



## Red Hat Decision Manager 7.3

Deploying a Red Hat Decision Manager  
authoring or managed server environment on  
Red Hat OpenShift Container Platform



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## Abstract

This document describes how to deploy a Red Hat Decision Manager 7.3 authoring or managed server environment on Red Hat OpenShift Container Platform.

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## PREFACE

As a system engineer, you can deploy a Red Hat Decision Manager authoring or managed environment on Red Hat OpenShift Container Platform to provide a platform for developing or running services and other business assets.

### Prerequisites

- At least four gigabytes of memory must be available in the OpenShift cluster/namespace.
- The OpenShift project for the deployment must be created.
- You must be logged in to the project using the **oc** command. For more information about the **oc** command-line tool, see the OpenShift [CLI Reference](#). If you want to use the OpenShift Web console to deploy templates, you must also be logged on using the Web console.
- Dynamic persistent volume (PV) provisioning must be enabled. Alternatively, if dynamic PV provisioning is not enabled, a sufficient persistent volume must be available. By default, Business Central requires one 1Gi PV. You can change the PV size for Business Central persistent storage in the template parameters.
- If you intend to use the Authoring High Availability template, which scales the Business Central pod, your OpenShift environment must support persistent volumes with ReadWriteMany mode. For information about access mode support in OpenShift Online volume plug-ins, see [Access Modes](#).



### IMPORTANT

**ReadWriteMany** mode is not supported on OpenShift Online and OpenShift Dedicated.

# CHAPTER 1. OVERVIEW OF RED HAT DECISION MANAGER ON RED HAT OPENSIFT CONTAINER PLATFORM

You can deploy Red Hat Decision Manager into a Red Hat OpenShift Container Platform environment.

In this solution, components of Red Hat Decision Manager are deployed as separate OpenShift pods. You can scale each of the pods up and down individually, providing as few or as many containers as necessary for a particular component. You can use standard OpenShift methods to manage the pods and balance the load.

The following key components of Red Hat Decision Manager are available on OpenShift:

- Decision Server, also known as *Execution Server* or *KIE Server*, is the infrastructure element that runs decision services and other deployable assets (collectively referred to as *services*) . All logic of the services runs on execution servers.

You can freely scale up a Decision Server pod, providing as many copies as necessary, running on the same host or different hosts. As you scale a pod up or down, all its copies run the same services. OpenShift provides load balancing and a request can be handled by any of the pods.

You can deploy a separate Decision Server pod to run a different group of services. That pod can also be scaled up or down. You can have as many separate replicated Decision Server pods as necessary.

- Business Central is a web-based interactive environment for authoring services. It also provides a management console. You can use Business Central to develop services and deploy them to Decision Servers.

Business Central is a centralized application. However, you can configure it for high availability, where multiple pods run and share the same data.

Business Central includes a Git repository that holds the source for the services that you develop on it. It also includes a built-in Maven repository. Depending on configuration, Business Central can place the compiled services (KJAR files) into the built-in Maven repository or (if configured) into an external Maven repository.



## IMPORTANT

In the current version, high-availability Business Central functionality is for Technology Preview only. For more information on Red Hat Technology Preview features, see [Technology Preview Features Scope](#) .

You can arrange these and other components into various environment configurations within OpenShift.

The following environment types are typical:

- *Authoring or managed environment*: An environment architecture that can be used for creating and modifying services using Business Central and also for running services on Decision Servers. It consists of pods that provide Business Central for the authoring work and one or more Decision Servers for execution of the services. Each Decision Server is a pod that you can replicate by scaling it up or down as necessary. You can deploy and undeploy services on each Decision Server using Business Central. For instructions about deploying this environment, see [Deploying a Red Hat Decision Manager authoring or managed server environment on Red Hat OpenShift Container Platform](#).
- *Deployment with immutable servers*: An alternate environment for running existing services for staging and production purposes. In this environment, when you deploy a Decision Server pod, it

builds an image that loads and starts a service or group of services. You cannot stop any service on the pod or add any new service to the pod. If you want to use another version of a service or modify the configuration in any other way, you deploy a new server image and displace the old one. In this system, the Decision Server runs like any other pod on the OpenShift environment; you can use any container-based integration workflows and do not need to use any other tools to manage the pods. For instructions about deploying this environment, see [Deploying a Red Hat Decision Manager immutable server environment on Red Hat OpenShift Container Platform](#).

You can also deploy a *trial* or evaluation environment. This environment includes Business Central and a Decision Server. You can set it up quickly and use it to evaluate or demonstrate developing and running assets. However, the environment does not use any persistent storage, and any work you do in the environment is not saved. For instructions about deploying this environment, see [Deploying a Red Hat Decision Manager trial environment on Red Hat OpenShift Container Platform](#).

To deploy a Red Hat Decision Manager environment on OpenShift, you can use the templates that are provided with Red Hat Decision Manager.

## CHAPTER 2. PREPARING TO DEPLOY RED HAT DECISION MANAGER IN YOUR OPENSIFT ENVIRONMENT

Before deploying Red Hat Decision Manager in your OpenShift environment, you need to complete several preparatory tasks. You do not need to repeat these tasks if you want to deploy additional images, for example, for new versions of decision services or for other decision services

### 2.1. ENSURING THE AVAILABILITY OF IMAGE STREAMS AND THE IMAGE REGISTRY

To deploy Red Hat Decision Manager components on Red Hat OpenShift Container Platform, you must ensure that OpenShift can download the correct images from the Red Hat registry. To download the images, OpenShift requires the information about their location (known as *image streams*). OpenShift also must be configured to authenticate with the Red Hat registry using your service account user name and password.

Some versions of the OpenShift environment include the required image streams. You must check if they are available. If image streams are available in OpenShift by default, you can use them if the OpenShift infrastructure is configured for registry authentication server. The administrator must complete the registry authentication configuration when installing the OpenShift environment.

Otherwise, you can configure registry authentication in your own project and install the image streams in the same project.

#### Procedure

1. Determine whether Red Hat OpenShift Container Platform is configured with the user name and password for Red Hat registry access. For details about the required configuration, see [Configuring a Registry Location](#). If you are using an OpenShift Online subscription, it is configured for Red Hat registry access.
2. If Red Hat OpenShift Container Platform is configured with the user name and password for Red Hat registry access, run the following commands:

```
$ oc get imagestreamtag -n openshift | grep rhdm73-decisioncentral-openshift
$ oc get imagestreamtag -n openshift | grep rhdm73-kieserver-openshift
```

If the outputs of both commands are not empty, the required image streams are available in the **openshift** namespace and no further action is required.

3. If the output of one or both of the commands is empty or if OpenShift is not configured with the user name and password for Red Hat registry access, complete the following steps:
  - a. Ensure you are logged in to OpenShift with the **oc** command and that your project is active.
  - b. Complete the steps documented in [Registry Service Accounts for Shared Environments](#). You must log in to Red Hat Customer Portal to access the document and to complete the steps to create a registry service account.
  - c. Select the **OpenShift Secret** tab and click the link under **Download secret** to download the YAML secret file.
  - d. View the downloaded file and note the name that is listed in the **name:** entry.
  - e. Run the following commands:

```
oc create -f <file_name>.yaml
oc secrets link default <secret_name> --for=pull
oc secrets link builder <secret_name> --for=pull
```

Where **<file\_name>** is the name of the downloaded file and **<secret\_name>** is the name that is listed in the **name:** entry of the file.

- f. Download the **rhdm-7.3.0-openshift-templates.zip** product deliverable file from the [Software Downloads](#) page and extract the **rhdm73-image-streams.yaml** file.
  - g. Complete one of the following actions:
    - Run the following command:
4. If you want to deploy a high-availability Business Central (this functionality is a technology preview), complete the following additional steps:
    - a. Verify if the AMQ scaledown controller image stream is present. Enter the following command:

```
$ oc create -f rhdm73-image-streams.yaml
```

- Using the OpenShift Web UI, select **Add to Project** → **Import YAML / JSON** and then choose the file or paste its contents.

```
$ oc get imagestreamtag -n openshift | grep amq-broker-72-scaledown-controller-openshift
```

If the output of the command is not empty, the required image stream is available in the **openshift** namespace and no further action is required.

- b. If the output of the commands is empty, complete the following steps:
    - i. Download the following file: <https://raw.githubusercontent.com/jboss-container-images/jboss-amq-7-broker-openshift-image/amq-broker-72/amq-broker-7-scaledown-controller-image-streams.yaml>
    - ii. Complete one of the following actions:
      - Run the following command:
- ```
$ oc create -f amq-broker-7-scaledown-controller-image-streams.yaml
```
- Using the OpenShift Web UI, select **Add to Project** → **Import YAML / JSON** and then choose the **amq-broker-7-scaledown-controller-image-streams.yaml** file or paste its contents.



#### NOTE

If you complete these steps, you install the image streams into the namespace of your project. If you install the image streams using these steps, you must set the **IMAGE\_STREAM\_NAMESPACE** parameter to the name of this project when deploying templates.

## 2.2. CREATING THE SECRETS FOR DECISION SERVER

OpenShift uses objects called **Secrets** to hold sensitive information, such as passwords or keystores. For more information about OpenShift secrets, see the [Secrets chapter](#) in the OpenShift documentation.

You must create an SSL certificate for Decision Server and provide it to your OpenShift environment as a secret.

### Procedure

1. Generate an SSL keystore with a private and public key for SSL encryption for Decision Server. In a production environment, generate a valid signed certificate that matches the expected URL of the Decision Server. Save the keystore in a file named **keystore.jks**. Record the name of the certificate and the password of the keystore file.

For more information on how to create a keystore with self-signed or purchased SSL certificates, see [Generate a SSL Encryption Key and Certificate](#).

2. Use the **oc** command to generate a secret named **kieserver-app-secret** from the new keystore file:

```
$ oc create secret generic kieserver-app-secret --from-file=keystore.jks
```

## 2.3. CREATING THE SECRETS FOR BUSINESS CENTRAL

If you are planning to deploy Business Central in your OpenShift environment, you must create an SSL certificate for Business Central and provide it to your OpenShift environment as a secret. Do not use the same certificate and keystore for Business Central and for Decision Server.

### Procedure

1. Generate an SSL keystore with a private and public key for SSL encryption for Business Central. In a production environment, generate a valid signed certificate that matches the expected URL of the Business Central. Save the keystore in a file named **keystore.jks**. Record the name of the certificate and the password of the keystore file.

For more information on how to create a keystore with self-signed or purchased SSL certificates, see [Generate a SSL Encryption Key and Certificate](#).

2. Use the **oc** command to generate a secret named **decisioncentral-app-secret** from the new keystore file:

```
$ oc create secret generic decisioncentral-app-secret --from-file=keystore.jks
```

## 2.4. PREPARING A MAVEN MIRROR REPOSITORY FOR OFFLINE USE

If your Red Hat OpenShift Container Platform environment does not have outgoing access to the public Internet, you must prepare a Maven repository with a mirror of all the necessary artifacts and make this repository available to your environment.

Skip this procedure if your Red Hat OpenShift Container Platform environment is connected to the Internet.

### Procedure

1. Prepare a Maven release repository to which you can write. The repository must allow read

access without authentication. Your OpenShift environment must have access to this repository. You can deploy a Nexus repository manager in the OpenShift environment. For instructions about setting up Nexus on OpenShift, see [Setting up Nexus](#).

2. Complete the following actions on a computer that has an outgoing connection to the public Internet:
  - a. Clear the local Maven cache directory (`~/.m2/repository`).
  - b. Build the source of your services using the `mvn clean install` command.
  - c. Upload all artifacts from the local Maven cache directory (`~/.m2/repository`) to the Maven repository that you prepared. You can use the [Maven Repository Provisioner](#) utility to upload the artifacts.

## 2.5. CHANGING GLUSTERFS CONFIGURATION

Check whether your OpenShift environment uses GlusterFS to provide permanent storage volumes. If it uses GlusterFS, to ensure optimal performance, tune your GlusterFS storage by changing the storage class configuration.

### Procedure

1. To check whether your environment uses GlusterFS, run the following command:

```
oc get storageclass
```

In the results, check whether the **(default)** marker is on the storage class that lists **glusterfs**. For example, in the following output the default storage class is **gluster-container**, which does list **glusterfs**:

```
NAME          PROVISIONER          AGE
gluster-block gluster.org/glusterblock 8d
gluster-container (default) kubernetes.io/glusterfs 8d
```

If the result has a default storage class that does not list **glusterfs** or if the result is empty, you do not need to make any changes. In this case, skip the rest of this procedure.

2. To save the configuration of the default storage class into a YAML file, run the following command:

```
oc get storageclass <class-name> -o yaml >storage_config.yaml
```

Replace **<class-name>** with the name of the default storage class. For example:

```
oc get storageclass gluster-container -o yaml >storage_config.yaml
```

3. Edit the **storage\_config.yaml** file:
  - a. Remove the lines with the following keys:
    - **creationTimestamp**
    - **resourceVersion**

- **selfLink**
- **uid**

- b. On the line with the **volumeoptions** key, add the following two options: **features.cache-invalidation on, performance.nl-cache on**. For example:

```
volumeoptions: client.ssl off, server.ssl off, features.cache-invalidation on,  
performance.nl-cache on
```

4. To remove the existing default storage class, run the following command:

```
oc delete storageclass <class-name>
```

Replace **<class-name>** with the name of the default storage class. For example:

```
oc delete storageclass gluster-container
```

5. To re-create the storage class using the new configuration, run the following command:

```
oc create -f storage_config.yaml
```

## CHAPTER 3. AUTHORIZING OR MANAGED SERVER ENVIRONMENT

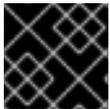
You can deploy an environment for creating and modifying services using Business Central and for running them in Decision Servers managed by Business Central. This environment consists of Business Central and one or more Decision Servers.

You can use Business Central both to develop services and to deploy them to one or several Decision Servers. For example, you can deploy test versions of services to one Decision Server and production versions to another Decision Server.

To avoid accidentally deploying wrong versions to a production Decision Server, you can create separate environments to author services (*authoring environment*) and to manage deployment of production services (*managed server environment*). You can use a shared external Maven repository between these environments, so that services developed in the authoring environment are available in the managed server environment. However, the procedures to deploy these environments are the same.

Depending on your needs, you can deploy either a single or high-availability Business Central. A single Business Central pod is not replicated; only a single copy of Business Central is used. In an HA Business Central deployment, you can scale Business Central.

An HA Business Central provides maximum reliability and responsiveness for authoring services, but has higher memory and storage requirements and also requires support for persistent volumes with ReadWriteMany mode.



### IMPORTANT

In the current version, the high-availability functionality is a technology preview.

You can scale Decision Server pods as necessary in any version of the authoring or managed server environment.

To deploy an authoring or managed server environment, first deploy the single or high-availability Business Central and a single Decision Server using the authoring template.

To add additional Decision Servers, you can deploy the Decision Server template in the same project.

### 3.1. DEPLOYING SINGLE BUSINESS CENTRAL AND ONE DECISION SERVER IN AN AUTHORIZING OR MANAGED SERVER ENVIRONMENT

To deploy single Business Central and one Decision Server in an authoring or managed server environment, use the **rdm73-authoring.yaml** template file. You can extract this file from the **rdm-7.3.0-openshift-templates.zip** product deliverable file. You can download the file from the [Software Downloads](#) page.

#### Procedure

1. Use one of the following methods to deploy the template:
  - In the OpenShift Web UI, select **Add to Project → Import YAML / JSON** and then select or paste the **rdm73-authoring.yaml** file. In the **Add Template** window, ensure **Process the template** is selected and click **Continue**.
  - To use the OpenShift command line console, prepare the following command line:

```
oc new-app -f <template-path>/rhdm73-authoring.yaml -p
DECISION_CENTRAL_HTTPS_SECRET=decisioncentral-app-secret -p
KIE_SERVER_HTTPS_SECRET=kieserver-app-secret
```

In this command line:

- Replace **<template-path>** with the path to the downloaded template file.
- Use as many **-p PARAMETER=value** pairs as needed to set the required parameters. You can view the template file to see descriptions for all parameters.

2. Set the following parameters as necessary:

- **Business Central Server Keystore Secret Name (DECISION\_CENTRAL\_HTTPS\_SECRET)**: The name of the secret for Business Central, as created in [Section 2.3, "Creating the secrets for Business Central"](#).
- **KIE Server Keystore Secret Name (KIE\_SERVER\_HTTPS\_SECRET)**: The name of the secret for Decision Server, as created in [Section 2.2, "Creating the secrets for Decision Server"](#).
- **Application Name (APPLICATION\_NAME)**: The name of the OpenShift application. It is used in the default URLs for Business Central and Decision Server. OpenShift uses the application name to create a separate set of deployment configurations, services, routes, labels, and artifacts. You can deploy several applications using the same template into the same project, as long as you use different application names. Also, the application name determines the name of the server configuration (server template) on the Business Central that the Decision Server is to join.
- **Business Central Server Certificate Name (DECISION\_CENTRAL\_HTTPS\_NAME)**: The name of the certificate in the keystore that you created in [Section 2.3, "Creating the secrets for Business Central"](#).
- **Business Central Server Keystore Password (DECISION\_CENTRAL\_HTTPS\_PASSWORD)**: The password for the keystore that you created in [Section 2.3, "Creating the secrets for Business Central"](#).
- **KIE Server Certificate Name (KIE\_SERVER\_HTTPS\_NAME)**: The name of the certificate in the keystore that you created in [Section 2.2, "Creating the secrets for Decision Server"](#).
- **KIE Server Keystore Password (KIE\_SERVER\_HTTPS\_PASSWORD)**: The password for the keystore that you created in [Section 2.2, "Creating the secrets for Decision Server"](#).
- **ImageStream Namespace (IMAGE\_STREAM\_NAMESPACE)**: The namespace where the image streams are available. If the image streams were already available in your OpenShift environment (see [Section 2.1, "Ensuring the availability of image streams and the image registry"](#)), the namespace is **openshift**. If you have installed the image streams file, the namespace is the name of the OpenShift project.  
You can also set the following user names and passwords:
- **KIE Admin User (KIE\_ADMIN\_USER)** and **KIE Admin Password (KIE\_ADMIN\_PWD)**: The user name and password for the administrative user in Business Central.
- **KIE Server User (KIE\_SERVER\_USER)** and **KIE Server Password (KIE\_SERVER\_PWD)**: The user name and password that a client application must use to connect to the Decision Server.

3. If you want to deploy additional Decision Servers and connect them to this Business Central, set the following parameters:
  - **KIE Server Controller User**(**KIE\_SERVER\_CONTROLLER\_USER**) and **KIE Server Controller Password** (**KIE\_SERVER\_CONTROLLER\_PWD**): The user name and password that a Decision Server must use to connect to the Business Central.
4. If you want to place the built KJAR files into an external Maven repository, set the following parameters:
  - **Maven repository URL**(**MAVEN\_REPO\_URL**): The URL for the Maven repository.
  - **Maven repository username**(**MAVEN\_REPO\_USERNAME**): The user name for the Maven repository.
  - **Maven repository password**(**MAVEN\_REPO\_PASSWORD**): The password for the Maven repository.
  - **Maven repository ID**(**MAVEN\_REPO\_ID**): The Maven ID, which must match the **id** setting for the Maven repository.



### IMPORTANT

To export or push Business Central projects as KJAR artifacts to the external Maven repository, you must also add the repository information in the **pom.xml** file for every project. For information about exporting Business Central projects to an external repository, see [Packaging and deploying a Red Hat Decision Manager project](#).

Alternatively, if you want to use the Maven repository that is built into Business Central and to connect additional Decision Servers to the Business Central, set the following parameters:

- **Username for the Maven service hosted by Business Central** (**DECISION\_CENTRAL\_MAVEN\_USERNAME**): The user name for the built-in Maven repository.
  - **Password for the Maven service hosted by Business Central** (**DECISION\_CENTRAL\_MAVEN\_PASSWORD**): The password for the built-in Maven repository. `.params_offline_central:`
5. If your OpenShift environment does not have outgoing access to the public Internet, set the following parameters:
    - **Maven mirror URL**(**MAVEN\_MIRROR\_URL**): The URL for the Maven mirror repository that you set up in [Section 2.4, "Preparing a Maven mirror repository for offline use"](#) . This URL must be accessible from a pod in your OpenShift environment.
    - **Maven mirror of**(**MAVEN\_MIRROR\_OF**): The Maven **mirrorOf** value that determines which artifacts are to be retrieved from the mirror. For instructions about setting the **mirrorOf** value, see [Mirror Settings](#) in the Apache Maven documentation. The default value is **external:\***. With this value, Maven retrieves every required artifact from the mirror and does not query any other repositories.
      - If you configure an external Maven repository (**MAVEN\_REPO\_URL**), change **MAVEN\_MIRROR\_OF** to exclude the artifacts in this repository from the mirror, for example, **external:\*,!repo-custom**. Replace **repo-custom** with the ID that you

configured in **MAVEN\_REPO\_ID**.

- If you configure a built-in Business Central Maven repository (**BUSINESS\_CENTRAL\_MAVEN\_SERVICE**), change **MAVEN\_MIRROR\_OF** to exclude the artifacts in this repository from the mirror: **external:\*,!repo-rhdmcentr**.
  - If you configure both repositories, change **MAVEN\_MIRROR\_OF** to exclude the artifacts in both repositories from the mirror: **external:\*,!repo-rhdmcentr,!repo-custom**. Replace **repo-custom** with the ID that you configured in **MAVEN\_REPO\_ID**.
6. You can use Git hooks to facilitate interaction between the internal Git repository of Business Central and an external Git repository. To configure Git hooks, set the following parameter:
- **Git hooks directory (GIT\_HOOKS\_DIR)**: The fully qualified path to a Git hooks directory, for example, **/opt/eap/standalone/data/kie/git/hooks**. You must provide the content of this directory and mount it at the specified path; for instructions, see [Section 3.3, "Providing the Git hooks directory"](#).
7. If you want to use RH-SSO or LDAP authentication, complete the following additional configuration. Do not configure LDAP authentication and RH-SSO authentication in the same deployment.
- a. In the RH-SSO or LDAP service, create all user names in the deployment parameters. If you do not set any of the parameters, create users with the default user names. The created users must also be assigned to roles:
    - **KIE\_ADMIN\_USER**: default user name **adminUser**, roles: **kie-server,rest-all,admin**
    - **KIE\_SERVER\_CONTROLLER\_USER**: default user name **controllerUser**, roles: **kie-server,rest-all,guest**
    - **DECISION\_CENTRAL\_MAVEN\_USERNAME** (not needed if you configure the use of an external Maven repository): default user name **mavenUser**. No roles are required.
    - **KIE\_SERVER\_USER**: default user name **executionUser**, roles **kie-server,rest-all,guest**
  - b. If you want to configure Red Hat Single Sign On (RH-SSO) authentication, an RH-SSO realm that applies to Red Hat Decision Manager must exist. Decision Server. If the client does not yet exist, the template can create it during deployment. Clients within RH-SSO must also exist for Business Central and for Decision Server. If the clients do not yet exist, the template can create them during deployment.  
For the user roles that you can configure in RH-SSO, see [Roles and users](#).

Use one of the following procedures:

- i. If the clients for Red Hat Decision Manager within RH-SSO already exist, set the following parameters in the template:
  - **RH-SSO URL (SSO\_URL)**: The URL for RH-SSO.
  - **RH-SSO Realm name (SSO\_REALM)**: The RH-SSO realm for Red Hat Decision Manager.
  - **Business Central RH-SSO Client name (DECISION\_CENTRAL\_SSO\_CLIENT)**: The RH-SSO client name for Business Central.

- **Business Central RH-SSO Client Secret(DECISION\_CENTRAL\_SSO\_SECRET):**  
The secret string that is set in RH-SSO for the client for Business Central.
  - **KIE Server RH-SSO Client name(KIE\_SERVER\_SSO\_CLIENT):** The RH-SSO client name for Decision Server.
  - **KIE Server RH-SSO Client Secret(KIE\_SERVER\_SSO\_SECRET):** The secret string that is set in RH-SSO for the client for Decision Server.
  - **RH-SSO Disable SSL Certificate Validation (SSO\_DISABLE\_SSL\_CERTIFICATE\_VALIDATION):** Set to **true** if your RH-SSO installation does not use a valid HTTPS certificate.
- ii. To create the clients for Red Hat Decision Manager within RH-SSO, set the following parameters in the template:
- **RH-SSO URL (SSO\_URL):** The URL for RH-SSO.
  - **RH-SSO Realm name (SSO\_REALM):** The RH-SSO realm for Red Hat Decision Manager.
  - **Business Central RH-SSO Client name(DECISION\_CENTRAL\_SSO\_CLIENT):**  
The name of the client to create in RH-SSO for Business Central.
  - **Business Central RH-SSO Client Secret(DECISION\_CENTRAL\_SSO\_SECRET):**  
The secret string to set in RH-SSO for the client for Business Central.
  - **Business Central Custom http Route Hostname (DECISION\_CENTRAL\_HOSTNAME\_HTTP):** The fully qualified host name to use for the HTTP endpoint for Business Central. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **Business Central Custom https Route Hostname (DECISION\_CENTRAL\_HOSTNAME\_HTTPS):** The fully qualified host name to use for the HTTPS endpoint for Business Central. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **KIE Server RH-SSO Client name(KIE\_SERVER\_SSO\_CLIENT):** The name of the client to create in RH-SSO for Decision Server.
  - **KIE Server RH-SSO Client Secret(KIE\_SERVER\_SSO\_SECRET):** The secret string to set in RH-SSO for the client for Decision Server.
  - **KIE Server Custom http Route Hostname(KIE\_SERVER\_HOSTNAME\_HTTP):**  
The fully qualified host name to use for the HTTP endpoint for Decision Server. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **KIE Server Custom https Route Hostname (KIE\_SERVER\_HOSTNAME\_HTTPS):** The fully qualified host name to use for the HTTPS endpoint for Decision Server. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **RH-SSO Realm Admin Username (SSO\_USERNAME) and RH-SSO Realm Admin Password (SSO\_PASSWORD):** The user name and password for the realm administrator user for the RH-SSO realm for Red Hat Decision Manager.

