

Joget on Google Kubernetes Engine

This article provides a tutorial on deploying, running and scaling Joget on [Google Kubernetes Engine \(GKE\)](#). GKE is a managed Kubernetes service offered by [Google Cloud](#).



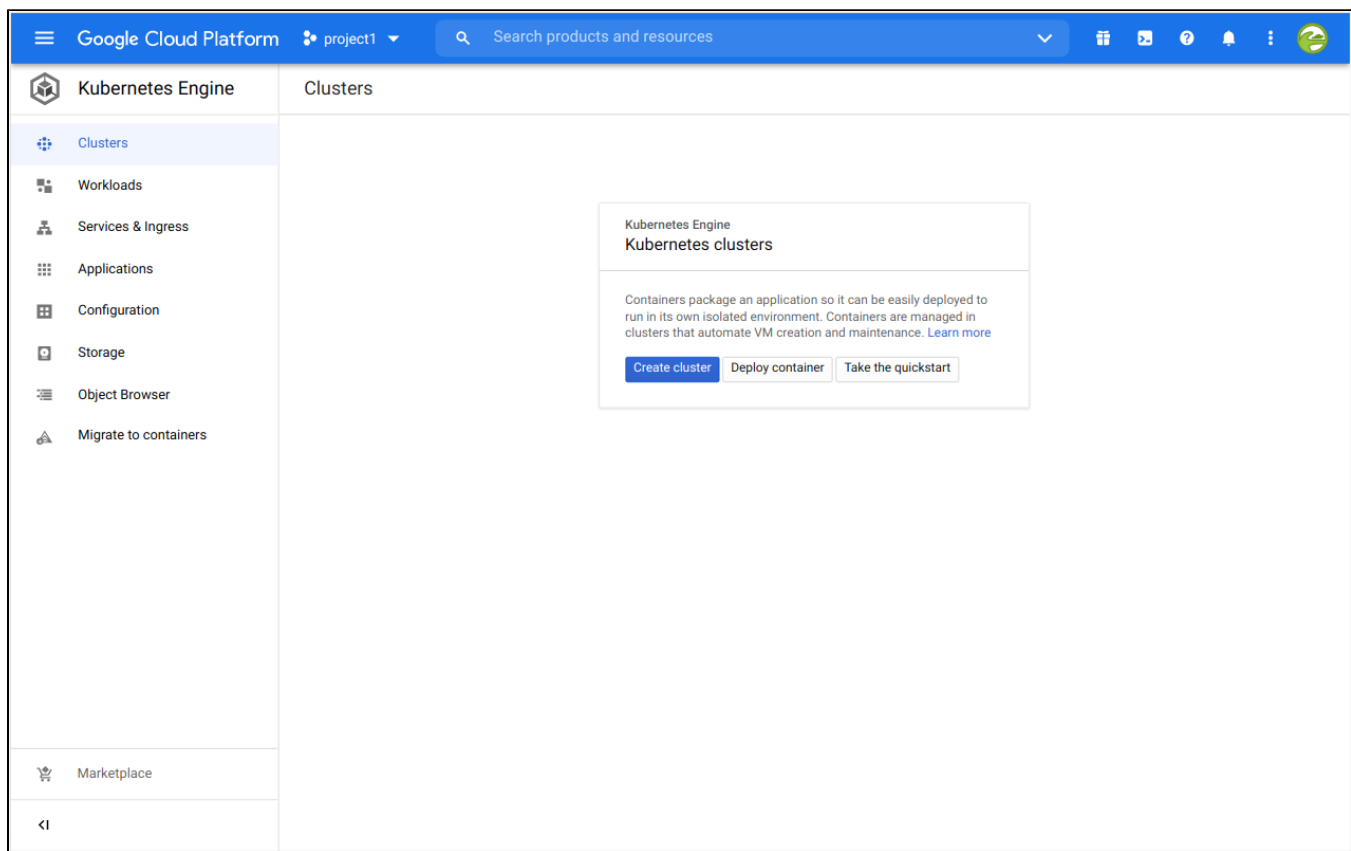
If you are not familiar with Kubernetes, refer to [Joget on Kubernetes](#) for a quick introduction.

- [Deploy Joget on Google Kubernetes Engine \(GKE\)](#)
 - [1. Create Kubernetes Cluster](#)
 - [2. Deploy MariaDB Database](#)
 - [3. Deploy Google Cloud Filestore Persistent Volume](#)
 - [4. Deploy Joget DX](#)
 - [5. Setup Database](#)
 - [6. Scale Deployment](#)
- [Sample Deployment YAML](#)

Deploy Joget on Google Kubernetes Engine (GKE)

1. Create Kubernetes Cluster

Access the [Google Kubernetes Engine console](#). In the **Clusters** page, click on the **Create cluster** button.



