

Global On Demand Multi-Cloud Network

Industry's only solution with single-click provisioning of the entire global multi-cloud network and network services. Connect users and sites to public clouds and the public clouds together, while cutting provisioning time from months to minutes



Cloud adoption continues to accelerate. Organizations are increasingly transitioning business critical applications from on-premise data centers to the public cloud and SaaS environments.

In response to this rapid adoption of the cloud, compute and storage have evolved beyond virtualization and automation to as-a-service offerings. Cloud architects and engineers are now focused on choosing the service attributes they want to consume, such as compute instances and storage volumes, rather than worry about implementation details. Complexity has been eliminated and cloud computing has become a business enabler for compute and storage.

Key Challenges

In contrast, the network (and network services) has not made a similar transition, nor does it operate in true concert with the cloud. Building a network for the cloud comes with the following key challenges:

- Slow response time to business and application owners' needs resulting from insufficient cloud networking expertise and cloud networking complexity sprawl
- Visibility and Governance blind spots resulting from disparate cloud architectures and the lack of single point of control
- High total cost of ownership (TCO) resulting from upfront do-it-yourself costs and complex network operations

The network (and network services) is under ever-increasing pressure to provide an agile, highly performing and cost-effective solution to cloud business needs.



Alkira is the industry's only solution with single-click provisioning of the global multi-cloud network and network services. Cut provisioning time from months to minutes.

Networking for the Cloud with Alkira Cloud Services Exchange

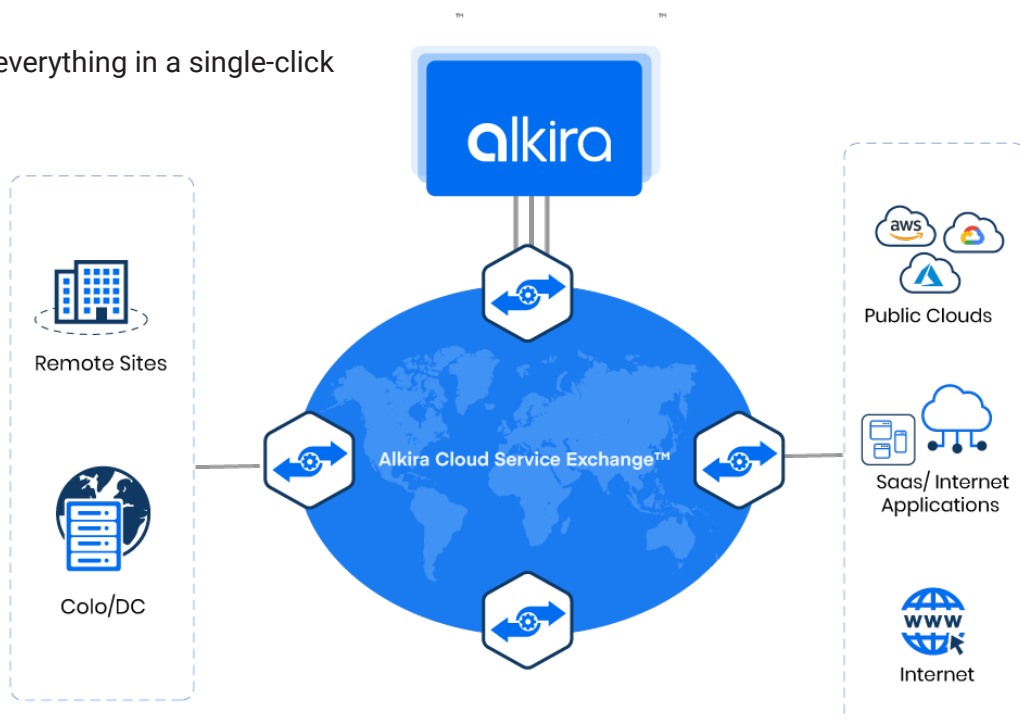
It is time for the network to evolve. It is time for the network to be reinvented for cloud. Read a white paper by Atif Khan, Alkira CTO. [🔗](#)

Alkira Cloud Services

Alkira Cloud Services Exchange™ (Alkira CSX) is the industry's first as-a-service unified multi-cloud network with integrated network services marketplace, visibility and governance. It removes obstacles to successful cloud and multi-cloud adoption.

