

A graphic showing a world map composed of a network of white lines and dots, set against a dark background with glowing green and white light effects. The map is positioned in the upper half of the page, with a white curved banner below it containing the title text.

**Ten Essential Elements
for a Successful
Global SD-WAN Deployment**

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Ten Essential Elements for a Successful Global SD-WAN Deployment

William Arthur Ward, the noted writer of inspirational maxims quipped, “The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails.” A pertinent glimpse into the facets of human nature. In fairness, our complaints are well-grounded in acknowledging that mobility, cloud, SaaS, and IoT, make it impossible for traditional networks to meet the needs of today’s expanding network perimeters. However, we can be very optimistic about the changing direction of network infrastructure. There is a radical, digital transformation upon us, that supports new and diverse customer-driven initiatives. Fortunately, there are the many realists, adjusting to these changes and meeting them head-on, by deploying managed SD-WAN as part of their digital transformation initiatives.

Global connectivity requires a new approach



While the pessimist forecasts doom, and the optimist sits with fingers crossed, AireSpring Global Managed SD-WAN was built for the realist who rolls up their sleeves and finds a way to make it work.

Here are ten key elements that AireSpring has identified and implemented in our Global Managed SD-WAN, that are critical for ensuring successful application performance with global connectivity.

1. SD-WAN technology architecture

SD-WAN simplifies the way enterprises configure remote locations, and improves performance and reliability, with cost-effective delivery of applications over the WAN. AireSpring Global Managed SD-WAN is powered by VMware® SD-WAN, the technology and market-leading software, and leader in the Gartner Magic Quadrant for WAN Edge Infrastructure. When choosing a technology solution, it’s hard to go wrong when selecting the best in the industry.

AireSpring Global Managed SD-WAN provides a cloud-native orchestration platform that centralizes programmable control over applications, network elements and bandwidth resources. Based upon business policies, AireSpring mitigates network performance problems, by proactively and intelligently prioritizing and routing diverse traffic across multiple circuits and ensures performance through fast and reliable failover protection. This improves application performance and avoids network congestion and failures.

2. Private global managed network

AireSpring Global Managed SD-WAN is delivered over our fully-managed layer 2 Global Private Network (GPN). Backed by a single-provider global SLA, GPN replaces the inherent unreliability of long-haul public Internet, to reduce latency, packet loss, jitter and more.

AireSpring GPN provides unimpeded, reliable and fast connectivity within the United States, and between the U.S. and countries throughout the world. We are advancing global connectivity to a new level, taking down connectivity barriers that formerly challenged national and multinational enterprises. We're solving long distance problems, including:

- Packet loss
- Latency
- Jitter
- Quality of service (QoS)
- Inefficient peering relationships
- Over-subscribed networks
- Regulatory restrictions within geographic locations

Our Global Managed SD-WAN includes everything enterprises need to deliver applications reliably and fast, anywhere on the planet.

