

Part 4

Portainer

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Planning

➤ Portainer?

- Environnement

- Architecture

➤ Installation

- Locale / Docker

➤ Usage et détails

Portainer

Portainer?

=> Interface Web graphique de gestion des conteneurs

- Léger
- Open Source
- Simple (Conteneurs et services)
 - Déploiement
 - Gestion
 - Surveillance
- Gestion des conteneurs et images
 - Créer
 - Modifier
 - Supprimer
- Administration des accès SSH (conteneurs)
- Monitoring (ressources)
- Version **Community** et Business

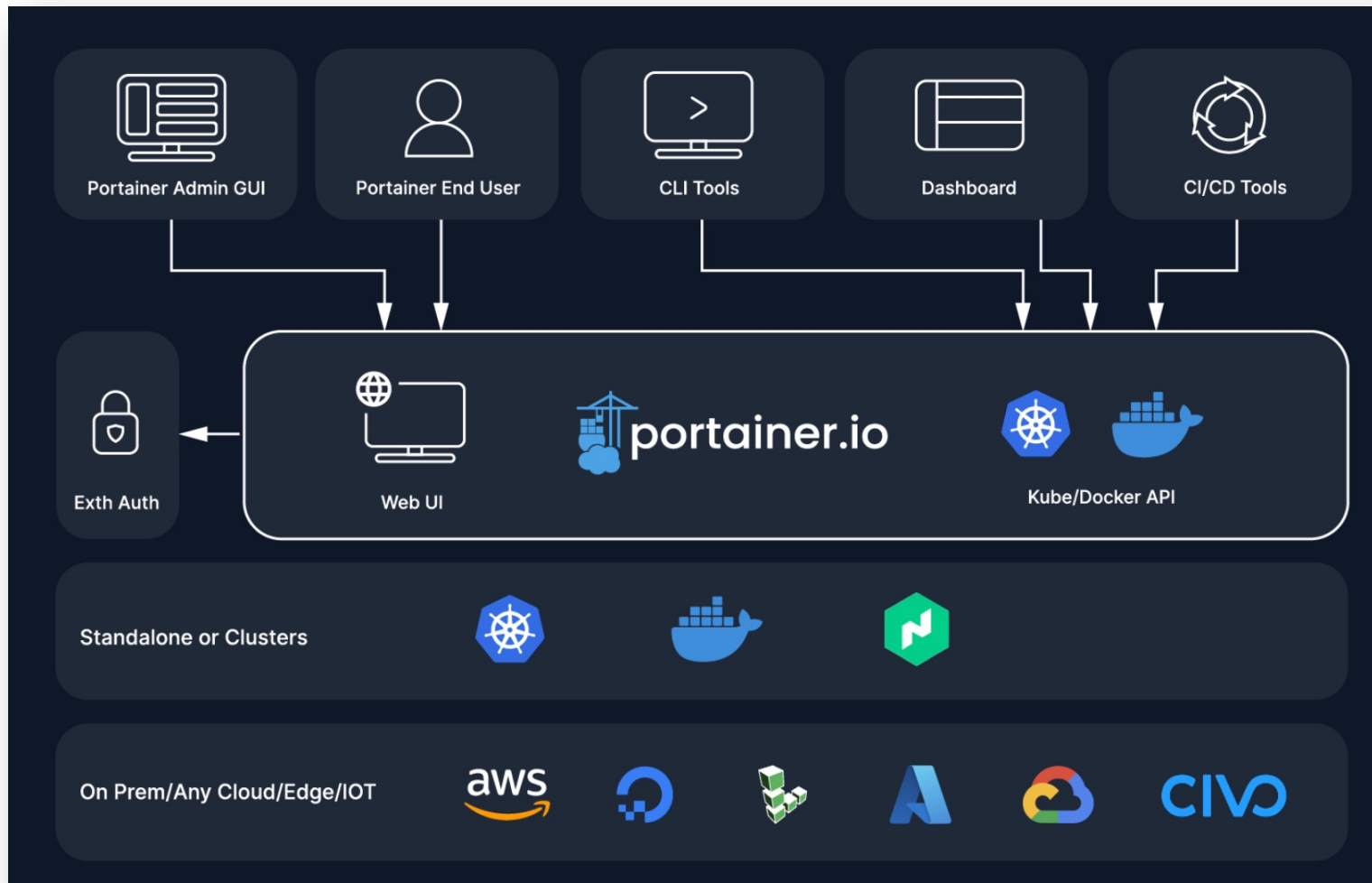


Portainer ?

