

Banking Application

Backend:

Customer Service

(`/api/customer`)

Endpoints:

@PostMapping(`"/createCustomer"`)

The screenshot displays a REST client interface with the following details:

- Method:** POST
- URL:** `http://localhost:8085/api/customer/createCustomer`
- Body Type:** raw
- Request Body (JSON):**

```
1 {
2   "name": "Agasthya N",
3   "email": "aggu@example.com",
4   "mobileNumber": "4567891230",
5   "address": "Hyderabad, India",
6   "age": 20,
7   "gender": "Male",
8   "kyc": "VERIFIED"
9 }
```
- Response Body (JSON):**

```
1 {
2   "id": 5,
3   "name": "Agasthya N",
4   "email": "aggu@example.com",
5   "mobileNumber": "4567891230",
6   "address": "Hyderabad, India",
7   "age": 20,
8   "gender": "Male",
9   "kyc": "VERIFIED"
10 }
```

@GetMapping("/getCustomer/{id}")

GET

▼

http://localhost:8085/api/customer/getCustomer/2

Params

Authorization

Headers (7)

Body

Scripts

Tests

Settings

Query Params

Key	Value
-----	-------

Body

Cookies

Headers (5)

Test Results

↺

{}

JSON

▼

▶

Preview

🔗

Visualize

▼

1

{

2

"id": 2,

3

"name": "Akshara Deekonda",

4

"email": "akshara@example.com",

5

"mobileNumber": "9876543219",

6

"address": "Hyderabad, India",

7

"age": 20,

8

"gender": "Female",

9

"kyc": "Pending"

10

}

Swagger

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localhost:8085/swagger-ui/index.html

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Swagger

powered by SWAGGER

/api-docs

Explore

OpenAPI definition

v0

OAS 3.1

/api-docs

Servers

http://localhost:8085 - Generated server url

customer-controller

^

POST

/api/customer/createCustomer

▼

GET

/api/customer/getCustomer/{id}

▼

Schemas

^

CustomerDTO

>

Expand all

object

Api-docs

```
localhost:8085/api-docs

{"openapi":"3.1.0","info":{"title":"OpenAPI definition","version":"v0"},"servers":[{"url":"http://localhost:8085","description":"Generated server url"}],"paths":{"/api/customer/createCustomer":{"post":{"tags":["customer-controller"],"operationId":"createCustomer","requestBody":{"content":{"application/json":{"schema":{"$ref":"#/components/schemas/CustomerDTO"},"required":true},"required":true},"responses":{"200":{"description":"OK","content":{"/*/*":{"schema":{"$ref":"#/components/schemas/CustomerDTO"}}}}},"/api/customer/getCustomer/{id":{"get":{"tags":["customer-controller"],"operationId":"getCustomerById","parameters":[{"name":"id","in":"path","required":true,"schema":{"type":"integer","format":"int64"}}],"responses":{"200":{"description":"OK","content":{"/*/*":{"schema":{"$ref":"#/components/schemas/CustomerDTO"}}}}}}},"components":{"schemas":{"CustomerDTO":{"type":"object","properties":{"id":{"type":"integer","format":"int64"},"name":{"type":"string"},"email":{"type":"string"},"mobileNumber":{"type":"string"},"address":{"type":"string"},"age":{"type":"integer","format":"int32"},"gender":{"type":"string"},"kyc":{"type":"string"}}}}}}}}
```

ZipKin

Zipkin

Find a trace

Dependencies

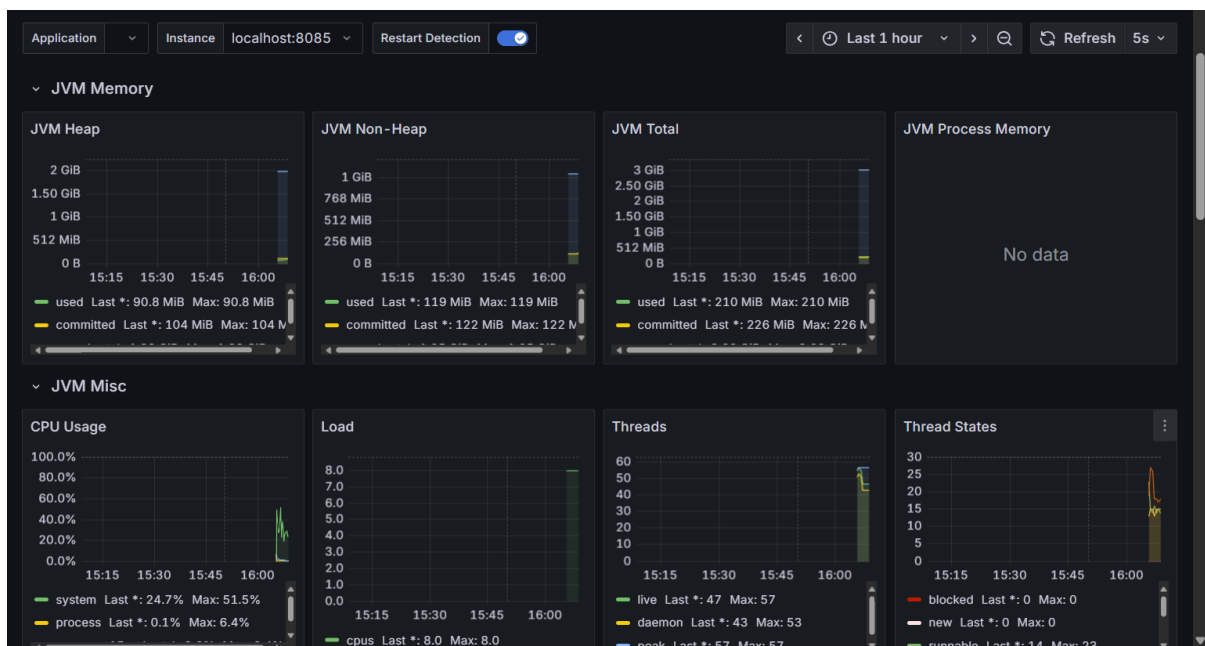
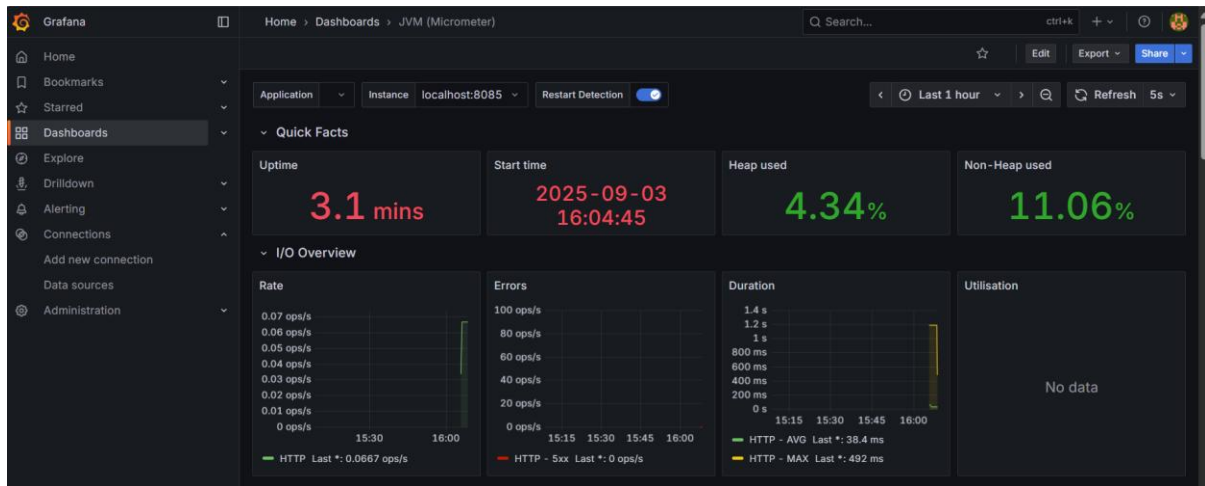
Search by trace ID

