

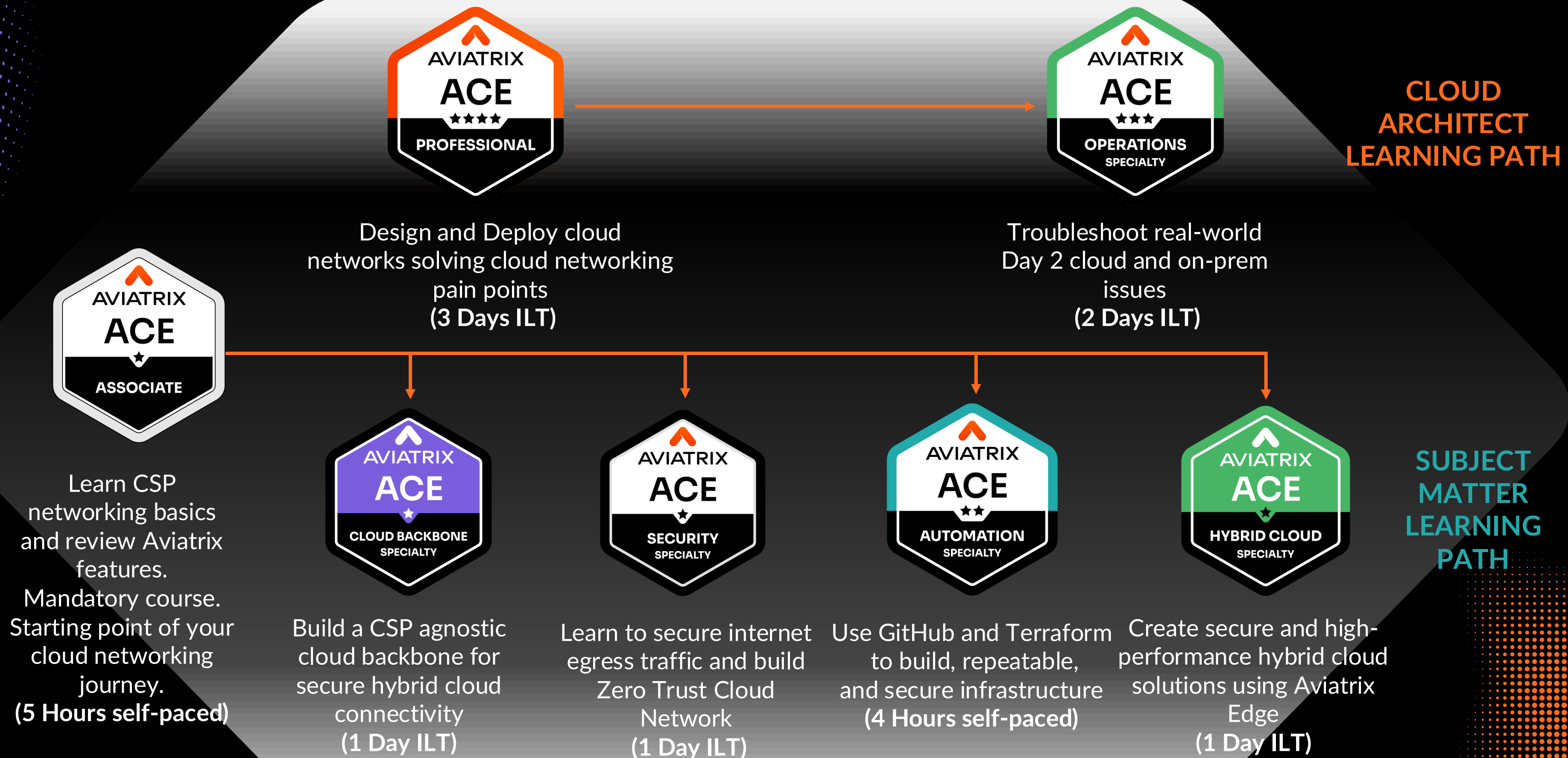


# ACE Professional

ACE Team



# ACE Learning Paths



ILT = Instructor Led Training

# ACE Team: the Trainer

- **Joe Amendolara** is a Senior Solutions Architect - ACE at Aviatrix, bringing a wealth of experience in network engineering and design. As a Cisco Certified Internetwork Expert (CCIEEx4, HCIE), Joe possesses deep technical knowledge and expertise in advanced networking concepts.
- Prior to joining Aviatrix, Joe held significant positions at Orange Business Services as a Senior Infrastructure Integration Solution Consultant and at Huawei Technologies as an IP Solution Sales Manager. His experience also includes roles at Whirlpool Corporation and Dimension Data, where he honed his skills in network engineering and service delivery management.
- Joe's technical expertise spans various areas, including:
  - Multicloud Networking and Security
  - QoS and Multicast implementation
  - IPv6 solutions deployment
  - Cisco ACI (Application Centric Infrastructure)



