Lab 03: Microservices using Hazelcast Distributed Map

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Code (branch): *micro_hazelcast*

POST:
Sending 10 POST requests:

- Facade service:

```
127.0.0.1 - - [14/May/2022 17:49:36] "GET /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:49:42] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:49:50] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:49:52] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:49:55] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:49:57] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:49:59] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:50:03] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:50:06] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:50:10] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [14/May/2022 17:50:13] "POST /facade_service HTTP/1.1" 200 -
```

- Message service:

```
127.0.0.1 - - [14/May/2022 17:49:36] "GET /message_service HTTP/1.1" 200 -
```

- Logging service 01:

```
2022-05-14 17:49:42 INFO     {'message': 'message_1', 'message_uuid': '69ce7c25-eead-4b3d-a044-c9173a0a41e6'}
2022-05-14 17:49:42 INFO     127.0.0.1 - - [14/May/2022 17:49:42] "POST /logging_service HTTP/1.1" 200 -
2022-05-14 17:49:57 INFO     {'message': 'message_5', 'message_uuid': 'b11d451c-f4e9-4f61-83d0-9701fb646ecd'}
2022-05-14 17:49:57 INFO     127.0.0.1 - - [14/May/2022 17:49:57] "POST /logging_service HTTP/1.1" 200 -
2022-05-14 17:49:59 INFO     {'message': 'message_6', 'message_uuid': '936a3678-955d-4798-b7a2-44f9d2132595'}
2022-05-14 17:49:59 INFO     127.0.0.1 - - [14/May/2022 17:49:59] "POST /logging_service HTTP/1.1" 200 -
```

- Logging service 02:

```
2022-05-14 17:49:36 INFO     127.0.0.1 - - [14/May/2022 17:49:36] "GET /logging_service HTTP/1.1" 200 -
2022-05-14 17:49:50 INFO     {'message': 'message_2', 'message_uuid': 'e68e84df-2d63-4c07-9f3a-a66c5a464266'}
2022-05-14 17:49:50 INFO     127.0.0.1 - - [14/May/2022 17:49:50] "POST /logging_service HTTP/1.1" 200 -
2022-05-14 17:49:52 INFO     {'message': 'message_3', 'message_uuid': '5a8ebe8d-7ef0-497f-b2ab-e4feb55e6131'}
2022-05-14 17:49:52 INFO     127.0.0.1 - - [14/May/2022 17:49:52] "POST /logging_service HTTP/1.1" 200 -
2022-05-14 17:49:55 INFO     {'message': 'message_4', 'message_uuid': '86b2e5d0-d190-4f27-b5ed-e8afac55a751'}
2022-05-14 17:49:55 INFO     127.0.0.1 - - [14/May/2022 17:49:55] "POST /logging_service HTTP/1.1" 200 -
2022-05-14 17:50:06 INFO     {'message': 'message_8', 'message_uuid': '9c2c37c8-8800-4a33-a1ac-4cff5a684d77'}
2022-05-14 17:50:06 INFO     127.0.0.1 - - [14/May/2022 17:50:06] "POST /logging_service HTTP/1.1" 200 -
```

- Logging service 03:

```
2022-05-14 17:50:03 INFO      {'message': 'message_7', 'message_uuid': 'd2b2914b-0c21-4bdd-8a56-dec9c1bf0ad0'}
2022-05-14 17:50:03 INFO      127.0.0.1 - - [14/May/2022 17:50:03] "POST /logging_service HTTP/1.1" 200 -
2022-05-14 17:50:10 INFO      {'message': 'message_9', 'message_uuid': '1d9a64d6-ce4a-4050-9dc1-bd8d0d93abc6'}
2022-05-14 17:50:10 INFO      127.0.0.1 - - [14/May/2022 17:50:10] "POST /logging_service HTTP/1.1" 200 -
2022-05-14 17:50:13 INFO      {'message': 'message_10', 'message_uuid': 'fced382a-512d-41ff-9ac9-33e43a8231e9'}
2022-05-14 17:50:13 INFO      127.0.0.1 - - [14/May/2022 17:50:13] "POST /logging_service HTTP/1.1" 200 -
```

GET:

```
http://localhost:8080/facade_service

HTTP/1.0 200 OK
Content-Type: text/html; charset=utf-8
Content-Length: 168
Server: Werkzeug/2.0.3 Python/3.9.12
Date: Sat, 14 May 2022 18:30:55 GMT

['message_6', 'message_1', 'message_4', 'message_7', 'message_3', 'message_2', 'message_8', 'message_10', 'message_5', 'message_9']: messages-service is not implemented
Response file saved.
> 2022-05-14T213055.200.html

Response code: 200 (OK); Time: 125ms; Content length: 168 bytes
```

- Facade service:

```
127.0.0.1 - - [14/May/2022 21:30:55] "GET /facade_service HTTP/1.1" 200 -
```

- Message service:

```
127.0.0.1 - - [14/May/2022 21:30:55] "GET /message_service HTTP/1.1" 200 -
```

Shutting down one of the logging services results in 2 cases:

- The output is provided by the shutdown service and results in an **error**

```
http://localhost:8080/facade_service

HTTP/1.0 200 OK
Content-Type: text/html; charset=utf-8
Content-Length: 14
Server: Werkzeug/2.0.3 Python/3.9.12
Date: Sat, 14 May 2022 18:36:08 GMT

Error occurred
Response file saved.
> 2022-05-14T213608.200.html

Response code: 200 (OK); Time: 17ms; Content length: 14 bytes
```

- The output is provided by the working service

```
http://localhost:8080/facade_service

HTTP/1.0 200 OK
Content-Type: text/html; charset=utf-8
Content-Length: 168
Server: Werkzeug/2.0.3 Python/3.9.12
Date: Sat, 14 May 2022 18:36:28 GMT

['message_6', 'message_1', 'message_4', 'message_7', 'message_3', 'message_2', 'message_8', 'message_10', 'message_5', 'message_9']: messages-service is not implemented
Response file saved.
> 2022-05-14T213628.200.html

Response code: 200 (OK); Time: 43ms; Content length: 168 bytes
```