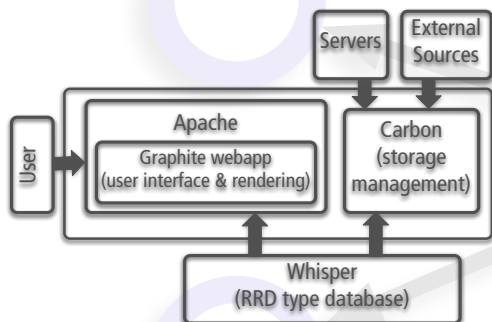


Overview

We consider a project to refresh the local monitoring for the ScotGrid Glasgow site, building upon the existing solution using Ganglia and Nagios. We focus here on the monitoring done by Ganglia. We present the motivation for this work, an example of the work underway, and show the future direction of the project.



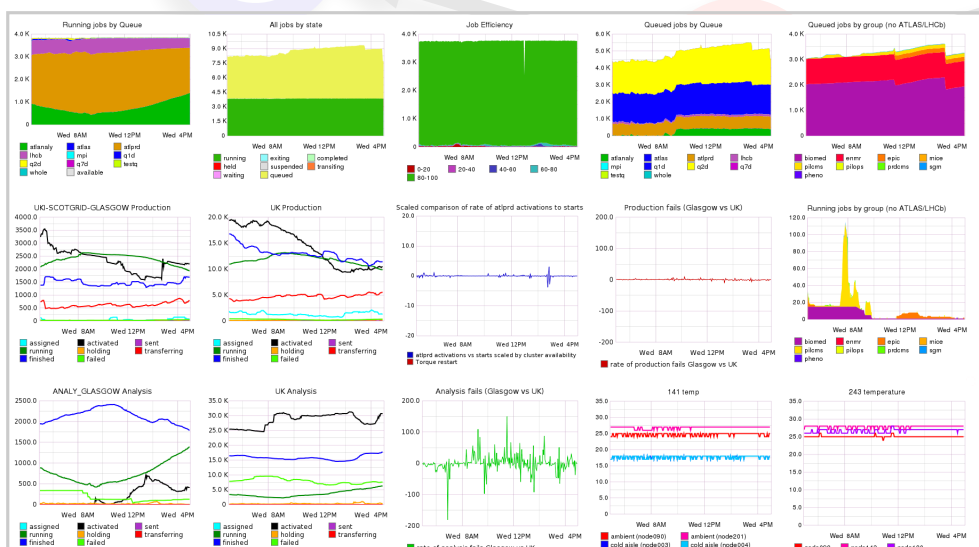
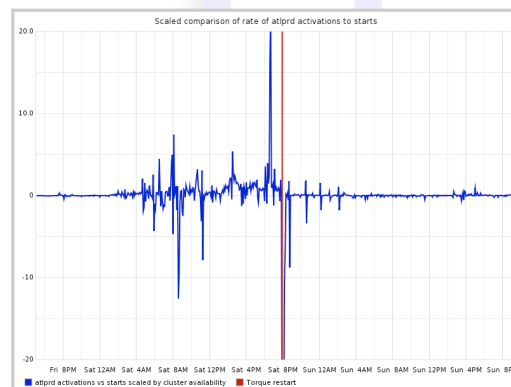
Motivation

Although Ganglia contains options for user-generated metrics which are used at Glasgow for batch monitoring, it was felt that better flexibility was needed for the collection, display and reuse of data. We have investigated Graphite, a popular solution that emphasises these features.

(The operating structure of Graphite is shown to the left)

Example

The graph to the right shows, in blue, data on the difference between the rate of job activations and the rate of job starts, taken from the ATLAS Panda Monitor JSON interface. The peaks in the plot flag delays in the job-starts that could flag a failure of the batch system and the need for a re-start. Indeed, overlaid in red is data taken from the batch server logs that shows which shows a restart occurring. All the data that is used to generate this graph was gathered separately and combined in Graphite, illustrating the power of this tool.



Outcomes and Future Work

To the left is a prototype top-level monitoring page for the ScotGrid dashboard, which gathers into one place experiment, cluster, and environmental data. It uses raw and analysed data to present an overview of the cluster containing all the operational-critical information.

Future work consists of further exploration of the combination of metrics and the use of external sources. We will also investigate more visualisation options and the integration of Nagios data and probes to this workflow.

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