

SAILING DELIVERY

Continuous Delivery inside containerized environments



Mandic. Especialistas em Clouds.

Mandic Clouds:



vmware®

openstack.



\$ whoami



Gabriel Tiozzi
tioxy.com
@tioxy

\$ history | less

...

2015 Primeiro contato com *AWS*

2016 Desenvolvedor de ASP MVC 5 & Winforms

2017 Pythonista focado em projetos de *CI/CD*, automação e *containers*

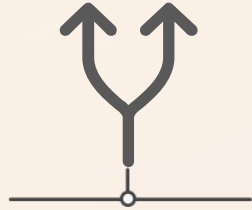
2018 Criador do *tioxy/panoptes* e em busca do *SRE*

(END)

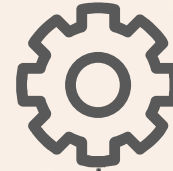
Agenda



Continuous
Delivery



Separando *CI*
de *CD*



Spinnaker



Demo

Continuous Delivery

O que é ?

“Continuous Delivery é a habilidade de ter mudanças de todos os tipos (incluindo novas funcionalidades, mudanças de configuração, bug fixes e experimentos) em produção ou para o usuário final, de maneira rápida, segura e sustentável.” — continuousdelivery.com

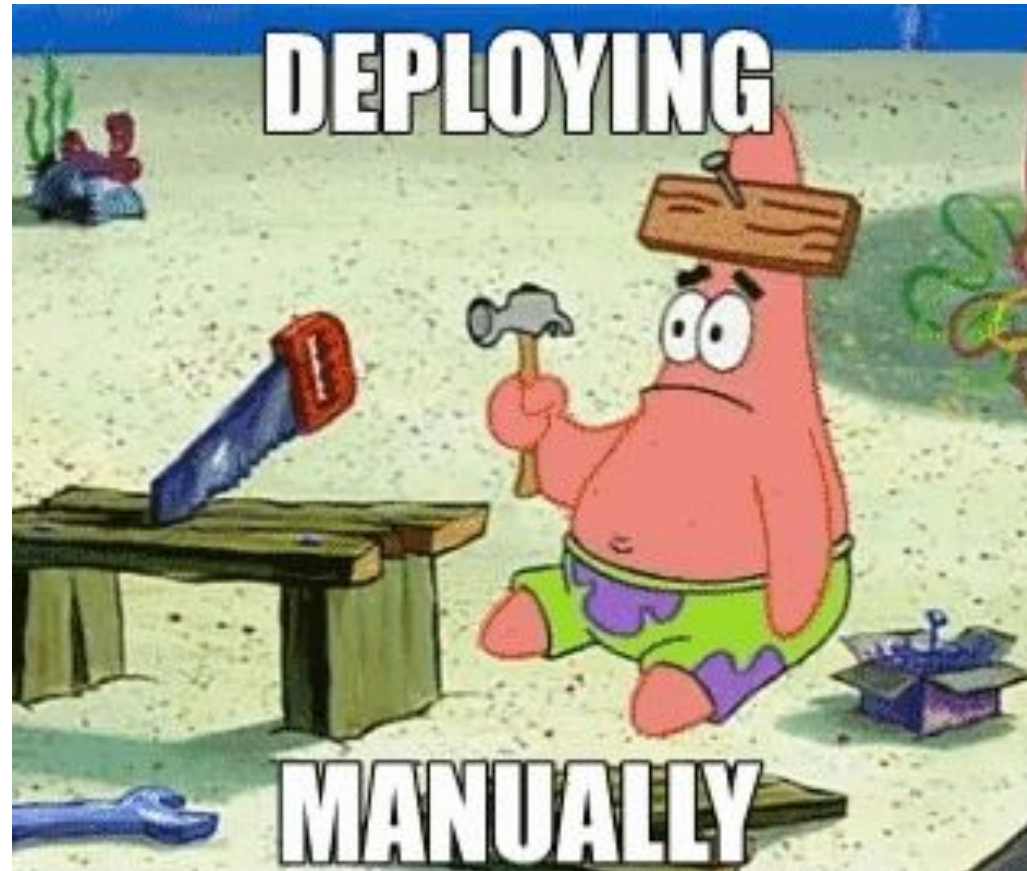
O que é ?

