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SD-WAN, SASE, and NaaS

Tackling common network challenges

Navigating the application era

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Modern network challenges

Modern networking requirements present a number of challenges to IT leaders. Today's workforce has evolving technology needs that, when implemented and managed correctly, can catalyze digital transformation.

Innovation drives networks towards increasing complexity. With the shift to remote and hybrid work models, organizations need secure connectivity that works seamlessly between the branch, headquarters, and home offices. Mobile and IoT devices are increasingly dominant endpoints in enterprise networks, adding complexity.

Al has been a double-edged sword, disrupting the status quo of almost every industry, leading Gartner to predict that "By 2027, the productivity value of Al will be recognized as a primary economic indicator".¹ Al offers tremendous benefits in the form of efficiency, time savings, and expanded organizational reach. However, the implementation of generative Al and other forms of machine learning require massive bandwidth and vast repositories of data. Legacy systems are rapidly failing to meet the needs of Al implementation.

Additionally, cybersecurity threats have increased in scope and sophistication, fueled in part by nefarious uses of Gen AI to improve the quality of phishing attempts and automation tools. Some cybersecurity tools generate thousands of alerts, many of which are false positives. Network complexity means it is difficult for security teams to gain visibility into the whole of the enterprise's digital estate, leaving critical blind spots and vulnerabilities. The only way to combat AI-powered cybercrime is to utilize AI cybersecurity tools to fight fire with fire.

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Escalating bandwidth demands

Hybrid work requires low latency to support video meetings and other collaboration. Countless cloud-based applications can help your organization improve communication, collaboration, customer service, and more. These tools can unlock limitless growth—but your organization will need the network infrastructure to back it up. The increasing demands on bandwidth, especially from applications requiring high-quality voice and video, can seriously strain WAN architecture.

Likewise, AI and IoT devices demand high bandwidth and low latency networks, with special security concerns. AI requires vast amounts of accurate, highquality data for training purposes, and that data needs to be accessible via fast and secure transport.

Enterprise networks should support the programs, applications, and Al innovations that keep your organization running efficiently while staying ahead of the competition. Is your current network holding your organization back from opportunities to be innovative?





Network as a Service

Legacy networking has started to cost the IT team excessive time, money, and resources. Innovation necessitates transformation by leveraging cloud-based services and collaboration apps with high-bandwidth demands, but current legacy networks simply cannot keep up. Worse yet, costly downtime is putting your organization at risk. These challenges entangle IT teams in time-consuming maintenance instead of focusing on the initiatives that prioritize growth.

NaaS is a fully-managed service offering designed to provide a simple, scalable method of offloading the complex tasks of supporting, maintaining, expanding, and securing networks. This solution offers cloud integration, security, switching, Wi-Fi, management, monitoring, and SD-WAN.

The CBTS Network as a Service solution offloads time and resource-consuming tasks.

NaaS from CBTS can offer several key advantages for your organization:

- **Predictable monthly service fee**: Investing in a brand-new network involves a hefty capital expenditure, initiating the countdown towards the next network refresh. Alternatively, NaaS from CBTS enables a transition to a predictable monthly fee, also providing significant cost savings. Access to the latest and best technology is always available.
- **24x7x365 support**: The expert engineers from CBTS manage, monitor, and protect the network infrastructure so the IT team can focus on innovation and mission-critical objectives.
- Hassle-free scaling: Whether scaling down during a slow season, growing exponentially due to mergers and acquisitions, or adding new branches, our NaaS solution can quickly scale to meet specific business needs.
- Enterprise-grade security: Rest easy knowing the network is secured with anti-malware and perimeter defense technology.
- Real-time analytics: Our powerful business intel can help your organization grow its revenue.
- Improved network performance and functionality: Our NaaS solution offers auto VPN and Power over Ethernet (PoE) to improve overall network performance.

Cisco Meraki (NaaS)

Among our cloud managed NaaS solutions is Cisco Meraki, which offers a scalable method of supporting, maintaining, expanding, and securing networks with cloud integration, security, switching, Wi-Fi, management, monitoring, and auto VPN.

Cisco Meraki features include:

- **Cloud-managed wireless**: The Cisco Meraki wireless LAN feature offers centralized management of Wi-Fi deployments and distributed multi-site networks from a single pane of glass. Powerful location analytics, application visibility and control, and high-capacity 802.11ac work together to give your team greater control.
- **Cloud-managed security and SD-WAN**: Security features like intrusion prevention, identity-based firewall, auto VPN, content filtering settings, advanced malware protection, and high availability and failover protect the network from any threat. All this comes with application visibility and control and centralized management features.
- **Cloud-managed switching**: Meraki cloud-managed switches include features like multigigabit ethernet, flexible stacking, layer 7 visibility, layer 3 scalability, voice and video Quality of Service (QoS), and network topology that streamline operations every step of the way from deployment to security to troubleshooting.



