



ITU Kaleidoscope 2014

Living in a converged world - impossible without standards?

**DESIGN AND SPECIFICATIONS
OF A REPOSITORY FOR REAL-
TIME OPEN DATA**

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What is Open Data?

- Data or content that is free to use, reuse, and redistribute subject only, at most, to the requirement to attribute and/or share-alike
- The World Bank further defines openness as a combination of being both technically and legally open

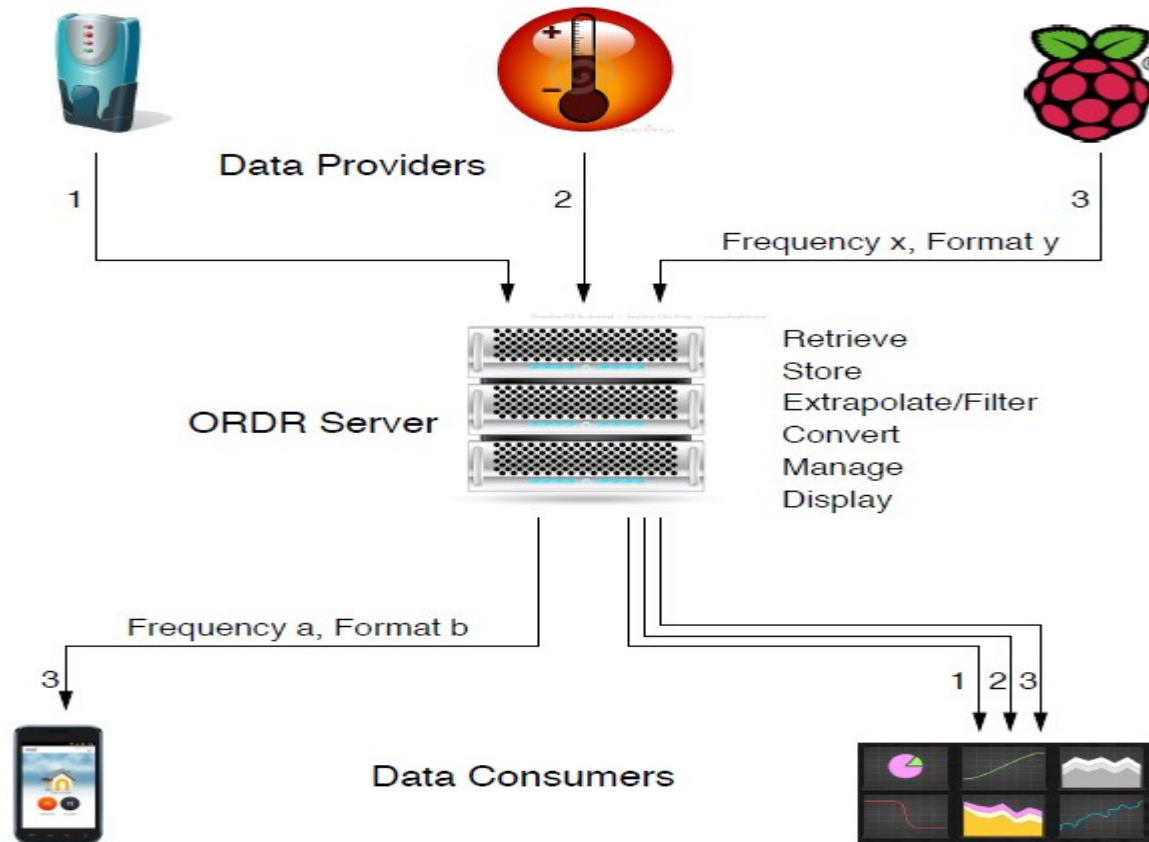
The problem

- The open data portals in existence support aggregated and summarized data but do not support raw real-time data
 - CKAN
 - Junar
- Platforms that do allow real-time data all do so in proprietary methods e.g. OpenCity
- There are also platforms that focus on Linked Open Data as opposed to the raw data

