



The overall objective of the Greek National Competence Center is to enable the efficient uptake of HPC technologies with the 3-fold goal to:

- advance competitiveness in research
- improve the effectiveness of government services and
- promote innovation in industry

The Greek Competence Center for High Performance Computing and Artificial Intelligence

Enhancing innovation capacity in Business, Industry and Science by utilizing advanced High Performance Computing services



Services

- Technological Support & Consulting
 - High-Performance Computing,
 - Artificial Intelligence, and
 - High-Performance Data Analytics
- Training and Skills Development
- Access to computational resources

https://eurocc-greece.gr/

Technologies

- Artificial Intelligence
- Machine Learning
- Computer Vision
- Large Language Models
- Scientific Simulations
- Digital Twins
- High-Performance Data Analytics

Sectors

- Life Sciences & Healthcare
- Biotechnologies
- Materials & Batteries
- Engineering & Manufacturing
- Climate Change & Meteorology
- Cybersecurity
- Robotics



Consortium

The Greek National Competence Center "EuroCC@Greece", is run by a consortium of 5 institutions, namely

- 1. National Infrastructures for Research and Technology (coordinator) GRNET
- 2. National Center for Scientific Research **Demokritos**
- 3. Institute of Communication and Computer Systems NTUA
- 4. Aristotle University of Thessaloniki AUTH
- 5. Foundation for Research and Technology Hellas FORTH











ARIS – HPC Infrastructure in Greece Compute Nodes

The ARIS infrastructure consists of a total of five computing system nodes based on Intel x86 architecture, interconnected into a single InfiniBand FDR14 network offering multiple options and processing architectures. More specifically, the infrastructure consists of:

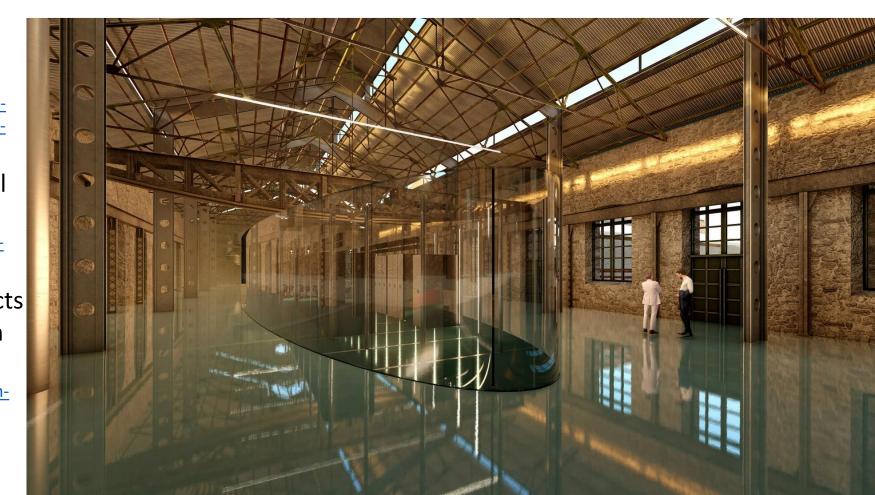
- Thin Nodes island based on the IBM NeXtScale platform and on Intel Xeon E5-2680v2 processors. It has **426 computing nodes** and offers a total of 8,520 CPU cores.
- Fat Nodes island consisting of 44 Dell PowerEdge R820 servers. Each server offers 4 Intel Xeon E5-4650v2 processors and 512 GB of central memory.
- **GPU accelerator** nodes comprised of **44 Dell PowerEdge R730 servers**. Each server contains 2 Intel Xeon E5-2660v3 processors, 64 GB of memory and **2 NVidia K40 GPU cards**, and
- Xeon Phi accelerator nodes consisting of 18 Dell PowerEdge R730 servers, each containing 2 Intel Xeon E5-2660v3 processors, 64 GB of memory and 2 Intel Xeon Phi 7120P co-processors.
- Machine Learning node consisting of 1 server, containing 2 Intel E5-2698v4 processors, 512 GB of central memory and 8 NVIDIA V100 GPU cards





The way is open to building a EuroHPC world-class supercomputer in Greece

- A hosting agreement has been signed between the EuroHPC Joint Undertaking and the National Infrastructures for Research and Technology (GRNET) in Greece, where DAEDALUS, a new EuroHPC supercomputer, will be located.
- **60 petaflops** or 60 million billion calculations per second https://grnet.gr/en/business-directory/grant-for-the-development-of-a-new-national-hpc-system-daedalus/
- Lavrion Technological and Cultural Park (TCPL) https://eurohpc-ju.europa.eu/way-open-building-eurohpc-world-class-supercomputer-greece-2022-11-28 en
- June 11, 2024: GRNET S.A. conducts a Public Consultation on the Open Tender Announcement Issue https://grnet.gr/2024/06/11/public-consultation-lavrio-daedalus/



