

laaS/PaaS dans le cloud avec Ansible et Scaleway

Qui sommes nous ?

Pascal Henry
Ingénieur
opensource



Fabrice Didon
Ingénieur
opensource

Sommaire

Qu'est-ce Scaleway ?

Qu'est-ce que Ansible ?

J'ai besoin d'un vps pour des tests.

Je déploie une infrastructure simple : un LEMP avec une image scaleway.

Je déploie une infrastructure complexe : un cluster k8s.

Les offres Scaleway et comparatifs.

Considérations légales.

Qu'est ce que Scaleway ?

- Filiale du Groupe Illiad ;
- Offre IaaS et PaaS sur x86 et ARM ;
- Offre Baremetal sur x86 et ARM ;
- Datacenters en Europe : Paris et Amsterdam ;
- Reprise progressive des offres de Online (autre filiale d'Illiad) ;
- Certifié hébergeurs de données de santé.

Qu'est-ce que ansible ?

- Outil d'automatisation « accessible » :
 - Pas besoin d'agent, juste d'un compte ssh ou winrm;
 - Fichiers descriptifs “lisibles” en yaml;
- Les tâches sont :
 - Reproductibles;
 - Idempotentes.

Exemple ansible

- Installer et démarrer nginx :

```
- hosts: webserver

tasks:

  - name: Install nginx latest

    apt:

      name: nginx

      state: latest

  - name: Start nginx

    systemd:

      name: nginx

      state: started
```

J'ai besoin d'un VPS pour tester

- Je provisionne mon VPS sur le portail.

Scaleway CLI

- Scaleway met à disposition un CLI dont les commandes sont similaires à celles de docker : **scw**

```
$scw ps
```

SERVER ID	IMAGE	CREATED	STATUS	PORTS	NAME
a677db10	Ubuntu	4 days	running	212.47.250.38	test01
c65c342e	GitLab	3 months	running	212.47.42.142	scw-642e26
f209a3e5	Ubuntu	4 months	running	212.47.123.23	scw-408906
2e23a415	WordPress	6 months	running	212.47.211.89	scw-402301

```
$scw create ubuntu
```

```
5cf8058e-a0df-4fc3-a772-8d44e6daf582
```

```
$scw start 5cf8058e
```

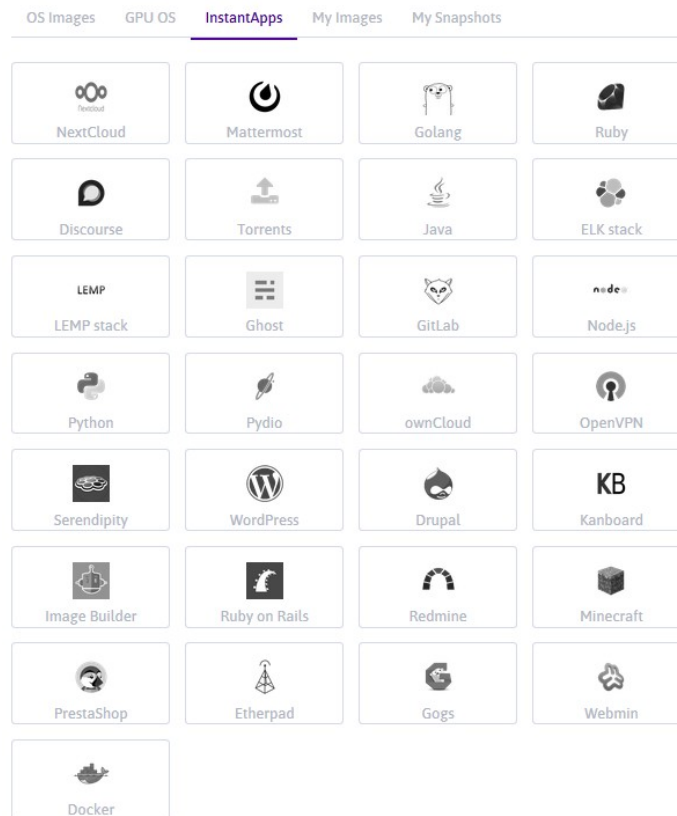
```
7313af22-62bf-4df1-9dc2-c4ffb4cb2d83
```

```
$scw exec test01 echo "Hello world!"
```

```
Hello World!
```

