



Red Hat JBoss Fuse 6.3

Management Console User Guide

Managing your environment from the Web

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Managing your environment from the Web

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Abstract

The Fuse Management Console User Guide describes the Fuse Management Console user interface and the tasks you can perform to manage containers and fabrics. This guide assumes that you are familiar with Red Hat JBoss Fuse components, Apache components, and the processing requirements for your organization.

Table of Contents

PART I. INTRODUCTION	5
CHAPTER 1. FUSE MANAGEMENT CONSOLE OVERVIEW	6
OVERVIEW	6
USER INTERFACE OVERVIEW	6
CHAPTER 2. ACCESSING THE MANAGEMENT CONSOLE	9
PREREQUISITES	9
ACCESSING THE MANAGEMENT CONSOLE	9
CHAPTER 3. SECURING THE MANAGEMENT CONSOLE	11
OVERVIEW	11
AUTHENTICATION	11
AUTHORIZATION AND ROLES	11
SSL/TLS SECURITY	15
CONFIGURING HAWTIO	15
UPLOAD FILTER	16
ADDING CACHE TO RBACRESTRICTOR	16
PART II. CONTAINER MANAGEMENT	17
CHAPTER 4. CONTAINER PERSPECTIVE	18
OVERVIEW	18
TOOLBAR	18
CHAPTER 5. MANAGING CONTAINERS	20
OVERVIEW	20
CREATING A CONTAINER	20
EDITING CONTAINER PROPERTIES	20
DELETING ONE OR MORE CONTAINERS	21
CHAPTER 6. MANAGING JMS QUEUES AND MESSAGES	22
OVERVIEW	22
CREATING A QUEUE	22
MANAGING QUEUES AND MESSAGES	22
CHAPTER 7. ACTIVEMQ PAGE	24
OVERVIEW	24
CHAPTER 8. CAMEL PAGE	25
OVERVIEW	25
CHAPTER 9. CONNECT PAGE	26
OVERVIEW	26
CHAPTER 10. JMX PAGE	28
OVERVIEW	28
CHAPTER 11. LOGS PAGE	29
OVERVIEW	29
CHAPTER 12. OSGI PAGE	30
OVERVIEW	30
CHAPTER 13. THREADS PAGE	32
OVERVIEW	32

PART III. FABRIC MANAGEMENT	33
CHAPTER 14. FABRIC PERSPECTIVE	34
OVERVIEW	34
TOOLBAR	34
CHAPTER 15. CREATING OR JOINING A FABRIC	35
OVERVIEW	35
CREATING OR JOINING A FABRIC	35
CHAPTER 16. MANAGING PROFILES	36
OVERVIEW	36
CREATING A PROFILE	36
EDITING A PROFILE	36
DELETING ONE OR MORE PROFILES	36
CHAPTER 17. ASSIGNING PROFILES TO CONTAINERS	38
OVERVIEW	38
CREATING A CONTAINER WITH AN ASSIGNED PROFILE	38
ASSIGNING OR REMOVING A PROFILE FROM AN EXISTING CONTAINER	38
ASSIGNING MULTIPLE PROFILES TO MULTIPLE CONTAINERS	39
CHAPTER 18. PROFILES DETAILS PAGE	40
OVERVIEW	40
FUNCTION BUTTONS	40
VIEW ASSOCIATED CONTAINERS	40
ABSTRACT TOGGLE	41
LOCKED TOGGLE	41
PARENTS LIST	41
DEPLOYMENTS	41
CHAPTER 19. SERVICES AREA	42
19.1. SERVICES OVERVIEW	42
19.2. CONTAINERS PAGE	42
19.3. PROFILES PAGE	44
19.4. MQ PAGE	46
19.5. APIS PAGE	48
19.6. EIPS PAGE	49
19.7. REGISTRY PAGE	49
19.8. MAP PAGE	50
CHAPTER 20. WIKI PAGE	52
OVERVIEW	52
ACTION BAR	53
REPOSITORY EXPLORER	53
DETAILS PANE	53
CHAPTER 21. DASHBOARD PAGE	54
OVERVIEW	54
NAVIGATION BAR	54
ACTIVE DASHBOARD PANE	54
CHAPTER 22. HEALTH PAGE	56
OVERVIEW	56
PART IV. LOG MANAGEMENT WITH INSIGHT	57

CHAPTER 23. GETTING STARTED	58
OVERVIEW	58
PREREQUISITES	58
DATA STORE INSTALLATION	58
WEB VIEWER INSTALLATION	58
CONFIGURING LOG COLLECTION	59
CONFIGURING METRICS COLLECTION	59
VIEWING AND ANALYZING LOGS AND METRICS	59
CHAPTER 24. INSIGHT PERSPECTIVE	60
OVERVIEW	60
TOOLBAR	60
CHAPTER 25. CAMEL PAGE	61
OVERVIEW	61
CHAPTER 26. LOGS PAGE	62
OVERVIEW	62
CHAPTER 27. CAMEL EVENTS PAGE	64
OVERVIEW	64
CHAPTER 28. ELASTICSEARCH PAGE	66
OVERVIEW	66
ENABLING BASIC HTTP AUTHENTICATION	66
LOGGING IN	67
PART V. DIAGNOSTIC TOOL PLUG-IN	68
CHAPTER 29. OPEN A NEW CASE	69
OPENING A NEW CASE	69
CHAPTER 30. EDIT AN EXISTING CASE	70
EDITING AN EXISTING CASE	70
CHAPTER 31. USING THE DIAGNOSTIC TOOL	71
USING THE DIAGNOSTIC TOOL	71
CHAPTER 32. LIMITATIONS OF THE DIAGNOSTIC TOOL	72

PART I. INTRODUCTION

CHAPTER 1. FUSE MANAGEMENT CONSOLE OVERVIEW

OVERVIEW

The Fuse Management Console provides a central interface to manage and configure Fuse entities. You can use the Fuse Management Console to configure and deploy containers, Apache ActiveMQ brokers, and fabrics. You also monitor JBoss Fuse and system resources, perform updates, and start or stop services.

The Fuse Management Console is available by default when you install Red Hat JBoss Fuse, and must be accessed using a web browser.

USER INTERFACE OVERVIEW



The Management Console consists of the following areas:

Welcome Page

Introduction to the Management Console and help topics.

Menu Bar

Global and user options. The Menu bar contains the following options:

Option	Description
	Opens the logging console in a drop-down pane.
	Opens the Welcome page and shows the wiki help.
Admin > Preferences	Opens the Preferences page. Use the page to configure global options for the user.
Admin > Log Out	Logs out of the Management Console.
Admin > About	Opens the About page that shows version information.

Container Perspective

Container management options. The actual areas depend on the container features and bundles. The Container perspective can contain the following options:

Option	Description
ActiveMQ	Tree view and details of running Apache ActiveMQ brokers. This page is available only when you connect to a container with an ActiveMQ profile.

Option	Description
Camel	Tree view and details of running Apache Camel routes. This page is available only when you connect to a container with a Camel profile.
Connect	Connection page to a remote server or a local JVM with a running Jolokia agent.
Dashboard	Overview of the Management Console status, services status, and system performance. You can add views to the dashboard and create additional dashboards. If you create or join a fabric, this toolbar option is not available. Use the Dashboard page in the Fabric perspective to view information for all containers in the fabric. For more information, see Dashboard Page .
Health	List and status of running health mbeans. This page shows any available container health mbeans. If you create or join a fabric, this toolbar option is not available. For more information, see Health Page .
JMX	Tree view of the JMX domains and mbeans. You can view details and execute commands on the mbeans.
Logs	List of log entries. Use this page to view activity details and error messages.
Maven	Search for Maven repositories using either a simple search or an advanced search with more parameters. This page is only available if the hawtio-maven-indexer feature has been installed.
OSGi	Detailed view of the JBoss Fuse OSGi environment. Use this page to manage bundles, features and configurations, and view details of Java packages and OSGi services.
Red Hat Access	Gain access to the Red Hat Customer Portal. Sign in to the Red Hat Customer Portal to search the Knowledge Base, Open a new support case, or list existing support cases. You can also use this page to use the Log File Viewer.
Terminal	Emulator view of the Karaf console. Use this page to run JBoss Fuse commands in the same way you run commands in the Karaf console.
Threads	List of active threads and stack trace details for each thread.

Fabric Perspective

Fabric management options. Available only if you create or join a fabric. The Fabric perspective contains the following options:

Option	Description
Containers	View the containers available on this instance of Fuse. Start/Stop, Delete or Create containers. Click the container name to get more information about each container.

Option	Description
Profiles	Lists the profiles available to this instance of Fuse. Click Details . . . to get more details of each profile. You can deploy selected profiles to a new container, assign selected profiles to existing container, or add requirements to selected profiles.
Wiki	Explorer view of the fabric configuration repository and wiki content. The repository contains files that affect the behavior of the fabric during runtime.
Services	View the services available on Fuse. Stop or start containers, edit profiles and administer services.
Scaling	Increase or decrease the number of required instances of a profile and review the effect on the health of the profile. You can also set up SSH or Docker Configurations.
Dashboard	Overview of the Management Console status, services status, and system performance. You can add views to the dashboard and create additional dashboards.
Health	List and status of running fabric and container health mbeans. For more information, see Health Page .

CHAPTER 2. ACCESSING THE MANAGEMENT CONSOLE

PREREQUISITES

To access the Management Console, you must start JBoss Fuse and configure user credentials.



NOTE

If you use JBoss Fuse on OpenShift, you can skip this task and access the Management Console directly with the JBoss Fuse application URL after you deploy the JBoss Fuse cartridge. For more information about how to get started with JBoss Fuse on OpenShift, see the *Cloud Computing with Fabricbook* for this release of JBoss Fuse.

To configure user credentials and start JBoss Fuse:

1. In the command line, navigate to the directory in which you installed JBoss Fuse and run the following command:

```
./fuse
```

The Karaf console starts and shows version information, the default Management Console URL, and a list of common commands.

2. If no user exists for JBoss Fuse, you can create one by running the

```
esb:create-admin-user
```

command. You can also define the user name and password directly in the `etc/users.properties` file. For more information, see the *Red Hat JBoss Fuse Installation Guide*.

ACCESSING THE MANAGEMENT CONSOLE

To access the Management Console:

1. In a Web browser, enter the URL to connect to the Management Console in the following format:

```
http://<host_name>:<port_number>
```



NOTE

For a list of supported browsers, see access.redhat.com.

For example, use the following default URL to connect to the Management Console locally:

```
http://localhost:8181
```

**NOTE**

You can configure the pax-web property to support HTTPS connections for a specific container.

See [chapter "Securing the Jetty HTTP Server" in "Security Guide"](#) for more details.

2. In the login page, enter the user name and password and click **Log In**.

If you created or joined a fabric, the Management Console opens to the **Fabric** perspective. Otherwise, only the **Container** perspective is available. By default, the Management Console shows the **Welcome** page. You can choose to hide the **Welcome** page at the bottom of the page.

CHAPTER 3. SECURING THE MANAGEMENT CONSOLE

OVERVIEW

Securing the Management Console consists of the following aspects:

- Authentication
- Authorization and Roles
- SSL/TLS security
- Configuring Hawtio

AUTHENTICATION

Authentication is enabled by default on the Management Console and is required in order for the Management Console to function correctly. The authentication mechanism consists of the following key elements:

- *HTTP BASIC authentication protocol*—the standard HTTP protocol for transferring username/password credentials is the BASIC authentication protocol. This protocol sends username/password credentials in plaintext, so these credentials are *vulnerable to snooping*, unless you enable SSL/TLS security.
- *JAAS authentication*—the Java Authentication and Authorization Service (JAAS) is a pluggable framework for authenticating credentials on the server side. The Jetty servlet container (which hosts the Management Console) is configured to use the `karaf` JAAS realm by default. This ensures that the Management Console uses the same pool of user credentials as the other standard container services (where the user credentials are usually stored in the `etc/users.properties` file by default, in a standalone container).

AUTHORIZATION AND ROLES

The operations that an authenticated user is allowed to perform depend on the role (or roles) assigned to that user. The following table summarizes the management console operations that different roles are allowed to perform:

	admin Administrator SuperUser	Deployer Auditor	viewer Monitor Operator Maintainer
Standalone Karaf			
login/logout	Y	Y	Y
ActiveMQ			
amq - Atttributes			

view	Y	Y	Y
change attribute value	Y	Y	N
amq - Create			
Create queue & topic	Y	Y	N
Queues & Topics			
View topics and queues	Y	Y	Y
Browse			
list messages	Y	Y	Y
resend, move messages	Y	Y	N
delete messages	Y	N	N
Delete			
purge queue	Y	Y	N
delete queue	Y	Y	N
Send			
send messages	Y	Y	N
Connect			
connect to another Fuse	Y	Y	Y
Dashboard			
create/remove dashboard	Y	Y	Y
create/remove/move widgets	Y	Y	Y
Jetty			

Connectors			
start/stop	Y	N	N
Applications			
start/stop/uninstall	Y	N	N
JMX			
change attribute value	Y	Y	N
view chart	Y	Y	Y
Logs			
view logs	Y	Y	Y
OSGi			
bundle operations	Y	Y	N
features un/install	Y	N	N
Declarative services			
activate/deactivate	Y	N	N
Framework configuration			
set startlevels	Y	N	N
Terminal	Y	N	N
Threads			
view threads	Y	Y	Y
Fabric			
Containers			
create/start/stop/delete	Y	N	N
Profiles			

Deploy, Assign, Add Requirements	Y	Y	N
Wiki			
create/delete/edit/move/rename file	Y	N	N
create/delete version	Y	N	N
change default version	Y	N	N
Services			
Containers			
create/start/stop/delete	Y	N	N
add/remove profile	Y	N	N
open container in a new window	Y	Y	Y
Profiles			
change requirements (Target)	Y	N	N
MQ			
view the brokers	Y	Y	Y
create a new broker	Y	N	N
view Diagram	Y	Y	Y
APIs			
deploy quickstarts	Y	N	N
EIPs			
deploy quickstarts	Y	N	N
Scaling			

set requirements	Y	N	N
Dashboard			
create/remove dashboard	Y	N	N
copy dashboard/to profiles	Y	N	N
create/remove/move widgets	Y	N	N
Preferences			
all settings (all are user-related)	Y	Y	Y
Help			
read all help topics	Y	Y	Y
Logging console			
all logging console operations	Y	Y	Y
Insight perspective			
view logs	Y	Y	Y
view camel exchanges	Y	Y	Y

SSL/TLS SECURITY

SSL/TLS security is *not* enabled by default for the Management Console. It is recommended that you enable SSL/TLS security on the Management Console to protect username/password credentials from snooping. For detailed instructions on how to enable SSL/TLS security, please see the following reference:

- [chapter "Securing the Jetty HTTP Server" in "Security Guide"](#)

CONFIGURING HAWTIO

To patch a security hole, Hawtio's proxy servlet now introduces whitelist host protection, with which by default Hawtio will only be able to connect to localhost. If you want to connect Hawtio to other remote Fuse instances, you need to configure the whitelist via:

- For Apache Karaf, make the following configuration changes in `etc/system.properties` file:

```
hawtio.proxyWhitelist = localhost, 127.0.0.1, myhost1, myhost2, myhost3
```

- For JBoss EAP, make the following configuration changes in `standalone/configuration/standalone-*.xml` file:

```
<property name=hawtio.proxyWhitelist" value="localhost, 127.0.0.1, myhost1, myhost2, myhost3"/>
```



NOTE

- In the Standalone mode, Hawtio automatically probes the local network interfaces other than `localhost/ 127.0.0.1` and add them to the whitelist. Hence, there is no need to manually register the local machine's addresses to the whitelist.
- In the Fabric mode, Hawtio automatically gathers IP addresses of containers in the same fabric and add them to the whitelist. Hence, there is no need to be aware of this proxy whitelist configuration.

