

1. Приклад запуску: ([посилання на кращу якість скріншоту](#))

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| <pre>[~/ucur_courses/apz/task1/logging]-[ivddorrrka@ivddorrrka]-[0]-[10140] [::] % python main.py 8081</pre> | <pre>[~/ucur_courses/apz/task1/logging]-[ivddorrrka@ivddorrrka]-[0]-[10010] [::] % python main.py 8083</pre> | <pre>[~/ucur_courses/apz/task1/logging]-[ivddorrrka@ivddorrrka]-[0]-[10012] [::] % python main.py 8084</pre> | <pre>ful_darwin.IO.thread-in-1] [c.h.i.s.t.Tcp ServerConnection]: [172.17.0.4]:5701 [dev] [5.2.2] Initialized new cluster connect ion between /172.17.0.4:5701 and /172.17. 0.3:38587 2023-04-03 19:48:07,568 [INFO] [hz.youth ful_darwin.IO.thread-in-2] [c.h.i.s.t.Tcp ServerConnection]: [172.17.0.4]:5701 [dev] [5.2.2] Initialized new cluster connect ion between /172.17.0.4:52257 and /172.17 .0.3:5701 2023-04-03 19:48:08,554 [INFO] [main] [c .h.j.i.JobCoordinationService]: [172.17.0 .4]:5701 [dev] [5.2.2] Jet started scanni ng for jobs 2023-04-03 19:48:08,560 [INFO] [main] [c .h.c.LifecycleService]: [172.17.0.4]:5701 [dev] [5.2.2] [172.17.0.4]:5701 is START ED</pre> |
| <pre>[~/ucur_courses/apz/task1/facade]-[ivddorrrka@ivddorrrka]-[0]-[10014] [::] % python main.py</pre> | | <pre>92-7100-4131-9929-ed1fd6d3d4b0 Member [172.17.0.3]:5701 - d3a5d7 5a-88af-4566-a632-8e876609a701 this Member [172.17.0.4]:5701 - 4c9896 f3-bf13-4ad4-9972-8a4c5e92bec4] 2023-04-03 19:48:07,557 [INFO] [hz.quizz ical_brahmagupta.IO.thread-in-2] [c.h.i.s .t.TcpServerConnection]: [172.17.0.3]:570 1 [dev] [5.2.2] Initialized new cluster c onnection between /172.17.0.3:5701 and /1 72.17.0.4:52257 2023-04-03 19:48:07,573 [INFO] [hz.quizz ical_brahmagupta.IO.thread-in-1] [c.h.i.s .t.TcpServerConnection]: [172.17.0.3]:570 1 [dev] [5.2.2] Initialized new cluster c onnection between /172.17.0.3:38587 and / 172.17.0.4:5701</pre> | <pre>2023-04-03 19:48:07,517 [INFO] [hz.cleve r_carson.priority-generic-operation.threa d-0] [c.h.i.c.ClusterService]: [172.17.0. 2]:5701 [dev] [5.2.2] Members {size:3, ver:3} [Member [172.17.0.2]:5701 - a5ce1b 92-7100-4131-9929-ed1fd6d3d4b0 this Member [172.17.0.3]:5701 - d3a5d7 5a-88af-4566-a632-8e876609a701 Member [172.17.0.4]:5701 - 4c9896 f3-bf13-4ad4-9972-8a4c5e92bec4] 2023-04-03 19:48:08,622 [INFO] [hz.cleve r_carson.priority-generic-operation.threa d-0] [c.h.i.p.i.PartitionStateManager]: [172.17.0.2]:5701 [dev] [5.2.2] Initializi ng cluster partition table arrangement...</pre> |
| <pre>[~/ucur_courses/apz/task1/messages]-[ivddorrrka@ivddorrrka]-[0]-[10016] [::] % python main.py</pre> | | | |

Тут в вікнах де вже щось запущено - це hazelcast ноди - аналогічним запуском, як в лабораторній роботі 2:

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| <pre>ad-0] [c.h.i.c.ClusterService]: [172.17.0.2]:5701 [dev] [5.2.2] Members {size:2, ver:2} [Member [172.17.0.2]:5701 - 722b0917-2716-45bf-bf98-4224608eed97 this Member [172.17.0.3]:5701 - d374c32f-2152-4469-a5f1-aace38e79fc8] 2023-03-18 13:09:19,318 [INFO] [hz.sharp_goldwasser.IO.thread-in-1] [c.h.i.s.t.TcpSe rverConnection]: [172.17.0.2]:5701 [dev] [5.2.2] Initialized new cluster connection between /172.17.0.2:5701 and /172.17.0.4:49413 2023-03-18 13:09:24,392 [INFO] [hz.sharp_goldwasser.priority-generic-operation.threa d-0] [c.h.i.c.ClusterService]: [172.17.0.2]:5701 [dev] [5.2.2] Members {size:3, ver:3} [Member [172.17.0.2]:5701 - 722b0917-2716-45bf-bf98-4224608eed97 this Member [172.17.0.3]:5701 - d374c32f-2152-4469-a5f1-aace38e79fc8 Member [172.17.0.4]:5701 - e719ff2e-e20e-47d5-a081-67d918769249 this] 2023-03-18 13:09:19,323 [INFO] [hz.eloquent_rubin.IO.thread-in-0] [c.h.i.s.t.TcpSe rverConnection]: [172.17.0.4]:5701 [dev] [5.2.2] Initialized new cluster connection b etween /172.17.0.4:49413 and /172.17.0.2:5701 2023-03-18 13:09:24,401 [INFO] [hz.eloquent_rubin.IO.thread-in-1] [c.h.i.s.t.TcpSe rverConnection]: [172.17.0.4]:5701 [dev] [5.2.2] Initialized new cluster connection b etween /172.17.0.4:5701 and /172.17.0.3:58321 2023-03-18 13:09:24,416 [INFO] [hz.eloquent_rubin.generic-operation.thread-0] [c.h .i.c.ClusterService]: [172.17.0.4]:5701 [dev] [5.2.2] Members {size:3, ver:3} [Member [172.17.0.2]:5701 - 722b0917-2716-45bf-bf98-4224608eed97 Member [172.17.0.3]:5701 - d374c32f-2152-4469-a5f1-aace38e79fc8 Member [172.17.0.4]:5701 - e719ff2e-e20e-47d5-a081-67d918769249 this] 2023-03-18 13:09:24,442 [INFO] [main] [c.h.j.i.JobCoordinationService]: [172.17.0.4]:5701 [dev] [5.2.2] Jet started scanning for jobs 2023-03-18 13:09:24,452 [INFO] [main] [c.h.c.LifecycleService]: [172.17.0.4]:5701 [dev] [5.2.2] [172.17.0.4]:5701 is STARTED</pre> | <pre>Member [172.17.0.3]:5701 - d374c32f-2152-4469-a5f1-aace38e79fc8 this] 2023-03-18 13:08:45,132 [INFO] [main] [c.h.j.i.JobCoordinationService]: [172.17.0. 3]:5701 [dev] [5.2.2] Jet started scanning for jobs 2023-03-18 13:08:45,143 [INFO] [main] [c.h.c.LifecycleService]: [172.17.0.3]:5701 [dev] [5.2.2] [172.17.0.3]:5701 is STARTED 2023-03-18 13:09:24,397 [INFO] [hz.vigilant_rubin.priority-generic-operation.threa d-0] [c.h.i.c.ClusterService]: [172.17.0.3]:5701 [dev] [5.2.2] Members {size:3, ver:3} [Member [172.17.0.2]:5701 - 722b0917-2716-45bf-bf98-4224608eed97 Member [172.17.0.3]:5701 - d374c32f-2152-4469-a5f1-aace38e79fc8 this Member [172.17.0.4]:5701 - e719ff2e-e20e-47d5-a081-67d918769249] 2023-03-18 13:09:24,403 [INFO] [hz.vigilant_rubin.IO.thread-in-1] [c.h.i.s.t.TcpSe rverConnection]: [172.17.0.3]:5701 [dev] [5.2.2] Initialized new cluster connection between /172.17.0.3:58321 and /172.17.0.4:5701 agement-center) 2023-03-18 13:17:12,400 [INFO] [main] [c.h.w.MCAApplication]: No active profile set , falling back to 1 default profile: "default" 2023-03-18 13:17:16,022 [INFO] [main] [c.h.w.c.SqlDbConfig]: Checking DB for requi red migrations. 2023-03-18 13:17:17,842 [INFO] [main] [c.h.w.c.SqlDbConfig]: Number of applied DB migrations: 19. 2023-03-18 13:17:19,155 [INFO] [main] [c.h.w.s.s.i.DisableLoginStrategy]: Login wi ll be disabled for 5 seconds after 3 failed login attempts. For every 3 consecutive failed login attempts, disable period will be multiplied by 10. 