

# AVIATRIX CLOUD NETWORK PLATFORM

## One Architecture. One Network. Any Cloud.

### Simplify Enterprise Cloud Networking

The Aviatrix cloud network platform delivers the advanced networking, security and operational visibility services required by enterprises, while maintaining the simplicity and automation of cloud.

### Advanced Multi-Cloud Network Transit

Aviatrix software enables enterprise IT to easily deploy a high-availability, multi-cloud network data plane with end-to-end and high-performance encryption, multi-cloud security domains and operational data IT teams need. Aviatrix transit provides the intelligence to ensure network correctness and the traffic engineering control network architects are missing from the basic transit constructs CSPs deliver.

### Enterprise Class Operational Visibility

The Aviatrix platform brings day-two operational visibility not available from any cloud provider to help you pinpoint traffic anomalies and suspicious behavior, resolve connectivity problems faster, and share network health metrics and dynamic network topology maps with staff and management.

### Multi-Cloud Network Training

Aviatrix offers hands on Aviatrix Certified Engineer ([ACE](#)) training and certifications to quickly bring your whole team up to speed on native AWS, Azure and GCP networking, multi-cloud reference architectures and the Aviatrix cloud network platform.

*"Aviatrix's cloud network platform intelligently programs the native cloud network constructs and goes well beyond that by adding network segmentation policies, rich visibility, and automation that we require to support our customers. Aviatrix makes cloud networking much easier for us and our customers."*

JOHN GOODSON  
SVP AND GENERAL MANAGER OF PRODUCTS  
VERINT

### CLOUD NETWORK SIMPLICITY AND AUTOMATION WITH ENTERPRISE VISIBILITY AND CONTROL

As an enterprise IT leader, your organization is driven by business transformation and tasked to accelerate your migration to public cloud. However, large scale enterprise application or service transformations are not as simple as cloud providers would make it seem. The promise of cloud is simplicity and automation, but the reality for enterprise IT is much more challenging – shadow IT, cloud and networking skills gaps, limited visibility and lack of a well architected network design – all contribute to your team's everyday challenges.

Aviatrix cloud network platform is a foundation upon which you can regain visibility and control and shift your focus from managing disparate cloud network to controlling a consistent global cloud network that provides enterprise class networking, security and operational features that are simply not available from any cloud provider.

Aviatrix is helping put you and your operations team back in control. Cloud 1.0, driven by automation and infrastructure as code, often went around traditional IT, viewing IT processes, security, compliance as roadblocks to agility and speed. And, according to Gartner, cloud networking has been "ad-hoc" at best – driven by on-premises solutions lifted and shifted to cloud or limited by native cloud services that simply couldn't meet enterprise networking requirements. For Cloud 2.0 and beyond however, you need the network visibility and control you enjoyed on premise, now for your cloud networks. You want day-two operations, visibility, control, regulatory compliance and other enterprise IT architectural structures that make large scale IT environments operational for the long term. But it's different, you don't want to do it the same way, you want it modernized for the cloud and maintain the simplicity and automation cloud offers.

### It's time to take an architectural approach.

As a forward-thinking enterprise cloud network architect, you realize that establishing a cloud architecture correctly is critical and the cloud network is the foundation. Business decisions will drive network design, so architect for flexibility. Each cloud provider has unique networking constructs, limitations and architecture. You must decide if you are going to attempt to bridge the skills gap, hire, train and grow your staff to manage the complexity of multiple cloud architectures or establish a single, multi-cloud architecture.

Aviatrix cloud networking experts engage directly with enterprise cloud network architects to guide cloud network designs based on a multi-cloud network architecture and your unique business requirements – resulting in a repeatable network design with consistent operational visibility and security across any cloud. Aviatrix experts have guided hundreds of customers through this architectural process and bring proven reference designs for single-cloud, multi-region and multi-cloud network environments.

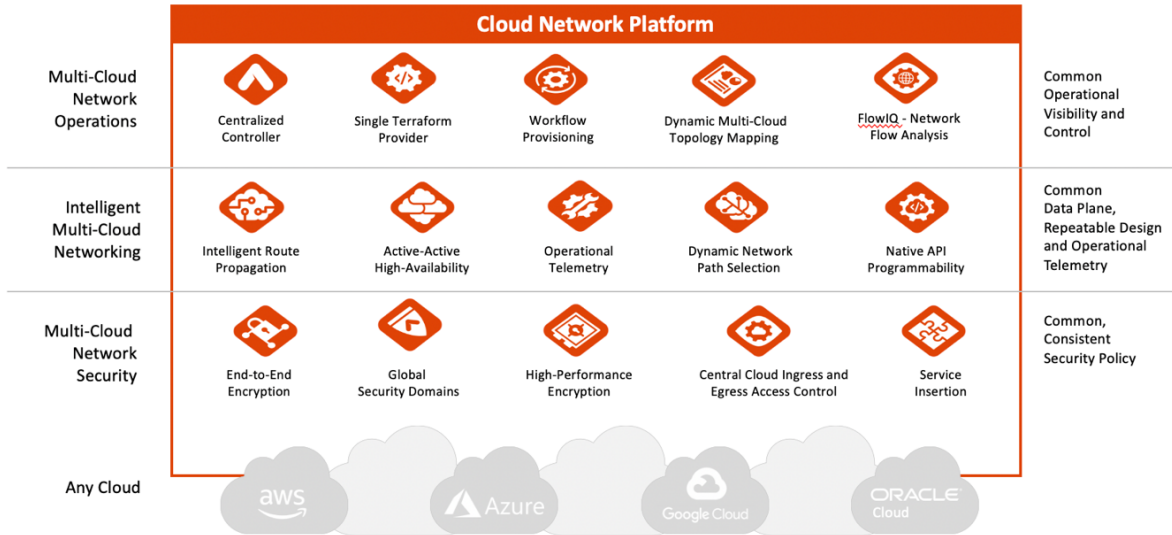


Figure 1: The Aviatrix cloud network platform brings multi-cloud networking, security, and operational visibility capabilities that go beyond what any cloud service provider offers.

