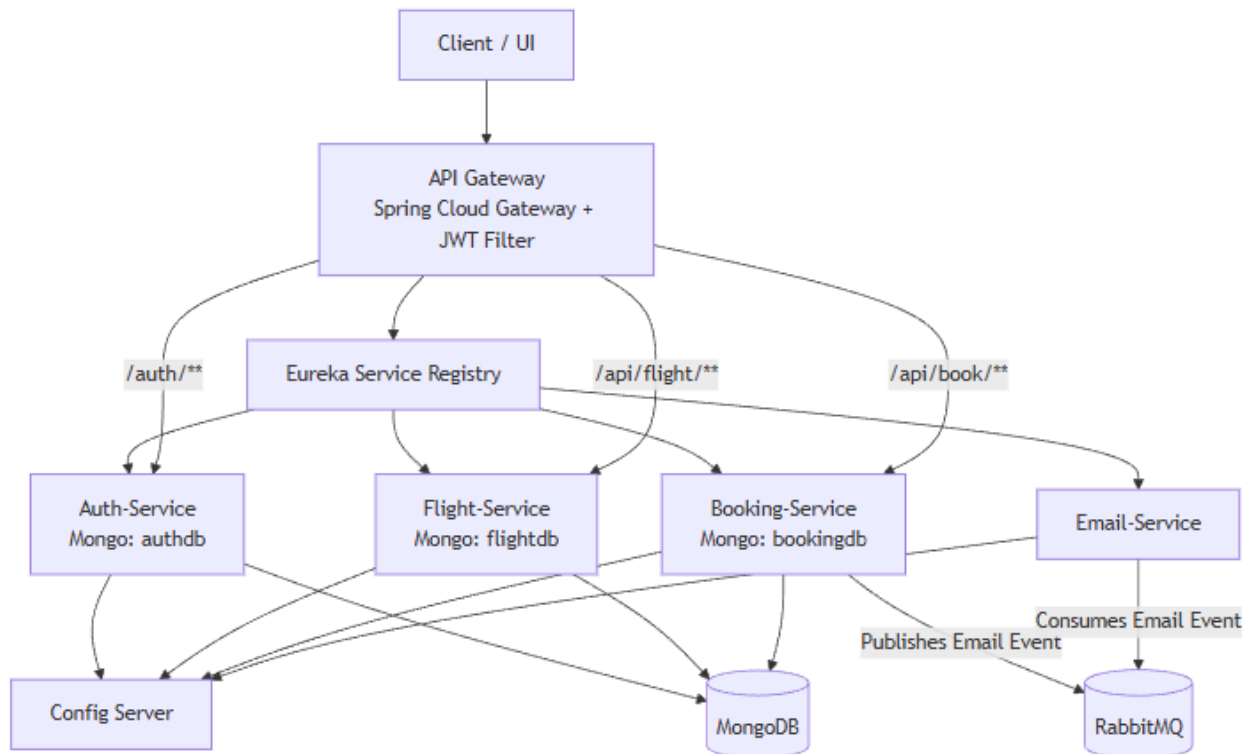


Flight Management System  
MicroServices & Security and  
Docker Implementation  
Week - 7  
Assignment  
Project Report  
Important Screenshots

# MicroServices Architecture



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

**flightmanagementsystemwithjwtdocker**  
C:\SpringBootProjects\FlightManagementSystemWithJWTdocker

**config-server** ●  
flightmanagements 8888:8888

**rabbitmq** ●  
rabbitmq:3-manage 15672:15672  
[Show all ports \(2\)](#)

**mongo-db** ●  
mongo:6 27017:27017

**service-registry** ●  
flightmanagements 8761:8761

**auth-service** ●  
flightmanagements 8001:8001

**booking-service** ●  
flightmanagements 8082:8082

RAM 5.10 GB CPU 7.30% Disk: 11.83 GB used (limit 1006.85 GB)

