

## NGI Italy [www.italiangrid.it](http://www.italiangrid.it)

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- NGI\_IT has a proved experience on Operations, Software Development and User Support activities
  - Combined to offer support among different communities

User community	User support project
<b>EU projects (EMSO, DRIHM, ELIXIR-ITA, LifeWatch, DC-HRP, AG-INFRA, CHAIN REDS)</b>	<ul style="list-style-type: none"> <li>•Data management</li> <li>•Activity planning</li> <li>•mixed HTC/HPC/Cloud approach in computing models</li> <li>•Catchall communities</li> </ul>
<b>IGI communities (bio-science, clima model, SPES, theophys)</b>	<ul style="list-style-type: none"> <li>• application porting</li> <li>•Provide high level Web interfaces and SGs</li> <li>•MPI support for applications</li> <li>•Tutorial and training events</li> <li>•Catchall communities</li> </ul>
<b>International communities (Computational Chemistry, WLCG)</b>	<ul style="list-style-type: none"> <li>• application porting</li> <li>•Provide high level Web interfaces and SGs</li> <li>•Tutorial and training events</li> <li>•mixed HTC/HPC/Cloud approach in computing models</li> <li>•Catchall IDP (GridIP)</li> </ul>

- IT\_NGI has developed Web portals and Science Gateways based on Liferay technology and equipped with some tools enabling the user to handle

- User/password, certificate, IDP authentication/authorization procedure, robot certificates (e-Token server)
- Data management
- Workflows model (WS-PGRADE)
- Multiple job(s) handling: DIRAC, Grid Engine (multiple middleware support via JSAGA)
- Cloud site orchestration via OCCl (MyCloud)

- Organization of tutorials, training events and schools

- Application porting and activity management

- Support activities
  - **EMSO**
    - pilot activity to define the data management model
  - **DRIHM**
    - support for mpi jobin grid and exp sw distribution
  - **ELIXIR-ITA**
    - INFN as technological partner; activities mainly focused on organizational issues
  - **LifeWatch**
    - support in workflow handling, providing resources, cloud resources provider (INFN-BARI)
  - **DCH-RP**
    - harmonization of policies for data storage and preservation of digital cultural heritage; SG-development and application porting
  - **AG-infra**
    - promotion of connections of agricultural data through e-infrastructure; SG-development and application porting
  - **CHAIN REDS**
    - promotion of collaboration across different infrastructures; SG-development and application porting

- Support activities
  - **SPES**
    - Selective Production of Exotic Species
    - application porting, data management and creation of high level web interfaces
  - **THEOPHYS**
    - Theoretical physics
    - MPI capabilities on Grid and creation of high level web interfaces
  - **BIO-SCIENCE**
    - protein surface simulation, simulation of biochemical system,
    - application porting, mixed HTC/HPC/Cloud approach in computing models, data management
  - **CLIMA MODEL**
    - MPI capabilities on Grid, application porting, mixed HTC/HPC/Cloud approach in computing models, data management

- Support activities
  - **WLCG**
    - Infrastructure and service development
  - **CMMST**
    - Computational modeling and theoretical chemistry
    - Implement a synergistic model to allocate resources and competences in a cooperative way
      - Cooperative endeavour based on
        - the combined expertise in the field of the molecular science
        - the adoption of high level ICT instruments
        - integration of GRIF Resource Selection System in WS-PGRADE
      - Tools and services
        - application-related, providing dedicated user support and training activities
      - Under developmet (as DCC)
        - articulate a Grid Economy Model as Costs to be paid for the Services utilized and Credits earned in return for the efforts spent

- These experiences and results will be the grounds for future activities at both national and international level.
- The EGI DCC could be a good opportunity also to share experiences and exploit results obtained in various projects we are involved in, in particular for:
  - Data management/data storage
  - Workflow model development
  - Mixed HTC/HPC/Cloud approach