

**ticketmaster®**



## **High Volume Metrics**

COLLECTION, ANALYSIS AND VISUALIZATION

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**Ticketmaster Open Source Projects:**  
**<http://code.ticketmaster.com>**

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# **Ticketmaster**

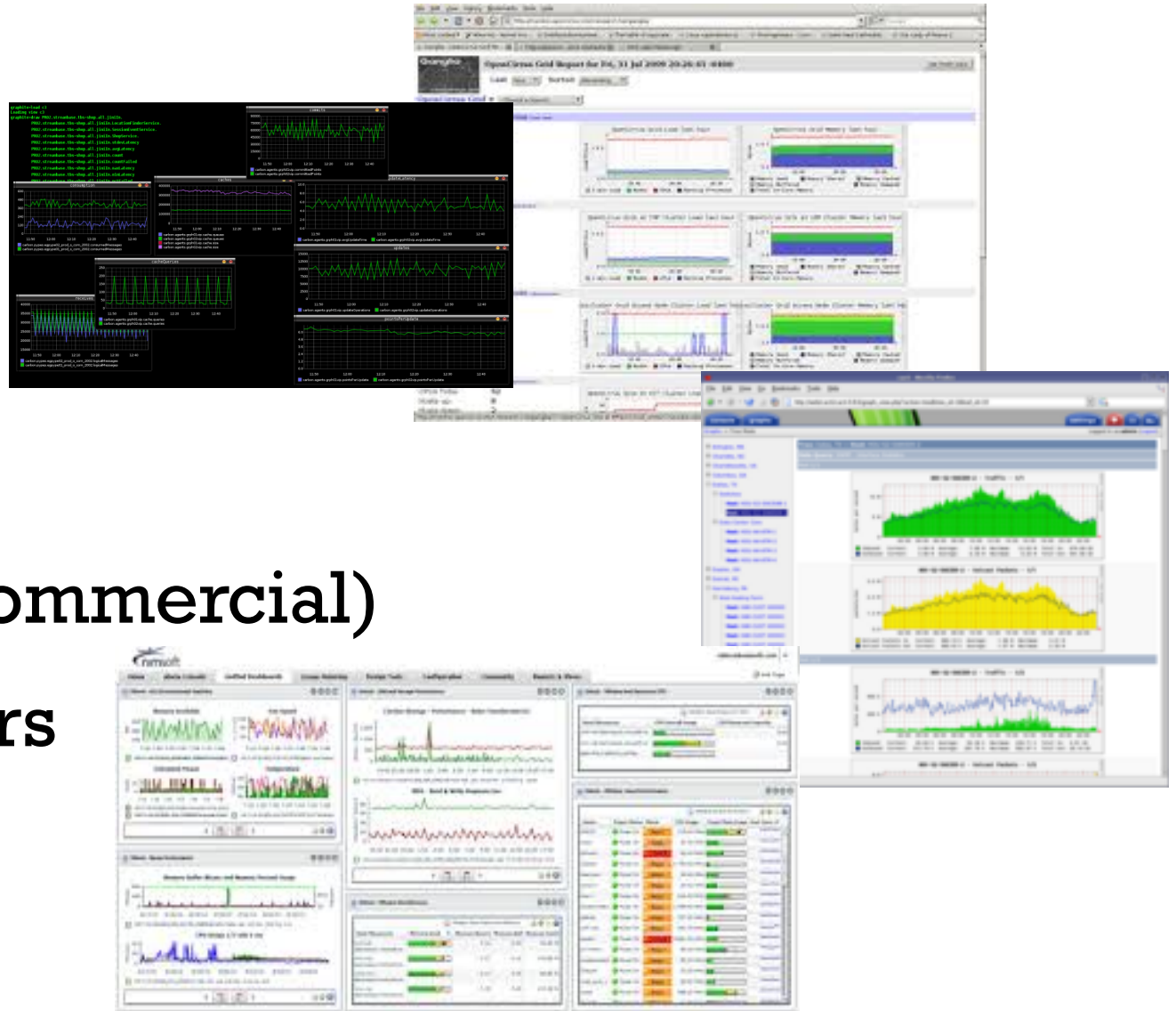
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- Top 5 ecommerce retailers.
- 37 million unique visits/month.
- 450 million tickets processed/year.
- 50+ development teams.
- Traffic patterns unlike most online retailers.
- 16,000+ systems.

# Common Technologies

HOW MANY DO YOU USE?

