

Aryaka AppAssure

Breakthrough Network and Application Visibility and Control

Solution Brief

The Challenge

Applications fuel the digital economy: the application layer is where technology meets the business and revenue is realized. Any disruption to application performance or availability results in real loss of revenue or an increase in costs. Delivering consistent application experience to users is extremely difficult and the top reasons are:

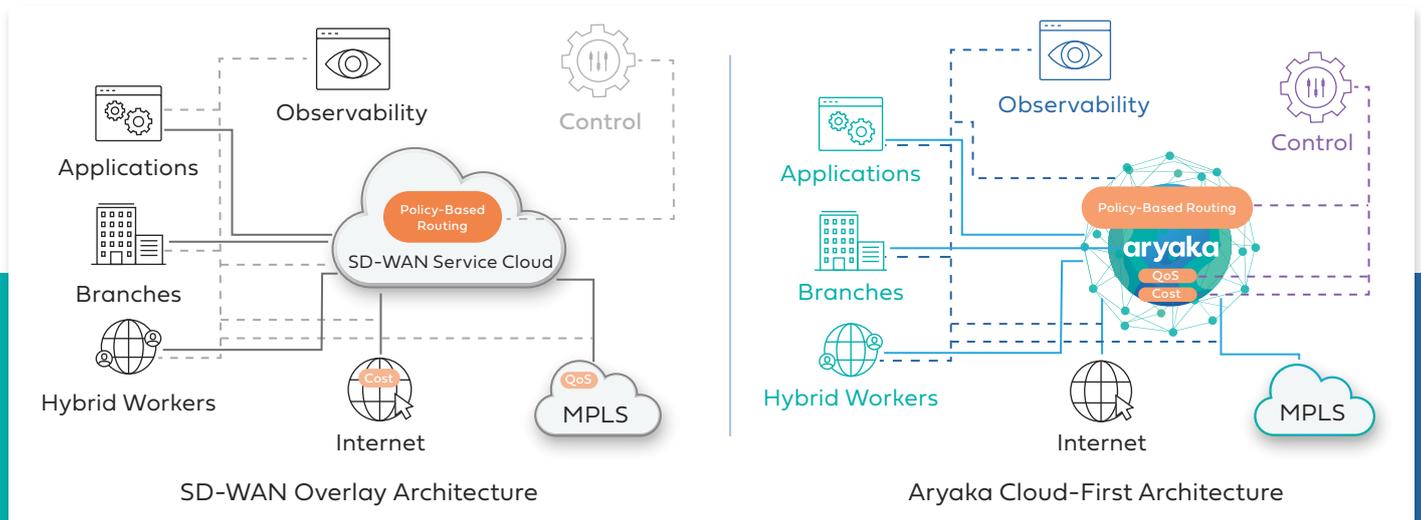
- **Increasing Number of Applications** – The typical enterprise now has 100s of applications and the number continues to grow rapidly
- **Distributed Applications** – Applications are hosted everywhere: on-premises, in the data center, the public cloud, the hybrid cloud, etc.
- **Distributed Users** – Users access applications now from anywhere: from the headquarters, branch offices, home, mobile devices, and even as IoT clients distributed across factories and field sites

In such an evolving environment, ensuring Application Performance is the biggest challenge that enterprise teams and CIOs are facing.

The Problem

The enterprise WAN plays a crucial role in delivering an optimal and productive application experience. Most existing SD-WAN solutions rely on an overlay-underlay architecture. The virtualized nature of the overlay network provides agility and cost advantages over MPLS. Also, an SD-WAN overlay leverages policy-based routing to guide application traffic through multiple transport underlay networks such as MPLS, the internet, 5G/LTE, etc., that is best suited to deliver on an application’s requirements. But overlay SD-WAN solutions have neither control over the underlay network’s performance, nor can they provide true visibility into potential performance bottlenecks. An IT team needs two critical capabilities to ensure application performance: end-to-end visibility and true control - which an SD-WAN overlay cannot provide.

Enterprises that use SD-WAN overlay solutions utilize multiple additional tools for each silo to overcome the visibility shortcomings of their underlay networks. However an increased number of tools exacerbates the problem with swivel chair operation and increased complexity in troubleshooting any issues. And even with multiple tools, network control remains elusive and is dependent on the underlay network service provider. This further creates disjointed and time-consuming workflows when application issues appear or when needing application optimization.



Aryaka AppAssure Solution Overview

Aryaka's Cloud-first WAN architecture combined with a high-performance global core network gives Aryaka AppAssure an inherent advantage of combining an integrated SD-WAN controller with a managed underlay transport network. There is no underlay-overlay separation. Aryaka AppAssure builds on this advantage to provide end-to-end visibility and total control to deliver a best-in-class application experience. Intuitive and closed workflows further simplify operations, ensuring a consistent application experience.

Aryaka AppAssure delivers a set of application visibility and control capabilities to Aryaka's SD-WAN Network, to optimize, monitor and ensure application performance across the enterprise for its users.

