Greener Observability: A Journey Toward Sustainable Monitoring Through Open Source Innovation

🌱 Cloud Native Sustainability Month 2025 - Barcelona Edition 🌱

26 November 2025

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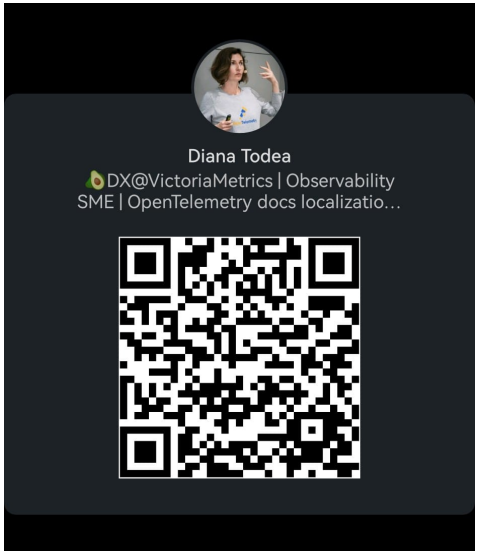


- OpenTelemetry member and contributor
- Cloud Native Days Romania organizer
- Co-lead CNCF Merge-Forward Neurodiversity

https://github.com/didiViking/Conferences_Talks

Agenda

- Why Sustainability Matters in Observability?
- VictoriaMetrics' Sustainable Mission
- Building Green Software from the Inside Out
- Product Efficiency = Lower Emissions
- Empower Users for Greener Operations

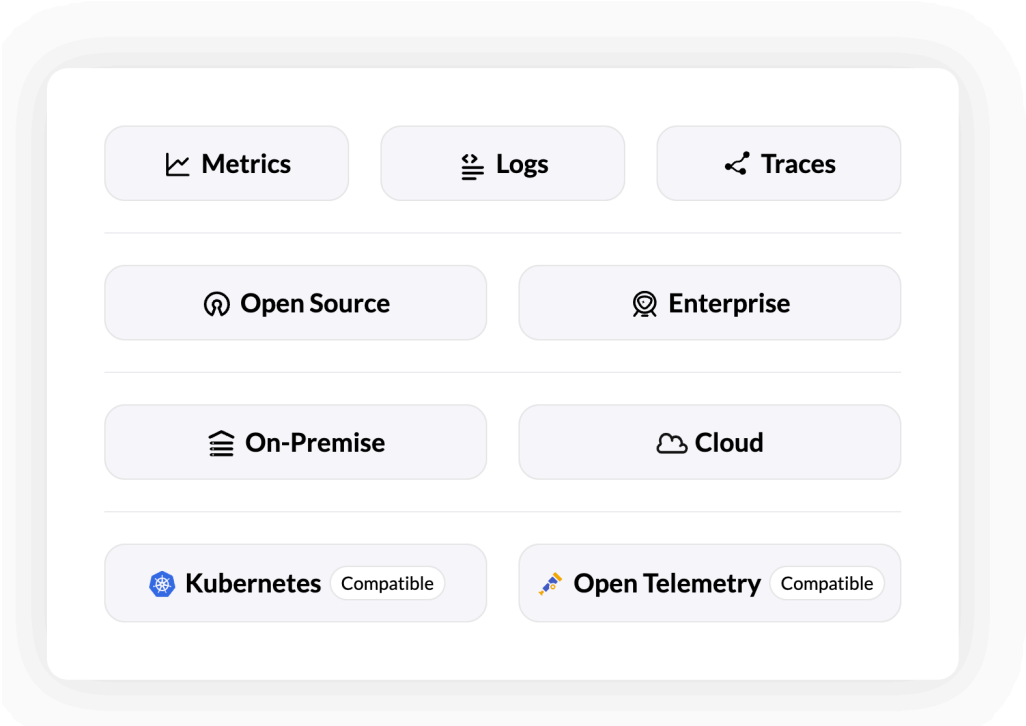
The Cost of Observability is huge

- Observability budgets commonly sit around ~15–25% of an infra bill
- Cloud logging/storage costs are explicit and can be tens of cents per GiB
- Adding AI / LLMs increases telemetry significantly

Why Sustainability matters in Observability?