Leveraging a globally distributed virtual infrastructure of Alkira Cloud Exchange Points™ (virtual multi-cloud points of presence with full routing stack and network services capabilities), organizations can establish global on demand cloud and multi-cloud network connectivity from their sites in three easy steps:

1. Register for Alkira service
2. Point-and-click the entire global on demand multi-cloud network
3. Provision everything in a single-click



Point-and-click Global On Demand Multi-Cloud Network



Steps to establish global on demand cloud and multi-cloud network connectivity

Step 1:

Registering for Alkira Service

Registering for Alkira service is the first step to enabling global on demand cloud and multi-cloud connectivity.

- a. Navigate to <https://www.alkira.com> and register your company
- b. Click on the link in the registration confirmation email and create an administrative account
- c. Log into Alkira service to start designing your network

Step 2:

Point-and-Click Global On demand Multi-Cloud Network

With Alkira CSX, your multi-cloud network is offered as-a-service, on demand, when and where you need it. You do not need to procure any additional hardware equipment (just use your existing routers), provision costly colocation direct cloud interconnects or perform tedious configuration tasks. Your entire global multi-cloud network is modeled through the intuitive Alkira Cloud Services Exchange Portal in a point-and-click fashion.

- a.** Select on the global map the locations in which your multi-cloud network is present. Alkira Cloud Exchange Points (Alkira CXPs) are geographically distributed around the world. Your cloud and on-premise locations are never too far from our closest point of presence
- b.** Point-and-click to discover and connect your existing public cloud instances to the closest Alkira Cloud Exchange Point. We currently support AWS VPCs, Microsoft Azure VNets and Google Cloud Platform VPCs. Once connected, all cloud instances can immediately communicate with each other across the Alkira Cloud Services Exchange.
- c.** Point-and-click to connect your remote sites to the closest Alkira Cloud Exchange Point for cloud and multi-cloud access. Remote sites can be home offices, branches, campuses, data centers, colocation facilities, etc. We currently support IPsec, Cisco SD-WAN and AWS Direct Connect as methods of last mile connectivity. Once connected, all remote sites can immediately communicate with all connected cloud instances.
- d.** Optionally, add SaaS/Internet access with Cloud Firewall security. SaaS/Internet access will be optimally provided through the closest Alkira Cloud Exchange Point to eliminate any data center backhaul latency penalties or cause data center network bandwidth starvation.

Experience the power of Alkira solution today and watch your multi-cloud network come to life in minutes. [↗](#)

Note: At this time, we do not support remote site to remote site or remote site to data center communication across the Alkira Cloud Services Exchange.

e. Optionally, create additional network segments. Once created, segments span the entire global multi-cloud network and provide end-to-end isolation. Remote sites, cloud instances, network services and SaaS/Internet exit points can be mapped to a particular segment. For Cisco SD-WAN, SD-WAN segmentation can be extended into the Alkira Cloud Services Exchange. You can now move your compliance and sensitive secure applications to cloud with confidence.

The Alkira CSX fully embraces cloud-native constructs of the public clouds eliminating restrictive intra-cloud and multi-cloud network and security limits organizations may encounter when traditionally deploying networking for the cloud. All cloud-native constructs are incorporated into the Alkira CSX offering, removing the need from organizations to understand any details of their provisioning and operation. This approach is in complete concert with Alkira's vision of a global on demand unified multi-cloud network delivered as-a-service.

Step 3:

Single-Click Provisioning

Provisioning the entire global on demand multi-cloud network is done in a single click. Alkira Cloud Services Exchange will automatically instantiate all the necessary elements required to establish global on demand multi-cloud network connectivity (and network services), based on the previously created point-and-click design. Alkira service billing will start incurring charges after all cloud infrastructure elements have been provisioned.