<https://linkedin.com/in/joe-amendolara>

# ACE Professional – Prerequisite and How to get certified

## Prerequisite:

- ACE Associate

## Certification Requirements:

To achieve certification, you must fulfil the following criteria:

- 1.Lab Completion:** Successfully complete at least **80%** of the labs, which equates to approximately 9 out of 12 labs. An automated script will assess the completion status of each lab.
  - 2.Course Attendance:** Full attendance is mandatory. Missing any class session will be considered a "no-show" for the entire course.
  - 3.Final Survey Completion:** You are required to complete a brief final survey, which should take no more than 3 minutes.
- By adhering to these guidelines, you will be well on your way to obtaining your certification.

➤ The certification will be issued approximately seven business days after the final day of training.

# The ACE Associate is a mandatory step

- You are welcome to attend the training, but the ACE Associate certificate is a must to get the ACE-Pro certificate.
- If after successfully finishing this training, should you proceed to attain ACE-Associate certification, kindly reach out to [ace@aviatrix.com](mailto:ace@aviatrix.com) to request your ACE-Pro certificate.

*It is a manual process and can take a minimum 5 business days*




# LAB POD Policy

- ❑ Attendance on Day 1 is required to retain the LAB POD.
- ❑ If attendance on Day 1 is missed, the LAB POD will be forfeited.
- ❑ Attendees arriving on Day 2 may participate in the training without the LAB POD and will not be awarded the ACE-Pro Certificate.



# Warm-Up (very important)

<https://docs.aviatrixlab.com/ace-pro/docs/home.html>



Welcome to ACE Professional Lab

POD Portal

Lab 1 - VPCs/VNets CREATION

Lab 2 - TRANSIT NETWORKING

Lab 3 - NETWORK SEGMENTATION

Lab 4 - HPE WITH ACTIVE MESH

Lab 5 - AVIATRIX CLOUD FIREWALL (with Secure Egress)

Lab 6 - FIRENET

Lab 7 - SITE2CLOUD

Lab 8 - SECURE HIGH-PERFORMANCE DATACENTER EDGE

Lab 9 - THREAT PREVENTION

Lab 10 - COSTIQ

Lab 11 - DISTRIBUTED CLOUD FIREWALL

Lab 12 - IAC & NETWORK INSIGHTS API

LOGOS-ICONS


PDFs

POD Portal

Link

You can view your personal POD portal by clicking on the picture below.

Access Code: 5RCY



ACE Professional Portal

Giuseppe Amendolara

Register

New Class

List

Status

Auto (system default)

Light

Dark

Logout

You have been assigned: Pod 1

Aviatrix CoPilot

Username: student

Password: 322z5dFuzY#R3Dp

Open Copilot

AWS

Username: student

Password: 322z5dFuzY#R3Dp

AWS Console

Gatus

Username: student

Password: 322z5dFuzY#R3Dp

aws-us-east-1-spoke1-test1

aws-us-east-1-spoke1-test2

aws-us-east-2-spoke1-test1

aws-us-east-2-spoke1-test2

azure-west-us-spoke1-test1

azure-west-us-spoke2-test1

gcp-us-central1-spoke1-test1

aws-strongswan-csr

onprem-pod1-edge

# Agenda – Day 1

Topics	Approx. Duration	Start time
Welcome / Logistics / Agenda / Intro / Warm-Up	0:50	9:00 AM
CoPilot UI tour	1:00	9:50 AM
<b>Break</b>	<b>0:15</b>	<b>10:50 AM</b>
<b>LAB 1:</b> Create VPCs/VNet using CoPilot	0:30	11:05 AM
CNSF - Characteristics	0:20	11:35 AM
CNSF - Deployment	0:50	11:55 AM
<b>Lunch Break</b>	<b>1:00</b>	<b>12:45 PM</b>
<b>LAB 2:</b> CNSF	0:55	1:45 PM
Network Segmentation	0:30	2:40 PM
<b>LAB 3:</b> Network Segmentation	0:30	3:10 PM
<b>Break</b>	<b>0:15</b>	<b>3:40 PM</b>
High-Performance Encryption - HPE	0:25	3:55 PM
ActiveMesh, Failover and Control Plane	0:40	4:20 AM
<b>End</b>		<b>5:00 PM</b>

