



# Performance Optimisation and Productivity

A Centre of Excellence in HPC



## POP Newsletter 27 – Issue March 2025

Welcome to the 27<sup>th</sup> newsletter from the EU [POP](#) Centre of Excellence.

In this edition, we give you an overview of recent POP webinars, events the POP experts attended and a short article introducing Spack.

If you would like to contribute technical content for this newsletter on the topic of parallel performance profiling, please contact us at [pop@bsc.es](mailto:pop@bsc.es).

This issue includes:

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For past editions of the newsletter, see the [POP newsletter web page](#).

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## POP Webinars

### Upcoming Webinars

**The 34th POP Webinar will be announced soon!**

**To stay informed go to our website or follow us on our social media channels:**



@pop-hpc.bsky.social **(NEW!)**



Performance Optimisation and Productivity (POP)



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## Recent Webinars

### OpenMP 6.0 Part 1: New Host-side Features and Enhancements

Just before the end of the 2024 we hosted the 31<sup>st</sup> POP webinar with Dr. Christian Terboven and Dr. Michael Klemm. Part 1 of this two-part OpenMP 6.0 webinar series focussed on the key updates including the introduction of free-agent threads, the taskgraph construct and the concept of iteration within tasking contexts. Listeners also learned about the improvements in base language support and loop transformation capabilities.

The recording and the slides can be found [here](#).

### OpenMP 6.0 Part 2: New Device Offloading Features

Part two of the OpenMP 6.0 webinar series was held on the 18<sup>th</sup> of February. In this webinar Christian Terboven and Michael Klemm continued to explore the new features of OpenMP focussing on accelerator programming. The session concluded with an engaging Q&A session for the attendees.

To watch the recording or read the presentation slides click [here](#).

### ZeroSum: User Space Utility for Monitoring Process, Thread, OS, and HW Resources, including GPU Utilization

High Performance Computing (HPC) systems are large, heterogeneous, sophisticated – and are therefore so complicated that they are difficult to use efficiently. In his webinar on the 28<sup>th</sup> of March Kevin Huck introduced ZeroSum a user space library, which monitors the application threads, MPI communication, and the hardware resources assigned to a user and indicating whether they are using their finite allocated compute time effectively.

The recording and the slide presentation can be found [here](#).

Browse the full list and catch up on all our previous webinars [here](#).

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## Recent POP Events

### POP @ HiPEAC 2025

At the HiPEAC 2025 from the 20<sup>th</sup> -22<sup>nd</sup> of January in Barcelona POP co-organised two full-day workshops in collaboration with several EuroHPC Centres of Excellence. The workshops “From Petascale to Exascale and Beyond: the Centres of Excellence Challenge” and “Tackling Software Challenges: The Centres of Excellence in High Performance Computing Perspective” were designed to foster meaningful exchanges between the CoEs and the wider HPC community.

To read more about POP's visit to the HiPEAC click [here](#).

### POP @ EuroHPC Summit 2025

This year's EuroHPC Summit in Krawkow was visited by a number of POP partners. Our experts showed posters, participated in several interesting panel discussions and networked with the wider HPC community.

To see pictures and read more go to our [blog](#).

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## Upcoming Events

### POP @ ISC High Performance 2025

From Jun 10 to 13, 2025, POP experts will attend the ISC High Performance 2025 conference in Hamburg, Germany. Visit our experts at the research exhibition booths of BSC (#G32), IT4I (#J22) or JSC/HLRS (#K02). On June 13, POP experts host the ISC tutorial "[Determining Parallel Application Execution Efficiency and Scaling using the POP Methodology](#)" (BSC, JSC). Finally, also on June 13, POP organizes the 2nd edition of the ISC workshop "[Readiness of HPC Extreme-scale Applications](#)".

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## Tool Time

### Installing POP tools with Spack

In this tool time article POP expert José Gracia gives a short introduction to Spack, which has become an increasingly important way to install software on HPC systems.

To read the complete article click [here](#).

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## Apply For Free Help with Code Optimisation

We offer a range of [free services](#) designed to help EU organisations improve the performance of parallel software. If you are not getting the performance you need from parallel software or would like to review the performance of a parallel code, please apply for help via the short [Service Request Form](#), or [email us](#) to discuss the service further and how it can be beneficial.

These services are funded by the EuroHPC research and innovation programme so there is no direct cost to our users.

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## The POP Helpdesk

Past and present POP users are eligible to use our [email helpdesk](#). Please contact our team of experts for help analysing code changes, to discuss your next steps and to ask questions about your parallel performance optimisation.

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<https://pop-coe.eu>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements No 676553 (POP1) and 824080 (POP2).

Currently, the project receives funding from the European High-Performance Computing Joint Undertaking (JU) under grant agreement No 101143931 (POP3).