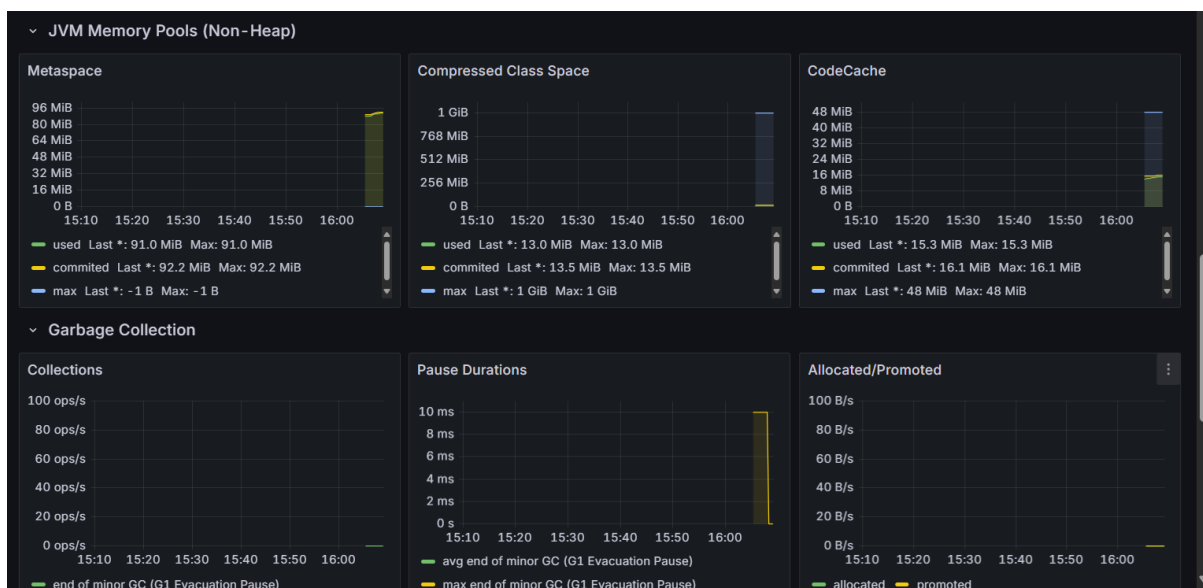
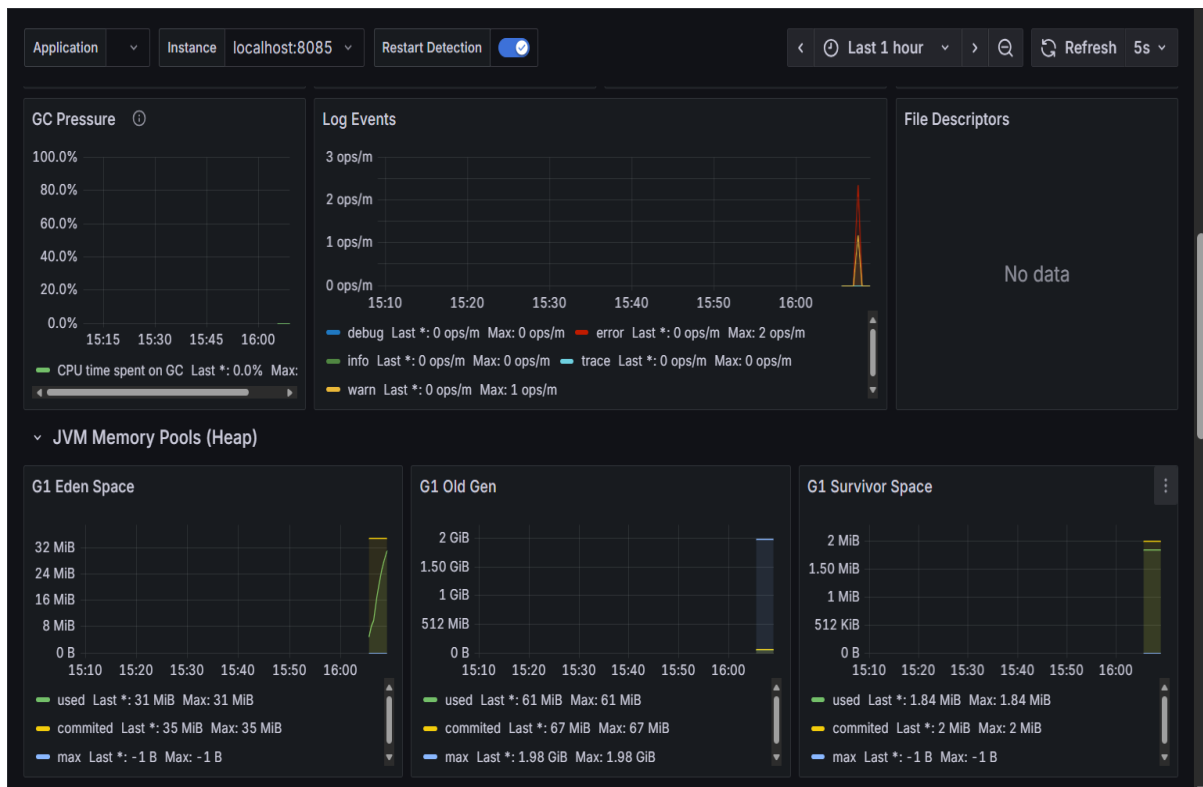
EN