- **RH-SSO Disable SSL Certificate Validation** (**SSO\_DISABLE\_SSL\_CERTIFICATE\_VALIDATION**): Set to **true** if your RH-SSO installation does not use a valid HTTPS certificate.
- c. To configure LDAP, set the **AUTH\_LDAP\*** parameters of the template. These parameters correspond to the settings of the `LdapExtended Login` module of Red Hat JBoss EAP. For instructions about using these settings, see [LdapExtended Login Module](#). If the LDAP server does not define all the roles required for your deployment, you can map LDAP groups to Red Hat Decision Manager roles. To enable LDAP role mapping, set the following parameters:
- **RoleMapping rolesProperties file path** (**AUTH\_ROLE\_MAPPER\_ROLES\_PROPERTIES**): The fully qualified pathname of a file that defines role mapping, for example, `/opt/eap/standalone/configuration/rolemapping/rolemapping.properties`. You must provide this file and mount it at this path in all applicable deployment configurations; for instructions, see [Section 3.5, "Providing the LDAP role mapping file"](#).
  - **RoleMapping replaceRole property** (**AUTH\_ROLE\_MAPPER\_REPLACE\_ROLE**): If set to **true**, mapped roles replace the roles defined on the LDAP server; if set to **false**, both mapped roles and roles defined on the LDAP server are set as user application roles. The default setting is **false**.
8. Complete the creation of the environment, depending on the method that you are using:
- In the OpenShift Web UI, click **Create**.
    - If the **This will create resources that may have security or project behavior implications** message appears, click **Create Anyway**.
  - Complete and run the command line.

## 3.2. DEPLOYING HIGH-AVAILABILITY BUSINESS CENTRAL AND ONE DECISION SERVER IN AN AUTHORIZING OR MANAGED SERVER ENVIRONMENT

To deploy high-availability Business Central and one Decision Server in an authorizing or managed server environment, use the `rdm73-authoring-ha.yaml` template file. You can download the file from the [Software Downloads](#) page.



### IMPORTANT

In the current version, the high-availability functionality is a technology preview.

### Procedure

1. Use one of the following methods to deploy the template:
  - In the OpenShift Web UI, select **Add to Project** → **Import YAML / JSON** and then select or paste the `rdm73-authoring-ha.yaml` file. In the **Add Template** window, ensure **Process the template** is selected and click **Continue**.
  - To use the OpenShift command line console, prepare the following command line:

```
oc new-app -f <template-path>/rhdm73-authoring-ha.yaml -p
DECISION_CENTRAL_HTTPS_SECRET=decisioncentral-app-secret -p
KIE_SERVER_HTTPS_SECRET=kieserver-app-secret
```

In this command line:

- Replace **<template-path>** with the path to the downloaded template file.
- Use as many **-p PARAMETER=value** pairs as needed to set the required parameters. You can view the template file to see descriptions for all parameters.

2. Set the following parameters as necessary:

- **Business Central Server Keystore Secret Name (DECISION\_CENTRAL\_HTTPS\_SECRET)**: The name of the secret for Business Central, as created in [Section 2.3, "Creating the secrets for Business Central"](#).
- **KIE Server Keystore Secret Name (KIE\_SERVER\_HTTPS\_SECRET)**: The name of the secret for Decision Server, as created in [Section 2.2, "Creating the secrets for Decision Server"](#).
- **Application Name (APPLICATION\_NAME)**: The name of the OpenShift application. It is used in the default URLs for Business Central and Decision Server. OpenShift uses the application name to create a separate set of deployment configurations, services, routes, labels, and artifacts. You can deploy several applications using the same template into the same project, as long as you use different application names. Also, the application name determines the name of the server configuration (server template) on the Business Central that the Decision Server is to join.
- **Business Central Server Certificate Name (DECISION\_CENTRAL\_HTTPS\_NAME)**: The name of the certificate in the keystore that you created in [Section 2.3, "Creating the secrets for Business Central"](#).
- **Business Central Server Keystore Password (DECISION\_CENTRAL\_HTTPS\_PASSWORD)**: The password for the keystore that you created in [Section 2.3, "Creating the secrets for Business Central"](#).
- **KIE Server Certificate Name (KIE\_SERVER\_HTTPS\_NAME)**: The name of the certificate in the keystore that you created in [Section 2.2, "Creating the secrets for Decision Server"](#).
- **KIE Server Keystore Password (KIE\_SERVER\_HTTPS\_PASSWORD)**: The password for the keystore that you created in [Section 2.2, "Creating the secrets for Decision Server"](#).
- **ImageStream Namespace (IMAGE\_STREAM\_NAMESPACE)**: The namespace where the image streams are available. If the image streams were already available in your OpenShift environment (see [Section 2.1, "Ensuring the availability of image streams and the image registry"](#)), the namespace is **openshift**. If you have installed the image streams file, the namespace is the name of the OpenShift project.  
You can also set the following user names and passwords:
- **KIE Admin User (KIE\_ADMIN\_USER)** and **KIE Admin Password (KIE\_ADMIN\_PWD)**: The user name and password for the administrative user in Business Central.
- **KIE Server User (KIE\_SERVER\_USER)** and **KIE Server Password (KIE\_SERVER\_PWD)**: The user name and password that a client application must use to connect to the Decision Server.

3. If you want to deploy additional Decision Servers and connect them to this Business Central, set the following parameters:
  - **KIE Server Controller User**(**KIE\_SERVER\_CONTROLLER\_USER**) and **KIE Server Controller Password** (**KIE\_SERVER\_CONTROLLER\_PWD**): The user name and password that a Decision Server must use to connect to the Business Central.
4. If you want to place the built KJAR files into an external Maven repository, set the following parameters:
  - **Maven repository URL**(**MAVEN\_REPO\_URL**): The URL for the Maven repository.
  - **Maven repository username** (**MAVEN\_REPO\_USERNAME**): The user name for the Maven repository.
  - **Maven repository password**(**MAVEN\_REPO\_PASSWORD**): The password for the Maven repository.
  - **Maven repository ID**(**MAVEN\_REPO\_ID**): The Maven ID, which must match the **id** setting for the Maven repository.



### IMPORTANT

To export or push Business Central projects as KJAR artifacts to the external Maven repository, you must also add the repository information in the **pom.xml** file for every project. For information about exporting Business Central projects to an external repository, see [Packaging and deploying a Red Hat Decision Manager project](#).

Alternatively, if you want to use the Maven repository that is built into Business Central and to connect additional Decision Servers to the Business Central, set the following parameters:

- **Username for the Maven service hosted by Business Central** (**DECISION\_CENTRAL\_MAVEN\_USERNAME**): The user name for the built-in Maven repository.
  - **Password for the Maven service hosted by Business Central** (**DECISION\_CENTRAL\_MAVEN\_PASSWORD**): The password for the built-in Maven repository. `.params_offline_central:`
5. If your OpenShift environment does not have outgoing access to the public Internet, set the following parameters:
    - **Maven mirror URL** (**MAVEN\_MIRROR\_URL**): The URL for the Maven mirror repository that you set up in [Section 2.4, "Preparing a Maven mirror repository for offline use"](#) . This URL must be accessible from a pod in your OpenShift environment.
    - **Maven mirror of** (**MAVEN\_MIRROR\_OF**): The Maven **mirrorOf** value that determines which artifacts are to be retrieved from the mirror. For instructions about setting the **mirrorOf** value, see [Mirror Settings](#) in the Apache Maven documentation. The default value is **external:\***. With this value, Maven retrieves every required artifact from the mirror and does not query any other repositories.
      - If you configure an external Maven repository (**MAVEN\_REPO\_URL**), change **MAVEN\_MIRROR\_OF** to exclude the artifacts in this repository from the mirror, for example, **external:\*,!repo-custom**. Replace **repo-custom** with the ID that you

configured in **MAVEN\_REPO\_ID**.

- If you configure a built-in Business Central Maven repository (**BUSINESS\_CENTRAL\_MAVEN\_SERVICE**), change **MAVEN\_MIRROR\_OF** to exclude the artifacts in this repository from the mirror: **external:\*,!repo-rhdmcentr**.
  - If you configure both repositories, change **MAVEN\_MIRROR\_OF** to exclude the artifacts in both repositories from the mirror: **external:\*,!repo-rhdmcentr,!repo-custom**. Replace **repo-custom** with the ID that you configured in **MAVEN\_REPO\_ID**.
6. You can use Git hooks to facilitate interaction between the internal Git repository of Business Central and an external Git repository. To configure Git hooks, set the following parameter:
- **Git hooks directory (GIT\_HOOKS\_DIR)**: The fully qualified path to a Git hooks directory, for example, **/opt/eap/standalone/data/kie/git/hooks**. You must provide the content of this directory and mount it at the specified path; for instructions, see [Section 3.3, "Providing the Git hooks directory"](#).
7. If you want to use RH-SSO or LDAP authentication, complete the following additional configuration. Do not configure LDAP authentication and RH-SSO authentication in the same deployment.
- a. In the RH-SSO or LDAP service, create all user names in the deployment parameters. If you do not set any of the parameters, create users with the default user names. The created users must also be assigned to roles:
    - **KIE\_ADMIN\_USER**: default user name **adminUser**, roles: **kie-server,rest-all,admin**
    - **KIE\_SERVER\_CONTROLLER\_USER**: default user name **controllerUser**, roles: **kie-server,rest-all,guest**
    - **DECISION\_CENTRAL\_MAVEN\_USERNAME** (not needed if you configure the use of an external Maven repository): default user name **mavenUser**. No roles are required.
    - **KIE\_SERVER\_USER**: default user name **executionUser**, roles **kie-server,rest-all,guest**
  - b. If you want to configure Red Hat Single Sign On (RH-SSO) authentication, an RH-SSO realm that applies to Red Hat Decision Manager must exist. Decision Server. If the client does not yet exist, the template can create it during deployment. Clients within RH-SSO must also exist for Business Central and for Decision Server. If the clients do not yet exist, the template can create them during deployment.  
For the user roles that you can configure in RH-SSO, see [Roles and users](#).

Use one of the following procedures:

- i. If the clients for Red Hat Decision Manager within RH-SSO already exist, set the following parameters in the template:
  - **RH-SSO URL (SSO\_URL)**: The URL for RH-SSO.
  - **RH-SSO Realm name (SSO\_REALM)**: The RH-SSO realm for Red Hat Decision Manager.
  - **Business Central RH-SSO Client name (DECISION\_CENTRAL\_SSO\_CLIENT)**: The RH-SSO client name for Business Central.

- **Business Central RH-SSO Client Secret(DECISION\_CENTRAL\_SSO\_SECRET):** The secret string that is set in RH-SSO for the client for Business Central.
  - **KIE Server RH-SSO Client name(KIE\_SERVER\_SSO\_CLIENT):** The RH-SSO client name for Decision Server.
  - **KIE Server RH-SSO Client Secret(KIE\_SERVER\_SSO\_SECRET):** The secret string that is set in RH-SSO for the client for Decision Server.
  - **RH-SSO Disable SSL Certificate Validation (SSO\_DISABLE\_SSL\_CERTIFICATE\_VALIDATION):** Set to **true** if your RH-SSO installation does not use a valid HTTPS certificate.
- ii. To create the clients for Red Hat Decision Manager within RH-SSO, set the following parameters in the template:
- **RH-SSO URL (SSO\_URL):** The URL for RH-SSO.
  - **RH-SSO Realm name (SSO\_REALM):** The RH-SSO realm for Red Hat Decision Manager.
  - **Business Central RH-SSO Client name(DECISION\_CENTRAL\_SSO\_CLIENT):** The name of the client to create in RH-SSO for Business Central.
  - **Business Central RH-SSO Client Secret(DECISION\_CENTRAL\_SSO\_SECRET):** The secret string to set in RH-SSO for the client for Business Central.
  - **Business Central Custom http Route Hostname (DECISION\_CENTRAL\_HOSTNAME\_HTTP):** The fully qualified host name to use for the HTTP endpoint for Business Central. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **Business Central Custom https Route Hostname (DECISION\_CENTRAL\_HOSTNAME\_HTTPS):** The fully qualified host name to use for the HTTPS endpoint for Business Central. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **KIE Server RH-SSO Client name(KIE\_SERVER\_SSO\_CLIENT):** The name of the client to create in RH-SSO for Decision Server.
  - **KIE Server RH-SSO Client Secret(KIE\_SERVER\_SSO\_SECRET):** The secret string to set in RH-SSO for the client for Decision Server.
  - **KIE Server Custom http Route Hostname(KIE\_SERVER\_HOSTNAME\_HTTP):** The fully qualified host name to use for the HTTP endpoint for Decision Server. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **KIE Server Custom https Route Hostname (KIE\_SERVER\_HOSTNAME\_HTTPS):** The fully qualified host name to use for the HTTPS endpoint for Decision Server. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **RH-SSO Realm Admin Username (SSO\_USERNAME) and RH-SSO Realm Admin Password (SSO\_PASSWORD):** The user name and password for the realm administrator user for the RH-SSO realm for Red Hat Decision Manager.

- **RH-SSO Disable SSL Certificate Validation** (**SSO\_DISABLE\_SSL\_CERTIFICATE\_VALIDATION**): Set to **true** if your RH-SSO installation does not use a valid HTTPS certificate.
- c. To configure LDAP, set the **AUTH\_LDAP\*** parameters of the template. These parameters correspond to the settings of the `LdapExtended Login` module of Red Hat JBoss EAP. For instructions about using these settings, see [LdapExtended Login Module](#). If the LDAP server does not define all the roles required for your deployment, you can map LDAP groups to Red Hat Decision Manager roles. To enable LDAP role mapping, set the following parameters:
- **RoleMapping rolesProperties file path** (**AUTH\_ROLE\_MAPPER\_ROLES\_PROPERTIES**): The fully qualified pathname of a file that defines role mapping, for example, `/opt/eap/standalone/configuration/rolemapping/rolemapping.properties`. You must provide this file and mount it at this path in all applicable deployment configurations; for instructions, see [Section 3.5, "Providing the LDAP role mapping file"](#).
  - **RoleMapping replaceRole property** (**AUTH\_ROLE\_MAPPER\_REPLACE\_ROLE**): If set to **true**, mapped roles replace the roles defined on the LDAP server; if set to **false**, both mapped roles and roles defined on the LDAP server are set as user application roles. The default setting is **false**.
8. If an AMQ scaledown controller image is not available in the **openshift** namespace and you installed the scaledown controller image stream (see [Section 2.1, "Ensuring the availability of image streams and the image registry"](#)), set the following parameter:
- **AMQ Scaledown Controller ImageStream Namespace** (**AMQ\_SCALEDOWN\_CONTROLLER\_IMAGE\_STREAM\_NAMESPACE**): Namespace in which the image stream for the AMQ scaledown controller image is installed. The default setting is **openshift**.
9. Complete the creation of the environment, depending on the method that you are using:
- In the OpenShift Web UI, click **Create**.
    - If the **This will create resources that may have security or project behavior implications** message appears, click **Create Anyway**.
  - Complete and run the command line.

### 3.3. PROVIDING THE GIT HOOKS DIRECTORY

If you configure the **GIT\_HOOKS\_DIR** parameter, you must provide a directory of Git hooks and must mount this directory on the Business Central deployment.

The typical use of Git hooks is interaction with an upstream repository. To enable Git hooks to push commits into an upstream repository, you must also provide a secret key that corresponds to a public key configured on the upstream repository.

#### Procedure

1. If interaction with an upstream repository using SSH authentication is required, complete the following steps to prepare and mount a secret with the necessary files:
  - a. Prepare the **id\_rsa** file with a private key that matches a public key stored in the repository.

- b. Prepare the **known\_hosts** file with the correct name, address, and public key for the repository.
- c. Create a secret with the two files using the **oc** command, for example:

```
oc create secret git-hooks-secret --from-file=id_rsa=id_rsa --from-file=known_hosts=known_hosts
```

- d. Mount the secret in the SSH key path of the Business Central deployment, for example:

```
oc set volume dc/<myapp>-rhdmcenr --add --type secret --secret-name git-hooks-secret --mount-path=/home/jboss/.ssh --name=ssh-key
```

Where **<myapp>** is the application name that was set when configuring the template.

2. Create the Git hooks directory. For instructions, see the [Git hooks reference documentation](#). For example, a simple git hooks directory can provide a post-commit hook that pushes the changes upstream. If the project was imported into Business Central from a repository, this repository remains configured as the upstream repository. Create a file named **post-commit** with permission values **755** and the following content:

```
git push
```

3. Supply the Git hooks directory to the Business Central deployment. You can use a configuration map or a persistent volume.
  - a. If the Git hooks consist of one or several fixed script files, use a configuration map. Complete the following steps:

- i. Change into the Git hooks directory that you have created.

- ii. Create an OpenShift configuration map from the files in the directory. Run the following command:

```
oc create configmap git-hooks --from-file=<file_1>=<file_1> --from-file=<file_2>=<file_2> ...
```

Where **file\_1**, **file\_2** and so on are git hook script files. For example:

```
oc create configmap git-hooks --from-file=post-commit=post-commit
```

- iii. Mount the configuration map on the Business Central deployment in the path that you have configured:

```
oc set volume dc/<myapp>-rhdmcenr --add --type configmap --configmap-name git-hooks --mount-path=<git_hooks_dir> --name=git-hooks
```

Where **<myapp>** is the application name that was set when configuring the template and **<git\_hooks\_dir>** is the value of **GIT\_HOOKS\_DIR** that was set when configuring the template.

- b. If the Git hooks consist of long files or depend on binaries, such as executable or KJAR files, use a persistence volume. You must create a persistent volume, create a persistent volume claim and associate the volume with the claim, transfer files to the volume, and mount the

volume in the ***myapp-rhdmcentr*** deployment configuration (where *myapp* is the application name). For instructions about creating and mounting persistence volumes, see [Using persistent volumes](#). For instructions about copying files onto a persistent volume, see [Transferring files in and out of containers](#).

4. Wait a few minutes, then review the list and status of pods in your project. Because Business Central does not start until you provide the Git hooks directory, the Decision Server might not start at all. To see if it has started, check the output of the following command:

```
oc get pods
```

If a working Decision Server pod is not present, start it:

```
oc rollout latest dc/<myapp>-kieserver
```

Where **<myapp>** is the application name that was set when configuring the template.

### 3.4. DEPLOYING AN ADDITIONAL DECISION SERVER

As a part of a managed server infrastructure, you can deploy an additional Decision Server on the OpenShift infrastructure. You can then use Business Central to deploy, undeploy, and manage services on this Decision Server.

To deploy an additional Decision Server, use the **rhdm73-kieserver.yaml** template file. You can download the file from the [Software Downloads](#) page.

#### Procedure

1. Use one of the following methods to deploy the template:

- In the OpenShift Web UI, select **Add to Project** → **Import YAML / JSON** and then select or paste the **rhdm73-kieserver.yaml** file. In the **Add Template** window, ensure **Process the template** is selected and click **Continue**.
- To use the OpenShift command line console, prepare the following command line:

```
oc new-app -f <template-path>/rhdm73-kieserver.yaml -p  
KIE_SERVER_HTTPS_SECRET=kieserver-app-secret
```

In this command line:

- Replace **<template-path>** with the path to the downloaded template file.
  - Use as many **-p PARAMETER=value** pairs as needed to set the required parameters. You can view the template file to see descriptions for all parameters.
2. Set the following parameters:
    - **KIE server controller service(KIE\_SERVER\_CONTROLLER\_SERVICE)**: The OpenShift service name for the Business Central that you installed for this environment.
    - **KIE server controller user(KIE\_SERVER\_CONTROLLER\_USER)**: The controller user name for logging onto the Business Central that you configured.

- **KIE server controller password(KIE\_SERVER\_CONTROLLER\_PWD)**: The controller password for logging onto the Business Central that you configured.
  - **KIE Server Keystore Secret Name(KIE\_SERVER\_HTTPS\_SECRET)**: The name of the secret for Decision Server, as created in [Section 2.2, "Creating the secrets for Decision Server"](#).
  - **Application Name (APPLICATION\_NAME)**: The name of the OpenShift application. It is used in the default URL for Decision Server. OpenShift uses the application name to create a separate set of deployment configurations, services, routes, labels, and artifacts. You can deploy several applications using the same template into the same project, as long as you use different application names. Also, the application name determines the name of the server configuration (server template) on the Business Central that the Decision Server is to join.
  - **KIE Server Certificate Name(KIE\_SERVER\_HTTPS\_NAME)**: The name of the certificate in the keystore that you created in [Section 2.2, "Creating the secrets for Decision Server"](#).
  - **KIE Server Keystore Password (KIE\_SERVER\_HTTPS\_PASSWORD)**: The password for the keystore that you created in [Section 2.2, "Creating the secrets for Decision Server"](#).
  - **KIE Server Mode(KIE\_SERVER\_MODE)**: In the `rhdm73-kieserver.yaml` template the default value is **PRODUCTION**; in this mode, you can not deploy **SNAPSHOT** versions of KJAR artifacts and can not change versions of an artifact in an existing container. (To deploy a new version with **PRODUCTION** mode, you can create a new container on the same Decision Server). To deploy **SNAPSHOT** versions or to change versions of an artifact in an existing container, set this parameter to **DEVELOPMENT**.
  - **ImageStream Namespace (IMAGE\_STREAM\_NAMESPACE)**: The namespace where the image streams are available. If the image streams were already available in your OpenShift environment (see [Section 2.1, "Ensuring the availability of image streams and the image registry"](#)), the namespace is **openshift**. If you have installed the image streams file, the namespace is the name of the OpenShift project.
3. Set the parameters for access to the Maven repository, depending on whether you configured the Business Central to use the built-in or external repository:
    - a. For a built-in repository:
      - **Name of the Maven service hosted by Business Central (DECISION\_CENTRAL\_MAVEN\_SERVICE)**: The service name for the built-in Maven repository of the Business Central.
      - **Username for the Maven service hosted by Business Central (DECISION\_CENTRAL\_MAVEN\_USERNAME)**: The user name for the built-in Maven repository of the Business Central. Enter the user name that you configured for the Business Central as **DECISION\_CENTRAL\_MAVEN\_USERNAME**.
      - **Password to access the Maven service hosted by Business Central (DECISION\_CENTRAL\_MAVEN\_PASSWORD)**: The password for the built-in Maven repository of the Business Central. Enter the password that you configured for the Business Central as **DECISION\_CENTRAL\_MAVEN\_PASSWORD**.
    - b. For an external repository:
      - **Maven repository URL(MAVEN\_REPO\_URL)**: The URL for the Maven repository with services.

- **Maven repository username (MAVEN\_REPO\_USERNAME):** The user name for the Maven repository.
- **Maven repository password (MAVEN\_REPO\_PASSWORD):** The password for the Maven repository.



#### NOTE

You can set up access to both the built-in Maven repository of the Business Central and an external Maven repository if your services have dependencies in both repositories.

- If your OpenShift environment does not have outgoing access to the public Internet, set the following parameters:
  - **Maven mirror URL (MAVEN\_MIRROR\_URL):** The URL for the Maven mirror repository that you set up in [Section 2.4, "Preparing a Maven mirror repository for offline use"](#). This URL must be accessible from a pod in your OpenShift environment.
  - **Maven mirror of (MAVEN\_MIRROR\_OF):** The Maven **mirrorOf** value that determines which artifacts are to be retrieved from the mirror. For instructions about setting the **mirrorOf** value, see [Mirror Settings](#) in the Apache Maven documentation. The default value is **external:\***. With this value, Maven retrieves every required artifact from the mirror and does not query any other repositories.
    - If you configure an external Maven repository (**MAVEN\_REPO\_URL**), change **MAVEN\_MIRROR\_OF** to exclude the artifacts in this repository from the mirror, for example, **external:\*,!repo-custom**. Replace **repo-custom** with the ID that you configured in **MAVEN\_REPO\_ID**.
    - If you configure a built-in Business Central Maven repository (**BUSINESS\_CENTRAL\_MAVEN\_SERVICE**), change **MAVEN\_MIRROR\_OF** to exclude the artifacts in this repository from the mirror: **external:\*,!repo-rhdmcentr**.
    - If you configure both repositories, change **MAVEN\_MIRROR\_OF** to exclude the artifacts in both repositories from the mirror: **external:\*,!repo-rhdmcentr,!repo-custom**. Replace **repo-custom** with the ID that you configured in **MAVEN\_REPO\_ID**.
- If you want to use RH-SSO or LDAP authentication, complete the following additional configuration. Do not configure LDAP authentication and RH-SSO authentication in the same deployment.
  - In the RH-SSO or LDAP service, create all user names in the deployment parameters. If you do not set any of the parameters, create users with the default user names. The created users must also be assigned to roles:
    - **KIE\_ADMIN\_USER:** default user name **adminUser**, roles: **kie-server,rest-all,admin**
    - **KIE\_SERVER\_USER:** default user name **executionUser**, roles **kie-server,rest-all,guest**
  - If you want to configure Red Hat Single Sign On (RH-SSO) authentication, an RH-SSO realm that applies to Red Hat Decision Manager must exist. A client within RH-SSO must also exist for  
For the user roles that you can configure in RH-SSO, see [Roles and users](#).