**Note:** Schedule might change if modules are running longer than expected.



# Agenda – Day 2

Topics	Approx. Duration	Start time
Day 1 Recap (Quiz)	0:20	9:00 AM
<b>LAB 4:</b> HPE with ActiveMesh	0:50	9:20 AM
Security	0:50	10:10 AM
<b>Break</b>	<b>0:15</b>	<b>11:00 AM</b>
<b>LAB 5:</b> Aviatrix Cloud Firewall	0:50	11:15 AM
Firewall Network - FireNet	0:45	12:05 PM
<b>Lunch Break</b>	<b>1:00</b>	<b>12:50 PM</b>
<b>LAB 6:</b> Firewall Network with PAN	0:55	1:50 PM
Site2Cloud	1:00	2:45 PM
<b>Break</b>	<b>0:15</b>	<b>3:45 PM</b>
<b>LAB 7:</b> Site2Cloud	0:30	4:00 PM
<b>LAB 8:</b> Aviatrix Edge	0:30	4:30 AM
<b>END</b>		<b>5:00 PM</b>

**Note:** Schedule might change if modules are running longer than expected.

# Agenda – Day 3

Topics	Approx. Duration	Start time
Day 2 Recap (Quiz)	0:20	9:00 AM
ThreatIQ and CostIQ	0:20	9:20 AM
<b>LAB 9</b> : Threat Prevention	0:30	9:40 AM
<b>LAB 10</b> : CostIQ	0:20	10:10 AM
Distributed Cloud Firewall	0:50	10:40 AM
<b>Break</b>	<b>0:15</b>	<b>11:30 AM</b>
<b>LAB 11</b> : Distributed Cloud Firewall	1:15	11:45 AM
IaC and Network Insights API	0:20	1:00 PM
<b>Lunch Break</b>	<b>1:00</b>	<b>1:20 PM</b>
<b>LAB 12</b> : IaC and Network Insights API	0:25	2:20 PM
Design Exercise Recap	0:20	2:45 PM
<b>Break</b>	<b>0:15</b>	<b>3:00 PM</b>
Let's Design Together! (breakout rooms)	1:00	3:15 PM
Design Presentations	0:30	4:15 PM
Survey + Closing	0:15	4:45 PM
<b>End</b>		<b>5:00 PM</b>

