Red Hat JBoss Fuse 6.3

JON Performance Metrics Reference

Fuse Plugin Pack for JBoss ON

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Fuse Plugin Pack for JBoss ON

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Abstract

This guide describes the information you can collect about your Fuse managed resources and then display it in JBoss Operation Network.

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CHAPTER 1. MONITORING FUSE RESOURCES

Abstract

Using Red Hat JBoss Operations Network (JON), you can discover, import, and monitor Red Hat JBoss Fuse resources.

1.1. INSTALLATION PROCEDURE

The JBoss ON for Fuse plugin pack is not installed with the JON base distribution. You must download and install it separately after you have installed the JON base distribution.

To install **JBoss ON for Fuse**:

1. Navigate to the Red Hat Customer Portal>Downloads>View All Downloads by Category .

2. Select **JBoss ON for Fuse** under Management in the sidebar menu (or from the **Product** drop-down menu).

3. Click the **Patches** tab to view the latest JBoss ON for Fuse patch packages.

4. Click **Download** next to the latest patch package Red Hat JBoss ON 3.3 Management Plug-in Pack Update-*XX* for Red Hat JBoss Fuse 6 (where the latest update at the time of writing was *Update-06*).

5. Unzip the plug-in package, **jon-plugin-pack-fuse-3.3.0.GA-update-*XX*.zip**, to a temporary directory.

6. Install the jar files in one of two ways:

   - Hot Deploy

     Copy the unpacked jar files into the JON /***installDir***/***server***/**plugins**/ directory. For details, see the JBoss Operations Network Installation Guide .

   - JON Server UI

     For details, see the JBoss Operations Network Installation Guide , or watch the video Installing JBoss Operations Network, Installing JON Agent Plugins .

1.2. USING JBOSS OPERATIONS NETWORK WITH FUSE ON EAP

The new **Fuse JBoss Application Server 7 Plugin** exposes the following services under **JBossAS7** standalone server and managed server resources from the **JBossAS7** Plugin:

- Apache ActiveMQ Services - singleton parent resource for all ActiveMQ Broker services

- Apache Camel Services - singleton parent resource for all Camel Context services

- Apache CXF Services - singleton parent resource for all CXF Bus and CXF Endpoint services

It can auto-discover standalone mode deployments and determine all the required configuration, including management username and password from the parent resource.

For domain deployments of EAP, it can auto-discover all the services. However, you can provide the management username and password in a text file **rhq-user.properties** in the **eap-install-dir/domain/configuration/** directory, with a single entry of the format:

> username=BASE64 encoded UTF-8 password

You can add a user to the ApplicationRealm, and uncomment the following line in the JBoss AS7 profiles, used by managed servers to be monitored.

> remoting-connector use-management-endpoint="false"/>-->

NOTE

This will make the MBeanServer accessible over the same Remoting connector used for remote JNDI and EJB access. Any user that can authenticate against the realm ApplicationRealm will be able to access the MBeanServer.

An alternative method to expose the username and password in a text file, is to manually import FuseJBossAS7 services as child services under managed servers to be monitored, and providing the username, password in the manually added resource. You must add a user to the ApplicationRealm.

NOTE

The auto-discovery only adds these services when any children resources are detected. For example, Apache Camel Services resource will be auto-discovered, when any Camel MBeans are detected in the server. The availability of these parent services tracks the availability of their respective children resources in the server. It also applies to manually imported services.

CHAPTER 2. JBOSS ON MANAGED FUSE RESOURCES

OVERVIEW

Metrics are collected for managed resources that are deployed in Red Hat JBoss Fuse.

- Apache ActiveMQ managed resources

- Apache Camel managed resources

- Apache CXF managed resources

- JBoss Fuse managed resources

- Fuse Fabric managed resources

> **NOTE**
>
> This guide descibes the metrics collected on Apache Camel, Apache CXF, JBoss Fuse, and Fuse Fabric managed resources only. The Performance Metrics Reference for Red Hat JBoss A-MQ describes the metrics collected on Apache ActiveMQ-managed resources.

> **IMPORTANT**
>
> Newly added resources, such as ActiveMQ queues and topics, will not appear in JON's list of resources until the JON agent discovers and adds them into inventory. By default, the agent scans for services at twenty-four hour intervals, but you can easily change the default interval either through the JON console or by resetting it in the agent's configuration file. For details, see *Setting Discovery Scan Intervals* in the *Configuring JBoss ON Servers and Agents* guide at https://access.redhat.com/site/documentation/.

Based on a managed resource's metrics, you can invoke Control Operations on the resource to avoid or correct throughput and performance problems.

AVAILABILITY STATUS

For all JBoss Fuse managed resources, this metric is of category Availability and of measurement type Dynamic. It indicates the availability status of a resource during a given time slice.

Table 2.1. Availability Indicators

Icon	State	Description
✔	Available (Up)	Resource is running and responding to availability checks.
❗	Down	Resource is not responding to availability checks.

