HPE aruba networking

Cloud-managed networking with HPE Aruba Networking Central

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

HPE GreenLake

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
- Orchestrate and automate network and security services—from the cloud, at scale—to streamline operations and enhance protection.
- 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
- Secure network endpoints with AI-powered visibility and profiling

Businesses continue to adopt cloud services at an impressive clip. Gartner(R) predicts that by 2026, 75% of organizations will adopt a digital transformation model that relies on the cloud as the primary foundational platform[1].

After lagging behind other IT domains initially, networks are also shifting to the cloud. IDC predicts that by 2025, 55% of enterprises will benefit from optimized operational efficiency, enhanced security, and reduced network costs derived from cloud-managed networking[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. Organizations indicated an average of 6 business days/year of downtime due to human error, which can translate to losses in productivity and revenue[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. 31% of organizations believe that networking and connectivity issues are the primary cause of outages4. On average, it takes employees 23 minutes to regain focus after such outages, leading to a significant drop in productivity[5]. Uptime Institute Data Center Resiliency Survey 2024 TechValidate, Cost of network downtime.

Network attack surfaces are expanding

Cloud adoption and hybrid work initiatives continue to dissolve the traditional IT perimeter. Meanwhile, more IoT devices are added to the network every day, often without IT's knowledge. 63% of organizations believe that security teams lack visibility over user and device activity across their IT infrastructure, including mobile, BYOD, and IoT devices. Ponemon Insitute, 2023[5], leaving networks and businesses more vulnerable to new security threats.

HPE Aruba Networking Central: Your single point of control and visibility for cloud-based 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, Central delivers on enterprise requirements for scale and resiliency, but is also designed for ease of use, making it a perfect fit businesses of all sizes.

[1] Gartner press release, 2023
[2] Worldwide Future of Connectedness 2024 Predictions, IDC FutureScape, 2023
[3] IDC, the cost of downtime - 2023
[4] Uptime Institute Data Center Resiliency Survey 2024
[5] TechValidate, Cost of network downtime
[6] Ponemon Insitute, 2023

The next generation of 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 Central will be made available for early adopter access towards the end of 2024.

Simple, unified operations

Central eliminates network siloes by providing a common management platform for HPE Aruba Networking 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.

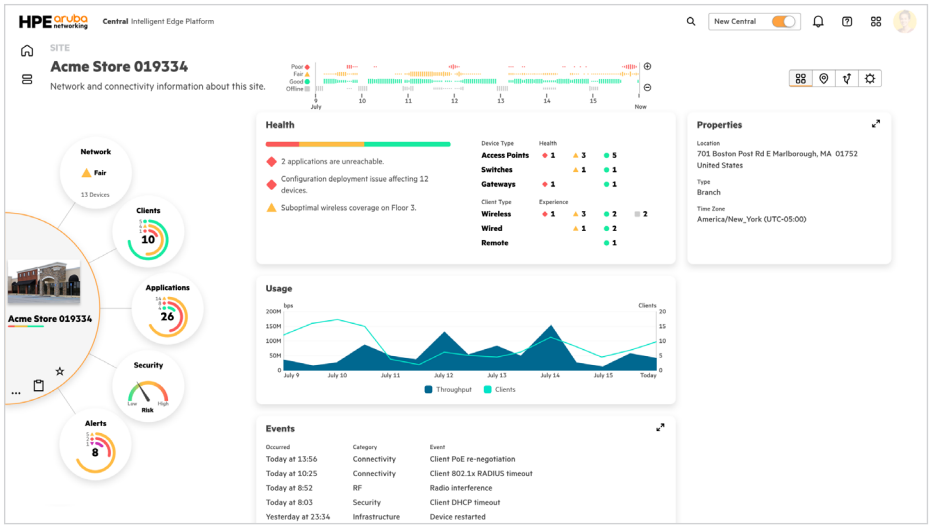

Figure 1. Central provides powerful visualizations and intelligent alerts that make it easy to detect network- or user-impacting issues with 'solar system' view.

Fast, easy installs

Central uses zero touch provisioning to accelerate onboarding of new devices and sites. Non-IT staff can use the mobile installer app to set up sites and provision network devices quickly. After a device is plugged in, it automatically receives its running configuration and policy settings from the cloud—no need for console cables, dense installation manuals, technical skills, or laptops.

Error-free change windows

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 HPE Aruba Networking 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 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.

Secure, 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 Central. Cloud Connect integrates 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 HPE Aruba Networking virtual gateways in public cloud infrastructures, such as a Microsoft Azure Virtual Network (VNET), Amazon Web Services virtual private cloud (AWS VPC) or Google Cloud Virtual Private Cloud (Google VPC). These gateways serve as a virtual instance of EdgeConnect SD-Branch and enable seamless and secure connectivity for all branch and data center locations connecting to public clouds. Virtual gateways are managed by Central and include full orchestration that completely automates VNET/VPC discovery, subnet management, gateway onboarding, and status monitoring.

