

Accelerating digital transformation with Network as a Service

White Paper

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Enterprise

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Network evolution drives digital transformation

When the global pandemic hit in March 2020, most organisations had already started on the path to digital transformation. They knew that cloud, Internet of Things (IoT) and other advanced digital technologies would help them become more agile, get more done faster, deliver better experiences and increase security. Then, almost overnight, their priorities changed.

Suddenly, organisations had to focus on supporting remote staff, remote students, hybrid, remote and in-office working arrangements, and dispersed team collaboration. Many also had to rapidly automate the parts of their business that required people to be in close contact. Contactless payments, ticketing, check-ins, and online services instead of in-person services are just a few examples.

Strained networks and budgets

These unexpected changes put new demands on enterprise networks. The network needed the capacity and reach to support people working from a much wider variety of locations. And it had to support more device types, connections from the outside world, and applications — all with the appropriate security, Quality of Service (QoS) and Quality of Experience (QoE). As a result, organisations needed much broader visibility and control of the network and its expanded scope.

With their focus on supporting immediate and urgent requirements, funds originally planned for evolving the network infrastructure went to other priorities including, improving cybersecurity, increasing bandwidth to remote data centres, purchasing more robust devices and implementing collaboration platforms.





An affordable evolution

With capital budgets depleted, the only way to advance the network infrastructure so it supports digital transformation initiatives is to find a more affordable way of doing it. This is where a Network as a Service (NaaS) model helps. Shifting to a NaaS model allows organisations to upgrade their network infrastructure and accelerate digital transformation without a massive upfront capital expenditure. Organisations can quickly and easily access the network equipment and technologies they need on an ongoing basis with a predictable monthly budget.

A growing number of organisations are recognising the value of the NaaS model. According to technology research and consulting firm Gartner, on premises NaaS will be adopted by 15 percent of all enterprises by the end of 2024, up from less than one percent in 2021.[1]

Brandon Butler, a senior research analyst at market intelligence firm IDC, has described enterprise NaaS as "an exciting new model for enterprises to consume network infrastructure via flexible options." According to Butler, "Enterprise NaaS models enable myriad significant benefits, from giving enterprises faster access to new technology and features, to enabling enterprises to free up their IT staff to focus on business-enabling tasks." And he says IDC believes enterprise NaaS will become an important way for enterprises to procure and manage their networks in the years to come.[2]

1 Network as a Service (NaaS), Andrew Lerner, Gartner, October 2021.
2 Enterprise Network as a Service Emerges as a Model for Flexible Consumption of Network Infrastructure, IDC, December 2020

NaaS benefits the entire organisation

More and more companies are interested in the NaaS model, whether they are small, medium, or large enterprises. Organisations are adopting the model because they realise it benefits every part of the enterprise, from overall business operations to specific departments and business units, and individual staff members. These broad benefits are possible because a NaaS offering can include anything and everything an organisation needs to upgrade its network and accelerate its digital transformation, including:

- Network equipment, such as switches and wireless LAN (WLAN) access points
- Network management tools and software
- Cybersecurity solutions
- Applications and licenses
- Managed support services, such as network monitoring and troubleshooting

While many of the benefits of a NaaS model will be specific to each organisation, there are overarching advantages that help every organisation achieve their digital transformation goals.

Predictable costs

When network infrastructure is provided as a service in a subscription format, organisations can spread the cost of new network solutions over time. They also know the monthly cost well in advance and can budget appropriately. There are no major upfront costs that can derail budgets or network priorities, and no financial surprises along the way.

This predictability allows organisations to sustainably evolve their network and advance their digital transformation. They no longer need to worry the network won't be adequate to support transformation initiatives. And they can't fall into the dangerous cycle of making major infrastructure investments followed by potentially years of languishing with no investments due to capital budget constraints. With network costs completely under control, organisations are free to focus on the transformation tactics that best support their business goals.

Accounting benefits

Depending on how a company manages their accounting, there are additional benefits related to adopting NaaS and switching network costs from CAPEX to OPEX. For example:

- A company could lease the equipment instead of paying subscription fees, but this would impact their ability to borrow more money for other projects. NaaS OPEX costs are not stated as liabilities on the balance sheet.
- Start-ups who are being funded by venture capitalists, may benefit by preserving CAPEX to develop their business instead of spending it on network infrastructure
- Local taxes may favor software over hardware, making the subscription portion of NaaS more attractive



New network resources provide new opportunities

Organisations that adopt a NaaS model have almost immediate access to new network infrastructure, technologies and software they otherwise couldn't afford, but that are essential to increase productivity, agility and scalability. So, whether they need to deploy a new network infrastructure or rejuvenate an aging one, it is advisable to look into NaaS.

