OOKAMI PROJECT
APPLICATION

Date: 03/02/2021
Project Title: SPEC

Usage:

- Testbed

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Names & Email of initial project users:

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Usage Description:

SPEC is an organization that provides standard benchmarks to industry and academia in a number of areas. Stony Brook is member of SPEC in the High Performance Group (HPG).

HPG is developing a new suite of benchmarks, called HPC2021, for high performance computing, and Stony Brook is involved in this process, testing and verifying the codes on the A64FX platform in particular.
Reference:
• https://www.spec.org/

Computational Resources:
• Total node hours per year: estimate 1000
• Size (nodes) and duration (hours) for a typical batch job: runs can range
  from a single node up to 100s. Runs often range from a few minutes to a
  a few hours (e.g. running the entire test suite with large input data).
• Disk space (home, project, scratch): 40GB, 4TB, 4TB

Personnel Resources:
None anticipated.

Required software:
Probably none extra.

If your research is supported by US federal agencies:
• Agency: NSF
  • Grant number(s): 1927880

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