Epsilon Cloud Networking

Multi-Cloud Networking with Operational Visibility and Control

What is Epsilon Cloud Networking?

Hyperscale clouds have proven to be the way forward for delivering application scale and flexibility. The massive shift from the on-premise data centres to hyperscale clouds brings a huge challenge to networking.

Epsilon Cloud Networking allows you to directly control native cloud networking constructs to maintain cloud simplicity and automation. It delivers a multi-cloud platform with the operational visibility and control across several cloud environments including Amazon Web Services, Google Cloud Platform, Microsoft Azure and Oracle Cloud.

Epsilon Cloud Networking uses Epsilon's private network as underlay and the Aviatrix controller as overlay, with multi-cloud networking that goes beyond the cloud gateways, allowing users to manage their VPC/VNETs within and across clouds.

## We Make Your Cloud Network Enterprise Grade

Epsilon's Cloud Networking removes the complexity from building, securing and maintaining cloud-based networks no matter where they exist. This may seem simple at first, but cloud provider networks have become very complex. Be it AWS or Azure, or any other public or private cloud, each one has nuanced differences that make it difficult to secure and maintain as enterprise workload requirements change. Couple that with the need for hybrid and multi-cloud configuration which require cross-cloud connectivity with virtual private networks, inter-cloud connectivity, dynamic access controls and more, you can easily see why a product our cloud networking solution makes sense.

Cloud challenges faced by enterprises today

IT Requirements

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Complexity & Skills Gap

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Architecture Gap

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Lack Of Visibility

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Limited Security

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Manual Process

AVIATRIX
CONTROLLER
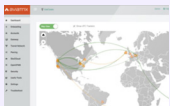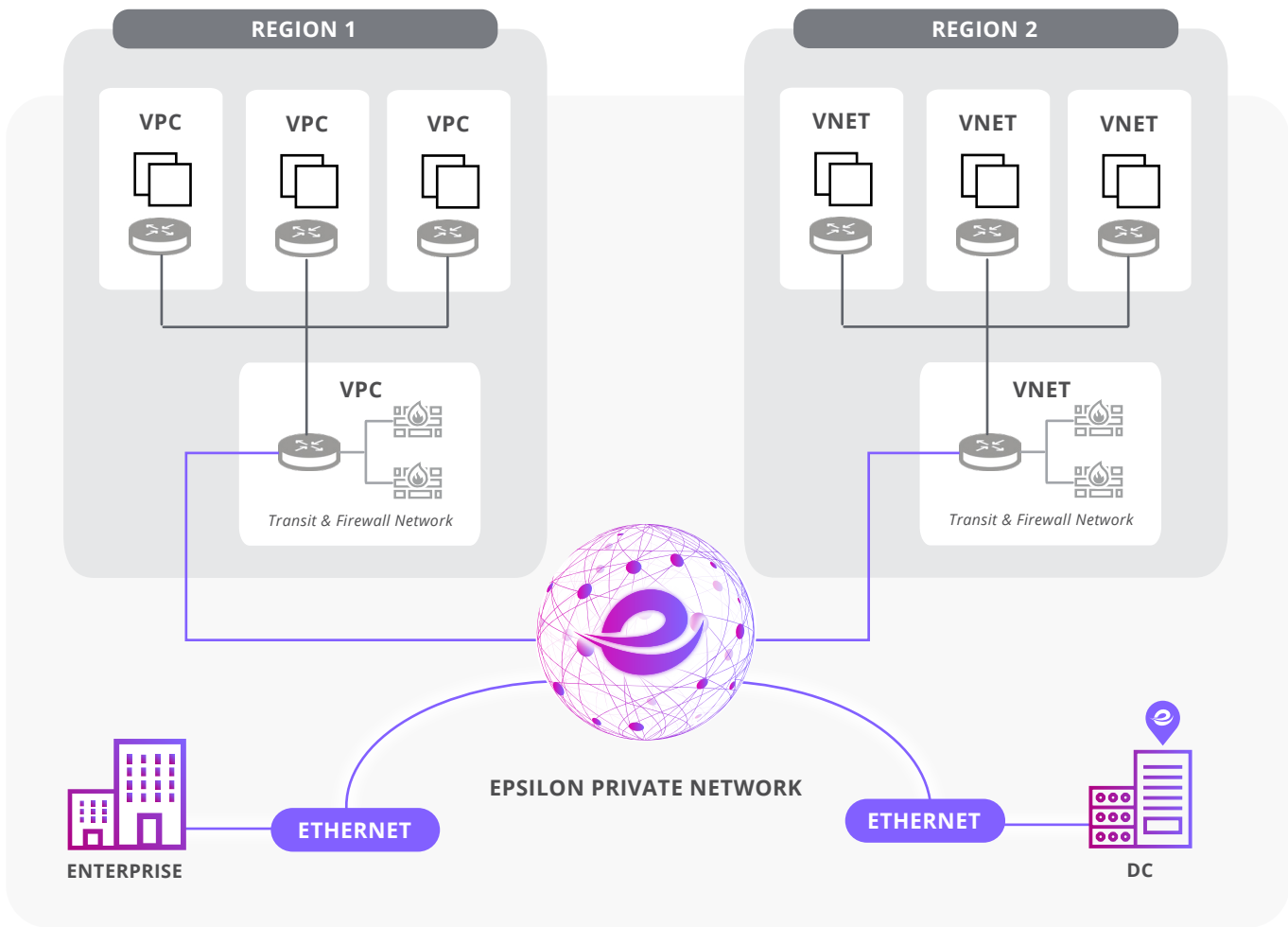
AUTOMATION &
OPERATIONAL
CONTROL

