

Practical Slurm: Batch Job Scheduling on HPC clusters

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This talk introduces Slurm, a scheduling and workload management system for HPC clusters. It explains how Slurm allocates shared resources among multiple users, manages job queuing, and enables efficient parallel job execution. The session covers Slurm's multifactor priority scheduling and backfill algorithms that optimize resource utilization. Practical examples demonstrate job submission for various workloads including serial jobs, multi-core CPU tasks, MPI parallelization (using Gromacs), memory-intensive applications, GPU computing, and licensed software. Key Slurm commands for monitoring and managing jobs are presented, providing researchers with essential tools for accessing and optimizing HPC resources on the Aristotle cluster.

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