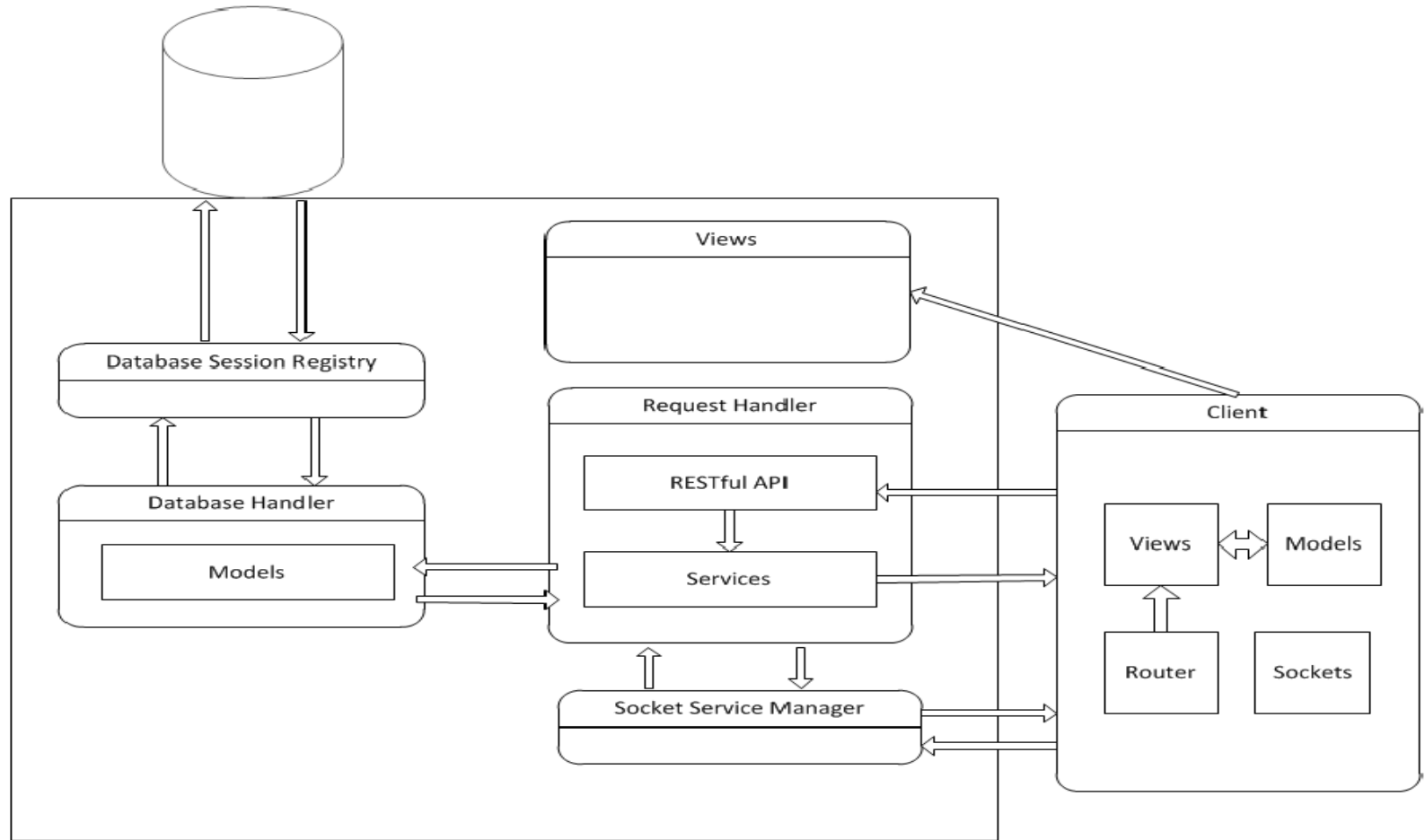
Specifications for the proposed platform

- The proposed platform design focuses on the following three things:
 - The data providers
 - The RTOD server
 - The data consumers

Specifications for the proposed platform contd.



RTOD Implementation



Sample Use Case

- Here a user sets up an account and streams his CPU utilisation to RTOD that is able to capture it in real-time and make it available to the public. The client has also requested an exponentially smoothed stream with a filter constant, $\alpha = 0.9$

$$d_s(n) = \alpha d_s(n-1) + (1-\alpha)d_r(n)$$

- This use case though simple, fully demonstrates the full implementation and how it works together