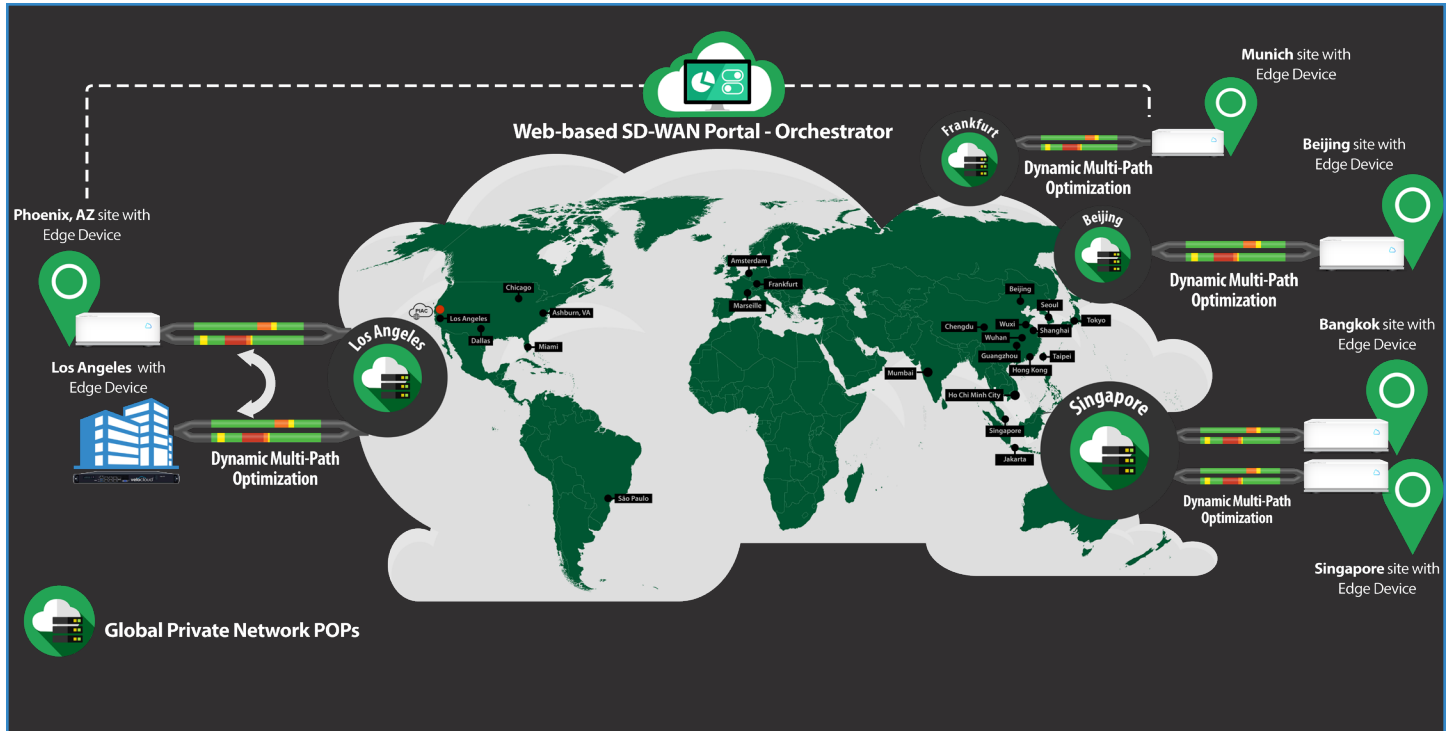
3. Flexible network deployment options

With our managed hybrid network that combines AireSpring's managed Global Private Network and last mile public Internet, AireSpring's unique network architecture enables the highest level of flexibility to mix and match global connectivity.

- Complete edge-middle-edge connectivity via GPN Tunnels, combines the power of SD-WAN with the reliability of AireSpring's GPN - a resilient, fully-meshed, layer 2 network, backed by a single-provider global SLA.
- Hybrid architecture combines AireSpring's GPN for international connectivity, with Over-the- Top (OTT) Dynamic Multipath Optimization (DMPO) Tunnels utilizing public Internet, for domestic and regional connectivity.
- US and Global ¾ Protection offers the ability to take traffic based on application, protocol, port or network & prefix to send it in-tunnel using SD-WAN to an AireSpring gateway in our data center, improving traffic and mitigating packet loss, jitter and out-of-order packets. This increases overall experience 10x better than raw Internet and flexibly allows customers to enhance (at least "3/4") any Internet bound traffic to any destination.

4. PoPs geographically distributed across the world

AireSpring Global Managed SD-WAN runs over our GPN with 23 current and planned strategically located PoPs throughout the United States, Europe and Asia-Pacific, China, and South America. AireSpring PoPs service regional edge locations, to deliver optimal application performance. All PoPs within the GPN communicate with each other to ensure network traffic is sent to the most optimal and closest PoP to the users.



AireSpring PoPs are fully-meshed to provide a failsafe and highly resilient network that ensures reliable and consistent global connectivity. The PoPs directly connect branch offices and data centers, to cloud applications, compute resources, and virtualized services.

