

Implementation of Bluesky and Ophyd in MXCuBE

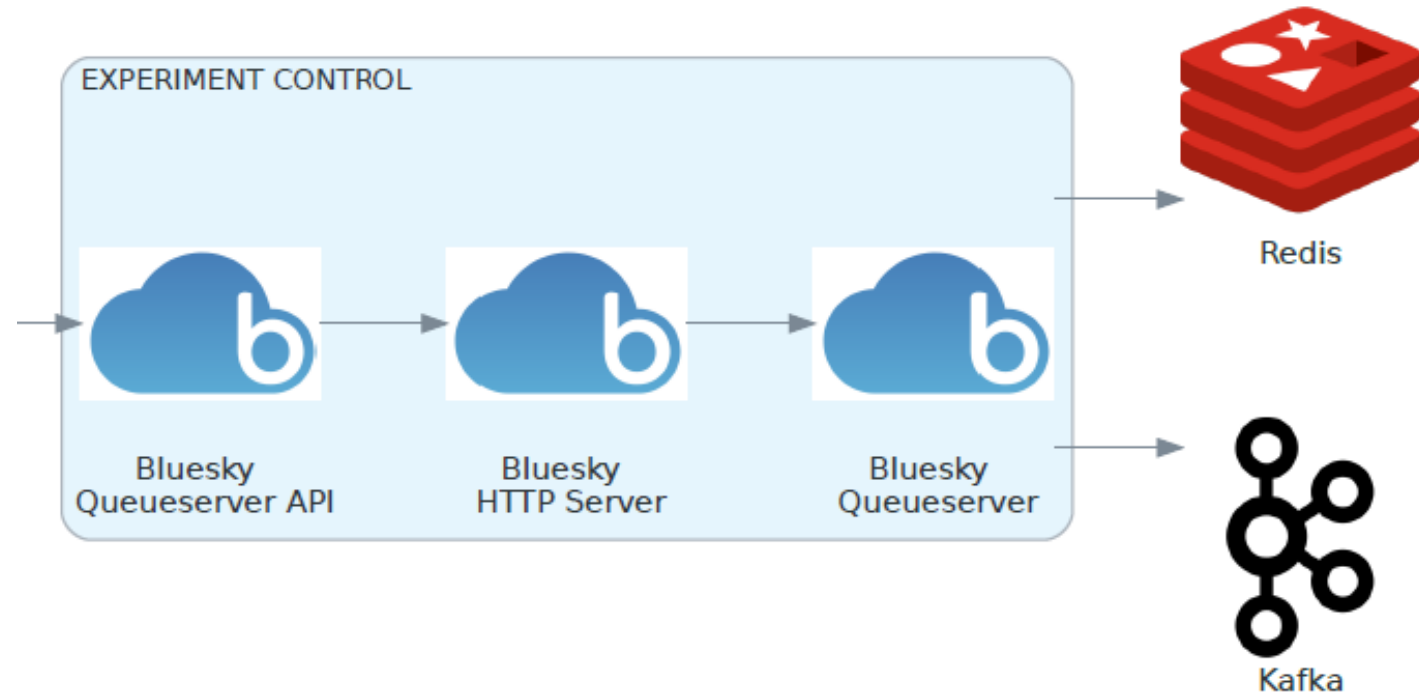
MX3 Team

Australian Synchrotron

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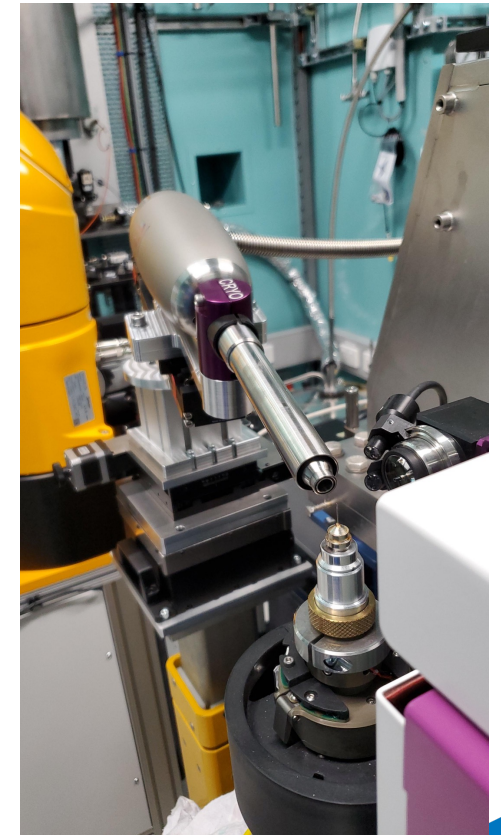
Bluesky