With the right infrastructure in place, organisations have the foundation needed to introduce advanced digital technologies that let them:

- Automate tasks, workflows and processes to increase productivity
- Adopt new applications to work more efficiently and effectively and help customers enjoy a better experience
- Support new and more flexible ways of working

In today's highly competitive world these types of capabilities are essential to stay ahead of the competition and meet escalating customer demands to drive new growth.

Reducing risks

The best NaaS offerings include all the hardware and software solutions needed to protect organisations from the growing number and severity of cyberthreats and ransomware attacks.

This is an extremely important advantage. As organisations adopt more cloud and IoT solutions, extend support for remote working and increase their number of data centre connections, it becomes much more complex to ensure the network provides robust and comprehensive cybersecurity. And bad actors have been taking advantage of organisations' security weaknesses. During the pandemic, 81 percent of global organisations experienced increased cyberthreats with 79 percent experiencing downtime due to a cyber incident during a peak season.[3]

With a NaaS model, organisations have peace of mind knowing their devices, applications and data are always fully protected. And they can remove the security burden from internal IT staff.



3 Cyber Threats Have Increased 81% Since Global Pandemic, McAfee Enterprise and FireEye, November 2021.



Faster upgrades

Because NaaS offerings are subscription-based, software upgrades are applied as they are available and are included in the monthly cost. These ongoing upgrades ensure network solutions always provide the latest features and implement the latest security measures and standards. The operating system in network switches is one of the most important first lines of defense against network intrusion, so these upgrades are vital to maintaining network security.

Hardware upgrades are typically available for a nominal fee. The NaaS provider already knows which hardware is being used and can recommend the optimal upgrade strategy and equipment.

Together, these software and hardware upgrades allow organisations to push forward and take advantage of new technologies, such as the next generation of Wi-Fi technologies, as they become available, without large capital expenditures.

NaaS aligns with enterprise needs and concerns

IDC research confirms that a NaaS approach helps enterprises achieve their goals. The research is based on a survey of more than 1,000 North American enterprises as well as an interview with a leading higher education institution. According to the results, the top drivers for NaaS are:

- Access to new technologies such as 100 Gb Ethernet, Wi-Fi 6, and software-defined WAN (SD-WAN)
- The impact of the pandemic on business plans
- The ability to accelerate deployment of new features and functionality

The IDC research also identifies cost and integrated security features as the top network expansion considerations, and network security as the top network management concern. A NaaS model addresses both cost and security concerns to allow enterprises to evolve cost-effectively while addressing their most pressing challenges.[4]

4 Network as a Service Enables Flexible Consumption of Secure and Agile Enterprise Networks, IDC, January 2021.



Evaluating NaaS offerings

With the additional business pressures and mandates brought on by the pandemic, digital transformation is more complex than it was when organisations first started on their journey. The new and varied demands mean organisations planning a move to a NaaS model must consider several interconnected factors as they evaluate different offerings and approaches. This is the only way to ensure the NaaS offering meets current requirements, supports future goals and helps organisations more easily adapt to unexpected events.

Look for the flexibility to customise the NaaS offering

There is no one-size-fits-all approach to NaaS, and there's no need to lock the organisation into a rigid model that creates organisational anxiety, or that doesn't meet business, industry or customer requirements.

For example, some organisations will want or need to maintain control of network resources. And they should have the flexibility to do that. For these organisations, a hybrid approach to NaaS is often the right choice: The organisation purchases the hardware upfront as a capital expenditure and is responsible for managing and upgrading hardware resources, but subscribes to software, licenses, and applications as a service.

A flexible approach to NaaS also allows organisations to tailor their subscription, its duration, and its monthly cost to meet their unique requirements. For instance, some organisations may want to expand their network in phases. This flexibility allows them to extend their network at their own pace, having multiple subscription durations to facilitate the management of their IT infrastructure.

These are just a couple examples of the potential to customise a NaaS subscription. The NaaS provider should be able to tailor its offering to meet almost any requirements, environment and budget.

