

k8s Introduction

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pre-GDB

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Intro

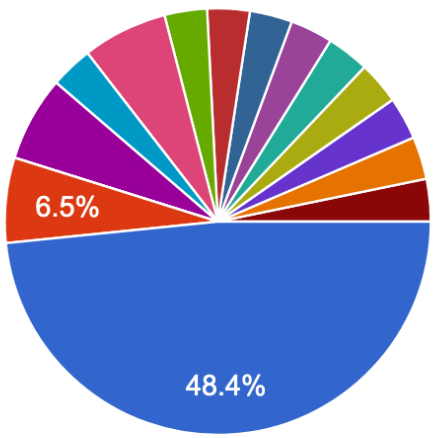
- k8s not part of WLCG infrastructure officially yet
- Several activities are nevertheless happening and interest is growing
- k8s is used mostly at CERN and in the US
 - Major usage is for services deployment but not only
 - In European countries there is some deployment mostly in France deployed on their cloud infrastructure
- A couple of interesting results from the Survey done by WLCG ops few months ago



k8s dominates the interest

Question 22. In case you use any system for management of containerized applications at your site, which one do you use?

31 responses



- Kubernetes
 - Docker Swarm
 - Azure Container Service
 - Amazon ECS
 - Apache Mesos
 - RedHat OpenShift
 - N/A
 - Kubernetes is the only system we're in...
- ▲ 1/2 ▼

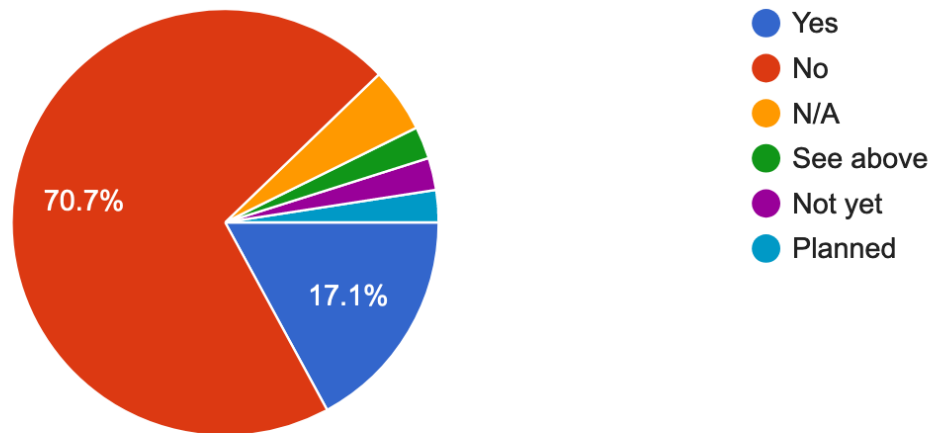


But little use for WLCG

Question 21. In case you use any system for management of containerized applications like Kubernetes at your site, is it used to manage the computing resources (or part of them) provided to the LHC VOs?



41 responses



Themes

- 1) Analysis facilities
 - * as a batch system including federated clusters and schedulers
 - * jupiter hub/binder hub/reana/kubeflow
 - * submission from the experiments
 - * easier access to alternative architectures
- 2) Service deployment
 - * large scale service deployment: rucio, cms webservices, htcondor, other services
 - * centralised remote deployment (slate)
- 3) k8s deployment and operations
 - * on openstack
 - * on baremetal
 - * on a commercial cloud
- 4) Security
 - * k8s security in general
 - * k8s security for centralised remote deployment
 - * AAI (x509, tokens, VO SSO...)
- 5) Storage integration
- 6) Image distribution (not strictly k8s but still)
 - * registries/registries caches
 - * cvmfs snapshotter
 - * cvmfs plain cvmfs
- 7) CNCF landscape (if we want to interact with the community we need to know the landscape <https://landscape.cncf.io>)
- 8) k8s CR! and use of different runtimes



Today

- 20 contributions from different projects
 - PRP
 - IRIS-HEP
 - WLCG sites
 - CERN-IT
 - ATLAS & CMS
- End with discussion about what do we want out of this meeting particularly if we want more organised effort for WLCG