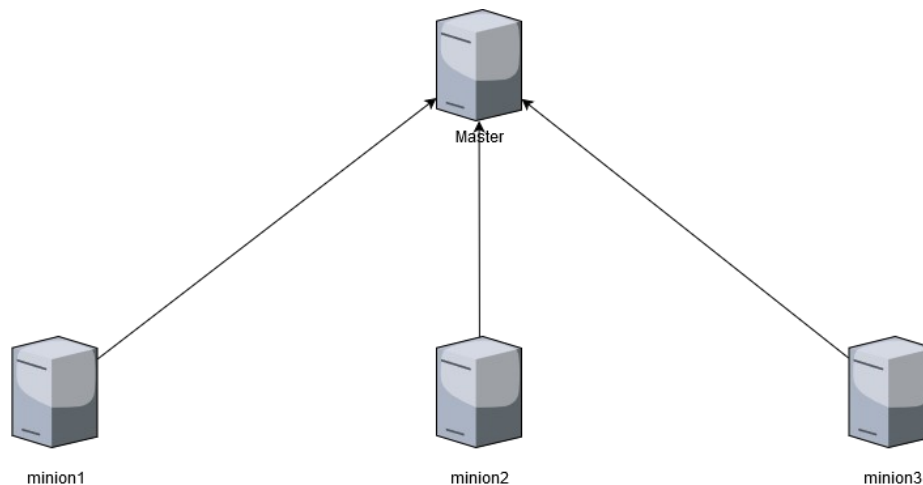

Déploiement du LEMP

- On utilise les InstantApps fourni par Scaleway



Déploiement d'un cluster k8s

- Automatisation complète par ansible pour livrer un cluster k8s.
 - 1 master ;
 - 3 minions.



Les offres Scaleway stables

Cloud Products for All Needs



Virtual Instances

Cloud instances delivered in seconds with backup, network and security options.



GPU Instances

Cloud GPU instances powered by dedicated high-end NVIDIA Tesla P100 at the best price-performance ratio.



Object Storage

Scalable, fast and reliable S3-compatible storage platform for your data.



Load Balancer

Ensure the scaling of all your applications while securing their continuous performance and availability.



Database New

Powerful, fully managed PostgreSQL relational databases.



Container Registry New

A fully managed container registry, facilitating storage, management and deployment of container images.

Les offres Scaleway Betas et Previews

Public Beta

Kubernetes Kapsule

Kubernetes Kapsule offers a simple way to deploy and manage containerized applications in the cloud. Relax and focus on your software stack while we take care of your clusters.

- Managed Kubernetes
- Dedicated clusters
- High-availability control plane
- Automated cluster healing

Try Kubernetes Kapsule



Private Beta

Block Storage

Block Storage is a solution for storing data on remote SSD volumes. It provides additional storage space for your different Scaleway services.

- Remote SSD volumes
- Easy attach to Instances
- Integration with Kubernetes Kapsule



Request your invitation to Block Storage:

Your email address

Submit

Private Beta

IoT Station

IoT Station is a complete environment connecting thousands of devices and providing them with scalable cloud resources. This first part introduces the Hub, enabling secured device-to-device messaging with MQTT publish/subscribe protocol. The next part will allow your devices to interact with Scaleway services.

