

nerd days 1.0

Return of the Data Nerd

Who Watches the Watchman: Custom metrics with Micrometer

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Who watches the watchmen?



Monitoring an internal monitoring system

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/OcadoTechnology
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Who we are



Ocado Technology is transforming the future of online grocery retail through **serial technology innovation**



Seven development centres in the UK and Europe



International partners in **eight** countries globally



600,000+ last-mile routing adjustments made per second*



200 patents granted and counting...



20 million demand forecasts made each day



The Ocado Smart Platform club



The Ocado Smart Platform

The most advanced eCommerce, logistics and fulfilment platform for groceries in the world.

Modular and scalable, our solution includes everything from:

- Webshop and mobile apps
- Automated fulfilment
- Store pick
- Routing and deliveries



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Robots do the picking



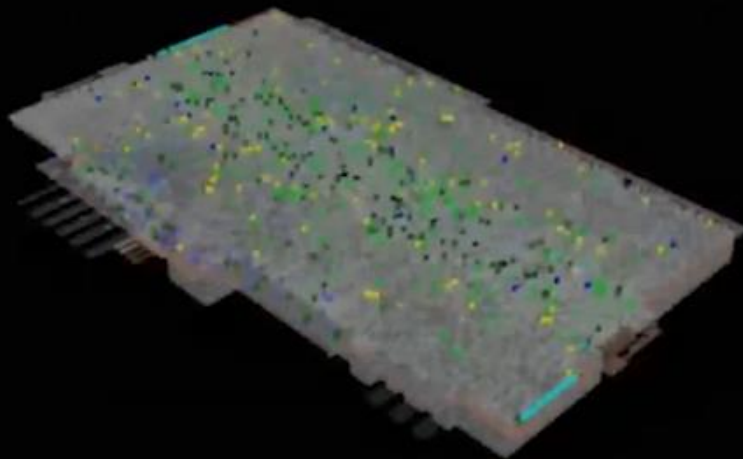
In the 'hive' thousands of bots collaborate like ants to pick a 50-item grocery order in five minutes or less

Ocado

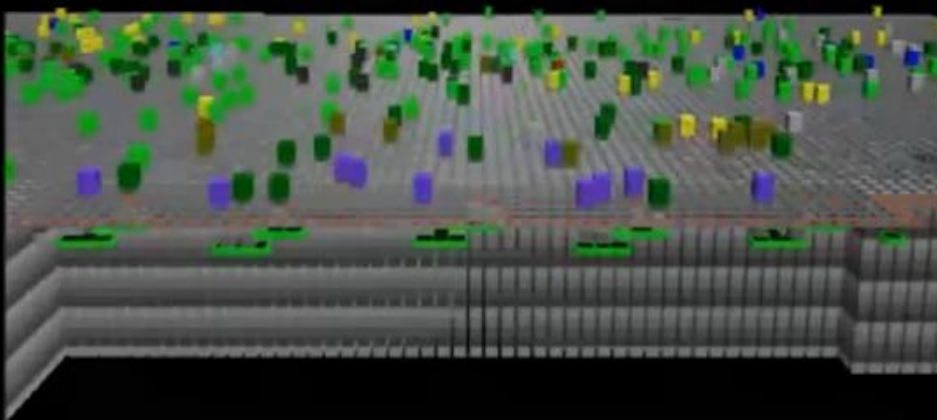
Robots do the picking



Simulated robotic grid



Simulated robotic grid



How do we monitor all of it?



New Relic®



Prometheus



Amazon Cloudwatch



Flux

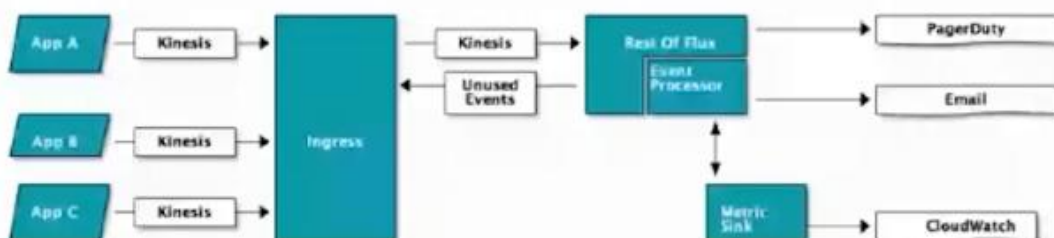
Why do we bother having own monitoring system?



Complex aggregated metrics on business event patterns

- Ratio of certain order funnel paths
- Order abandonment rate
- Number of route calculation started but not finished within the deadline

So, who watches the watchmen?





New Relic®



Terraform



MICROMETER
application monitoring



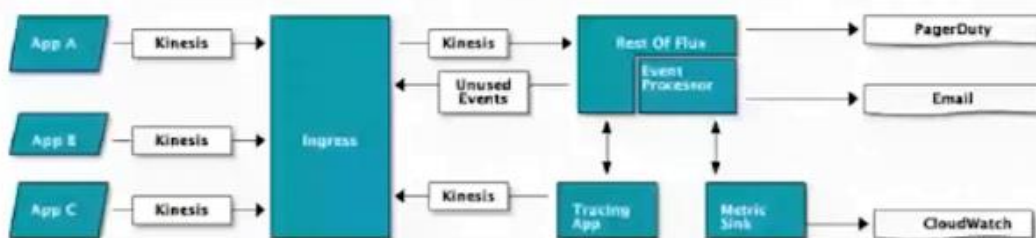
Amazon Cloudwatch

We use Micrometer for generating custom metrics



Monitoring CEP System (RED metrics for streaming)

- Rate
- Loss
- Delay



MICROMETER
application monitoring

Why do we use Micrometer

- Mature framework with easy to use interfaces
- Custom metrics are part of the code
- Centered around dimensional metrics
- Works great with Spring Framework providing a wealth of metrics out of the box
- Has integrations with all major monitoring platforms

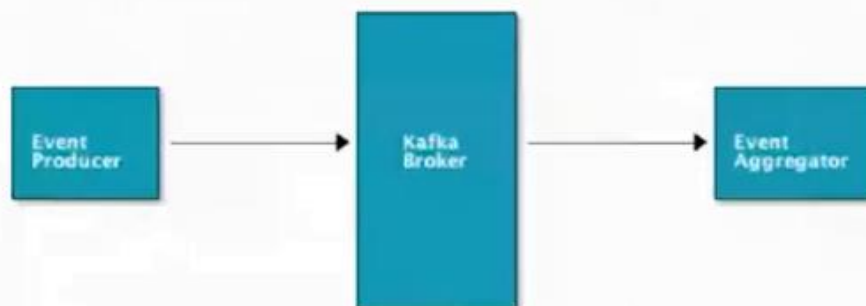
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Dimensional metrics

- Metric value - a scalar or vector of double values
- Tags - arbitrary set of key value pairs

Base metrics types

- Counter
- Gauge
- Timer
- Distribution Summary



Demo time!

Source code at:

<https://github.com/amalinovski/sample-streaming-system>

