



Enabling Grids for E-science

2nd EGEE NA4 SSC Workshop ES SSC Proposal

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On behalf of the EGEE-ES potential partner SSC

(1)

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www.eu-egee.org

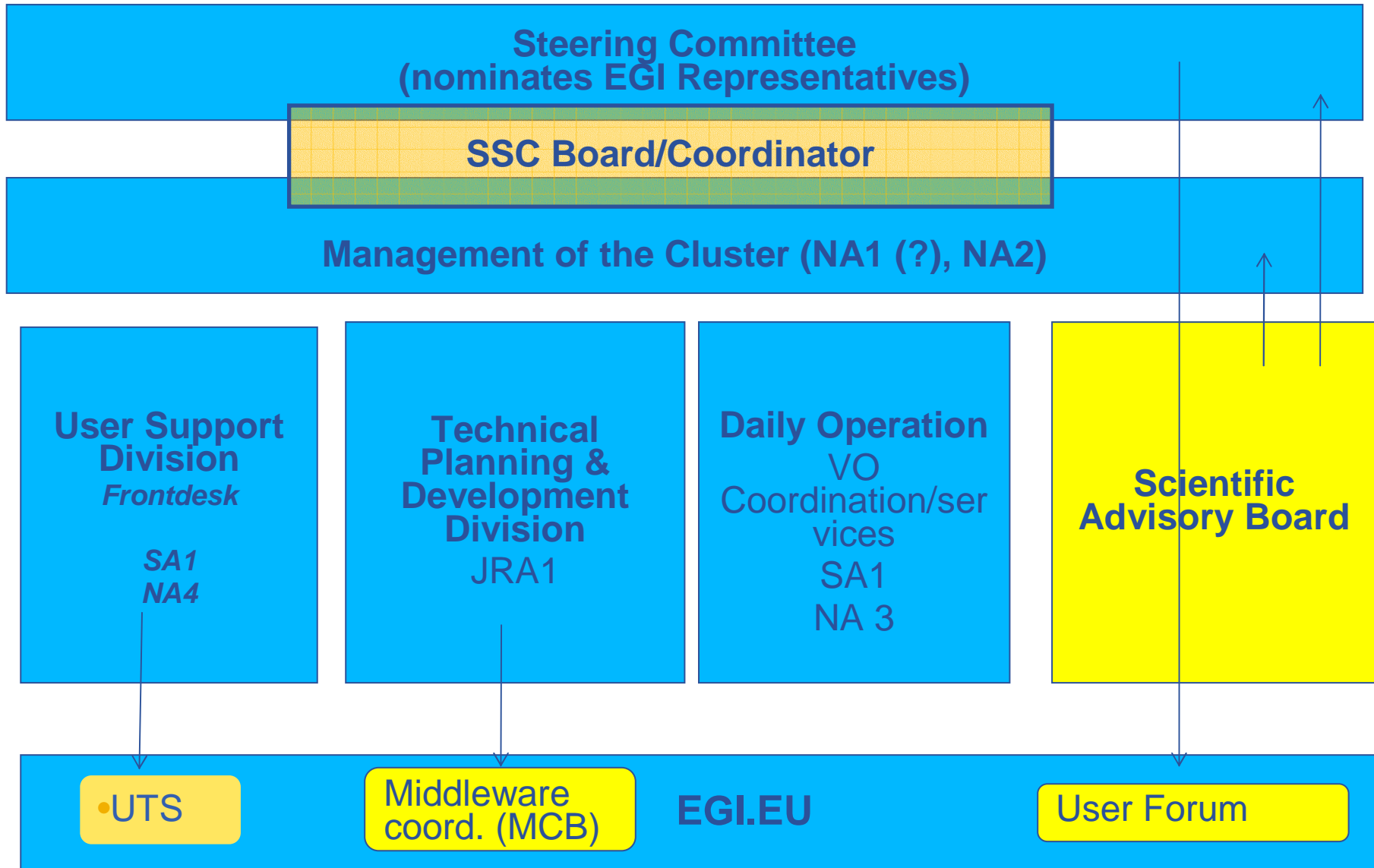


- **Contact points within the EGI management structure that are different and/or in addition to those in the EGI_DS Blueprint and Functions documents.**
- **Identify "heavy" and/or VO-specific services that are needed by the community to fully exploit the EGI infrastructure.**
- **Identify the institutes/projects/NGIs that have been contacted about the SSC.**
- **Identify any ESFRI projects that have been contacted.**
- **Identify likely partners that will be funded.**
- **Identify likely partners that will be unfunded.**
- **Identify common tools/libraries for porting that will be useful for the community. (E.g. BLAS, LAPACK, ...)**
- **Also create a rough draft of the work plan for the SSC, identifying whether the activities within the work plan are Networking Activities, Service Activities, or Joint Research Activities. Also provide a rough calculation of the effort required.**

DRAFT (1st approximation)

WP	Description	FTEs	comment
NA1	SSC Management	1	
NA2	Dissemination, Training, ...	2	
NA3	VO Management and Coordination	1	
NA4	Application Support and Identification	2	
JRA1	Technical planning and development, interfaces to other ES infrastructures	3	
SA1	Monitoring, Resource, Frontdesk, 1 st level User support	3	
Total		12	

Contact points with EGI structure





- European Grid Infrastructure

Risks for ES SSC:

- Too many contact points
- Organisation is not streamlined
- Is EGI.eu overorganized?

Question of Efficiency!

- ES specific applications (e.g. MM5, WRF, ..)
- Access/interfaces from/to existing ES community infrastructures
 - OWS (consulting and standard interfaces for processing @ data)
 - Processing outside of the infrastructure (code to data!)
 - Accessing data centers outside of Grid (e.g. OWS, handling)
 - !high priority .. Copying and duplicating is no solution)
 - Accessing databases from Grid (interfaces and support for solutions e.g. GReIC, OGSA-DAI, GENESI-DR)
- Specific site services