- Managed message brokers
- Managed security and certificates per device
- Full MQTT protocol support (retained messages, quality of service...)
- Available over WebSockets as well
- Usage metrics at hub and device levels



Request your invitation to IoT Station:

Your email address

Submit

Private Beta

Serverless

You are looking for an environment to deploy your code easily. Our Serverless solutions allows you to focus on writing your code without worrying about managing the infrastructure that supports it:

- Fully scalable
- Python, Go, NodeJS or custom runtime
- Docker container deployment
- AWS Lambda compatibility



Request your invitation to Serverless:

Your email address

Register

Early Access

Domains

Domains is a combined service coupling domain name registration to the domain name system (DNS). You can efficiently purchase domains and configure their DNS records from a single environment. The service is available via API during early access. There is no simpler way to route end-users requests to your servers no matter if it is inside or outside Scaleway!



- Managed and secured domain name system: zone, records, IPv6 compatibility.
- Multiple TLDs domain name registration. During early access, one free domain name (one-year registration) among the following TLDs: .com, .net, .org and .fr.
- Dynamic routing capabilities: balance traffic depending on resource health and more to come...

Request your invitation to Domains:

Your email address

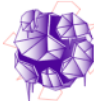
Submit

Early Access

Cold Storage

Cold Storage will allow a safe & secure long-term archival storage in the Scaleway ecosystem.

Store & retrieve your data in an ultra secure datacenter via a simple API-compatible S3.



Request your invitation to Cold Storage:

Your e-mail address

Submit

Discovery

Virtual Private Cloud

Virtual Private Cloud (VPC) is designed to group the Scaleway ecosystem into private networks. It will be possible to interconnect the different products and design a modular architecture.

In the discovery phase, you can register below and participate in its definition.



For more information about VPC, get in touch with us:

Your email address

Submit

Discovery

AI Inference

AI Inference at Scale will allow anyone with a trained model to deploy it in Scaleway environment.

Whatever framework you're using, no devops skills required, you will get an endpoint that scales. Currently in discovery phase, you can register below and participate in its definition.



For more information about AI Inference, get in touch with us:

Your e-mail address

Submit

Discovery

Load Balancer Multicloud

Our Load Balancer will be Multicloud very soon.

Use our Load Balancer in a Multicloud Environment.



We need your feedbacks about our Load Balancer Multicloud, please subscribe to our user tests

Your e-mail address

Submit

Les offres Scaleway : compétitives ?

- Facturation à la minute, sauf :
 - L'assistance ;
 - Le Stockage.
- La facturation à la minute est cappée à 500 heures (20 jrs et 20 h)
 - 30 % d'offert chaque mois pour une utilisation continue.

Les offres Scaleway : compétitives ?

Fournisseur	Offre (VPS de 4 cores et 16 go de RAM)	Tarif
Scaleway	GP1-XS (150 Go de stockage inclus)	0,078 €/h Soit 39 € mois
AWS	t3.xlarge + 150 Go	0,18 \$/h Soit 129,6 \$ mois Stockage : 16,5 \$ mois Total : 146,1 \$ mois

Pourquoi Scaleway ou un autre cloud provider français ?

- Parce que l'offre existe : Ovh, Clever Cloud, Gandi, Ikoula...
- L'éthique :
 - Ils payent leurs impôts en France;
 - Ils appliquent le code du travail français;
 - Souscrire à leurs offres, c'est les aider à développer leurs offres;
 - Respecte la confidentialité de vos données (RGPD).
- Le cadre légal

Cloud Act

- Clarifying Lawful Overseas Use of Data Act (2018)
- Étend le droit américain sur les serveurs d'entreprises américaines, où que se trouve ce serveur.

Liens

- Pour aller plus loin, quelques liens intéressants..
 - <https://medium.com/@waxzce/parlons-de-la-taxe-gafam-de-sa-pr%C3%A9tendue-inutilit%C3%A9-de-pourquoi-et-des-changements-que-%C3%A7a-ce8990423547>
 - <https://www.usine-digitale.fr/article/le-cloud-act-un-texte-securitaire-americain-qui-inquiete.N800995>



Merci à vous.