

US CMS Tier-2 workshop

T2_BR_UERJ - Present Status

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www.hepgrid.uerj.br

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Hardware Installed



Nodes

- 55 machines with two Xeon 2.66GHz (single core) / 512 MB per core/ 400GB dCache pool (each)
- 25 machines with two Xeon 2.66GHz (single core) / 1 GB per core / 400GB dCache pool (each)
- 40 machines with two Xeon E5410(Quadcore 2.33GHz) /2Gb per core / 4.5 TB dCache pool (each)
- 4 Switches DELL PowerConnect 6248 – Layer 3
- 4 Switches 3Com 24ports Gigabit – Layer 2

475 cores (production)

212 TB - dCache pool

Main Software Installed OSG Site since 2005



- OSGCE64
 - VDT 1.10.1
 - Globus Toolkit 4.0.7
 - Condor 7.0.5
 - MonALISA 1.8.6
 - PRIMA Authorization Module 0.7.1
 - SRM Fermi Client 1.8.0-15p8
 - SRM Berkeley Client 2.2.1.2.e5
- OSGCE
 - same versions than OSGCE64
 - VDT 1.10.1
- GUMS => VTD 1.10.1
 - GUMS 1.2.15
- Condor Central Manager
 - Condor 7.0.3
- SE-PNFS
 - dcache-server-1.8.0-12
 - dcache-httpDoor-0.1-1
 - pnfs-postgresql-3.1.10-7
- Condor Central Manager
 - Condor 7.0.3
- Nodes
 - Condor 7.0.3
 - dcache-srmclient-1.8.0-14
 - dcache-server-1.8.0-12
 - dcache-dcap-1.8.0-15p8

Cluster Topology



HEPGRID-BRASIL currently consists of two clusters: one is called *Production Cluster* and the other is called *Development Cluster*.

The Production Cluster

The Production Cluster is composed by one central node, the *prod-frontend*, five Gigabit switches (four *peripheral* switches connected to a *central* switch) and 120 *compute* nodes. The Production Cluster is the cluster where helper applications are installed to support experiments – which run to produce valid results.

The prod-frontend machine uses two network interfaces: one is external, with a valid IP, connected to the Gigabit port in the *internet switch*, and the other is internal, only seen by the Production Cluster. Each compute node uses only one internal network interface, and its IP is not valid either. All the compute nodes' interfaces and the prod-frontend's interface are used just for communication inside the Production Cluster. Those IP's are given automatically in the installation of Linux Rocks, our operating system.

The Development Cluster

The Development Cluster is used for testing new installed/developed helper applications' behavior in a distributed environment. It is composed by a central node, the *devel-frontend*, a 100 Mbit switch and three compute nodes.

The external link is provided by RNP, the National Education and Research Network (Rede Nacional de Ensino e Pesquisa – RNP) is the Brazilian infrastructure of advanced network for collaboration and communication in the fields of teaching and research. (now 1,2 Gbps; expected for soon 2 x 10 Gbps)