Based on the extent of network design, for example the number of geographic locations, remote sites, public cloud instances and network services, the provisioning cycle may take as little as ten minutes. Alkira Cloud Services Exchange Portal provides a progress bar to keep you updated on the provisioning cycle. Your global multi-cloud network is ready for use immediately after the provisioning cycle completes.

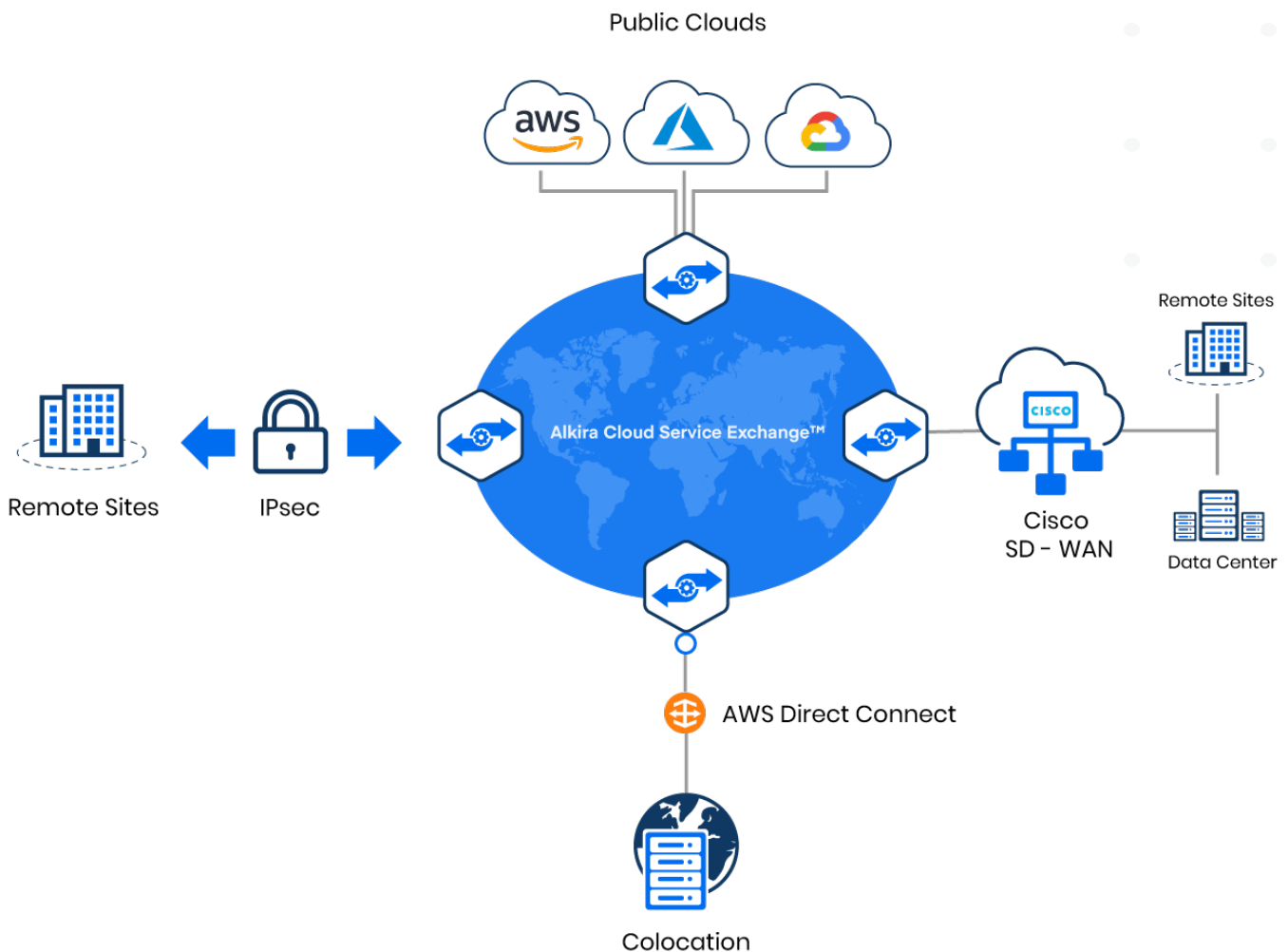
Network for Cloud Solution Scenarios

Sites to Public Clouds

Alkira Cloud Services Exchange offers high-speed, low-latency transport from all remote sites to all connected public cloud instances. Remote sites can be a mix of home offices, branch offices, campuses, data centers and colocation facilities. Public cloud instances can be a mix of AWS VPCs, Microsoft Azure VNets and GCP VPCs. Public cloud instances can also reside in a single public cloud across one or multiple geographic regions.