Juniper Mist (NaaS)

Juniper Mist networks leverage SD-WAN or SASE frameworks, setting themselves apart with an Al-driven assistant at their core. Marvis stands out as a Virtual Network Assistant (VNA), acting as a round-the-clock support "robot". It preemptively notifies the network administrator about potential problems, often before any customer support tickets are issued. Additionally, Marvis can execute numerous functions typically handled by a first-tier customer support representative, such as tagging or escalating tickets to second-tier agents or resolving issues directly, eliminating manual intervention.

Marvis can automatically generate and dispatch trouble tickets for devices integrated with or powered by Juniper Mist Al. Furthermore, Marvis smartly manages traffic flow and can autonomously rectify straightforward network issues through its "self-driving" functionality.

The benefits of Juniper Mist AI networks include:

- · Automatically generates support tickets for connected devices.
- 24x7x365 monitoring and support.
- **Proactively monitors network speeds and functionality** to maintain service level expectations (SLEs). If service levels drop below the specified thresholds, alerts are sent automatically.
- Identifies and resolves issues before they impact users, improving the customer service experience.
- Enhances help desk efficiency by reducing the volume of trouble tickets.
- Utilizes Natural Language Processing (NLP) to expedite and improve the troubleshooting process.
- Marvis employs dynamic packet capture to determine the root cause of issues and their solutions. It can preserve data in the event of an outage and restore it once service has resumed.
- Features self-driving capabilities to ensure maximum uptime through immediate adjustments and self-repair mechanisms.



SD-WAN

In today's distributed enterprise environment, SD-WAN has become a cornerstone, extending beyond its traditional roles of establishing a hybrid WAN or cloud connectivity to pave the way for digital transformation. It allows businesses to adopt new edge applications, ensuring seamless, secure multi-cloud connectivity without straining data center resources. With the integration of AlOps, organizations can simplify operational complexities by quickly identifying and addressing the root causes of poor application performance. SD-WAN empowers employees to work securely and efficiently from anywhere, offering unparalleled flexibility and choice.

Traditional MPLS networks often struggle to keep pace with an organization's bandwidth and latency demands, resulting in high costs. Departments and teams require low latency/high performance access to cloud applications, yet they are hindered by network performance that restricts their ability to harness transformative technologies. Network teams spend more time on maintenance tasks than on optimization and innovation efforts.

Security and management requirements for various traffic flows have compounded the complexity of managing branch operations, leading to increased operational costs. If this scenario sounds familiar, SD-WAN could be the ideal solution.

The cloud-delivered SD-WAN solutions from CBTS provides an agile platform for deploying, managing, and monitoring hybrid public, private, wired, and wireless networks. Expert engineers design tailored migration strategies to meet specific organizational needs.

These solutions offer network visibility and control from a central location and enable the offloading of management and issue analysis to the skilled IT professionals at CBTS. It ensures the remediation of impairments across multiple pathways to reliably manage applications and traffic across branch offices, data centers, and the cloud.

SD-WAN proves particularly beneficial for organizations operating call centers or those heavily reliant on critical applications, especially voice and video. SD-WAN and SASE are also critical infrastructures for AI adoption.

The CBTS SD-WAN solution delivers several key advantages for organizations:

- Improved business agility: This software-defined solution delivers faster deployment, on-demand bandwidth, and disaster recovery.
- Increased IT efficiency: Automation and cloud management removes burdens from IT teams, allowing them to focus on more critical tasks.
- **Reduced overall costs**: Stabilize IT budgets by eliminating data center upgrades and redesign costs and commit to a predictable monthly fee. Reduce your costs while still having access to an agile, high-performance network.
- Superior quality of experience (QoE): Improve performance of critical applications with multiple levels of redundancy.

CBTS is committed to providing all of our technology solutions on the best-in-class technology that will help our partners reach their business goals. The CBTS SD-WAN solution can be delivered on either Palo Alto Networks[®] Prisma[®] SD-WAN or VMware VeloCloud SD-WAN[™] platforms, allowing organizations to leverage the perfect SD-WAN offerings for their needs.

