



# Google Cloud and Multi-Cloud Networking with Alkira Cloud Services Exchange and Google Network Connectivity Center (NCC) Integration

## Benefits of joint solution:

### Advanced Routing Control

Utilize Alkira's global routing policy to control traffic forwarding and network selection.

### Support Multi-Project Google Cloud NCC Deployments

Enabling transit for inter-project traffic forwarding for NCC environments across multiple projects.

### End-to-End Cloud Network Segmentation

Segmentation and micro-segmentation allow segregating GCP NCC environments and reducing security attack surface.

### Cloud Firewall Security for Google Cloud Workloads

Easily enforce uniform firewall security policy for Google Cloud single or multi-region application traffic.

### Multi-Cloud, Single Interface

Deploy Google NCC connectivity alongside your AWS, Azure and on-premises networks with enhanced networking capabilities.

Cloud computing has enabled organizations to rapidly deploy servers, storage and applications at global scale, avoiding the time and cost barriers inherent to on-premises do-it-yourself (DIY) architectures. As more and more customers turn to the cloud for this very reason, cloud providers are investing heavily in their network infrastructure to increase their reach and improve service delivery. The network capacity, global reach and infrastructure resiliency that now underpins these global cloud networks rivals the world's largest telecommunications providers, however the latent potential in these networks has been unavailable or difficult to effectively access for traditional enterprise networking use cases.

Utilizing cloud provider network infrastructure within the enterprise would allow organizations to dramatically rethink the way they build and operate networks, unlocking performance gains, rapid provisioning and drastically improved TCO models. While DIY options do exist for building on top of these cloud networks, most come with significant sacrifices in the form of increased complexity, poor visibility, and the loss of network fundamentals, such as dynamic routing or basic troubleshooting tools. For most organizations this means the potential remains out of reach as they wait for the promise of hyperscale networking to meet the feature demands of enterprise networking.

## Unlocking the Potential of Hyperscale Networking

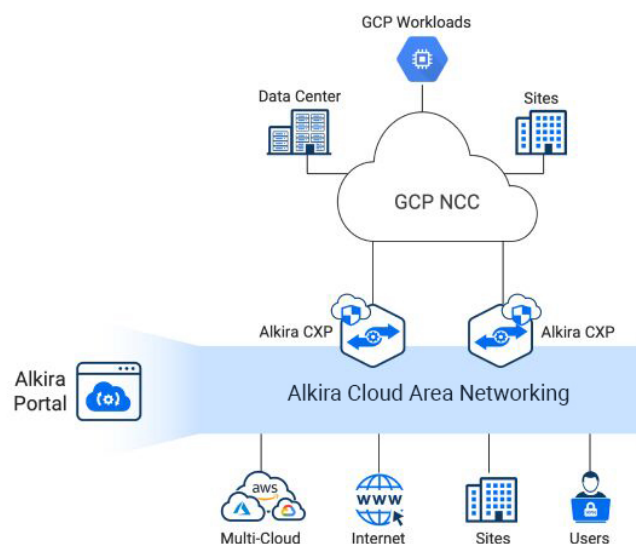
In partnership with Google Cloud, Alkira Cloud Services Exchange supports native integration with Google Cloud Network Connectivity Center (NCC). Organizations can take advantage of Google Cloud's native networking functionality while benefiting from the ease of use and advanced networking inherent in Alkira Cloud Services Exchange. Combining the Alkira Cloud Services Exchange platform with Google Cloud NCC unlocks the latent potential of hyperscale networking; delivering access to a vast array of robust network infrastructure while enabling the rich set of capabilities and operational controls required for enterprise networking.

With the Alkira solution customers have access to both the Alkira and Google cloud-scale networks with seamless communication between resources attached to either infrastructure. Alkira's feature-rich networking, in-built automation and extensive operational toolset eliminates the barriers that stand in the way of realizing the promise of cloud-scale networking.

