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Expanding the QueueServer use case to further experiment

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While the Bluesky QueueServer was originally developed as an alternative method for executing Bluesky plans, we have explored its usability with other experiment orchestration engines. At its core, the QueueServer enables the execution of a dedicated server-side Python process—by default managing the Bluesky Run Engine—and facilitates communication with this process via ZeroMQ and an HTTP REST API.
Here, we evaluate the possibility of not only connecting to the Bluesky Run Engine through the QueueServer, but also accessing Sardana (the experiment orchestration system used at PETRA III) via the QueueServer and its API. Looking ahead, we consider this approach a potential option for unified, API-based access to experiment controls. This could be particularly beneficial for cross-facility GUI-development and users conducting experiments across multiple facilities and for (ML-based) closed-loop feedback applications.

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