

Efficiency Monitoring with Checkmk: How HPE improves IT efficiency and sustainability



Challenge

- Energy efficiency was difficult to assess
- High manual effort to provide sustainability KPIs
- Lack of actionable data foundation to reduce energy consumption and carbon footprint

Why Checkmk?

- Out-of-the-box tracking of energy consumption, utilization, and efficiency metrics
- Automated features for quick deployment and low-maintenance operation
- Extensive multi-vendor support (e.g. VMware) with over 2,000 plugins

Results

- Automated tracking of sustainability KPIs saves time and effort
- Data-driven IT optimization improves resource utilization
- Detailed analysis enables targeted savings in energy, CO₂ emissions, and costs

About HPE Customer Innovation Center



Industry
Information Technology



Headquarters
Geneva, Switzerland



Employees
Approx. 100



Monitored hosts/services
VMware environment



Solution
Checkmk Enterprise

Challenge

Measuring and improving IT efficiency

The HPE Customer Innovation Center (CIC) in Geneva serves as a showcase for cutting-edge IT infrastructure. Customers and partners can experience the latest technologies, such as the HPE Private Cloud AI, firsthand in the on-premises data center and test them in proof-of-concept scenarios. Energy efficiency is a central focus – not only due to regulatory requirements, but also because of rising power consumption driven by digitalization and data-intensive workloads. Consequently, sustainable IT is becoming a critical factor for long-term competitiveness.

HPE therefore aims to systematically reduce the carbon footprint of both customer IT environments and its own data centers. Against this backdrop, the CIC decided to pursue certification from the Swiss Datacenter Efficiency Association (SDEA). This organization evaluates not only the overall data center infrastructure but explicitly also the efficiency of IT systems – the largest consumers of energy in IT operations and a key lever for reducing emissions and operational costs – and provides practical criteria for continuous optimization.

However, the CIC lacked a turnkey solution to automatically collect the necessary data from servers, storage, and network components and to calculate the relevant metrics (KPIs) without additional effort.



Thanks to Checkmk, we can precisely measure and continuously optimize the IT efficiency of our data center. The automated collection of key efficiency metrics saves us time and supports not only the SDEA certification but also the targeted reduction of energy consumption, CO₂ emissions, and operational costs.

Frédéric Thibaut, IT and Data Center consultant at the HPE CIC

Solution

Automated efficiency monitoring with Checkmk

To address this challenge, the CIC selected the Checkmk IT monitoring platform. The key factor was its ability to retrieve the required operational data directly out of the box and turn it into meaningful efficiency KPIs. Crucial to this capability is Checkmk's broad vendor support: with more than 2,000 available plugins, the platform integrates seamlessly into existing infrastructures and enables effortless collection of all relevant metrics for measuring and optimizing energy efficiency.



Especially important for the CIC was the platform's extensive support for VMware environments, as the data center infrastructure is primarily based on VMware vSphere. Checkmk collects relevant metrics from ESXi hosts as well as from the virtual machines (VMs) running on them, and correlates this data with information from the central VMware vCenter management console. This provides the CIC with deep insights into the resource usage of the IT infrastructure, including detailed analyses of utilization from the ESXi hosts down to the VM level.

Results

Certified efficiency and optimization gains

Using Checkmk, the CIC has implemented a highly automated and easy-to-deploy IT efficiency monitoring system. The solution accurately captures key performance and consumption data across infrastructure components – ranging from RAM and disk utilization to individual CPU cores – and automatically prepares the results. Therefore, all KPIs required for SDEA certification are available at the push of a button. This not only saves the CIC time and effort but also lays the essential foundation for continuously and systematically monitoring IT efficiency.

Furthermore, Checkmk serves as a strategic tool for improving efficiency. Insights into resource consumption and the utilization of individual IT systems directly inform hardware procurement decisions. The CIC can make smarter choices – for example, when selecting suitable CPUs and memory.

By configuring servers based on actual workloads, the CIC achieves more efficient resource use. Overprovisioning and idle capacity are avoided, reducing power consumption.

As a result, the CIC – currently awarded the SDEA Silver Plus certification for its data center – achieves reduced CO₂ emissions, lower operational costs, and a strengthened leadership position in sustainability.



Automated IT efficiency monitoring



Reduction of IT team workload



Data-driven efficiency enhancements



Cost savings and carbon footprint reduction



Smarter hardware investments

HPE

The HPE Customer Innovation Center (CIC) in Geneva offers customers tailored programs, hands-on demonstrations, and direct engagement with industry experts. Within its on-premises data center, customers can test the latest technologies, partner applications, and prototypes – both on-site and virtually. HPE has been committed to sustainability for decades, including through its “Design for Environment” innovation program launched in the 90s. The company participates in the CDP Climate Data Report and supports the Paris Climate Agreement, to achieve climate-neutrality by 2040 – both across its organization and within customer solutions. More recently, HPE introduced a consumption-based model through HPE GreenLake that reduces overprovisioning with right-sized, scalable infrastructure.

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Free trial



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