

Sustainability through Green Gates @Nextcloud





2. Easier maintenance

- One tech stack**
- One deployment**
- Learn one system**
- One support channel**
- One maintenance window**

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Open source & on premises

Your hub
your choice



Some visualization of the wide range of applications

Storage
solutio
ns

User
directori
es

Authenticatio
n

Image of hub base + apps again (from beginning of this section)

Intro clip playing





Criteria

Blauer Engel certified software ...

- Can be operated energy-efficiently
- is transparent in terms of energy usage
- Complies with sustainability for its technical aspects, like modular design and compatibility with older system
- offers openness of interfaces, data portability, and documentation

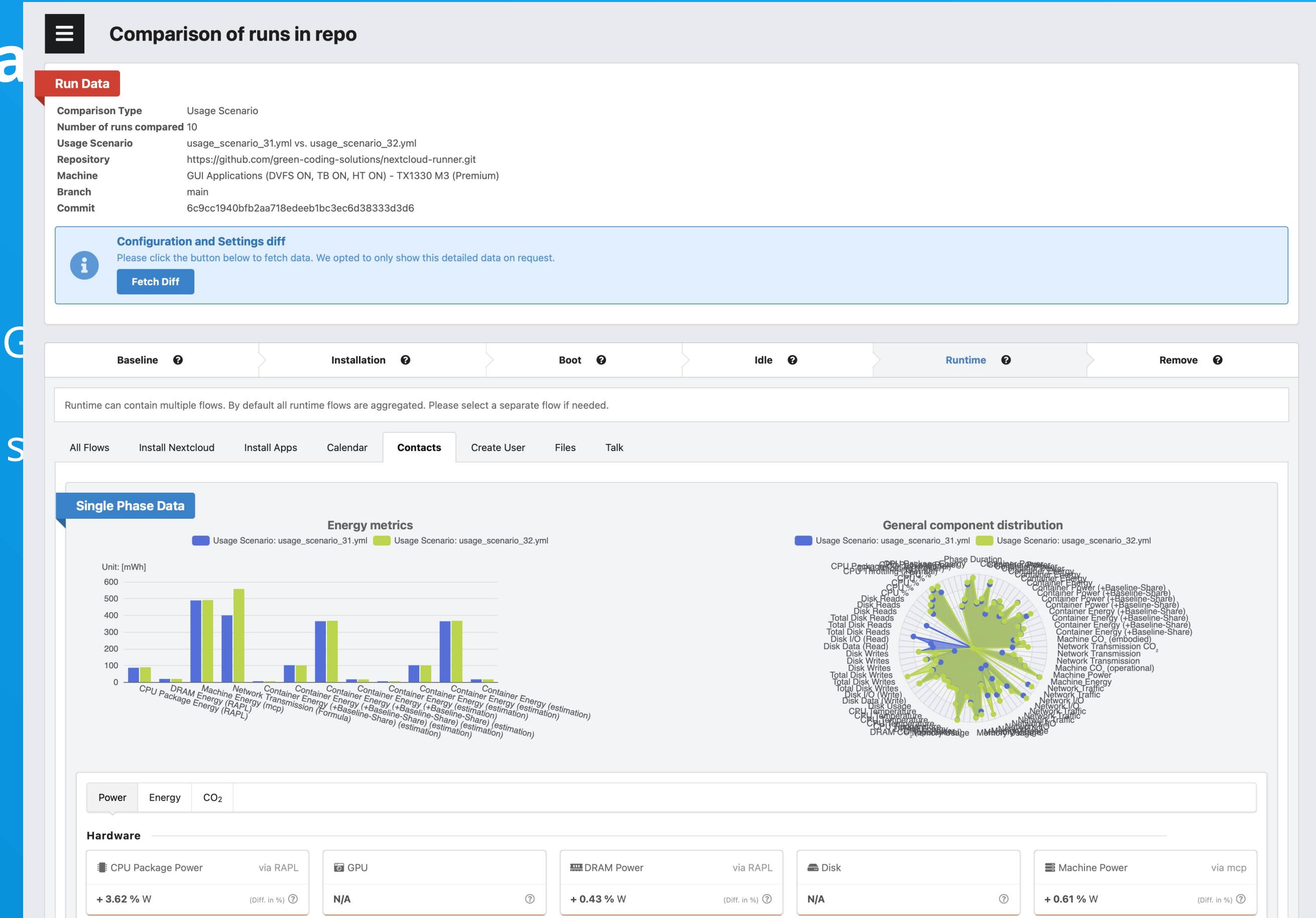
The setup

How do we measure resource changes?

