aryaka

Aryaka and SAP: Better Together

Case Study

SAP: ERP At Its Finest

With over 4.4 million active customers across 180 countries and counting, SAP has been the market leader in the enterprise application software space for the last several decades. From manufacturing, logistics, finance, sales, supply chain to IoT, cloud, and everything else in between, SAP serves all verticals globally.

The highly virtualized, mission-critical SAP environments, however, have multiple moving parts and a lot more goes under the hood than what meets the eye. Running the SAP Suite involves a good amount of real-time data analysis and massive file transfers across geographies, between remote and centralized locations.

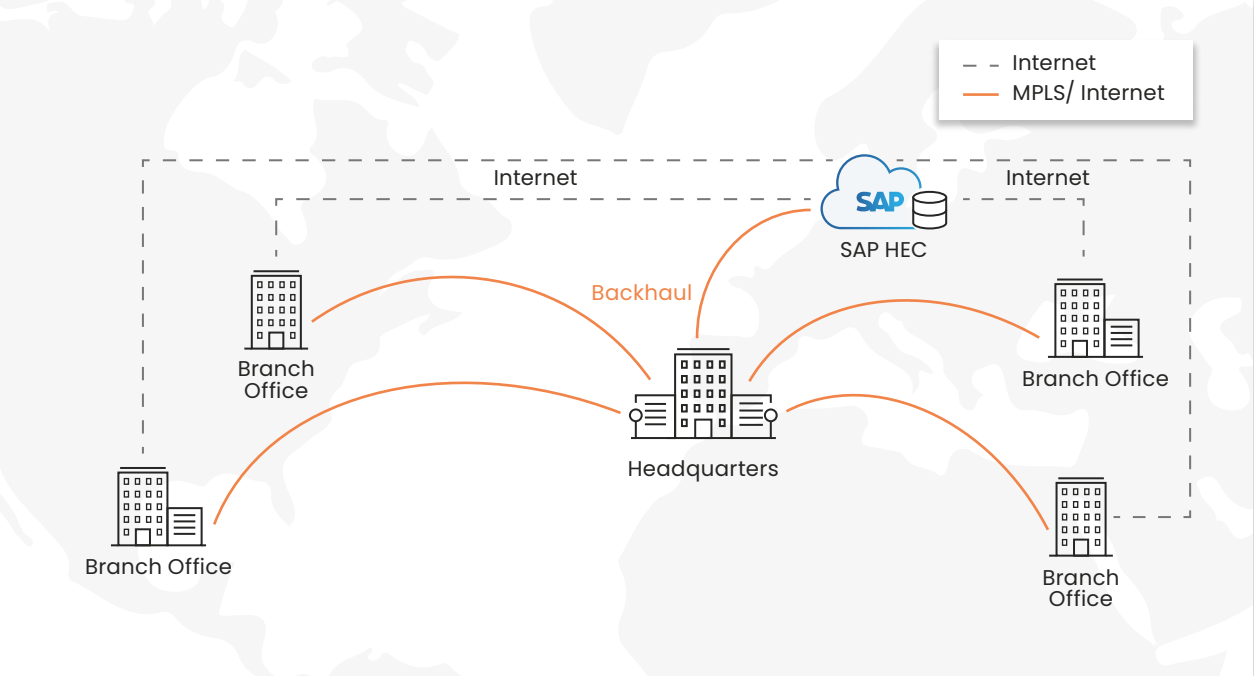
Unlocking the true potential of your SAP deployments requires a network that is optimized, always available and scalable. Also, with SAP's 2025 deadline for migration to their flagship ERP software S/4HANA looming ahead, it may be time for many organizations to re-evaluate their WAN infrastructure.

Aryaka with its private Layer 2 core has been helping enterprises get SAP right for over a decade. No need to re-engineer your entire WAN infrastructure or pile up boxes, with a plug and play multi-cloud and SaaS connectivity service that enables customers to spin up connectivity to IaaS and SaaS on-demand and with guaranteed performance benefits in just a few hours.

Packet Loss and Latency: The Bane of SAP Performance

SAP operations involve a good deal of to and fro data movement between distributed operational units and the headquarters before churning out meaningful insights. This means a lot of traffic flows between branch offices, remote locations and the central hub, i.e., the headquarters where the SAP instance sits. All this backhauling overwhelms the network with data, sabotaging the entire user experience with packet loss, latency and jitter. The tremors of inconsistent performance are experienced more by mobile users or employees operating across long distances.