Use one of the following procedures:

- i. If the client for Red Hat Decision Manager within RH-SSO already exists, set the following parameters in the template:
  - **RH-SSO URL (`SSO_URL`)**: The URL for RH-SSO.
  - **RH-SSO Realm name (`SSO_REALM`)**: The RH-SSO realm for Red Hat Decision Manager.
  - **KIE Server RH-SSO Client name (`KIE_SERVER_SSO_CLIENT`)**: The RH-SSO client name for Decision Server.
  - **KIE Server RH-SSO Client Secret (`KIE_SERVER_SSO_SECRET`)**: The secret string that is set in RH-SSO for the client for Decision Server.
  - **RH-SSO Disable SSL Certificate Validation (`SSO_DISABLE_SSL_CERTIFICATE_VALIDATION`)**: Set to **true** if your RH-SSO installation does not use a valid HTTPS certificate.
- ii. To create the client for Red Hat Decision Manager within RH-SSO, set the following parameters in the template:
  - **RH-SSO URL (`SSO_URL`)**: The URL for RH-SSO.
  - **RH-SSO Realm name (`SSO_REALM`)**: The RH-SSO realm for Red Hat Decision Manager.
  - **KIE Server RH-SSO Client name (`KIE_SERVER_SSO_CLIENT`)**: The name of the client to create in RH-SSO for Decision Server.
  - **KIE Server RH-SSO Client Secret (`KIE_SERVER_SSO_SECRET`)**: The secret string to set in RH-SSO for the client for Decision Server.
  - **KIE Server Custom http Route Hostname (`KIE_SERVER_HOSTNAME_HTTP`)**: The fully qualified host name to use for the HTTP endpoint for Decision Server. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **KIE Server Custom https Route Hostname (`KIE_SERVER_HOSTNAME_HTTPS`)**: The fully qualified host name to use for the HTTPS endpoint for Decision Server. If you need to create a client in RH-SSO, you can not leave this parameter blank.
  - **RH-SSO Realm Admin Username (`SSO_USERNAME`) and RH-SSO Realm Admin Password (`SSO_PASSWORD`)**: The user name and password for the realm administrator user for the RH-SSO realm for Red Hat Decision Manager.
  - **RH-SSO Disable SSL Certificate Validation (`SSO_DISABLE_SSL_CERTIFICATE_VALIDATION`)**: Set to **true** if your RH-SSO installation does not use a valid HTTPS certificate.
- c. To configure LDAP, set the **AUTH\_LDAP\*** parameters of the template. These parameters correspond to the settings of the `LdapExtended Login` module of Red Hat JBoss EAP. For instructions about using these settings, see [LdapExtended Login Module](#). If the LDAP server does not define all the roles required for your deployment, you can map LDAP groups to Red Hat Decision Manager roles. To enable LDAP role mapping, set the following parameters:
  - **RoleMapping rolesProperties file path**

(**AUTH\_ROLE\_MAPPER\_ROLES\_PROPERTIES**): The fully qualified pathname of a file that defines role mapping, for example, **/opt/eap/standalone/configuration/rolemapping/rolemapping.properties**. You must provide this file and mount it at this path in all applicable deployment configurations; for instructions, see [Section 3.5, “Providing the LDAP role mapping file”](#).

- **RoleMapping replaceRole property (AUTH\_ROLE\_MAPPER\_REPLACE\_ROLE)**: If set to **true**, mapped roles replace the roles defined on the LDAP server; if set to **false**, both mapped roles and roles defined on the LDAP server are set as user application roles. The default setting is **false**.
6. Complete the creation of the environment, depending on the method that you are using:
- In the OpenShift Web UI, click **Create**.
    - A **This will create resources that may have security or project behavior implications** pop-up message might be displayed. If it is displayed, click **Create Anyway**.
  - Complete and run the command line.

### 3.5. PROVIDING THE LDAP ROLE MAPPING FILE

If you configure the **AUTH\_ROLE\_MAPPER\_ROLES\_PROPERTIES** parameter, you must provide a file that defines the role mapping. Mount this file on all affected deployment configurations.

#### Procedure

1. Create the role mapping properties file, for example, **my-role-map**. The file must contain entries in the following format:

```
ldap_role = product_role1, product_role2...
```

For example:

```
admins = kie-server,rest-all,admin
```

2. Create an OpenShift configuration map from the file by entering the following command:

```
oc create configmap ldap-role-mapping --from-file=<new_name>=<existing_name>
```

Replace **<new\_name>** with the name that the file is to have on the pods (it must be the same as the name specified in the **AUTH\_ROLE\_MAPPER\_ROLES\_PROPERTIES** file) and **<existing\_name>** with the name of the file that you created. For example:

```
oc create configmap ldap-role-mapping --from-file=rolemapping.properties=my-role-map
```

3. Mount the configuration map on every deployment configuration that is configured for role mapping.

The following deployment configurations can be affected in this environment:

- **myapp-rhdmcentr**: Business Central
- **myapp-kieserver**: Decision Server

Replace **myapp** with the application name. Sometimes, several Decision Server deployments can be present under different application names.

For every deployment configuration, run the command:

```
oc set volume dc/<deployment_config_name> --add --type configmap --configmap-name  
ldap-role-mapping --mount-path=<mapping_dir> --name=ldap-role-mapping
```

Replace **<mapping\_dir>** with the directory name (without file name) set in the **AUTH\_ROLE\_MAPPER\_ROLES\_PROPERTIES** parameter, for example, **/opt/eap/standalone/configuration/rolemapping**.

## CHAPTER 4. OPENSIFT TEMPLATE REFERENCE INFORMATION

Red Hat Decision Manager provides the following OpenShift templates. To access the templates, download and extract the **rhdm-7.3.0-openshift-templates.zip** product deliverable file from the [Software Downloads](#) page of the Red Hat customer portal.

- **rhdm73-authoring.yaml** provides a Business Central and a Decision Server connected to the Business Central. You can use this environment to author services and other business assets or to run them in staging or production environments. For details about this template, see [Section 4.1, "rhdm73-authoring.yaml template"](#).
- **rhdm73-authoring-ha.yaml** provides a high-availability Business Central and a Decision Server connected to the Business Central. You can use this environment to author services and other business assets or to run them in staging or production environments. The high-availability functionality is in technical preview. For details about this template, see [Section 4.2, "rhdm73-authoring-ha.yaml template"](#).
- **rhdm73-kieserver.yaml** provides a Decision Server. You can configure the Decision Server to connect to a Business Central. In this way, you can set up a staging or production environment in which one Business Central manages several distinct Decision Servers. For details about this template, see [Section 4.3, "rhdm73-kieserver.yaml template"](#).

### 4.1. RHDM73-AUTHORING.YAML TEMPLATE

Application template for a non-HA persistent authoring environment, for Red Hat Decision Manager 7.3

#### 4.1.1. Parameters

Templates allow you to define parameters which take on a value. That value is then substituted wherever the parameter is referenced. References can be defined in any text field in the objects list field. Refer to the [Openshift documentation](#) for more information.

| Variable name             | Image Environment Variable | Description                   | Example value | Required |
|---------------------------|----------------------------|-------------------------------|---------------|----------|
| <b>APPLICATION_NAME</b>   | –                          | The name for the application. | myapp         | True     |
| <b>KIE_ADMIN_USERNAME</b> | <b>KIE_ADMIN_USERNAME</b>  | KIE administrator username.   | adminUser     | False    |
| <b>KIE_ADMIN_PASSWORD</b> | <b>KIE_ADMIN_PASSWORD</b>  | KIE administrator password.   | –             | False    |

| Variable name                         | Image Environment Variable            | Description                                                                                                                                                 | Example value  | Required |
|---------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| <b>KIE_SERVER_CONTROLLER_USER</b>     | <b>KIE_SERVER_CONTROLLER_USER</b>     | KIE server controller username. (Sets the org.kie.server.controller.user system property)                                                                   | controllerUser | False    |
| <b>KIE_SERVER_CONTROLLER_PASSWORD</b> | <b>KIE_SERVER_CONTROLLER_PASSWORD</b> | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)                                                                    | –              | False    |
| <b>KIE_SERVER_CONTROLLER_TOKEN</b>    | <b>KIE_SERVER_CONTROLLER_TOKEN</b>    | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property)                                           | –              | False    |
| <b>KIE_SERVER_USER</b>                | <b>KIE_SERVER_USER</b>                | KIE server username. (Sets the org.kie.server.user system property)                                                                                         | executionUser  | False    |
| <b>KIE_SERVER_PASSWORD</b>            | <b>KIE_SERVER_PASSWORD</b>            | KIE server password. (Sets the org.kie.server.pwd system property)                                                                                          | –              | False    |
| <b>KIE_SERVER_BYPASS_AUTH_USER</b>    | <b>KIE_SERVER_BYPASS_AUTH_USER</b>    | Allows the KIE server to bypass the authenticated user for task related operations e.g. queries. (Sets the org.kie.server.bypass.auth.user system property) | false          | False    |

| Variable name                         | Image Environment Variable          | Description                                                                                                                                                                                                                                                                          | Example value      | Required |
|---------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| <b>KIE_SERVER_MODE</b>                | <b>KIE_SERVER_MODE</b>              | The KIE Server mode. Valid values are 'DEVELOPMENT' or 'PRODUCTION'. In production mode, you can not deploy SNAPSHOT versions of artifacts on the KIE server and can not change the version of an artifact in an existing container. (Sets the org.kie.server.mode system property). | <b>DEVELOPMENT</b> | False    |
| <b>KIE_MBEANS</b>                     | <b>KIE_MBEANS</b>                   | KIE server mbeans enabled/disabled (Sets the kie.mbeans and kie.scanner.mbeans system properties)                                                                                                                                                                                    | enabled            | False    |
| <b>DROOLS_SERVER_FILTER_CLASSES</b>   | <b>DROOLS_SERVER_FILTER_CLASSES</b> | KIE server class filtering (Sets the org.drools.server.filter.classes system property)                                                                                                                                                                                               | true               | False    |
| <b>DECISION_CENTRAL_HOSTNAME_HTTP</b> | <b>HOSTNAME_HTTP</b>                | Custom hostname for http service route for Decision Central. Leave blank for default hostname, e.g.: <application-name>-rhdmcen<project>.<default-domain-suffix>                                                                                                                     | –                  | False    |

| Variable name                          | Image Environment Variable | Description                                                                                                                                                                         | Example value | Required |
|----------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>DECISION_CENTRAL_HOSTNAME_HTTPS</b> | <b>HOSTNAME_HTTPS</b>      | Custom hostname for https service route for Decision Central. Leave blank for default hostname, e.g.: secure-<br><application-name>-rhdmcentr-<br><project>.<default-domain-suffix> | –             | False    |
| <b>KIE_SERVER_HOSTNAME_HTTP</b>        | <b>HOSTNAME_HTTP</b>       | Custom hostname for http service route for KIE Server. Leave blank for default hostname, e.g.:<br><application-name>-kieserver-<br><project>.<default-domain-suffix>                | –             | False    |
| <b>KIE_SERVER_HOSTNAME_HTTPS</b>       | <b>HOSTNAME_HTTPS</b>      | Custom hostname for https service route for KIE Server. Leave blank for default hostname, e.g.: secure-<br><application-name>-kieserver-<br><project>.<default-domain-suffix>       | –             | False    |

| Variable name                           | Image Environment Variable              | Description                                                                                                                                                                                                                                  | Example value              | Required |
|-----------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | If true, the KIE server will use secure-<br><application-name>-kieserver vs. <application-name>-kieserver as the KIE server route endpoint for Decision Central to report. Therefore, Decision Central displays the secure link to the user. | false                      | False    |
| <b>DECISION_CENTRAL_HTTPS_SECRET</b>    | –                                       | The name of the secret containing the keystore file for Decision Central.                                                                                                                                                                    | decisioncentral-app-secret | True     |
| <b>DECISION_CENTRAL_HTTPS_KEYSTORE</b>  | <b>HTTPS_KEYSTORE</b>                   | The name of the keystore file within the secret.                                                                                                                                                                                             | keystore.jks               | False    |
| <b>DECISION_CENTRAL_HTTPS_NAME</b>      | <b>HTTPS_NAME</b>                       | The name associated with the server certificate.                                                                                                                                                                                             | jboss                      | False    |
| <b>DECISION_CENTRAL_HTTPS_PASSWORD</b>  | <b>HTTPS_PASSWORD</b>                   | The password for the keystore and certificate.                                                                                                                                                                                               | mykeystorepass             | False    |
| <b>KIE_SERVER_HTTPS_SECRET</b>          | –                                       | The name of the secret containing the keystore file.                                                                                                                                                                                         | kieserver-app-secret       | True     |
| <b>KIE_SERVER_HTTPS_KEYSTORE</b>        | <b>HTTPS_KEYSTORE</b>                   | The name of the keystore file within the secret.                                                                                                                                                                                             | keystore.jks               | False    |
| <b>KIE_SERVER_HTTPS_NAME</b>            | <b>HTTPS_NAME</b>                       | The name associated with the server certificate.                                                                                                                                                                                             | jboss                      | False    |

| Variable name                       | Image Environment Variable | Description                                                                                                                                                                                                                                                    | Example value              | Required |
|-------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>KIE_SERVER_HTTPS_PASSWORD</b>    | <b>HTTPS_PASSWORD</b>      | The password for the keystore and certificate.                                                                                                                                                                                                                 | mykeystorepass             | False    |
| <b>IMAGE_STREAM_NAMESPACE</b>       | –                          | Namespace in which the ImageStreams for Red Hat Middleware images are installed. These ImageStreams are normally installed in the openshift namespace. You should only need to modify this if you installed the ImageStreams in a different namespace/project. | openshift                  | True     |
| <b>KIE_SERVER_IMAGE_STREAM_NAME</b> | –                          | The name of the image stream to use for KIE server. Default is "rhdm73-kieserver-openshift".                                                                                                                                                                   | rhdm73-kieserver-openshift | True     |
| <b>IMAGE_STREAM_TAG</b>             | –                          | A named pointer to an image in an image stream. Default is "1.1".                                                                                                                                                                                              | 1.1                        | True     |
| <b>MAVEN_MIRROR_URL</b>             | <b>MAVEN_MIRROR_URL</b>    | Maven mirror that Decision Central and KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for building and deploying your services.                                                                      | –                          | False    |

| Variable name              | Image Environment Variable | Description                                                                                                                                                                                                                                                                                                                          | Example value                                                                                                                                                               | Required |
|----------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>MAVEN_MIRROR_OF</b>     | <b>MAVEN_MIRROR_OF</b>     | Maven mirror configuration for KIE server.                                                                                                                                                                                                                                                                                           | external:*;!repo-rhdmcentr                                                                                                                                                  | False    |
| <b>MAVEN_REPO_ID</b>       | <b>MAVEN_REPO_ID</b>       | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*;!repo-rhdmcentr;!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. | repo-custom                                                                                                                                                                 | False    |
| <b>MAVEN_REPO_URL</b>      | <b>MAVEN_REPO_URL</b>      | Fully qualified URL to a Maven repository or service.                                                                                                                                                                                                                                                                                | <a href="http://nexus.nexus-project.svc.cluster.local:8081/nexus/content/groups/public/">http://nexus.nexus-project.svc.cluster.local:8081/nexus/content/groups/public/</a> | False    |
| <b>MAVEN_REPO_USERNAME</b> | <b>MAVEN_REPO_USERNAME</b> | Username to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | –                                                                                                                                                                           | False    |
| <b>MAVEN_REPO_PASSWORD</b> | <b>MAVEN_REPO_PASSWORD</b> | Password to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | –                                                                                                                                                                           | False    |

| Variable name                           | Image Environment Variable | Description                                                                 | Example value                                                                 | Required |
|-----------------------------------------|----------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------|
| <b>DECISION_CENTRAL_MAVEN_USERNAME</b>  | <b>KIE_MAVEN_USER</b>      | Username to access the Maven service hosted by Decision Central inside EAP. | mavenUser                                                                     | True     |
| <b>DECISION_CENTRAL_MAVEN_PASSWORD</b>  | <b>KIE_MAVEN_PASSWORD</b>  | Password to access the Maven service hosted by Decision Central inside EAP. | –                                                                             | True     |
| <b>GIT_HOOKS_DIRECTORY</b>              | <b>GIT_HOOKS_DIRECTORY</b> | The directory to use for git hooks, if required.                            | <b>/opt/eap/standalone/data/kie/git/hooks</b>                                 | False    |
| <b>DECISION_CENTRAL_VOLUME_CAPACITY</b> | –                          | Size of the persistent storage for Decision Central's runtime data.         | 1Gi                                                                           | True     |
| <b>DECISION_CENTRAL_MEMORY_LIMIT</b>    | –                          | Decision Central Container memory limit.                                    | 2Gi                                                                           | False    |
| <b>KIE_SERVER_MEMORY_LIMIT</b>          | –                          | KIE server Container memory limit.                                          | 1Gi                                                                           | False    |
| <b>SSO_URL</b>                          | <b>SSO_URL</b>             | RH-SSO URL.                                                                 | <a href="https://rh-sso.example.com/auth">https://rh-sso.example.com/auth</a> | False    |
| <b>SSO_REALM</b>                        | <b>SSO_REALM</b>           | RH-SSO Realm name.                                                          | –                                                                             | False    |
| <b>DECISION_CENTRAL_SSO_CLIENT</b>      | <b>SSO_CLIENT</b>          | Decision Central RH-SSO Client name                                         | –                                                                             | False    |
| <b>DECISION_CENTRAL_SSO_SECRET</b>      | <b>SSO_SECRET</b>          | Decision Central RH-SSO Client Secret.                                      | 252793ed-7118-4ca8-8dab-5622fa97d892                                          | False    |

| Variable name                                 | Image Environment Variable                    | Description                                                                | Example value                        | Required |
|-----------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------|--------------------------------------|----------|
| <b>KIE_SERVER_SSO_CLIENT</b>                  | <b>SSO_CLIENT</b>                             | KIE Server RH-SSO Client name.                                             | –                                    | False    |
| <b>KIE_SERVER_SSO_SECRET</b>                  | <b>SSO_SECRET</b>                             | KIE Server RH-SSO Client Secret.                                           | 252793ed-7118-4ca8-8dab-5622fa97d892 | False    |
| <b>SSO_USERNAME</b>                           | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist. | –                                    | False    |
| <b>SSO_PASSWORD</b>                           | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                     | –                                    | False    |
| <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                 | false                                | False    |
| <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                             | preferred_username                   | False    |
| <b>AUTH_LDAP_URL</b>                          | <b>AUTH_LDAP_URL</b>                          | LDAP Endpoint to connect for authentication.                               | ldap://myldap.example.com            | False    |
| <b>AUTH_LDAP_BIND_DN</b>                      | <b>AUTH_LDAP_BIND_DN</b>                      | Bind DN used for authentication.                                           | uid=admin,ou=users,ou=example,ou=com | False    |
| <b>AUTH_LDAP_BIND_CREDENTIAL</b>              | <b>AUTH_LDAP_BIND_CREDENTIAL</b>              | LDAP Credentials used for authentication.                                  | Password                             | False    |
| <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b>         | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b>         | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password. | –                                    | False    |

| Variable name                                 | Image Environment Variable                    | Description                                                                                                                                                                                                                                                                      | Example value              | Required |
|-----------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>AUTH_LDAP_BASE_CTX_DN</b>                  | <b>AUTH_LDAP_BASE_CTX_DN</b>                  | LDAP Base DN of the top-level context to begin the user search.                                                                                                                                                                                                                  | ou=users,ou=example,ou=com | False    |
| <b>AUTH_LDAP_BASE_FILTER</b>                  | <b>AUTH_LDAP_BASE_FILTER</b>                  | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. A common example for the search filter is (uid={0}).           | (uid={0})                  | False    |
| <b>AUTH_LDAP_SEARCH_SCOPE</b>                 | <b>AUTH_LDAP_SEARCH_SCOPE</b>                 | The search scope to use.                                                                                                                                                                                                                                                         | <b>SUBTREE_SCOPE</b>       | False    |
| <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                           | 10000                      | False    |
| <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used. | distinguishedName          | False    |

| Variable name                          | Image Environment Variable             | Description                                                                                                                                                                                                                                                                     | Example value | Required |
|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_PARSE_USERNAME</b>        | <b>AUTH_LDAP_PARSE_USERNAME</b>        | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> . | true          | False    |
| <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                           | –             | False    |
| <b>AUTH_LDAP_USERNAME_END_STRING</b>   | <b>AUTH_LDAP_USERNAME_END_STRING</b>   | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                             | –             | False    |
| <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | Name of the attribute containing the user roles.                                                                                                                                                                                                                                | memberOf      | False    |

| Variable name                 | Image Environment Variable    | Description                                                                                                                                                                                                                                                     | Example value               | Required |
|-------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------|
| <b>AUTH_LDAP_ROLES_CTX_DN</b> | <b>AUTH_LDAP_ROLES_CTX_DN</b> | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is. | ou=groups,ou=example,ou=com | False    |

| Variable name                   | Image Environment Variable      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Example value  | Required |
|---------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| <b>AUTH_LDAP_ROLE_FILTER</b>    | <b>AUTH_LDAP_ROLE_FILTER</b>    | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. The authenticated userDN is substituted into the filter anywhere a {1} is used. An example search filter that matches on the input username is (member={0}). An alternative that matches on the authenticated userDN is (member={1}). | (memberOf={1}) | False    |
| <b>AUTH_LDAP_ROLE_RECURSION</b> | <b>AUTH_LDAP_ROLE_RECURSION</b> | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                                                                                                                                                                                                   | 1              | False    |
| <b>AUTH_LDAP_DEFAULT_ROLE</b>   | <b>AUTH_LDAP_DEFAULT_ROLE</b>   | A role included for all authenticated users                                                                                                                                                                                                                                                                                                                                                                                                                   | guest          | False    |

| Variable name                            | Image Environment Variable               | Description                                                                                                                                                                                                                                                                                              | Example value | Required |
|------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributesDN property is set to true, this property is used to find the role object's name attribute.                                                                                                        | name          | False    |
| <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | A flag indicating if the DN returned by a query contains the roleNameAttribute ID. If set to true, the DN is checked for the roleNameAttribute ID. If set to false, the DN is not checked for the roleNameAttribute ID. This flag can improve the performance of LDAP queries.                           | false         | False    |
| <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>    | <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>    | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttribute Id attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true. | false         | False    |

| Variable name                                         | Image Environment Variable                            | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Example value | Required |
|-------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_REFERRAL_USE_R_ATTRIBUTE_ID_TO_CHECK</b> | <b>AUTH_LDAP_REFERRAL_USE_R_ATTRIBUTE_ID_TO_CHECK</b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. | –             | False    |
| <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b>              | <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b>              | When present, the RoleMapping Login Module will be configured to use the provided file. This parameter defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is original_role=role1,role2,role3                                                                                                                                        | –             | False    |
| <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>                  | <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>                  | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                                                                                                                                                                   | –             | False    |

## 4.1.2. Objects

The CLI supports various object types. A list of these object types as well as their abbreviations can be found in the [Openshift documentation](#).

### 4.1.2.1. Services

A service is an abstraction which defines a logical set of pods and a policy by which to access them. Refer to the [container-engine documentation](#) for more information.

| Service                               | Port | Name    | Description                                  |
|---------------------------------------|------|---------|----------------------------------------------|
| <b>\${APPLICATION_NAME}-rhdmcenr</b>  | 8080 | http    | All the Decision Central web server's ports. |
|                                       | 8443 | https   |                                              |
|                                       | 8001 | git-ssh |                                              |
| <b>\${APPLICATION_NAME}-kieserver</b> | 8080 | http    | All the KIE server web server's ports.       |
|                                       | 8443 | https   |                                              |

### 4.1.2.2. Routes

A route is a way to expose a service by giving it an externally-reachable hostname such as **www.example.com**. A defined route and the endpoints identified by its service can be consumed by a router to provide named connectivity from external clients to your applications. Each route consists of a route name, service selector, and (optionally) security configuration. Refer to the [Openshift documentation](#) for more information.

| Service                                     | Security        | Hostname                                   |
|---------------------------------------------|-----------------|--------------------------------------------|
| <b>\${APPLICATION_NAME}-rhdmcenr-http</b>   | none            | <b>\${DECISION_CENTRAL_HOSTNAME_HTTP}</b>  |
| <b>\${APPLICATION_NAME}-rhdmcenr-https</b>  | TLS passthrough | <b>\${DECISION_CENTRAL_HOSTNAME_HTTPS}</b> |
| <b>\${APPLICATION_NAME}-kieserver-http</b>  | none            | <b>\${KIE_SERVER_HOSTNAME_HTTP}</b>        |
| <b>\${APPLICATION_NAME}-kieserver-https</b> | TLS passthrough | <b>\${KIE_SERVER_HOSTNAME_HTTPS}</b>       |

### 4.1.2.3. Deployment Configurations

A deployment in OpenShift is a replication controller based on a user defined template called a deployment configuration. Deployments are created manually or in response to triggered events. Refer to the [Openshift documentation](#) for more information.

