

Aryaka

Unified SASE as a Service

Get performance, agility, simplicity, and security without tradeoffs!



Table of contents

| | |
|--|---|
| The World Changed. And Continues to Change..... | 3 |
| The DNA to Evolve and Thrive | 3 |
| Delivering Global Secure Network Access is Hard..... | 4 |
| Unified SASE..... | 5 |
| Aryaka Unified SASE as a Service..... | 6 |
| Four Core Elements..... | 7 |
| Change Happens. Evolution is Inevitable..... | 9 |



| The World Changed. And Continues to Change.

There are only a handful of moments in modern history that truly disrupted the world's economic trajectory. The Great Depression. World War II. The Internet Dot-com Boom (and subsequent bust). The Great Recession. A decade of zero percent interest rates. The COVID-19 Pandemic.

Equally, the history of Information Technology shows the disruptive role technology has had. No doubt, IT influenced the trajectory of societies, economies, and enterprises. From Mainframes to Client/Servers. From on-premises datacenters to Cloud computing. And now, from Automation and Machine Learning to Artificial Intelligence (AI) and AIOps.

The impact of these combined forces will be felt for many years, if not decades.

For enterprises and IT teams, the long-term effects are just now materializing. A rising cost of capital. A workforce that can work anywhere. Distributed workloads that can reside everywhere. Ever increasing cybersecurity threats and an expanding attack surface. Fierce competition that is unmistakably global. Fierce adversaries from all corners of this world. Like all impactful moments, there will be winners and losers. And the ones that will come out ahead and on top are the ones most able to evolve and adapt. The ones that are agile and flexible. Networking and network security play a crucial role for any enterprise's success in this new era.

Aryaka exists to help IT teams and enterprises to thrive in this changed world.

| The DNA to Evolve and Thrive

Evolution requires resilience and flexibility. But for IT leaders who are often handed a network and security architecture that was built for a different era, resiliency and true flexibility has been an almost unattainable goal. Until now.

Aryaka helps CISOs, CIOs and IT teams modernize, optimize, and transform their global secure network access - and simplify operations along the way - by converging networking, security and observability into a single platform delivered as service.

We integrate traditionally siloed products like SD-WAN, Next-Gen Firewall, Secure Web Gateway, IDPS and others, and Observability services into a single-pass architecture and a global private core network. Instead of an enterprise needing to build a cloud-connected, software-defined network and security architecture, we enable them to simply "plug into" ours and consume it as a service. Deployments measured in days and weeks, not months and years. Network and security policy changes applied everywhere in an instant. A platform with architecture that was built in the cloud, for the cloud. A Unified Secure Access Service Edge (SASE) as a Service.

| Delivering Global Secure Network Access is Hard

Organizations face an increasingly complex IT, security, and networking environment. The constant march of digital transformation, remote work, hybrid compute and workloads across datacenters and multi-cloud environments, increased adoption of AI and automation, proliferating security threats, and the lack of skilled security resources all combine to pressure CISOs and CIOs to deliver more secure network access without compromising performance or availability.

As many CIOs and CISOs will attest to, even the best ideas slam into the headwinds of reality. Building on the idea of SASE is challenging because it converges two traditionally siloed disciplines that are perpetuated by incumbents. It really is not in the best interest of a carrier to decommission inflexible, but very profitable, MPLS links in exchange for fast, more efficient, and cost-effective software defined WAN. Similarly, traditional hardware SD-WAN and Security vendors are understandably reluctant to forego lucrative contracts for boxes for integrated, multi-tenant, cloud solutions. Top it off with the fact that the pool of talent and experience across cloud, application delivery, network, and security is thin and growing thinner, it is no surprise that CISOs and CIOs look for help, and a better solution with a better experience. Their organizations don't just want, they need security, performance, agility and flexibility, and they need to act sooner rather than later to achieve it.

We designed Aryaka Unified SASE as a Service to deliver just that.

| Unified SASE

The IT market is awash with acronyms and the term Secure Access Service Edge (SASE), coined by analyst firm Gartner in 2019, is no exception and vendors have attached their meaning and marketing to it. To say there has been confusion in the market is an understatement. Unified SASE, a phrase introduced by network and security analyst firm Dell'Oro Group, represents a consolidated and highly integrated approach to SASE. It combines networking and security services into a single platform from a single vendor and utilizes a unified policy repository for both network and security policies.



