



nile

Translating Network Reliability into **Lower** **TCO & Rapid ROI**

Beyond connectivity, Nile ensures that your network is free from frustrating downtime that can cripple productivity and hinder business growth.

Introduction

In the ever-evolving landscape of enterprise network infrastructure solutions, Nile stands as a game-changer, revolutionizing the way we think about wired and wireless LANs. Beyond mere connectivity, Nile ensures that your network operates seamlessly, eliminating the frustrating downtime that can cripple productivity and hinder business growth.

The network is the lifeline of any modern organization utilizing technology to improve employee productivity and enable effective use of real-estate. Downtime, slow connections, and unresolved issues can disrupt workflows, frustrate users, and ultimately lead to financial losses. Nile Access Service delivers a next-generation wired and wireless access network that not only promises guaranteed performance for coverage, capacity and availability but also delivers tangible benefits that resonate with businesses across industries.

Advantage with Nile	3
Nile Differentiation	6
Network Engineering	6
Network Security	7
Network Operations	8
Conclusion	9



Advantage with Nile

Enterprise IT organizations demand a network infrastructure that aligns with their core requirements to support critical IT initiatives, at guaranteed service levels. In other words, reliability and availability are not only important requirements, they are essential. In the rest of this document, we highlight the key outcomes that can be achieved with uninterrupted connectivity enabled by Nile Access Service across the enterprise real estate.

Nile's next-generation wired and wireless access network is built with high availability and redundancy in mind: across wireless coverage, wired backbone and more. Disaster recovery design within a Nile network is the default option. Highly resilient and radically simplified network design eliminates the need to maintain a golden configuration file across the infrastructure or a best practices design document: since the network automatically maintains its "best state" across all sites.

Scalability and security are key considerations given rapid adoption of digitization initiatives across the enterprise.

Nile's agile innovation model powered by modern cloud software acts as the secret ingredient to help organizations seamlessly expand their growing business footprint. Nile's robust security measures powered by its campus zero trust innovation are designed to align with stringent security requirements often put forward by cybersecurity teams, cyber insurance compliance policies and/or network security audits.

A Nile network is by design consumed as operational expense in a per-user or per-sqft pricing, with monthly or annual payment terms - and does not require upfront capital expense. Proactive monitoring and predictive maintenance of service quality are essential parts of the Nile Access Service. Closed loop automation powered by AI eliminates traditional manual lifecycle management, radically reducing operational burden for IT.

Let's take a closer look at the unique capabilities of the Nile Access Service, results from customer deployments in the real world and how they can be translated to business outcomes.

Eliminating Network Tickets

Nile's unique technology is designed to proactively test with virtual and physical sensors to detect deviations in its promise for guaranteed performance. This proactive service quality improvement takes place even before users and devices notice any connectivity issues, hence is able to prevent up to 100% of network related IT tickets.

Few customer outcomes include:

"During our freshman move-in, we received no trouble tickets. This is a drastic difference compared to last year with our previous technology. In fact, this has never happened before."

- Higher Education

"Right from the start, Nile sensors have constantly been monitoring our network. They see problems before others do, and the network is constantly self-tuning to prevent problem areas."

- High Tech Enterprise

Rapid Issue Resolution

Nile doesn't stop at preventing downtime; we also excel at rapid issue resolution when issues arise outside of our control, up to 25 times faster than traditional network infrastructures. Our automated systems identify root causes swiftly, ensuring that you're never left guessing.

"It's always been a big mystery when a particular application is inaccessible. We went from spending 40 hours on troubleshooting to 1.5 hours."

- Higher Education

"Within 15 minutes, Nile production engineering team was aware of simulated link failures, rogue APs, network elements going down during our hands-on testing during our evaluation; no support tickets required."

- Manufacturing

Zero Touch Software Maintenance

Say goodbye to manual software maintenance and endless updates, with unpredictable maintenance windows and manual post-upgrade performance analysis. Nile service maintains a single production release of its microservices based cloud software across all its customer deployments, and orchestrates rollouts with pre- and post-validation of service quality, ensuring that your network remains up-to-date without the headaches.