#### 4.1.2.3.1. Triggers

A trigger drives the creation of new deployments in response to events, both inside and outside OpenShift. Refer to the [OpenShift documentation](#) for more information.

| Deployment                            | Triggers    |
|---------------------------------------|-------------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | ImageChange |
| <b>\${APPLICATION_NAME}-kieserver</b> | ImageChange |

#### 4.1.2.3.2. Replicas

A replication controller ensures that a specified number of pod "replicas" are running at any one time. If there are too many, the replication controller kills some pods. If there are too few, it starts more. Refer to the [container-engine documentation](#) for more information.

| Deployment                            | Replicas |
|---------------------------------------|----------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | 1        |
| <b>\${APPLICATION_NAME}-kieserver</b> | 1        |

#### 4.1.2.3.3. Pod Template

##### 4.1.2.3.3.1. Service Accounts

Service accounts are API objects that exist within each project. They can be created or deleted like any other API object. Refer to the [OpenShift documentation](#) for more information.

| Deployment                            | Service Account                     |
|---------------------------------------|-------------------------------------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | <b>\${APPLICATION_NAME}-rhdmsvc</b> |
| <b>\${APPLICATION_NAME}-kieserver</b> | <b>\${APPLICATION_NAME}-rhdmsvc</b> |

##### 4.1.2.3.3.2. Image

| Deployment                            | Image                                   |
|---------------------------------------|-----------------------------------------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | rhdm73-decisioncentral-openshift        |
| <b>\${APPLICATION_NAME}-kieserver</b> | <b>\${KIE_SERVER_IMAGE_STREAM_NAME}</b> |

##### 4.1.2.3.3.3. Readiness Probe

**`\${APPLICATION\_NAME}-rhdmcenr`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/kie-wb.jsp
```

**`\${APPLICATION\_NAME}-kieserver`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/services/rest/server/readychck
```

**4.1.2.3.3.4. Liveness Probe****`\${APPLICATION\_NAME}-rhdmcenr`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/kie-wb.jsp
```

**`\${APPLICATION\_NAME}-kieserver`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/services/rest/server/healthcheck
```

**4.1.2.3.3.5. Exposed Ports**

| Deployments                             | Name    | Port | Protocol   |
|-----------------------------------------|---------|------|------------|
| <b>`\${APPLICATION_NAME}-rhdmcenr`</b>  | jolokia | 8778 | <b>TCP</b> |
|                                         | http    | 8080 | <b>TCP</b> |
|                                         | https   | 8443 | <b>TCP</b> |
|                                         | git-ssh | 8001 | <b>TCP</b> |
| <b>`\${APPLICATION_NAME}-kieserver`</b> | jolokia | 8778 | <b>TCP</b> |
|                                         | http    | 8080 | <b>TCP</b> |
|                                         | https   | 8443 | <b>TCP</b> |

**4.1.2.3.3.6. Image Environment Variables**

| Deployment                             | Variable name         | Description                 | Example value               |
|----------------------------------------|-----------------------|-----------------------------|-----------------------------|
| <b>`\${APPLICATION_NAME}-rhdmcenr`</b> | <b>KIE_ADMIN_USER</b> | KIE administrator username. | <b>`\${KIE_ADMIN_USER}`</b> |

| Deployment | Variable name                      | Description                                                                                                                                                                               | Example value                          |
|------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|            | <b>KIE_ADMIN_PWD</b>               | KIE administrator password.                                                                                                                                                               | <b>\${KIE_ADMIN_PWD}</b>               |
|            | <b>KIE_MBEANS</b>                  | KIE server mbeans enabled/disabled (Sets the kie.mbeans and kie.scanner.mbeans system properties)                                                                                         | <b>\${KIE_MBEANS}</b>                  |
|            | <b>KIE_SERVER_CONTROLLER_USER</b>  | KIE server controller username. (Sets the org.kie.server.controller.user system property)                                                                                                 | <b>\${KIE_SERVER_CONTROLLER_USER}</b>  |
|            | <b>KIE_SERVER_CONTROLLER_PWD</b>   | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)                                                                                                  | <b>\${KIE_SERVER_CONTROLLER_PWD}</b>   |
|            | <b>KIE_SERVER_CONTROLLER_TOKEN</b> | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property)                                                                         | <b>\${KIE_SERVER_CONTROLLER_TOKEN}</b> |
|            | <b>KIE_SERVER_USER</b>             | KIE server username. (Sets the org.kie.server.user system property)                                                                                                                       | <b>\${KIE_SERVER_USER}</b>             |
|            | <b>KIE_SERVER_PWD</b>              | KIE server password. (Sets the org.kie.server.pwd system property)                                                                                                                        | <b>\${KIE_SERVER_PWD}</b>              |
|            | <b>WORKBENCH_ROUTE_NAME</b>        | –                                                                                                                                                                                         | <b>\${APPLICATION_NAME}-rhdmcen</b>    |
|            | <b>MAVEN_MIRROR_URL</b>            | Maven mirror that Decision Central and KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for building and deploying your services. | <b>\${MAVEN_MIRROR_URL}</b>            |

| Deployment | Variable name              | Description                                                                                                                                                                                                                                                                                                                          | Example value                              |
|------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
|            | <b>MAVEN_REPO_ID</b>       | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*,!repo-rhdmcentr,!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. | <b>\${MAVEN_REPO_ID}</b>                   |
|            | <b>MAVEN_REPO_URL</b>      | Fully qualified URL to a Maven repository or service.                                                                                                                                                                                                                                                                                | <b>\${MAVEN_REPO_URL}</b>                  |
|            | <b>MAVEN_REPO_USERNAME</b> | Username to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | <b>\${MAVEN_REPO_USERNAME}</b>             |
|            | <b>MAVEN_REPO_PASSWORD</b> | Password to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | <b>\${MAVEN_REPO_PASSWORD}</b>             |
|            | <b>KIE_MAVEN_USER</b>      | Username to access the Maven service hosted by Decision Central inside EAP.                                                                                                                                                                                                                                                          | <b>\${DECISION_CENTRAL_MAVEN_USERNAME}</b> |
|            | <b>KIE_MAVEN_PWD</b>       | Password to access the Maven service hosted by Decision Central inside EAP.                                                                                                                                                                                                                                                          | <b>\${DECISION_CENTRAL_MAVEN_PASSWORD}</b> |
|            | <b>GIT_HOOKS_DIR</b>       | The directory to use for git hooks, if required.                                                                                                                                                                                                                                                                                     | <b>\${GIT_HOOKS_DIR}</b>                   |
|            | <b>HTTPS_KEYSTORE_DIR</b>  | –                                                                                                                                                                                                                                                                                                                                    | <b>/etc/decisioncentral-secret-volume</b>  |

| Deployment | Variable name                                 | Description                                                                | Example value                                       |
|------------|-----------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------|
|            | <b>HTTPS_KEYSTORE</b>                         | The name of the keystore file within the secret.                           | <b>`\${DECISION_CENTRAL_HTTPS_KEYSTORE}`</b>        |
|            | <b>HTTPS_NAME</b>                             | The name associated with the server certificate.                           | <b>`\${DECISION_CENTRAL_HTTPS_NAME}`</b>            |
|            | <b>HTTPS_PASSWORD</b>                         | The password for the keystore and certificate.                             | <b>`\${DECISION_CENTRAL_HTTPS_PASSWORD}`</b>        |
|            | <b>SSO_URL</b>                                | RH-SSO URL.                                                                | <b>`\${SSO_URL}`</b>                                |
|            | <b>SSO_OPENIDCONNECT_DEPLOYMENTS</b>          | –                                                                          | ROOT.war                                            |
|            | <b>SSO_REALM</b>                              | RH-SSO Realm name.                                                         | <b>`\${SSO_REALM}`</b>                              |
|            | <b>SSO_SECRET</b>                             | Decision Central RH-SSO Client Secret.                                     | <b>`\${DECISION_CENTRAL_SSO_SECRET}`</b>            |
|            | <b>SSO_CLIENT</b>                             | Decision Central RH-SSO Client name                                        | <b>`\${DECISION_CENTRAL_SSO_CLIENT}`</b>            |
|            | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist. | <b>`\${SSO_USERNAME}`</b>                           |
|            | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                     | <b>`\${SSO_PASSWORD}`</b>                           |
|            | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                 | <b>`\${SSO_DISABLE_SSL_CERTIFICATE_VALIDATION}`</b> |
|            | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                             | <b>`\${SSO_PRINCIPAL_ATTRIBUTE}`</b>                |

| Deployment | Variable name                         | Description                                                                                                                                                                                                                                                            | Example value                                |
|------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
|            | <b>HOSTNAME_HTTP</b>                  | Custom hostname for http service route for Decision Central. Leave blank for default hostname, e.g.: <application-name>-rhdmcenr-<project>. <default-domain-suffix>                                                                                                    | <b>`\${DECISION_CENTRAL_HOSTNAME_HTTP}`</b>  |
|            | <b>HOSTNAME_HTTPS</b>                 | Custom hostname for https service route for Decision Central. Leave blank for default hostname, e.g.: secure-<application-name>-rhdmcenr-<project>. <default-domain-suffix>                                                                                            | <b>`\${DECISION_CENTRAL_HOSTNAME_HTTPS}`</b> |
|            | <b>AUTH_LDAP_URL</b>                  | LDAP Endpoint to connect for authentication.                                                                                                                                                                                                                           | <b>`\${AUTH_LDAP_URL}`</b>                   |
|            | <b>AUTH_LDAP_BIND_DN</b>              | Bind DN used for authentication.                                                                                                                                                                                                                                       | <b>`\${AUTH_LDAP_BIND_DN}`</b>               |
|            | <b>AUTH_LDAP_BIND_CREDENTIAL</b>      | LDAP Credentials used for authentication.                                                                                                                                                                                                                              | <b>`\${AUTH_LDAP_BIND_CREDENTIAL}`</b>       |
|            | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b> | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password.                                                                                                                                                                                             | <b>`\${AUTH_LDAP_JAAS_SECURITY_DOMAIN}`</b>  |
|            | <b>AUTH_LDAP_BASE_CTX_DN</b>          | LDAP Base DN of the top-level context to begin the user search.                                                                                                                                                                                                        | <b>`\${AUTH_LDAP_BASE_CTX_DN}`</b>           |
|            | <b>AUTH_LDAP_BASE_FILTER</b>          | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. A common example for the search filter is (uid={0}). | <b>`\${AUTH_LDAP_BASE_FILTER}`</b>           |

| Deployment | Variable name                                 | Description                                                                                                                                                                                                                                                                      | Example value                                       |
|------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|            | <b>AUTH_LDAP_SEARCH_SCOPE</b>                 | The search scope to use.                                                                                                                                                                                                                                                         | <b>`\${AUTH_LDAP_SEARCH_SCOPE}`</b>                 |
|            | <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                           | <b>`\${AUTH_LDAP_SEARCH_TIME_LIMIT}`</b>            |
|            | <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used. | <b>`\${AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE}`</b> |
|            | <b>AUTH_LDAP_PARSE_USERNAME</b>               | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> .  | <b>`\${AUTH_LDAP_PARSE_USERNAME}`</b>               |
|            | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b>        | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                            | <b>`\${AUTH_LDAP_USERNAME_BEGIN_STRING}`</b>        |

| Deployment | Variable name                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Example value                                          |
|------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
|            | <b>AUTH_LDAP_USER_NAME_END_STRING</b> | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                                                                                                                                                                                                                                                                 | <b><code>\${AUTH_LDAP_USER_NAME_END_STRING}</code></b> |
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>    | Name of the attribute containing the user roles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b><code>\${AUTH_LDAP_ROLE_ATTRIBUTE_ID}</code></b>    |
|            | <b>AUTH_LDAP_ROLE_S_CTX_DN</b>        | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is.                                                                                                                                                                                                                                                     | <b><code>\${AUTH_LDAP_ROLE_S_CTX_DN}</code></b>        |
|            | <b>AUTH_LDAP_ROLE_FILTER</b>          | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a <code>{0}</code> expression is used. The authenticated userDN is substituted into the filter anywhere a <code>{1}</code> is used. An example search filter that matches on the input username is <code>(member={0})</code> . An alternative that matches on the authenticated userDN is <code>(member={1})</code> . | <b><code>\${AUTH_LDAP_ROLE_FILTER}</code></b>          |

| Deployment | Variable name                            | Description                                                                                                                                                                                                                                                                                             | Example value                                  |
|------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
|            | <b>AUTH_LDAP_ROLE_RECURSION</b>          | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                                             | <b>`\${AUTH_LDAP_ROLE_RECURSION}`</b>          |
|            | <b>AUTH_LDAP_DEFAULT_ROLE</b>            | A role included for all authenticated users                                                                                                                                                                                                                                                             | <b>`\${AUTH_LDAP_DEFAULT_ROLE}`</b>            |
|            | <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributesDN property is set to true, this property is used to find the role object's name attribute.                                                                                                       | <b>`\${AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID}`</b>  |
|            | <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | A flag indicating if the DN returned by a query contains the roleNameAttributeID. If set to true, the DN is checked for the roleNameAttributeID. If set to false, the DN is not checked for the roleNameAttributeID. This flag can improve the performance of LDAP queries.                             | <b>`\${AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN}`</b> |
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>    | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttributeID attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true. | <b>`\${AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN}`</b>    |

| Deployment                            | Variable name                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Example value                                            |
|---------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
|                                       | <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. | <b>\${AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK}</b> |
|                                       | <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b>             | When present, the RoleMapping Login Module will be configured to use the provided file. This parameter defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is original_role=role1,role2,role3                                                                                                                                        | <b>\${AUTH_ROLE_MAPPER_ROLES_PROPERTIES}</b>             |
|                                       | <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>                 | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                                                                                                                                                                   | <b>\${AUTH_ROLE_MAPPER_REPLACE_ROLE}</b>                 |
| <b>\${APPLICATION_NAME}-kieserver</b> | <b>KIE_ADMIN_USER</b>                                | KIE administrator username.                                                                                                                                                                                                                                                                                                                                                                                        | <b>\${KIE_ADMIN_USER}</b>                                |
|                                       | <b>KIE_ADMIN_PWD</b>                                 | KIE administrator password.                                                                                                                                                                                                                                                                                                                                                                                        | <b>\${KIE_ADMIN_PWD}</b>                                 |

| Deployment | Variable name                       | Description                                                                                                                                                                                                                                                                          | Example value                             |
|------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|            | <b>KIE_SERVER_MODE</b>              | The KIE Server mode. Valid values are 'DEVELOPMENT' or 'PRODUCTION'. In production mode, you can not deploy SNAPSHOT versions of artifacts on the KIE server and can not change the version of an artifact in an existing container. (Sets the org.kie.server.mode system property). | <b>`\${KIE_SERVER_MODE}`</b>              |
|            | <b>KIE_MBEANS</b>                   | KIE server mbeans enabled/disabled (Sets the kie.mbeans and kie.scanner.mbeans system properties)                                                                                                                                                                                    | <b>`\${KIE_MBEANS}`</b>                   |
|            | <b>DROOLS_SERVER_FILTER_CLASSES</b> | KIE server class filtering (Sets the org.drools.server.filter.classes system property)                                                                                                                                                                                               | <b>`\${DROOLS_SERVER_FILTER_CLASSES}`</b> |
|            | <b>KIE_SERVER_BYPASS_AUTH_USER</b>  | Allows the KIE server to bypass the authenticated user for task related operations e.g. queries. (Sets the org.kie.server.bypass.auth.user system property)                                                                                                                          | <b>`\${KIE_SERVER_BYPASS_AUTH_USER}`</b>  |
|            | <b>KIE_SERVER_CONTROLLER_USER</b>   | KIE server controller username. (Sets the org.kie.server.controller.user system property)                                                                                                                                                                                            | <b>`\${KIE_SERVER_CONTROLLER_USER}`</b>   |
|            | <b>KIE_SERVER_CONTROLLER_PWD</b>    | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)                                                                                                                                                                                             | <b>`\${KIE_SERVER_CONTROLLER_PWD}`</b>    |
|            | <b>KIE_SERVER_CONTROLLER_TOKEN</b>  | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property)                                                                                                                                                                    | <b>`\${KIE_SERVER_CONTROLLER_TOKEN}`</b>  |

| Deployment | Variable name                           | Description                                                                                                                                                                                                                                     | Example value                               |
|------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|            | <b>KIE_SERVER_CONTROLLER_SERVICE</b>    | –                                                                                                                                                                                                                                               | <b>\${APPLICATION_NAME}-rhdmcenr</b>        |
|            | <b>KIE_SERVER_CONTROLLER_PROTOCOL</b>   | –                                                                                                                                                                                                                                               | ws                                          |
|            | <b>KIE_SERVER_ID</b>                    | –                                                                                                                                                                                                                                               | <b>\${APPLICATION_NAME}-kieserver</b>       |
|            | <b>KIE_SERVER_ROUTE_NAME</b>            | –                                                                                                                                                                                                                                               | <b>\${APPLICATION_NAME}-kieserver</b>       |
|            | <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | If true, the KIE server will use secure-<br><application-name>-kieserver vs.<br><application-name>-kieserver as the KIE server route endpoint for Decision Central to report. Therefore, Decision Central displays the secure link to the user. | <b>\${KIE_SERVER_USE_SECURE_ROUTE_NAME}</b> |
|            | <b>KIE_SERVER_USER</b>                  | KIE server username.<br>(Sets the org.kie.server.user system property)                                                                                                                                                                          | <b>\${KIE_SERVER_USER}</b>                  |
|            | <b>KIE_SERVER_PWD</b>                   | KIE server password.<br>(Sets the org.kie.server.pwd system property)                                                                                                                                                                           | <b>\${KIE_SERVER_PWD}</b>                   |
|            | <b>MAVEN_MIRROR_URL</b>                 | Maven mirror that Decision Central and KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for building and deploying your services.                                                       | <b>\${MAVEN_MIRROR_URL}</b>                 |
|            | <b>MAVEN_MIRROR_OFF</b>                 | Maven mirror configuration for KIE server.                                                                                                                                                                                                      | <b>\${MAVEN_MIRROR_OFF}</b>                 |

| Deployment | Variable name                        | Description                                                                                                                                                                                                                                                                                                                          | Example value                              |
|------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
|            | <b>MAVEN_REPOS</b>                   | –                                                                                                                                                                                                                                                                                                                                    | RHDMCENTR,EXTERNAL                         |
|            | <b>RHDMCENTR_MAVEN_REPO_ID</b>       | –                                                                                                                                                                                                                                                                                                                                    | repo-rhdmcentr                             |
|            | <b>RHDMCENTR_MAVEN_REPO_SERVICE</b>  | –                                                                                                                                                                                                                                                                                                                                    | <b>\${APPLICATION_NAME}-rhdmcentr</b>      |
|            | <b>RHDMCENTR_MAVEN_REPO_PATH</b>     | –                                                                                                                                                                                                                                                                                                                                    | <b>/maven2/</b>                            |
|            | <b>RHDMCENTR_MAVEN_REPO_USERNAME</b> | Username to access the Maven service hosted by Decision Central inside EAP.                                                                                                                                                                                                                                                          | <b>\${DECISION_CENTRAL_MAVEN_USERNAME}</b> |
|            | <b>RHDMCENTR_MAVEN_REPO_PASSWORD</b> | Password to access the Maven service hosted by Decision Central inside EAP.                                                                                                                                                                                                                                                          | <b>\${DECISION_CENTRAL_MAVEN_PASSWORD}</b> |
|            | <b>EXTERNAL_MAVEN_REPO_ID</b>        | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*,!repo-rhdmcentr,!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. | <b>\${MAVEN_REPO_ID}</b>                   |
|            | <b>EXTERNAL_MAVEN_REPO_URL</b>       | Fully qualified URL to a Maven repository or service.                                                                                                                                                                                                                                                                                | <b>\${MAVEN_REPO_URL}</b>                  |
|            | <b>EXTERNAL_MAVEN_REPO_USERNAME</b>  | Username to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | <b>\${MAVEN_REPO_USERNAME}</b>             |

| Deployment | Variable name                                 | Description                                                                | Example value                                     |
|------------|-----------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------|
|            | <b>EXTERNAL_MAVEN_REPO_PASSWORD</b>           | Password to access the Maven repository, if required.                      | <b>\${MAVEN_REPO_PASSWORD}</b>                    |
|            | <b>HTTPS_KEYSTORE_DIR</b>                     | –                                                                          | <b>/etc/kieserver-secret-volume</b>               |
|            | <b>HTTPS_KEYSTORE</b>                         | The name of the keystore file within the secret.                           | <b>\${KIE_SERVER_HTTPS_KEYSTORE}</b>              |
|            | <b>HTTPS_NAME</b>                             | The name associated with the server certificate.                           | <b>\${KIE_SERVER_HTTPS_NAME}</b>                  |
|            | <b>HTTPS_PASSWORD</b>                         | The password for the keystore and certificate.                             | <b>\${KIE_SERVER_HTTPS_PASSWORD}</b>              |
|            | <b>SSO_URL</b>                                | RH-SSO URL.                                                                | <b>\${SSO_URL}</b>                                |
|            | <b>SSO_OPENIDCONNECT_DEPLOYMENTS</b>          | –                                                                          | ROOT.war                                          |
|            | <b>SSO_REALM</b>                              | RH-SSO Realm name.                                                         | <b>\${SSO_REALM}</b>                              |
|            | <b>SSO_SECRET</b>                             | KIE Server RH-SSO Client Secret.                                           | <b>\${KIE_SERVER_SSO_SECRET}</b>                  |
|            | <b>SSO_CLIENT</b>                             | KIE Server RH-SSO Client name.                                             | <b>\${KIE_SERVER_SSO_CLIENT}</b>                  |
|            | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist. | <b>\${SSO_USERNAME}</b>                           |
|            | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                     | <b>\${SSO_PASSWORD}</b>                           |
|            | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                 | <b>\${SSO_DISABLE_SSL_CERTIFICATE_VALIDATION}</b> |
|            | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                             | <b>\${SSO_PRINCIPAL_ATTRIBUTE}</b>                |

| Deployment | Variable name                         | Description                                                                                                                                                                                                                                                            | Example value                               |
|------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|            | <b>HOSTNAME_HTTP</b>                  | Custom hostname for http service route for KIE Server. Leave blank for default hostname, e.g.: <application-name>-kieserver-<project>.<default-domain-suffix>                                                                                                          | <b>`\${KIE_SERVER_HOSTNAME_HTTP}`</b>       |
|            | <b>HOSTNAME_HTTPS</b>                 | Custom hostname for https service route for KIE Server. Leave blank for default hostname, e.g.: secure-<application-name>-kieserver-<project>.<default-domain-suffix>                                                                                                  | <b>`\${KIE_SERVER_HOSTNAME_HTTPS}`</b>      |
|            | <b>AUTH_LDAP_URL</b>                  | LDAP Endpoint to connect for authentication.                                                                                                                                                                                                                           | <b>`\${AUTH_LDAP_URL}`</b>                  |
|            | <b>AUTH_LDAP_BIND_DN</b>              | Bind DN used for authentication.                                                                                                                                                                                                                                       | <b>`\${AUTH_LDAP_BIND_DN}`</b>              |
|            | <b>AUTH_LDAP_BIND_CREDENTIAL</b>      | LDAP Credentials used for authentication.                                                                                                                                                                                                                              | <b>`\${AUTH_LDAP_BIND_CREDENTIAL}`</b>      |
|            | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b> | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password.                                                                                                                                                                                             | <b>`\${AUTH_LDAP_JAAS_SECURITY_DOMAIN}`</b> |
|            | <b>AUTH_LDAP_BASE_CTX_DN</b>          | LDAP Base DN of the top-level context to begin the user search.                                                                                                                                                                                                        | <b>`\${AUTH_LDAP_BASE_CTX_DN}`</b>          |
|            | <b>AUTH_LDAP_BASE_FILTER</b>          | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. A common example for the search filter is (uid={0}). | <b>`\${AUTH_LDAP_BASE_FILTER}`</b>          |

| Deployment | Variable name                                 | Description                                                                                                                                                                                                                                                                      | Example value                                     |
|------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
|            | <b>AUTH_LDAP_SEARCH_SCOPE</b>                 | The search scope to use.                                                                                                                                                                                                                                                         | <b>\${AUTH_LDAP_SEARCH_SCOPE}</b>                 |
|            | <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                           | <b>\${AUTH_LDAP_SEARCH_TIME_LIMIT}</b>            |
|            | <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used. | <b>\${AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE}</b> |
|            | <b>AUTH_LDAP_PARSE_USERNAME</b>               | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> .  | <b>\${AUTH_LDAP_PARSE_USERNAME}</b>               |
|            | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b>        | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                            | <b>\${AUTH_LDAP_USERNAME_BEGIN_STRING}</b>        |

| Deployment | Variable name                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Example value                                          |
|------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
|            | <b>AUTH_LDAP_USER_NAME_END_STRING</b> | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                                                                                                                                                                                                                                                                 | <b><code>\${AUTH_LDAP_USER_NAME_END_STRING}</code></b> |
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>    | Name of the attribute containing the user roles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b><code>\${AUTH_LDAP_ROLE_ATTRIBUTE_ID}</code></b>    |
|            | <b>AUTH_LDAP_ROLE_S_CTX_DN</b>        | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is.                                                                                                                                                                                                                                                     | <b><code>\${AUTH_LDAP_ROLE_S_CTX_DN}</code></b>        |
|            | <b>AUTH_LDAP_ROLE_FILTER</b>          | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a <code>{0}</code> expression is used. The authenticated userDN is substituted into the filter anywhere a <code>{1}</code> is used. An example search filter that matches on the input username is <code>(member={0})</code> . An alternative that matches on the authenticated userDN is <code>(member={1})</code> . | <b><code>\${AUTH_LDAP_ROLE_FILTER}</code></b>          |

| Deployment | Variable name                            | Description                                                                                                                                                                                                                                                                                             | Example value                                  |
|------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
|            | <b>AUTH_LDAP_ROLE_RECURSION</b>          | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                                             | <b>`\${AUTH_LDAP_ROLE_RECURSION}`</b>          |
|            | <b>AUTH_LDAP_DEFAULT_ROLE</b>            | A role included for all authenticated users                                                                                                                                                                                                                                                             | <b>`\${AUTH_LDAP_DEFAULT_ROLE}`</b>            |
|            | <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributesDN property is set to true, this property is used to find the role object's name attribute.                                                                                                       | <b>`\${AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID}`</b>  |
|            | <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | A flag indicating if the DN returned by a query contains the roleNameAttributeID. If set to true, the DN is checked for the roleNameAttributeID. If set to false, the DN is not checked for the roleNameAttributeID. This flag can improve the performance of LDAP queries.                             | <b>`\${AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN}`</b> |
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>    | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttributeID attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true. | <b>`\${AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN}`</b>    |

| Deployment | Variable name                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Example value                                            |
|------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
|            | <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. | <b>\${AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK}</b> |
|            | <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b>             | When present, the RoleMapping Login Module will be configured to use the provided file. This parameter defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is original_role=role1,role2,role3                                                                                                                                        | <b>\${AUTH_ROLE_MAPPER_ROLES_PROPERTIES}</b>             |
|            | <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>                 | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                                                                                                                                                                   | <b>\${AUTH_ROLE_MAPPER_REPLACE_ROLE}</b>                 |

#### 4.1.2.3.3.7. Volumes

| Deployment                            | Name                            | mountPath                                 | Purpose   | readOnly |
|---------------------------------------|---------------------------------|-------------------------------------------|-----------|----------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | decisioncentral-keystore-volume | <b>/etc/decisioncentral-secret-volume</b> | ssl certs | True     |

| Deployment                            | Name                      | mountPath                           | Purpose   | readOnly |
|---------------------------------------|---------------------------|-------------------------------------|-----------|----------|
| <b>\${APPLICATION_NAME}-kieserver</b> | kieserver-keystore-volume | <b>/etc/kieserver-secret-volume</b> | ssl certs | True     |

#### 4.1.2.4. External Dependencies

##### 4.1.2.4.1. Volume Claims

A **PersistentVolume** object is a storage resource in an OpenShift cluster. Storage is provisioned by an administrator by creating **PersistentVolume** objects from sources such as GCE Persistent Disks, AWS Elastic Block Stores (EBS), and NFS mounts. Refer to the [OpenShift documentation](#) for more information.

| Name                                        | Access Mode   |
|---------------------------------------------|---------------|
| <b>\${APPLICATION_NAME}-rhdmcentr-claim</b> | ReadWriteMany |

##### 4.1.2.4.2. Secrets

This template requires the following secrets to be installed for the application to run.

decisioncentral-app-secret kieserver-app-secret

## 4.2. RHDM73-AUTHORING-HA.YAML TEMPLATE

Application template for a HA persistent authoring environment, for Red Hat Decision Manager 7.3

### 4.2.1. Parameters

Templates allow you to define parameters which take on a value. That value is then substituted wherever the parameter is referenced. References can be defined in any text field in the objects list field. Refer to the [OpenShift documentation](#) for more information.

