“NCC”

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UNESP Center for Scientific Computing

- Consolidates scientific computing resources for São Paulo State University (UNESP) researchers
  - It mainly uses Grid computing paradigm

- Main users
  - UNESP researchers, students, and software developers
  - SPRACE (São Paulo Research and Analysis Center) physicists and students
    - Caltech, Fermilab, CERN
    - São Paulo CMS Tier-2 Facility

UNESP Center for Scientific Computing

SPRACE - LHC/CMS Tier2 Facility

- 96 worker nodes
  - Physical CPUs: 128
  - Logical CPUs (cores): 1152
  - HEPSpec06: 17456
  - 128 cores: 3GB/core
  - 1024 cores: 4GB/core
- 02 head nodes
- 13 storage servers
  - 1 PB (effective)
- Network
  - LAN: 1 Gbps & 10 Gbps
  - WAN: 2x 10 Gbps , 2x 40 Gbps (1x 100G in Q3 2016)

GridUnesp - HPC infrastructure

- Campus Grid
  - 1 central cluster + 6 secondary clusters (deployed in different Unesp campi at São Paulo State)
- Worker nodes @ NCC
  - Physical CPUs: 256 (2009)
  - Logical CPUs (cores): 2048 - 2GB/core
- 1 head node
- 1 storage server
  - 132 TB (effective)
- Network
  - LAN: 1 Gbps
  - WAN: 2x 10 Gbps

Unesp / Intel Collaborative Efforts

- IPCC (Intel Parallel Computing Center)
  - Vectorization & Parallelization of Geant (**GE**ometry **AN**d **T**racking)

- Intel Modern Code
  - Workshops and Tutorials
    - ❑ High Performance Computing (HPC)
    - ❑ Data Science / Big Data Analytics
  - HPC Consultancy