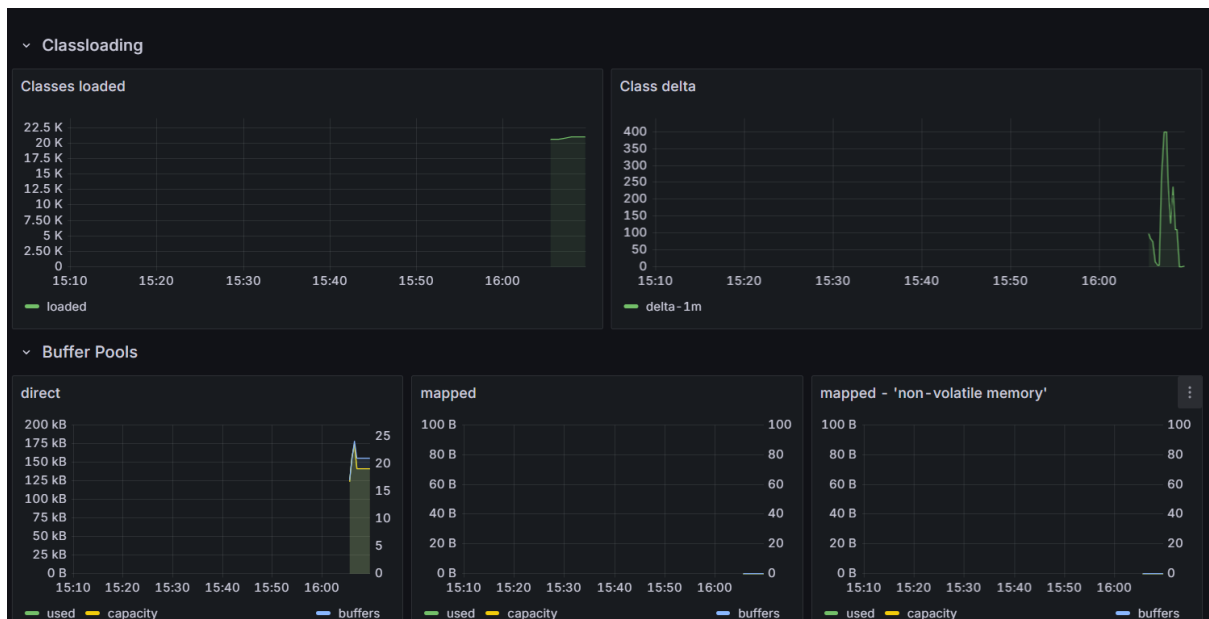
RUN QUERY

Results				EXPAND ALL	COLLAPSE ALL	Service filters
	Root	Start Time	Spans	Duration		
▼	customerservice: http post /api/customer/createcustomer	a minute ago (09/03 16:07:26:933)	1	491.712ms	SHOW	
▼	customerservice: http get /api/customer/getcustomer/{id}	a few seconds ago (09/03 16:07:58:367)	1	253.044ms	SHOW	
▼	customerservice: http get	a few seconds ago (09/03 16:08:02:542)	1	56.212ms	SHOW	
▼	customerservice: http put	a few seconds ago (09/03 16:08:02:542)	1	54.836ms	SHOW	
▼	customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:07:37:268)	1	42.504ms	SHOW	
▼	customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:08:07:268)	1	40.953ms	SHOW	
▼	customerservice: http get	a few seconds ago (09/03 16:07:32:493)	1	35.981ms	SHOW	
▼	customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:07:52:268)	1	32.509ms	SHOW	
▼	customerservice: http get /actuator/prometheus	a minute ago (09/03 16:07:22:268)	1	26.060ms	SHOW	
▼	customerservice: http put	a few seconds ago (09/03 16:07:32:509)	1	18.455ms	SHOW	

Prometheus-Graphana







Account Service

("/api/accounts")

Endpoints:

@PostMapping("/saveAccount")

POSTlocalhost:8081/api/accounts/saveAccount

ParamsAuthorizationHeaders (9)BodyScriptsTestsSettings

noneform-datax-www-form-urlencodedrawbinaryGraphQLJSON

```
1 {
2   "customerId": 2,
3   "userName": "Akshara Deekonda",
4   "panCardNum": "ACBDE345H",
5   "aadhaarCardNum": "123443212341",
6   "accountNumber": "12345567823",
7   "accountType": "SAVINGS",
8   "balance": 10000.00,
9   "loan": 0.00
10 }
```

BodyCookiesHeaders (5)Test Results

{ }JSONPreviewVisualize

```
1 {
2   "id": 3,
3   "customerId": 2,
4   "userName": "Akshara Deekonda",
5   "panCardNum": "ACBDE345H",
6   "aadhaarCardNum": "123443212341",
7   "accountNumber": "12345567823",
8   "accountType": "SAVINGS",
9   "balance": 10000.00,
10  "loan": 0.0
11 }
```

@GetMapping("/getAccount/{id}")

GETlocalhost:8081/api/accounts/getAccount/1

ParamsAuthorizationHeaders (7)BodyScriptsTestsSettings

Query Params


	Key	Value	Descri
--	-----	-------	--------

BodyCookiesHeaders (5)Test Results

{ }JSONPreviewVisualize

```
1 {
2   "id": 1,
3   "customerId": 1,
4   "userName": "Aarchana Venna",
5   "panCardNum": "ABCDE1234F",
6   "aadhaarCardNum": "123412341234",
7   "accountNumber": "9876543210",
8   "accountType": "SAVINGS",
9   "balance": 5000.0,
10  "loan": 0.0
11 }
```

Swagger


Swagger
powered by SMARTBLUR

Explore

OpenAPI definition v0 OAS 3.1

/api-docs

Servers

account-controller

POST /api/accounts/saveAccount

GET /api/accounts/getAccount/{id}

Schemas

AccountDTO
Expand all
object

Api-docs


← ↻

🔍 ⭐ ⚙️ 👤 ... 🌈

Pretty-print

```
{
  "openapi": "3.1.0",
  "info": {
    "title": "OpenAPI definition",
    "version": "v0",
    "servers": [
      {
        "url": "http://localhost:8081",
        "description": "Generated server url"
      }
    ],
    "paths": {
      "/api/accounts/saveAccount": {
        "post": {
          "tags": [
            "account-controller"
          ],
          "operationId": "saveAccount",
          "requestBody": {
            "content": {
              "application/json": {
                "schema": {
                  "$ref": "#/components/schemas/AccountDTO"
                }
              }
            },
            "required": true
          },
          "responses": {
            "200": {
              "description": "OK",
              "content": {
                "*/*": {
                  "schema": {
                    "$ref": "#/components/schemas/AccountDTO"
                  }
                }
              }
            }
          }
        }
      },
      "/api/accounts/getAccount/{id}": {
        "get": {
          "tags": [
            "account-controller"
          ],
          "operationId": "getAccountById",
          "parameters": [
            {
              "name": "id",
              "in": "path",
              "required": true,
              "schema": {
                "type": "integer",
                "format": "int64"
              }
            }
          ],
          "responses": {
            "200": {
              "description": "OK",
              "content": {
                "*/*": {
                  "schema": {
                    "$ref": "#/components/schemas/AccountDTO"
                  }
                }
              }
            }
          }
        }
      }
    },
    "components": {
      "schemas": {
        "AccountDTO": {
          "type": "object",
          "properties": {
            "id": {
              "type": "integer",
              "format": "int64",
              "customerId": {
                "type": "integer",
              }
            },
            "username": {
              "type": "string",
            },
            "panCardNum": {
              "type": "string",
            },
            "aadhaarCardNum": {
              "type": "string",
            },
            "accountNumber": {
              "type": "string",
            },
            "accountType": {
              "type": "string",
            },
            "balance": {
              "type": "number",
              "format": "double",
            },
            "loan": {
              "type": "number",
              "format": "double",
            }
          }
        }
      }
    }
  }
}
```

