IOPMP Task Group Meeting
November 23, 2023

Video link

Agenda

- Updates of the member day in the 2023 RV Summit NA:
- Plan for the draft5:
- Feedback of draft4:
- The WorldGuard checker compatibility:

The member day

- The IOPMP updates were represented on Nov 6.
  - introduced the priority and non-priority rules
  - explained how the IOPMP mimics the WG checker
- Transaction checker: there will be only one checker to ratify.
  - IOPMP spec should make the necessary changes to be more WG-compatible

Plan for the Draft 5

- Target date: <u>end of Nov</u>
- Checklist:
  - The first entry of a MD is TOR and refers its previous MD: programming notice: on-going
  - Reset/default values: having an initial version
  - Change SID to SDID:
    - IOPMP just needs a name, keep using SID in draft5 unless get further notice.
    - Discussion of SDID, WID, or SID will be left to Security HC.
  - More description about the routing by SDID in "A2.1 Parallel IOPMP:" on-going
  - Swap HWCFG0 and HWCFG1: done
  - More description about the fields r/w/x in ENTRY_CFG(i): on-going
  - Multi-fault report: postpone to the draft 6
  - Static entries/configuration: on-going

New feedback

- Mark unused bits as a "MBZ" or "Reserved": will do
- MDSTALL.md and MDTSALLH.md could be "WARL": will do
- Move ERRREACT.ip out from the ERRREACT (0x18): will do
  - Into the existing register, ERR_REQINFO (0x6C)
- Redefine ERR_REQINFO: will do
  - merge no_hit/par_hit/type into one field.

ERR_REQINFO				
0x006C				
Field	**Bits**	**R/W**	**Default**	**Description**
no_hit	0:0	R	0	Indicate the request hit no entry.
par_hit	1:1	R	0	Indicate the request failed due to partial hit.
type	10:8	R	0	• Indicated if it's a read, write or user field violation. • 0x0 = read error • 0x1 = write error • 0x3 = user_attr error
eid	31:16	R	0	Indicated the errored entry index.

The WorldGuard Checker Compatibility

- The IOPMP specification does not include a control bit for each entry that can turn off the interrupts in response to a violation detected by that entry.
  - Usage: The feature helps define a guard region that the prefetch or speculative access would touch.
  - TODO: Perrine will provide a proposal to the issue
  - Will not be included in draft 5, may be in draft 6.