

Arista VeloCloud SD-Branch by Digital Carbon

Arista VeloCloud SD-Branch Overview

- Zero-touch deployment
- One-click business policy
- Enhanced firewall service
- Easy service insertion
- High application performance
- Cloud-based network-as-a-service
- Optimized bandwidth usage
- Comprehensive analytics dashboard
- Seamless branch connectivity
- Robust security features

A co-managed, cloud-delivered branch platform for modern enterprises

Enterprises are under pressure to modernise their branch networks as users, applications and data move to the cloud and workforces become increasingly distributed. Traditional architectures based on separate WAN, LAN, Wi-Fi and security products are complex to run, slow to adapt and difficult to secure consistently across many sites.

Arista VeloCloud SD-Branch from Digital Carbon brings these pieces together into a single, cloud-managed solution that combines VeloCloud SD-WAN, Arista PoE switches, Arista Wi-Fi access points and integrated security (Enhanced Firewall Service, Edge Threat Management and Network Access Control). Delivered as a co-managed service, it gives IT teams enterprise-grade networking with shared visibility and control, while Digital Carbon handles day-to-day operations, optimisation and lifecycle management.

Business challenges at the branch

- **Cloud-first applications and bandwidth growth** – Online collaboration, SaaS and rich media have multiplied WAN bandwidth demand, while legacy MPLS and rigid hub-and-spoke designs drive up cost and add latency.
- **Fragmented network and security stack** – Separate routers, firewalls, Wi-Fi controllers and switching platforms lead to operational silos, inconsistent policies and slow troubleshooting.
- **Distributed workforce and IoT explosion** – Employees, contractors and IoT devices now connect from anywhere, increasing the importance of strong edge security, identity-based access control and clear visibility into user and device behaviour.
- **Limited IT resources** – Many organisations lack the in-house capacity to design, deploy and continuously tune an advanced SD-Branch architecture for dozens or hundreds of sites.

Benefits of VeloCloud SD-Branch

- Zero-touch deployment streamlines setup with automatic profiling and real-time optimisation for WAN & LAN.
- Secure cloud/SaaS access enhances connectivity, minimizes latency, and protects against unauthorized branch disruptions.
- VeloCloud SD-Branch ensures high application performance with deep traffic analysis and on-demand network remediation.
- Integrated advanced firewall service eliminates branch firewall needs, leveraging Arista's technology for security.
- Simplifies network management with one-click business policy settings across a centralized, cloud-based orchestrator.
- Enhances operational efficiency and reduces costs by integrating solutions to streamline management and troubleshooting.

Digital Carbon's Arista VeloCloud SD-Branch solution addresses these challenges with a unified, co-managed approach.

Solution overview

Arista VeloCloud SD-Branch is a cloud-delivered branch architecture in which VeloCloud SD-WAN Edge provides secure, optimised WAN connectivity, Arista Cloud managed PoE switches deliver wired access and power, Arista Wi-Fi 6/6E/7 access points provide high-performance wireless, and security services are embedded at the edge and in the cloud.

The solution is orchestrated centrally via **VeloCloud Orchestrator** and operated jointly by Digital Carbon and your IT team. This creates a single logical SD-Branch platform for all industries and branch types — retail, hospitality, manufacturing, construction, transport and more.

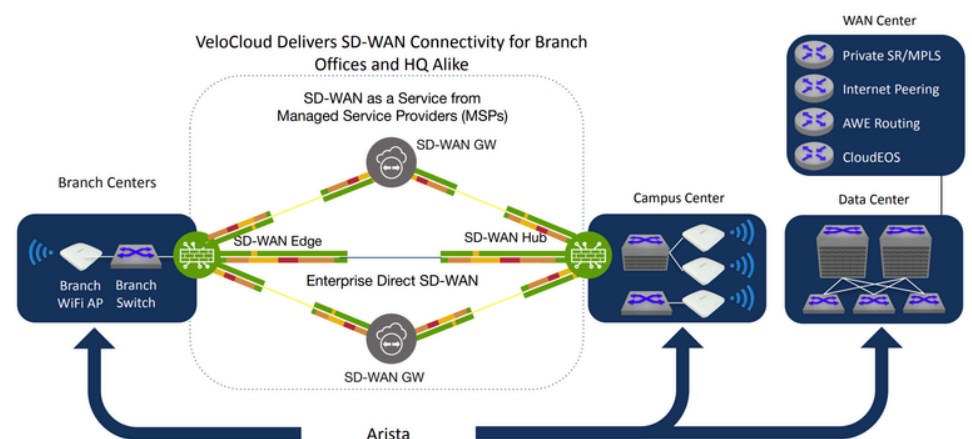


Figure 1: Arista and VeloCloud technologies to enhance SD-WAN solutions and connectivity for both branch offices and headquarters, supporting various network components such as branch switches, WiFi access points, and SD-WAN edges.