- Graphite
- Ganglia
- Cacti
- Nimsoft (commercial)
- Many others



# Common Technologies

## PROS AND CONS

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### Graphite / Ganglia / Cacti

#### Pros:

- Easy setup
- RRD / Whisper / MySQL
- Aggregation and consolidation
- Stock Graphing

#### Cons:

- File based data storage
- Higher space consumption (graphite:12bytes/metric)
- Scalability
- Data Analysis difficult
- Stock Graphing
- Server side pre-rendered static graphs.

# Common Technologies

WHY THEY HAVEN'T WORKED FOR TICKETMASTER

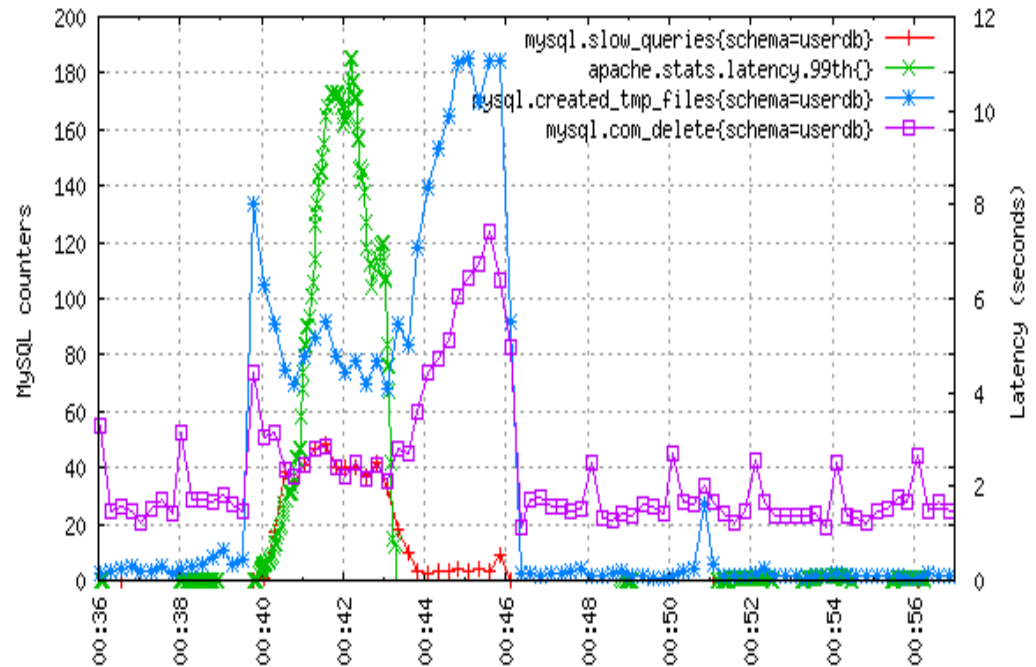
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- Space consumption vs granularity
- Scalability. Specifically horizontal scalability.
- Infinite data resolution and data retention.
- In flight and post collection data analysis

# OpenTSDB

## WHY IT WORKS FOR TICKETMASTER

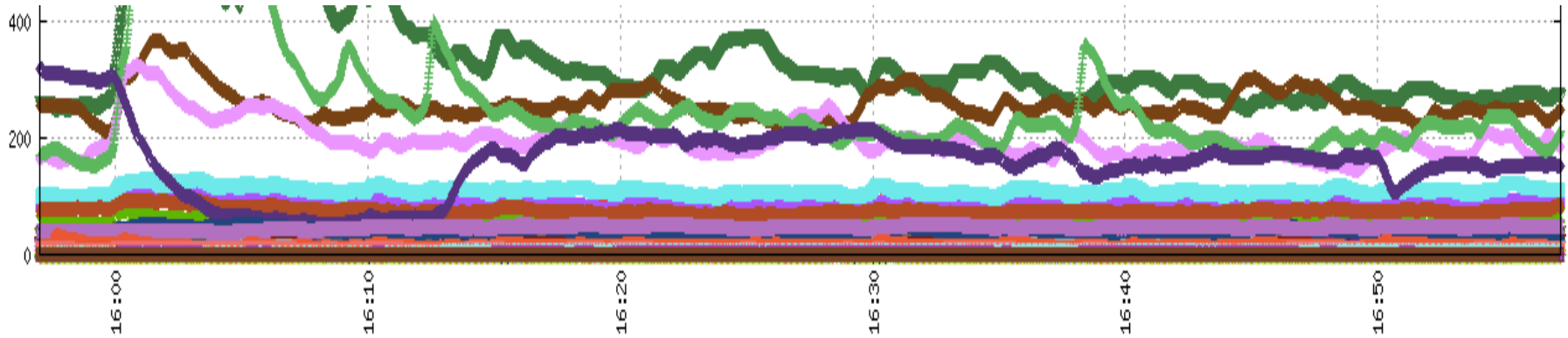
- Sub-second metric collection.
- Ability to ingest well over 1,000,000 metrics/sec
- Distributed architecture.
- Analysis of large data sets.



