

Documentation Complète : Déploiement, Supervision et Administration de Cluster Via Rancher avec Traefik, MetalLB et mkcert



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Architecture et Principe

Schéma d'Architecture

text

```
[Utilisateur]
  ↓ HTTPS (rancher.k8s.ci) → DNS → 10.64.13.210
[Traefik LoadBalancer] (10.64.13.210)
  ↓ Présente certificat mkcert valide
[Ingress Kubernetes]
  ↓ Route vers service Rancher
[Rancher Service] (LoadBalancer: 10.64.13.211)
  ↓
[Pods Rancher] (avec certificat mkcert monté)
```

Principe de Fonctionnement

- **MetalLB** : Fournit les IPs LoadBalancer dans le cluster local
- **Traefik** : Reverse proxy et ingress controller avec termination SSL
- **mkcert** : Génère des certificats TLS valides localement
- **Rancher** : Interface de gestion Kubernetes avec certificats valides



Prérequis et Installation

Prérequis Système

bash

```
# Vérifier l'environnement
kubectl version --short
helm version
ip addr show # Vérifier l'interface WiFi (10.64.13.203/24)
```

Structure du Projet

```
rancher-deployment/
├── metalib/
│   └── metalib-config.yaml
├── namespace/
│   └── namespace.yaml
├── render/
│   ├── rancher-ingress.yaml
│   └── rancher-values.yaml
├── scripts/
│   ├── checkstatus.sh
│   └── debug.sh
├── traefik/
│   └── traefik-values.yaml
├── rancher-l8s.c1-i.pem
├── rancher-l8s.c1-i-key.pem
├── rancher-l8s.c1.pem
├── deploy.sh
└── check-start.sh
```



Configuration mkcert

Installation de mkcert

```
bash

# Téléchargement et installation
wget -O mkcert
https://github.com/FiloSottile/mkcert/releases/download/v1.4.4/mkcert-v1.4.4-
linux-amd64
chmod +x mkcert
sudo mv mkcert /usr/local/bin/

# Installation de l'Autorité de Certification locale
mkcert -install
```

Génération des Certificats

```
bash

# Générer le certificat pour le domaine et l'IP
mkcert rancher.k8s.ci 10.64.13.211 #votre ip correspondante

# Vérifier les fichiers générés
ls -la *.pem
# rancher.k8s.ci+1.pem # Certificat
# rancher.k8s.ci+1-key.pem # Clé privée
```

Création des Secrets Kubernetes

bash

```
# Secret pour Traefik (format TLS)
kubectl create secret tls tls-rancher-ingress \
  -n cattle-system \
  --cert=rancher.k8s.ci+1.pem \
  --key=rancher.k8s.ci+1-key.pem
```



Déploiement Pas à Pas

Étape 1: Préparation des Namespaces

namespaces/namespaces.yaml

yaml

```
apiVersion: v1
kind: Namespace
metadata:
  name: metallb-system
  labels:
    name: metallb-system
---
apiVersion: v1
kind: Namespace
metadata:
  name: traefik-system
  labels:
    name: traefik-system
---
apiVersion: v1
kind: Namespace
metadata:
  name: cattle-system
  labels:
    name: cattle-system
```

Étape 2: Configuration MetalLB

metallb/metallb-config.yaml

yaml

```
apiVersion: metallb.io/v1beta1
kind: IPAddressPool
metadata:
  name: my-ip-pool
  namespace: metallb-system
spec:
  addresses:
    - 10.64.13.210-10.64.13.220
---
apiVersion: metallb.io/v1beta1
kind: L2Advertisement
metadata:
  name: l2-ad
  namespace: metallb-system
spec: {}
```

Étape 3: Configuration Traefik

traefik/traefik-values.yaml

yaml

```
deployment:
  replicas: 1

providers:
  kubernetesIngress:
    publishedService:
      enabled: true

ports:
  web:
    redirectTo: websecure # Redirection HTTP → HTTPS automatique
  websecure:
    tls:
      enabled: true      # Activation TLS

ingressRoute:
  dashboard:
    enabled: true      # Activation dashboard Traefik

service:
  type: LoadBalancer  # MetalLB attribuera une IP
```

Étape 4: Configuration Rancher

rancher/rancher-values.yaml

yaml

```
hostname: rancher.k8s.ci
replicas: 1

# DÉSACTIVATION de l'ingress Rancher - Traefik gère
ingress:
  enabled: false

service:
  type: LoadBalancer

# Montage du certificat mkcert dans Rancher
volumes:
  - name: ssl-cert
    secret:
      secretName: tls-rancher-ingress # Secret créé avec mkcert

volumeMounts:
  - name: ssl-cert
    mountPath: /etc/rancher/ssl
    readOnly: true

# Variables d'environnement pour utiliser le certificat
extraEnv:
  - name: SSL_CERT_DIR
    value: /etc/rancher/ssl
  - name: CATTLE_PROMETHEUS_METRICS
    value: "true"

resources:
```

```
limits:
  cpu: 1000m
  memory: 1536Mi
requests:
  cpu: 500m
  memory: 1024Mi
```

