



Orchestration de conteneurs

Samuel Liard



Qui suis-je ?

Samuel Liard

Lead Dev backend chez Apizee

CTO d'un studio de jeux vidéo

Architecte logiciel chez Orange

Co fondateur du GDG Code d'Armor à Lannion



Code
d'Armor



Apizee

Spécialisé dans les API de communication webrtc

Lauréate du Pass French Tech 2017
23 personnes principalement sur Lannion



Notre architecture



Web server



Asyncon task

SIG Server



Nos besoins

- Déployer notre offre sur un PC pour des démos
- Déployer notre offre dans l'infrastructure d'un client
- Pouvoir le faire en mode offline
- Permettre au client lui même de déployer notre offre

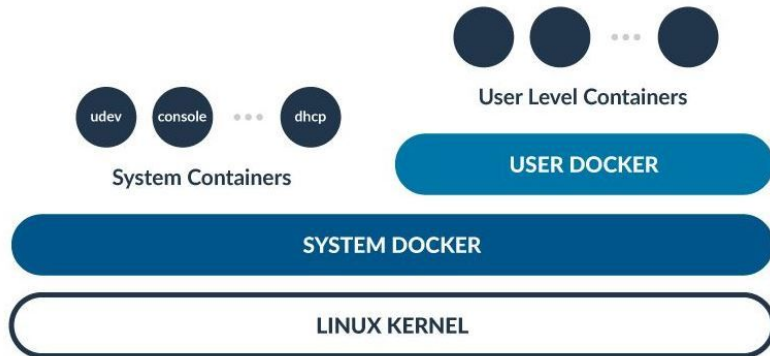


Rancher OS

OS minimaliste

Optimisé pour les conteneurs

Docker intégré



Rancher UI

Orchestrateur de VM

Interface graphique de gestion

Gestion d'un catalogue de services

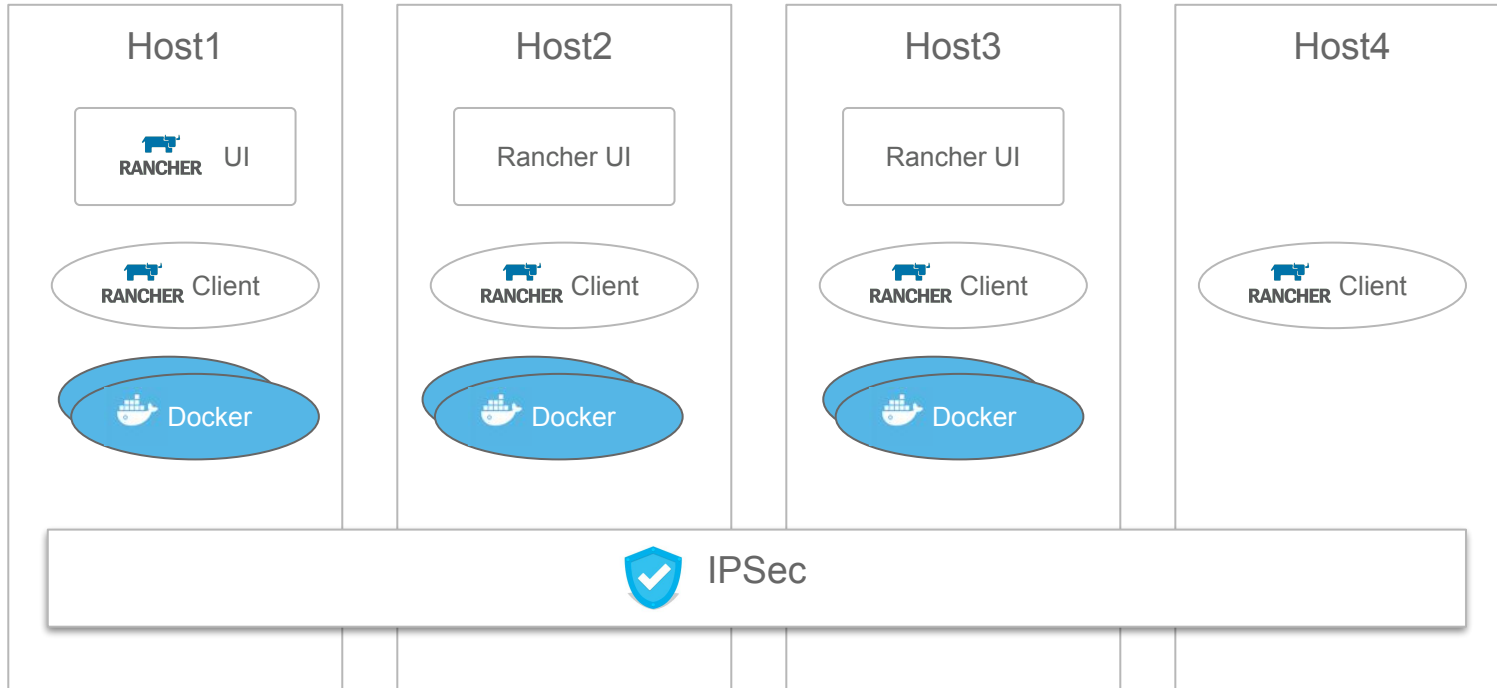


Un orchestrateur

- Gère l'affectation de conteneur
- Gestion des erreurs
- Provisionne les hosts
- Catalogue de services



Un orchestrateur



Les Hosts

Hosts: Add Host



Manage available machine drivers

- 1 Start up a Linux machine somewhere and install a supported version of Docker on it.
- 2 Make sure any security groups or firewalls allow traffic:
 - o From and To all other hosts on UDP ports 500 and 4500 (for IPsec networking)
- 3 Optional: Add labels to be applied to the host.

+ Add Label

- 4 Specify the public IP that should be registered for this host. If left empty, Rancher will auto-detect the IP to use. This generally works for machines with unique public IPs, but will not work if the machine is behind a firewall/NAT or if it is the same machine that is running the `rancher/server` container.

e.g. 1.2.3.4

- 5 Copy, paste, and run the command below to register the host with Rancher:

```
sudo docker run --rm --privileged -y /var/run/docker.sock:/var/run/docker.sock -v /var/lib/rancher:/var/lib/rancher rancher/agent:v1.2.9 http://10.1.0.10:8000/v1/scripts/1608684BC55A29C18317:1514678400000:MIuhC41FHp3UHz9sHD5JzAhv18
```

- 6 Click close below. The new host should pop up on the Hosts screen within a minute.

Close



Gestion des volumes



NetApp E-Series

Volume plugin for E-Series

[View Details](#)



NetApp ONTAP NAS

Volume plugin for ONTAP NAS

[View Details](#)



NetApp ONTAP SAN

Volume plugin for ONTAP SAN

[View Details](#)



NetApp SolidFire

Volume plugin for SolidFire

[View Details](#)



