

Flight Management System

MicroServices & Security and Docker Implementation

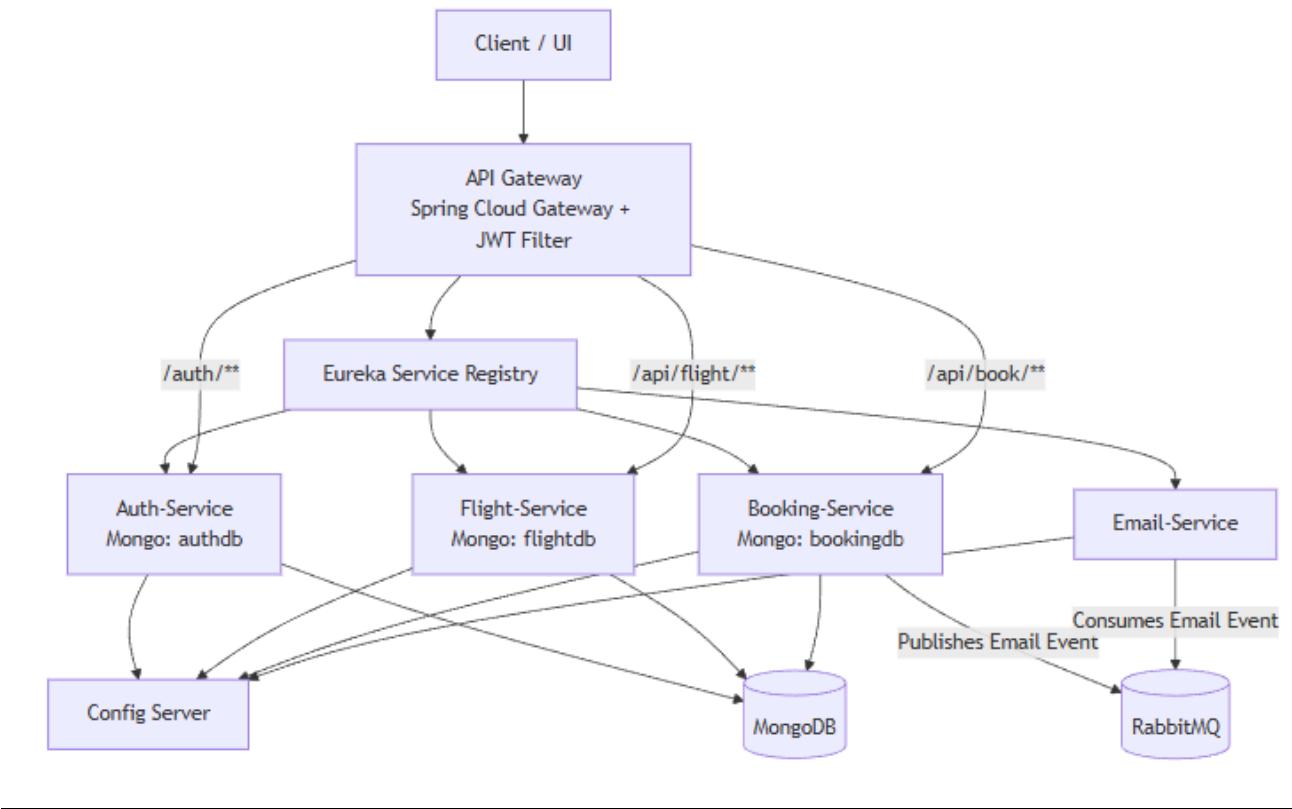
Week - 7

Assignment

Project Report

Important Screenshots

MicroServices Architecture



All my microservices are deployed in docker and running from there:-

The screenshot shows the Docker Desktop interface with the title "flightmanagementsystemwithjwtdocker". On the left, a list of services is displayed with their ports and icons:

- config-server • flightmanagements 8888:8888
- rabbitmq • rabbitmq:3-manage 15672:15672
- mongo-db • mongo:6 27017:27017
- service-registry • flightmanagements 8761:8761
- auth-service • flightmanagements 8001:8001
- booking-service • flightmanagements 8082:8082

On the right, a terminal window shows log output for the email-service container:

```
java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:1136) ~[na:na]
at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:635) ~[na:na]
at java.base/java.lang.Thread.run(Thread.java:840) ~[na:na]

2025-12-08T21:25:14.889Z  WARN 1 --- [email-service] [tContainer#0-72]
o.s.a.r.l.SimpleMessageListenerContainer : Consumer raised exception, processing can restart if the connection factory supports it. Exception summary: org.springframework.amqp.AmqpConnectException: java.net.ConnectException: Connection refused
2025-12-08T21:25:14.889Z  INFO 1 --- [email-service] [tContainer#0-72]
o.s.a.r.l.SimpleMessageListenerContainer : Restarting Consumer@15ebf6cd: tags=[[[]]], channel=null, acknowledgeMode=AUTO local queue size=0
2025-12-08T21:25:14.891Z  INFO 1 --- [email-service] [tContainer#0-73]
o.s.a.r.c.CachingConnectionFactory      : Attempting to connect to: [localhost:5672]
2025-12-08T21:25:14.892Z  ERROR 1 --- [email-service] [tContainer#0-73]
o.s.a.r.l.SimpleMessageListenerContainer : Failed to check/redeclare auto-delete queue(s).
2025-12-08T21:25:14.892Z  INFO 1 --- [email-service] [tContainer#0-73]
o.s.a.r.c.CachingConnectionFactory      : Attempting to connect to: [localhost:5672]
```

System status at the bottom: RAM 5.10 GB, CPU 7.30%, Disk: 11.83 GB used (limit 1006.85 GB).