**One Architecture. One Network. Any Cloud.**

The Aviatrix cloud network platform brings multi-cloud networking, security, and operational visibility capabilities that go beyond what any cloud service provider offers. Aviatrix software leverages public cloud provider APIs to interact with and directly program native cloud networking constructs, abstracting the unique complexities of each cloud to form one network data plane, and adds advanced networking and security features including:

- Intelligent Cloud Network Correctness
- Active-Active High-Availability Transit
- End-to-End and High-Performance IPSec Encryption (wire speed up to 75 Gbps)
- Single Terraform Provider for Day-One Multi-Cloud Infrastructure as Code Automation
- Enterprise Class Day-Two Operational Visibility and Troubleshooting

Aviatrix customers leverage the capabilities of the Aviatrix cloud network platform in many ways. While each deployment is similar, each is also unique to each customer’s requirements and network design. Similarities start with the Aviatrix Controller’s ability to deploy Aviatrix networking and security services in a common, repeatable manner across clouds. Aviatrix Transit offers the same networking and operational capabilities across all cloud providers. Security policies for SAML User VPN, site-to-cloud connections and Internet egress, for example, are consistent and centrally managed across your multi-cloud network environment.

**Beyond Orchestration.**

Cloud providers will position automation scripts as orchestration, but orchestration only provides the initial deployment of network resources – it doesn’t help you with day-two operations, visibility, network correctness verification or troubleshooting that your operations team needs to do their jobs effectively.

Aviatrix multi-cloud operational visibility includes features such as cloud network flow analysis, geographical source-destination heat maps, time series traffic analysis to visually identify flow anomalies, communication path evaluation to verify both routing correctness and security configurations for application communications and more.

*“I really like the added visibility Aviatrix brings to my cloud network operations team. It’s a great reminder of the visibility and troubleshooting ability we took for granted when infrastructure was ‘on prem,’ now we have even more for our multi-cloud network.”*

TOBY FOSS  
DIRECTOR OF CLOUD NETWORK OPERATIONS  
INFORMATICA

### Multi-Cloud Network Architecture

Aviatrix 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.

### Centralized Controller

The Aviatrix controller is the brain of the cloud network platform. The platform leverages the centralized intelligence and knowledge of the controller to dynamically program both native cloud network constructs and Aviatrix's own advanced services. Our single Terraform provider enables network and security Infrastructure-as-Code automation across your multi-cloud environment.

### Network Service Gateways

Aviatrix gateways deliver advanced cloud networking and 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 data, but also for secure network ingress and egress filtering and external service insertion.

### High-Availability Networking

Aviatrix secure network transit is designed with active-active high-availability and redundant pathing. Pairs of Aviatrix Gateways, deployed in separate availability zones, establish a full mesh, multi-path connection that maximizes both throughput performance and network availability.

### High-Performance Encryption

Standard IPsec encryption is limited to 1.25 Gbps. Aviatrix's high-performance encryption distributes processing across multiple cores and aggregates IPsec tunnels to achieve wire speed encryption, up to 75 Gbps.

### Multi-Cloud Network Segmentation

Some clouds enable the creation of security domains. Aviatrix extends secure network segmentation beyond cloud boundaries, enabling multi-cloud security domains, with consistent, centrally managed, global network segmentation and connection policies.

### Secure Cloud Ingress and Egress Controls

Aviatrix gateways 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

Aviatrix Transit provides a secure point of access for network and security services such as next-generation firewalls, IDS/IPS and SD-WAN cloud edge connections. Aviatrix gateways provides load balancing to scale out connected services and ensure redundant and failover high availability.

### Operational Visibility

Enterprise network operations teams must have deep visibility into network activity. Native public cloud networks are opaque, even basic analytics must be obtained from multiple sources and require skilled human correlation to become actionable. Multi-cloud visibility is simply not available from any cloud provider.

### Dynamic Network Mapping

Aviatrix leverages the central intelligence and knowledge of the controller to dynamically generate and maintain an accurate multi-cloud network topology map that includes all network resources and network configurations the controller is managing. The map includes both native network resources and Aviatrix secure transit and cloud ingress and egress control gateways.

### FlowIQ – Intelligence Network Traffic Flow Analytics

Aviatrix extracts detailed network traffic flow data from Aviatrix 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 and global traffic heat maps.

### More

Additional advanced networking features which are not included in this overview include BGP propagation, traffic engineering, optimal path routing and more.

### Try Aviatrix Today or Schedule an Architectural Review Session

Aviatrix is simple to deploy; our intelligent central controller is launched from cloud provider marketplaces and automates the deployment of additional network and security services, as required. Most customers launch and begin using Aviatrix services in an afternoon, easy to try and evaluate. We have experts available to help you.

Contact your Aviatrix account executive or email [info@aviatrix.com](mailto:info@aviatrix.com) to schedule an architectural overview or design session with one of our solution architects. Learn about [Aviatrix Certified Engineer \(ACE\)](#) training or for more information go to [aviatrix.com](http://aviatrix.com).