- More telemetry = more servers = more energy = more carbon footprint

VictoriaMetrics Observability Stack



VictoriaMetrics (member) 2023

VictoriaMetrics

CNCF Members | Silver

Sustainability

VictoriaMetrics Sustainable Mission

Green Coding Practices

Preventing Code Bloat

Careful Use of External Libraries

Observability and Profiling

Language Choice

VictoriaMetrics Sustainable Features

1.7x
less memory

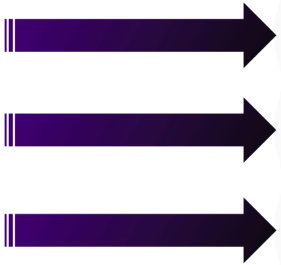
90%
energy cost reduction

2.5x
less disk space

10x
infrastructure cost Savings

16x
faster query latency

4x
network cost Savings

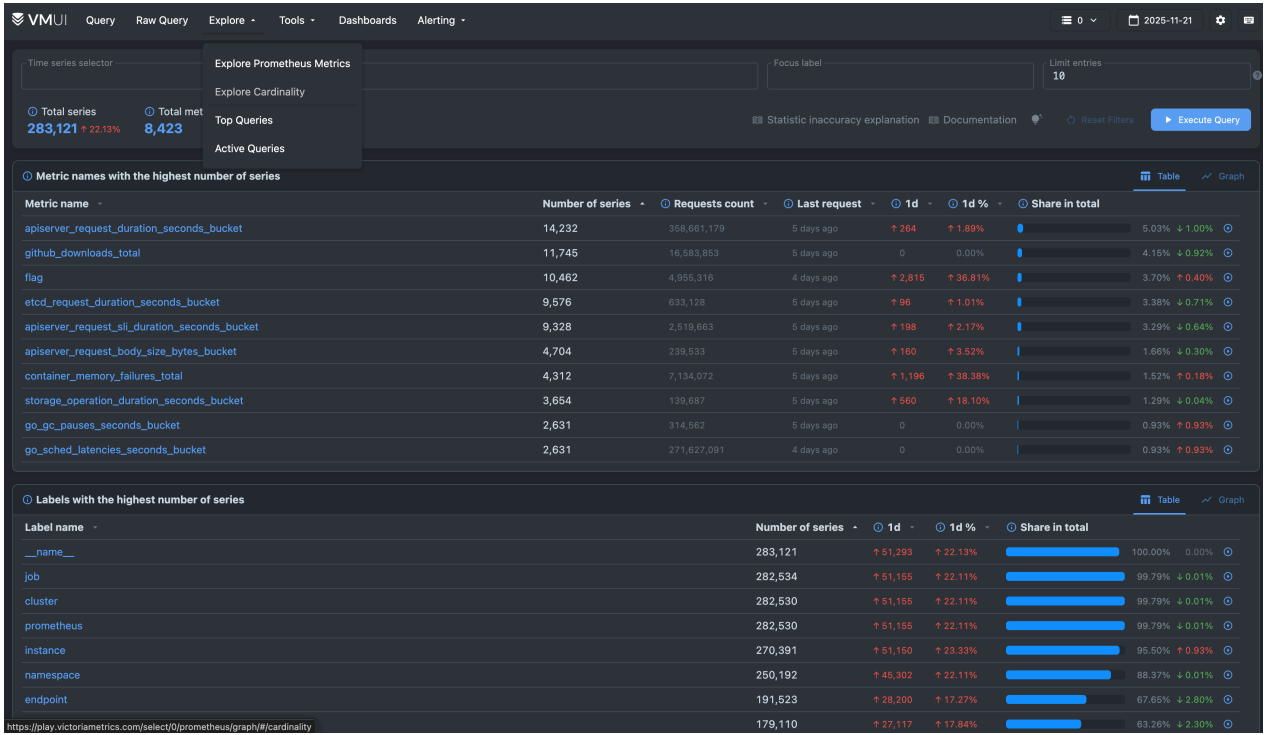


Benchmarks

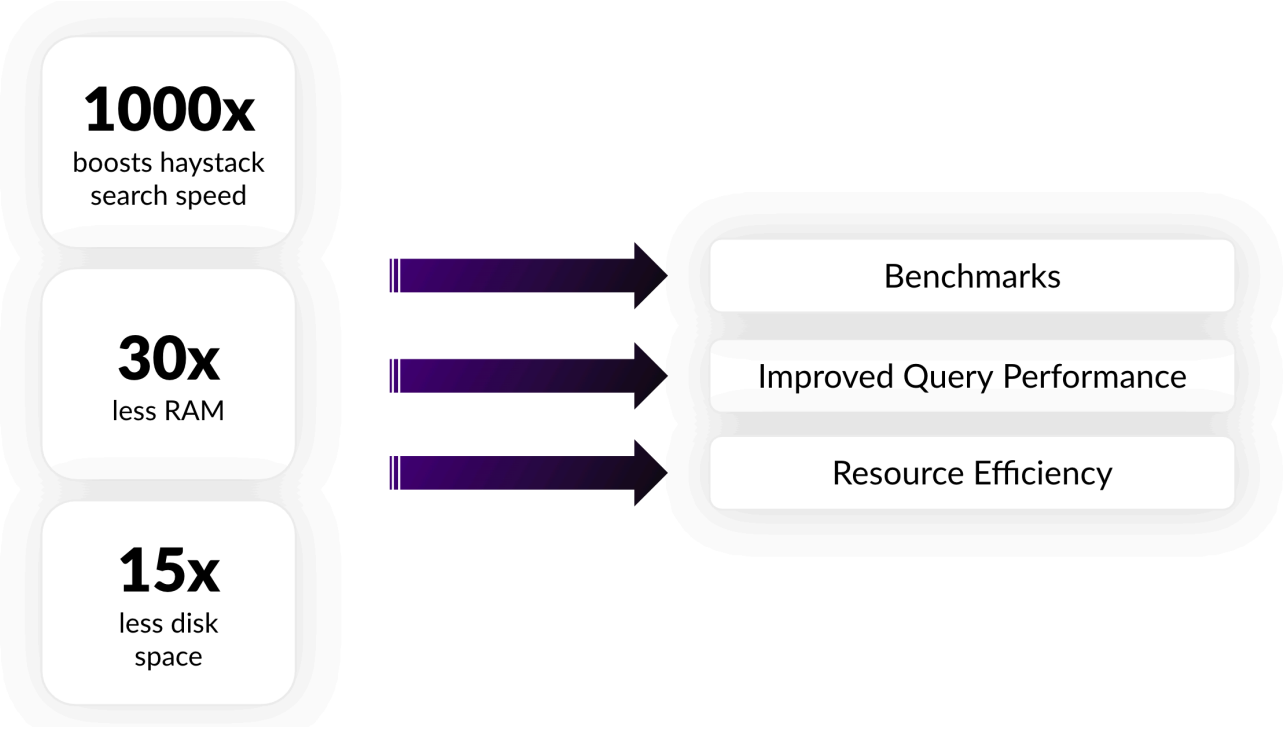
Energy Savings

Hardware reduction

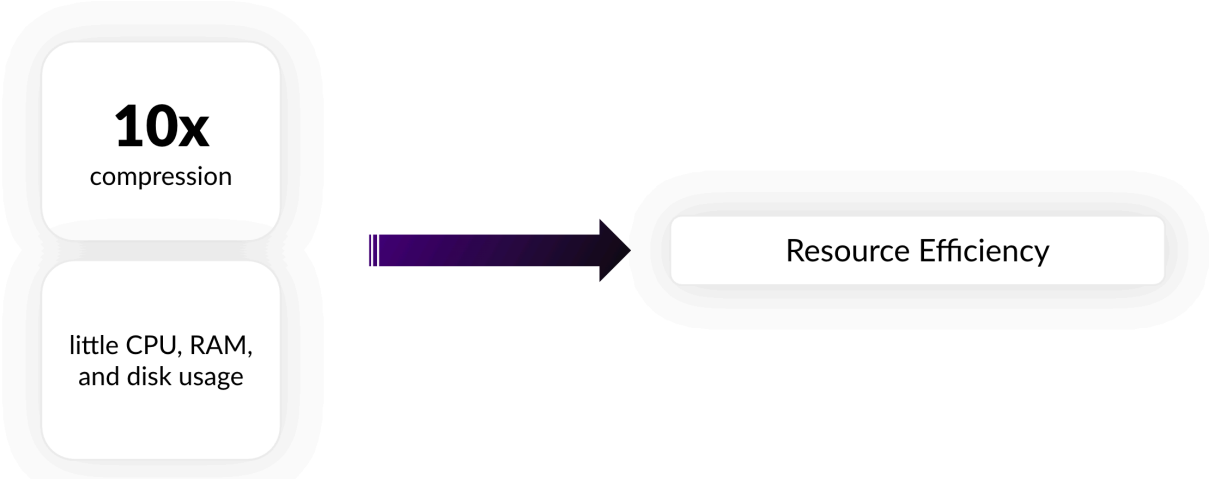
Find your “most bloated” metrics in Cardinality Explorer



