Introduction
This document provides an overview of the Smart Cities blueprint as well as an overview of key features and implementations of PARSEC in Akraino Release 5.

Overview
Akraino Blueprint: Smart Cities
The purpose of Smart Cities blueprint is to provide edge computing platform based on Arm Soc, improve deployment flexibility and security in the edge computing. The high-level relationships between the functional domains is shown in the figure below:

![Smart Cities Functional Domains](image)

For the full description of the Smart Cities Reference Architecture please refer to the Smart Cities Documents.

Smart Cities in Akraino R5
Key features and implementations in Akraino Release 5:

Smart Cities blueprint’s security components is PARSEC. It is first released in Akraino release 5. The following is a brief introduction to PARSEC.
Parsec is the Platform AbstRaction for SECurity, a new open-source initiative to provide a common API to secure services in a platform-agnostic way.

Parsec aims to define a universal software standard for interacting with secure object storage and cryptography services, creating a common way to interface with functions that would traditionally have been accessed by more specialised APIs. Parsec establishes an ecosystem of developer-friendly libraries in a variety of popular programming languages. Each library is designed to be highly ergonomic and simple to consume. This growing ecosystem will put secure facilities at the fingertips of developers across a broad range of use cases in infrastructure computing, edge computing and the secure Internet of Things.
For more information of PARSEC:

For more information of Smart Cities blueprint:
https://wiki.akraino.org/display/AK/Smart+Cities

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).


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](http://www.lfedge.org)