

T2.1 Code Audits – Second Campaign

- Audits ongoing for all codes.

Ticket	Code	Status
588	SPECFEM3D	
600	LaMEM	
601	ExaHyPe	
602	FALL3D	
603	Seisol	
604	xSHELLS	
605	pTatin3D	
606	Tandem	see below
607	OpenPDAC	
608	ELMER/ICE	see below
609	HySEA	see below

Reporting:

Metrics available

Tracing:

User or POP analyst is trying to obtain traces.

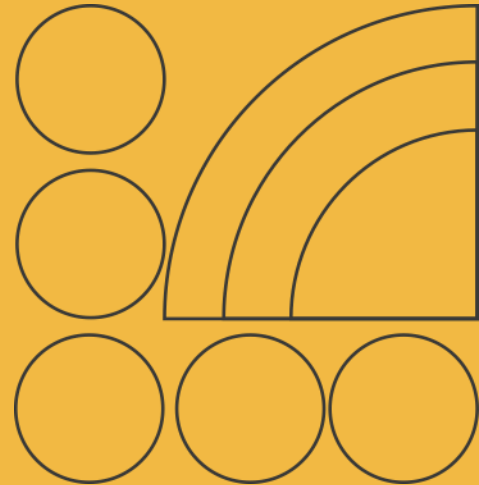
Waiting for user:

POP can not progress!

Analyzing:

Traces are available.

Flagship code Tandem

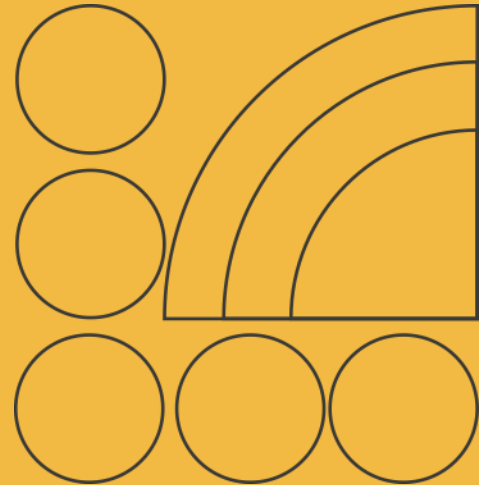


Tools status (OK/KO)	Tracing (YES/NO)	Analysing (YES/NO)	POP metrics (YES/NO)	Other metrics (YES/NO)
	NO	NO	NO	NO

- **Tools status:** Tandem installed and running on LUMI-G in contact with POP expert for next step
- **Tracing:** not started
- **Analysing:** No
- **POP metrics:** No
- **Other metrics:** No
- **Notes:** please, insert here any issue or further comments



Flagship code Elmer/Ice

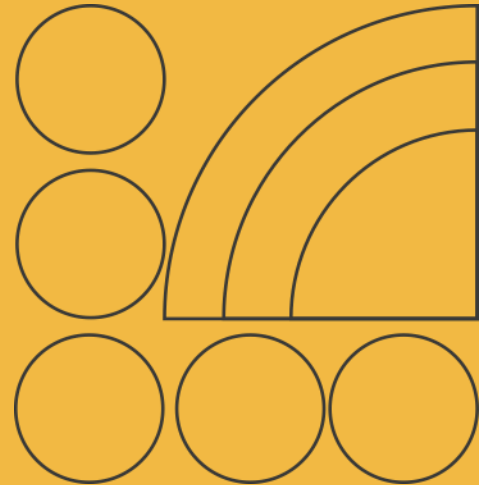


Tools status (OK/KO)	Tracing (YES/NO)	Analysing (YES/NO)	POP metrics (YES/NO)	Other metrics (YES/NO)
OK-ish	Yes	no	no	Yes

- **Tools status:** DLB/TALP reports on MPI, but not on OMP and GPU; we have switched from score-p (no recipe for LUMI) to rocprof
- **Tracing:** rocprof traces for two problem sizes (MPI+OMP+GPU)
- **Analysing:** HLRS told us they will attend to it next week
- **POP metrics:** see above
- **Other metrics:** DLB/TALP for several problem sizes
- **Notes:** strong scaling of GPU code is (in parts super)-linear; weak scaling not perfectly linear (overheads mesh-splitting?).



Tsunami-HySEA



Tools status (OK/KO)	Tracing (YES/NO)	Analysing (YES/NO)	POP metrics (YES/NO)	Other metrics (YES/NO)
OK	YES	NO	NO	YES

- Audit in Leonardo with Tsunami-HySEA (MPI+CUDA)
- The POP analyst has been assigned.
- We have tried to use a more recent Extrae version than the one used in the first audit, without success.
- Currently obtaining the traces with the same Extrae version used in the first audit (4.0.6).
- Strong scaling obtained. It is slightly better than that of achieved in the first audit.



Deliverable D2.3 Strategy

- All codes need to provide a chapter
- POP metrics should be included
- Other metrics may be included
- Other metrics must be included if POP metrics are not available
- Todo:
 - Any feedback on the template?

