UTEP-PNNL-DDL 28June2024 meeting

Agenda and Notes

1. Updates

Briana –

got DeepCam to run, ran again yesterday with different parameters

1.81s reported runtime with 512 nodes

still trying to get OpenCatalyst to run, missing module

trying to find any differences between ours and reported configurations

FamilySeer – still getting file not found error

Josh – reached out about reinforcement learning approach

Aaron –

working on VGG-16 script

looking at Roofline article and Rogelio’s dissertation about Roofline metrics

put README with cyPAPI installation and run details on project github

Christopher –

fixed issues with Score-P and able to run with test codes

Cube GUI has a lot of dependencies, might be better to install on Perlmutter and use NoMachine

next step – use with PyTorch+Horovod+MPI

will put README with install details on project Github

William –

able to run baseline FL model on Perlmutter with 10 and 100 clients

will try to collect metrics this weekend with GPU nodes, meeting with Josh this afternoon

Alejandro –

looking at memory consumption models, learning about transformers

slides on histograms for gradient boosted tree algorithm

1. Plans for next week
   1. Resolve overhead and op count issues with CyPAPI (or use NSight Compute)
   2. MLPerf HPC benchmarks – get them all to run, then start instrumenting
   3. Clarify roofline modeling approach for mixed precision
   4. Score-P traces for PyTorch+Horovod+MPI code