Cloud-Managed Networking with HPE Aruba Networking Central

Deploy, optimize, and protect your network from a single point of control

HPE aruba networking

Key Benefits

- Improve IT efficiency by consolidating tools and collaborating around a common data set
- Achieve greater scale and agility by deploying new networks in hours, not days or weeks
- Boost performance for Wi-Fi networks as well as leading SaaS apps such as Microsoft 365
- Give users reliable access to apps and data from anywhere while ensuring networks remain secure
- Lower IT support costs by surfacing and resolving potential issues before they become problems
- Reduce disruptions when issues do arise by troubleshooting an average of 50% faster
- Mitigate risk by detecting, containing, and responding to threats faster
- Maximize budgets through flexible licensing and financing options

Businesses continue to adopt cloud services at an impressive clip. 95% of new digital workloads are forecasted to be deployed on cloud-native platforms by 2025, up from 30% in 2021[1].

After lagging behind other IT domains initially, networks are also shifting to the cloud. By 2022, more than half of new network deployments will be managed via cloud-based platforms[2].

The transition is well timed, as networks today are overwhelmingly complex.

Network siloes hinder IT agility

Network operations are highly fragmented, often facilitated by separate management tools for wired, wireless, WANs, and data centers. A consequence of these siloes is that most processes remain highly manual, increasing risk of errors and downtime. In fact, 40% of all network outages are due to human error[3], which can translate to losses in productivity and revenue.

Visibility gaps impede decision-making

When network- or user-impacting problems do occur, IT must rely on the same patchwork of tools for troubleshooting activities. But manually correlating data between tools is a time-consuming task, and root cause analysis is often full of guesswork. 30% of network outages lasted more than 24 hours[3], driving up support costs and distracting personnel from more strategic initiatives. Compounding this issue is that an unprecedented number of employees are now working from home. Unfortunately, 70% of businesses have workers who experience performance issues multiple times a week[4]. As problems linger, employee productivity plummets.

Network attack surfaces are expanding

Cloud adoption and work-from-home (WFH) initiatives continue to dissolve the traditional IT perimeter. Meanwhile, more IoT devices are added to the network every day, often without IT's knowledge. Nearly 80% of IT teams have found IoT devices they did not install[5], leaving networks and businesses more vulnerable to new security threats.

HPE Aruba Networking Central: Your Single Point of Control for Cloud-based Networking

HPE Aruba Networking Central is a powerful cloud networking solution that delivers AI-powered analytics, end-to-end automation and orchestration, and advanced security so IT can deploy, optimize, and protect the network from a single point of control.

Built on a cloud-native, microservices architecture, HPE Aruba Networking Central delivers on enterprise requirements for scale and resiliency, but is also designed for ease of use, making it a perfect fit for mid-sized businesses with limited IT personnel.

[1] Gartner IT Symposium/Xpo, April 2022

[2] IDC, Five Key Enterprise Networking Trends to Watch in 2020, April 2020

[3] Uptime Institute Intelligence report, June 2022

[4] IDC, Future of Enterprise Networking: Emergence of the New Normal, Feb. 2, 2021

[5] Internet of Things - statistics and facts, Statista, 2020

The next generation of HPE Aruba Networking Central further amplifies the value of unified cloud-managed networking with an AI-powered, operator-centric experience designed with a deliberate consideration for network operator needs and goals. With intuitive navigation, industry-first "network time travel", scalable topology visualizations, near real-time full-stack visibility, and intelligent automation, it transforms the way IT personnel interact with the network. Next-generation HPE Aruba Networking Central will be made available for early adopter access towards the end of 2024.

Simple, Unified Operations

HPE Aruba Networking Central eliminates network siloes by providing a common management platform for Aruba wired, wireless, SD-WAN, and VPN infrastructure. By taking advantage of centralized, guided workflows, IT can complete all management tasks from a single user interface – reducing costs tied to truck rolls while improving staff productivity.

This level of IT simplification is realized across the entire network lifecycle – from day 0 setup to day N maintenance activities. Additional simplicity is provided for businesses needing to extend and optimize connectivity to third-party cloud services, as well as IoT deployments.

