

## **Opportunistic use of supercomputers: linking with Cloud and Grid platforms**

*Wednesday, 11 November 2015 16:40 (20 minutes)*

Supercomputers are good candidates for opportunistic use, as a non-negligible fraction of the computing time may stay unused while waiting for a large number of cores to be available for a new parallel job to be executed. In practice this results in a typical occupancy below 90%, leaving yet an interesting 10% of computing time that could be used by short jobs using few cores.

Users accessing to supercomputers however may not have such need for short jobs that may be more frequent for users of Cloud or Grid computing platforms.

We explore the possibility of automatic back-filling execution in a supercomputer of jobs prepared for a Cloud or a Grid platform.

Different options for this integration are presented, as well as its implementation on a top500 supercomputer for different applications.

The experience using this schema to support the long-tail of science in biodiversity, providing access to more than 100 users from 20 different countries in the world, will be also described.

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**Session Classification:** Long tail of science: tools and services