

EGEE SA1 Organization Meeting

EGEE

**Enabling Grids for
E-science in Europe**

Regional Operations Centers



ROC Objectives

- Bring the middleware release to a set of Resource Centers
- Maintain the Grid resource centers aligned with the release
- Validate the set of grid services and components to form a functioning Grid to serve user communities
- Validate installation/upgrade procedure and documentation
- Develop/Run test suites for components and Grid services to certify a site installation
- Develop Expertise in the usage and troubleshooting of problems experienced by resource centers and users

ROC Objectives

- Provide support to resource centers and user, interact with Application/VO specific support
- Refer and escalate middleware problems to developers
- Collaborate with CIC to have monitoring systems and performance evaluator running
- Define the tools to measure the service level provided by resource centers
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Certification - Release documentation and distribution

- Certification of the release:
 - the Certification Activity is a collaborative activity between the 'ROCs/Release group', in contact with Middleware developments
 - Distributed Certification testbed
- ROCs customize the release for its region
 - add specific region VO and related software etc
- Definition of a CVS packages repository
 - Cern central packages repository
 - ROC specific repository if needed
- Configuration and automatic installation tools for the production infrastructure sites,
 - collaborative development, integration
- 'Mini' installation testbed to verify installation procedures one for each ROC

ROC Management Team - Activities

- Has the responsibility to coordinate the upgrade or new installation with the Resource Centers
- Keeps a repository of Resource Centers configurations
- Collaborate with Resource Centers install/upgrade middleware release
- ROC Management Team in collaboration with Resource centers managers 'certificate' the Resource Centers
 - Development of a certification suite
 - The Grid resource are allowed to be registered in the Grid Information Service
- Deployment support:
 - Sites/Resource centers and ROC Management Team
 - ROC Management Team and ROCs/ReleaseGroup

ROC Grid Service Certification

- **GRID site and service validation**
- Testing programs to verify and validate resources and Grid services installation and upgrade
 - Middleware release test suite provided by Middleware Activities
 - Developments of Grid Services and Resources certification suite 'Application specific' in collaboration with CIC and VO
 - Who: ROC Management Team and Resource center grid manager

ROC: Support

- User and Service Support
 - VO Applications
 - VO Services
 - Grid Services
 - Resource Centers and local resources managers
 - ROC Groups (Release Group and Management team)
- Development of specific procedures to recover or proactively avoid congestion or faulty situation in grid services or sites
- Knowledge Base
- Exhalation to middleware developers: who is allowed to submit bugs?
- How Rocs are informed about upgrade with bug solution?

ROC: Monitoring (in collaboration with CIC)

- Monitoring services at resources centers
- Monitoring Grid Services (Resource Brokers, RLS, GIS etc)
- Monitoring VO usage/availability of resources
- Job Monitoring at VO level

Policies management

- Service level Agreement
- Resource availability
- Shared resources

Use case: GOC (ROC-CIC) experience and organization in Italian Grid

- Production Grid : new issues
- Set up a Management Organization
 - Coordination committee to analyze experiment requirements and define resource access policies.
 - Deployment planning according to CC decisions
 - New Management tools definition and implementation
 - Operations Services and support for Multi-VO users

- **Installation and configuration:**
 - Configuration and automatic installation tools for the production infrastructure sites
- **Monitoring:**
 - GridICE from DataTAG/INFN for active monitoring:
 - Based on automatic resource discovery from Grid Information System
 - Dynamic monitoring
 - Grid services, Jobs and Grid resources
 - Customized view for
 - VO-managers,
 - Site managers,
 - Grid Operation Center operators,
 - Grid Users
- **Software repository**
- **User support**
- **Site manager support**
- **Release validation:**
 - Integration/customization of middleware release with application specific software
- **GRID Site and GRID service validation**
 - Testing programs to verify and validate site and services installation

Where is all this stuff?

<http://grid-it.cnaf.infn.it>

(Currently we are installing a customized version of LCG1-1.1, based on EDG 2.x, 100% compatible with LCG: <http://lcg.web.cern.ch/LCG/>)

- Packages lists
-> **Manage your site -> Packages lists**
- Documentation for installation and upgrade:
-> **Manage your site -> Installation/Upgrade**
- Grid status by GridICE
-> **Grid status**
- User and site manager support:
-> **Support -> Ticketing system**
- Knowledge base:
-> **Support -> Knowledge base**

