

## Network Cloud powered by Tungsten Fabric

Network Cloud with Tungsten Fabric blueprint addresses a variety of telco edge cloud use cases supporting virtualized, containerized and bare metal workloads.

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CICD (Community)	Akraino Workflow Edge Application and APIs Edge Application and Orchestration	Platform Workflows APIs Applications & VNFs Lightweight Edge App Orchestration NFV & Domain Specific Orchestrator	Communit	App (CDN) Integr	e Cloud(s) ration APIs	Akraino Upper Cloud Lifecycle Tools		Declarative Configuration AI Tools box ETE Operations tools ETE Security tools
	Edge Platform Software Components	Infra Orchestration Storage Network Control Plane Network Data Plane Operation System	OpenStack	(Ocata) Kubern ngle SDN DK/SR-IOV & C		AirShip Under Cloud	D a w n	Narad (Inventory) ETE Testing OpenStack Tempest
	Network Edge Network Edge Micro Services Customer Edge	NC – Multinode Cluster	Single Serv	Single Server		Lifecycle *To be contribu to Airsh		PINC (N/W Orchestration) Documentation
	۱	Akraino - new	Upstream	Future release	<u> </u>		Ľ	

### Overview

This blueprint implements Network Cloud blueprint with Tungsten Fabric as an SDN Controller that support CNI for Kubernetes as well Neutron plugin for OpenStack. This allows the operators to take the advantage of the advanced networking feature offered by Tungsten Fabric. This blueprint uses the latest version of Regional Controller to deploy the edge sites that uses Airship as the deployment tool. This enables telco operators to take control of their infrastructure, by providing a declarative framework for defining and managing the life cycle of the infrastructure

#### **Key Features**

- Supports Telco grade application and wide variety of Virtual Network Functions (VNFs) and Containerized Network Functions (CNFs)
- Offers advanced networking features supported by Tungsten Fabric, such as service chaining, network policies, security, VRRP, route advertisement, flow management, etc.
- Enables deployment of multiple remote edge sites from a single regional controller
- Consolidates settings into a single input file that defines the edge site configuration

For more information:

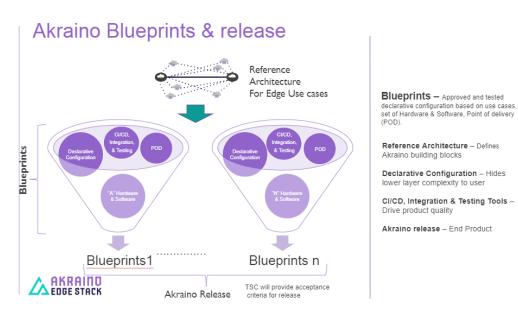
Blueprint Details https://wiki.akraino.org/display/AK/Network+Cloud+and+TF+Integration+Project

Akraino R2 is now available! For more information: <u>https://www.lfedge.org/projects/akraino/</u> or <u>https://wiki.akraino.org/</u>

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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/.

#### [SIDEBAR]

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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.

**[Insert Logos for**: Akraino, Baetly, Fledge, EdgeX Foundry, Glossary of Edge Computing Home Edge, Project EVE]

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