NETWORK TRANSIT

SOLUTION BRIEF

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Organizations need the speed and flexibility of cloud infrastructure, but network connectivity has largely remained a challenge. Cloud compute and data infrastructure - the building blocks of our applications – are available in mere minutes with a variety of delivery and consumption models. Establishing connectivity between applications and other applications or applications and data remains the principal challenge in consuming cloud-native options even within a single cloud service provider (CSP).

Today's cloud-forward organizations are cherry picking services from multiple CSPs in an effort to deliver the best possible application experience for their employees and customers. That effort is frequently complicated by the lack of cloud-native network options that are as simple and secure to deploy as application infrastructure.

Current state of multi-cloud networking

Respective CSP network functions have provided a bridge between virtual private clouds and networks, however, these functions are myopic in their delivery - built only for the cloud in which they were conceived. Even within a single CSP infrastructure, these tools lack the global visibility that most network engineers are accustomed to in order to effectively manage the network. As organizations continue to scale their cloud infrastructure across regions and other clouds, they are faced with either poor service delivery due to a disjointed network, or the risk of security vulnerabilities created by connecting everything through a wide-open, peering mesh.

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While cloud-native network functions provide the most efficient access to the network below the CSP abstraction layer, the requirement to manually stitch together multiple CSP tools is extraordinarily complex and unwieldy to operate, manage, or scale. While CSP network functions have matured, most organizations still require complementary tools and services such as load balancers and firewalls; this only serves to add additional complexity to an already complex problem as well as increase the risk of technical debt.
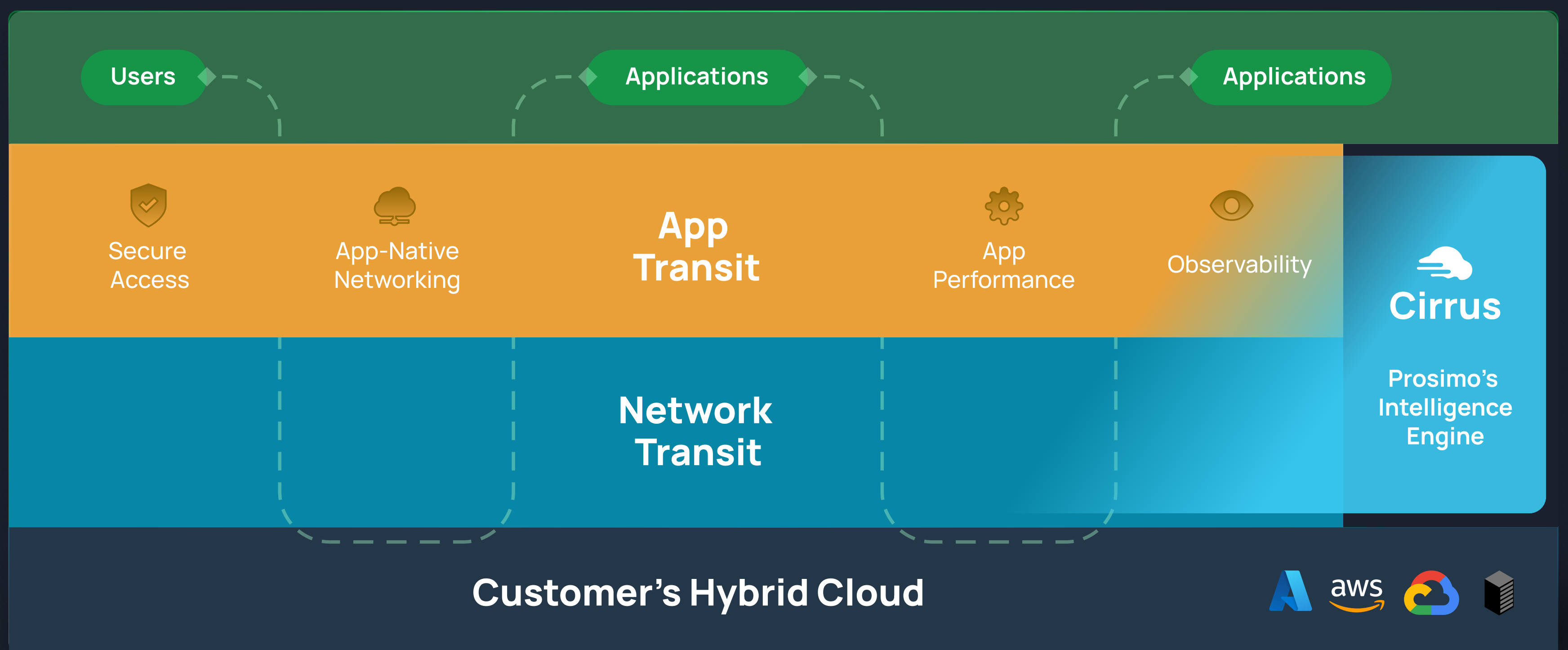
Many organizations and vendors have attempted to rationalize cloud networks by employing orchestrated solutions that replicate their on-prem networks through virtual versions of conventional hardware appliances. While this may help in connecting cloud networks and application endpoints, hardware was never intended to work in combination with cloud-native functions. The "allow all'' approach of conventional routing policy only serves to break the existing segmentation and security of cloud-native networks. Unfortunately, regardless of the approach, all are inherently complex and do not solve the key issues that make multi-cloud networking extremely painful.