You will be presented with several configuration pages. Adjust the cluster configuration as desired, or just use the default values.

In the **Cluster basics** page, you can configure the name, zone and Kubernetes version for the cluster.



Do take note of the **Zone** used as this will be used for storage configuration later.

Google Cloud Platformproject1Search products and resources

Create a Kubernetes cluster

ADD NODE POOLREMOVE NODE POOL

Cluster basics

NODE POOLS

default-pool

CLUSTER

Automation

Networking

Security

Metadata

Features

Cluster basics

The new cluster will be created with the name, version, and in the location you specify here. After the cluster is created, name and location can't be changed.

To experiment with an affordable cluster, try **My first cluster** in the **Cluster set-up guides**

Name

cluster-1

Location type

Zonal

Regional

Zone

us-central1-c

Specify default node locations

Current default: us-central1-c

Master version

Choose a release channel for automatic management of your cluster's version and upgrade cadence. Choose a static version for more direct management of your cluster's version. [Learn more.](#)

Static version

Release channel

Static version

1.17.12-gke.1504 (master version)

CREATE

CANCEL

Equivalent [REST](#) or [command line](#)

Cluster set-up guides

My first cluster

An affordable cluster to experiment with

In the **Node Pools** page, you can configure the number of nodes and scaling options.

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Create a Kubernetes cluster

ADD NODE POOLREMOVE NODE POOL

Cluster basics

NODE POOLS

default-pool

Nodes

Security

Metadata

CLUSTER

Automation

Networking

Security

Metadata

Features

Node pool details

The new cluster will be created with at least one node pool. A node pool is a template for groups of nodes created in this cluster. More node pools can be added and removed after cluster creation.

Name

default-pool

Node version

1.17.12-gke.1504 (master version)

Size

Number of nodes *

3

Pod address range limits the maximum size of the cluster. [Learn more](#)

Enable autoscaling

Specify node locations

Default: us-central1-c

Automation

Enable auto-upgrade

Enable auto-repair

Surge upgrade

CREATE

CANCEL

Equivalent [REST](#) or [command line](#)

Under the **Nodes** page, you can choose the machine configuration to specify the machine type, CPU and disk options.

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Create a Kubernetes cluster

ADD NODE POOLREMOVE NODE POOL

Cluster basics

NODE POOLS

default-pool

Nodes

Security

Metadata

CLUSTER

Automation

Networking

Security

Metadata

Features

Nodes

These node settings will be used when new nodes are created using this node pool.

Image type

Container-Optimized OS (cos) (default)

Machine Configuration

Machine family

GENERAL-PURPOSECOMPUTE-OPTIMIZEDMEMORY-OPTIMIZED

Machine types for common workloads, optimized for cost and flexibility

Series

E2

CPU platform selection based on availability

Machine type

e2-standard-2 (2 vCPU, 8 GB memory)

vCPU

2

Memory

8 GB

CPU PLATFORM AND GPU

Boot disk type

Standard persistent disk

Boot disk size (GB)

100

CREATE

CANCEL

Equivalent [REST](#) or [command line](#)

Click on the **CREATE** button at the bottom to start creating the cluster.

When the cluster has been created, you will see a tick next to the cluster name, and a **Connect** button will become available.

Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration

Storage

Object Browser

Migrate to containers

Marketplace

<1

Kubernetes clusters

CREATE CLUSTERDEPLOYREFRESHDELETESHOW INFO PANELLEARN

A Kubernetes cluster is a managed group of VM instances for running containerized applications. [Learn more](#)

Filter by label or name

<input type="checkbox"/>	Name ^	Location	Cluster size	Total cores	Total memory	Notifications	Labels	
<input checked="" type="checkbox"/>	cluster-1	us-central1-c	3	6 vCPUs	24.00 GB			<div>Connect✎🗑</div>

2. Deploy MariaDB Database

Once we have a running cluster, you will need to deploy a database to be used by the Joget platform. In this case, we will use a [MariaDB](#) database that is available in the Google Cloud Marketplace.

Open the **Applications** page, and click on the **Deploy from Marketplace** button.

In the **Marketplace**, search for **MariaDB**, click on the **MariaDB** entry and click on the **Configure** button.

The screenshot shows the Google Cloud Platform Marketplace interface. On the left, the 'Kubernetes Engine' sidebar is visible with options like Clusters, Workloads, Services & Ingress, Applications, Configuration, Storage, Object Browser, and Migrate to containers. The main area displays search results for 'mariadb' under the 'Kubernetes apps' section. There are 4 results listed, each with a logo, name, description, and an 'Anthos' badge.

