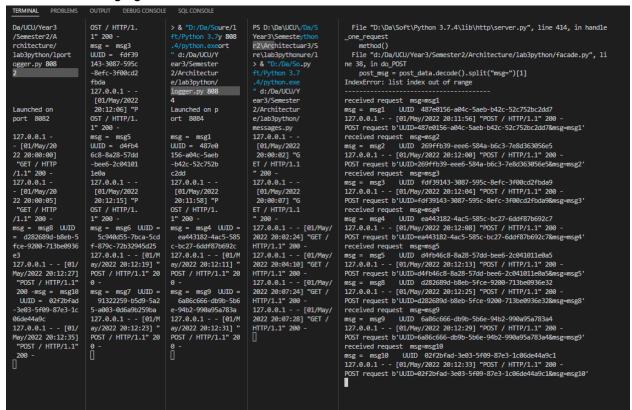The result of 10 POST requests. From left to right: logging service 1, logging service 2, logging service 2, messaging service, facade service

3 Logging services in Hazelcast management center:

Map Statistics (In-Memory Format: BINARY)

Member	Entries	Gets	Puts	Removals	Sets	Entry Memory	Backups	Backup Memory	Events	Hits	Locks	Dirty Entries
192.168.239.1:57...	2	0	2	0	0	326.00 B	4	652.00 B	0	0	0	0
192.168.239.1:57...	5	0	5	0	0	815.00 B	4	653.00 B	0	0	0	0
192.168.239.1:57...	3	0	3	0	0	490.00 B	2	326.00 B	0	0	0	0
TOTAL	10	0	10	0	0	1.59 kB	10	1.59 kB	0	0	0	0

Postrequest.py script output:

```
d:\Da\UCU\Year3\Semester2\Architecture\lab3python>python postrequest.py
200
POST request b'msg=msg1'
200
POST request b'msg=msg2'
200
POST request b'msg=msg3'
200
POST request b'msg=msg4'
200
POST request b'msg=msg5'
200
POST request b'msg=msg6'
200
POST request b'msg=msg7'
200
POST request b'msg=msg8'
200
POST request b'msg=msg9'
200
POST request b'msg=msg10'
```

Proof of random distribution:

```
msg = msg1 UUID
= 487e0156-a04c-5
aeb-b42c-52c752bc2
dd
127.0.0.1 - - [01/
May/2022 20:53:28]
 "POST / HTTP/1.1"
 200 -
msg = msg2 UUID
= 269ffb39-eee6-5
84a-b6c3-7e8d36305
6e
127.0.0.1 - - [01/
May/2022 20:53:32]
 "POST / HTTP/1.1"
 200 -
msg = msg4 UUID
= ea443182-4ac5-5
85c-bc27-6ddf87b69
2c
127.0.0.1 - - [01/
May/2022 20:53:40]
 "POST / HTTP/1.1"
 200 -
msg = msg5 UUID
= d4fb46c8-8a28-5
7dd-bee6-2c041011e
0a
127.0.0.1 - - [01/
May/2022 20:53:44]
 "POST / HTTP/1.1"
 200 -
msg = msg8 UUID
= d282689d-b8eb-5
fce-9200-713be0936
e3
127.0.0.1 - - [01/
May/2022 20:53:57]
 "POST / HTTP/1.1"
 200 -
msg = msg10 UUID
 = 02f2bfad-3e03-
5f09-87e3-1c06de44
a9c
127.0.0.1 - - [01/
May/2022 20:54:05]
 "POST / HTTP/1.1"
 200 -
```

```
0a95a783a', 'msg9')
, ('d282689d-b8eb-5
fce-9200-713be0936e
3', 'msg8'), ('02f2
bfad-3e03-5f09-87e3
-1c06de44a9c', 'msg
87-595c-8efc-3f00cd
2fbda', 'msg3')]
PS D:\Da\UCU\Year3\
Semester2\Architect
ure\lab3python>
ure\lab3python> & "
D:/Da/Soft/Python 3
.7.4/python.exe" d:
/Da/UCU/Year3/Semes
ter2/Architecture/l
ab3python/logger.py
 8083
Launched on port 8
083

msg = msg3 UUID =
 fdf39143-3087-595
c-8efc-3f00cd2fbda
127.0.0.1 - - [01/M
ay/2022 20:53:36] "
POST / HTTP/1.1" 20
0 -
msg = msg9 UUID =
 6a86c666-db9b-5b6
e-94b2-990a95a783a
127.0.0.1 - - [01/M
ay/2022 20:54:01] "
POST / HTTP/1.1" 20
0 -
```

```
sg6'), ('d4fb46c8-8
a28-57dd-bee6-2c041
011e0a', 'msg5'), (
'91322259-b5d9-5a25
ure\lab3python> & "
D:/Da/Soft/Python 3
.7.4/python.exe" d:
/Da/UCU/Year3/Semes
ter2/Architecture/l
ab3python/logger.py
 8084
ure\lab3python> & "
D:/Da/Soft/Python 3
.7.4/python.exe" d:
/Da/UCU/Year3/Semes
ter2/Architecture/l
ab3python/logger.py
 8084
Launched on port 8
084

msg = msg6 UUID =
 5c940d55-7bca-5cd
f-879c-72b32945d25
127.0.0.1 - - [01/M
ay/2022 20:53:49] "
POST / HTTP/1.1" 20
0 -
msg = msg7 UUID =
 91322259-b5d9-5a2
5-a003-0d6a9b259ba
127.0.0.1 - - [01/M
ay/2022 20:53:53] "
POST / HTTP/1.1" 20
0 -
```

