Benchmark informed software upgrades at Quest-NUiT

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ABSTRACT

We present the work performed at Quest, a high performance computing cluster at Northwestern University regarding benchmarking of software perfromed to guide software upgrades. We performed extensive evaluation of all mpi libraries present on the system for functionality and performance in addition to testing architecture optimized software that can be loaded dynamically at runtime.

CCS CONCEPTS

• **Software and its engineering → Software configuration management and version control systems**; *Software maintenance tools.*

KEYWORDS

software management, software builds, software automation

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1 INTRODUCTION

Software stack management is complex. We want to improve it.

2 MPI

Our benchmarks.

2.1 Improvements

2.1.1 *UCX.*

2.1.2 *PMIx.*

3 NODE ARCH DEPENDENT SOFTWARE

3.1 benchmarks

3.1.1 *LAMMPS.*

3.1.2 *GROMACS.*

4 FIGURES

The "`figure`" environment should be used for figures. One or more images can be placed within a figure. If your figure contains third-party material, you must clearly identify it as such, as shown in the example below.

Figure 1: A figure

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Figure captions are placed *below* the figure.

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REFERENCES

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