

Portainer Web GUI - Environment Connection

With my K8 cluster now set up, I'm going to connect this cluster to my Portainer container running in my local Docker engine on another VM I have in Proxmox. For more details about my Portainer set up, check out my [Docker Containers](#) book. Portainer is a Web GUI container you can use for Kubernetes and Docker management, and it'll allow me to manage and deploy containers and clusters. See below to view how I set up my connection:

Portainer Agent

To connect this cluster, I'll be deploying a Portainer Agent onto the cluster. To do so, run the following command in any node of your cluster:

```
kubectl apply -f https://downloads.portainer.io/ce2-19/portainer-agent-k8s-nodeport.yaml
```

```
austin@k-ctrlr:~$ kubectl apply -f https://downloads.portainer.io/ce2-19/portainer-agent-k8s-nodeport.yaml
namespace/portainer created
serviceaccount/portainer-sa-clusteradmin created
clusterrolebinding.rbac.authorization.k8s.io/portainer-crb-clusteradmin created
service/portainer-agent created
service/portainer-agent-headless created
deployment.apps/portainer-agent created
austin@k-ctrlr:~$
```

With this installed, check the status of the agent by running the following command:

```
kubectl get pods --namespace=portainer
```

```
austin@k-ctrlr:~$ kubectl get pods --namespace=portainer
NAME                                READY   STATUS    RESTARTS   AGE
portainer-agent-548d57f7b5-2d6cj    1/1     Running   0           77s
austin@k-ctrlr:~$
```

Now, open up your Portainer GUI in the web browser and navigate to Environment ---> Add. Select Kubernetes and start the wizard:

 Environment Wizard

Select your environment(s)
You can onboard different types of environments, select all that apply.

Connect to existing environments



Docker Standalone
Connect to Docker Standalone via URL/IP, API or Socket



Docker Swarm
Connect to Docker Swarm via URL/IP, API or Socket



Kubernetes
Connect to a Kubernetes environment via URL/IP



ACI
Connect to ACI environment via API



Nomad
Connect to HashiCorp Nomad environment via API

Business Feature

Set up new environments



Provision KaaS Cluster
Provision a Kubernetes cluster via a cloud provider's Kubernetes as a Service

Business Feature



Create Kubernetes cluster
Create a Kubernetes cluster on existing infrastructure

Business Feature

[Start Wizard](#)

Next, enter your node IP address and specify port 30778. I'm using NordPort so 30778 applies; if you're using load balancer then use port 9001:

Environment Wizard

1
Kubernetes

Connect to your Kubernetes environment



Agent



Edge Agent Standard



Import
Import an existing Kubernetes config

Information

Ensure that you have deployed the Portainer agent in your cluster first. Refer to the platform related command below to deploy it.

Kubernetes via load balancer **Kubernetes via node port**

```
kubect1 apply -f https://downloads.portainer.io/ce2-19/portainer-agent-k8s-nodeport.yaml
```

[Copy command](#)

Name*

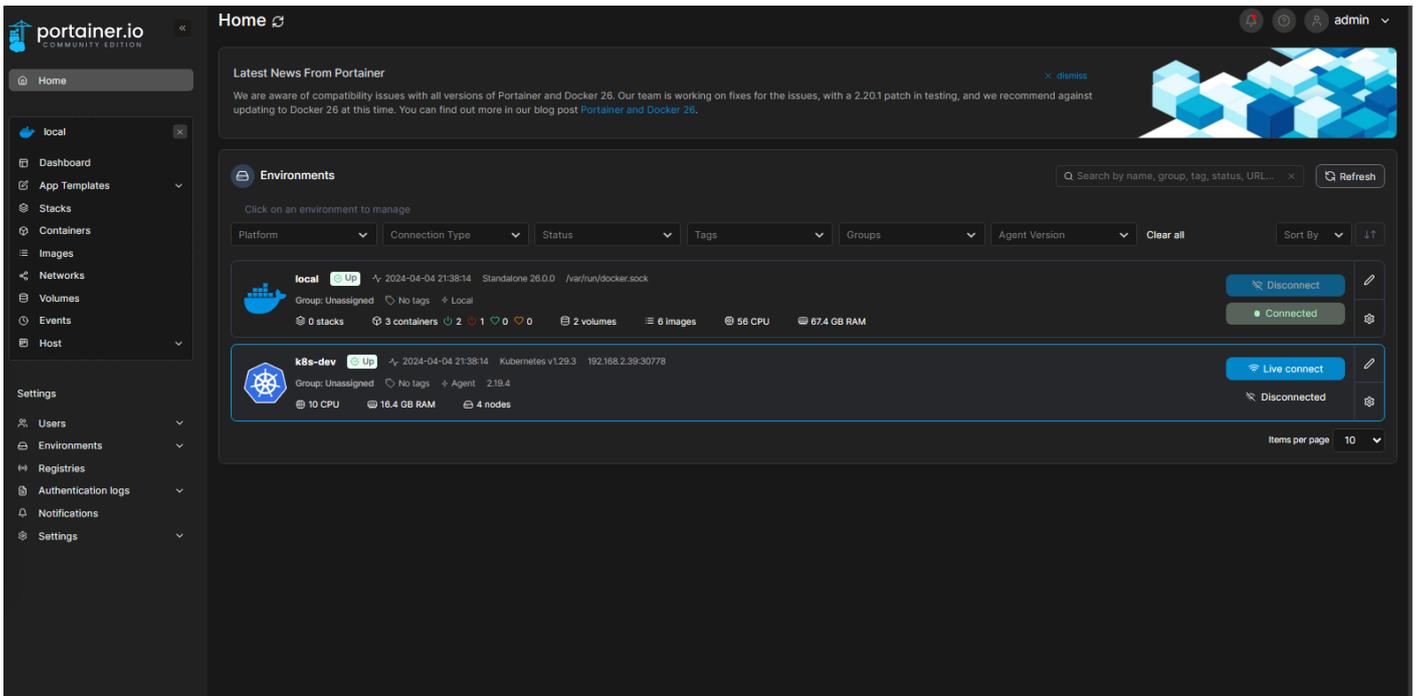
Environment address*

> More settings

[Connect](#)

[← Previous](#) [Close →](#)

Your cluster should now connect, load, and be added to your dashboard:



The screenshot shows the Portainer.io dashboard with the 'Environments' section active. The table lists two environments:

Environment Name	Status	Platform	Connection Type	Agent Version	Resources	Actions
local	Up	Standalone	26.0.0	/var/run/docker.sock	0 stacks, 3 containers, 2 volumes, 6 images, 56 CPU, 67.4 GB RAM	Disconnect, Connected
k8s-dev	Up	Kubernetes	v1.29.3	192.168.2.39:30778	10 CPU, 16.4 GB RAM, 4 nodes	Live connect, Disconnected

Select "Live Connect" to view your cluster resources:

The cluster is now connected to Portainer and can be managed via the Web GUI!

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