Portworx

Volume plugin for Portworx Elastic Data Fabric, providing scale-out persistent storage for containers.

[View Details](#)



Rancher EBS

Docker volume plugin for Amazon EBS

[View Details](#)



Rancher NFS

Docker volume plugin for NFS. Supported for NFS v3 and v4.

[View Details](#)



Rancher Secrets

Rancher Volume plugin

[View Details](#)



Un catalogue de services

The screenshot displays a service catalog interface with a blue header and a light gray main area. The header contains navigation links: Home, Default, STACKS, CATALOG, INFRASTRUCTURE, ADMIN (with a red exclamation mark), and API. A user profile icon is in the top right. Below the header, the page title is 'Catalog: All'. A search bar with 'Search...' and a 'Category: All' dropdown are present. A 'Manage' button with a pencil icon is on the right. The catalog is organized into a grid of service cards. Each card features a logo, a title, a brief description, and a 'View Details' button. The services shown are: Alfresco (ECM and BPM platform), Alibaba Cloud DNS (Rancher External DNS service powered by Alibaba Cloud), Apache Guacamole (clientless remote desktop gateway), Apache Kafka (Kafka cluster), Apache Zookeeper (Zookeeper cluster), Apizee (All apizee in one service), Apizee Freeswitch (Freeswitch 1.6), and ApizeeMP (Media proxy). A large 'ee' logo is visible in the bottom right corner of the image.

Catalog: All

Search... Category: All Manage

- Alfresco**
An ECM and BPM platform.
[View Details](#)
- Alibaba Cloud DNS**
Rancher External DNS service powered by Alibaba Cloud
[View Details](#)
- Apache Guacamole**
Apache Guacamole is a clientless remote desktop gateway. It supports standard protocols like VNC, RDP, and SSH.
[View Details](#)
- Apache Kafka**
Kafka cluster
[View Details](#)
- Apache Zookeeper**
Zookeeper cluster
[View Details](#)
- Apizee**
All apizee in one service
[View Details](#)
- Apizee Freeswitch**
Freeswitch 1.6
[View Details](#)
- ApizeeMP**
Media proxy
[View Details](#)

Notre produit



Apizee services

All Apizee services data

Catalog: Apizee

Category: Apizee Services

Support: Maintained by community members

Template Version

4.5.8

Select a version of the template to deploy

New Stack

Name*

apizee

Description

Description

Configuration Options

Cloud hostname*

cloud-rancher.apizee.com

Hostname for cloud service

Wildcard certificat use by all services*

Choose a Certificate...