Icon	State	Description
	Unknown	The agent has no record of the resource's state. This could be due to the resource having been newly added to inventory, so has not yet been checked for availability. Or it could be that the agent is down.
	Disabled	The resource has been administratively marked as unavailable. In reality, the resource could be running or stopped. When a resource is disabled, the server ignores availability reports from the agent to prevent unnecessary alerts triggered by known down (or cycling) states.
	Mixed (resource groups only)	Members in a resource group have different availability states.

PER MINUTE METRICS

Because metrics of type Trends Up and category Throughput continuously increase, the rate of change becomes more important to track than the total number of exchanges. So JBoss ON automatically calculates and creates a secondary Per Minute metric for many of these type of exchanges. By default, the Per Minute metrics, rather than their counterparts, are enabled and charted.

REFERENCING PROPERTIES IN DYNAMIC GROUP DEFINITION EXPRESSIONS

To reference configuration properties and traits in Dynamic Group Definition expressions, you must use the item's internal name.

CHAPTER 3. APACHE CAMEL MANAGED RESOURCES

Abstract

Apache Camel metrics are collected for routes that are deployed in Red Hat JBoss ON managed platforms. Based on a resource's metrics, you can invoke Control Operations on the resource to avoid or correct throughput and performance problems.

3.1. AGENT METRIC COLLECTORS

The main service entries, which collect the required metrics, are:

- Camel Context

- Camel Component

- Camel Endpoint

- Camel Route

- Camel Processor

> **NOTE**
>
> By default, Availability status is collected on all Camel services. Only the Camel Route and Camel Processor services collect additional metrics.

3.2. CAMEL CONTEXT SERVICE

Overview

Description:	Camel Context
Singleton:	no
Plugin:	Camel

Parent Resource Types

- JMX Server Platform

- Fabric Container Platform

- JBoss Fuse Container Platform

- JBoss AS Server Platform

Child Resource Types

- Section 3.3, "Camel Component Service"

- Section 3.4, "Camel Endpoint Service"

- Section 3.6, "Camel Route Service"

- Section 3.5, "Camel Processor Service"

Connection Properties
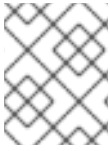
NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Name	Description	Required	Internal Name
Camel Id	The name of the Camel component	yes	CamelId
Camel Version	The Camel version	yes	CamelVersion
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Context	The name of the Camel Context	yes	context
Name	Name	yes	name

Metrics

NOTE

You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Name	Type	Description	Internal Name
Exchanges Completed	measurement	Indicates the total number of exchanges processed successfully since start-up or the last reset operation	ExchangesCompleted

Name	Type	Description	Internal Name
Exchanges Completed per Minute	measurement	Indicates the total number of exchanges processed successfully per minute since start-up or the last reset operation	ExchangesCompleted
Exchanges Failed	measurement	Indicates the total number of exchanges that failed to process since start-up or the last reset operation.	ExchangesFailed
Exchanges Failed per Minute	measurement	Indicates the total number of exchanges that failed to process per minute since start-up or the last reset operation.	ExchangesFailed
Exchanges Total	measurement	Indicates the total number of exchanges, passed or failed, that processed since start-up or the last reset operation.	ExchangesTotal
Exchanges Total per Minute	measurement	Indicates the total number of exchanges, passed or failed, that processed per minute since start-up or the last reset operation.	ExchangesTotal
Min Processing Time	measurement	Indicates the shortest time, in milliseconds, to process an exchange since start-up or the last reset operation.	MinProcessingTime
Mean Processing Time	measurement	Indicates the average processing time, in milliseconds, for all exchanges processed since start-up or the last reset operation.	MeanProcessingTime

Name	Type	Description	Internal Name
Max Processing Time	measurement	Indicates the longest time, in milliseconds, to process an exchange since start-up or the last reset operation.	MaxProcessingTime
Total Processing Time	measurement	Indicates the total processing time, in milliseconds, to process all exchanges since start-up or the last reset operation.	TotalProcessingTime
Last Processing Time	measurement	Indicates the time, in milliseconds, it took to process the last exchange.	LastProcessingTime
State	trait	String description of the Camel Resource State.	State

NOTE

All **Exchanges*** metrics are of measurement type Trends Up and category Throughput. Because Trends Up metrics continuously increase, the rate of change becomes more important to track than the total number of exchanges, so JBoss ON automatically calculates and creates a secondary Per Minute metric for each **Exchanges*** metric. By default, the Per Minute metrics, rather than their counterparts, are enabled and charted.

Configuration Properties

Operations

You can invoke control operations to avoid or correct throughput and performance problems.

Name	Description
start	The start operation starts up the selected camel context.
stop	The stop operation stops the selected camel context immediately.
suspend	The suspend operation pauses the routing of messages and preserves the state of the route, after the completion of all inflight exchanges.

