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# Computing

- Last Updated (11.07.2011)

## Simulation services

CESGA provides computing servers of different architectures to allow researchers to pick up the architecture which suits their computing needs best.

Computing systems installed in CESGA:

- FINIS TERRAE: to access it, type the command: `ssh ft.cesga.es`
- SVG: to access it, type the command: `ssh svgd.cesga.es`
- HPC 320: to access it, type the command: `ssh sc.cesga.es`
- SUPERDOME: to access it, type the command: `ssh sd.cesga.es`
- GRID: to access it, type the command: `ssh svgd.cesga.es`
- History

Internal communications in the Center are made on ATM, ETHERNET and GIGABIT ETHERNET networks.

These machines were co-financed by Xunta de Galicia, CSIC, ICYT and FEDER.

## Technical Details of the Installed Systems

### FINIS TERRAE

Architecture  
Cluster SMP NUMA

Number of Processors  
2.528

Type of Processor  
Intel IA 64 Itanium 2 Montvale Dual Core 1.600MHz(6.4 Gflops)

Peak Performance  
15.360 GFLOPS

Interconnect  
Infiniband 4x DDR 20 Gbps

Memory  
19.670 GB

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Disc  
390.000 GB

OS  
Unix, Linux, Windows

Year Installed  
2007

HP Cluster Superdome

Architecture  
2 nodes SMP Cluster

Number of Processors  
128

Type of Processor  
Intel Itanium2, 1500 MHz, 6 Mbytes cache

Peak Performance  
768 GFLOPS

Interconnect  
Infiniband

Memory  
384 GBytes

Disc  
7 Terabytes

OS  
HP-UX

Year Installed  
2003

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Compaq HPC 320

Architecture  
Cluster of 8 SMP servers

Number of Processors  
32

Type of Processor  
Alpha EV68 1 GHz

Peak Performance  
64 GFLOPS

Interconnect  
Memory Channel Dual Rail

Memory  
80 GB

Disc  
2 TB

OS  
Tru64

Year Installed  
2002

SVG

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Architecture  
PC Farm (Self Made), Beowulf Cluster

Number of Processors  
Over 96 processors

Type of Processor  
Intel Pentium III 1GHz up to P4 3,2 GHz

Peak Performance  
528 GFLOPS (nodo CESGA)

Interconnect  
Myrinet and Gigabit Ethernet

Memory  
512 MB - 1GB per node

Disc  
9 up to 160 GB per node (over 12TB global)

OS  
Linux

Year Installed  
2000 (first stage)

## GRID

Architecture  
Blades Dell PowerEdge 1955

Number of Processors  
40

Type of Processor  
Intel quad-core:  
36 Intel Xeon 5130 1.6GHz  
4 Intel Xeon 5355 2.66GHz

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Peak Performance  
2183 GFLOPS

Interconnect  
Gigabit Ethernet

Memory  
4GB (nodes Xeon 5130)  
8GB (nodes Xeon 5355)

Disc  
SAS 73.4GB (nodes 5130)  
2x SAS 73.4GB (nodes 5355)

OS  
Linux

Year Installed  
2007