UPLOAD FILTER

You can implement a new filter to prevent an arbitrary file upload to Hawtio. It allows you to verify the uploaded file content against the whitelisted filters that are configured via a system property. You can configure this filter via `Hawtio.upload.filter` property key. Following is the syntax to configure the property:

```
hawtio.upload.filter="signature=504B0304,offset=0,maxSize=10kb,exc=[@ *]"
```

In the above configuration, the filter pattern syntax definition is as follows:

- `signature`- file magic number
- `offset`- from which a magic number starts
- `maxSize`- allowed max file size
- `exc`- list of space separated characters allowed for Ascii file within an opening and a closing bracket

ADDING CACHE TO RBACRESTRICTOR

JBoss Hawtio causes a high load on the server within the ActiveMQ tab. Since, the refresh rate is one second by multiple users, therefore the load on the server is too high.

You can reduce the load, by adding a cache based on Guava cache to RBACRestrictor, so that the MBean invocations may not occur so often. The cache entries expires in 10 minutes. Therefore, if you change the configuration of RBAC, the changes propagation to Hawtio may take up to 10 minutes.

However, you can restart the Hawtio-Web console in order to invalidate cache and make changes visible immediately.

PART II. CONTAINER MANAGEMENT

Abstract

You use the Fuse Management Console to deploy containers to a fabric and manage container properties. You can manage properties for each container such as the JMX domains, versions, and hosts. You can also review log entries and monitor system status and performance while the container runs.

CHAPTER 4. CONTAINER PERSPECTIVE

OVERVIEW

When you log in to the Management Console, you use the **Container** perspective to configure and monitor runtime information about a specific container. By default, the Container perspective shows information about the root container. You can also select and connect to any container from the **Fabric** perspective.

TOOLBAR

The **Container** perspective contains a toolbar that you use to manage and monitor container components. The actual areas depend on the container features and bundles and whether the container is deployed to a fabric. The toolbar can contain the following options:

Option	Description
ActiveMQ	Tree view and details of running Apache ActiveMQ brokers. This page is available only when you connect to a container with an ActiveMQ profile.
Camel	Tree view and details of running Apache Camel routes. This page is available only when you connect to a container with a Camel profile.
Connect	Connection page to a remote server or a local JVM with a running Jolokia agent.
Dashboard	Overview of the Management Console status, services status, and system performance. You can add views to the dashboard and create additional dashboards. If you create or join a fabric, this toolbar option is not available. Use the Dashboard page in the Fabric perspective to view information for all containers in the fabric. For more information, see Dashboard Page .
Health	List and status of running health mbeans. This page shows any available container health mbeans. If you create or join a fabric, this toolbar option is not available. Use the Health page in the Fabric perspective to view fabric and container health mbeans. For more information, see Health Page .
JMX	Tree view of the JMX domains and mbeans. You can view details and execute commands on the mbeans.
Logs	List of log entries. Use this page to view activity details and error messages.
OSGi	Detailed view of the JBoss Fuse OSGi environment. Use this page to manage bundles, features and configurations, and view details of Java packages and OSGi services.
Terminal	Emulator view of the Karaf console. Use this page to run JBoss Fuse commands in the same way you run commands in the Karaf console.
Threads	List of active threads and stack trace details for each thread.

Option	Description
Wiki	Explorer view of the fabric configuration repository and wiki content. The repository contains files that affect the behavior of the fabric during runtime. This toolbar option is available only if you create or join a fabric, and opens the Wiki page in the Fabric perspective. For more information, see Wiki Page .

CHAPTER 5. MANAGING CONTAINERS

OVERVIEW

You can create, edit, and delete a container from the **Fabric** perspective of the Management Console. The type of container you create depends on the purpose and location of the container.

You can create a child container, a cloud container, or an ssh container. If you create a cloud container, make sure you have the credentials to your cloud account. If you create an ssh container, make sure you have the remote host properties.

If you do not create or join a fabric, you must use the Karaf console to create the container and use the **Container** perspective to view and manage container properties. See [Red Hat JBoss Fuse Console Reference](#) for Karaf Console commands.

CREATING A CONTAINER

Depending on the location from which you create the container, the Management Console auto-fills one or more container properties. For example, if you create a container for an existing profile from the **Wiki** page, the profile name appears in the **Selected Profiles** list.

To create a container:

1. To create a container, navigate to one of the pages from which you can create a container and click the **+Create** button to open the **Create New Container** page. You can create containers from the following pages:
 - The Container page
 - The Services > Container page
 - The Services > MQ page
2. Set the container properties, such as the name and user credentials to use when JBoss Fuse runs the container.
3. Click the **Create and Start Container** button to save the container. The **Containers** page opens and shows the container name and status. It may take some time to download and assign all the container features and dependencies.



NOTE

If you create an OpenShift container, the container also appears as an application on the OpenShift applications page.

EDITING CONTAINER PROPERTIES

You can access the **Container Details** page from multiple areas in the Fabric perspective of the Management Console, amongst which are:

- The Container page
- The Services > Container page

To edit a container, click the container name and edit the container properties in the **Container Details** page. If you added or removed profiles, bundles, or other components, the Management Console shows the progress of the changes and the state of the container.

DELETING ONE OR MORE CONTAINERS

You can delete containers from the **Containers** page or the **Services > Containers** page.

To delete containers, select one or more containers from the list and click the **Delete** button.

CHAPTER 6. MANAGING JMS QUEUES AND MESSAGES

OVERVIEW

You can create, edit, and delete message queues for JMS brokers from the **ActiveMQ** page of the **Container** perspective. You can also search for messages, move, and resend messages directly from the queue.

CREATING A QUEUE

1. Connect to the container and open the **ActiveMQ** page.
2. Select the top-level node in the tree and click the **Create** button in the toolbar. The details pane shows a text box and a type selector.
3. Enter a name for the queue and make sure to select the **Queue** radio button. The queue appears in the **Queue** folder under the top-level node in the tree.

MANAGING QUEUES AND MESSAGES

When you select a queue from the Queue folder, the details pane shows a toolbar with the following options:

Attributes

Detailed information about the queue properties. You can click each property to show additional information about the property, such as description, type, and default value.

Browse

Grid view of all messages in the queue. You can select one or more messages to resend, move, or delete. You can also filter the message list according to properties such as the message ID, priority, type, custom header attributes, and message body.

Send

Composer window where you can create a message to send to the queue. You can format the message as JSON, plain text, Properties, or XML. You can also add header properties or choose message templates.

Diagram

Visual representation of broker components. You can choose to show or hide component types, such as queues, topics, profiles, or containers.

Delete

Options to purge or delete the queue. You can purge the queue to delete all messages without deleting the queue itself, or delete the queue including all messages and attributes.

**WARNING**

Deleting and purging the queue cannot be undone.

Operations

List of possible operations that you can perform in the queue. To manually execute an operation, you click an operation and define parameters and conditions if exist for the operation.

Chart

Timeline representation of message processing in the queue. The timeline dynamically shows the message flow in real-time. You can edit the chart to determine which attributes to show in the chart.

CHAPTER 7. ACTIVEMQ PAGE

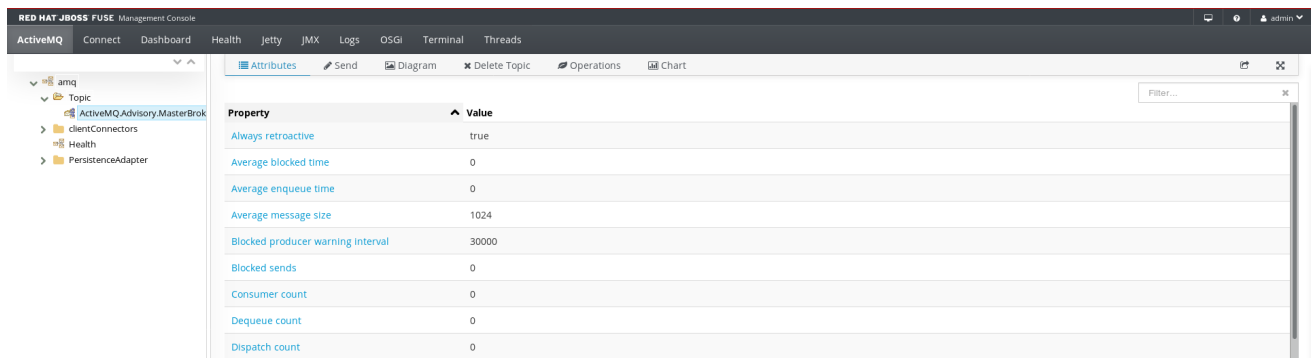
Abstract

You view and manage Apache ActiveMQ brokers in the **ActiveMQ** page. You can view broker attributes, run commands, add destinations, and monitor broker status.

OVERVIEW

You access the **ActiveMQ** page from the **Container** perspective. This page is available only when you connect to a container that uses one or more ActiveMQ brokers.

The following image shows an example of the **ActiveMQ** page:



The ActiveMQ page contains the following sections:

ActiveMQ Tree

Tree view of running ActiveMQ brokers organized in folders. You can click a folder to show the folder contents, and select a topic, queue, or broker to show the details in the details pane.

Toolbar

Options to view attributes, run commands, and view or create charts for the selected entity. You can also add the current view to the dashboard and toggle full screen mode. If you select a topic, you can also manually send the message to an endpoint.

Details Pane

Detailed view of the selected entity. The contents of this pane depend on the toolbar option that you select. You can filter the details pane to show only values that match the text string that you enter.

CHAPTER 8. CAMEL PAGE

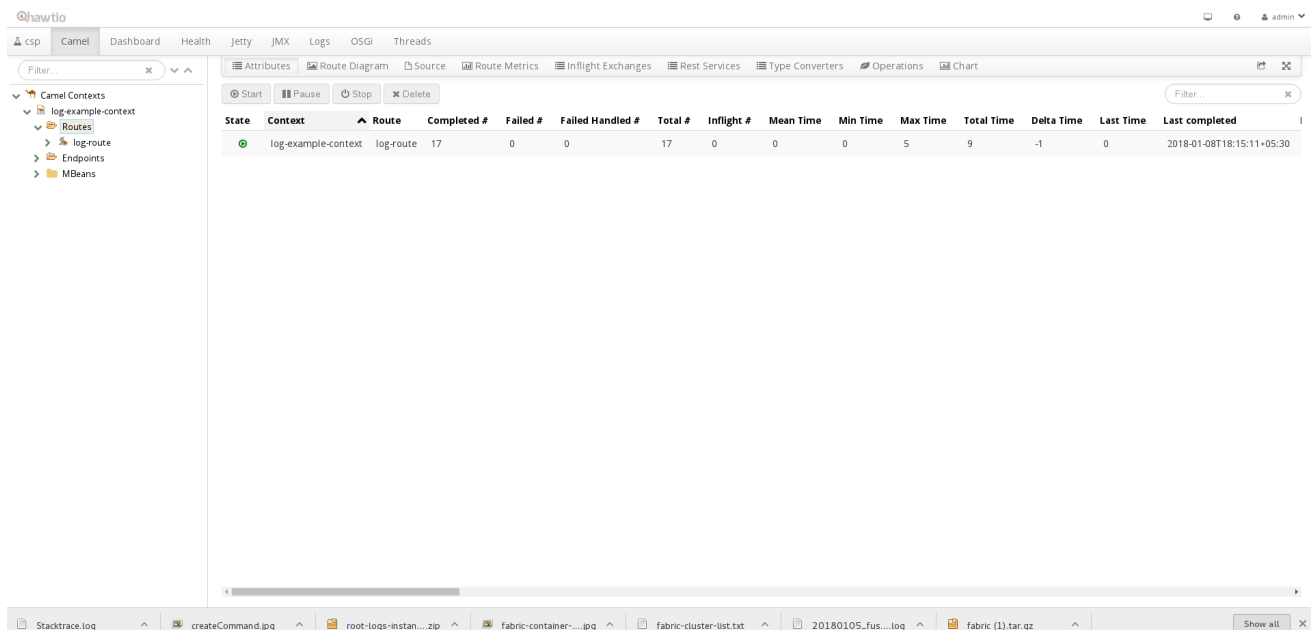
Abstract

You view and manage Apache Camel routes and dependencies in the **Camel** page. You can view route attributes and source code, debug and trace the route, and monitor route status.

OVERVIEW

You access the **Camel** page from the **Container** perspective. This page is available only when you connect to a container that uses one or more Camel routes.

The following image shows an example of the **Camel** page:



The Camel page contains the following sections:

Camel Tree

Tree view of running Camel routes and dependencies organized in folders. You can click a folder to show the folder contents, and select a route, endpoint, or mbean to show the details in the details pane.

Toolbar

Options to view attributes, run commands, and view or create charts for the selected entity. You can also add the current view to the dashboard and toggle full screen mode. If you select a route, you can also debug or trace messages through the route.

Details Pane

Detailed view of the selected entity. The contents of this pane depend on the toolbar option that you select. You can filter the details pane to show only values that match the text string that you enter.

CHAPTER 9. CONNECT PAGE

Abstract

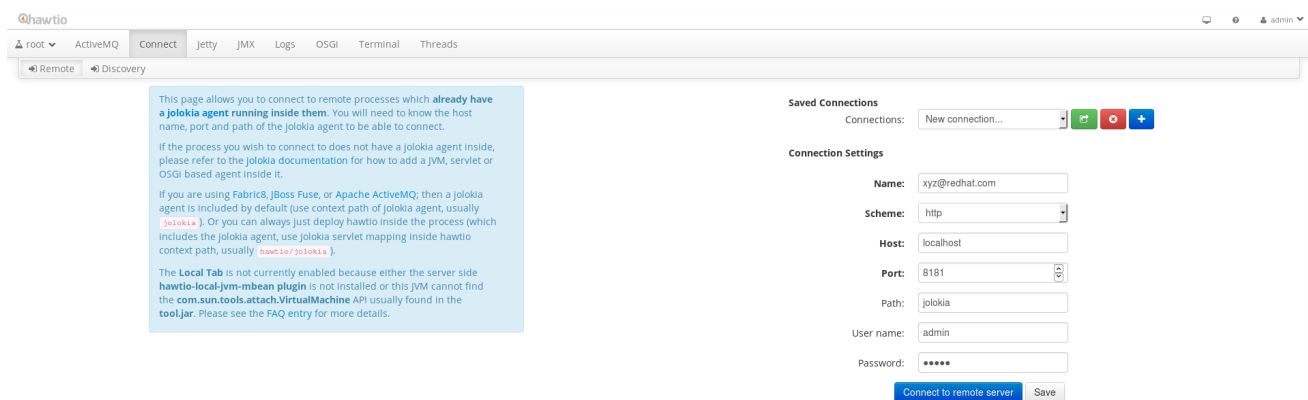
You view and manage local and remote connections in the **Connect** page. You can connect to a remote server with a running jolokia agent, or connect to a local server if you have a local JVM with a jolokia agent.

