

## Jul 28, 2022 | 📅 RISC-V Perf Analysis SIG Meeting

Attendees: Beeman Strong tech.meetings@riscv.org LIU Zhiwei

### Notes

- **Attendees:**
  - Marc Casas
  - Bruce Ableidinger
  - Zhiwei
  - Jeff Scheel
  - Mark Himmelstein
  - Beeman
  - Phillip Reames
  - Aaron Durbin
  - Atish Patra
  - Greg Favor
  - (may have missed some here)
- **Slides and video** [here](#)
- **Permanent chairs selected:** Beeman as chair, Marc as vice-chair
  - Thanks to Zhiwei for his role as acting-VC, and good luck in the new QEMU SIG!
- Porting of Valgrind (Petr Pavlu at SUSE) and DynamoRIO (Stanislaw Kardach at Semihalf) are in progress, aiming for completion at EOY
- **Reviewing prioritized list of gaps**
  - Full list with details [here](#)
  - Jeff drives list of deliverables, can give him list of SW to-dos
  - Add a column that includes groups with which to collaborate for each gap
  - Add a column with target markets for ISA gaps
- Re: analysis tools, there are vendors with proprietary analysis tools, let's encourage them to advertise. For RV to survive money has to be made, not all will be open-source. Ask tech-announce.
  - Andes is one, IAR too
- Re: KVM enabling, VMware is now a RV member, Andre and Renu. Reach out to them.
  - Beeman: my experience in the past is that they don't expose PMU resources to guests, but will check in with them
- Re: PGO, make sure psABI and debug folks are in the loop
- Mark suggested to prioritize based on value, not status
- Otherwise no disagreement on prioritization for now. Expect list of gaps and priorities to evolve over time.
- **Reviewing Supervisor Counter Delegation proposal**
  - Spec [here](#), feedback welcome!
  - Aiming to eliminate need for system calls
  - Proposes ISA extension to allow M-mode to delegate counters to S/HS-mode
- Talk to security folks about counter delegation

- Delegating LCOFI does so for all interrupts, not per counter
  - So if M-mode is not delegating all counters then won't want to delegate LCOFI
  - Would instead have to deliver LCOFIs to S-mode based if caused by delegated counters (determined from scoutovf)
- Stopped at beginning of Virtual Supervisor Counter Delegation proposal, to be continued
- Beeman on vacation in two weeks, hoping to have an off-cycle meeting at the same timeslot next week (Aug 4, 7am PT / 2pm UTC)

#### Action items

- ☐ Beeman Strong Add requested columns to gaps sheet
- ☐ Beeman Strong Revise priorities to ignore status (don't reduce priority if WIP)
- ☐ Beeman Strong Reach out about proprietary performance analysis tools
- ☐ Beeman Strong Reach out to VMware about PMU enabling
- ☐ Beeman Strong Talk to security HC about counter delegation