

Cluster Hardware

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Node Setup

partition	type	sockets	cores/socket	threads/core	total	memory
compute	E5-2623 v3 @ 3.00GHz	2	4	2	16	64GB
gpu	E5-2623 v3 @ 3.00GHz	2	4	2	16	64GB
batch	E5-2650 v4 @ 2.20GHz	2	12	2	48	128GB
iapetos	E5-2643 0 @ 3.30GHz	2	4	1	8	64GB
atlas	E5-2637 v3 @ 3.50GH	2	4	2	16	64GB
new-compute*	Xeon Gold 6140	2	18	2	72	96GB

Table: CPUs

"The cluster is not connected to a UPS"

- internet connection via DFN
- all partitions but the batch partition use Infiniband QDR 40/Gb
- batch uses 10Gb Ethernet
- fully non blocking networks in each partition
- task which are not network bound should go to batch

- all systems mount BeeGFS storage at /home
- distributed file system (all nodes see the same content)
- BeeGFS
 - maximum throughput of 2 3GB read and 1GB write
 - 200TB for all users
 - NO BACKUP
 - considered as unsafe storage
- Ceph
 - maximum throughput of 2-3GB read and 1GB write
 - available via s3 (ask for an account)
 - better suited for input/output bound applications
 - 250TB
 - very hard to destroy but also NO BACKUP
 - mainly used for virtualization

- hot-water cooling
 - input 40°C
 - output 50°C
 - compute, new-compute, new-gpu
 - target is 100 kW for heating the URZ and the CFunGene
- all others are air cooled