Ethernetics makes the internet greener with server monitoring platform

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Pieter Beyl

Electricity consumption of the internet and its growing infrastructure ask for optimisation to become 'greener'. In order to optimise the life expectancy and efficiency of server infrastructure, monitoring the energy consumption, the environmental conditions and communication flows are key. With its Decabon platform Ethernetics targets one-third less power consumption and material carbon footprint reductions per server rack by half.

This case is one of the 15 smart product examples we have compiled for you in the Smart Product Inspirator

Discover all 15 examples

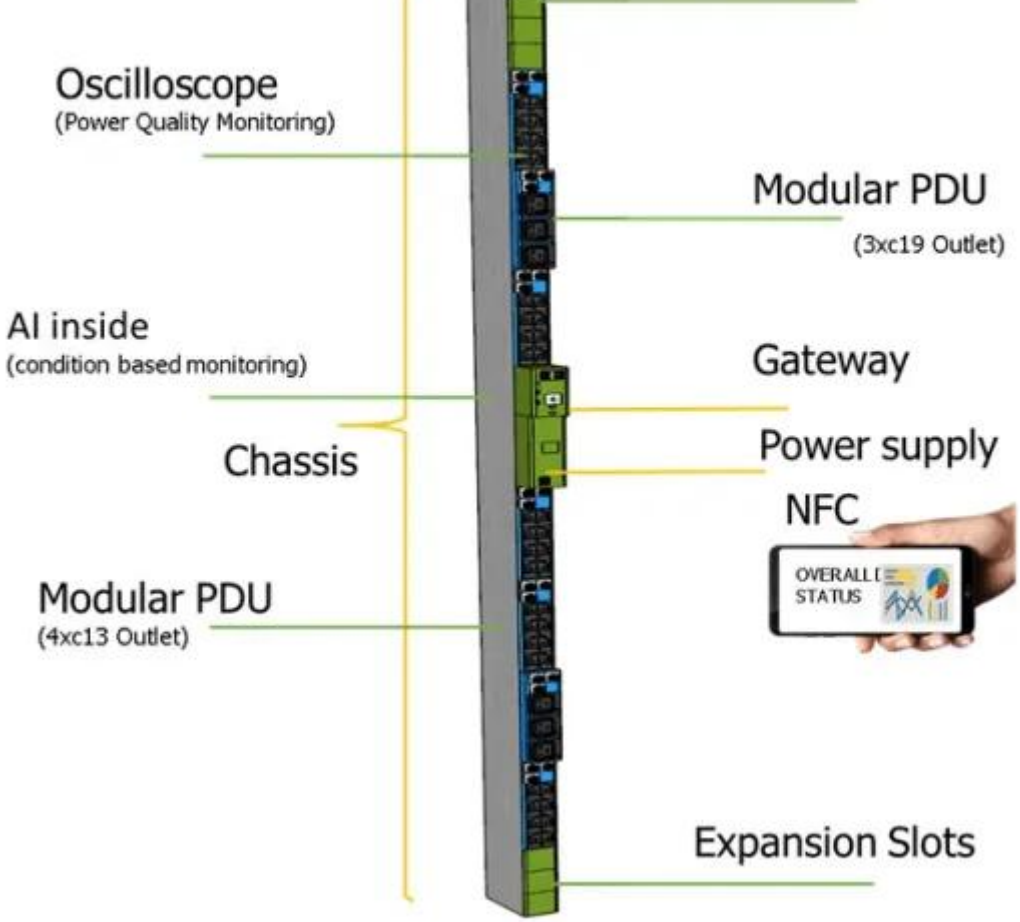
Ethernetics is a startup company with a mission to reduce the carbon footprint of the internet. Its Decabon platform, consisting of off-the-shelf hardware and over-the-air software solutions, supports telecoms, datacentres, datacentre operators and their customers in making the internet greener.

Why this smart product

The internet will soon account for 5% of the global electricity consumption. This growing demand is not only directly related to the growing data traffic, but also to the growing infrastructure. While much attention has been paid to reducing the energy for cooling, the consumption of the IT equipment itself stayed largely untouched. In order to optimise the life expectancy and efficiency of server infrastructure, monitoring the energy consumption, the environmental conditions and communication flows are key. With its Decabon platform Ethernetics targets 30% less power consumption and material carbon footprint reductions per server rack by 50%.

Value for the customer

The main benefit for the customers is the lower energy costs. The platform runs several energy saving services that automatically switch on/off power supplies and servers in order to minimise idling, load imbalance and supply redundancy. Based on real-time measurements the system can tell where the energy losses occur. The collected datasets allow Ethernetics to train AI algorithms and automate new processes to increase the efficiency even further. By detecting and predicting issues, the monitoring platform will then be able to reduce server downtime and even extend the lifespan of the IT equipment.



Technology behind smart product Decabon

The modular platform is mounted vertically at the edges of a server rack and can be equipped with swappable modules for power monitoring & distribution, IoT device connections, network switches, artificial intelligence inside and software services provided out of the cloud. The power distribution unit is extended with a patented oscilloscope and spectrum analyser built-in for detailed real-time electrical measurements. An ultra-fast network switch module allows to lower network energy usage by 15%. A dedicated computing unit with AI capabilities performs condition-based monitoring to identify potential problems and to reduce downtime and maintenance costs. The measurement data and dashboards not only support an optimal system management, but also support in achieving sustainability certifications and quality standards. As the core of Ethernetics's innovation is on the embedded software running the energy saving services, the company collaborates with external partners for the cloud back-end and cloud dashboard development.

Capturing revenue

The base configuration and swappable power modules are typically acquired by the customers as a one-time expenditure. The energy saving services that run on the platform are offered through a licence. Ethernetics also gets a return on the customer's saved energy costs thanks to a gain-sharing agreement.

Next steps

With the first generation of products launched in 2023, Ethernetics is already thinking ahead about putting more focus on circular strategies in the second generation, for instance a takeback program for the swappable modules. In parallel, the energy saving services will be complemented with services for condition based maintenance and predictive maintenance, especially when more and more data is becoming available from devices in the field.

Smart Product Scenarios

To enhance your chances of success and guide your smart product innovation, Sirris offers you practical tools and guidelines. Our **Smart Product Inspirator** provides you with a framework for identifying valuable smart product ideas based on the 5 most common scenarios and 15 smart product examples illustrating these scenarios. With these carefully analysed scenarios we help you uncover the potential for success. The key scenarios for Ethernetics's Decabon platform are: ‘**Smart Autonomy**' and ‘**Smart Maintenance**'.

Authors

Pieter Beyl