SASE is a service-centric, cloud-based technology solution that provides network connectivity and enforces security between users, devices, and applications," said Mauricio Sanchez, Sr. Research Director, Enterprise Networking and Security at Dell'Oro Group.

"Organizations are embracing the Unified SASE approach which delivers these capabilities as a unified, tightly integrated service that increases network scalability, agility, and security.

Unified SASE focuses on:

- ◆ A true single pane of glass for management and provisioning
- ◆ A unified control plane for both configuration and observability
- ◆ Common network/service/application/user policies across network functions and security functions
- ◆ A single-pass architecture for a given traffic session going through a processing touch point only once for SD-WAN functions and security functions
- ◆ Reduced attack surface across all users, applications, and sites

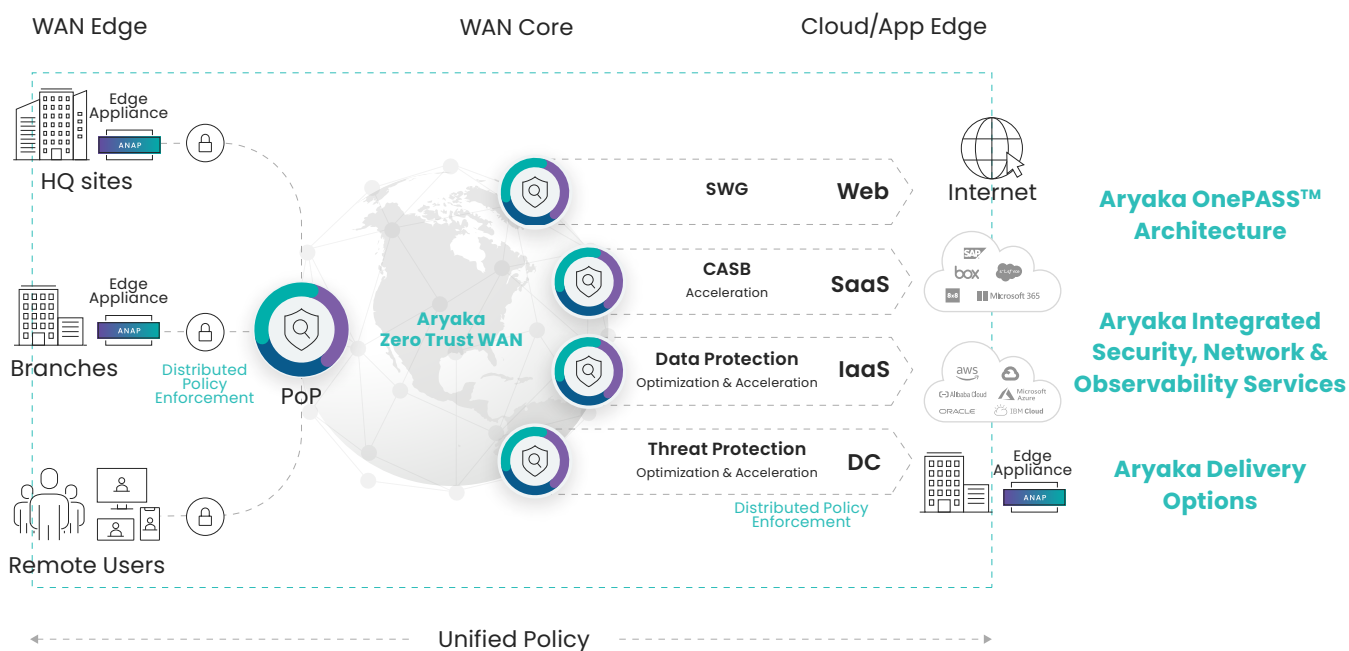
The promise of the approach is to deliver a better user experience while reducing costs and complexity. Win, win, win.

We take it one step further with Aryaka Unified SASE as a Service.

