21st International Conference on Computing in High Energy and Nuclear Physics **CHEP2015** Okinawa Japan: April 13 - 17, 2015

Contribution ID: **265** Type: **poster presentation**

Optimizing CMS build infrastructure via Apache Mesos

The Offline Software of the CMS Experiment at the Large Hadron Collider (LHC) at CERN consists of 6M lines of in-house code, developed over a decade by nearly 1000 physicists, as well as a comparable amount of general use open-source code. A critical ingredient to the success of the construction and early operation of the WLCG was the convergence, around the year 2000, on the use of a homogeneous environment of commodity x86-64 processors and Linux.

Apache Mesos is a cluster manager that provides efficient resource isolation and sharing across distributed applications, or frameworks. It can run Hadoop, Jenkins, Spark, Aurora, and other applications on a dynamically shared pool of nodes.

We present how we migrated our continuos integration system to schedule jobs on an relatively small Apache Mesos enabled cluster and how this resulted in better resource usage, higher peak performance and lower latency thanks to the dynamic scheduling capabilities of Mesos.

Primary author: Mr EULISSE, Giulio (Fermi National Accelerator Lab. (US))

Co-authors: DEGANO, Alessandro (Universita e INFN (IT)); ABDURACHMANOV, David (Vilnius University (LT)); MENDEZ LOPEZ, David Gonzalo (Universidad de los Andes (CO)); Dr ELMER, Peter (Princeton University (US)); MUZAFFAR, Shahzad Malik (Fermi National Accelerator Lab. (US))

Presenter: Mr EULISSE, Giulio (Fermi National Accelerator Lab. (US))

Track Classification: Track4: Middleware, software development and tools, experiment frameworks, tools for distributed computing