

NOKIA

CONSUMPTION-BASED IT BRINGS CLOUD AGILITY, COST EFFICIENCY TO NOKIA SOFTWARE

Boosts R&D velocity, lowers energy demand with
HPE GreenLake and HPE 3PAR

Industry

Telecommunications

Objective

Support fast-growing software development and testing demands with greater agility and efficiency

Approach

Adopt HPE GreenLake consumption-based IT model to build private cloud as a service on efficient, high-density HPE 3PAR all-flash storage

IT matters

- Delivers high performance to accelerate R&D velocity
- Brings greater infrastructure elasticity for frictionless capacity growth
- Enables storage to be automated and integrated with R&D workflows

Business matters

- Helps improve product quality and accelerate time to market
- Reduces energy demands with high-density technology architecture
- Lowers data center floor space costs thanks to smaller IT footprint



Leveraging consumption-based IT from HPE GreenLake, Nokia Software accelerates research and development (R&D) output to lead the 5G revolution with a private cloud as a service built on all-flash HPE 3PAR storage and HPE BladeSystem compute. As a result, Nokia Software maximizes performance and reduces capital expenses, while reducing its environmental footprint.

We live in a connected world today, where people rarely go anywhere without their mobile phone. That's because it's hardly just a phone anymore. It's also our navigation and entertainment; a direct link to banking, travel, and other personal services; a business tool; and so much more. Soon, the advent of 5G will further challenge what is possible on a mobile device. And Nokia, the Finnish telecommunications giant, is already out in front of the rising wave of 5G applications.

The Nokia Software business unit is a center of innovation, creating iconic telecom apps for Nokia customers. As Nokia vies for position at the forefront of the 5G revolution, the pace of its R&D is accelerating. To support test and development for its software engineers, Nokia Software runs agile, high-performance R&D data centers, called vLab. The vLab in Tampere, Finland, is built largely on technology from Hewlett Packard Enterprise.

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– Jarkko Kytömäki, vLab Infrastructure Manager, Nokia Software

Nokia Software boosts R&D velocity, improves cost efficiency, and reduces its energy footprint with HPE GreenLake consumption-based IT and high-density, and all-flash HPE 3PAR storage



Jarkko Kytömäki, Nokia Software’s vLab infrastructure manager in Tampere, explains, “Our mission is to provide first-class virtualized, shared, and remotely accessible R&D and testing resources for our global software developers. We want to give them a public cloud user experience but with on-prem control and cost points.”

Nokia Software has a long history with HPE, using HPE BladeSystem and HPE Synergy compute systems with HPE 3PAR storage as the foundation of the vLab infrastructure. In fact, to support the growing demands of Nokia developers, the company recently extended its investment in all-flash HPE 3PAR 20850, which was first deployed in 2015. Moreover, to increase elasticity in the infrastructure, Nokia Software also adopted a consumption-based IT model from HPE GreenLake to deliver a private cloud as a service for R&D.

“This newest iteration of HPE 3PAR is loaded with the latest innovations that allow the storage environment to be automated and integrated with R&D workflows,” notes Kytömäki. “With HPE GreenLake, we are now able to bring hardware elasticity on-prem at a fraction of the cost of public cloud. If demand from our users increases, I’m confident the HPE GreenLake consumption model can bring the additional resources we need to meet the business demand.”

INCREASES THE VELOCITY OF R&D

Today, Nokia Software has five HPE 3PAR 20850 arrays in production in the Tampere vLab. It is a very active environment, supporting thousands of software engineers, developing and testing 5G applications in a continuous integration/continuous delivery (CI/CD) model. Automation with HPE 3PAR helps the Tampere vLab deploy as many as six million virtual machines (VMs) per year for R&D and testing, and that number is rapidly growing.

Such intensive demands are why Nokia Software continues to put its trust in the reliable all-flash performance of HPE 3PAR. Kytömäki points out that in software development, the majority of the workloads are initiated by machine-to-machine calls and driven by test automation, making them much faster than human interaction. “With increased R&D velocity, we saw that the speed of all-flash storage really does matter. The high performance of the HPE 3PAR 20850 enables our developers to perform more testing in parallel, which translates to better quality products and faster time to market.”

Working hand-in-hand with Kytömäki and his vLab team is an on-site HPE technical consultant and HPE GreenLake services coordinator, who has built such a close relationship with vLab personnel, they refer to him as Mr. DeepLake.

Kytömäki remarks, “We value our Mr. DeepLake from HPE for providing guidance and best practices. Together, we can define a more perfect infrastructure. Because of this, I’ve been able to move my development people to work on higher-value projects.”

RUNNING LEAN AND GREEN WITH HPE GREENLAKE

Leveraging HPE GreenLake to operate the vLab in a consumption-based IT model, Nokia Software only pays for the storage capacity used, creating a very manageable and predictable monthly operating expense. Yet, with HPE GreenLake, the resources are in place to grow as needed without the time and expense associated with new capital investments.

“With HPE GreenLake, we can always add capacity by simply building on the hardware investment we already have available to us,” Kytömäki remarks. “It provides us a more frictionless way to scale and keep up with our R&D demands.”



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Customer at a glance

Solution

Private cloud as a service for telecommunications software R&D and testing

Hardware

- HPE 3PAR Storage
- HPE BladeSystem c7000
- HPE Synergy

HPE Pointnext Services

- HPE GreenLake

Kytömäki also points out that HPE GreenLake supports Nokia’s progressive environmental objectives. The company is targeting a carbon-negative data center operation, using renewable energy sources to power the data center and water from a nearby Finnish lake to cool the data center, as well as recovering heat from the IT systems for redistribution into the surrounding community ecosystem.

“HPE GreenLake enables us to continually gain performance and workload capacity in denser, less energy-demanding footprints. Storage is a good example, where the same capacity that took up six racks in the past, now fits in less than one. That smaller footprint means less electricity, less cooling, and of course, less data center floor space, which is the most expensive resource.”

Moreover, HPE GreenLake helps Nokia Software keep pace with the latest technologies. Kytömäki concludes, “We are not tying our hands to aging technology because HPE GreenLake will bring us the next innovation as it emerges. Today, it’s the HPE 3PAR 20850 arrays, but in another couple years it will be something even better. And we have Mr. DeepLake to help us stay current with it all and make sure everything continues to run smoothly.”

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