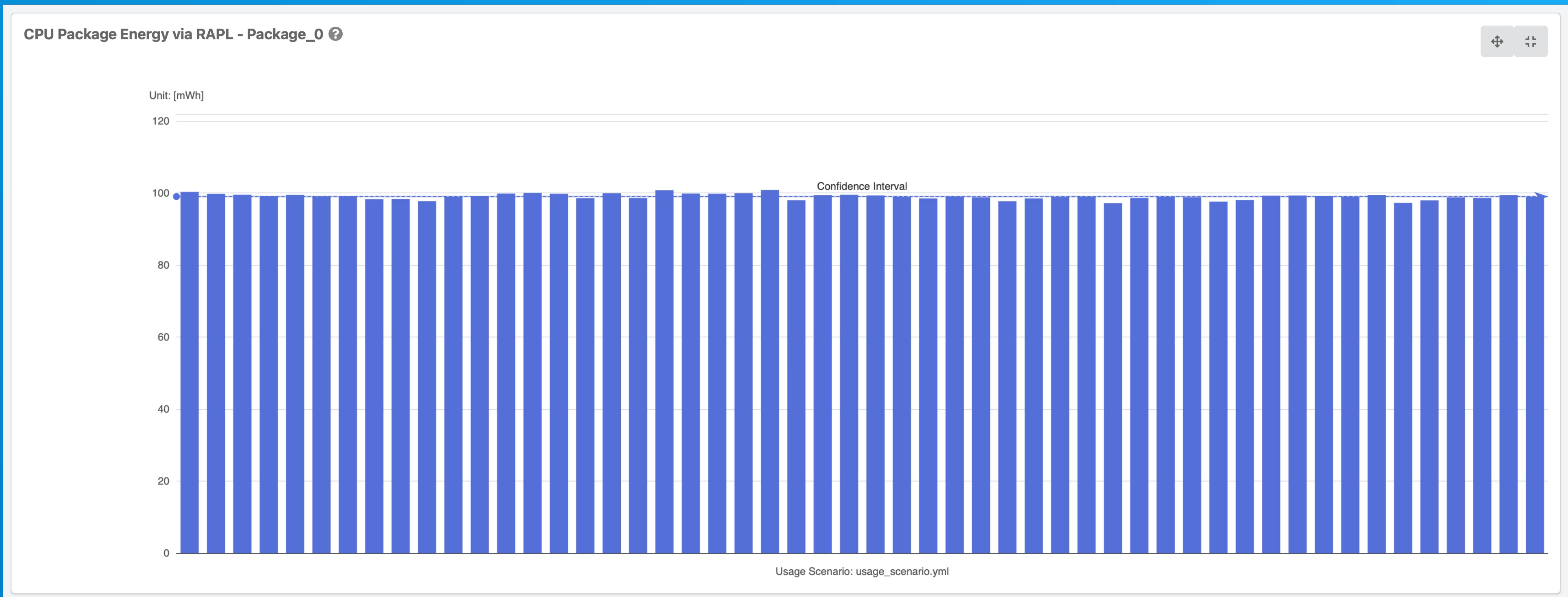
Built docker container from git sources

Used three containers (app, db, playwright) with G