Étape 5: Configuration Ingress

rancher/rancher-ingress.yaml

yaml

```
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: rancher
  namespace: cattle-system
  annotations:
    kubernetes.io/ingress.class: traefik
    traefik.ingress.kubernetes.io/router.entrypoints: websecure
    traefik.ingress.kubernetes.io/router.tls: "true"
spec:
  rules:
  - host: rancher.k8s.ci
    http:
      paths:
      - path: /
        pathType: Prefix
        backend:
          service:
            name: rancher
            port:
              number: 80
  tls:
  - hosts:
    - rancher.k8s.ci
    secretName: tls-rancher-ingress # Utilise le secret mkcert
```

Étape 6: Lancement du Déploiement

bash

```
# Rendre les scripts exécutables
chmod +x scripts/*.sh

# Lancer le déploiement complet
./scripts/deploy.sh
```



Fichiers de Configuration Complets

Script de Déploiement Principal

scripts/deploy.sh

bash

```
#!/bin/bash
set -e
```

```

echo "=== Déploiement de Rancher avec Traefik et MetalLB ==="

# Variables
METALLB_VERSION="v0.13.12"
TRAEFIK_VERSION="23.0.0"
RANCHER_VERSION="2.12.2"

echo "📦 Installation des namespaces..."
kubectl apply -f namespaces/namespaces.yaml

echo "🔧 Installation de MetalLB..."
kubectl apply -f https://raw.githubusercontent.com/metallb/metallb/${METALLB_VERSION}/config/manifests/metallb-native.yaml

echo "⌚ Attente du déploiement de MetalLB..."
kubectl -n metallb-system wait --for=condition=ready pod -l app=metallb --timeout=120s

echo "📡 Configuration de MetalLB..."
kubectl apply -f metallb/metallb-config.yaml

# Installation Traefik
if ! helm repo list | grep -q "traefik"; then
    echo "🚀 Installation de Traefik avec Helm..."
    helm repo add traefik https://traefik.github.io/charts
    helm repo update
else
    echo "⚠️ Le dépôt Traefik est déjà ajouté, on saute cette étape."
fi

helm upgrade --install traefik traefik/traefik \
    --namespace traefik-system \
    --version ${TRAEFIK_VERSION} \
    --values traefik/traefik-values.yaml

echo "⌚ Attente du déploiement de Traefik..."
kubectl -n traefik-system wait --for=condition=ready pod -l app.kubernetes.io/name=traefik --timeout=120s

echo "🍷 Installation de Rancher avec Helm..."
helm repo add rancher-latest https://releases.rancher.com/server-charts/latest
helm repo update

helm upgrade --install rancher rancher-latest/rancher \
    --namespace cattle-system \
    --version ${RANCHER_VERSION} \
    --values rancher/rancher-values.yaml

echo "📄 Application de l'ingress Rancher..."
kubectl apply -f rancher/rancher-ingress.yaml

echo "⌚ Attente du déploiement de Rancher..."
kubectl -n cattle-system wait --for=condition=ready pod -l app=rancher --timeout=600s

echo "✅ Déploiement terminé!"
echo ""
echo "📊 Tableau de bord Traefik: https://10.64.13.210:9000/dashboard/"
echo "🍷 Rancher: https://rancher.k8s.ci"
echo ""
echo "🔍 Vérification des services:"
kubectl get svc -n traefik-system
kubectl get svc -n cattle-system

```

Script de Vérification

scripts/check-status.sh

```
bash

#!/bin/bash
echo "=== Statut du déploiement ==="

echo ""
echo "🔍 Pods:"
kubectl get pods -n metallb-system
echo ""
kubectl get pods -n traefik-system
echo ""
kubectl get pods -n cattle-system

echo ""
echo "🌐 Services:"
kubectl get svc -n traefik-system
kubectl get svc -n cattle-system

echo ""
echo "🚪 Ingress:"
kubectl get ingress -A

echo ""
echo "📡 IPs MetalLB:"
kubectl get ipaddresspool -n metallb-system
```