For more information about Jolokia JMX agents, see the Jolokia Web site at the following address: <http://www.jolokia.org/>

OVERVIEW

You access the **Connect** page from the **Container** perspective. By default, this page opens to the **Remote** tab. If you have a local JVM with a jolokia agent, the **Local** tab also appears.

The following image shows an example of the **Remote** tab:



The **Connect** page contains the following sections:

Navigation Bar

Tabbed view of available connection types. The **Remote** tab always appears. If you have a local JVM with a jolokia agent, the **Local** tab also appears. Click the **Discovery** tab to automatically discover agents.

Saved Connections List

This is a drop-down list of default and custom connections. Select a connection from the list and perform the following operations by clicking on the buttons:



to connect to the selected connection



to delete the selected connection.



to add a new connection.

Connection Settings

User credentials and connection properties, such as the connection name and host properties.

When you save the connection a new browser window opens and connects to the remote server. If you select a saved connection you can edit the connection properties in this section.

CHAPTER 10. JMX PAGE

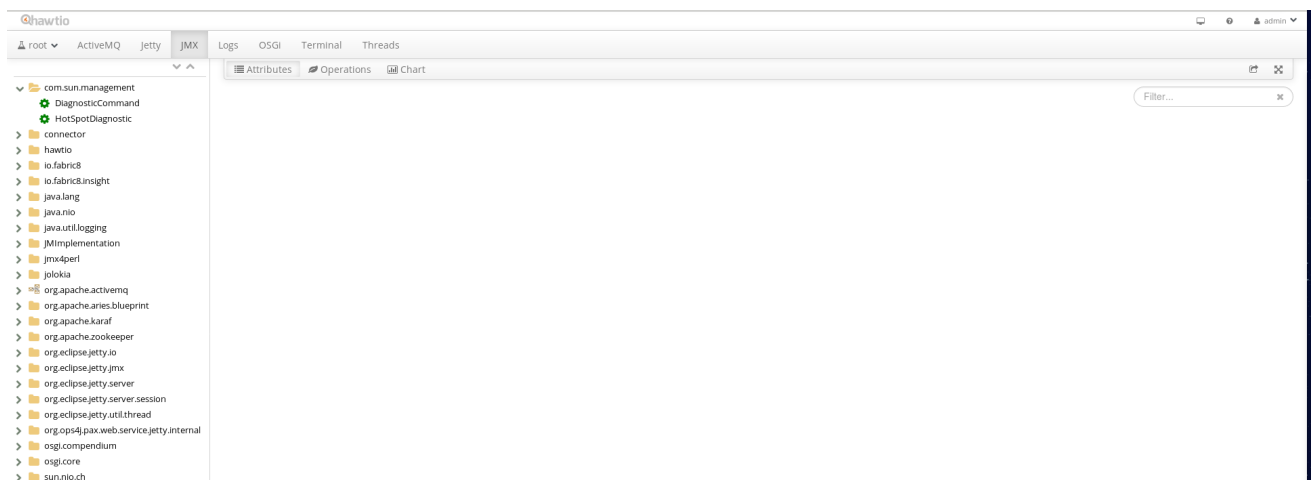
Abstract

You view and manage JMX domains and mbeans in the **JMX** page. You can view mbean attributes, run commands, and create charts that show statistics for the mbeans.

OVERVIEW

You access the **JMX** page from the **Container** perspective.

The following image shows an example of the **JMX** page:



The **JMX** page contains the following sections:

JMX Tree

Tree view of the active JMX domains and mbeans organized in folders. You can click a folder to show the mbeans, and select an mbean to show the details in the details pane.

Toolbar

Options to view attributes, perform operations, and view or create charts for the selected mbean. You can also add the current view to the dashboard and toggle full screen mode. If you select a broker mbean, you can view additional information about the broker and manage durable subscribers.

Details Pane

Detailed view of the selected mbean. The contents of this pane depend on the toolbar option that you select. You can filter the details pane to show only values that match the text string that you enter.

CHAPTER 11. LOGS PAGE

Abstract

You view log entries for JBoss Fuse in the **Logs** page. You can filter the page to show specific log types, and drill down to each log entry to view detailed information about the log entry.

OVERVIEW

You access the **Logs** page from the **Container** perspective.

The following image shows an example of the **Logs** page:



Timestamp	Level	Logger	Message
2018-01-08 17:49:23	INFO	org.apache.cxf.rt.transports.http	registering context DefaultHttpContext [bundle=org.apache.cxf.cxf-rt-transports-http [116], contextID=default], with context-name:
2018-01-08 17:49:23	INFO	org.apache.cxf.rt.transports.http	registering JasperInitializer
2018-01-08 17:49:23	INFO	org.apache.sshd.common.util.SecurityUtils	BouncyCastle already registered as a JCE provider
2018-01-08 17:49:24	INFO	org.eclipse.jetty.server.handler.ContextHandler	Started HttpContextDefaultHttpContext [bundle=org.apache.cxf.cxf-rt-transports-http [116], contextID=default]
2018-01-08 17:49:24	INFO	org.eclipse.jetty.server.Server	jetty-9.2.21.v20170120
2018-01-08 17:49:24	INFO	org.eclipse.jetty.server.ServerConnector	Started default@1f738dab(HTTP/1.1)(0.0.0.0:8181)
2018-01-08 17:49:24	INFO	org.eclipse.jetty.server.Server	Started @5529ms
2018-01-08 17:49:24	INFO	org.apache.cxf.rt.transports.http	Unbinding bundle: [org.apache.cxf.cxf-rt-transports-http [116]]
2018-01-08 17:49:24	INFO	org.eclipse.jetty.server.handler.ContextHandler	Stopped HttpContextDefaultHttpContext [bundle=org.apache.cxf.cxf-rt-transports-http [116], contextID=default]
2018-01-08 17:49:24	INFO	org.eclipse.jetty.server.ServerConnector	Stopped default@1f738dab(HTTP/1.1)(0.0.0.0:8181)
2018-01-08 17:49:24	INFO	org.apache.cxf.rt.transports.http	SPDY not available, creating standard ServerConnector for Http
2018-01-08 17:49:24	INFO	org.apache.cxf.rt.transports.http	Pax Web available at [0.0.0.0]:8181
2018-01-08 17:49:24	INFO	org.apache.cxf.rt.transports.http	Binding bundle: [org.apache.cxf.cxf-rt-transports-http [116]] to http service
2018-01-08 17:49:24	INFO	org.apache.cxf.rt.transports.http	will add org.apache.jasper.servlet.JasperInitializer to ServletContainerInitializers

The **Logs** page contains the following sections:

Action Bar

Options to filter the log entries section according to a text string or the logging level. You can also add the current view to the dashboard.

Log Entries

List view of the log entries. By default, the list shows log entries in descending order. You can change the default sorting in the **User > Preferences > Server Logs** page. Click the log entry link to drill down to details about the log entry, such as the bundle name, thread, and the full message text.

CHAPTER 12. OSGI PAGE

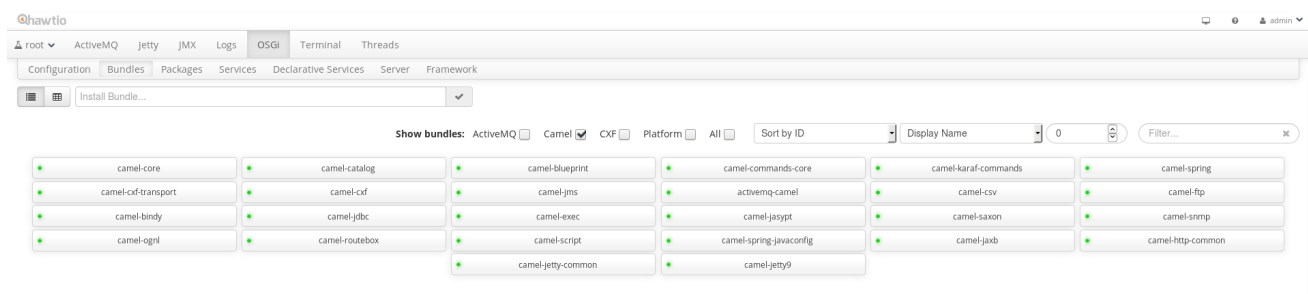
Abstract

Use the **OSGi** page to view and manage the JBoss Fuse OSGi environment. You can view and manage container bundles, features, and configurations, as well as Java packages and OSGi services.

OVERVIEW

The **OSGi** page is accessed from the **Container** perspective. The page contains a toolbar with options for each container component.

The following image shows an example of the **Bundles** page:



The **OSGi** page contains the following toolbar options:

Configuration

List of configuration objects. You can view the state of each object and drill down to view or edit object details. You can also create a new configuration object.

Bundles

List of installed bundles. You can install and uninstall bundles, start and stop bundles, and edit bundle properties. You can also filter the list and toggle between list and grid view.

Features

List of available features. You can install and uninstall features or feature repositories, and drill down to view feature details.

Packages

List of installed Java packages. You can view package versions and associated bundles.

Services

List of running services. You can view service IDs, associated bundles and object classes.

Declarative Services

List of declarative OSGi services. You can view the service state and drill down to view service details. You can also activate and deactivate services.

Server

Detailed information about the local or remote host in read-only mode.

Framework

Configuration options for the container OSGi framework. You can set the framework start level and the initial bundle start level.

CHAPTER 13. THREADS PAGE

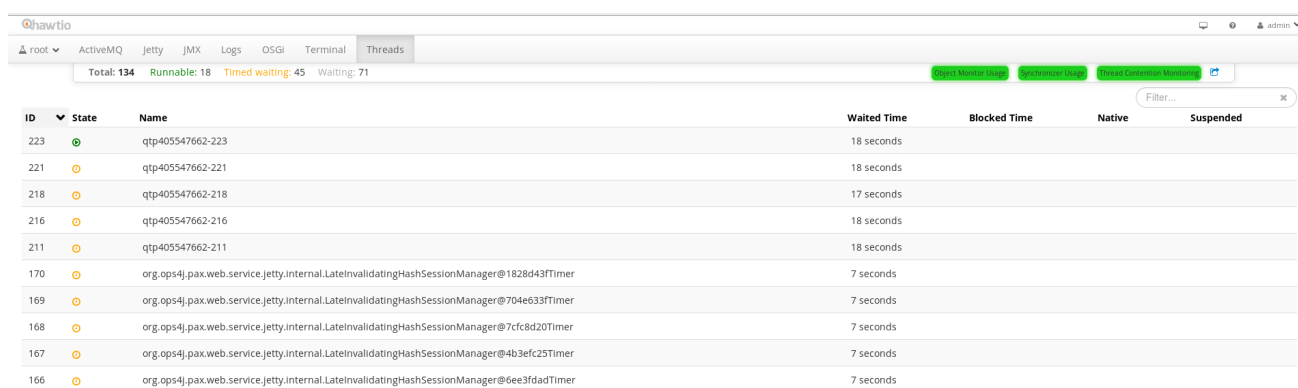
Abstract

You view and monitor the state of threads in the **Threads** page. You can filter the page to show threads by status, and drill down to each thread to view stack trace information about the thread.

OVERVIEW

You access the **Threads** page from the **Container** perspective.

The following image shows an example of the **Threads** page:



ID	State	Name	Waited Time	Blocked Time	Native	Suspended
223	Waiting	qtp405547662-223	18 seconds			
221	Waiting	qtp405547662-221	18 seconds			
218	Waiting	qtp405547662-218	17 seconds			
216	Waiting	qtp405547662-216	18 seconds			
211	Waiting	qtp405547662-211	18 seconds			
170	Waiting	org.ops4j.pax.web.service.jetty.internal.LateInvalidatingHashSessionManager@1828d43fTimer	7 seconds			
169	Waiting	org.ops4j.pax.web.service.jetty.internal.LateInvalidatingHashSessionManager@704e633fTimer	7 seconds			
168	Waiting	org.ops4j.pax.web.service.jetty.internal.LateInvalidatingHashSessionManager@7cfc8d20Timer	7 seconds			
167	Waiting	org.ops4j.pax.web.service.jetty.internal.LateInvalidatingHashSessionManager@4b3efc25Timer	7 seconds			
166	Waiting	org.ops4j.pax.web.service.jetty.internal.LateInvalidatingHashSessionManager@6ee3fdadTimer	7 seconds			

The **Threads** page contains the following sections:

Filter

Options to filter the thread list according to the thread state. You can click each state to filter the page, or click **Total** to show all threads. Each state shows the number of threads with that state. You can also enter a text string in the Filter box to show only thread names that match the text string.

Thread List

List view of active threads. By default, the thread list shows all threads in descending ID order. You can click each column header to sort the list by that column. You can also click each thread to drill down to detailed information, such as the lock class name and full stack trace for that thread.

PART III. FABRIC MANAGEMENT

Abstract

You use the Fuse Management Console to deploy containers to a fabric and assign containers to profiles. You can start, stop, and connect to containers. You can also update container versions, manage profiles and dependencies, and monitor the system status and performance.

CHAPTER 14. FABRIC PERSPECTIVE

OVERVIEW

When you log in to the Management Console, you use the **Fabric** perspective to configure and manage containers, profiles, and general fabric properties.

TOOLBAR

The **Fabric** perspective contains a toolbar that you use to manage and monitor fabric areas. The toolbar contains the following buttons:

Option	Description
Fabric	The Fabric tab has a drop down menu which enables you to select a Fabric perspective, or a container perspective.
Containers	This view shows all the containers available in the Fabric.
Profiles	This tab shows the profiles that are available to the Fabric. This page can be used to manage the profiles.
Wiki	Explorer view of the fabric configuration repository and wiki content. The repository contains files that affect the behavior of the fabric during runtime.
Services	<p>This tab shows the services available to the Fabric. The options on this page include:</p> <ul style="list-style-type: none"> • Containers - view the containers in this Fabric • Profiles - view the currently active profiles in this Fabric • MQ - view the Fabric-based MQ brokers • APIs - view the APIs in the Fabric • EIPs - view the Camel Enterprise Integration Patterns in the Fabric • Registry - view the contents of the Fabric's runtime registry • Map - view the location of the Fabric on Google Maps
Scaling	Increase or decrease the number of instances of a profile and review the effect on the health of the profile. You can also set up SSH or Docker Configurations.
Dashboard	Overview of the Management Console status, services status, and system performance. You can add views to the dashboard and create additional dashboards.
Health	List and status of running health mbeans. This page shows any available container or fabric health mbeans.