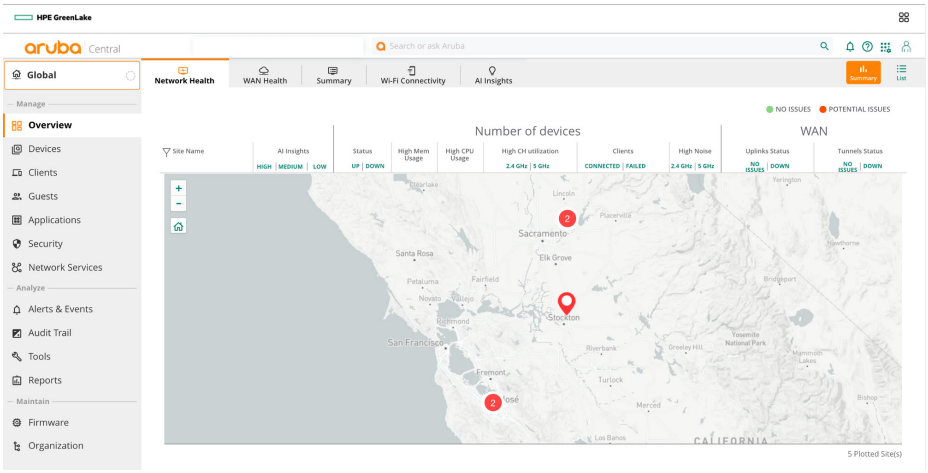


Figure 1. HPE Aruba Networking Central provides powerful visualizations and intelligent alerts that make it easy to detect network- or user-impacting issues.

Fast, easy installs

HPE Aruba Networking Central uses zero touch provisioning to accelerate onboarding of new devices and sites. Once a device is plugged in, it automatically receives its running configuration and policy settings from the cloud. An integrated mobile installer app is also available, which is particularly useful for on-the-go operations or for work in tight quarters such as wiring closets – no need for console cables, dense installation manuals, or laptops.

Error-free change windows

HPE Aruba Networking Central simplifies change windows with guided, GUI-based workflows, as well as templates so IT can easily modify settings across devices that have common requirements. More advanced Aruba CX switch configuration options such as Multi editor and port profiles are just a click away. While Multi editor enables IT to set, validate, and deploy changes across multiple devices simultaneously and with zero errors. Port profiles enable IT teams to extensively configure ports with the same configuration and apply it on multiple switches.

Broad visibility with quick drill-downs

Dashboards and topology views provide powerful visualizations into the performance of applications, networks, connected clients, WAN uplinks, and more. Quickly scan and assess network health at the global or site level, then drill into problematic areas and launch diagnostic checks or live event troubleshooting sessions in just a few clicks.

Seamless, optimized cloud connectivity

Businesses looking to extend networks to the cloud can do so in a simple and secure fashion with Cloud Connect, a service within HPE Aruba Networking Central. Cloud Connect integrates Aruba EdgeConnect SD-Branch Gateways with AWS Transit Gateway and Azure Virtual WAN, the global network backbone for Amazon Web Services and Microsoft Azure, respectively. In just a few steps, IT can establish secure, high-performance connectivity between a business location and the nearest cloud point of presence.

For more advanced use cases, customers can deploy Aruba Virtual Gateways directly into AWS, Azure, and Google Cloud Platform. Aruba Virtual Gateways managed by HPE Aruba Networking Central can improve traffic management and application delivery while supporting thousands of VPN tunnels and routes.

Customers can also improve performance for leading SaaS applications such as Microsoft 365 or Salesforce.com. Using a capability called SaaS Express, HPE Aruba Networking Central dynamically steers traffic to the nearest application server over the best available path by measuring for metrics such as jitter or packet loss, improving the quality of experience for end users.

Extend operations to IoT

HPE Aruba Networking Central simplifies IoT operations with an integrated dashboard and app store. The dashboard extends visibility into IoT infrastructure with at-a-glance views into the health and security of devices such as sensors and connectors. From the dashboard, IT can monitor BLE and Zigbee devices connected to any Aruba indoor or outdoor access points running AOS 10, helping converge IT and IoT onto the same network.

The integrated app store reduces the complexity of deploying new IoT services, which often require specialized components and skills. HPE Aruba Networking Central provides a faster, more economical process, as customers can seamlessly download and deploy best-of-breed apps from leading IoT partners in a couple of clicks.

Customer Success Story
KEMET Recovers Millions in Lost Profitability by Overhauling Legacy Systems

KEMET Electronics Corporation, a leading global supplier of high-end electronic components, modernized its wired and wireless infrastructure to facilitate adoption of IoT-enabled Industry 4.0 across 45 manufacturing and sales facilities worldwide.

