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# Update on the design and implementation of an instrumentation & control system for Cathodes and Radio-frequency Interactions in Extremes Project

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The Accelerator Operations and Technology division at Los Alamos Neutron Science Center (LANSCE)is working on designing and implementing an Instrumentation and Controls System (ICS) for the Cathodes and Radio-frequency Interactions in Extremes (CARIE) project. The backbone of this project is the Experimental Physics and Industrial Control System (EPICS), which integrates all the hardware to facilitate a distributed real-time control system for controlling and monitoring all essential system variables. The system design includes National Instrument's (NI) CompactRIO Systems (cRIO) controller, NI's PXIe for high-speed data acquisition, and EtherNet/IP devices. In this paper, we will provide an update on the deployment of the CARIE control system and share lessons learned, including challenges and best practices employed during the project.

## Footnotes

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