Key components

VeloCloud SD-WAN – Resilient, Application-Aware WAN

VeloCloud SD-WAN offers enterprise-grade performance, security and visibility across both internet and private transports, significantly simplifying the WAN with zero-touch deployment and one-click business policies.

- **Zero-touch Edge deployment** – Branch Edge appliances are shipped to site and brought online by simply connecting power and a network cable; activation, configuration and ongoing management are handled from the cloud.
- **Dynamic Multipath Optimisation (DMPO)** – Edges continuously monitor link loss, latency and jitter across broadband, DIA, LTE, 5G or satellite, and dynamically steer traffic per packet over the optimal path for each application.

- **Enhanced Firewall Service (EFS)** – Built-in next-generation firewalling includes stateful inspection, IDS/IPS, URL filtering, malicious IP filtering, traffic segmentation and security dashboards, removing the need for separate branch firewalls.
- **Unified policy and visibility** – VeloCloud Orchestrator provides a single portal for business policies, routing, monitoring, security events and firewall logging, streamlining operations at scale.

Arista Branch PoE Switches – Secure Wired Edge

Arista Cloud Managed Compact PoE switches extend the SD-Branch into space-constrained, quiet environments while delivering enterprise-class features.

- **Compact, PoE-rich design** – Models offer 1 GbE and multi-Gigabit ports with PoE/PoE+ and high-power PoE, ideal for powering access points, IP phones, cameras and IoT devices without external injectors.
- **Cloud-managed with ZTP** – Switches support Zero Touch Provisioning and are managed via VeloCloud Orchestrator or full CloudVision, providing state-streaming telemetry, automated change control and AI-driven analytics.
- **Segmentation and NAC** – 802.1X, RADIUS, MAC-based authentication and policy-driven VLAN / VXLAN assignment enable network access control and zero-trust segmentation at the wired edge.

Arista Wi-Fi 6/6E/7 Access Points – High-Performance Wireless

Arista enterprise Wi-Fi 6/6E/7 access points combine cloud-based configuration with a controlless architecture, where forwarding decisions and control remain local for resilience.

- **Indoor and outdoor models** with internal or external antennas support a wide range of branch and campus environments.
- **Integrated WIPS and zero-trust security** provide wireless intrusion protection, advanced segmentation and secure onboarding for users and IoT devices.
- **Client Journey and AI-driven troubleshooting** in CloudVision trace every step of client connectivity (DHCP, DNS, 802.1X, QoS, URL access), greatly reducing time to identify and resolve wireless problems.

Integrated security – EFS, Edge Threat Management and NAC

Security is embedded throughout the SD-Branch fabric rather than bolted on.

Arista VeloCloud SD-Branch by Digital Carbon

“Working with Digital Carbon has been brilliant. They can dive right into the technical detail when you need it, guide you through every step, and deliver a true turnkey solution. They’re responsive, supportive, and always ready with solid advice to make sure you get exactly the outcome you’re aiming for.”

Michael Polley, IT Manager, Amphenol

- **Enhanced Firewall Service** on VeloCloud Edge provides L4-7 stateful inspection, IDS/IPS, URL and malicious IP filtering, DDoS and flood protection, traffic segmentation and policy templates.
- **Edge Threat Management** builds on top of Velocloud Enhanced firewall Service with Arista’s next-generation firewalling, unified threat management and secure connectivity where additional perimeter controls are required.
- **Network Access Control (NAC)** at the wired and wireless edge uses 802.1X, MAC-based authentication and dynamic VLAN/VXLAN assignment to enforce identity-based access and limit lateral movement.
- **Security monitoring and logging** via VeloCloud Orchestrator centralise IDS/IPS, URL, IP reputation and firewall events, with optional SIEM integration for advanced threat analytics and compliance.



• **Figure 2:** Example SD-Branch equipment stack with VeloCloud Edge, Arista PoE switch and Arista wireless access point for secure branch networking.

Co-managed by Digital Carbon

Digital Carbon delivers Arista VeloCloud SD-Branch as a co-managed service, combining our expertise with your in-house knowledge.

- Digital Carbon designs the architecture, deploys new sites with zero-touch workflows, manages templates and policies, monitors health and security, and provides active tuning and incident response.
- Your IT team retains visibility and control via VeloCloud Orchestrator and CloudVision, can make day-to-day changes where desired, and benefits from shared dashboards, reporting and automation.