"Knowing Nile is managing updates and security patches and testing them before they're pushed out gives me peace of mind. We have our weekends back."

- General Enterprise

Continuous Security Compliance

Cybersecurity is a top requirement for any business today. Nile enables zero trust isolation for each connected device, enabling continuous compliance against cyber insurance requirements and radically reducing the attack surface for potential incidents and relevant downtime.

"Our legacy machines run Windows XP, which pose a cybersecurity risk and require \$55K to be replaced. With Nile, we locked down and isolated these devices, preserving their lifespan."

- Healthcare

Built-In System Care and Upkeep

Automating additions, replacements, and refreshes, Nile ensures that your network is always in top shape.

Here's how one organization benefited:

"Our network was no longer a solid foundation. The only way I was going to address that was with Nile - without letting other things slip through the cracks."

- Distribution / Logistics

Lower TCO & Strong ROI

Imagine a 5-year access network subscription with the following parameters:

- 100,000 square feet (sqft) of workplace with one Wi-Fi AP at every 2,000 sqft
- 25% of the total number of access switch ports reserved for IoT
- Each of the 500 employees (200 sqft / employee) carry one Wi-Fi device
- 4 network related IT tickets per device per year is eliminated with Nile
- Two hours of lost productivity per incident, valued at \$40, recovered with Nile

Based on these, Nile translates to a **>60% reduction** in total cost of ownership (TCO) savings and **<3 year** return on investment (ROI). With Nile, you conquer downtime, take a sledgehammer to your TCO and welcome an ROI that's quick and impactful.

Nile Differentiation

In a world where network connectivity often gambles with service quality, Nile is changing the game with high-capacity installations and closed loop automation to proactively detect and resolve deviations in service quality. In the face of fragmented network security, Nile stands firm, pioneering a campus zero trust solution to minimize risk and radically reduce attack surface across the enterprise LAN. And when outdated network operations overwhelm IT teams, Nile steps in to tackle traditional manual and burdensome management workflows with AI automation. Below we review Nile's long list of industry first technology innovations for network engineering, security, and operations.

Network Engineering

Traditional designs for access network connectivity often leaves too many things to chance in enabling guaranteed service quality.

It has been an unfortunate reality for IT teams to pick cost vs reliability and performance. They constantly make compromises in hardware selection across the enterprise LAN design, relying on capabilities of a series of product SKUs.

Deploying each product required custom configuration to maximize its individual capacity

without the ability to focus on and keep track of overall wired and wireless LAN coverage, capacity, and availability.

As Nile, we have decided to stop doing the same thing, expecting a different result. We are aiming to bring laser focus on guaranteed network uptime and elimination of guesswork in enhancing overall system performance. We do so with the following unique capabilities.

A Nile network is built strong to cover every corner

- High capacity install and cabling health check: eliminate poor installs.
- High density design and deployment of Wi-Fi 6/6E APs: eliminate guesswork.
- Proactively detect deviations in system status from baseline: go deeper.

A Nile network self evaluates for essential insights

- Report key results on user, device, app quality: eliminate alert-fatigue.
- Proactively test with softbots and physical sensors: automatically fine-tune.
- Enabling end users to self-monitor their service quality: keep them informed.

A Nile network is as agile as cloud software

- Network functions as microservices with built-in observability: self-monitors.
- Nile production team instruments automation for novel issues: self-resolves.
- Hitless upgrades to on-prem microservices for improvements: self-improves.

Network Security

Principles for zero trust networking give us a solid blueprint in implementing a secure enterprise LAN. But today's perimeters for access network security are too fragmented, with multiple product touchpoints for configuration, to align campus and branch network security implementations with zero trust security.

Security and network design are being tackled separately since the network elements at the enterprise campus and branch locations simply do not speak the same language as today's cybersecurity technology stack.

As a result, securing the network usually meant complex configuration changes on top of the existing network design, new appliances to tackle requirements for Network Access Control (NAC), additional appliances to protect against east-west traffic flows for IoT along with device profiling, and new gateways/routers to integrate with cloud security services for north-south traffic flows.

