



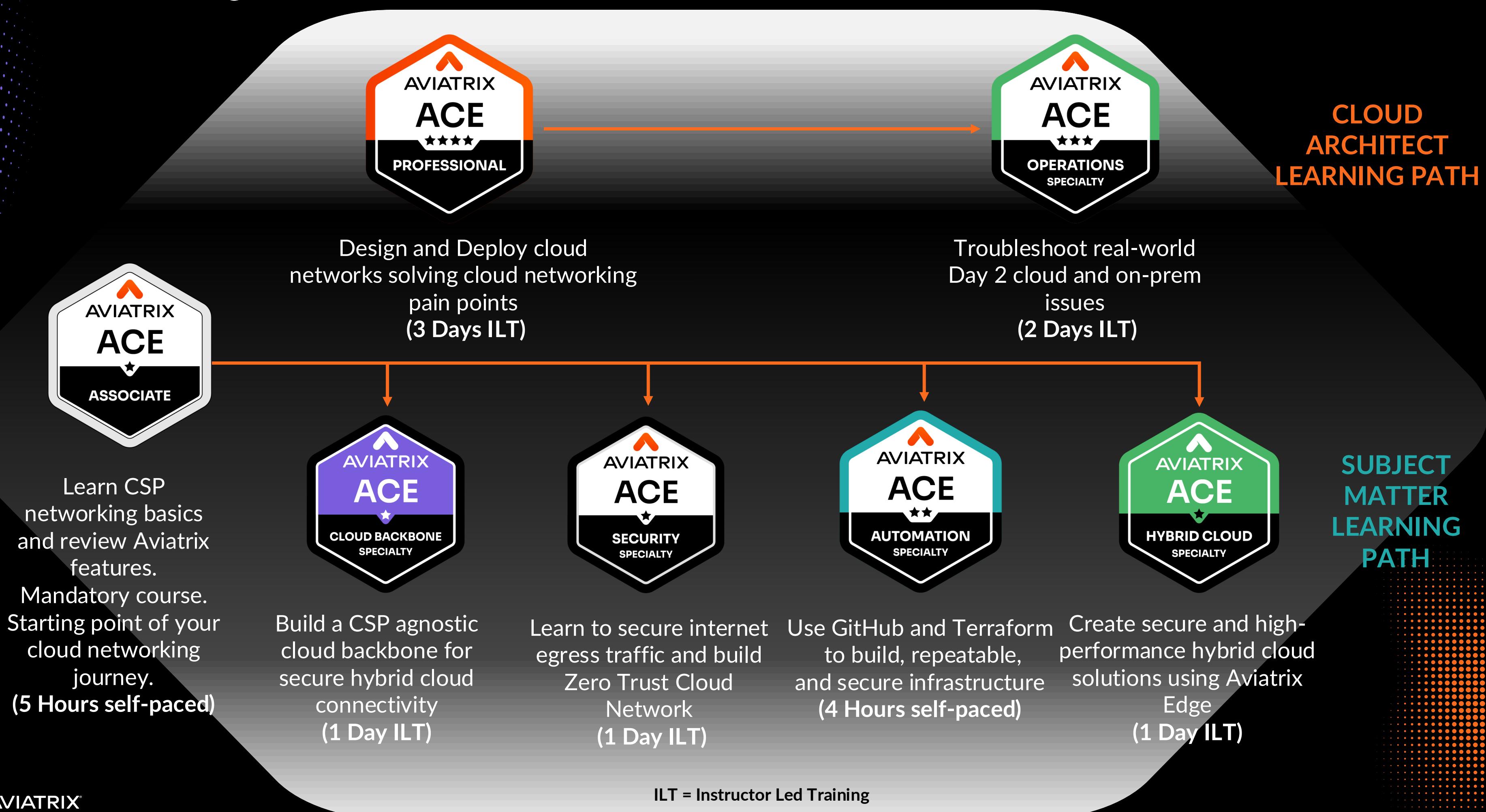
# ACE Professional

Day-1

ACE Team



# ACE Learning Paths



# 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 (CCIEx4, 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

- ❑ If Day 1 registrations are complete but no labs are completed, the pod will be decommissioned. Attendees arriving on Day 2 may participate in the training without the Lab Pod and will not receive the ACE-Pro Certificate.
- ❑ Day 1 attendance is mandatory. If you miss Day 1, no pods will be available on Day 2. Attendees arriving on Day 2 may participate in the training without the Lab Pod and will not receive the ACE-Pro Certificate.