2023-03-18 13:17:22,757 [INFO] [main] [c.h.w.MCAApplication]: Started MCAApplication in 11.591 seconds (JVM running for 13.259) 2023-03-18 13:17:22,809 [INFO] [AsyncExecutor-1] [c.h.w.MCAApplication]: Hazelcast Management Center successfully started at http://localhost:8080 2023-03-18 13:17:22,832 [INFO] [AsyncExecutor-2] [c.h.w.s.ClusterManager]: Connect ing to 0 enabled cluster(s) on startup. 2023-03-18 13:17:22,847 [INFO] [AsyncExecutor-1] [c.h.w.MCAApplication]: Hazelcast Management Center 5.2.1 (20221201 - f06fa4a), Hazelcast client version: 5.2.1, embe dded Jetty version: 9.4.49.v20220914</pre> |
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```
sudo docker run -p 5701:5701 hazelcast/hazelcast
sudo docker run -p 5702:5701 hazelcast/hazelcast
sudo docker run -p 5703:5701 hazelcast/hazelcast
```

В інших вікнах показано що буде запущено там - на всіх наступних скріншотах в кожному розділі раниться відповідне

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| <pre> OK UUID=2 of message 'msg2' INFO: ::1:47640 - "POST / HTTP/1.1" 200 OK INFO: ::1:36382 - "GET / HTTP/1.1" 200 OK UUID=3 of message 'msg3' INFO: ::1:36396 - "POST / HTTP/1.1" 200 OK INFO: ::1:36402 - "GET / HTTP/1.1" 200 OK UUID=6 of message 'msg6' INFO: ::1:36414 - "POST / HTTP/1.1" 200 OK INFO: ::1:36420 - "GET / HTTP/1.1" 200 OK UUID=8 of message 'msg8' INFO: ::1:36422 - "POST / HTTP/1.1" 200 OK </pre> | <pre> 0 OK UUID=1 of message 'msg1' INFO: ::1:46092 - "POST / HTTP/1.1" 2 00 OK INFO: ::1:51904 - "GET / HTTP/1.1" 20 0 OK UUID=5 of message 'msg5' INFO: ::1:51914 - "POST / HTTP/1.1" 2 00 OK INFO: ::1:51930 - "GET / HTTP/1.1" 20 0 OK UUID=9 of message 'msg9' INFO: ::1:51938 - "POST / HTTP/1.1" 2 00 OK INFO: ::1:51954 - "GET / HTTP/1.1" 20 0 OK UUID=10 of message 'msg10' INFO: ::1:51970 - "POST / HTTP/1.1" 2 00 OK </pre> | <pre> [~/ucv_courses/apz/task1/logging]-[ivd dorrka@ivddorrka]-[0]-[10012] [~:~] % python main.py 8084 INFO: Started server process [20479] INFO: Waiting for application startu p. INFO: Application startup complete. INFO: Uvicorn running on http://loca lhost:8084 (Press CTRL+C to quit) INFO: ::1:35498 - "GET / HTTP/1.1" 2 00 OK UUID=4 of message 'msg4' INFO: ::1:35510 - "POST / HTTP/1.1" 200 OK INFO: ::1:35526 - "GET / HTTP/1.1" 2 00 OK UUID=7 of message 'msg7' INFO: ::1:35542 - "POST / HTTP/1.1" 200 OK </pre> |
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2.1 Запустили 3 екземпляри logging-service зліва направо відповідно порт 8081, 8083, 8084

2.3 GET метод :

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| <pre>INFO: ::1:47640 - "POST / HTTP/1.1" 200 OK INFO: ::1:36382 - "GET / HTTP/1.1" 200 OK INFO: ::1:36396 - "POST / HTTP/1.1" 200 OK INFO: ::1:36402 - "GET / HTTP/1.1" 200 OK INFO: ::1:36414 - "POST / HTTP/1.1" 200 OK INFO: ::1:36420 - "GET / HTTP/1.1" 200 OK INFO: ::1:36422 - "POST / HTTP/1.1" 200 OK INFO: ::1:35342 - "GET / HTTP/1.1" 200 OK</pre> | <pre>INFO: ::1:46992 - "POST / HTTP/1.1" 200 OK INFO: ::1:51904 - "GET / HTTP/1.1" 200 OK INFO: ::1:51914 - "POST / HTTP/1.1" 200 OK INFO: ::1:51930 - "GET / HTTP/1.1" 200 OK INFO: ::1:51938 - "POST / HTTP/1.1" 