

MICHAL

Flexible Infrastructure Accounting Framework

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e-infrastructure for
science, research
and education



OpenNebulaConf 2016

- ▶ Resource **usage** data rather than just **reservation** data
 - ▶ Load prediction
 - ▶ Overcommit strategies assessment
 - ▶ Comparability of multiple HPC approaches
- ▶ Unified view of infrastructure usage
- ▶ Custom annual usage reports (institute specific)

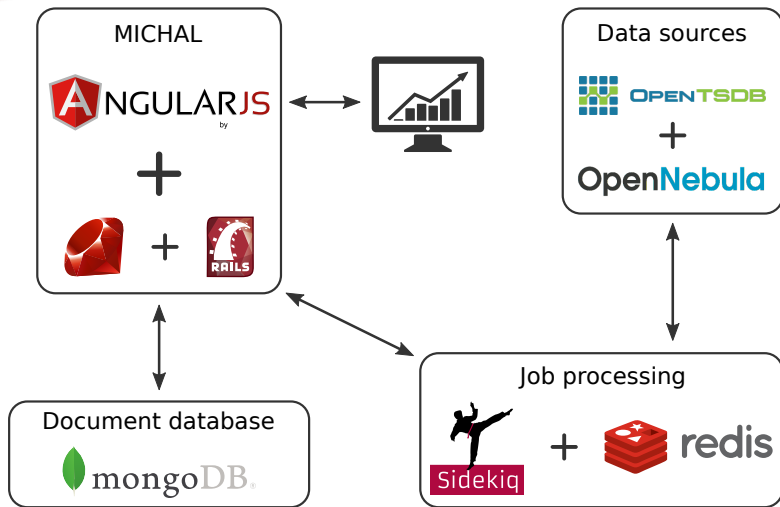
MICHAL – Multi-Input Cloud Hardware Accounting Layer

Features

- ▶ accounting data unification across multiple platforms
 - ▶ OpenNebula cloud, Hadoop cluster, ...
- ▶ computation of selected statistics
- ▶ statistics visualization & export (charts)

Under the hood

- ▶ modular design
- ▶ asynchronous jobs



¹Logos obtained from <http://opentsdb.net>, <http://opennebula.org>, <http://sidekiq.org> and <https://commons.wikimedia.org>

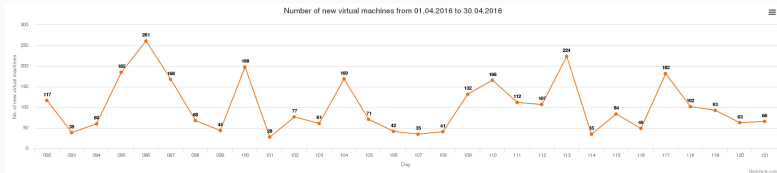
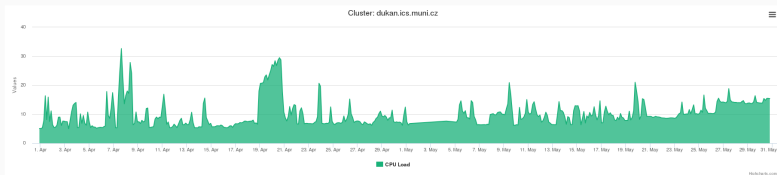
- ▶ In Time
 - ▶ progress of a metric in time
 - ▶ area chart
- ▶ Overall
 - ▶ overall usage of a resource by individual users/user groups
 - ▶ pie chart
- ▶ New Virtual Machine Count
 - ▶ number of newly started virtual machines within a time period
 - ▶ line chart

Multi-Input Cloud Hardware Accounting Layer

+ NEW STATISTIC ✓ MY STATISTICS ✓ PERIODIC STATISTICS

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Example statistic



- ▶ bugfixes
- ▶ new accounting modules
- ▶ first big test → MetaCentrum annual usage report
- ▶ accounting of the rest of the infrastructure

– That's All Folks! –

...

Do you have any questions?

- ▶ ask **NOW!**
- ▶ ask me directly at kimle@cesnet.cz
- ▶ send your questions to cloud@metacentrum.cz

Something to explore:

- ▶ <https://github.com/CESNET/michal>
- ▶ <https://github.com/Misenko/tcollector>