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# Elastic extension of a local analysis facility on external Clouds for the LHC experiments

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The computing infrastructures serving the LHC experiments have been designed to cope at most with the average amount of data recorded. The usage peaks, as already observed in Run-I, may however originate large backlogs, thus delaying the completion of the data reconstruction and ultimately the data availability for physics analysis. In order to cope with the production peaks, the LHC experiments are exploring the opportunity to access Cloud resources provided by external partners or commercial providers.
In this work we present the proof of concept of the elastic extension of a local analysis facility, specifically the Bologna Tier-3 Grid site, fot the LHC experiments hosted at the site, on an external OpenStack infrastructure. We focus on the "Cloud Bursting" of the Grid site using DynFarm, a newly designed tool that allows the dynamic registration of new worker nodes to LSF. In this approach, the dynamically added worker nodes instantiated on the OpenStack infrastructure are transparently accessed by the LHC Grid tools and at the same time they serve as an extension of the farm for the local usage.

## Tertiary Keyword (Optional)

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