

## **Ganil: Control system at Spiral 2**

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The commissioning of the Spiral2 facility at Ganil will soon start, requiring the control system components to be delivered. The control system development results from the collaboration between Ganil, CEA/IRFU, CNRS/IPHC laboratories, using appropriate tools and approach. Based on Epics, the control system follows a classical architecture. At the lowest level, Modbus/TCP protocol is considered as a field bus. Then, equipment are handled by IOCs (soft or VME/VxWorks) with a software standardized interface between IOCs and clients applications on top. This last upper layer consists of Epics standard tools, CSS/BOY user interfaces within the so-called CSSop Spiral2 context suited for operation and, for machine tunings, high level applications implemented by Java programs developed within a Spiral2 framework derived from the open-Xal one. Databases are used for equipment data and alarms archiving, to configure equipment and to manage the machine lattice and beam settings. A global overview of main choices and status of the system is therefore here proposed.