



EUChinaGrid Infrastructure

Giuseppe Andronico - INFN Catania

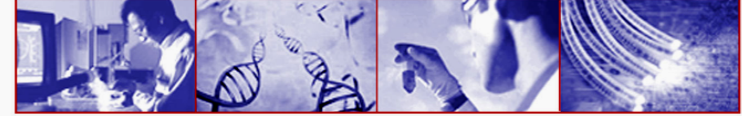
Concertation Meeting – Budapest, October 4th, 2007



FP6-2004-Infrastructures-6-SSA-026634



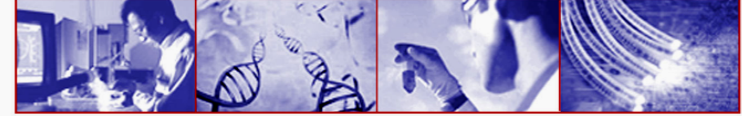
<http://www.euchinagrid.org>



Infrastructure

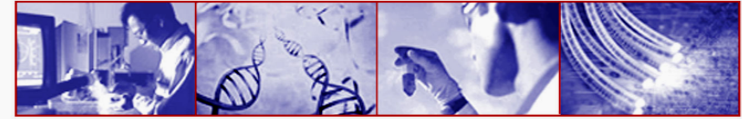
- ▶ EUChinaGrid from Jan 1st 2006 to Dec 31st 2007
 - 11 gLite Sites
 - IHEP (China)
 - CNIC (China)
 - Peking University (China)
 - Shandong University (China)
 - 2 Sites at Cyfronet (Poland)
 - 2 Sites at Aristotle University of Thessaloniki (Greece)
 - 3 Sites at INFN (Italy)





Network Status

- ▶ Main link Beijing-Copenhagen (stable from August 2007) at 2.5Gbps thanks to the european project ORIENT
 - Upgrade of the previous EU-China link at 622Mbps (TIEN2 project)
- ▶ European network GEANT2 and network infrastructure between Europe with Asia-Pacific TEIN2 support IPv6
 - Users networks have to become IPv6 compliant
- ▶ EU-China RTT of 180 ms both for IPv4 and IPv6
 - Upgrade of the value of ~400 ms at the beginning of EUChinaGrid project
- ▶ Requirements
 - IPv6 compliant
 - Low jitter (< 200ms)
 - Link stability
 - No packet loss



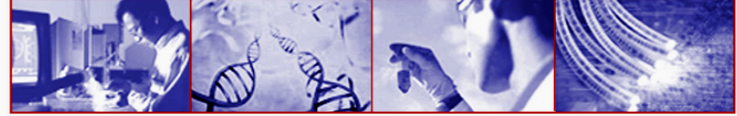
Infrastructure and Sites

- ▶ 11 Sites in the actual infrastructure
 - 9 Sites already existent in EGEE
 - 1 new Site under EGEE/CERN ROC control
 - 1 new Site under EUChina ROC control

- ▶ 1 incoming Site will be set up asap

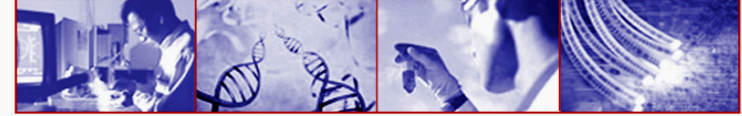
- ▶ CPUs: ~825
- ▶ Storage space: ~30 TB

Site	ROC	GK#	Q#	Computing Resources							Storage Resources					
				RunJob	WaitJob	JobLoad	Power	WN#	CPU#	CPUload	Available	Total	%	MH#		
BEIJING-CNIC-LCG2-IA64	CERN	1	7	0	31108	-	0	0	0	-	7.1 GB	62.8 GB	89%	11		
BEIJING-LCG2	CERN	1	8	12	6	79%	41K	14	28	18%	1.1 TB	2.8 TB	60%	7		
SDU-LCG2	CERN	1	5	0	0	-	-	-	-	-	59.4 GB	67.9 GB	13%	-		
CYFRONET-IA64	CentralEu	1	13	39	18	-	-	-	-	-	237.8 GB	2 TB	89%	23		
CYFRONET-LCG2	CentralEu	1	17	154	0	-	0	0	0	-	69.5 TB	87.3 TB	20%	136		
BEIJING-PKU	EUChina	1	8	0	2	0%	0	1	2	9%	-	-	-	4		
INFN-CATANIA	Italy	1	11	382	219	100%	120K	29	86	100%	1.8 TB	3.5 TB	48%	93		
INFN-CNAF	Italy	2	8	8	2	63%	8K	4	8	28%	243.3 GB	1.7 TB	96%	11		
INFN-ROMA3	Italy	1	6	0	0	0%	57K	22	44	0%	6.9 TB	7.1 TB	3%	27		
GR-01-AUTH	SEE	1	12	8	18	-	-	-	-	-	-	-	-	-		
HG-03-AUTH	SEE	1	19	105	6	89%	156K	57	114	98%	-	-	-	63		
TOTAL: 11		4	5	12	114	708	31379	4%	383K	127	282	4%	80 TB	104.6 TB	5%	375



