

WP3 Node Architecture & Building Blocks

WP3T34-02: Driver for SW diverse redundancy library



Developed by:
Barcelona Supercomputing Center
 Centro Nacional de Supercomputación

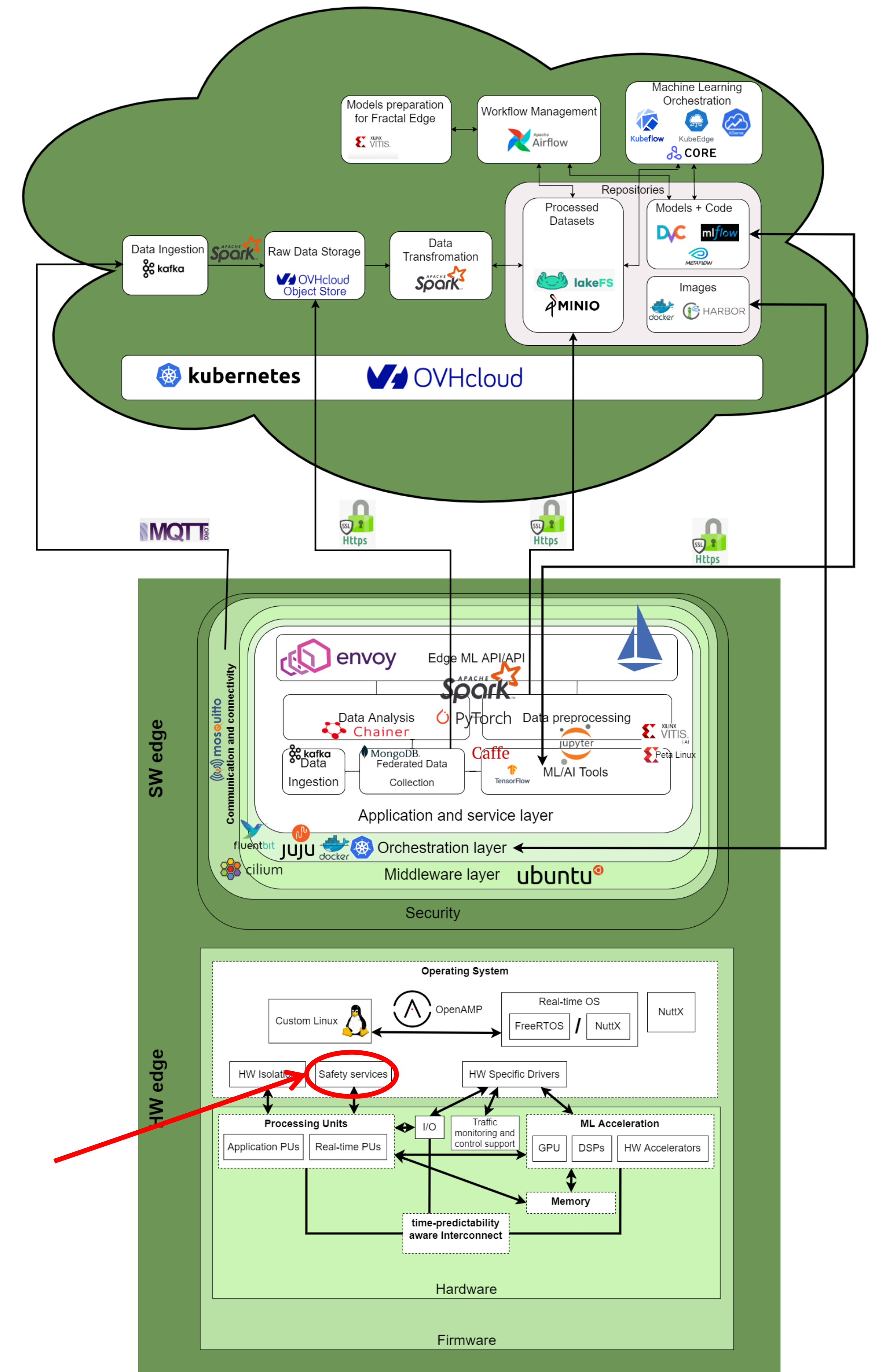


Component description

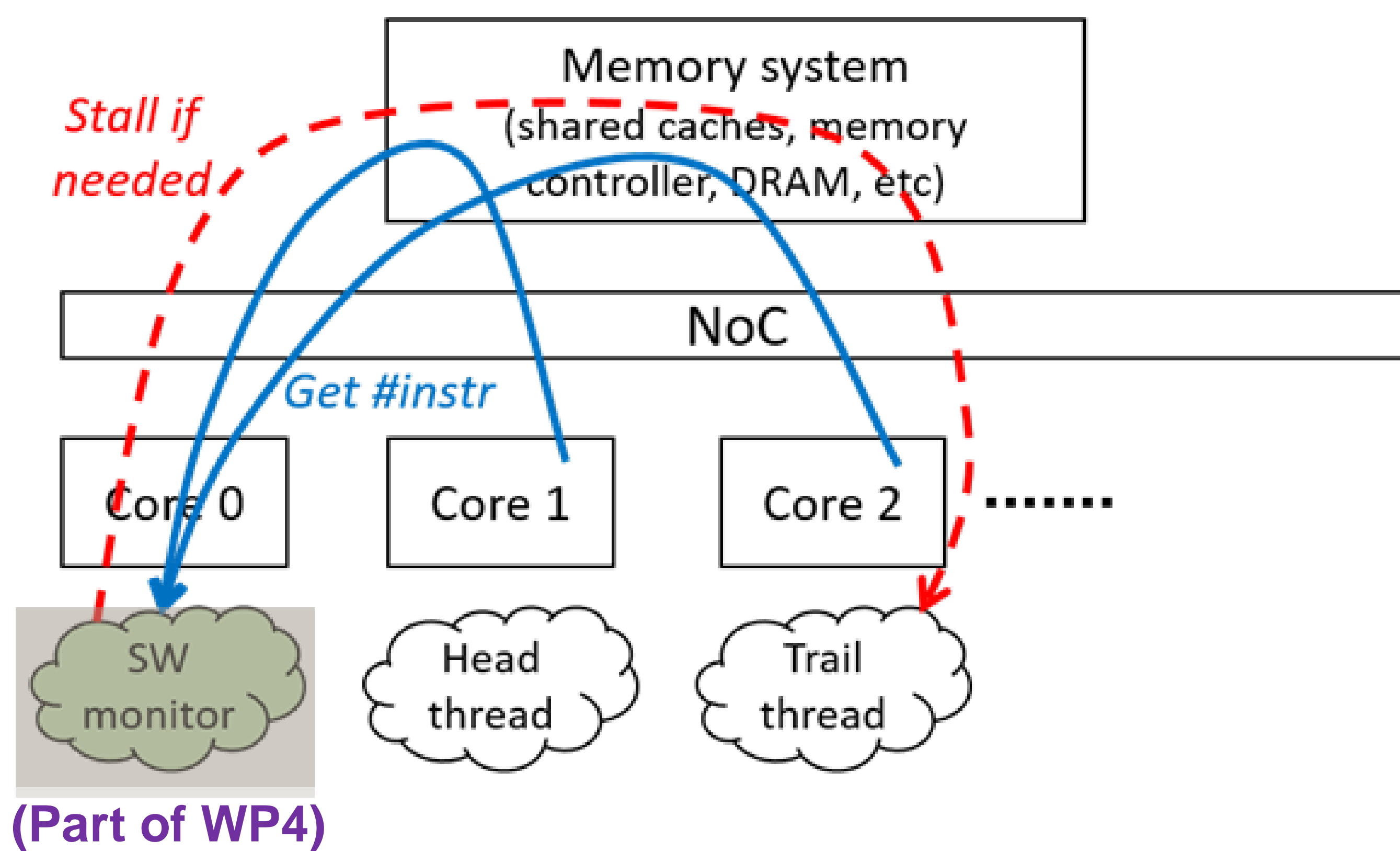
- Objective of the component:
 - Driver to read PMCs (Performance Monitoring Counters) from a remote core, and to issue SIG_STOP and SIG_CONT signals to remote cores. (WP3T34-02)
- Fractal Features associated:
 - SAFETY → REDUNDANCY → PROCESSES (WP3T34-02)
 - SAFETY → REDUNDANCY → DIVERSE REDUNDANCY (WP3T34-02)
- Inputs/Outputs:
 - (input) cores where head and trail processes will run
 - (output) instructions executed by each of the cores
- Integration:
 - NOEL-V
 - UC-7



Component location



Images/Diagrams to describe the component and its processes



Get started

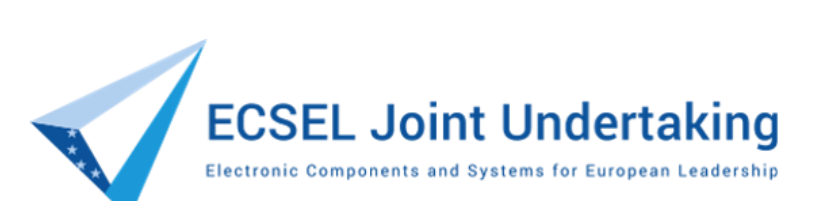
The component can be used with the appropriate safety service in WP4 to execute an end user application/function redundantly with time staggering to achieve some form of diversity

- (WP4) Run end user app/function redundantly on two cores;
- (WP3) Read instruction count from redundant cores;
- (WP4) If staggering too low then
- (WP3) stall trail core;
- (WP3) Else resume trail core (if stalled);
- (WP4) Repeat from STEP 2 until head core finishes;
- (WP4) Wait until trail core finishes;
- (WP4) Compare results from head and trail cores;
- (WP4) Report an error upon mismatch;

EU2020 Horizon



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