SSL certificate



Le service

🏠 Default ▾ STACKS ▾ CATALOG ▾ INFRASTRUCTURE ▾ ADMIN ▾ ! API ▾ 👤 ▾

User Stacks [Add Stack](#) [Add from Catalog](#) Sort By:

apizee			Upgrade available	Add Service ▾	8 Services	14 Containers	⚙️ ⋮
🟢 Active	apz-ccs + 1 Sidekick ⓘ	Image: registry.apizee.com/docker/apizee-rancher/ccs:4.5.9	Service	2 Containers	⬆️ ⋮		
🟢 Active	apz-cloud + 2 Sidekicks ⓘ	Image: registry.apizee.com/docker/apizee-rancher/web:4.5.9	Service	3 Containers	⬆️ ⋮		
🔴 Active	apz-lb ⓘ	To: 10.0.1.100 apz-ccs apz-cloud Ports: 443/tcp, 80/tcp	Load Balancer	1 Container	⬆️ ⋮		
🟢 Active	apz-memcached ⓘ	Image: memcached:latest	Service	1 Container	⬆️ ⋮		
🟢 Active	apz-mongo + 1 Sidekick ⓘ	Image: mongo:3.0.8	Service	2 Containers	⬆️ ⋮		
🟢 Active	apz-mysql + 1 Sidekick ⓘ	Image: registry.apizee.com/docker/apizee-rancher/db:4.5.9	Service	2 Containers	⬆️ ⋮		
🟢 Active	apz-rabbitmq ⓘ	Image: rabbitmq:3.6.9	Service	1 Container	⬆️ ⋮		
🟢 Active	apz-redis + 1 Sidekick ⓘ	Image: redis:3.0.6	Service	2 Containers	⬆️ ⋮		

v1.6.10 [Help](#) [Documentation](#) [File an Issue](#) [Forums](#) [Slack](#) 🌐 English ▾ ⬇️ Download CLI ▾



Répartir sur les hosts

Hosts

Add Host

The screenshot displays a management interface for seven hosts, each with a unique configuration and set of containers. The hosts are: MediaProxy, SFU_1, SFU_2, SFU_3, SFU_4, SIP_Gateway, and WEB. Each host card shows its status (ACTIVE), IP address, operating system, hardware resources, and specific configuration parameters. Below the host details, there are sections for 'Stacks' (e.g., apizee, media-server) and 'Standalone Containers' (e.g., apz-mp-1, apz-lb-1, apz-media-server-1, etc.). A 'Show System' button is visible in the top right corner.

Host Name	IP	OS	CPU	RAM	Config	Stacks	Containers
MediaProxy	10.60.2.211	Debian GNU/Linux 8 (3.16.0)	8x2.19 GHz	31.5 GiB	49.1 GiB	apizee (apz-mp-1)	apz-mp-1
SFU_1	10.60.2.212	Ubuntu 16.04.3 LTS (4.4.0)	8x2.19 GHz	31.4 GiB	49.1 GiB	apizee (apz-lb-1)	apz-lb-1
SFU_2	10.60.2.213	Ubuntu 16.04.3 LTS (4.4.0)	8x2.19 GHz	31.4 GiB	49.1 GiB	apizee (apz-lb-6)	apz-lb-6
SFU_3	10.60.2.214	Ubuntu 16.04.3 LTS (4.4.0)	8x2 GHz	31.4 GiB	49.1 GiB	apizee (apz-lb-2)	apz-lb-2
SFU_4	10.60.2.215	Ubuntu 16.04.3 LTS (4.4.0)	8x2.19 GHz	31.4 GiB	49.1 GiB	apizee (apz-lb-5)	apz-lb-5
SIP_Gateway	10.60.2.216	Debian GNU/Linux 8 (3.16.0)	8x2.6 GHz	31.5 GiB	49.1 GiB	apizee (apz-mongo-1, apz-redis-1, apz-mysql-1, apz-ccs-1, apz-lb-4)	apz-mongo-1, apz-redis-1, apz-mysql-1, apz-ccs-1, apz-lb-4
WEB	10.60.2.210	Debian GNU/Linux 8 (3.16.0)	8x2.19 GHz	31.5 GiB	49.1 GiB	apizee (apz-rabbitmq-1, apz-memcached-1, apz-cloud-1, apz-lb-3)	apz-rabbitmq-1, apz-memcached-1, apz-cloud-1, apz-lb-3

