

CASTIEL 2

THE HPC TRAINING ECOSYSTEM IN EUROPE

October 22, 2024

Is CASTIEL 2 an
isolated
project?



EuroCC & CASTIEL



The EuroCC and CASTIEL projects are **strongly interconnected**.

They were both launched under the Horizon 2020 (H2020) program, **funded by the EuroHPC Joint Undertaking (JU)**

They both officially began on September 1, 2020.



EuroHPC
Joint Undertaking



EuroCC has established a network of ...

- **33 National Competence Centres (NCCs):** National-level HPC hubs across Europe.
- **14 Centres of Excellence (CoEs):** Focused on specific topics.



What is the
purpose of the
CASTIEL 2
project?



GLOBAL AIM OF THE PROJECT

Coordinate and support National Competence Centres (**NCCs**) and Centres of Excellence (**CoEs**) at the European level, **fostering collaboration, knowledge sharing, and skill development** in HPC

PARTICIPANTS

1. UNI. OF STUTTGART
2. SCAPOS
3. CINECA
4. **BSC**
5. TERATEC
6. PRACE
7. **TU WIEN**

WORK PACKAGES

- WP1 Management
- WP2 NCC/CoE Networking and Mapping of Competences, Codes and Services
- WP3 Training, Twinning, Mentoring**
- WP4 NCCs, CoEs and Industry Interactions
- WP5 Awareness, Impact and Outreach

If we focus on WP3
Training, Twinning, Mentoring ...



GENERAL OBJECTIVE

Maximise existing HPC knowledge and expertise across Europe.

Promote the consolidation of a complete and comprehensive **European HPC Training Baseline.**

TASKS

1. Facilitate Access to Training Opportunities and Offers within the European HPC Ecosystem
2. Assist the Evolution of NCCs and CoEs through the Mentoring and Twinning Programme
3. Support Exchange of Training Best Practices and Training Related Collaborations across NCCs and CoEs
4. Contribution to the single reference Portal and the Marketplace from the Training Perspective

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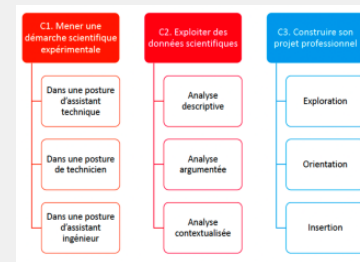
1. Visibility and Access of HPC training opportunities At National and European levels

REFERANCE PORTAL



Centralisation of training activities in Europe with SPECTRA Project

TRAINING BASELINE



Definition of the European HPC training baseline

CERTIFICATION



Map out the situation of CERTIFICATION

EUROPEAN INITIATIVES



Cooperation with other European initiatives on training offerings (EUMaster4HPC, ETP4HPC)

2. Assist the Evolution of NCCs and CoEs through the Mentoring and Twinning Programme

MENTORING GROUPS



- ✓ Training on Quantum Computing
- ✓ Training on HPC for AI
- ✓ Training on HPC for SMEs
- ✓ Collaboration on training

COLLABORATION ON COURSE DEVELOPMENT



Multi GPU AI - Train the Trainers Course

INDUSTRY AND TRAINING CHAMPIONS



Collaboartion on Onboarding SMES

MOBILITY OF HPC SPECIALITS



Available funds

WORKING GROUPS



Birds of a Feather at ISC 2025



To serve the needs of NCCs and CoEs, to get support and guidance and benefit from expertise

3. Support Exchange of Training Best Practices and Training Related Collaborations across NCCs and CoEs



- BEST PRACTICES**
- JOINT ACTIVITIES**
- WEBINAR SERIES**
- PARTNERSHIPS**
- MATERIAL**



Exchange of Best Practices, Available Resources, Knowledge ... during the **Training Coffee Break**



TRAINING SPRINT
Quickly disseminate the expertise and abilities of CoEs



In-depth exploration of a topic - Industry point of view on Quantum Computing



Cooperation With Hardware and Software companies - Hackathon – NVIDIA



- Co-Design effort to define a core set of training courses in HPC/HPDA/AI
- Of European scope – by and for all CASTIEL2/EUROCC2 training champions
- Task force ongoing
- Career pathways (thnx 2 D Henty EPCC), 3 target sectors, 6 user profiles
- Should provide a guideline for newcomers that suddenly end up in HPC/HPDA/AI
- Certification task force in parallel (perhaps μ -credentials)
- Collaborations with EUMaster4HPC (curriculum) Spectra (certification forum)
- → <https://tinyurl.com/castiel2wp3/tb2.html>

Thanks



This project has received funding from the European High-Performance Computing Joint Undertaking (JU) under grant agreement No 101102047. The JU receives support from the Digital Europe Programme and Germany, Italy, Spain, France, Belgium, Austria.