This model gives you the best of both worlds: strategic control and standards, with operational heavy lifting handled by a specialist provider.

| | Solution design and architecture | Delivery of devices to site | Activation support for all devices | Reactive incident management | Proactive network management | Change management | Ongoing optimisation services | Platform training for IT team |
|--------------|----------------------------------|-----------------------------|------------------------------------|------------------------------|------------------------------|-------------------|-------------------------------|-------------------------------|
| Resell | No | Yes | No | No | No | No | No | No |
| Full-Managed | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Co-Managed | Shared | Yes | Yes | Yes | No | Shared | Shared | Yes |

Key benefits

1. Simplified branch operations

- One integrated solution replaces multiple standalone routers, firewalls, Wi-Fi controllers and switching platforms, reducing hardware count and operational complexity.
- Centralised, template-driven configuration and policy significantly reduce time to roll out new sites and changes.

2. Better application performance and user experience

- DMPO and deep application recognition steer critical applications over the best available path while remediating loss and jitter, even on commodity broadband links.
- Client and application performance analytics help IT identify RF, cabling or configuration issues affecting user experience across wired and wireless.

3. Strong, consistent security

- Embedded Enhanced Firewall Service, Edge Threat Management and NAC provide layered protection from the WAN edge through to wired and wireless access.
- Central security dashboards, hosted firewall logging and SIEM integration support faster incident response and regulatory compliance across all branches.

4. Faster time-to-value

- Zero-touch provisioning for Edges, switches and access points allows non-technical staff to bring sites online quickly while Digital Carbon handles remote configuration.
- A repeatable SD-Branch design for all industries simplifies planning and accelerates standardised roll-outs across diverse locations.

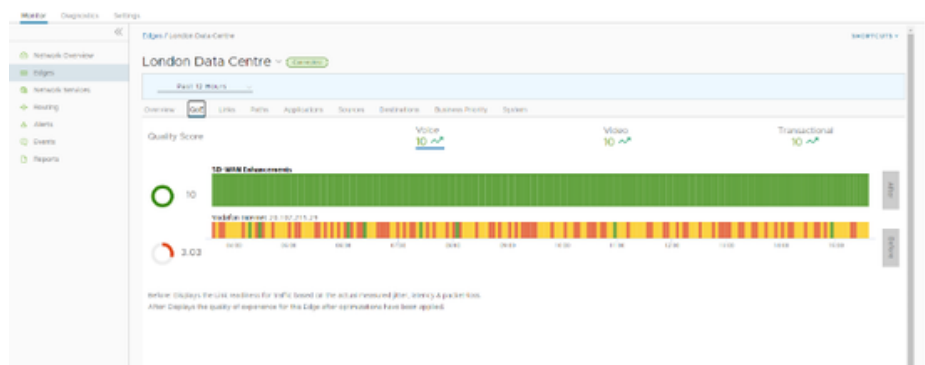


Figure 3: Arista VeloCloud SD-Branch DMPO enhancements dashboard.

Example use cases

Retail and Hospitality – Securely segment POS, guest Wi-Fi, staff devices and IoT (kiosks, cameras, digital signage), while ensuring high-quality access to SaaS, inventory and payment systems over cost-effective internet circuits.

Manufacturing and Production – Connect plants and warehouses with resilient WAN, power and secure OT/IT devices via PoE switching, and prioritise latency-sensitive applications such as MES, SCADA visualisation and collaboration tools.

Construction and Engineering – Rapidly bring site offices online using broadband or 4G/5G, standardise Wi-Fi and wired access for staff and contractors, and protect project data, BIM models and cloud services with consistent edge security and segmentation.

Transportation and Logistics – Provide reliable connectivity for depots, warehouses and hubs, powering scanners, cameras and IoT sensors from compact PoE switches, with SD-WAN optimising access to TMS/WMS platforms and telematics data across distributed locations.

Why Digital Carbon

Digital Carbon specialises in co-managed Arista VeloCloud deployments, combining SD-WAN, SD-Branch and ZTNA design expertise with deep operational experience. We help organisations turn advanced platform capabilities — such as DMPO, Enhanced Firewall Service, CloudVision analytics and NAC — into practical, outcome-driven services that improve resilience, security and user experience at every branch.

To explore how Arista VeloCloud SD-Branch could simplify your branch network and security strategy, scan the QR code to book your free SD-Branch workshop with Digital Carbon.

Book a Discovery Call with
Digital Carbon:

