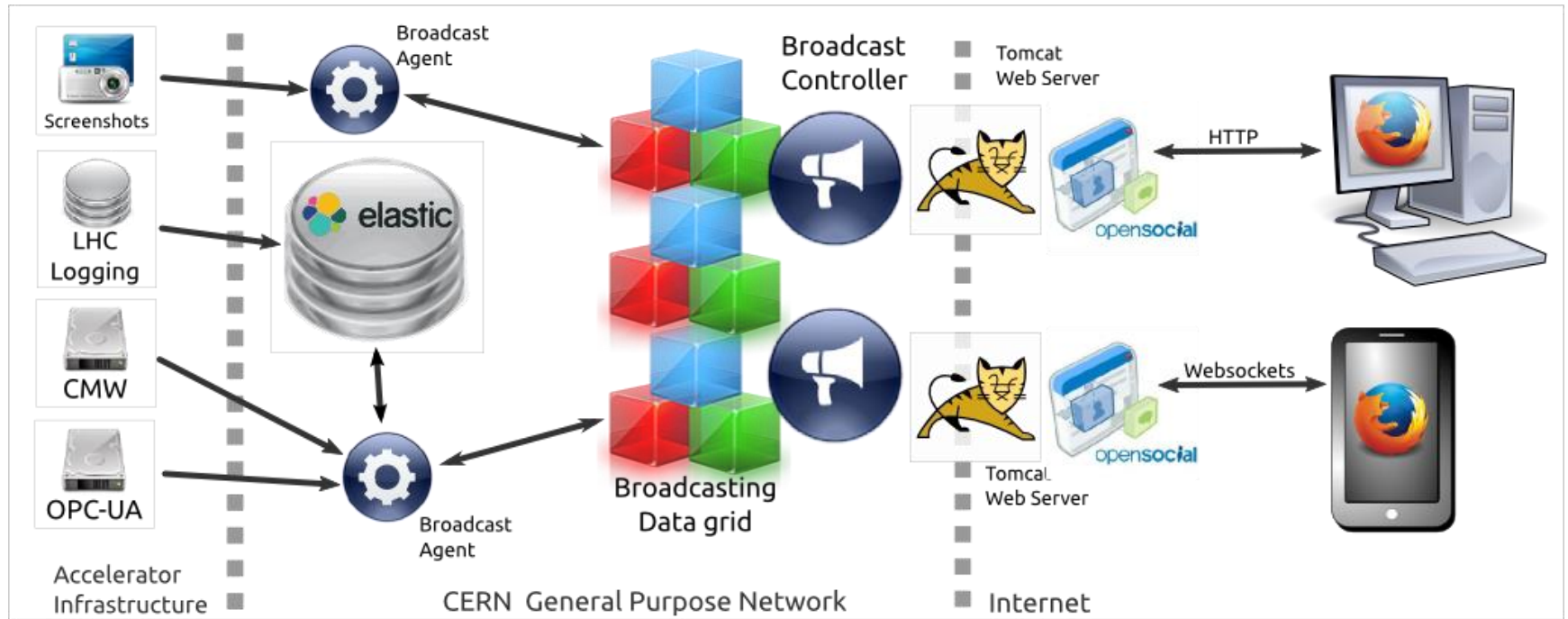# Web Broadcasting with C2MON

Brice Copy – Web Dev Workshop – 04 Oct 2016
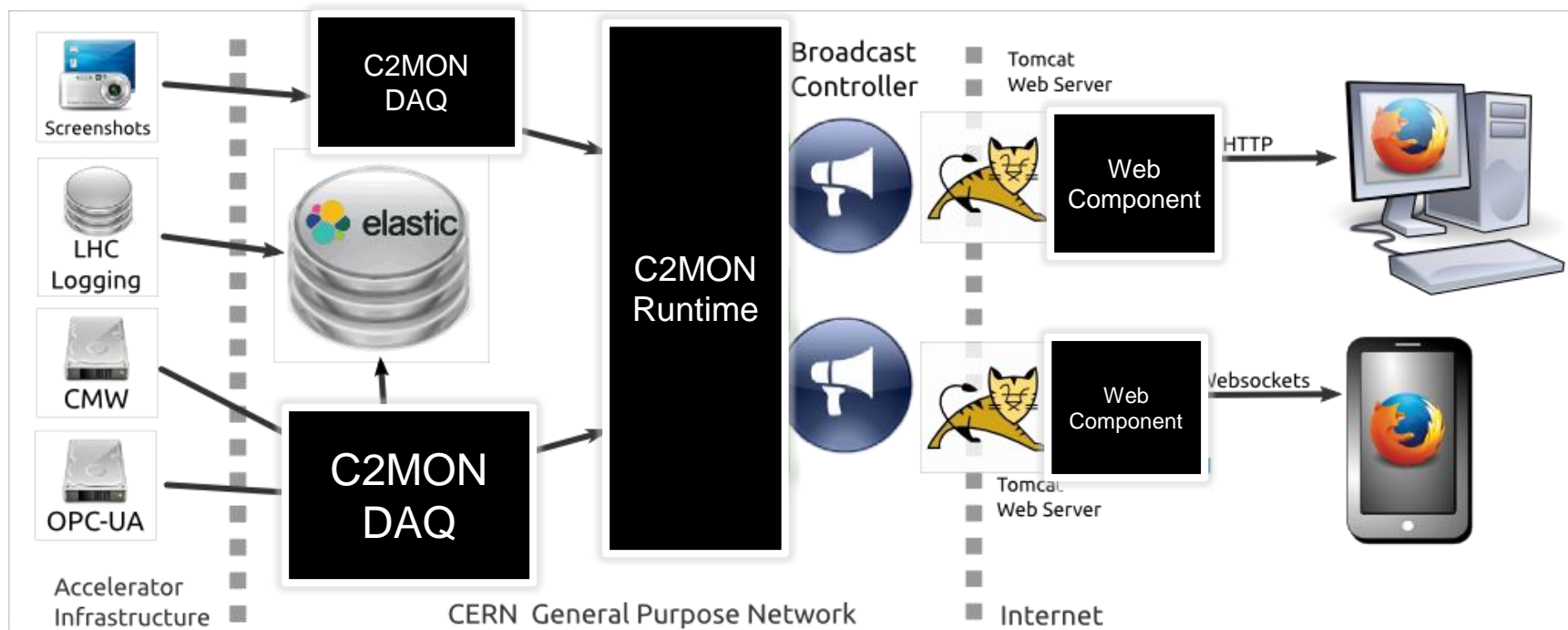
Overview