5. Replace or augment expensive, capacity-constrained, rigid MPLS networks

For decades, organizations have contended with expensive and rigid traditional networks. The increasing complexity of network resources and equipment has made WAN infrastructure cumbersome and challenging to control and adapt. Making dynamic changes, and manipulating network resources to support multi-clouds, rapid deployments, and ondemand bandwidth, has become difficult at best. Today's modern WANs are cloud-native and software-driven. They are supported by an orchestration service layer that automates network behaviors to support business objectives. AireSpring transforms expensive, complex and rigid legacy networks, into simplified, cost-efficient, agile and performance-driven business solutions. Our customer engagements enable a business-driven network that matches business requirements.

6. A powerful orchestration and management platform

The AireSpring cloud-native management and orchestration platform automates provisioning and configurations, to dynamically scale and adapt to business opportunities around the world. We enable visibility into your entire global network, with centralized monitoring and configuration (with read/write access). AireSpring SD-WAN orchestration is a multi-tenant, multi-segment architecture, that gives enterprises the protection and flexibility they need to manage diverse business requirements. The orchestrator provides deep granularity and control, with real-time monitoring and analytics, and one-click service provisioning for all edge-enabled locations.

7. Global direct connectivity to multi-clouds and SaaS

Directly connect to cloud applications over our global SLA-backed network to GPN PoPs closest to cloud providers. AireSpring includes built-in support for AWS Direct Connect, Azure Express Route, Google Cloud, Oracle Fast Connect, and many others. Cloud services simply become another edge location to our global network, similar to a data center. Cloud connectivity and applications are accelerated, optimized, secured, monitored, and controlled, automatically through the SD-WAN orchestrator.

8. Highly available, dedicated connectivity to-and-from locations within China

AireSpring GPN has a robust presence in China, with PoPs strategically located in Beijing, Singapore, Shanghai, Guangzhou, Dalian, Wuhan, Chengdo Wuxi and Hong Kong. This provides reliable, fast, and direct connectivity throughout the Chinese mainland and Hong Kong.

Premium Internet Access for China (PIAC) is a premium internet service for mainland China that provides optimal internet access to global resources such as Office 365, Salesforce, G-suite, and other cloud-based apps and ERP systems. PIAC includes an SD-WAN edge appliance by VMware and the AireSpring Global Private Network.

9. Global vendor for sourcing, deploying, monitoring, and supporting, last mile connections

AireSpring will globally procure any last mile circuit around the world (e.g. Broadband, LTE, DSL, DIA Internet, MPLS, etc.) to the customer premises, as part of our fully-managed, end-to-end solution.

10. Proactive 24/7/365 network monitoring and resolution for all connectivity, including 3rd-parties

AireSpring will provide 24/7/365 proactive monitoring and troubleshooting for last mile Internet circuits, through our global NOCs, whether provided by AireSpring, or other vendors.



The promise of SD-WAN simplicity, flexibility and lower costs

Global network infrastructure is complicated, time-consuming and resource-intensive. SD-WAN infrastructure comes with substantial long-term costs and resource burdens. SD-WAN DIY implementations require enterprise IT teams to handle the complexity of designing and engineering a new architecture, either in parallel to an existing network, or as a replacement. There are many time and cost incumbrances for internal IT and other business units. It requires negotiating carrier contracts with multiple vendors, provisioning and deploying circuits, coordinating multiple NOC support organizations, and keeping track of a quagmire of billing issues. SD-WAN lifecycle:

- 1. Preparation (strategy, planning, designing, engineering, etc.)**
- 2. Deployment (transitioning, integrating SD-WAN components into the WAN, locating carriers, negotiating contracts, provisioning circuits)**
- 3. On-going management, operations and continual improvements (monitoring, troubleshooting, resolving issues, implementing policy changes, adding/removing networks to support locations, etc.).**

Each phase requires skilled IT staff with diverse disciplines, processes, reporting functions, and specialized systems, tools and applications.

