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Distributed data processing pipelines in ALFA

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The common ALICE-FAIR software framework ALFA offers a platform for simulation, reconstruction and analysis of particle physics experiments. FairMQ is a module of ALFA that provides building blocks for distributed data processing pipelines, composed out of components communicating via message passing. FairMQ integrates and efficiently utilizes standard industry data transport technologies, while hiding the transport details behind an abstract interface. In this work we present the latest developments in FairMQ, focusing on the new and improved features of the transport layer, primarily the shared memory transport and the generic interface features. Furthermore, we present the new control and configuration facilities, that allow programmatically controlling a group of FairMQ components. Additionally, new debugging and monitoring tools are highlighted. Finally, we outline how these tools are used by the ALICE experiment.

Significance

References

Experiment context, if any

ALICE, FAIR

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