

Automated Deployment on Red Hat OpenShift with the Joget Operator

Red Hat OpenShift is the industry's most comprehensive enterprise Kubernetes platform, and [operators](#) are the modern way to automate infrastructure management tasks. A new [Joget Operator](#) has now been released to further simplify and accelerate app development on Red Hat OpenShift. It has achieved [Red Hat OpenShift Operator Certification](#), and is now available in the OpenShift Embedded OperatorHub.

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Tutorial Part 1: Install Joget Operator from the OperatorHub

The Joget Operator enables customers to rapidly deploy, manage and scale a Joget cluster on Red Hat OpenShift. As a certified Operator, it is listed in the OpenShift Embedded OperatorHub catalog. Joget is a development platform as well as an application runtime, so the Joget Operator is listed under both the Application Runtime and Developer Tools categories.

These steps assume that you already have a running OpenShift 4 cluster. You can access <https://try.openshift.com/> to setup a new cluster.

1.1 Install Joget Operator as Cluster Admin

1. Login to the OpenShift console as the cluster admin

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2. Browse to Catalog > OperatorHub and search for Joget

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3. Select the Joget Operator, and click on the Install button

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4. Click on the Subscribe button to install the Joget Operator.

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5. Browse to Catalog > Installed Operators and select Joget Operator to confirm that the operator has been installed successfully.

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Tutorial Part 2: Create a Joget Cluster with the Joget Operator

2.1 Create New Project and Deploy Database

1. Now that the Joget Operator has been installed, login to the OpenShift console as a normal user.

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2. Browse to Projects and click on the Create Project button. Enter a name and click on Create.

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3. As a prerequisite, you will need to deploy either a [MySQL](#) or [MariaDB](#) database in the project.

4. The fastest way to deploy MySQL would be to use the OpenShift CLI e.g.:

```
# deploy persistent mysql
export DB_APP_NAME=joget-mysql
export MYSQL_DATABASE=jwdb
export MYSQL_USER=joget
export MYSQL_PASSWORD=joget

oc new-app openshift/mysql-persistent --name $DB_APP_NAME -p DATABASE_SERVICE_NAME=$DB_APP_NAME -p
MYSQL_USER=$MYSQL_USER -p MYSQL_PASSWORD=$MYSQL_PASSWORD -p MYSQL_DATABASE=$MYSQL_DATABASE
```

5. Alternatively, you can deploy using the OpenShift Console. For MySQL, you can use either the public docker hub image [centos/mysql-57-centos7](#), or the certified one from the Red Hat Registry [registry.redhat.io/rhsc/mysql-57-rhel7](#).

6. To access images from the Red Hat Registry, you will need to create a Secret containing a valid Red Hat login. If you do not have an account, you can acquire one by registering for one of the following options:

- a. [Red Hat Developer Program](#). This account gives you access to developer tools and programs.
- b. [30-day Trial Subscription](#). This account gives you a 30-day trial subscription with access to select Red Hat software products.

7. Browse to Workloads > Secret, select Image Pull Secret from the Create dropdown and key in the Red Hat registry server and login information e.g.

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- a. Registry Server Address: [registry.redhat.io](#)
- b. Username: Red Hat login username
- c. Password: Red Hat login password

8. Browse to the project, and click on Add > Deploy Image.

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9. For MySQL, enter either [centos/mysql-57-centos7](#) or [registry.redhat.io/rhsc/mysql-57-rhel7](#) for the Image Name and click on the Search icon.

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10. Key in the following configuration and click on Deploy.

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- a. Name: joget-mysql
- b. Environment Variables:
 - i. MYSQL_DATABASE: jwdb
 - ii. MYSQL_USER: joget
 - iii. MYSQL_PASSWORD: joget

11. Click on the name to verify that the MySQL database has been deployed successfully.

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IMPORTANT NOTE: By default, the data in this MySQL image is not persistent across container restarts. You will need to [mount the volume](#) to make the data persistent. Alternatively, deploy a persistent MySQL using a template using the OpenShift CLI described earlier.

2.2 Deploy Joget using the Joget Operator

1. Browse to Catalog > Developer Catalog.

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2. Select the Joget Operator, and click on Create.

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3. By default the configuration for "name" is "example-joget" and "size" is 1 (the number of required Joget instances). Modify the values as required, click Create.

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4. The Joget Operator will automatically start to deploy the required number of Joget instances along with all the required resources, which should take a few minutes.

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5. Select the created Joget name, and click on Resources to see the resources automatically created and managed by the Joget Operator.

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6. Click on Events to see the events as they happen

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2.3 Complete One-Time Joget Database Setup

1. Browse to Home > Status and select the Joget deployment. After a few minutes, you should see at least 1 available MATCHING PODS.

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2. Select Resources to see the created Services and Routes. Copy the Location in the created Route. That is the URL to access Joget from an external browser.

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3. Access the Joget URL and in the Database Setup page, key in the database configuration of the database deployed earlier and click on the Save button.

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- a. Database Type: MySQL
- b. Database Host: the service name of the database e.g. joget-mysql
- c. Database Port: 3306
- d. Database Name: the configured database name e.g. jwdb
- e. Database User: the configured username e.g. joget
- f. Database Password: the configured password e.g. joget

4. Once the setup is completed, click on Done and you will be brought to the Joget App Center.

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