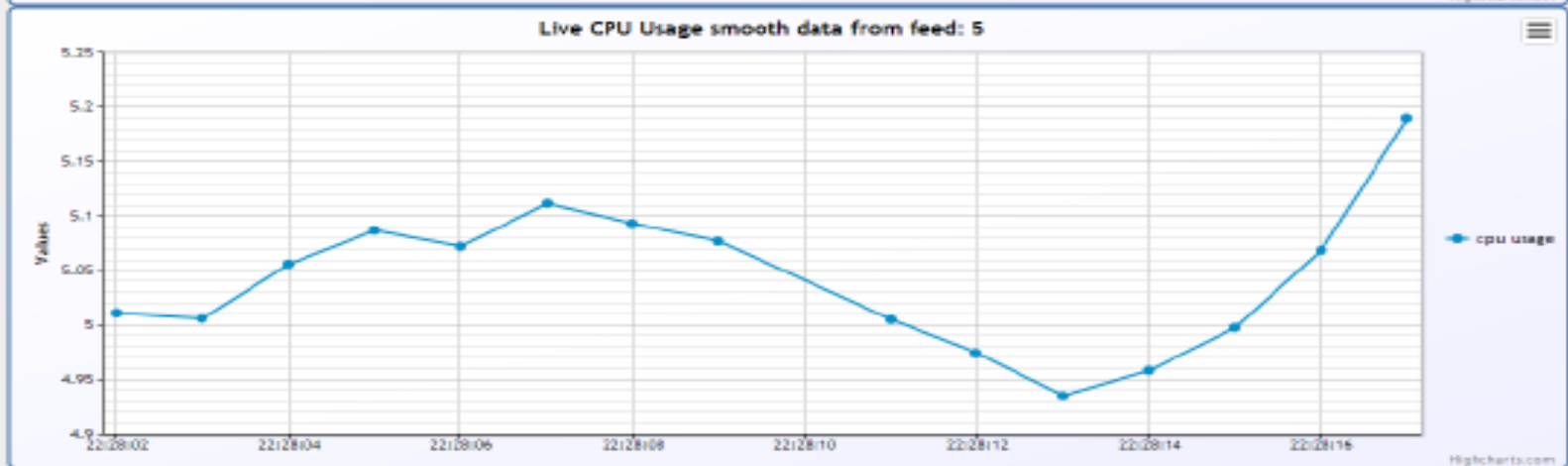
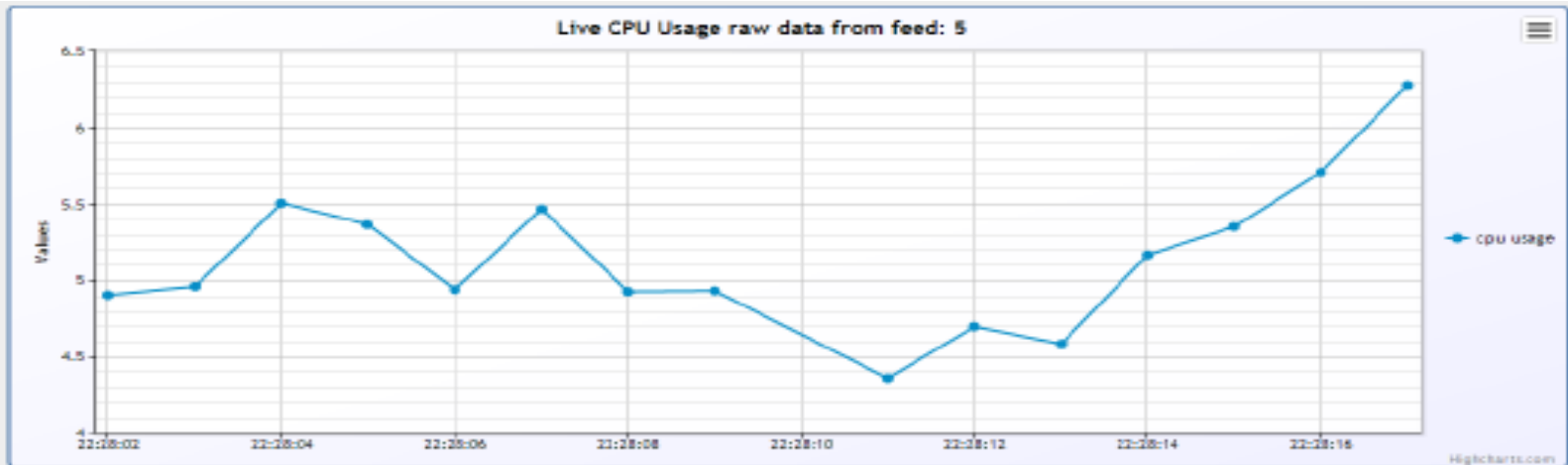
Sample Use Case contd.

Feed Details

Metadata

Dataset	CPU Usage
Hits	319
Smooth Factor	0.9
Datatype	JSON
Fresh	true
Last Updated	Mon Dec 09 2013 22:28:17 GMT-0400 (SA)
Created	2013-11-02 01:18:54-04
Frequency	5000

Sample Use Case contd.



Thanks for listening

- Questions?