Prosimo is a cloud-native solution for a cloud-native problem

Prosimo challenges the conventional approach to cloud networking by creating a secure network fabric at Layer 3 and – optionally – through Layer 7 at the application layer. This flexibility means that you may connect subnets within one cloud or across clouds with the flexibility to microsegment down to an individual IP address. Whether it is between CSP regions or crossing over to another cloud (public or private), Prosimo establishes secure transit with consistent policy in only minutes. This requires limited understanding of CSP services and zero need to understand or configure network policies at the L3/4 level thereby reducing your exposure to technical debt.

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Business Outcomes

✓ **Accelerate time to value:** deliver secure cloud networks in minutes, not days - as fast as cloud compute and data infrastructure.

✓ **Avoid technical debt:** reduce your dependence upon specialized networking or CSP-specific expertise.

✓ **Increased productivity:** reduce maintenance windows due to virtual appliance failures, upgrades, or patching. Find and fix problems faster by isolating network from application problems.

Prosimo's full-stack cloud transit is the only cloud network built on an elastic Kubernetes architecture that understands and speaks the language of cloud-native infrastructure. Because Prosimo speaks cloud-native, it establishes connectivity by working in concert with the most efficient network services of each unique CSP without the bottlenecks of monolithic virtual appliances. Regardless of whether you are using Transit Gateway in AWS or VNet peering in Azure, Prosimo orchestrates the connectivity between functions and clouds, selects the best possible path, and then provides you with a global view of your cloud networks and apps. This is how Prosimo has become the first autonomous cloud networking platform: Prosimo manages all aspects of cloud transit network stack – including security and performance - without the operational baggage or downtime of conventional networking.

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HOW PROSIMO STACKS UP TO CONVENTIONAL NETWORKING

Prosimo	Conventional networking alternatives
Single, cloud transit management dashboard for network, security, and content delivery deployed as SaaS; Prosimo Distributed Edge is deployed as IaaS within customer's administrative control.	Cloud network management platform(s) deployed as SaaS or virtual appliances. Network fabric requires monolithic, virtual routing appliances. May orchestrate virtual security appliances but requires additional dashboards.
Prosimo Distributed Edge is Kubernetes-based network, security, and content delivery that dynamically scales based on network load.	Inelastic, virtual routing appliances are deployed as a fixed form factor. No way to dynamically scale up or down. Virtual firewall appliances are not vertically or horizontally scalable.
Updates and patches to the Prosimo Distributed Edge are delivered by Prosimo using Kubernetes best practices without impacting traffic flows.	Customers are required to manage the virtual appliance lifecycle to include patching, reboots, and failovers. A 500 HA appliance deployment requiring a critical patch and reboot means rebooting 1000 appliances. Multiply that by 2 if firewalls are deployed in tandem.
Prosimo platform does not require extensive routing protocol experience keeping you out of technical debt. Gain visibility through detailed telemetry of each cloud network segment in the path; perform all network troubleshooting from a single dashboard.	Cloud network controllers may orchestrate BGP, IPsec, and NAT policy but extensive networking experience is still required to troubleshoot and maintain network fabric. Finding problems may require packet captures on each appliance in a network path.
Prosimo resides within your cloud, administrative control, and data path while leveraging the network SLA of each cloud to deliver maximum performance in multicloud networks.	Orchestration platforms that rely upon virtual appliances limit performance by operating on configured policies which lack global visibility into an ever changing, multicloud network. Other solutions black box network traffic with no real clarity on how the traffic is being routed or what impact those routing decisions have on network performance.

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Operational Outcomes

Gain visibility, improve uptime

Cloud network management platform(s) deployed as SaaS or virtual appliances. Network fabric requires monolithic, virtual routing appliances. May orchestrate virtual security appliances but requires additional dashboards.

Maintain microsegmentation, eliminate blind spots

Cloud network management platform(s) deployed as SaaS or virtual appliances. Network fabric requires monolithic, virtual routing appliances. May orchestrate virtual security appliances but requires additional dashboards.

Autonomous cloud networking

Cloud network management platform(s) deployed as SaaS or virtual appliances. Network fabric requires monolithic, virtual routing appliances. May orchestrate virtual security appliances but requires additional dashboards.

A network as flexible as the cloud

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Summary

Prosimo's full-stack cloud transit is ready to fundamentally change how you connect to and across clouds. This means you sleep better at night and your organization enjoys meaningful impact to its business outcomes. See more at Prosimo.io and sign-up for a free trial.

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