

# Seamless Multi-Cloud Networking for Aruba EdgeConnect SD-WAN Deployments

## Overview

As enterprises embark on their cloud adoption journey, they face challenges transitioning their established networking models to the new cloud infrastructure. The first barrier is connectivity at the edge, where the rigid nature of traditional private line networks like MPLS have complicated the transformation strategy and its efficiency. Here, the Internet has emerged as a natural alternative, with SD-WAN platforms like Aruba EdgeConnect being leveraged to secure and simplify edge-to-cloud connectivity, while ensuring the reliability and performance users expect from MPLS. Connectivity to the cloud is only half the challenge.

Enterprises need advanced networking and security capabilities in the cloud to support application transition from on-premises data centers to cloud, multi-cloud and SaaS environments. Alkira® Cloud Area Networking accelerates cloud transition by enabling deployment and operation of enterprise-grade global high speed cloud networks with end-to-end segmentation and integrated stateful security services. This new cloud network requires no upfront hardware investments, no complex software configurations, and no cloud architecture expertise.

## Benefits

### Simplified Operations

Alkira Cloud Area Networking Portal provides simplified instantiation, visibility and monitoring for the EdgeConnect virtual instances.

### Unified Routing

Enterprise-grade cross-segment routing and security controls for shared cloud application services use cases (M&As, divestitures, partners access).

### Centralized Security

End-to-end segmentation between SD-WAN sites and cloud workloads with advanced security and policy enforcement for cloud application traffic.

### Network Regionalization

Save cost and provisioning time on long-haul private circuits by interconnecting regionalized EdgeConnect SD-WAN fabrics over the Alkira's high speed low latency global cloud backbone.

### Seamless Mergers and Acquisitions

Seamlessly interconnect multi-vendor SD-WAN fabrics to support mergers and acquisitions during the migration to an enterprise-wide Aruba EdgeConnect SD-WAN solution.

## Foundation for Successful Cloud Adoption

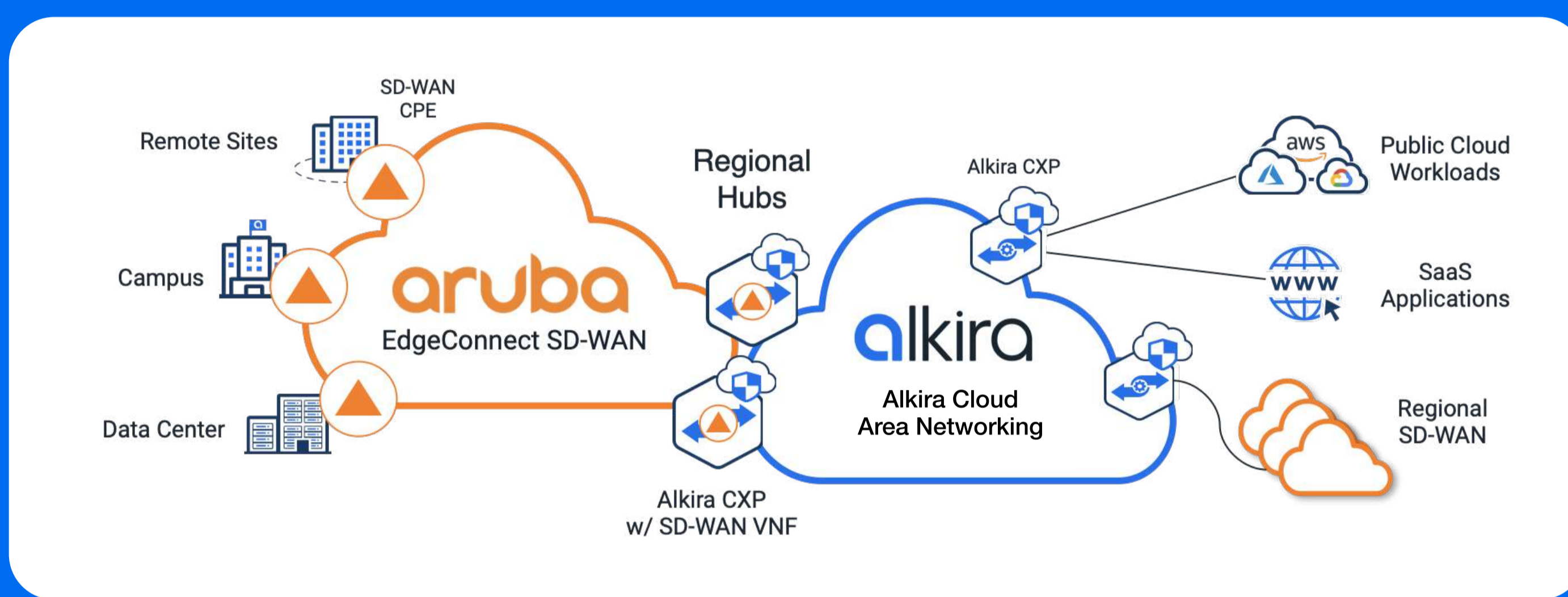
Deploying an end-to-end architecture capable of accommodating enterprise networking and security requirements is critical to any successful cloud and multi-cloud transformation. To that end, Aruba and Alkira are joining forces to modernize and dramatically simplify the cloud and multi-cloud networking experience.