**Note:** Schedule might change if modules are running longer than expected.



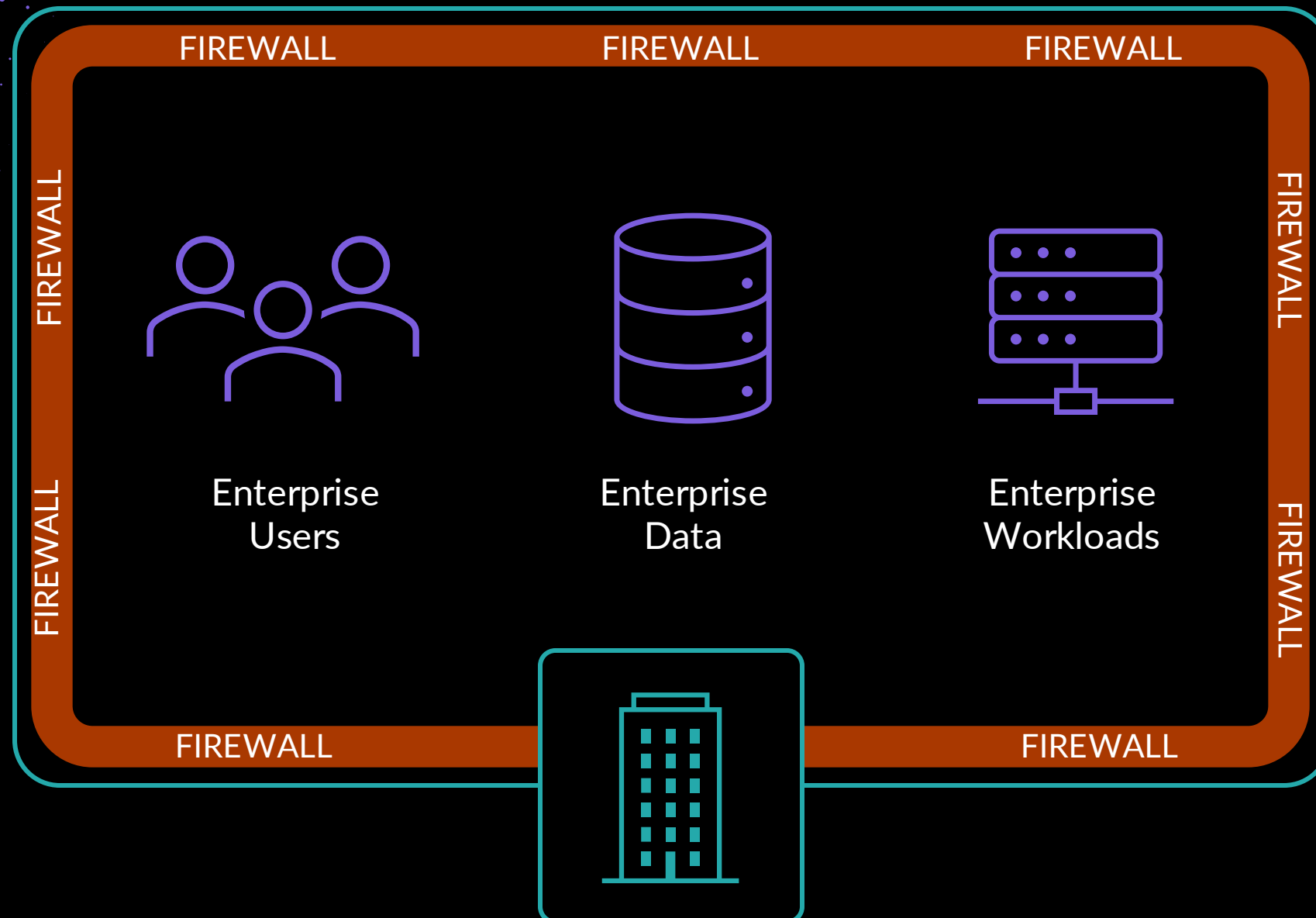
Who we are? What we do?

# The Cloud Security Challenge

*SECURING THE NEW ATOMIZED CLOUD PERIMETER*

## The Enterprise Network

A physical building with a cable to the Internet



## The Cloud Network

A highly dynamic and distributed environment



### The New Perimeter

Every Virtual Private Cloud (VPC), Kubernetes cluster, serverless function, PaaS service, and API endpoint

