

A dramatic landscape photograph of a fjord. In the foreground, a dark, rocky cliff edge juts out, with a small figure of a person standing on it. Below the cliff, a calm body of water (the fjord) winds through a deep, rugged valley. The valley walls are steep and rocky, with some greenery visible in the distance. The sky is filled with large, dramatic clouds, with a bright light source (likely the sun) breaking through near the horizon, creating a golden glow. The overall mood is majestic and awe-inspiring.

Vapor

# Overview

# The Kinetic Edge Guiding Principles

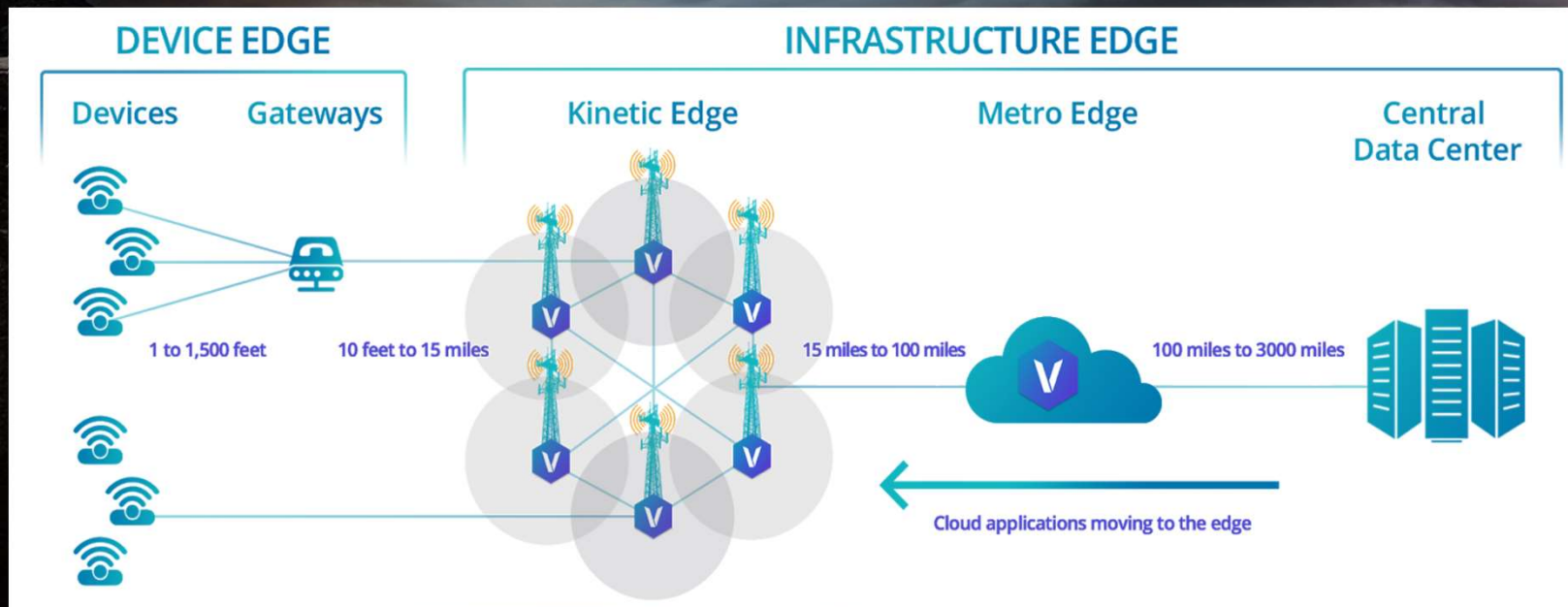
- Support for heterogeneous services/devices – The Kinetic Edge (KE) is a dense compute, extensible platform that supports heterogeneous devices
- Support for variety of spectrum bands – Vapor provides spectrum agnostic infrastructure interoperable with any RAN
- Scalable – The KE is designed to scale to hundreds and even thousands of highly distributed availability zones
- Software based and programmable - We deploy a software-defined edge colocation and interconnection platform
- Common hardware platform – Each KE site is capable of supporting any common compute platform that Dish selects
- Open source and open interfaces – Vapor participates in and contributes to many open source consortiums
- Support for multi-tenancy and virtualization – The KE was designed from the ground up to support multi-tenancy and virtualization
- Flexible with agile service/slice deployment – The KE supports the dense compute and latency required for slice deployment
- Context aware automation – Vapor’s open source Synse API provides in-depth, real-time context telemetry
- Resilient – By providing a geographically distributed “flat net”, the KE allows for workload migration enabling best in class uptime



