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# Une CLI efficace pour administrer un troupeau de clusters Kubernetes

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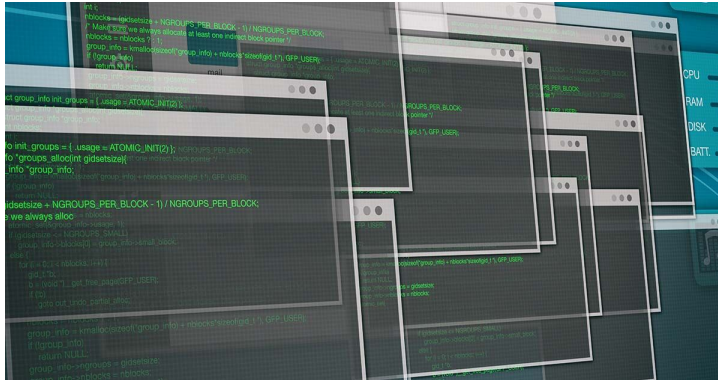
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Sérieusement décontracté.e.s

# Pet vs Cattle: le troupeau grandit vite!



# Nombreux clusters Kubernetes, nombreux risques d'erreur humaine



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# Avec Linux et ZSH

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# Ajouter le contexte Kubernetes dans le prompt zsh

Avec l'aide de:

- Zsh
- Oh my Zsh
- les Nerd Fonts
- Powerlevel10k

Pour les installer, voir:

<https://github.com/Le-s-filles-et-les-garcons-de-la-tech/supercharge-your-cli-for-kubernetes/blob/main/Linux/README.md>

A terminal window titled 'guillaume@guillaume-ThinkPad-X230:~' with a dark purple background and light green text. It shows three sequential terminal sessions. The first session shows the prompt 'minikube-2' and the command 'kubectl minikube-prod', resulting in 'Switched to context "minikube-prod".'. The second session shows the prompt 'minikube-prod/default' and the command 'kubectl minikube-dev', resulting in 'Switched to context "minikube-dev".'. The third session shows the prompt 'minikube-dev/default' and a partial command 'k'. Each session has a timestamp on the right: 22:11:23, 22:11:33, and 22:11:40 respectively. The prompts are color-coded: purple for 'minikube-2', red for 'minikube-prod/default', and green for 'minikube-dev/default'. The terminal also features navigation icons (back, forward, home, etc.) and a search bar at the top.

# Aller plus loin avec Kubeswitch

- Chaque terminal a son contexte
- Possibilité de chercher dans plusieurs fichiers kubeconfig
- Peut se connecter à AKS, GKE, EKS, Rancher, Gardener

The screenshot displays three terminal windows from a user named guillaume on a ThinkPad-X230. The top-left window is in the 'minikube-prod/default' context, showing the output of 'kubectl get pods' with one pod 'prod-web-server' in a 'Running' state. The top-right window is in the 'minikube-2' context, also showing 'kubectl get pods' output with one pod 'demo-web-server' in a 'Running' state. The bottom window shows the K9s interface for the 'minikube-dev' context. It includes a sidebar with navigation options like 'all', 'default', 'Attach', 'Delete', 'Describe', 'Edit', 'Help', and 'Kill'. The main area shows a table of pods in the 'default' namespace, with one pod 'bash' highlighted in orange, indicating it is in a 'CrashLoopBackOff' state.

```
Context: minikube-dev
Cluster: minikube-dev
User: minikube-dev
K9s Rev: v0.31.8
K8s Rev: v1.27.4
CPU: n/a
MEM: n/a
```

NAME	PF	READY	STATUS	RESTARTS	IP	NODE	AGE
bash	●	0/1	CrashLoopBackOff	4	10.244.0.4	minikube-dev	2m29s

