

## Updates on usage of the Czech national HPC center

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The distributed computing of the ATLAS experiment at LHC is using computing resources of the Czech national HPC center IT4Innovations for several years. The submission system is based on ARC-CEs installed at the Czech LHC Tier2 site (praguelcg2). Recent improvements of this system will be discussed here. First, there was migration of the ARC-CE from version 5 to 6 which improves the reliability and scalability. The sshfs connection between praguelcg2 and IT4Innovations was a bottleneck of this system but this improved with new a version and setting. Containerisation using Singularity allows for customisation of environment without the need of requesting exceptions to HPC management as well as reduced amount of data on the shared storage. The system will need further modifications to improve CPU efficiency when running on worker nodes with very high number of cores. IT4Innovations HPCs provide significant contribution to computing done in Czech republic for the ATLAS experiment.

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