Supporting the Electricity Needs of the Czech Republic with Cisco UCS

ČEPS ⋅ Industry: Public utility ⋅ Size: 1000 employees ⋅ Location: Prague, Czech Republic

ČEPS is the sole transmission system operator in the Czech Republic. The company is responsible for maintaining and upgrading 43 substations, 78 transformers, and 5644km of power lines, which allow electricity to be supplied from the country’s transmission system to its distribution network. ČEPS also maintains the balance of electricity supply and demand within the Czech power system and organizes cross-border power exchanges as needed. For more information, visit ceps.cz.

Challenges
• Align physical and virtual data center systems
• Simplify IT operations
• Support an increasing number of business requests

Results
• Modernized and connected two data centers
• Accelerated infrastructure deployments
• Reduced licensing costs

Solutions
• Cisco Unified Computing System™ (Cisco UCS®)
• Cisco Unified Communications

For more information
• Cisco UCS
• Cisco Unified Communications
Challenge: Modernize, simplify IT operations

Without ČEPS, the Czech Republic would be in the dark. Owner of an exclusive license from the Energy Regulatory Office, the company is responsible for maintaining the infrastructure that delivers electricity throughout the country.

But ČEPS isn’t just maintaining the status quo. It’s helping modernize the Czech power system by increasing transmission capacity, connecting with foreign grids, and developing new solutions for the domestic and European electricity markets.

Technology sprawl has been the natural consequence of modernization, and the ČEPS IT infrastructure—which includes two data centers and roughly 400 physical and virtual servers supporting more than one hundred applications—is managed by a single person.

“We have a large VMware environment that continues to grow,” says Karel Hlavinka, head of IT infrastructure at ČEPS, citing the company’s 200 virtual machines (VMs). “We needed to refresh our data center infrastructure not only to increase our capacity, but also to simplify our operations and make it easier to deploy VMs.”

ČEPS chose Cisco UCS—which combines servers with networking and storage access in a single unified system—as the foundation for its data center refresh and VMware environment. As a stretched cluster with approximately 50 Cisco UCS servers, the platform provides consistency across the company’s data centers and connectivity between them.

“Our primary data centers in Prague used to be active/passive, but now they’re active/active,” says Hlavinka, noting the increased redundancy and resiliency of the environment.

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**Accelerating VM deployments, improving cost efficiency**

The ability to simplify data center operations in support of a complex and growing VMware environment was a key factor in the decision to deploy Cisco UCS. Leveraging the policy model and automation of the platform, the company has created templates that dramatically reduce the time and effort required to deploy virtual infrastructure.

“The Cisco UCS server profiles make it much easier to deploy VMs and keep up with the needs of the business,” says Hlavinka.

The high density of the Cisco UCS servers has enabled ČEPS to put more VMs on each physical server, he adds, expanding its virtual environment without increasing licensing costs.

**Looking ahead**

ČEPS is planning to place additional workloads on Cisco UCS in the future. The company has already ported its Cisco Unified Communications applications to the platform, including the on-premises version of Cisco Webex®. And it may eventually extend the environment to its branch offices and substations with Cisco Application Centric Infrastructure (Cisco ACI™), the industry’s leading software-defined network (SDN) solution.

“We have Nexus 9000 switches in place,” says Hlavinka, “so we can adopt Cisco ACI in the future.”

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