

Updating the 14UD control system at HIAF (ANU)

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The current control system is based on an Ubuntu 12 (32 bit) server and EPICS version 3.14.11-dirty. The server provides EPICS IOC's to four VME crates and a few arm based IOC's via tftp boot. All IOC's run the same iocApp with different st.cmd and data base files to form the accelerator control system. In addition all control terminals are thick clients booting from the Ubuntu 12 server, which provide a python based control screen to operate the accelerator.

In this contribution I will present our ideas for restructuring/reprogramming the control system and operator screens.

We are planing to update EPICS to R7 where possible, program a new operator screen based on qeframework and alpine Linux, and restructure the overall architecture utilising docker and Gitlab. The aim is to make the system independent of the underlying operating system and partially decentralised (using three servers), so that a single server failure can be compensated by redistributing the services to the remaining servers. Gitlab's CI/CD tools seem to be a promising path to automate some of the maintenance and deployment tasks using git repositories to keep track of changes.

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