# Warm-Up (very important)

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

The image shows two overlapping web pages from the AVIATRIX ACE Professional Portal.

**Left Page (POD Portal):**

- Header:** AVIATRIX, Search bar, and a sidebar with three horizontal dots.
- Section:** POD Portal
- Content:** A large graphic featuring the AVIATRIX logo, the word "ACE" with four stars, and the word "PROFESSIONAL". Below it, a text box says "Link" and "You can view your personal POD portal by clicking on the picture below." It also includes an "Access Code: 5RCY".
- Sidebar:** A list of 12 labs:
  - 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
- Bottom:** LOGOS-ICONS and PDFs sections.

**Right Page (ACE Professional Portal):**

- Header:** ACE Professional Portal, Giuseppe Amendolara, Register, New Class, List, Status, Auto (system default), Light, Dark, Logout.
- Content:** A message "You have been assigned: Pod 1" with a dropdown arrow. Below it are two boxes: "Aviatrix CoPilot" (Username: student, Password: 322z5dFuzY#R3Dp) and "AWS" (Username: student, Password: 322z5dFuzY#R3Dp).
- Bottom:** A "Status" section showing a list of resources with their status and links:
  - 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>	0:15	<b>10:50 AM</b>
LAB 1: 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>	1:00	<b>12:45 PM</b>
LAB 2: CNSF	0:55	1:45 PM
Network Segmentation	0:30	2:40 PM
LAB 3: Network Segmentation	0:30	3:10 PM
<b>Break</b>	0:15	<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: HPE with ActiveMesh</b>	0:50	9:20 AM
Security	0:50	10:10 AM
<b>Break</b>	0:15	11:00 AM
<b>LAB 5: Aviatrix Cloud Firewall</b>	0:50	11:15 AM
Firewall Network - FireNet	0:45	12:05 PM
<b>Lunch Break</b>	1:00	12:50 PM
<b>LAB 6: Firewall Network with PAN</b>	0:55	1:50 PM
Site2Cloud	1:00	2:45 PM
<b>Break</b>	0:15	3:45 PM
<b>LAB 7: Site2Cloud</b>	0:30	4:00 PM
<b>LAB 8: Aviatrix Edge</b>	0:30	4:30 AM
<b>END</b>		5:00 PM

**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 : Threat Prevention</b>	0:30	9:40 AM
<b>LAB 10 : CostIQ</b>	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: Distributed Cloud Firewall</b>	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: IaC and Network Insights API</b>	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.



