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Design and development of Diamond-II accelerator control system

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Diamond light source is a 3rd-generation synchrotron light source that has been operating since 2007. The existing accelerator control system is based on EPICS V3, and a mixture of VME hardware, PCs and embedded devices. An upgrade of Diamond to Diamond-II is now in the construction phase with installation set to begin in January 2028, followed by storage ring commissioning in Oct 2028.

A new control system is currently under development, leveraging existing infrastructure while modernizing key components. The updated control system will be built on EPICS 7 with software deployed via Kubernetes clusters. This paper outlines the system requirements, development activities, planning, and deployment strategy, for the Diamond-II accelerator control system.

Footnotes

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