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# Avec MacOS et ZSH

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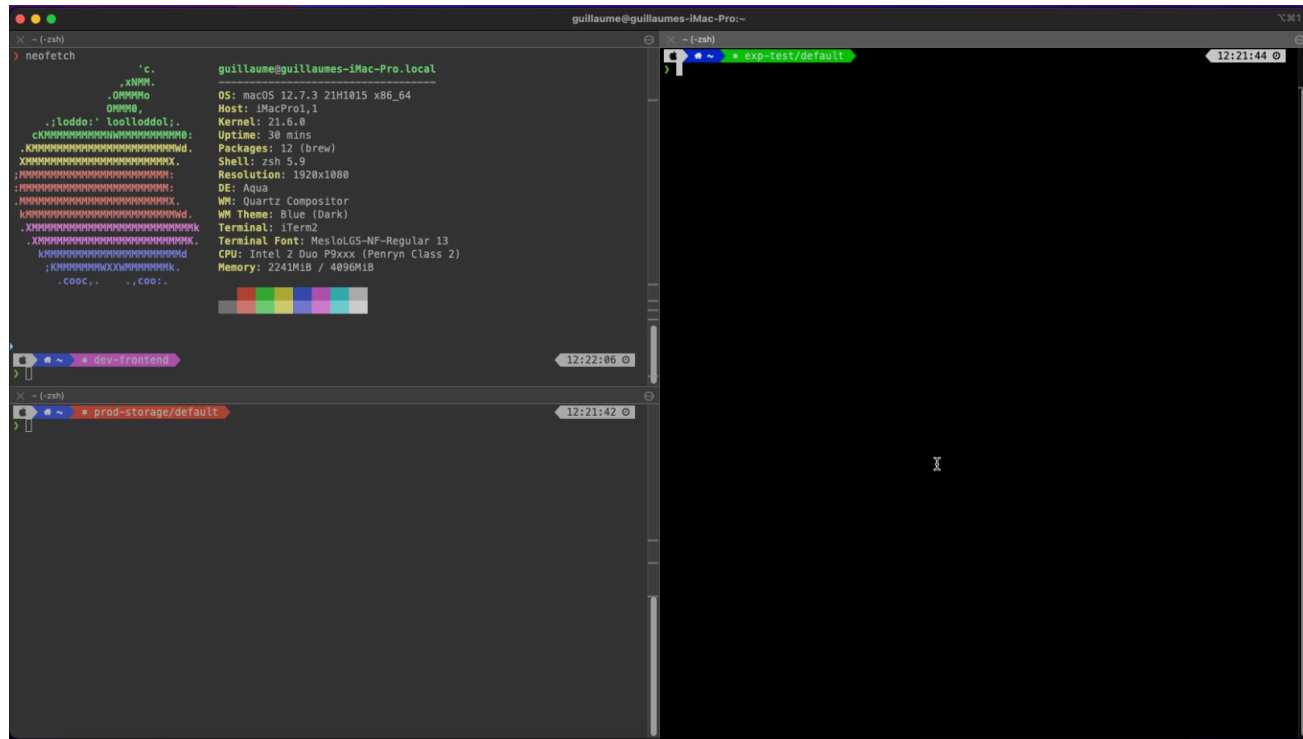
# MacOS utilise aussi zsh!

Les outils et la configuration sont très proches de Linux:

- Zsh
- brew
- iTerm2
- Oh my Zsh
- les Nerd Fonts
- Powerlevel10k

Pour les installer, voir:

<https://github.com/Les-tilles-et-les-garcons-de-la-tech/supercharge-your-cli-for-kubernetes/blob/main/Macos/README.md>



The screenshot shows a macOS terminal window with a dark theme. The terminal title bar reads 'guillaume@guillaumes-iMac-Pro:~'. The terminal content displays the output of the 'neofetch' command, which shows system information like OS (macOS 12.7.3), Host (iMacPro1,1), Kernel (21.6.0), Uptime (30 mins), Packages (12 (brew)), Shell (zsh 5.9), Resolution (1920x1080), DE (Aqua), WM (Quartz Compositor), WM Theme (Blue (Dark)), Terminal (iTerm2), Terminal Font (MesloLGS-NF-Regular 13), CPU (Intel 2 Duo P9xxx (Penryn Class 2)), and Memory (2241Mib / 4896Mib). Below the system info is a color calibration bar. To the right of the terminal, a file explorer window is open, showing a directory structure with folders like 'dev-frontend' and 'prod-storage/default'.



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# Et même avec Windows et Powershell!

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# Ajouter le contexte Kubernetes dans le prompt Powershell

Avec l'aide de:

- windows terminal
- Powershell 7
- Ho-My-Posh
- les Nerd Fonts
- et quelques customisations perso de theme pour Ho-My-Posh

Pour les installer, voir:

<https://github.com/Les-filles-et-le-s-garcons-de-la-tech/supercharge-your-cli-for-kubernetes/blob/main/windows/README.md>



```
guill ~ > apps * minikube :: kube-public
$ kubectl minikube-dev
✓ Switched to context "minikube-dev".

guill ~ > apps * minikube-dev :: default
$ kubectl minikube2-prod
✓ Switched to context "minikube2-prod".

guill ~ > apps * minikube2-prod :: default
$ |
```

# Aller plus loin avec Kubeswitch

## Problème

- L'outil n'est pas dispo pour Windows!