Palo Alto Networks Prisma SD-WAN

This offering from Palo Alto Networks stands out by ensuring an unparalleled user experience, streamlining operations, and enhancing security measures, all of which contribute to a return on investment as high as 243%.² By leveraging advanced Al and ML technologies, Prisma SD-WAN tackles the complexities of conventional routing and deployment issues, making network management less cumbersome. This innovative approach results in a dramatic 99% reduction in trouble tickets and bolsters branch security, effectively cutting down security breaches by 45%.²

- **Enhanced user experience**: By ensuring the availability of applications according to real-time performance SLAs and offering increased visibility, there's a tenfold performance enhancement, alongside eliminating issues associated with packet-based networks.
- **Streamlined operations**: Trouble tickets are reduced by up to 99% thanks to Palo Alto Networks Prisma SD-WAN, which simplifies complex network operations and aids in accelerating SASE migration efforts.
- **Better security results**: With Palo Alto Networks Prisma SD-WAN, branches receive top-notch security natively, including ZTNA 2.0.

Prisma SD-WAN integrates with Prisma Access to provide a comprehensive SASE solution while offering integrated 5G and SD-branch capabilities. The platform includes CloudBlades for branch services and AlOps for network insights. Additionally, Prisma SD-WAN Clarity provides actionable insights, and Bandwidth On-Demand offers a flexible consumption model.

Customers who adopt Prisma SD-WAN report:

- 10x improved network performance over legacy systems²
- A 99% reduction in support tickets²
- A 45% reduction in security breaches²

SASE

Secure access service edge (SASE) integrates top-tier networking and security features into a unified solution designed specifically for dynamic, cloud-first organizations. CBTS defines SASE as a combination of SD-WAN and cloud-native security service edge (SSE) tools, including next-gen firewalls, cloud access brokers, and more. In other words:

SD-WAN + SSE = SASE

Palo Alto Networks Prisma SASE

Prisma SASE stands out as the only comprehensive SASE solution in the market, combining cloud-based network security, SD-WAN, and Autonomous Digital Experience Management (ADEM). Prisma SASE offers cloud-delivered security services, ensuring the protection of all applications utilized by a diverse workforce, whether remote, mobile or in an office.

Prisma is the sole SASE solution incorporating native DEM capabilities, ensuring an exceptional user experience for all. ADEM offers insights into any disturbances or incidents that negatively impact the user experience along every segment, from the end user to the application. This includes areas such as the endpoint, Wi-Fi, LAN, ISP, Prisma Access, and the application itself, whether it is SaaS, laaS, or a data center. By constantly monitoring each segment of the service delivery path, ADEM delivers valuable information that aids in promptly identifying and isolating the problematic network segment, thereby streamlining the resolution process. With ADEM integrated into Prisma SASE, your workforce can achieve higher satisfaction and productivity, regardless of location.

Prisma SASE features:

- · Single-pane-of-glass controls improve visibility across the digital estate.
- · AI-enabled ADEM enhances customer experience.
- · Cost-efficient cloud scale pricing reduces WAN costs.
- Streamline and simplify network environments by merging and integrating toolsets.
- Meet service-level agreements (SLA) and reduce overall trouble tickets.
- Reduce the risk of breaches with zero trust network access-enabled architecture.
- **Cloud-native architecture** ensures speed, availability, security, and maximum uptime.

Why choose CBTS for meeting network challenges?

CBTS provides full support for leading NaaS, SD-WAN, and SASE solutions, enhancing security and minimizing network downtime with 24x7x365 support. Our team provides extensive expertise, streamlined onboarding, and flexible service levels, ensuring a comprehensive and tailored approach to meet organizational requirements.

- **Expertise in various domains** includes strong networking, security, and cloud technologies knowledge.
- **Our Al-readiness assessment** helps organizations navigate the evolving requirements of the Al revolution.
- **Efficient integration** uses templates and automation strategies to simplify the onboarding process, tailored to fit specific organizational requirements.
- Advanced security measures allow access to a suite of additional security tools and services from our industry-leading partners, bolstering the organization's security framework.
- **Full-spectrum service** includes everything from the preliminary consultation to ongoing maintenance. CBTS engineers are involved in every facet of the implementation process, providing guidance and execution support to the team.
- **Service flexibility** allows for a range of service models suited to the organization's internal capabilities, extending from do-it-yourself options to comprehensive SOC support.

Our solid reputation comes from delivering satisfactory outcomes to numerous clients, establishing long-lasting partnerships, and ensuring continuous support for the team. To blueprint migration to the Cloud and identify the most effective SD-WAN, SASE, or NaaS solutions, contact the experts at CBTS for a customized plan tailored to the needs of your business.

Sources:

- 1. Gartner's Top Strategic Predictions for 2024 and Beyond
- 2. Palo Alto Networks NGFW delivered a 229% ROI



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From developing and deploying modern apps and the secure, scalable platforms on which they run, to managing, monitoring, and optimizing their operations, CBTS is the trusted partner businesses need to thrive in the application era.

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