ATLAS Distributed Computing Presents

THE RETURN OF

Its Central Services core

ATLAS Distributed Computing (ADC) Central Services

ADC is responsible for managing
- 700+ virtual machines
- 43 projects hosted in OPENSTACK
- 5310 allocated CPU Cores

1/3rd of the cores are used by 3 Projects in OPENSTACK: Build, Panda, and Rucio. The remaining 2/3rds cover projects from data preparation to detector safety systems.

At the core of ADC, is the Central Services, who’s job it is to support and maintain all the different applications and systems, be the interface between CERN IT and the service managers of the various projects, all while ensuring that security and good computing practices are being adhered to, all keeping a smile on our face.

Design Philosophy

Central Services coordinators decided to follow the design principle noted by the U.S. Navy in 1960, KISS, an acronym for "Keep It Simple Stupid". Having a system that is overly sophisticated and takes forever to repair and maintain, wastes precious resources that could be used elsewhere.

With this philosophy in mind, our goal is Simplification via Automation, trying to automate as much as possible by removing the need for human intervention and using tools that match a minimalistic set of requirements, without a massive overhead required for training and administration:

- Puppet
- Bash
- Continuous Integration in Gitlab
- InfluxDB / Grafana
- RunDeck

Conclusion

There is still a lot that can be done and no system is infallible, however we feel that if we can "make everything as simple as possible, but not simpler", we will be able to create an easily maintainable environment that is not only capable of handling the current working systems, but keep things running well into run 3 at the LHC.