**email-service**

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

**flightmanagementsystemwithjwtdocker**  
C:\SpringBootProjects\FlightManagementSystemWithJWTdocker

**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

**email-service**

```
to 22430, ctx : Checkpointer, msg : WriteTrigger 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"}}

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) - <a href="#">DESKTOP-U2KN9DC:api-gateway:8080</a>
AUTH-SERVICE	n/a (1)	(1)	UP (1) - <a href="#">DESKTOP-U2KN9DC:auth-service:8001</a>
BOOKING-SERVICE	n/a (1)	(1)	UP (1) - <a href="#">DESKTOP-U2KN9DC:booking-service:8082</a>
EMAIL-SERVICE	n/a (1)	(1)	UP (1) - <a href="#">DESKTOP-U2KN9DC:email-service:8084</a>
FLIGHT-SERVICE	n/a (1)	(1)	UP (1) - <a href="#">DESKTOP-U2KN9DC:flight-service:8081</a>
FMS-CONFIG-SERVER	n/a (1)	(1)	UP (1) - <a href="#">DESKTOP-U2KN9DC:fms-config-server:8888</a>

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 🕒 201 Created

📄 Raw ▶ Preview 🖼 Visualize ▼

1 User 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

201 Created

Raw

Preview

Visualize

```
1 User created
```

## Login

POST

http://localhost:8080/auth/login

Send

Docs

Params

Authorization

Headers (10)

Body

Scripts

Settings

Cookie

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

Schema

Beautif

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

Body

Cookies (1)

Headers (14)

Test Results

200 OK

158 ms

944 B

Save Response

JSON

Preview

Visualize

```
1 {
2   "token": "eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJqb2VsQGV4YW1wbGUuY29tIiwicm9sZSI6ImlJPTEVfQ1VTVE9NRVlILCJpYXQiOiJlE3NjUyMjExMDMsImV4cCI6MTc2NTMwNzUwM30.oXM7aN5m32Y8Gwbao3ZyzJ1ujj1myakA00jAtyfo0iw",
3   "tokenType": "Bearer",
4   "email": "joel@example.com",
5   "role": "ROLE_CUSTOMER"
6 }
```

## Logout

HTTP

Flight Management System - Microservices (... / ... / Logout (Invalidate Refresh Token)

POST

http://localhost:8080/auth/logout

Docs

Params

Authorization

Headers (8)

Body

Scripts

Settings

Query Params

	Key	Value	D
	Key	Value	C

Body

Cookies

Headers (14)

Test Results

200 OK

374 ms

Raw

Preview

Visualize

```
1 Logged out successfully
```

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

HTTP Flight Management System - Microservices (With Auth) / Flight S... / Add Airline (Admin)

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

Docs Params Authorization Headers (10) Body • Scripts Settings

Query Params

	Key	Value	
	Key	Value	

Body Cookies Headers (9) Test Results 401 Unauthorized = 18 ms

Raw Preview Debug with AI

1

# MongoDB – AuthDB

spring-boot > authdb > users

Documents 0 Aggregations Schema Indexes 1 Validation

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

25 1 – 1 of 1

```
{
  "_id": ObjectId('6937208ecd6b645dda0ff905'),
  "name": "Joel",
  "email": "joel@example.com",
  "password": "$2a$10$G0jIkPH08mqgpBWAIJdKSOVhA43ljtCRsXK9C3i5Wv.rI9NLmJM4u",
  "role": "ROLE_CUSTOMER",
  "_class": "com.example.fms.auth.model.User"
}
```

# BookingDB

spring-boot > bookingdb > bookings

Documents 7 Aggregations Schema Indexes 1 Validation

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

▶

```
{
  "_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"/>	<span>●</span> rabbitmq	d62f89d2be6b	rabbitmq:3-management	15672:15672 <a href="#">Show all ports (2)</a>	0.27%	5 hours ago	<span>■</span> <span>⋮</span> <span>🗑</span>

## 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

## 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	

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

### Booking Confirmed Inbox x



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.