| Variable name             | Image Environment Variable | Description                   | Example value | Required |
|---------------------------|----------------------------|-------------------------------|---------------|----------|
| <b>APPLICATION_NAME</b>   | –                          | The name for the application. | myapp         | True     |
| <b>KIE_ADMIN_USERNAME</b> | <b>KIE_ADMIN_USERNAME</b>  | KIE administrator username.   | adminUser     | False    |

| Variable name                         | Image Environment Variable            | Description                                                                                                       | Example value  | Required |
|---------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------|----------|
| <b>KIE_ADMIN_PASSWORD</b>             | <b>KIE_ADMIN_PASSWORD</b>             | KIE administrator password.                                                                                       | –              | False    |
| <b>KIE_SERVER_CONTROLLER_USERNAME</b> | <b>KIE_SERVER_CONTROLLER_USERNAME</b> | KIE server controller username. (Sets the org.kie.server.controller.user system property)                         | controllerUser | False    |
| <b>KIE_SERVER_CONTROLLER_PASSWORD</b> | <b>KIE_SERVER_CONTROLLER_PASSWORD</b> | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)                          | –              | False    |
| <b>KIE_SERVER_CONTROLLER_TOKEN</b>    | <b>KIE_SERVER_CONTROLLER_TOKEN</b>    | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property) | –              | False    |
| <b>KIE_SERVER_USERNAME</b>            | <b>KIE_SERVER_USERNAME</b>            | KIE server username. (Sets the org.kie.server.user system property)                                               | executionUser  | False    |
| <b>KIE_SERVER_PASSWORD</b>            | <b>KIE_SERVER_PASSWORD</b>            | KIE server password. (Sets the org.kie.server.pwd system property)                                                | –              | False    |

| Variable name                       | Image Environment Variable          | Description                                                                                                                                                                                                                                                                          | Example value      | Required |
|-------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| <b>KIE_SERVER_BYPASS_AUTH_USER</b>  | <b>KIE_SERVER_BYPASS_AUTH_USER</b>  | Allows the KIE server to bypass the authenticated user for task related operations e.g. queries. (Sets the org.kie.server.bypass.auth.user system property)                                                                                                                          | false              | False    |
| <b>KIE_SERVER_MODE</b>              | <b>KIE_SERVER_MODE</b>              | The KIE Server mode. Valid values are 'DEVELOPMENT' or 'PRODUCTION'. In production mode, you can not deploy SNAPSHOT versions of artifacts on the KIE server and can not change the version of an artifact in an existing container. (Sets the org.kie.server.mode system property). | <b>DEVELOPMENT</b> | False    |
| <b>KIE_MBEANS</b>                   | <b>KIE_MBEANS</b>                   | KIE server mbeans enabled/disabled. (Sets the kie.mbeans and kie.scanner.mbeans system properties)                                                                                                                                                                                   | enabled            | False    |
| <b>DROOLS_SERVER_FILTER_CLASSES</b> | <b>DROOLS_SERVER_FILTER_CLASSES</b> | KIE server class filtering. (Sets the org.drools.server.filter.classes system property)                                                                                                                                                                                              | true               | False    |

| Variable name                          | Image Environment Variable | Description                                                                                                                                                              | Example value | Required |
|----------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>DECISION_CENTRAL_HOSTNAME_HTTP</b>  | <b>HOSTNAME_HTTP</b>       | Custom hostname for http service route for Decision Central. Leave blank for default hostname, e.g.: <application-name>-rhdmcen<project>.<default-domain-suffix>         | –             | False    |
| <b>DECISION_CENTRAL_HOSTNAME_HTTPS</b> | <b>HOSTNAME_HTTPS</b>      | Custom hostname for https service route for Decision Central. Leave blank for default hostname, e.g.: secure-<application-name>-rhdmcen<project>.<default-domain-suffix> | –             | False    |
| <b>KIE_SERVER_HOSTNAME_HTTP</b>        | <b>HOSTNAME_HTTP</b>       | Custom hostname for http service route for KIE Server. Leave blank for default hostname, e.g.: <application-name>-kieserver-<project>.<default-domain-suffix>            | –             | False    |
| <b>KIE_SERVER_HOSTNAME_HTTPS</b>       | <b>HOSTNAME_HTTPS</b>      | Custom hostname for https service route for KIE Server. Leave blank for default hostname, e.g.: secure-<application-name>-kieserver-<project>.<default-domain-suffix>    | –             | False    |

| Variable name                           | Image Environment Variable              | Description                                                                                                                                                                                                                                  | Example value              | Required |
|-----------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | If true, the KIE server will use secure-<br><application-name>-kieserver vs. <application-name>-kieserver as the KIE server route endpoint for Decision Central to report. Therefore, Decision Central displays the secure link to the user. | false                      | False    |
| <b>DECISION_CENTRAL_HTTPS_SECRET</b>    | –                                       | The name of the secret containing the keystore file for Decision Central.                                                                                                                                                                    | decisioncentral-app-secret | True     |
| <b>DECISION_CENTRAL_HTTPS_KEYSTORE</b>  | <b>HTTPS_KEYSTORE</b>                   | The name of the keystore file within the secret.                                                                                                                                                                                             | keystore.jks               | False    |
| <b>DECISION_CENTRAL_HTTPS_NAME</b>      | <b>HTTPS_NAME</b>                       | The name associated with the server certificate.                                                                                                                                                                                             | jboss                      | False    |
| <b>DECISION_CENTRAL_HTTPS_PASSWORD</b>  | <b>HTTPS_PASSWORD</b>                   | The password for the keystore and certificate.                                                                                                                                                                                               | mykeystorepass             | False    |
| <b>KIE_SERVER_HTTPS_SECRET</b>          | –                                       | The name of the secret containing the keystore file for KIE Server.                                                                                                                                                                          | kieserver-app-secret       | True     |
| <b>KIE_SERVER_HTTPS_KEYSTORE</b>        | <b>HTTPS_KEYSTORE</b>                   | The name of the keystore file within the secret.                                                                                                                                                                                             | keystore.jks               | False    |
| <b>KIE_SERVER_HTTPS_NAME</b>            | <b>HTTPS_NAME</b>                       | The name associated with the server certificate.                                                                                                                                                                                             | jboss                      | False    |

| Variable name                         | Image Environment Variable            | Description                                                                                                                                    | Example value  | Required |
|---------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| <b>KIE_SERVER_HTTPS_PASSWORD</b>      | <b>HTTPS_PASSWORD</b>                 | The password for the keystore and certificate.                                                                                                 | mykeystorepass | False    |
| <b>APPFORMER_ELASTIC_RETRIES</b>      | <b>APPFORMER_ELASTIC_RETRIES</b>      | The number of times that appformer will try to connect to the elasticsearch node before give up.                                               | –              | False    |
| <b>APPFORMER_JMS_BROKER_PORT</b>      | <b>APPFORMER_JMS_BROKER_PORT</b>      | The port to connect to the JMS broker. Defaults to 61616.                                                                                      | 61616          | False    |
| <b>APPFORMER_JMS_BROKER_USER</b>      | <b>APPFORMER_JMS_BROKER_USER</b>      | The username to connect to the JMS broker.                                                                                                     | jmsBrokerUser  | True     |
| <b>APPFORMER_JMS_BROKER_PASSWORD</b>  | <b>APPFORMER_JMS_BROKER_PASSWORD</b>  | The password to connect to the JMS broker.                                                                                                     | –              | True     |
| <b>ES_HOSTNAME_HTTP</b>               | –                                     | Custom hostname for http service route. Leave blank for default hostname, e.g.: <application-name>-rhdmindex-<project>.<default-domain-suffix> | –              | False    |
| <b>APPFORMER_ELASTIC_CLUSTER_NAME</b> | <b>APPFORMER_ELASTIC_CLUSTER_NAME</b> | Sets the ES cluster.name and configure it on Decision Central. Defaults to kie-cluster.                                                        | –              | False    |

| Variable name                 | Image Environment Variable    | Description                                                                                                                                                                                  | Example value | Required |
|-------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>ES_NODE_NAME</b>           | <b>ES_NODE_NAME</b>           | Sets the ES node.name property. Defaults to HOSTNAME env value.                                                                                                                              | –             | False    |
| <b>ES_TRANSPORT_HOST</b>      | <b>ES_TRANSPORT_HOST</b>      | Sets the ES transport.host property. This will set the transport address of the main ES cluster node. Used for communication between nodes in the cluster. Defaults to container address.    | –             | False    |
| <b>APPFORMER_ELASTIC_PORT</b> | <b>APPFORMER_ELASTIC_PORT</b> | Sets the ES http.host property. This will set the http address of the main ES cluster node. Used for communication between nodes in the cluster and for communication with Decision Central. | –             | False    |
| <b>ES_HTTP_HOST</b>           | <b>ES_HTTP_HOST</b>           | Sets the ES http.host property. This will set the http address of the main ES cluster node. Used to interact with the cluster REST API. Defaults to the container IP address.                | –             | False    |

| Variable name                                          | Image Environment Variable | Description                                                                                                                          | Example value                                               | Required |
|--------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------|
| <b>ES_HTTP_PORT</b>                                    | <b>ES_HTTP_PORT</b>        | Sets the ES http.port property. This will set the http port of the main ES cluster node. Used to interact with the cluster REST API. | –                                                           | False    |
| <b>ES_JAVA_OPTS</b>                                    | <b>ES_JAVA_OPTS</b>        | Appends custom jvm configurations/properties to ES jvm.options configuration file.                                                   | -Xms1024m -Xmx1024m                                         | False    |
| <b>AMQ_SCALEDOWN_CONTROLLER_IMAGE_STREAM_NAMESPACE</b> | –                          | Namespace in which the ImageStream for the AMQ Scaledown Controller image is installed. Default is "openshift".                      | openshift                                                   | True     |
| <b>AMQ_SCALEDOWN_CONTROLLER_IMAGE_STREAM_NAME</b>      | –                          | The name of the image stream to use for the AMQ Scaledown Controller. Default is "amq-broker-72-scaledown-controller-openshift".     | amq-broker-72-scaledown-controller-openshift                | True     |
| <b>AMQ_SCALEDOWN_CONTROLLER_IMAGE_STREAM_TAG</b>       | –                          | The AMQ image stream tag. Default is "1.0".                                                                                          | 1.0                                                         | True     |
| <b>AMQ_BROKER_IMAGE</b>                                | –                          | AMQ Broker Image                                                                                                                     | registry.redhat.io/amq-broker-7/amq-broker-72-openshift:1.1 | True     |
| <b>AMQ_ROLE</b>                                        | –                          | User role for standard broker user.                                                                                                  | admin                                                       | True     |

| Variable name                       | Image Environment Variable | Description                                                                                                                                                                                                                                                    | Example value              | Required |
|-------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>AMQ_NAME</b>                     | –                          | The name of the broker.                                                                                                                                                                                                                                        | broker                     | True     |
| <b>AMQ_GLOBAL_MAX_SIZE</b>          | –                          | Specifies the maximum amount of memory that message data can consume. If no value is specified, half of the system's memory is allocated.                                                                                                                      | 10 gb                      | False    |
| <b>AMQ_VOLUME_CAPACITY</b>          | –                          | Size of persistent storage for AMQ broker volume.                                                                                                                                                                                                              | 1Gi                        | True     |
| <b>ES_VOLUME_CAPACITY</b>           | –                          | Size of persistent storage for Elasticsearch volume.                                                                                                                                                                                                           | 1Gi                        | True     |
| <b>IMAGE_STREAM_NAMESPACE</b>       | –                          | Namespace in which the ImageStreams for Red Hat Middleware images are installed. These ImageStreams are normally installed in the openshift namespace. You should only need to modify this if you installed the ImageStreams in a different namespace/project. | openshift                  | True     |
| <b>KIE_SERVER_IMAGE_STREAM_NAME</b> | –                          | The name of the image stream to use for KIE server. Default is "rhdm73-kieserver-openshift".                                                                                                                                                                   | rhdm73-kieserver-openshift | True     |

| Variable name | Image Environment Variable | Description | Example value | Required |
|---------------|----------------------------|-------------|---------------|----------|
|---------------|----------------------------|-------------|---------------|----------|

|                         |                         |                                                                                                                                                                                           |                            |       |
|-------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------|
| <b>IMAGE_STREAM_TAG</b> | –                       | A named pointer to an image in an image stream. Default is "1.1".                                                                                                                         | 1.1                        | True  |
| <b>MAVEN_MIRROR_URL</b> | <b>MAVEN_MIRROR_URL</b> | Maven mirror that Decision Central and KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for building and deploying your services. | –                          | False |
| <b>MAVEN_MIRROR_OF</b>  | <b>MAVEN_MIRROR_OF</b>  | Maven mirror configuration for KIE server.                                                                                                                                                | external:*;!repo-rhdmcentr | False |

| Variable name                          | Image Environment Variable | Description                                                                                                                                                                                                                                                                                                                          | Example value                                                                                                                                                               | Required |
|----------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>MAVEN_REPO_ID</b>                   | <b>MAVEN_REPO_ID</b>       | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*,!repo-rhdmcentr,!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. | repo-custom                                                                                                                                                                 | False    |
| <b>MAVEN_REPO_URL</b>                  | <b>MAVEN_REPO_URL</b>      | Fully qualified URL to a Maven repository or service.                                                                                                                                                                                                                                                                                | <a href="http://nexus.nexus-project.svc.cluster.local:8081/nexus/content/groups/public/">http://nexus.nexus-project.svc.cluster.local:8081/nexus/content/groups/public/</a> | False    |
| <b>MAVEN_REPO_USERNAME</b>             | <b>MAVEN_REPO_USERNAME</b> | Username to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | –                                                                                                                                                                           | False    |
| <b>MAVEN_REPO_PASSWORD</b>             | <b>MAVEN_REPO_PASSWORD</b> | Password to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | –                                                                                                                                                                           | False    |
| <b>DECISION_CENTRAL_MAVEN_USERNAME</b> | <b>KIE_MAVEN_USER</b>      | Username to access the Maven service hosted by Decision Central inside EAP.                                                                                                                                                                                                                                                          | mavenUser                                                                                                                                                                   | True     |

| Variable name                           | Image Environment Variable | Description                                                                 | Example value                                                                 | Required |
|-----------------------------------------|----------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------|
| <b>DECISION_CENTRAL_MAVEN_PASSWORD</b>  | <b>KIE_MAVEN_PASSWORD</b>  | Password to access the Maven service hosted by Decision Central inside EAP. | –                                                                             | True     |
| <b>GIT_HOOKS_DIRECTORY</b>              | <b>GIT_HOOKS_DIRECTORY</b> | The directory to use for git hooks, if required.                            | <b>/opt/eap/standalone/data/kie/git/hooks</b>                                 | False    |
| <b>DECISION_CENTRAL_VOLUME_CAPACITY</b> | –                          | Size of the persistent storage for Decision Central's runtime data.         | 1Gi                                                                           | True     |
| <b>DECISION_CENTRAL_MEMORY_LIMIT</b>    | –                          | Decision Central Container memory limit.                                    | 2Gi                                                                           | False    |
| <b>KIE_SERVER_MEMORY_LIMIT</b>          | –                          | KIE server Container memory limit.                                          | 1Gi                                                                           | False    |
| <b>SSO_URL</b>                          | <b>SSO_URL</b>             | RH-SSO URL.                                                                 | <a href="https://rh-sso.example.com/auth">https://rh-sso.example.com/auth</a> | False    |
| <b>SSO_REALM</b>                        | <b>SSO_REALM</b>           | RH-SSO Realm name.                                                          | –                                                                             | False    |
| <b>DECISION_CENTRAL_SSO_CLIENT</b>      | <b>SSO_CLIENT</b>          | Decision Central RH-SSO Client name.                                        | –                                                                             | False    |
| <b>DECISION_CENTRAL_SSO_SECRET</b>      | <b>SSO_SECRET</b>          | Decision Central RH-SSO Client Secret.                                      | 252793ed-7118-4ca8-8dab-5622fa97d892                                          | False    |
| <b>KIE_SERVER_SSO_CLIENT</b>            | <b>SSO_CLIENT</b>          | KIE Server RH-SSO Client name.                                              | –                                                                             | False    |
| <b>KIE_SERVER_SSO_SECRET</b>            | <b>SSO_SECRET</b>          | KIE Server RH-SSO Client Secret.                                            | 252793ed-7118-4ca8-8dab-5622fa97d892                                          | False    |

| Variable name                                 | Image Environment Variable                    | Description                                                                | Example value                        | Required |
|-----------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------|--------------------------------------|----------|
| <b>SSO_USERNAME</b>                           | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist. | –                                    | False    |
| <b>SSO_PASSWORD</b>                           | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                     | –                                    | False    |
| <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                 | false                                | False    |
| <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                             | preferred_username                   | False    |
| <b>AUTH_LDAP_URL</b>                          | <b>AUTH_LDAP_URL</b>                          | LDAP Endpoint to connect for authentication.                               | ldap://myldap.example.com            | False    |
| <b>AUTH_LDAP_BIND_DN</b>                      | <b>AUTH_LDAP_BIND_DN</b>                      | Bind DN used for authentication.                                           | uid=admin,ou=users,ou=example,ou=com | False    |
| <b>AUTH_LDAP_BIND_CREDENTIAL</b>              | <b>AUTH_LDAP_BIND_CREDENTIAL</b>              | LDAP Credentials used for authentication.                                  | Password                             | False    |
| <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b>         | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b>         | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password. | –                                    | False    |
| <b>AUTH_LDAP_BASE_CTX_DN</b>                  | <b>AUTH_LDAP_BASE_CTX_DN</b>                  | LDAP Base DN of the top-level context to begin the user search.            | ou=users,ou=example,ou=com           | False    |

| Variable name                                                | Image Environment Variable                                   | Description                                                                                                                                                                                                                                                                      | Example value             | Required |
|--------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------|
| <b>AUTH_LDAP_B<br/>ASE_FILTER</b>                            | <b>AUTH_LDAP_B<br/>ASE_FILTER</b>                            | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. A common example for the search filter is (uid={0}).           | (uid={0})                 | False    |
| <b>AUTH_LDAP_S<br/>EARCH_SCOPE</b>                           | <b>AUTH_LDAP_S<br/>EARCH_SCOPE</b>                           | The search scope to use.                                                                                                                                                                                                                                                         | <b>SUBTREE_SCO<br/>PE</b> | False    |
| <b>AUTH_LDAP_S<br/>EARCH_TIME_L<br/>IMIT</b>                 | <b>AUTH_LDAP_S<br/>EARCH_TIME_L<br/>IMIT</b>                 | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                           | 10000                     | False    |
| <b>AUTH_LDAP_DI<br/>STINGUISHED_<br/>NAME_ATTRIB<br/>UTE</b> | <b>AUTH_LDAP_DI<br/>STINGUISHED_<br/>NAME_ATTRIB<br/>UTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used. | distinguishedNam<br>e     | False    |

| Variable name                          | Image Environment Variable             | Description                                                                                                                                                                                                                                                                     | Example value | Required |
|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_PARSE_USERNAME</b>        | <b>AUTH_LDAP_PARSE_USERNAME</b>        | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> . | true          | False    |
| <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                           | –             | False    |
| <b>AUTH_LDAP_USERNAME_END_STRING</b>   | <b>AUTH_LDAP_USERNAME_END_STRING</b>   | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                             | –             | False    |
| <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | Name of the attribute containing the user roles.                                                                                                                                                                                                                                | memberOf      | False    |

| Variable name                 | Image Environment Variable    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Example value               | Required |
|-------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------|
| <b>AUTH_LDAP_ROLES_CTX_DN</b> | <b>AUTH_LDAP_ROLES_CTX_DN</b> | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is.                                                                                                                                                                                               | ou=groups,ou=example,ou=com | False    |
| <b>AUTH_LDAP_ROLE_FILTER</b>  | <b>AUTH_LDAP_ROLE_FILTER</b>  | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. The authenticated userDN is substituted into the filter anywhere a {1} is used. An example search filter that matches on the input username is (member={0}). An alternative that matches on the authenticated userDN is (member={1}). | (memberOf={1})              | False    |

| Variable name                            | Image Environment Variable               | Description                                                                                                                                                                                                                                                                    | Example value | Required |
|------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_ROLE_RECURSION</b>          | <b>AUTH_LDAP_ROLE_RECURSION</b>          | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                    | 1             | False    |
| <b>AUTH_LDAP_DEFAULT_ROLE</b>            | <b>AUTH_LDAP_DEFAULT_ROLE</b>            | A role included for all authenticated users                                                                                                                                                                                                                                    | guest         | False    |
| <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributelsDN property is set to true, this property is used to find the role object's name attribute.                                                                             | name          | False    |
| <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | A flag indicating if the DN returned by a query contains the roleNameAttribute ID. If set to true, the DN is checked for the roleNameAttribute ID. If set to false, the DN is not checked for the roleNameAttribute ID. This flag can improve the performance of LDAP queries. | false         | False    |

| Variable name                                        | Image Environment Variable                           | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Example value | Required |
|------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>                | <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>                | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttributeId attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true.                                                                                                            | false         | False    |
| <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. | –             | False    |

| Variable name                            | Image Environment Variable               | Description                                                                                                                                                                                                                                                                 | Example value | Required |
|------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b> | <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b> | When present, the RoleMapping Login Module will be configured to use the provided file. This parameter defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is original_role=role1,role2,role3 | –             | False    |
| <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>     | <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>     | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                            | –             | False    |

## 4.2.2. Objects

The CLI supports various object types. A list of these object types as well as their abbreviations can be found in the [Openshift documentation](#).

### 4.2.2.1. Services

A service is an abstraction which defines a logical set of pods and a policy by which to access them. Refer to the [container-engine documentation](#) for more information.

| Service                               | Port | Name    | Description                                  |
|---------------------------------------|------|---------|----------------------------------------------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | 8080 | http    | All the Decision Central web server's ports. |
|                                       | 8443 | https   |                                              |
|                                       | 8001 | git-ssh |                                              |
| <b>\${APPLICATION_NAME}-ping</b>      | 8888 | ping    | The JGroups ping port for clustering.        |

| Service                                 | Port  | Name      | Description                                            |
|-----------------------------------------|-------|-----------|--------------------------------------------------------|
| <b>\${APPLICATION_NAME}-kieserver</b>   | 8080  | http      | All the KIE server web server's ports.                 |
|                                         | 8443  | https     |                                                        |
| <b>\${APPLICATION_NAME}-rhdminindex</b> | 9200  | rest      | All the Decision Central Indexing Elasticsearch ports. |
|                                         | 9300  | transport |                                                        |
| <b>\${APPLICATION_NAME}-amq-tcp</b>     | 61616 | –         | The broker's OpenWire port.                            |
| <b>ping</b>                             | 8888  | –         | The JGroups ping port for clustering.                  |

#### 4.2.2.2. Routes

A route is a way to expose a service by giving it an externally-reachable hostname such as **www.example.com**. A defined route and the endpoints identified by its service can be consumed by a router to provide named connectivity from external clients to your applications. Each route consists of a route name, service selector, and (optionally) security configuration. Refer to the [Openshift documentation](#) for more information.

| Service                                      | Security        | Hostname                                   |
|----------------------------------------------|-----------------|--------------------------------------------|
| <b>\${APPLICATION_NAME}-rhdmcentr-http</b>   | none            | <b>\${DECISION_CENTRAL_HOSTNAME_HTTP}</b>  |
| <b>\${APPLICATION_NAME}-rhdmcentr-https</b>  | TLS passthrough | <b>\${DECISION_CENTRAL_HOSTNAME_HTTPS}</b> |
| <b>\${APPLICATION_NAME}-kieserver-http</b>   | none            | <b>\${KIE_SERVER_HOSTNAME_HTTP}</b>        |
| <b>\${APPLICATION_NAME}-kieserver-https</b>  | TLS passthrough | <b>\${KIE_SERVER_HOSTNAME_HTTPS}</b>       |
| <b>\${APPLICATION_NAME}-rhdminindex-http</b> | none            | <b>\${ES_HOSTNAME_HTTP}</b>                |

#### 4.2.2.3. Deployment Configurations

A deployment in OpenShift is a replication controller based on a user defined template called a deployment configuration. Deployments are created manually or in response to triggered events. Refer to the [Openshift documentation](#) for more information.

