

# Direct

## Direct Component

The `direct:` component provides direct, synchronous invocation of any consumers when a producer sends a message exchange. This endpoint can be used to connect existing routes in the **same** camel context.

Asynchronous

The `SEDA` component provides asynchronous invocation of any consumers when a producer sends a message exchange. Connection to other camel contexts

The `VM` component provides connections between Camel contexts as long they run in the same **JVM**.

## URI format

```
direct:someName[?options]
```

Where `someName` can be any string that uniquely identifies the endpoint.

## Options

Name	Default Value	Description
<code>allowMultipleConsumers</code>	<code>true</code>	<b>@ deprecated</b>  If set to <code>false</code> , then when a second consumer is started on the endpoint, an <code>IllegalStateException</code> is thrown.  <b>Will be removed in Camel 2.1:</b> Direct endpoint does not support multiple consumers.
<code>block</code>	<code>false</code>	<b>Camel 2.11.1:</b> If sending a message to a direct endpoint which has no active consumer, the producer will block for <code>timeout</code> milliseconds waiting for a consumer to become active.
<code>timeout</code>	<code>30000</code>	<b>Camel 2.11.1:</b> The timeout value, in milliseconds, to block, when enabled, for an active consumer.
<code>failIfNoConsumers</code>	<code>true</code>	<b>Camel 2.16.0:</b> Indicates whether the producer should fail by throwing an exception when sending to a <code>direct</code> endpoint with no active consumers.

You can append query options to the URI in the following format: `?option=value&option=value&...`

## Samples

In the route below we use the direct component to link the two routes together:

```
from("activemq:queue:order.in")
  .to("bean:orderServer?method=validate")
  .to("direct:processOrder?block=true&timeout=5000");

from("direct:processOrder")
  .to("bean:orderService?method=process")
  .to("activemq:queue:order.out");
```

And the sample using spring DSL:

```
<route>
  <from uri="activemq:queue:order.in"/>
  <to uri="bean:orderService?method=validate"/>
  <to uri="direct:processOrder?failIfNoConsumers=false"/>
</route>

<route>
  <from uri="direct:processOrder"/>
  <to uri="bean:orderService?method=process"/>
  <to uri="activemq:queue:order.out"/>
</route>
```

See also samples from the [SEDA](#) component, how they can be used together.

## See Also

- [Configuring Camel](#)
- [Component](#)
- [Endpoint](#)
- [Getting Started](#)
  
- [SEDA](#)
- [VM](#)