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Rogue: Back-End Integration and Future Developments

Thursday, 9 November 2023 17:30 (15 minutes)

Rogue is an open-source, C++/python, hybrid architecture platform that facilitates the communication with firmware and hardware modules. It uses low level C++ interfaces for performant data movement, asynchronous messaging and high-speed register access. A high level python interface is used to easily define and organize device nodes in a hierarchical tree structure. Both layers are extensible via plug-ins, allowing for users to easily develop high-performing solutions. Rogue's extensibility coupled with the flexibility of its libraries, allows it to be easily integrated into the data acquisition pipelines of larger systems.

Rogue has been successfully integrated into several existing data acquisition back-ends including the CEBAF Online Data Acquisition (CODA), EUDAQ and the Observatory Control System (OCS). Ongoing developments continue to improve Rogue's capabilities as a stand-alone data acquisition framework providing high performance data processing and monitoring all controlled by a central run control. This work will review the back-end integration details and future developments aimed at enhancing Rogue's stand-alone capabilities.

Early Career

Presenter: MORENO, Omar (SLAC)

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