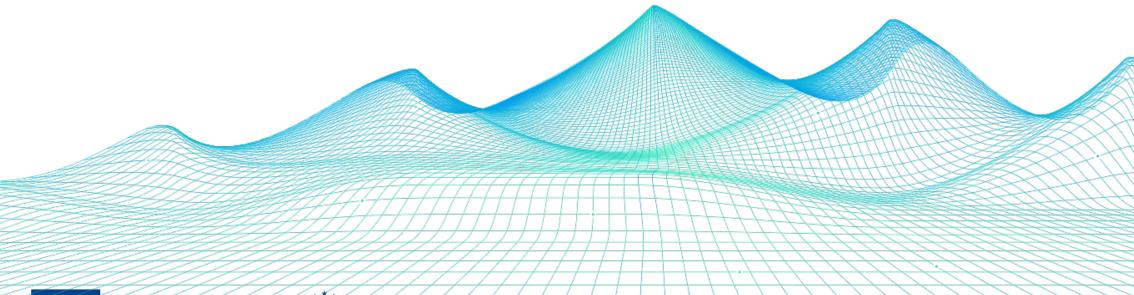
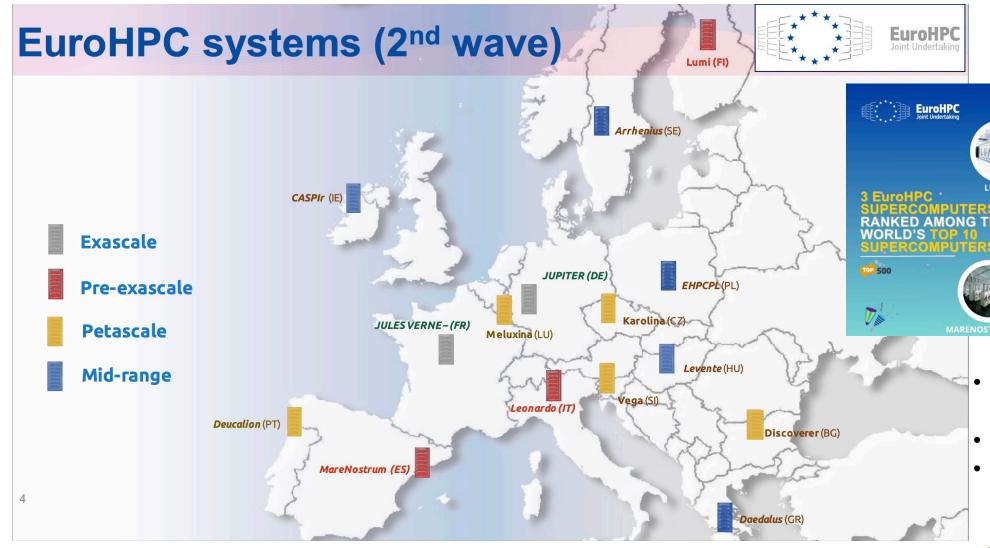


EPICURE: supporting EuroHPC users toward a pan european HPC/AI application support team European-level HPC Support

S. Requena (GENCI)



Motivations for EPICURE



- > 15 000 nVIDIA A100, 4400 nVIDIA H100 and 11 700 AMD MI250x
- Soon close to 24 000 nVIDIAH200 (Jupiter)
- Not counting the ongoing HPC/quantum deployment and 2nd Exascale system

- Use of massive hybrid CPU/GPU configurations
- Mix of HPC/HPDA/AI
- # of applications in Europe



USER SUPPORT IS KEY TO BENEFIT FROM EUROHPC SYSTEMS

Motivations for EPICURE

EuroHPC JU is deploying a HPC infrastructure, comprising supercomputers, that range from petascale, to future exascale systems Support services are currently limited primarily to Level 1 and 2 support which mostly entails a help desk support for day-by-day operational issues and problems

ASTs, established in some of EuroHPC Hosting Entities, will provide their services aiming primarily at Level 2 and 3 application support (porting and optimization)

Hosting Entities have complementary skills in applications-based development and optimization

EPICURE aims at leveraging and expanding this offering by establishing and operating a distributed but coordinated European-wide HPC (Level 2 and 3) application support service





EPICURE in a nutshell

- EPICURE = Eurohpe aPpliCation sUpport pRojEct
 - Selected in the field of call DIGITAL-EUROHPC-JU-2022-APPSUPPORT-01
- 4 years from 01.02.2024 until 31.12.2028
- Budget = $10M \in (5M \in EuroHPC + 5M \in MS)$
- Leader of the consortium = CSC (Finland)
- Consortium: 16 partners from 14 countries --> all the existing petascale + pre-exascale (LUMI, BSC, Cineca)+ future exascale (Jülich + GENCI) EuroHPC systems
 - Will amplify at the EU level efforts provided localy by Hosting Entities
 - Will provide mainly Level 2 and 3 application support services
 - Will collaborate with EuroCC, CoEs, EUMaster4HPC programme, strategic projects (Destination Earth...) and technological projects (EPI, EUPEX, RISC-V...)
- 1 to 4 FTE per partner —a first distributed task force of 28 experts



EPICURE activities



Inputs from EuroHPC Peer Review team and CoEs

WP4: Technical coordination (VSB)

Specific trainings, hackhatons, workshops...

European
HPC
Application
Support
Portal...

Porting, profiling, BPG and tech reports

WP2: Code enabling & scaling (BSC)

WP3: Code optimisation (CINECA)

In-depth intra/inter node optimisation inc. GPU

WP5:
Advanced
Training
(INESC-TEC)

WP6:
Dissemination
&Outreach
(CSC)

WP1: Coordination & Management (CSC)

Alignement with EuroCC, CoEs and EuroHPC training initiatives

Skills will be the key of the HPC/AI global stake







- Many examples in Europe demonstrated the importance of joint HPC and AI support teams
- Importance to reach a critical mass in EU for the support -150 to 200p globally?
- So EPICURE is just a start!

At the end technology is always a story of human skills



