Akraino API Portal

Jane Shen, Tim Epkes, Neal Oliver, Jeff Brower, Tina Tsou

API Sub-committee Infrastructure Work Stream

May 12, 2020

Why is an API/Interface portal needed?

Akraino's Release 3 marks another milestone. With several blueprints accepted, a community API portal provides a view inside these blueprints.
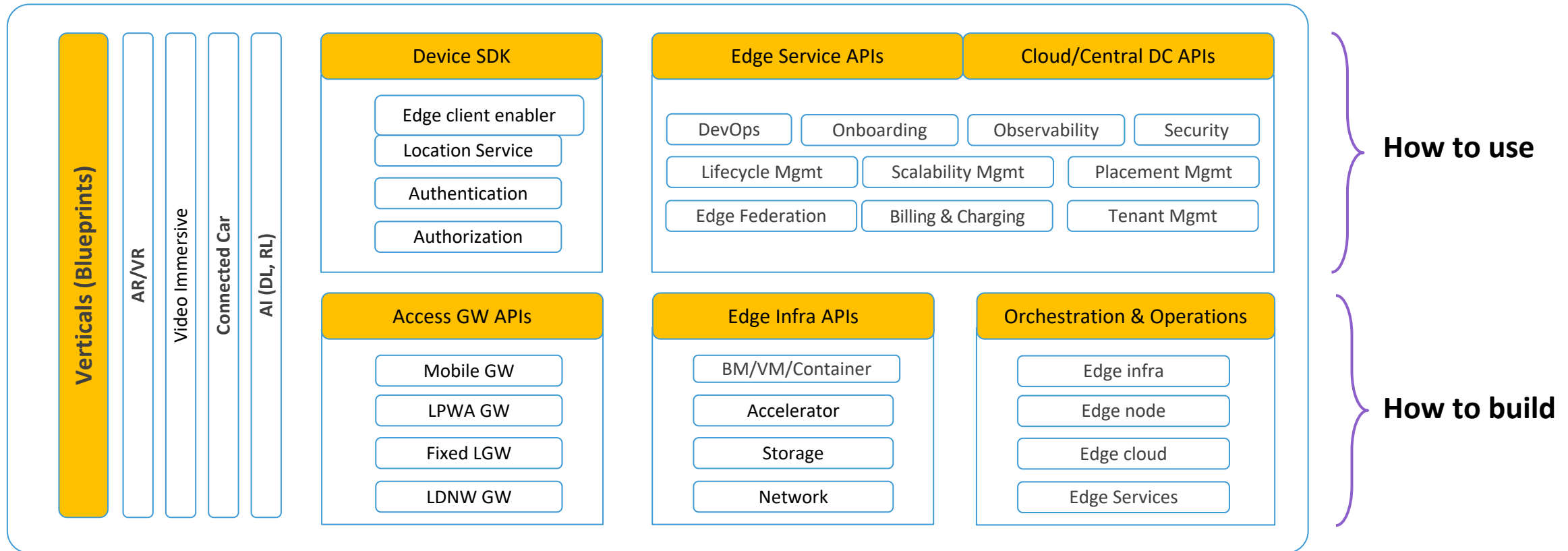
➤ *"A blueprint shows it works; APIs show how it works"*

➤ *APIs provide a map for customers to navigate Akraino edge stacks and services*