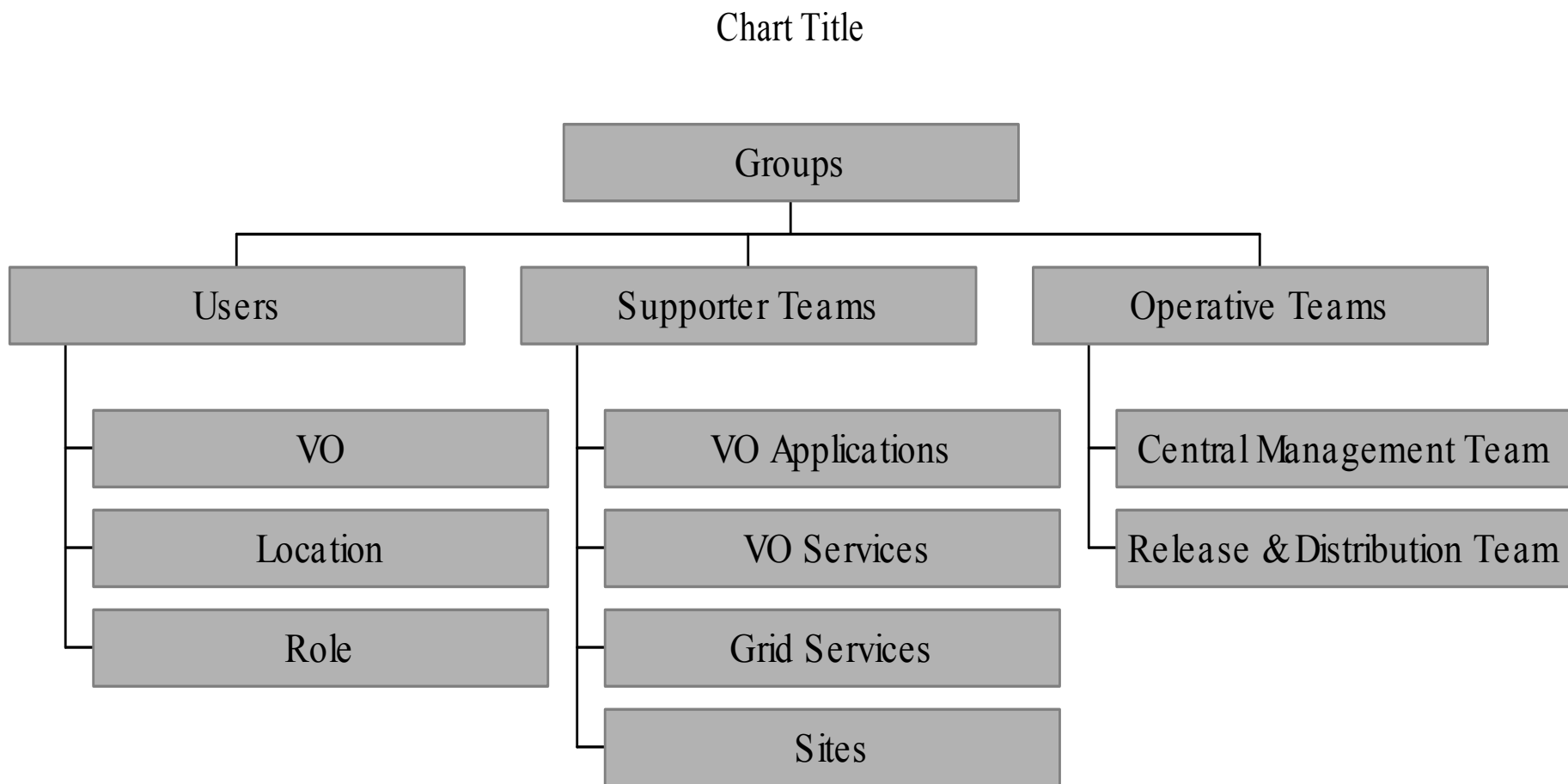
Organization

- **Grid Operation** – resp. C.Vistoli
 - **Central Management Team** A.Italiano, A. Chierici
 - Alessandro Cavalli, Enrico Ferro, F.Fanzago, F.Taurino, S.Fantinel, L.Vaccarossa, T.Coviello
 - **Release and Documentation** E.Ferro, A. Chierici
 - A.Caltroni, A.Ferraro, S.Lusso, A.Chierici
 - INFNgrid is a superset of LCG1
 - Added some VOs
 - INFN VOs: infngrid, babar, theophys, virgo*
 - Grid.it VO for other sciences: inaf (astrophysics), ingv (vulcanology), bio (bioinformatics), gridit
 - Different directories structure of the repository
 - Improved GridICE support for monitoring

Organization cont.

- **Service support A.Ferraro, A.Caltroni**
 - **VO services support**
 - **ATLAS, DeSalvo**
 - **.CMS , M.Corvo, D.Bonaccorsi**
 - **.Alice, G.Lore**
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 - **GRID Services support**
 - **A.Cavalli (MDS), A.Italiano (RB), M.Verlato (RLS), V.Ciaschini**
 - **(VOMS), S.Fantinel (GridICE), A.Chierici (instal/config ce,se)**
 - **Site manager (resource centers) support**
- **User Support (Applications) M.Verlato**
 - **a. CMS, D.Bonaccorsi**
 - **b. ATLAS, G.Negri,**
 - **c. Alice, G.LoRe**

Grid groups within the support system



Support system

Content Management System



Trouble Ticketing System



grid-it.cnaf.infn.it

Menu view:

Manage your site

Installation

Upgrade

Testing

Packages list

CVS

Grid status

VO view

Site view

Support

Ticketing system

Knowledge base

Search Links Site

map

Site/resource map of INFN-Grid



- CMS T.2 T2/3
- Atlas T.2 T2/3
- Alice T.2 T2/3
- LHCb T.2 T2/3
- Babar
- VIRGO
- grid.it resources
- general purpose resources

LCG participation:

- Tier1 cnaf,
- Tier2 in MI, TO, LNL, Roma1, NA

Service and operation coordination between 'Grids' to guarantee Virtual Organization services

- The grids service organizations must guarantee:
 - Deployment, Operations Coordination/cooperation between ROCs-CICs
 - VO services deployment models
 - Grid management
 - Grid monitoring
 - User and Service support
 - the most suitable VO virtual grid configuration across multiple federation
 - allow VO virtual grid configuration across federation