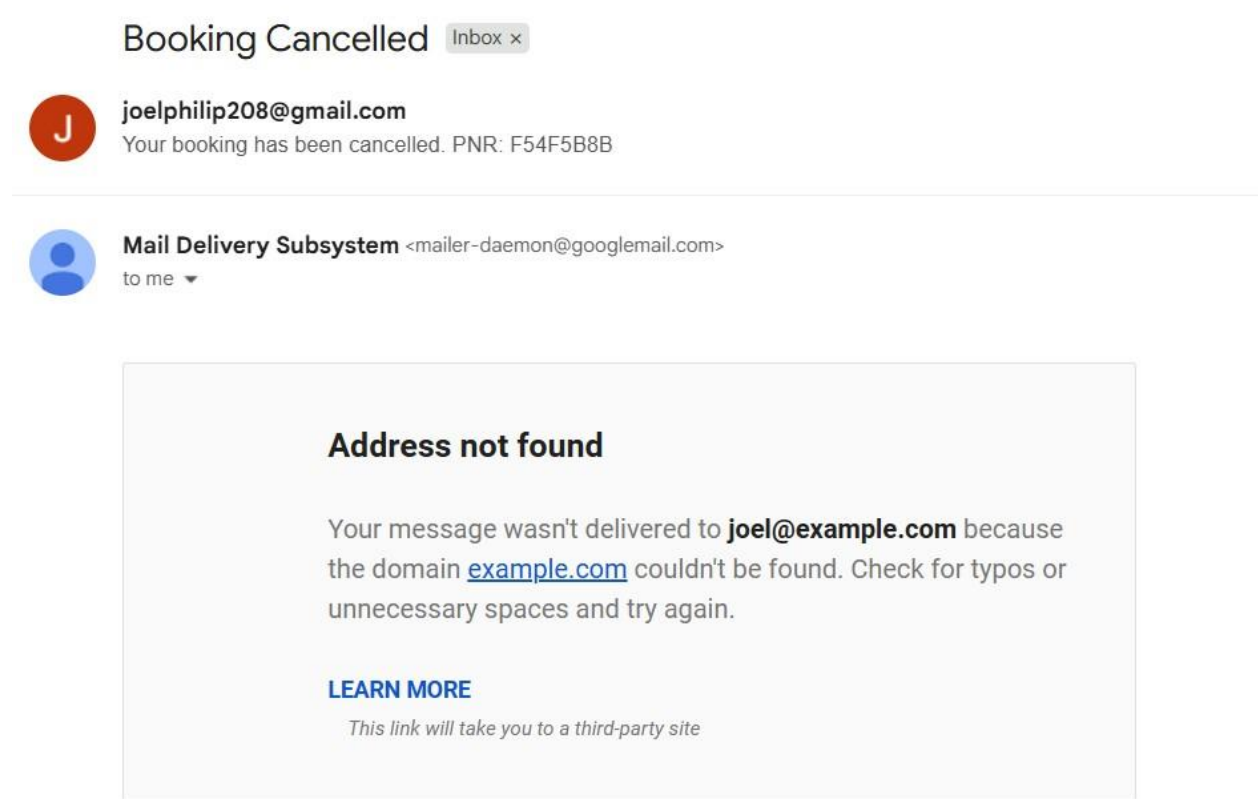
[LEARN MORE](#)

▲ 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



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
prerequisite-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]




Code coverage is 95 %

# Code Coverage is 95%

 flight-service
 


[Session](#)