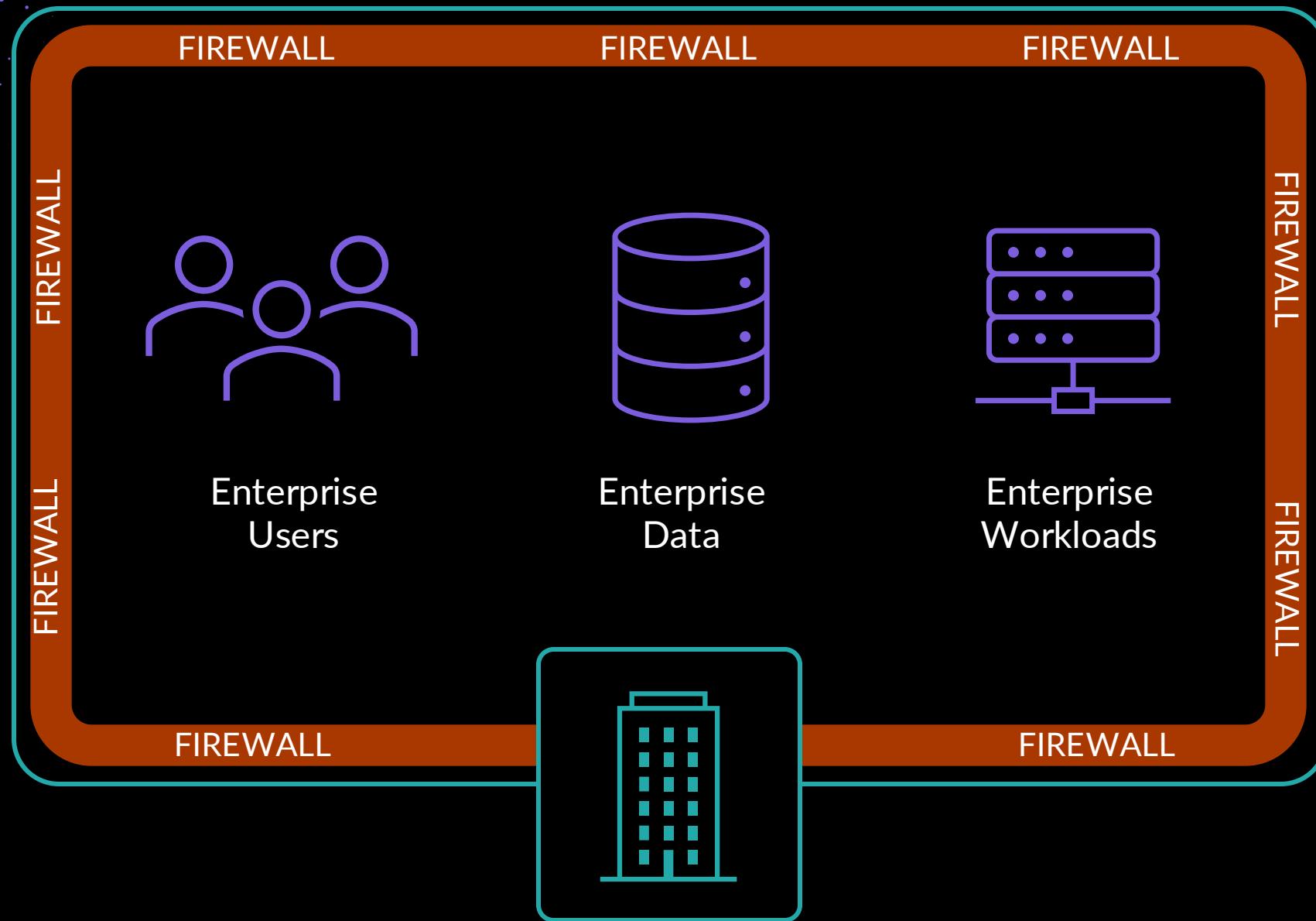
Who we are? What we do?

