The bridge to possible

Leading Energy Firm Chooses Cisco HyperFlex to Boost Application Performance, Transform European Smart Grids

E.ON · Industry: Energy · Location: Germany

Schleswig-Holstein Netz AG, part of the E.ON Group, operates electric and gas energy grids in Schleswig-Holstein, Germany, and is responsible for the safe and reliable operation of the region's energy networks. E.ON is an international, privately owned energy firm focused on smart power grids, innovative customer solutions, and energy system transformation. For more information, visit eon.com.

Challenges

- Develop innovative energy networks that connect traditional grids
- Strengthen infrastructure resiliency
- Separate physical and virtual workloads

Solutions

- Cisco HyperFlex™ hyperconverged infrastructure (HCI)
- Cisco Nexus® 9000 Series switches
- Cisco Customer Experience (Cisco CX)

Results

- Aligned operational technology (OT) systems across four operating companies
- Accelerated infrastructure deployments from hours to minutes
- Improved data security and control

For more information

- Cisco HyperFlex
- Cisco Nexus 9000
- Cisco CX

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Challenge: Align OT systems across four operating companies

A new energy future is being realized across Germany and throughout Europe. Renewable sources like wind and solar are replacing fossil fuels and nuclear power. Technology-driven energy solutions are reducing the strain on aging power grids. And the entire energy ecosystem is becoming more democratized, expanding the possibilities for production, storage, and consumption.

E.ON is at the forefront of these transformations. The international conglomerate is making its energy grids smarter and more efficient. And it is developing expansive energy networks that connect those grids to one another, to renewable energy plants, and to a wide variety of digital endpoints—creating new opportunities for people, companies, and communities.

E.ON's first energy network covers the entirety of Germany, bringing together four regional subsidiaries: Schleswig-Holstein Netz AG, Bayernwerk Netz GmbH, Avacon Netz GmbH, and E.DIS Netz GmbH. While the four grid management companies remain independent, they're working cooperatively to share critical resources, improve operational efficiency, and strengthen systems resiliency.

"Several hundred thousand kilometers of electricity, gas, and communications networks depend on the availability of our services," says Benjamin Bubbers, systems administrator for Schleswig-Holstein Netz AG. "Any network failure can have an impact on millions of households and companies throughout Germany, so we're aligning our OT systems across the country and splitting the workload between the four subsidiaries."

Each company has its own data center, he explains, and its own role within the OT cooperative. Schleswig-Holstein Netz AG is responsible for physical and virtual infrastructure systems, managed endpoints, and basic services. The other three companies are handling security, data networking, and technical support.

"We want one combined effort instead of four individual, repetitive efforts," Bubbers explains.

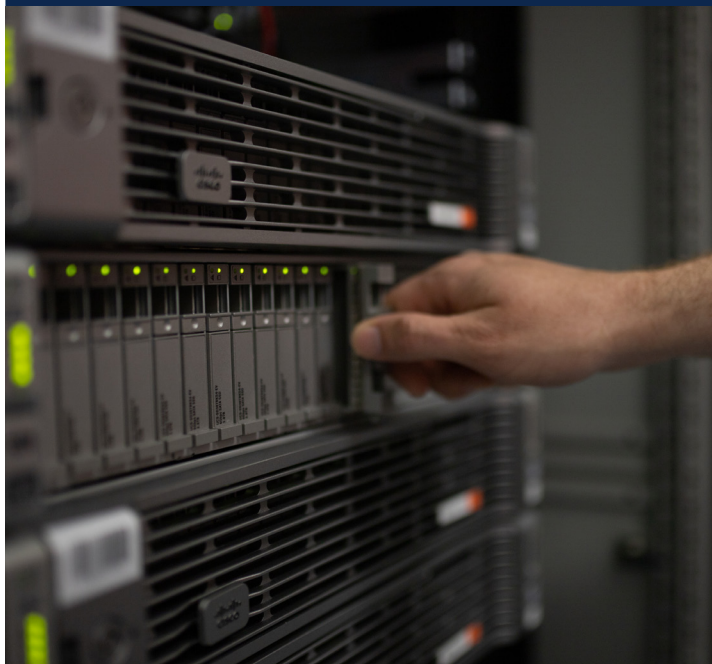
Doing so requires an incredibly powerful and flexible technology foundation. One that is fully integrated, effortlessly scaled, and centrally managed. One that can align multiple data centers, serve the needs of multiple operating companies, and support an energy ecosystem that continues to evolve.

After a thorough evaluation of multiple hyperconverged infrastructure solutions, Schleswig-Holstein Netz AG selected Cisco HyperFlex.

"The solution scored well not only for its excellent price/performance ratio, but also for its all-flash architecture and very flexible expansion options. For example, we can upgrade RAM or CPU independently to meet the requirements of specific applications," Bubbers notes. "And as our requirements grow, Cisco HyperFlex can be scaled very quickly and easily."

"Cisco HyperFlex is very easy to manage. We can see the entire environment and the health of the systems and applications within it."

Benjamin Bubbers,
Systems Administrator,
Schleswig-Holstein Netz AG



Case study
Cisco public

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Standardization and speed on Cisco HyperFlex

Schleswig-Holstein Netz AG now has 68 Cisco HyperFlex nodes spread across four regional data centers in Germany. Within each data center are two stretched clusters that are separated into two fire compartments, with local data mirroring between them. The clusters are integrated with Veeam Availability Suite—providing offsite backup for all virtual, physical, and cloud-based workloads—and asynchronous replication among the four data centers will be implemented in the near future.

"We have incredible redundancy and resiliency within each data center. An entire room can go down and the other will take over," says Bubbers. "And Cisco HyperFlex integrates seamlessly with Veeam for offsite backups and disaster recovery."

The distributed environment is centrally administered using Cisco Intersight cloud management.

"We manage all four data centers and all of our configurations from a single pane of glass," says Bubbers. "Cisco HyperFlex is very easy to manage. We can see the entire environment and the health of the systems and applications within it."

Aggregating data center systems, configurations, and processes has dramatically improved operational efficiency, he adds.

"Deploying virtual machines now takes five minutes instead of two-plus hours," Bubbers says. "And the VMs can be easily replicated and sent to the other data centers using Cisco HyperFlex ReadyClones."

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