Aruba EdgeConnect SD-WAN is fully integrated into the Alkira Cloud Area Networking, allowing enterprises to seamlessly establish network connectivity between the EdgeConnect SD-WAN fabric and the cloud workloads attached to the Alkira solution. Application traffic between the SD-WAN fabric and the cloud can be symmetrically steered to the next-generation firewalls residing within the Alkira solution using Alkira intent-based policies.

The Alkira Cloud Area Networking Portal offers full visibility, governance, control and troubleshooting tools across the entire cloud network deployment to provide enterprises with the necessary operational controls. At the same time Aruba Orchestrator remains a single pane of glass for all EdgeConnect SD-WAN operations, including the EdgeConnect virtual SD-WAN appliances automatically deployed within the Alkira Cloud Area Networking.

## Solution

The joint solution leverages Alkira SD-WAN connectors to attach the Aruba EdgeConnect SD-WAN fabric to one or more geographically distributed Alkira Cloud Exchange Points (CXPs), Alkira's multi-cloud virtual points of presence with advanced networking and security capabilities. Aruba EdgeConnect SD-WAN virtual appliances available through the cloud providers' marketplaces are redundantly instantiated by Alkira inside the CXPs.



Alkira's solution is responsible for deploying, connecting, and monitoring the Aruba EdgeConnect appliances. Once instantiated, Aruba Orchestrator accepts the new virtual appliances, applies the necessary SD-WAN configuration, and manages them as any other EdgeConnect SD-WAN appliance. Alkira instantiated appliances support the full range of EdgeConnect SD-WAN features including Aruba Boost WAN Optimization.

Network segmentation defined in the Aruba EdgeConnect SD-WAN fabric by the Business Intent Overlays (BIOs) is extended through the Alkira SD-WAN connectors into the Alkira Cloud Area Networking effectively creating end-to-end segmentation across LAN, WAN, and cloud environments. Application traffic originating within the SD-WAN fabric toward the cloud can be further segregated into micro-segments in order to enforce more granular security controls.

For scenarios where SD-WAN users residing in different segments require access to shared cloud application services connected to Alkira, the joint solution supports cross-segment communication for traffic between the Aruba SD-WAN environment and the cloud. In case of SD-WAN overlapping IP addresses, the joint solution employs network address translation (NAT) for the cross-segment traffic toward the cloud to resolve IP address conflicts.

