

Advancing South-East Europe into the eInfrastructure era

www.see-grid.eu



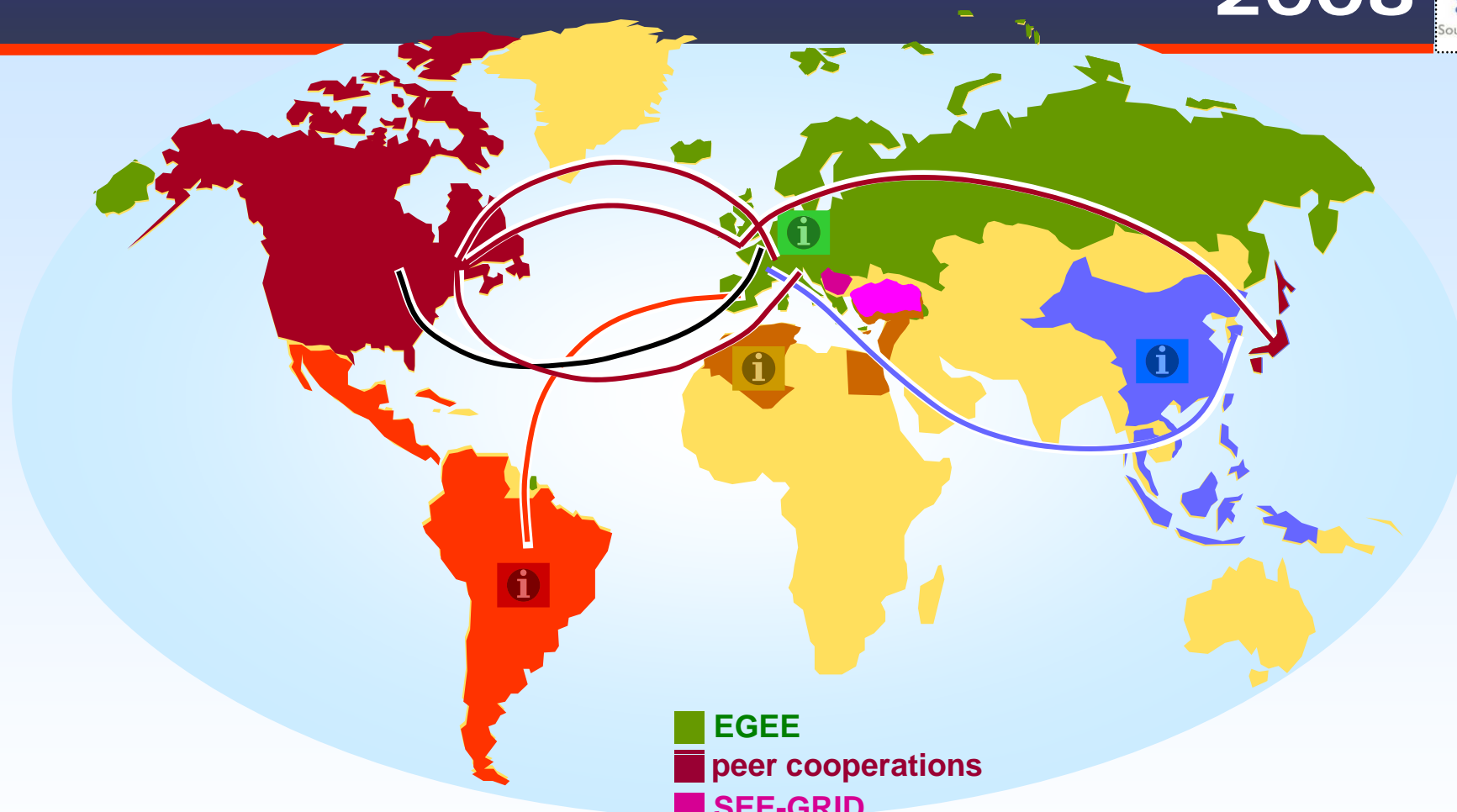
Peter Kacsuk
MTA SZTAKI

Grids: regional expansion 2004-2008



SEE-GRID

South Eastern European GRid-enabled
elnfrastructure Development



- EGEE
- peer cooperations
- SEE-GRID
- BalticGrid
- EUMEDGRID, EXPRESS
- EELA, RedCLARA
- EUChinaGrid