# Visualization

## WHAT ARE THE REQUIREMENTS

3600 points per series



- Analysis and correlation of data sets.
- Cross cutting of data.
- Audience viewing the data.
- Viewing perspective of a data set.
- Visualizing the data.





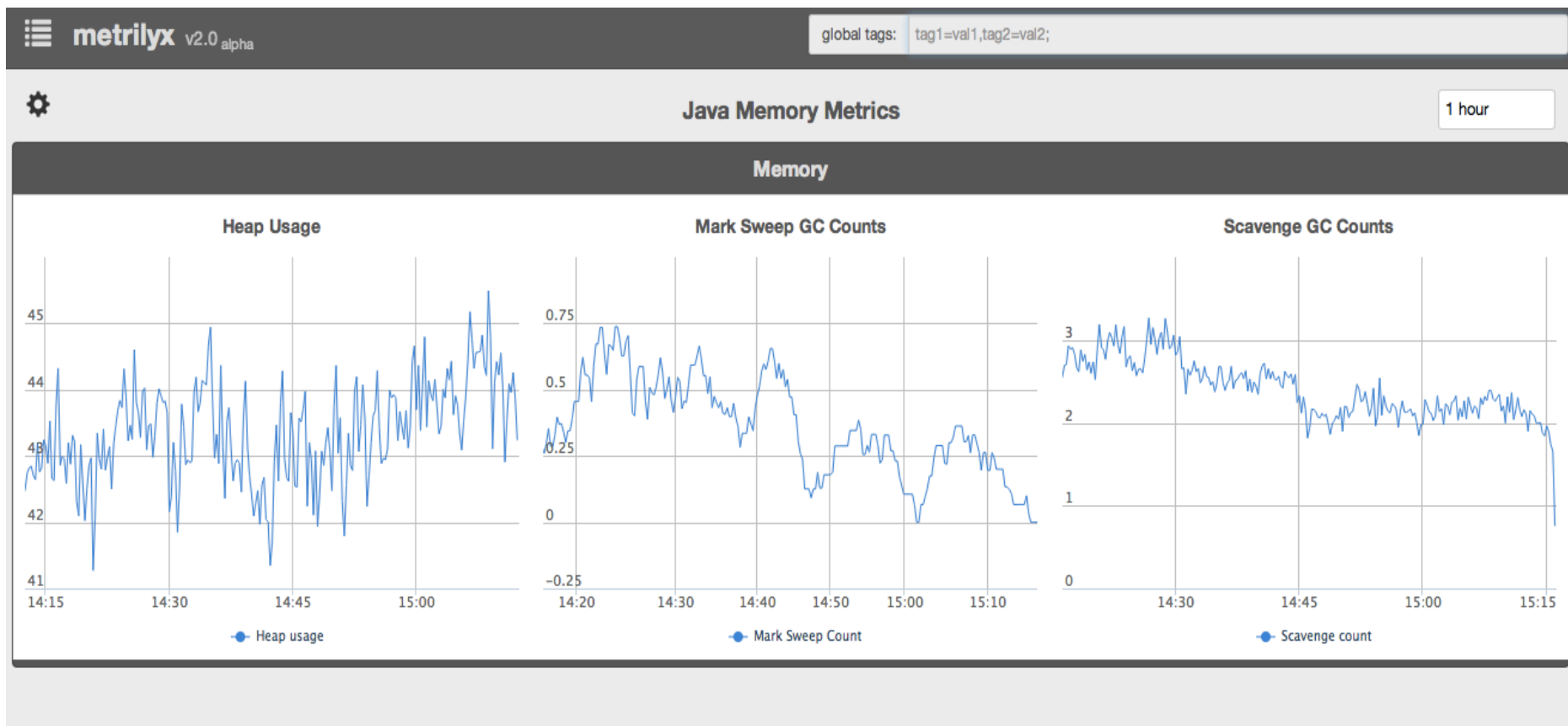
- Model, analyze and visualize data

- User controlled viewing perspectives

- Ease of use and setup

- Targeted for all viewing audiences.

# Single Entity



# Multiple Entities



# Q & A

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Metrilyx Source Code:

<https://github.com/Ticketmaster/metrilyx-2.0>