

# A Cluster with App-Only Image and Load Balancer

## Overview

In our steps, we'll create a two-node Yellowfin cluster, with each node allocated 6GB of RAM, with Traefik forwarding requests from port 80 (standard HTTP port) of your DNS hostname or IP address to Yellowfin instances.

When deploying Yellowfin with Traefik fronting it, the Yellowfin Kubernetes service will default to the "ClusterIP" service type in Kubernetes, so it will not expose any ports to the external interface of the Kubernetes cluster.

Before deploying a cluster with these defaults, make sure you have already created a repository database and synced it with the same version of Yellowfin that will be used in the Yellowfin container. To do this, download the full application installer for Yellowfin, and [install it on your workstation](#). This will create a Yellowfin repo DB as well as an instance of Yellowfin in a folder which can be deleted after configuring the containers.

For a list of supported database types, see the database information on [Install And Deploy Yellowfin](#).

To deploy a Yellowfin cluster, follow the steps below.

1. Install the full application installer version of Yellowfin on your workstation (this is temporary to ensure the repo DB is available for the containers to use)
2. Copy the web.xml file from this installation and save it as a backup to your preferred location (this acts as a reference for the Yellowfin credentials required to connect to your Yellowfin repo DB)
3. Ensure Kubernetes is running and that Traefik has been installed
4. Copy the following text and paste it into your preferred text editor:

```
---
### Yellowfin Cluster Service ###
apiVersion: v1
kind: Service
metadata:
  name: yellowfin-cluster

spec:
  ports:
    - protocol: TCP
      name: web
      port: 8080
  selector:
    app: yellowfin-cluster
---
### Yellowfin Cluster Deployment ###
kind: Deployment
apiVersion: apps/v1
metadata:
  namespace: default
  name: yellowfin-cluster
  labels:
    app: yellowfin-cluster

spec:
  replicas: 2
  selector:
    matchLabels:
      app: yellowfin-cluster
  template:
    metadata:
      labels:
        app: yellowfin-cluster
    spec:
      containers:
        - env:
            - name: APP_MEMORY
              value: "6144"
            - name: CLUSTER_PORT
              value: "7800"
            - name: JDBC_CLASS_NAME
              value: INSERT_DATABASE_TYPE_HERE
            - name: JDBC_CONN_ENCRYPTED
              value: "true"
            - name: JDBC_CONN_PASS
```

```

        value: INSERT_JDBC_PASSWORD_HERE
      - name: JDBC_CONN_URL
        value: jdbc:INSERT_JDBC_CONNECTION_STRING_HERE
      - name: JDBC_CONN_USER
        value: INSERT_DATABASE_USER_HERE
      - name: NODE_BACKGROUND_TASKS
        value: REPORT_BROADCAST_BROADCASTTASK,REPORT_BROADCAST_MIREPORTTASK,FILTER_CACHE,
SOURCE_FILTER_REFRESH,SOURCE_FILTER_UPDATE_REMINDER,THIRD_PARTY_AUTORUN,ORGREF_CODE_REFRESH,
ETL_PROCESS_TASK,SIGNALS_DCR_TASK,SIGNALS_ANALYSIS_TASK,SIGNALS_CLEANUP_TASK,COMPOSITE_VIEW_REFRESH,
SIGNALS_CORRELATION_TASK
      - name: NODE_PARALLEL_TASKS
        value: 4,4,4,4,4,4,4,4,4,4,4,4,4
      name: yellowfin-cluster
      image: yellowfinbi/yellowfin-app-only:<RELEASE_VERSION_GOES_HERE>
      ports:
        - name: web
          containerPort: 8080

---
### Yellowfin Cluster Ingress ###
apiVersion: traefik.containo.us/v1alpha1
kind: IngressRoute
metadata:
  name: yellowfiningressroute
  namespace: default
spec:
  entryPoints:
    - webs
  routes:
    - match: Host(`INSERT_DNS_HOSTNAME`)
      kind: Rule
      services:
        - name: yellowfin-cluster
          port: 8080
      sticky:
        cookie:
          httpOnly: true
          name: stickyCookie

