Enterprise networking is in a state of transition, posing new challenges to enterprises. Network as a service (NaaS) has emerged as a simple solution for enabling an autonomous network.

Key Criteria for Implementing Emerging Enterprise NaaS Models

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Introduction

Significant changes are underway in how organizations across the world are buying and managing enterprise network infrastructure. The trend is encapsulated by the rise of enterprise network-as-a-service (NaaS) models, which apply cloudlike consumption and management simplicity to complex network deployments. IDC defines enterprise NaaS as a flexible, operating expense (opex) model of enterprise network infrastructure that includes hardware, software, licenses, and life-cycle services in a single offering.

Enterprise NaaS offerings have emerged in recent years, driven by organizations looking to simplify and optimize their networks. Enterprises are looking to ensure their enterprise network infrastructure — specifically in the enterprise campus and branch (LAN and WLAN) — not only can meet the needs of their business but also can be a strategic benefit to the organization. This IDC Spotlight paper outlines the catalysts driving the enterprise NaaS market, describes best practices for organizations implementing NaaS, and profiles a new vendor in the enterprise NaaS market: Nile.

AT A GLANCE

KEY TAKEAWAYS

There are a handful of key criteria to consider when using enterprise NaaS, including:

» **Service levels.** NaaS models should be driven by service levels that guarantee a high-quality network experience.

» **Flexible consumption.** NaaS should include subscription-based, pay-as-you-go pricing.

» **End-to-end management.** NaaS should include hardware, software, management, and full life-cycle services, from day 0 planning to day n operations.

» **Integrated security.** NaaS must be trustworthy and secure.

Enterprise NaaS: A New Consumption Model for Networking

The rise of enterprise NaaS is more than a decade in the making. In the past 10 years, organizations have become accustomed to new ways of buying technology for enabling their digital transformation. The rise of infrastructure as a service (IaaS) and software as a service (SaaS) in the public cloud has normalized opex-based and pay-as-you-go flexible consumption models for IT infrastructure. This contrasts with the traditional perpetual, capital expense (capex) procurement model that has dominated IT buying. As cloud consumption models have become more mainstream, usage-based pricing models have been applied to other parts of the IT stack — including the network — creating the enterprise NaaS market.

The emergence of enterprise NaaS comes at a time when the enterprise network is playing a key role in organizations' digital transformation strategies. The enterprise network is where users, devices, and IoT-enabled things connect to the network and access the business-critical applications that drive modern digital businesses today. But enterprises have network challenges, particularly in the procurement and ongoing management of the network. Enterprise NaaS models aim to simplify and optimize the full life cycle of enterprise network deployment and management.

IDC survey data has shown increased interest among enterprises in flexible consumption models for IT infrastructure. In an IDC survey that asked 600 respondents what was driving their interest in consumption-based models, the top 3 responses were the ability to adopt new technology and upgrades with a lower barrier to entry, keeping up with the latest technology, and wanting a cloudlike experience (automated and self-provisioning [i.e., AWS]).

Another survey highlighted the interest in applying flex consumption models to the network. When respondents were asked what their top network management priorities were, the top response was the need to explore more flexible consumption/as-a-service models for network infrastructure. Another top priority was changes to physical workspaces (e.g., carpeted offices) that were causing regular network redesigns. New or refreshed network buildouts represent an opportunity for organizations to shift to NaaS models.

These survey data points have influenced IDC forecasts predicting that opex spending will make up an increased percentage of IT budgets in the years to come. *IDC FutureScape: Worldwide Future of Digital Infrastructure 2022 Predictions* noted that by 2025, 60% of enterprises will fund line-of-business (LOB) and IT projects through opex budgets, matching how vendors provide their services with a focus on outcomes that are determined by service-level agreements (SLAs) and key performance indicators (KPIs).

Key Drivers for Enterprise NaaS

Among the biggest drivers for enterprise NaaS are the complexity and scale of enterprise networking today, which are causing organizations to seek simpler, more efficient, and secure network operations. Enterprises are looking to optimize user and device experiences, but network complexity is derived, in part, from there being more users and devices than ever on the network as well as users accessing high-bandwidth applications. Meanwhile, securing the enterprise network has never been more challenging, with threats against enterprises continuing to increase.

> IDC predicts that by 2025, 60% of enterprises will fund line-of-business (LOB) and IT projects through opex budgets, with a focus on outcomes that are determined by SLAs and KPIs.

