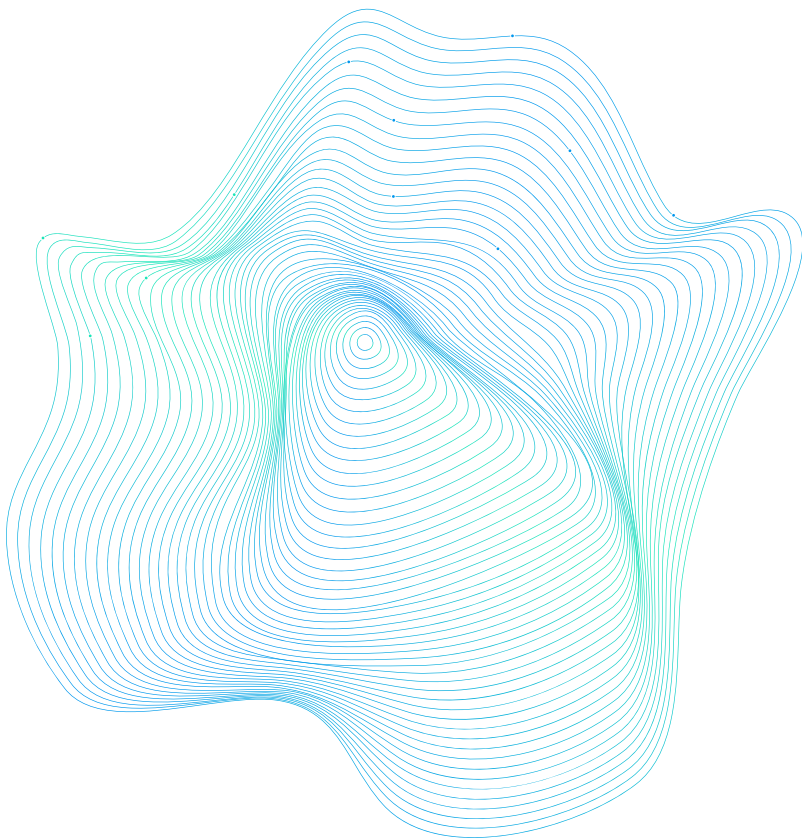




EPICURE

Unlocking European-level HPC Support

High-level Specialised Application Support Service in High-Performance Computing

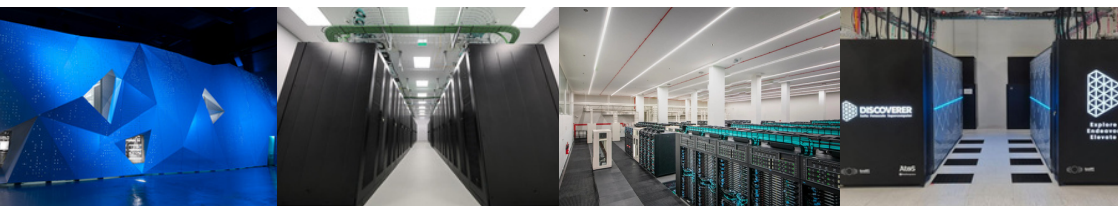


Co-funded by
the European Union



EuroHPC
Joint Undertaking

This project has received funding from the European High-Performance Computing Joint Undertaking under grant agreement No. 101139786. Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union or EuroHPC Joint Undertaking. Neither the European Union nor the granting authority can be held responsible for them.