CHAPTER 15. CREATING OR JOINING A FABRIC

OVERVIEW

To view and manage fabric properties, you must create or join a fabric. You create or join a fabric from the Karaf console. Before you create or join a fabric, make sure that JBoss Fuse is running and that your system is connected to the network.

CREATING OR JOINING A FABRIC

You create or join a fabric from the Karaf console or from the **Terminal** page in the **Container** perspective of the Management Console. You use the same command syntax in the Karaf console and the **Terminal** page.

To create a fabric, run the following command:

```
fabric:create
```

The Karaf console shows the default zookeeper password to use when you access the fabric.

To join a fabric, run the following command:

```
fabric:join <zookeeper_URL> <container_name>
```

You can set optional arguments, such as the profile or the port range. For more information, see [chapter "Creating a New Fabric" in "Fabric Guide"](#) .

CHAPTER 16. MANAGING PROFILES

OVERVIEW

A profile is a set of instructions to use when you run containers in a fabric. For example, a profile might contain one or more bundles, features, or configuration objects that you want to assign to multiple containers.

JBoss Fuse provides a default set of profiles based on the distribution that you install. You must create or join a fabric before you can manage profiles. You can create, edit, and delete profiles. You can also add or remove features, bundles, or feature repositories from an existing profile.

CREATING A PROFILE

1. In the **Wiki** page, click the **+Create** icon. Select **Fabric8 Profile** from the list. Enter a name in the **Name:** field. The **Name:** field accepts a combination of letters, numbers, and the characters **.**, **-** and **_**.

To create a profile in an existing folder, click on the **Wiki** tab and drill down to the folder in which you want to create the profile. Click the **+Create** icon.

2. Enter a name for the profile. Use dash characters to create directory levels. Each dash character adds a level to the directory hierarchy. For example, if you enter **MyProfile-Profile1**, the Management Console creates the directory **MyProfile** under the main profiles directory and creates the **Profile1** in that directory.

If you create a profile from an existing folder, you do not need to use the dash character to create a directory. The profile appears in the directory from which you create the profile.

3. If you want the profile to inherit features, bundles, or other configuration properties from one or more existing profiles, you have to change the parents of the profile. Click the edit icon underneath the parents section and select new parents from the list. Click the **Change Parents** button to apply your changes.

EDITING A PROFILE

1. In the **Profiles** tab or the **Wiki** page, click a profile name. A page will open showing profile details.
2. Edit the profile properties and save the changes. The Management Console updates the profile properties and deploys the changes to any container to which you assigned the profile.

DELETING ONE OR MORE PROFILES

1. Click on the **Wiki** tab. A list of profiles will be shown.
2. Select one or more profiles, then click on the **Actions** label. Select **Delete** to delete all the selected profiles.

**WARNING**

Deleting a profile that is in use can have severe consequences for your system. Exercise extreme caution when deleting profiles.

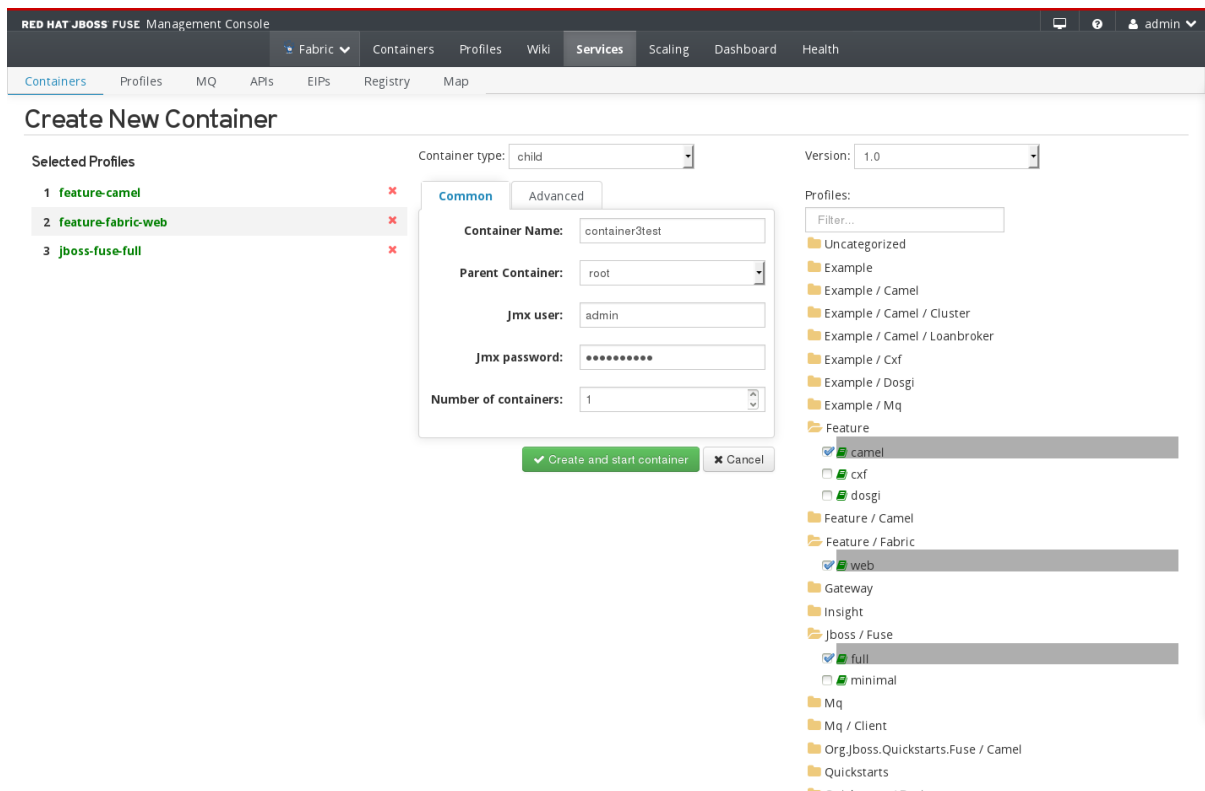
CHAPTER 17. ASSIGNING PROFILES TO CONTAINERS

OVERVIEW

You can assign one or more profiles to a container in a fabric. Each profile contains configuration information, such as features, bundles, or system properties. You must create or join a fabric before you can assign profiles to containers.

CREATING A CONTAINER WITH AN ASSIGNED PROFILE

1. To create a new container, go to the **Containers** tab and click the **+ Create** button. Alternatively, you can create a new container from the **Services** page by selecting **+ Create**.



2. In the **Profiles** section of the **Create New Container** page, click a folder to show the available profiles for that category or enter a filter string to search the profile list for a specific profile.
3. Select one or more profiles and enter the container properties in the same way that you enter the container properties for a standalone container.

ASSIGNING OR REMOVING A PROFILE FROM AN EXISTING CONTAINER

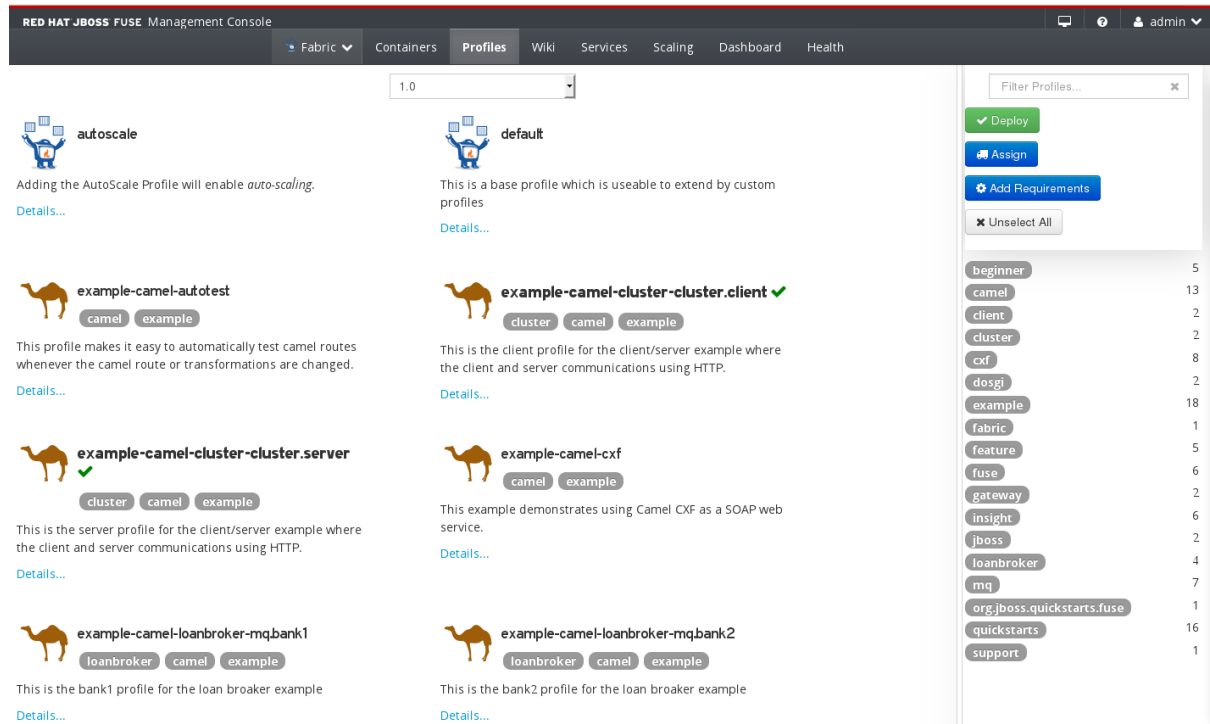
1. Open the **Containers** tab or go to **Services > Containers** and select the container that you want to edit. The **Container** page shows a list of the assigned profiles.
2. Choose whether to add or remove profiles from the container.
 - To add profiles to the container, click the **Add** button and select one or more profiles from

the list. You can add profiles based on the profiles that you already assigned to the container. For example, you cannot add a JON profile to a container that runs with a SOAP profile.

- To remove profiles from the container, select one or more profiles and click the **Remove** button. If you remove all profiles from a container, JBoss Fuse assigns the **default** profile to the container.

ASSIGNING MULTIPLE PROFILES TO MULTIPLE CONTAINERS

1. In the **Profiles** page, select one or more profiles by clicking on the name. A green tick will appear beside the name indicating that the profile has been selected.

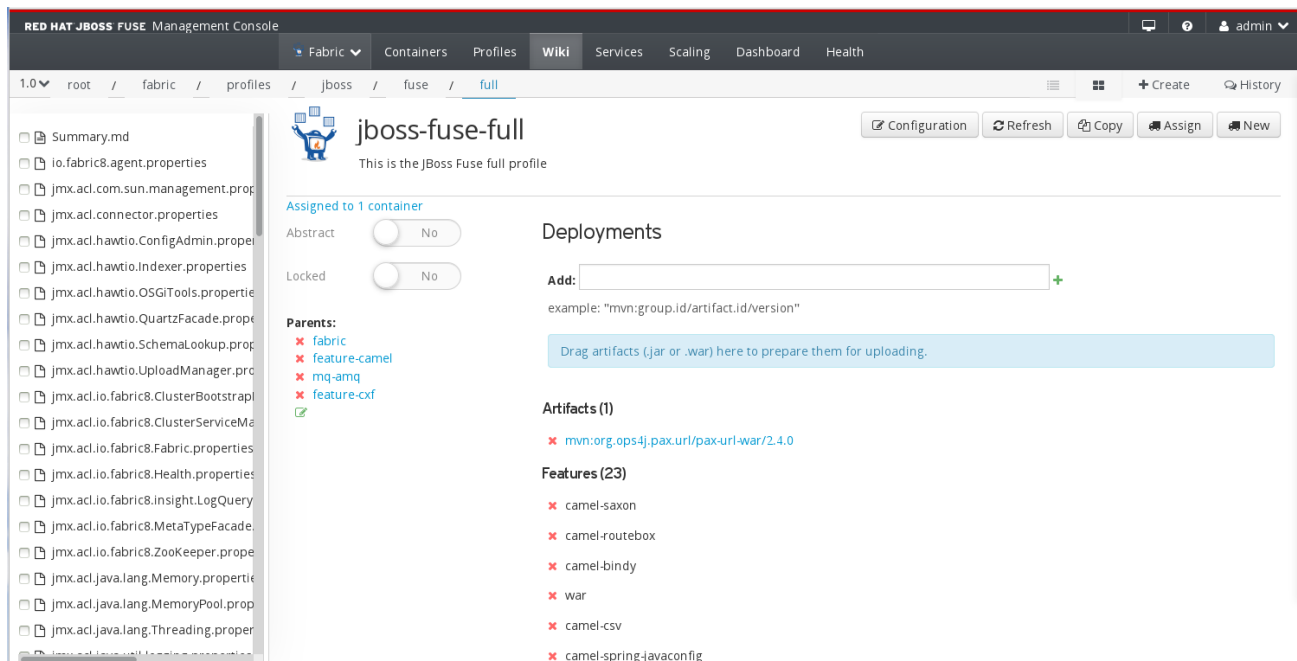


2. Click the **Assign** button. A list of available containers will be shown.
3. Select one or more containers from the list. To select more than one container, hold down **ctrl** key when selecting the container.
4. Click the **Assign** button to apply the selected profiles to the selected containers.

CHAPTER 18. PROFILES DETAILS PAGE

OVERVIEW

You can edit profile details on the Wiki profile page. Use this page to add and remove artifacts, features and feature repositories. Other functions are provided via buttons and editable lists.



FUNCTION BUTTONS

Some functions are available using the following buttons:

Button	Function
Configuration	View a list of the bundles and features that make up this profile.
Refresh	Deploy the latest version of <i>this profile</i> on all associated containers.
Copy	Create a new profile by copying this one.
Assign	Assign this profile to a container that already exists in the system.
New	Create a new container and assign this profile to it.

VIEW ASSOCIATED CONTAINERS

To view the containers that this profile is assigned to, click the sentence **Assigned to X Containers**, where X is a number indicating how many containers have this profile assigned. You will be taken to a list of the containers where you can click on individual containers to see any details you require.

ABSTRACT TOGGLE

Use the **Abstract** toggle to mark this profile as abstract. This means that the profile must be inherited by other profiles, and cannot be instantiated in its own right.

LOCKED TOGGLE

Use the **Locked** toggle ensure that no changes can be made to the profile unless it is deliberately unlocked.

PARENTS LIST

This list shows all the parent profiles from which this profile inherits features. You can remove a parent profile by clicking the red X next to it. Confirm the removal in the pop-up window.

You can add to the parent profiles list by clicking the green edit icon at the bottom of the list. To add the features of a profile, select from the presented list in the pop-up window. Click **Change Parents** to confirm. The list of parent profiles will be updated with the new information.

DEPLOYMENTS

The **Deployments** section shows lists of artifacts, features and feature repositories deployed to the profile.