App Name	Description	Deployment Environment
MariaDB Galera Cluster	Google Click to Deploy containers Multi instance MariaDB Galera Cluster installation	Anthos (4)
MariaDB	Google Click to Deploy containers Multi instance MariaDB installation with replication	GKE (4)
MediaWiki	Google Click to Deploy containers Single instance MediaWiki installation with MariaDB	GKE on-prem (3)
Robin Cloud Native Storage	Robin.io Storage and Data management for stateful workloads on Kubernetes	Blog & CMS (1)

Additional filters shown on the left include: Databases (3), Storage (1), Free (3), and Paid (1).

Google Cloud Platform

Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration


Storage

Object Browser

Migrate to containers

Marketplace

CLOUD SHELL Terminal (micro-harbor-295802)



MariaDB

Container Registry tag: 10.3

[MariaDB \(Google Click to Deploy containers\)](#)

Multi instance MariaDB installation with replication

[CONFIGURE](#)

works with **Anthos**

Type
Kubernetes apps

Last updated
11/24/20

Deployment Environment
[GKE](#)
[GKE on-prem](#)
[Anthos](#)

Category
Databases

Repository path
[marketplace.gcr.io/google/mariadb](#)

Container images
[10.3](#)
[mysql-d-exporter:10.3](#)
[prometheus-to-sd:10.3](#)

Overview

MariaDB is a community-developed fork of the MySQL relational database management system.

This application supports [GKE On Prem](#) deployment.

[Learn more](#)

About Google Click to Deploy containers

Popular open stacks packaged for containers by Google. The images serve as base images for building applications on [App Engine Flexible Environment](#), [Kubernetes Engine](#), or other Docker hosts.

[Learn more](#)
[About the provider](#)

About Kubernetes apps

[Google Kubernetes Engine](#) is a managed, production-ready environment for deploying containerized applications. Kubernetes apps are prepackaged applications that can be deployed to Google Kubernetes Engine in minutes.

Pricing

MariaDB is free to deploy to your Kubernetes cluster.

Change the configuration as required, or just use the default values, and click on **Deploy**. Wait for a few minutes while the MariaDB instance is starting.

Due to an error we are currently experiencing you may get redirected to an error page after scheduling a deployment using this form. However, your application might still be deployed and you will be able to check its status on <https://console.cloud.google.com/kubernetes/application>. We are working on a fix.

DISMISS

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Search products and resources

Marketplace

Deploy MariaDB

[Click to Deploy on GKE](#) Deploy via command line

Cluster
cluster-1 [us-central1-c]

or [Create a new cluster](#)

Namespace
default

App instance name
mariadb-1

StorageClass
Create a new storage class

Storage size for persistent volumes
32Gi

Replicas
2

☐ Enable Stackdriver Metrics Exporter

[Deploy](#)

MariaDB Overview
Solution provided by Google Click to Deploy containers

Documentation
[User Guide](#)
Get started with Google Cloud Platform's MariaDB Kubernetes application
[Getting Started with MariaDB](#)
Official MariaDB documentation

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Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration

Storage

Object Browser

Migrate to containers

Marketplace

<|

Applications

Cluster

Namespace default

RESET

SAVE

BETA



DEPLOY FROM MARKETPLACE

DELETE

LEARN

Kubernetes Applications collect containers, services and configuration that are managed together. [Learn more](#)

Filter applications

	Name ↑	Status	Namespace	Cluster	Software	Version	Updates
<input type="checkbox"/>	 mariadb-1 MariaDB by Google Click to Deploy	 OK	default	cluster-1	MariaDB	10.3.25-20201025-150334	


CLOUD SHELL

Terminal

(micro-harbor-295802) x +

Open Editor

Once the status is OK, click on the name and view the details. Under **Details**, look for **MariaDB root password** and click on **preview secret data**.

 Copy the **database root password** and **service name** for the database setup later.

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Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration

Storage

Object Browser

Migrate to containers

Marketplace

Application de...

REFRESH

HIDE INFO PANEL

LEARN

Deployment tool

Marketplace

✓ mariadb-1

By [Google Click to Deploy](#)

DETAILS

EVENTS

YAML

VERSION HISTORY

Cluster

Namespace

Created

Labels

Annotations

cluster-1

default

Nov 25, 2020, 11:05:04 AM

app.kubernetes.io/name: mariadb-1

SHOW ANNOTATIONS

MariaDB info

MariaDB

MariaDB Application Namespace

MariaDB root password

MariaDB replication user

MariaDB replication password

10.8.14.111 (Service: [mariadb-1-mariadb](#))

default

[preview secret data](#)

[preview secret data](#)

[preview secret data](#)

Components

Application info

Description

Support

Documentation

Next steps

MariaDB is an open source relational database system, and one of the most popular database servers in the world. It is a fork of MySQL.

Google does not offer support for this solution. However, community support is available on [Stack Overflow](#). Additional community support is available on [community forums](#).