Used the Standard apps from the Nextcloud app s



Last 30 days



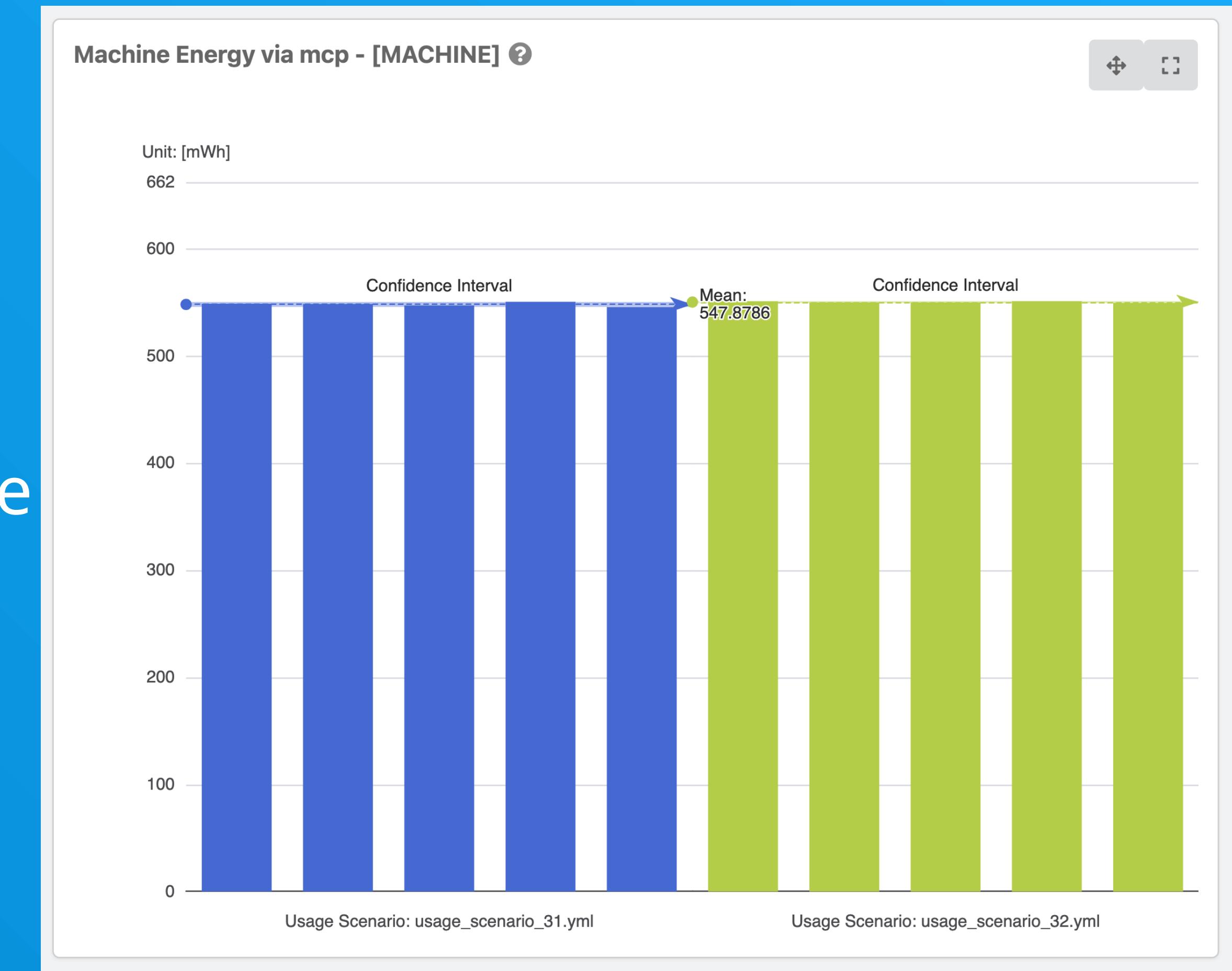
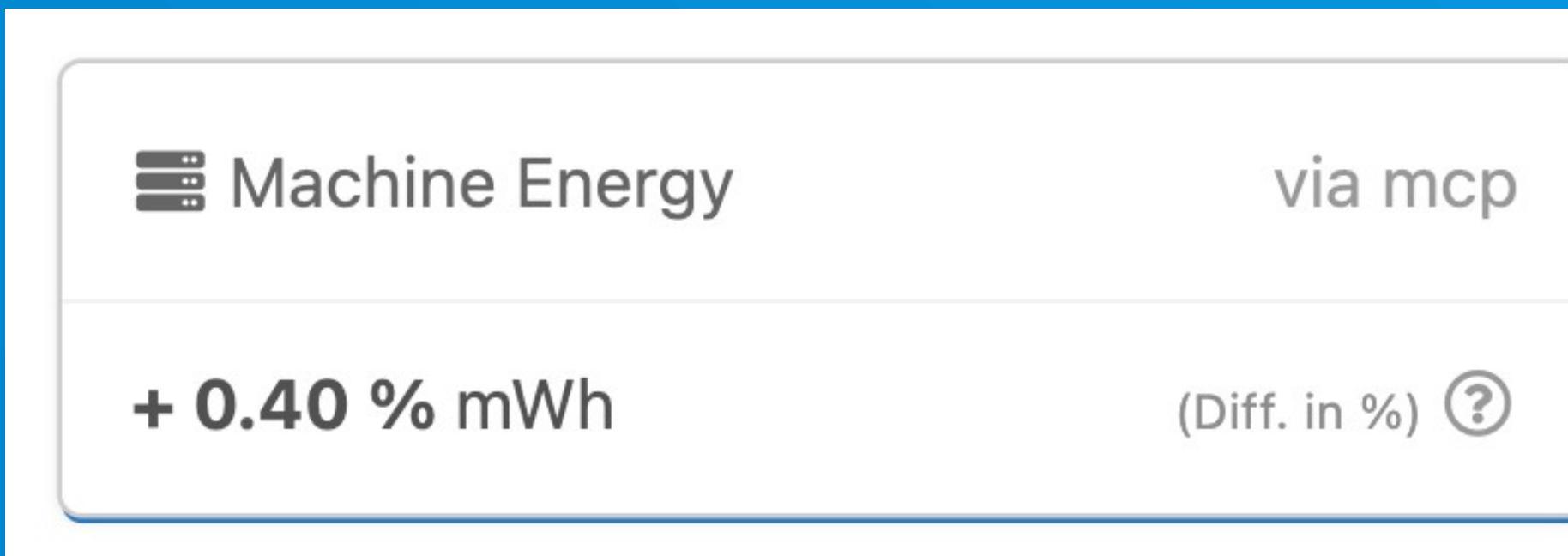
Stable 31 vs Stable 32