- Organizations looking for the simplest method of connecting remote sites to public cloud resources through the Alkira Cloud Services Exchange, can do so by leveraging IPsec tunnels over the Internet. IPsec tunnels are provisioned at each remote site router and terminated at the geographically closest Alkira Cloud Exchange Point. The Alkira solution generates the required configuration to be applied to the remote site router.
- Organizations deploying Cisco SD-WAN can leverage automated connectivity to public cloud resources through the Alkira Cloud Services Exchange. The Cisco SD-WAN fabric is automatically extended into one or more Alkira Cloud Exchange Points of your choosing. This allows creating regional hand-offs between Cisco SD-WAN fabric and the Alkira Cloud Services Exchange to access the connected cloud instances.
- Organizations leveraging colocations for cloud connectivity can leverage the AWS Direct Connect service to connect to the closest Alkira Cloud Exchange Point. Once connected, organizations can access all cloud instances (AWS, Microsoft Azure and GCP) globally connected to the Alkira Cloud Services Exchange.

Based on the specifics of the network design, the Alkira solution supports all remote sites to public clouds connectivity methods at the same time. Organizations can insert network services, such as Palo Alto VM-Series Firewalls, into the Alkira Cloud Services Exchange and leverage Alkira intent-based policies to steer the desired traffic to the cloud network services nodes.