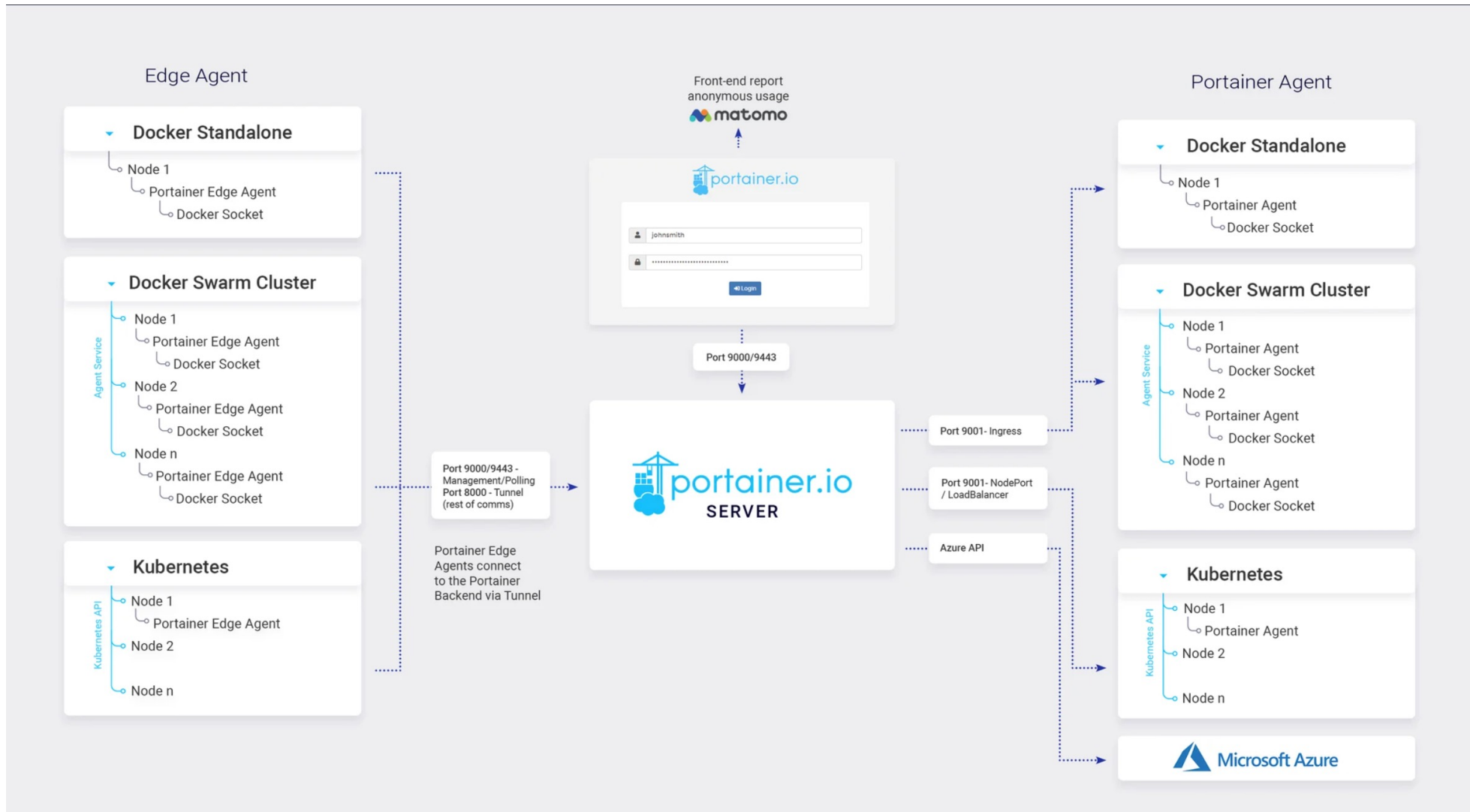
Intérêts

- Interface conviviale : L'interface web de Portainer est intuitive et facile à utiliser, la rendant accessible aux nouveaux utilisateurs de Docker.
- Visualisation : Il offre une représentation visuelle de votre infrastructure Docker, la rendant plus facile à comprendre et à gérer.
- Prise en charge multiplateforme : Portainer est compatible avec divers environnements Docker, y compris Docker Swarm et Kubernetes.
- Contrôle d'accès basé sur les rôles (RBAC) : Portainer vous permet de définir des rôles et des autorisations pour les utilisateurs, améliorant la sécurité et le contrôle d'accès.
- Surveillance des ressources : Vous pouvez surveiller l'utilisation du CPU, de la mémoire et du réseau des conteneurs et des services.
- Modèles : Portainer fournit une bibliothèque de modèles d'applications préconfigurés, simplifiant la création de conteneurs.

Environnement



Architecture de Portainer



Installation

Installation

Portainer contient une base de données pour stocker les données. Ce serveur va se greffer sur l'environnement local de Docker (var/run/docker:sock).

Il est également possible de se connecter à d'autres environnements, par le biais des **agents Portainer**. L'opération consiste à installer un agent sur les clients que l'on désire gérer à distance. Cela permet de n'avoir qu'un seul serveur Portainer pour toutes nos instances pilotées.


Usage local à partir d'un conteneur Docker

```
$ docker run -d -p 9000:9000 --name portainer --restart always -v  
/var/run/docker.sock:/var/run/docker.sock -v portainer_data:/data portainer/portainer-ce
```

Usage

Usage

Upgrade to Business Edition

 **portainer.io**
COMMUNITY EDITION

Home

local

Dashboard

App Templates

Stacks

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Settings

Users

Teams

Roles

Environments

Registries

Authentication logs

Activity Logs




Notifications

Settings