Script de Nettoyage

scripts/cleanup.sh

```
bash

#!/bin/bash
echo "=== Nettoyage du déploiement ==="

helm uninstall rancher -n cattle-system || true
helm uninstall traefik -n traefik-system || true

kubectl delete -f rancher/rancher-ingress.yaml || true
kubectl delete -f metallb/metallb-config.yaml || true

kubectl delete -f
https://raw.githubusercontent.com/metallb/metallb/v0.13.12/config/manifests/metallb-native.yaml || true

kubectl delete namespace cattle-system traefik-system metallb-system || true

echo "✅ Nettoyage terminé"
```

Modifie ton DNS/hosts

```
bash

# Sur ta machine, modifie /etc/hosts pour pointer vers Traefik
sudo nano /etc/hosts
```

```
# Ajoute cette ligne :
10.64.13.210 rancher.k8s.ci

# Maintenant teste la validité du certificat
curl -v https://rancher.k8s.ci
```



Résolution des Problèmes

Problème: Certificat non reconnu

```
bash

# Vérifier le certificat présenté
openssl s_client -connect rancher.k8s.ci:443 -servername rancher.k8s.ci < /dev/null | openssl x509 -noout -issuer -subject

# Vérifier le secret
kubectl get secret -n cattle-system tls-rancher-ingress -o yaml

# Régénérer les certificats si nécessaire
mkcert -uninstall
mkcert -install
mkcert rancher.k8s.ci 10.64.13.211
```

Problème: Services non accessibles

```
bash

# Vérifier les IPs attribuées
kubectl get svc -A

# Vérifier les logs
kubectl logs -n traefik-system deployment/traefik
kubectl logs -n cattle-system -l app=rancher

# Vérifier la résolution DNS
nslookup rancher.k8s.ci
```

Problème: Ingress non configuré

```
bash

# Vérifier l'ingress
kubectl describe ingress -n cattle-system rancher

# Vérifier les endpoints
kubectl get endpoints -n cattle-system rancher
```



Maintenance et Surveillance

Surveillance des Ressources

```
bash

# Vérifier l'utilisation des ressources
kubectl top pods -A
```



```
kubectl top nodes
```

```
# Vérifier les événements
```

```
kubectl get events -A --sort-by='.lastTimestamp'
```

Sauvegarde des Certificats

```
bash
```

```
# Sauvegarder les certificats mkcert
```

```
cp rancher.k8s.ci+1.pem ~/backup/
```

```
cp rancher.k8s.ci+1-key.pem ~/backup/
```

```
# Sauvegarder les secrets
```

```
kubectl get secret -n cattle-system tls-rancher-ingress -o yaml >  
~/backup/secret-backup.yaml
```

Mise à Jour

```
bash
```

```
# Mettre à jour Rancher
```

```
helm upgrade rancher rancher-latest/rancher -n cattle-system -f rancher/rancher-  
values.yaml
```

```
# Mettre à jour Traefik
```

```
helm upgrade traefik traefik/traefik -n traefik-system -f traefik/traefik-  
values.yaml
```



Points Clés de la Solution

Avantages de l'Architecture

1. **Certificats Valides** : Plus d'avertissements de sécurité
2. **SSL Termination** : Traefik gère le TLS de manière centralisée
3. **Load Balancing** : MetalLB fournit des IPs stables
4. **Haute Disponibilité** : Architecture scalable

Flux de Trafic

1. **Client** → HTTPS avec certificat mkcert valide
2. **Traefik** → Termination SSL et routage
3. **Rancher** → Service avec certificat monté
4. **Réponse** → Retour via Traefik avec chiffrement

Sécurité

- Certificats TLS valides reconnus par les navigateurs
- Communication chiffrée de bout en bout
- Secrets Kubernetes sécurisés

- Contrôle d'accès via Ingress

Cette documentation fournit une solution complète et professionnelle pour déployer Rancher avec des certificats TLS valides dans un environnement de développement local. 🚀

