

# gtask

## gtask Component

### Available as of Camel 2.1

The `gtask` component contributes to the [Camel Components for Google App Engine](#) (GAE). It supports asynchronous message processing on GAE by using the [task queueing service](#) as message queue. For adding messages to a queue it uses the task queue API. For receiving messages from a queue it installs an HTTP callback handler. The handler is called by an HTTP POST callback (a [web hook](#)) initiated by the task queueing service. Whenever a new task is added to a queue a callback will be sent. The `gtask` component abstracts from these details and supports endpoint URIs that make message queueing on GAE as easy as message queueing with [JMS](#) or [SEDA](#).

### URI format

```
gtask://queue-name[?options]
```

### Options

Name	Default Value	Context	Description
workerRoot	worker	Producer	The servlet mapping for callback handlers. By default, this component requires a callback servlet mapping of <code>/worker/*</code> . If another servlet mapping is used e.g. <code>/myworker/*</code> it must be set as option on the producer side: <code>to("gtask:myqueue?workerRoot=myworker")</code> .
inboundBindingRef	reference to <code>GTaskBinding</code>	Consumer	Reference to an <code>InboundBinding&lt;GTaskEndpoint, HttpServletRequest, HttpServletResponse&gt;</code> in the <a href="#">Registry</a> for customizing the binding of an Exchange to the Servlet API. The referenced binding is used as post-processor to <code>org.apache.camel.component.http.HttpBinding</code> .
outboundBindingRef	reference to <code>GTaskBinding</code>	Producer	Reference to an <code>OutboundBinding&lt;GTaskEndpoint, TaskOptions, void&gt;</code> in the <a href="#">Registry</a> for customizing the binding of an Exchange to the task queueing service.

On the consumer-side, all options of the [Servlet component](#) are supported.

### Message headers

On the consumer-side all headers of the [Servlet component](#) are supported plus the following.

Name	Type	Context	Description
<code>GTaskBinding.GTASK_QUEUE_NAME</code>	String	Consumer	Name of the task queue.
<code>GTaskBinding.GTASK_TASK_NAME</code>	String	Consumer	Name of the task (generated value).
<code>GTaskBinding.GTASK_RETRY_COUNT</code>	int	Consumer	Number of callback retries.

### Message body

On the producer side the in message body is converted to a `byte[]` and is POSTed to the callback handler as content-type `application/octet-stream`.

### Usage

Setting up tasks queues is an administrative task on Google App Engine. Only one queue is pre-configured and can be referenced by name out-of-the-box: the `default` queue. This queue will be used in the following examples. Please note that when using task queues on the local development server, tasks must be executed manually from the [developer console](#).

### Default queue

```
...
.to(gtask:default) // add message to default queue

from(gtask:default) // receive message from default queue (via a web hook)
...
```

This example requires the following servlet mapping.

#### web.xml

```
...
<servlet>
  <servlet-name>CamelServlet</servlet-name>
  <servlet-class>org.apache.camel.component.servlet.CamelHttpTransportServlet</servlet-class>
  ...
</servlet>
...
<servlet-mapping>
  <servlet-name>CamelServlet</servlet-name>
  <url-pattern>/worker/*</url-pattern>
</servlet-mapping>
...
```

## Dependencies

Maven users will need to add the following dependency to their `pom.xml`.

#### pom.xml

```
<dependency>
  <groupId>org.apache.camel</groupId>
  <artifactId>camel-gae</artifactId>
  <version>x.x.x</version>
</dependency>
```

## See Also

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