Zipkin


Zipkin

Dependencies

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🌐 EN ⚙️

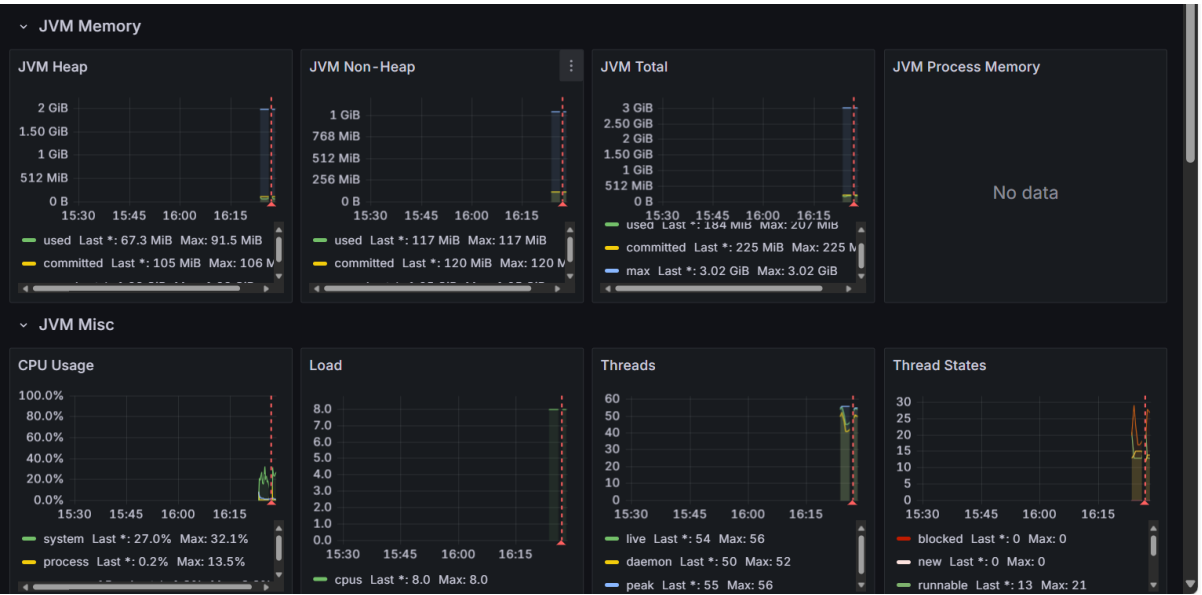
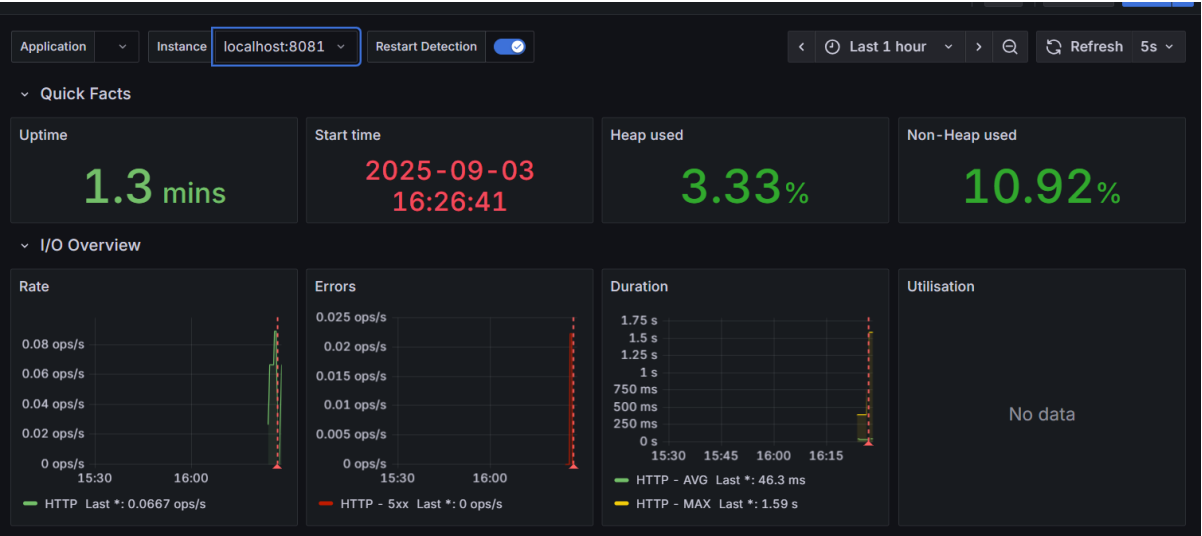
+
RUN QUERY
⚙️

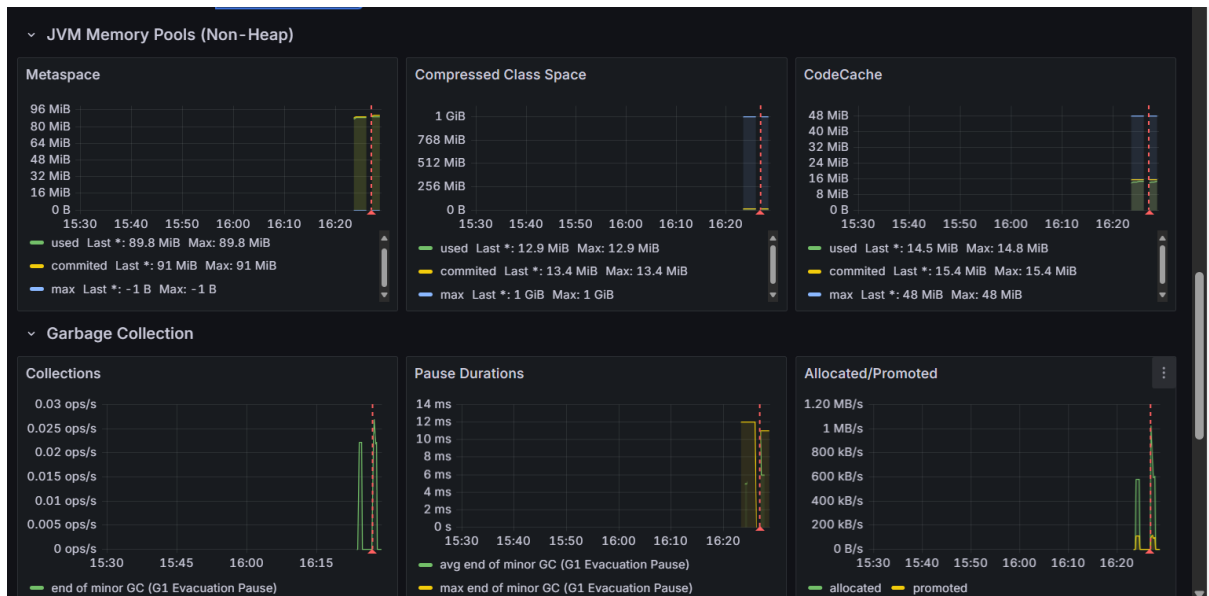
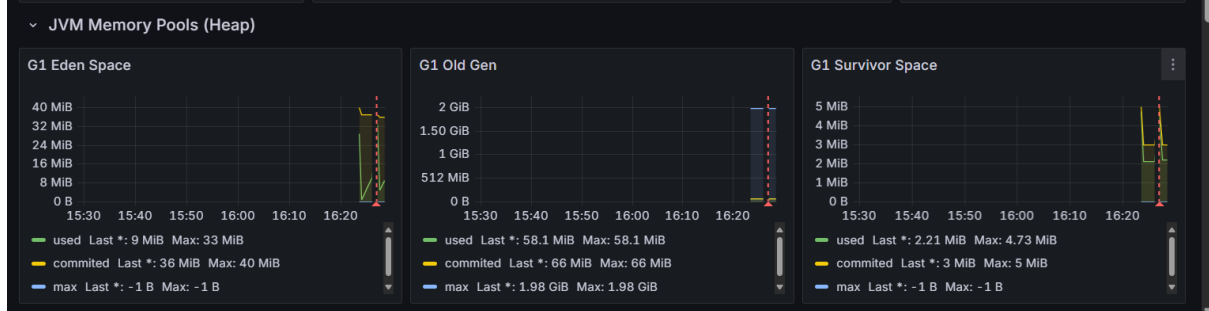
Results