Resultats

```
d-a-s@k8s-master: ~/rancher-deployment
d-a-s@k8s-master:~$ ./scripts/deploy.sh
=== Déploiement de Rancher avec Traefik et MetalLB ===
🔧 Installation des namespaces...
namespace/metalb-system unchanged
namespace/traefik-system unchanged
namespace/cattle-system unchanged
🔧 Installation de MetalLB...
namespace/metalb-system configured
customresourcedefinition.apiextensions.k8s.io/addresspools.metalb.io configured
customresourcedefinition.apiextensions.k8s.io/bfdprofiles.metalb.io configured
customresourcedefinition.apiextensions.k8s.io/bgpadvertisements.metalb.io configured
customresourcedefinition.apiextensions.k8s.io/bgppeers.metalb.io configured
customresourcedefinition.apiextensions.k8s.io/communities.metalb.io configured
customresourcedefinition.apiextensions.k8s.io/ipaddresspools.metalb.io configured
customresourcedefinition.apiextensions.k8s.io/l2advertisements.metalb.io configured
serviceaccount/controller unchanged
serviceaccount/speaker unchanged
role.rbac.authorization.k8s.io/controller unchanged
role.rbac.authorization.k8s.io/pod-lister unchanged
clusterrole.rbac.authorization.k8s.io/metalb-system:controller unchanged
clusterrole.rbac.authorization.k8s.io/metalb-system:speaker unchanged
rolebinding.rbac.authorization.k8s.io/controller unchanged
rolebinding.rbac.authorization.k8s.io/pod-lister unchanged
clusterrolebinding.rbac.authorization.k8s.io/metalb-system:controller unchanged
clusterrolebinding.rbac.authorization.k8s.io/metalb-system:speaker unchanged
configmap/metalb-excludel2 unchanged
secret/webhook-server-cert unchanged
service/webhook-service unchanged
deployment.apps/controller unchanged
daemonset.apps/speaker unchanged
validatingwebhookconfiguration.admissionregistration.k8s.io/metalb-webhook-configuration configured
⚠️ Attente du déploiement de MetalLB...
pod/controller-c76b688-9q5dp condition met
pod/speaker-bt5fw condition met
🔧 Configuration de MetalLB...
```

Execution du Script de Deploiement

```
d-a-s@k8s-master: ~/rancher-deployment
validatingwebhookconfiguration.admissionregistration.k8s.io/metalb-webhook-configuration configured
⚠️ Attente du déploiement de MetalLB...
pod/controller-c76b688-9q5dp condition met
pod/speaker-bt5fw condition met
🔧 Configuration de MetalLB...
ipaddresspool.metalb.io/my-ip-pool unchanged
l2advertisement.metalb.io/l2-ad unchanged
⚠️ Le dépôt Traefik est déjà ajouté, on saute cette étape.
Release "traefik" has been upgraded. Happy Helming!
NAME: traefik
LAST DEPLOYED: Wed Nov 26 00:22:34 2025
NAMESPACE: traefik-system
STATUS: deployed
REVISION: 33
TEST SUITE: None
NOTES:
Traefik Proxy v2.10.0 has been deployed successfully
on traefik-system namespace !
⚠️ Attente du déploiement de Traefik...
pod/traefik-85645b5bd5-wwq2b condition met
🔧 Installation de Rancher avec Helm...
"rancher-latest" already exists with the same configuration, skipping
Hang tight while we grab the latest from your chart repositories...
...Successfully got an update from the "jetstack" chart repository
...Successfully got an update from the "puppygraph" chart repository
...Successfully got an update from the "rancher-stable" chart repository
...Successfully got an update from the "nessie-helm" chart repository
...Successfully got an update from the "rancher-latest" chart repository
...Successfully got an update from the "traefik" chart repository
Update Complete. *Happy Helming!*
Release "rancher" has been upgraded. Happy Helming!
NAME: rancher
LAST DEPLOYED: Wed Nov 26 00:22:41 2025
NAMESPACE: cattle-system
STATUS: deployed
```

```
Nov 26 14:40
d-a-s@k8s-master: ~/rancher-deployment

If you provided your own bootstrap password during installation, browse to https://rancher.k8s.ci to get started.
If this is the first time you installed Rancher, get started by running this command and clicking the URL it generates:

...
echo https://rancher.k8s.ci/dashboard/?setup=$(kubectl get secret --namespace cattle-system bootstrap-secret -o go-template='{{.data.bootstrapPassword|base64decode}}')
...

To get just the bootstrap password on its own, run:

...
kubectl get secret --namespace cattle-system bootstrap-secret -o go-template='{{.data.bootstrapPassword|base64decode}}{{ "\n" }}'
...

Happy Containering!
Application de l'ingress Rancher...
Warning: annotation "kubernetes.io/ingress.class" is deprecated, please use 'spec.ingressClassName' instead
ingress.networking.k8s.io/rancher created
Attente du déploiement de Rancher...
pod/rancher-9948d9484-257pv condition met
pod/rancher-f4f9bb4bf-zjx9d condition met
Déploiement terminé!

Tableau de bord Traefik: https://10.64.13.210:9000/dashboard/
Rancher: https://rancher.10.64.13.211.nip.io

Vérification des services:
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
traefik    LoadBalancer  10.107.83.14     10.64.13.210     80:30589/TCP,443:32748/TCP  5h35m
NAME      TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)      AGE
imperative-api-extension ClusterIP  10.98.102.160    <none>           6666/TCP      8h
rancher    LoadBalancer  10.97.1.202      10.64.13.211     80:32474/TCP,443:30504/TCP  5h35m
rancher-webhook ClusterIP  10.106.241.123   <none>           443/TCP       8h
d-a-s@k8s-master:~/rancher-deployment$
```