# 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

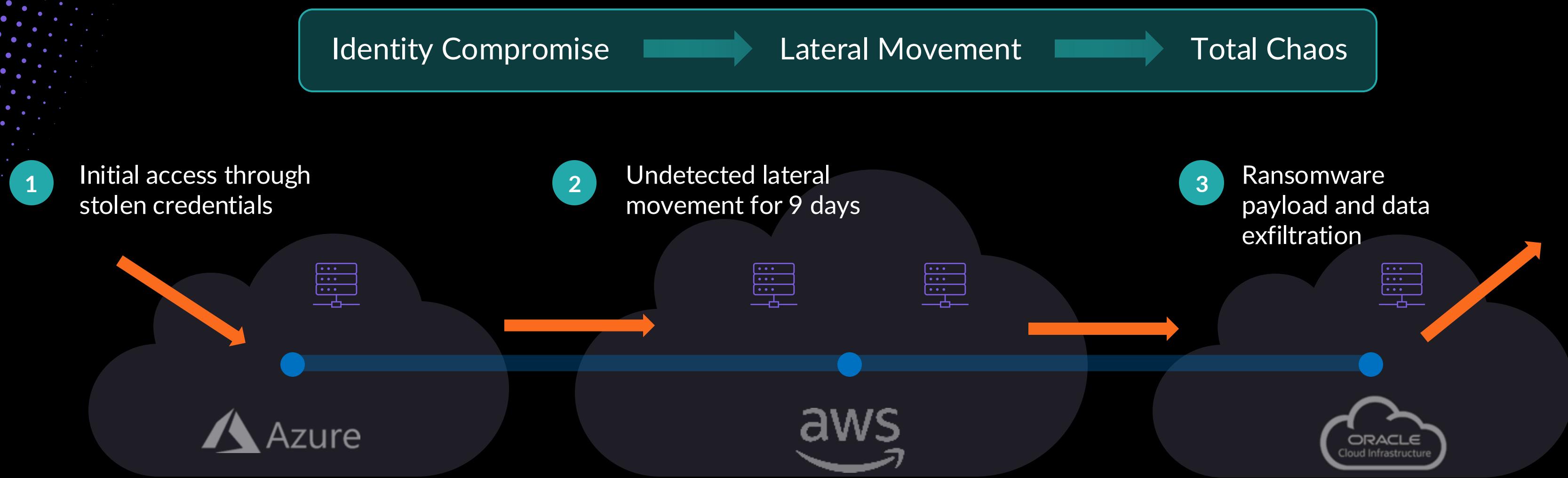
A highly dynamic and distributed environment