200 OK INFO: ::1:51954 - "GET / HTTP/1.1" 200 OK INFO: ::1:51970 - "POST / HTTP/1.1" 200 OK INFO: ::1:59000 - "GET / HTTP/1.1" 200 OK</pre> | <pre>[~] % python main.py 8084 INFO: Started server process [20479] INFO: Waiting for application startup. INFO: Application startup complete. INFO: Uvicorn running on http://localhost:8084 (Press CTRL+C to quit) INFO: ::1:35498 - "GET / HTTP/1.1" 200 OK INFO: ::1:35510 - "POST / HTTP/1.1" 200 OK INFO: ::1:35526 - "GET / HTTP/1.1" 200 OK INFO: ::1:35542 - "POST / HTTP/1.1" 200 OK INFO: ::1:52772 - "GET / HTTP/1.1" 200 OK</pre> | <pre>Received auth from Connection[id=6, /172.17.0.1:45701->/172.17.0.1:48626, qualifier=null, endpoint=[172.17.0.1]:48626, remoteUId=8fca6b45-d6e8-40b0-a1e8-655019e29e66, alive=true, connectionType=PYH, planeIndex=-1], successfully authenticated, clientUId: 8fca6b45-d6e8-40b0-a1e8-655019e29e66, client name: hz.client_0, client version: 5.1 [~] % curl http://localhost:8080 [Not implemented yet]: msg1/nmsg7/nmsg4/nmsg2/nmsg10/nmsg6/nmsg8/nmsg5/nmsg3/nmsg7/nmsg4/nmsg2/nmsg10/nmsg6/nmsg9/nmsg8/nmsg5/nmsg3 msg1/nmsg7/nmsg4/nmsg9/nmsg2/nmsg10/nmsg6/nmsg3 [~] % [~] %</pre> |
| <pre>INFO: 127.0.0.1:47908 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:47918 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:47922 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:47938 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:47940 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:47942 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:47954 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:47960 - "POST / HTTP/1.1" 201 Created INFO: 127.0.0.1:34188 - "GET / HTTP/1.1" 200 OK</pre> | <pre>0622, remoteUId=c2be9573-4018-4877-ae32-65a83b9d87f, alive=true, connectionType=PYH, planeIndex=-1], successfully authenticated, clientUId: c2be9573-4018-4877-ae32-65a83b9d87f, client name: hz.client_0, client version: 5.1 2023-04-03 19:50:56.983 [INFO] [hz.quizral_brahmagupta.priority-generic-operation.thread-6] [c.h.c.i.p.t.AuthenticationMessageTask]: [172.17.0.3]:5701 [dev] [5.2.2] Received auth from Connection[id=6, /172.17.0.3:5701->/172.17.0.1:48634, qualifier=null, endpoint=[172.17.0.1]:48634, remoteUId=8fca6b45-d6e8-40b0-a1e8-655019e29e66, alive=true, connectionType=PYH, planeIndex=-1], successfully authenticated, clientUId: 8fca6b45-d6e8-40b0-a1e8-655019e29e66, client name: hz.client_0, client version: 5.1</pre> | <pre>2023-04-03 19:50:56.981 [INFO] [hz.clever_carson.priority-generic-operation.thread-6] [c.h.c.i.p.t.AuthenticationMessageTask]: [172.17.0.2]:5701 [dev] [5.2.2] Received auth from Connection[id=5, /172.17.0.2:5701->/172.17.0.1:46692, qualifier=null, endpoint=[172.17.0.1]:46692, remoteUId=8fca6b45-d6e8-40b0-a1e8-655019e29e66, alive=true, connectionType=PYH, planeIndex=-1], successfully authenticated, clientUId: 8fca6b45-d6e8-40b0-a1e8-655019e29e66, client name: hz.client_0, client version: 5.1</pre> | <pre>2023-04-03 21:57-03-Apr-2023 "ivddorrrka" 21:57-03-Apr-2023</pre> |
