ARRCUS
NETWORK DIFFERENT™

SOLUTION BRIEF

Arrcus Multi-Cloud Networking (MCN)

The new paradigm for cloud connectivity

The Arrcus multi-cloud networking platform delivers the industry's best scalable networking solution to securely and seamlessly interconnect enterprise data centers with any cloud region around the world, with hyperscale performance and cloud-native security.

Market realities and networking challenges

The era of enterprise data centers (DCs) and public clouds delivering business-critical applications are evolving rapidly to keep up with the explosive access from users and machines from anywhere and anytime. In order to support this rapid expansion of applications and data in distributed places around the world, a new generation of high performance and scalable networking architecture is required. The current networking architecture adopted by the major public cloud providers – Amazon AWS, Google Cloud Platform, Microsoft Azure, and Oracle Cloud is neither optimized nor aligned with the existing enterprise DCs, which in turn aren't designed to scale and integrate with the public clouds. This disjointed network architecture presents significant barriers to growth and also for the efficient and rapid adoption of distributed applications across multi-cloud infrastructure.

The challenges in the current solutions are multi-fold. Legacy vendors lack a unified networking architecture that leads to rigid deployment, limited in both scale and performance and is based on inconsistent operating models. Furthermore, as the adoption of on-prem solutions from cloud providers like Amazon AWS Outposts, Google Anthos, and Microsoft Azure Arc accelerates, these architectural limitations are leading to a siloed IT models with increasing complexity, heightened security vulnerabilities, and unnecessary costs. The fundamental disconnect in this architecture stems from the lack of integration between the well-adopted DC IP Clos architecture and the high reliance on overlay based (IPSec, VPN) networks from the cloud providers. In networking terms, this translates to the data center based on the IP Clos "underlay" network lacking integration with the public cloud network based on the – IPSec, VPN – "overlay" network. This lack of integration has led to multiple issues including tedious workflows, inefficient change management, and complex orchestration models, all of which lead to high-cost solutions. Ideally, and also what enterprise organizations are seeking is a simple network and a scalable architecture with a unified data forwarding software, managed with standard orchestration workflows, and integrated into their existing network operating models.

The Arrcus MCN Networking Platform with ArcEdge and ArcOrchestrator

The Arrcus MCN platform consists of ArcEdge, which is a secure data plane element and ArcOrchestrator, which is the modern orchestrator that dramatically simplifies and secures cloud connectivity with hyperscale performance. Designed for digital-first enterprises, the Arrcus multi-cloud networking platform empowers organizations to tightly integrate their data center network and public cloud infrastructure with a flexible deployment architecture and robust security. Operationally efficient with well-adopted frameworks like HashiCorp Terraform and Ansible playbooks with support for the on-premise YANG data models, OpenConfig, and a complete RestAPI framework. Built with cloud-native principles for Amazon Web Services, Microsoft Azure, and Google Cloud Platform, the Arrcus multi-cloud networking platform is a fully integrated and cloud-native solution.

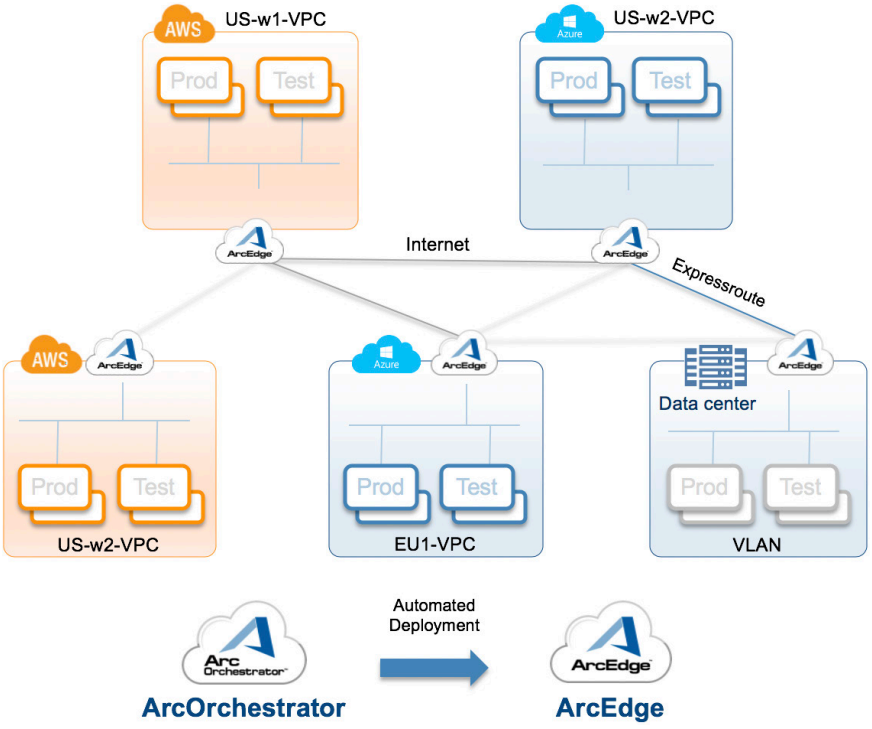

Figure 1: Arrcus multi-cloud networking platform

Key Capabilities and Benefits

ArcEdge is powered by ArcOS – proven, robust and microservices-based network operating system built from first principles and leverages industry-leading route scale and convergence times. ArcEdge is architected on cloud-native tenets for seamless integration and auto-scaling in cloud services like Amazon AWS virtual private clouds (VPCs) and Microsoft Azure virtual networks (VNETs) and as a border leaf edge in the data center IP Clos network.

ArcOrchestrator is a cloud-native software that can be deployed and managed in Amazon AWS and Microsoft Azure. Along with the support for popular frameworks, ArcOrchestrator integrates with Kubernetes orchestration platform as a controller to deploy and manage ArcEdge in both the cloud and on-prem. With support for global templates, deployment and connectivity across 1000's of nodes can be orchestrated with a single set of variable constructs and run-time scripts. Enterprise IT and cloud operators can leverage the common templates to provision changes across all layers of the network, from routing updates to network access policy and application connectivity.

Architectural flexibility

Interconnect distributed applications with hub-spoke, full-mesh or hybrid connectivity models with multi-cloud network address translation, high availability, and support for overlapping IP addresses needed for cloud migration across the data center, Amazon AWS, Google Cloud Platform, and Microsoft Azure.

Cloud-native security and integration

Seamlessly deliver access and authentication-based security policies integrated with the always-on AES-256 encryption for all traffic and cloud-native security like IAM, security groups and NACLs. Flexibly deploy cloud-native application firewalls or 3rd-party firewalls with complete isolation of compute, network and storage resources. Provides the ability to identify, route, and run heterogeneous workloads deployed in virtual machines and containers.

Orchestration integration and support

Deploying, connecting, and securing hundreds and thousands of nodes is made easy as operators manage everything from the ArcOrchestrator. Supports HashiCorp, Terraform, and Ansible playbooks for easy integration into existing deployment frameworks and operational simplicity.

Learn more

Visit www.arrcus.com to find out how you can Transform your Cloud Journey with the Arrcus multi-cloud networking (MCN) platform.

Network Different – with Arrcus

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 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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