

HiPerGator specification sheet

HiPerGator went into production in August 2013 with 21,000 cores, 16,000 AMD cores from a new Dell system and 5,000 older cores. In 2016, HiPerGator was expanded by adding 30,000 Intel cores and an extra 1 PB, bringing the total to 51,000 cores and a 3 PB high-performance file system. In addition there are a number of edge servers integrated with HiPerGator to provide Galaxy portal, database services, 1 TB large memory per core, and NVIDIA accelerators.

CPU (central processor unit) core and RAM (random access memory) details

There are 30,000 cores in Intel E5-2698v3 processors with 4 GB of RAM per core. The total RAM of the HiPerGator 2.0 expansion is 120 TB. In 2018, 1,024 SkyLake processors were added

Computing speed

The theoretical maximum speed of the original HiPerGator is 157 Teraflops, or 157 trillion floating point operations. The 30,000-core HiPerGator expansion adds another 1,100 Teraflops of speed. This is also equal to 1.1 Petaflops.

Storage details

There are two storage systems, called orange (3 PB) and blue (2 PB), with orange more for long term preservation and blue more for extreme performance. The file system is Lustre 3.1.

Accelerator details

HiPerGator has 80 NVIDIA GPUs (graphical processor units), with 96 CPUs similar in performance to GeForce 2080ti added in May 2019.

The two hardware visualization nodes each have 8 GeForce 1080ti cards.

Further information

Consult the UFIT Research Computing web site for more details:

- HiPerGator <https://www.rc.ufl.edu/services/computation/hipergator/>
- Accelerators <https://devrc.rc.ufl.edu/services/computation/hipergator/accelerators/>
- Buying resources <https://www.rc.ufl.edu/services/computation/>