

**EGEE'07 Concentration WS
Budapest, 1-5 Oct 2007**

EU-IndiaGrid - Infrastructure

Sergio Fantinel
INFN-PD/LNL
(sergio.fantinel@lnl.infn.it)

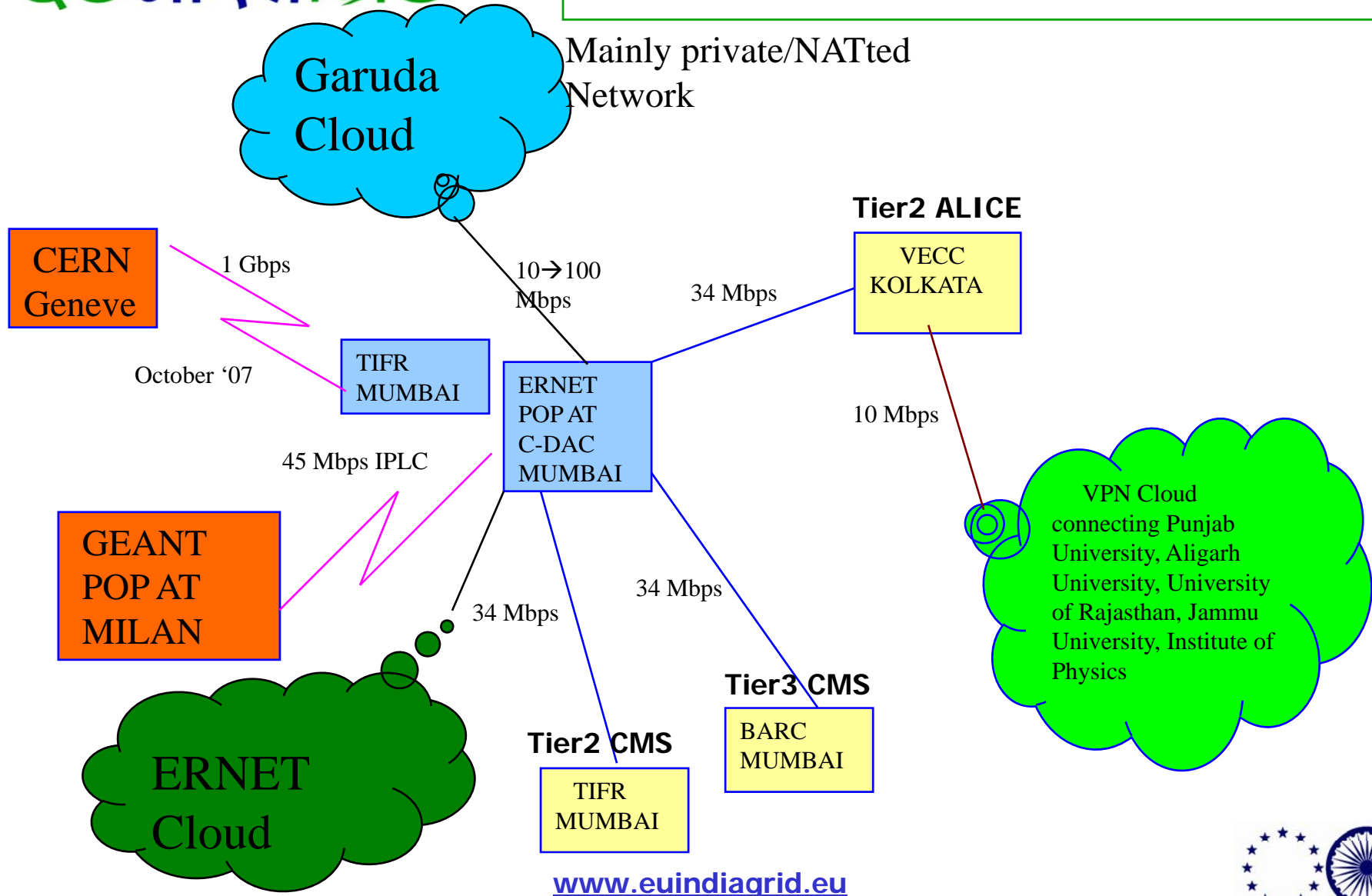


- Project start: October 2006
- Duration: 24 months
- To support the **interconnection** and **interoperability** of the prominent European Grid infrastructure (EGEE) with the Indian Grid infrastructure for the **benefit of eScience applications**;
- To **identify** and **aggregate** research, scientific and industrial communities which may benefit from the use of Grid technology resulting in an **eScience Network Community**
- To promote the use of advanced Grid technologies within the created Network Community relying on **pilot applications** in Biology, High Energy Physics, Material Science and Earth and Atmospheric Sciences and specific outreach and dissemination activities
- To **disseminate** European EGEE Grid technology achievements in India and leverage on Indian Grid experiences and skills.

www.euindiagrid.eu



Network Status



[grid.eu">www.euindiagrid.eu](http://www.euindia<span style=)



- Note that there is no an internationally recognized CA in India -> the project is supporting the creation of a such CA. C-DAC is in charge to do it.
- Two main grid infrastructure in India:
 - DAE Grid (gLite based)
 - GARUDA grid infrastructure is based on GT2 and run with an internal fake CA.
All resources are interconnected with a privat/NATted network
The concept of the VO is implemented through the manual management of the user/group credentials on all the resources.