EXPAND ALL COLLAPSE ALL Service filters

	Root	Start Time	Spans	Duration	
▼	accountservice: http get /api/accounts/getaccount/{id}	a few seconds ago (09/03 16:27:22:333)	1	68.940ms	SHOW
▼	accountservice: http get /actuator/prometheus	a few seconds ago (09/03 16:27:28:303)	1	57.617ms	SHOW
▼	accountservice: http get /actuator/prometheus	a few seconds ago (09/03 16:27:13:299)	1	43.823ms	SHOW
▼	customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:27:22:269)	1	36.518ms	SHOW
▼	customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:27:07:269)	1	35.532ms	SHOW
▼	customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:27:37:269)	1	32.057ms	SHOW
▼	accountservice: http put	a few seconds ago (09/03 16:27:21:445)	1	29.030ms	SHOW
▼	customerservice: http get	a few seconds ago (09/03 16:27:24:544)	1	20.745ms	SHOW
▼	accountservice: http get	a few seconds ago (09/03 16:27:21:443)	1	20.535ms	SHOW
▼	customerservice: http put	a few seconds ago (09/03 16:27:24:529)	1	17.760ms	SHOW

Prometheus-Graphana







Payment Services ----->Notification Service (Using Kafka)

Kafka can be used to **publish events** like user registrations or order updates to a topic, and a **consumer service** can process these events to send **email notifications**.

This makes the notification system **scalable, asynchronous, and loosely coupled** from the main application.

@PostMapping("/payments")

POST localhost:8082/payments

Params Authorization Headers (9) Body Scripts Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL JSON

```
1 {
2   "userEmail": "archanavenna2001@gmail.com",
3   "amount": 500
4 }
```


Body Cookies Headers (5) Test Results

{ } JSON Preview Visualize

```
1 {
2   "userEmail": "archanavenna2001@gmail.com",
3   "amount": 500.0,
4   "status": "SUCCESS",
5   "message": "Your payment of 500.0 is successful!"
6 }
```




Email using smtp

Payment Status - SUCCESS Inbox x

 **archanavenna0454@gmail.com**
to me ▾

Your payment of 500.0 is successfull

Amount: 500.0

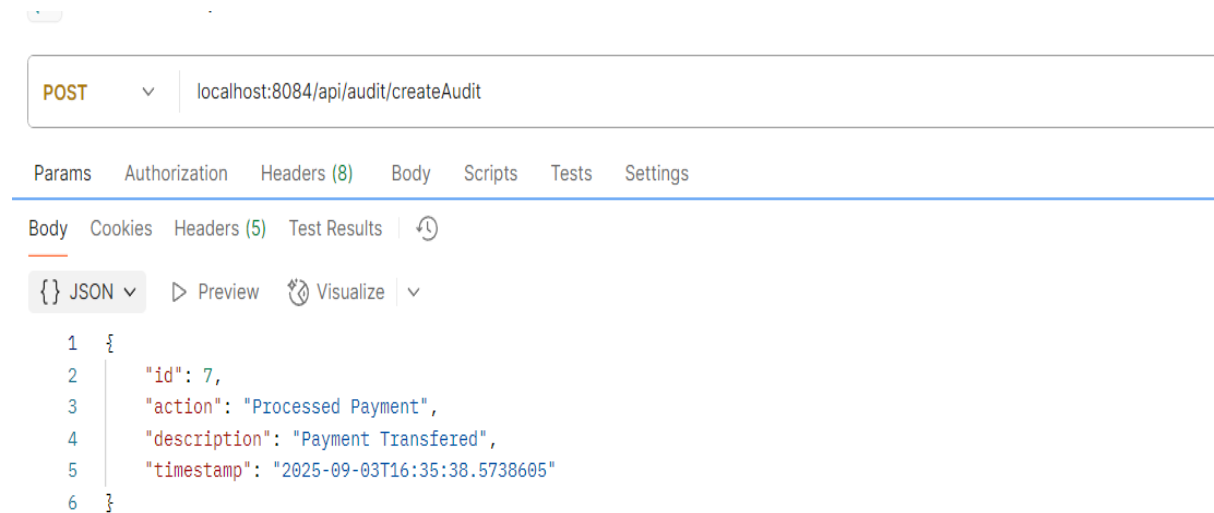
  

AuditLog Service

("/api/audit")

Endpoint:

@PostMapping("/createAudit")



POST localhost:8084/api/audit/createAudit

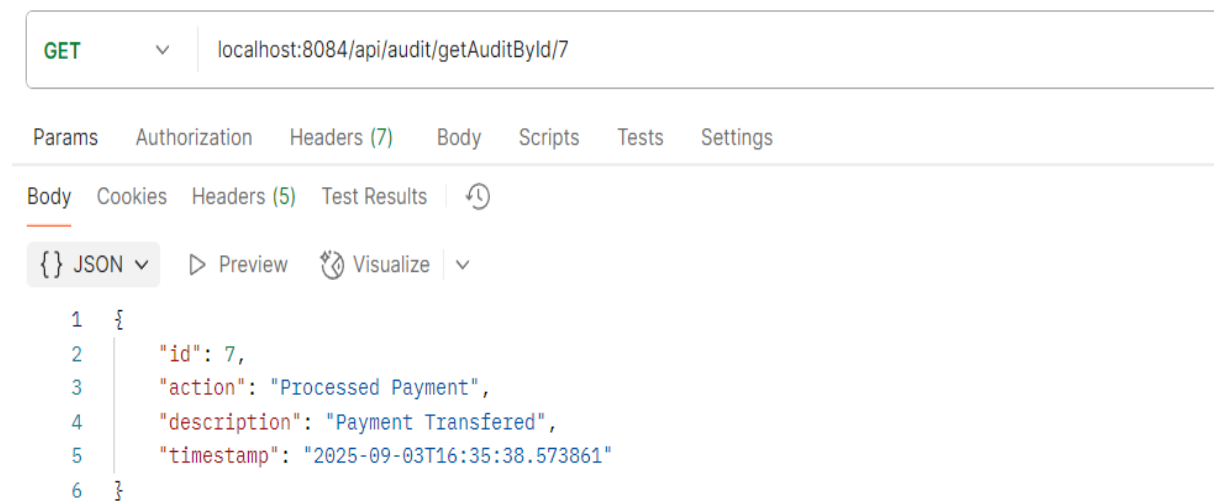
Params Authorization Headers (8) Body Scripts Tests Settings