- Cut Wi-Fi deployment times from days to hours using zero touch provisioning
- Optimizes network performance and user experience using AI-based analytics

Read the full case study

Remote work capabilities

HPE Aruba Networking Central enables IT to easily scale, monitor, and secure the network infrastructure required to support thousands of remote users who need access to corporate applications and services. Options include deploying the Aruba EdgeConnect Microbranch solution with any Aruba access point to provide an office-like experience to employees anywhere, or by using plug-and-play Virtual Intranet Access (VIA) VPN clients that connect to Aruba Gateways deployed in data centers or public cloud infrastructure to support workers on the go.

Once workers are connected, IT can centrally monitor and troubleshoot user-impacting problems, including employees who are connected to the VPN. Insights include the client data path, bandwidth consumption, and VPN tunnel health. Proactive notification of issues helps IT debug issues faster by pinpointing the exact cause of bottlenecks, thereby reducing help desk calls and minimizing user interruptions.

With the Aruba EdgeConnect Microbranch functionality in AOS 10, IT also gains WAN orchestration and policy-based routing capabilities, as well as integration with cloud security solutions from providers such as Zscaler. The resulting microbranch architecture dramatically simplifies how IT manages connectivity for the hybrid workforce – delivering enhanced performance, reliability, and security to remote locations with minimal overhead.

Full programmability and automation

A rich library of APIs and webhooks makes it easy to integrate HPE Aruba Networking Central with other popular IT solutions. By dynamically pulling data from HPE Aruba Networking Central into third-party tools, network operators can trigger actions based on certain events or conditions. Common use cases include automating the creation of IT tickets in ServiceNow or another ITSM tool, as well configuring and deploying network devices using automation frameworks like Ansible.

Zero-downtime maintenance windows

HPE Aruba Networking Central makes routine maintenance even simpler with robust reporting and live firmware upgrades. Reports are available on demand or at scheduled intervals, with dozens of widgets available for network and application usage, client sessions, and more. Armed with these insights, IT can make more informed capacity planning decisions, ensuring the environment is ready for current and future needs. To ensure continuous operations, IT can also complete live firmware upgrades on supported network devices across an entire site. A GUI-based workflow enables IT to complete the process in just a few clicks, and the network experiences no downtime.

AI-Powered Analytics and Optimization

HPE Aruba Networking Central delivers a full-service AIOps solution that automatically surfaces issues and guides IT through remediation steps so problems are fixed before users notice them. IT can then apply patented optimization techniques to proactively improve Wi-Fi performance and the resulting user experience.

Baselines and anomaly detection

Dynamic baselines start forming the moment APs, switches, gateways, and connected clients start generating traffic – no manual setup required. Baselines adjust automatically to account for variable conditions, such as new users or devices on the network, reducing the chance of false positives or negatives.

When issues do occur, built-in anomaly detection instantly alerts IT to the likely culprit for dozens of issues such as authentication failures and DHCP failures for wireless networks, or PoE failures and port flaps for switching. Issues are categorized based on severity, helping IT prioritize changes, fixes, and other improvement efforts.

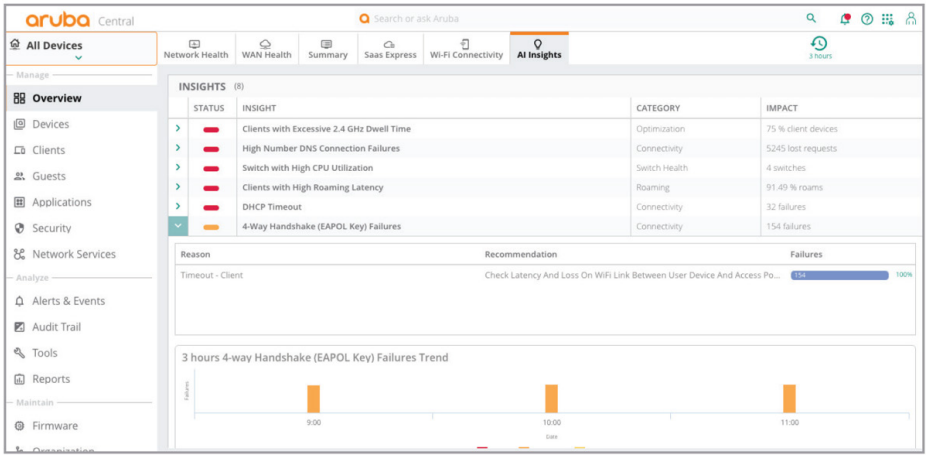


Figure 2. AI Insights detect network issues and automatically pinpoint root cause, helping reduce MTTR by up to 90%.