AireSpring Global Managed SD-WAN	Enterprise DIY SD-WAN
AireSpring dedicated global NOC teams monitor, troubleshoot and resolve issues – 24/7/365	IT staff monitor, troubleshoot, and resolve issues with multiple vendor ticketing systems, within limited hours, including time off and sick days, and utilize staff skills as available
AireSpring handles tactical and strategic network and IT functions, including logistics, shipping and configuration changes	IT must balance time between tactical network functions, and strategic initiatives that help the business better compete
AireSpring procures, deploys, manages, monitors, troubleshoots and supports everything	IT procures, deploys, manages, monitors, troubleshoots and supports everything, while dealing with multiple vendor processes, systems and contacts
AireSpring is a single-point-of-contact, responsible for coordinating, managing, and negotiating all carrier contracts, MSAs, invoices	IT and other internal departments are responsible for coordinating and negotiating all carrier contracts, MSAs, invoices
Costs are consistent and predictable	Cost vary, based upon technology and systems needed, and available costs, hours worked, and variables in filling knowledge gaps
AireSpring’s global NOCs proactively monitor and resolve problems	IT works with multiple carrier support organizations to find, troubleshoot and resolve problems
AireSpring is a single-point-of-contact – no more finger pointing	To get a network problem resolved, IT must locate, coordinate, troubleshoot, and try to determine which carrier is at fault

To deliver on the SD-WAN promise, AireSpring Global Managed SD-WAN eliminates the time, cost, and difficulties associated with managing global networks. Our single-source provider model removes the cost and time required to deal with the array of technologies and business interactions associated with a global SD-WAN.

AireSpring Global Managed SD-WAN simplifies branch, data center, multi-cloud and SaaS connectivity. We simplify network infrastructure, as a single vendor for SD-WAN and global connectivity and services. We include planning, designing, provisioning, deploying, monitoring, managing, and supporting it all, with one bill for everything.

AireSpring GPN bypasses the unreliability of the public Internet over long distances, delivering fast and reliable connectivity. It can run concurrent with existing legacy networks, while future-proofing global business connectivity. We become an extension of your organization, achieving optimal and cost-effective network connectivity. Our process-driven methodologies ensure your WAN flexibly scales on-demand as your organization grows, either organically, or through mergers and acquisitions. We ensure a quality user experience and the best IT experience, with seamless access to onpremises, multi-cloud and SaaS environments.



Conclusion

By eliminating the WAN as an obstacle, AireSpring empowers it to be a channel for business acceleration. AireSpring Global Managed SD-WAN ensures reliable application performance at scale. The challenges of SD-WAN may make pessimists of those that have tried managing SD-WAN infrastructure themselves. But those with vision and foresight, adjusting their sails and partnering with AireSpring, are unlocking the power of digital transformation. They are delivering unmatched application performance to users, from any application hosting environment, throughout the world.

About AireSpring

AireSpring simplifies global networking for national and multinational enterprises. By eliminating the WAN as an impediment, we empower it to be a conduit for business acceleration. AireSpring Global Managed SD-WAN ensures applications are delivered reliably at scale, while reducing complexity.

For two decades, AireSpring has served thousands of businesses, as a Managed Services Provider specializing in Unified Communications, Managed Network, and IT services. Our Managed SD-WAN Gateways are integrated into our nationwide IP network in the U.S., that has now grown into a managed Global Private Network with geographically distributed PoPs.

AireSpring Global Managed SD-WAN includes industry-leading SD-WAN technology from VMware SD-WAN, AireSpring's Global Private Network with worldwide PoPs, global last mile circuit procurement, provisioning and monitoring, and 24/7/365 global NOC support – all delivered from a single vendor, with one bill.

Global networks can no longer be an obstacle imposing complexity and rigidity between time-sensitive business opportunities and strategic initiatives. AireSpring unburdens enterprises from the high costs and time-consuming tasks of managing myriad business and technical challenges associated with global SD-WAN and network infrastructure.

Whether your organization has multiple offices across the United States, or in different countries around the world, AireSpring Global Managed SD-WAN provides the best solution, custom-built for your business.