



CEE 618 Scientific Parallel Computing

Linux Cluster: fractal

Environmental Computational Physics Lab

Paritosh Das and Albert S. Kim (Assoc. Prof.)

Civil and Environmental Engineering

University of Hawaii at Manoa

Hardware System

- Linux Cluster from Dell Inc. under support from US National Science Foundation, Prof. Kim's NSF Faculty CAREER Award
- Initially 16 nodes, 2 Intel(R) Xeon(TM) CPU 2.80GHz, and 2 GB memory per core.
- Additional 3 nodes of the 2nd rack, 8 Intel(R) Xeon(R) CPU E5345 2.33GHz per node, and 2 GB memory per core.
- Currently total 56 cores with 2GB memory each.



Software installed

- Cluster fractal is fully upgraded to CentOS 5.9 (Final) version.
- Queuing system: PBS (Portable Batch System), torque.
- Programming Language: Intel FORTRAN and C/C++ (version 13.1.0)
- Libraries (newly compiled with ifort/icc version 13.0.1):
 - LAPACK-3.4.2 and ScaLAPACK-2.0.2
 - GotoBLAS2 and BLACS-1.1
 - OPENMPI-1.6.3 (<http://www.open-mpi.org/>).
 - OpenFOAM 2.1.1 (<http://www.openfoam.org/>)

Network Configuration