[User Guide: Google Click to Deploy MariaDB](#)
[Official documentation for MariaDB](#)

Get the authentication credentials for the cluster

gcloud container clusters get-credentials [CLUSTER_NAME] --namespace [NAMESPACE]

[CLUSTER_NAME] is the name of the cluster for this application

CLOUD SHELL

Terminal

(micro-harbor-295802)

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3. Deploy Google Cloud Filestore Persistent Volume

If you are running a multiple node Kubernetes cluster, you will need to allocate shared persistent storage with read write access by multiple nodes. For this purpose, you can use [Google Cloud Filestore](#), a fully managed storage service.

Access the [Google Cloud Filestore console](#). The first time you access it, you will need to click on the **Enable** button.

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Cloud Filestore API

Google

The Cloud Filestore API is used for creating and managing cloud file servers.

ENABLE

TRY THIS API

OVERVIEW

DOCUMENTATION

Overview

The Cloud Filestore API is used for creating and managing cloud file servers.

About Google

Google's mission is to organize the world's information and make it universally accessible and useful. Through products and platforms like Search, Maps, Gmail, Android, Google Play, Chrome and YouTube, Google plays a meaningful role in the daily lives of billions of people.

Additional details

Type: [APIs & services](#)

Last updated: 12/10/19

Service name: file.googleapis.com

Tutorials and documentation

[Learn more](#)

In the Instances page, click on the **Create Instance** button.

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Search products and resources

Filestore

Instances

CREATE INSTANCE

HIDE INFO PANEL

Instances

Backups

An instance is a fully managed network-attached storage system you can use with your Google Compute Engine and Kubernetes Engine instances. [Learn more](#)

Filter table

Instance ID

File share name

Service tier

Location

IP address

Capacity

No rows to display

No instances selected

Labels help organize your resources (e.g., cost_center:sales or env:prod).

No instances selected.

Key in an **Instance ID**, **File share name** and **Region/Zone**, then click on the **Create** button.

Name	Value
Instance ID	joget-storage
File Share Name	volume1



IMPORTANT: You must create the Filestore instance in the **same zone** as your Kubernetes cluster for it to be accessible to the cluster.

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Filestore

Instances

Backups

Create an instance

Name your instance

Instance ID *

Choice is permanent. Must be unique in its zone. Use lowercase letters, numbers, and hyphens. Start with a letter.

Description (optional)

Configure service tier

Your choices for instance type and storage type combine to form the service tier (e.g., BASIC_HDD). Choices are permanent.

Instance type

Affects capacity, performance scalability, durability, and cost. [Learn more](#)

☒ Basic

General-purpose NFS storage system. Optimized for cost. 1-63.9 TB capacity.

☐ High Scale BETA

High capacity NFS storage system. Performance scales with capacity. 60-320 TB capacity.

COMPARE INSTANCE TYPES

Storage type

Choice is permanent. [Learn more](#)

☒ HDD

Best for general-purpose workloads, lower cost

☐ SSD

Best for performance-critical workloads, higher cost

Summary

Service tier

BASIC_HDD

Location

us-central1

Cost estimate

Based on tier, region, and capacity. [Pricing details](#)

1 TB (\$0.28/TB/hr)

\$204.80

Monthly estimate

\$204.80

Performance estimate

Read IOPS

600

Write IOPS

1000

Read throughput (MB/s)

100

Write throughput (MB/s)

100

Allocate capacity

Once the instance has been initialized, take note of the IP address and File share name to be used later.

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Filestore

Instances

Backups

Instances

CREATE INSTANCE

SHOW INFO PANEL

An instance is a fully managed network-attached storage system you can use with your Google Compute Engine and Kubernetes Engine instances. [Learn more](#)

Filter table

Instance ID	File share name	Service tier	Location	IP address	Capacity	Labels
joget-storage	volume1	BASIC_HDD	us-central1-c	10.28.126.74	1 TB	

joget-storage has been createdDISMISS

4. Deploy Joget DX

With the prerequisite database and persistent storage available, you can now deploy Joget.

