

9th Meeting of the seL4 Technical Steering Committee

Thu, 3 Dec 2025, 6pm AEST, by Zoom

Attendance

TSC members present:

- Gerwin Klein (GK)
- June Andronick (JA)
- Matthew Brecknell (MB)
- Gernot Heiser (GH)
- Rafal Kolanski (RK)
- Ihor Kuz (IK)
- Corey Lewis (CL)
- Kent McLeod (KM)
- Ivan Velickovic (IV)
- Indan Zupancic (IZ)

TSC members absent:

- Kevin Elphinstone (KE)
- Anna Lyons (AL)
- Yanyan Shen (YS)

Reviewers/Committers present:

- Nick Spinale

Minutes

0. Welcome and roll call

1. Action items from last meeting

- **done** MB+GK: bump cmake-format version and check global update options
- **done** GK: add mypy to CI – this was investigated and abandoned, because it creates too much CI noise for now
- **done** GK: add rustfmt + clippy requirements to style guide; check CI
- **done** IZ: update implementation prototype for RFC-14 (thresholds)
- open:
 - GH: update RFC-16 (PMU)
 - GK: write guidelines for what should be considered a bug in Jira/issues
 - IH/GK: discourse + mailing list sync

2. Adopting TSC charter for the new seL4 Foundation organisation

- confirmed that people have read the new charter
- discussion on practicalities of running with old vs new; proposal is to keep both running in parallel but delegate all responsibilities and duties to new TSC

- NB: there's one LF person that has owner access to github org; will stay on until the TSC under LF is dissolved
- **RESOLVED**
 - everyone present in favour of joining the new TSC
 - **TODO**: GK invite 3 absentees to join the new TSC
- **RESOLVED** (as old TSC): current TSC delegate all responsibilities and duties to the new TSC as much as permitted under current charter

3. RFCs:

- RFC for deprecating and removing old boards <https://github.com/seL4/rfcs/pull/30>
 - **RESOLVED (unanimously)**: RFC accepted without changes
- RFC-22: SBI capability <https://github.com/seL4/rfcs/pull/35>
 - **RESOLVED (unanimously)**: RFC accepted without changes, using variant 5 proposed in the RFC
- RFC-21: overmapping check unification <https://github.com/seL4/rfcs/pull/34>
 - RISC-V forbids overmapping; other archs allow it
 - 2 options: (1) change RISC-V to allow it; or (2) change all other archs to forbid it
 - consensus that better behaviour/API is to forbid it; issue is that it requires non-trivial verification work that we don't have funding avenue for
 - KM raises that allowing remapping had some desired use cases, which we would want to keep, in a more restricted way
 - discussion on the best approach while waiting for verification, between doing nothing (keeping the inconsistency); do option (1) until verification is done (ie accept the RFC but wait for verification for implementation). Agreement that more discussion is needed.
 - **TODO**: IZ to rewrite RFC-21 to clarify the desired behaviour from the kernel (forbid unrestricted unmapping but allow some restricted efficient remapping; update RFC title to reflect that)
 - **TODO**: GK to provide an estimate for verification of RFC-21 changes after update
 - **RESOLVED (unanimously)**: RFC deferred
- RFC-20: runtime domain schedules <https://github.com/seL4/rfcs/pull/33>
 - **RESOLVED (unanimously)**: RFC accepted without changes
- RFC-14: budget limit thresholds <https://github.com/seL4/rfcs/pull/24>
 - **TODO**: Indan to update RFC-14 text to reflect focusing on budget threshold but not budget limit
 - **RESOLVED**: needs more discussion

AOB

- GH raises a QA issue: need to better track performance for kernel changes
 - The merge of PR that provided the eager FPU scheduling led to an apparant (not real) performance regression of 50% in IPC and notification cost, unnoticed for months. PR disaster; was noticed in a paper.
 - GH: seL4bench needs to run with FPU disabled; mkit also needs to have the option to run FPU off; even so, still 10-15% performance regression (that's current kernel vs prior; GK: might be other changes than FPU)
 - IV: website should have a graph, per commit... Julia already working on this
 - GH: just not on performance page
 - GK: agree would be great to have in CI, would be good to visualise
 - **TODO**: GK to work with Julia on performance tracking/displaying

Summary of actions

Old:

- GH: update RFC-16 (PMU)
- GK: write guidelines for what should be considered a bug in Jira/issues
- IH/GK: discourse + mailing list sync

New:

- NS+GH: add Rust clippy requirement to style guide
- GK invite 3 absentees to join the new TSC
- IZ to rewrite RFC-21 to clarify the desired behaviour from the kernel (forbid unrestricted unmapping but allow some restricted efficient remapping; update RFC title to reflect that)
- GK to provide an estimate for verification of RFC-21 changes after update
- IZ to update RFC-14 text to reflect focusing on budget threshold but not budget limit
- GK to work w Julia on performance tracking/displaying

Acronyms

TSC Technical Steering Committee of the seL4 Foundation

Minutes prepared by GK + JA