Répartir sur les hosts

Hosts Add Host

ACTIVE ⋮

preprod-ccs-med01

🔗 10.103.2.11 | 🌐 17.03.2-ce
📦 Debian GNU/Linux 7 (3.16.0)
📊 2x2.3 GHz | 📀 3.86 GiB | 📦 28.3 GiB

`apz.host.ccs=true`

Stack: apizee

○ ..apz-lb-1 10.42.221.191 ⋮

Standalone Containers

+ Add Container

ACTIVE ⋮

preprod-cloud-med01

🔗 10.103.2.13 | 🌐 17.03.2-ce
📦 Debian GNU/Linux 7 (3.16.0)
📊 2x2.3 GHz | 📀 3.86 GiB | 📦 28.3 GiB

`apz.host.cloud=true`

Stack: apizee

○ ..apz-mysql-1 10.42.106.26 ⋮

Sidekicks 🟢

○ ..apz-lb-2 10.42.197.124 ⋮

○ ..apz-mongo-1 10.42.62.127 ⋮

Sidekicks 🟢

○ ..apz-rabbitmq-1 10.42.5.193 ⋮

○ ..apz-memcached-10.42.190.225 ⋮

○ ..apz-cloud-1 10.42.76.23 ⋮

Sidekicks 🟢 🟢

○ ..apz-redis-1 10.42.206.10 ⋮

Sidekicks 🟢

○ ..apz-ccs-1 10.42.88.208 ⋮

Sidekicks 🟢

Standalone Containers

+ Add Container



Logs

ProTip: Hold the Command key when opening logs to launch a new window.

Service: **Logs: apizee-apz-lb-1**

Type: Load Balancer

Scale: Global

Image: rancher/lb-...

Endpoint: None

Command: None

Combined Standard Out Standard Error

```
06/12/2017 08:22:12 time="2017-12-06T07:22:12Z" level=error msg="Failed to initialize Kubernetes controller: KUBERNETES_URL is not set"
06/12/2017 08:22:12 time="2017-12-06T07:22:12Z" level=info msg="Starting Rancher LB service"
06/12/2017 08:22:12 time="2017-12-06T07:22:12Z" level=info msg="LB controller: rancher"
06/12/2017 08:22:12 time="2017-12-06T07:22:12Z" level=info msg="LB provider: haproxy"
06/12/2017 08:22:12 time="2017-12-06T07:22:12Z" level=info msg="starting rancher controller"
06/12/2017 08:22:12 time="2017-12-06T07:22:12Z" level=info msg="Healthcheck handler is listening on :10241"
06/12/2017 08:22:14 time="2017-12-06T07:22:14Z" level=info msg=" -- starting haproxy\n * Starting haproxy haproxy\n ..done.\n"
06/12/2017 08:22:14 time="2017-12-06T07:22:14Z" level=info msg=" -- reloading haproxy config with the new config changes\n * Reloading haproxy
06/12/2017 11:36:56 time="2017-12-06T10:36:56Z" level=info msg=" -- reloading haproxy config with the new config changes\n * Reloading haproxy
06/12/2017 11:37:00 time="2017-12-06T10:37:00Z" level=info msg=" -- reloading haproxy config with the new config changes\n * Reloading haproxy
06/12/2017 11:37:03 time="2017-12-06T10:37:03Z" level=info msg=" -- reloading haproxy config with the new config changes\n * Reloading haproxy
06/12/2017 11:37:11 time="2017-12-06T10:37:11Z" level=info msg=" -- reloading haproxy config with the new config changes\n * Reloading haproxy
06/12/2017 11:54:52 time="2017-12-06T10:54:52Z" level=info msg=" -- reloading haproxy config with the new config changes\n * Reloading haproxy
06/12/2017 11:54:54 time="2017-12-06T10:54:54Z" level=info msg=" -- reloading haproxy config with the new config changes\n * Reloading haproxy
```