Getrequest.py script output with different amount of logging services (3, 2 and 1):

Facade output while using getrequest.py script:

```
D:\Da\UCU\Year3\Semester2\Architecture\lab3python>"D:/Da/Soft/Python 3.7.4/python.exe" d
:/Da/UCU/Year3/Semester2/Architecture/lab3python/facade.py 8086
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:03:53 GMT', 'Conten
t-type': 'text/html'}
[('ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e'
, 'msg2'), ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72
b32945d25', 'msg6'), ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a
25-a003-0d6a9b259ba', 'msg7'), ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d28268
9d-b8eb-5fce-9200-713be0936e3', 'msg8'), ('02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'
), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:03:55 GMT', 'Conten
t-type': 'text/html'}
Messages Service not Implemented
127.0.0.1 - - [01/May/2022 21:03:55] "GET /?msg=HELLO HTTP/1.1" 200 -
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:01 GMT', 'Conten
t-type': 'text/html'}
[('ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e'
, 'msg2'), ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72
b32945d25', 'msg6'), ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a
25-a003-0d6a9b259ba', 'msg7'), ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d28268
9d-b8eb-5fce-9200-713be0936e3', 'msg8'), ('02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'
), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:03 GMT', 'Conten
t-type': 'text/html'}
Messages Service not Implemented
127.0.0.1 - - [01/May/2022 21:04:03] "GET /?msg=HELLO HTTP/1.1" 200 -
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:08 GMT', 'Conten
t-type': 'text/html'}
[('ea443182-4ac5-585c-bc27-6ddf87b692c', 'msg4'), ('269ffb39-eee6-584a-b6c3-7e8d363056e'
, 'msg2'), ('487e0156-a04c-5aeb-b42c-52c752bc2dd', 'msg1'), ('5c940d55-7bca-5cdf-879c-72
b32945d25', 'msg6'), ('d4fb46c8-8a28-57dd-bee6-2c041011e0a', 'msg5'), ('91322259-b5d9-5a
25-a003-0d6a9b259ba', 'msg7'), ('6a86c666-db9b-5b6e-94b2-990a95a783a', 'msg9'), ('d28268
9d-b8eb-5fce-9200-713be0936e3', 'msg8'), ('02f2bfad-3e03-5f09-87e3-1c06de44a9c', 'msg10'
), ('fdf39143-3087-595c-8efc-3f00cd2fbda', 'msg3')]
{'Server': 'BaseHTTP/0.6 Python/3.7.4', 'Date': 'Sun, 01 May 2022 18:04:10 GMT', 'Conten
t-type': 'text/html'}
Messages Service not Implemented
127.0.0.1 - - [01/May/2022 21:04:10] "GET /?msg=HELLO HTTP/1.1" 200 -
```