Fin de Deploiement de Scripts

```
Nov 26 14:43
d-a-s@k8s-master: ~/rancher-deployment

d-a-s@k8s-master: ~
d-a-s@k8s-master: ~
d-a-s@k8s-master: ~/rancher...
d-a-s@k8s-master: ~/rancher...
d-a-s@k8s-master: ~/rancher...
d-a-s@k8s-master: ~/rancher...

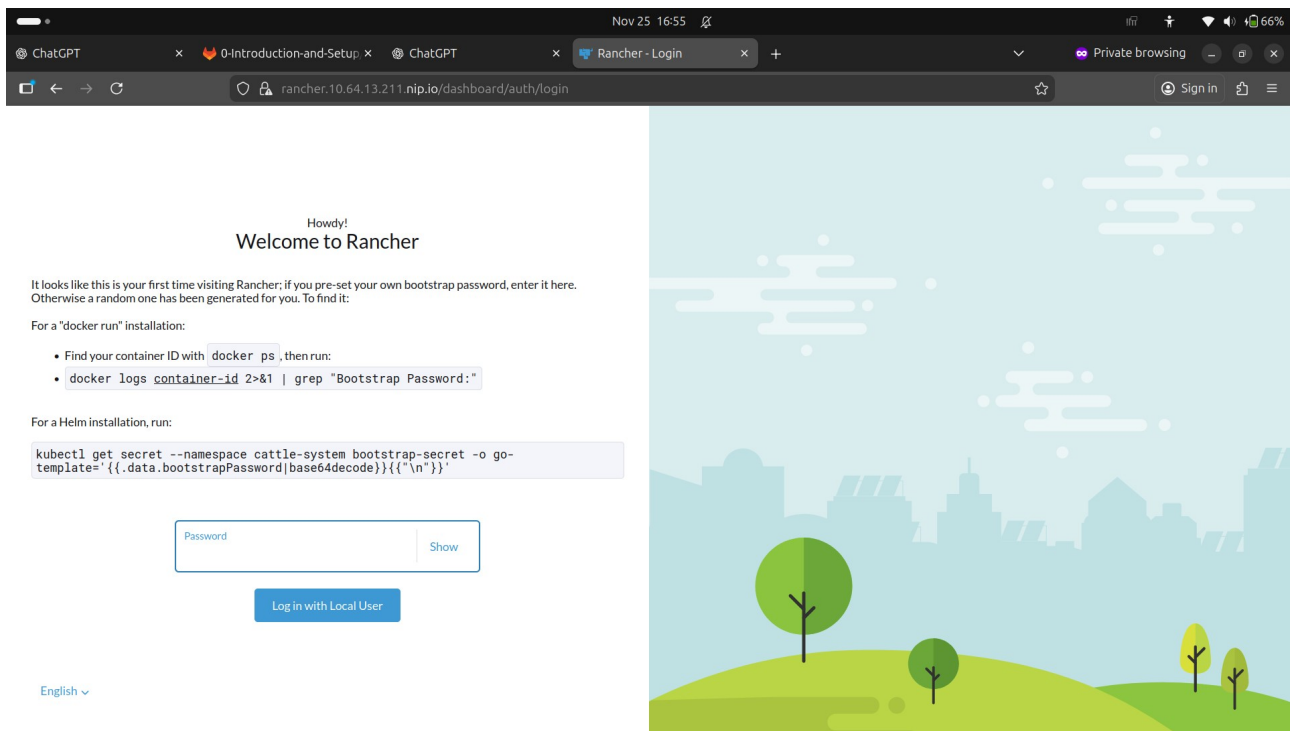
kube-system      kube-controller-manager-k8s-master      1/1      Running      5 (18m ago)    10h
kube-system      kube-proxy-5pbkt                         1/1      Running      0             10h
kube-system      kube-scheduler-k8s-master                1/1      Running      8 (18m ago)    10h
metallb-system   controller-c76b688-9q5dp                 1/1      Running      0             7h36m
metallb-system   speaker-bt5fw                             1/1      Running      17 (18m ago)   7h36m
traefik-system   traefik-b86df5745-5kt98                  1/1      Running      0             14s

d-a-s@k8s-master:~/rancher-deployment$ kubectl get pods -n traefik-system -w
NAME              READY   STATUS    RESTARTS   AGE
traefik-b86df5745-5kt98  1/1     Running   0           28s

^C
d-a-s@k8s-master:~/rancher-deployment$ kubectl get pods -A
NAMESPACE          NAME                                                    READY   STATUS    RESTARTS   AGE
cattle-fleet-local-system  fleet-agent-666ddcddf8-528v8                          1/1     Running   5 (13h ago)  18h
cattle-fleet-system        fleet-controller-5cc66bb5f6-n7dlw                      3/3     Running   39 (15m ago)  21h
cattle-fleet-system        gitjob-5cff5b4bff-vdqpj                                1/1     Running   25 (15m ago)  21h
cattle-fleet-system        helmops-574f89c75d-htbdf                                1/1     Running   26 (15m ago)  21h
cattle-provisioning-capi-system  capi-controller-manager-77f6bb9c69-dvp4d              1/1     Running   28 (15m ago)  21h
cattle-system             rancher-5f4c49f685-cmjkw                               1/1     Running   0             7m20s
cattle-system             rancher-webhook-7ff56cb48f-8k5rm                       1/1     Running   0             21h
cert-manager              cert-manager-597f9759f-d6r9p                           1/1     Running   2 (12h ago)   14h
cert-manager              cert-manager-cainjector-6dc4d85566-ghl5t               1/1     Running   9 (15m ago)   14h
cert-manager              cert-manager-webhook-6787b9c856-7wzp8                  1/1     Running   0             14h
fleet-default             rke2-machineconfig-cleanup-cronjob-29401925-8vw2c       0/1     Completed  0             13h
kube-system              calico-kube-controllers-75cd4cc5b9-24mz7                1/1     Running   21 (12h ago)  23h
kube-system              calico-node-74h45                                       1/1     Running   0             23h
kube-system              coredns-674b8bbfcf-k8tkx                               1/1     Running   0             24h
kube-system              coredns-674b8bbfcf-wmljc                               1/1     Running   0             24h
kube-system              etcd-k8s-master                                         1/1     Running   2             24h
kube-system              kube-apiserver-k8s-master                               1/1     Running   8 (15m ago)   24h
kube-system              kube-controller-manager-k8s-master                     1/1     Running   7 (13h ago)   24h
kube-system              kube-proxy-5pbkt                                         1/1     Running   0             24h
kube-system              kube-scheduler-k8s-master                               1/1     Running   10 (13h ago)  24h
metallb-system           controller-c76b688-9q5dp                                 1/1     Running   0             21h
metallb-system           speaker-bt5fw                                             1/1     Running   27 (15m ago)  21h
traefik-system           traefik-b86df5745-5kt98                                 1/1     Running   0             13h

d-a-s@k8s-master:~/rancher-deployment$
```