Focus on end-to-end security

From a technology perspective, security is the most important aspect to consider in any network offering. Every element in the offering must implement the latest security techniques and best practices, and there must be a well-defined plan for security updates as patches and software upgrades are released. When evaluating NaaS offerings, look for solutions that protect:

- Access to the network from within the organisation's facilities and from remote locations
- The information stored on devices, particularly mobile devices
- Applications and tools, especially those that are business- or mission-critical and those that are used for remote collaboration
- The data employees can access, download and upload to the cloud
- Connections to external sites, such as data centres, and to customer, partner, and supplier organisations



Consider work styles and applications

The sudden shift to remote working due to the pandemic has very likely changed work styles forever. While essential workers have continued to work on-site throughout lockdowns and restrictions, some who have been working remotely may never return to working on-site. Others may choose a hybrid approach that combines on-site and remote work. The NaaS offering must securely support staff in all circumstances.

The combination of work styles within an organisation influences NaaS technology decisions. For example, if staff is primarily working on-site the corporate network and Wi-Fi technologies may be the top priorities. However, if it looks like remote working is the more common approach, improving data centre and cloud connectivity may be a priority.

It's also important to consider the applications each employee needs to access, the bandwidth required in each case, and where the employee is located. While voice communications solutions don't have significant bandwidth requirements, video communications and collaboration solutions do. And to be used effectively, they must be delivered with the appropriate QoS and QoE. That means the NaaS offering must have the ability to support multiple simultaneous video streams and prioritise network traffic and bandwidth allocation based on which employees are using which applications and from which location.

Organisations should also consider innovative applications they can purchase as a service that will increase operational efficiency and allow for business process automation. Examples include:

- Asset Tracking that helps organisations locate mission-critical assets, including people and equipment
- Predictive maintenance for network equipment
- Business process automation by connecting devices and people based on incident triggers
- Secure Access Service Edge (SASE) that provides secure "work from anywhere" capabilities

Work with an expert partner

With so many interrelated factors to assess and balance, most organisations will want to work with an expert partner who can help them evaluate their NaaS requirements and develop the strategy that's best for their organisation and its unique needs.

In addition to providing the hardware and software options that are part of a robust NaaS offering, the partner should be able to offer value-added support services. These services can include specialised solution deployment and security services as well as issue resolution and repair services with Service Level Agreements (SLAs) tailored for business priorities. These services help organisations maximise the benefits of their NaaS strategy and further accelerate digital transformation.



NaaS offers new agility

Alcatel-Lucent Enterprise understands the technologies and considerations involved in a move to NaaS. We provide flexible access to the solutions needed by organisations in any industry, and at any stage of development, to adopt a NaaS model and accelerate their digital transformation.

A complete set of NaaS solutions

With our approach to Digital Age Networking, you have access to network hardware and software that meets your requirements for cost-effective simplicity and secure automation including:

- **Secure high-performance network switches, WLAN access points, SD-WAN hardware appliances and network management software** that are regularly updated to provide new capabilities and the latest security features
- **An autonomous network** that provides the simplest approach to securely and automatically connecting people, processes, applications and objects — whether they're indoors or harsh outdoor environments
- **Segmentation techniques** that enable secure and efficient onboarding of IoT devices while protecting the rest of the network from being compromised
- **A unified management system** that provides end-to-end network visibility, a single point of configuration, policy assignments, and monitoring for all wired and wireless network elements, on and off premises
- **Innovative industry specific applications, asset tracking, business process automation, SASE "work from anywhere" Services** that increase productivity and open the door to new revenue streams**.**

A fully customisable NaaS subscription

Our NaaS solutions are fully customisable to meet each organisation's unique requirements for hardware, software, licenses and applications. Organisations have complete flexibility to mix capital equipment purchases with their NaaS subscription, as needed, to meet business and budget goals. And they can always add to or remove NaaS elements from their subscription, on the fly, as requirements evolve.

Subscriptions are in months for better adaptability to business constraints. A single invoice consolidating all your active subscriptions is provided with four billing options: full payment, annual, quarterly, or monthly to suit your accounting practices.

Alcatel-Lucent Enterprise is ready to help you take your organisation's digital transformation to the next level.

To learn how our NaaS offering can help accelerate your digital transformation, contact us or visit our Corporate web site.

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