Calendar

- Unchanges consumption

- + 0.4% (5 runs average)

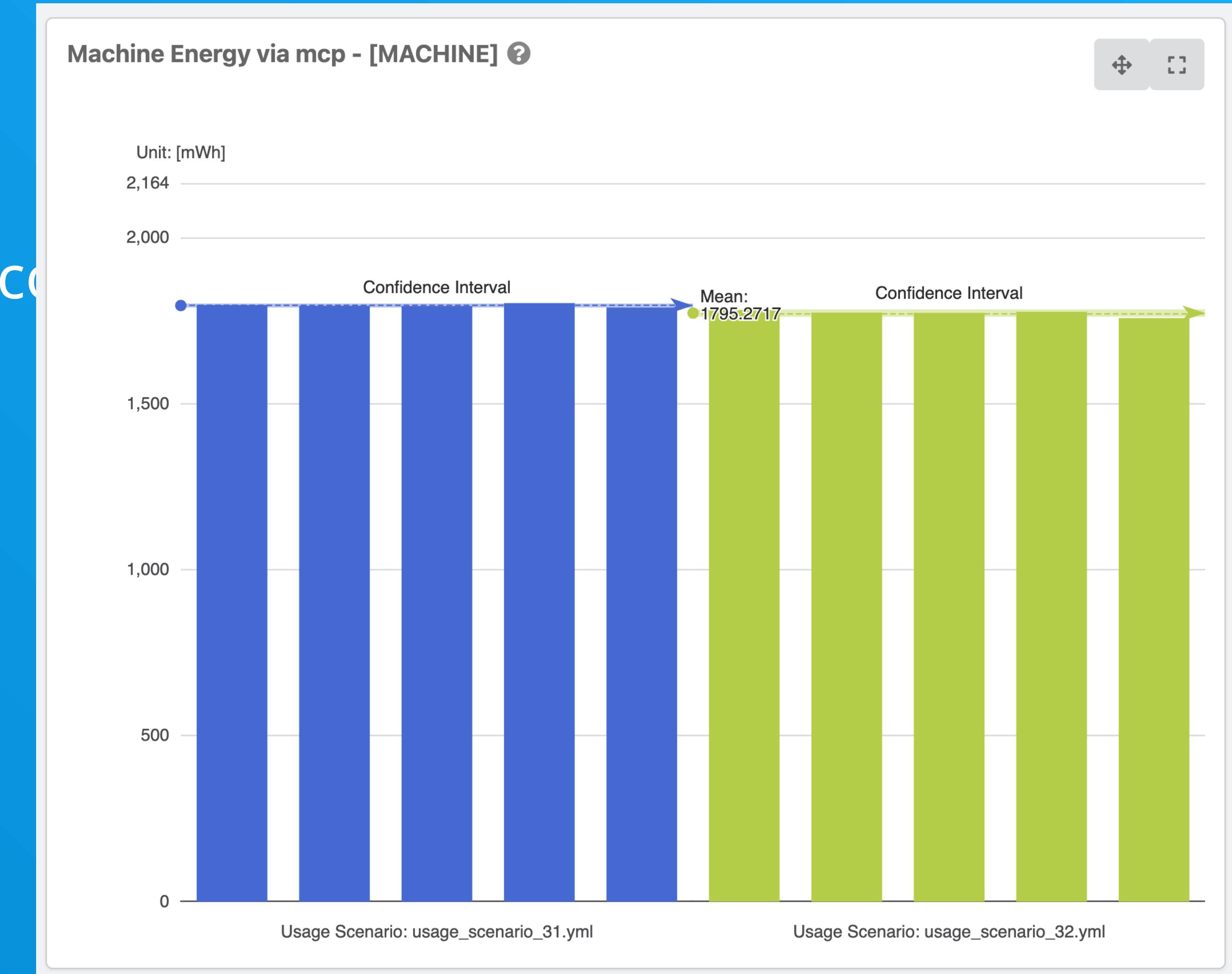
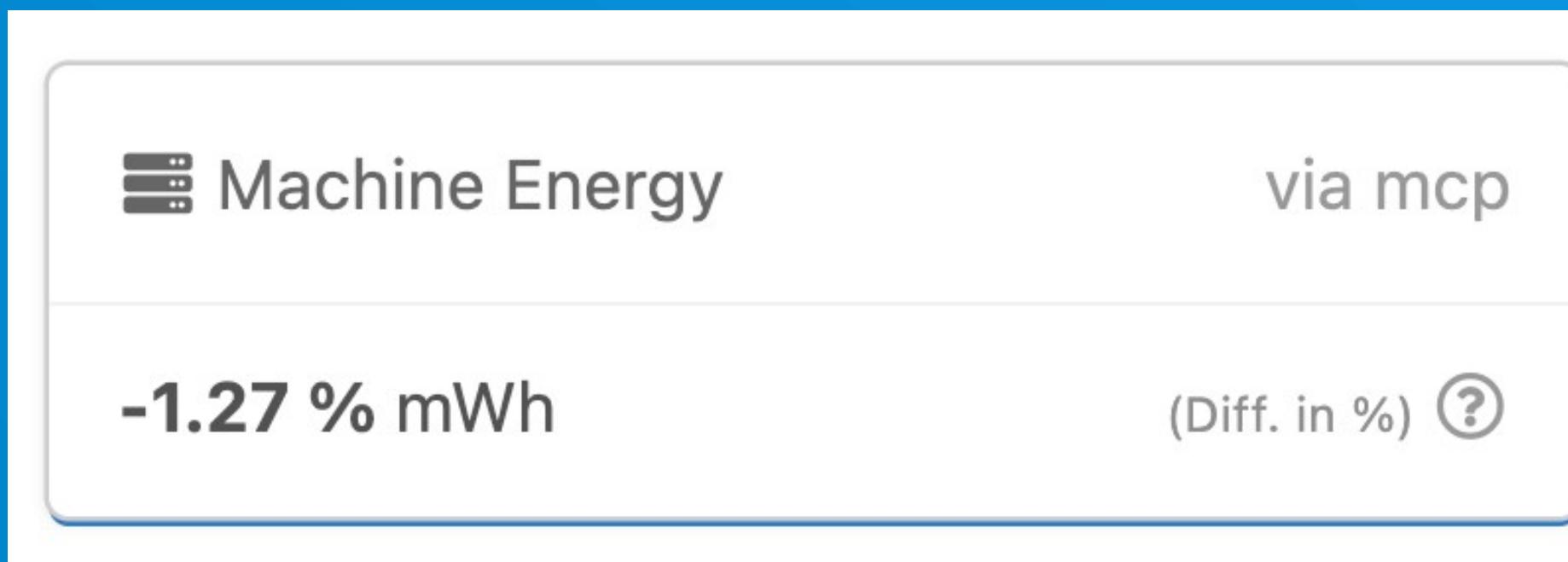
- Within margin of error/ noise of the



Stable 31 vs Stable 32

Talk

- Even slightly reduced energy consumption
- 1.27% (5 runs average)

