UNT Talon 3.0

UNT's High Performance Computing (http://hpc.unt.edu/) serves to enhance, support, and grow the research computing community at the University of North Texas. The HPC facility is located on campus, and includes several high performance computing clusters supported by high speed networks, high performance storage, advanced software, and is staffed with the HPC Services Team.

PI has access to the Talon 3.0 supercomputer which has more than 8,300 CPU cores, 150,000 GPU coprocessor cores, Mellanox FDR InfiniBand network, and over 1.4 Petabytes of Lustre File Storage.

Talon 3.0 is a heterogeneous cluster with five different compute node types. These specific nodes can be chosen in the Slurm queuing system. Each server is interconnected with Mellanox FDR InfiniBand at 56/Gbs.

Talon 3.0 has a variety of different file systems, including (1) Home directory; (2) Scratch2 directory which is running Lustre 2.5.2 on a DDN SFA7700X storage appliance. This filesystem has 1.4PB total available and can sustain speeds of up to 10GB/s over FDR Infiniband. (3)In addition, 575TB of storage available via an EMC Isilon X series SAN. This mountpoint contains both /storage/remote and /storage/research over a 10gigE NFS connection.

The College of Engineering has licenses for a variety of computational software including Abaqus, Ansys, Nastran, LS Dyna, ProEngineer, AutoCAD, Ideas, Framemaker, Labview, Matlab, Mathematica, Fortran, and C++, etc. Programs that perform a full range of molecular modeling simulations, such as quantum mechanics, quantum chemistry, Monte-Carlo simulations are available. Many standard scientific computational codes have been compiled for general use on Talon 3. Researchers may request that software licensed to their specific group be installed, subject to allowed usage within the software license terms. Researchers may also run their own custom user-compiled programs.