The screenshot shows the Docker Desktop interface with the title "flightmanagementsystemwithjwtdocker". On the left, a list of services is displayed with their ports and icons:

- service-registry • flightmanagements 8761:8761
- auth-service • flightmanagements 8001:8001
- booking-service • flightmanagements 8082:8082
- flight-service • flightmanagements 8081:8081
- email-service • flightmanagements 8084:8084
- api-gateway • flightmanagements 8080:8080

On the right, a terminal window shows log output for the email-service container:

```
ld :22430,  ctx : Checkpointer , msg : WIREDRIVER message , attr :{ message : {"ts_sec":1765229137,"ts_usec":286618,"thread":"1:0x7904f8a29640","session_name": "WT_SESSION.checkpoint","category": "WT_VERB_CHECKPOINT_PROGRESS","category_id": 6,"verbose_level": "DEBUG","verbose_level_id": 1,"msg": "saving checkpoint snapshot min: 46, snapshot max: 46 snapshot count: 0, oldest timestamp: (0, 0) , meta checkpoint timestamp: (0, 0) base write gen: 1"}}
```

Log continues with:

```
2025-12-08T21:25:39.923Z  WARN 1 --- [email-service] [tContainer#0-77]
o.s.a.r.l.SimpleMessageListenerContainer : Consumer raised exception, processing can restart if the connection factory supports it. Exception summary: org.springframework.amqp.AmqpConnectException: java.net.ConnectException: Connection refused
2025-12-08T21:25:39.923Z  INFO 1 --- [email-service] [tContainer#0-77]
o.s.a.r.l.SimpleMessageListenerContainer : Restarting Consumer@6f2408bc: tags=[[[]]], channel=null, acknowledgeMode=AUTO local queue size=0
2025-12-08T21:25:39.925Z  INFO 1 --- [email-service] [tContainer#0-78]
o.s.a.r.c.CachingConnectionFactory      : Attempting to connect to: [localhost:5672]
2025-12-08T21:25:39.926Z  ERROR 1 --- [email-service] [tContainer#0-78]
o.s.a.r.l.SimpleMessageListenerContainer : Failed to check/redeclare auto-delete queue(s).
2025-12-08T21:25:39.926Z  INFO 1 --- [email-service] [tContainer#0-78]
o.s.a.r.c.CachingConnectionFactory      : Attempting to connect to: [localhost:5672]
```

These are my services which are registered in service registry

Instances currently registered with Eureka			
Application	AMIs	Availability Zones	Status
API-GATEWAY	n/a (1)	(1)	UP (1) - DESKTOP-U2KN9DC:api-gateway:8080
AUTH-SERVICE	n/a (1)	(1)	UP (1) - DESKTOP-U2KN9DC:auth-service:8001
BOOKING-SERVICE	n/a (1)	(1)	UP (1) - DESKTOP-U2KN9DC:booking-service:8082
EMAIL-SERVICE	n/a (1)	(1)	UP (1) - DESKTOP-U2KN9DC:email-service:8084
FLIGHT-SERVICE	n/a (1)	(1)	UP (1) - DESKTOP-U2KN9DC:flight-service:8081
FMS-CONFIG-SERVER	n/a (1)	(1)	UP (1) - DESKTOP-U2KN9DC:fms-config-server:8888

General Info

Name	Value
total-avail-memory	72mb
num-of-cpus	12
current-memory-usage	48mb (66%)

I have added Authentication Endpoints such as :-
Register User – Customer (Books Flights)

HTTP Flight Management System - Microservices (With Auth) / Authentication Service / Register User

POST http://localhost:8080/auth/register

Docs Params Authorization Headers (9) Body Scripts Settings

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

```
1  {
2    "name": "Joel",
3    "email": "joel@example.com",
4    "password": "password123",
5    "role": "ROLE_CUSTOMER"
6 }
```

Body Cookies Headers (13) Test Results

Preview Visualize

1 User created

201 Created

Register Admin (Add Flights and Airlines)

POST http://localhost:8080/auth/register

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

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

```
1  {
2    "name": "Raj",
3    "email": "Raj@example.com",
4    "password": "password123",
5    "role": "ROLE_ADMIN"
6 }
```

Body Cookies Headers (13) Test Results

Raw Preview Visualize

1 User created

201 Created

Login

The screenshot shows a POST request to `http://localhost:8080/auth/login`. The request body is a JSON object:

```
1 {  
2   "email": "joel@example.com",  
3   "password": "password123"  
4 }
```

The response status is **200 OK** with a response time of 158 ms and a response size of 944 B. The response body is a JSON object containing a token and user information:

```
1 {  
2   "token": "eyJhbGciOiJIUzI1NiJ9.  
3         eyJzdWIiOiJqb2VsQGV4YW1wbGUuY29tIiwicm9sZSI6IlJPTEVfQ1VTVE9NRVIiLCJpYXQiOjE3NjUyMjExMDMsImV4cCI  
4         6MTc2NTMwNzUwM30.oXM7aN5m32Y8Gwba03ZyzJ1ujj1myakA00jAtyfo0iw",  
5   "tokenType": "Bearer",  
6   "email": "joel@example.com",  
7   "role": "ROLE_CUSTOMER"  
8 }
```

Logout

The screenshot shows a POST request to `http://localhost:8080/auth/logout`. The request body is empty.

The response status is **200 OK** with a response time of 374 ms. The response body is a simple message:

```
1 Logged out successfully
```

I have implemented Role Based Authentication so if a customer tries to access Admin Endpoints it will return 401 Error

The screenshot shows a POST request to the endpoint `http://localhost:8080/api/flight/airline`. The request method is `POST`. The status bar indicates a `401 Unauthorized` response with a duration of `18 ms`. The `Body` tab is selected, showing the number `1`.