- Python library used mainly for experiment orchestration
- Bluesky talks to hardware via Ophyd: a Python hardware-abstraction layer
- Bluesky plans can be launched through Prefect



The MX3 beamline library

- All ophyd devices and bluesky plans can in found in the [mx3-beamline-library](#)
- We have ophyd devices to talk to
 - MD3
 - Isara Robot
 - Dectris detector
- (See also [mx-robot-library](#) and [ansto-simplon-api](#))



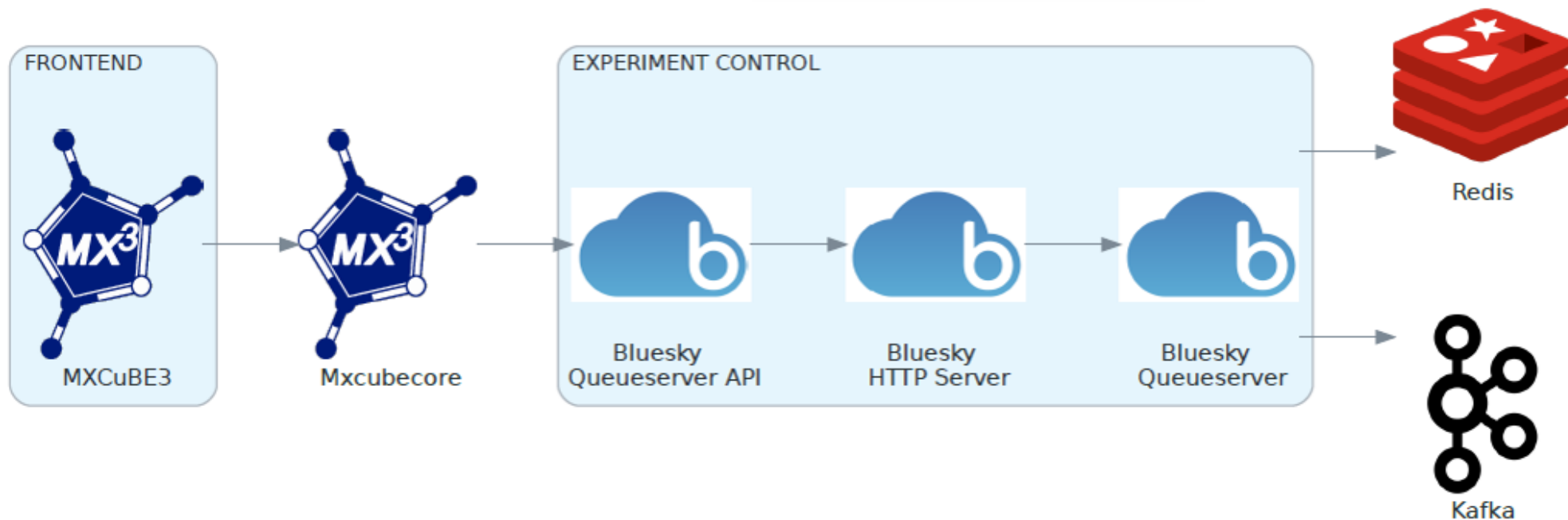
Ophyd Hardware Object class

- Wrote a [Hardware object class](#) which uses ophyd devices from the mx3-beamline-library
- This class has been tested on real motors
- No issues found during the integration of ophyd in mxcube core



Triggering workflows from MXCuBE

- Created an [abstract bluesky-workflow class](#) which allows us to launch bluesky plans workflows from MXCuBE
- Currently mxcubecore calls the bluesky queueserver directly



Future work

- Launch workflows by calling the prefect API (simplifies our infrastructure)
- Update mxcube and mxcube-core to the latest version
- Open a pull request to add the classes introduced in this presentation to the main branch of mxcube-core