- SEE-GRID-1 project May 2004 - May 2006:
results

- SEE-GRID-2 project May 2006 - May 2008:
 - Definition
 - Objectives

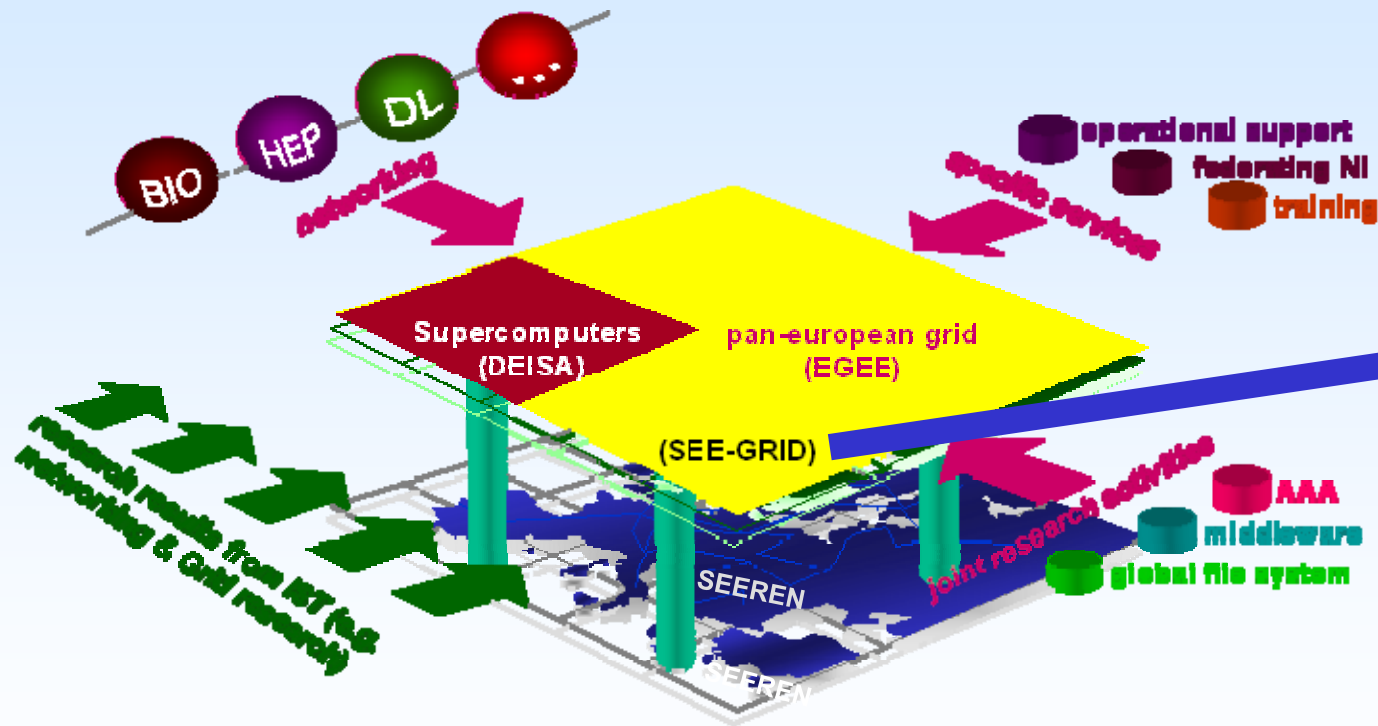
- Recommendations for regional initiatives

