

Paradrop: A virtualized WiFi router for edge computing, Third Party services, And a tool for teaching networking in the classroom



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What is Paradrop?

- Orchestration framework to manage applications that run directly on Wi-Fi Access Points (e.g., edge-computing)
- Paradrop allows low-overhead virtualized access to unused resources of the AP to perform useful work
- Perfect for graduate or undergraduate students learning wireless and networking fundamentals

Key Components

- Flexible, secure, and lightweight containers in APs
- Cloud-based backend to orchestrate resources and applications
- Easy to use API
- Isolated wireless network for applications



Classroom Uses

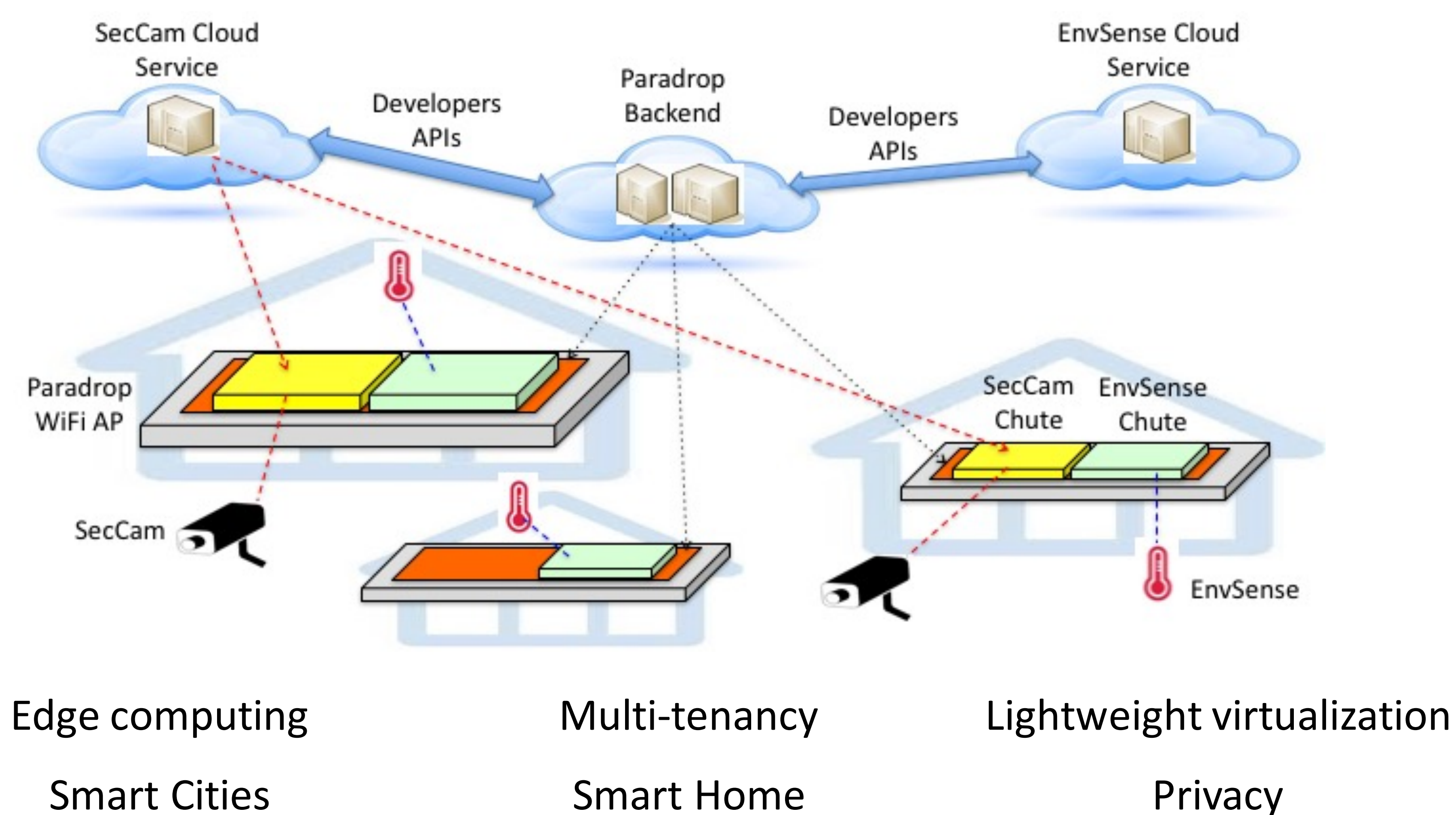
- Basic networking fundamentals
- Wireless communication protocols
- Distributed and edge systems
- Advanced networking: Software Defined Networking, Network Function Virtualization