## Solution

- L'outil étant écrit en go, il est facile de le compiler pour Windows
- Ecrire le script powershell qui va remplacer le script bash/zsh
- Ecrire la doc d'installation
- Tester
- Faire une pull request sur le projet pour proposer d'ajouter la version Windows aux versions officielles

PowerShell

PowerShell

PowerShell

d

guill ~ minikube-dev :: default

213ms 11:06:03

\$ k get all -A

NAMESPACE	NAME	READY	STATUS	RESTARTS
default	pod/bash	1/1	Running	4 (55d ago) 83d
kube-system	pod/coredns-5d78c9869d-88s28	1/1	Running	3 (55d ago) 83d
kube-system	pod/etcd-minikube-dev	1/1	Running	3 (55d ago) 83d
kube-system	pod/kube-apiserver-minikube2			
kube-system	pod/kube-controller-manag			
kube-system	pod/kube-proxy-9z4bm			
kube-system	pod/kube-scheduler-miniku			
kube-system	pod/storage-provisioner			

NAME

AGE

TYPE

default	service/kubernetes	Clus
kube-system	service/kube-dns	Clus

NAME

AVAILABLE

1

kube-system	daemonset.apps/kube-proxy
kube-system	deployment.apps/coredns

NAME

NAME

kube-system	replicaset.apps/coredns-5d78c9869d-88s28
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guill ~ minikube-dev :: default

165ms 11:08:40

guill ~ minikube-prod :: prod-website

2ms 11:08:29

\$ k get pods

NAME	READY	STATUS	RESTARTS	AGE
mywebsite	1/1	Running	0	34s
ubuntu	1/1	Running	1 (21s ago)	26s

guill ~ minikube-prod :: prod-website

126ms 11:08:37

PowerShell

Context: minikube2

Cluster: minikube2

User: minikube2

K9s Rev: v0.27.4 ↗ v0.31.4

K8s Rev: v1.27.4

CPU: n/a

MEM: n/a

<0> all

<1> default

<a> Attach

<ctrl-d> Delete

<d> Describe

<e> Edit

<?> Help

<ctrl-k> Kill

<l> ...

<p>

<shift-f>

<s>

<n>

<f>

Pods(all)[7]

NAMESPACE↑	NAME	PF	READY	RESTARTS	STATUS	IP	NODE	AGE
kube-system	coredns-5d78c9869d-rk746	●	1/1	1	Running	10.244.0.3	minikube2	55d
kube-system	etcd-minikube2	●	1/1	1	Running	192.168.59.104	minikube2	55d
kube-system	kube-apiserver-minikube2	●	1/1	1	Running	192.168.59.104	minikube2	55d
kube-system	kube-controller-manager-minikube2	●	1/1	1	Running	192.168.59.104	minikube2	55d
kube-system	kube-proxy-2xqpx	●	1/1	1	Running	192.168.59.104	minikube2	55d
kube-system	kube-scheduler-minikube2	●	1/1	1	Running	192.168.59.104	minikube2	55d
kube-system	storage-provisioner	●	1/1	2	Running	192.168.59.104	minikube2	55d

<pod>

# Instructions completes disponibles sur notre Github!

<https://github.com/Les-filles-et-les-garcons-de-la-tech/supercharge-your-cli-for-kubernetes>

Les issues et Pull Requests sont les bienvenues



supercharge-your-cli-for-kubernetes (Public)

main 1 Branch 0 Tags

Go to file Add file Code

GuillaumeBernardFGTech initial commit ac29e85 · 1 minute ago 2 Commits

Linux	initial commit	1 minute ago
Macos	initial commit	1 minute ago
windows	initial commit	1 minute ago
Fully_customized_powershell.png	initial commit	1 minute ago
Fully_customized_zsh_linux.png	initial commit	1 minute ago
Fully_customized_zsh_mac.png	initial commit	1 minute ago
README.md	initial commit	1 minute ago

README

## Supercharge your CLI for Kubernetes

A collection of config files and script to go with the following presentation: (add link here)

The goal is to customize our shell to work efficiently with a large number of Kubernetes clusters using [Kubeswitch](#).

Kubeswitch allows you to have a different kubect! context for each terminal windows, which is really usefull when working with a lot of different kubernetes clusters. You can open a new terminal to solve a production problem while keeping you other terminal in the context of the test you were running.

It does that by creating temp kubeconfig files and changing local environment variables to point to this config file.

It also allows you to use several kubeconfig files, organize them in folders, easily switch between context and more.

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# Avez vous des question?

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