“Continuous Delivery é a habilidade de ter mudanças de todos os tipos (incluindo novas funcionalidades, mudanças de configuração, bug fixes e experimentos) em produção ou para o usuário final, de maneira rápida, segura e sustentável.” — continuousdelivery.com

TL;DR Estar pronto para um deploy 11 AM

SEM MEDO

Por que usar?



Por que usar?



Delivery != Deployment



Separando CI de CD

Pipelines de CI fazendo CD ?!



Construir

Testar

Armazenar & Versionar

Entregar

Jenkins fazendo CD

```
stage( 'Deployment' ) {  
    steps {  
        sh ' /path/my-magic-deployment.sh '  
    }  
}
```

Jenkins fazendo CD

```
stage( 'Deployment' ) {  
    steps {  
        sh ' /path/my-magic-deployment.sh '  
    }  
}
```





“Spinnaker é uma plataforma de Continuous Delivery open source e multi-cloud para releases de software com alta velocidade e confiança.”

— *Spinnaker.io*

SPINNAKER Search Projects Applications tioxy Search What's New Help

nginx PIPELINES INFRASTRUCTURE TASKS CONFIG

Infrastructure CLUSTERS LOAD BALANCERS FIREWALLS

SEARCH ?

ACCOUNT

- k8s-master

REGION

- nginx-ingress

STACK

- (none)

DETAIL

- (none)