portainer.io Community Edition 2.19.4

Environments

Home

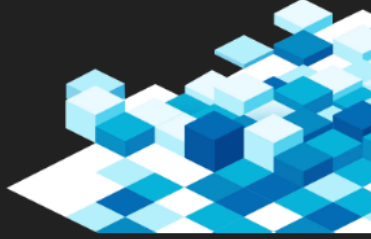
   admin

Latest News From Portainer

New Portainer CE 2.19 - now with improved page load performance and a change to how we view Kubernetes ConfigMaps and Secrets.

There's also a bunch of resolved issues in this release and some important changes to be aware of. See the [release notes](#) for details.

If you'd like to try Portainer Business edition, you can get a license for 3 nodes free [here](#).



Environments

Search by name, group, tag, status, URL... X

Refresh

Click on an environment to manage

Platform

Connecti...

Status

Tags

Groups

Agent Ver...

Clear all

Sort By

↓↑

local

Up

2023-12-20 20:07:09

Standalone 20.10.21

/var/run/docker.sock

Group: Unassigned

No tags

Local

1 stack

11 containers

3

8

2

0

15 volumes

14 images

8 CPU

12.6 GB RAM

Disconnect

Connected

Items per page 10

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Usage

The screenshot displays the Portainer.io Community Edition interface. On the left is a dark sidebar with navigation options: Home, local (selected), Dashboard, App Templates (expanded), Custom Templates, Stacks, Containers, Images, Networks, Volumes, Events, Host, Settings, Users, Teams, Roles, Environments, Registries, Authentication logs, and Activity Logs. The main content area is titled 'Templates' and features a search bar and filters for Category and Type. A list of templates is shown, including Registry, Registry (cache), Ubuntu, NodeJS, Nginx, Httpd, Caddy, MySQL, and MariaDB, each with its icon, name, description, and category.

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portainer.io COMMUNITY EDITION

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Custom Templates

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Activity Logs

portainer.io Community Edition 2.19.4

Templates

Search for a template...