➤ *Consistent and well organized APIs will increase Akraino adoption*

As Forbes puts it, "How a business wins or loses is increasingly dependent on how well they connect to external party apps, devices and services."
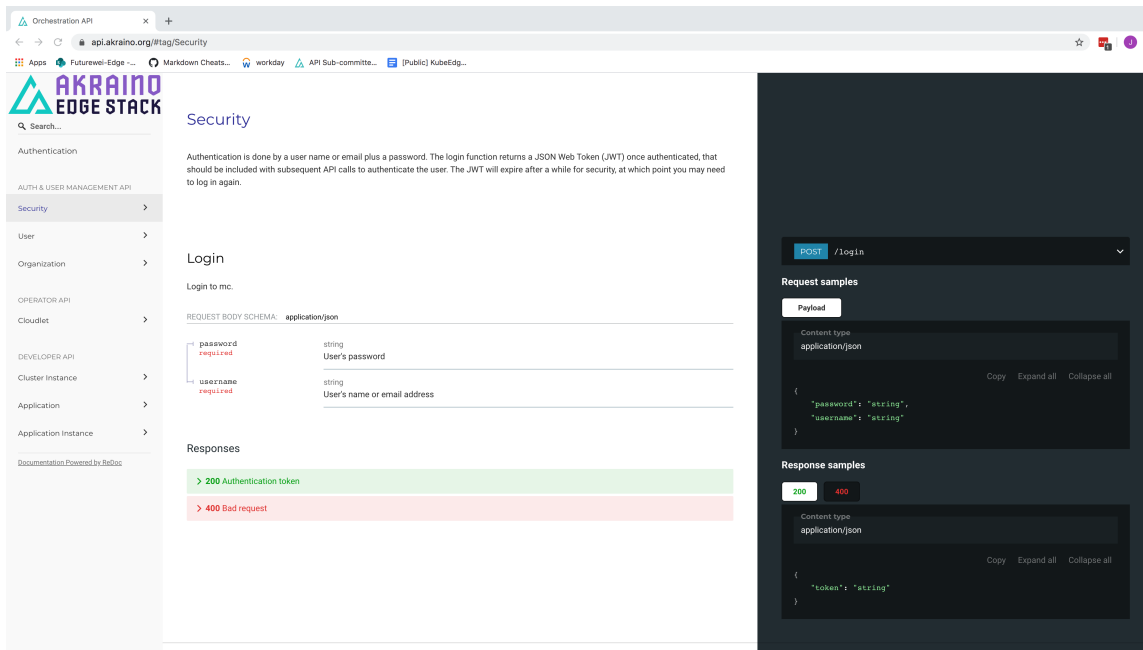
What will be included in API Portal?

➢ 2 categories of Edge APIs:

- **How to build the edge**: BM/VM/Container, networking, storage, mgmt./orchestration
- **How to use edge as a service**: End user application(device, edge service, cloud service),

➢ A focus on interfaces, not implementations

➢ An inclusive approach, highlighting common APIs

➢ Open, extendable

Proposal on API portal map

AKRAINO EDGE STACK

Verticals (Blueprints)
- AR/VR
- Video Immersive
- Connected Car
- AI (DL, RL)

Device SDK
- Edge client enabler
- Location Service
- Authentication
- Authorization

Edge Service APIs | **Cloud/Central DC APIs**
- DevOps
- Onboarding
- Observability
- Security
- Lifecycle Mgmt
- Scalability Mgmt
- Placement Mgmt
- Edge Federation
- Billing & Charging
- Tenant Mgmt

How to use

Access GW APIs
- Mobile GW
- LPWA GW
- Fixed LGW
- LDNW GW

Edge Infra APIs
- BM/VM/Container
- Accelerator
- Storage
- Network

Orchestration & Operations
- Edge infra
- Edge node
- Edge cloud
- Edge Services

How to build

What we have now

api.akraino.org

- This is REST API based documentation with the focus on application developer interfacing.

- We will continue to include the infrastructure work stream APIs

Call for Actions

- Pilot projects:

    Volunteer projects are welcome. PCEI, AI Edge, KubeEdge are in the queue

- API portal design:

    Categories, format (RESTful, gRPC etc.), versioning etc.

    You are welcome to join our Friday 9am weekly meeting to discuss

    https://wiki.akraino.org/display/AK/API+Sub-committee

- Collaborative validation:

    Mock servers, client stubs etc. We need volunteers to test out APIs

Thank You!