- Current architecture
- Benefits of C2MON vs current Broadcast Agents
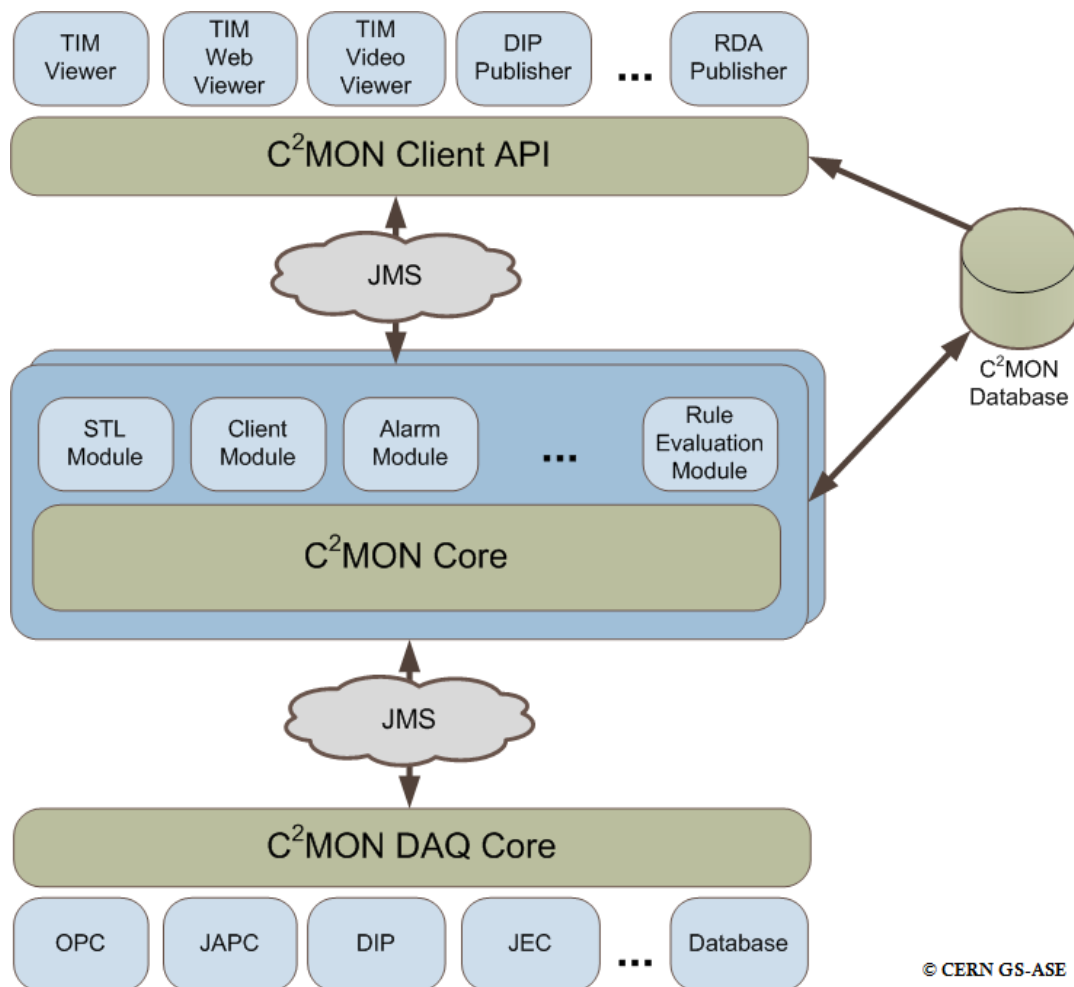- C2MON architecture intro
- Simplifying web development
- Roadmap