The SEE-GRID-1 initiative



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> <http://www.see-grid.org>

SEE-GRID-1 project partners: the regional dimension



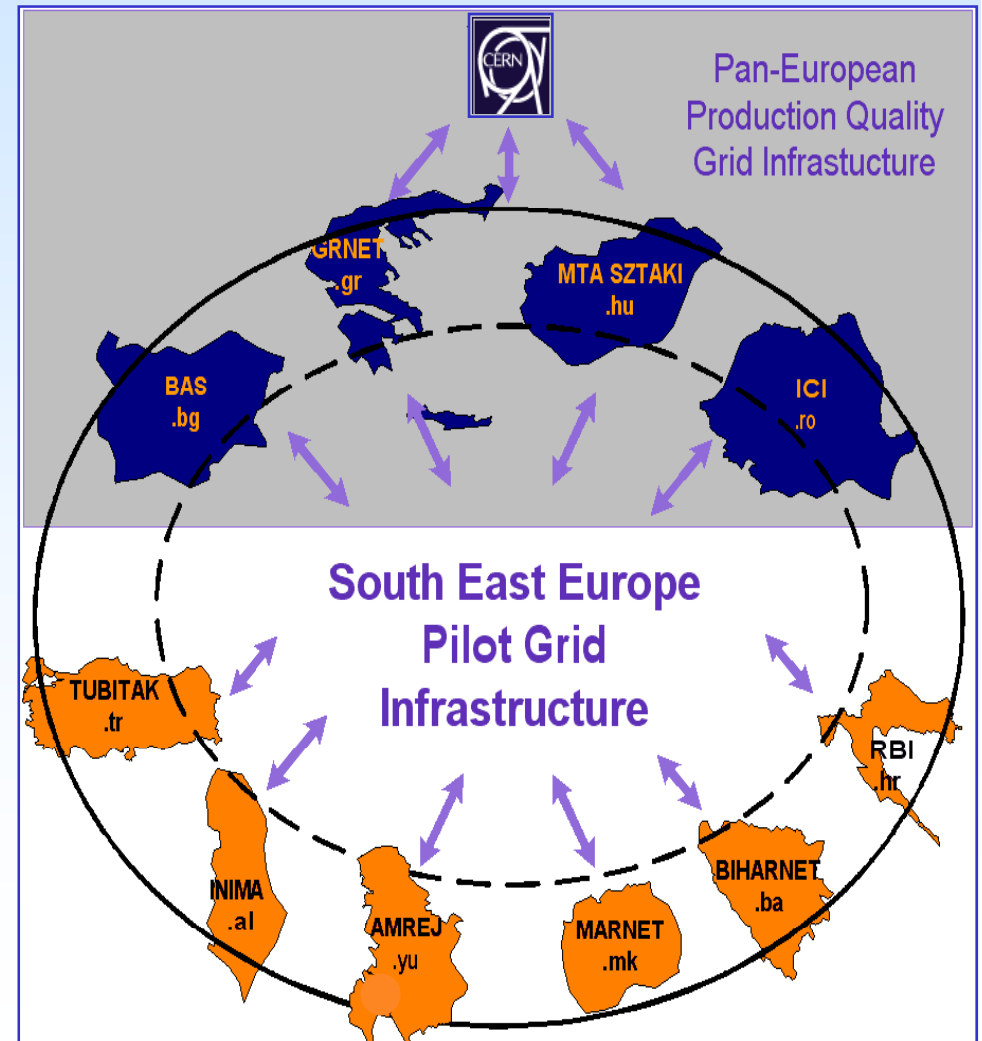
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Contractors

GRNET	Greece
CERN	Switzerland
SZTAKI	Hungary
IPP-BAS	Bulgaria
ICI	Romania
TUBITAK	Turkey
INIMA	Albania
BIHARNET	Bosnia-Herzegovina
UKIM	FYR of Macedonia
UOB	Serbia-Montenegro
RBI	Croatia