##### 4.2.2.3.1. Triggers

A trigger drives the creation of new deployments in response to events, both inside and outside OpenShift. Refer to the [Openshift documentation](#) for more information.

| Deployment                                                        | Triggers    |
|-------------------------------------------------------------------|-------------|
| <b><code>\${APPLICATION_NAME}-rhdmcentr</code></b>                | ImageChange |
| <b><code>\${APPLICATION_NAME}-kieserver</code></b>                | ImageChange |
| <b><code>\${APPLICATION_NAME}-rhdmindex</code></b>                | ImageChange |
| <b><code>\${APPLICATION_NAME}-amq-scaledown-controller</code></b> | ImageChange |

#### 4.2.2.3.2. Replicas

A replication controller ensures that a specified number of pod "replicas" are running at any one time. If there are too many, the replication controller kills some pods. If there are too few, it starts more. Refer to the [container-engine documentation](#) for more information.

| Deployment                                                        | Replicas |
|-------------------------------------------------------------------|----------|
| <b><code>\${APPLICATION_NAME}-rhdmcentr</code></b>                | 2        |
| <b><code>\${APPLICATION_NAME}-kieserver</code></b>                | 2        |
| <b><code>\${APPLICATION_NAME}-rhdmindex</code></b>                | 1        |
| <b><code>\${APPLICATION_NAME}-amq-scaledown-controller</code></b> | 1        |

#### 4.2.2.3.3. Pod Template

##### 4.2.2.3.3.1. Service Accounts

Service accounts are API objects that exist within each project. They can be created or deleted like any other API object. Refer to the [Openshift documentation](#) for more information.

| Deployment                                                        | Service Account                                                      |
|-------------------------------------------------------------------|----------------------------------------------------------------------|
| <b><code>\${APPLICATION_NAME}-rhdmcentr</code></b>                | <b><code>\${APPLICATION_NAME}-rhdmsvc</code></b>                     |
| <b><code>\${APPLICATION_NAME}-kieserver</code></b>                | <b><code>\${APPLICATION_NAME}-rhdmsvc</code></b>                     |
| <b><code>\${APPLICATION_NAME}-amq-scaledown-controller</code></b> | <b><code>\${APPLICATION_NAME}-amq-scaledown-controller-sa</code></b> |

## 4.2.2.3.3.2. Image

| Deployment                                                        | Image                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------------|
| <b><code>\${APPLICATION_NAME}-rhdmcentr</code></b>                | rhdm73-decisioncentral-openshift                                   |
| <b><code>\${APPLICATION_NAME}-kieserver</code></b>                | <b><code>\${KIE_SERVER_IMAGE_STREAM_NAME}</code></b>               |
| <b><code>\${APPLICATION_NAME}-rhdmindex</code></b>                | rhdm73-decisioncentral-indexing-openshift                          |
| <b><code>\${APPLICATION_NAME}-amq-scaledown-controller</code></b> | <b><code>\${AMQ_SCALEDOWN_CONTROLLER_IMAGE_STREAM_NAME}</code></b> |

## 4.2.2.3.3.3. Readiness Probe

**`${APPLICATION_NAME}-rhdmcentr`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/kie-wb.jsp
```

**`${APPLICATION_NAME}-kieserver`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/services/rest/server/readycheck
```

**`${APPLICATION_NAME}-rhdmindex`**

```
Http Get on http://localhost:9200/_cluster/health
```

## 4.2.2.3.3.4. Liveness Probe

**`${APPLICATION_NAME}-rhdmcentr`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/kie-wb.jsp
```

**`${APPLICATION_NAME}-kieserver`**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/services/rest/server/healthcheck
```

**`${APPLICATION_NAME}-rhdmindex`**

```
tcpSocket on port 9300
```

## 4.2.2.3.3.5. Exposed Ports

| Deployments                           | Name    | Port | Protocol   |
|---------------------------------------|---------|------|------------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | jolokia | 8778 | <b>TCP</b> |
|                                       | http    | 8080 | <b>TCP</b> |
|                                       | https   | 8443 | <b>TCP</b> |
|                                       | git-ssh | 8001 | <b>TCP</b> |
|                                       | ping    | 8888 | <b>TCP</b> |
| <b>\${APPLICATION_NAME}-kieserver</b> | jolokia | 8778 | <b>TCP</b> |
|                                       | http    | 8080 | <b>TCP</b> |
|                                       | https   | 8443 | <b>TCP</b> |
| <b>\${APPLICATION_NAME}-rhdmindex</b> | es      | 9300 | <b>TCP</b> |
|                                       | http    | 9200 | <b>TCP</b> |

#### 4.2.2.3.3.6. Image Environment Variables

| Deployment                            | Variable name                     | Description                                                                                        | Example value                         |
|---------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | <b>KIE_ADMIN_USER</b>             | KIE administrator username.                                                                        | <b>\${KIE_ADMIN_USER}</b>             |
|                                       | <b>KIE_ADMIN_PWD</b>              | KIE administrator password.                                                                        | <b>\${KIE_ADMIN_PWD}</b>              |
|                                       | <b>KIE_MBEANS</b>                 | KIE server mbeans enabled/disabled. (Sets the kie.mbeans and kie.scanner.mbeans system properties) | <b>\${KIE_MBEANS}</b>                 |
|                                       | <b>KIE_SERVER_CONTROLLER_USER</b> | KIE server controller username. (Sets the org.kie.server.controller.user system property)          | <b>\${KIE_SERVER_CONTROLLER_USER}</b> |
|                                       | <b>KIE_SERVER_CONTROLLER_PWD</b>  | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)           | <b>\${KIE_SERVER_CONTROLLER_PWD}</b>  |

| Deployment | Variable name                      | Description                                                                                                                                                                                                                                                                                                                         | Example value                            |
|------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
|            | <b>KIE_SERVER_CONTROLLER_TOKEN</b> | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property)                                                                                                                                                                                                                   | <b>`\${KIE_SERVER_CONTROLLER_TOKEN}`</b> |
|            | <b>KIE_SERVER_USER</b>             | KIE server username. (Sets the org.kie.server.user system property)                                                                                                                                                                                                                                                                 | <b>`\${KIE_SERVER_USER}`</b>             |
|            | <b>KIE_SERVER_PWD</b>              | KIE server password. (Sets the org.kie.server.pwd system property)                                                                                                                                                                                                                                                                  | <b>`\${KIE_SERVER_PWD}`</b>              |
|            | <b>WORKBENCH_ROUTE_NAME</b>        | –                                                                                                                                                                                                                                                                                                                                   | <b>`\${APPLICATION_NAME}-rdmcentr`</b>   |
|            | <b>MAVEN_MIRROR_URL</b>            | Maven mirror that Decision Central and KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for building and deploying your services.                                                                                                                                           | <b>`\${MAVEN_MIRROR_URL}`</b>            |
|            | <b>MAVEN_REPO_ID</b>               | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*,!repo-rdmcentr,!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. | <b>`\${MAVEN_REPO_ID}`</b>               |
|            | <b>MAVEN_REPO_URL</b>              | Fully qualified URL to a Maven repository or service.                                                                                                                                                                                                                                                                               | <b>`\${MAVEN_REPO_URL}`</b>              |

| Deployment | Variable name                         | Description                                                                 | Example value                              |
|------------|---------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------|
|            | <b>MAVEN_REPO_USERNAME</b>            | Username to access the Maven repository, if required.                       | <b>\${MAVEN_REPO_USERNAME}</b>             |
|            | <b>MAVEN_REPO_PASSWORD</b>            | Password to access the Maven repository, if required.                       | <b>\${MAVEN_REPO_PASSWORD}</b>             |
|            | <b>KIE_MAVEN_USER</b>                 | Username to access the Maven service hosted by Decision Central inside EAP. | <b>\${DECISION_CENTRAL_MAVEN_USERNAME}</b> |
|            | <b>KIE_MAVEN_PWD</b>                  | Password to access the Maven service hosted by Decision Central inside EAP. | <b>\${DECISION_CENTRAL_MAVEN_PASSWORD}</b> |
|            | <b>GIT_HOOKS_DIR</b>                  | The directory to use for git hooks, if required.                            | <b>\${GIT_HOOKS_DIR}</b>                   |
|            | <b>HTTPS_KEYSTORE_DIR</b>             | –                                                                           | <b>/etc/decisioncentral-secret-volume</b>  |
|            | <b>HTTPS_KEYSTORE</b>                 | The name of the keystore file within the secret.                            | <b>\${DECISION_CENTRAL_HTTPS_KEYSTORE}</b> |
|            | <b>HTTPS_NAME</b>                     | The name associated with the server certificate.                            | <b>\${DECISION_CENTRAL_HTTPS_NAME}</b>     |
|            | <b>HTTPS_PASSWORD</b>                 | The password for the keystore and certificate.                              | <b>\${DECISION_CENTRAL_HTTPS_PASSWORD}</b> |
|            | <b>JGROUPS_PING_PROTOCOL</b>          | –                                                                           | openshift.DNS_PING                         |
|            | <b>OPENSIFT_DNS_PING_SERVICE_NAME</b> | –                                                                           | <b>\${APPLICATION_NAME}-ping</b>           |
|            | <b>OPENSIFT_DNS_PING_SERVICE_PORT</b> | –                                                                           | 8888                                       |

| Deployment | Variable name                         | Description                                                                                                                                                                                  | Example value                             |
|------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|            | <b>APPFORMER_ELASTIC_PORT</b>         | Sets the ES http.host property. This will set the http address of the main ES cluster node. Used for communication between nodes in the cluster and for communication with Decision Central. | <b>\${APPFORMER_ELASTIC_PORT}</b>         |
|            | <b>APPFORMER_ELASTIC_CLUSTER_NAME</b> | Sets the ES cluster.name and configure it on Decision Central. Defaults to kie-cluster.                                                                                                      | <b>\${APPFORMER_ELASTIC_CLUSTER_NAME}</b> |
|            | <b>APPFORMER_ELASTIC_RETRIES</b>      | The number of times that appformer will try to connect to the elasticsearch node before give up.                                                                                             | <b>\${APPFORMER_ELASTIC_RETRIES}</b>      |
|            | <b>APPFORMER_ELASTIC_HOST</b>         | –                                                                                                                                                                                            | <b>\${APPLICATION_NAME}-rhdmindex</b>     |
|            | <b>APPFORMER_JMS_BROKER_ADDRESS</b>   | –                                                                                                                                                                                            | <b>\${APPLICATION_NAME}-amq-tcp</b>       |
|            | <b>APPFORMER_JMS_BROKER_PORT</b>      | The port to connect to the JMS broker. Defaults to 61616.                                                                                                                                    | <b>\${APPFORMER_JMS_BROKER_PORT}</b>      |
|            | <b>APPFORMER_JMS_BROKER_USER</b>      | The username to connect to the JMS broker.                                                                                                                                                   | <b>\${APPFORMER_JMS_BROKER_USER}</b>      |
|            | <b>APPFORMER_JMS_BROKER_PASSWORD</b>  | The password to connect to the JMS broker.                                                                                                                                                   | <b>\${APPFORMER_JMS_BROKER_PASSWORD}</b>  |
|            | <b>SSO_URL</b>                        | RH-SSO URL.                                                                                                                                                                                  | <b>\${SSO_URL}</b>                        |
|            | <b>SSO_OPENIDCONNECT_DEPLOYMENTS</b>  | –                                                                                                                                                                                            | ROOT.war                                  |
|            | <b>SSO_REALM</b>                      | RH-SSO Realm name.                                                                                                                                                                           | <b>\${SSO_REALM}</b>                      |

| Deployment | Variable name                                 | Description                                                                                                                                                                 | Example value                                       |
|------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|            | <b>SSO_SECRET</b>                             | Decision Central RH-SSO Client Secret.                                                                                                                                      | <b>`\${DECISION_CENTRAL_SSO_SECRET}`</b>            |
|            | <b>SSO_CLIENT</b>                             | Decision Central RH-SSO Client name.                                                                                                                                        | <b>`\${DECISION_CENTRAL_SSO_CLIENT}`</b>            |
|            | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist.                                                                                                  | <b>`\${SSO_USERNAME}`</b>                           |
|            | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                                                                                                                      | <b>`\${SSO_PASSWORD}`</b>                           |
|            | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                                                                                                                  | <b>`\${SSO_DISABLE_SSL_CERTIFICATE_VALIDATION}`</b> |
|            | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                                                                                                                              | <b>`\${SSO_PRINCIPAL_ATTRIBUTE}`</b>                |
|            | <b>HOSTNAME_HTTP</b>                          | Custom hostname for http service route for Decision Central. Leave blank for default hostname, e.g.: <application-name>-rhdmcentr-<project>.<default-domain-suffix>         | <b>`\${DECISION_CENTRAL_HOSTNAME_HTTP}`</b>         |
|            | <b>HOSTNAME_HTTPS</b>                         | Custom hostname for https service route for Decision Central. Leave blank for default hostname, e.g.: secure-<application-name>-rhdmcentr-<project>.<default-domain-suffix> | <b>`\${DECISION_CENTRAL_HOSTNAME_HTTPS}`</b>        |
|            | <b>AUTH_LDAP_URL</b>                          | LDAP Endpoint to connect for authentication.                                                                                                                                | <b>`\${AUTH_LDAP_URL}`</b>                          |
|            | <b>AUTH_LDAP_BIND_DN</b>                      | Bind DN used for authentication.                                                                                                                                            | <b>`\${AUTH_LDAP_BIND_DN}`</b>                      |

| Deployment | Variable name                                 | Description                                                                                                                                                                                                                                                                      | Example value                                       |
|------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|            | <b>AUTH_LDAP_BIND_CREDENTIAL</b>              | LDAP Credentials used for authentication.                                                                                                                                                                                                                                        | <b>`\${AUTH_LDAP_BIND_CREDENTIAL}`</b>              |
|            | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b>         | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password.                                                                                                                                                                                                       | <b>`\${AUTH_LDAP_JAAS_SECURITY_DOMAIN}`</b>         |
|            | <b>AUTH_LDAP_BASE_CTX_DN</b>                  | LDAP Base DN of the top-level context to begin the user search.                                                                                                                                                                                                                  | <b>`\${AUTH_LDAP_BASE_CTX_DN}`</b>                  |
|            | <b>AUTH_LDAP_BASE_FILTER</b>                  | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. A common example for the search filter is (uid={0}).           | <b>`\${AUTH_LDAP_BASE_FILTER}`</b>                  |
|            | <b>AUTH_LDAP_SEARCH_SCOPE</b>                 | The search scope to use.                                                                                                                                                                                                                                                         | <b>`\${AUTH_LDAP_SEARCH_SCOPE}`</b>                 |
|            | <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                           | <b>`\${AUTH_LDAP_SEARCH_TIME_LIMIT}`</b>            |
|            | <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used. | <b>`\${AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE}`</b> |

| Deployment | Variable name                          | Description                                                                                                                                                                                                                                                                     | Example value                                           |
|------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
|            | <b>AUTH_LDAP_PARSE_USERNAME</b>        | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> . | <b><code>\${AUTH_LDAP_PARSE_USERNAME}</code></b>        |
|            | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                           | <b><code>\${AUTH_LDAP_USERNAME_BEGIN_STRING}</code></b> |
|            | <b>AUTH_LDAP_USERNAME_END_STRING</b>   | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                             | <b><code>\${AUTH_LDAP_USERNAME_END_STRING}</code></b>   |
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | Name of the attribute containing the user roles.                                                                                                                                                                                                                                | <b><code>\${AUTH_LDAP_ROLE_ATTRIBUTE_ID}</code></b>     |
|            | <b>AUTH_LDAP_ROLE_S_CTX_DN</b>         | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is.                 | <b><code>\${AUTH_LDAP_ROLE_S_CTX_DN}</code></b>         |

| Deployment | Variable name                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Example value                               |
|------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|            | <b>AUTH_LDAP_ROLE_FILTER</b>            | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. The authenticated userDN is substituted into the filter anywhere a {1} is used. An example search filter that matches on the input username is (member={0}). An alternative that matches on the authenticated userDN is (member={1}). | <b>\${AUTH_LDAP_ROLE_FILTER}</b>            |
|            | <b>AUTH_LDAP_ROLE_RECURSION</b>         | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                                                                                                                                                                                                   | <b>\${AUTH_LDAP_ROLE_RECURSION}</b>         |
|            | <b>AUTH_LDAP_DEFAULT_ROLE</b>           | A role included for all authenticated users                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>\${AUTH_LDAP_DEFAULT_ROLE}</b>           |
|            | <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b> | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributesDN property is set to true, this property is used to find the role object's name attribute.                                                                                                                                                                                                                                                             | <b>\${AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID}</b> |

| Deployment | Variable name                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Example value                                              |
|------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
|            | <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b>             | A flag indicating if the DN returned by a query contains the roleNameAttributeID. If set to true, the DN is checked for the roleNameAttributeID. If set to false, the DN is not checked for the roleNameAttributeID. This flag can improve the performance of LDAP queries.                                                                                                                                        | <b>`\${AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN}`</b>             |
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>                | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttributeID attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true.                                                                                                            | <b>`\${AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN}`</b>                |
|            | <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. | <b>`\${AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK}`</b> |
|            |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                            |

| Deployment                            | Variable name                            | Description                                                                                                                                                                                                                                                                          | Example value                                |
|---------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
|                                       | <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b> | When present, the RoleMapping Login Module will be configured to use the provided file. This parameter defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is original_role=role1,role2,role3          | <b>\${AUTH_ROLE_MAPPER_ROLES_PROPERTIES}</b> |
|                                       | <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>     | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                                     | <b>\${AUTH_ROLE_MAPPER_REPLACE_ROLE}</b>     |
| <b>\${APPLICATION_NAME}-kieserver</b> | <b>KIE_ADMIN_USER</b>                    | KIE administrator username.                                                                                                                                                                                                                                                          | <b>\${KIE_ADMIN_USER}</b>                    |
|                                       | <b>KIE_ADMIN_PWD</b>                     | KIE administrator password.                                                                                                                                                                                                                                                          | <b>\${KIE_ADMIN_PWD}</b>                     |
|                                       | <b>KIE_SERVER_MODE</b>                   | The KIE Server mode. Valid values are 'DEVELOPMENT' or 'PRODUCTION'. In production mode, you can not deploy SNAPSHOT versions of artifacts on the KIE server and can not change the version of an artifact in an existing container. (Sets the org.kie.server.mode system property). | <b>\${KIE_SERVER_MODE}</b>                   |
|                                       | <b>KIE_MBEANS</b>                        | KIE server mbeans enabled/disabled. (Sets the kie.mbeans and kie.scanner.mbeans system properties)                                                                                                                                                                                   | <b>\${KIE_MBEANS}</b>                        |

| Deployment | Variable name                         | Description                                                                                                                                                 | Example value                           |
|------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
|            | <b>DROOLS_SERVER_FILTER_CLASSES</b>   | KIE server class filtering. (Sets the org.drools.server.filter.classes system property)                                                                     | <b>\${DROOLS_SERVER_FILTER_CLASSES}</b> |
|            | <b>KIE_SERVER_BYPASS_AUTH_USER</b>    | Allows the KIE server to bypass the authenticated user for task related operations e.g. queries. (Sets the org.kie.server.bypass.auth.user system property) | <b>\${KIE_SERVER_BYPASS_AUTH_USER}</b>  |
|            | <b>KIE_SERVER_CONTROLLER_USER</b>     | KIE server controller username. (Sets the org.kie.server.controller.user system property)                                                                   | <b>\${KIE_SERVER_CONTROLLER_USER}</b>   |
|            | <b>KIE_SERVER_CONTROLLER_PWD</b>      | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)                                                                    | <b>\${KIE_SERVER_CONTROLLER_PWD}</b>    |
|            | <b>KIE_SERVER_CONTROLLER_TOKEN</b>    | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property)                                           | <b>\${KIE_SERVER_CONTROLLER_TOKEN}</b>  |
|            | <b>KIE_SERVER_CONTROLLER_SERVICE</b>  | –                                                                                                                                                           | <b>\${APPLICATION_NAME}-rhdmcenr</b>    |
|            | <b>KIE_SERVER_CONTROLLER_PROTOCOL</b> | –                                                                                                                                                           | ws                                      |
|            | <b>KIE_SERVER_ID</b>                  | –                                                                                                                                                           | <b>\${APPLICATION_NAME}-kieserver</b>   |
|            | <b>KIE_SERVER_ROUTE_NAME</b>          | –                                                                                                                                                           | <b>\${APPLICATION_NAME}-kieserver</b>   |

| Deployment | Variable name                           | Description                                                                                                                                                                                                                                     | Example value                                 |
|------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
|            | <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | If true, the KIE server will use secure-<br><application-name>-kieserver vs.<br><application-name>-kieserver as the KIE server route endpoint for Decision Central to report. Therefore, Decision Central displays the secure link to the user. | <b>`\${KIE_SERVER_USE_SECURE_ROUTE_NAME}`</b> |
|            | <b>KIE_SERVER_PWD</b>                   | KIE server password.<br>(Sets the org.kie.server.pwd system property)                                                                                                                                                                           | <b>`\${KIE_SERVER_PWD}`</b>                   |
|            | <b>KIE_SERVER_USER</b>                  | KIE server username.<br>(Sets the org.kie.server.user system property)                                                                                                                                                                          | <b>`\${KIE_SERVER_USER}`</b>                  |
|            | <b>MAVEN_MIRROR_URL</b>                 | Maven mirror that Decision Central and KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for building and deploying your services.                                                       | <b>`\${MAVEN_MIRROR_URL}`</b>                 |
|            | <b>MAVEN_MIRROR_OFF</b>                 | Maven mirror configuration for KIE server.                                                                                                                                                                                                      | <b>`\${MAVEN_MIRROR_OFF}`</b>                 |
|            | <b>MAVEN_REPOS</b>                      | –                                                                                                                                                                                                                                               | RHDMCENTR,EXTERNAL                            |
|            | <b>RHDMCENTR_MAVEN_REPO_ID</b>          | –                                                                                                                                                                                                                                               | repo-rhdmcentr                                |
|            | <b>RHDMCENTR_MAVEN_REPO_SERVICE</b>     | –                                                                                                                                                                                                                                               | <b>`\${APPLICATION_NAME}`-rhdmcentr</b>       |
|            | <b>RHDMCENTR_MAVEN_REPO_PATH</b>        | –                                                                                                                                                                                                                                               | <b>/maven2/</b>                               |

| Deployment | Variable name                        | Description                                                                                                                                                                                                                                                                                                                          | Example value                                |
|------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
|            | <b>RHDMCENTR_MAVEN_REPO_USERNAME</b> | Username to access the Maven service hosted by Decision Central inside EAP.                                                                                                                                                                                                                                                          | <b>`\${DECISION_CENTRAL_MAVEN_USERNAME}`</b> |
|            | <b>RHDMCENTR_MAVEN_REPO_PASSWORD</b> | Password to access the Maven service hosted by Decision Central inside EAP.                                                                                                                                                                                                                                                          | <b>`\${DECISION_CENTRAL_MAVEN_PASSWORD}`</b> |
|            | <b>EXTERNAL_MAVEN_REPO_ID</b>        | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*,!repo-rhdmcentr,!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. | <b>`\${MAVEN_REPO_ID}`</b>                   |
|            | <b>EXTERNAL_MAVEN_REPO_URL</b>       | Fully qualified URL to a Maven repository or service.                                                                                                                                                                                                                                                                                | <b>`\${MAVEN_REPO_URL}`</b>                  |
|            | <b>EXTERNAL_MAVEN_REPO_USERNAME</b>  | Username to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | <b>`\${MAVEN_REPO_USERNAME}`</b>             |
|            | <b>EXTERNAL_MAVEN_REPO_PASSWORD</b>  | Password to access the Maven repository, if required.                                                                                                                                                                                                                                                                                | <b>`\${MAVEN_REPO_PASSWORD}`</b>             |
|            | <b>HTTPS_KEYSTORE_DIR</b>            | –                                                                                                                                                                                                                                                                                                                                    | <b>/etc/kieserver-secret-volume</b>          |
|            | <b>HTTPS_KEYSTORE</b>                | The name of the keystore file within the secret.                                                                                                                                                                                                                                                                                     | <b>`\${KIE_SERVER_HTTPS_KEYSTORE}`</b>       |

| Deployment | Variable name                                 | Description                                                                                                                                                   | Example value                                       |
|------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|            | <b>HTTPS_NAME</b>                             | The name associated with the server certificate.                                                                                                              | <b>`\${KIE_SERVER_HTTPS_NAME}`</b>                  |
|            | <b>HTTPS_PASSWORD</b>                         | The password for the keystore and certificate.                                                                                                                | <b>`\${KIE_SERVER_HTTPS_PASSWORD}`</b>              |
|            | <b>SSO_URL</b>                                | RH-SSO URL.                                                                                                                                                   | <b>`\${SSO_URL}`</b>                                |
|            | <b>SSO_OPENIDCONNECT_DEPLOYMENTS</b>          | –                                                                                                                                                             | ROOT.war                                            |
|            | <b>SSO_REALM</b>                              | RH-SSO Realm name.                                                                                                                                            | <b>`\${SSO_REALM}`</b>                              |
|            | <b>SSO_SECRET</b>                             | KIE Server RH-SSO Client Secret.                                                                                                                              | <b>`\${KIE_SERVER_SSO_SECRET}`</b>                  |
|            | <b>SSO_CLIENT</b>                             | KIE Server RH-SSO Client name.                                                                                                                                | <b>`\${KIE_SERVER_SSO_CLIENT}`</b>                  |
|            | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist.                                                                                    | <b>`\${SSO_USERNAME}`</b>                           |
|            | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                                                                                                        | <b>`\${SSO_PASSWORD}`</b>                           |
|            | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                                                                                                    | <b>`\${SSO_DISABLE_SSL_CERTIFICATE_VALIDATION}`</b> |
|            | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                                                                                                                | <b>`\${SSO_PRINCIPAL_ATTRIBUTE}`</b>                |
|            | <b>HOSTNAME_HTTP</b>                          | Custom hostname for http service route for KIE Server. Leave blank for default hostname, e.g.: <application-name>-kieserver-<project>.<default-domain-suffix> | <b>`\${KIE_SERVER_HOSTNAME_HTTP}`</b>               |

| Deployment | Variable name                         | Description                                                                                                                                                                                                                                                            | Example value                               |
|------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|            | <b>HOSTNAME_HTTPS</b>                 | Custom hostname for https service route for KIE Server. Leave blank for default hostname, e.g.: secure-<br><application-name>-<br>kieserver-<project>.<br><default-domain-suffix>                                                                                      | <b>`\${KIE_SERVER_HOSTNAME_HTTPS}`</b>      |
|            | <b>AUTH_LDAP_URL</b>                  | LDAP Endpoint to connect for authentication.                                                                                                                                                                                                                           | <b>`\${AUTH_LDAP_URL}`</b>                  |
|            | <b>AUTH_LDAP_BIND_DN</b>              | Bind DN used for authentication.                                                                                                                                                                                                                                       | <b>`\${AUTH_LDAP_BIND_DN}`</b>              |
|            | <b>AUTH_LDAP_BIND_CREDENTIAL</b>      | LDAP Credentials used for authentication.                                                                                                                                                                                                                              | <b>`\${AUTH_LDAP_BIND_CREDENTIAL}`</b>      |
|            | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b> | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password.                                                                                                                                                                                             | <b>`\${AUTH_LDAP_JAAS_SECURITY_DOMAIN}`</b> |
|            | <b>AUTH_LDAP_BASE_CTX_DN</b>          | LDAP Base DN of the top-level context to begin the user search.                                                                                                                                                                                                        | <b>`\${AUTH_LDAP_BASE_CTX_DN}`</b>          |
|            | <b>AUTH_LDAP_BASE_FILTER</b>          | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. A common example for the search filter is (uid={0}). | <b>`\${AUTH_LDAP_BASE_FILTER}`</b>          |
|            | <b>AUTH_LDAP_SEARCH_SCOPE</b>         | The search scope to use.                                                                                                                                                                                                                                               | <b>`\${AUTH_LDAP_SEARCH_SCOPE}`</b>         |
|            | <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>    | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                 | <b>`\${AUTH_LDAP_SEARCH_TIME_LIMIT}`</b>    |