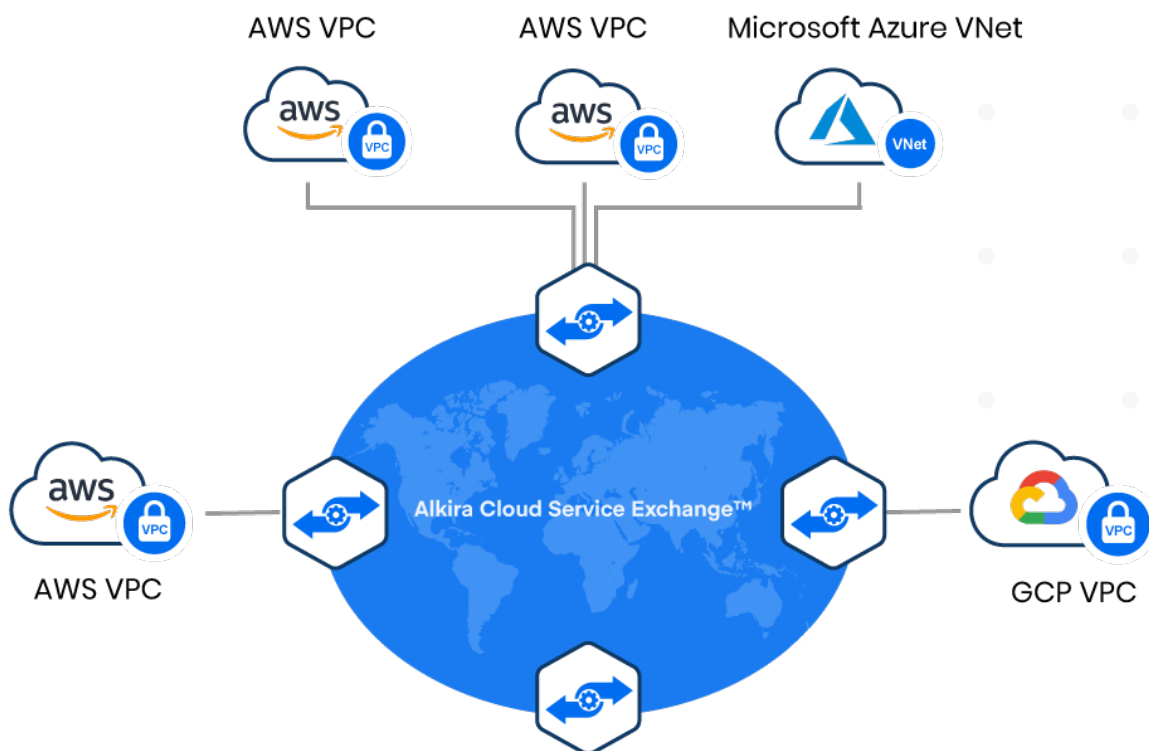


Remote Sites to Public Cloud Networking Options

Public Cloud to Public Cloud

Alkira Cloud Services Exchange offers high-speed, low-latency transport between all connected public cloud instances. Public cloud instances can be a mix of AWS VPCs, Microsoft Azure VNets and GCP VPCs. Public cloud instances can also reside in a single public cloud across one or multiple geographic regions.

Alkira CSX automatically discovers AWS VPCs, Microsoft Azure VNets and GCP VPCs based on the cloud credentials provided by the administrator. Once discovered, an administrator can simply select the