MongoDB – AuthDB

The screenshot shows the MongoDB Compass interface for the 'users' collection in the 'authdb' database. The collection has 0 documents. A query builder is present with a placeholder 'Type a query: { field: 'value' } or [Generate query](#)'. Below it are standard CRUD buttons (+, -, edit, delete) and a search bar showing '25' results from '1-1 of 1'. One document is displayed:

```
_id: ObjectId('6937208ecd6b645dda0ff905')
name : "Joel"
email : "joel@example.com"
password : "$2a$10$GOjIkPH08mqgpBWAIDkSOVhA43ljtCRsXK9C3i5Wv.rI9NLmJM4u"
role : "ROLE_CUSTOMER"
_class : "com.example.fms.auth.model.User"
```

BookingDB

The screenshot shows the MongoDB Compass interface for the 'bookings' collection in the 'bookingdb' database. The collection has 7 documents. A query builder is present with a placeholder 'Type a query: { field: 'value' } or [Generate query](#)'. Below it are standard CRUD buttons (+, -, edit, delete). One document is displayed:

```
_id: ObjectId('692e09b516c49c0911074fde')
pnr : "EC2AEC3E"
email : "joel@example.com"
flightId : "692e07c458e0122b39e5e1d2"
seatsBooked : 1
bookingTime : 2025-12-01T21:33:41.227+00:00
canceled : true
canceledAt : 2025-12-02T00:35:59.871+00:00
_class : "com.example.fms.booking.model.Booking"
```

spring-boot > bookingdb > passengers

Documents 9

Aggregations

Schema

Indexes 1

Validation



Type a query: { field: 'value' } or [Generate query](#)



25

```
_id: ObjectId('692e09b516c49c0911074fdf')
name : "Joel"
gender : "Male"
age : 22
seatNumber : "11A"
meal : "VEG"
bookingId : "692e09b516c49c0911074fde"
_class : "com.example.fms.booking.model.Passenger"
```

FlightDB

spring-boot > flightdb > airlines

Documents 5

Aggregations

Schema

Indexes 1

V



Type a query: { field: 'value' } or [Generate query](#)



```
_id: ObjectId('692e070f58e0122b39e5e1d1')
name : "Indigo"
logoUrl : "https://airindia.com/logo.png"
_class : "com.example.fms.flight.model.Airline"
```

spring-boot > flightdb > flights

Documents 4 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#) +



25 1

```
_id: ObjectId('692e07c458e0122b39e5e1d2')
flightNumber : "AI101"
fromPlace : "Bangalore"
toPlace : "Mumbai"
departureTime : 2025-12-14T23:30:00.000+00:00
arrivalTime : 2025-12-15T01:45:00.000+00:00
price : 4500
totalSeats : 120
availableSeats : 110
airlineId : "692e070f58e0122b39e5e1d1"
_class : "com.example.fms.flight.model.Flight"
```

I have used RabbitMQ as my Message Broker to send emails

Containers [Give feedback](#)

Container CPU usage ⓘ 0.65% / 1200% (12 CPUs available)

Container memory usage ⓘ 156MB / 6.54GB

Show charts

Search Only show running containers

	Name	Container ID	Image	Port(s)	CPU (%)	Last started	Actions
<input type="checkbox"/>	rabbitmq	d62f89d2be6b	rabbitmq:3-management	15672:15672	0.27%	5 hours ago	

[Overview](#) [Connections](#) [Channels](#) [Exchanges](#) [Queues and Streams](#) [Admin](#)

Queues

▼ All queues (1)

Pagination

 Page of 1 - Filter: Regex [?](#)

Overview					Messages			Message rates			+/-
Virtual host	Name	Type	Features	State	Ready	Unacked	Total	incoming	deliver / get	ack	
/	email.queue	classic	D	running	0	0	0	0.00/s	0.00/s	0.00/s	

[▶ Add a new queue](#)
[HTTP API](#) [Documentation](#) [Tutorials](#) [New releases](#) [Commercial edition](#) [Commercial support](#) [Discussions](#) [Discord](#) [F](#)

Connections

▼ All connections (2)

Pagination

 Page of 1 - Filter: Regex [?](#)

Overview			Details			Network		+/-
Name	User name	State	SSL / TLS	Protocol	Channels	From client	To client	
172.17.0.1:43606 rabbitConnectionFactory#3909a854:0	guest	running	○	AMQP 0-9-1	1	0 B/s	0 B/s	
172.17.0.1:58122 rabbitConnectionFactory#14fded9d:0	guest	running	○	AMQP 0-9-1	1	2 B/s	2 B/s	

[HTTP API](#) [Documentation](#) [Tutorials](#) [New releases](#) [Commercial edition](#) [Commercial support](#) [Discussions](#) [Discord](#)

This is the email that it will send when you book or cancel a ticket

Booking Confirmed Inbox ×



joelphilip208@gmail.com

to joel ▾

Your flight booking is confirmed.

PNR: F54F5B8B



Mail Delivery Subsystem <mailer-daemon@googlemail.com>

to me ▾



Address not found

Your message wasn't delivered to **joel@example.com** because the domain [example.com](#) couldn't be found. Check for typos or unnecessary spaces and try again.

[LEARN MORE](#)

▲ This link will take you to a third-party site

```
: EMAIL SERVICE → Using SMTP user: joelphilip208@gmail.com
: Attempting to send email to: joel@example.com
: Email sent successfully to joel@example.com
: Received EmailEvent from RabbitMQ: EmailEvent[to=joel@example.com, subject=Booking Confirmed, body=Your flight booking is confirmed.

: EMAIL SERVICE → Using SMTP user: joelphilip208@gmail.com
: Attempting to send email to: joel@example.com
: Email sent successfully to joel@example.com
: Received EmailEvent from RabbitMQ: EmailEvent[to=joel@example.com, subject=Booking Cancelled, body=Your booking has been cancelled.
```

I have used SMTP to do it and I put my credentials in my run configurations

Booking Cancelled Inbox ×



joelphilip208@gmail.com

Your booking has been cancelled. PNR: F54F5B8B



Mail Delivery Subsystem <mailer-daemon@googlemail.com>

to me ▾

Address not found

Your message wasn't delivered to **joel@example.com** because the domain [example.com](#) couldn't be found. Check for typos or unnecessary spaces and try again.