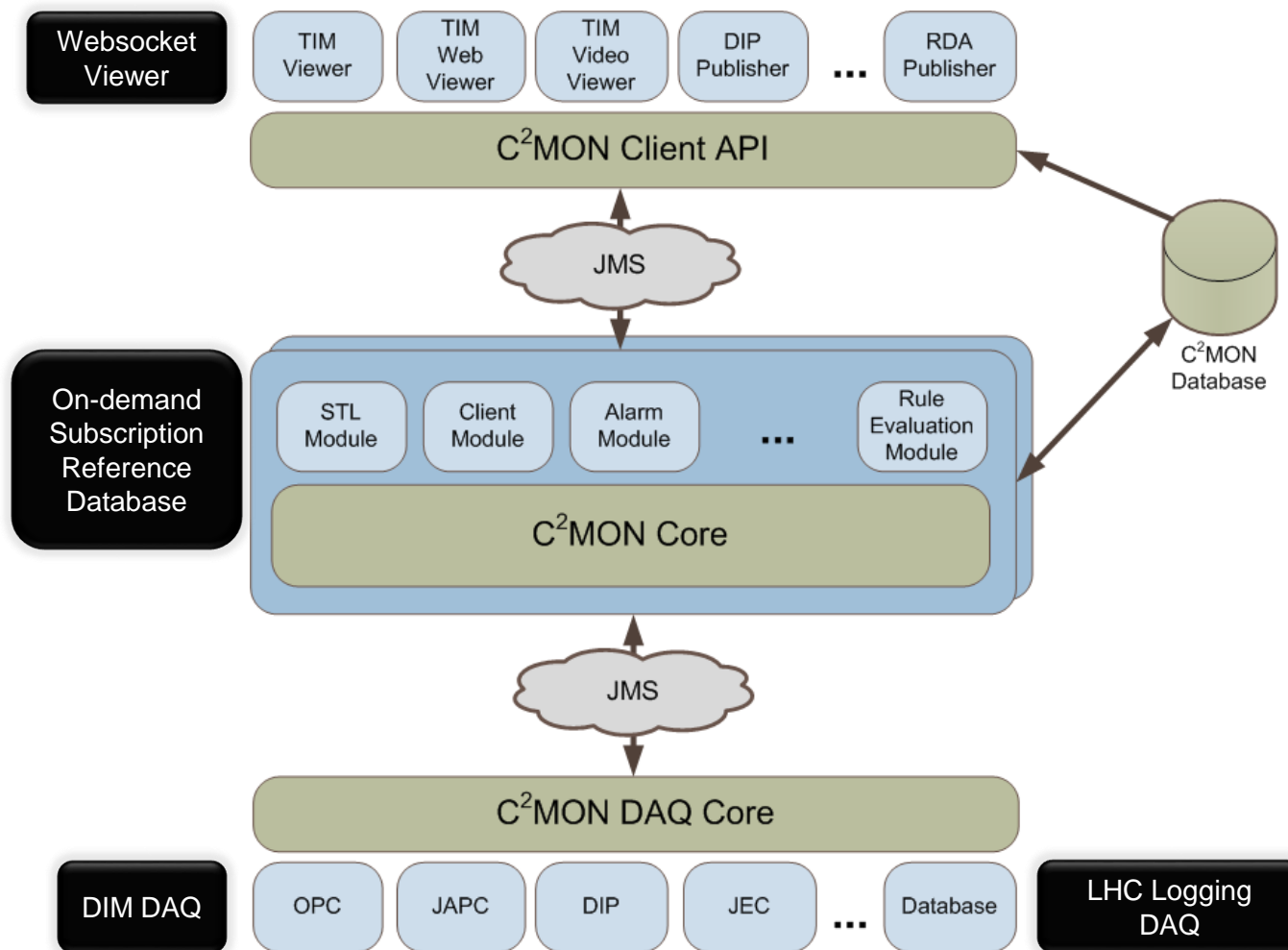# Current dashboard architecture

C2MON based dashboard

C2MON Architecture Intro

© CERN GS-ASE

Benefits of C2MON

- C2MON DAQ is a solid, proven piece of architecture :
  - 400 million data point updates a day.
  - Metadata support for extensive information about data quality.
  - 30 days archiving of traffic, with de-duplication, smoothing.
- C2MON data acquisition process is well established :
  - MODESTI process provides an approval and notification workflow.
- C2MON offers archiving :
  - HSQLDB or Oracle archiving for relational data storage