Geo view Site view VO view Help About

GridICE >> Site::ALL

General														XML	
Gris	Host	Job	Charts	Network											
Overview														Computing	Management
Computing Resources														Storage Resources	
Site	Region	GK#	Q#	RunJob	WaitJob	JobLoad	Power	WN#	CPU#	CPUload	Available	Total	%	MH#	
ICTP-TRIESTE	Italy	1	3	25	0	78%	0	16	32	83%	10.6 GB	31.6 GB	67%	17	
IN-DAE-VECC-01	AsiaPacific	1	3	26	29	100%	0	13	24	100%	10.4 TB	10.7 TB	2%	2	
IN-DAE-VECC-EUINDIAGRID	AsiaPacific	1	9	0	0	0%	0	12	24	18%	-	-	-	2	
INDIACMS-TIFR	AsiaPacific	1	3	0	18	-	-	-	-	-	8 TB	13.5 TB	41%	-	
INFN-BARI	Italy	1	5	71	4290	100%	89K	32	72	100%	521.4 GB	1.3 TB	60%	56	
INFN-CAGLIARI	Italy	1	6	73	399	100%	5K	5	7	83%	-	-	-	31	
INFN-CATANIA	Italy	1	11	347	536	-	-	-	-	-	-	-	-	-	
INFN-CNAF	Italy	2	8	15	36	88%	8K	4	8	75%	158 GB	1.7 TB	91%	11	
INFN-FERRARA	Italy	1	4	4	2	12%	39K	17	34	0%	936.7 GB	1006 GB	7%	21	
INFN-LNL-2	Italy	2	9	48	0	5%	126K	35	86	34%	21.1 TB	35.4 TB	40%	92	
INFN-PADOVA	Italy	1	9	43	47	31%	120K	32	138	30%	53.8 TB	55.5 TB	3%	49	
INFN-PISA	Italy	2	22	196	0	24%	1M	171	800	14%	28.6 GB	47.8 GB	40%	152	
SNS-PISA	Italy	1	6	9	0	83%	18K	3	12	51%	64.2 GB	67.7 GB	5%	5	
UKI-SOUTHGRID-CAM-HEP	UKI	1	11	50	1	-	-	-	-	-	-	-	-	-	
TOTAL: 14	3	3	17	109	907	5358	2M	340	1237	58%	94.9 TB	119.1 TB	36%	438	



- HPC Clusters from C-DAC
 - Bangalore
 - AIX Cluster
 - Pune, Chennai, Hyderabad
 - Linux Clusters
- Linux Clusters from
 - IISc & RRI, Bangalore
 - IMSc & MIT, Chennai
 - IIT, Guwahati
 - IIT, Kharagpur
- AIX SMP from University of Hyderabad
- SAC, Ahmedabad is contributing GSAT3 terminals (GSAT4 when launched) and Satellite bandwidth



Since December 2006:

- 1 **VOMS server** @ INFN-CNAF (Bologna)
<https://voms2.cnaf.infn.it:8443/voms/euindia>
- 1 **LFC server** @ INFN-CNAF (Bologna)
<lfcserver.cnaf.infn.it>
- 1 **TOP LEVEL BDII** @ INFN-PADOVA
<eu-india-03.pd.infn.it>
- 1 **WMS-LB (RB)** @ INFN-PADOVA
<eu-india-02.pd.infn.it>
- 1 **GridICE server** @ INFN-PADOVA
<http://euindia-gridice.pd.infn.it:50080/gridice/>
- 1 **Gstat** @ AP-ROC, Taiwan
<http://gstat.gridops.org/gstat/euindia>

- Most of the gLite resources come from EGEE production sites and so operations are basically the ones of the production infrastructure
- GARUDA infrastructure has its Monitoring and Operation Centre at C-DAC Bangalore
- At the moment there is no a real ROC and now we are starting to work on (ROC at CDAC is foreseen in EU-IndiaGrid2)

- The interoperability between gLite and GARUDA middleware is under discussion and several approaches are figured out.
- The Project is actively organizing panel sessions, round tables, discussions about interoperability with other Projects interested in this matter (EGEE'07, WLCG-WS in Taiwan, eScience 2007 in Bangalore)
- A contact with OGF was started late September 2007 - participation at interoperability panel at upcoming Open Grid Forum events is under discussion
- The EU-IndiaGrid2 Project proposal describe a more detailed way on standards adoption/collaboration for job and data management interoperability