Aryaka AppAssure capabilities that overcome the limitations of overlay SD-WAN architectures are:

1. Deep Packet Inspection and Application Classification

The deep packet inspection engine within Aryaka's managed SD-WAN CPE, the ANAP, can automatically identify over 3500 applications. With additional application mapping methods such as a 5-tuple in the IP header, DNS and destination server name, AppAssure can identify proprietary applications used by the enterprise. First packet identification capability within the DPI engine for most of the application flows avoids any performance penalty. Once an application is identified, AppAssure allows to classify the application in the corresponding applications group to manage it most efficiently.

2. Application Steering and Optimization

The ability to guarantee the network transport performance is imperative to meet application performance requirements. QoS guarantees can never be outsourced to an underlay transport network to which the policy-based routing engine has no control over. The Aryaka high performance global network delivers on end-to-end network SLAs and application QoS.

AppAssure provides the ability to steer an application over multiple WAN paths and granularly apply traffic optimization. Aryaka's traditional optimization capabilities including WAN optimization, last mile link assurance, traffic overflow, and SLA based network selection are available for individual application group and per site/site group. The ability to control the transport network provides guaranteed delivery of the steering and optimization policies.

3. Application Monitoring and Troubleshooting

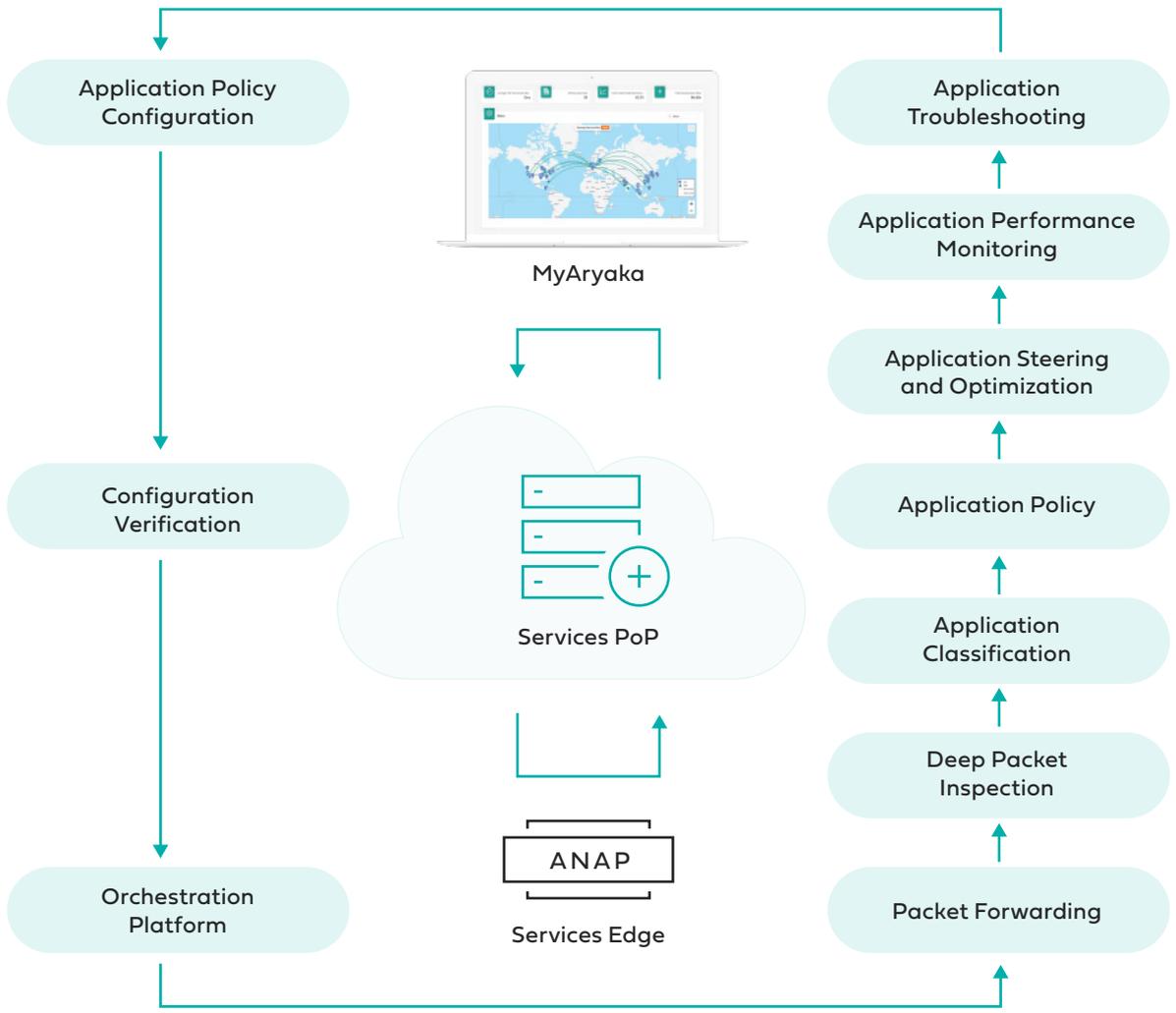
Aryaka AppAssure provides complete and immediate visibility into network and application performance via the MyAryaka portal with vertical and horizontal visibility across and into every element involved in packet delivery, including last mile, middle mile and any physical or virtual resources.

