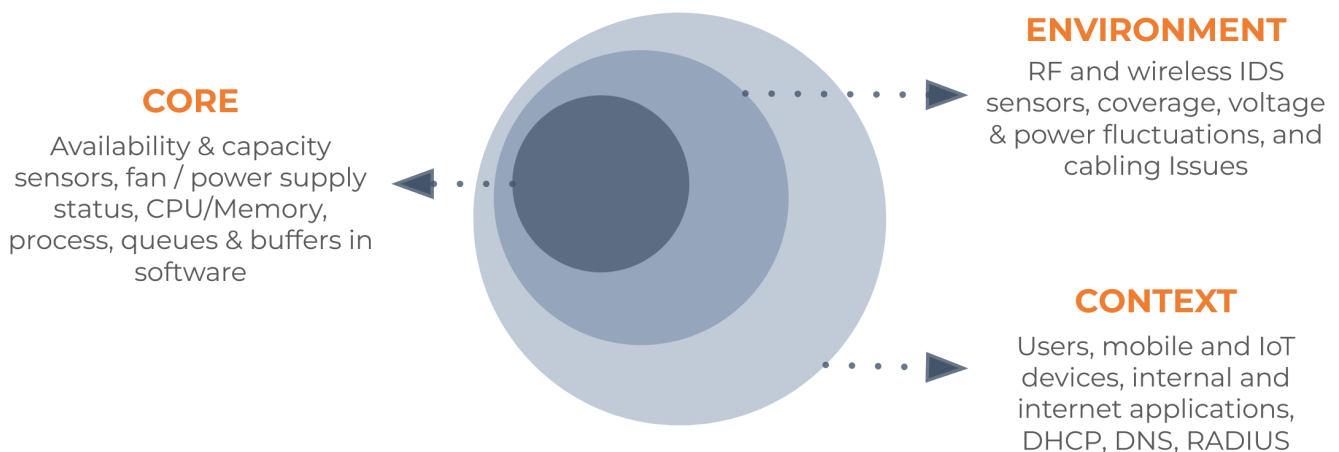


What is the Nile Architecture?

Overview

The Nile Architecture is based on the core principles of Core, Environment, and Context. These three pillars form the foundation of the Nile network design and management approach.

Core, Environment, Context

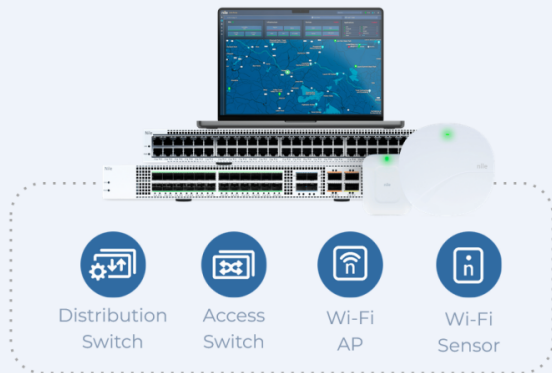


Core

When we talk about 'Core' in this context we are referring to the Nile Service Block which provides wired and wireless access infrastructure as a service. Designing our own hardware means we can embed physical and virtual sensors through out the NSB in order to gather the deep intelligence required to deliver fully automated infrastructure.

Nile Service Block

FOR WIRED & WIRELESS LAN



VERTICALLY INTEGRATED
INFRASTRUCTURE, PURPOSE BUILT
TO BE DELIVERED AS-A-SERVICE



Deterministic system design

with high performance hardware and built-in redundancy



Campus zero trust security

to enforce L3-only device isolation on hardened hardware



Comprehensive data collection

with deep instrumentation and physical/virtual sensors at every layer

Environment

An autonomous vehicle uses an array of sensors to monitor its surrounding environment, using this data to inform decisions and, if necessary, raise alerts. Nile monitors the environment where NSB is deployed using a similar model.

Physical Wi-Fi sensors and dedicated monitoring radios in our APs provide real-time data on the wireless environment, while switches in the NSB monitor for cabling health and power fluctuations.

Context

In the Nile Architecture, Context refers to the users and devices connected to the NSB, as well as the services and applications being consumed/delivered. Nile's context monitoring doesn't end with device status; monitoring user/device **experience** at the point of consumption is vital to our 360 degree view.

For example; when a wireless user establishes a connection they will be authenticated using RADIUS or other NaaC services. Once authenticated they receive an IP address via DHCP from internal systems or Nile DHCP. The user accesses enterprise cloud applications, requiring DNS.

Nile monitors the availability and response time of these services, building an ongoing 'pattern-of-life' dataset which our AI tools can use to take action if there are deviations in normal operations.

The same methodology is used to monitor the user experience across 3,800 automatically identifiable applications.

This 'Outside-in' approach is both unique and fundamental to the Nile Access Service.

Read next

[Nile's Layer 3 Only Network: Transcending VLANs](#)

Revision #10

Created 12 March 2024 21:42:42 by JR

Updated 28 March 2024 21:48:26 by JR