

SSH

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Available as of Camel 2.10

The SSH component enables access to SSH servers such that you can send an SSH command, and process the response.

Maven users will need to add the following dependency to their `pom.xml` for this component:

```
<dependency>
  <groupId>org.apache.camel</groupId>
  <artifactId>camel-ssh</artifactId>
  <version>x.x.x</version>
  <!-- use the same version as your Camel core version -->
</dependency>
```

URI format

```
ssh:[username[:password]@]host[:port][?options]
```

Options

Name	Default Value	Description
host	null	Hostname of SSH Server
port	22	Port of the SSH Server
username	null	Username used for authenticating with SSH Server.
password	null	Password used for authenticating with SSH Server. Used if <code>keyPairProvider</code> is null.
keyPairProvider	null	Refers to a <code>org.apache.sshd.common.KeyPairProvider</code> to use for loading keys for authentication. If this option is used, then <code>password</code> is not used.
keyType	ssh-rsa	Refers to a key type to load from <code>keyPairProvider</code> . The key types can for example be "ssh-rsa" or "ssh-dss".
certResource	null	Camel 2.11: Path reference to a public key certificate. Prefix path with <code>classpath:</code> , <code>file:</code> , or <code>http:</code> .
certFilename	null	@deprecated: Use <code>certResource</code> instead. Refers to a filename to use within file based <code>keyPairProvider</code> .
timeout	30000	Milliseconds to wait before timing out connection to SSH Server.

Consumer Only Options

Name	Default Value	Description
initialDelay	1000	Milliseconds before polling the SSH server starts.
delay	500	Milliseconds before the next poll of the SSH Server.
useFixedDelay	true	Controls if fixed delay or fixed rate is used. See <code>ScheduledExecutorService</code> in JDK for details.
pollCommand	null	Command to send to SSH Server during each poll cycle. You may need to end your command with a newline, and that must be URL encoded <code>%0A</code> .

Usage as a Producer endpoint

When the SSH Component is used as a Producer (`.to("ssh://...")`), it will send the message body as the command to execute on the remote SSH server.

Here is an example of this within the XML DSL. Note that the command has an XML encoded newline (`
`).

```

<route id="camel-example-ssh-producer">
  <from uri="direct:exampleSshProducer"/>
  <setBody>
    <constant>features:list&#10;</constant>
  </setBody>
  <to uri="ssh://karaf:karaf@localhost:8101"/>
  <log message="\${body}"/>
</route>

```

Authentication

The SSH Component can authenticate against the remote SSH server using one of two mechanisms: Public Key certificate or username/password. Configuring how the SSH Component does authentication is based on how and which options are set.

1. First, it will look to see if the `certResource` option has been set, and if so, use it to locate the referenced Public Key certificate and use that for authentication.
2. If `certResource` is not set, it will look to see if a `keyPairProvider` has been set, and if so, it will use that to for certificate based authentication.
3. If neither `certResource` nor `keyPairProvider` are set, it will use the `username` and `password` options for authentication.

The following route fragment shows an SSH polling consumer using a certificate from the classpath.

In the XML DSL,

```

<route>
  <from uri="ssh://scott@localhost:8101?certResource=classpath:test_rsa&useFixedDelay=true&
delay=5000&pollCommand=features:list%0A"/>
  <log message="\${body}"/>
</route>

```

In the Java DSL,

```

from("ssh://scott@localhost:8101?certResource=classpath:
test_rsa&useFixedDelay=true&delay=5000&pollCommand=features:list%0A")
  .log("\${body}");

```

An example of using Public Key authentication is provided in `examples/camel-example-ssh-security`.

Certificate Dependencies

You will need to add some additional runtime dependencies if you use certificate based authentication. The dependency versions shown are as of Camel 2.11, you may need to use later versions depending what version of Camel you are using.

```

<dependency>
  <groupId>org.apache.sshd</groupId>
  <artifactId>sshd-core</artifactId>
  <version>0.8.0</version>
</dependency>
<dependency>
  <groupId>org.bouncycastle</groupId>
  <artifactId>bcpkg-jdk15on</artifactId>
  <version>1.47</version>
</dependency>
<dependency>
  <groupId>org.bouncycastle</groupId>
  <artifactId>bcpkix-jdk15on</artifactId>
  <version>1.47</version>
</dependency>

```

Example

See the [examples/camel-example-ssh](#) and [examples/camel-example-ssh-security](#) in the Camel distribution.

See Also

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