OPERATIONAL
VISIBILITY

TRAFFIC FLOW
ANALYSIS

DYNAMIC
TOPOLOGY
MAPPING

AVIATRIX
COPILOT

aws

Azure

Google Cloud

ORACLE Cloud

REGION 1

VPC

VPC

VPC

VPC

Transit & Firewall Network

REGION 2

VNET

VNET

VNET

VNET

Transit & Firewall Network

EPSILON PRIVATE NETWORK

ENTERPRISE

ETHERNET

ETHERNET

DC

Cloud Network Simplicity & Automation

The Epsilon cloud networking platform brings multi-cloud networking, security, and operational capabilities that go beyond what cloud service providers offers.

The solution delivers a multi-cloud network architecture with a common network data and operational plane. With point and click workflows and automation, enterprise no longer need to undertake the complex and manual processes of native cloud networking. Epsilon Cloud Networking provides all the tools they need to transform their cloud networking through a single relationship.

The Epsilon-Aviatrix advanced network data plane features include end-to-end and high performance IPSec encryption up to 75Gbps, active high availability links and day-two operational and troubleshooting.

All The Way To VPC/VNET
Our solutions goes beyond the cloud gateways all the way to VPC/VNET level, allowing you to manage your VPC/VNETs within and across clouds

High Performance Encryption
Standard IPSec encryption is limited to 1.25 Gbps. Epsilon's high performance encryption distributes processing across multiple cores and aggregates IPSec tunnel to achieve wirespeed encryption, up to 75 Gbps

Simplified Repeatable Cloud Networking
A simplified repeatable cloud networking architecture across any cloud by abstracting the otherwise complex and manual processes of native cloud networking with point and click workflows

Visibility & Operations
Advanced visibility & operations via controller FlowIQ-Intelligence Network Traffic Flow Analytics

"Business transformation has driven enterprise IT organisations to embrace public cloud as the new centre of gravity for applications and data. Cloud operations teams are facing more challenges including limited visibility, lack of network control and skill gaps. Our cloud networking service will enable businesses to take on these challenges more effectively."

Peter Agnew
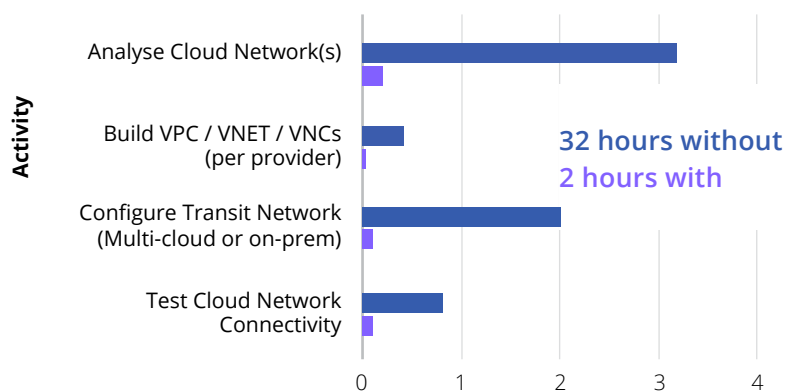Global Product Manager
Epsilon

Features and Capabilities

- **Multi-Cloud Network Architecture**
  Helps enterprise cloud network architects create a multi-cloud network architecture and offers a cloud network platform that provides the software and services required to plan, deploy and operate a secure enterprise multi-cloud network

- **Centralised Controller**
  Leverages the centralised intelligence and knowledge of the controller to dynamically program both native cloud network constructs

- **Network Service Gateways**
  Deliver advanced cloud networking security services. Gateways are primarily deployed to deliver transit network and security services such as intelligent dynamic routing, active-active network high availability, end-to-end and high-performance encryption and collect operational visibility telemetry, but also for secure network ingress and egress filtering and external service insertion