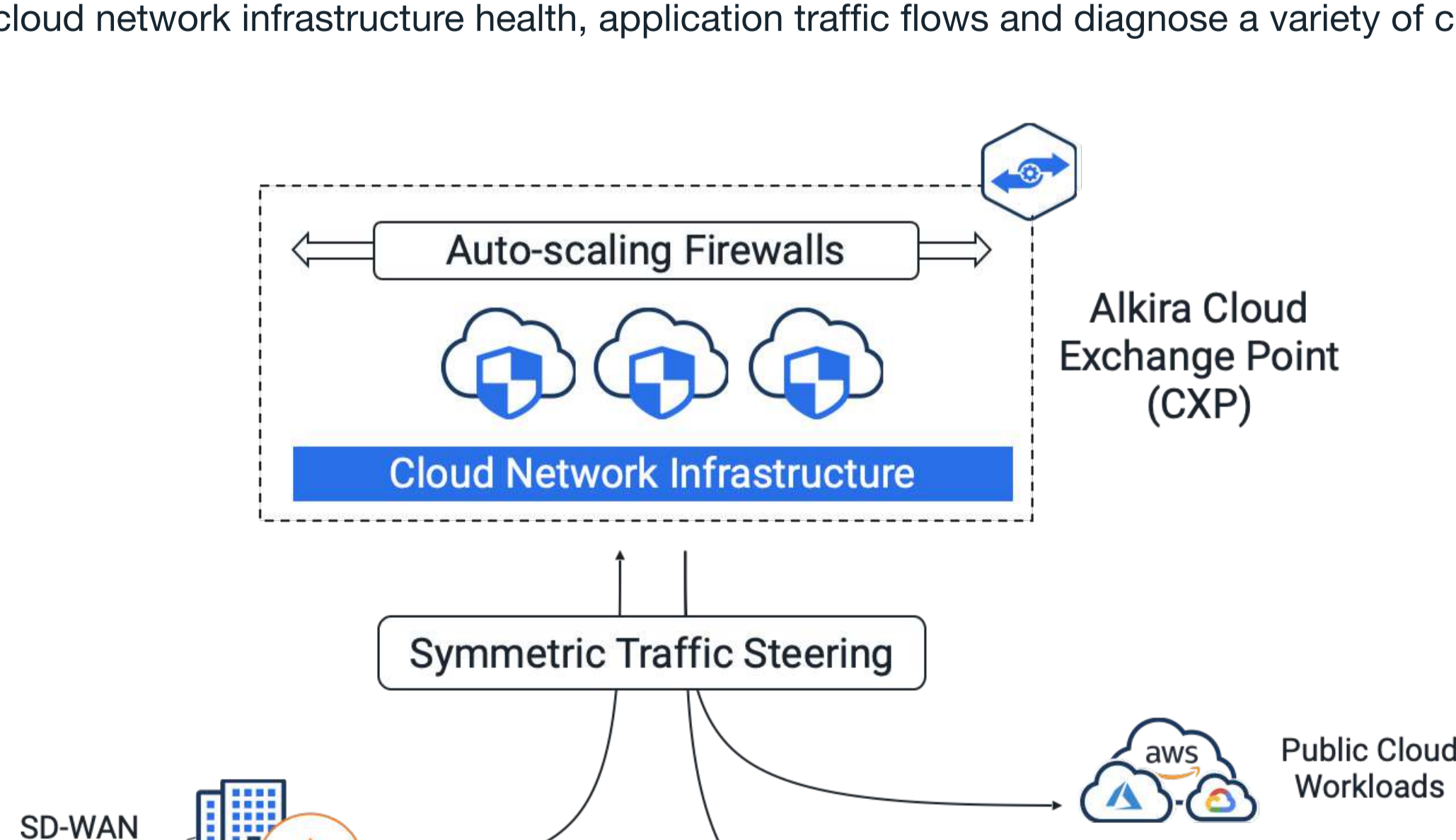


Alkira's network services marketplace offers a selection of networking and security services, such as next-generation firewalls. Using Alkira intent-based policies, enterprises can easily select the SD-WAN traffic of interest, be symmetrically steered toward the auto-scaling firewalls deployed within the Alkira Cloud Exchange Points. Firewall service insertion is commonly applicable for the following use cases:

- Intra-segment security policy enforcement between different micro-segments associated with SD-WAN connectivity to cloud
- Cross-segment SD-WAN traffic accessing shared cloud application services
- Internet-bound SD-WAN traffic destined for SaaS applications through the regional Internet exit points offered by Alkira

Enterprises looking to regionalize their SD-WAN deployment can attach multiple Aruba EdgeConnect SD-WAN fabrics to their closest Alkira Cloud Exchange Points. Such regional SD-WAN fabrics are interconnected through the high bandwidth, low latency Alkira Cloud Backbone, eliminating the dependency on procuring costly long-haul private circuits in cases where internet cannot be considered a viable solution.

Alkira Cloud Area Networking Portal offers a simple and intuitive user interface for all provisioning, monitoring and troubleshooting needs of the cloud network, while Aruba Orchestrator remains a single pane of glass for all SD-WAN operations, as well as control configuration and licensing of the Aruba EdgeConnect SD-WAN virtual appliances deployed in the Alkira Cloud Exchange Points. Industry leading visualization available in the Alkira Cloud Area Networking Portal offers Aruba SD-WAN customers the ability to have complete visibility into cloud network infrastructure health, application traffic flows and diagnose a variety of cloud network connectivity issues.



Joint Alkira and Aruba solution allows enterprises to drive the digital transformation across the wide area network and cloud environments. The Aruba EdgeConnect SD-WAN customers can now enjoy a cloud native networking experience with the security, performance and agility made possible by Alkira Cloud Area Networking.



Aruba, a Hewlett Packard Enterprise company

### About Aruba Networks

Aruba, a Hewlett Packard Enterprise company, is the global leader in secure, intelligent edge-to-cloud networking solutions that use AI to automate the network, while harnessing data to drive powerful business outcomes. With Aruba ESP (Edge Services Platform) and as-a-service options, Aruba takes a cloud-native approach to helping customers meet their connectivity, security, and financial requirements across campus, branch, data center, and remote worker environments, covering all aspects of wired, wireless LAN, and wide area networking (WAN). To learn more, visit Aruba at [www.arubanetworks.com](http://www.arubanetworks.com).



### About Alkira

Alkira Cloud Area Networking ([www.alkira.com](http://www.alkira.com)) is the fastest way to unify clouds, sites, and users. With Alkira Cloud Area Networking, you can deliver secure, end-to-end networking in hours instead of months. One cloud or many. Enjoy an elastic network that scales up and down based on demand. The only enterprise-grade network built 100% in the cloud. Agentless. And delivered as-a-service. With Alkira, your network team will move faster. Manage less. And save more.