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ProtoDUNE Run Conditions Database

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The DUNE experiment will produce vast amounts of metadata, which describe the data coming from the read-out of the primary DUNE detectors. Various databases will collect the metadata from different sources. The conditions data, which is the subset of all the metadata that is accessed during the offline reconstruction and analysis, will be stored in a dedicated database. ProtoDUNE at CERN is the largest DUNE far detector prototype, and as such serves to prove database solutions and schemas for DUNE.

The ProtoDUNE Run Conditions Database is a PostgreSQL relational database that stores the conditions metadata coming from sources such as: DAQ, Slow Control, and Beam databases. This contribution will summarize the Run Conditions Database infrastructure which consists of a python rest API users' interface, a C++ interface, an Art interface (which is the framework used for the offline LArTPC data processing), and a plug in to the new data catalog (MetaCat). We will present how the conditions data, coming from the slow controls database, is retrieved, studied, and stored in a convenient format.

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