## Solution Details

The Alkira Cloud Services Exchange portal provides an intuitive, topology-driven interface allowing enterprises to instantly integrate Google Cloud NCC with the broader Alkira network. Simply logon to the Alkira Cloud Services Exchange portal, authenticate to your Google Cloud NCC project and connect Google Cloud NCC VPCs to one or more Alkira Cloud Exchange Points (CXP) globally. The Alkira platform fully automates the discovery, attachment and configuration of both your Alkira and Google Cloud infrastructure. Cloud resources and sites deployed within the Google Cloud NCC environment can now seamlessly communicate with resources attached to Alkira Cloud Services Exchange including multi- cloud workloads, remote sites and data centers.

Peering between networks utilizes standards based BGP, allowing administrators to manage network path selection utilizing Alkira's simple yet powerful global routing policy. Enterprises can control the advertisement and weighting of routing information exchanged in each region to influence how resources communicate across both sets of infrastructure.



**Figure: Alkira Cloud Services Exchange and GCP NCC Integration**

Enterprises can easily enforce uniform security policy for Google Cloud single or multi-region application traffic. Utilizing Alkira intent-based policy administrators can implement Alkira native traffic controls (security, NAT, etc.), or seamlessly insert stateful next-generation firewall services hosted within Alkira Cloud Services Exchange, in each Alkira Cloud Exchange Point®.

Alkira's solution manages automated firewall provisioning, health monitoring, auto-scale, and symmetric traffic steering for third party firewall services available from the Alkira Network Services Marketplace.

In cases where cloud workloads are distributed across multiple Projects within Google Cloud, Alkira Cloud Services Exchange supports multiple simultaneous peering's with NCC enabled VPC's. The Alkira routing fabric can now act as a transit for inter-project traffic forwarding, connecting otherwise isolated NCC deployments. Furthermore, NCC VPCs can be compartmentalized through use of the Alkira segmentation framework, maintaining global isolation of workloads across NCC environments and Alkira connected resources. The segmentation control offered natively within Alkira Cloud Services Exchange enables customers to maintain isolation for network policy (e.g., line-of-business segmentation), compliance (e.g., PCI DSS, HIPAA) or deployment environment separation (e.g., production, development, staging) purposes. Where required, communication between segments for shared application services can be selectively allowed with or without firewall security policy enforcement.

The Alkira solution enables a common set of enhanced networking capabilities and single view of policy regardless of where your workloads reside. Onboard your Google NCC environment alongside AWS, Azure and on-premises networks, all driven through the intuitive Alkira Cloud Services Exchange portal.

## Summary

Alkira Cloud Services Exchange provides seamless integration of Google Cloud NCC, supplementing and enhancing network capabilities and operations for Google Cloud customers. Alkira allows organizations to simplify their cloud and multi-cloud networking journey while leveraging the significant investment made by Google Cloud into global network infrastructure. The entire integrated solution is consumed as a service unlocking a true cloud-native networking experience which is highly resilient, performant and secure.



### About Google Cloud

Google Cloud accelerates organizations' ability to digitally transform their business with the best infrastructure, platform, industry solutions and expertise. We deliver enterprise-grade solutions that leverage Google's cutting-edge technology – all on the cleanest cloud in the industry. Customers in more than 200 countries and territories turn to Google Cloud as their trusted partner to enable growth and solve their most critical business problems.



### About Alkira

Alkira® Cloud Services Exchange is the industry's first solution offering global cloud network infrastructure as-a-service. With Alkira, enterprises can have a consistent and significantly simplified experience deploying a global cloud network for end-to-end and any-to-any network connectivity across users, sites, and clouds with integrated network and security services, full day-2 operational visibility, advanced controls, and governance. The entire network is drawn on an intuitive design canvas, deployed in a single click and is ready in minutes!

Alkira Cloud Services Exchange.  
The Fastest Way to the Cloud.