```

5. Read through the above text and replace the database connection settings with your own configuration details (these are located in the web.xml file of the Yellowfin installation)
6. In the text above, replace the text **INSERT\_DNS\_HOSTNAME** with your own DNS name (or IP address) for Traefik to listen to, for routing requests to the Yellowfin instance. In the example below, we've added an example DNS name:

```

### Yellowfin Cluster Ingress ###
apiVersion: traefik.containo.us/v1alpha1
kind: IngressRoute
metadata:
  name: yellowfiningressroute
  namespace: default
spec:
  entryPoints:
    - webs
  routes:
    - match: Host(`yellowfin.example.com`)
      kind: Rule
      services:
        - name: yellowfin-cluster
          port: 8080
      sticky:
        cookie:
          httpOnly: true
          name: stickyCookie

```

7. Save the text to a YAML file called **yellowfin-cluster.yml**
8. Run the following command in a terminal to deploy Yellowfin and execute it in the background:  
Kubect1 apply -f yellowfin-cluster.yml
9. Start Yellowfin by typing your host URL

10. Ensure that Yellowfin is running from your cluster and that you can login (this confirms that your login credentials are correct, so you can safely delete the workstation instance of Yellowfin)
11. Delete the workstation instance of Yellowfin by removing the folder



If you're using AWS EKS, or having issues clustering your Yellowfin instances, merge the following environment variable **CLUSTER\_INTERFACE** and value into the **containers** section of your Kubernetes deployment file:

```
containers:
  -env
    name: CLUSTER_INTERFACE
    value: "match-interface:eth1"
```

[top](#)

## Section navigation

### Current topic - Install in a Container

The page is part of the [Install in a Container](#) topic contains the following pages, split by Docker and Kubernetes:

#### [A Cluster with App-Only Image and Load Balancer](#)

- [Deploy to Docker without Swarm](#)
  - [Sandbox Instance with All-In-One Image](#)
  - [Single Instance with App-Only Image](#)
  - [Multiple Discrete Instances with App-Only Image](#)
  - [A Cluster with App-Only Image](#)
- [Deploy to Docker with Swarm](#)
  - [Sandbox instance with All-In-One Image - Swarm](#)
  - [Single Instance with App-Only Image - Swarm](#)
  - [Multiple Discrete Instances with App-Only Image - Swarm](#)
  - [A Cluster with App-Only Image - Swarm](#)

#### [Kubernetes](#)

- [Deploy to Kubernetes without load balancing](#)
  - [Sandbox Instance with All-In-One Image - no Load Balancer](#)
  - [Multiple Discrete Instances with App-Only Image - no Load Balancer](#)
- [Deploy to Kubernetes with Load Balancing](#)
  - [Single Instance with App-Only Image and Load Balancer](#)
  - [A Cluster with App-Only Image and Load Balancer](#)

This page is part of the [Install And Deploy Yellowfin](#) section of the wiki, which has these topics:

## Install on Premises

### [A Cluster with App-Only Image and Load Balancer](#)

- [Installation Steps](#)

## Install in the Cloud

### [Install in the Cloud](#)

- [Yellowfin for AWS](#)
- [Yellowfin for Azure](#)
- [Yellowfin for Google Cloud Platform](#)

## Install in a container

[Install in a Container](#)

- [Docker](#)
- [Kubernetes](#)
- [Upgrading Yellowfin Container Deployment](#)

## Deploy Yellowfin

[Deploy Yellowfin](#)

- [Logs and Logging](#)
- [Yellowfin Directory Structure](#)
- [User Welcome](#)

## Advanced Deployments

[Advanced Deployments](#)

- [Clustering Guide](#)
- [Yellowfin Server Specification](#)
- [Automate Yellowfin Deployment on Linux](#)
- [SAML Bridge](#)
- [Standalone Configuration Tools](#)

[top](#)

---