NaaS models can fundamentally help organizations overcome these challenges. NaaS provides a simple way for organizations to get access to a high-quality enterprise network, delivered as a service with performance and security guarantees.

Benefits of Enterprise NaaS

The rise in interest among enterprises in NaaS offerings is driven by a variety of important benefits that NaaS can enable. One of the primary benefits of NaaS has nothing to do with technology; instead, it focuses on staffing. Organizations around the globe want to ensure their valuable IT and networking staff are focusing on business-enabling tasks rather than nondifferentiated day-to-day management of IT resources. NaaS enables organizations to outsource the day-to-day management of the network to a NaaS provider, giving customers access to a high-quality, secure network and, in turn, freeing up their IT teams to focus on tasks that add value to the overall business.

There are a variety of other benefits of enterprise NaaS, including:

» **Simplifies and speeds network deployment and management.** Procurement of new network infrastructure can be complex. How do enterprises know how much and what type of infrastructure they need? Gaining access to network infrastructure and devoting time to install it can be a weeklong to monthlong, imprecise process. NaaS models simplify the entire life cycle of network deployments, from day 0 planning and installation to day 1 and day n ongoing management.

» **Improves refresh cycles.** NaaS models allow organizations to get access to the latest technology and enable dynamic implementation of new equipment and features. At the end of the life of the infrastructure, NaaS models include secure decommissioning and disposal of used resources to support enterprise sustainability goals.

» **Enables features to be added dynamically via self-service.** One of the fundamental aspects of an as-a-service offering is the ability to scale up resources to ensure it is meeting the exact needs of the customer. Equally important is the ability to scale down to ensure proper alignment between usage and value.

» **Enables better cost-per-user metrics; reduces up-front capex.** By utilizing pay-as-you-go metrics that are derived from SLAs, organizations can align the cost of the service with the value they get from it.

Key Features of an Enterprise NaaS Offering

Enterprise NaaS models have been born out of the cloud era of digital business operations. But not all NaaS models are the same. There are key differences between enterprise NaaS and traditional leasing, as well as differences when using a subscription-based model for individual components of NaaS, such as software, hardware, or services. Enterprise NaaS should be a comprehensive offering that encompasses the full life cycle of a network deployment, with assurances that the network is meeting the needs of the business and flexible, consumption-based payment models.

As organizations evaluate enterprise NaaS models, they should consider a variety of core tenets, including the following:

» **Service level driven.** In the past, service levels have been based on the response time for parts replacement or uptime of hardware. Enterprise NaaS service levels should be based on the level of experience the network provides the customer based on metrics such as service uptime, device capacity, and coverage.

» **Flexible consumption.** Flexibility and agility are what differentiate NaaS from traditional leasing models. Enterprise NaaS models should include pay-as-you-go pricing with a dynamic ability for customers to scale up resources — and scale down resources if needed — with monthly billing based on the amount of network capacity used.

» **End-to-end operations management.** NaaS models should include all aspects of an enterprise networking deployment being delivered as a service. That includes an entire life cycle from day zero planning and site surveys to day one installation and day n ongoing management, troubleshooting, and optimization. The service should provide assurances for ongoing technology refreshes as new standards and capabilities are available (i.e., Wi-Fi 6 to Wi-Fi 6E).

» **Built-in security.** Security is paramount in any technology buying decision, but in a NaaS model, security should be built into the hardware components along with having a trustworthy partner managing the network. All aspects of the offering should be secure — from the infrastructure components to a zero trust architecture — meaning that every user or device on the network is securely authenticated.

Considering Nile

Nile was founded in 2018 with a mission to fundamentally change how networks are run. Built from the ground up, Nile's offering aims to deliver enterprise network infrastructure as a service with flexible, pay-as-you-use pricing models and guaranteed SLAs based on availability, capacity, and coverage. It includes built-in security with zero trust access paradigms and an advanced automation platform that manages the full life cycle of enterprise network deployments and optimization.

The Nile offering is based on several key features and capabilities:

» **High performance and resilience.** Nile's enterprise campus and branch networking technology is built on enterprise-grade hardware using a service block architecture to create redundant, resilient, and scalable components, with built-in advanced sensors for detailed analytics, integrated security, advanced automation, and self-tuning capabilities.

» **Built-in security.** Nile's architecture was developed on the principles of zero trust — from access to network and deep data protection — with the ability for customers to extend control security policies that are executed and maintained by Nile with end-to-end traffic encryption.

