



Akraino R6 includes the **Smart Data Transaction for CPS** blueprint, an Akraino approved blueprint.

The Smart Data Transaction for CPS blueprint provides a framework for sharing data between edge nodes to enable cooperative analysis and action while reducing upstream bandwidth pressure. It also demonstrates support for remote smart sensors connected via low power radio (LoRa) technology.

This release also includes support for installation and monitoring of a cluster of edge nodes by leveraging Kubernetes and Ansible to simplify orchestration.

This blueprint aims to provide a foundation for future work expanding the range of possible applications using the Akraino Edge Stack. Release 6 is the first iteration of the blueprint. This release provides a test implementation of these concepts using EdgeX and Kubernetes technologies.

Key features in Release 6:

Release 6 is the first release of the Smart Data Transaction for CPS blueprint. The key features are:

- Simple support for data sharing between edge nodes
- Support for low-power radio (LoRa) connected sensors
- Simplified setup and orchestration through Kubernetes and Ansible

For more information see the full documentation at the Smart Data Transaction for CPS documentation page:

<https://wiki.akraino.org/display/AK/Smart+Data+Transaction+for+CPS+Documentation>

Akraino R6 Smart Data Transaction for CPS BP is now available! For more information visit

<https://www.lfedg.org/projects/akraino/> or <https://wiki.akraino.org>

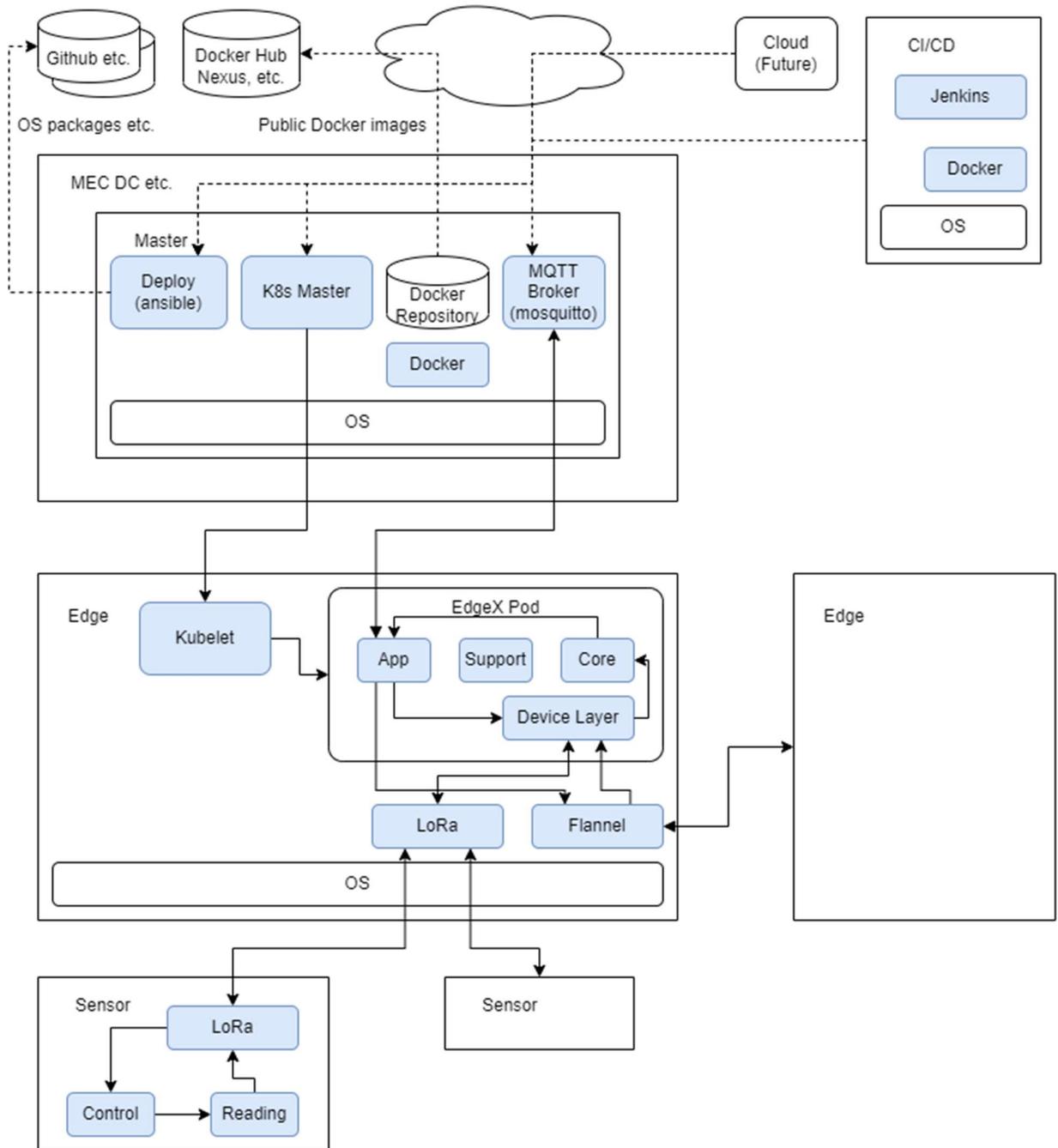


Figure 1: High level Architecture



Akraino Edge Stack is an open source project under the LF Edge umbrella that creates edge software stacks that supports high-availability cloud services optimized for edge computing systems and applications. It offers users new levels of flexibility to scale edge cloud services quickly, to maximize the applications and functions supported at the edge, and to help ensure the reliability of systems that must be up at all times. The Akraino Edge Stack platform integrates multiple open source projects to supply a holistic Edge Platform, Edge Application, and Developer APIs ecosystem.

Akraino uses the “blueprint” concept to address specific Edge use cases to support an end-to-end solution.

A blueprint is a declarative configuration of the entire stack--i.e., edge platform that can support edge workloads and edge APIs.

To address specific use cases, a blueprint architecture is developed by the community and a declarative configuration is used to define all the components used within that architecture such as hardware, software, tools to manage the entire stack, and method of deployment (Blueprints are maintained using full CI/CD integration and testing by the community for ready download and install).

For more information: <https://www.lfedge.org/projects/akraino/> or <https://wiki.akraino.org/>.



Akraino is part of the LF Edge umbrella organization that establishes an open, interoperable framework for edge computing independent of hardware, silicon, cloud, or operating system. By bringing together industry leaders, LF Edge creates a common framework for hardware and software standards and best practices critical to sustaining current and future generations of IoT and edge devices.

LF Edge Projects address the challenge of industry fragmentation, and collaborates with end users, vendors, and developers to transform all aspects of the edge and accelerate open source developments.

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