The cloud version is not much different either when accessed over the public internet. The internet, being the breeding ground for latency, packet loss and jitter, does not keep up well with the huge file transfers and large numbers of data packets being sent by mediocre SAP web application. The result? Dropped data, slower transmissions, connection time-outs, and mediocre SAP web application performance.



The first reaction is to throw more bandwidth at the problem. However, bandwidth does little to increase throughput. As the inconsistent latency kicks in, it disrupts the throughput, even over smaller distances, due to network congestion and network peering policies. Also, even if latency is addressed, the network will still be highly congested, pushing past its peak capacity and routing data across continents. Application performance is bound to be negatively impacted.

The Challenge

When a US-based specialty chemical manufacturing enterprise with 5,000+ employees and a customer base spread across 100 countries was left stranded because of the abysmal performance of their SAP Suite, they knew it was time for a new solution. File transfers were too slow, database syncing took forever, and the overall application performance was negatively impacting business. Critical business processes such as order management and delivery were slow in particular, bringing down other units that depended on them.

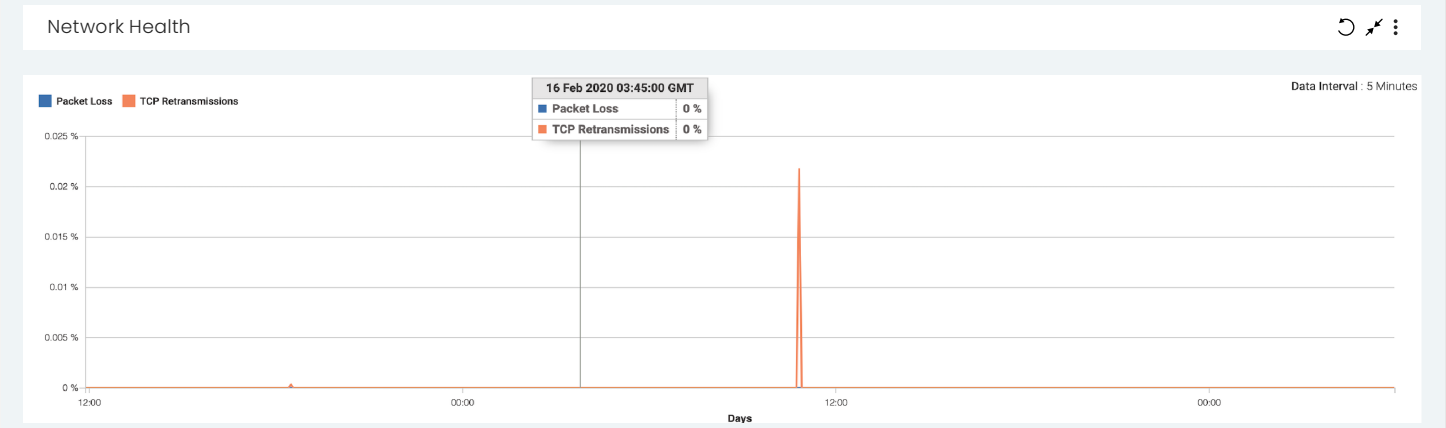
After evaluating the available solutions that still relied on public internet underlays, the company chose Aryaka because of the guaranteed application performance in remote regions, irrespective of where these applications were hosted on the globe.

