Akraino Release 7 includes an updated version of 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. The first version in release 6 introduced support for remote smart sensors connected via low power radio (LoRa) technology, and a basic framework for installation and monitoring of a cluster of edge nodes by leveraging Kubernetes and Ansible. This release includes support for image capture from IP cameras and local image analysis, and a demonstration of sharing static image data between nodes.

Key features in Release 7:

Release 7 is the second release of the Smart Data Transaction for CPS blueprint. The key features are:

- Simple support for data sharing between edge nodes
- Simplified setup and orchestration through Kubernetes and Ansible
- Support for low-power radio (LoRa) connected sensors
- Support for IP camera image capture and sharing images
- Support for image analysis on edge nodes, including GPU acceleration

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+Release7+Documentation

Akraino R7 Smart Data Transaction for CPS BP is now available! For more information visit https://www.lfedge.org/projects/akraino/ or https://wiki.akraino.org
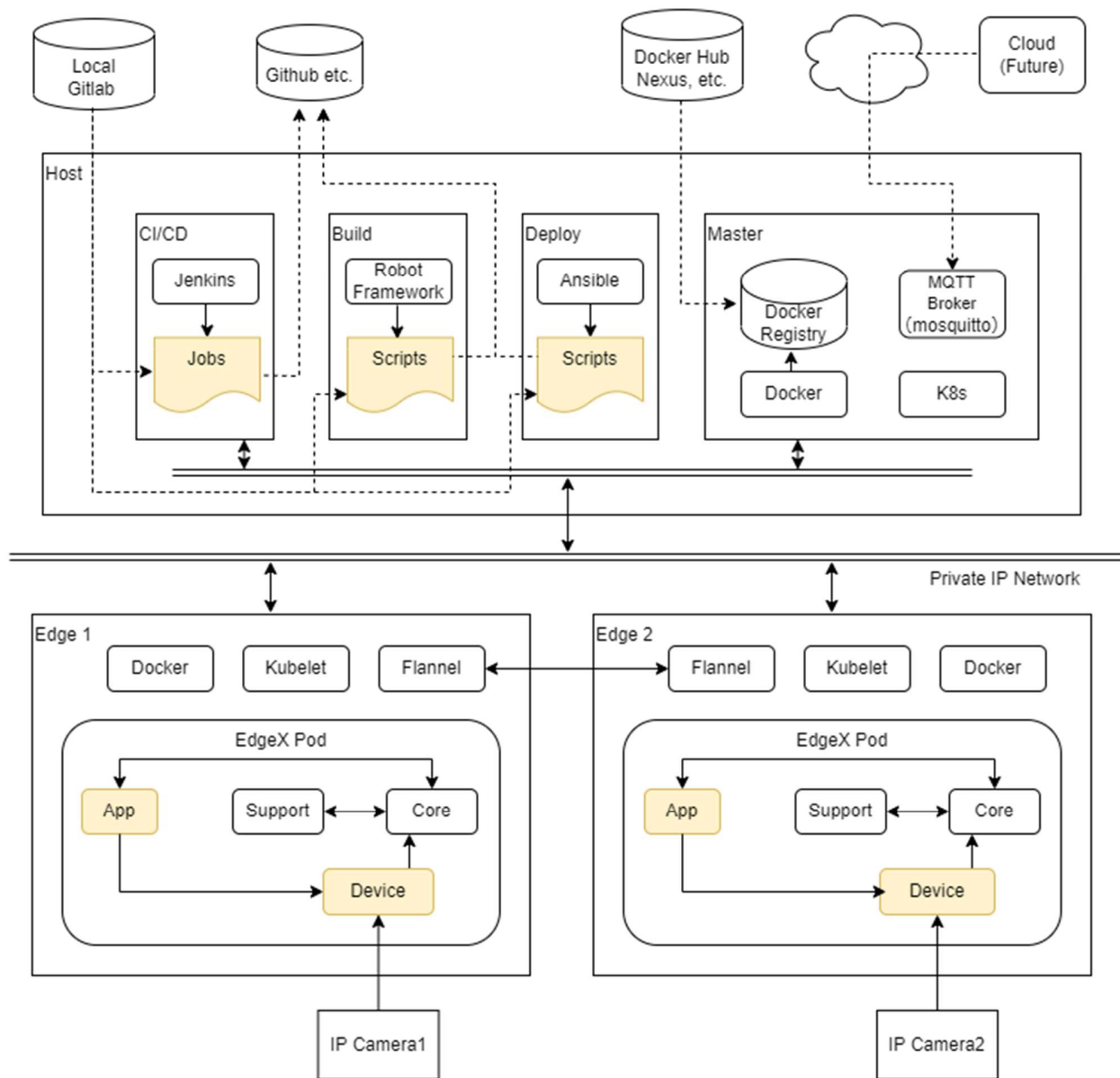
Figure 1: High level Architecture

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.

www.lfedge.org