Third Parties

18 universities / research centres

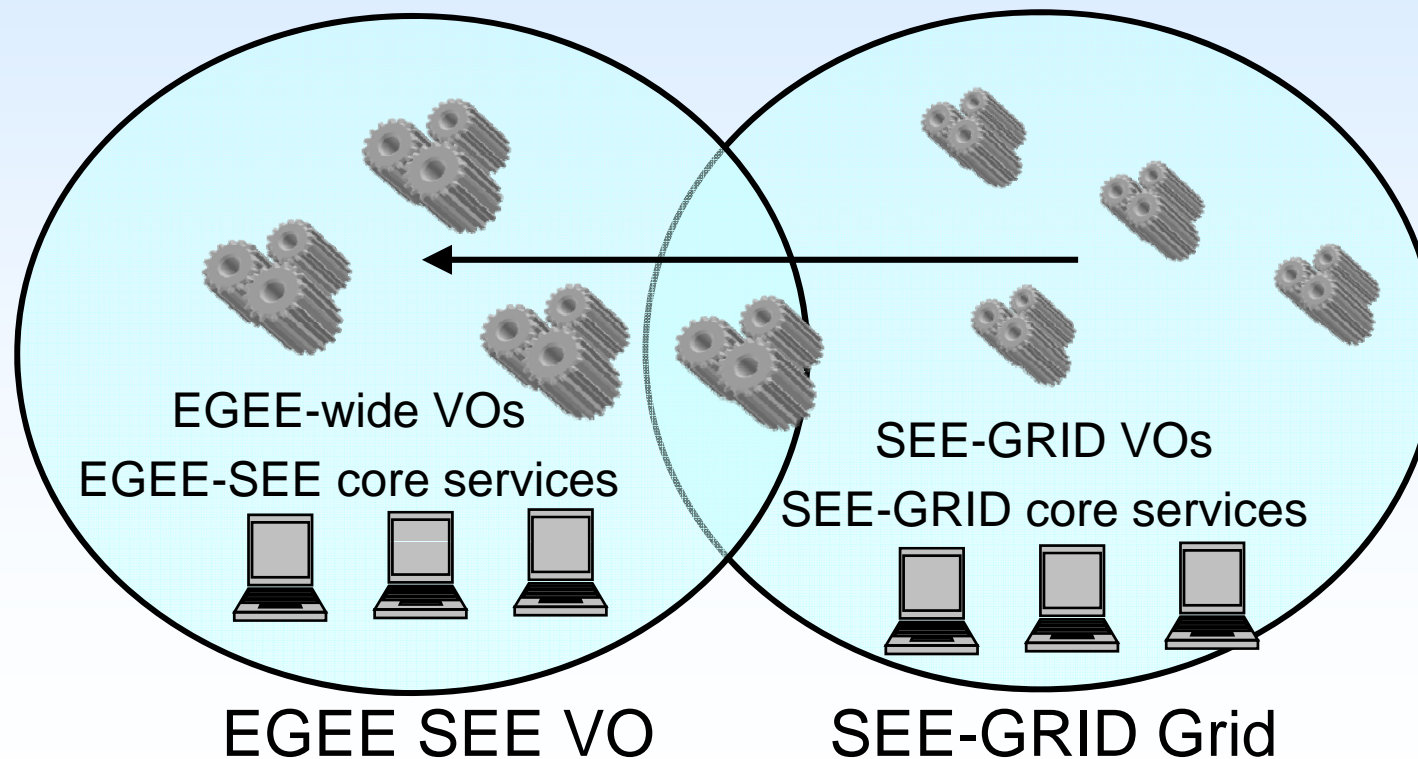


SEE-GRID and EGEE



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- Infrastructure overlapping and complementing to EGEE
- SEE-GRID open to new “fresher” sites
- SEE-GRID open to new applications