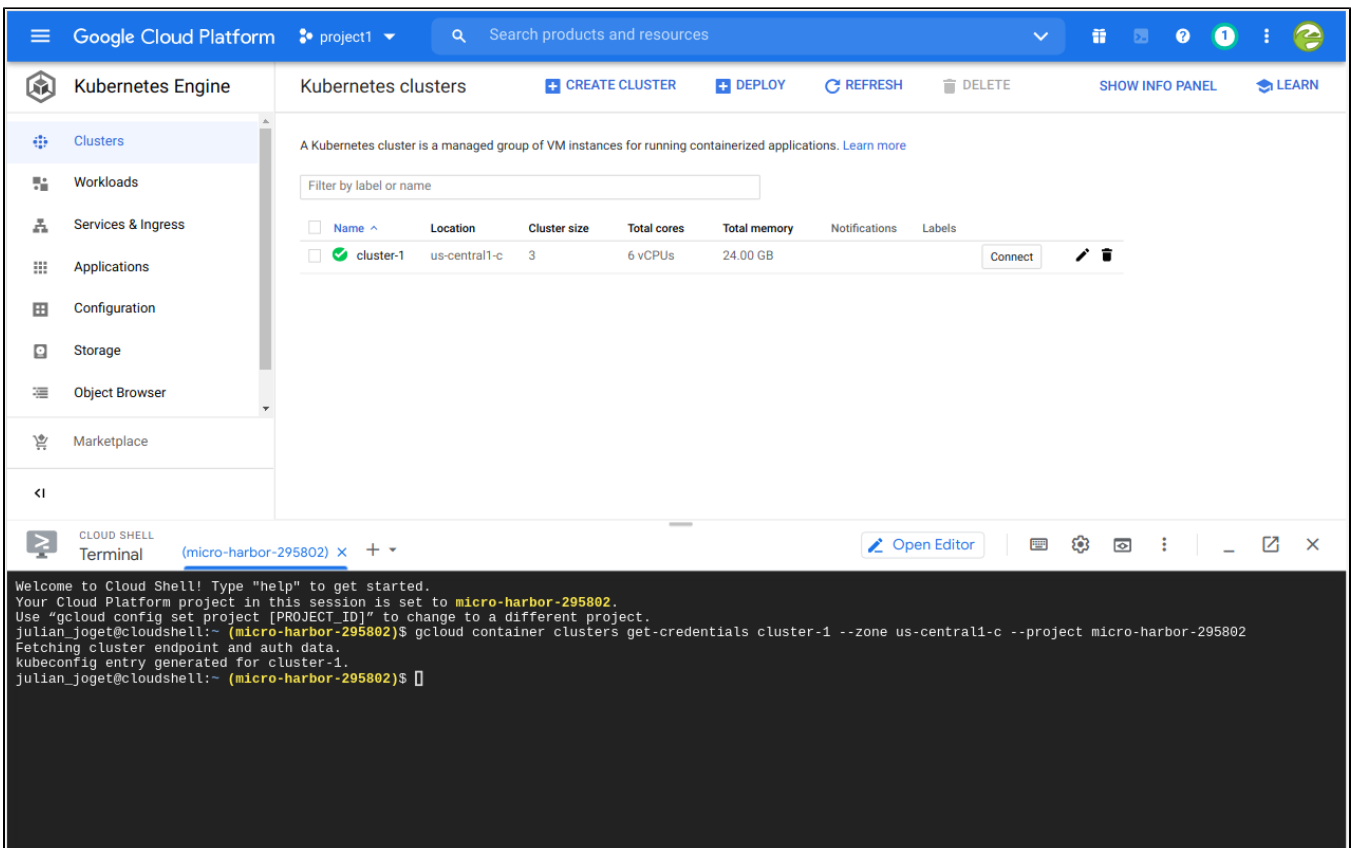
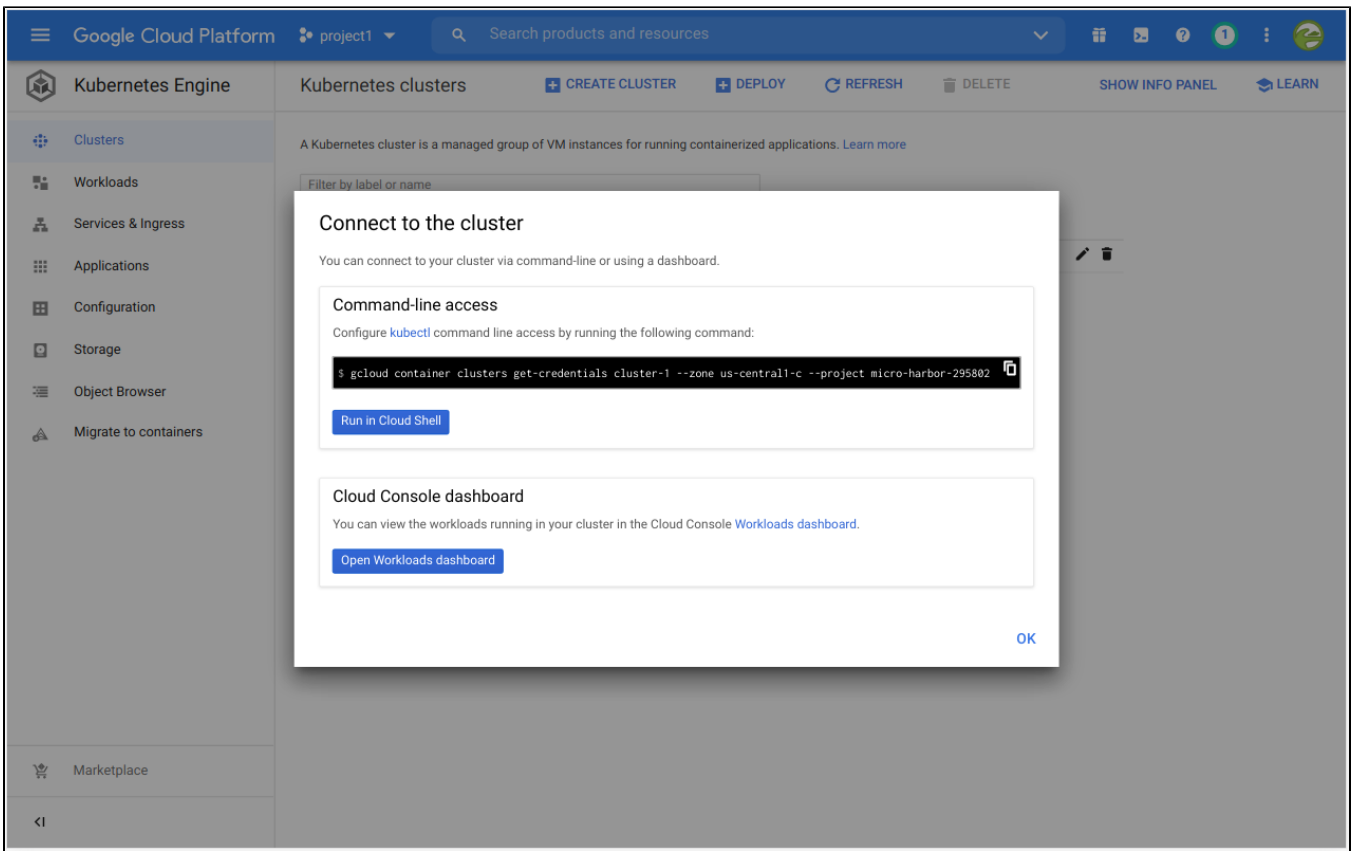
Download the [joget-dx7-tomcat9-gke.yaml](#) file below, and modify the PersistentVolume to match the Filestore settings for the **path (file share name)** and **server (IP address)**.



```
path: /volume1 # change to match the Filestore instance file share name
server: 10.255.140.178 # change to match the IP address of the Filestore instance
```