[LEARN MORE](#)

This link will take you to a third-party site

I have used newman tool to test my API end points and every request gave a valid response

```
C:\Users\Hp\OneDrive\Documents\Postman - Collections>newman --version  
6.2.1
```

```
C:\Users\Hp\OneDrive\Documents\Postman - Collections>newman run FlightManagementSystem-Microservices.postman_collection.json  
newman
```

```

Flight Management System - Microservices

□ Health Check
└ API Gateway Health
    GET http://localhost:8080/actuator/health [200 OK, 114B, 235ms]

└ Eureka Server UI
    GET http://localhost:8761 [200 OK, 6.08kB, 153ms]

□ Flight Service (via API Gateway)
└ Add Airline (Admin)
    POST http://localhost:8080/api/flight/airline [201 Created, 149B, 529ms]

└ Add Flight Inventory (Admin)
    POST http://localhost:8080/api/flight/airline/692e070f58e0122b39e5e1d1/inventory [201 Created, 156B, 53ms]

└ Search Flights (User)
    POST http://localhost:8080/api/flight/search [200 OK, 583B, 34ms]

└ Get Flight Details
    GET http://localhost:8080/api/flight/details/692e07c458e0122b39e5e1d2 [200 OK, 342B, 18ms]

□ Booking Service (via API Gateway)
└ Book Flight
    POST http://localhost:8080/api/book/book [201 Created, 222B, 634ms]

└ Cancel Booking
    DELETE http://localhost:8080/api/book/cancel/EC2AEC3E [200 OK, 155B, 83ms]

└ Booking History
    GET http://localhost:8080/api/book/history/joel@example.com [200 OK, 595B, 28ms]

└ Get Ticket
    GET http://localhost:8080/api/book/ticket/EC2AEC3E [200 OK, 648B, 36ms]

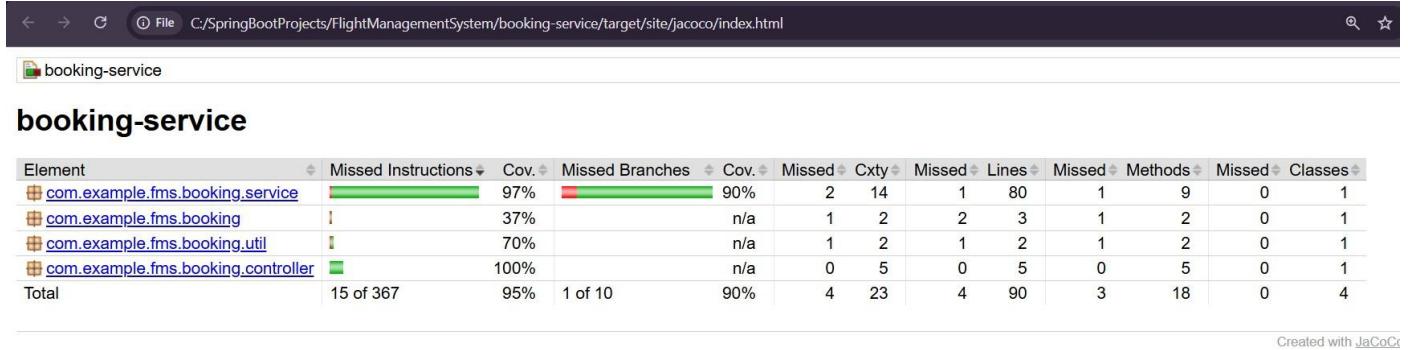
```

	executed	failed
iterations	1	0
requests	10	0
test-scripts	0	0
prerequest-scripts	0	0
assertions	0	0
total run duration: 1007ms		
total data received: 8.21kB (approx)		
average response time: 16ms [min: 10ms, max: 29ms, s.d.: 6ms]		