Aryaka Unified SASE as a Service

Our Unified SASE as a Service offering provides five compelling business benefits:

- ◆ Reduced network attack surface and risk
- ◆ World-Class SaaS and multi-cloud application performance
- ◆ Improved business and operational agility
- ◆ 'As-a-service' flexibility and economics
- ◆ Confidence to succeed: your way on your SASE journey

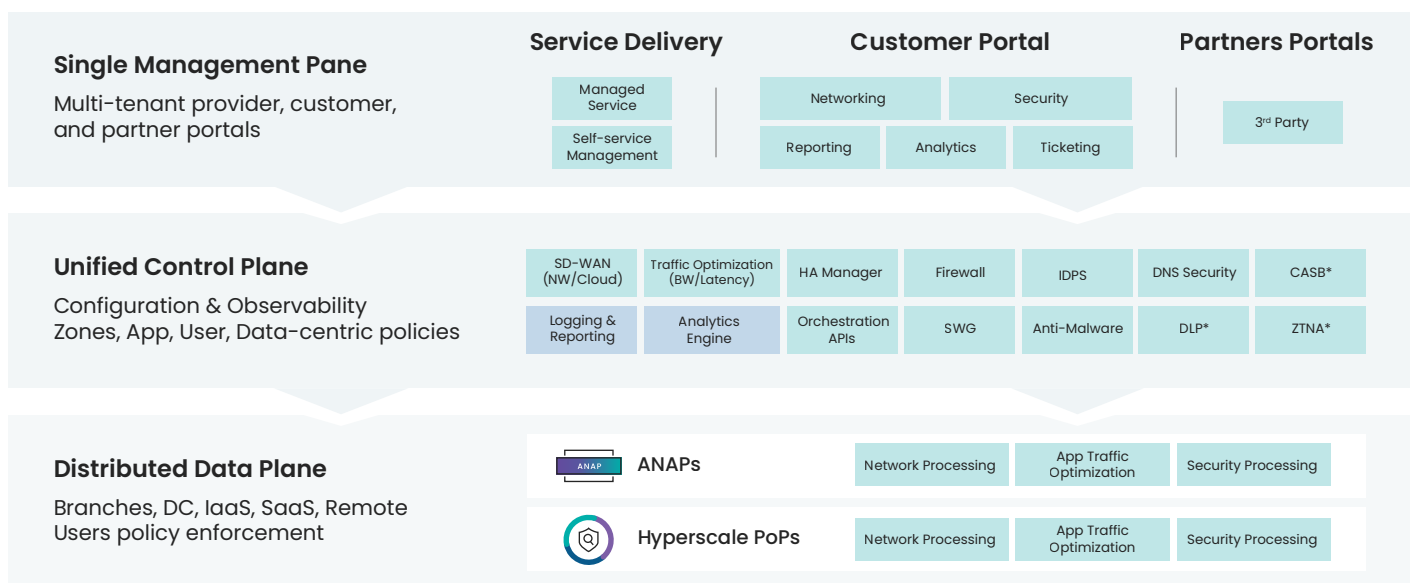


Four Core Elements

We combine four elements into a single platform delivered as a service. The result: Our approach delivers Performance, Agility, Simplicity, and Security, transforming global secure network access.

Aryaka OnePASS™ Architecture

A defining feature of the Aryaka Unified SASE as a Service platform is our single-pass architecture which allows enterprises to perform comprehensive inspections and processing, while examining a given data packet only once. The OnePASS architecture ensures that every flow is 'run to completion' for all SASE functions – network services, NGFW, IDPS, SWG, anti-malware and others in the future. It enforces policy consistently and without user performance impact across global scale deployments.



*Roadmap

Single Pane Management

A single pane of glass for management, provisioning, and observability for both network and security services. This is the ability to provide visibility into performance characteristics and security aspects of the traffic. As part of the managed services, the NOC/SOC will have visibility across the deployment, with the ability to leverage AI/ML and data analytics for pro-active issue identification and resolution. The enterprise also requires a role-based customer portal and interfaces with 3rd party portals, for example for traffic log exports.

Unified Control Plane

SASE must be centrally orchestrated, a unified control plane that ties these capabilities together in a coherent way to apply policies consistently across hundreds of locations and users to ensure they get applied properly. As we all know, one of the main reasons for security breaches is misconfiguration due to complexity, lack of knowledge, and lack of oversight. Without a unified control plane, it is hard or even impossible to apply security ubiquitously and consistently. Given the as-a-service aspect of SASE, a managed services provider may effectively offer this control, removing the burden and chance of misconfiguration from the IT department.

❑ Distributed Data Plane

With users and applications anywhere, security enforcement must happen closer to the source. Security controls should be easily enforceable at multiple places and wherever needed. And only once. To address the entire spectrum of the attacks, and provide a better security experience, appropriate security functions need to be able to be applied at any location. This approach requires a distributed policy enforcement with unified security policies enforced closest to where the users are - at the customer premise on the edge appliance or in the PoP/cloud - and closer to the destination where the applications are.

