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A possible solution for HEP processing on network secluded Computing Nodes

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The computing needs of LHC experiments in the next decades (the so-called High Luminosity LHC) are expected to increase substantially, due to the concurrent increases in the accelerator luminosity, in the selection rates and in the detectors' complexity. Many Funding Agencies are aiming to a consolidation of the national LHC computing infrastructures, via a merge with other large scale computing activities, such as HPC and Cloud centers. The LHC Experiments have started long ago tests and production activities on such centers, with intermittent success. The biggest obstacle with some centers comes from stricter network policies with respect to our standard centers, which do not allow an easy merge with the distributed LHC computing infrastructure. A possible solution for such centers is presented here, able to satisfy three main goals: be user deployable, be a catch-all solution for all the protocols and services, and be transparent to the experiment software stack. It is based on the integration of existing tools like tsocks, tunsocks, openconnect, cvmfsexec and singularity. We present results from an early experimentation, which positively show how the solution is indeed usable. Large scale testing on thousands of nodes is the next step in our agenda.

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