NTE

NTE is a renewables and telecoms company whose ambition is to make the Norwegian region Trøndelag climate-neutral and digital. Icinga is a strong building block of their business both in the Telecom and the Energy division.

NTE, initially established as an electricity company in 1919, expanded its operations to include a Telecom division in 2004. This division focuses on providing fiber optic connectivity to local municipalities and has become one of NTE's main areas of growth. Currently, NTE serves a total of 75,000 customers in Norway, including 5,000 business customers.

In addition to their telecom services, NTE has recently ventured into the field of Internet of Things (IoT) by offering a state-of-the-art LoRa WAN radio communication network. They have also secured a contract to install 60,000 IoT water measurement devices in a specific community.

Ranking among Norway's largest renewable energy companies, NTE has 550 employees throughout Trøndelag and produce renewable energy for 500,000 people. In addition, the company is a provider of electrical installation and electrical application retailing as well as optic fiber broadband. The company is owned by the 19 municipalities of Trøndelag.

The Challenge

> **"**
>
> It looked really promising, it had momentum and it was going somewhere. So, we decided to take a chance and hop on the train.
>
> Thomas Vådahl
> Systems Manager
> NTE Telekom AS

Thomas Vådahl, System Administrator at NTE recounts the company's history. During the early stages of the company, they relied on various software solutions that were pieced together. However, in 2011, they made a strategic decision to rebuild their inventory and monitoring system from scratch. The company strongly believes in the power of open source and prioritizes its use due to cost-effectiveness and the ability to customize.

The company also places great importance on the transparency of source code and the security advantages offered by open source projects. Additionally, NTE values the support provided by the open source community and sees the independence from vendors as a significant benefit.

When the team embarked on setting up the new system, their goal was to seamlessly integrate their inventory system with Icinga monitoring and automate processes as much as possible. Thomas Vådahl, System Administrator, was familiar with Nagios but found its appearance unappealing and was uncertain about its future direction. Fortunately, they stumbled upon an early version of Icinga, which showed great promise and had a strong development trajectory. Seeing this opportunity, they decided to take a chance and embrace Icinga as their preferred solution, much to Thomas' satisfaction.
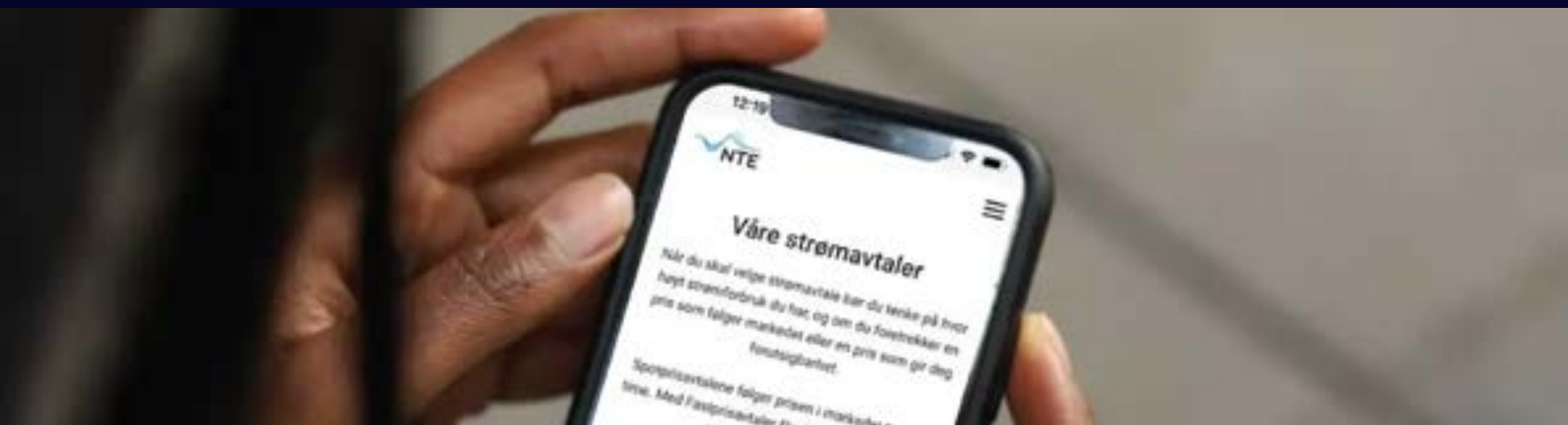
The Solution

Starting with Icinga

The set-up of the entire installation went like a breeze. The company actively participated in forums, where they received quick and helpful responses whenever they had any uncertainties. They also attended the Icinga camp in Stockholm, where they had the opportunity to meet Opsdis (binero), Icinga's Scandinavian partner. Opsdis provided valuable assistance by conducting a comprehensive review of their entire setup, including their custom checks.