Body Cookies Headers (5) Test Results

{ } JSON Preview Visualize

```
1 {
2   "id": 7,
3   "action": "Processed Payment",
4   "description": "Payment Transferred",
5   "timestamp": "2025-09-03T16:35:38.5738605"
6 }
```

@GetMapping("/getAuditById/{id}")



GET localhost:8084/api/audit/getAuditById/7

Params Authorization Headers (7) Body Scripts Tests Settings

Body Cookies Headers (5) Test Results

{ } JSON Preview Visualize

```
1 {
2   "id": 7,
3   "action": "Processed Payment",
4   "description": "Payment Transferred",
5   "timestamp": "2025-09-03T16:35:38.573861"
6 }
```

Swagger

Swagger.
powered by SMARTBEAR

/api-docs Explore

OpenAPI definition v0 OAS 3.1

/api-docs

Servers
http://localhost:8084 - Generated server url

audit-controller

POST /api/audit/createAudit

GET /api/audit/getAuditById/{id}

Schemas

AuditDTO > Expand all object


Api-docs

```


{
  "openapi": "3.1.0",
  "info": {
    "title": "OpenAPI definition",
    "version": "v0"
  },
  "servers": [
    {
      "url": "http://localhost:8084",
      "description": "Generated server url"
    }
  ],
  "paths": {
    "/api/audit/createAudit": {
      "post": {
        "tags": [
          "audit-controller"
        ],
        "operationId": "createAudit",
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "$ref": "#/components/schemas/AuditDTO"
              }
            }
          },
          "responses": {
            "200": {
              "description": "OK",
              "content": {
                "*/*": {
                  "schema": {
                    "$ref": "#/components/schemas/AuditDTO"
                  }
                }
              }
            }
          }
        }
      }
    },
    "/api/audit/getAuditById/{id}": {
      "get": {
        "tags": [
          "audit-controller"
        ],
        "operationId": "getAuditById",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          }
        ],
        "responses": {
            "200": {
              "description": "OK",
              "content": {
                "*/*": {
                  "schema": {
                    "$ref": "#/components/schemas/AuditDTO"
                  }
                }
              }
            }
          }
        },
        "components": {
          "schemas": {
            "AuditDTO": {
              "type": "object",
              "properties": {
                "id": {
                  "type": "integer",
                  "format": "int64"
                },
                "action": {
                  "type": "string",
                  "description": {
                    "type": "string",
                    "format": "date-time"
                  }
                }
              }
            }
          }
        }
      }
    }
  }
}


```


Zipkin




Zipkin


 Find a trace


 Dependencies





Search by trace ID

EN 






RUN QUERY























Results

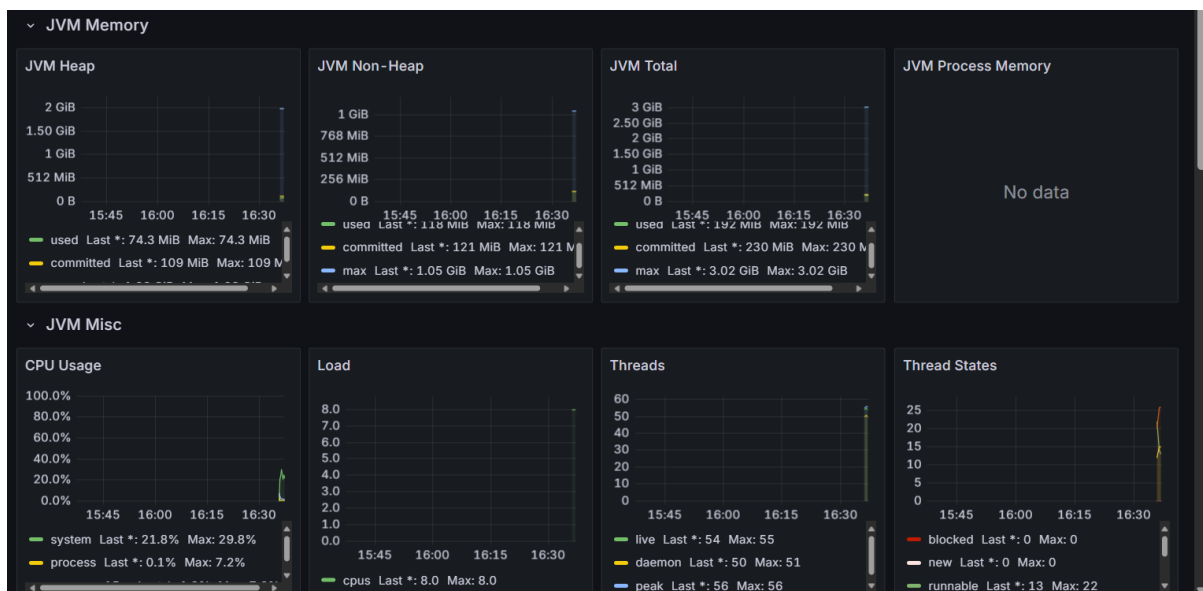
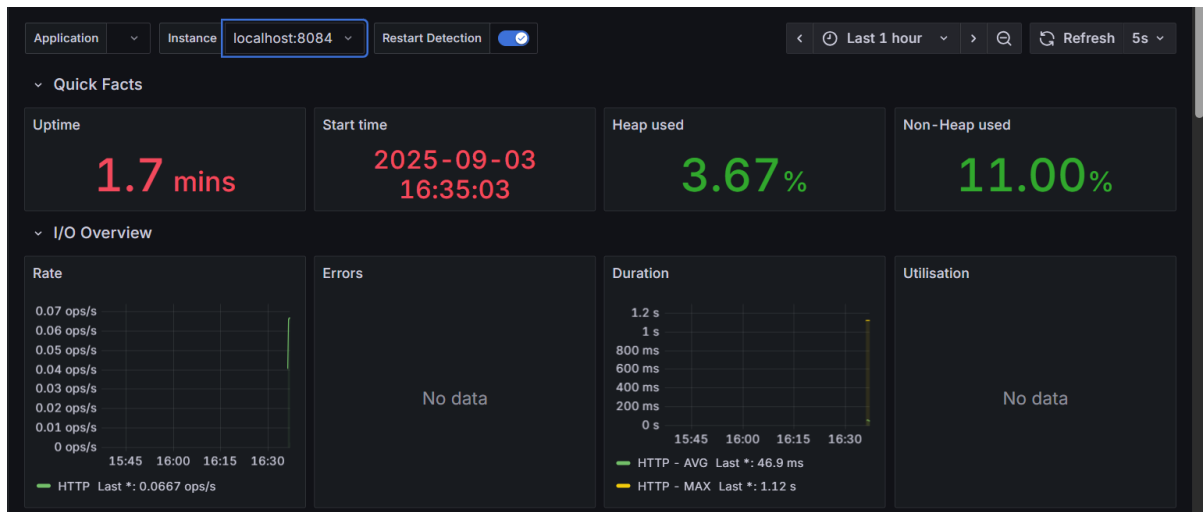
EXPAND ALL

