

Kubectl superpowers

Benoit Petit - 05/02/2020

Qui sommes nous ?

2.6 milliard
de téléchargements

300 millions
d'utilisateurs actifs mensuels

plus d'**1 milliard**
d'événements par heure

15 To et **des milliards**
de requêtes par jour

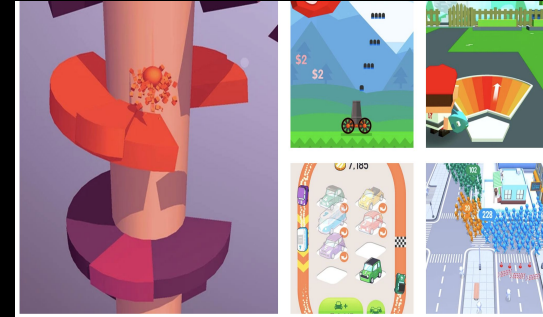
Leader dans le secteur des jeux
mobiles hyper casual

International :
Berlin, Barcelone, Amsterdam, UK
à venir Montréal ...

***200** salariés*

3 BU Opérationnels :

- Growth & Engineering
- Apps
- Gaming

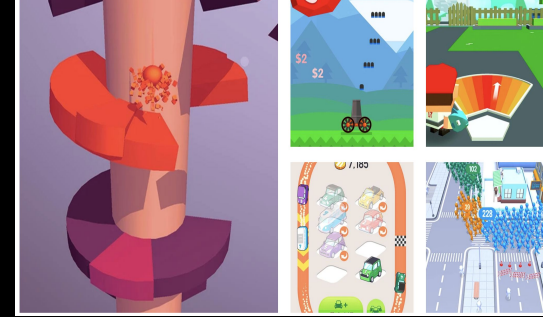


- Website : www.voodoo.io
- Pour postuler : jobs@voodoo.io
- Contact : stephanie@voodoo.io
- Meet up : Voodoo Talks

Voodoo's tech



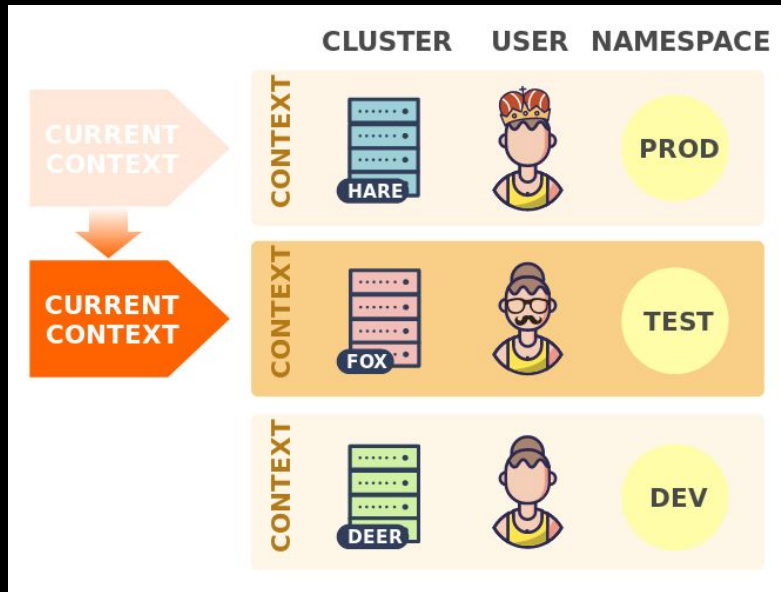
+



- EKS
- sagemaker
- dynamoDB
- EMR
- Redshift
- ...

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We need to upgrade cert-manager ... on all clusters



```
alias upgrade_cert_manager='kubectl delete -f https://raw.githubusercontent.com/jetstack/cert-manager/release-0.7/deploy/manifests/00-crds.yaml && kubectl apply --validate=false -f https://raw.githubusercontent.com/jetstack/cert-manager/release-0.9/deploy/manifests/00-crds.yaml && helm delete cert-manager --purge && bash install.sh'
```

What's the issue with kubectl (contexts) anyway ?