NTE prefers to follow their unique approaches when it comes to handling tasks. They have implemented an inventory system where they make all the configs for Icinga – and they are extremely satisfied with its performance.

Built-to-last Business

Over ten years have passed since the initial implementation of their Icinga installation, and their network has significantly grown. They now serve 5,000 business customers, ranging from large municipalities, schools, hospitals, banks, and even military installations. These customers require a scalable and stable network. Thomas is particularly pleased that "Icinga helps us daily with the threshold system in pinpointing potential faults before they actually affect our customers."

The current Icinga installation at NTE Telekom monitors approximately 6,000 hosts and 40,000 services, ensuring comprehensive network monitoring for both their internal infrastructure and their high-end business customers.

> "
> The nice thing about Icinga is that you can integrate with anything and that it´s so flexible. Nothing is stopping you.

Thomas Vådahl
Systems Manager
NTE Telekom AS

Taking their own Ways

NTE Telekom currently employs a high-availability setup consisting of two masters, a separate Icinga web server, a combined Redis/Icinga DB server, and a large MariaDB server. They also have two Influx servers and two satellites. To maintain simplicity, NTE decided against dividing their network into zones but instead devised a custom approach.

Thomas emphasizes that Icinga grants them the freedom to implement their preferred methods, and the system operates autonomously without requiring manual intervention. All the necessary work is performed within their inventory system, which automatically updates Icinga accordingly.

Establishing a Source of Truth

Additionally, NTE has integrated Icinga with Influx and Grafana, further enhancing their monitoring capabilities. Their NOC, which operates 24/7, utilizes eight large monitors, with seven of them dedicated to displaying Icinga data through Grafana.

NTE also monitors Service Level Agreements (SLAs) for their customers. In their customer portal, they have integrated Icinga to fetch statistics from various equipment, allowing them to track uptime on specific connections. With Icinga's exceptional stability and reliability over more than 10 years, NTE can have peace of mind knowing that their monitoring system consistently delivers reliable performance.

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> With Icinga we can have our own ways and it just works. Nobody ever touches it. We just do all the work in our inventory system and Icinga is automatically updated.
>
> Thomas Vådahl
> Systems Manager
> NTE Telekom AS

> ❞
>
> We call Icinga our source of truth. Everything we pick from Icinga is always 100% correct.
>
> Thomas Vådahl
> Systems Manager
> NTE Telekom AS

Success

❞

Icinga will play a major part in delivering new XAAS services, both for our own visibility and in customer dashboards.

Thomas Vådahl
Systems Manager
NTE Telekom AS

Customer Portal with Icinga Dashboards

NTE's B2B customers have access to a dedicated portal that provides them with a comprehensive overview of all NTE-related services. The portal displays real-time status updates obtained from Icinga, ensuring transparency and allowing customers to stay informed. Thomas expresses his satisfaction, explaining that if a customer suspects an issue, they can simply refer to the dashboard and observe the same information as the NTE team. This empowers customers to troubleshoot and resolve problems on their own.

Icinga at the Core of New XAAS Services

Icinga plays a vital role in two major forward-looking projects at NTE. The first project involves their new XAAS (everything as a service) service offering, where Icinga serves as a crucial component. For instance, in their Infrastructure as a Service (IaaS) offering, NTE provides customers with virtual machines, accompanied by comprehensive visibility into their usage and costs through VMware, facilitated by Icinga's VSphere Module. This is particularly valuable for local customers who require their data to be stored in Norway and benefit from NTE's fiber-optic lines. By utilizing Icinga, NTE can consolidate all relevant information into a single system, eliminating the need for additional monitoring tools.

Insight into the IOT World

The second project in which Icinga plays a significant role is NTE's upcoming IoT offering. Icinga serves as a crucial component at the core of this project. In this particular venture, NTE not only monitors the 60,000 water-measurement units but also oversees the backbone of the LoRa WAN (Long Range Wide Area Network). It is essential for NTE to ensure that all components are online, packets are flowing smoothly, and data is reaching its intended destinations effectively.

In both projects, Icinga's comprehensive monitoring capabilities enable NTE to maintain visibility and control over critical aspects of their services, ensuring efficient operations and customer satisfaction.

Outcomes

- ☑ High flexibility ensures freedom to take own ways in monitoring

- ☑ High availability set-up for 100% security

- ☑ Comprehensive overview and reliable source of truth for the NOC

- ☑ Customer portal with Icinga dashboards assures transparency for end customers

- ☑ Icinga as backbone for forward-looking new projects of NTE (XAAS services and IOT World)

Share your Story

Do you also have excellent experiences with
Icinga and would like to share them?
We'd be happy to make your story come out big
on our website!

Please get into contact with us at:

info@icinga.com

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About Icinga

Icinga is a comprehensive open source monitoring solution that integrates easily in existing infrastructures and is unbeatable in configuration possibilities, automation and scaling. Monitor private, public, or hybrid clouds. For more information, visit icinga.com

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