❑ Aryaka Zero Trust WAN

Aryaka's global private network delivers security and performance from the first to the middle to the last mile of the network. The Private Core backbone interconnects Aryaka POP locations through redundant and dedicated links. Customers have the option to choose a private core backbone with specific bandwidth allocations for traffic between their offices. Aryaka ensures that the traffic between the offices and the nearest POP locations are connected to leverages the private core. This approach offers benefits such as low jitter, deterministic throughput, and deterministic latency. It also provides enterprises with secure, fast, and reliable cloud and SaaS access from any location in the world.

Moreover, leveraging a private backbone not only offers performance advantages but also brings several security benefits into play. Encryption of traffic over the Internet is common among SASE providers and while it may prevent attackers from deciphering the data, they can still gather valuable information. For instance, attackers could discern traffic volume patterns, packet lengths, the source/destination, and other metadata of the traffic. This intelligence can help attackers identify various attacks that they can launch later. Additionally, attackers may be able to inject traffic and launch DoS attacks. As we said before, reducing the attack surface is crucial in mitigating the likelihood of successful attacks. The Aryaka private core network plays a significant role in this by minimizing the attack surface, as it avoids utilizing the Internet backbone across countries for Inter-POP traffic.



Aryaka Services: Networking, Security and Observability

On top of this architecture and our private global core network we deliver a comprehensive and integrated set of Unified Policy, Network Security, SD-WAN, Application Acceleration, WAN Optimization, Observability services and integration services for 3rd party solutions.

- ◆ SD-WAN: Deploy on our global core network optimized for cost and performance backed by global SLAs
- ◆ Multi-Cloud Connectivity: Connect to hundreds of cloud service providers in minutes
- ◆ SaaS Acceleration: improve the performance of SaaS applications for any user from anywhere in the world without hardware deployment or the overhead
- ◆ Security Services: Solutions for both branch and cloud deployments to optimally meet distributed enterprises' security requirements:
 - ◆ Secure Remote Access: Fully managed VPNaaS for remote and mobile users
 - ◆ Next-Gen Firewall-Secure Web Gateway, Anti-Malware and IPS: Unified security policies for both on-premises and remote workers
- ◆ Managed Firewall Services: Integrated management of 3rd party firewalls
- ◆ Last Mile Services: Global procurement and management for wireline and wireless connectivity
- ◆ Professional Services: Aryaka Day 0 services for 3rd party managed Firewalls. Aryaka SmartHands to help with installation and activation of Aryaka Services.

The Aryaka customer portal provides monitoring, insights, alerting, and reporting in a co-managed, real-time portal and enables users to select their preferred option for the delivery of services.

Aryaka Flexible Delivery Options

Each transformation journey is different and each organization advances at their own pace. We meet organizations wherever they are on their transformative secure network access journeys. Organizations have varying skills, legacy products, and operational approaches. Our flexible delivery options and ability to integrate 3rd party security products allows us to tailor the journey to each organization's needs. It provides organizations to implement our solution their way, at their pace and to choose from self-managed, co-managed and Aryaka-managed service delivery. We like to say: It's your way, on your SASE journey.

| Change Happens. Evolution is Inevitable.

Change happens. Evolution is inevitable. While users will be anywhere and will require secure access to cloud applications, they will not need access to all application data. Similarly, applications can be everywhere, but will not require accessing all the enterprise data. Balancing least privilege access and identity-based access controls with deterministic network performance is the future. As is the need for observability across the entire network. So is being agile and flexible to adapt to changing business needs and evolving security threats. Aryaka's Unified SASE as a Service was designed and built for this future. It is designed so that organizations can get it all: Performance, Agility, Simplicity and Security without tradeoffs.



Aryaka gives us an all-encompassing solution with their own network, PoPs, managed services, SASE, etc. The other vendors had excellent technology, but they were just selling boxes."

About Aryaka

Aryaka is the leader and first to deliver Unified SASE as a Service, the only SASE solution designed and built to deliver performance, agility, simplicity and security without tradeoffs. Aryaka meets customers where they are on their unique SASE journeys, enabling them to seamlessly modernize, optimize and transform their networking and security environments. Aryaka's flexible delivery options empower enterprises to choose their preferred approach for implementation and management. Hundreds of global enterprises, including several in the Fortune 100, depend on Aryaka for cloud-based software-defined networking and security services. For more on Aryaka, please visit www.aryaka.com.

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