Hardware

This page gives an overview of the Grid.UP computers and details the various types of file systems, nodes, and system services available to end-users.

Grid.UP is a general purpose capability system and is designed to be a well balanced system, designed to handle tasks which require:

- many cores
- large symmetric multi-processing nodes
- high memory
- a fast interconnect
- a lot of work space on disk
- a fast I/O subsystem

Nodes Overview

The set of node available to end-users comprises a large number of compute nodes, or “worker nodes”. We distinguish the following different node flavours:

- **batch** : CPU-only “thin” compute nodes,
- **big** : CPU and GPU-enhanced “fat” compute nodes which have more memory than the default worker nodes
- **cfp** : CPU-only compute nodes exclusive for cfp registered users
- **lsrelcm** : CPU-only compute nodes exclusive for lsre/lcm registered users

---

The table below lists the current available node types.

# Nodes	Node name	Node flavour / partition	CPU SKU	CPU Cores per Node	Accelerator(s)	DIMMs	Total memory per node	Local storage	Network connectivity
22	ava01-22	batch	2x Intel E5-2450 CPUs	16	N/A	68 GB DDR3 RAM clocked at 1600MHz	66 GB	1x 500GB 7.2K SATA HDD for local storage (not user accessible)	* 1x Broadcom Corporation NetXtreme BCM5720 NICs * 1x Infiniband
1	avafat01	big	2x Intel E5-2650 CPUs	32	NVIDIA Tesla 20-Series M2075	128GB of DDR3 RAM clocked at 1333MHz	128 GB	1x 500GB 7.2K SATA HDD for local storage (not user accessible)	* 1x Broadcom Corporation NetXtreme BCM5720 NICs * 1x Infiniband

# Nodes	Node name	Node flavour / partition	CPU SKU	CPU Cores per Node	Accelerator(s)	DIMMs	Total memory per node	Local storage	Network connectivity
1	ceft01	ceft	2 x Intel E5-2683 v4 CPUs	32	N/A	128Gb of DDR4 Synchronous 2400 MHz	128 GB	* 1x 126GB SuperMicro SSD for local storage (not user accessible) * LSI2208 RAID 5 (55TB) **(exclusive for ceft registered users)**	1x Intel Corporation I350 Gigabit NICs
1	ceft02	ceft big	2 x Intel E5-2650 v4 CPUs	24	N/A	64Gb of DDR4 Synchronous 2133 MHz	64 GB	* 1x 126GB SuperMicro SSD for local storage (not user accessible) * 6x 6TB LSI2208 RAID 5 (28TB) **(exclusive for ceft registered users)**	1x Intel Corporation I350 Gigabit NICs
6	cfp01-06	big	2x Intel E5-2650 CPUs	16	N/A	64GB of DDR3 RAM clocked at 1600MHz	64 GB	1x 500GB 7.2K SATA HDD for local storage (not user accessible)	* 1x Intel Corporation I350 Gigabit NICs * 1x Infiniband
1	cfp07	big	2x Intel E5-2640 CPUs	20	N/A	192GB of DDR4 RAM	192 GB	1x 1TB 7.2K SATA HDD for local storage (not user accessible)	2x Intel Corporation I350 Gigabit NICs
1	cfp08	big	2x AMD EPYC 7301 16-Core Processor	32	N/A	256GB of DDR4 RAM	256 GB	1x 240GB 7.2K SATA HDD for local storage (not user accessible)	2x Intel Corporation I350 Gigabit NICs
1	cfp09	big	2x 16c Intel® Xeon® Gold 6226R	32	N/A	<tbd>	512 GB	1x 252 GB (not user accessible)	Gigabit NICs
1	cfp10	big	1x 24c AMD EPYC 7443 24-Core	24	N/A	<tbd>	512 GB	1x 252 GB (not user accessible)	Gigabit NICs

# Nodes	Node name	Node flavour / partition	CPU SKU	CPU Cores per Node	Accelerator(s)	DIMMs	Total memory per node	Local storage	Network connectivity
1	cfp11	cfp	2 x AMD EPYC 7443P 24-Core Processor	48	ASPEED Graphics Family	<tbd>	514 GB	1x 1.92 TB (not user accessible)	BCM57416 NetXtreme-E Dual-Media 10G RDMA Ethernet
10	cfpsmall01-10	batch	1x Intel(R) Xeon(R) CPU E5430	8	N/A	8GB of DDR3 RAM clocked at 1600MHz	8 GB	1x 250GB (not user accessible)	Intel Corporation I350 Gigabit NICs
1	cristalflow	big	2x e5-2640v4	40	N/A	4x 16GB	64 GB	* 1x SSD 128GB (not user accessible) * 4x 6TB RAID 5 (18TB) **(exclusive for cristalflow registered users)**	2x Gigabit NICs
6	demec01-06	big	2x Intel(R) Xeon(R) CPU E5-2640 v2	32	N/A	64GB of DDR3 RAM clocked at 1600MHz	64 GB	1x 500GB 7.2K SATA HDD (not user accessible)	2x Intel Corporation I350 Gigabit NICs
2	inegi01-02	big	2 x Intel E5-2680 v2 CPUs	20	N/A	64GB of DDR3 RAM clocked at 1866MHz	64 GB	1x 500GB 7.2K SATA HDD for local storage (not user accessible)	* 1x Intel Corporation I350 Gigabit NICs * 1x QDR Mellanox MT27500 IB HCA
2	ventos01-02	big	<tbd>	64 32	N/A	96	96 GB 128 GB	27 TB **(exclusive for ventos registered users)**	2x Gigabit NICs
newest									
5	lsrelcm01-05	lsrelcm	2x Intel(R) Xeon(R) Silver 4316 CPU	40	N/A	64	64 GB	1x 500 GB (not user accessible)	2x NetXtreme BCM5719 Gigabit Ethernet PCIe

InfiniBand

Some cluster nodes are linked by a single Qlogic 12200 switch.

From:
https://grid.fe.up.pt/dokuwiki/ - **GRID FEUP**

Permanent link:
https://grid.fe.up.pt/dokuwiki/doku.php?id=system_details:slurm_hardware

Last update: **2024/06/05 14:48**