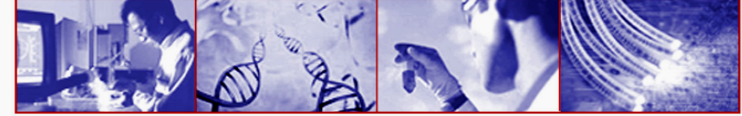
Operations

- ▶ Ticketing system installed at GARR (XOOPS)
 - Control shifts by CERN and INFN
- ▶ GridICE server at INFN-CNAF
 - “Intermonitoring” activity started
- ▶ SAM at IHEP
- ▶ Gstat at Academia Sinica (Taiwan)



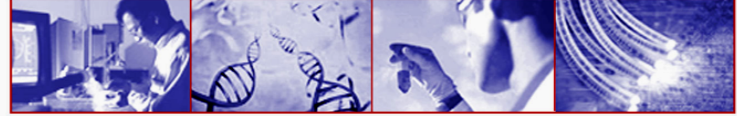
ROC Definition

- ▶ EUChina ROC is born in order to coordinate the operational activity for the existent gLite infrastructure and to support new incoming Sites.
- ▶ INFN-CNAF guides this ROC
- ▶ CERN people is part of the operational activity



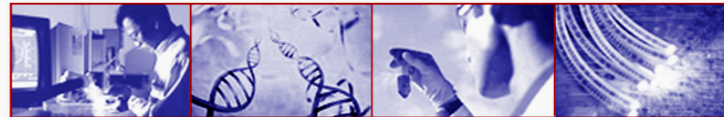
Country Level Operations

- ▶ Interoperations round table with GOS people on Oct 24th in Beijing (as part of the ROC-on-Duty tutorial)
 - Aim to have 2 ROCs, 1 in China and 1 in Europe
 - 1 central ROC coordinating (INFN)



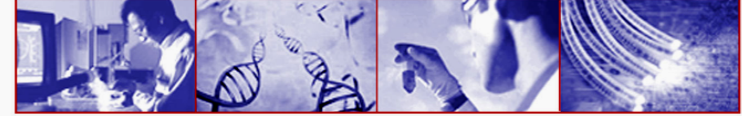
VO Management

- ▶ euchina VO
 - VOMS server at INFN-CNAF
 - 46 users registered
 - Supported on all the sites (SAM test controls enabled)
- ▶ Other VOs supported
 - cms
 - atlas
 - biomed
 - argo



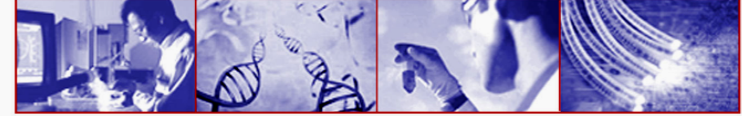
SLAs

- ▶ There is no SLA for EUChinaGrid sites



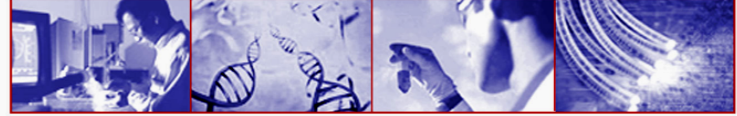
Contributions to Standards

- ▶ A gateway service has been developed for interoperability between gLite and GOS middlewares
- ▶ We are studying how to make this service compliant with GIN standards



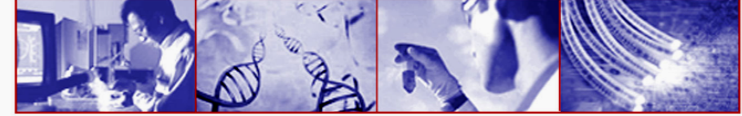
Join Development Areas

- ▶ Interoperability gateway
 - prerequisite for interoperations between pilot infrastructure (gLite based) and CNGrid
- ▶ IPv6 code checker developed to verify the compatibility of gLite with IPv6
 - Now part of the ETICS building system
- ▶ Testbed set up to test IPv6 compatibility can be used



Training Infrastructure

- ▶ GILDA has been used for the tutorial during EUChinaGrid project
- ▶ Series of Sites and services with the latest INFN-GRID middleware
- ▶ Used for several tutorials all over the world
- ▶ <https://gilda.ct.infn.it/>



Other Points and Issues to discuss

- ▶ Chinese partners willing to expand gLite based infrastructure
 - 1 new site deployed in a non-partner institute (Shandong University)
- ▶ Good collaboration with Chinese Sites in operations activity
 - WISDOM Data Challenge
 - CMS and ATLAS software deployment
- ▶ Local training team created in China as a warranty for future spreading of gLite knowledge