Name	Description
resume	The resume operation resumes the processing of messages after a call to suspend.

Package Types

3.3. CAMEL COMPONENT SERVICE

Overview

Description:	Camel Component
Singleton:	no
Plugin:	Camel

Parent Resource Types

- [Section 3.2, "Camel Context Service"](#)

Child Resource Types

Connection Properties
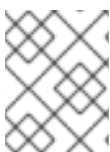
> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Name	Description	Required	Internal Name
Component Name	The name of the Camel component	yes	ComponentName
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Name	Name	yes	name

Metrics

Configuration Properties

Operations

Package Types

3.4. CAMEL ENDPOINT SERVICE

Overview

Description:	Camel Endpoint
Singleton:	no
Plugin:	Camel

Parent Resource Type

- Section 3.2, "Camel Context Service"

Child Resource Types

Connection Properties

NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Name	Description	Required	Internal Name
Endpoint Uri	The uri of the Camel consumer endpoint	yes	EndpointUri
Object Name		yes	objectName

Name	Description	Required	Internal Name
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Name	Name	yes	name

Metrics

Configuration Properties

Operations

Package Types

3.5. CAMEL PROCESSOR SERVICE

Overview

Description:	Camel Processor
Singleton:	no
Plugin:	Camel

Parent Resource Types

- Section 3.2, "Camel Context Service"

Child Resource Types

Connection Properties

> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Name	Description	Required	Internal Name
Route Id	The name of the Camel route	yes	RouteId
Processor Id	The name of the processor in the Camel Route	yes	ProcessorId
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Name	Name	yes	name

Metrics

> **NOTE**
>
> You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Name	Type	Description	Internal Name
Exchanges Completed	measurement	Indicates the total number of exchanges the selected processor has processed successfully since processor start-up or the last **reset** operation.	ExchangesComple
Exchanges Completed Per Minute	measurement	Indicates the total number of exchanges the selected processor has processed successfully per minute since processor start-up or the last **reset** operation.	ExchangesComple
Exchanges Failed	measurement	Indicates the total number of exchanges that the selected processor has failed to process since processor start-up or the last **reset** operation.	ExchangesFailed

Name	Type	Description	Internal Name
Exchanges Failed Per Minute	measurement	Indicates the total number of exchanges that the selected processor has failed to process per minute since processor start-up or the last **reset** operation.	ExchangesFailed
Exchanges Total	measurement	Indicates the total number of exchanges, passed or failed, that the selected processor has processed since route start-up or the last **reset** operation.	ExchangesTotal
Exchanges Total Per Minute	measurement	Indicates the total number of exchanges, passed or failed, that the selected processor has processed per minute since route start-up or the last **reset** operation.	ExchangesTotal
Min Processing Time	measurement	Indicates the shortest time, in milliseconds, to process an exchange since processor start-up or the last **reset** operation.	MinProcessingTim
Mean Processing Time	measurement	Indicates the average processing time, in milliseconds, for all exchanges processed since processor start-up or the last **reset** operation.	MeanProcessingT
Max Processing Time	measurement	Indicates the longest time, in milliseconds, to process an exchange since processor start-up or the last **reset** operation.	MaxProcessingTin
Total Processing Time	measurement	Indicates the total processing time, in milliseconds, of all exchanges processed since processor start-up or the last **reset** operation.	TotalProcessingTi
Last Processing Time	measurement	Indicates the time, in milliseconds, it took the selected processor to process the last exchange.	LastProcessingTin
State	trait	A string describing the state of the Camel resource.	State

NOTE

All **Exchanges*** metrics are of measurement type Trends Up and category Throughput. Because Trends Up metrics continuously increase, the rate of change becomes more important to track than the total number of exchanges, so JBoss ON automatically calculates and creates a secondary Per Minute metric for each **Exchanges*** metric. By default, the Per Minute metrics, rather than their counterparts, are enabled and charted.

Configuration Properties

Operations

You can invoke control operations to avoid or correct throughput and performance problems.

Name	Description
reset	The reset operation immediately clears all counters, thus all statistics, for the specified processor.
start	The start operation starts up the selected processor and all of its services.
stop	The stop operation immediately stops the selected processor.