**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*



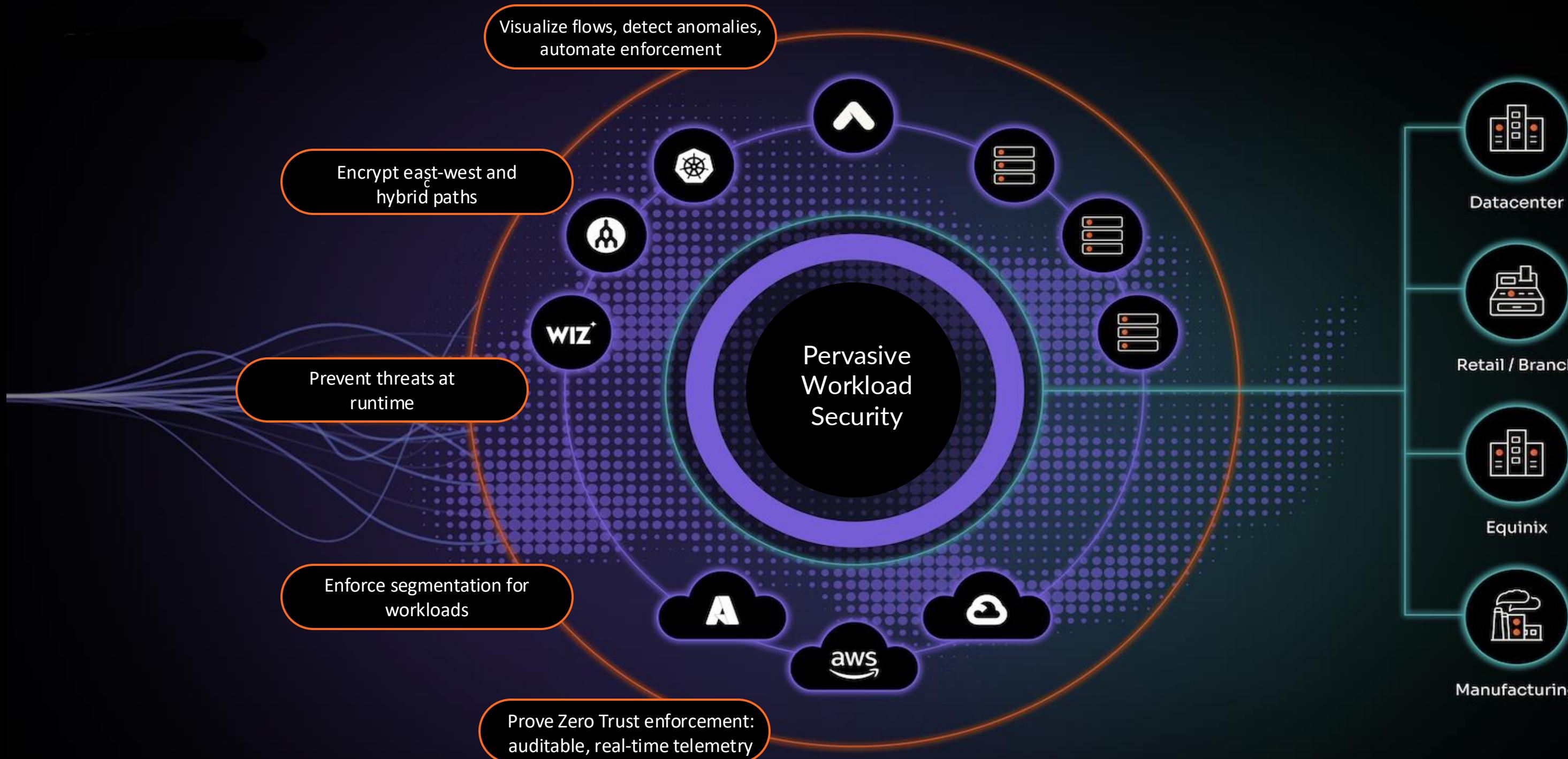
## UHG Operational Disruption and Impact