» **Simplified end-to-end operations.** Nile aims to deliver a complete enterprise NaaS model, with all aspects of the company's offering delivered as a service. This includes a full site survey and installation. Once installed, Nile manages the entire life cycle of the environment, from constant and adaptive monitoring and optimizing to network troubleshooting and hardware life-cycle refreshes, software updates, and security patches.

» **Flexible consumption.** Nile's offering is priced via a holistic pay-per-use model, inclusive of deployment and management services, infrastructure components, monitoring, troubleshooting, refreshes, and optimizations. Customers can scale up — or scale down — capacity of their Nile network on demand.

» **Service-level agreements.** Nile's service levels are focused on outcomes rather than operations. For example, Nile's advanced management platform monitors availability of the service; capacity is measured to ensure not just that the network is up but also that high-quality experiences are being delivered; and coverage is measured to ensure uniform delivery of services for all users and devices.

Nile Global is backed by a team of network industry veterans, including former Cisco Executive Chairman John Chambers, who is a cofounder and member of Nile's board, and Pankaj Patel, former Cisco Chief Development Officer and now CEO of Nile.

Challenges

Enterprises are still learning about NaaS models and, specifically, the differences between NaaS and leasing and subscription offerings. It's important for NaaS vendors such as Nile to showcase the key benefits that only NaaS can provide.

Nile also has an opportunity to help customers understand the true value of NaaS from a total cost of ownership (TCO) perspective, particularly in comparison with traditional capex models. Such calculations should consider the entire life cycle of services that NaaS should provide — including network hardware, software, management, and support. The calculations should also include the freeing up of staff time to focus on business-enabling tasks, having an optimized network, and reducing operational management complexity for customers.

As a new entrant to the enterprise NaaS market, Nile will need to prove that its technology and brand can meet the needs of enterprise customers. Meanwhile, Nile will face competition from other enterprise networking vendors looking to offer enterprise-grade NaaS.

Conclusion

Enterprise networking is in a state of transition right now. Organizations around the globe are increasingly realizing the importance of transforming their networks to ensure their connectivity strategy meets the needs of their business. But managing the enterprise network in today's modern, digital-first world is a challenge. Enterprise networks can be complex to purchase, install, and maintain. Organizations want to ensure their valuable IT staff are focused on tasks that enhance business value rather than managing nondifferentiated day-to-day tasks that can be automated.

Enterprise NaaS models have emerged as a simple solution to these challenges. Born out of cloudlike consumption models, enterprise NaaS has unique capabilities to provide value. If implemented correctly, enterprise NaaS should provide access to the latest technology, managed by advanced automation systems. NaaS should be delivered via a full life-cycle process, with the infrastructure constantly secured and optimized while paid for using consumption-based pricing. As such, an enterprise NaaS model can provide significant value to organizations to ensure the network not only meets the needs of the business it serves but also becomes an enabler of an organization's digital transformation strategy.

About the Analyst

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Brandon Butler is a Research Manager with IDC's Network Infrastructure group covering Enterprise Networks. His research focuses on market and technology trends, forecasts, and competitive analysis in enterprise campus and branch networks. His coverage includes technologies used in local and wide area networking such as Ethernet switching, routing/SD-WAN, wireless LAN, and enterprise network management platforms.

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More About Nile

Nile has re-imagined the network with the aim to deliver to deliver a completely new connectivity experience, born to be delivered completely as-a-service. Engineered around the principles of zero trust, continuous monitoring, deep automation, and utmost simplicity, Nile's service eliminates the network operations burden for IT, freeing up time to focus more energy towards building business and competitive value.

The Nile service:

» Network performance is guaranteed with committed Service Level Agreements (SLAs) that focus on outcomes the network must deliver: always-on availability, coverages everywhere, with voice/video-grade capacity.

» Built from the ground up around zero trust architecture, Nile secures against unauthorized access and the proliferation of malware.

» Deep instrumentation and sensors are the foundation that continuously monitor the network, using AI and software to constantly fine-tune network performance.

» End to end operations simplify the network experience for IT. The Nile service is inclusive of the beginning site-survey, through installation, and into continuous monitoring and automated management. The Nile service also performs all software upgrades, security patches, and hardware lifecycle management refreshes.

The Nile service is consumed in a flexible pay-as-you-use model that offers businesses the agility to scale up and scale down as they need. The singular, holistic network consumption model brings predictability and clarity to network costs.

Learn more at www.nilesecure.com

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