# Anatomy of Today's Threats

*RECENT SUCCESSFUL ATTACKS ARE FOLLOWING THE SAME PATTERNS*

Identity Compromise

Lateral Movement

Total Chaos

1

Initial access through stolen credentials

2

Undetected lateral movement for 9 days

3

Ransomware payload and data exfiltration



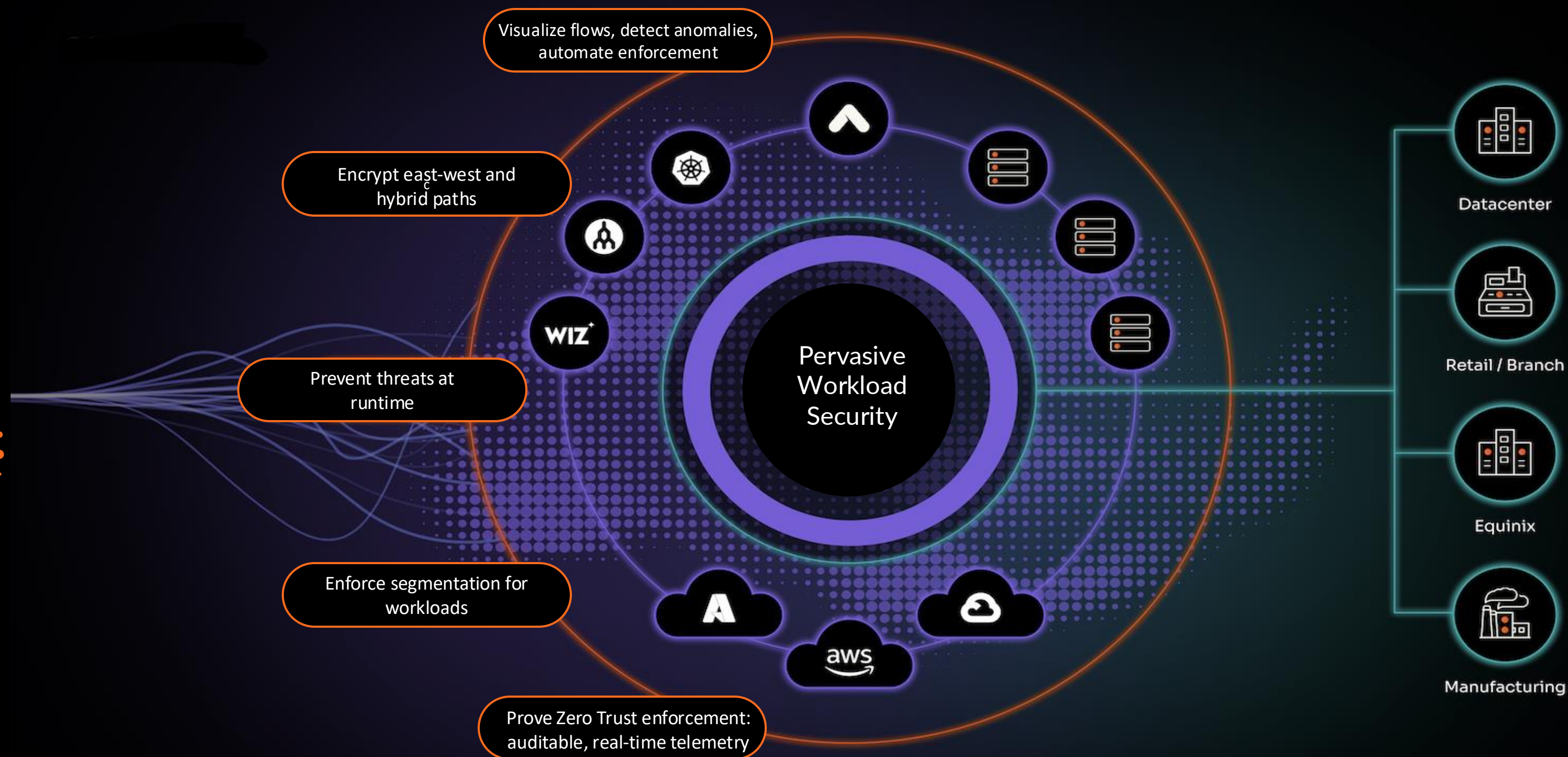
## UHG Operational Disruption and Impact

- \$22M ransom paid in Bitcoin — yet stolen data remains in the hands of threat actors, signaling a failed containment
- 190 million Americans exposed, including full identity profiles (names, DOBs, SSNs, driver's license numbers) — the largest healthcare breach in U.S. history
- Nationwide halt in claims processing disrupted patient care and provider payments for weeks — forcing Congressional intervention and federal investigation
- \$3.96B in damages reported — including \$3.09B in remediation and \$867M in operational losses, with long-tail legal and reputational fallout still unfolding

