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Europe 2018
CNCF Cross-cloud CI
(beta)
Deep Dive Session:
cross-cloud provisioner

Welcome!

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Welcome!

- What is cross-cloud?
- Goals
- Audience
- Live demo
- Technology overview
- Code review
- How to collaborate
- Q/A

What is cross-cloud?

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What is cross-cloud?

- An open source, multi-cloud, Kubernetes provisioner
- https://github.com/crosscloudci/cross-cloud

What is cross-cloud?

What does cross-cloud do?

- Deploys vanilla-upstream Kubernetes to public/private clouds and bare metal with support for cloud specific feature flags.

- Optionally, runs conformance tests against the provisioned K8s cluster.

What are cross-cloud's goals?

Goals:

- To provide a vendor neutral, community maintained, vanilla Kubernetes provisioning solution which supports deployments across cloud providers, private clouds and bare metal with independent, Kubernetes interoperability testing results for end-users.

Who is cross-cloud's audience?

Audience:

- Groups wanting to install their own Kubernetes clusters:
  - in hybrid environments (cloud + metal)
  - across multiple cloud providers
  - in private environments (e.g. OpenStack installations)

- An interested party can confidently support multiple target environments using upstream Kubernetes and run conformance tests to validate the installation.

How does cross-cloud work?

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Live Demo: cross-cloud provisioning for GCE

How does cross-cloud work? (steps)

Steps for cross-cloud provisioning VMs or bare metal:

- **Allocates resources and provisions environment with a provider**
  - eg. VMs, load balancer, security groups
- **Deploys specified version of vanilla K8s into provisioned environment with configuration requested**
  - eg. CNI version, DNS for services and pods
- **Optionally: runs conformance tests on the new cluster**

Cross-cloud technology overview

Cross-cloud provisioning uses:

- Terraform
- Cloud-init
- Vanilla Kubernetes

Why don’t we use [enter tech here]?

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Let’s walk through the code

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[GCE cross-cloud provisioning code]

How to collaborate?

- **Attend CI WG meetings:**
  - https://github.com/cncf/wg-ci
- **Post to the CI Public Discussion Group:**
  - cncf-ci-public@lists.cncf.io
- **Subscribe to the CNCF CI public mailing list:**
  - https://lists.cncf.io/g/cncf-ci-public
- **Create issues/PRs on GitHub:**
  - https://github.com/crosscloudci/cross-cloud/issues
- **Review KubeCon Cross-cloud CI Intro Slides:**
  - https://kccnceu18.sched.com/event/DrnT/cncf-cicd-wg-intro

Connect with Cross-cloud CI

@crosscloudci

@crosscloudci

crosscloudci@vulk.coop

How to add a cloud provider?

- **Cross-cloud FAQ:**
  - https://github.com/crosscloudci/cross-cloud/blob/master/FAQ.md

Any questions?

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Thank you

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Today's Demo Prepared by:

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