CYGRID PHASES

At the initial phase, CyGrid will interconnect computing resources of the University of Cyprus and the pan-European Grid testbed. At a second phase, we aim the access through CyGrid of the scientific community of Cyprus to large computing centres, and provide access and support to end-users.

In the context of CrossGrid, the CyGrid node will be used to run CrossGrid application suite which will entail the development of interactive compute and data intensive applications like simulations and visualisations for surgical procedures, flooding crisis and team decision support systems, distributed data analysis in high-energy physics, air pollution combined with weather forecasting.

FUNDING AGENCIES

For more information on CyGrid visit our website at
http://www.cs.ucy.ac.cy/crossgrid

HPCL RESEARCH INTERESTS

→ Grid Computing:
  – Performance
  – Information Services

→ Web Services & Middleware.

→ Telematics Applications & the Grid.

→ Parallel & Distributed Systems.

→ Performance Engineering.

→ Web Technologies.

→ Web Applications.

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 University of Cyprus

HIGH PERFORMANCE COMPUTING LAB

DEPT. OF COMPUTER SCIENCE
UNIVERSITY OF CYPRUS

CyGRID

 http://www.cs.ucy.ac.cy/hpcl

GOALS

Our lab aims to:

- Conduct research and promote the scientific and technological knowledge in Parallel and Distributed Processing.

- Promote the uptake of High Performance Computing technology in Cyprus through support and expertise transfer to local user communities.

- Organize University Seminars, Training Events, Scientific Workshops, Summer Schools, and Conferences in Cyprus.

R&D FOCUS

- Grid Computing.
- Parallel and Distributed Systems
- Performance Engineering.
- Web Technologies
- Web Applications

RESEARCH PROJECTS

- **CROSSGRID**: Development of Grid Environment for Interactive Applications

- **eRACE:** extensible Retrieval Annotation Caching Engine

- **EMISPHER**: Euro-Mediterranean Internet-Satellite Platform for Health, medical Education and Research

- **WEBC-MINE**: Web Mining

- **APSIFAE**: The Development of a Digital Achievement Portfolio for Teachers

THEMATIC NETWORKS

- **ANWIRE**: Academic Network for Wireless Internet Research in Europe

- **APART2**: Automatic Performance Analysis: Real Tools

INFRASTRUCTURE

Our lab has a strong and constantly upgraded infrastructure that currently consists of:

- 16 Computing Elements (2.2GHz P4, 1GB RAM, 40 GB HDD)
- 2 Storage Elements (54 GB)
- 1 Gatekeeper (IBM x220 PIII , dual processor)
- FastEthernet
- Participation to CrossGrid / Datagrid testbed

Additional access to Departmental computing resources, including:

- 1 Sunfire Symmetric Multiprocessor System, 4CPUs, 900Ghz, 8GB RAM

- 1 Enterprise E250, 2 CPUs, 3 GB RAM
- 8 Solaris Stations connected through LAN.

Network connectivity is provided through Géant and the Cyprus Research and Educational Network (CYNET).

CYGRID

In the context of the CrossGrid project, the High Performance Computing Lab, runs the **CyGrid** node, which supports the pancyprian grid infrastructure. The fundamental goal of CyGrid is to disseminate CrossGrid outcomes in Cyprus and to promote the uptake of Grid technologies by the academic, research and educational world of Cyprus. CyGrid manages:

1. Cluster for parallel processing and high performance computing.

2. Middleware for accessing and common usage of local computing resources and remote supercomputers that are in the disposal of CrossGrid.

3. Certification Authority for authentication and authorization for secure usage and access to CrossGrid testbed.

Span of the CrossGrid testbed