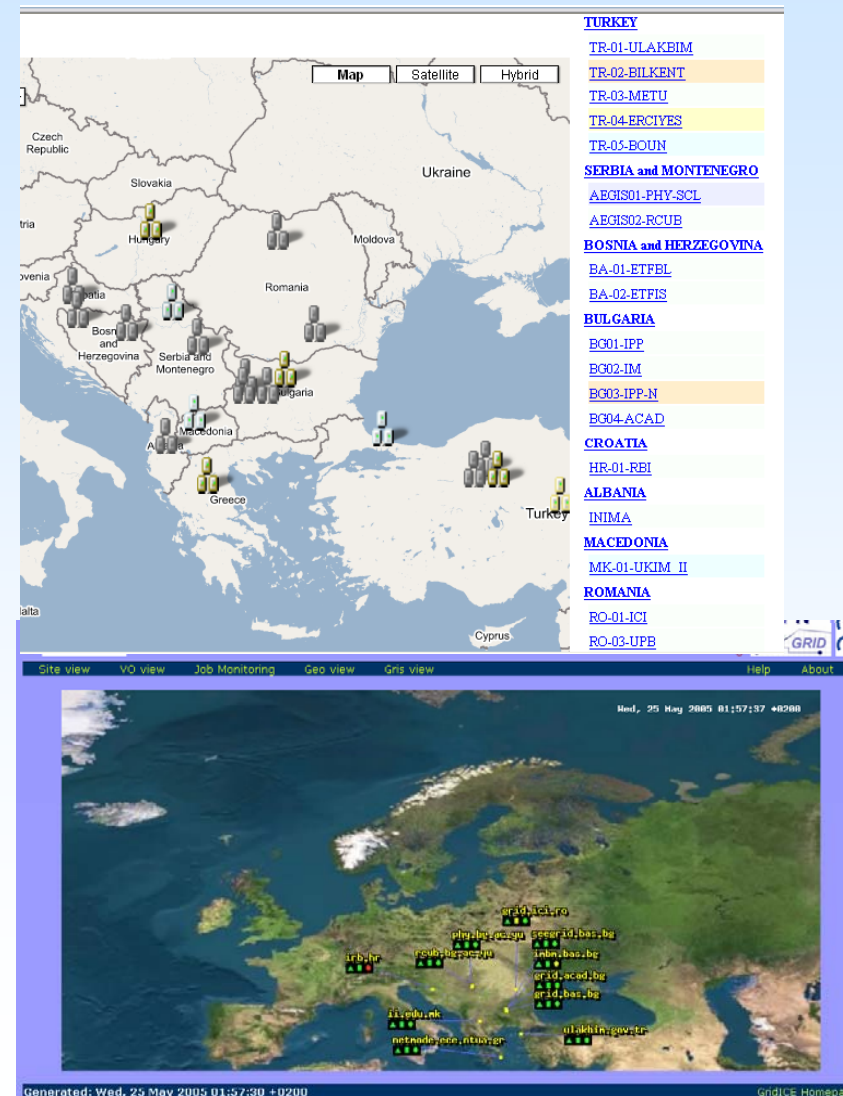
SEE-GRID-1 key results: infrastructure



SEE-GRID

South Eastern European GRI-enabled
Infrastructure Development

- Large, distributed infrastructure spanning all countries:
 - Including EGEE-SEE sites, 30 sites, 450 CPUs
 - 150 CPUs in 20 non-EGEE-SEE sites
- LCG-2 MW on Scientific Linux
- Support the SEE-GRID Virtual Organization
- Interconnection of SEE sites by **P-GRADE portal**
- Catch-all SEE-GRID CA operational
- Overlap with EGEE production
- Operations centre management solutions deployed: a number of monitoring tools, helpdesk, sites database, etc...