The Solution

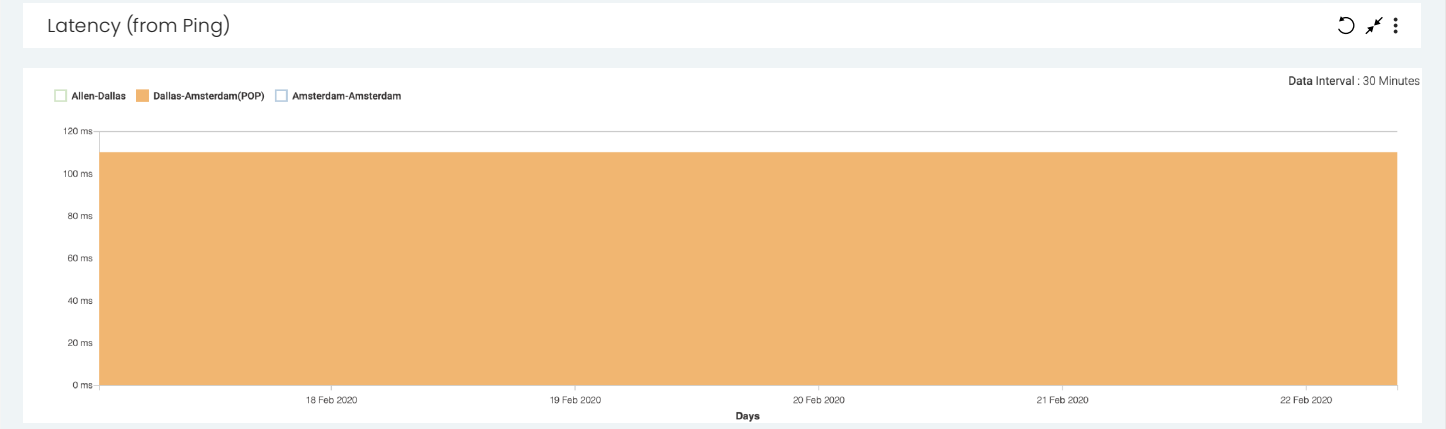
To solve global connectivity and application performance issues, the company deployed Aryaka's SmartConnect SD-WAN as-a-Service. Positive results quickly followed.

1. 97% data reduction and an increase in application performance by up to 33x.

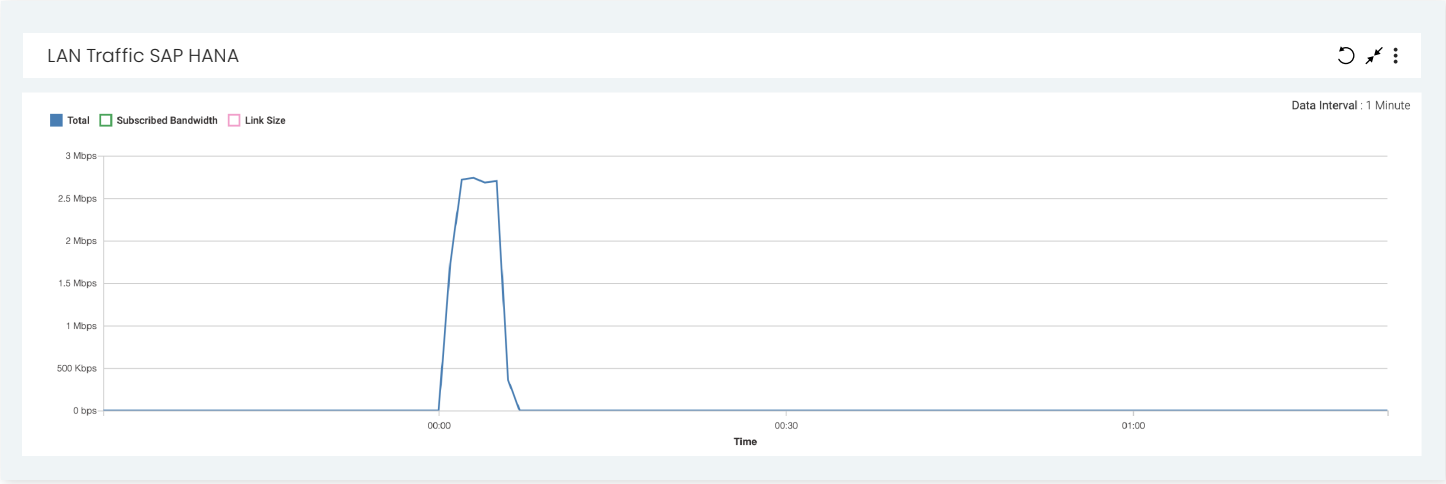
2. Packet loss decreased to almost 0%!