JaCoCo Report

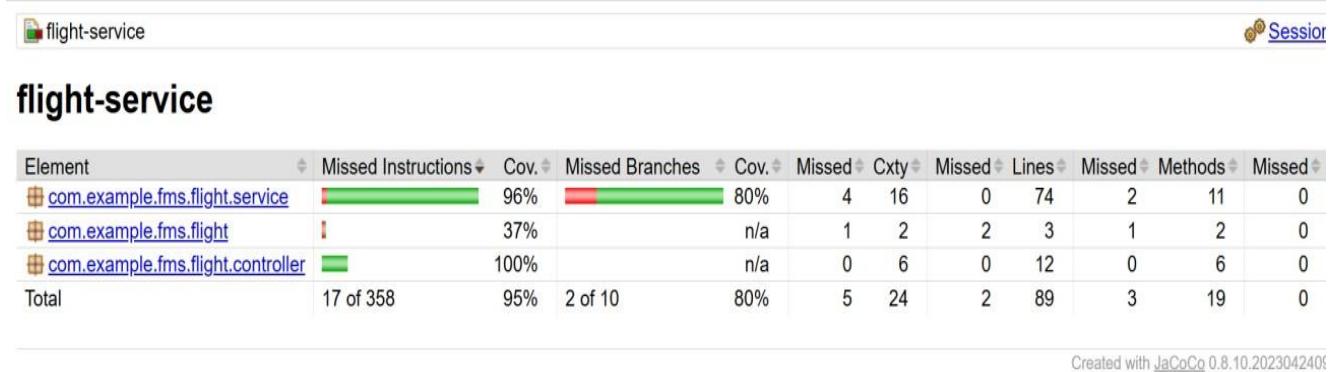
For Booking Service :-

Code coverage is 95 %



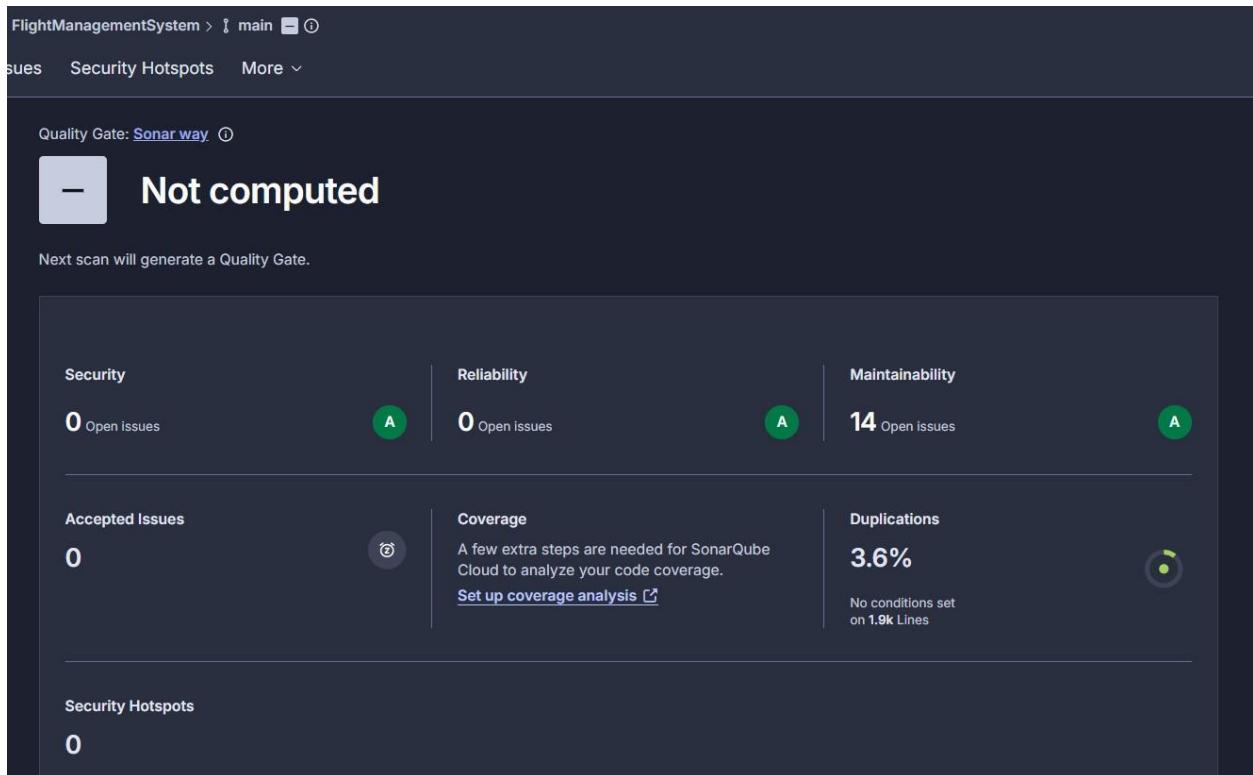
For Flight Service:-

Code Coverage is 95%

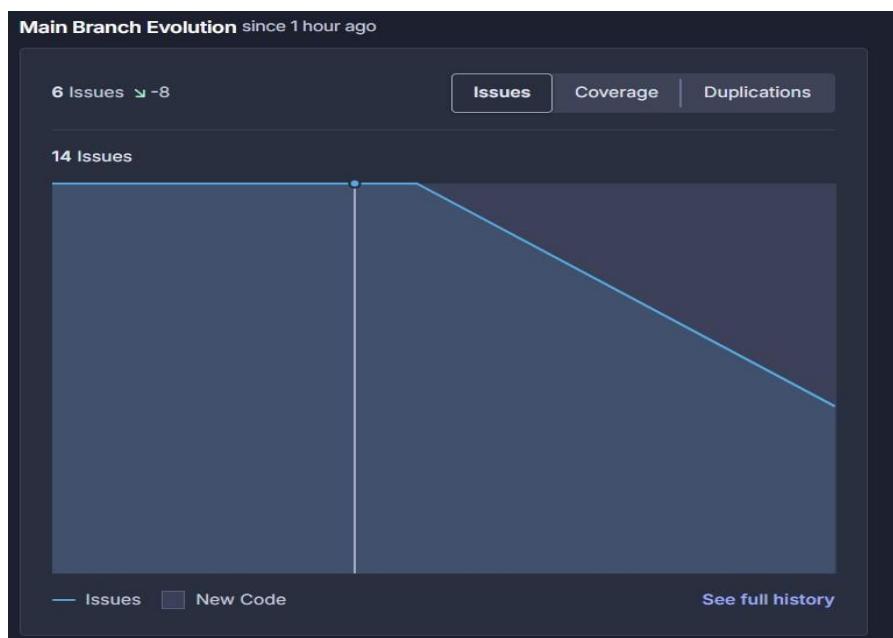


SonarQube Report

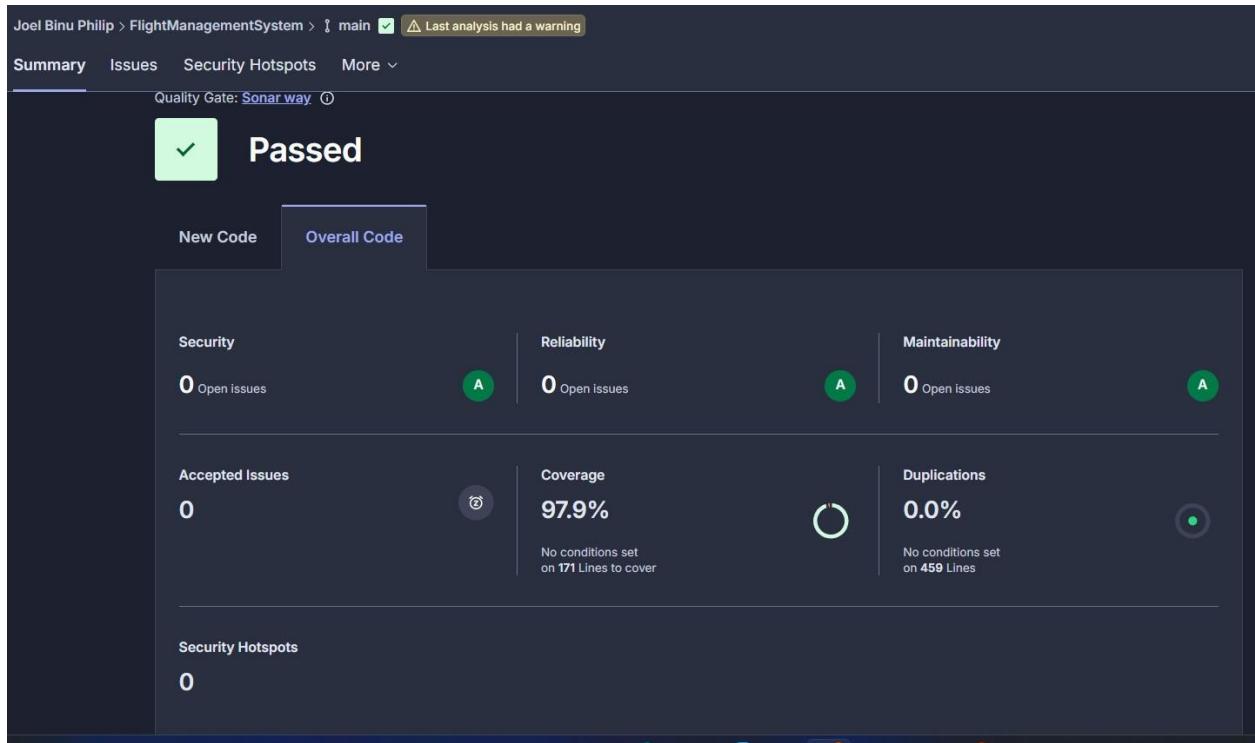
Before :-



Issue fixing history graph



After :-



JMeter Load Testing Using CLI

20 threads

```
C:\Users\Hp\Downloads> "C:\Tools\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\jmeter.bat" -n -t working_plan.jmx -l results20.jtl -e -o report20
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
Creating summariser <summary>
Created the tree successfully using working_plan.jmx
Starting standalone test @ 2025 Dec 2 07:23:55 IST (1764640435750)
Waiting for possible Shutdown/StopTestNow/HeapDump/ThreadDump message on port 4445
summary + 217 in 00:00:04 = 51.3/s Avg: 5 Min: 3 Max: 35 Err: 0 (0.00%) Active: 1 Started: 73 Finished: 72
summary + 293 in 00:00:06 = 51.2/s Avg: 4 Min: 3 Max: 10 Err: 0 (0.00%) Active: 0 Started: 170 Finished: 170
summary = 510 in 00:00:10 = 51.2/s Avg: 5 Min: 3 Max: 35 Err: 0 (0.00%)
Tidying up ... @ 2025 Dec 2 07:24:05 IST (1764640445783)
... end of run
```

50 threads

```
C:\Users\Hp\Downloads> "C:\Tools\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\jmeter.bat" -n -t working_plan.jmx -l results50.jtl -e -o report50
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
Creating summariser <summary>