# Kinetic Edge Architecture

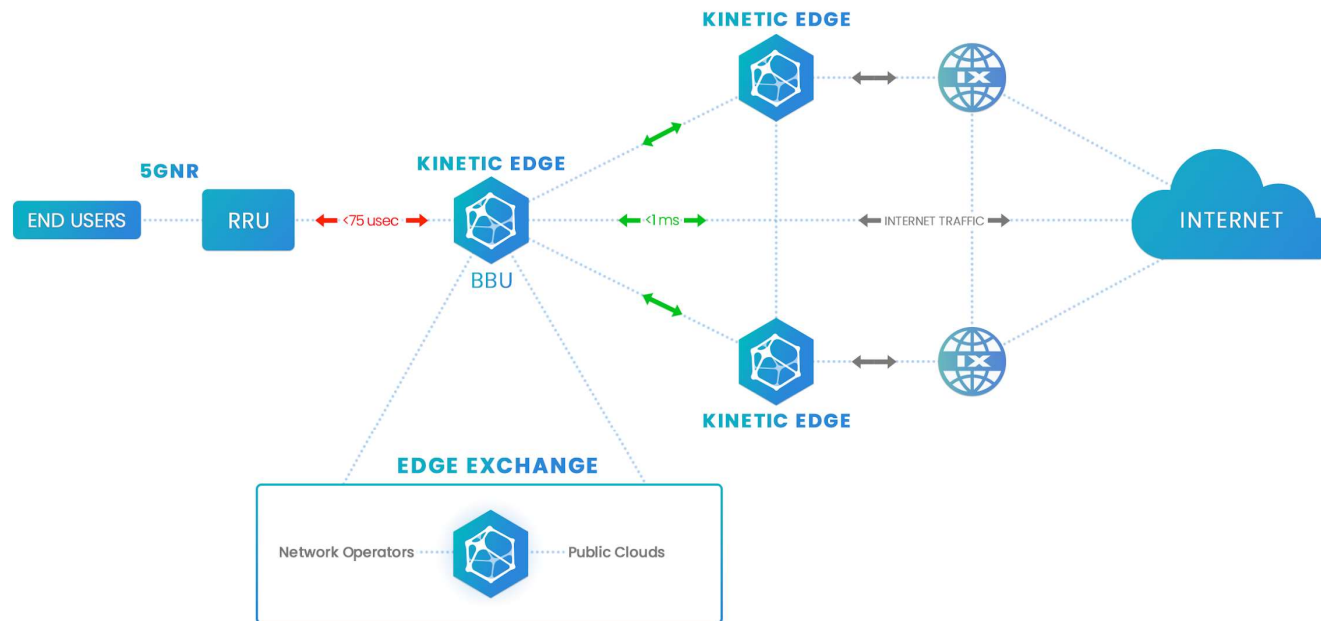
## Edge-first Architecture

The design, deployment and operation of hundreds of edge data centers that are distributed across the United States requires an entirely new mindset compared to a handful of hyperscale locations in highly controlled environments. From the industry-leading air-cooling efficiency of each Kinetic Edge site to its highly secure design, allowing for remote operation, the Kinetic Edge platform was designed totally from the ground up as the optimal edge colocation and software-defined interconnection platform to support 5G networks, edge clouds and new uses. Each physical Kinetic Edge site is its own logical availability zone, with multiple across a city.



