Testing the VAC VM Payload Framework at Liverpool

S Jones, R Fay, J Bland

University of Liverpool

October 2016
VAC Tests

- VAC is a runtime framework that gives a plain vanilla worker node the ability to run virtual machine payloads on behalf of client experiments.
- To test if VAC scales well, we converted a section of our production cluster to VAC, comprising 530 VM slots. We ran VM payloads for a period of three months.
- Over that period, we monitored the usage, performance and consistency of the system, and we compiled some statistics to show that VAC provides an straightforward migration route for sites who wish to adopt Virtual Machine payloads without the heavy overhead of implementing an entire private cloud, such as OpenStack.
- In particular, we can report that:
  - Job occupancy approached 100% once the configuration was mature.
  - We processed payloads from multiple VOs (although the great majority of the traffic came from ATLAS).
  - VAC practically meets its design goal of eliminating complex middle-ware components and configurations on the workernodes, but some minor optional modules (such as a squid cache) are recommended for efficiency reasons.
VAC Jobs

(daily average; full occupancy = 530)