To add to the **Artifacts** list, either drag an artifact or enter the address of an artifact into the **Add** box. Click the green + to add the artifact.

To remove an entry from any of the **Deployments** lists, click the red X next to the entry. Confirm the delete in the pop-up box by clicking **Delete**.

To edit an entry in any of the **Deployments** lists, click the pencil icon at the end of each entry. Edit the details required, then confirm the change by clicking the green tick, or cancel by clicking the red X in the pop-up box.

To edit the **Features** list, click the green edit icon at the bottom of the list. On the **Edit Profilename Features** page, you can perform the following:

- **Filter** the list of available features.
- Select additional features from the list. Click + **Add** to add the name to the features list, or click + **Add With Version** to add the name and version number to the features list.
- Delete entries from the **Features** list. Click the red X next to the feature name in the **Profile Features** list.
- See which features are inherited, by referring to the **Inherited Features** list.

Confirm the changes by clicking the **Save Changes** button. Click **Done** when you have finished, or if no changes have been made.

To add a feature repository, enter a repository name in the specified format into the **Add** box. Click the green + to add the repository.

CHAPTER 19. SERVICES AREA

Abstract

You use the **Services** area to view and manage containers, profiles, ActiveMQ brokers, and APIs. You can perform rolling updates to entities, monitor registered services, and view the location of your containers on a map.

19.1. SERVICES OVERVIEW

Toolbar

The **Services** tab contains a toolbar that you can use to access management pages for fabric entities. The **Services** toolbar contains links to the following pages:

Containers

List of available containers. Use this page to view container status, drill down to container details, and create containers in the fabric.

Profiles

List of assigned profiles. Use this page to view profile and container details and define minimum and maximum container requirements for each profile.

MQ

Graphical view of ActiveMQ brokers in a broker topology. Use this page to move, group, and connect containers.

APIs

List of installed Apache CXF Web Services APIs. Use this page to view and manage API properties, such as parameter values and exceptions.

EIPs

Dynamic diagram of installed Apache Camel containers. Use this page to view the details of the Camel route endpoints and dependencies.

Registry

List of registered services. Use this page to drill down to services and view service details and status.

Map

Locations of deployed containers according to the fabric geoIP data.

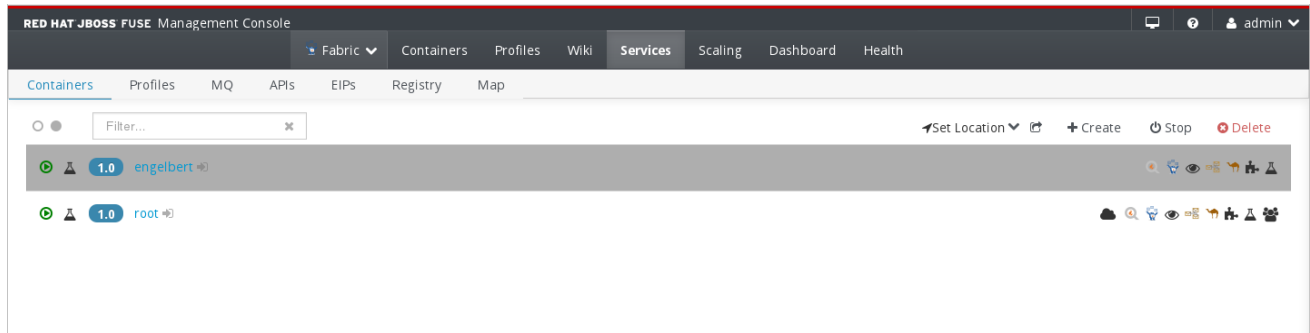
19.2. CONTAINERS PAGE

Abstract

You can view and manage containers in a fabric in the **Containers** page. You can view the list of containers, drill down to container details, and create containers.

Overview

The following image shows an example of the **Containers** page:



The **Containers** page contains the following sections:

Action Bar

Options to filter the container list, add the view to the dashboard, create a new entity, delete a container, or stop a container. The whole bar is shown when one or more containers is selected.

Container List

This is a list of the deployed containers. Click the name of the container to drill down to the container details page.

Action Bar

The Action Bar contains the following options:

Select All / Select None

Selects all containers in the list or clears all selections. Use the clear circle to clear all selections, and the solid circle to select all.

Filter

Filters the container list to show only containers that match a string that you enter in the text box. The container list refreshes as you type. To clear the filter, click the X in the filter box.

Set Location

Use this option to set the location of one or more containers. Select **Set Location** and either select **No Location** or select **New...** and add a location in the pop-up box.

Add to Dashboard

Adds the current view to the dashboard. The view appears in the fabric dashboard.

+Create

Opens the **Create New Container** page. The new container appears as a child of the root container in the container list.

Start/Stop

Starts or stops the selected containers. This icon toggles between start and stop, depending on the state of the selected container.

Delete

Deletes the selected containers.

Container List

The container list contains the following elements:

Status

Icon that shows the status of the container.

Version

Version number of the associated profile.

Container Name

Name of the container. You click the container name to drill down to the container details page.

Open a New Window and Connect to this Container

Use the icon next to the container name to open the container in the container perspective in a new window.

Icon list

Next at the end of each container row is a list of icons representing the services available in the container. Hover the mouse over each icon to identify it.

19.3. PROFILES PAGE

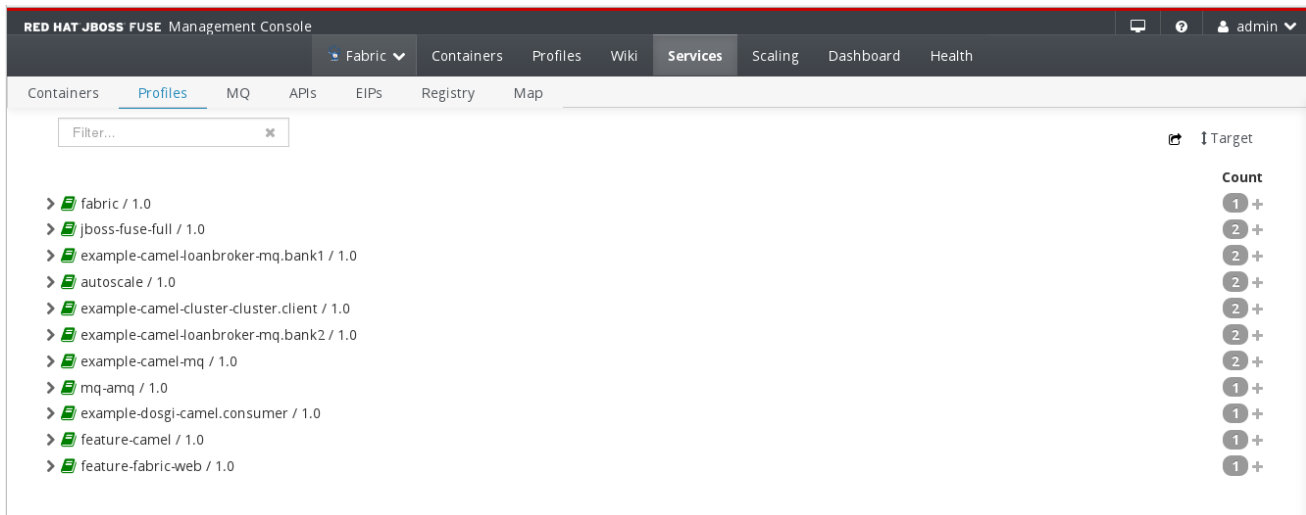
Abstract

You can view and manage assigned profiles in a fabric in the **Services > Profiles** page. You can drill down to profile and container details and create containers for the profiles. You can also define profile requirements for the fabric.

Overview

You access the **Profiles** page from the **Fabric** perspective. If the **Fabric** perspective is not available, make sure that your fabric is available or create a new fabric.

The following image shows an example of the **Profiles** page:



The **Profiles** page contains the following sections:

Action Bar

Options to filter the container list, add the view to the dashboard, or define profile usage targets.

Container List

List of assigned profiles. You can click the name of the profile to drill down to the profile details page where you can manage profile settings.

Action Bar

The Action Bar contains the following options:

Filter

Filters the profile list to show only profiles that match a string that you enter in the text box. The profile list refreshes as you type. To clear the filter, click the X in the filter box.

Add to Dashboard

Adds the current view to the dashboard. The view appears in the fabric dashboard.

Target

Configure the minimum number of required instances for each profile. Click **Target** to open a pop-up window in which you can configure the maximum and minimum number of instances for each profile. You can also add or remove dependent profiles for each profile.

Count

Shows the number of running containers for each profile. Click on the number to add more containers.

Profile List

The profile list contains the following elements:

Show / Hide

Arrow icon to show or hide containers for each profile. Each container shows the same information

as the container list on the **Containers** page.

Profile

Name and version of the profile. Click on the profile name to drill down to the profile details page.

Instances

Icon that shows the number of profile instances. You can click the icon to create additional containers for the profile.

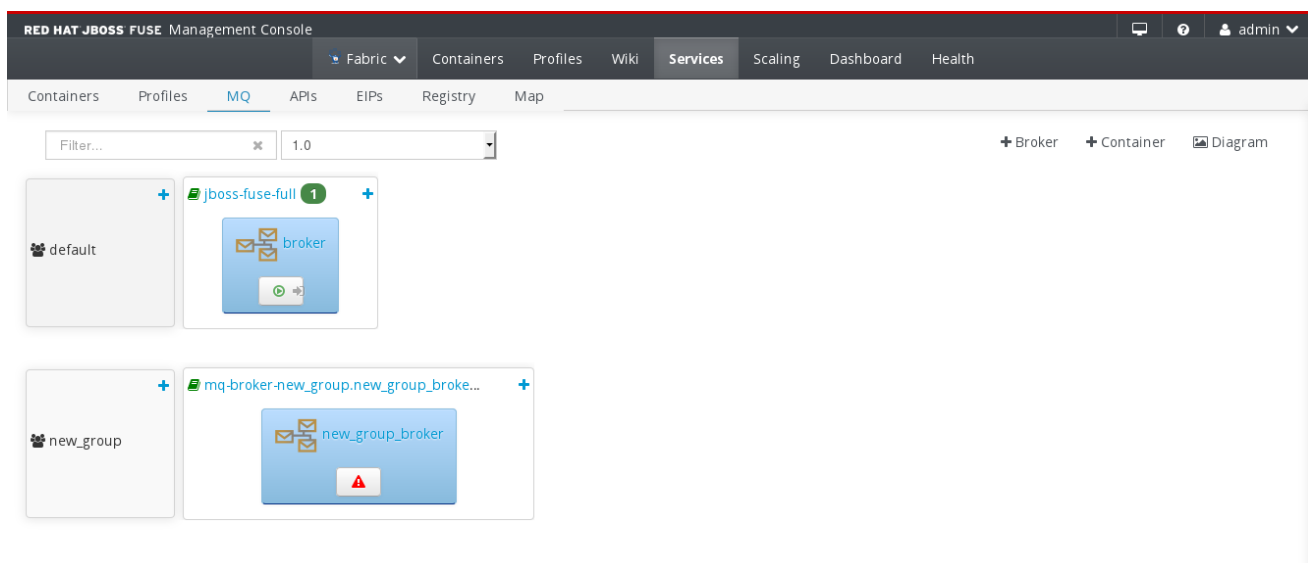
19.4. MQ PAGE

Abstract

You view and manage Apache ActiveMQ brokers in the **Services > MQ** page. You can create and organize ActiveMQ brokers in topologies, and monitor broker status during runtime.

Overview

The following image shows an example of the **MQ Configuration Topology** page:



The **MQ** page contains the following sections:

Action Bar

Options to filter the topology viewer, add brokers and containers.

Topology Viewer

Graphical overview of Apache ActiveMQ brokers, profiles, and topologies.

Action Bar

The **Action Bar** contains the following options:

Filter

Filters the topology viewer to show only brokers that match a string that you enter in the text box. The topology viewer refreshes as you type. To clear the filter, you click the X icon.

+Broker

Opens the **Master Slave Broker** page. In this page, you create a broker configuration that acts as a fabric profile. If you create a broker from the Action Bar, you must manually specify in which group to create the broker.

+Container

Opens the **Create New Container** page. The new container appears in the container list.

Diagram

Toggles between the **Configuration** view, as shown above, and the **Diagram** view.

Configuration Topology Viewer

The Configuration topology viewer contains the following elements:

Group

Broker group with one or more profiles. Each group appears as a box that shows the name of the group. You can click the + to create a broker in the group. When you create a broker in the group, you can choose to assign the broker to an existing profile in the group or choose a different profile.

Profile

Profile with one or more brokers. Each profile appears as a box that shows the name of the profile and one or more nested boxes that represent brokers. You can click the profile name to drill down to the profile details. You can also click the + icon to create a broker in the group. The broker is assigned to the existing profile.

Broker

Apache ActiveMQ broker with one or more containers. Each broker appears as a box that shows the name of the broker and icons that represent the containers of the broker. You can click the broker name to view the configuration properties of the broker.

Container

One or more active containers that run with the parent profile and broker. Each container appears as a box that shows the container icon. You can hover over the container icon to view the container name, and click the icon to drill down to container details.

Diagram Viewer

The Diagram topology viewer shows a diagrammatic representation of the AMQ topology. It shows links between components. The Diagram page contains the following elements:

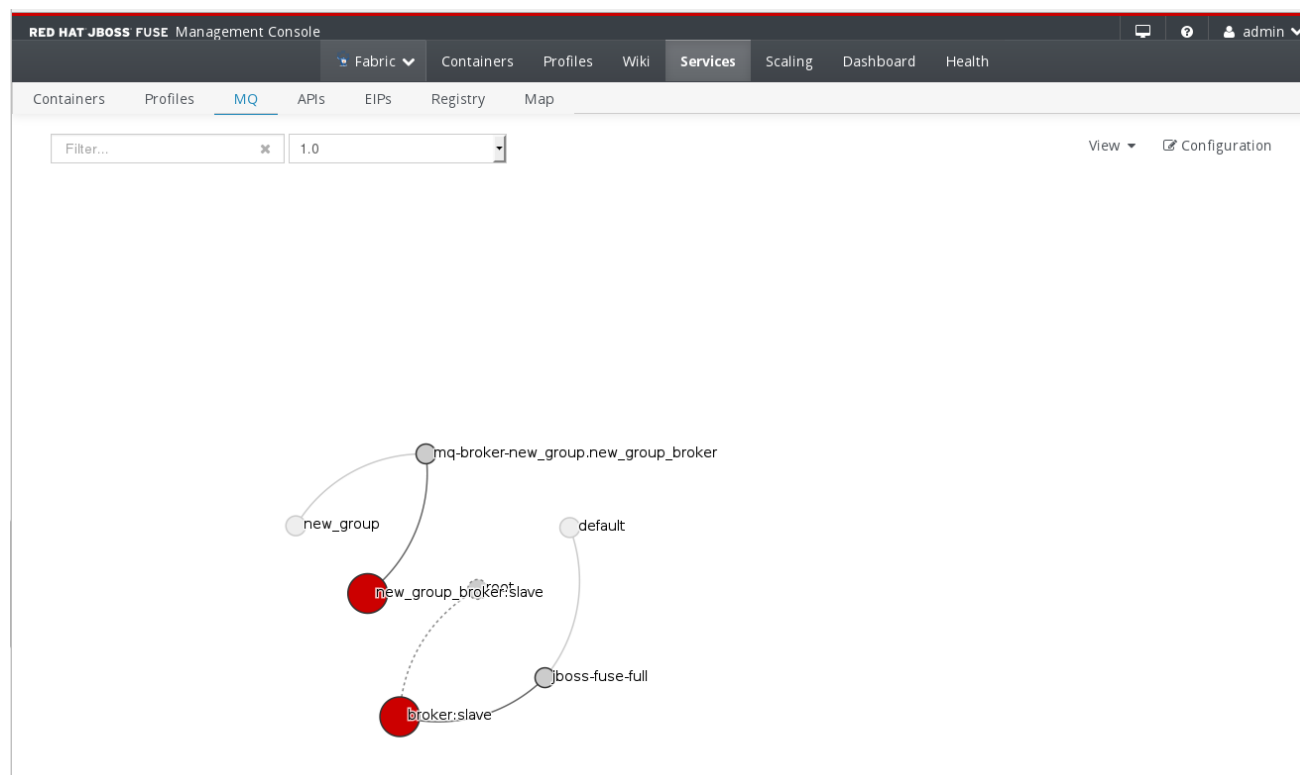
Filter

The **Filter** field allows you to focus your diagram on specific parts or specific versions of the system.

