OOKAMI PROJECT APPLICATION

Date:

10/05/2024

Project Title:

Utilising PMU event data to inform A64FX processor model creation

Usage:

- Testbed

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Usage Description:

Run a select set of micro-benchmarks through tools and frameworks such as Perf, PAPI, and LIKWID, to collect PMU event data. Such data will then be used to fine-tune A64FX processor model attributes as defined by the University of Bristol HPC group's simulation framework, The Simulation Engine (SimEng).

Computational Resources:

- Total node hours per year: 500
- Size (nodes) and duration (hours) for a typical batch job: Single node, up to an hour
- Disk space (home, project, scratch): 100G

Personnel Resources (assistance in porting/tuning, or training for your users):

Required software:

If your research is supported by US federal agencies:

- Agency:
- Grant number(s):

Production projects:

Production projects should provide an additional 1-2 pages of documentation about how

1. the code has been tuned to perform well on A64FX (ideally including benchmark data comparing performance with other architectures such as x86 or GPUs)
2. it can make effective use of the key A64FX architectural features (notably SVE, the high-bandwidth memory, and NUMA characteristics)
3. it can accomplish the scientific objectives within the available 32 Gbyte memory per node