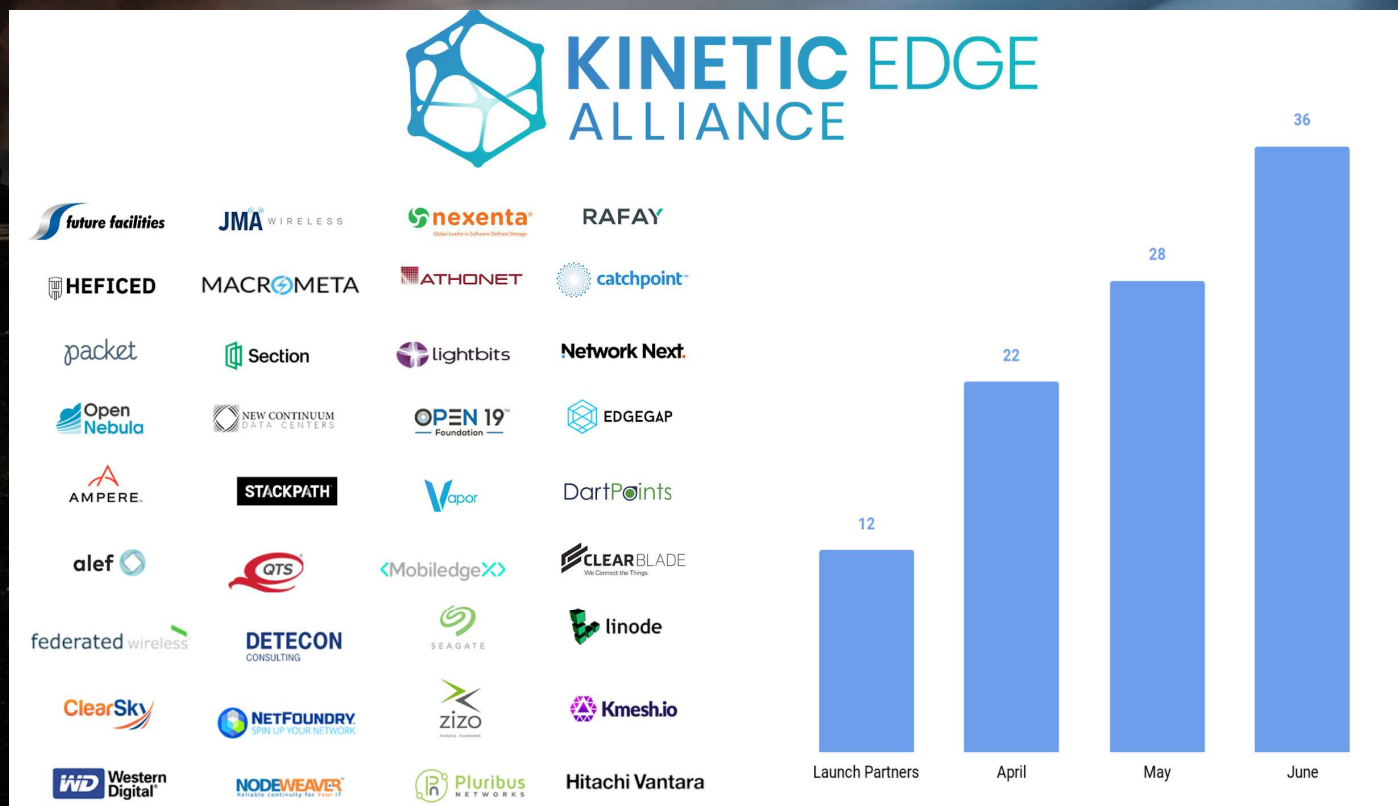
# Kinetic Edge Exchange

The Kinetic Edge Exchange is a set of software-defined interconnection capabilities built on top of the Kinetic Edge platform which enable network operators to automate and streamline hyper-local interconnection arrangements with third party networks.



# Kinetic Edge Alliance

Each member of the Kinetic Edge Alliance brings their unique capabilities that can be used in a building block fashion to create differentiated and fit-for-purpose solutions at the Kinetic Edge for a range of use cases. The aim is for the Kinetic Edge Alliance and its members to be a one stop shop for those looking to deploy infrastructure, functions and applications at the Kinetic Edge.



# 2019 Markets





# 2020 Markets