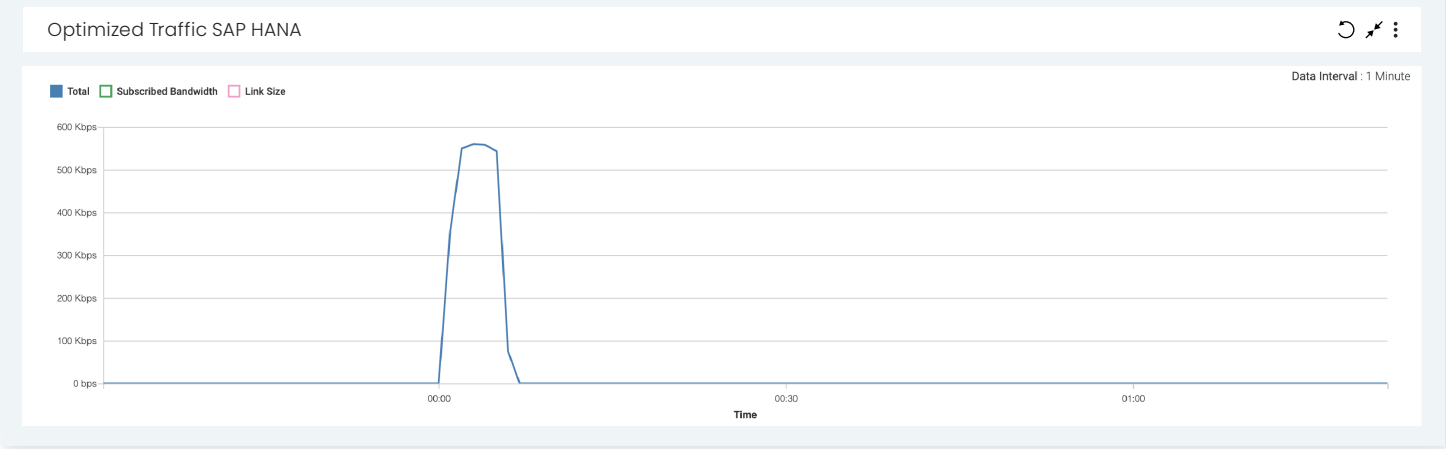


3. Stable core latency between distant locations such as Amsterdam and Allen, Texas.

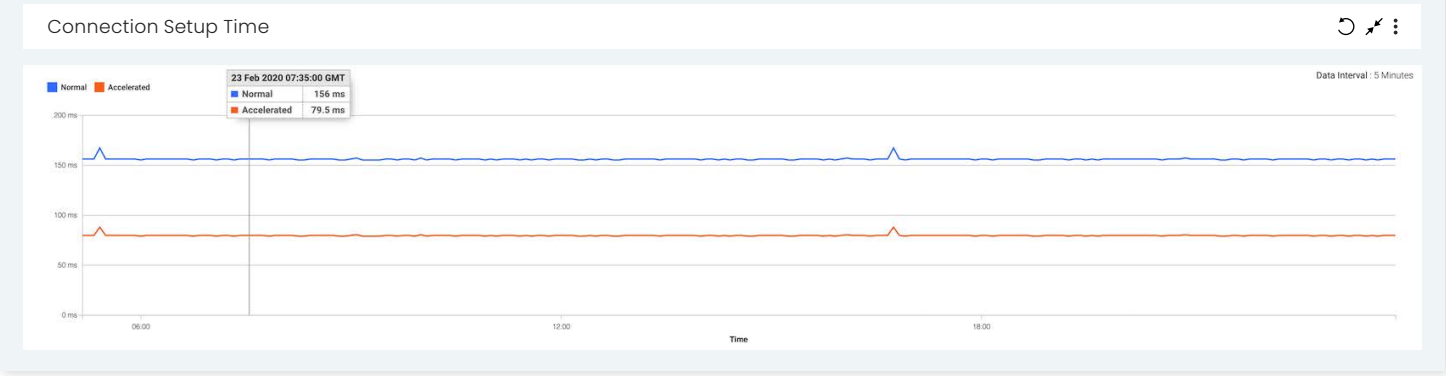


4. LAN traffic of 2.7 Mbps optimized to 550 Kbps performing ARR. The optimization negates the requirement for high bandwidth and greatly increases the throughput.