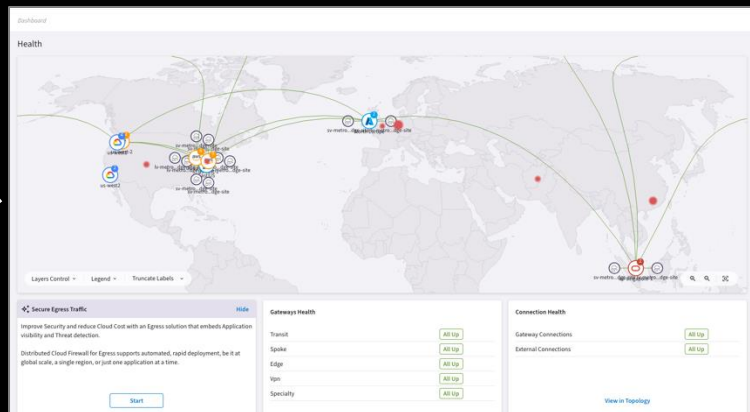
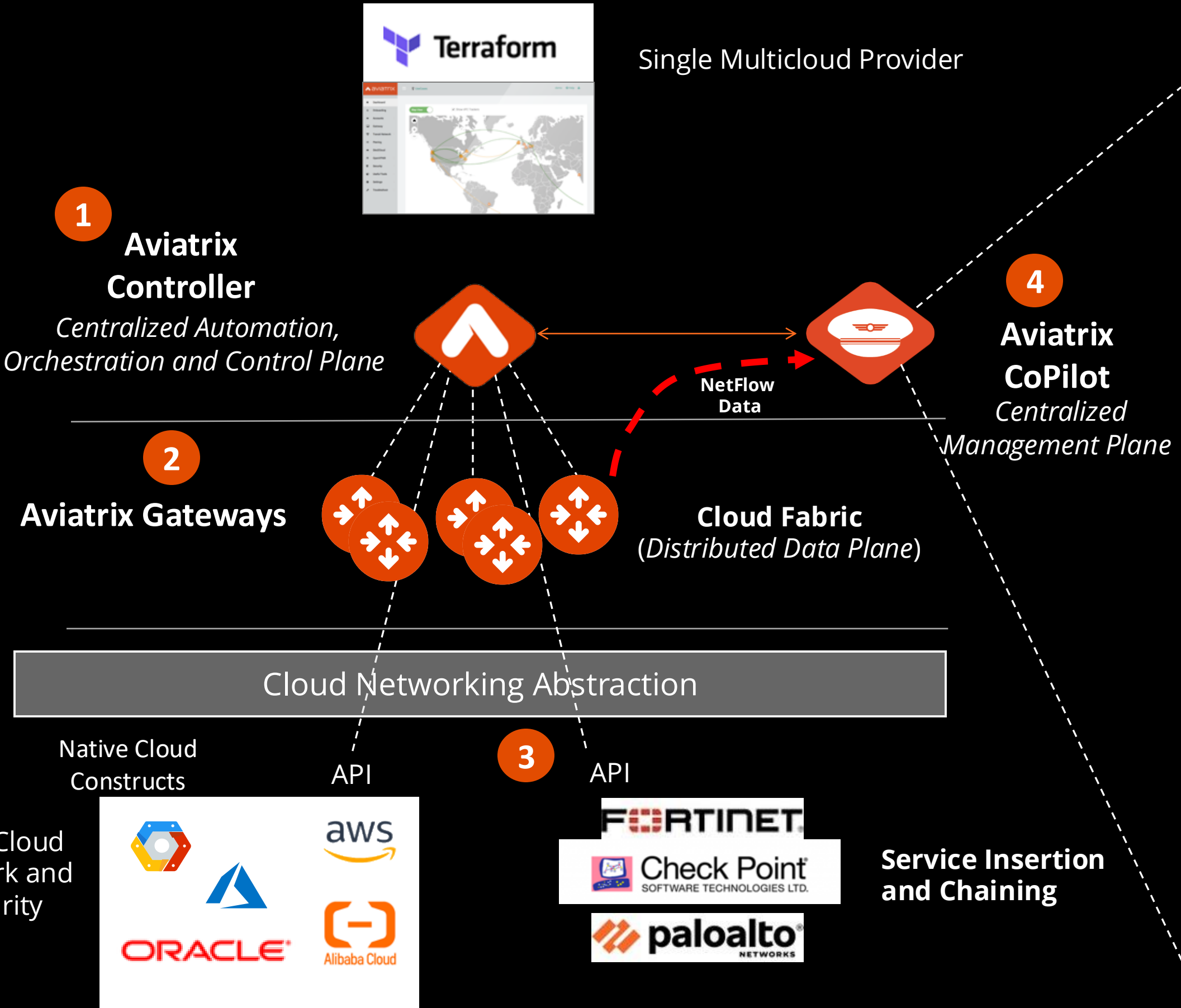