View

The **View** drop-down menu allows you to select the components you want to see in your diagram. You can include or exclude a number of components, and configure how the diagram is presented.

The following image shows an example of the **MQ Diagram** page:



19.5. APIS PAGE

Abstract

You view and manage Apache CXF Web Services APIs in the **Services > APIs** page.

Overview

The following image shows an example of the **APIs** page:

Service	APIs	Container	Version	Location
{http://rest.fabric8.io/}FabricResource	Swagger WADL	root	1.0	http://127.0.0.1:8181/cxf/fabric8

The **APIs** page contains the following sections:

Filter

Filters the API list to show only APIs that match a string that you enter in the text box. The API list refreshes as you type. To clear the filter, you click the X icon.

API List

List of active Web Services APIs. Each API shows the service name, a link to the available operations, the container that uses the API, and the location of the Web Service.

19.6. EIPS PAGE

Abstract

You view Apache Camel routes and dependencies in the Enterprise Integration Pattern (**EIPs**) page.

Overview

The **EIPs** page contains the following sections:

Action Bar

Options to filter and show or hide entities from the route viewer.

Route Viewer

Graphical overview of Apache Camel routes and dependencies. You can click each entity to display the properties in the right pane.

Action Bar

The Action Bar contains the following options:

Filter

Filters the route viewer to show only entities that match a string that you enter in the text box. The route viewer refreshes as you type. To clear the filter, you click the X icon.

View

Drop-down list of entity types. You select or clear the check box next to each entity type that you want to show or hide.

Route Viewer

The route viewer shows active Camel routes and dependency clusters. You can use the mouse scroll button to zoom in and out. You can also use the mouse to drag the clusters in the pane. When you click each entity, you can view details and properties in the right pane.

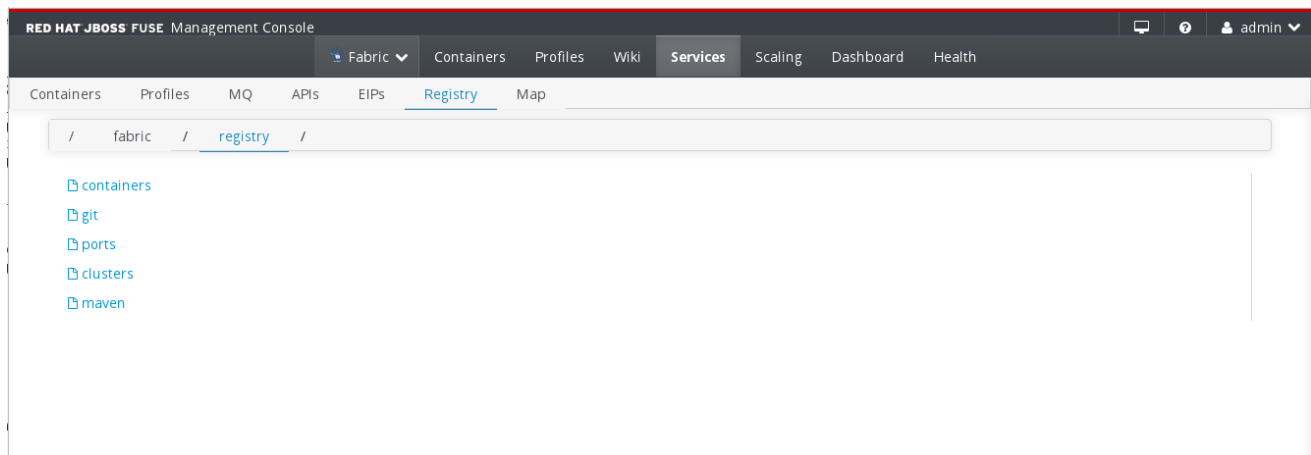
19.7. REGISTRY PAGE

Abstract

You view the status and manage registered services in the **Registry** page. You can view the details and monitor the status for entities such as clusters, servlets, webapps, and repositories.

Overview

The following image shows an example of the **Registry** page:



The **Registry** page contains the following sections:

Navigation Bar

Breadcrumb view of the location in the service list.

Service List

List view of the registered services.

Navigation Bar

The Navigation Bar shows a breadcrumb view of the location in the service list. Each node in the hierarchy appears as a link. You can click each link to drill up in the hierarchy. By default, the **Registry** page shows the **clusters** node.

Service List

The service list shows registered services in folders. Click the folder to drill down to the service details.

When you drill down to service details, you can view the following general properties:

ID

Identifier of the service.

Container

Name of the container that uses the service.

Services

URL of the service.

Each service can show additional properties based on the type of service and the profile that runs the container.

19.8. MAP PAGE

Abstract

You view the location of deployed containers in the **Map** page.

Overview

The **Map** page contains the following sections:

Container Tree

Tree view of the deployed containers. You can click a container in the tree to center the map to the location of the container.

Map

Google Map control that shows the location of the container. You can switch between the map view and the satellite view. You can also zoom in and out of the map.

CHAPTER 20. WIKI PAGE

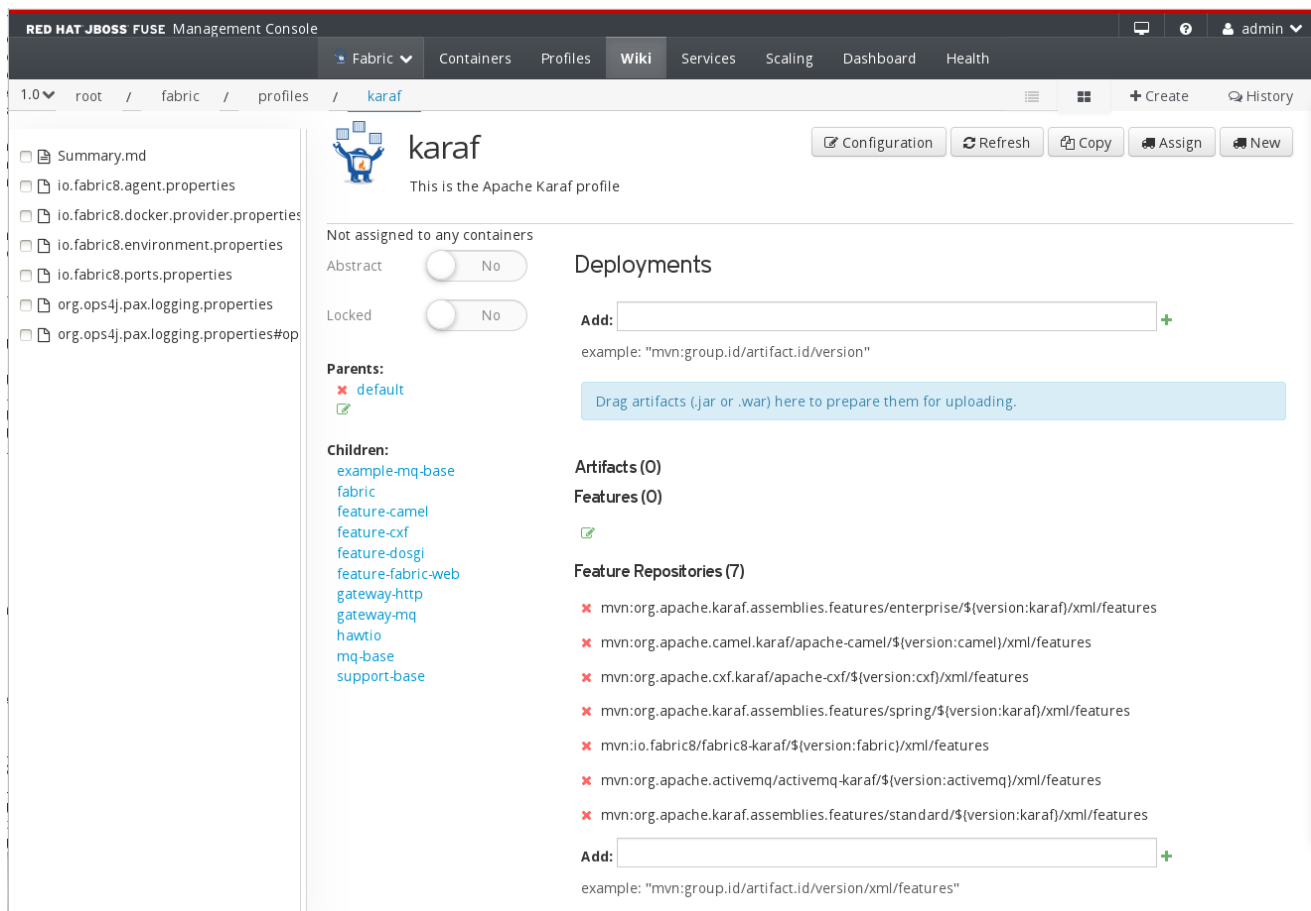
Abstract

You view and manage the fabric configuration repository and integrated wiki content in the **Wiki** page. You can view the list of configuration objects, drill down to object details, and manage wiki documents.

OVERVIEW

You access the **Wiki** page from the **Fabric** perspective. If the **Fabric** perspective is not available, make sure that your fabric is available or create a new fabric.

The following image shows an example of the **Wiki** page:



The **Wiki** page contains the following sections:

Action Bar

Breadcrumb view of the location in the configuration repository and document management options.

Repository Explorer

Tree view of the fabric configuration repository and wiki documents.

Details Pane

Detailed view of the configuration object or wiki content.

ACTION BAR

The Action Bar contains the following options:

Version

Version of the repository branch to view. You can open the drop-down list to switch versions.

Navigation Bar

Breadcrumb view of the location in the repository. Each hierarchical level appears as a link. You can click each link to drill up to the parent directory. By default, the **Wiki** page opens to the main profiles directory.

Create

Opens the Create Document dialog box. You can use this dialog box to create configuration objects such as profiles, property files, Camel routes, or wiki pages. You cannot use this dialog box to create profiles or containers.

Edit

Switches the details pane to a wiki markdown view. You can edit the wiki markdown content directly in the page and save the updated wiki document.

Actions Menu

Object management options based on the contents of the details pane. For example, when you edit a profile you can use the **Actions** menu to change the profile parent, assign the profile to a new container, or edit the profile features. Use the mouse to hover over the menu options and view the description.

REPOSITORY EXPLORER

The repository explorer shows a tree view of all configuration objects and wiki documents organized in folders. You can click a folder in the tree to show the folder contents, or click a profile or a wiki document to show the details in the details pane.

You can select one or more objects and use the **Actions** menu to move, delete, or view the version history of the selected objects. You can also hover over each object to view the last modified date and time and the size of the object.

DETAILS PANE

Detailed view of the configuration object or wiki content. When you edit a profile, this pane shows the profile details. When you drill down to a directory with a wiki document, this pane shows the contents of the wiki document.

If the directory does not contain a wiki document, this pane is empty.

CHAPTER 21. DASHBOARD PAGE

Abstract

Monitor system performance and runtime status using the **Dashboard** page. You can view recent log entries, active profiles, running containers, and system services.

OVERVIEW

The Dashboard page contains the following sections:

Navigation Bar

Tabbed view of available dashboards and management options.

Active Dashboard Pane

Detailed view of the active dashboard.

NAVIGATION BAR

The navigation bar shows a tabbed view of available dashboards. Custom dashboards that you create or import appear in the navigation bar. You can click the dashboard name to switch between dashboards.

You can click the **Manage** button to create or import custom dashboards.

ACTIVE DASHBOARD PANE

The active dashboard pane shows a detailed view of the selected dashboard. By default, this pane shows the **Welcome** dashboard. You can use the **Add Current View to Dashboard** button in various areas of the Management Console to customize the default dashboard or create a new dashboard.

You can click and drag each area in the dashboard to arrange the dashboard. You can also click the edit icon next to each area title to edit the area name.

The **Welcome** dashboard contains the following areas:

Java Heap Memory

Pie chart view of used and free Java heap memory.

Java Non Heap Memory

Pie chart view of used and free Java non-heap memory.

Containers

List of deployed containers and container management options.

Active Profiles

List of active profiles and profile management options. Active profiles are profiles that you assigned to containers.

Loaded Classes

Pie chart view of loaded classes and unloaded classes.

Process CPU Load

Graphical view of CPU usage.

Threads

Timeline view of running threads and status information, such as thread count and thread user time.

Logs

List of recent log entries. You can click the log type to view basic information about the log entry, or click the log entry link to open the full log entry syntax.