Tout les Pods sont en Running



La première fois vous allez obtenir le secret et vous logger

Nov 25 16:56

ChatGPT x 0-Introduction-and-Setup x ChatGPT x Rancher x +

Private browsing Sign in

rancher.10.64.13.211.nip.io/dashboard/auth/setup

Welcome to Rancher!

The first order of business is to set a strong password for the default admin user. We suggest using this random one generated just for you, but enter your own if you like.

☐ Use a randomly generated password

☒ Set a specific password to use

[Show](#)

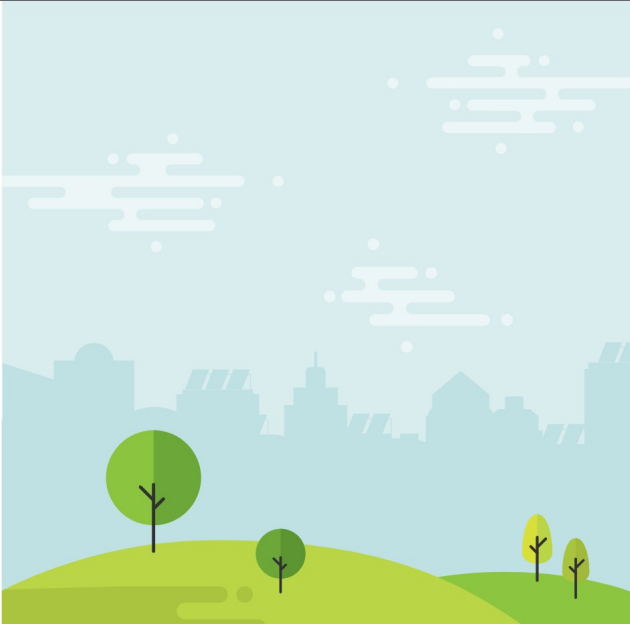
[Show](#)

What URL should be used for this Rancher installation? All the nodes in your clusters will need to be able to reach this.