| <pre>[~] % python main.py ~/ucu_courses/apz/task1/messages-[ivddorrrka@ivddorrrka]-[0]-[10016] [~] % python main.py INFO: Started server process [20395] INFO: Waiting for application startup. INFO: Application startup complete. INFO: Uvicorn running on http://localhost:8082 (Press CTRL+C to quit) INFO: ::1:34850 - "GET / HTTP/1.1" 200 OK</pre> | <pre>[~] % python main.py 8084 INFO: Started server process [20479] INFO: Waiting for application startup. INFO: Application startup complete. INFO: Uvicorn running on http://localhost:8082 (Press CTRL+C to quit) INFO: ::1:34850 - "GET / HTTP/1.1" 200 OK</pre> | <pre>[~] % python main.py 8084 INFO: Started server process [20479] INFO: Waiting for application startup. INFO: Application startup complete. INFO: Uvicorn running on http://localhost:8082 (Press CTRL+C to quit) INFO: ::1:34850 - "GET / HTTP/1.1" 200 OK</pre> | <pre>[~] % python main.py 8084 INFO: Started server process [20479] INFO: Waiting for application startup. INFO: Application startup complete. INFO: Uvicorn running on http://localhost:8082 (Press CTRL+C to quit) INFO: ::1:34850 - "GET / HTTP/1.1" 200 OK</pre> |

- В червоному віконечку - всі меседжі виведені з усіх екземплярів logging-service
- В синьому бачимо як пройшов GET
- І відповідно в зеленому GET запит прийшов до фасаду і меседж-сервісу

```
INFO:      ::1:36382 - "GET / HTTP/1.1" 200 OK  
UID=3 of message 'msg3'  
INFO:      ::1:36396 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:36402 - "GET / HTTP/1.1" 200 OK  
UID=6 of message 'msg5'  
INFO:      ::1:36414 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:36420 - "GET / HTTP/1.1" 200 OK  
UID=8 of message 'msg8'  
INFO:      ::1:36422 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:35342 - "GET / HTTP/1.1" 200 OK  
INFO:      ::1:41412 - "GET / HTTP/1.1" 200 OK
```

```
INFO:      ::1:51904 - "GET / HTTP/1.1" 200 OK  
UID=5 of message 'msg5'  
INFO:      ::1:51914 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:51930 - "GET / HTTP/1.1" 200 OK  
UID=9 of message 'msg9'  
INFO:      ::1:51938 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:51954 - "GET / HTTP/1.1" 200 OK  
UID=10 of message 'msgl0'  
INFO:      ::1:51970 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:59000 - "GET / HTTP/1.1" 200 OK  
INFO:      ::1:50618 - "GET / HTTP/1.1" 200 OK
```

```
INFO:      ::1:35510 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:35526 - "GET / HTTP/1.1" 200 OK  
UID=7 of message 'msg7'  
INFO:      ::1:35542 - "POST / HTTP/1.1" 200 OK  
INFO:      ::1:52772 - "GET / HTTP/1.1" 200 OK  
INFO: Waiting for application shutdown.  
[~]-[ivddorrrka@ivddorrrka] ~ [~][10034]  
[~]-[% curl http://localhost:8080  
[Not implemented yet]: msg1\nmsg7\msg4\  
nmsg2\nmsg10\nmsg6\nnmgs6\nnmgs8\nmsg5\nmsg3  
msg1\nmsg7\nmsg4\nmsg2\nmsg10\nmsg6\nms  
[~]-[ivddorrrka@ivddorrrka] ~ [~][10034]  
[~]-[] %  
[~)-%  
[~)] %
```

Бачимо, що з того ендпоінта не прийшли повідомлення під час гет-запиту, тому відповідно якщо відключити ще один екземпляр logging-service - то під час гету матимемо очевидний результат - лише з працюючих ендпоінтів придуть повідомлення.