Customers can also improve performance for leading SaaS applications such as Microsoft 365 or Salesforce.com. Using a capability called SaaS Express, 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.

To tackle the security challenges of cloud computing, HPE Aruba Networking SD-Branch seamlessly integrates with HPE Aruba Networking SSE to form a unified SASE solution. HPE Aruba Networking SSE provides advanced cloud-based security features such as ZTNA (Zero Trust Network Access), SWG (Secure Web Gateway), and CASB (Cloud Access Security Broker). EdgeConnect SD-Branch also fully automates the orchestration with third-party security vendors such as Zscaler or Palo Alto Networks.

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

Extend operations to IoT

Central simplifies IoT operations with an integrated dashboard and app store. The dashboard extends visibility into all BLE, Zigbee, and other proprietary protocol third-party IoT devices on the network, offering visibility into previously invisible non-Wi-Fi IoT devices through HPE Aruba Networking indoor/outdoor access points (APs) running AOS 10.

These APs can also act as IoT connectors and gateways, facilitating communication with IoT devices and transmitting data to Central and other IoT partner apps. This eliminates the need for additional hardware procurement and maintenance, ensuring interoperability and helping converge IT and IoT into the same network. For more details refer to this page.

The integrated app store reduces the complexity of deploying new IoT services, which often require specialized components and skills. 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.

Remote work capabilities

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 EdgeConnect Microbranch solution with HPE Aruba Networking 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 HPE Aruba Networking 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 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.

Customer Success Story
With a surge in IoT clients connecting to the network, this hotel found that traditional detection techniques using collectors and agents were no longer scalable. With Central, they accurately identified and applied policies using AI-powered Client Insights, yielding significant benefits such as:

- Profiling accuracy of up to 99% with <5% rate of unknowns
- Eliminating the 15% increase in helpdesk tickets
- Reducing the time spent to resolve network issues by up-to 90%

Read the full case study

Full programmability and automation

A rich library of APIs and webhooks makes it easy to integrate Central with other popular IT solutions. By dynamically pulling data from 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

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

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. 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.

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

A retailer wanted an easy way to identify Wi-Fi coverage gaps at its various stories. The IT team found that only 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

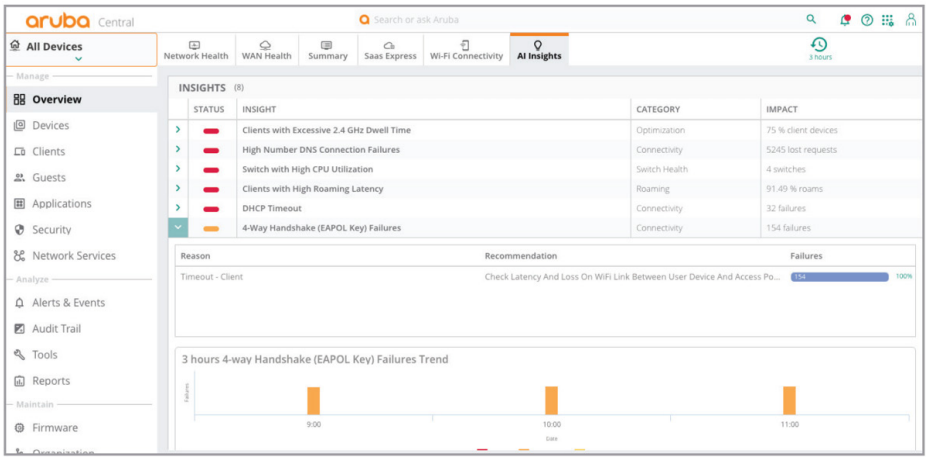

Figure 2. AI Insights detect network issues and automatically pinpoint root cause, helping reduce MTTR by up to 90%.

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 HPE Aruba Networking 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, Central eliminates aimless clicking, manual correlation of data, and guesswork. A powerful GenAI-based, natural language search engine makes it easy to find quick and precise answers, configuration tips, troubleshooting advice, and more. Using multiple proprietary large language models (LLM) trained on the HPE Aruba Networking data lake, it greatly

[1] Footnote MetricHPE Regular 6/6.75 pt with 4.75 pt paragraph space venenatis aliquam ac viverra elit, cras sollicitudin augue sit amet velit mollis tincidunt.