# The Solution – “Security From The Inside Out”

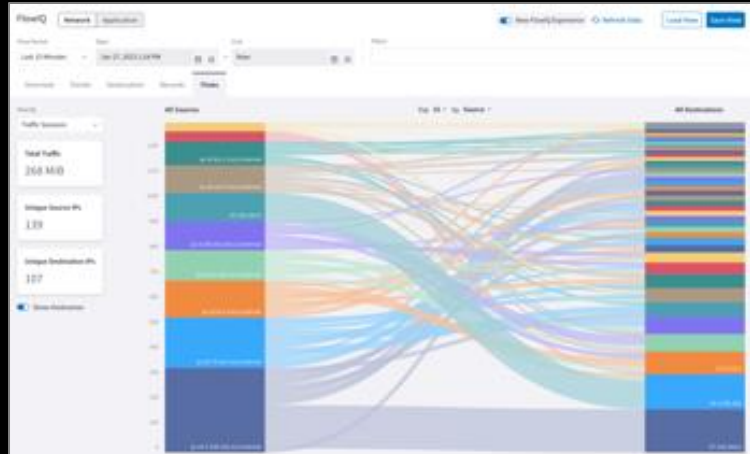
*CLOUD NATIVE SECURITY: EMBEDDED, NOT BOLTED ON*



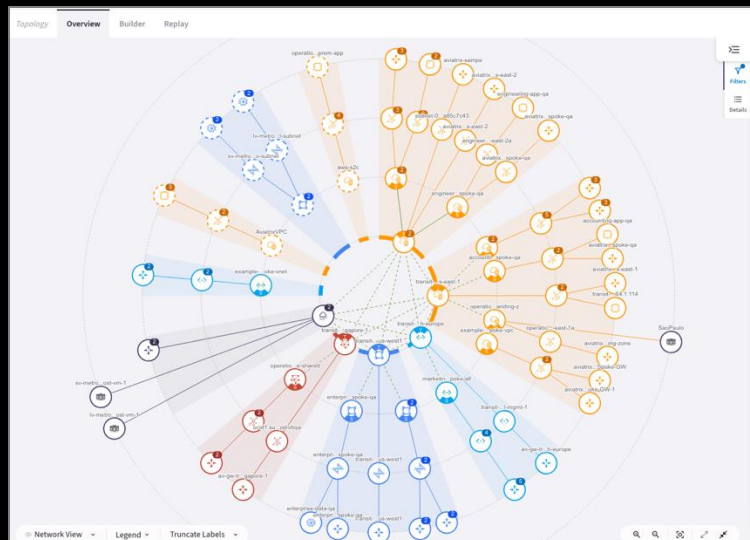
# CNSF (Aviatrix Enterprise)