  - ElasticSearch archiving is being rolled out (BASICS talk on Friday about this).
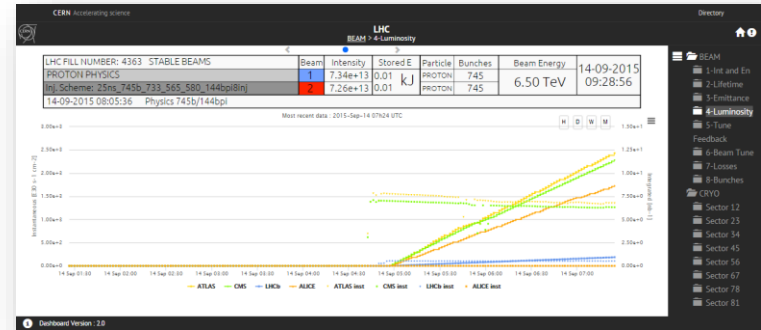   - Using Kibana / Grafana for quick dashboard rollouts.

C2MON Additions

Simplifying web development

Current dashboard relies on Opensocial :
- To package reusable visualizations
- To pass parameters between visualizations
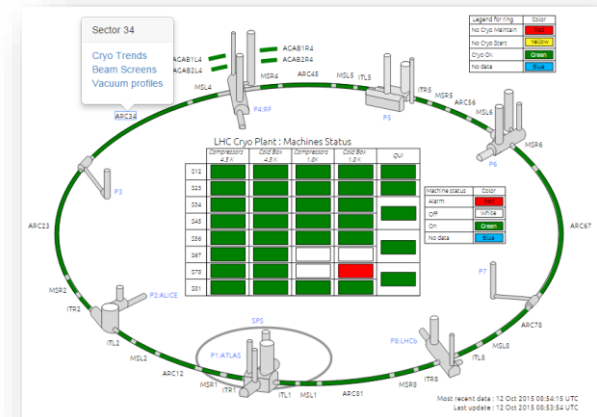- To orchestrate page navigation

Opensocial Constraints :
- Still relies on IFRAME tags (security, message passing is very complicated)
- Is not a first class citizen inside the Web Browser

