Mixing HTC and HPC Workloads With HTCondor and Slurm

Highlights

After many years of maintaining HTC equipment for HEP/NP, RACF has now also been tasked with administrating HPC systems for other user groups at BNL

Due to differing requirements and capabilities it is was decided to administrate two separate batch systems for our HTC and HPC users: HTCondor and Slurm, respectively

Using a configuration we've developed which utilizes the condor_job_router daemon, it's technically possible to allow our HTC/HTCondor users to opportunistically utilize our HPC/Slurm resources

Can be done in a way which is fairly transparent to users

HTC users benefit from the “commodity-centric” nature of their hardware requirements

Possible to allow our HPC users to opportunistically utilize our HTC installations as well via HTCondor flocking, but currently only if they plan on running HTC-like jobs

Users need to manually submit such jobs to HTCondor