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# Computing

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CESGA provides computing support resources to the growing number of researchers who use scientific computing tools. In order to access these services, register as a user.

CESGA's support equipment provides answers to the researchers' needs through several different services:

-computing hours interchange with other supercomputing centres: according to the collaboration agreement signed by the Supercomputing centres of Catalunya, Andalusia and Galicia, CESGA users have 10,000 computing execution hours in CESGA and CICA.

-Advice service in the search, selection and developing of algorithms, programmes and architectures. According to the objectives, methods and specific requirements of the computing you need, they will help you to select the most appropriated tools to execute them. CESGA's support technicians have extensive experience in computing environments used in the computing fields of the structures, such as in molecular chemistry, financial markets analysis, fluid dynamics and atmospheric simulations. CESGA has also exceptional relationships with the hardware and software suppliers, with which often interchanges solutions.

-Code porting service: the support technicians are used to adapt the programmes and algorithms of the users to their execution in the different architectures of the supercomputers at CESGA. This becomes necessary to many researchers when their calculations need extra memory or storage resources superior to those of their machines.

-Programme optimization service: the support technicians will help you to reformulate your programme for a better CPU time and memory volume use in the execution by looking for improvements in the codes performance. Sometimes, this means a vectorization or even a parallelization of the codes.

-Service for the analysis and design of comfortable and productive work environments: the support technicians will help you to evaluate your environment depending on the specific requirements of the calculation aiming to provide better performance, whether you use the supercomputers at CESGA or your own workstation or PC network.

-Other support services: CESGA can also help you not only in the data structures formulation in order to use the massive data storage system efficiently, but also in the development of scripts for the visualization of the simulations and modelizations numeric results.

## How to apply for the support service

Contact CESGA, the support and systems staff will analyze and evaluate the problem with you, and they will help you to establish the criteria the solution must follow. According to this analysis, the support staff will put you in contact with the most suitable specialist for the solving of the problem. The work of the specialist may concern different areas, from the solving of simple doubts to more extensive collaborations with the research group.

## Who can access these services?

All the researchers from the Galician Universities, CSIC centres and R&D departments of public and private companies that apply for it will be able to access CESGA's support services for scientific computing. The researchers that demand these services are normally users of the supercomputers or either they habitually work with workstations or PC networks in order to execute their calculations.

## Who should you address?

In order to access these services, once you have a user account, it is enough with sending an e-mail to [sistemas@cesga.es](mailto:sistemas@cesga.es) exposing your needs, and we will contact you to analyze the best solutions.

If you have any doubt, you can contact the Systems Area staff by coming to CESGA, calling the number 981569810 or via e-mail addressing [sistemas@cesga.es](mailto:sistemas@cesga.es).