

# ElasticSearch

## ElasticSearch Component

Available as of Camel 2.11

The ElasticSearch component allows you to interface with an [ElasticSearch](#) server. Maven users will need to add the following dependency to their `pom.xml` for this component:

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

## URI Format

```
elasticsearch://clusterName[?options]
```

if you want to run against a local (in JVM/classloader) ElasticSearch server, just set the `clusterName` value in the URI to `local`. See the [client guide](#) for more details.

## Endpoint Options

The following options may be configured on the ElasticSearch endpoint. All are required to be set as either an endpoint URI parameter or as a header (headers override endpoint properties)

Name	Description
operation	Required. The operation to perform.
indexName	The name of the index.
indexType	The type of the index.
ip	From <b>Camel 2.12</b> . The <b>TransportClient</b> remote host IP address to use.
port	From <b>Camel 2.12</b> . The <b>TransportClient</b> remote port to use (defaults to 9300).
transportAddresses	From <b>Camel 2.16</b> . Comma separated list with <b>IP:PORT</b> formatted remote transport addresses to use.  Options <b>IP</b> and <b>PORT</b> must be left blank for <b>transportAddresses</b> to be considered instead.
consistencyLevel	From <b>Camel 2.16</b> . The write consistency level to use with <b>INDEX</b> and <b>BULK</b> operations.  Can be one of: <ul style="list-style-type: none"><li>• <b>ONE</b></li><li>• <b>QUORUM</b></li><li>• <b>ALL</b></li><li>• <b>DEFAULT</b></li></ul>

replicationType	<p>From <b>Camel 2.16</b>. The replication type to use with <b>INDEX</b> and <b>BULK</b> operations.</p> <p>Can be one of:</p> <ul style="list-style-type: none"> <li>• <b>SYNC</b></li> <li>• <b>ASYNC</b></li> <li>• <b>DEFAULT</b></li> </ul> <p>From <b>Camel 2.17</b> the option <code>replicationType</code> has been removed, as the <code>async</code> replication was removed in Elasticsearch 2.0.0.</p>
parent	<p>From <b>Camel 2.16.1 / 2.17.0</b></p> <p>Optionally used with <b>INDEX</b> operations for Elasticsearch <a href="#">Parent-Child relationships</a> to specify the <b>ID</b> of the parent record.</p>
clientTransportSniff	<p>From <b>Camel 2.17</b></p> <p>Define if the client is allowed to sniff the rest of the cluster.</p>
pathHome	<p>From <b>Camel 2.17.2</b></p> <p>Define the <code>path.home</code> property inside settings of ElasticSearch node.</p> <p>Default: <code>/usr/share/elasticsearch</code></p>

## Message Operations

The following Elasticsearch operations are currently supported. Simply set an endpoint URI option or an exchange header with name `operation` and a value set to one of the following. Some operations also require other parameters or the message body to be set.

Operation	Message body	Description
INDEX	<code>Map</code> , <code>String</code> , <code>byte[]</code> or <code>XContentBuilder</code> content to index.	Adds content to an index and returns the content's <code>indexId</code> in the body.  From <b>Camel 2.15</b> : you can set the <code>indexId</code> by setting the message header with the key " <code>indexId</code> ".
GET_BY_ID	Index id of content to retrieve.	Retrieves the specified index and returns a <code>GetResult</code> object in the body.
DELETE	Index id of content to delete.	Deletes the specified <code>indexId</code> and returns a <code>DeleteResult</code> object in the body.
BULK_INDEX	A <code>List</code> or <code>Collection</code> of any type that is already accepted ( <code>Map</code> , <code>String</code> , <code>byte[]</code> or <code>XContentBuilder</code> ).	From <b>Camel 2.14</b> : Adds content to an index and return a <code>List</code> of the id's of the successfully indexed documents in the body.
BULK	A <code>List</code> or <code>Collection</code> of any type that is already accepted ( <code>Map</code> , <code>String</code> , <code>byte[]</code> or <code>XContentBuilder</code> ).	From <b>Camel 2.15</b> : Adds content to an index and returns the <code>BulkResponse</code> object in the body.
SEARCH	<code>Map</code> or <code>SearchRequest</code> object.	From <b>Camel 2.15</b> : Search the content with the <code>Map</code> or query string.
MULTIGET	<code>List</code> of <code>MultiGetRequest.Item</code> object.	From <b>Camel 2.17</b> : Retrieves the specified indexes type's specified in <code>MultiGetRequest</code> and returns a <code>MultiGetResponse</code> object in the body.
MULTISEARCH	<code>List</code> of <code>SearchRequest</code> object.	From <b>Camel 2.17</b> : Search for parameters specified in <code>MultiSearchRequest</code> and returns a <code>MultiSearchResponse</code> object in the body.
EXISTS	Index name as a header.	From <b>Camel 2.17</b> : Returns a <code>Boolean</code> object in the body.
UPDATE	<code>Map</code> , <code>String</code> , <code>byte[]</code> or <code>XContentBuilder</code> content to update.	From <b>Camel 2.17</b> : Updates content to an index and returns the content's <code>indexId</code> in the body.

## Index Example

Below is a simple **INDEX** example:

```
from("direct:index")
  .to("elasticsearch://local?operation=INDEX&indexName=twitter&indexType=tweet");
```

```
<route>
  <from uri="direct:index"/>
  <to uri="elasticsearch://local?operation=INDEX&indexName=twitter&indexType=tweet"/>
</route>
```

A client would simply need to pass a body message containing a **Map** to the route. The result body contains the **indexId** created:

```
Map<String, String> map = new HashMap<String, String>();
map.put("content", "test");
String indexId = template.requestBody("direct:index", map, String.class);
```

## For more information, see these resources

[ElasticSearch Main Site](#)

[ElasticSearch Java API](#)

## See Also

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