Package Types

3.6. CAMEL ROUTE SERVICE

Overview

Description:	Camel Route
Singleton:	no
Plugin:	Camel

Parent Resource Types

- [Section 3.2, "Camel Context Service"](#)

Child Resource Types

Connection Properties

> **NOTE**
>
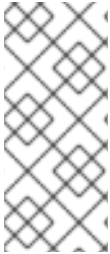> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Name	Description	Required	Internal Name
Route Id	The name of the Camel route	yes	RouteId
Endpoint Uri	The uri of the consumer endpoint in the Camel route	yes	EndpointUri
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Name	Name	yes	name

Metrics

> **NOTE**
>
> You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Name	Type	Description	Internal Name
Exchanges Completed	measurement	Indicates the total number of exchanges the route has processed successfully since route start-up or the last **reset** operation.	ExchangesComple
Exchanges Completed Per Minute	measurement	Indicates the total number of exchanges the route has processed successfully per minute since route start-up or the last **reset** operation.	ExchangesComple
Exchanges Failed	measurement	Indicates the total number of exchanges that the route has failed to process since route start-up or the last **reset** operation.	ExchangesFailed

Name	Type	Description	Internal Name
Exchanges Failed Per Minute	measurement	Indicates the total number of exchanges that the route has failed to process per minute since route start-up or the last **reset** operation.	ExchangesFailed
Exchanges Total	measurement	Indicates the total number of exchanges, passed or failed, that the route has processed since route start-up or the last **reset** operation.	ExchangesTotal
Exchanges Total Per Minute	measurement	Indicates the total number of exchanges, passed or failed, that the route has processed per minute since route start-up or the last **reset** operation.	ExchangesTotal
Inflight Exchanges	measurement	Indicates the number of exchanges currently transiting the route.	InflightExchanges
Inflight Exchanges Per Minute	measurement	Indicates the number of exchanges currently transiting the route per minute.	InflightExchanges
Min Processing Time	measurement	Indicates the shortest time, in milliseconds, to process an exchange since route start-up or the last **reset** operation.	MinProcessingTim
Mean Processing Time	measurement	Indicates the average processing time, in milliseconds, for all exchanges processed since route start-up or the last **reset** operation.	MeanProcessingT
Max Processing Time	measurement	Indicates the longest time, in milliseconds, to process an exchange since route start-up or the last **reset** operation.	MaxProcessingTir
Total ProcessingTime	measurement	Indicates the total processing time, in milliseconds, of all exchanges processed since route start-up or the last **reset** operation.	TotalProcessingTi
Last Processing Time	measurement	Indicates the time, in milliseconds, it took the route to process the last exchange.	LastProcessingTir
State	trait	A string describing the state of the Camel resource.	State

NOTE

All **Exchanges*** metrics are of measurement type Trends Up and category Throughput. Because Trends Up metrics continuously increase, the rate of change becomes more important to track than the total number of exchanges, so JBoss ON automatically calculates and creates a secondary Per Minute metric for each **Exchanges*** metric. By default, the Per Minute metrics, rather than their counterparts, are enabled and charted.

Configuration Properties

Operations

You can invoke control operations to avoid or correct throughput and performance problems.

Name	Description
reset	The reset operation immediately clears all counters, thus all statistics, for the specified route.
shutdown	The shutdown operation immediately stops and shuts down the selected route, pending the completion of all inflight exchanges.
start	The start operation starts up the selected route, including all of its processors and services.
stop	The stop operation immediately stops the selected route, pending the completion of all pending inflight exchanges.

Package Types

CHAPTER 4. APACHE CXF MANAGED RESOURCES

Abstract

Apache CXF metrics are collected for web services that are deployed in Red Hat JBoss ON managed platforms. Based on a resource's metrics, you can invoke Control Operations on the resource to avoid or correct throughput and performance problems.

4.1. AGENT METRIC COLLECTORS

The main service entries, which collect the required metrics, are:

- CXF Process

- CXF Bus

- CXF Work Queue Manager

- CXF Work Queue

- CXF Endpoint

- CXF Client Operation Counter

- CXF Client Service Counter

- CXF Server Operation Counter

- CXF Server Service Counter
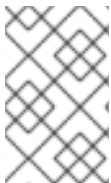
> **NOTE**
>
> By default, Availability status is collected on all CXF services. Only the CXF Client Operation Counter, CXF Client Service Counter, CXF Server Operation Counter, and CXF Server Service Counter services collect additional metrics.

4.2. CXF PROCESS SERVER (CXF)

Overview

Description:	CXF Process
Singleton:	no
Plugin:	CXF

Parent Resource Types

- Managed Platforms

Child Resource Types

- CXF Process JVM Server

Autodiscovery Process Scans

Name	Query
${processScan.name}	process|basename|match=^java.*,arg|-Dcxf.home|match=.*,arg| -Dcxf.home|match=.*,arg|-Dcxf.config.file|match=.*

Connection Properties

Name	Description	Required	Internal Name
CXF Home	CXF Process Home Directory	yes	cxf.home
Server Resource Key	Java system property that uniquely identifies this Server	yes	resourceKey
Version File Pattern	File name with Server version	yes	versionFile
Home Directory	System property for home directory	yes	homeProperty
Connector Address	JMX Service URL	no	connectorAddress
Principal	JMX login principal/username	no	principal
Credentials	JMX login credentials/password	no	credentials

> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Configuration Properties

Operations

Package Types

4.3. BUS SERVICE (CXF)

Overview

Description:	CXF Bus
Singleton:	no
Plugin:	CXF

Parent Resource Types

- Section 4.2, "CXF Process Server (CXF)"
- JMX Server Platform
- Section 6.1.1, "Fabric Container Server (Fabric)"
- Section 5.1.1, "JBoss Fuse Container Server (JBossFuse)"
- JBossAS Server Platform

Child Resource Types

- Section 4.4, "WorkQueueManager Service (CXF)"

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Bus ID	CXF Bus ID	yes	bus.id

Name	Description	Required	Internal Name
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps

> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Configuration Properties

Operations

Name	Description
Shutdown	Shutdown the CXF bus.