Created the tree successfully using working_plan.jmx
Starting standalone test @ 2025 Dec 2 07:24:42 IST (1764640482536)
Waiting for possible Shutdown/StopTestNow/HeapDump/ThreadDump message on port 4445
summary = 510 in 00:00:10 = 51.2/s Avg: 5 Min: 3 Max: 36 Err: 0 (0.00%)
Tidying up ... @ 2025 Dec 2 07:24:52 IST (1764640492569)
... end of run
```

100 Threads

```
C:\Users\Hp\Downloads> "C:\Tools\apache-jmeter-5.6.3\apache-jmeter-5.6.3\bin\jmeter.bat" -n -t working_plan.jmx -l results100.jtl -e -o report100
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
Creating summariser <summary>
Created the tree successfully using working_plan.jmx
Starting standalone test @ 2025 Dec 2 07:25:12 IST (1764640512339)
Waiting for possible Shutdown/StopTestNow/HeapDump/ThreadDump message on port 4445
summary = 510 in 00:00:10 = 51.2/s Avg: 4 Min: 2 Max: 32 Err: 0 (0.00%)
Tidying up ... @ 2025 Dec 2 07:25:22 IST (1764640522375)
... end of run
```

20 threads report

C:/Users/Hp/Downloads/report20/index.html

The screenshot displays a performance testing report interface. At the top, there's a purple header bar with the path 'C:/Users/Hp/Downloads/report20/index.html'. Below the header, on the left, is a table showing test results for four requests. On the right, there's a large green circle indicating a 'PASS' status at 100%. Below these, a section titled 'Statistics' provides detailed performance metrics for each request.

