

ACCELERATOR COMPUTING INFRASTRUCTURE

design, develop and maintain a computing infrastructure with the following purpose: implementation and maintenance of an **Electronics Management Data System** (EMDS) dedicated to the storing and presentation of all project documents, cads, etc; implementation and maintenance of a **Project Management Data System** (PDS) in order to efficiently allocate and monitors efforts and costs; develop a common infrastructure and **tools with the experiment** in order to share and correlate data; implementation and maintenance of **accelerator simulation code** FARM/TIER2 share; implementation and maintenance of **servers and services** needed for the **accelerator controls**

SOFTWARE INFRASTRUCTURE, CONTROL SYSTEMS

design and implementation of the **controls system**; development and implementation of the **drivers**, and interface with accelerators device; development and implementation of the **user interface** and **high level** accelerator softwares; development and implementation accelerator infrastructure interface to **monitor and control subsystems** device like PLC, field bus, etc (electrical, fluid, etc installations); design and develop accelerator **simulation code interface** and controls systems in order to permit an easy and standardized data flow; implementation and development of an accelerator **logbook and trouble ticketing** system in order to monitors, store and allows statistics on accelerator devices and subsystems; design and develop **web tools for public** and private data presentation and correlation, **online analysis, and monitoring**.

USERS INFRASTRUCTURE, REMOTE CONTROL ROOM

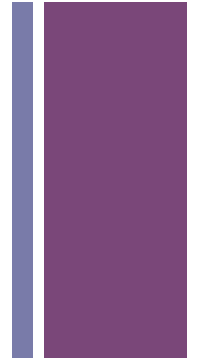
The infrastructure previously introduced (hardware and software) requires to develop **identification and security** tools and the implementation of **collaborating tools** for the community participating to the project.

In the mean time, the international community interested in the development of the accelerator, push also to foreseen a **Remote Control Room** in order to permit and guarantee participation in the operation and high efficiency in diagnostics and fault solution

ACCELERATOR COMPUTING FARM

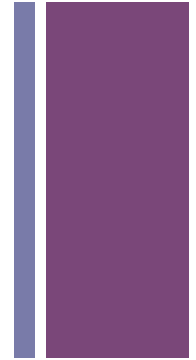
- has been installed a computer **FARM** dedicated to accelerators simulation & calculation code
- 5/16 slot rack equipped with blade 2 processor Intel Xeon X5660, 64 bit esa-core, 2.80 GHz, 48 GB RAM, FiberChannel, GigabitEthernet dual.
 - simulation and calculation code: HFSS, GdFidL, MatLab, Mathematica, OPERA, ORCAD, inventor, FLUKA, GEANT, MCNPX, ANSYS
 - Controls R&D: Labview, memcache, mongoDB, etc
- hardware has been installed in April 2011. FARM configuration under the LNF computing infrastructure is going on. Software installation and configuration are also started.

+ SuperB Tier2 startup@LNF



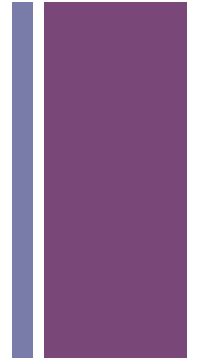
- a VO for **SuperB** is starting at LNF thanks to a collaboration with **ATLAS@LNF TIER2** resources and personnels and LNF computing service and infrastructure
- the share will be addressed to **accelerator and experiment** purposes: MDI and backgrounds, CMAD for e-cloud and IBS simulation, dynamic aperture calculation, etc as well as fast, full and GARFIELD simulation

+ New Computing Nodes in Frascati Tier2



- 8 computing nodes were recently purchased in collaboration with ATLAS group, in order to add them to the Tier2 cluster.
- 2 Dell Power Edge C6100: 4 nodes in 2U, where any unit support:
 - 4 x CPU dual-esa core (Intel Xeon E5645, 2,40GHz, 6 core, cache 12MB)
 - 4 x 36GB memory (for 2 CPU)
 - 4 x 2 disks of 1TB
- Whit new nodes SuperB VO will use: 176 (/704) computing slots

+ SuperB VO in Frascati Tier2



- Support to superbvo.org VO was recently added to Frascati Tier2.
 - With the last purchase the site will be made of: 704 computing slots, i.e. almost 4544 HEP SPEC, where SuperB share will be ~1112 HEP SPEC (~25% of total share)
 - Tier2 services: lcg-CE and CREAM CE, batch server Torque, scheduler Maui, “superb” queue in Grid and “local” for local submission
 - 240TB of net disk space, managed from DPM (Disk Pool Manager) srm for ATLAS VO, few TB available for superb (only 1/2TB VO present request)
 - VO manager is installing the simulation software in a NFS area exported to WNs and UI, in the future will be migrated to cvmfs (like ATLAS)
 - SuperB Frascati group.....