Customer Success Story
Large retailer optimizes wireless connectivity using AIOps Peer Comparisons in HPE Aruba Networking Central

A retailer wanted an easy way to identify Wi-Fi coverage gaps at its various stories. The IT team found that only HPE Aruba Networking Central was capable of delivering holistic performance gains across every store through the use of peer comparisons of similar environments.

- Improved performance for devices used by store associates by 50%
- Experienced a 3x drop in Wi-Fi interference
- Could deliver similar results at 95% of stores – no onsite IT visits required

Read the full case study

HPE Aruba Networking's AIOps capabilities further simplify daily operations with closed-loop automation. Once enabled in Central, self-healing workflows kick in to automatically update configurations as needed. When applied, a detailed report is created to show the impact before and after the change was made.

Lastly, anonymized peer recommendations gathered from networks with similar characteristics can also be applied to continuously fine-tune configurations and proactively improve capacity or performance.

Built-in 24x7 assistance

Further assistance is provided via AI- and event-driven workflows that automatically capture all required logs and diagnostics to jumpstart troubleshooting tasks. The AI engine can also trigger an Aruba TAC case for more proactive support, which is particularly helpful for sporadic issues that are difficult to diagnose or recreate for troubleshooting purposes.

No guesswork and aimless clicking

By placing valuable information at an admin's fingertips in the context of existing workflows, HPE Aruba Networking Central eliminates aimless clicking, manual correlation of data, and guesswork. A powerful search engine based on natural language processing makes it easy to find help guides, locate specific network devices or clients, and more. One-click actions from search results take admins to the right spot in the UI to make necessary changes, and they can also launch diagnostic checks, packet capture, or live troubleshooting tools.

Patented Wi-Fi optimization techniques

HPE Aruba Networking Central and Aruba's portfolio of wireless access points (APs) provide a number of AI-powered optimization techniques to boost Wi-Fi performance.

To improve the experience for users roaming throughout a facility, ClientMatch monitors radio frequencies and uses machine learning to reassign clients to another AP once signal levels weaken. Businesses with high client density can use AirMatch, which enables the network to automatically adapt to changing RF conditions to avoid coverage gaps and co-channel interference.

With Air Slice, organizations can provide SLA-grade application assurance for latency-sensitive, high-bandwidth applications. After configuring policies for applications as well as user and device roles in HPE Aruba Networking Central, Air Slice then monitors network usage and dynamically adjusts radio resources as new users connect and applications sessions begin or end.

Cloud-Grade Security

To help tighten network security and simplify IT operations, HPE Aruba Networking Central NetConductor delivers advanced, cloud-native configuration, management, and security capabilities, including intent-based policy automation and orchestration, intuitive network access and authentication controls, and AI-based discovery and profiling of all connected clients.

Global Policy Automation and Orchestration

The policy manager within HPE Aruba Networking Central empowers IT to define and maintain global policies at scale with ease, using UI-driven intent-based workflows that automatically map user roles for employees, contractors, guests, and devices to their proper access privileges.

The user-friendly network wizard simplifies the creation of underlays for campus and data-center environments. Manual errors are eliminated as network topology is automatically identified and configured with minimal user inputs. This guided set-up process enables network admins to create their networks quickly and efficiently, without worrying about errors.

Using the fabric wizard within HPE Aruba Networking Central, IT operators can then automatically generate logical overlays without complex CLI programming, pushing inherent policies universally across wired, wireless, and WAN infrastructure.

Network devices such as fabric-capable Aruba gateways and switches perform inline policy enforcement and inspection with the help of global policy identifiers. This enables unified policy enforcement across the entire network and reduces network latency as application traffic doesn't need to be diverted to a separate security appliance, so there's no compromise between network protection, performance, and user experience.