Further, application traffic visibility is available in multiple dimensions – across ISP links, WAN networks, LAN segments and application groups. Application performance parameters such as QoS and SLA may be monitored across all network types. The user can drill in and out of any dimension to quickly triage an application issue. A user can also monitor individual traffic flows that constitute total traffic in any given dimension.

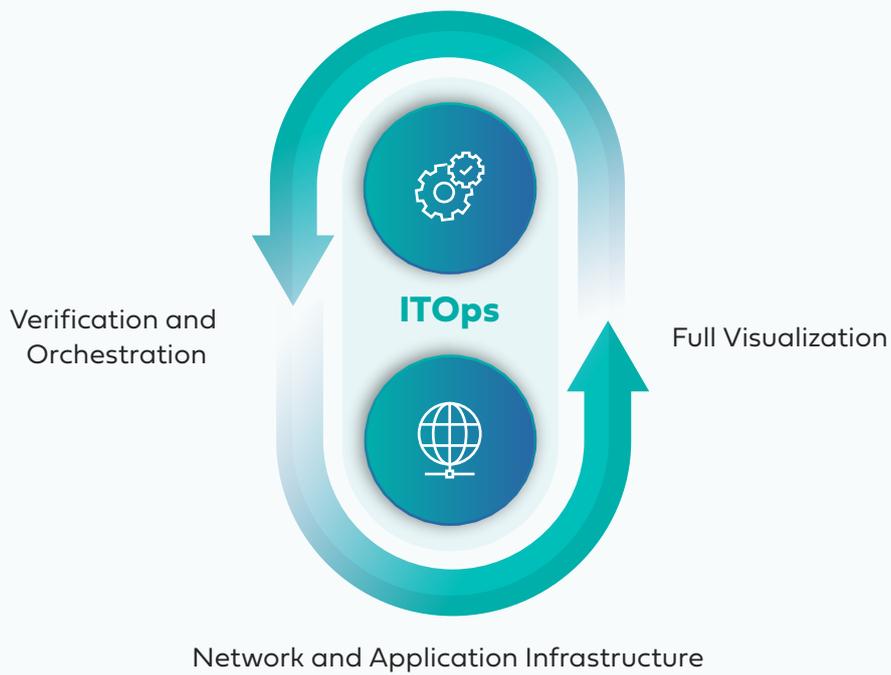
4. Co-management and Simplified Workflows

In a constantly changing world of application requirements, IT teams need robust co-management capabilities to stay on top of application performance. AppAssure provides expanded co-management capabilities with simple workflows to the user that facilitates:

- a. Troubleshooting and fixing application issues
- b. Monitoring network performance across multiple network fabrics
- c. Granular network capacity planning
- d. Configuring and optimizing application performance



MyAryaka Co-Managed Portal



Key Benefits

Total Control	Aryaka's high-performance global core network integrated with SD-WAN orchestration, can exercise complete control over the required performance level for any given application. Deterministic performance is always guaranteed and immediately fine-tuned. Total control over the transport network can deliver application QoS and required network SLAs for any given application.
End-to-end Visibility	By eliminating the opaque visibility that overlay SD-WAN architectures provide into the underlay, network architects gain complete visibility over application and network behavior. Network architects can see a direct correlation between underlay network behavior and application performance issues. Enhanced performance visibility helps to manage QoS and enables the audit of SLAs.
Simple Workflows	AppAssure simplifies delivering a consistent application experience with intuitive and closed-loop workflows. With ease of use, network architects don't need to perform swivel chair operations with multiple tools to diagnose issues and follow disjointed workflows to fix the issue. A single tool – the MyAryaka portal - provides visibility, configuration, and orchestration functions to drive immediate optimization. The MyAryaka portal also provides effective tools to expedite all aspects of troubleshooting from problem notification to problem isolation to problem resolution to reduce overall MTTR significantly.
Co-Management	Maintaining optimum application experience in dynamic enterprise environments requires swift action by IT teams. Expanded co-management capabilities with AppAssure provides IT teams with flexibility and the ability to respond quickly to application issues or updated application needs. Network architects can carry out granular network capacity planning, optimizing the network for both cost and performance.

About Aryaka Networks

Aryaka, the Cloud-First WAN company, brings agility, simplicity and a great experience to consuming the WAN-as-a-service. An optimized global network and innovative technology stack delivers the industry's #1 managed SD-WAN and SASE service service and sets the gold standard for application performance. Aryaka's SmartServices platform offers connectivity, application acceleration, security, cloud networking and insights, leveraging global orchestration and provisioning. The company's customers include hundreds of global enterprises including several in the Fortune 100.