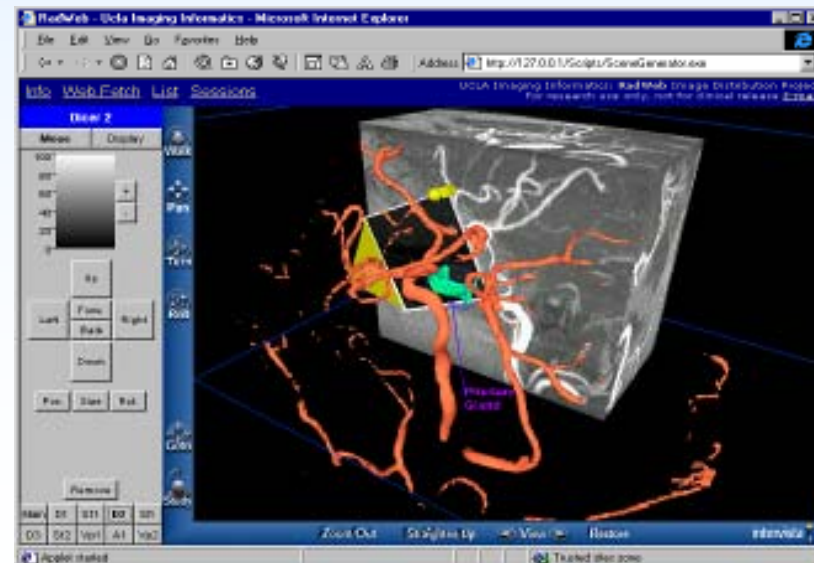
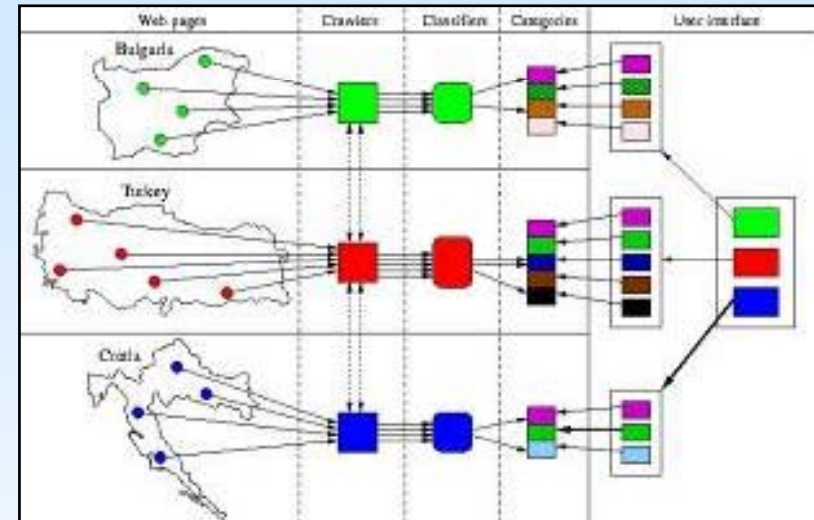


SEE-GRID-1 key results: applications



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- 2 regional grid applications developed:
 - **Search Engine for South-East Europe (SE4SEE)** for Grid-aided web-crawling & data indexing.
 - **Volumetric Image Visualization Environment (VIVE)** for medical images and other static or time-dependent scalar and vector 3D fields



SEE-GRID-2 project partners: expansion



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Start date:	01/05/2006
Duration:	24 months
Total Budget:	2,028,886 €

Contractors

GRNET	Greece
CERN	Switzerland
SZTAKI	Hungary
IPP-BAS	Bulgaria
ICI	Romania
TUBITAK	Turkey
ASA/INIMA	Albania
UoBL	Bosnia-Herzegovina
UKIM	FYR of Macedonia
UOB	Serbia
UoM	Montenegro
RENAM	Moldova
RBI	Croatia

Third Parties

27 universities / research centres
Hungary: Univ. of Miskolc
Int. Business School