User and Device Authentication

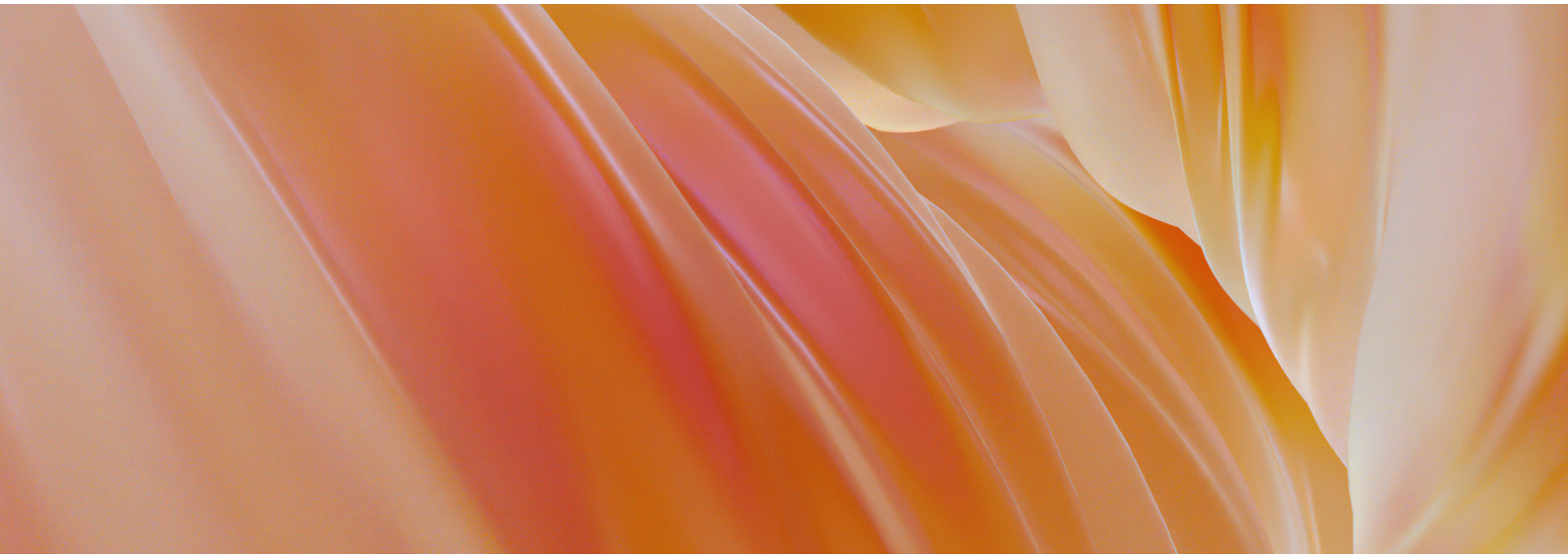
A capability known as Cloud Auth streamlines end-user authentication for wired and wireless networks managed by HPE Aruba Networking Central. IT admins have the flexibility to select from various authentication methods such as - uploading approved client MAC addresses or authenticating users through integrations with popular cloud identity stores such as Google Workspace or Azure Active Directory, and assigning the appropriate level of network access based on network profile. The network profile for different operating systems (macOS, Windows, iOS, and Android) can be downloaded by entering user credentials or easily installed via the Onboard app. Alternately, unique pre-shared passwords or passphrases can be used to onboard user devices and non-user specific devices such as IP phones, cameras, thermostats etc, without prior device registration with Multi Pre-Shared Keys (MPSK). Users can also leverage captive portal authorization method for effortless network access.

Within the associated monitoring dashboard in HPE Aruba Networking Central, administrators have visibility into traffic patterns, access requests, connected sessions, and more, helping IT continuously refine and strengthen security postures.

AI-based Client Profiling

To close visibility gaps often associated with mobile and IoT devices, HPE Aruba Networking Central offers ML-based classification of all clients. This capability, known as Client Insights, uses dynamic comparisons against crowdsourced fingerprints of known clients and MAC range classification in the likely event that unknown devices are connected to your network.

Through this service, HPE Aruba Networking Central automatically categorizes all devices running on any wired or wireless network, using deep packet inspection to provide additional context and behavioral information that help ensure devices are receiving proper policy enforcement.



Flexible Technology Eases Migration

HPE Aruba Networking Central NetConductor uses widely adopted protocols such as EVPN/VXLAN to produce the intelligent network overlay. As a result, the overlay can be quickly deployed across heterogeneous networks across all domains, from remote and branch locations to campuses and data centers across enterprises of all sizes, giving you the benefit of modern visibility, authentication, and security services with flexibility and freedom of choice to modernize your network at your pace – no technical disruptions or costly rip and replace of infrastructure required.

Note: Some features within HPE Aruba Networking Central NetConductor will be generally available later in 2023. To learn more, contact your Aruba sales representative or please refer to the HPE Aruba Networking Central NetConductor solution page.