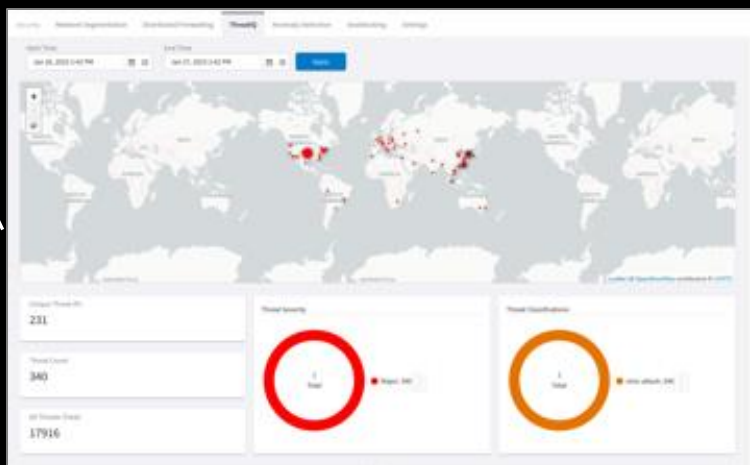
Multicloud Operational Visibility



FlowIQ Multicloud Traffic Flow Analysis



Multicloud Dynamic Topology Mapping

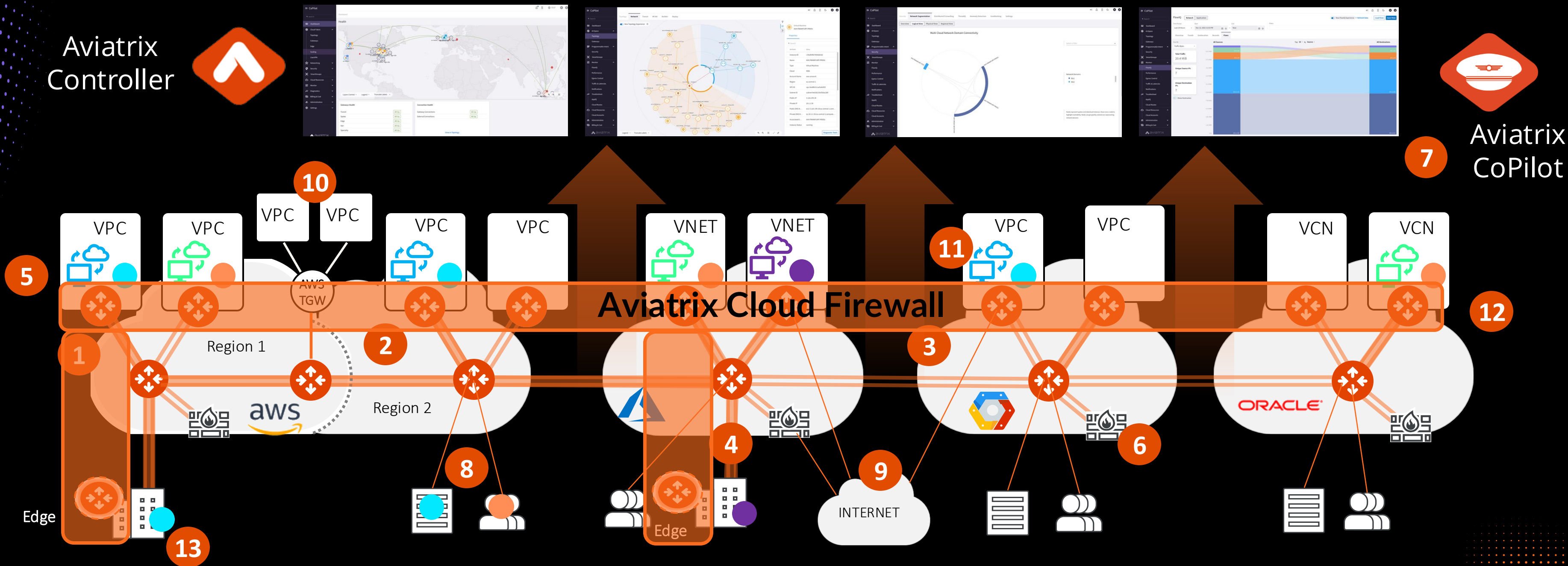


Threat Prevention

There are two products: **Aviatrix Enterprise** and **Aviatrix PaaS**



# CNSF – Logical View



1. Single Cloud  
Multi-Account  
High-Availability (Active-Active)  
Secure Hybrid-Cloud Connectivity

2. Multi-Region

3. Repeatable Design

4. High-Performance Encryption

5. Network Segmentation  
(aka Macro-Segmentation)

6. Service Insertion & Chaining

7. Enterprise Operational Visibility

8. Secure Cloud Access  
(User VPN)

9. Aviatrix Cloud Firewall  
(Secure Cloud Egress)

10. Cloud-Native

11. Micro-Segmentation

12. Distributed Cloud Firewall

13. Secure High-Performance  
Datacenter Edge

 <b>Abbott</b>	 <b>abbvie</b>	 <b>Adobe</b>	 <b>Aflac</b>	 <b>ABInBev</b>	 <b>APPTIO</b>		 <b>AVIS</b> Budget	 <b>BAKER HUGHES</b> a GE company	 <b>BankUnited</b>
 <b>BHP</b>	 <b>Biogen</b>	 <b>BNY MELLON</b>	 <b>CHOICE</b> HOTELS	 <b>CENTENE</b> Corporation	 <b>CHANGE</b> HEALTHCARE	 <b>chewy.com</b>	 <b>CHS</b>	 <b>Constellation</b> Brands	 <b>covetrus</b>
		 <b>dōTERRA</b>	 <b>DXC</b> TECHNOLOGY	 <b>e-on</b>	 <b>FACTSET</b>	 <b>FEMA</b>		 <b>Genworth</b>	
 <b>GUIDEWIRE</b>	 <b>Heineken</b>	 <b>Home Office</b>	 <b>IHG</b>	 <b>Informatica</b>	 <b>inmarsat</b>	 <b>Johnson</b> Controls		 <b>Lufthansa</b> Systems	
 <b>LG</b>	 <b>Mercedes-Benz</b>		 <b>navitaire</b> an amadeus company				 <b>pwc</b>	 <b>Raytheon</b> Technologies	
 <b>Roche</b>	 <b>salesforce</b>	 <b>SIEMENS</b>	 <b>splunk</b>			 <b>UNITED</b> AIRLINES	 <b>VERINT</b>		

# Next: Walkthrough of CoPilot UI

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