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# The CMS Offline condition database software system

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Non-event data describing detector conditions change with time and
come from different data sources. They are accessible by physicists
within the offline event-processing applications for precise calibration of reconstructed data as well as for data-quality control purposes.

Over the past three years CMS has developed and deployed a software
system managing such data. Object-relational mapping and the relational
abstraction layer of the LHC persistency framework are the foundation;
the offline condition framework updates and delivers C++ data objects according to their validity. A high-level tag versioning system allows production managers to organize data in hierarchical view. A scripting API in python, command-line tools and a web service serve physicists in daily work. A mini-framework is available for handling data coming from external sources. Efficient data distribution over the worldwide network is guaranteed by a system of hierarchical web caches.

The system has been tested and used in all major productions, test-beams and cosmic runs.

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