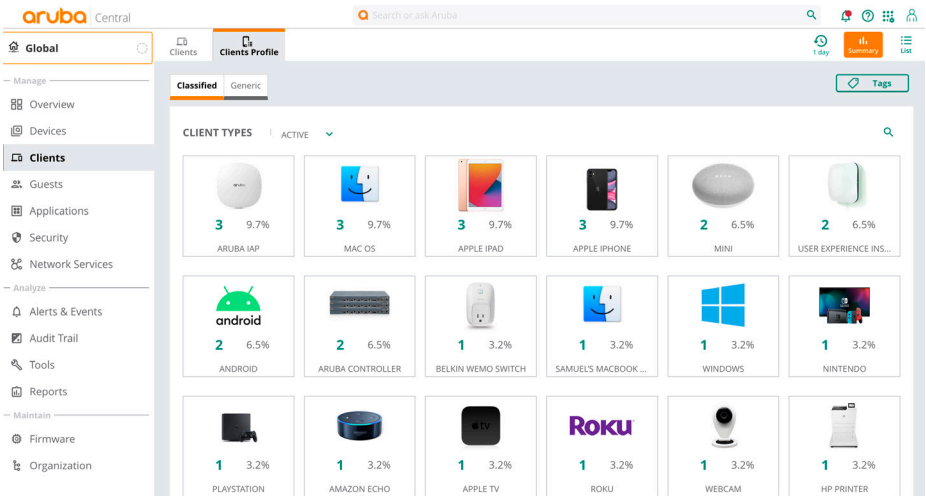


Figure 3. AI-based client insights are integrated into HPE Aruba Networking Central to accurately profile all connected devices, including IoT.

Automate and secure guest connectivity

Using pre-negotiated agreements with major mobile network operators and the Wi-Fi certified Passpoint® standard, Air Pass* automatically and securely authenticates guest access with seamless handoffs between cellular and the private Wi-Fi network. This reduces the need for captive portals to deliver a great Wi-Fi experience for guests while maintaining security and reducing the overhead of deploying a distributed antenna system (DAS).

Protect branches with advanced threat intelligence

Using Internet breakouts at branch locations can improve the performance of cloud apps and lower routing costs, but the network is more vulnerable as traffic bypasses data center security.

To offset security concerns, EdgeConnect SD-Branch Gateways include advanced threat defense capabilities that quickly detect and alert IT to incoming attacks. Actions are orchestrated through an HPE Aruba Networking Central security dashboard, enabling IT to quarantine traffic in Aruba ClearPass or correlate it with other security incidents. Integrations with cloud security solutions from Zscaler and other leading providers are also supported for customers with more advanced requirements.

Deploy and Consume Your Way

HPE Aruba Networking Central is available through multiple deployment models, with flexible purchasing and finance options to address a range of staffing, technical, and budgetary needs.

Bring cloud-like agility to on-prem IT

HPE Aruba Networking Central On-Premises is ideal for customers that want cloud-like agility and efficiency, but have security or compliance mandates that require an on-prem solution.

Reduce IT workloads by entrusting Aruba experts

HPE GreenLake for Aruba provides a network-as-a-service option that combines the use of Aruba products and services to reduce IT overhead and optimize service delivery, with predictable monthly payments to maximize budgets.

Simple, flexible licensing

Management features within HPE Aruba Networking Central are enabled via flexible software subscription licenses, purchased on a per-device basis. Licenses are available in 1, 3, 5, 7, and 10-year terms and are available in two tiers to provide a flexible, simple ordering experience so customers can align desired capabilities for AIOps, security, and more with current and future budgets.

Additional financial flexibility is available through HPE Financial Services, which include options such as payment deferrals, asset upcycling to unlock funds from existing equipment, and leasing programs with predictable payments and routine refreshes.

Bring Your Network to the Cloud

Overcome the challenges of legacy networking by leveraging the power of the cloud to connect, protect, and optimize every aspect of your network from a single point of control. See why 120,000+ customers have entrusted HPE Aruba Networking Central to simplify operations, reduce costs, and deliver compelling experiences for IT and end users alike.

Explore the ROI of HPE Aruba Networking Central by viewing the outcomes some of your IT peers have achieved.

Prospective or New Customer?

Learn more about HPE Aruba Networking Central, or try it for yourself through a self-guided demo.

Already an HPE Aruba Networking Customer?

Sign up now for a free 90-day trial to manage up to 10 network devices.

Make the right purchase decision.
Contact our presales specialists.

Contact us

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