→ `kubectl config get-contexts --no-headers | wc -l`

59

→ in many different environments/regions

→ **gigantic kubeconfig** file

(or you have to play w/ \$KUBECONFIG)

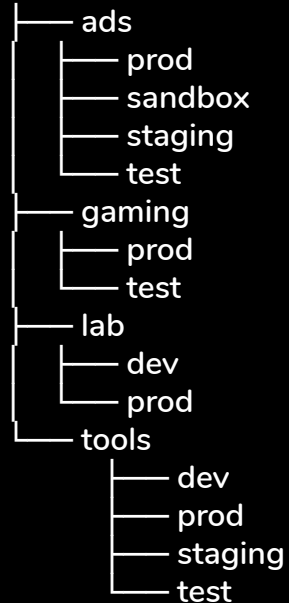
→ how to **classify** ?

→ how to **avoid mistakes** ?



Solved it ! ...

\$HOME/.kube/configs/



+ [\(kubectl bash completion !\)](#)



```
function cfgkube () {  
    export KUBECONFIG=/home/bpetit/.kube/configs/$1/$2/$3.config;  
    kubectl config current-context  
    kubectl cluster-info  
    export PS1="${txtylw}LOCAL | ${user_color}\u${txtrst}@${txtblu}\h${txtrst}${txtpur}-[${txtcyn}\t${txtpur}]-bash:[\V]-  
jobs:\j\n${txtwhit}(kube config: $(echo $KUBECONFIG))\n(kube context: $(kubectl --insecure-skip-tls-verify config  
current-context))\n${txtpur}==> ${bldblu}\w : ${txtrst}\n"  
}
```

... or did I ?



vs.



Put this into `~/.kube/config`

```
apiVersion: v1
kind: Config
clusters:
- name: "kube-airflow"
  cluster:
    server: "https://[redacted]"

users:
- name: "[redacted]"
  user:
    token: "[redacted]"

contexts:
- name: "kube-airflow"
  context:
    user: "[redacted]"
    cluster: "kube-airflow"

current-context: "kube-airflow"
```

Copy to Clipboard

Then download (if needed) and run `kubectl`

[Close](#)

```
export AWS_PROFILE=my-profile-dev

aws eks --region eu-west-2 update-kubeconfig --name mycluster
```

+ AND it's not that clean neither...

How to cleanly add features to kubectl ?

kubectl plugins !

I

- an executable file
- in your \$PATH
- named kubectl-myplugin

How to share/search/download plugins ?

crew !

```
kubectl krew list
PLUGIN  VERSION
ctx     v0.7.1
krew    v0.3.3
ns      v0.7.1
```

```
kubectl krew search myplugin
```

```
kubectl krew install/update myplugin
```

Existing kubectl plugins

kubectl ns

Also known as "kubens", a utility to set your current namespace and switch between them.

kubectl ctx

Also known as "kubectx", a utility to switch between context entries in your kubeconfig file efficiently.

kubectl get-all

Like 'kubectl get all', but get `_really_` all resources

kubectl who-can

Shows which users, groups and service accounts can perform a given verb on a given resource type.

What about the upgrades ?

```
kubectl it add bu-gaming/staging/monitoring \  
    {awseks|kubeconfig} --name admin-kube-monitoring \  
    [--profile admin-user] [--region eu-west-2] \  
    [--cluster-name kube-monitoring] \  
    [--path path/to/original.config] \  
    [--original-name mycontext]
```

```
kubectl it run bu-gaming/staging/monitoring kubectl get po -l  
app=django
```

```
kubectl it ls bu-gaming/staging [--show-type] [--show-profile]
```

Sources

<https://learnk8s.io/blog/kubectl-productivity>

← GOLD !



<https://github.com/kubernetes-client>

← kubectl client sdks

<https://github.com/weibeld/kubernetes-client-go-examples>

<https://github.com/kubernetes-client/python/tree/master/examples>

Thank you !

@bpetit_

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