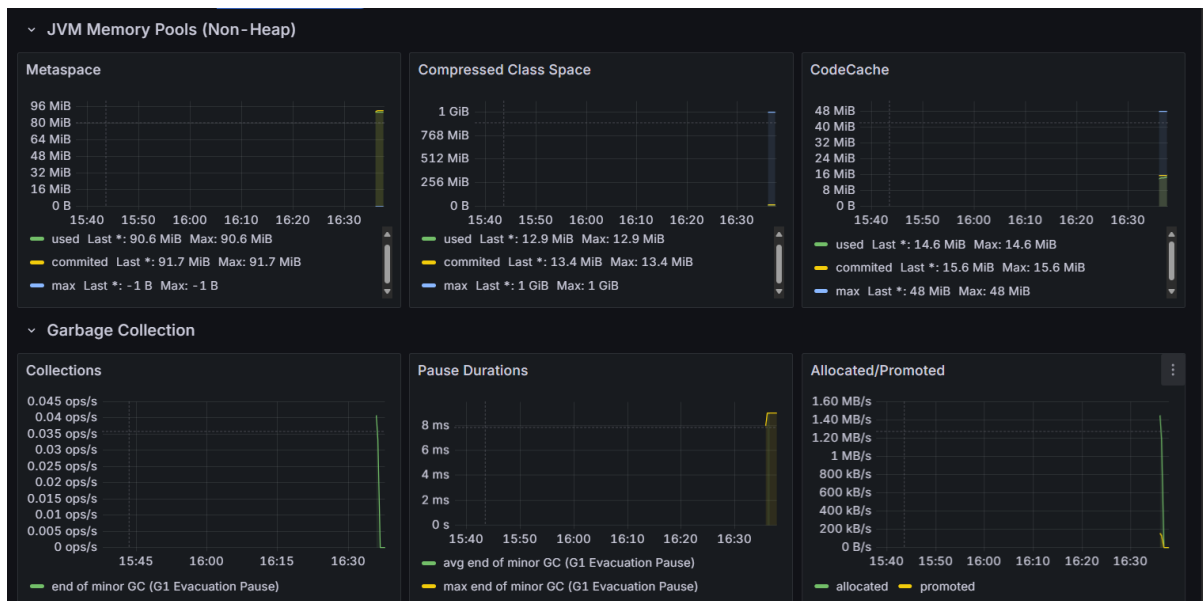
COLLAPSE ALL

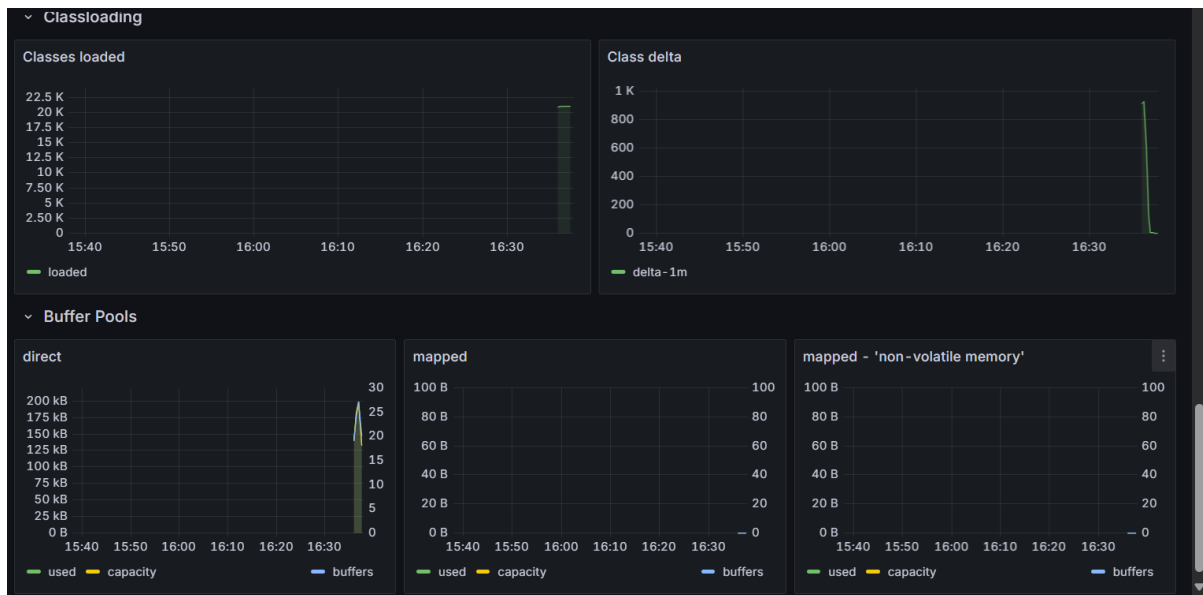
Service filters

Root	Start Time	Spans	Duration	
 auditlogservice: http get /api/audit/getauditbyid/{id}	a few seconds ago (09/03 16:35:58:309)	1	125.864ms 	<div>SHOW</div>
 accountservice: http get /actuator/prometheus	a few seconds ago (09/03 16:35:58:300)	1	85.090ms 	<div>SHOW</div>
 customerservice: http get	a few seconds ago (09/03 16:35:56:109)	1	82.894ms 	<div>SHOW</div>
 customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:36:07:268)	1	61.768ms 	<div>SHOW</div>
 customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:35:52:268)	1	57.966ms 	<div>SHOW</div>
 auditlogservice: http get /actuator/prometheus	a few seconds ago (09/03 16:36:00:816)	1	57.161ms 	<div>SHOW</div>
 accountservice: http get /actuator/prometheus	a few seconds ago (09/03 16:36:13:298)	1	45.051ms 	<div>SHOW</div>
 auditlogservice: http get /actuator/prometheus	a few seconds ago (09/03 16:36:15:817)	1	34.596ms 	<div>SHOW</div>
 customerservice: http put	a few seconds ago (09/03 16:35:56:125)	1	32.174ms 	<div>SHOW</div>
 accountservice: http put	a few seconds ago (09/03 16:35:52:442)	1	13.758ms 	<div>SHOW</div>

Prometheus-Graphana








FeedBack Service

("api/feedback")

Endpoints:

 localhost:8089/api/feedback/submitform

POST localhost:8089/api/feedback/submitform

Params Authorization Headers (9) **Body** Scripts Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON** ▾

```
1 {
2   "customerId": 2,
3   "type": "FEEDBACK",
4   "message": "The mobile app is very user friendly!"
5 }
```

Body Cookies Headers (5) Test Results ↻

{} JSON ▾ ▶ Preview 🔍 Visualize ▾

```
1 {
2   "id": 2,
3   "customerId": 2,
4   "type": "FEEDBACK",
5   "message": "The mobile app is very user friendly!",
6   "submittedAt": "2025-09-03T16:39:58.5821704",
7   "status": "OPEN"
8 }
```

@GetMapping("/getFeedback/{id}")

PUT

localhost:8089/api/feedback/updateStatus/1?status=RESOLVED

Params

Authorization

Headers (8)

