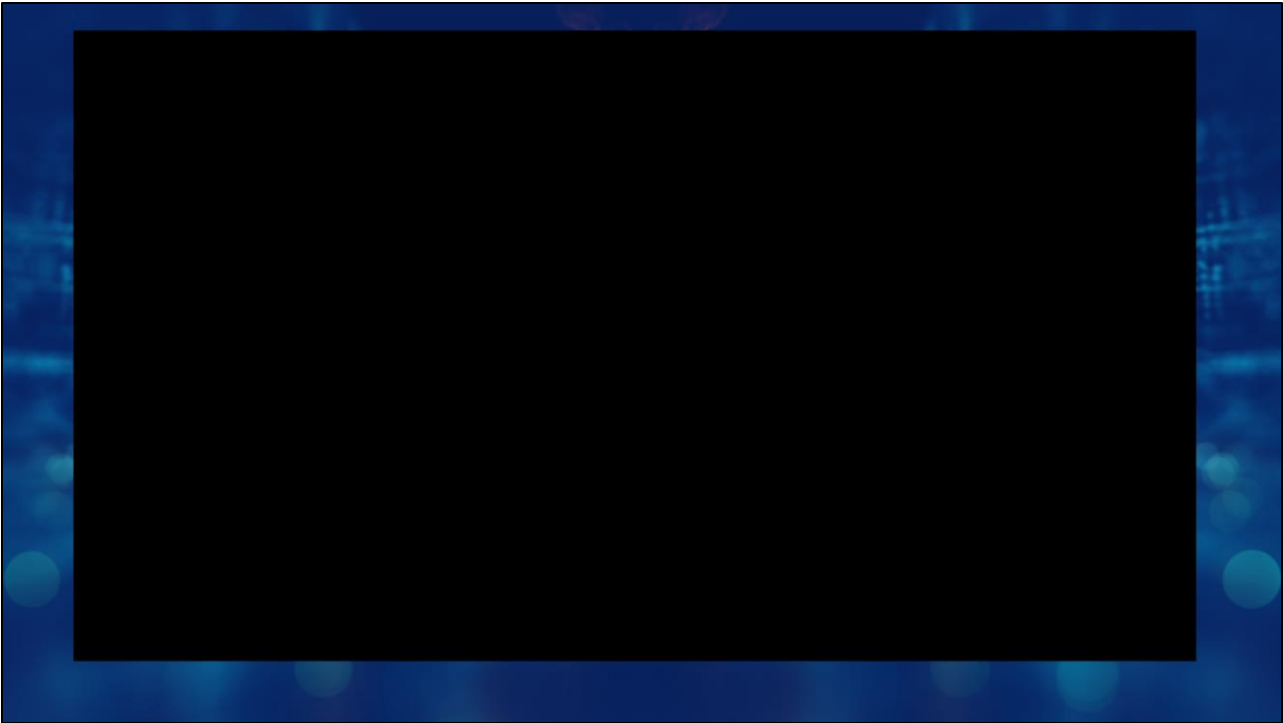




DTPM SIG E-Trace-Encap TG






















05-Mar-2024

Meeting minutes are in the speaker notes for the relevant slide



Agenda

- Disclosures
- Self-Hosted Trace (Beeman)
- AOB

PD	Paul Donahue (Ventana) (Me)	 
IR	Iain Robertson (Siemens)	 
BS	Beeman Strong (Rivos)	 
AJ	Aaron Jin (Siemens)	 
BA	Bruce Ableidinger (SiFive)	 
DR	Dmitriy Ryabtsev (Syntacore)	 
JG	Jay Gamoneda (NXP)	 
MS	Michael Schleinkofer (Lauterbach)	
RC	Robert Chyla (MIPS)	 
RK	Rolf Kuehnis (Lauterbach)	 
VS	Vasiliy Starikov (Syntacore)	 



Attendees: see screenshot on the agenda slide

Competitive/Gap Analysis

- Spreadsheet:
 - Located in *for risc-v members/Workgroups/Debug Trace Performance Monitoring* RVI Google Drive
 - <https://docs.google.com/spreadsheets/d/1l0N-E-hTjFj3jkPrjsLitso4hACDajayNwh35F4KUfs/edit#gid=0>
- Priority activities for this year?
 - Self-hosted trace: Beeman led discussion using [these slides](#)
 - Some recent discussion related to cycle accurate trace
 - Debug beyond ratification?
 - What else?



Self-hosted trace

- conversation starter, not a final proposal
- Physical memory can be subject to PMP
- Trace can use a small dedicated memory buffer instead of virtual or physical memory
- Trace writes might behave as if they are in some mode that's different than the current mode or the mode being traced. Kind of like MPRV.
- Trace writes can be buffered and occasionally write large chunks rather than each packet as it is produced.
- Pulling lines into the cache is bad for debugability because it pollutes the cache

- Cacheability may not be the issue. You can have a no write allocate policy on cacheable memory and still not pollute the cache.
- Challenge of a fixed-size special RAM is that context switching trace has very high overhead.
- Nested virtualization should be considered
- timestamp needs to take `htimedelta` into account for guests
- We're a SIG so we need to decide if this is important but we don't need to come up with the final solution. A TG would do that.
- Sounds good but the CSR part might be problematic and the first thing to tackle.

Future Meetings / AOB

- From Jan, meetings will be 30mins at 10am Pacific every 4th Tuesday, starting Jan 9th
- AOB



Thank You