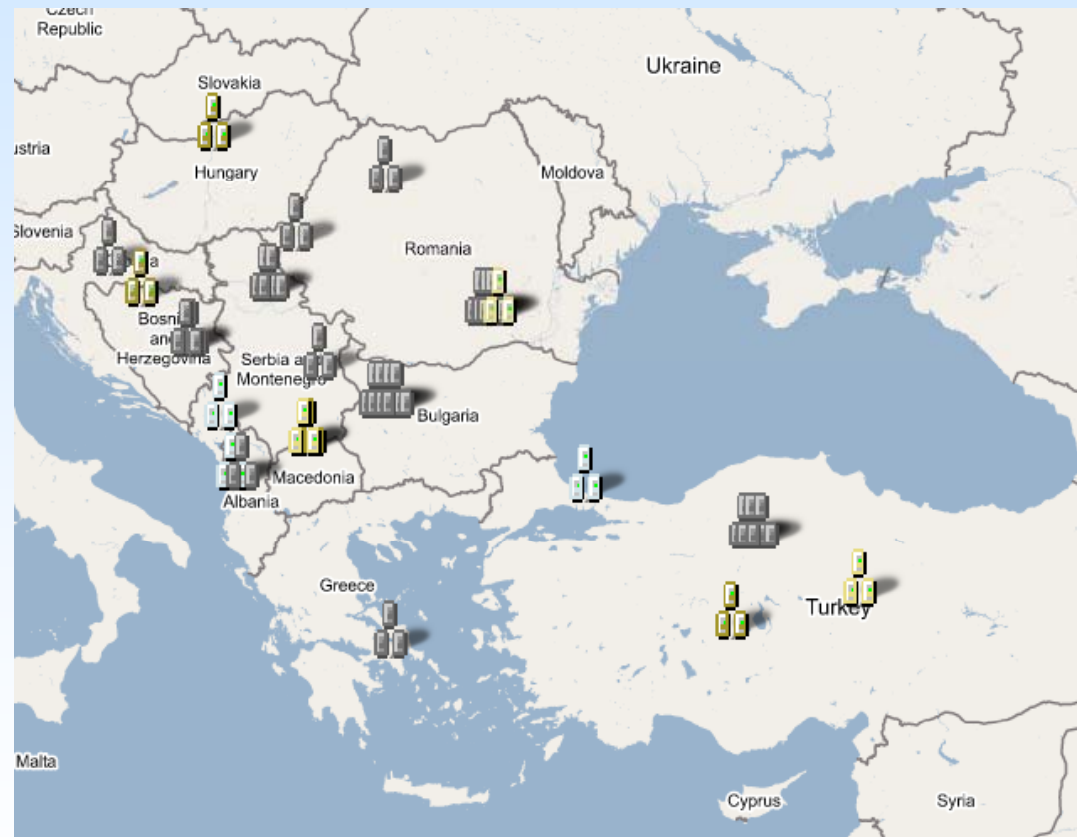
Current infrastructure



SEE-GRID

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- Number of Countries: 11
- Number of Sites: 31
- Number of CPUs: 540
- TBs of Storage: 11.64
- Migrating from LCG to gLite



Infrastructure management: monitoring



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No	Site Reports	GIIS Host	bnode	cernse	gperf	sanity	serv	version	totalCPU	freeCPU	runJob	waitJob	seAvail TB	seUsed TB	maxCPU	avgCPU
1	AEGIS01-PHY-SCL	ce.phy.bg.ac.yu	ok	ok	ok	ok	ok	GLITE-3 0 1	100	1	99	276	0.06	0.07	100	95

