Is Cloud Computing really energy-efficient?

**Motivation:** Global ICT energy consumption constantly grows. Cloud computing is assumed to be energy-efficient, hence leading to a steady growth of cloud-based software services.

**Goal:** investigate Cloud-based software to understand how its software architectures deal with energy-efficiency.

**Research methods:** Systematic Literature Review

**Results:** software architectural strategies addressing energy efficiency aspects of Cloud-based software services.

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**Software Architectural Strategies for Energy Efficiency**

We identified the following software architectural strategies to guide the design of energy-efficient software.

**Energy Monitoring**

Monitor the energy consumption of the cloud infrastructure.

*Example:* Energy metering

**Self-Adaptation**

Reconfigure software at runtime to lower energy consumption.

*Example:* VM Scaling

**Cloud Federation**

Negotiate cloud services from multiple providers by using energy consumption information.

*Example:* Energy Broker

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**References**