STATUS

- Healthy
- Unhealthy
- Disabled
- Starting

Edit multiple Show Instances with details Create Server Group

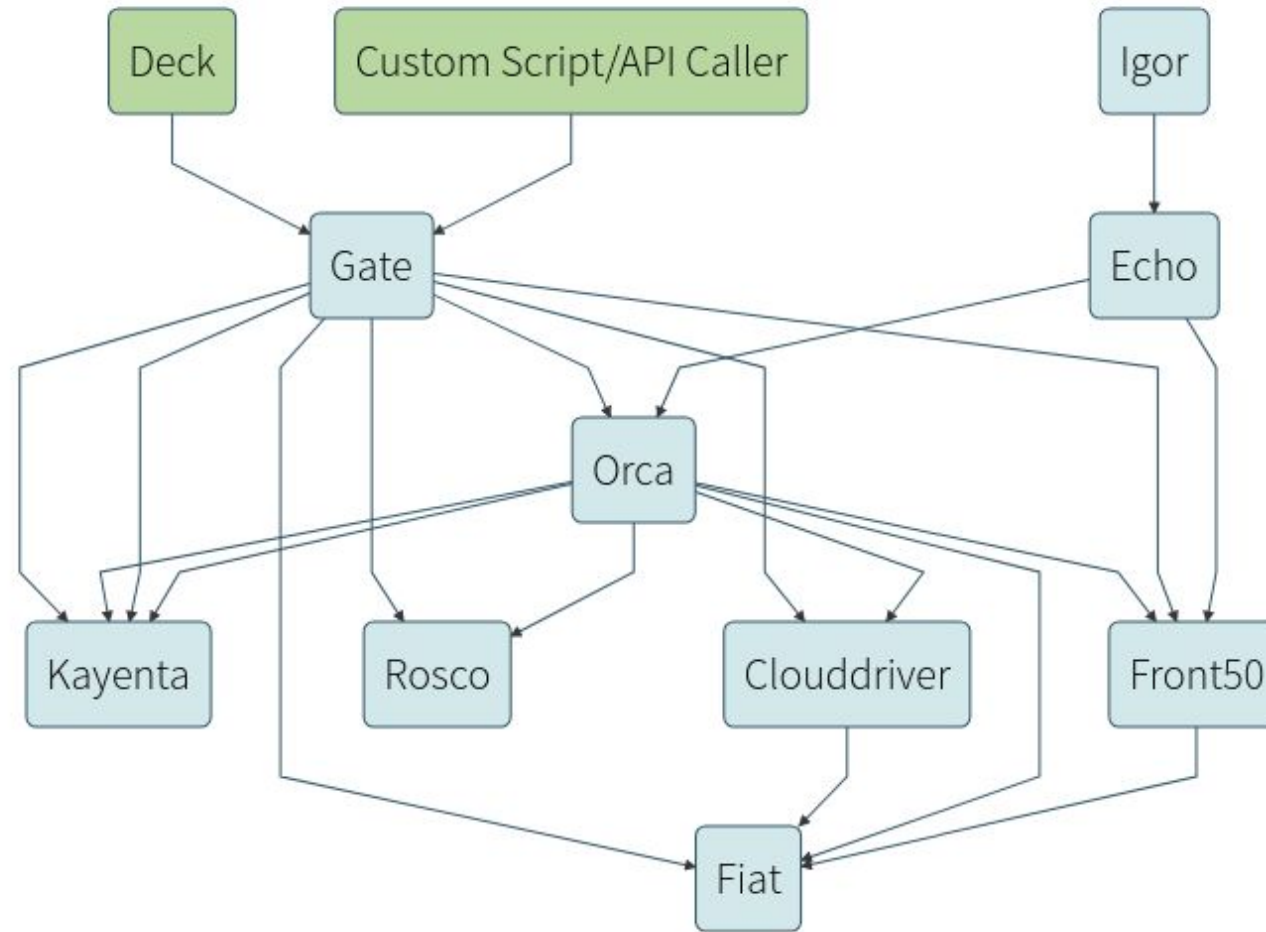
K8S-MASTER nginx-ingress 2 ▲ : 100%

NGINX-INGRESS

nginx/nginx-ingress:edge 2 ▲ : 100%

Página *Applications* na versao 1.9.4

Arquitetura



Instalação fácil...

Halyard *hal*

Local (Git, Debian)

Distributed (Kubernetes)

Instalação fácil... (K8S)

```
ubuntu@ip-10-56-0-240:~$ hal config provider kubernetes enable  
  
+ Get current deployment  
  Success  
  
+ Edit the kubernetes provider  
  Success  
  
+ Successfully enabled kubernetes
```

Instalação fácil... (K8S)

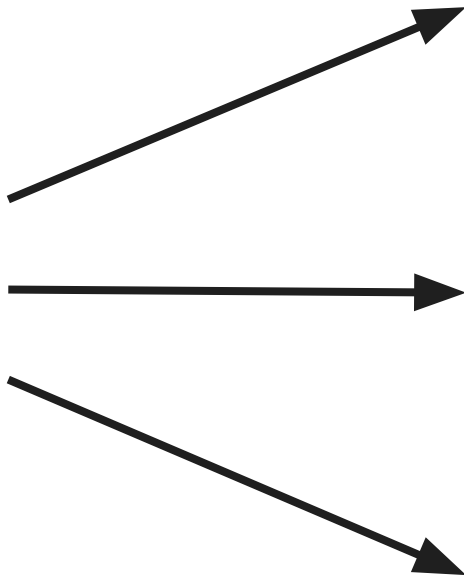
```
ubuntu@ip-10-56-0-240:~$ hal config provider kubernetes account add my-k8s-v2-account \  
> --provider-version v2 \  
> --context $(kubectl config current-context)  
+ Get current deployment  
  Success  
+ Add the my-k8s-v2-account account  
  Success  
+ Successfully added account my-k8s-v2-account for provider  
  kubernetes.
```


Instalação fácil... (K8S)

```
ubuntu@ip-10-56-0-240:~$ hal config deploy edit --type distributed
+ Get current deployment
  Success
+ Get the deployment environment
  Success
+ Edit the deployment environment
  Success
+ Successfully updated your deployment environment.
```

Instalação fácil...