You can now use the [kubectl](#) command line tool to apply the entire YAML. In GKE, you can run a **Cloud Shell** directly in the browser.

In the GKE **Clusters** page, click on the **Connect** button for your cluster, then **Run in Cloud Shell**.



Once you have access to the Cloud Shell command line, use your favourite editor (e.g. `vi` or `nano`) to save your YAML into a file.

You can then apply the YAML using `kubectl` e.g.

```
kubectl apply -f joget-dx7-tomcat9-gke.yaml
```

Google Cloud Platform project1 Search products and resources

Kubernetes Engine

Kubernetes clusters [CREATE CLUSTER](#) [DEPLOY](#) [REFRESH](#) [DELETE](#) [SHOW INFO PANEL](#) [LEARN](#)

A Kubernetes cluster is a managed group of VM instances for running containerized applications. [Learn more](#)

Filter by label or name

<input type="checkbox"/>	Name ^	Location	Cluster size	Total cores	Total memory	Notifications	Labels	
<input type="checkbox"/>	cluster-1	us-central1-c	3	6 vCPUs	24.00 GB			Connect Edit Delete

CLOUD SHELL Terminal (micro-harbor-295802) [Open Editor](#)

```
julian_joget@cloudshell:~ (micro-harbor-295802)$ kubectl apply -f joget.yaml
persistentvolume/joget-dx7-tomcat9-pv created
persistentvolumeclaim/joget-dx7-tomcat9-pvc created
deployment.apps/joget-dx7-tomcat9 created
service/joget-dx7-tomcat9 created
clusterrolebinding.rbac.authorization.k8s.io/joget-dx7-tomcat9-clusterrolebinding created
julian_joget@cloudshell:~ (micro-harbor-295802)$
```

Wait for a few minutes while the required Kubernetes objects (Deployment, PersistentVolume, PersistentVolumeClaim, Deployment, Service and ClusterRoleBinding) are created for the Joget deployment.

You can view the deployment in the **Workloads** page in the GKE console.

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Kubernetes Engine

Workloads REFRESH DEPLOY DELETE

Cluster Namespace default RESET SAVE BETA

Workloads are deployable units of computing that can be created and managed in a cluster.

