

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 performed 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

ACM Reference Format:

Sajid Ali and Alper Kinaci. 2020. Benchmark informed software upgrades at Quest-NUIt. In *Proceedings of PEARC '20*. ACM, New York, NY, USA, 1 page. <https://doi.org/10.1145/nnnnnnn.nnnnnnn>

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

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ACKNOWLEDGMENTS

To Alex from NUIt for help, to various mailing lists and forums including but not limited to mpich-discuss, slurm-info, spack-users.

REFERENCES

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PEARC '20, July 26–30, 2020, Portland, OR

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ACM ISBN 978-x-xxxx-xxxx-x/YY/MM...\$15.00

<https://doi.org/10.1145/nnnnnnn.nnnnnnn>

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