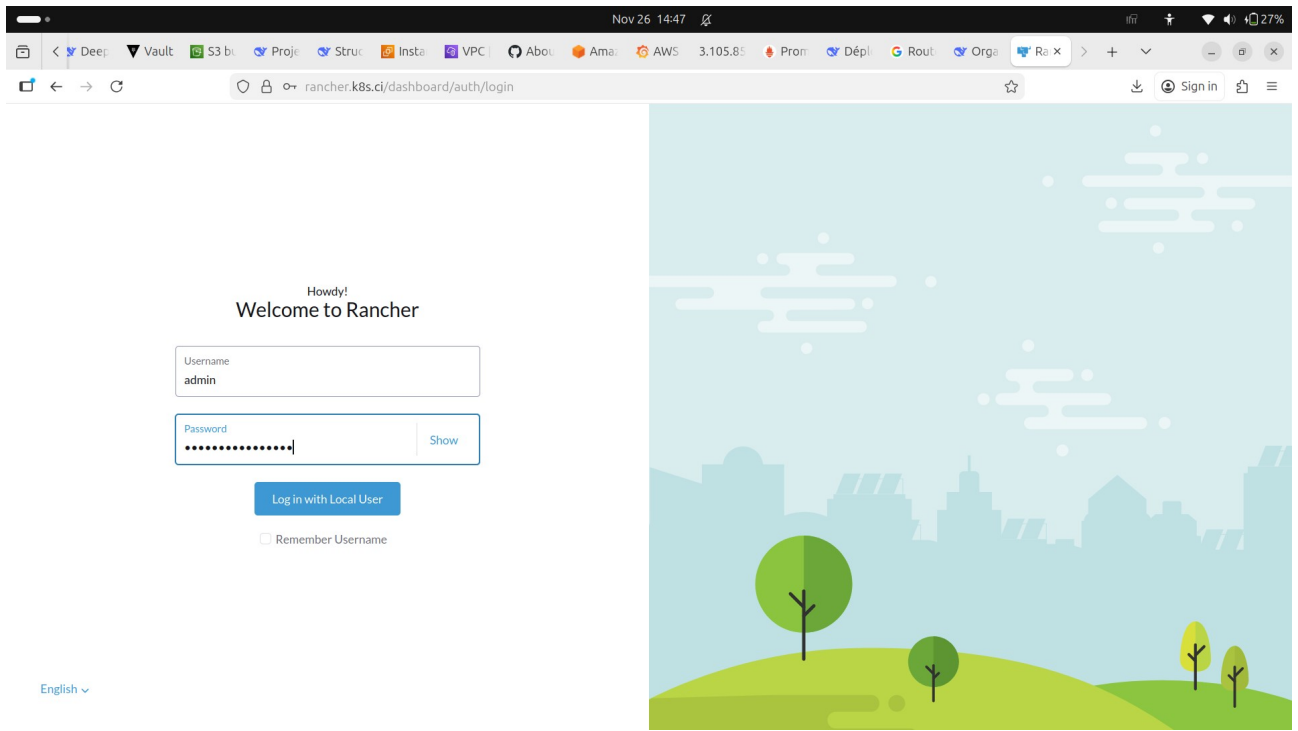
https://rancher.10.64.13.211.nip.io

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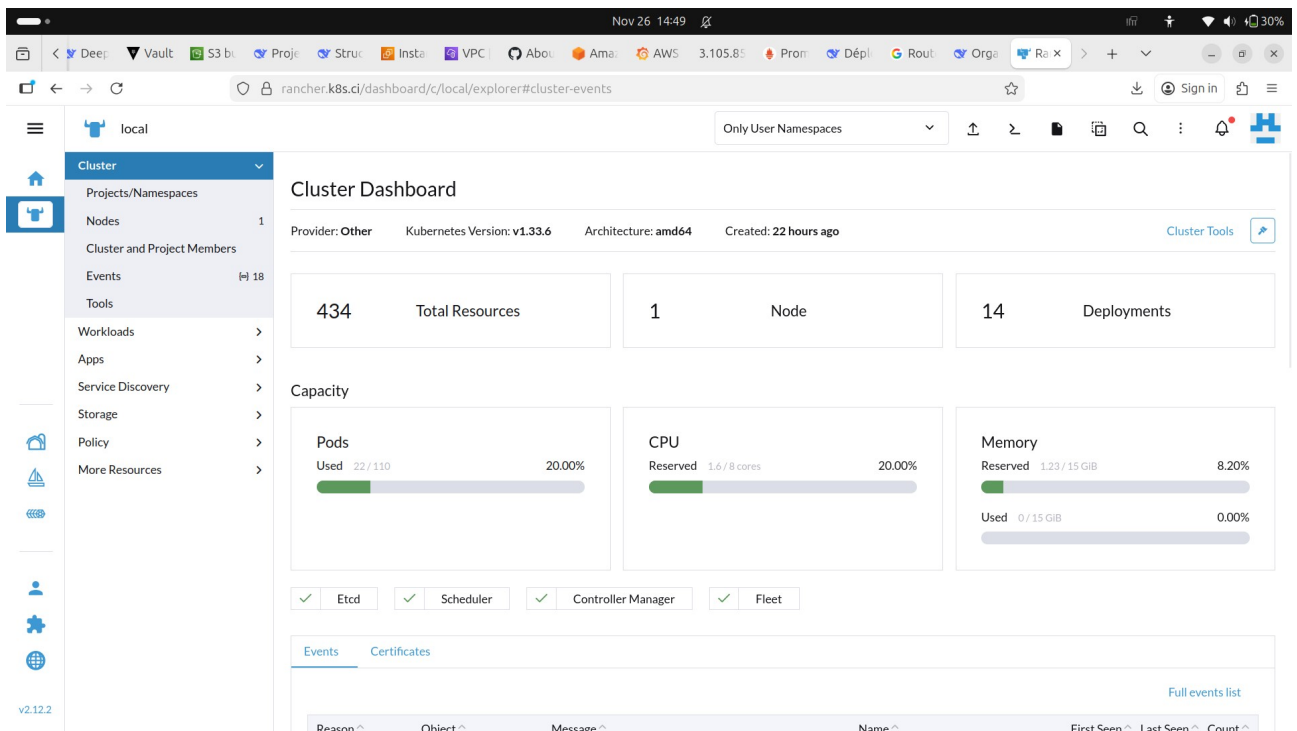
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A stylized illustration of a city skyline with various buildings and houses. In the foreground, there are rolling green hills with several trees of different shapes and sizes. The sky is light blue with some white, wispy clouds.

Ensuite Vous decidez soit de generer un mot de passe ou d'en definir un



On Se Connecte



On peut voir les informations sur notre Cluster

The screenshot displays the Rancher management interface. The top navigation bar includes the Rancher logo and various utility icons. On the left sidebar, the 'local' cluster is selected under the 'CLUSTER MANAGEMENT' section. The main panel shows a table of cluster events.

Event Type	Pod Name	Description	Component	Age	Count
FailedMount	Pod traefik-b86df5745-5kt98	Name: "traefik-b86df5745-5kt98", UID: "ac173a44-5300-423d-8a73-4fd029d0687a" expired and refresh failed: Post "https://10.64.13.203:6443/api/v1/namespaces/traefik-system/serviceaccounts/traefik/token": dial tcp 10.64.13.203:6443: connect: network is unreachable	traefik-b86df5745-5kt98.187b6abf64bfce01	13h	6
FailedMount	Pod traefik-b86df5745-5kt98	MountVolume.SetUp failed for volume "kube-api-access-fpxcc": failed to fetch token: Post "https://10.64.13.203:6443/api/v1/namespaces/traefik-system/serviceaccounts/traefik/token": dial tcp 10.64.13.203:6443: connect: connection refused	traefik-b86df5745-5kt98.187b92b35d866353	59m	1