desired cloud instances to be connected to the Alkira Cloud Services Exchange. After the network has been provisioned, Alkira Cloud Services Exchange automatically distributes the required network reachability, so all public cloud instances can immediately communicate to each other.



Public Cloud to Public Cloud Networking Options

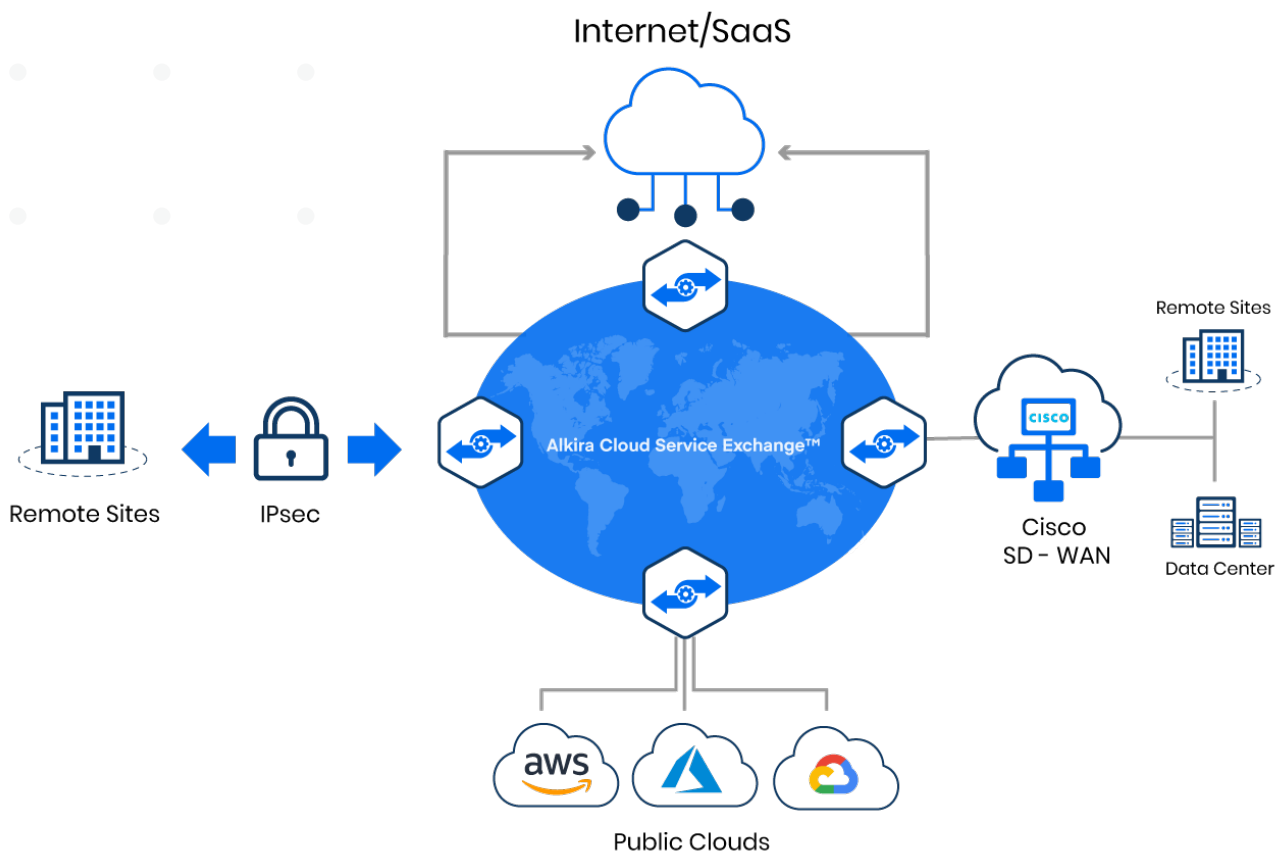
Based on the requirements, organizations can insert network services, such as Palo Alto VM-Series Firewalls, into the Alkira Cloud Services Exchange and leverage Alkira policies to steer the desired cloud to cloud traffic to the network services nodes.