| Deployment | Variable name                                 | Description                                                                                                                                                                                                                                                                      | Example value                                                  |
|------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
|            | <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used. | <b><code>\${AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE}</code></b> |
|            | <b>AUTH_LDAP_PARSE_USERNAME</b>               | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> .  | <b><code>\${AUTH_LDAP_PARSE_USERNAME}</code></b>               |
|            | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b>        | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                            | <b><code>\${AUTH_LDAP_USERNAME_BEGIN_STRING}</code></b>        |
|            | <b>AUTH_LDAP_USERNAME_END_STRING</b>          | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                              | <b><code>\${AUTH_LDAP_USERNAME_END_STRING}</code></b>          |

| Deployment | Variable name                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Example value                            |
|------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b> | Name of the attribute containing the user roles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>`\${AUTH_LDAP_ROLE_ATTRIBUTE_ID}`</b> |
|            | <b>AUTH_LDAP_ROLE_S_CTX_DN</b>     | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is.                                                                                                                                                                                                                                                     | <b>`\${AUTH_LDAP_ROLE_S_CTX_DN}`</b>     |
|            | <b>AUTH_LDAP_ROLE_FILTER</b>       | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a <code>{0}</code> expression is used. The authenticated userDN is substituted into the filter anywhere a <code>{1}</code> is used. An example search filter that matches on the input username is <code>(member={0})</code> . An alternative that matches on the authenticated userDN is <code>(member={1})</code> . | <b>`\${AUTH_LDAP_ROLE_FILTER}`</b>       |
|            | <b>AUTH_LDAP_ROLE_RECURSION</b>    | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                                                                                                                                                                                                                                                         | <b>`\${AUTH_LDAP_ROLE_RECURSION}`</b>    |
|            | <b>AUTH_LDAP_DEFAULT_ROLE</b>      | A role included for all authenticated users                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>`\${AUTH_LDAP_DEFAULT_ROLE}`</b>      |

| Deployment | Variable name                            | Description                                                                                                                                                                                                                                                                                             | Example value                                |
|------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
|            | <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributesDN property is set to true, this property is used to find the role object's name attribute.                                                                                                       | <b>\${AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID}</b>  |
|            | <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | A flag indicating if the DN returned by a query contains the roleNameAttributeID. If set to true, the DN is checked for the roleNameAttributeID. If set to false, the DN is not checked for the roleNameAttributeID. This flag can improve the performance of LDAP queries.                             | <b>\${AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN}</b> |
|            | <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>    | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttributeID attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true. | <b>\${AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN}</b>    |

| Deployment                           | Variable name                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Example value                                            |
|--------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
|                                      | <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. | <b>\${AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK}</b> |
|                                      | <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b>             | When present, the RoleMapping Login Module will be configured to use the provided file. This parameter defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is original_role=role1,role2,role3                                                                                                                                        | <b>\${AUTH_ROLE_MAPPER_ROLES_PROPERTIES}</b>             |
|                                      | <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>                 | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                                                                                                                                                                   | <b>\${AUTH_ROLE_MAPPER_REPLACE_ROLE}</b>                 |
| <b>\${APPLICATION_NAME}-rhdindex</b> | <b>ES_CLUSTER_NAME</b>                               | Sets the ES cluster.name and configure it on Decision Central. Defaults to kie-cluster.                                                                                                                                                                                                                                                                                                                            | <b>\${APPFORMER_ELASTIC_CLUSTER_NAME}</b>                |
|                                      | <b>ES_NODE_NAME</b>                                  | Sets the ES node.name property. Defaults to HOSTNAME env value.                                                                                                                                                                                                                                                                                                                                                    | <b>\${ES_NODE_NAME}</b>                                  |

| Deployment | Variable name                | Description                                                                                                                                                                                  | Example value                     |
|------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
|            | <b>ES_TRANSPORT_HOST</b>     | Sets the ES transport.host property. This will set the transport address of the main ES cluster node. Used for communication between nodes in the cluster. Defaults to container address.    | <b>\${ES_TRANSPORT_HOST}</b>      |
|            | <b>ES_TRANSPORT_TCP_PORT</b> | Sets the ES http.host property. This will set the http address of the main ES cluster node. Used for communication between nodes in the cluster and for communication with Decision Central. | <b>\${APPFORMER_ELASTIC_PORT}</b> |
|            | <b>ES_HTTP_PORT</b>          | Sets the ES http.port property. This will set the http port of the main ES cluster node. Used to interact with the cluster REST API.                                                         | <b>\${ES_HTTP_PORT}</b>           |
|            | <b>ES_HTTP_HOST</b>          | Sets the ES http.host property. This will set the http address of the main ES cluster node. Used to interact with the cluster REST API. Defaults to the container IP address.                | <b>\${ES_HTTP_HOST}</b>           |
|            | <b>ES_JAVA_OPTS</b>          | Appends custom jvm configurations/properties to ES jvm.options configuration file.                                                                                                           | <b>\${ES_JAVA_OPTS}</b>           |

#### 4.2.2.3.3.7. Volumes

| Deployment                            | Name                            | mountPath                                 | Purpose   | readOnly |
|---------------------------------------|---------------------------------|-------------------------------------------|-----------|----------|
| <b>\${APPLICATION_NAME}-rhdmcentr</b> | decisioncentral-keystore-volume | <b>/etc/decisioncentral-secret-volume</b> | ssl certs | True     |

| Deployment                              | Name                                         | mountPath                           | Purpose     | readOnly |
|-----------------------------------------|----------------------------------------------|-------------------------------------|-------------|----------|
| <b>\${APPLICATION_NAME}-kieserver</b>   | kieserver-keystore-volume                    | <b>/etc/kieserver-secret-volume</b> | ssl certs   | True     |
| <b>\${APPLICATION_NAME}-rhdminindex</b> | <b>\${APPLICATION_NAME}-rhdminindex-pvol</b> | <b>/opt/elasticsearch/data</b>      | rhdminindex | false    |

#### 4.2.2.4. External Dependencies

##### 4.2.2.4.1. Volume Claims

A **PersistentVolume** object is a storage resource in an OpenShift cluster. Storage is provisioned by an administrator by creating **PersistentVolume** objects from sources such as GCE Persistent Disks, AWS Elastic Block Stores (EBS), and NFS mounts. Refer to the [OpenShift documentation](#) for more information.

| Name                                          | Access Mode   |
|-----------------------------------------------|---------------|
| <b>\${APPLICATION_NAME}-rhdminindex-claim</b> | ReadWriteMany |
| <b>\${APPLICATION_NAME}-rhdminindex-claim</b> | ReadWriteOnce |

##### 4.2.2.4.2. Secrets

This template requires the following secrets to be installed for the application to run.

decisioncentral-app-secret kieserver-app-secret

##### 4.2.2.4.3. Clustering

Clustering in OpenShift EAP is achieved through one of two discovery mechanisms: Kubernetes or DNS. This is done by configuring the JGroups protocol stack in standalone-openshift.xml with either the **<openshift.KUBE\_PING/>** or **<openshift.DNS\_PING/>** elements. The templates are configured to use **DNS\_PING**, however ``KUBE_PING`` is the default used by the image.

The discovery mechanism used is specified by the **JGROUPS\_PING\_PROTOCOL** environment variable which can be set to either **openshift.DNS\_PING** or **openshift.KUBE\_PING**. **openshift.KUBE\_PING** is the default used by the image if no value is specified for **JGROUPS\_PING\_PROTOCOL**.

For **DNS\_PING** to work, the following steps must be taken:

1. The **OPENSIFT\_DNS\_PING\_SERVICE\_NAME** environment variable must be set to the name of the ping service for the cluster (see table above). If not set, the server will act as if it is a single-node cluster (a "cluster of one").
2. The **OPENSIFT\_DNS\_PING\_SERVICE\_PORT** environment variables should be set to the port number on which the ping service is exposed (see table above). The **DNS\_PING** protocol will attempt to discern the port from the SRV records, if it can, otherwise it will default to 8888.

3. A ping service which exposes the ping port must be defined. This service should be "headless" (ClusterIP=None) and must have the following:
  - a. The port must be named for port discovery to work.
  - b. It must be annotated with **service.alpha.kubernetes.io/tolerate-unready-endpoints** set to **"true"**. Omitting this annotation will result in each node forming their own "cluster of one" during startup, then merging their cluster into the other nodes' clusters after startup (as the other nodes are not detected until after they have started).

### Example ping service for use with DNS\_PING

```
kind: Service
apiVersion: v1
spec:
  clusterIP: None
  ports:
  - name: ping
    port: 8888
  selector:
    deploymentConfig: eap-app
metadata:
  name: eap-app-ping
  annotations:
    service.alpha.kubernetes.io/tolerate-unready-endpoints: "true"
    description: "The JGroups ping port for clustering."
```

For **KUBE\_PING** to work, the following steps must be taken:

1. The **OPENSIFT\_KUBE\_PING\_NAMESPACE** environment variable must be set (see table above). If not set, the server will act as if it is a single-node cluster (a "cluster of one").
2. The **OPENSIFT\_KUBE\_PING\_LABELS** environment variables should be set (see table above). If not set, pods outside of your application (albeit in your namespace) will try to join.
3. Authorization must be granted to the service account the pod is running under to be allowed to access Kubernetes' REST api. This is done on the command line.

#### Example 4.1. Policy commands

Using the default service account in the myproject namespace:

```
oc policy add-role-to-user view system:serviceaccount:myproject:default -n myproject
```

Using the eap-service-account in the myproject namespace:

```
oc policy add-role-to-user view system:serviceaccount:myproject:eap-service-account -n myproject
```

## 4.3. RHDM73-KIESERVER.YAML TEMPLATE

Application template for a managed KIE Server, for Red Hat Decision Manager 7.3

### 4.3.1. Parameters

Templates allow you to define parameters which take on a value. That value is then substituted wherever the parameter is referenced. References can be defined in any text field in the objects list field. Refer to the [Openshift documentation](#) for more information.

| Variable name           | Image Environment Variable    | Description                                                                                                                                                                                                                                                                                                                          | Example value | Required |
|-------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>APPLICATION_NAME</b> | –                             | The name for the application.                                                                                                                                                                                                                                                                                                        | myapp         | True     |
| <b>MAVEN_MIRROR_URL</b> | <b>MAVEN_MIRROR_URL</b>       | Maven mirror that KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for deploying your services.                                                                                                                                                                              | –             | False    |
| <b>MAVEN_MIRROR_OF</b>  | <b>MAVEN_MIRROR_OF</b>        | Maven mirror configuration for KIE server.                                                                                                                                                                                                                                                                                           | external:*    | False    |
| <b>MAVEN_REPO_ID</b>    | <b>EXTERNAL_MAVEN_REPO_ID</b> | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*,!repo-rhdmcentr,!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. | repo-custom   | False    |

| Variable name                          | Image Environment Variable             | Description                                                                                       | Example value                                                                                                                                                               | Required |
|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>MAVEN_REPO_URL</b>                  | <b>EXTERNAL_MAVEN_REPO_URL</b>         | Fully qualified URL to a Maven repository or service.                                             | <a href="http://nexus.nexus-project.svc.cluster.local:8081/nexus/content/groups/public/">http://nexus.nexus-project.svc.cluster.local:8081/nexus/content/groups/public/</a> | True     |
| <b>MAVEN_REPO_USERNAME</b>             | <b>EXTERNAL_MAVEN_REPO_USERNAME</b>    | Username to access the Maven repository, if required.                                             | –                                                                                                                                                                           | False    |
| <b>MAVEN_REPO_PASSWORD</b>             | <b>EXTERNAL_MAVEN_REPO_PASSWORD</b>    | Password to access the Maven repository, if required.                                             | –                                                                                                                                                                           | False    |
| <b>DECISION_CENTRAL_MAVEN_SERVICE</b>  | <b>RHDMCENTRAL_MAVEN_REPO_SERVICE</b>  | The OpenShift service name for the optional Decision Central (for maven repo usage), if required. | myapp-rhdmcentr                                                                                                                                                             | False    |
| <b>DECISION_CENTRAL_MAVEN_USERNAME</b> | <b>RHDMCENTRAL_MAVEN_REPO_USERNAME</b> | Username to access the Maven service hosted by Decision Central inside EAP.                       | mavenUser                                                                                                                                                                   | False    |
| <b>DECISION_CENTRAL_MAVEN_PASSWORD</b> | <b>RHDMCENTRAL_MAVEN_REPO_PASSWORD</b> | Password to access the Maven service hosted by Decision Central inside EAP.                       | maven1!                                                                                                                                                                     | False    |
| <b>KIE_ADMIN_USER</b>                  | <b>KIE_ADMIN_USER</b>                  | KIE administrator username.                                                                       | adminUser                                                                                                                                                                   | False    |
| <b>KIE_ADMIN_PASSWORD</b>              | <b>KIE_ADMIN_PASSWORD</b>              | KIE administrator password.                                                                       | –                                                                                                                                                                           | False    |

| Variable name                       | Image Environment Variable | Description                                                                                                                                                                                                                                                    | Example value              | Required |
|-------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------|
| <b>KIE_SERVER_USER</b>              | <b>KIE_SERVER_USER</b>     | KIE server username. (Sets the org.kie.server.user system property)                                                                                                                                                                                            | executionUser              | False    |
| <b>KIE_SERVER_PASSWORD</b>          | <b>KIE_SERVER_PASSWORD</b> | KIE server password. (Sets the org.kie.server.pwd system property)                                                                                                                                                                                             | –                          | False    |
| <b>IMAGE_STREAM_NAMESPACE</b>       | –                          | Namespace in which the ImageStreams for Red Hat Middleware images are installed. These ImageStreams are normally installed in the openshift namespace. You should only need to modify this if you installed the ImageStreams in a different namespace/project. | openshift                  | True     |
| <b>KIE_SERVER_IMAGE_STREAM_NAME</b> | –                          | The name of the image stream to use for KIE server. Default is "rhdm73-kieserver-openshift".                                                                                                                                                                   | rhdm73-kieserver-openshift | True     |
| <b>IMAGE_STREAM_TAG</b>             | –                          | A named pointer to an image in an image stream. Default is "1.1".                                                                                                                                                                                              | 1.1                        | True     |

| Variable name                         | Image Environment Variable            | Description                                                                                                                                                                       | Example value                            | Required |
|---------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------|
| <b>KIE_SERVER_CONTROLLER_USER</b>     | <b>KIE_SERVER_CONTROLLER_USER</b>     | KIE server controller username. (Sets the org.kie.server.controller.user system property)                                                                                         | controllerUser                           | False    |
| <b>KIE_SERVER_CONTROLLER_PASSWORD</b> | <b>KIE_SERVER_CONTROLLER_PASSWORD</b> | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)                                                                                          | –                                        | False    |
| <b>KIE_SERVER_CONTROLLER_TOKEN</b>    | <b>KIE_SERVER_CONTROLLER_TOKEN</b>    | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property)                                                                 | –                                        | False    |
| <b>KIE_SERVER_CONTROLLER_SERVICE</b>  | <b>KIE_SERVER_CONTROLLER_SERVICE</b>  | The service name for the optional standalone controller. The application uses this service name to register with the controller. (If set, will be used to discover host and port) | –                                        | False    |
| <b>KIE_SERVER_CONTROLLER_HOST</b>     | <b>KIE_SERVER_CONTROLLER_HOST</b>     | KIE server controller host. (Used to set the org.kie.server.controller system property)                                                                                           | my-app-controller-ocpuser.os.example.com | False    |

| Variable name                       | Image Environment Variable          | Description                                                                                                                                                                                                                                                                          | Example value     | Required |
|-------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------|
| <b>KIE_SERVER_CONTROLLER_PORT</b>   | <b>KIE_SERVER_CONTROLLER_PORT</b>   | KIE server controller port. (Used to set the org.kie.server.controller.system property)                                                                                                                                                                                              | 8080              | False    |
| <b>KIE_SERVER_MODE</b>              | <b>KIE_SERVER_MODE</b>              | The KIE Server mode. Valid values are 'DEVELOPMENT' or 'PRODUCTION'. In production mode, you can not deploy SNAPSHOT versions of artifacts on the KIE server and can not change the version of an artifact in an existing container. (Sets the org.kie.server.mode system property). | <b>PRODUCTION</b> | False    |
| <b>KIE_MBEANS</b>                   | <b>KIE_MBEANS</b>                   | KIE server mbeans enabled/disabled. (Sets the kie.mbeans and kie.scanner.mbeans system properties)                                                                                                                                                                                   | enabled           | False    |
| <b>DROOLS_SERVER_FILTER_CLASSES</b> | <b>DROOLS_SERVER_FILTER_CLASSES</b> | KIE server class filtering. (Sets the org.drools.server.filter.classes system property)                                                                                                                                                                                              | true              | False    |

| Variable name                           | Image Environment Variable              | Description                                                                                                                                                                                                                              | Example value        | Required |
|-----------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------|
| <b>KIE_SERVER_HOSTNAME_HTTP</b>         | <b>HOSTNAME_HTTP</b>                    | Custom hostname for http service route. Leave blank for default hostname, e.g.: <application-name>-kieserver-<project>.<default-domain-suffix>                                                                                           | –                    | False    |
| <b>KIE_SERVER_HOSTNAME_HTTPS</b>        | <b>HOSTNAME_HTTPS</b>                   | Custom hostname for https service route. Leave blank for default hostname, e.g.: secure-<application-name>-kieserver-<project>.<default-domain-suffix>                                                                                   | –                    | False    |
| <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | If true, the KIE server will use secure-<application-name>-kieserver vs. <application-name>-kieserver as the KIE server route endpoint for Decision Central to report. Therefore, Decision Central displays the secure link to the user. | false                | False    |
| <b>KIE_SERVER_HTTPS_SECRET</b>          | –                                       | The name of the secret containing the keystore file.                                                                                                                                                                                     | kieserver-app-secret | True     |
| <b>KIE_SERVER_HTTPS_KEYSTORE</b>        | <b>HTTPS_KEYSTORE</b>                   | The name of the keystore file within the secret.                                                                                                                                                                                         | keystore.jks         | False    |
| <b>KIE_SERVER_HTTPS_NAME</b>            | <b>HTTPS_NAME</b>                       | The name associated with the server certificate.                                                                                                                                                                                         | jboss                | False    |

| Variable name                          | Image Environment Variable             | Description                                                                                                                                                                                                                                 | Example value                                                                          | Required |
|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------|
| <b>KIE_SERVER_HTTPS_PASSWORD</b>       | <b>HTTPS_PASSWORD</b>                  | The password for the keystore and certificate.                                                                                                                                                                                              | mykeystorepass                                                                         | False    |
| <b>KIE_SERVER_BYPASS_AUTH_USER</b>     | <b>KIE_SERVER_BYPASS_AUTH_USER</b>     | Allows the KIE server to bypass the authenticated user for task related operations e.g. queries. (Sets the org.kie.server.bypass.auth.user system property)                                                                                 | false                                                                                  | False    |
| <b>KIE_SERVER_MEMORY_LIMIT</b>         | –                                      | KIE server Container memory limit.                                                                                                                                                                                                          | 1Gi                                                                                    | False    |
| <b>KIE_SERVER_CONTAINER_DEPLOYMENT</b> | <b>KIE_SERVER_CONTAINER_DEPLOYMENT</b> | KIE Server Container deployment configuration in format: containerId=groupId:artifactId:version c2=g2:a2:v2                                                                                                                                 | rhdm-kieserver-library=org.openshift.quickstarts:rhdm-kieserver-library:1.4.0-SNAPSHOT | False    |
| <b>KIE_SERVER_MGMT_DISABLED</b>        | <b>KIE_SERVER_MGMT_DISABLED</b>        | Disable management api and don't allow KIE containers to be deployed/undeployed or started/stopped. Sets the property org.kie.server.management.api.disabled to true and org.kie.server.startup.strategy to LocalContainersStartupStrategy. | true                                                                                   | False    |

| Variable name                                 | Image Environment Variable                    | Description                                                                                                                                                     | Example value                                                                 | Required |
|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------|
| <b>KIE_SERVER_STARTUP_STRATEGY</b>            | <b>KIE_SERVER_STARTUP_STRATEGY</b>            | When set to LocalContainersStartupStrategy, allows KIE server to start up and function with local config, even when a controller is configured and unavailable. | LocalContainersStartupStrategy                                                | False    |
| <b>SSO_URL</b>                                | <b>SSO_URL</b>                                | RH-SSO URL.                                                                                                                                                     | <a href="https://rh-sso.example.com/auth">https://rh-sso.example.com/auth</a> | False    |
| <b>SSO_REALM</b>                              | <b>SSO_REALM</b>                              | RH-SSO Realm name.                                                                                                                                              | –                                                                             | False    |
| <b>KIE_SERVER_SSO_CLIENT</b>                  | <b>SSO_CLIENT</b>                             | KIE Server RH-SSO Client name.                                                                                                                                  | –                                                                             | False    |
| <b>KIE_SERVER_SSO_SECRET</b>                  | <b>SSO_SECRET</b>                             | KIE Server RH-SSO Client Secret                                                                                                                                 | 252793ed-7118-4ca8-8dab-5622fa97d892                                          | False    |
| <b>SSO_USERNAME</b>                           | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist.                                                                                      | –                                                                             | False    |
| <b>SSO_PASSWORD</b>                           | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                                                                                                          | –                                                                             | False    |
| <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                                                                                                      | false                                                                         | False    |
| <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                                                                                                                  | preferred_username                                                            | False    |

| Variable name                         | Image Environment Variable            | Description                                                                                                                                                                                                                                                            | Example value                        | Required |
|---------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------|
| <b>AUTH_LDAP_URL</b>                  | <b>AUTH_LDAP_URL</b>                  | LDAP Endpoint to connect for authentication.                                                                                                                                                                                                                           | ldap://myldap.example.com            | False    |
| <b>AUTH_LDAP_BIND_DN</b>              | <b>AUTH_LDAP_BIND_DN</b>              | Bind DN used for authentication.                                                                                                                                                                                                                                       | uid=admin,ou=users,ou=example,ou=com | False    |
| <b>AUTH_LDAP_BIND_CREDENTIAL</b>      | <b>AUTH_LDAP_BIND_CREDENTIAL</b>      | LDAP Credentials used for authentication.                                                                                                                                                                                                                              | Password                             | False    |
| <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b> | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b> | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password.                                                                                                                                                                                             | –                                    | False    |
| <b>AUTH_LDAP_BASE_CTX_DN</b>          | <b>AUTH_LDAP_BASE_CTX_DN</b>          | LDAP Base DN of the top-level context to begin the user search.                                                                                                                                                                                                        | ou=users,ou=example,ou=com           | False    |
| <b>AUTH_LDAP_BASE_FILTER</b>          | <b>AUTH_LDAP_BASE_FILTER</b>          | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. A common example for the search filter is (uid={0}). | (uid={0})                            | False    |
| <b>AUTH_LDAP_SEARCH_SCOPE</b>         | <b>AUTH_LDAP_SEARCH_SCOPE</b>         | The search scope to use.                                                                                                                                                                                                                                               | <b>SUBTREE_SCOPE</b>                 | False    |

| Variable name                                 | Image Environment Variable                    | Description                                                                                                                                                                                                                                                                      | Example value     | Required |
|-----------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------|
| <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                           | 10000             | False    |
| <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used. | distinguishedName | False    |
| <b>AUTH_LDAP_PARSE_USERNAME</b>               | <b>AUTH_LDAP_PARSE_USERNAME</b>               | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> .  | true              | False    |

| Variable name                          | Image Environment Variable             | Description                                                                                                                                                                                                                           | Example value         | Required |
|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------|
| <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true. | –                     | False    |
| <b>AUTH_LDAP_USERNAME_END_STRING</b>   | <b>AUTH_LDAP_USERNAME_END_STRING</b>   | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.   | –                     | False    |
| <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | Name of the attribute containing the user roles.                                                                                                                                                                                      | <code>memberOf</code> | False    |

| Variable name                 | Image Environment Variable    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Example value               | Required |
|-------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------|
| <b>AUTH_LDAP_ROLES_CTX_DN</b> | <b>AUTH_LDAP_ROLES_CTX_DN</b> | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is.                                                                                                                                                                                               | ou=groups,ou=example,ou=com | False    |
| <b>AUTH_LDAP_ROLE_FILTER</b>  | <b>AUTH_LDAP_ROLE_FILTER</b>  | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a {0} expression is used. The authenticated userDN is substituted into the filter anywhere a {1} is used. An example search filter that matches on the input username is (member={0}). An alternative that matches on the authenticated userDN is (member={1}). | (memberOf={1})              | False    |

| Variable name                            | Image Environment Variable               | Description                                                                                                                                                                                                                                                                    | Example value | Required |
|------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_ROLE_RECURSION</b>          | <b>AUTH_LDAP_ROLE_RECURSION</b>          | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                    | 1             | False    |
| <b>AUTH_LDAP_DEFAULT_ROLE</b>            | <b>AUTH_LDAP_DEFAULT_ROLE</b>            | A role included for all authenticated users.                                                                                                                                                                                                                                   | guest         | False    |
| <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | <b>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</b>  | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributelsDN property is set to true, this property is used to find the role object's name attribute.                                                                             | name          | False    |
| <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | <b>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</b> | A flag indicating if the DN returned by a query contains the roleNameAttribute ID. If set to true, the DN is checked for the roleNameAttribute ID. If set to false, the DN is not checked for the roleNameAttribute ID. This flag can improve the performance of LDAP queries. | false         | False    |

| Variable name                                        | Image Environment Variable                           | Description                                                                                                                                                                                                                                                                                                                                                                                                        | Example value | Required |
|------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>                | <b>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</b>                | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttributeId attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true.                                                                                                            | false         | False    |
| <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | <b>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. | –             | False    |

| Variable name                            | Image Environment Variable               | Description                                                                                                                                                                                                                                                                             | Example value | Required |
|------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b> | <b>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</b> | When present, the RoleMapping Login Module will be configured to use the provided file. This property defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is <code>original_role=role1,role2,role3</code> | –             | False    |
| <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>     | <b>AUTH_ROLE_MAPPER_REPLACE_ROLE</b>     | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                                        | –             | False    |

### 4.3.2. Objects

The CLI supports various object types. A list of these object types as well as their abbreviations can be found in the [OpenShift documentation](#).

