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Flexible containerised deployment of EPICS IOCs via CI/CD

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Managing a large number of EPICS Input/Output Controllers (IOCs) in a control system presents significant challenges in configuration, deployment, and maintenance. This poster introduces a streamlined deployment pipeline that efficiently manages IOC lifecycles within containerized environments, leveraging CI/CD practices for robust configuration management and automated updates. A key feature of this system is its fine grained deployment control: it supports both the rollout of revised IOC images across all instances and the selective deployment of updated database (db) files to individual IOC instances without impacting others in the same Docker stack. This flexibility enables rapid, low risk updates and simplifies the orchestration of complex EPICS-based infrastructures, ensuring scalability, maintainability, and operational reliability.

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Footnotes

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