Is system object: False Filter workloads

Name	Status	Type	Pods	Namespace	Cluster
joget-dx7-tomcat9	OK	Deployment	1/1	default	cluster-1
mariadb-1-deployer	OK	Job	0/1	default	cluster-1
mariadb-1-mariadb	OK	Stateful Set	1/1	default	cluster-1
mariadb-1-mariadb-secondary	OK	Stateful Set	1/1	default	cluster-1

CLOUD SHELL Terminal (micro-harbor-295802) Open Editor

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Kubernetes Engine

Deployment details REFRESH EDIT DELETE ACTIONS KUBECTL SHOW INFO PANEL

joget-dx7-tomcat9

OVERVIEW DETAILS REVISION HISTORY EVENTS LOGS YAML

1 hour 6 hours 12 hours 1 day 2 days 4 days 7 days 14 days 30 days

CPU Memory Disk

Cluster: cluster-1
 Namespace: default
 Labels: app: joget-dx7-tomcat9
 Logs: Container logs, Audit logs
 Replicas: 1 updated, 1 ready, 1 available, 0 unavailable
 Pod specification: Revision 1, containers: joget-dx7-tomcat9, volumes: joget-dx7-tomcat9-pv

Active revisions

CLOUD SHELL Terminal (micro-harbor-295802) Open Editor

In the **Services & Ingress** page, you can see an **External load balancer** service with a corresponding **Endpoint** URL.

Click on that **Endpoint** URL to access Joget.

Free trial status: \$298.26 credit and 81 days remaining - with a full account, you'll get unlimited access to all of Google Cloud Platform.
DISMISS
ACTIVATE

Google Cloud Platform
project1

Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration

Storage

Object Browser

Migrate to containers

Marketplace

<|

Services & Ingress

REFRESH

CREATE INGRESS

DELETE

Cluster

Namespace default

RESET

SAVE

BETA

SERVICES

INGRESS

Services are sets of Pods with a network endpoint that can be used for discovery and load balancing. Ingresses are collections of rules for routing external HTTP(S) traffic to Services.

Is system object : False

Filter services and ingresses

X

?

|||

<input type="checkbox"/>	Name ↑	Status	Type	Endpoints	Pods	Namespace	Cluster
<input type="checkbox"/>	joget-dx7-tomcat9	OK	External load balancer	35.202.11.207:80	1/1	default	cluster-1
<input type="checkbox"/>	mariadb-1-mariadb	OK	Cluster IP	10.8.13.162	1/1	default	cluster-1
<input type="checkbox"/>	mariadb-1-mariadb-secondary	OK	Cluster IP	10.8.7.170	1/1	default	cluster-1
<input type="checkbox"/>	mariadb-1-mysqld-exporter-svc	OK	Cluster IP	None	1/1	default	cluster-1

CLOUD SHELL

Terminal

(micro-harbor-295802) X +

Open Editor

5. Setup Database

To complete the Joget deployment, you need to perform a one-time [Database Setup](#).

Key in the previously created MariaDB **service name** in the **Database Host**, and the **root password** in the **Database Password** fields. Click on **Save**.


DATABASE SETUP

No database configuration was detected, so please configure your database settings below.
Please ensure that the database server is installed and running first. [More Information](#)

Database Type	MySQL
Database Host	mariadb-1-mariadb
Database Port	3306
Database Name	jwdb
Database User	root
Database Password	*****
Include Sample Apps	<input checked="" type="checkbox"/>
Include Sample Users	<input checked="" type="checkbox"/>

[Save](#)

Once the setup is complete, click on **Done** and you will be brought to the [Joget App Center](#).




Joget DX

Faster, Simpler Digital

Welcome to Joget DX.

Click this icon to enable hints at any time.

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[OK](#) [Disable Hints](#)


APP CENTER

[Home](#) [Login](#)


Search




Customer Relationship
Customer




Employee Services Portal
Employee Portal



Expenses Claims App
Expenses Claim



Internal Service
Internal Service



Joget DX Showcase
DX Showcase

Powered by Joget

6. Scale Deployment

To scale the number of pods running Joget, you can use the GKE console.

In the **Workloads** page, choose the Joget deployment and in the **Deployment details** header, select **Actions > Scale**.

Key in the required number of replicas (pods) that you require and click on the **Scale** button.

The screenshot displays the Google Cloud Platform (GCP) console interface for the Kubernetes Engine. The left sidebar shows the navigation menu with 'Workloads' selected. The main panel shows the 'Deployment details' for the workload 'joget-dx7-tomcat9'. A 'Scale' dialog box is open in the center, prompting the user to 'Scale a workload to a new size.' The dialog has a text input field labeled 'Replicas *' with the value '1' entered. Below the input field, it says '* indicates required field'. At the bottom of the dialog are 'CANCEL' and 'SCALE' buttons. The background shows the 'Overview' tab with CPU and Disk usage graphs and a table of deployment details.