#### 4.3.2.1. Services

A service is an abstraction which defines a logical set of pods and a policy by which to access them. Refer to the [container-engine documentation](#) for more information.

| Service                                    | Port | Name  | Description                            |
|--------------------------------------------|------|-------|----------------------------------------|
| <b>\${APPLICATION_NAME}-kieserver</b>      | 8080 | http  | All the KIE server web server's ports. |
|                                            | 8443 | https |                                        |
| <b>\${APPLICATION_NAME}-kieserver-ping</b> | 8888 | ping  | The JGroups ping port for clustering.  |

#### 4.3.2.2. Routes

A route is a way to expose a service by giving it an externally-reachable hostname such as

**www.example.com**. A defined route and the endpoints identified by its service can be consumed by a router to provide named connectivity from external clients to your applications. Each route consists of a route name, service selector, and (optionally) security configuration. Refer to the [Openshift documentation](#) for more information.

| Service                                     | Security        | Hostname                             |
|---------------------------------------------|-----------------|--------------------------------------|
| <b>\${APPLICATION_NAME}-kieserver-http</b>  | none            | <b>\${KIE_SERVER_HOSTNAME_HTTP}</b>  |
| <b>\${APPLICATION_NAME}-kieserver-https</b> | TLS passthrough | <b>\${KIE_SERVER_HOSTNAME_HTTPS}</b> |

### 4.3.2.3. Deployment Configurations

A deployment in OpenShift is a replication controller based on a user defined template called a deployment configuration. Deployments are created manually or in response to triggered events. Refer to the [Openshift documentation](#) for more information.

#### 4.3.2.3.1. Triggers

A trigger drives the creation of new deployments in response to events, both inside and outside OpenShift. Refer to the [Openshift documentation](#) for more information.

| Deployment                            | Triggers    |
|---------------------------------------|-------------|
| <b>\${APPLICATION_NAME}-kieserver</b> | ImageChange |

#### 4.3.2.3.2. Replicas

A replication controller ensures that a specified number of pod "replicas" are running at any one time. If there are too many, the replication controller kills some pods. If there are too few, it starts more. Refer to the [container-engine documentation](#) for more information.

| Deployment                            | Replicas |
|---------------------------------------|----------|
| <b>\${APPLICATION_NAME}-kieserver</b> | 1        |

#### 4.3.2.3.3. Pod Template

##### 4.3.2.3.3.1. Service Accounts

Service accounts are API objects that exist within each project. They can be created or deleted like any other API object. Refer to the [Openshift documentation](#) for more information.

| Deployment                            | Service Account                       |
|---------------------------------------|---------------------------------------|
| <b>\${APPLICATION_NAME}-kieserver</b> | <b>\${APPLICATION_NAME}-kieserver</b> |

## 4.3.2.3.3.2. Image

| Deployment                            | Image                                   |
|---------------------------------------|-----------------------------------------|
| <b>\${APPLICATION_NAME}-kieserver</b> | <b>\${KIE_SERVER_IMAGE_STREAM_NAME}</b> |

## 4.3.2.3.3.3. Readiness Probe

**\${APPLICATION\_NAME}-kieserver**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/services/rest/server/readycheck
```

## 4.3.2.3.3.4. Liveness Probe

**\${APPLICATION\_NAME}-kieserver**

```
/bin/bash -c curl --fail --silent -u '${KIE_ADMIN_USER}:${KIE_ADMIN_PWD}'
http://localhost:8080/services/rest/server/healthcheck
```

## 4.3.2.3.3.5. Exposed Ports

| Deployments                           | Name    | Port | Protocol   |
|---------------------------------------|---------|------|------------|
| <b>\${APPLICATION_NAME}-kieserver</b> | jolokia | 8778 | <b>TCP</b> |
|                                       | http    | 8080 | <b>TCP</b> |
|                                       | https   | 8443 | <b>TCP</b> |
|                                       | ping    | 8888 | <b>TCP</b> |

## 4.3.2.3.3.6. Image Environment Variables

| Deployment                            | Variable name         | Description                 | Example value             |
|---------------------------------------|-----------------------|-----------------------------|---------------------------|
| <b>\${APPLICATION_NAME}-kieserver</b> | <b>KIE_ADMIN_USER</b> | KIE administrator username. | <b>\${KIE_ADMIN_USER}</b> |
|                                       | <b>KIE_ADMIN_PWD</b>  | KIE administrator password. | <b>\${KIE_ADMIN_PWD}</b>  |

| Deployment | Variable name                       | Description                                                                                                                                                                                                                                                                          | Example value                             |
|------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|            | <b>KIE_SERVER_MODE</b>              | The KIE Server mode. Valid values are 'DEVELOPMENT' or 'PRODUCTION'. In production mode, you can not deploy SNAPSHOT versions of artifacts on the KIE server and can not change the version of an artifact in an existing container. (Sets the org.kie.server.mode system property). | <b>`\${KIE_SERVER_MODE}`</b>              |
|            | <b>KIE_MBEANS</b>                   | KIE server mbeans enabled/disabled. (Sets the kie.mbeans and kie.scanner.mbeans system properties)                                                                                                                                                                                   | <b>`\${KIE_MBEANS}`</b>                   |
|            | <b>DROOLS_SERVER_FILTER_CLASSES</b> | KIE server class filtering. (Sets the org.drools.server.filter.classes system property)                                                                                                                                                                                              | <b>`\${DROOLS_SERVER_FILTER_CLASSES}`</b> |
|            | <b>KIE_SERVER_BYPASS_AUTH_USER</b>  | Allows the KIE server to bypass the authenticated user for task related operations e.g. queries. (Sets the org.kie.server.bypass.auth.user system property)                                                                                                                          | <b>`\${KIE_SERVER_BYPASS_AUTH_USER}`</b>  |
|            | <b>KIE_SERVER_CONTROLLER_USER</b>   | KIE server controller username. (Sets the org.kie.server.controller.user system property)                                                                                                                                                                                            | <b>`\${KIE_SERVER_CONTROLLER_USER}`</b>   |
|            | <b>KIE_SERVER_CONTROLLER_PWD</b>    | KIE server controller password. (Sets the org.kie.server.controller.pwd system property)                                                                                                                                                                                             | <b>`\${KIE_SERVER_CONTROLLER_PWD}`</b>    |
|            | <b>KIE_SERVER_CONTROLLER_TOKEN</b>  | KIE server controller token for bearer authentication. (Sets the org.kie.server.controller.token system property)                                                                                                                                                                    | <b>`\${KIE_SERVER_CONTROLLER_TOKEN}`</b>  |

| Deployment | Variable name                           | Description                                                                                                                                                                                                                                     | Example value                               |
|------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
|            | <b>KIE_SERVER_CONTROLLER_SERVICE</b>    | The service name for the optional standalone controller. The application uses this service name to register with the controller. (If set, will be used to discover host and port)                                                               | <b>\${KIE_SERVER_CONTROLLER_SERVICE}</b>    |
|            | <b>KIE_SERVER_CONTROLLER_PROTOCOL</b>   | –                                                                                                                                                                                                                                               | ws                                          |
|            | <b>KIE_SERVER_CONTROLLER_HOST</b>       | KIE server controller host. (Used to set the org.kie.server.controller system property)                                                                                                                                                         | <b>\${KIE_SERVER_CONTROLLER_HOST}</b>       |
|            | <b>KIE_SERVER_CONTROLLER_PORT</b>       | KIE server controller port. (Used to set the org.kie.server.controller system property)                                                                                                                                                         | <b>\${KIE_SERVER_CONTROLLER_PORT}</b>       |
|            | <b>KIE_SERVER_ID</b>                    | –                                                                                                                                                                                                                                               | <b>\${APPLICATION_NAME}-kieserver</b>       |
|            | <b>KIE_SERVER_ROUTE_NAME</b>            | –                                                                                                                                                                                                                                               | <b>\${APPLICATION_NAME}-kieserver</b>       |
|            | <b>KIE_SERVER_USE_SECURE_ROUTE_NAME</b> | If true, the KIE server will use secure-<br><application-name>-kieserver vs.<br><application-name>-kieserver as the KIE server route endpoint for Decision Central to report. Therefore, Decision Central displays the secure link to the user. | <b>\${KIE_SERVER_USE_SECURE_ROUTE_NAME}</b> |
|            | <b>KIE_SERVER_USER</b>                  | KIE server username. (Sets the org.kie.server.user system property)                                                                                                                                                                             | <b>\${KIE_SERVER_USER}</b>                  |

| Deployment | Variable name                              | Description                                                                                     | Example value                                                                                                                                           |
|------------|--------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b>KIE_SERVER_PWD</b>                      | KIE server password.<br>(Sets the org.kie.server.pwd system property)                           | <b>\${KIE_SERVER_PWD}</b>                                                                                                                               |
|            | <b>KIE_SERVER_CONTAINER_DEPLOYMENT</b>     | KIE Server Container deployment configuration in format: containerId=groupId:artifactId:version | c2=g2:a2:v2                                                                                                                                             |
|            | <b>\${KIE_SERVER_CONTAINER_DEPLOYMENT}</b> | <b>MAVEN_MIRROR_URL</b>                                                                         | Maven mirror that KIE server must use. If you configure a mirror, this mirror must contain all artifacts that are required for deploying your services. |
|            | <b>\${MAVEN_MIRROR_URL}</b>                | <b>MAVEN_MIRROR_OFF</b>                                                                         | Maven mirror configuration for KIE server.                                                                                                              |
|            | <b>\${MAVEN_MIRROR_OFF}</b>                | <b>MAVEN_REPOS</b>                                                                              | –                                                                                                                                                       |
|            | RHDMCENTR,EXTERNAL                         | <b>RHDMCENTR_MAVEN_REPO_ID</b>                                                                  | –                                                                                                                                                       |
|            | repo-rhdmcentr                             | <b>RHDMCENTR_MAVEN_REPO_SERVICE</b>                                                             | The OpenShift service name for the optional Decision Central (for maven repo usage), if required.                                                       |
|            | <b>\${DECISION_CENTRAL_MAVEN_SERVICE}</b>  | <b>RHDMCENTR_MAVEN_REPO_PATH</b>                                                                | –                                                                                                                                                       |
|            | /maven2/                                   | <b>RHDMCENTR_MAVEN_REPO_USERNAME</b>                                                            | Username to access the Maven service hosted by Decision Central inside EAP.                                                                             |
|            | <b>\${DECISION_CENTRAL_MAVEN_USERNAME}</b> | <b>RHDMCENTR_MAVEN_REPO_PASSWORD</b>                                                            | Password to access the Maven service hosted by Decision Central inside EAP.                                                                             |

| Deployment | Variable name                                           | Description                         | Example value                                                                                                                                                                                                                                                                                                                        |
|------------|---------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b><code>\${DECISION_CENTRAL_MAVEN_PASSWORD}</code></b> | <b>EXTERNAL_MAVEN_REPO_ID</b>       | The id to use for the maven repository. If set, it can be excluded from the optionally configured mirror by adding it to MAVEN_MIRROR_OF. For example: external:*,!repo-rhdmcentr,!repo-custom. If MAVEN_MIRROR_URL is set but MAVEN_MIRROR_ID is not set, an id will be generated randomly, but won't be usable in MAVEN_MIRROR_OF. |
|            | <b><code>\${MAVEN_REPO_ID}</code></b>                   | <b>EXTERNAL_MAVEN_REPO_URL</b>      | Fully qualified URL to a Maven repository or service.                                                                                                                                                                                                                                                                                |
|            | <b><code>\${MAVEN_REPO_URL}</code></b>                  | <b>EXTERNAL_MAVEN_REPO_USERNAME</b> | Username to access the Maven repository, if required.                                                                                                                                                                                                                                                                                |
|            | <b><code>\${MAVEN_REPO_USERNAME}</code></b>             | <b>EXTERNAL_MAVEN_REPO_PASSWORD</b> | Password to access the Maven repository, if required.                                                                                                                                                                                                                                                                                |
|            | <b><code>\${MAVEN_REPO_PASSWORD}</code></b>             | <b>KIE_SERVER_MGMT_DISABLED</b>     | Disable management api and don't allow KIE containers to be deployed/undeployed or started/stopped. Sets the property org.kie.server.mgmt.api.disabled to true and org.kie.server.startup.strategy to LocalContainersStartupStrategy.                                                                                                |

| Deployment | Variable name                              | Description                           | Example value                                                                                                                                                    |
|------------|--------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b>\${KIE_SERVER_MGMT_DISABLED}</b>        | <b>KIE_SERVER_STARTUP_STRATEGY</b>    | When set to LocalContainersStartup Strategy, allows KIE server to start up and function with local config, even when a controller is configured and unavailable. |
|            | <b>\${KIE_SERVER_STARTUP_STRATEGY}</b>     | <b>HTTPS_KEYSTORE_DIR</b>             | –                                                                                                                                                                |
|            | <b>/etc/kieserver-secret-volume</b>        | <b>HTTPS_KEYSTORE</b>                 | The name of the keystore file within the secret.                                                                                                                 |
|            | <b>\${KIE_SERVER_HTTPS_KEYSTORE}</b>       | <b>HTTPS_NAME</b>                     | The name associated with the server certificate.                                                                                                                 |
|            | <b>\${KIE_SERVER_HTTPS_NAME}</b>           | <b>HTTPS_PASSWORD</b>                 | The password for the keystore and certificate.                                                                                                                   |
|            | <b>\${KIE_SERVER_HTTPS_PASSWORD}</b>       | <b>JGROUPS_PING_PROTOCOL</b>          | –                                                                                                                                                                |
|            | <b>openshift.DNS_PING</b>                  | <b>OPENSIFT_DNS_PING_SERVICE_NAME</b> | –                                                                                                                                                                |
|            | <b>\${APPLICATION_NAME}-kieserver-ping</b> | <b>OPENSIFT_DNS_PING_SERVICE_PORT</b> | –                                                                                                                                                                |
|            | <b>8888</b>                                | <b>SSO_URL</b>                        | RH-SSO URL.                                                                                                                                                      |
|            | <b>\${SSO_URL}</b>                         | <b>SSO_OPENIDCONNECT_DEPLOYMENTS</b>  | –                                                                                                                                                                |
|            | <b>ROOT.war</b>                            | <b>SSO_REALM</b>                      | RH-SSO Realm name.                                                                                                                                               |
|            | <b>\${SSO_REALM}</b>                       | <b>SSO_SECRET</b>                     | KIE Server RH-SSO Client Secret                                                                                                                                  |
|            | <b>\${KIE_SERVER_SSO_SECRET}</b>           | <b>SSO_CLIENT</b>                     | KIE Server RH-SSO Client name.                                                                                                                                   |

| Deployment | Variable name                                           | Description                                   | Example value                                                                                                                                          |
|------------|---------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <code>\${KIE_SERVER_SSO_CLIENT}</code>                  | <b>SSO_USERNAME</b>                           | RH-SSO Realm Admin Username used to create the Client if it doesn't exist.                                                                             |
|            | <code>\${SSO_USERNAME}</code>                           | <b>SSO_PASSWORD</b>                           | RH-SSO Realm Admin Password used to create the Client.                                                                                                 |
|            | <code>\${SSO_PASSWORD}</code>                           | <b>SSO_DISABLE_SSL_CERTIFICATE_VALIDATION</b> | RH-SSO Disable SSL Certificate Validation.                                                                                                             |
|            | <code>\${SSO_DISABLE_SSL_CERTIFICATE_VALIDATION}</code> | <b>SSO_PRINCIPAL_ATTRIBUTE</b>                | RH-SSO Principal Attribute to use as username.                                                                                                         |
|            | <code>\${SSO_PRINCIPAL_ATTRIBUTE}</code>                | <b>HOSTNAME_HTTP</b>                          | Custom hostname for http service route. Leave blank for default hostname, e.g.:<br><application-name>-kieserver-<project>.<default-domain-suffix>      |
|            | <code>\${KIE_SERVER_HOSTNAME_HTTP}</code>               | <b>HOSTNAME_HTTPS</b>                         | Custom hostname for https service route. Leave blank for default hostname, e.g.: secure-<application-name>-kieserver-<project>.<default-domain-suffix> |
|            | <code>\${KIE_SERVER_HOSTNAME_HTTPS}</code>              | <b>AUTH_LDAP_URL</b>                          | LDAP Endpoint to connect for authentication.                                                                                                           |
|            | <code>\${AUTH_LDAP_URL}</code>                          | <b>AUTH_LDAP_BIND_DN</b>                      | Bind DN used for authentication.                                                                                                                       |
|            | <code>\${AUTH_LDAP_BIND_DN}</code>                      | <b>AUTH_LDAP_BIND_CREDENTIAL</b>              | LDAP Credentials used for authentication.                                                                                                              |
|            | <code>\${AUTH_LDAP_BIND_CREDENTIAL}</code>              | <b>AUTH_LDAP_JAAS_SECURITY_DOMAIN</b>         | The JMX ObjectName of the JaasSecurityDomain used to decrypt the password.                                                                             |

| Deployment | Variable name                                          | Description                                   | Example value                                                                                                                                                                                                                                                                                     |
|------------|--------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b><code>\${AUTH_LDAP_JAAS_SECURITY_DOMAIN}</code></b> | <b>AUTH_LDAP_BASE_CTX_DN</b>                  | LDAP Base DN of the top-level context to begin the user search.                                                                                                                                                                                                                                   |
|            | <b><code>\${AUTH_LDAP_BASE_CTX_DN}</code></b>          | <b>AUTH_LDAP_BASE_FILTER</b>                  | LDAP search filter used to locate the context of the user to authenticate. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a <code>{0}</code> expression is used. A common example for the search filter is <code>(uid={0})</code> . |
|            | <b><code>\${AUTH_LDAP_BASE_FILTER}</code></b>          | <b>AUTH_LDAP_SEARCH_SCOPE</b>                 | The search scope to use.                                                                                                                                                                                                                                                                          |
|            | <b><code>\${AUTH_LDAP_SEARCH_SCOPE}</code></b>         | <b>AUTH_LDAP_SEARCH_TIME_LIMIT</b>            | The timeout in milliseconds for user or role searches.                                                                                                                                                                                                                                            |
|            | <b><code>\${AUTH_LDAP_SEARCH_TIME_LIMIT}</code></b>    | <b>AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE</b> | The name of the attribute in the user entry that contains the DN of the user. This may be necessary if the DN of the user itself contains special characters, backslash for example, that prevent correct user mapping. If the attribute does not exist, the entry's DN is used.                  |

| Deployment | Variable name                                       | Description                            | Example value                                                                                                                                                                                                                                                                   |
|------------|-----------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b>`\${AUTH_LDAP_DISTINGUISHED_NAME_ATTRIBUTE}`</b> | <b>AUTH_LDAP_PARSE_USERNAME</b>        | A flag indicating if the DN is to be parsed for the username. If set to true, the DN is parsed for the username. If set to false the DN is not parsed for the username. This option is used together with <code>usernameBeginString</code> and <code>usernameEndString</code> . |
|            | <b>`\${AUTH_LDAP_PARSE_USERNAME}`</b>               | <b>AUTH_LDAP_USERNAME_BEGIN_STRING</b> | Defines the String which is to be removed from the start of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                           |
|            | <b>`\${AUTH_LDAP_USERNAME_BEGIN_STRING}`</b>        | <b>AUTH_LDAP_USERNAME_END_STRING</b>   | Defines the String which is to be removed from the end of the DN to reveal the username. This option is used together with <code>usernameEndString</code> and only taken into account if <code>parseUsername</code> is set to true.                                             |
|            | <b>`\${AUTH_LDAP_USERNAME_END_STRING}`</b>          | <b>AUTH_LDAP_ROLE_ATTRIBUTE_ID</b>     | Name of the attribute containing the user roles.                                                                                                                                                                                                                                |
|            |                                                     |                                        |                                                                                                                                                                                                                                                                                 |

| Deployment | Variable name                                       | Description                                  | Example value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------|-----------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b><code>\${AUTH_LDAP_ROLE_ATTRIBUTE_ID}</code></b> | <b><code>AUTH_LDAP_ROLE_S_CTX_DN</code></b>  | The fixed DN of the context to search for user roles. This is not the DN where the actual roles are, but the DN where the objects containing the user roles are. For example, in a Microsoft Active Directory server, this is the DN where the user account is.                                                                                                                                                                                                                                                     |
|            | <b><code>\${AUTH_LDAP_ROLEES_CTX_DN}</code></b>     | <b><code>AUTH_LDAP_ROLE_FILTER</code></b>    | A search filter used to locate the roles associated with the authenticated user. The input username or userDN obtained from the login module callback is substituted into the filter anywhere a <code>{0}</code> expression is used. The authenticated userDN is substituted into the filter anywhere a <code>{1}</code> is used. An example search filter that matches on the input username is <code>(member={0})</code> . An alternative that matches on the authenticated userDN is <code>(member={1})</code> . |
|            | <b><code>\${AUTH_LDAP_ROLE_FILTER}</code></b>       | <b><code>AUTH_LDAP_ROLE_RECURSION</code></b> | The number of levels of recursion the role search will go below a matching context. Disable recursion by setting this to 0.                                                                                                                                                                                                                                                                                                                                                                                         |
|            | <b><code>\${AUTH_LDAP_ROLE_RECURSION}</code></b>    | <b><code>AUTH_LDAP_DEFAULT_ROLE</code></b>   | A role included for all authenticated users.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Deployment | Variable name                                             | Description                                           | Example value                                                                                                                                                                                                                                                                                           |
|------------|-----------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b><code>\${AUTH_LDAP_DEFAULT_ROLE}</code></b>            | <b><code>AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID</code></b>  | Name of the attribute within the roleCtxDN context which contains the role name. If the roleAttributesDN property is set to true, this property is used to find the role object's name attribute.                                                                                                       |
|            | <b><code>\${AUTH_LDAP_ROLE_NAME_ATTRIBUTE_ID}</code></b>  | <b><code>AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN</code></b> | A flag indicating if the DN returned by a query contains the roleNameAttributeID. If set to true, the DN is checked for the roleNameAttributeID. If set to false, the DN is not checked for the roleNameAttributeID. This flag can improve the performance of LDAP queries.                             |
|            | <b><code>\${AUTH_LDAP_PARSE_ROLE_NAME_FROM_DN}</code></b> | <b><code>AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN</code></b>    | Whether or not the roleAttributeID contains the fully-qualified DN of a role object. If false, the role name is taken from the value of the roleNameAttributeID attribute of the context name. Certain directory schemas, such as Microsoft Active Directory, require this attribute to be set to true. |
|            |                                                           |                                                       |                                                                                                                                                                                                                                                                                                         |

| Deployment | Variable name                                                         | Description                                                       | Example value                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|-----------------------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <b><code>\${AUTH_LDAP_ROLE_ATTRIBUTE_IS_DN}</code></b>                | <b><code>AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK</code></b> | If you are not using referrals, you can ignore this option. When using referrals, this option denotes the attribute name which contains users defined for a certain role, for example member, if the role object is inside the referral. Users are checked against the content of this attribute name. If this option is not set, the check will always fail, so role objects cannot be stored in a referral tree. |
|            | <b><code>\${AUTH_LDAP_REFERRAL_USER_ATTRIBUTE_ID_TO_CHECK}</code></b> | <b><code>AUTH_ROLE_MAPPER_ROLES_PROPERTIES</code></b>             | When present, the RoleMapping Login Module will be configured to use the provided file. This property defines the fully-qualified file path and name of a properties file or resource which maps roles to replacement roles. The format is original_role=role1,role2,role3                                                                                                                                         |
|            | <b><code>\${AUTH_ROLE_MAPPER_ROLES_PROPERTIES}</code></b>             | <b><code>AUTH_ROLE_MAPPER_REPLACE_ROLE</code></b>                 | Whether to add to the current roles, or replace the current roles with the mapped ones. Replaces if set to true.                                                                                                                                                                                                                                                                                                   |

#### 4.3.2.3.3.7. Volumes

| Deployment                                         | Name                      | mountPath                                        | Purpose   | readOnly |
|----------------------------------------------------|---------------------------|--------------------------------------------------|-----------|----------|
| <b><code>\${APPLICATION_NAME}-kieserver</code></b> | kieserver-keystore-volume | <b><code>/etc/kieserver-secret-volume</code></b> | ssl certs | True     |

#### 4.3.2.4. External Dependencies

#### 4.3.2.4.1. Secrets

This template requires the following secrets to be installed for the application to run.

kieserver-app-secret

## 4.4. OPENSIFT USAGE QUICK REFERENCE

To deploy, monitor, manage, and undeploy Red Hat Decision Manager templates on Red Hat OpenShift Container Platform, you can use the OpenShift Web console or the **oc** command.

For instructions about using the Web console, see [Create and build an image using the Web console](#) .

For detailed instructions about using the **oc** command, see [CLI Reference](#). The following commands are likely to be required:

- To create a project, use the following command:

```
$ oc new-project <project-name>
```

For more information, see [Creating a project using the CLI](#) .

- To deploy a template (create an application from a template), use the following command:

```
$ oc new-app -f <template-name> -p <parameter>=<value> -p <parameter>=<value> ...
```

For more information, see [Creating an application using the CLI](#) .

- To view a list of the active pods in the project, use the following command:

```
$ oc get pods
```

- To view the current status of a pod, including information whether or not the pod deployment has completed and it is now in a running state, use the following command:

```
$ oc describe pod <pod-name>
```

You can also use the **oc describe** command to view the current status of other objects. For more information, see [Application modification operations](#).

- To view the logs for a pod, use the following command:

```
$ oc logs <pod-name>
```

- To view deployment logs, look up a **DeploymentConfig** name in the template reference and run the following command:

```
$ oc logs -f dc/<deployment-config-name>
```

For more information, see [Viewing deployment logs](#).

- To view build logs, look up a **BuildConfig** name in the template reference and run the command:

```
$ oc logs -f bc/<build-config-name>
```

For more information, see [Accessing build logs](#).

- To scale a pod in the application, look up a **DeploymentConfig** name in the template reference and run the command:

```
$ oc scale dc/<deployment-config-name> --replicas=<number>
```

For more information, see [Manual scaling](#).

- To undeploy the application, you can delete the project by using the command:

```
$ oc delete project <project-name>
```

Alternatively, you can use the **oc delete** command to remove any part of the application, such as a pod or replication controller. For details, see [Application modification operations](#).

## APPENDIX A. VERSIONING INFORMATION

Documentation last updated on Monday, December 21, 2020.