Title: The Data Processing Layer (DPL) for distributed big volume data analysis from LHC ALICE experiment (CERN).

The Data Processing Layer [1] is a framework providing declarative workflow definition to define data processing pipelines. The DPL will create a topology that will connect the producer of some kind of data to all of its consumers. The user implements such data flow description by providing a call back that fills the model representing the workflow. Once a data flow is described, the user can run it by simply starting a single executable, called the DPL driver. Such a driver will map the data flow to a concrete topology to a set of processes running ZeroMQ [2] devices.

The main task will be the implementation of debug software to gather logs and metrics aggregated during the processing. This software should also allow for dumping the input and/or output data from any device in the system when requested.

[1] <u>https://doi.org/10.1051/epjconf/201921405010</u>
[2] https://zeromq.org/