

Center for Supercomputing and Bioinformatics



Areas of Activity



- “Platform for Scientific and Technology support on Genomics, Proteomics & Bioinformatics at Andalusia”



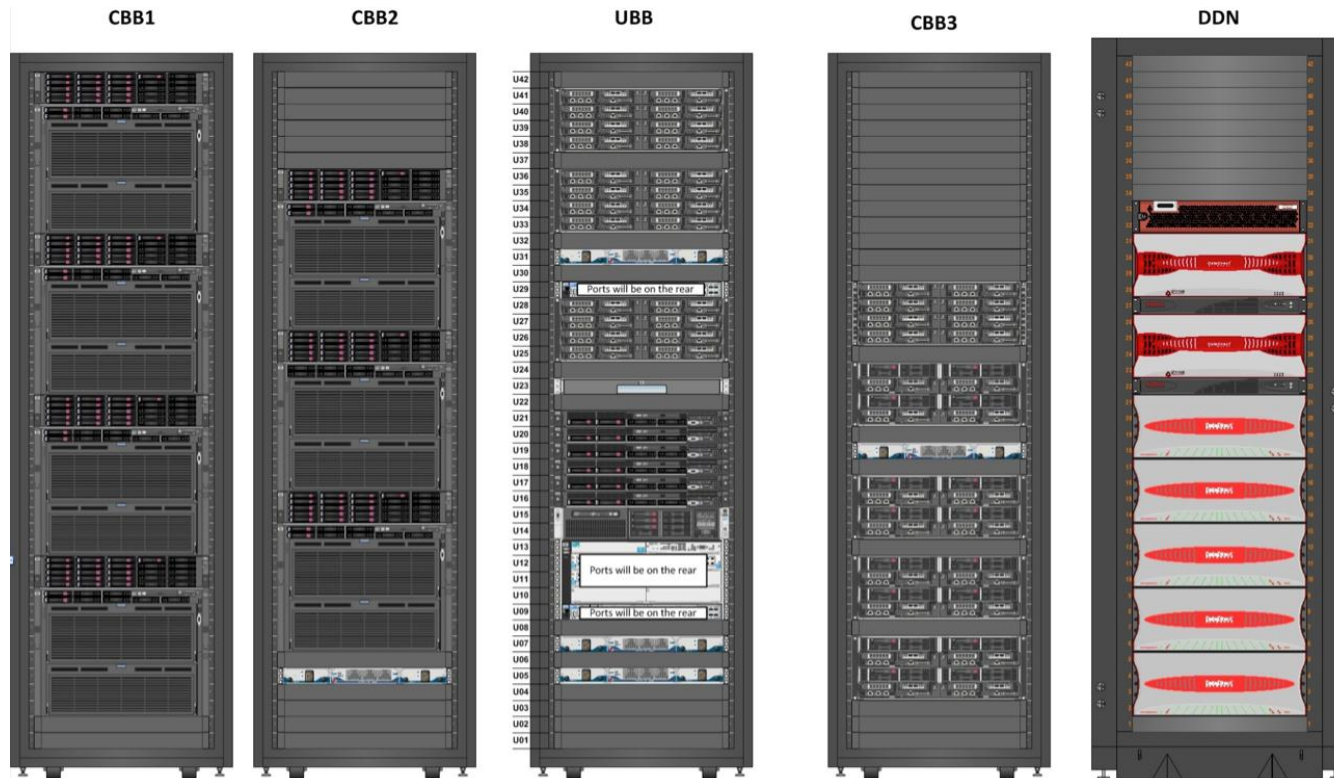
- National Supercomputing Network
- Computational Platform of University of Málaga



UNIVERSIDAD
DE MÁLAGA



- 2312 cores
- 21 TB RAM
- 750 TB disco
- 31 TFLOPS
- Cluster BBDD: Oracle
- Virtualization: VMWare
- Data tape library: LTO4, 700 TB



- 7 HP DL980 fat nodes with 80 cores and 2TB RAM each.
- 32 HP SL230 E5-2670 with 16 cores and 64 GB RAM.
- 16 HP SL250 E5-2670 and 2 GPUs M2075
- 600 TB Lustre Storage
- Infiniband FDR network.





- 41 HP DL165 AMD Opteron 6176, with 24 cores and 96 GB each
- 15 HP DL180 Intel X5675 with 12 Cores and 96 GB RAM and 30 TB disk each.
- 4 HP DL385 AMD 6176, with 24 cores and 128 GB each



Topology of picasso

0,720PB bruto (Lustre+ home)

Lustre file system (DDN SFA10K) 5.93PB



NFS, mgt node

MDS,OSS
 HP DL360 G7 6 nodes
 Storage
 DDN SFA10000
 (enclosure x5)
 Lustre (4 File Systems)
 OSS: 4 OST: **0,535 PB Neto**
 MDS: 2 MDT: 5,4TB



Sistemas Actuales

Opteron extension

Interconexión Infiniband 4x FDR 1:2 blocking

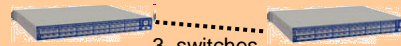
Switches Core



2 switches

2x Mellanox 36 ports

Leaf Switches



3 switches

3x Mellanox 36 ports

Nodo de Gestión

Compute nodes: (CPU+GPU)

“THIN” nodes



48 nodes y 32 GPUs
 768 cores y 3 TB Mem y 24 TB Disk
 32 x SL230s Gen8- nodes
 CPU: 2 x Intel E5-2670
 Mem: 64 GB
 Disk: 1x500 GB
 16 x SL250s Gen8 nodes
 CPU: 2 x Intel E5-2670
 Mem: 64 GB
 Disk: 1x500 GB
 GPU: 2x NVIDIA M2075
 OS: Suse Linux Enterprise Server

“FAT” nodes



7 nodes
 560 cores y 14 TB Mem y 18,3 TB Disk
 7 x DL980 nodes:
 CPU 8 x Intel E7-4870
 Mem: 2 TB
 Disk: 18 x 146GB
 OS: Suse Linux Enterprise Server

- **Computational Physics**
- **Computational Chemistry**
- **Computational Biology**
 - **Genomics, Proteomics**
- **Digital Asset Management**
 - **CIMES: Medical Images**
 - **CTI: Audiovisual (video & audio)**
 - **FCl: Learning**
 - **UMA web-tv channel**

- ***Assistance & advice on scientific computing from application to programming support.***
- ***Training courses for both new and more experience users.***
- ***A range of application and software licences ready to use.***
- ***Creating synergies between different research groups.***
- ***Specialized support for analysis of bioinformatics data.***



***¡HIGHLY PRODUCTIVE
COMPUTING CENTER!***

¡System Integration!

¡Advanced Services!