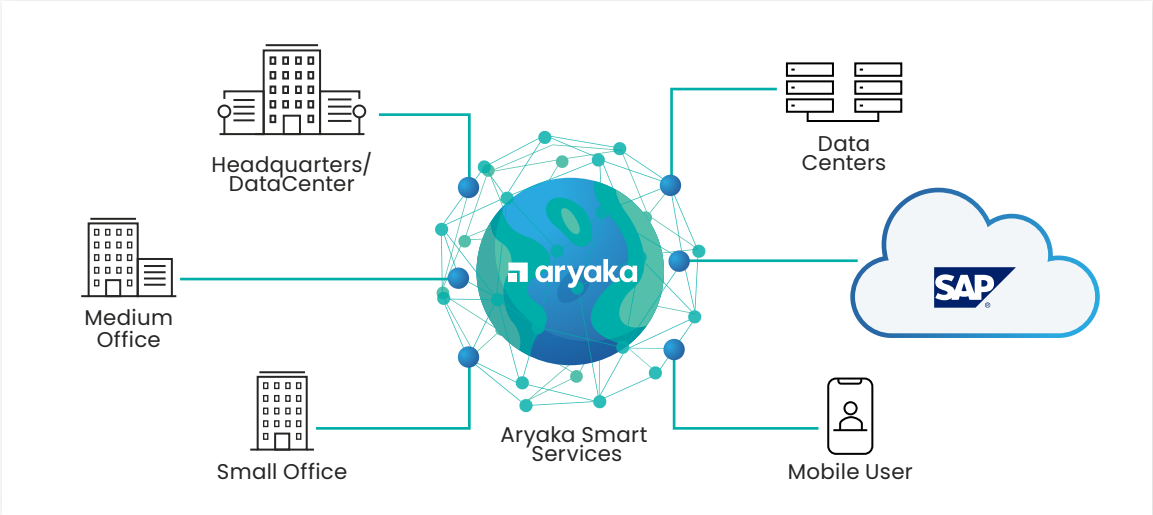


5. Up to 2x faster TCP Connection setup time.



How It Works: Aryaka and SAP

Unlike the limitations of Internet or MPLS-based underlays, Aryaka's Global Private L2 backbone connects its 30+ points of presence (PoPs) in a full-mesh that is strategically located to place end-users with optimal access to Cloud, SaaS applications and datacenters.



The remote locations, branch offices and headquarters connect to Aryaka's closest point of presence, and a full-mesh is achieved in the cloud. The global private network eliminates the need for backhauling and single choke points. The built-in optimization and resiliency combined with guaranteed stable core latency ensures lightning-fast connectivity and zero congestion between the sites, data centers and SAP instances. This helps address the three significant limitations with regular underlays that sabotage the SAP performance:

- **Bandwidth Issues**

Aryaka's proprietary byte-level data deduplication algorithm, termed Advanced Redundancy Removal (ARR ™), uses a unique unanchored compression methodology to accelerate enterprise traffic and improves network throughput dramatically.

As a result, users in remote locations can access data in centralized and distant data centers with responsiveness similar to that from a local server. Aryaka removes all redundancy from WAN traffic, ensuring that multiple copies of files and large attachments are not re-sent across the WAN.

Under certain conditions observed in customer deployments, bandwidth utilization is reduced by up to 99% and roundtrips are sharply reduced, by as much as 95% in some cases.

- **Latency**

Aryaka's private core L2 network has built-in capacity and redundancy to ensure that there is always a stable network core. With predefined traffic routing and multiple redundant paths, Aryaka can provide an application with a stable, consistent, and predictable network condition which improves the efficiency of the application, send and receive buffers and results in a much smoother interactive end-user experience.

- **Packet Loss**

Aryaka uses its patented multi-segment optimization to achieve optimal application performance and minimize packet loss. In this approach, each segment, first-mile, middle-mile and last-mile have independent proxies. This allows for optimal data flow by reducing the time taken for the first-byte transfer, using bigger payloads sizes per packet and providing recovery from up to 5% packet loss. Plus, Aryaka delivers an array of optimization techniques to nullify packet loss, namely path selection, load balancing, path replication, timed replay and path loss adaptive recovery.

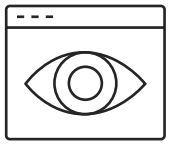
Conclusion

If data is the new oil in the digital economy, SAP is the catalyst that helps you unlock the value of that data. SAP Suite performance is too critical to be left to chance. But without enough optimization and resiliency built into the network, your SAP tool is flying blind, vulnerable to WAN performance pitfalls.

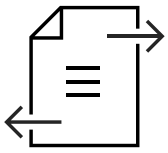
Aryaka has the relevant technical expertise and a proven track record of helping organizations extract the most out of their SAP investments. We welcome you to leverage our expert knowledge and technical skills to get a seamless SAP experience, irrespective of where in the world you reside.

Fully Managed Service

SD-WAN Functionality



Real Time Network & Application Visibility



Faste File Transfer

aryaka

+1.888.692.7925

info@aryaka.com