Web Components :
- Custom HTML tags that can be added to the page like
- any other, emits standard DOM events to exchange data…
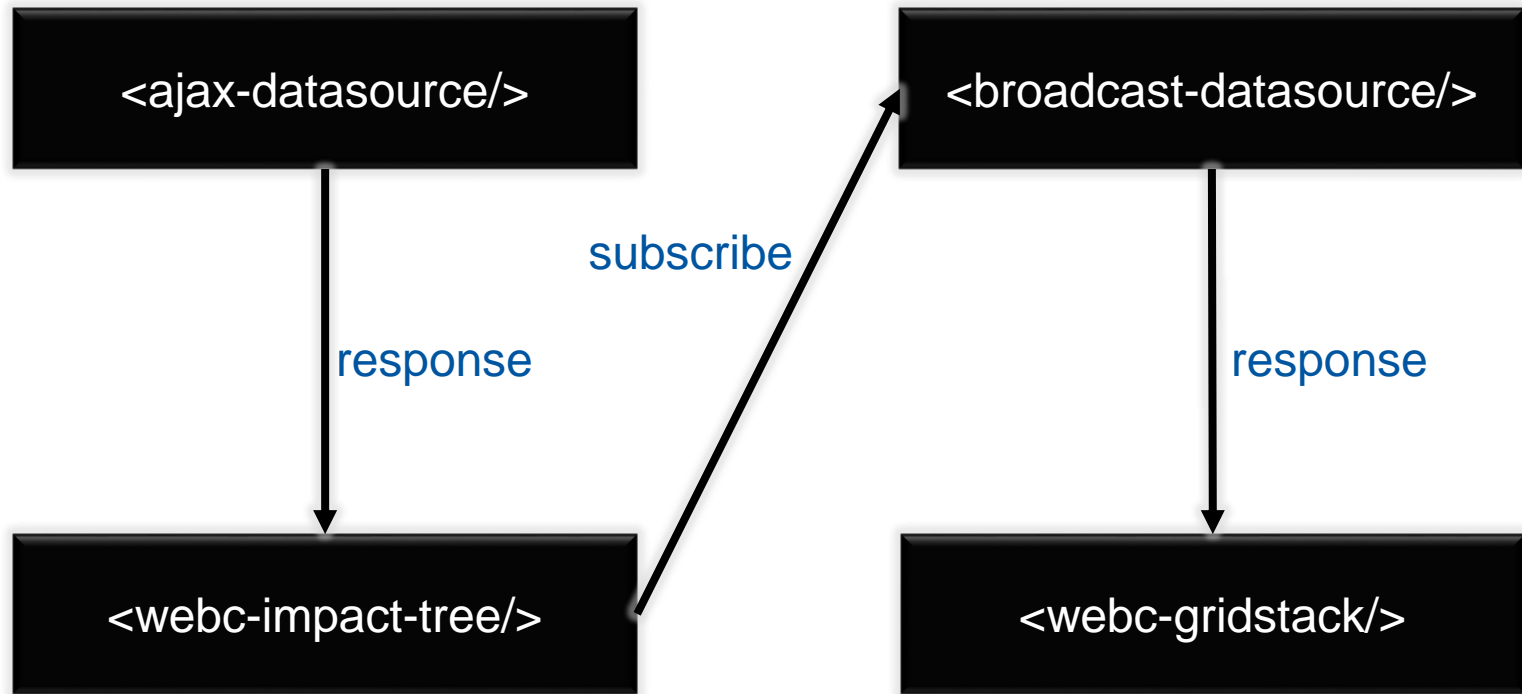- But comes with its own security context, Javascript runtime
- context.

Dashboard Pages with Web Components

Idea : Anyone with an HTML editor can layout tags

- Edit tag properties to setup :
  - Data subscriptions
  - Visualization formatting

- If required, add Javascript functions in the host page :
  - To translate data (e.g. go from NESTED to FLAT data format)
  - To perform fine-grained formatting (e.g. use D3 to update tree nodes)

Anatomy of a Dashboard page

```
<ajax-datasource/>
```

```
<broadcast-datasource/>
```

subscribe

response

response

```
<webc-impact-tree/>
```

```
<webc-gridstack/>
```

Questions ?