EPICURE
Unlocking European-level HPC Support

INDEX

- 1 A Message from our Coordinator

- 2 Mission and Objectives

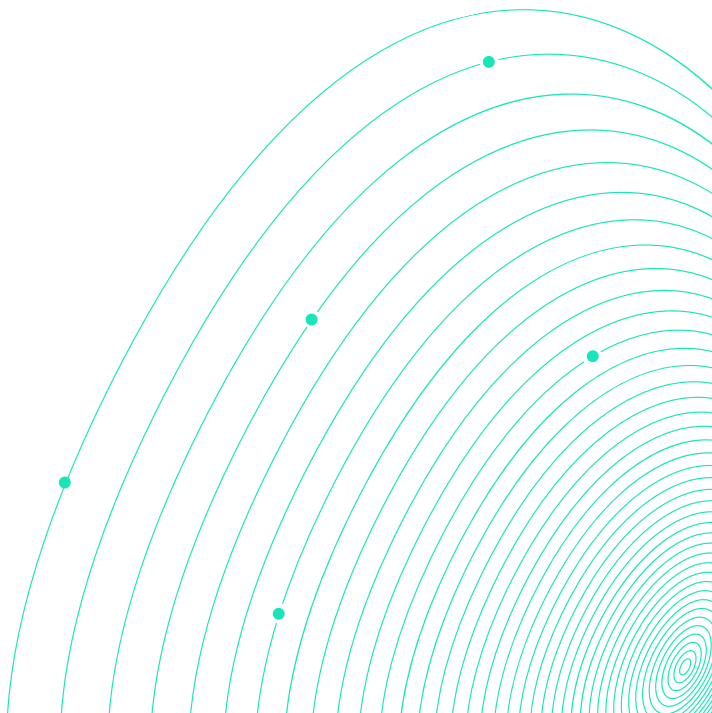
- 3 Support Services

- 4 How to Access EPICURE Support Services

- 5 Events and Training Opportunities

- 6 Partners

- 7 Contacts



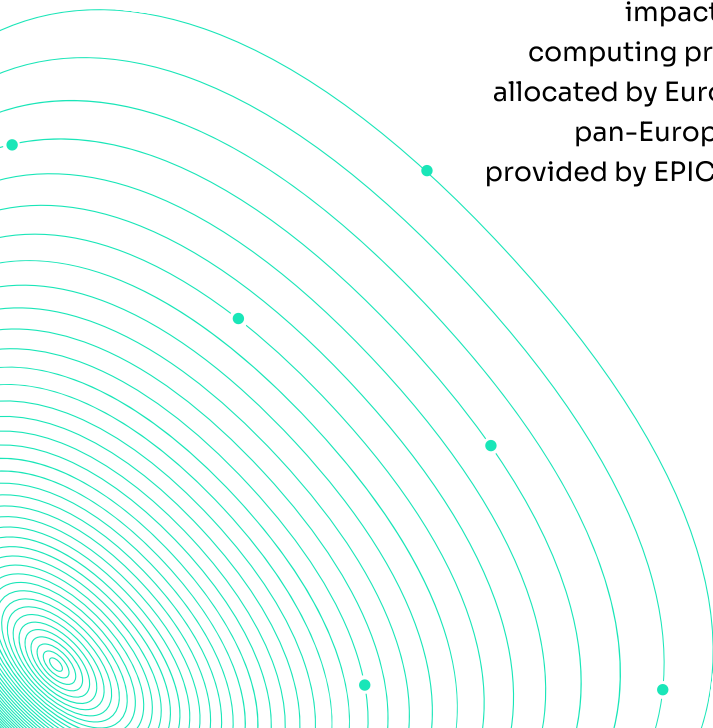


Janne Ignatius
Program Director
CSC - IT Center for Science

A MESSAGE FROM OUR COORDINATOR

EPICURE has a central role in the European high-performance computing ecosystem. With the help of Application Support Teams, users of EuroHPC supercomputers are able to get better results in their groundbreaking research, thanks to the improved simulation software.

This support has significant positive impact and is available to all computing projects that have been allocated by EuroHPC. In addition, the pan-European training program provided by EPICURE is very beneficial to the community.



MISSION

EPICURE will establish a four-year operation of a distributed European-wide high-performance computing application support service bringing together Application Support Teams (ASTs) set up in all current and future EuroHPC Hosting Entities, operating its supercomputers.

OBJECTIVES

- Provide support services to users that have access to the EuroHPC supercomputers;
- Deliver the valuable support solutions based on all partners' long experience in HPC operations and support;
- Focus on Level 2 and 3 application support in the area of application porting and optimisation for selected applications/user groups with short to medium term support (3-6 months).

Development of a European HPC Application Support portal, acting as a single point of contact for European HPC users to retrieve information on the systems offered by the EuroHPC Joint Undertaking.