Regional SaaS/Internet Access

Alkira Cloud Services Exchange offers regional Internet exit points for optimal access to Internet resources and SaaS applications. The exit points are distributed throughout the global reach of the Alkira Cloud Services Exchange. Organizations can decide on whether to allow or disallow SaaS/Internet access. If such access is allowed, it will be delivered at the geographically closest Alkira Cloud Exchange Point where particular remote sites or public cloud instances are connected.

Alkira Cloud Services Exchange offers a network services marketplace, which includes Palo Alto VM-Series Firewalls. Organizations can leverage Alkira intent-based policies to steer SaaS/Internet designated traffic through the Palo Alto VM-Series Firewalls in order to meet organizational security policy requirements.

The use of geographically distributed SaaS/Internet access coupled with stateful cloud firewall security eliminates the latency penalty experienced by the users at remote sites when such traffic is backhauled through the data center.



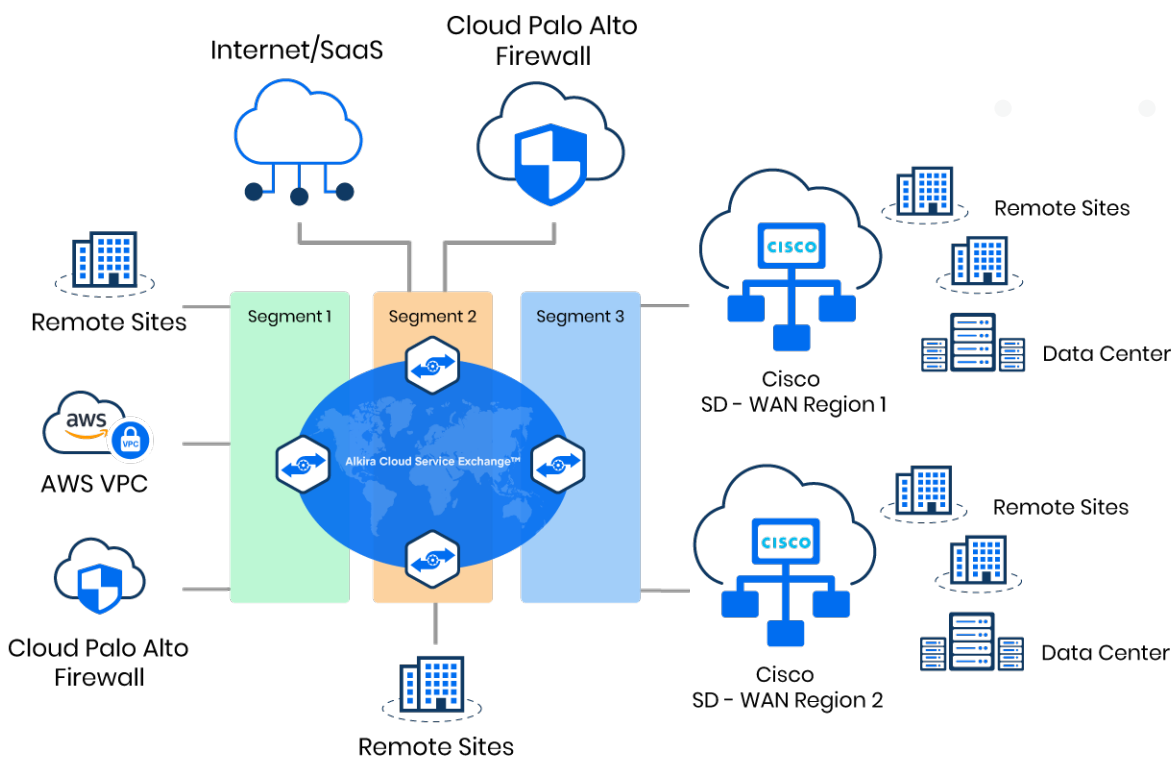
Regional SaaS/Internet Access

End-to-End Segmentation

Alkira Cloud Services Exchange offers end-to-end network segmentation capabilities that allow grouping remote sites, public cloud instances, network services and SaaS/Internet exit points into a specific network connectivity segment. Once defined, segments immediately span the entire global multi-cloud network provisioned across the Alkira Cloud Services Exchange. All segments are fully isolated from each other.

For organizations leveraging the Cisco SD-WAN solution, SD-WAN segmentation can be seamlessly extended into the Alkira Cloud Services Exchange. It creates a contiguously segmented environment, even for cases where the SD-WAN fabric does not provide full end-to-end connectivity.

The concepts of segmentation are also extended to the network services nodes provisioned in Alkira Cloud Services Exchange. This allows network services nodes, like Palo Alto VM-Series Firewalls to inspect the traffic within a given segment or across segments. In the latter case, Palo Alto VM-Series Firewalls route the traffic between the segments, while Alkira Cloud Services Exchange delivers the traffic to and from the firewall in accordance with defined Alkira intent-based policies.



End-to-End Segmentation

Customer Benefits

Alkira solution allows organizations to turn networking for the cloud from a business inhibitor to a business enabler, while providing the following main benefits.

- Faster time to cloud reduces deployment time from months to minutes in full alignment with business SLAs
- High bandwidth, low latency network from remote sites to public clouds (AWS, Microsoft Azure and GCP) and SaaS/Internet applications, and between multiple public clouds or multiple regions of the same public cloud
- Eliminate cloud-specific limitations by building a multi-region, multi-cloud overlay network, leveraging cloud-native and advance routing and security constructs
- Global security policy enforcement by leveraging firewalls of choice and global symmetric traffic steering
- Elasticity to accommodate on demand capacity, e.g. periodic high-volume data transfers, seasonal retail customer uptake, etc.
- End-to-end segmentation between remote sites, public cloud instances, cloud network services and SaaS/Internet exit points for compliance and sensitive or secure applications
- On demand/subscription consumption cost model to ensure customers are charged for only the network and network services resources they actually consume
- High availability and resiliency backed up by high uptime service guarantee
- Full visibility to eliminate operational blind spots and improve day-2 operations



Summary

In summary, Alkira Cloud Services Exchange™ offers the industry's first leapfrog solution focusing on removing obstacles to successful cloud and multi-cloud adoption. Leveraging globally distributed network of Alkira Cloud Exchange Points™ (multi-cloud virtual points of presence), organizations can establish global on demand connectivity between remote locations and the public clouds. Organizations can easily insert on demand stateful global network and security services from the Alkira services marketplace, leveraging intent-based policies. End-to-end visibility and governance offer deep network and network services insights eliminating operational blind spots. The Alkira™ industry-leading graphical user interface enables dramatic operational simplification by offering a point-and-click modeling canvas with single-click provisioning of the entire end-to-end multi-cloud service in minutes.

The Network. Reinvented for Cloud.™



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