[2] Nullam interdum leo in nulla egestas, et cursus sapien pellentesque.

enhances user experience by delivering faster and more accurate search results based on the user's intent. 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

Central and Aruba's portfolio of wireless 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 Central, Air Slice then monitors network usage and dynamically adjusts radio resources as new users connect and applications sessions begin or end.

Users can effortlessly on board multiple devices by creating a secure Personal Area Network through identity-based authentication with a shared key. This approach ensures privacy and seamless on boarding.

Cloud-grade security

To help tighten network security and simplify IT operations, 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 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 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. End-to-end role propagation and policy enforcement across multiple fabrics can be achieved using CX border switches deployed at the edge of the fabric, eliminating the need for additional hardware. 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 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, Azure Active directory or Okta 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 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, 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, 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.

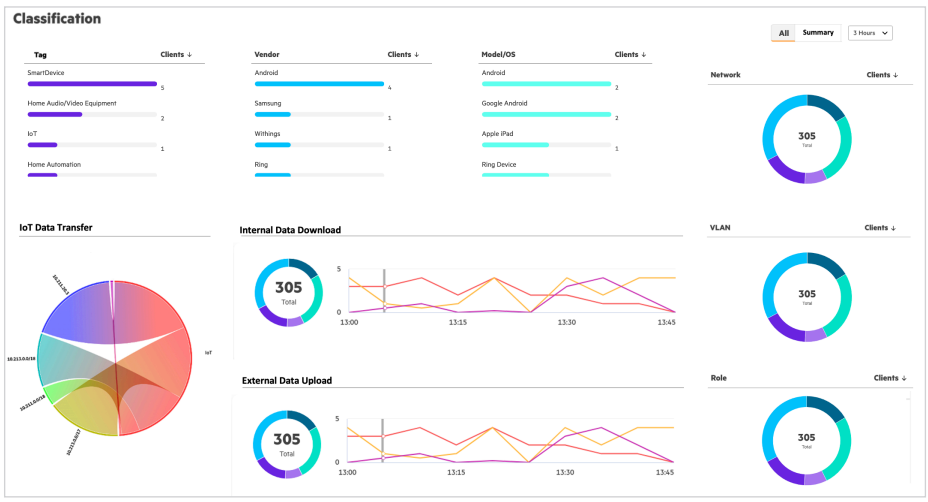

Figure 3. AI-based client insights are integrated into Central to accurately profile all connected devices, including IoT.

Flexible technology eases migration

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.

Customers seeking cloud agility with on-premises regulatory compliance options can access an on-premises version of Central. Transitioning to the cloud is seamless, maintaining a similar dashboard and user experience for a smooth migration process.

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 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.

Contribute to sustainability

Efficiency in IT operations is crucial for sustainability, minimizing resource consumption while meeting service level expectations. HPE is committed to achieving net zero emissions by 2040, with current efforts including eliminating ozone-depleting components and using recyclable packaging materials. Through AI-driven operations, we put HPE Aruba Networking APs into deep sleep mode when inactive, significantly reducing power consumption. Continuous monitoring and proactive recommendations reduces helpdesk

tickets, ensuring resources are utilized effectively. Additionally, our WFH and remote management capabilities, including Zero Touch Provisioning, help cut travel costs and carbon emissions. To learn more visit the webpage.

Deploy and consume your way

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

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 HPE Aruba Networking 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.

Managed Service Provider

Amidst shrinking budgets and network complexities, many organizations are turning to Managed Service Providers (MSPs) to efficiently acquire, manage, and maintain their IT infrastructure. This shift allows businesses to spread costs over time and allocate IT resources to strategic projects, while MSPs handle the complexities of network management.

Simple, flexible licensing

Management features within Central Subscriptions are available in two tiers—Foundational and Advanced—and come with 1-, 3-, 5-, 7-, or 10-year terms. Refer to the ordering guide for details.

This framework provides a simple, yet flexible purchasing experience for every area of networking while making it easy to align requirements for AIOps, security, and other desired features to both current and future budgets.

In addition, flexible consumption options and payment models are available with the as-a-Service (aaS) SKUs for access points, switches, and gateways. The flexible consumption options include delayed activation for up to 90 days, license co-termination, mid-cycle tier upgrade, and seamless license renewal. Learn more about flexible consumption options. For additional financial flexibility, HPE Financial Services offers options such as payment deferrals and leasing programs with predictable payments.

Bring your network to the cloud

Overcome the challenges of legacy networking by leveraging the power of the cloud to connect, protect, and automate every aspect of your network from a single point of control.

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

Explore our security-first, AI-powered networking solutions to discover how we empower networking and security teams to deliver unique experiences and drive innovative business outcomes—without sacrificing cybersecurity protection.

Prospective or New Customer?

Learn more about 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

Visit **ArubaNetworks.com**

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