SUPPORT SERVICES

EPICURE offers comprehensive support services to enhance the performance and scalability of applications on EuroHPC systems, focusing on Level 2 and 3 support in application porting and optimisation for selected applications and user groups. This includes short to medium-term support (3-6 months) in areas such as code enabling and scaling, performance analysis, benchmarking, code refactoring, and code optimisation.



Code Enabling and Scaling

The service specialises in porting and enabling codes for various EuroHPC systems. It includes also the study of applications to understand their scalability, identifying necessary improvements for efficient utilisation across larger node counts.

Performance Analysis

Our service conducts performance analysis of applications to identify bottlenecks and potential enhancements in node and multi-node performance (such as vectorisation, utilisation of suitable mathematical libraries, I/O optimisation, MPI, etc.).

Benchmarking

The benchmarking service aims to standardise benchmarks for classifying machine performance. These benchmarks will provide valuable insights into categorising architectures, helping to determine the most suitable architecture for typical problems and tasks.

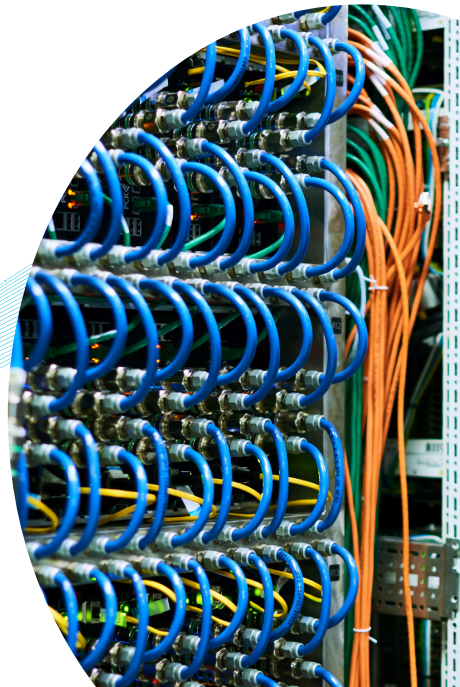
SUPPORT SERVICES

Code Refactoring

This service involves restructuring or rewriting parts of an application code to improve maintainability and ease modification, but without changing its function. Refactoring usually involves code changes to make the source and structure more conformant to typical programming styles and standards and is usually a first step before major modifications are made (e.g. porting to GPUs).

Code Optimisation

The aim of the code optimisation service is to improve the efficiency and performance of the software, but without changing its functionality. The procedure will draw on the results of other EPICURE services (e.g. performance and scaling analysis) to implement software changes which will consume fewer resources on EuroHPC systems (time, memory, CPU, disk space, etc.).



HOW TO ACCESS EPICURE SUPPORT SERVICES

Who's Eligible?

To benefit from EPICURE support, you must have an **active EuroHPC Joint Undertaking (JU) allocation project**.

Don't have one yet?

No problem - we can guide you through the application process!



Duration

Support is available for projects lasting from 3 to 12 months.

Ready to Optimise?

If you're looking to enhance your HPC workflows, EPICURE is here to help:

Request support: Submit your request to access EPICURE's expert guidance.



Need a EuroHPC allocation? Check the latest EuroHPC Access Calls to get started!



**Check our
website for
more details**



EVENTS AND TRAINING OPPORTUNITIES

One of the EPICURE project's central goals is to **deliver high-quality training to both students and industry professionals**. By leveraging a strong network of partners and collaborators, EPICURE organises focused events that promote the efficient and user-friendly adoption of EuroHPC Joint Undertaking (JU) computational resources.

These training programmes **tackle key challenges in the HPC ecosystem**, including the transition between different architectures, application performance optimisation, and maintaining system stability and efficiency.

The events follow a two-pronged approach:

- **Onboarding New Users:** Specially designed sessions support newcomers and emerging user communities, providing them with the tools and knowledge needed to get started quickly. Training includes guidance on domain-specific software and adaptation across various EuroHPC systems.
- **Advanced Optimisation Techniques:** For experienced users, in-depth sessions cover topics such as hardware-aware programming, memory optimisation, minimising communication overhead, and effective parallelisation strategies.