- **Operational Visibility**
  Day-two operations visibility and troubleshooting. Enterprise network operations teams must have deep visibility into the network activities

- **Epsilon Private Network**
  Enterprise-class solution with embedded security using Epsilon private network as underlay and Aviatrix controller as overlay

- **Dynamic Network Mapping**
  Leverages the central intelligence and knowledge of the controller to dynamically generate & maintain an accurate multi-cloud network topology map that includes all network resources & network configurations the controller is managing

- **FlowIQ - Intelligence Network Traffic Flow Analytics**
  Extracts detailed network traffic data from secure transit infrastructure including source, destination, port and protocol filtering and combined with additional meta data such as latency and tagging to deliver never before possible multi cloud flow inspection & global traffic heat map

- **High-Availability (HA) Networking**
  HA networking with full resiliency in both overlay & underlay network

- **High Performance Encryption**
  High performance encryption distributes processing across multiple cores & aggregates IPSec tunnels to achieve wire speed encryption, up to 75 Gbps

- **Multi Cloud Segmentation**
  Some clouds enable the creation of security domains, extend secure network segmentation beyond cloud boundaries, enabling multi-cloud security domains, with consistent. centrally managed, global network segmentation policy

- **Secure Cloud Ingress & Egress Controls**
  Offer both ingress and egress l4 and Fully Qualified Domain Name (FQDN) filtering. Centrally managed filter groups ensure consistent multi cloud security for any cloud application communicating with Internet-based resources and service

- **Multi Cloud Network Service Insertion**
  A secure point of access for network and security services such as next-generation firewalls, IDS/IPS and SD-WAN cloud edge connections

A recent study conducted among customers using the Aviatrix Cloud Networking solution shows a 14x reduction in time to Plan, Build and Deploy Tasks, and a 7x reduction time on Day-Two Operational Tasks
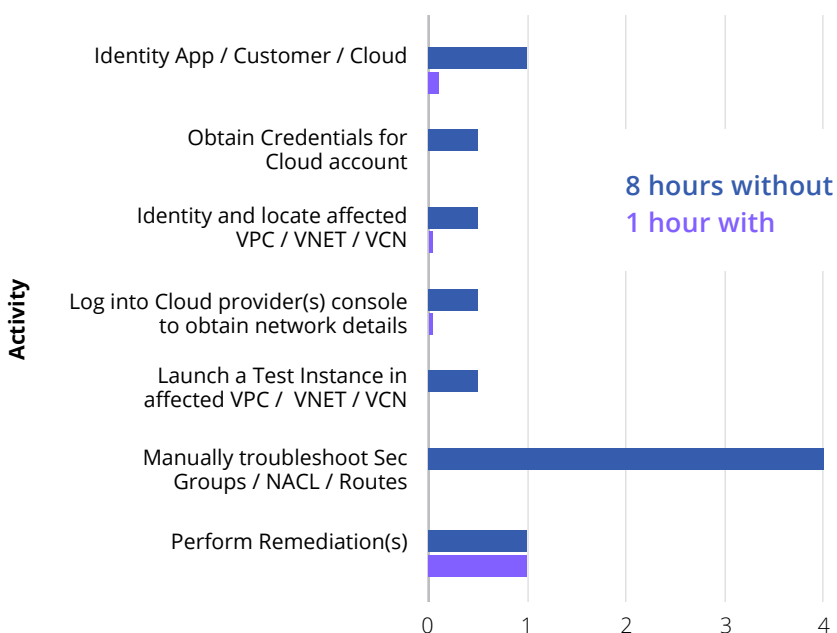
Cloud Network Build & Deployment

▮ Build and deploy without Aviatrix (in hours)   ▮ Deploy with Aviatrix (in hours)

32 hours without
2 hours with

Activity:
- Analyse Cloud Network(s)
- Build VPC / VNET / VNCs (per provider)
- Configure Transit Network (Multi-cloud or on-prem)
- Test Cloud Network Connectivity

* 50 Aviatrix accounts surveyed in Q4CY19 to create Composite Organisation

Cloud Network Troubleshooting

▮ Troubleshoot without Aviatrix (in hours)   ▮ Troubleshoot with Aviatrix (in hours)

8 hours without
1 hour with

Activity:
- Identity App / Customer / Cloud
- Obtain Credentials for Cloud account
- Identity and locate affected VPC / VNET / VCN
- Log into Cloud provider(s) console to obtain network details
- Launch a Test Instance in affected VPC / VNET / VCN
- Manually troubleshoot Sec Groups / NACL / Routes
- Perform Remediation(s)

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