TCBs

<https://sel4.atlassian.net/browse/RFC-13>

Resolved:

- RFC approved

8. RFC: The seL4 Core Platform

<https://sel4.atlassian.net/browse/RFC-5>

Conditions from previous meeting on platform and qemu support are satisfied. Unclear if condition on using the capDL loader is satisfied or not. Convincing progress on verifiability side, but no (unverified) capDL loader yet in seL4 CP repo.

If there are problems either the capDL loader needs to be improved or CP.

Discussion on what it means for the RFC to be approved:

- if approved, the foundation commits to future maintenance and development
- when implemented, the seL4 CP repo will move to the seL4 org and be under management of the TSC
- TSC expected to help with PR reviews and decisions, working together with UNSW and Breakaway

Questions/concerns:

- transition path from CAMkES to CP. Needed, but no immediate answers.
- potential of taking on too much breadth in the seL4 org, no real expertise in the TSC on details of the CP. Potentially not needed if CP developers are available to inform TSC decisions. Or TSC should grow to include direct CP expertise.

Decision postponed until there is more clarity on the capDL loader.

9. RFC: The seL4 Device Driver Framework

<https://sel4.atlassian.net/browse/RFC-12>

Postponed to next meeting; dependency on Core Platform.

10. RFC: Ability to build additional bootloaders inside the seL4 build system

<https://sel4.atlassian.net/browse/RFC-4>

Postponed to next meeting; meeting out of time.

Meeting closed 9:56 AEST

Summary of Actions

From previous meetings:

- **IK, KM, AL:** introduce a “new to seL4 section” on Discourse
- **Ben Leslie:** write guidelines for what should be considered a bug in Jira/issues

From this meeting:

- **GK:** open discourse topic area for each SIG
- **SIG chairs (EM, MB, YY):** lead discussion on SIG purpose/summary and email to TSC chair when ready to publish on seL4 website.

Acronyms

TSC Technical Steering Committee of the seL4 Foundation

Minutes prepared by GK on 2022-12-16