Property	Value
Cluster	cluster-1
Namespace	default
Labels	app: joget-dx7-tomcat9
Logs	Container logs , Audit logs
Replicas	1 updated, 1 ready, 1 available, 0 unavailable
Pod specification	Revision 1, containers: joget-dx7-tomcat9 , volumes: joget-dx7-tomcat9-pv

The desired number of pods will initialize and startup. These instances will have session replication configured, so load can be balanced between them and transparent failover will happen in the event of failure.

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Kubernetes Engine

Deployment details REFRESH EDIT DELETE ACTIONS KUBECTL SHOW INFO PANEL

Cluster: [cluster-1](#)
 Namespace: default
 Labels: app: joget-dx7-tomcat9
 Logs: [Container logs](#), [Audit logs](#)
 Replicas: 2 updated, 2 ready, 1 available, 1 unavailable
 Pod specification: Revision 1, containers: [joget-dx7-tomcat9](#), volumes: [joget-dx7-tomcat9-pv](#)

Active revisions

Revision ↓	Name	Status	Summary	Created on	Pods running/Pods total
1	joget-dx7-tomcat9-75cc874457	Pods are pending	joget-dx7-tomcat9: quay.io/juljog/joget-dx7-tomcat9:latest	Nov 25, 2020, 10:47:20 AM	2/2

Managed pods

Revision	Name	Status	Restarts	Created on ↑
1	joget-dx7-tomcat9-75cc874457-cgzzp	Running	0	Nov 25, 2020, 10:47:20 AM
1	joget-dx7-tomcat9-75cc874457-pmp7j	ContainerCreating	0	Nov 25, 2020, 11:49:42 AM

Exposing services

Name ↑	Type	Endpoints
joget-dx7-tomcat9	Node Port	10.8.2.105:8080 T
joget-dx7-tomcat9-n2djk	Load balancer	34.67.63.54:80

CLOUD SHELL Terminal (micro-harbor-295802) Open Editor

Sample Deployment YAML

```
# Example YAML for Google Kubernetes Engine (GKE) deployment using Google Cloud Filestore as persistent volume
# https://cloud.google.com/filestore/docs/accessing-fileshares
---
apiVersion: v1
kind: PersistentVolume
metadata:
  name: fileserver
spec:
  capacity:
    storage: 1Ti
  accessModes:
    - ReadWriteMany
  nfs:
    path: /volume1 # change to match the Filestore instance file share name
    server: 10.145.99.42 # change to match the IP address of the Filestore instance
---
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: joget-dx7-tomcat9-pvc
spec:
  accessModes:
    - ReadWriteMany
  storageClassName: ""
  volumeName: fileserver
resources:
  requests:
    storage: 100Gi
---
apiVersion: apps/v1
kind: Deployment
```

```

metadata:
  name: joget-dx7-tomcat9
  labels:
    app: joget-dx7-tomcat9
spec:
  replicas: 1
  selector:
    matchLabels:
      app: joget-dx7-tomcat9
  template:
    metadata:
      labels:
        app: joget-dx7-tomcat9
    spec:
      volumes:
        - name: joget-dx7-tomcat9-pv
          persistentVolumeClaim:
            claimName: joget-dx7-tomcat9-pvc
            readOnly: false
      initContainers:
        - name: init-volume
          image: busybox:1.28
          command: ['sh', '-c', 'chmod -f -R g+w /opt/joget/wflow; exit 0']
          volumeMounts:
            - name: joget-dx7-tomcat9-pv
              mountPath: "/opt/joget/wflow"
      containers:
        - name: joget-dx7-tomcat9
          image: jogetworkflow/joget-dx7-tomcat9:latest
          ports:
            - containerPort: 8080
          volumeMounts:
            - name: joget-dx7-tomcat9-pv
              mountPath: /opt/joget/wflow
          env:
            - name: KUBERNETES_NAMESPACE
              valueFrom:
                fieldRef:
                  fieldPath: metadata.namespace
---
apiVersion: v1
kind: Service
metadata:
  name: joget-dx7-tomcat9
  labels:
    app: joget-dx7-tomcat9
spec:
  ports:
    - name: http
      port: 80
      targetPort: 8080
    - name: https
      port: 443
      targetPort: 9080
  selector:
    app: joget-dx7-tomcat9
  type: LoadBalancer
---
apiVersion: rbac.authorization.k8s.io/v1
kind: ClusterRoleBinding
metadata:
  name: joget-dx7-tomcat9-clusterrolebinding
roleRef:
  apiGroup: rbac.authorization.k8s.io
  kind: ClusterRole
  name: view
subjects:
  - kind: ServiceAccount
    name: default
    namespace: default

```