 - runtime environments (commercial and open-source C++, Fortran, Java, perl, Python....)
 - Mathematical and Earth Science libraries
 - IDL, PVWave
- HPC support
 - support for parallel platforms (compiler and interconnect dependent MPIs & OpenMP, incl. installation support and best practices for Batch, at least at different sites)
 - access to HPC storages

- Support for complex workflows
- ES SSC Science Gateways
- Resource reservation (operational and risk management)
- Access to Instruments and Sensors from Grid by solutions from GridCC : IE (Instrument Element) and VCR (Virtual Control Room) and DORII

- **At a first stage the potential partners have been asked to get in touch with their NGI for information and political support**
 - Bulgaria, France, Germany, Greece, Italy, Russia, Slovakia, Spain, UK, Ukrainia
- **These NGIs have been and will be contacted to negotiate:**
 - Political support to the SSC
 - Formal definition of interfaces with the NGI
 - Support in terms of
 - Shared person power
 - Tools and services
 - Financial support
- **Who will be in charge of contact with NGIs?**
 - Before the consolidation of the SSC: each partner with its respective NGI according to common framework
 - When consolidated: SSC for formal responses from the NGIs

- **The current ESFRI projects recognized as relevant for ES are:**
 - EPOS
 - ICOS: Integrated Carbon Observation System (Coord. IPSL)
 - Lifewatch
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- **EU Projects, Initiatives.... Contacted and to be contacted**
 - VAMDC (Coord. IPSL)
 - HALO (Harmonized coordination of Atmosphere, Land and Ocean coordinated projects of the GMES backbone)
 - Seadatanet (Ocean) IFREMER
 - GEOLAND
 - Atmosphere Coord.:ECMWF
 - Orfeus Consortium– Seismology

- **IUGG : International Union of Geophysics and Geodesy**
- **EGU; European Geophysical Union- ESSI: CNR/IMAA, CRS4, IPSL, KNMI, SCAI, Univ. Cantabria**
- **e-IRG: data infrastructure – ESRIN**
- **CODATA : GCRAS**
- **ERCIM (European Consortium for Informatics and Mathematics), IISAS , SCAI (partner)**
- **CORDEX: Univ. Cantabria**
- **PRACE (IPSL, CMCC**
- **Geoss – CNR, SRI**
- **INSPIRE, SEIS: CNR/IMAA**
- **G-OWS: CNR/IMAA**
- **OGF (SCAI working group leader, IMMA)**
- **OGC (IMAA)**

