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Development of a customised wrapper for p4p and use of this to migrate ISIS's accelerator controls from Vsystem to EPICS

Thursday 5 June 2025 15:30 (2 hours)

The controls system for the ISIS accelerator is being migrated from using the commercial software Vsystem to EPICS which is open source. The primary protocol used for transporting process variables (PVs) across the network is pvAccess and the Python-based software p4p is used to create servers that provide access to process variables (PVA servers). A custom wrapper for p4p is being implemented to simplify and standardise way in which PVA servers work. This will allow users to easily create PVA servers for their own devices whilst allowing automatic registration with other services, for example ChannelFinder.

The main device interface used for ISIS accelerator controls is an in-house developed CPS crate and these require a Vsystem reader to initialise and read channels from each CPS crate. This functionality can be replaced using the customised p4p module to provide a service that can initialise the crate and then start a PVA server to provide the PVs for that crate. This will allow decoupling the CPS crates from Vsystem so that they can be moved into EPICS.

Footnotes

Paper preparation format

LaTeX

Region represented

Europe

Funding Agency

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