VictoriaLogs Sustainable Features



VictoriaTraces Sustainable Features



Build Green Software from the Inside Out

https://greensoftware.foundation/manifesto

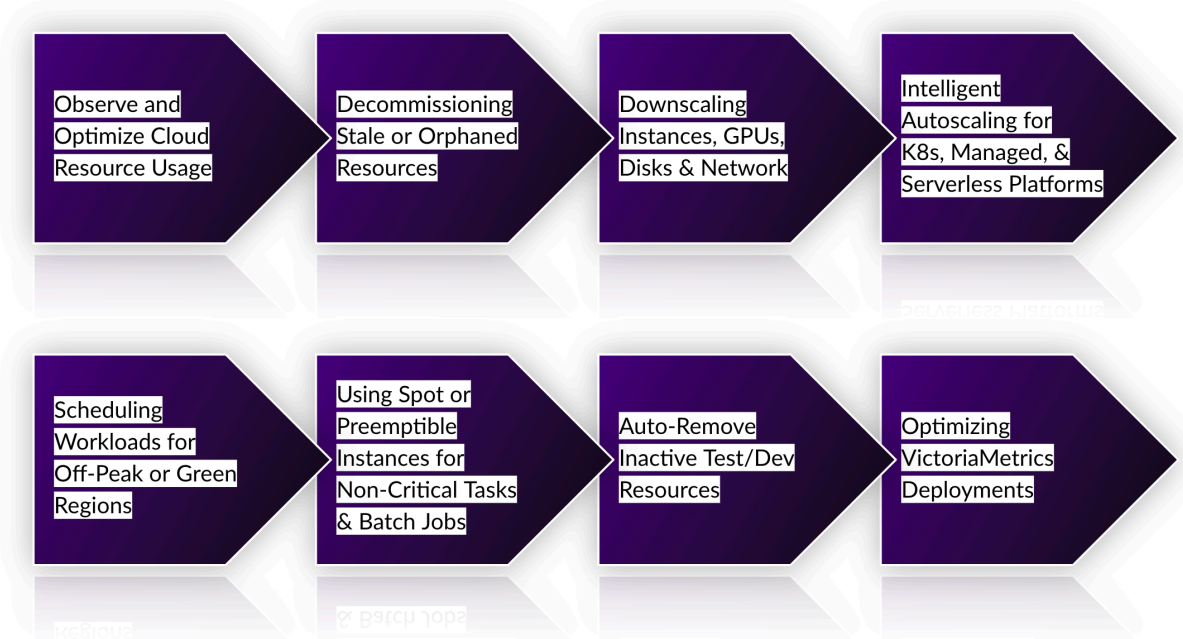
MINIMISE CARBON

The Foundation's mission is to reduce the total change in global carbon emissions associated with software. When evaluating choices we choose the option that advocates for abatement (reducing emissions) not neutralisation (offsetting emissions).

Operationalise:

- We will consider how to minimise carbon emissions in every decision we make around how we conduct ourselves operationally and the standards and technology we create and use.

Recommendations to Reduce Footprint



Empower Users for Greener Operations

https://2025.cloudnativebergen.dev/speaker/marta-paciorkowska

9 Rs ->5Rs for Kubernetes waste management

Refuse -> Reduce -> Repair -> Resize -> Reschedule -> (Repeat)

Take-aways

- Observability companies should start applying Green Software Foundation's actions since day 1
- Sustainability is spread through company culture
- But ultimately, we are all responsible to maintain it
- Homework: talk about a green project with your co-workers and start implementing it!

Resources

Sustainability at VictoriaMetrics

https://greensoftware.foundation/articles/what-is-green-software
https://github.com/cncf/tag-env-sustainability
https://github.com/VictoriaMetrics/prometheus-benchmark
https://docs.victoriametrics.com/victorialogs/#benchmarks
https://victoriametrics.com/blog/dev-note-distributed-tracing-with-victorialogs/
https://play.victoriametrics.com/
https://docs.victoriametrics.com/

Explore VictoriaMetrics Solutions

VictoriaMetrics

Open Source Available on Github

VictoriaTraces

Open Source Available on Github

VictoriaLogs

Open Source Available on Github

Muchas gracias!

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VictoriaMetrics Community