

Theia

Theia is located at NESCC in Fairmont, West Virginia. Theia is a Cray CS400 cluster with 1012 compute nodes with Intel Haswell processors. It has QDR InfiniBand interconnect and Panasas filesystem.

System Configuration

	Theia	Selene
CPU Type	Intel Haswell	Intel Haswell
CPU Speed	2.60 GHz	2.60 GHz
Cores/node	24	24
Total Cores	24288	528
Memory/Core	2.67 GB	2.67 GB
Memory/Node	64 GB	64 GB
Peak Flops/node	998 GFlops	998 GFlops
Total Service Nodes	10	1
Service Node Memory	256 GB	256 GB
Total BigMem Nodes	14	1
BigMem Node Memory	256 GB	256 GB
Total Flops	1010 TF	22 TF

Notes:

- Total flops is a measure of peak, and doesn't necessarily represent actual performance.
- Selene is the Test and Development System. Users must be granted specific access to the system for use.

File Systems

name	type	size	Bandwidth
scratch3	Panasas	5.5 PB	> 50 GB/s
scratch4	Panasas	5.5 PB	> 50 GB/s

Zeus

System Configuration

	Zeus	Herc
CPU Type	Intel Westmere	Intel Westmere
CPU Speed	3.46 GHz	3.46 GHz
Cores/node	12	12
Total Cores	27648	576
Memory/Core	2 GB	2 GB
Memory/Node	24 GB	24 GB
Peak Flops/node	166 GFlops	166 GFlops

	Zeus	Herc
Total Service Nodes	8	1
Service Node Memory	48 GB	48 GB
Total BigMem Nodes	6	0
BigMem Node Memory	96 GB	96 GB
Total Flops	382.6 TF	8.0 TF

Notes:

- Total flops is a measure of peak, and doesn't necessarily represent actual performance.
- Herc is the Test and Development System. Users must be granted specific access to the system for use.

File Systems

name	type	size	Max Bandwidth
scratch1	Lustre	2.5 PB	22 GB/s
scratch2	Lustre	3.1 PB	28 GB/s

Gaea

Gaea is a Cray XE6 machine located in Oak Ridge, Tennessee at Oak Ridge National Laboratory (ORNL).

==== System Configuration

- **c1** - 368 teraflops
 - 41216 Cores
 - 32 cores/node
 - 1288 nodes
 - 157 TB of memory
 - AMD Interlagos Processors
 - 4 more login nodes that can submit to both C1 and C2
 - Initial testing begins July 31
 - Early system and user acceptance begins August 14
- **c2** - 720 teraflop Cray XE6
 - 78336 Cores
 - 32 cores/node
 - 2448 nodes
 - 157 TB of memory
 - AMD Interlagos Processors
 - 4 Login nodes (Gaea5-8)
- **t3**
 - 2994 cores
 - 184 nodes
 - AMD Interlagos 16 core
 - Nvidia K20X "Kepler" GPU

- 2 Login nodes (Gaea9-10)
- RTNS (remote data transfer nodes)
- LDTNS (local data transfer nodes)
- Connectivity @ 2x10GB/s to NOAA N-Wave research network

Filesystems

- 3 Files Systems
 - 1PB Fast Scratch Lustre file System (fs)
 - 4PB Staging Lustre file system (ltfs)

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