



## HELSE NORD IS READY FOR THE FUTURE OF HEALTH TECH

### HELSE NORD

#### NAME

HELSE NORD

#### WEBSITE

HELSE-NORD.NO

#### INDUSTRY

HEALTHCARE

#### LOCATION

BODØ, NORWAY

#### KEY CHALLENGES

- Modernize data centers
- Transform Networking and security

#### SOLUTION

Helse Nord has transformed their old three layer data infrastructure into a modern software defined data center (SDDC). VMware solutions ensure scalability, increased efficiency and robustness for present and future services.

#### IMPACT

- Unified data infrastructure for large region
- Increased efficiency and scalability
- Better foundation for IoT and new services

As with all health authorities, Helse Nord's IT systems have become increasingly critical to the delivery of its services. Supporting private health data for almost half a million people, professional work applications for 19,000 employees and other important health services, Helse Nord needed to upgrade its IT infrastructure to handle current and future requirements. Working with VMware and partner Core Services, it now has modernized its data centers, enabling Helse Nord to build what is now one of the most cutting-edge health systems in the country that will transform outcomes for patients in the coming years.

Helse Nord is geographically the largest health authority in Norway. It runs 11 hospitals, serving approximately 480,000 inhabitants from Kirkenes in the east, close to the Russian border, out to the island of Svalbard, west of the Norwegian Sea. Helse Nord employs more than 19,000 people, and is one of four health authorities in Norway, state-owned by the Department of Health.

#### The Challenge

Helse Nord IKT (ICT) is the main IT department for the entire region. They support the 11 hospitals and main hospital pharmacy whenever they require new functions, services, increased capacity and other needs. Previously their data center architecture was divided in three traditional divisions: Networking, storage and compute. Each working independent from another.

"That way of doing things led to very long delivery times for us. Let's say we needed to expand our data center. We first had to place an order, and then wait for new parts to be delivered from somewhere in Europe. Then you had to install them physically into the specific on-premise data centers. After that, you somehow needed to make the three divisions coordinate with each other. That was difficult in a busy workday. It was not uncommon to wait several weeks for us to deliver what the organization needed," says Vegard Jørgensen, Senior Advisor at Helse Nord IKT.

Security requirements for the healthcare industry, as well as policies for data storage like GDPR, were also getting stricter. Helse Nord was also excited about emerging technologies like IoT which have the potential to transform healthcare. Helse Nord realized its infrastructure could not support its increasingly advanced digital requirements, and started a public procurement process that was won by VMware's partner, Core Services.

#### The Solution

The journey towards Helse Nord's new digital foundation started with pre-project evaluation in cooperation with Core Services followed by test runs in the following months. Soon after Helse Nord started implementation of its new

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VEGARD JØRGENSEN  
SENIOR ADVISOR  
HELSE NORD IKT, DEPARTMENT OF SERVICES

#### VMWARE FOOTPRINT

- VMware vSphere
- VMware vSAN
- VMware NSX
- VMware vCloud Suite

#### PARTNER



Software Defined Data Center (SDDC), with VMware vSphere® and VMware vSAN™ playing important parts.

“We have completely virtualized the old architecture. With vSphere, we now manage all functions from one portal. The people managing services are also running the infrastructure. Jobs that used to take weeks have been reduced to less than an hour,” says Jørgensen.

“When you combine vSphere 6.5 and vSAN 6.6, you get an incredibly powerful tool. Without it, we would not be able to automate. All data is now run according to policies. To launch new services, all you need to do is choose the required specifications. For instance, you can now decide how many data centers they will be running in.”

Scalability used to be painful for Helse Nord, easily taking two weeks if a hospital needed to expand their data center. Now VMware NSX® and VMware vCloud Suite® have enabled the IT team to automate large parts of the supply chain, so it can deliver the same service in less than 30 minutes. Upgrading to vSphere enabled Helse Nord to deploy VMware vSAN to automate storage. Its data center now consists of between 800-1000 different services. Micro segmentation lets Jørgensen and his colleagues isolate each one from the other.

“Security has been part of the plan since day one. Patient data is now safe, secure and compliant with current regulations. We are now one of the first in the country to allow patients to easily access their own health data through a public website.”

### Business Results

With guidance from the Directorate of Health and the National Security Authority, Helse Nord has made patient records easily accessible. Patients simply log into [www.helsenorge.no](http://www.helsenorge.no) with the secure login service BankID, to access their journal data. As a result, the relationship between doctors and patients has changed.

“We now have patients in their hospital beds accessing their personal records via their mobile devices. And when the doctor returns to them the following day, they have seen all the notes, researched their condition and treatment, and are much better informed,” says Jørgensen.

All the 19,000 employees within the organization use the services provided by Helse Nord IKT. This includes the email system, staff shift planning tools and a personnel portal for employee-related information.

“The whole system is hybrid. Some services run in our on-premise private cloud on VMware NSX. Some run on the public cloud - our accounting system being one example. It is a highly scalable solution.” says Jørgensen.

With patients actively accessing data on their servers, Helse Nord recognizes that patients are now also end users.

“Increasingly patients want to take charge of their own health activities. So we are investigating how to improve the booking of medical appointments, eliminating the need for a patient to call in and make a booking.”

Helse Nord has upgraded its infrastructure without requiring the organization to expand. With VMware and more time to focus on delivery, as well as increased flexibility to implement changes, Helse Nord now can focus on implementing the DevOps model in the organization.

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“It’s a faster way of developing. Google and Apple are making hundreds of changes every day on their platforms. We will not do that many, but we need to make more and smaller changes, and we must ensure that time from product development to the end user is as short as possible. This gives us the ability to provide continuous updates. This is a new way of working, and we need to align the rest of the organization accordingly.”

### Looking Ahead

Norway is now facing a big generation of elderly people retiring from the workforce which is increasing pressure on national health services.

“If we continue to do things in the same way as before, we would need to hire a large workforce of health workers. That’s why it is essential for IT and technology to handle some of these functions going forward.”

There is also an emerging market of IoT technology that can connect to Helse Nord’s software defined data center.

“We already have heart monitors reporting patients’ heart rhythms directly into our digital infrastructure. We see that IoT with sensors has huge potential, and we are already talking to leading providers. But IoT will also demand a lot of extra capacity from our data centers. That’s why it feels great knowing that our digital infrastructure is ready to meet this demand,” says Jørgensen.

### About Core Services AS

Core Services AS is one of the leading providers of IT infrastructure, hyperconverged, Software Defined solutions. The company delivers products, services and business critical security and data center solutions to some of the largest companies within the private and public sector in Norway. In 2017 Core Services became part of Dustin, which is one of the leading providers of IT products and related services and solutions in the Nordic. [www.coreservices.no](http://www.coreservices.no)

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Photo courtesy of Lufttransport AS

