
Slurm Core and Advanced training completed by HPCNow! at Australia's Pawsey Supercomputing Research Centre

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Barcelona, March 15th 2023 – Jordi Blasco, CTO of HPCNow!, conducted two series of Slurm virtual trainings in February for Pawsey Supercomputing Research Centre. Pawsey is the home of Setonix, which is the most powerful public research supercomputer in not only Australia but also the Southern Hemisphere.

The training, given online, was offered in two main training series: Slurm Core Training, addressing new HPC users (beginning to intermediate levels), and Slurm Advanced Training, targeting users with deeper skills.

Using a combination of presentation, live demo, Q&A, and hands-on, Jordi Blasco gave beginner Slurm users an overview of how Slurm works, the way it schedules jobs, wait times, the main priorities, and best practices. Hands-on sessions covered a number of topics, including running a job / step allocation using Serial, OpenMP, MPI, GPU and Hybrid. Hands-on sessions were well received by participants.

Following the core training series, Jordi presented an advanced series of training to Pawsey users. Topics included topology aware scheduling, job profiling, multithreading, heterogeneous jobs, and checkpointing / restarts. Jordi used discussion and hands-on activities to delve into several topics in more detail, including job dependencies and workflows, and system information and job monitoring.

As one training participant said after attending the core training series from Jordi, "I have more understanding of what I'm doing now, and thus able to scale far better."

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The Pawsey Centre is a world-class high-performance computing facility accelerating scientific discoveries for Australia's researchers. Named for Australian scientist Joseph Pawsey, known as one of the pioneers of Australian radio astronomy for his work in the field of interferometry, Pawsey is currently serving over 2000 researchers achieving unprecedented results, in domains such as radio astronomy, energy and resources, engineering, bioinformatics and health sciences.

The Pawsey Centre is an unincorporated joint venture of CSIRO – Australia's national science agency, Curtin University, Edith Cowan University, Murdoch University and The University of Western Australia.

The Australian Government supports the Pawsey Capital Refresh project through a \$70 million grant. Pawsey is also supported by the Australian Government under the National Collaborative Research Infrastructure Strategy (NCRIS) through the Department of Education. The Centre would also like to acknowledge the support provided by the Western Australian Government and its partner organisations.

The screenshot displays a Zoom meeting window. The main content is a presentation slide with a green background on the left side featuring the HPCNow! logo and the title "Heterogeneous Jobs". The right side of the slide has a white background with the text: "Heterogeneous Jobs" and "Since version 17.11 Slurm supports heterogeneous jobs which are jobs using a different kind of resources with their own submission options." Below the slide, the Zoom meeting interface shows a grid of participant video thumbnails. From left to right, the participants are: Jordi Blasco, Simon Michrow..., XZ, Lauren Huet, Amy Geddes, 10 others, and You.

About HPCNow!

The use of supercomputing as a tool for solving problems in a wide variety of fields has grown exponentially in recent years. From its beginnings in the 80's and 90's, when the owners of the first supercomputers were mainly public entities such as universities, research centres, or the military, their use in the private sector has grown significantly. Thus, HPC has become a highly valuable, even indispensable tool in many important companies in industries such as defence, pharmaceutical, chemical, automotive, and/or aerospace.

This is the context in which HPCNow! was founded by three partners with wide experience in the management of high-performance computers and a thorough background in the use of scientific HPC codes. The company offers since more than ten years ago its expertise and knowledge with the aim of helping its customers to get the most out of HPC technologies by providing simple and efficient supercomputer usage.

The fact of providing careful and detailed solutions and the successful customer response to our services has allowed HPCNow! to grow without external funding and to have the means to tackle any new challenge.