CHAPTER 22. HEALTH PAGE

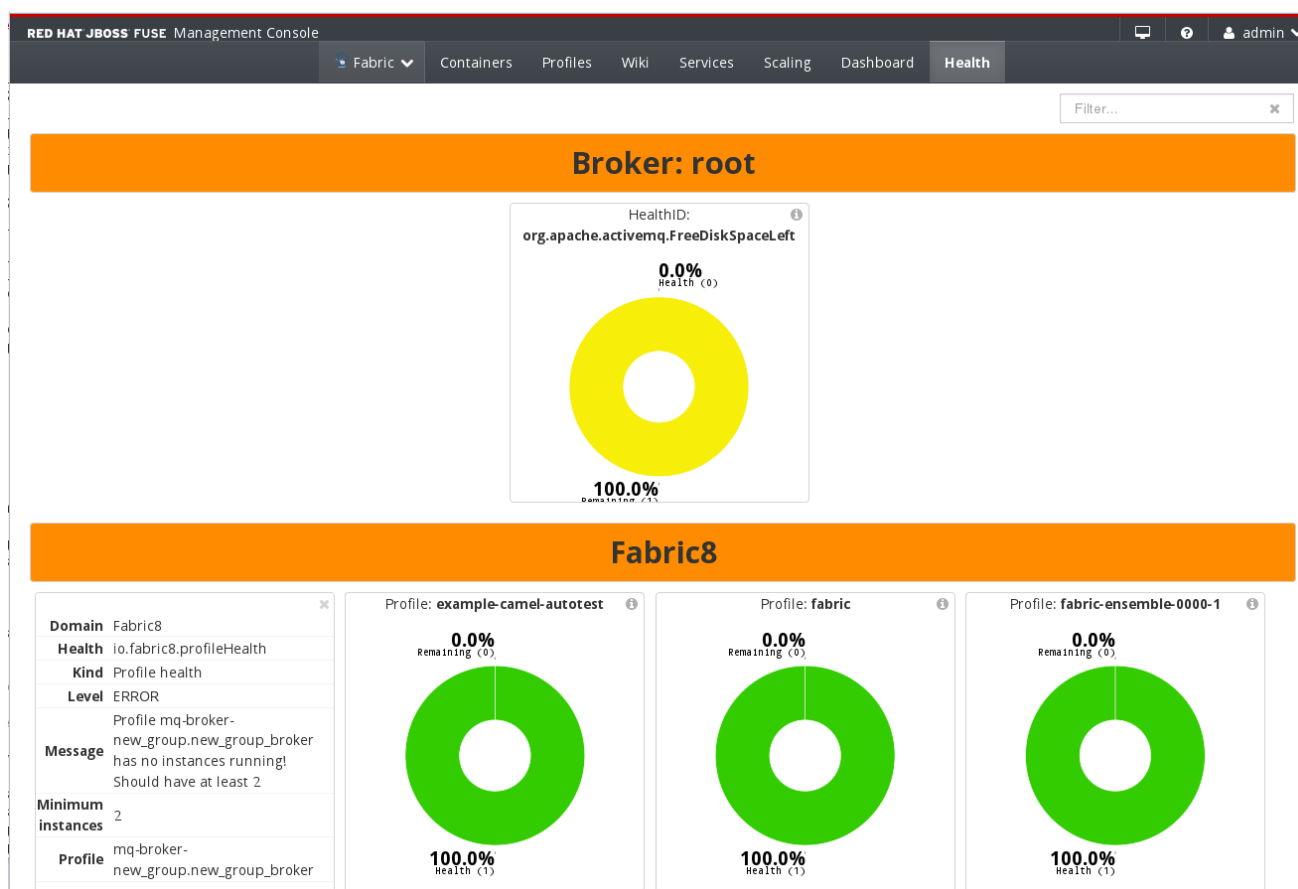
Abstract

You view the status of health mbeans for containers and fabrics in the **Health** page. Health mbeans continuously check running Java code and services for syntax errors.

You can view the status for each broker and profile. The actual content of this page depends on the active brokers and profiles.

OVERVIEW

The following image shows an example of the **Health** page:



The **Health** page contains the following sections:

Filter

Filters the brokers and profiles pane to show only brokers or profiles that match a string that you enter in the text box. The pane refreshes as you type. To clear the filter, you click the X icon.

Brokers and Profiles Pane

Graphical view and service names for the active brokers and profiles. Each broker and profile shows the name and type of the broker or profile. You can click the information icon to expand the details pane for the selected broker or profile.

PART IV. LOG MANAGEMENT WITH INSIGHT

Abstract

You use the Insight plugin to centrally manage logs and metrics for multiple containers in a fabric. The Insight plugin is a set of profiles that uses Elasticsearch and Kibana technology to collect log messages and events from multiple containers in one or more data stores. You then access and analyze the messages from the **Insight** perspective of the Fuse Management Console.

CHAPTER 23. GETTING STARTED

OVERVIEW

To get started with Insight, you set up the data store, configure the containers to send messages or events to the data store, and install the embedded Web viewer to show the data in the Management Console. You then configure each container that you want to add to the Insight ensemble to send logs or metrics to the data store.

PREREQUISITES

Before you install and configure Insight, you must create a fabric or join an existing fabric.

DATA STORE INSTALLATION

To ensure optimal system resource usage, it is recommended that you install each data store in a separate container.

To install the data store, create a container with the following profiles:

`insight-elasticsearch.node`

Listener process that collects logs and events from the containers and writes the data to the data store. This profile contains all the configuration for the data store, such as size and location.

To customize the data store configuration, edit the `io.fabric8.elasticsearch-insight.properties` file. For more information about the Elasticsearch node configuration properties, see the [Elasticsearch documentation](#).

`insight-elasticsearch.datastore`

Database instance that uses Elasticsearch to store log messages and events from multiple sources. This profile extends the `insight-elasticsearch.node` profile and inherits its configuration.

WEB VIEWER INSTALLATION

To install the Web viewer, add the following profiles to the root container:

`insight-elasticsearch.node`

This profile enables the container to join the Elasticsearch cluster as an Elasticsearch client.

`insight-console`

Enables the **Insight** perspective in the Fuse Management Console.

After adding these profiles to the root container, the Web viewer is then available from the **Insight** perspective.

You can configure a different Web viewer to access logs and metrics. To connect directly to the cluster from an external Web viewer, enter the IP address from the **Connect** box of the **Elasticsearch** page as the destination of the data store cluster. You cannot use the command line to query the data store.

CONFIGURING LOG COLLECTION

By default, containers send log messages to standalone log files that you view in the Logs tab of the container. To instruct a container to send the messages to the Insight data store, add the `insight-logs.elasticsearch` profile to each container that you want to add to the Insight ensemble.

CONFIGURING METRICS COLLECTION

By default, containers with Camel routes use stack tracing to collect metrics. To instruct a container to send the messages to the Insight data store, add the `insight-metrics.elasticsearch` and the `insight-camel` profiles to each Camel container that you want to add to the Insight ensemble.

VIEWING AND ANALYZING LOGS AND METRICS

You access the logs and metrics for all containers and brokers from the **Insight** perspective. For more information, see [Chapter 24, *Insight Perspective*](#).

CHAPTER 24. INSIGHT PERSPECTIVE

OVERVIEW

When you log in to the Management Console, you use the **Insight** perspective to view and analyze log messages and events stored in the Insight data store. The **Insight** perspective shows information for all the containers and brokers in the fabric that you add to the Insight ensemble.

TOOLBAR

The **Insight** perspective contains a toolbar that you use to manage and monitor Insight components. The actual options depend on which Insight profiles you install and the type of containers from which you collect log messages and events. The toolbar can contain the following options:

Option	Description
Camel	Detailed view of a Camel event based on the exchange ID of the event.
Logs	Embedded Web viewer that you use to access all logs stored in the Insight data store.
Camel Events	Embeddeed Web viewer that you use to access all Camel events stored in the Insight data store.
Elasticsearch	Overview of all data stores in the fabric.

CHAPTER 25. CAMEL PAGE

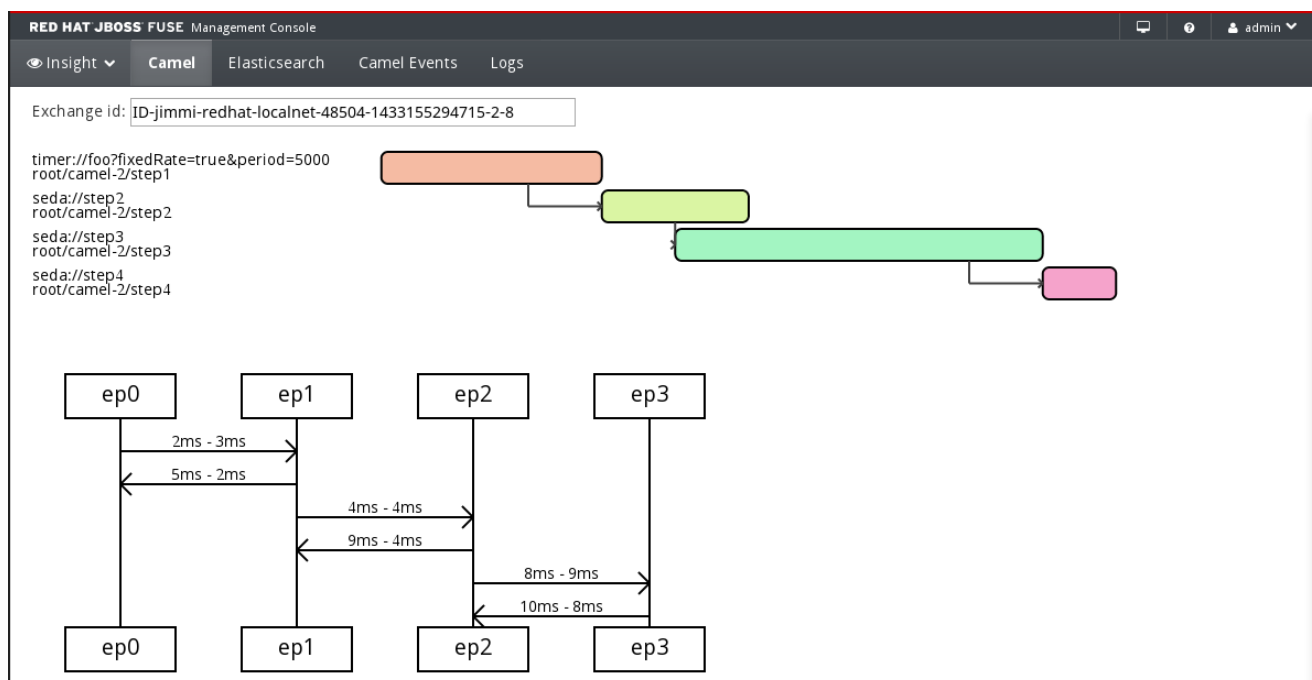
Abstract

You view metrics about a Camel route in the **Camel** page. You can view route attributes and source code, debug and trace the route, and monitor route status.

OVERVIEW

You access the **Camel** page from the **Insight** perspective. This page is available only when you install and configure the Insight plugin for one or more containers with a Camel route.

The following image shows an example of the **Camel** page:



The Camel page contains the following sections:

Exchange ID

Text box where you enter the exchange ID of a Camel route. To locate the exchange ID, select an event from the **Camel Events** page of the **Insight** perspective and copy the value of the **exchange.id** field.

Details pane

Gantt chart and diagram view of the message processing time in each part of the route. You can use these diagrams to locate bottlenecks and optimize the route.

CHAPTER 26. LOGS PAGE

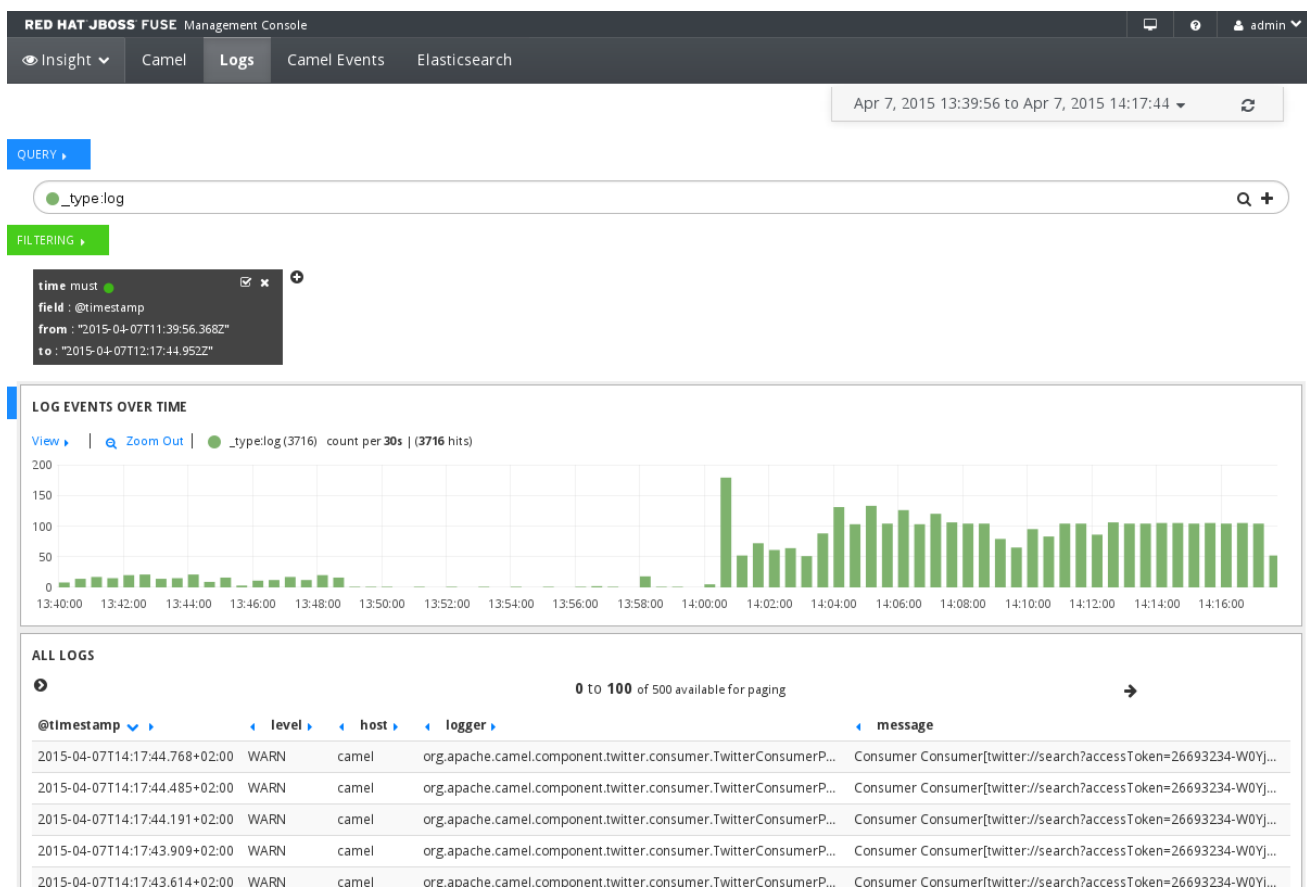
Abstract

You view and analyze log messages in the **Logs** page. The page displays logs of all containers that use the insight-logs profile. You can query the Elasticsearch data store, filter the log list, and drill down to message details.

OVERVIEW

You access the **Logs** page from the **Insight** perspective. This page is available only when you install and configure the Insight plugin for one or more containers in the fabric.

The following image shows an example of the **Logs** page:



The Logs page contains the following sections:

Quick-filter

Drop-down list with options to filter the log list and graph according to predefined times, such as last 15 minutes or last 7 days. The list also includes a **Refresh** icon that you can use to display messages that were generated after you navigated to this page.

Query box

Text box where you enter a query to search for log messages in the data store. By default, the page shows only events of type **log**. You can define queries with the lucene query string, regular expressions, or topN formats. For information and conventions, click the colored circle icon on the left side of the query box and open the **About** dialog box.