It has not been easy. And it is even harder during moves, adds and changes.

As a gold standard in access network security, Nile customers take advantage of zero trust principles by default. With Nile, "campus zero trust" model is not an add-on, it is embedded within the network. This eliminates the same old burden and unnatural pattern of having to maintain security policy definitions via VLANs, static ACLs and NAC configurations.

Let's summarize how Nile eliminates piecemeal network security, and radically reduces attack surface across the enterprise LAN. Note that the Nile solution has already achieved [ISO 27001, SOC2 Type II, CSA Level 1 certifications](#).

A Nile network mandates secure access

- Authenticate and authorize all for network access: know your audience.
- Hardened hardware, TPM security, MACSec encryption: protect the network.
- 802.1x for users, SSO for BYOD and device profiling for IoT: protect your assets.

A Nile network orchestrates access without static ACLs

- Dynamic rules that move with users and devices: eliminate static ACLs.
- Security patches by Nile production engineering: we protect the service.
- Visibility across the stack including wireless IDS: no more confusion.

A Nile network integrates policy based segmentation in L3

- Isolation across all authorized users and IoT devices: protect users & devices.
- Centralize traffic & share user attributes with firewalls: protect against threats.
- Tunnel guest traffic to Nile's point-of-presence (PoP): eliminate risk.

Network Operations

Manual workflows can be a great source management burden and significant time sink unless automated end to end. And unfortunately, closed loop automation for IT operations across the enterprise network has never been possible primarily due to lack of an integrated data model across the network core, the external environment and user / device and application context.

First, we have been trying to script our way out of complexity for years. Many different versions of software, coupled with hundreds configuration options for installs, made it simply unscalable.

Each of these components comes with their own definition of data libraries, how the data is collected, processed and reported back to their backend systems for monitoring. Trying to correlate it all, across different deployments, have generally proven to be impossible.

And within each product line, today there is a separate effort to enable AI Ops – required to quickly monitor the performance & experience.

But, AI Ops takes a “model-centric” approach: “give me a chaotic set of logs, reports, and my magical algorithm will give you insights”.

In other words, in plain terms, it will sift through the trash to find the real valuable items automatically. The question we are asking ourselves is: why do we produce all this “trash” in the first place?

Nile Access Service goes beyond summarizing the task list for IT teams with AI Ops, and enables closed loop automation of network operations.

With the following set of unique capabilities, Nile takes IT teams out of the cycle of trial & error when it comes to lifecycle management. This collection of capabilities and services has never been possible for enterprise networks under an integrated data model in the cloud, enabling AI automation.

With the use of model- and data-centric AI, the Nile Access Service is able to move past the old world of scripting, and having to monitor constant stream of alerts & notifications.

A Nile network utilizes a deterministic system design

- Eliminate 80% of traditional configuration needs: prevent mistakes.
- Single set of hardware options across the stack: eliminate SKU confusion.
- Same design for Wi-Fi installs across all Nile tenants: no more surprises.

A Nile network goes beyond AI Ops with AI Automation

- Automated physical installation workflows with mobile apps: keep it simple.
- Radically simplified system provisioning: don't configure, orchestrate.
- Go deeper into system, user, device, app health: no more guessing.

A Nile network shares responsibility for your success

- Onboarding with Nile service delivery managers: let's do this together.
- Pre-/post-validation for software updates: just need a maintenance window.
- Proactive support from Nile customer success: we manage the tickets.

Conclusion

Nile's value in eliminating downtime will change the way you think about network reliability and expected performance for your infrastructure.

Unique capabilities within the Nile Access Service have tangible TCO and ROI benefits, from reducing tickets to swift issue resolution and cost savings on cyber insurance. With Nile, your network pays for itself during the subscription period, making it a smart and strategic investment.

As you rely on digital infrastructure and cloud-native solutions, we take care of your network so that you can focus on improving the way you work and adding intelligence to your business.

Nile shares the responsibility for your success and keeps your access network running smoothly, ensuring uninterrupted operations and peace of mind.