Package Types

4.4. WORKQUEUEMANAGER SERVICE (CXF)

Overview

Description:	CXF WorkQueueManager
Singleton:	no
Plugin:	CXF

Parent Resource Types

- Section 4.3, "Bus Service (CXF)"

Child Resource Types

- Section 4.5, "WorkQueue Service (CXF)"

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Bus ID	CXF Bus ID	yes	bus.id
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps

NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Configuration Properties

Operations

Name	Description
Shutdown	Shut down the Work Queue Manager.

Package Types

4.5. WORKQUEUE SERVICE (CXF)

Overview

Description:	CXF WorkQueue
Singleton:	no

Plugin:	CXF

Parent Resource Types

- Section 4.4, "WorkQueueManager Service (CXF)"

Child Resource Types

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps
Bus ID	CXF Bus ID	yes	bus.id
Name	Workqueue Name	yes	name

> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Configuration Properties

Operations

Package Types

4.6. CXF ENDPOINT SERVICE (CXF)

Overview

Description:	CXF Endpoint
Singleton:	no
Plugin:	CXF

Parent Resource Types

- Section 4.2, "CXF Process Server (CXF)"

- JMX Server Platform

- Section 6.1.1, "Fabric Container Server (Fabric)"

- Section 5.1.1, "JBoss Fuse Container Server (JBossFuse)"

- JBossAS_Server_Platform

Child Resource Types

- Section 4.8, "ClientOperationCounter Service (CXF)"

- Section 4.7, "ClientServiceCounter Service (CXF)"

- Section 4.10, "ServerOperationCounter Service (CXF)"

- Section 4.9, "ServerServiceCounter Service (CXF)"

Child resources are not enabled by default. This avoids unnecessary runtime overhead during web service call processing. To enable **Performance.Counter.Server** and **Performance.Counter.Client**, add the following to the Spring context file or the Blueprint document:

```
<bean id="CounterRepository" class="org.apache.cxf.management.counters.CounterRepository">
    <property name="bus" ref="<CXF-bus-instance>" />
</bean>
```

The **Performance.Counter.Server** and **Performance.Counter.Client** type resources will be discovered after the CXF endpoint is invoked at least once.

Connection Properties

Name	Description	Required	Internal Name
Address	Endpoint Address	no	Address
Object Name		yes	objectName

Name	Description	Required	Internal Name
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Bus ID	CXF Bus ID	yes	bus.id
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps
Service	Service QName	yes	service
Port	Port Name	yes	port

> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Configuration Properties

Operations

Name	Description
Start	Start a CXF endpoint.
Stop	Stop a CXF endpoint.

Package Types

4.7. CLIENTSERVICECOUNTER SERVICE (CXF)

Overview

Description:	CXF Client Service Counter

Singleton:	no
Plugin:	CXF

Parent Resource Types

- **Section 4.6, "CXF Endpoint Service (CXF)"**

Child Resource Types

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps

NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Name	Type	Description	Internal Name
Average Response Time	measurement	Average Response Time	AvgResponseTime
Min Response Time	measurement	Minimum Response Time	MinResponseTime
Max Response Time	measurement	Maximum Response Time	MaxResponseTime
Invocation Count	measurement	Number of Operation invocations	NumInvocations
Invocation Count per Minute	measurement	Number of Operation invocations per minute	NumInvocations

Name	Type	Description	Internal Name
Checked Application Faults	measurement	Number of checked application faults thrown	NumCheckedApplicationFau
Checked Application Faults per Minute	measurement	Number of checked application faults thrown per minute	NumCheckedApplicationFau
UnChecked Application Faults	measurement	Number of unchecked application faults thrown	NumUnCheckedApplicationF
UnChecked Application Faults per Minute	measurement	Number of unchecked application faults thrown per minute	NumUnCheckedApplicationF
Logical Runtime Faults	measurement	Number of logical runtime faults thrown	NumLogicalRuntimeFaults
Logical Runtime Faults per Minute	measurement	Number of logical runtime faults thrown per minute	NumLogicalRuntimeFaults
Runtime Faults	measurement	Number of runtime faults thrown	NumRuntimeFaults
Runtime Faults per Minute	measurement	Number of runtime faults thrown per minute	NumRuntimeFaults
Total Handling Time	measurement	Total processing time	TotalHandlingTime
Total Handling Time per Minute	measurement	Total processing time per minute	TotalHandlingTime