Apdex	T (Toleration threshold)	F (Frustration threshold)	Label
1.000	500 ms	1 sec 500 ms	Total
1.000	500 ms	1 sec 500 ms	GET Ticket
1.000	500 ms	1 sec 500 ms	GET Flight Details
1.000	500 ms	1 sec 500 ms	GET Booking History

PASS
100%

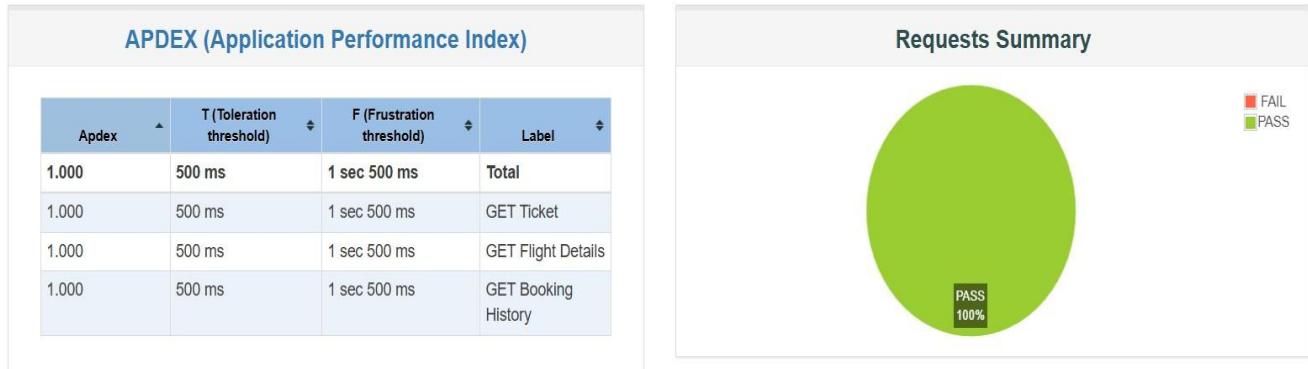
Statistics

Requests	Executions				Response Times (ms)							Throughput		Network (KB/sec)	
	Label	#Samples	FAIL	Error %	Average	Min	Max	Median	90th pct	95th pct	99th pct	Transactions/s	Received	Sent	
Total	510	0	0.00%	5.28	3	35	4.00	7.90	8.00	10.00	51.87	28.37	7.36		
GET Booking History	170	0	0.00%	3.86	3	6	4.00	4.90	5.00	6.00	17.36	10.64	2.46		
GET Flight Details	170	0	0.00%	4.92	3	35	4.00	5.00	5.00	35.00	17.30	6.30	2.62		
GET Ticket	170	0	0.00%	7.07	5	10	7.00	8.00	9.00	10.00	17.37	11.54	2.31		

50 Threads Report

Screenshot of a web browser showing the Apache JMeter Dashboard. The title bar says "Apache JMeter Dashboard". The address bar shows "Downloads/report50/index.html".

Test and Report information	
Source file	"results50.jtl"
Start Time	"12/2/25, 7:24 AM"
End Time	"12/2/25, 7:24 AM"
Filter for display	""



Statistics														
Requests	Executions				Response Times (ms)							Throughput	Network (KB/sec)	
	Label	#Samples	FAIL	Error %	Average	Min	Max	Median	90th pct	95th pct	99th pct	Transactions/s		
Total	510	0	0.00%	5.17	3	36	4.00	7.00	8.00	9.00	51.88	28.38	7.36	
GET Booking History	170	0	0.00%	3.85	3	6	4.00	5.00	5.00	6.00	17.37	10.64	2.46	
GET Flight Details	170	0	0.00%	4.94	3	36	4.00	5.00	6.00	36.00	17.31	6.31	2.62	
GET Ticket	170	0	0.00%	6.72	5	9	7.00	8.00	8.00	9.00	17.37	11.54	2.31	

100 Threads

Screenshot of the Apache JMeter Dashboard showing results for 100 threads.

Test and Report information

Source file	"results100.jtl"
Start Time	"12/25, 7:25 AM"
End Time	"12/25, 7:25 AM"
Filter for display	""

APDEX (Application Performance Index)

Apdex	T (Toleration threshold)	F (Frustration threshold)	Label
1.000	500 ms	1 sec 500 ms	Total
1.000	500 ms	1 sec 500 ms	GET Ticket
1.000	500 ms	1 sec 500 ms	GET Flight Details
1.000	500 ms	1 sec 500 ms	GET Booking History

Requests Summary

PASS
100%

FAIL
PASS

Statistics

Requests	Executions				Response Times (ms)							Throughput		Network (KB/sec)	
	Label	#Samples	FAIL	Error %	Average	Min	Max	Median	90th pct	95th pct	99th pct	Transactions/s	Received	Sent	
Total	510	0	0.00%	4.87	2	32	4.00	7.00	7.00	10.00	51.88	28.37	7.36		
GET Booking History	170	0	0.00%	3.65	2	7	4.00	4.00	5.00	7.00	17.36	10.63	2.46		
GET Flight Details	170	0	0.00%	4.64	3	32	4.00	5.00	5.00	32.00	17.31	6.30	2.62		
GET Ticket	170	0	0.00%	6.34	4	10	6.00	7.90	8.00	10.00	17.36	11.53	2.31		

API Endpoints POST Add Airline :-

POST http://localhost:8080/api/flight/airline

Docs Params Authorization Headers (9) **Body** Scripts

none form-data x-www-form-urlencoded raw binary

```
1 {  
2   "name": "Spice Jet",  
3   "logoUrl": "https://airindia.com/logo.png"  
4 }
```

Body Cookies Headers (3) Test Results

Raw Preview Visualize

```
1 Airline created successfully
```

POST Add Flight Inventory

POST http://localhost:8080/api/flight/airline/692e070f58e0122b39e5e1d1/inventory

Docs Params Authorization Headers (9) Body Scripts Settings

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

```
1  {
2    "airlineId": "692e070f58e0122b39e5e1d1",
3    "flightNumber": "AI132",
4    "fromPlace": "Bangalore",
5    "toPlace": "Mumbai",
6    "departureTime": "2025-12-15T05:00:00",
7    "arrivalTime": "2025-12-15T07:15:00",
8    "price": 4500,
9    "totalSeats": 120
10 }
```

