

Batch Monitoring Dashboards

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Overview

1 Monitoring for the Batch System

- Project Goal
- Solution

2 Creating Dashboards

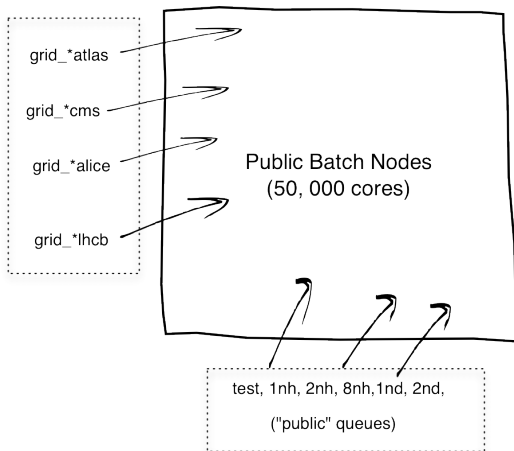
- Lemon Sensors
- Hut

3 Results

Our Group

IT-PES

("Grid" queues)



Purpose

- **consult the current state** of the batch system,
- **predict issues** in order to ensure **maximum efficiency** and the **best possible service** and
- **users** can **check the batch service status** themselves.

Solution



Choices

Group-wide

- under our control
- flexible
- easy to use

IT-wide

- imposes constraints
- overhead to register metrics and sensors
- more secure

LSF Queues Lemon Sensor

- Reporting on **LSF jobs**
- Challenge: **300k samples**
- Solution: **Group Data**



Hut

- **Kibana** is a tool developed to create *tables, histograms, pie charts* and even *maps*
- The structure of a dashboard is purely **json**.

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The screenshot shows the 'Add Panel' configuration interface in Kibana. At the top, there are three tabs: 'General', 'Panels', and 'Add Panel', with 'Add Panel' being the active tab. To the right of these tabs is the heading 'Row Settings'. Below the tabs, the text 'Select Panel Type' is displayed above a dropdown menu. The dropdown menu is currently empty. At the bottom right of the form, there are two buttons: a green 'Save' button and a red 'Cancel' button.

Hut

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- The structure of a dashboard is purely **json**.



```
"line_id": INT,  
"play_name": "String",  
"speech_number": INT,  
"line_number": "String",  
"speaker": "String",  
"text_entry": "String",
```

Hut

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General Panels **Add Panel**

Select Panel Type

```
"line_id": INT,
"play_name": "String",
"speech_number": INT,
"line_number": "String",
"speaker": "String",
"text_entry": "String",
```

```
"title": "Batch Efficiency",
"services": {
  "query": {
    "list": {
      "0": {
        "id": 0,
        "color": "#7EB26D",
        "alias": "Meyrin",
        "pin": false,
        "type": "lucene",
        "enable": true,
        "query": "location:Meyrin"
      },
      ...
    }
  }
}
```

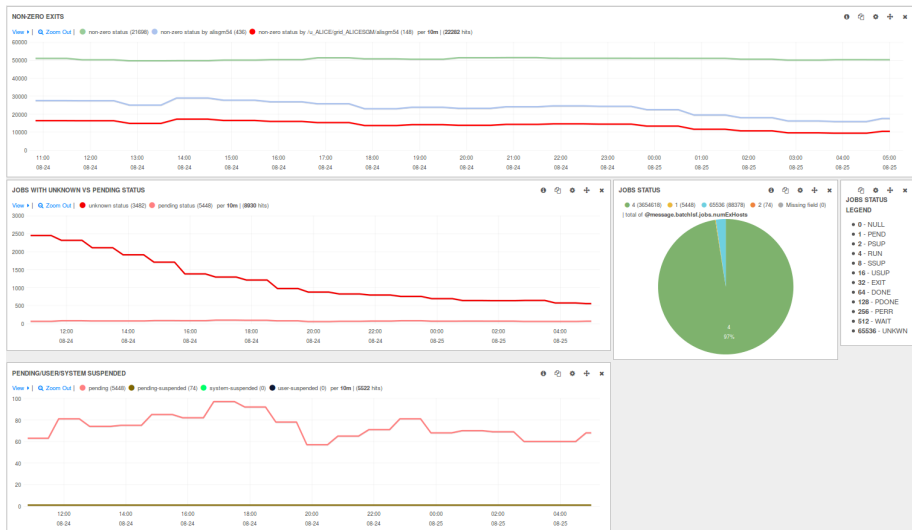
Hut

- A dashboard template tool
 - Why do it manually when you can automate the process?
- `./hut <template_file> <data_file> <output_file>`

Results - Jobs Statuses

- The required metrics can now be plotted (Lemon)
- Easier way to generate dashboards (hut)
- We have graphs! (Kibana)

Results - Jobs Statuses



Close Future

- Package **hut**
- Job Timings Dashboard: a new **sensor** for **Job Throughput**.

Thank You!