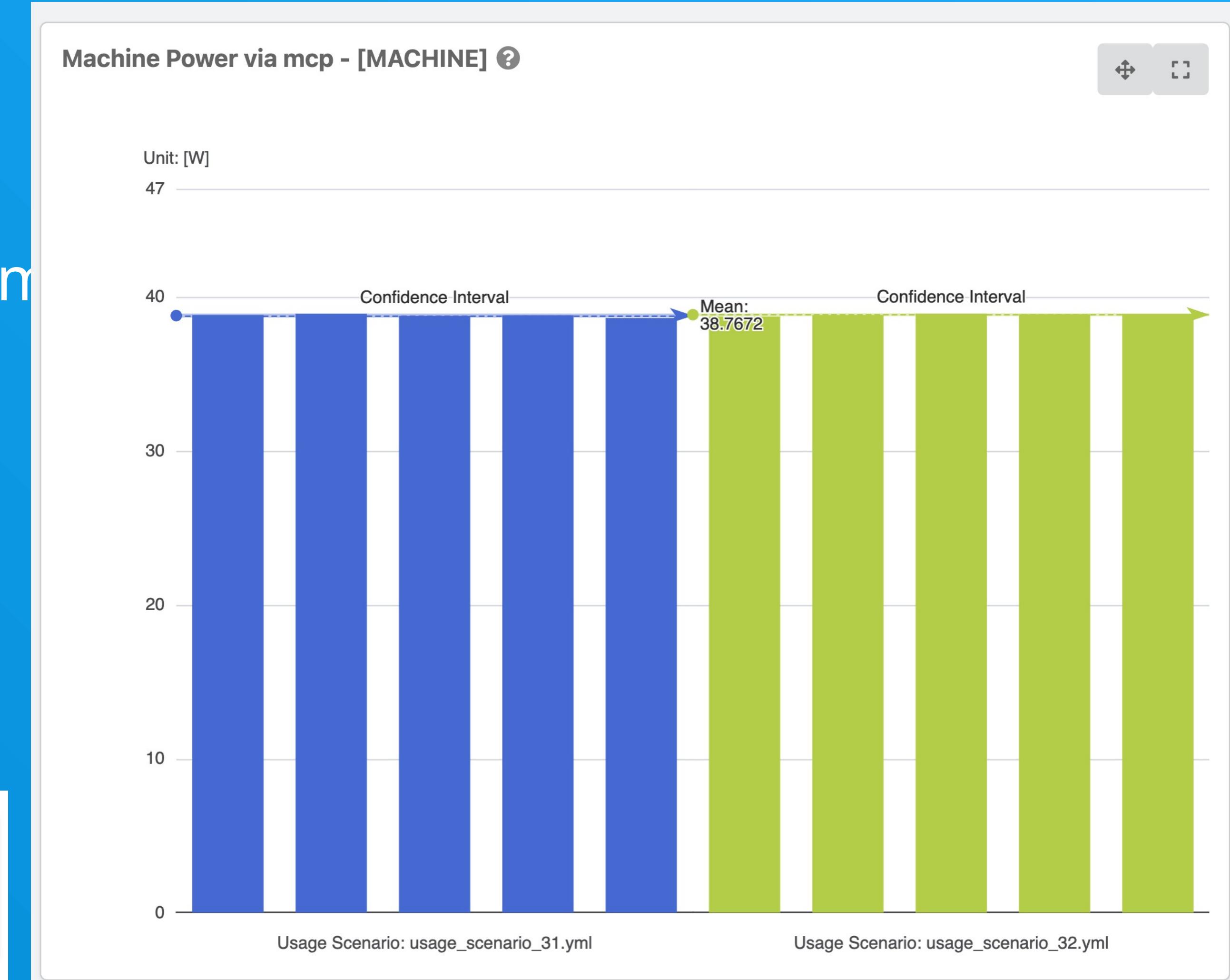
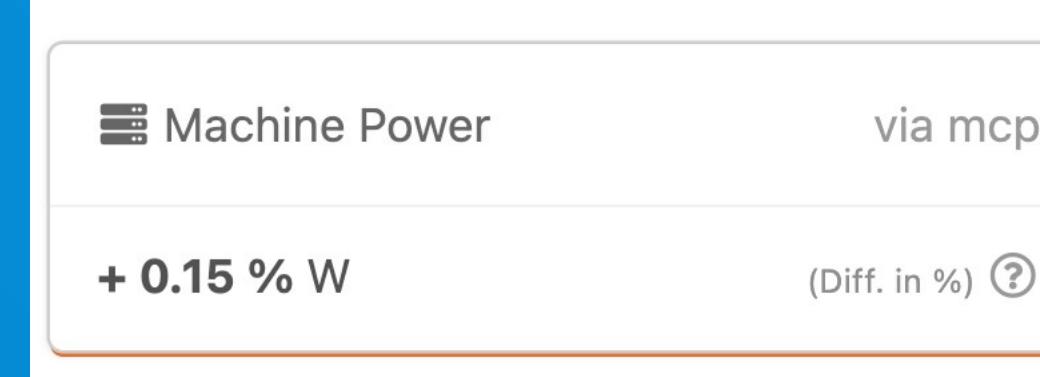
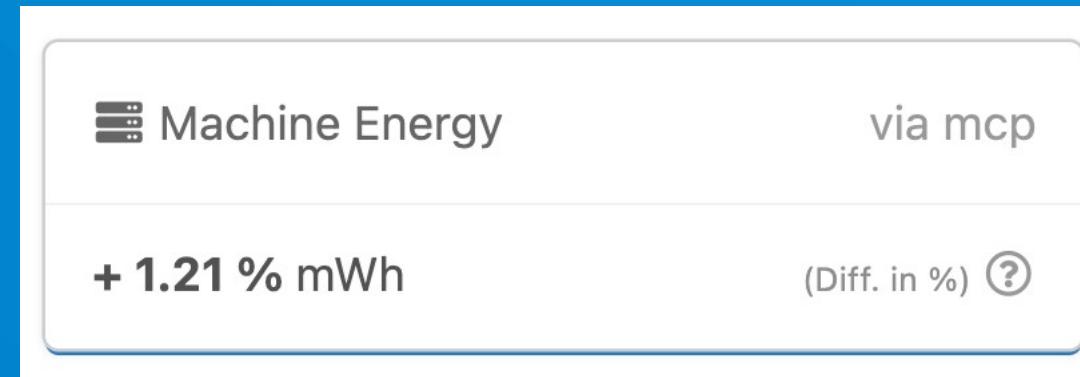