EuroHPC Access Modes

EuroHPC JU Call for Proposals – Extreme Scale Access Mode

For applications with high-impact, high-gain innovative research

<u>EuroHPC JU Call for Proposals – Regular Access Mode</u>

The expected impact in the application's domain should justify the need for large allocations

EuroHPC JU Call for Proposals – Al and Data-Intensive Applications Access Mode

To support ethical artificial intelligence & machine learning

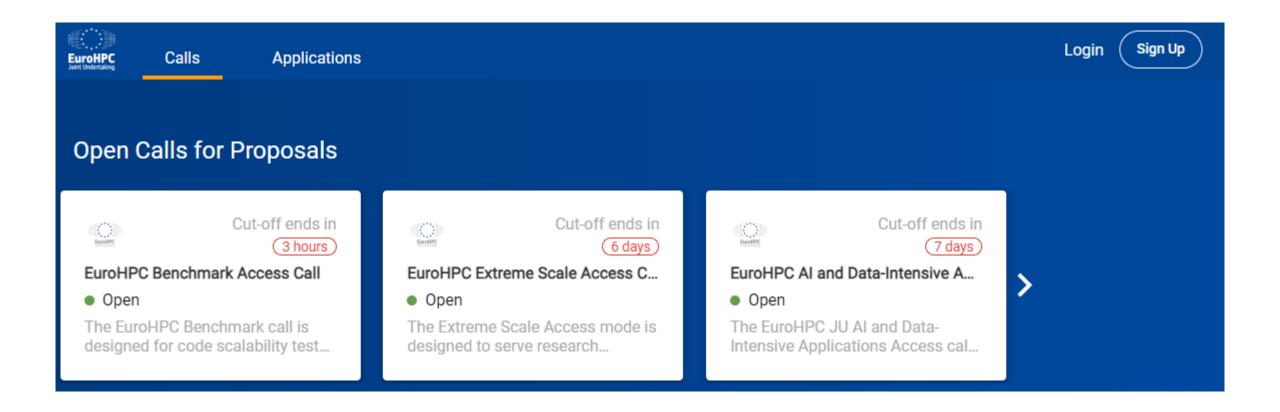
<u>EuroHPC JU Call for Proposals – Development Access Modes</u>

To develop, test and optimise applications

EuroHPC JU Call for Proposals – Benchmark Access Modes

To test or benchmark applications

https://eurohpc-ju.europa.eu/access-our-supercomputers/access-policy-and-faq_en



https://access.eurohpc-ju.europa.eu/

Frequently Asked Questions (FAQ)

- How can I gain access to computation time on EuroHPC machines?
 - You will need to **apply** to one of the open **access calls** that **EuroHPC** provides. The list of available calls can be found here.
- Which organisations are eligible for access to EuroHPC machines?
 - Any European organisation is eligible for access to perform Open Science research (the results of the work are made available for open access). This includes public and private academic and research institutions, public sector organisations, industrial enterprises and SMEs
- What is the cost?
 - Currently access is free of charge.
- What are the participation conditions?
 - Participation conditions depend on the specific access call that a research group has applied. In general users of EuroHPC systems commit to: acknowledge the use of the resources in their related publications, contribute to dissemination events, produce and submit a report after completion of a resource allocation. More information on participation conditions can be found in the call's Documents section.



MARCH 29 | 09:45 EET | ONLINE



MAY 29, 2024 | 10:00 EET | HYBRID



EURO
Greece

HPC Training Series

Course 2

Introduction to accelerators:
GPUs / CUDA

I PRESENTATION LANGUAGE: GREEK |

APRIL 19, 2024 | 10:00 EET | ONLINE



JULY 11-14, 2024 | 10:00 - 16:00 EET | ON-SITE





Our Training Events

https://eurocc-greece.gr/events-2/

HPC Training Series - Course 6 "Gradient-based and gradient-free optimization, with applications to CFD and beyond"

Dr Nikos Bakas

https://eurocc-greece.gr/newsletter/
https://www.linkedin.com/company/eurocc-greece
https://www.youtube.com/@euroccgreece9501
https://twitter.com/EuroCC Greece











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