More Information

Available soon as an educational platform for your classroom

For Workshop docs and more info visit: www.paradrop.io
Email: suman@cs.wisc.edu

Architecture



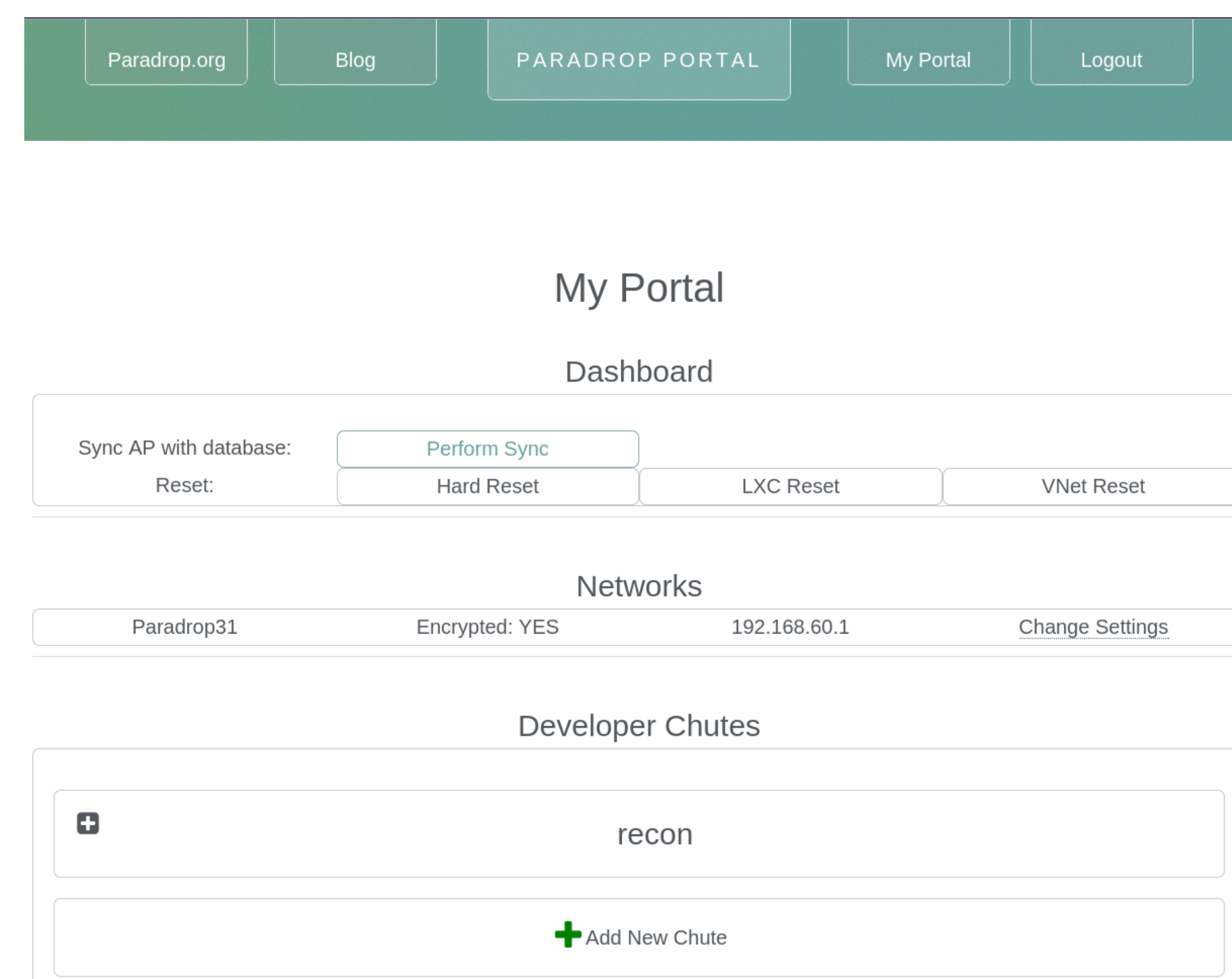
Paradrop Platform

Paradrop Benefits

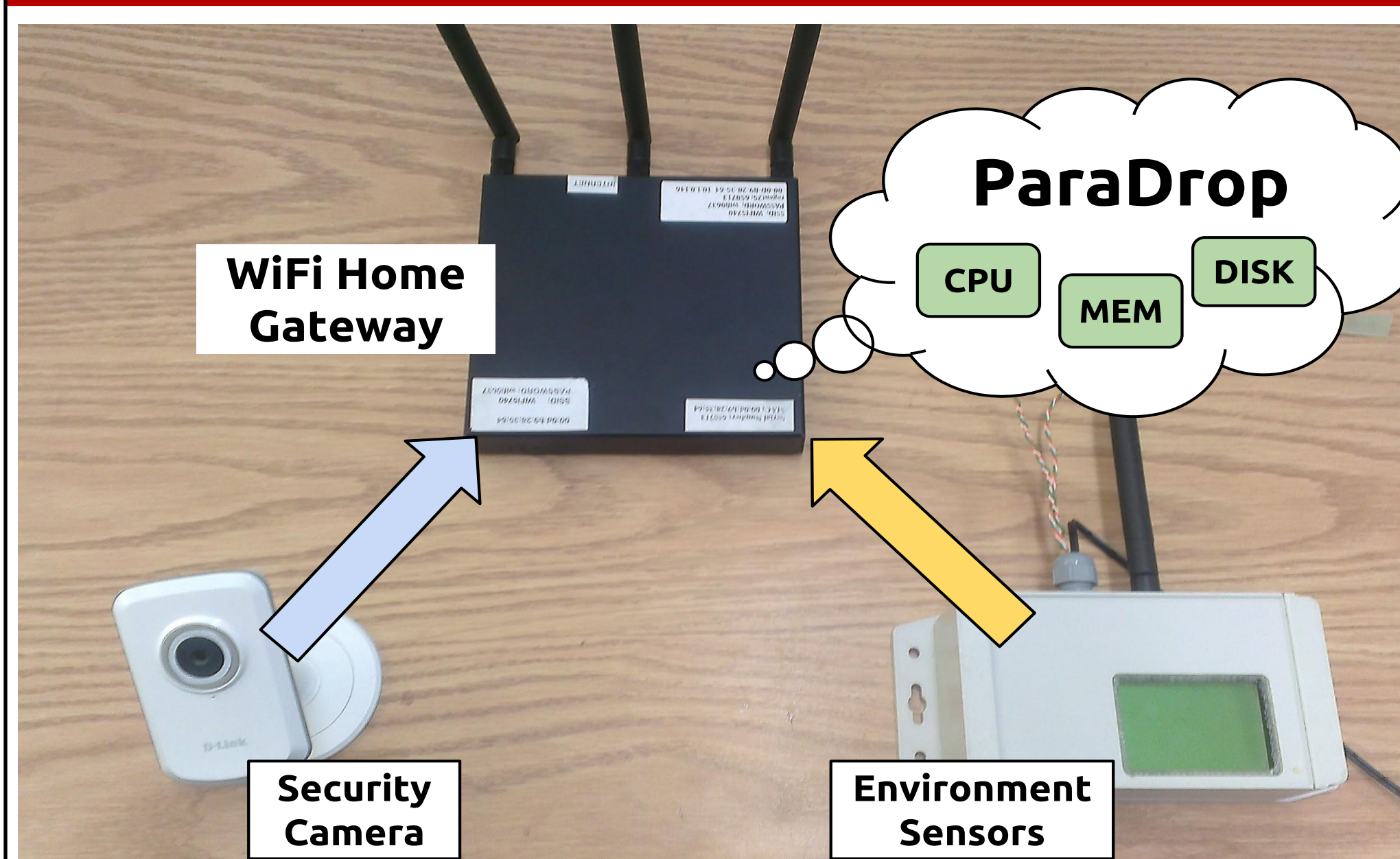
- Smaller learning-curve for edge-computing frameworks by writing applications in many languages
- Supports full Linux environments
- RESTful API for full configuration and deployment control
- Dynamic deployment of virtual machines through cloud-backed servers
- Easily interact with Internet of Things devices such as IP Cameras, wireless environment sensors

Paradrop Portal

UI-based configuration and control of edge-computing environment



Fully Implemented



Tutorial at US Ignite App Summit 2014

