In experiments of High Energy Physics, a large number of participating institutes situated in different countries all over the world employ the same software environment to access experiment data. The packaging and deployment of the experiment-specific software necessary to analyze these worldwide distributed data becomes a complicated task in the framework of grid computing. The continuous development in short release cycles requires the deployment procedure, which is organised centrally by an experiment, to be efficient, robust and transparent.

This paper describes the strategy used by the CMS experiment at the Large Hadron Collider at CERN, Geneva, to distribute, install and monitor experiment specific software bundles using grid technologies. The software packages allow to run dedicated applications like Monte-Carlo simulations of the detector or physics analyses on remote grid sites.