Provider



Account A



Account B



Account C



Mas também difícil! (GKE + K8S)

complicates configuring Spinnaker because each machine running Spinnaker needs its own service account. `gcloud` checks the permissions of that service account in order to generate an authentication token.

Given that all pods on GKE share the same service account, granting Spinnaker on GKE permission also grants permission to all pods running alongside Spinnaker. For this reason, we recommend configuring a [Kubernetes service account](#) for Spinnaker to authenticate as.

TL;DR Use the credentials you've downloaded to create a [Kubernetes service account](#) for Spinnaker to authenticate as.

Next Steps [🔗](#)

Follow the [setup instructions for adding a Kubernetes account in Spinnaker](#).

Mas também difícil! (GKE + K8S)

➤ Optional: Create a Kubernetes Service Account [🔗](#)

➤ Optional: Configure Kubernetes roles (RBAC) [🔗](#)

➤ Migrating from the V1 provider [🔗](#)

Mas também difícil! (GKE + K8S)

Then add the account:

```
hal config provider kubernetes account add my-k8s-v2-account \  
  --provider-version v2 \  
  --context $(kubectl config current-context)
```

You'll also need to run

```
hal config features edit --artifacts true
```

Advanced account settings [↗](#)

If you're looking for more configurability, please see the other options listed in the [Halyard Reference](#).

Mas também difícil! (GKE + K8S)

- `--required-group-membership` : (*Default:* `[]`) A user must be a member of at least one specified group in order to make changes to this account's cloud resources.
- `--service-account` : When true, Spinnaker attempt to authenticate against Kubernetes using a Kubernetes service account. This only works when Halyard & Spinnaker are deployed in Kubernetes. Read more about service accounts here: <https://kubernetes.io/docs/tasks/configure-pod-container/configure-service-account/>.
- `--write-permissions` : (*Default:* `[]`) A user must have at least one of these roles in order to make changes to this account's cloud resources.

NÃO FUNCIONA :(

Mas também difícil! (GKE + K8S)

```
2018-12-05 02:12:20.941 WARN 1 --- [ecutionAction-1] c.n.s.c.k.v.s.KubernetesV2Credentials:
Could not list namespaces for account my-k8s-v2-account:
Failed to read [namespace] from :
Error from server (Forbidden): namespaces is forbidden:
User "system:serviceaccount:spinnaker:default" cannot list namespaces at the cluster scope
```

O que eu ganho?

Gerência de deployments Multicloud

Deploy com análise de métricas

Definições de estratégias customizadas

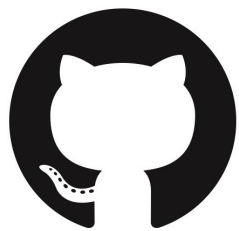
Criação de imagens via Packer

Deploy de manifests via Helm

Editor de Pipelines

The screenshot displays the Spinnaker Pipeline Editor interface. At the top, there is a navigation bar with 'SPINNAKER', 'Search', 'Projects', and 'Applications'. The user is logged in as 'stevenkim@spinnaker-test.net'. Below this, the 'mdservice' application is selected, and the 'PIPELINES' tab is active. The pipeline being edited is named 'Promote to Prod'. The pipeline flow consists of the following stages: Configuration, Find Image from Stage, Deploy Canary, Cutover Manual Approval, Deploy Prod (Red/Black), Tear Down Canary, Wait 2 hrs, and Destroy Old Prod. The 'Deploy Prod (Red/Black)' stage is currently selected. Below the pipeline flow, there are options to 'Add stage' and 'Copy an existing stage'. The configuration panel for the selected stage shows: Stage Name: 'Deploy Prod (Red/Black)', Stage type: 'Deploy', and Depends On: 'Cutover Manual Approval'. There are also options for 'Deploy Configuration', 'EXECUTION OPTIONS', and 'NOTIFICATIONS'. At the bottom, a table header is visible with columns: Provider, Account, Cluster, Region, Strategy, Capacity, and Actions.