NOTE

You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Configuration Properties

Operations

Package Types

4.8. CLIENTOPERATIONCOUNTER SERVICE (CXF)

Overview

Description:	CXF Client Operation Counter
Singleton:	no
Plugin:	CXF

Parent Resource Types

- [Section 4.6, "CXF Endpoint Service (CXF)"](#)

Child Resource Types

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Operation	Operation Name	yes	operation
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps

> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Name	Type	Description	Internal Name
Average Response Time	measurement	Average Response Time	AvgResponseTime
Min Response Time	measurement	Minimum Response Time	MinResponseTime

Name	Type	Description	Internal Name
Max Response Time	measurement	Maximum Response Time	MaxResponseTime
Invocation Count	measurement	Number of Operation invocations	NumInvocations
Invocation Count per Minute	measurement	Number of Operation invocations per minute	NumInvocations
Checked Application Faults	measurement	Number of checked application faults thrown	NumCheckedApplicationFaults
Checked Application Faults per Minute	measurement	Number of checked application faults thrown per minute	NumCheckedApplicationFaults
UnChecked Application Faults	measurement	Number of unchecked application faults thrown	NumUnCheckedApplicationFaults
UnChecked Application Faults per Minute	measurement	Number of unchecked application faults thrown per minute	NumUnCheckedApplicationFaults
Logical Runtime Faults	measurement	Number of logical runtime faults thrown	NumLogicalRuntimeFaults
Logical Runtime Faults per Minute	measurement	Number of logical runtime faults thrown per minute	NumLogicalRuntimeFaults
Runtime Faults	measurement	Number of runtime faults thrown	NumRuntimeFaults
Runtime Faults per Minute	measurement	Number of runtime faults thrown per minute	NumRuntimeFaults
Total Handling Time	measurement	Total processing time	TotalHandlingTime
Total Handling Time per Minute	measurement	Total processing time per minute	TotalHandlingTime

NOTE

You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Configuration Properties

Operations

Package Types

4.9. SERVERSERVICECOUNTER SERVICE (CXF)

Overview

Description:	CXF Server Service Counter
Singleton:	no
Plugin:	CXF

Parent Resource Types

- [Section 4.6, "CXF Endpoint Service (CXF)"](#)

Child Resource Types

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps

NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Name	Type	Description	Internal Name
Average Response Time	measurement	Average Response Time	AvgResponseTime
Min Response Time	measurement	Minimum Response Time	MinResponseTime
Max Response Time	measurement	Maximum Response Time	MaxResponseTime
Invocation Count	measurement	Number of Operation invocations	NumInvocations
Invocation Count per Minute	measurement	Number of Operation invocations per minute	NumInvocations
Checked Application Faults	measurement	Number of checked application faults thrown	NumCheckedApplicationFaults
Checked Application Faults per Minute	measurement	Number of checked application faults thrown per minute	NumCheckedApplicationFaults
UnChecked Application Faults	measurement	Number of unchecked application faults thrown	NumUnCheckedApplicationFaults
UnChecked Application Faults per Minute	measurement	Number of unchecked application faults thrown per minute	NumUnCheckedApplicationFaults
Logical Runtime Faults	measurement	Number of logical runtime faults thrown	NumLogicalRuntimeFaults
Logical Runtime Faults per Minute	measurement	Number of logical runtime faults thrown per minute	NumLogicalRuntimeFaults
Runtime Faults	measurement	Number of runtime faults thrown	NumRuntimeFaults
Runtime Faults per Minute	measurement	Number of runtime faults thrown per minute	NumRuntimeFaults
Total Handling Time	measurement	Total processing time	TotalHandlingTime
Total Handling Time per Minute	measurement	Total processing time per minute	TotalHandlingTime

> **NOTE**
>
> You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Configuration Properties

Operations

Package Types

4.10. SERVEROPERATIONCOUNTER SERVICE (CXF)

Overview

Description:	CXF Server Operation Counter
Singleton:	no
Plugin:	CXF

Parent Resource Types

- Section 4.6, "CXF Endpoint Service (CXF)"

Child Resource Types

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Operation	Operation Name	yes	operation

Name	Description	Required	Internal Name
Avoid Custom Object Names	Avoid Custom JMX Object Names	yes	skipUnknownProps

NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Name	Type	Description	Internal Name
Average Response Time	measurement	Average Response Time	AvgResponseTime
Min Response Time	measurement	Minimum Response Time	MinResponseTime
Max Response Time	measurement	Maximum Response Time	MaxResponseTime
Invocation Count	measurement	Number of Operation invocations	NumInvocations
Invocation Count per Minute	measurement	Number of Operation invocations per minute	NumInvocations
Checked Application Faults	measurement	Number of checked application faults thrown	NumCheckedApplicationFaults
Checked Application Faults per Minute	measurement	Number of checked application faults thrown per minute	NumCheckedApplicationFaults
UnChecked Application Faults	measurement	Number of unchecked application faults thrown	NumUnCheckedApplicationFaults
UnChecked Application Faults per Minute	measurement	Number of unchecked application faults thrown per minute	NumUnCheckedApplicationFaults
Logical Runtime Faults	measurement	Number of logical runtime faults thrown	NumLogicalRuntimeFaults
Logical Runtime Faults per Minute	measurement	Number of logical runtime faults thrown per minute	NumLogicalRuntimeFaults

Name	Type	Description	Internal Name
Runtime Faults	measurement	Number of runtime faults thrown	NumRuntimeFaults
Runtime Faults per Minute	measurement	Number of runtime faults thrown per minute	NumRuntimeFaults
Total Handling Time	measurement	Total processing time	TotalHandlingTime
Total Handling Time per Minute	measurement	Total processing time per minute	TotalHandlingTime

NOTE

You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Configuration Properties

Operations

Package Types

CHAPTER 5. JBOSS FUSE MANAGED RESOURCES

Abstract

JBoss Fuse metrics are collected for Red Hat JBoss Fuse containers and Fabric service.

5.1. AGENT METRIC COLLECTORS

Abstract

The main service entries, which collect the required metrics, are:

- JBoss Fuse Container Server

- JBoss Fuse Fabric Service

.

5.1.1. JBoss Fuse Container Server (JBossFuse)

Overview

Description:	JBoss Fuse Container Process
Singleton:	no
Plugin:	JBossFuse

Parent Resource Types

- Managed Platforms

Child Resource Types

- JBoss Fuse Container JVM_Server

Autodiscovery Process Scans

Name	Query
${processScan.name}	process|basename|match=^java.*,arg|-Dkaraf.home|match=.*,arg| -Dkaraf.base|match=.*,arg|*|match=org\.apache\.karaf\.(main|shell\.wrapper)\.Main

Connection Properties

Name	Description	Required	Internal Name
Start Script Path	The path to the script that the Start and Restart operations should use to start the server. If not absolute, the path is resolved relative to the server home directory (e.g. **bin/fuse** or **bin/karaf**).	no	startScript
Start Script Prefix	A prefix command line that should be prepended to the start script command line by the Start and Restart operations. The prefix must be an absolute path (for example, **/usr/bin/sudo**). This property is most commonly used to run the Server process as a different user than the RHQ Agent for example, **sudo -u fuse -g fuse** could be used to run the Server as user **fuse** and group **fuse**. You can also chain prefix commands (e.g. **nohup sudo -u fuse** could be used to make the Server ignore HUP signals and to run as user **fuse**).	no	startScriptPrefix

Name	Description	Required	Internal Name
Start Script Environment Variables	The variables that the Start and Restart operations will add to the environment of the server start script. Put each name=value pair on a new line. Do not enclose variable values in quotes (e.g. **JAVA_OPTS=-Xms512M -Xmx1024M**). On UNIX systems, the typical minimum set of environment variables is: **PATH=/usr/bin:/bin**. On Windows, the typical minimum set is: **PATH=C:\Windows\System32;C:\Windows**, and on OS=Windows_NT, the typical minimum set is: **SYSTEMROOT=C:\Windows**. It is also good practice to set JAVA_HOME to the absolute path of the install directory of the JRE or JDK you want to use to run the Server instance. If JAVA_HOME is unspecified, the start script attempts to find java in the PATH. This property is limited to 2000 characters.	no	startScriptEnv
Start Script Arguments	The arguments that the Start and Restart operations will pass to the server start script. Put each argument on a new line. An exception, you can put the value of a space-delimited option on the same line as the option. This property is limited to 2000 characters.	no	startScriptArgs

Name	Description	Required	Internal Name
Log Event Sources	The list of log files that can be tracked	yes	logEventSources
JBoss Fuse Container Home	JBoss Fuse Container Home Directory	yes	karaf.home
JBoss Fuse Container Base	JBoss Fuse Container Base Directory	yes	karaf.base
Server Resource Key	Java system property that uniquely identifies this Server	yes	resourceKey
Version File Pattern	File name with Server version	yes	versionFile
Home Directory	System property for home directory	yes	homeProperty
Log File	Log File to track	yes	logFile
Connector Address	JMX Service URL	no	connectorAddress
Principal	JMX login principal/username	no	principal
Credentials	JMX login credentials/password	no	credentials
Fabric Registry URL	URL to use to connect to the Fabric Registry, required for Fabric managed Containers	no	zookeeper.url
Fabric Registry Password	Password to use to connect to the Fabric Registry	no	zookeeper.password
Registry Timeout	Registry connection timeout in Seconds, used for Fabric metadata collection	yes	zookeeper.timeout
JBoss Fuse Container Type	JBoss Fuse Container Type based on underlying product install	yes	container.type