Body Cookies Headers (3) Test Results

Raw Preview Visualize

1 Flight inventory added successfully

201 Created

POST Search flights

HTTP Flight Management System - Microservices / Flight Service (via API Gateway) / **Search Flights (User)**

POST <http://localhost:8080/api/flight/search>

Docs Params Authorization Headers (9) **Body** • Scripts Settings

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

```
1 {  
2   "fromPlace": "Bangalore",  
3   "toPlace": "Mumbai",  
4   "date": "2025-12-15"  
5 }
```

Body Cookies Headers (3) Test Results

200 OK

{ } JSON ▾ ▷ Preview Visualize ▾

```
1 {  
2   "flights": [  
3     {  
4       "id": "692e07c458e0122b39e5e1d2",  
5       "flightNumber": "AI101",  
6       "airlineName": "Indigo",  
7       "fromPlace": "Bangalore",  
8       "toPlace": "Mumbai",  
9       "departureTime": "2025-12-15T05:00",  
10      "arrivalTime": "2025-12-15T07:15",  
11      "price": 4500.0,  
12      "availableSeats": 115  
13    },  
..
```

GET Get Flight Details

HTTP Flight Management System - Microservices / Flight Service (via API Gateway) / **Get Flight Details**

GET http://localhost:8080/api/flight/details/692e07c458e0122b39e5e1d2

Docs Params Authorization Headers (6) **Body** Scripts Settings

none form-data x-www-form-urlencoded raw binary GraphQL

This request does not have a body

Body Cookies Headers (3) Test Results |

200 OK

{ } JSON Preview Visualize

```
1 {  
2   "id": "692e07c458e0122b39e5e1d2",  
3   "flightNumber": "AI101",  
4   "fromPlace": "Bangalore",  
5   "toPlace": "Mumbai",  
6   "departureTime": "2025-12-15T05:00",  
7   "arrivalTime": "2025-12-15T07:15",  
8   "price": 4500.0,  
9   "availableSeats": 115,  
10  "airlineName": "Indigo"  
11 }
```

POST Book Seat in Flight

HTTP Flight Management System - Microservices / Booking Service (via API Gateway) / Book Flight

POST

Docs Params Authorization Headers (9) **Body** • Scripts Settings

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

```
1 {
2   "flightId": "692e07c458e0122b39e5e1d2",
3   "email": "joel@example.com",
4   "passengers": [
5     {
6       "name": "Joel",
7       "gender": "Male",
8       "age": 22,
9       "seatNumber": "1A",
10      "meal": "VEG"
11    }
12  ]
13 }
```

Body Cookies Headers (3) Test Results ⏱ 201 Created

{ } JSON ▾ ▷ Preview 🖼 Visualize ▾

```
1 {
2   "pnr": "E93CA33A",
3   "email": "joel@example.com",
4   "flightId": "692e07c458e0122b39e5e1d2",
5   "status": "BOOKED"
6 }
```

DELETE Cancel Booking

DELETE ▾ http://localhost:8080/api/book/cancel/E93CA33A

☰ Docs Params Authorization Headers (6) Body Scripts Settings

Query Params

Key	Value
Key	Value

Body Cookies Headers (3) Test Results | ⏺ 2

{ } JSON ▾ ▷ Preview ⚒ Visualize | ▾

```
1  {
2    "pnr": "E93CA33A",
3    "status": "CANCELLED"
4 }
```

GET Get Booking History

HTTP Flight Management System - Microservices / Booking Service (via API Gateway) / **Booking History**

GET ▼ http://localhost:8080/api/book/history/joel@example.com

Docs Params Authorization Headers (6) Body Scripts Settings

Query Params

	Key	Value	Description
	Key	Value	Description

Body Cookies Headers (4) Test Results ⌚ 200 OK

{ } JSON ▼ ▷ Preview ☒ Visualize ▼

```
1 [  
2 {  
3   "id": "692e09b516c49c0911074fde",  
4   "pnr": "EC2AEC3E",  
5   "email": "joel@example.com",  
6   "flightId": "692e07c458e0122b39e5e1d2",  
7   "seatsBooked": 1,  
8   "bookingTime": "2025-12-02T03:03:41.227",  
9   "canceled": true,  
10  "canceledAt": "2025-12-02T06:05:59.871"  
11 },  
12 {  
13   "id": "692e346fdd67044a16bbdf32",  
14 }
```

GET Ticket Details

HTTP Flight Management System - Microservices / Booking Service (via API Gateway) / [Get Ticket](#)

GET

▼

http://localhost:8080/api/book/ticket/E93CA33A

☰ Docs

Params

Authorization

Headers (6)

Body

Scripts

Settings

Query Params

	Key	Value
	Key	Value

Body

Cookies

Headers (3)

Test Results



{ } JSON ▾

▶ Preview



Visualize ▾

```
1  {
2      "booking": {
3          "pnr": "E93CA33A",
4          "flightId": "692e07c458e0122b39e5e1d2",
5          "email": "joel@example.com",
6          "seatsBooked": 1,
7          "bookingTime": "2025-12-02T08:06:39.552",
8          "cancelled": true,
9          "cancelledAt": "2025-12-02T08:07:55.368"
10     },
11     "passengers": [
12         {
13             "name": "Joel",
14             "gender": "Male",
15             "age": 22,
16             "seatNumber": "1A",
17             "meal": "VEG"
18         }
19     ],
}
```

```
    },
],
"flight": {
    "id": "692e07c458e0122b39e5e1d2",
    "flightNumber": "AI101",
    "fromPlace": "Bangalore",
    "toPlace": "Mumbai",
    "departureTime": "2025-12-15T05:00",
    "arrivalTime": "2025-12-15T07:15",
    "price": 4500.0,
    "availableSeats": 114,
    "airlineName": "Indigo"
}
}
```