4th Meeting of the seL4 Technical Steering Committee

Fri, 17 Dec 2021, 8:00-9:30 AEST, by Zoom

Attendance

TSC members present:

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

Reviewers/Committers present:

- Ben Leslie
- Axel Heider

Others present:

- Rob Chapman
- Nick Spinale
- Rober Sison
- Joonas Onatsu
- Stephen Williams
- Sid Agrawal
- Todd Carpenter
- Nataliya Korovkina
- Jorge Pereira

Minutes

0. **Welcome Yanyan to the TSC**

1. **Update from Board**

    - progress on endorsement
    - summit next year
    - budget increased

2. **Update on GitHub status, test stability, etc**

- GK: porting all bamboo tests to GitHub; going fine; some things better and some harder

- GK: issues with some tests being flaky; eg in MC locks; should make this more reliable

- Board decided to contract someone to take care of maintenance of seL4 repository; Call and PD not out yet; want input from TSC

  - GK: helping with documentation; helping with userlevel libraries, tests, etc.

  - JA's: also monitor the mailing list to make sure nothing gets forgotten; not answering everything but make sure they are answered and ping people if needed

3. **PR shepherding and community support in general**

- going better; KM and GK doing it mainly at the moment; but may ask for volunteer to help or rotating.

- AL: trying to help but no time; rotating would work for me. We need to maintain high level of quality and checks, specially for things in the kernel; need maintainer of specific modules with the right expertise

- IK: pairing would work well

- GK: ok for GK+KM continuing for a while but in Jan/Feb might ask for volunteer to do more of the shepherding

4. **Exalate sync tool license has run out, company not responding to email**

   Resolved:

   - remove Exalate
   - use Jira for RFCs only
   - keep old Jira issues archived
   - use GitHub as main issue tracker

5. **Endorsement Scheme**

   Delegated to volunteer group: IK, GK, JA

6. **Release Schedule**

   Enough infrastructure in place now to resume releases as before, except that binary verification is currently not in working state. High chance for funding for that early next year.

7. **Change main verification platform to imx8?**

   Context: Sabre boards are hard to buy, so want to more widely available platform. Currently extremely hard to support mulitple verified platforms per architecture.

   Resolved: keep Sabre (imx6) as default verified platform for Arm-32, investigate ways to make verification support for multiple boards happen.

8. **RFC: Removing CNode Mutate** https://sel4.atlassian.net/browse/RFC-7

   Discussion on RFC revealed that the feature is still necessary. Therefore proposer moves to reject the RFC.

   Resolved: RFC rejected

9. **RFC: Core Platform** https://sel4.atlassian.net/browse/RFC-5

   - Implementation now available.

- Main remaingin issues:
  – not yet clearly articulated what benefits/drawbacks are wrt CAmkES
  – needs evidence that it is amenable for verification
  – should not replicate capDL infrastructure, but use it
  – should support (at least some of) the standard platforms/boards the Foundation has support for

Resolved:

- remains at Stage 1 approval. To progress, it must:
  – propose a design that integrates the capDL toolchain so that the existing theorems for seL4 system initialisation can be used
  – support at least one standard seL4 board
  – support running CP under emulation (qemu)

10. **RFC: SMC calls** https://sel4.atlassian.net/browse/RFC-9

Resolved: needs more discussion on implications on performance, assurance, and WCET.

Meeting closed 9:30 AEST

Summary of Actions

From previous meetings:

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

Acronyms

TSC Technical Steering Committee of the seL4 Foundation

Minutes prepared by GK and JA