Whether you're new to HPC or looking to deepen your expertise, EPICURE's training events are designed to empower you. Join us and unlock the full potential of EuroHPC systems!



Check our
training
materials



Check our
events

PARTNERS



CSC

CSC
Finland



**Barcelona
Supercomputing
Center**
Centro Nacional de Supercomputación

BSC CNS
Spain



CINECA
Italy



IT4I@VSB
Czech Republic



Institute of Information Science, Maribor, Slovenia

IZUM
Slovenia



JSI
Slovenia



LUXPROVIDE
Luxembourg



INESC TEC
Portugal



Sofia Tech Park
Bulgaria



UAntwerpen
Belgium



KTH
Sweden



CYFRONET
Poland



DTU
Denmark



FZJ
Germany



GENCI
France



CINES
France

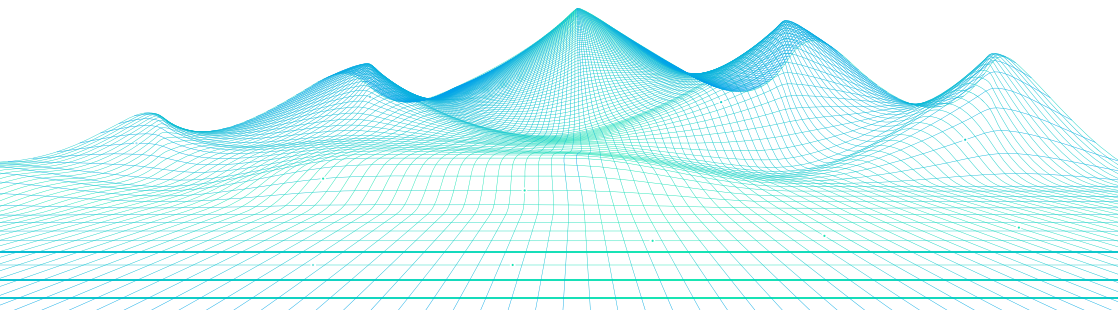
CONTACTS

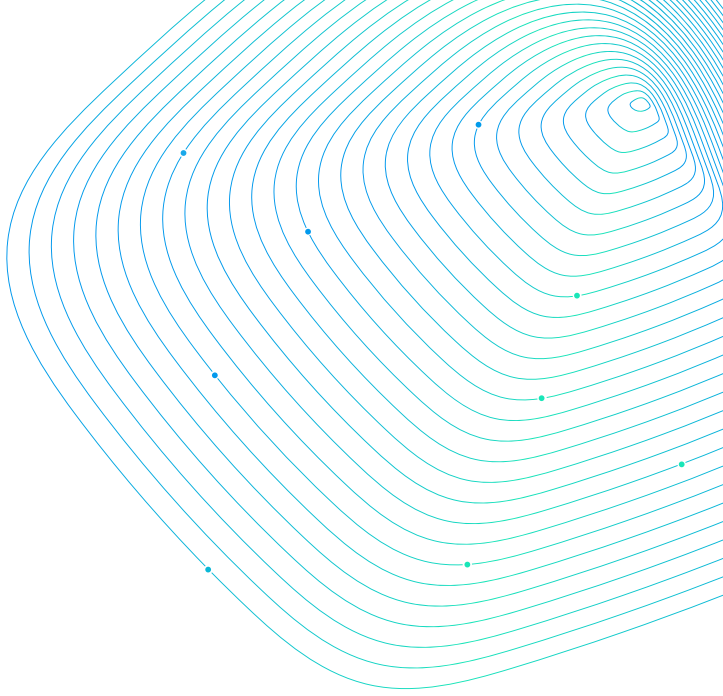
Project's Coordination



EPICURE Project Management Office
pmo-epicure@postit.csc.fi

Follow Us





**EPICURE is your
gateway to fully
leveraging EuroHPC
resources.**



Co-funded by
the European Union



EuroHPC
Joint Undertaking

This project has received funding from the European High-Performance Computing Joint Undertaking under grant agreement No. 101139786.
Views and opinions expressed are, however, those of the author(s) only and do not necessarily reflect those of the European Union or EuroHPC Joint Undertaking. Neither the European Union nor the granting authority can be held responsible for them.