- \$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

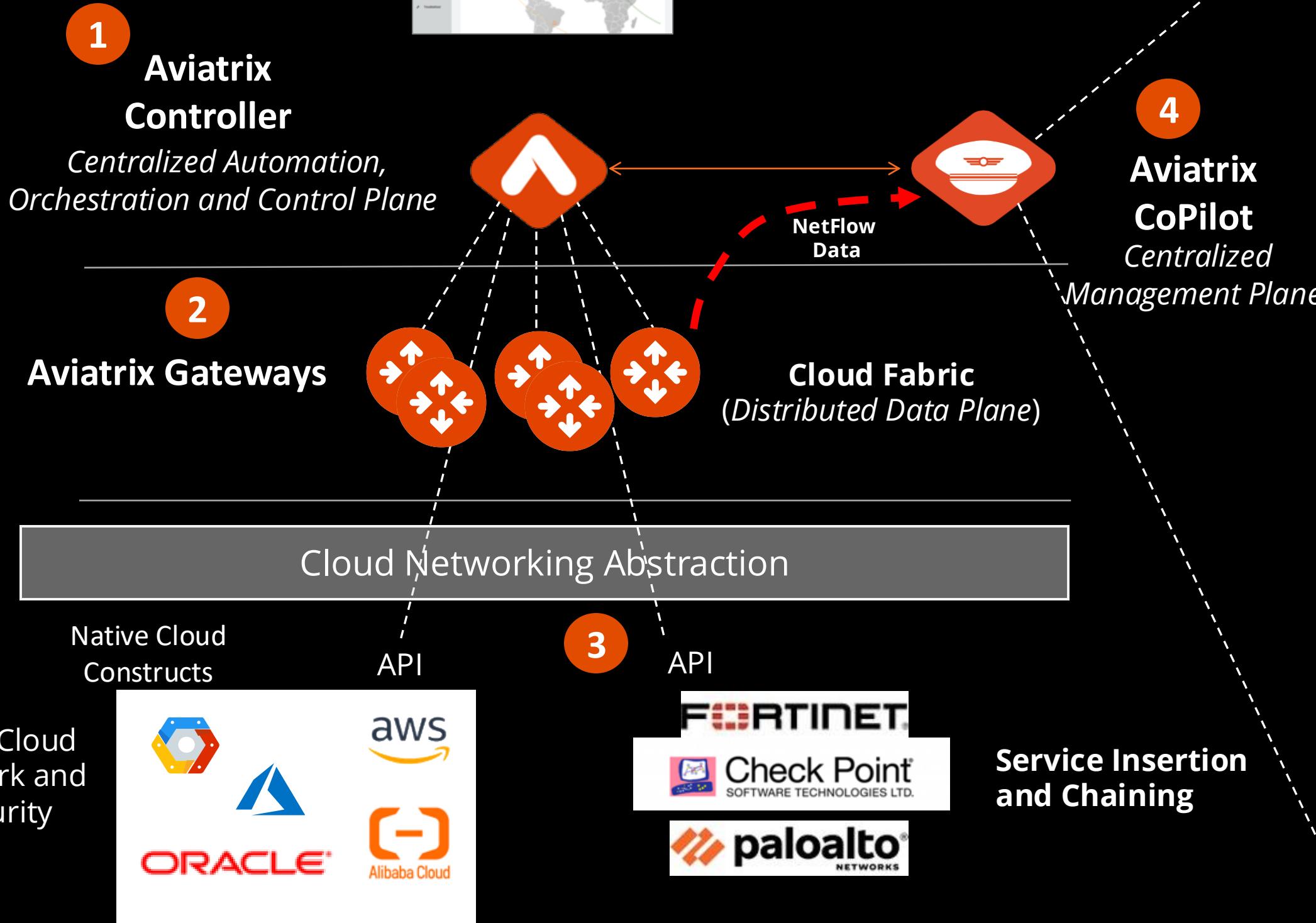
14

# The Solution – “Security From The Inside Out”

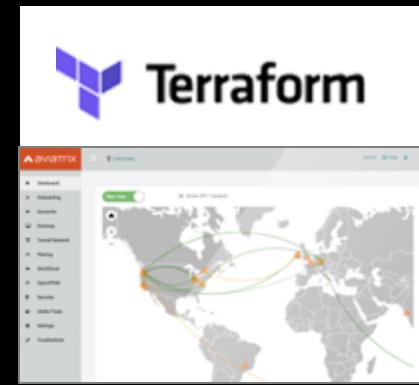
*CLOUD NATIVE SECURITY: EMBEDDED, NOT BOLTED ON*



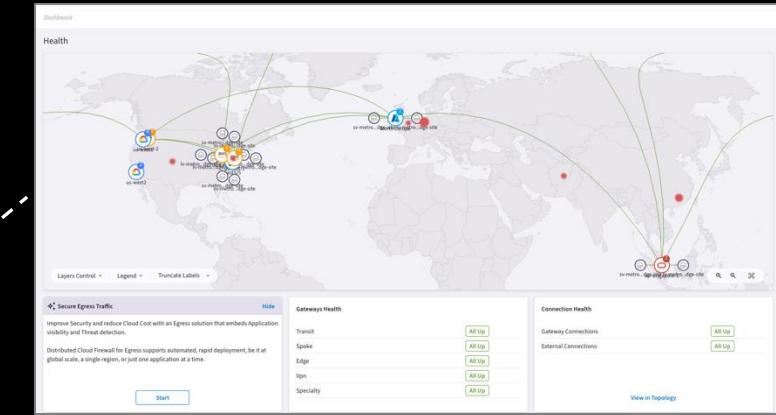
# CNSF (Aviatrix Enterprise)