Stable 31 vs Stable 32

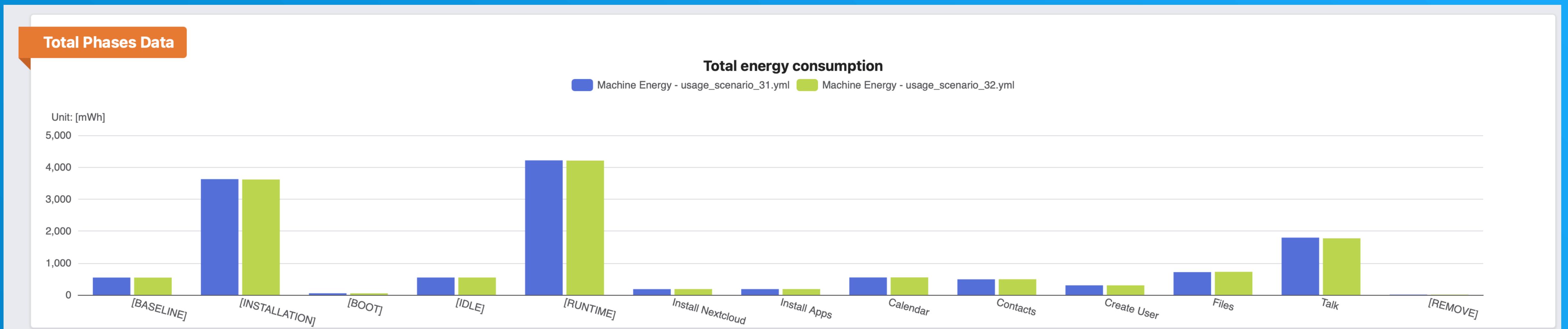
Files

Slight increase in energy consumption

+ 1.21% (5 runs average)