General		Gris	Host	Job	Charts	Network	Computing Resources						Storage Resources		
Site ▼	Domain	GK#	Q#	RunJob	WaitJob	SlotLoad	Power	WN#	CPU#	CPULoad	Available	Total	%		
AEGIS01-PHY-SCL	phy.bg.ac.yu	1	8	99	2	99%	560K	25	100	99%	135.2 GB	278.5 GB	51%		
AEGIS02-RCUB	rcub.bg.ac.yu	1	3	6	0	5%	48K	12	12	11%	112.2 GB	199.2 GB	4%		
AEGIS03-ELEF-LEDA	elfak.ni.ac.yu	1	3	0	0	0%	19K	4	4	0%	8.5 GB	9.3 GB	9%		
AL-01-INIMA	salla6.inima.al	1	2	1	28	0%	4K	3	3	1%	1.2 GB	9.1 GB	87%		
AL-02-FIE	fie.upt.al	2	6	0	26664	-	45K	8	8	0%	47.5 GB	49.1 GB	3%		
BA-01-ETFBL	grid.etfbl.net	1	2	0	0	0%	17K	2	3	0%	147.2 GB	149.5 GB	2%		
BA-02-ETFIS	etf.unssa.rs.ba	1	2	0	10	0%	29K	3	6	0%	24.1 GB	29.8 GB	19%		
BA-04-PMFSA	pmf.unsa.ba	1	2	3	0	100%	40K	7	9	4%	33.6 GB	34.4 GB	2%		
BG01-IPP	grid.bas.bg	1	10	0	1	0%	-	-	-	-	591.7 GB	705 GB	16%		
BG02-IM	imbm.bas.bg	1	5	4	15	80%	-	-	-	-	15.4 GB	32.9 GB	54%		
BG04-ACAD	grid.acad.bg	1	10	1	3	0%	373K	39	78	14%	27 GB	70.3 GB	62%		
BG05-SUGrid	grid.uni-sofia.bg	1	9	12	87	86%	-	-	-	-	58.5 GB	83.5 GB	30%		
HR-01-RBI	irb.hr	1	4	0	2	75%	112K	5	20	0%	60.8 GB	64.6 GB	6%		
MK-01-UKIM_II	ii.edu.mk	1	4	0	5	0%	72K	6	12	0%	327.5 GB	337.7 GB	3%		
MK-02-ETF	etf.ukim.edu.mk	1	2	0	0	0%	-	-	-	-	-	-	100%		
MREN-01-CIS	cg.ac.yu	1	2	0	0	0%	25K	2	4	0%	64.6 GB	67.7 GB	5%		
RO-01-ICI	grid.ici.ro	1	8	8	8	88%	-	-	-	-	410.7 GB	433 GB	5%		
RO-03-UPB	rogrid.pub.ro	1	3	0	0	0%	20K	6	6	0%	29.9 GB	34 GB	12%		
RO-08-UVT	info.uvt.ro	1	7	0	1	0%	-	-	-	-	298.2 GB	299 GB	0%		
RO-09-UTCN	mosigrid.utcluj.ro	1	3	0	0	0%	-	-	-	-	196 GB	216.6 GB	9%		
SZTAKI	hpcc.sztaki.hu	1	2	0	0	0%	-	-	-	-	17.9 GB	18.7 GB	4%		
TR-01-ULAKBIM	ulakbim.gov.tr	1	14	24	25	73%	665K	125	125	60%	2.7 TB	3.1 TB	11%		
TR-02-BILKENT	cs.bilkent.edu.tr	1	13	0	0	0%	12K	1	2	0%	128.7 GB	205.1 GB	7%		
TR-03-METU	cc.metu.edu.tr	1	13	0	0	0%	3K	1	1	0%	46 GB	50.3 GB	8%		
TR-04-ERCIYES	erciyes.edu.tr	1	13	0	0	0%	-	-	-	-	97.3 GB	102.6 GB	5%		
TR-05-BOUN	grid.boun.edu.tr	1	13	0	0	0%	-	-	-	-	30.8 GB	34.7 GB	11%		
TR-06-SELCUK	selcuk.edu.tr	1	13	6	60	100%	-	-	-	-	24.5 GB	33.2 GB	26%		
test-Gmet	netmode.ece.ntua.gr	1	2	0	27	-	-	-	-	-	29.3 GB	32.9 GB	11%		
TOTAL	28 sites	29	178	164	26938	27%	2M	249	393	12%	5.6 TB	6.6 TB	23%		

Using the infrastructure



- Going to website www.seegrid.eu
- Talking to the SEEGRID representative in the country
 - Miklos Kozlovsky (SZTAKI): **m.kozlovsky@sztaki.hu**
- Obtaining a certificate from SEE-GRID catch-all CA
- Joining the SEE-GRID VO
- Asking local country Grid team to provide support

- Currently 10+ new applications under development, ~20 in the course of the project