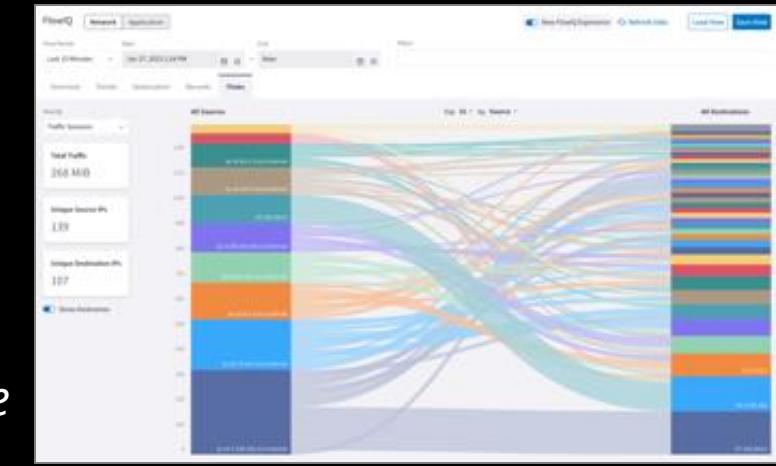
Single Multicloud Provider



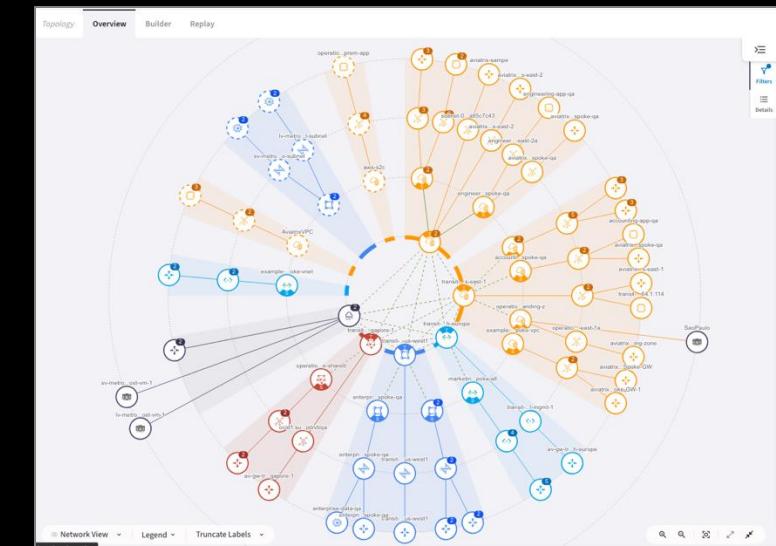
Multicloud Operational Visibility



FlowIQ Multicloud Traffic Flow Analysis

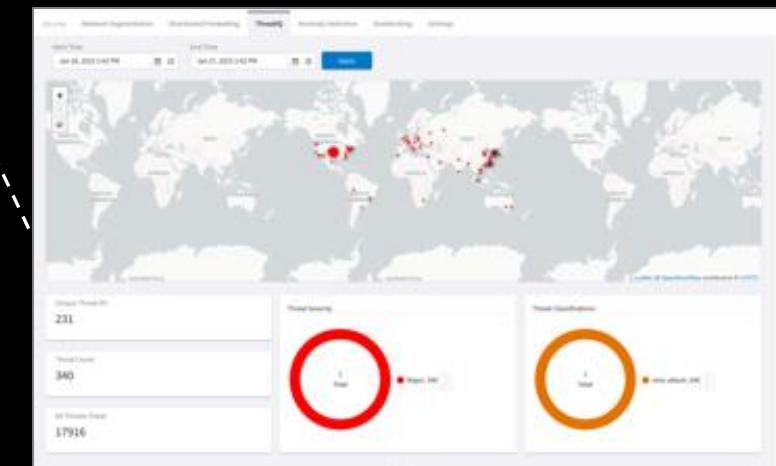