Name	Description	Required	Internal Name
JBoss Fuse Container Name	JBoss Fuse Container name, same as Karaf name	yes	karaf.name
Fabric Container Git Repository	Fabric Container Git repository location	yes	git.root

NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Name	Type	Description	Internal Name
JBoss Fuse Container Version	trait	JBoss Fuse Profile Version used by this Container	container.version
JBoss Fuse Profiles	trait	JBoss Fuse Profiles referenced directly by this Container	profiles
JBoss Fuse Parent Profiles	trait	JBoss Fuse parent Profiles indirectly referenced by this Container	parentProfiles
MQ Clusters	trait	JBoss Fuse MQ Clusters where this Container exports ActiveMQ Connection Details	mqClusters

NOTE

You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Configuration Properties

Operations

Name	Description
Start	Start the server by invoking its start script
Restart	Restart the server by shutting it down and then invoking its start script
Stop	Stop the server.

Package Types

5.1.2. Fabric Service (JBossFuse)

Description:	Fabric Service
Singleton:	no
Plugin:	JBossFuse

Parent Resource Types

- JBoss Fuse Container Platform

Child Resource Types

Connection Properties

Name	Description	Required	Internal Name
Object Name		yes	objectName
Name Template		yes	nameTemplate
Description Template		yes	descriptionTemplate
Skip unknown object name properties	Skip object names with unknown properties	yes	skipUnknownProps

> **NOTE**
>
> You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Name	Type	Description	Internal Name
Default Version	trait	Default Container Version	DefaultVersion
Maven Repo URI	trait	Fabric Maven Repo URI	MavenRepoURI
Maven Repo Upload URI	trait	Fabric Maven Repo upload URI	MavenRepoUploadURI
Zookeeper Url	trait	Fabric ZooKeeper URL	ZookeeperUrl
Current Container Name	trait	Current container name from Fabric agent	CurrentContainerName
Default Jvm Options	trait	Container default JVM options	DefaultJvmOptions
Default Repo	trait	Default Maven repo	DefaultRepo

NOTE

You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Configuration Properties

Operations

Name	Description
Scale Profile	Scale a profile up or down

Package Types

CHAPTER 6. FABRIC MANAGED RESOURCES

Abstract

Fabric metrics are collected for fabrics deployed in Red Hat JBoss Fuse.

6.1. AGENT METRIC COLLECTORS

Abstract

The main service entry, which collects the required metrics, is Fabric Container.

6.1.1. Fabric Container Server (Fabric)

Overview

Description:	Fabric Container Process
Singleton:	no
Plugin:	Fabric

Parent Resource Types

- Managed Platforms

Child Resource Types

- Fabric Container JVM Server

Autodiscovery Process Scans

Name	Query
${processScan.name}	process|basename|match=^java.*,arg|-Dkaraf.home|match=.*,arg| -Dkaraf.base|match=.*,arg|*|match=org\.apache\.karaf\.(main|shell\.wrapper)\.Main

Connection Properties

Name	Description	Required	Internal Name

Name	Description	Required	Internal Name
Log Event Sources	The list of log files that can be tracked	yes	logEventSources
Fabric Container Home	Fabric Container Home Directory	yes	karaf.home
Fabric Container Base	Fabric Container Base Directory	yes	karaf.base
Server Resource Key	Java system property that uniquely identifies this Server	yes	resourceKey
Version File Pattern	File name with Server version	yes	versionFile
Home Directory	System property for home directory	yes	homeProperty
Log File	Log File to track	yes	logFile
Connector Address	JMX Service URL	no	connectorAddress
Principal	JMX login principal/username	no	principal
Credentials	JMX login credentials/password	no	credentials
Fabric Registry URL	URL to use to connect to the Fabric Registry, required for Fabric managed Containers	no	zookeeper.url
Fabric Registry Password	Password to use to connect to the Fabric Registry	no	zookeeper.password
Registry Timeout	Registry connection timeout in Seconds, used for Fabric metadata collection	yes	zookeeper.timeout
Fuse Container Type	Fuse Container Type based on underlying product install	yes	container.type

Name	Description	Required	Internal Name
Fabric Container Name	Fabric Container name, same as Karaf name	yes	karaf.name

NOTE

You must use the internal name to reference Configuration Properties in Dynamic Group Definition expressions.

Metrics

Name	Type	Description	Internal Name
Fabric Container Version	trait	Fabric Profile Version used by this Container	container.version
Fabric Profiles	trait	Fabric Profiles referenced directly by this Container	profiles
Fabric Parent Profiles	trait	Fabric parent Profiles indirectly referenced by this Container	parentProfiles
MQ Clusters	trait	Fabric MQ Clusters where this Container exports ActiveMQ Connection Details	mqClusters

NOTE

You must use the internal name to reference Traits in Dynamic Group Definition expressions.

Configuration Properties

Operations

Package Types