Institute	Country	NGI	Discipline	VO	Role
SCAI/FhG ES cluster	Germany	D-Grid	Applied Informatics	ESR G-Climate	User Support Development
GCRAS + Consortium of Russian ES and SKIF-Grid (Belorussia) ES cluster	Russia	RDIG	Geophysics, Applied Informatics	eEarth	Operation Development User support
IISAS ES cluster	Slovakia	SlovakGrid	Applied Informatics	ESR	Operation, development
CGGVeritas ES Cluster	France	NGI- France	Seimology	EGEODE	Operation, User support,
Univ. Cantabria	Spain	Red Nacional de e-Ciencia	Climate	ESR & EELA G-Climate	Operation, Use r support, development
SFTC	UK	UK- France	Environment BADC	NGS	Operation, User support,
CNR/Earth & environment	Italy	IGI	Civil protection	Cyclops	User support Development

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EMA	France	NGI france	Civil Protection & Hydrology	Cyclops & ESR	Development
Univ. Minho	Portugal	Iniciativa Nacional GRID	Civil Protect.	Cyclops, EELA2	Operation, development
CMCC/SPACI Univ. Salento	Italy	IGI	Climate & Applied Informatics	Climate-G	User support Development
IPP-BAS	Bulgaria	Bulgarian Grid Consortium	Informatics Environment	See-Grid-SCI	Operation, User support, Development
NOA	Greece	GRNET	Meteorology, Environment	See-GRId-SCI	User Support
IASA NTUA&NKUA	Greece	GRNET	Atmos. Model Applied Informatics	See-Grid	Operation, User support
Univ. Thessaloniki	Greece	GRNET	Atmos. Phys. Seismology	See-Grid	Operation, User Support
Univ. Patras	Greece	GRNET	Geology, Seismology,	See-Grid	

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ESRIN			Earth Observation	GPOD	Operation, development, user support
SRI	Ukrainia	Ukrainian NGI	Environment		Operation, Development, User support
IPGP Cannot answer today	France	French NGI	Solid Earth	ESR	Operation, User support
IPSL Answer ??	France	French NGI	Ocean, Atmosphere, Climate	ESR	Coordination, dissemination
FRANCE Discussion about	An academic research	Organisation To participate	And to support the SSC	On going	
BRGM	France	French NGI			
KNMI	The Netherlands		Meteorology, Seismology, climate		
Univ. Neuchâtel	Switzerland	SwiNG	Geohydrology	ESR	End-user
CRS4	Italy		Environment		

- **There has been an effort to expand the ES community in EGEE and then EGI**
- **For ES partners that are joining the ES SSC effort:**
 - Organization of the ES SSC
 - Definition of the different roles
 - Funding of the partners
 - EU proposals
 - NGI

- **ES community is interested to any tool/library able to provide solutions for its VO-specific services. In particular**
 - Parallel applications are relevant for us:
 - Gridification of MPI and MPICH (EGEE-III MPI WG)
 - In principle there should be interest by the A&A community for all MPI-related libraries
http://wiki.egee-see.org/index.php/Libraries_and_softwares_based_on_MPI_paradigm
 - Tools and services being part of the RESPECT program. Among them it is worth to explicitly mention
 - GANGA: a lightweight distributed framework for parallel scientific applications in master-worker model
 - i2glogin: a tool that enables interactive communication between a grid job and the user
 - GRelC (Grid Relational Catalog Project): a set of advanced data grid services to transparently, efficiently and securely manage grid-databases...and similar tools like OGSA-DAI, G-DSE and AMGA
 - IE (Instrument Element): an abstraction of an instrument, sensor, or group of instruments and sensors in Grid
 - VCR (Virtual Control Room): an open source grid portal based on [GridSphere](#) and Web 2.0 technologies. The VCR fully supports the gLite middleware and Instrument Elements
 - StoRM to manage any storage resources