FailedMount	Pod controller-c76b688-q95dp	MountVolume.SetUp failed for volume "kube-api-access-4zt8x": failed to fetch token: serviceaccounts "controller" is forbidden: User "systemnode:k8s-master" cannot create resource "serviceaccounts/token" in API group "" in the namespace "metalb-system": no relationship found between node "k8s-master" and this object	controller-c76b688-q95dp.187b92b44f7b7608	59m	1
RegisteredNode	Node k8s-master	Node k8s-master event: Registered Node k8s-master in Controller	k8s-master.187b92b8afa82296	59m	1
BackOff	Pod speaker-bt5fw	Back-off restarting failed container speaker in pod speaker-bt5fw_metalb-system(4ec0f89d-dd02-4266-beab-b387e077607a)	speaker-bt5fw.187b5db94caf9d7d	17h	165
nodeAssigned	Service traefik	announcing from node "k8s-master" with protocol "layer2"	traefik.187b92f91dcbb1510	54m	2
FailedBinding	PersistentVolumeClaim traefik	no persistent volumes available for this claim and no storage class is set	traefik.187b92b8b5a3ff84	59m	61
Unhealthy	Pod speaker-bt5fw	Liveness probe failed: Get "http://10.64.13.203:7472/metrics": dial tcp 10.64.13.203:7472: connect: network is unreachable	speaker-bt5fw.187b5db445876934	17h	15

At the bottom of the table, there are pagination controls showing '1 - 10 of 18 Events'.

On Peut Superviser notre cluster s il y a des erreurs ou tout s'est bien passé, Voir l'état du cluster et Administrer, gérer le cluster et plein d'autres choses, Amusez-Vous !