Multicloud Dynamic Topology Mapping



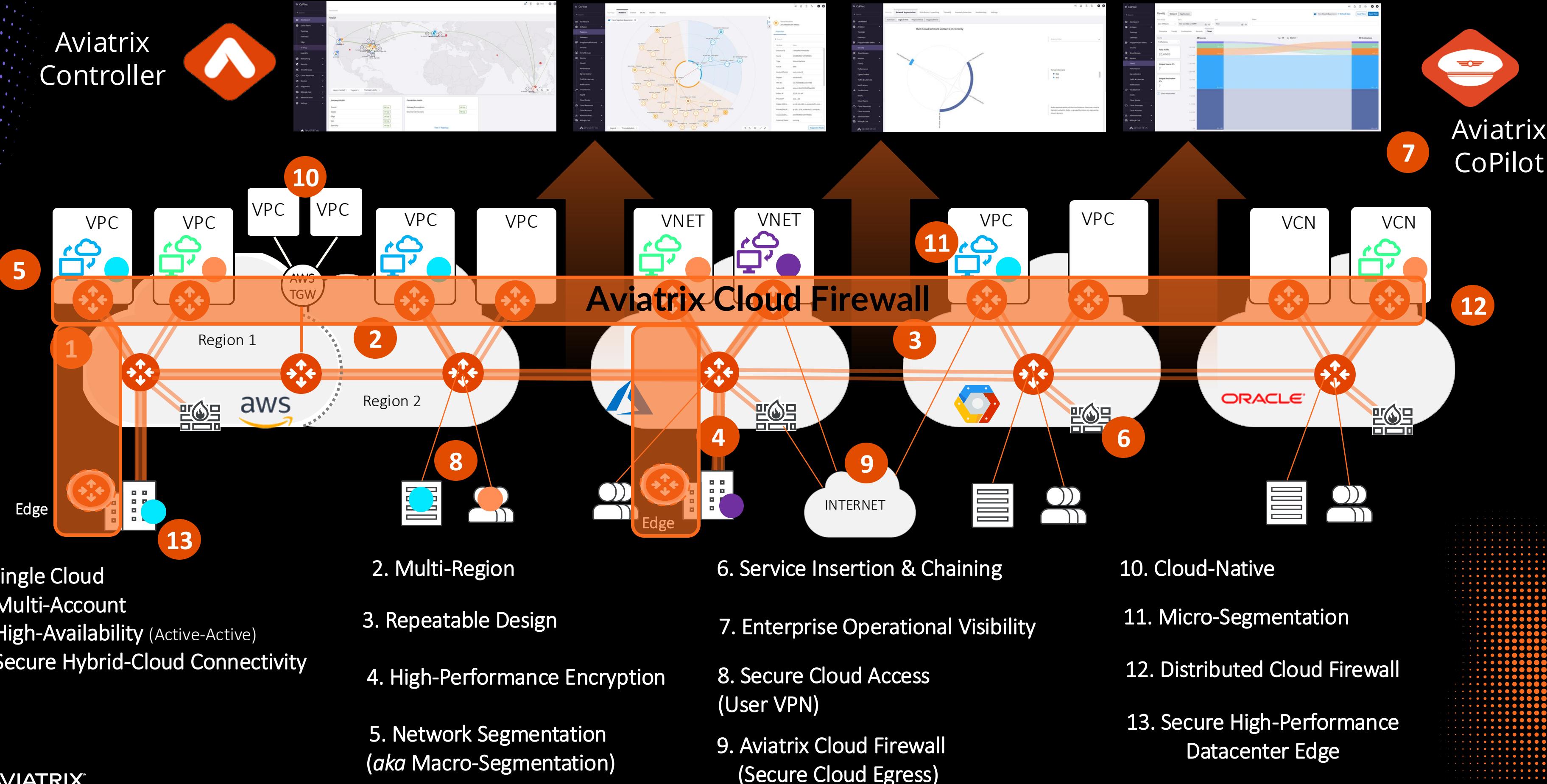
Threat Prevention

Service Insertion and Chaining



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

# CNSF – Logical View





# Next: Walkthrough of CoPilot UI

---