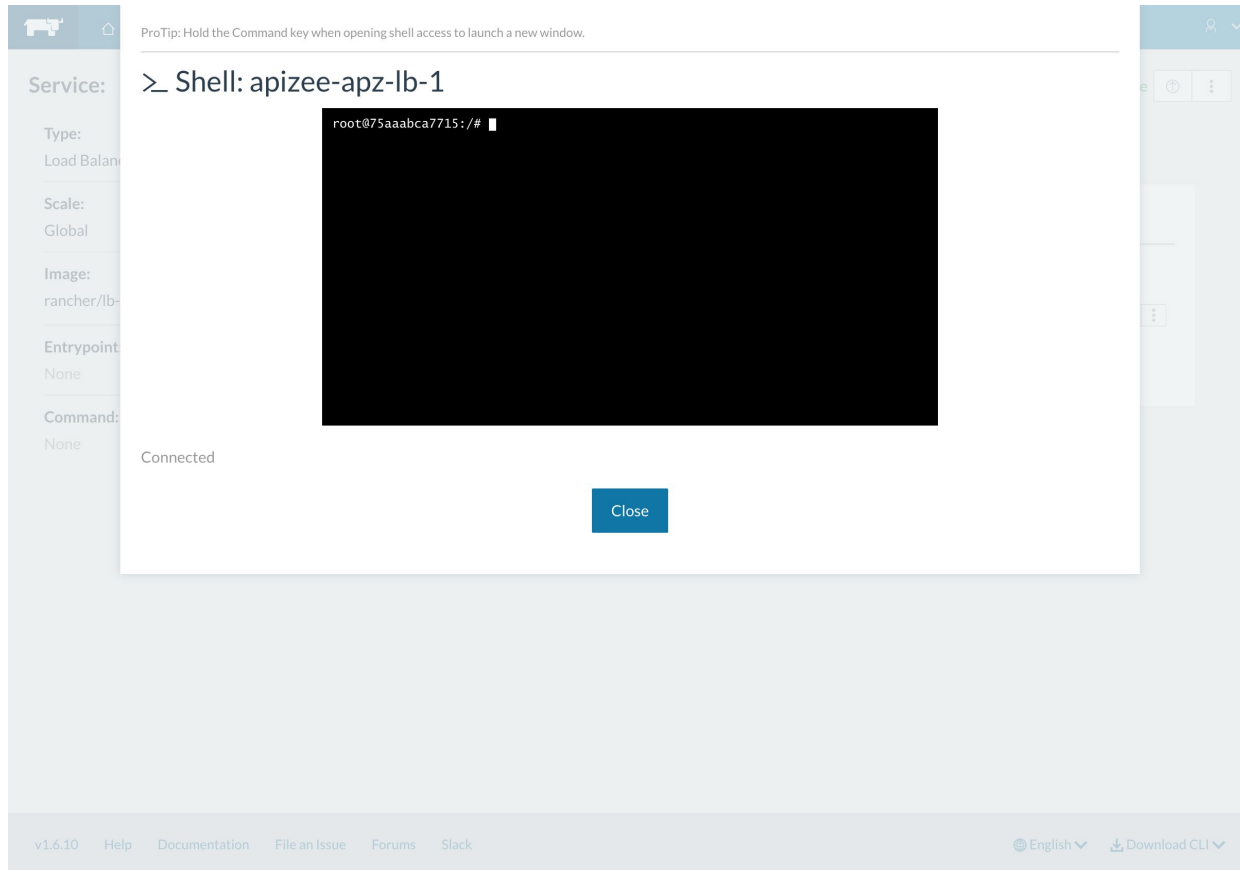
Connected

Scroll to Top Scroll to Bottom Clear Screen Close

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Terminal



The screenshot shows a terminal window within a cloud management interface. The window title is "Shell: apizee-apz-lb-1". The terminal content shows a root shell prompt: "root@75aaabca7715: /#". The terminal window is connected to a service named "apizee-apz-lb-1". The interface includes a sidebar with service details and a footer with navigation links.

Service: **Shell: apizee-apz-lb-1**

Type: Load Balancer

Scale: Global

Image: rancher/lb-...

Entrypoint: None

Command: None

Connected

Close

ProTip: Hold the Command key when opening shell access to launch a new window.

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Mise en place



GitLab

Git public

Catalogue Apizee

Registry docker privé

Images Apizee



Bonnes pratiques pour build

- Mettre dans l'entrypoint la gestion des variables d'environnement
- Ajouter un moyen de surcharger des données
- Ne pas utiliser de port range
- Faire un tail sur le fichier de log dans l'entrypoint



Rancher compose

- La configuration du système
- La définition des tests de vie des services



Docker compose

- La liste des machines docker
- Le liens entre les machines
- La gestion des labels



Merci !