Filtering pane

Filter settings for the logs list. You can use this pane to add, edit or delete filter settings.

Log Events Over Time graph

Visual representation of the messages as they are collected in the data store. You can drag the mouse cursor to highlight an area in the graph and show the events that occurred during the selected time frame. The log list refreshes as you zoom in or out in the graph.

All Logs list

List of logs messages for all containers and brokers in the Insight ensemble. The events in this list depend on the query, filter, and graph settings. Use the left and right arrows to navigate the list.

You can click an event to drill down to detailed information, such as log level, full message, bundle name, and so on. You can also perform actions on the event, such as add or remove a filter based on one of the event properties.

CHAPTER 27. CAMEL EVENTS PAGE

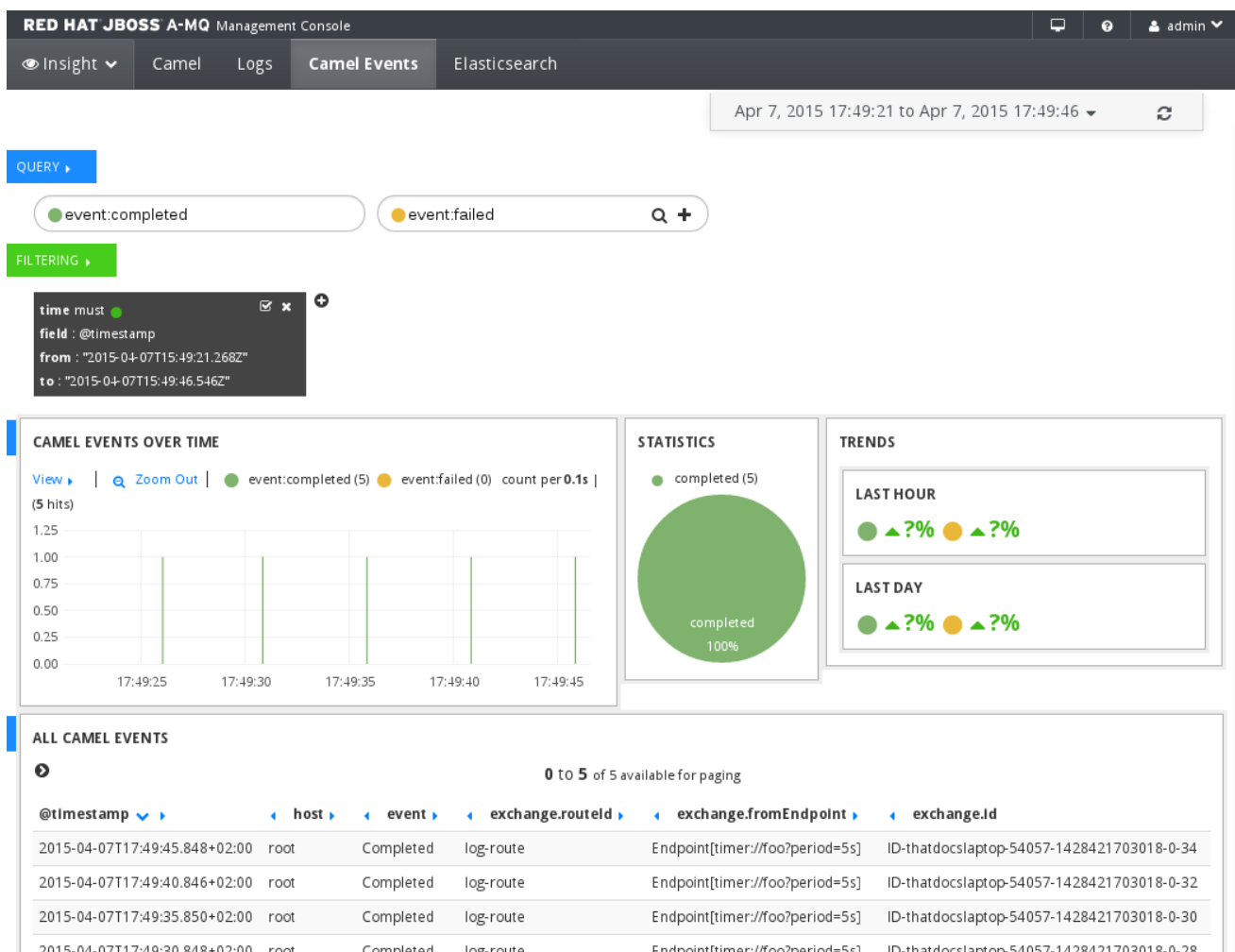
Abstract

You view and analyze events for all containers with Camel routes in the **Camel** page. This page provides functionality similar to route tracing.

OVERVIEW

You access the **Camel Events** page from the **Insight** perspective. This page is available only when you install and configure the Insight plugin for one or more containers with a Camel route.

The following image shows an example of the **Camel Events** page:



The Camel Events page contains the following sections:

Quick-filter

Drop-down list with options to filter the event list and graph according to predefined times, such as last 15 minutes or last 7 days. The list also includes a **Refresh** icon that you can use to display messages that were generated after you navigated to this page.

Query box

Text box where you enter a query to search for events in the data store. By default, the page shows only completed and failed events. You can define queries with the lucene query string, regular

expressions, or topN formats. For information and conventions, click the colored circle icon on the left side of the query box and open the **About** dialog box.

Filtering pane

Filter settings for the event list. You can use this pane to add, edit or delete filter settings.

Camel Events Over Time graph

Visual representation of the events as they are collected in the data store. You can drag the mouse cursor to highlight an area in the graph and show the events that occurred during the selected time frame. The event list refreshes as you zoom in or out in the graph.

Statistics pie chart

Visual representation of the percentage of completed events. You can click the completed area in the pie chart to add a filter that shows only completed events.

Trends overview

Statistical information about the Camel events that occurred in the last hour and the last day. The trends are displayed based on the query settings. By default, the overview shows information about completed and failed events.

All Camel Events list

List of events for all Camel containers and brokers in the Insight ensemble. The events in this list depend on the query, filter, and graph settings. Use the left and right arrows to navigate the list.

You can click an event to drill down to detailed information, such as exchange ID, full message, endpoint, and so on. You can also perform actions on the event, such as add or remove a filter based on one of the event properties.

CHAPTER 28. ELASTICSEARCH PAGE

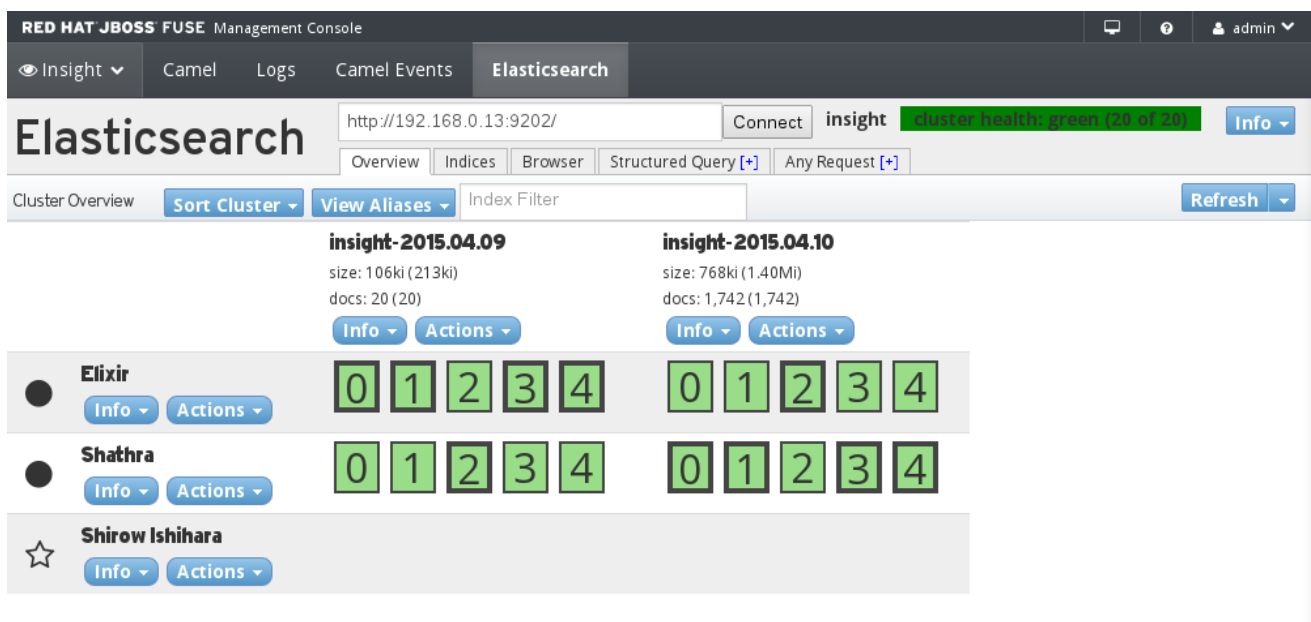
Abstract

You view and manage the Elasticsearch data stores in the **Elasticsearch** page. You can view detailed information about all the data stores in the fabric, such as cluster and node state. You can also run custom queries on the database.

OVERVIEW

You access the **Elasticsearch** page from the **Insight** perspective. This page is available only when you install and configure the Insight plugin for one or more containers in the fabric.

The following image shows an example of the **Elasticsearch** page:



The Elasticsearch page contains the following sections:

Cluster overview and toolbar

General information about the data store cluster, such as the address and the state of the cluster. If you want to connect directly to the cluster from an external Web viewer, you use the IP address from the **Connect** box to indicate the location of the data store cluster.

Data Store list and details

List of all the data stores in the cluster. Each node represents a data store container. The right pane shows general information about each node, such as storage size according to date, number of messages, and so on.

ENABLING BASIC HTTP AUTHENTICATION

You can enable basic HTTP authentication on Elasticsearch nodes that are used in Fabric8 v1 insight profiles. To do this:

1. Assign the `elasticsearch.basicauth` profile to

- Each container that has `elasticsearch.node` assigned
- Each `elasticsearch.node` child profile

This adds basic HTTP authentication to the Elasticsearch API. The API authenticates against the JAAS fabric realm. By default, a user with any one of the following roles is authenticated: "admin", "manager", "viewer", "Monitor", "Operator", "Maintainer", "Deployer", "Auditor", "Administrator", "SuperUser".

2. Optionally, if you want to modify the default settings, insert the following configuration properties into the `io.fabric8.elasticsearch-insight` PID:

- `http.basic.realm`

The default is `karaf`. Specify the name of the JAAS realm to use.

- `http.basic.roles`

The default is:

`admin,manager,viewer,Monitor,Operator,Maintainer,Deployer,Auditor,Administrator,SuperUser`. Specify a comma separated list of allowed roles.

- `http.basic.log`

The default is `false`. Specify `true` for more verbose logging.

LOGGING IN

When you log in to Hawtio, be sure to enable **Remember me**. This provides a better experience if there are refreshes of the Hawtio page. When the user account that is used to log in to Hawtio is authorized then the Insight panel works out of the box.

PART V. DIAGNOSTIC TOOL PLUG-IN

The Diagnostic tool is implemented as a Hawtio plug-in integrated in the Fuse Management Console. The plug-in is deployed either as a feature in a non-fabric environment or as a profile in a Fabric environment called support-base.

The plug-in can be accessed on the Fuse Management Console under the Red Hat Access menu in the top right corner. The plug-in allows you to add artifacts such as **LOGS**, **SUPPORT_ZIP**, **ETC**, **HEAPDUMP** and **THREADDUMP**.

The diagnostic tool allows the following attachments:

- **LOGS**: logged information of the root container.
- **SUPPORT_ZIP**: Generates a comprehensive zip of diagnostic information.
- **ETC** : Generates a zip of the configuration folder.
- **HEAPDUMP**: Generates a zipped heap dump.
- **THREADDUMP** : Generates a thread dump.



NOTE

In case of Fabric, the **SUPPORT_ZIP** artifact would contain extra Fabric-specific configurations such as the contents of the ZooKeeper registry (calls zkdump).

CHAPTER 29. OPEN A NEW CASE

You can open a new case through the Fuse Management Console.

OPENING A NEW CASE

1. Login to Fuse Management Console.
2. In **Fuse Management Console**, click on **Red Hat Access** in the top right corner.
3. Login with your Red Hat Subscription ID and Password.
4. Select **Open New Case** from the drop-down list.
5. In the Open New Case window, click **My Account** and the **owner** field and **Product** field are updated automatically, select the product version, enter the Summary and Description and click **Next**.
6. On the next page, select the **Support Level**, **Severity** and **Case Group**
7. You can upload local files and server files when you open a new case.

To upload local files, click **Attach local file**, enter file description and click **Add**.
8. To attach server files, select the file type from the listed option and click **Submit**.

CHAPTER 30. EDIT AN EXISTING CASE

You can edit an existing case through the Fuse Management Console.

EDITING AN EXISTING CASE

1. Login to Fuse Management Console.
2. In **Fuse Management Console**, click on **Red Hat Access** in the top right corner.
3. Login with your Red Hat Subscription ID and Password.
4. Select **List Cases** from the drop-down list.
5. The case list can be filtered using the search box, selecting a case group, or as per the status of the cases.

Select the case for editing from the search results.

6. On the next page, there are different section such as **Details**, **Attachments** and **Case Discussion**.

To modify the case details, edit the **Details** section and click **Update Details**.

7. In the Attachments section you can add new attachments and click **Upload Attachments** or delete existing attachments.
8. In the Discussion section you can add comments and choose to make the comment public or private.

You can access existing solutions in the Recommendations section. You can also choose to escalate the case with Red Hat Support manager.

CHAPTER 31. USING THE DIAGNOSTIC TOOL

To use the Diagnostic tool, you need to install and create an instance of Red Hat JBoss Fuse 6.2. You can access the diagnostic tool through the Hawtio interface.

USING THE DIAGNOSTIC TOOL

1. Login to Fuse Management Console.
2. In **Fuse Management Console**, click on **Red Hat Access** in the top right corner.
3. Select **Diagnose Log** from the drop-down list.

The Log File Viewer screen opens.

4. In the Log File Viewer, click **Please Select the machine** and click **root**, select the log file and click **Select File**.

The contents of the log file are displayed in the Log Viewer window



NOTE

The log file used in this step is for example purpose. You can choose any file for diagnostics.

5. From the list of the log messages, click on the message relevant to your issue and click **Red Hat Diagnose**.
6. The Recommendations panel opens, click the appropriate Support case in the panel to access the information related to the problem.

In case the issue is not listed in the recommendations panel, you can click the **Open a New Support Case** to file a case with Red Hat Support Team

CHAPTER 32. LIMITATIONS OF THE DIAGNOSTIC TOOL

The diagnostic tool has certain limitations:

- The diagnostic tool can only get extra information from root, child, or SSH containers.
- Cloud containers are not supported.
- The diagnostic tool collects the extra information by a process running on the remote container, in extreme cases (heavily overloaded container), the tool might not be able to gather statistics from a badly failing container.
- Extra artifacts are delivered straight from container, so container host must have Internet access.