Category Type Sort By

Registry container
Docker image registry
docker

Registry (cache) container
Docker image registry configured as a DockerHub pull through cache
docker

Ubuntu container
Debian-based Linux operating system
operating-system

NodeJS container
JavaScript-based platform for server-side and networking applications
development

Nginx container
High performance web server
webserver

Httpd container
Open-source HTTP server
webserver


Caddy container
Open-source web server with automatic HTTPS written in Go
webserver

MySQL container
The most popular open-source database
database

MariaDB container
Performance beyond MySQL
database

Usage

Upgrade to Business Edition

 portainer.io
COMMUNITY EDITION

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Images


Image list


 Pull image


Registry: Docker Hub (anonymous)


Image*: docker.io e.g. my-image:my-tag  Search


 Image name is required.



 Advanced mode



 Pull the image



 You are currently using an anonymous account to pull images from DockerHub and will be limited to 100 pulls every 6 hours. You can configure DockerHub authentication in the [Registries View](#). Remaining pulls: 100/100










 Images

Q Search... 

 Remove 

 Import  Export





 + Build a new image 



 Id  Filter	Tags 	Size 	Created 
 sha256:1a0fb356ea35830bad2a93aea5a72c...	portainer/portainer-ce:latest	293.6 MB	2023-12-07 09:14:32
 sha256:8189e588b0e8fcc95b0d764d6f7bdb...	mysql:latest	564.3 MB	2023-04-18 00:44:34
 sha256:1c567b4b95279dfad4c3a88edaf28a...  Unused	jetbrains/qodana-python:2022.3-eap	2.5 GB	2023-03-24 06:27:28











Usage























Containers

Container list

   admin 

 Containers 

 Start  Stop  Kill  Restart  Pause  Resume  Remove  Add container  

	Name  	State   Filter 	Quick Actions	Stack  	Image  	Created  	IP Address  	Published Ports  
	clever_wilbur	exited	 	-	apache/airflow	2021-12-19 22:05:33	-	-
	grafana-container	exited	 	-	grafana/grafana-enterprise:latest	2022-02-08 11:44:18	-	-

Usage

The screenshot displays the Portainer.io Community Edition interface. On the left is a sidebar with navigation links: Home, local (selected), Dashboard, App Templates, Stacks, Containers, Images, Networks, Volumes, Events, and Host. Below these are Settings, Users, Teams, Roles, Environments, Registries, Authentication logs, Activity Logs, Notifications, and Settings. The main area shows the 'Container details' for 'grafana-container'. At the top, there's a breadcrumb 'Containers > grafana-container' and a user profile 'admin'. The 'Actions' section includes buttons for Start, Stop, Kill, Restart, Pause, Resume, Remove (highlighted in red), Recreate, and Duplicate/Edit. The 'Container status' section lists: ID (a76907ec0041a642ddb03e73a07e56d834c0affaf0a36e00a3ca2054eee6012e), Name (grafana-container), Status (Stopped for 2 years with exit code 0), Created (2022-02-08 11:44:18), and Finished (2022-02-08 12:02:56). Below this is a 'Container webhook' toggle (disabled) and a 'Business Feature' button. A row of links includes Logs, Inspect, Stats, Console, and Attach. The 'Access control' section shows Ownership as 'administrators' with a 'Change ownership' link. At the bottom is a 'Create image' button. The footer of the interface shows 'portainer.io Community Edition 2.19.4' and the local host path 'localhost:9000/#!/2/docker/images'.

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portainer.io Community Edition 2.19.4

localhost:9000/#!/2/docker/images

Containers > grafana-container

Container details

admin

Actions

Start Stop Kill Restart Pause Resume Remove Recreate Duplicate/Edit

Container status

ID	a76907ec0041a642ddb03e73a07e56d834c0affaf0a36e00a3ca2054eee6012e
Name	grafana-container
Status	Stopped for 2 years with exit code 0
Created	2022-02-08 11:44:18
Finished	2022-02-08 12:02:56

Container webhook ☐ Business Feature

Logs Inspect Stats Console Attach

Access control

Ownership	administrators
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Change ownership

Create image

Portainer – Récap et exemple

Récapitulatif et exemple

https://www.youtube.com/watch?v=D_w2plozsbQ