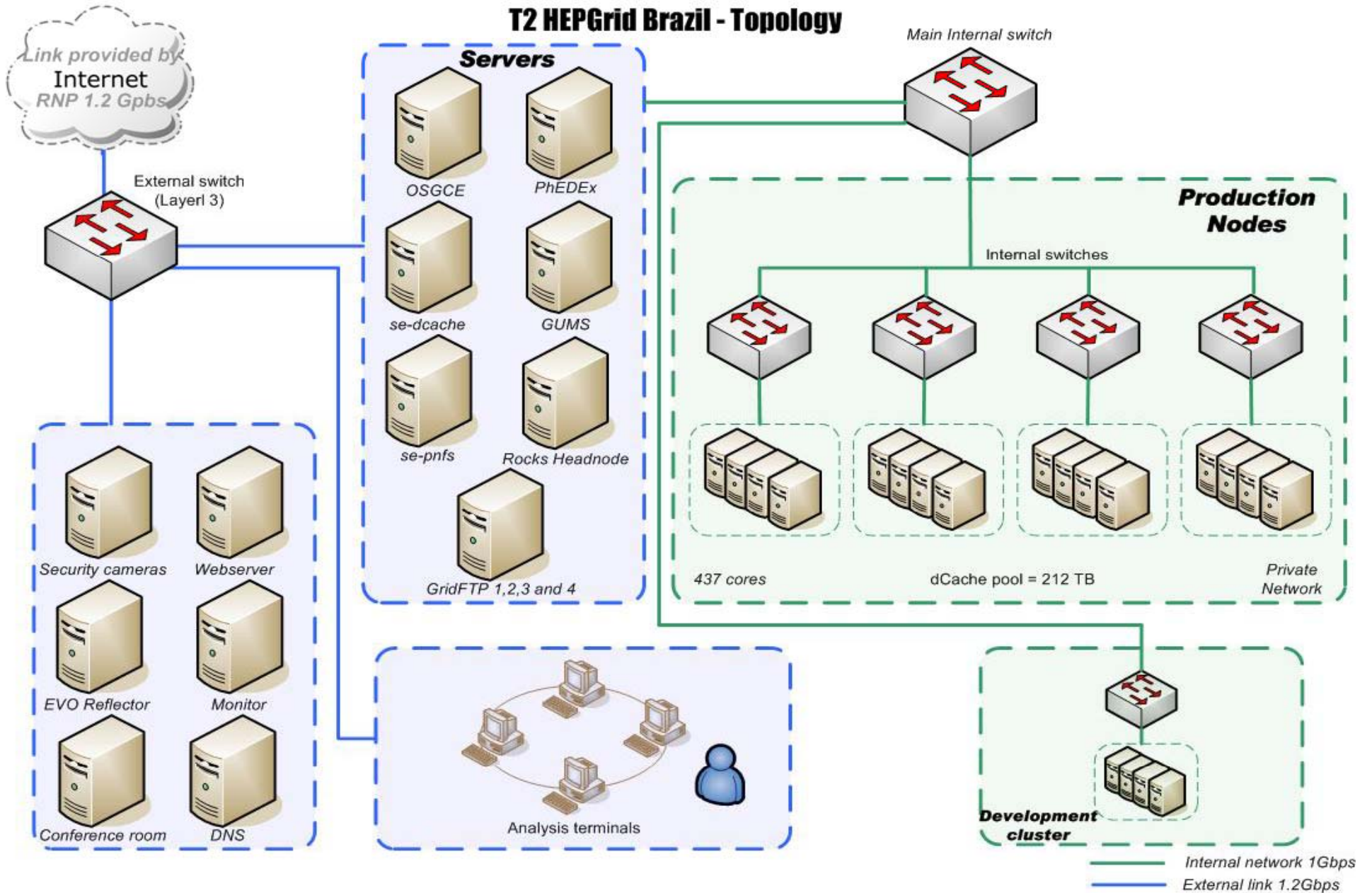


<http://www.rnp.br/en/rnp/>

Cluster Topology



T2 HEPGrid Brazil - Topology



PhEDEx Status



PhEDEx Commissioned links

To T1	From T1	To T2	From T2	Nup/Ndown
2	7	1	1	3/ 8

PhEDEx Agents

Node	Site Agents				
	FileDownload	FileExport	FileStager	FileRemove	BlockDownloadVerify
T2_BR_UERJ	UP (2/2 agents)	UP		UP	

CMS Small Control Room



We see two large screens to have images from other SCR-Sites and the other one to be used also locally. There are four PCs to be used as monitors of the Control Room.

We had, the first communication with the Control Room of CMS at CERN the January 22 at 9:40 AM Rio'time. Lucas Taylor, Joao Gonçalves, Guido Tonelli, Patricia Bittencourt and Jose Afonso was present at CERN and in SCR at UERJ, Eduardo Revoredo, Alberto Santoro, plus many colleagues from UERJ. We had also the participants LISHEP2009, present in Rio, as Harvey Newman, Albert De Roeck, Michele Arneodo and many other colleagues of the workshop. For the group of UERJ this new possibility represent an effort of many Brazilian institutions (CNPq, FINEP, FAPERJ, RENAFAE, RNP).