Living on the Edge

Edge computing developments

Dan Druta, AT&T

GSMA Internet Group Plenary Sept 9th 2019

Broad set of activities focused on Edge

Internal Use
- 5G
- Other

Enterprise
- Retail
- Manufacturing
- Healthcare
- Stadiums

Verticals
- XR
- IoT

AT&T

Network Edge Compute

Network Edge Compute brings Azure cloud closer to the network edge

Use case – Drone monitoring

“By running their VigilAir application using Azure cloud services delivered through the Plano AT&T test environment, and connecting their drone-tracking sensors using AT&T LTE and 5G networks, Vorpal could achieve the low latency and compute scalability required for optimized performance.”

AT&T

Edge for Retail

To better enable seamless, uninterrupted network connectivity, the AT&T Foundry is testing 5G connectivity with Badger Technologies' robots in a multi-access edge computing (MEC) environment. The goal is to demonstrate how 5G using millimeter wave spectrum and edge computing could provide Badger Technologies and retailers with the lower latency and high throughput required to process and share vast amounts of data while running concurrently with other in-store network applications.

AT&T

5G Innovation Program

Edge Zones

- We first turned our focus to media applications such as augmented reality, virtual reality, and cloud-driven gaming. We've now completed our first experiment with GridRaster. The goal of this phase of our collaboration was to quantitatively understand how improved network performance metrics, such as delay and packet jitter, would translate to improvements in application performance metrics, such as motion-to-photon-latency and frame loss – yielding a better experience for the end user.
    - » We'll be collaborating with NVIDIA to experiment with new ways of delivering experiences over 5G and edge computing technology. At AT&T Spark, the AT&T Foundry, Ericsson and NVIDIA will unveil a GeForce NOW edge computing demo that will showcase *Shadow of the Tomb Raider* using the power of cloud gaming over a 5G network. It's a glimpse at what the future holds and a prime example of what we can achieve through this collaboration.

We believe 5G will do for Business what 4G did for the consumer's experience. Therefore, we're starting to bring our 5G network right to our enterprise customers' doors so they can innovate in near real-time on their own campuses. Some examples include:

- » Magic Leap: This year AT&T plans to launch a 5G Innovation Zone on the Magic Leap campus in Plantation, Florida to give developers and creators the ability to test devices and applications on a 5G network right where the work is being done.
- » Rush System for Health: AT&T's 5G network, Multi-access Edge Computing (MEC) - a cloud-based IT service environment at the edge of the network – and other advanced network related technologies, will enable Rush's system hospitals to manage its cellular traffic over both its local network based in Chicago and its wide area network. This will allow Rush to better satisfy network communications and application processing needs for its data, enhance the various use cases across its system, and help improve the patient experience.
- » Samsung: We are working with Samsung Electronics America, Inc. and Samsung Austin Semiconductor to create America's first manufacturing-focused 5G "Innovation Zone" in Austin, Texas. The goal of the testbed is to explore different use cases over 5G to provide a real-world understanding of how 5G can impact manufacturing and to provide insight into the future of a smart factory.
- » WarnerMedia: Initial areas of the Content Innovation Lab include exploration of AT&T's 5G infrastructure offerings to develop, deliver and deploy new immersive consumer content experiences in the form of AR/VR/MR/gaming offerings, enhancing real-time interactivity and connectivity.

AT&T

Linux Foundation Akraino Edge Stack project

Integration project under LF

Focused on end to end use cases for edge computing

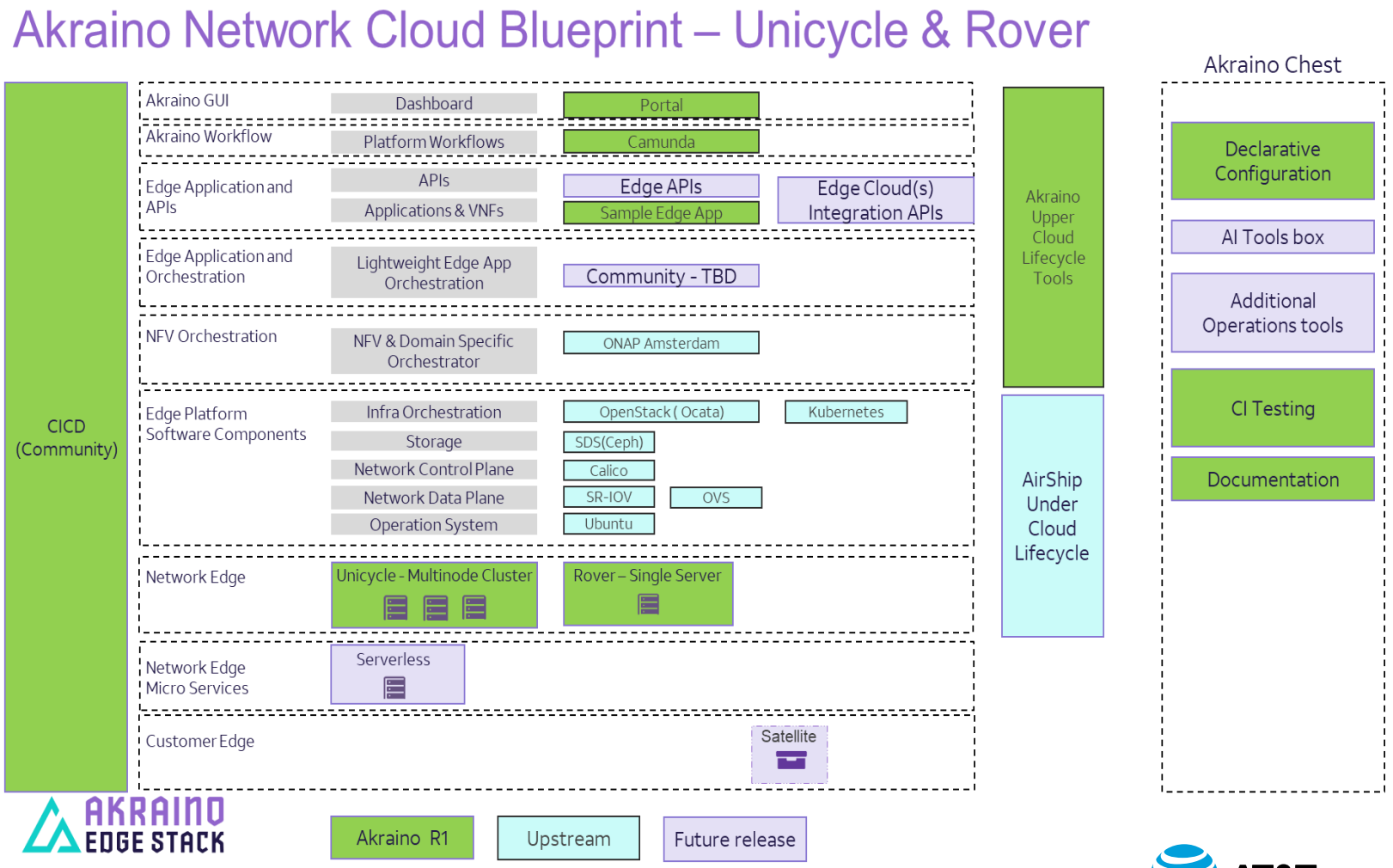
Defines specific blueprints fulfilling the individual use cases

Blueprints cover full stack (h/w, s/w)

Overview documentation

Relevant work for developer centric APIs:

- MEC APIs Framework Blueprint
- API's sub-committee



AT&T


AT&T