Integrações



G Suite



... e mais outras disponíveis na doc.

Quando é uma opção?

Parque já é Netflix OSS

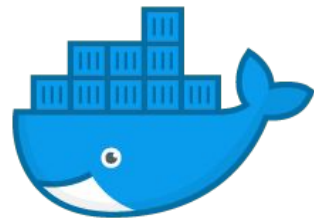
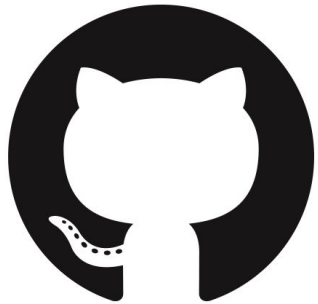
Deployments complexos

Escalabilidade

Muito dinheiro !!!

Demo

Stack



docker



B 0 2 5 9 9 5 S A 5 9 5 5 N 2 Z 7 0 Y 9 S 9 9 5 5 S A 5 S A 0
7 G C S 7 3 8 Y 4 J P 4 V X Q 0 Y 7 G C 7 S 7 3 8 Y 3 8 4
N 5 V 6 8 F V 6 C E M M 5 8 Z 1 N N 5 V I 6 8 F V 6 F V C
4 1 D 3 T 8 H 0 J Q 6 9 V R 5 V 8 4 1 D 0 3 T 8 H 0 8 H J
2 5 U J E I 9 4 7 4 5 5 9 2 K 6 8 2 5 U 7 J E I 9 4 7 9 7
3 Y U P Z 8 1 7 F 4 W D R 6 G Z 1 3 Y U 1 P Z 8 1 7 8 1 F
N 5 L P 7 W K 2 6 1 2 7 K U 7 M C N 5 L P 7 W K 2 W K 6
4 8 H 9 5 T U 6 U 8 L 0 5 H 3 5 N 4 8 H T 9 5 7 U 6 7 U U
I 1 5 J 6 1 3 T 0 5 0 F Q 2 2 K E I 1 5 S J 6 1 3 T 1 3 0
H Z 7 V R N N 4 2 3 8 P 5 V H 9 K H Z 7 D V R N N 4 N N 2
7 9 U 6 1 X 1 B 3 I L V 0 7 A 6 Z P 9 U 4 6 1 X 1 5 X 1 3
1 6 0 5 1 R R 2 Z M C D T C L 5 7 1 6 0 W 5 1 R R 2 R R Z
Y Q M S 6 L 6 7 R N 5 0 2 0 7 Y Q M Z S 6 L 6 T L 6 7
Y G F 2 1 0 8 2 4 8 P F 5 Q 2 L Y G F B 2 1 0 8 7 D 8 2
3 8 5 4 L W 6 3 G C 4 7 4 2 S 0 3 6 0 4 L W 6 Q W 6 3
2 2 4 7 4 8 9 9 E 6 R 1 5 9 5 2 4 0 7 5 4 8 4 8 9
9 0 0 8 7 9 F U 2 S 2 3 B 5 9 0 3 8 9 7 9 7 9 F
8 7 1 3 9 C 3 7 M Z 9 R I 3 8 7 3 3 9 C 9 0 3
D 2 0 9 U 0 Z R A C T 0 G D X T U U 0 Z
D F 0 3 S D 4 N 2 2 G D 1 0 3 3 S D
F 4 J 5 6 2 1 6 S 6 F 5 1 J J 5 6
5 L 5 2 9 5 K M I 5 A 5 5 2 9
5 C 7 M 0 5 2 C C 7
8 9 8 1 A 9 9

Gabriel Tiozzi

gabriel.tiozzi@rivendel.com.br



Especialista em Clouds.