Overview of all scenarios for Talk

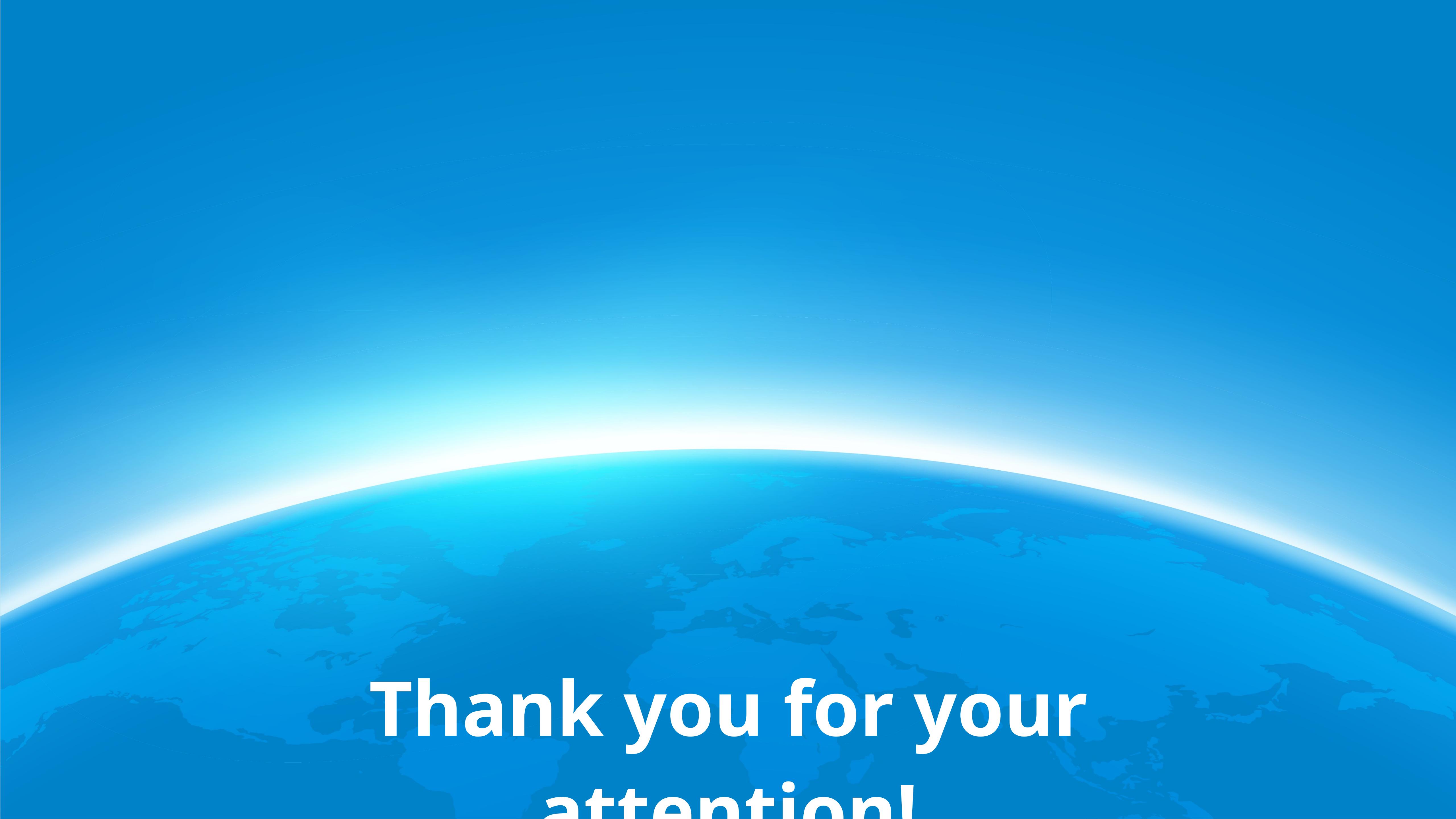


Take aways

- strong insights into core functionalities and their detailed energy consumption
- We are already in compliance with the strict requirement of Blauer Engel to keep energy consumption increase <10% with new software updates
- We can easily find targets to optimize our code in regard to energy consumption

How this makes Nextcloud better

- On every commit to main or pre merge the resource benchmark is run to check if the feature increases resource usage
- Management gets an Overview of increasing demand
- We can see where we can improve
- As server and representative apps are benchmarked a real world deployment is tested which is often not done as the apps are developed independently



Thank you for your
attention!