ARRCUS
NETWORK DIFFERENT™

CASE STUDY

CoreSite Leverages Arrcus ACE Multi-Cloud Networking Solution to Build Out the Open Cloud Exchange®

Company Overview

CoreSite, an American Tower company, offers hybrid IT solutions that empower enterprises, cloud, network, and IT, service providers, to monetize and future-proof their digital business. The company's highly interconnected data center campuses offer a native digital supply chain featuring direct cloud onramps to enable its customers to build customized hybrid IT infrastructure and accelerate digital transformation. With its Open Cloud Exchange® (OCX) interconnection platform, CoreSite enables deploying high-performance hybrid architectures faster, more securely, and at a lower total cost of operation (TCO) than alternative solutions.

By virtualizing and automating complex network functions, the OCX enables enterprises, network providers, and IT service providers to connect and deliver solutions to an ever-expanding digital ecosystem.

The OCX is designed to provide secure connectivity between private infrastructure and public cloud providers such as AWS, Azure, GCP, and OCI. OCX platform tackles the problem of complexity across different Cloud Service Providers (CSPs) by creating an abstract one-to-many cloud overlay network and embedding automation in each step of the workflow. By leveraging the easy-to-use service delivery platform to seamlessly manage interconnection needs and accelerate IT modernization, customers can focus on their core business rather than managing their IT infrastructure.

"We leverage Arrcus' virtual routers in the CoreSite OCX to help enable our customers to quickly expand market reach and gain a competitive edge while lowering TCO," said Matt Senderhauf, Vice President, Interconnection Strategy at CoreSite.

Challenges

CoreSite's key requirements to help deploy the OCX include:

- Accelerate enterprise cloud migration with an easy and transparent multi-cloud routing platform without increasing the security attack surface
- Ensure a multi-tenant solution with a cloud access policy, authentication, encryption, and financial control with reduced cost as compared to legacy solutions
- Remove redundant data paths between on-premises sites (data centers, regional centers) and distributed cloud regions from different providers
- Automate Layer 3 connectivity and automated cloud-to-cloud routing to simplify hybrid and multi-cloud architectures
- Reduce time to deploy the multi-cloud network with optimized route paths to ensure optimal application performance and superior end-user experience
- Eliminate operational inefficiencies and costs associated with static circuits and manual configuration changes to interconnect cloud regions

With these modern network requirements, CoreSite needed to provide seamless connectivity across network boundaries through a networking component capable of interconnecting to various cloud service providers (CSPs).

The OCX platform is designed to be a solution for customers to directly orchestrate and manage their secure private-cloud-to-public-cloud connections. With this solution, the majority of the tasks are automated with a minimal interception in the backend.

The OCX works by providing a single port into CoreSite's Layer 2 Ethernet switching platform, enabling private virtual connections (VLANs) to multiple service providers. Provisioning is done in real-time with a virtual router solution through CoreSite's service delivery platform, where multiple tasks need to happen in cohesion including:

DevOps Challenges

- Creating and managing virtual private clouds (VPCs) across CSPs. Abstraction is quite important to deliver services quickly and in a seamless fashion
- Creating virtual routing instances in private infrastructure and connecting them to the virtual routers of the CSPs

NetOps Challenges

- Configuring overlay networks across private and public clouds by leveraging networking constructs
- Automating the services by using a standardized framework that does not require special translation plugins

While certain vendors can provide a solution for one or more aspects, most lack the ability to provide an automation framework that can be leveraged to fully integrate with provisioning workflows. In certain cases, the legacy architecture where the command-line interface (CLI) is mostly static and translating that into service calls requires specialized plugins for each component of the solution.

Solution

With the Arrcus ACE Multicloud Networking (MCN) solution, the company provides a key component that enables CoreSite to deploy the OCX. To solve the DevOps challenges, the orchestration portion of Arrcus' MCN solution seamlessly creates and manages VPCs across various CSPs such as AWS, GCP, Azure, and OCI. The MCN orchestration platform streamlines the inherent complexity and embedded CSP-specific workflows, simplifying the user experience.

Once configured, the ability to provide a seamless overlay network is made possible by Arrcus' rich CLI framework that is based on OpenConfig/Yang models. These data models help the customer plan the workflows based on well-known frameworks that easily translate across multiple routing platforms, thus helping solve the NetOps issues with a rich set of standardized northbound APIs.

Since each CSP has specific standard operating procedures, having a common abstraction layer to translate the backend calls has proven to be extremely useful in enhancing time to market. In addition, Arrcus delivers standardized models for configuration/verification that can address the multitude of challenges faced by any business looking to adapt to modern networks.

"With just a few clicks in MyCoreSite, our service delivery platform, customers can quickly establish direct and secure virtual connections to multiple service providers and to the public cloud for rapid, automated provisioning," said Brian Warren, Senior Vice President, Development and Product Engineering at CoreSite.

In the end, Arrcus was able to deliver:

- A multi-cloud routing solution for dynamic utilization and cloud connectivity by leveraging CoreSite's private network infrastructure with high bandwidth and low latency
- Fast provisioning and elasticity with the connections aligned with traffic patterns
- Efficient and optimized route paths and connections to the public cloud resources eliminating round-trip data paths that dramatically improved application performance and end-user experience and unleashed massive capacity

Summary

Partnering with Arrcus and its MCN solution, CoreSite was able to expand its capabilities and provide new service offerings with enhanced business agility while reducing TCO and accelerating time to market. Most importantly, this was achieved by using a simple yet scalable model of creating an abstraction layer that simplifies complexity challenges across CSPs while at the same time optimizing resources by embedding automation in every step of the way.

About Arrcus

Arrcus was founded to enrich human experiences by interconnecting people, machines, and data. Our mission is to democratize the networking industry by providing the best-in-class software, the most flexible consumption model, and the lowest total cost of ownership (TCO). The Arrcus team consists of world-class technologists who have an unparalleled record in shipping industry-leading networking products, complemented by industry thought leaders, operating executives, and strategic company builders. The company is headquartered in San Jose, California.

For more information, go to www.arrcus.com or follow @arrcusinc.

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