Body

Scripts

Tests

Settings

Query Params

<input checked="" type="checkbox"/>	Key	Value
<input checked="" type="checkbox"/>	status	RESOLVED
	Key	Value

Body

Cookies

Headers (5)

Test Results

{}

JSON

Preview

Visualize

1

{

2

"id": 1,

3

"customerId": 1,

4

"type": "FEEDBACK",

5

"message": "The mobile app is very user friendly!",

6

"submittedAt": "2025-08-31T11:58:57.414267",

7

"status": "RESOLVED"

8

}

Swagger

localhost:8089/swagger-ui/index.html

Swagger

/api-docs

Explore

OpenAPI definition

v0 OAS 3.1

/api-docs

Servers

http://localhost:8089 - Generated server url

feed-back-controller

PUT

/api/feedback/updateStatus/{id}

POST

/api/feedback/submitform

GET

/api/feedback/getFeedback/{id}

Schemas

FeedBackDTO

Expand all

object

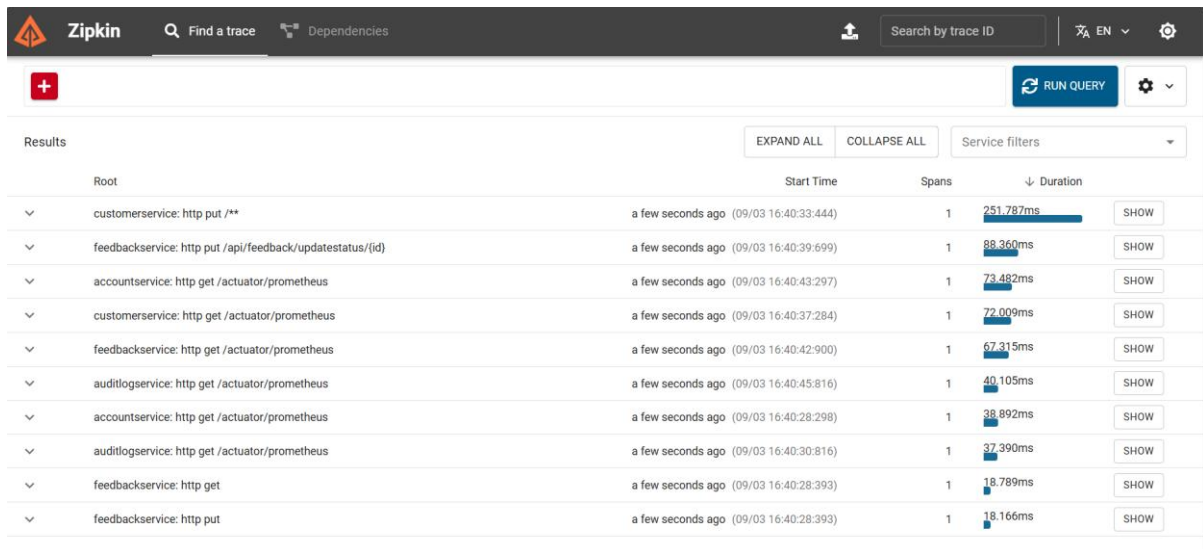
Api-docs

localhost:8089/api-docs

Pretty print

```
{
  "openapi": "3.1.0",
  "info": {
    "title": "OpenAPI definition",
    "version": "v0"
  },
  "servers": [
    {
      "url": "http://localhost:8089",
      "description": "Generated server url"
    }
  ],
  "paths": {
    "/api/feedback/updateStatus/{id}": {
      "put": {
        "tags": [
          "feed-back-controller"
        ],
        "operationId": "updateStatus",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          },
          {
            "name": "status",
            "in": "query",
            "required": true,
            "schema": {
              "type": "string"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "/*/*": {
                "schema": {
                  "$ref": "#/components/schemas/FeedBackDTO"
                }
              }
            }
          }
        }
      }
    },
    "/api/feedback/submitform": {
      "post": {
        "tags": [
          "feed-back-controller"
        ],
        "operationId": "submitFeedback",
        "requestBody": {
          "content": {
            "application/json": {
              "schema": {
                "$ref": "#/components/schemas/FeedBackDTO"
              }
            }
          }
        },
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "/*/*": {
                "schema": {
                  "$ref": "#/components/schemas/FeedBackDTO"
                }
              }
            }
          }
        }
      }
    },
    "/api/feedback/getFeedback/{id}": {
      "get": {
        "tags": [
          "feed-back-controller"
        ],
        "operationId": "getFeedbackById",
        "parameters": [
          {
            "name": "id",
            "in": "path",
            "required": true,
            "schema": {
              "type": "integer",
              "format": "int64"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "OK",
            "content": {
              "/*/*": {
                "schema": {
                  "$ref": "#/components/schemas/FeedBackDTO"
                }
              }
            }
          }
        }
      }
    }
  },
  "components": {
    "schemas": {
      "FeedBackDTO": {
        "type": "object",
        "properties": {
          "id": {
            "type": "integer",
            "format": "int64"
          },
          "customerId": {
            "type": "integer",
            "format": "int64"
          },
          "type": {
            "type": "string"
          },
          "message": {
            "type": "string"
          },
          "submittedAt": {
            "type": "string",
            "format": "date-time"
          },
          "status": {
            "type": "string"
          }
        }
      }
    }
  }
}
```

Zipkin



The screenshot shows the Zipkin web interface. At the top, there's a navigation bar with the Zipkin logo, a search bar labeled 'Find a trace', a 'Dependencies' link, and a 'Search by trace ID' input. Below this is a toolbar with a red '+' button, a 'RUN QUERY' button, and a settings icon. The main area is titled 'Results' and contains a table of traces. The table has columns for 'Root', 'Start Time', 'Spans', and 'Duration'. There are also buttons for 'EXPAND ALL', 'COLLAPSE ALL', and 'Service filters'. The table lists several traces, each with a dropdown arrow, a description of the root span, the start time, the number of spans, the duration, and a 'SHOW' button.

Root	Start Time	Spans	Duration
customerservice: http put /**	a few seconds ago (09/03 16:40:33:444)	1	251.787ms
feedbackservice: http put /api/feedback/updatestatus/{id}	a few seconds ago (09/03 16:40:39:699)	1	88.360ms
accountservice: http get /actuator/prometheus	a few seconds ago (09/03 16:40:43:297)	1	73.482ms
customerservice: http get /actuator/prometheus	a few seconds ago (09/03 16:40:37:284)	1	72.009ms
feedbackservice: http get /actuator/prometheus	a few seconds ago (09/03 16:40:42:900)	1	67.315ms
auditlogservice: http get /actuator/prometheus	a few seconds ago (09/03 16:40:45:816)	1	40.105ms
accountservice: http get /actuator/prometheus	a few seconds ago (09/03 16:40:28:298)	1	38.892ms
auditlogservice: http get /actuator/prometheus	a few seconds ago (09/03 16:40:30:816)	1	37.390ms
feedbackservice: http get	a few seconds ago (09/03 16:40:28:393)	1	18.789ms
feedbackservice: http put	a few seconds ago (09/03 16:40:28:393)	1	18.166ms

Prometheus-Graphana