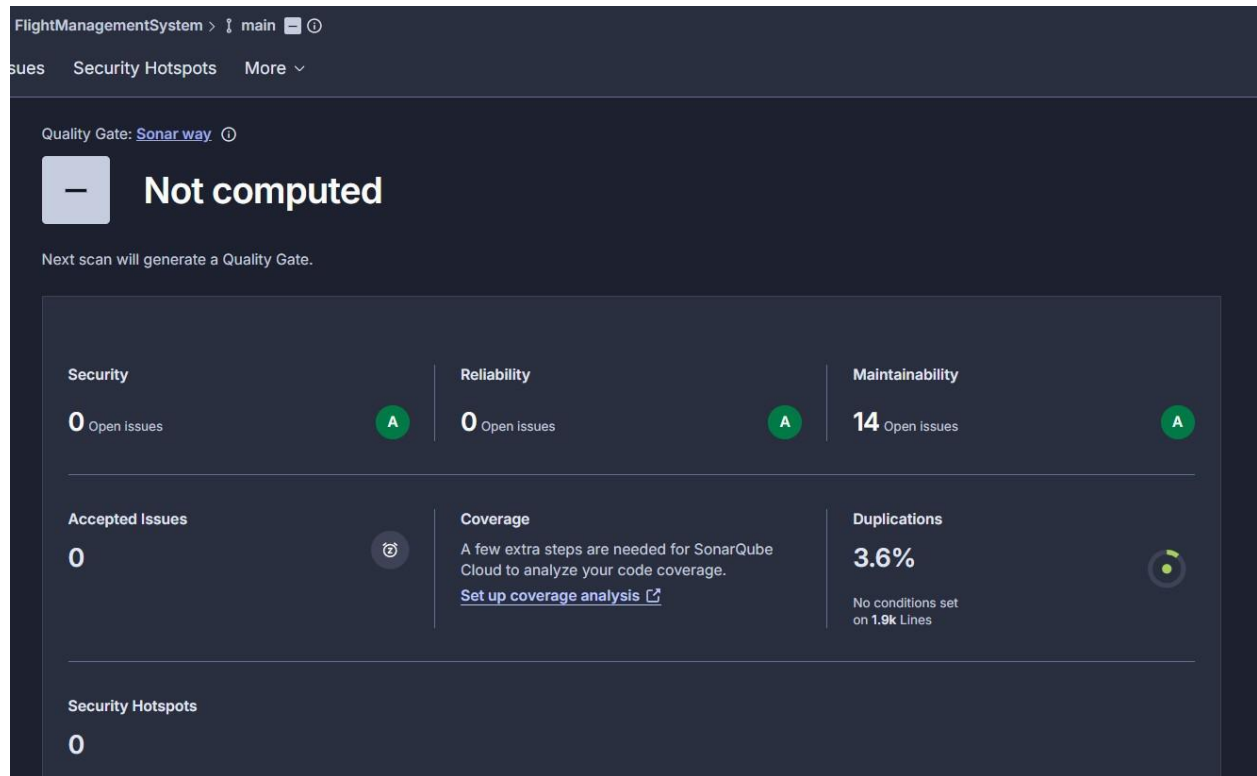
## flight-service

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed
 <a href="#">com.example.fms.flight.service</a>	<div><div></div></div>	96%	<div><div></div></div>	80%	4	16	0	74	2	11	0
 <a href="#">com.example.fms.flight</a>	<div><div></div></div>	37%		n/a	1	2	2	3	1	2	0
 <a href="#">com.example.fms.flight.controller</a>	<div><div></div></div>	100%		n/a	0	6	0	12	0	6	0
Total	17 of 358	95%	2 of 10	80%	5	24	2	89	3	19	0

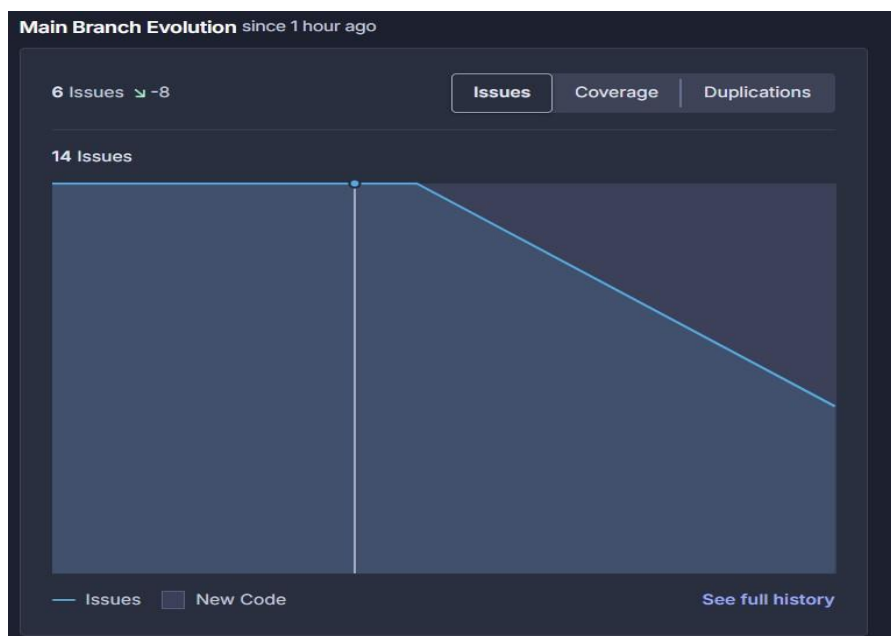
Created with [JaCoCo](#) 0.8.10.2023042405

# SonarQube Report

Before :-

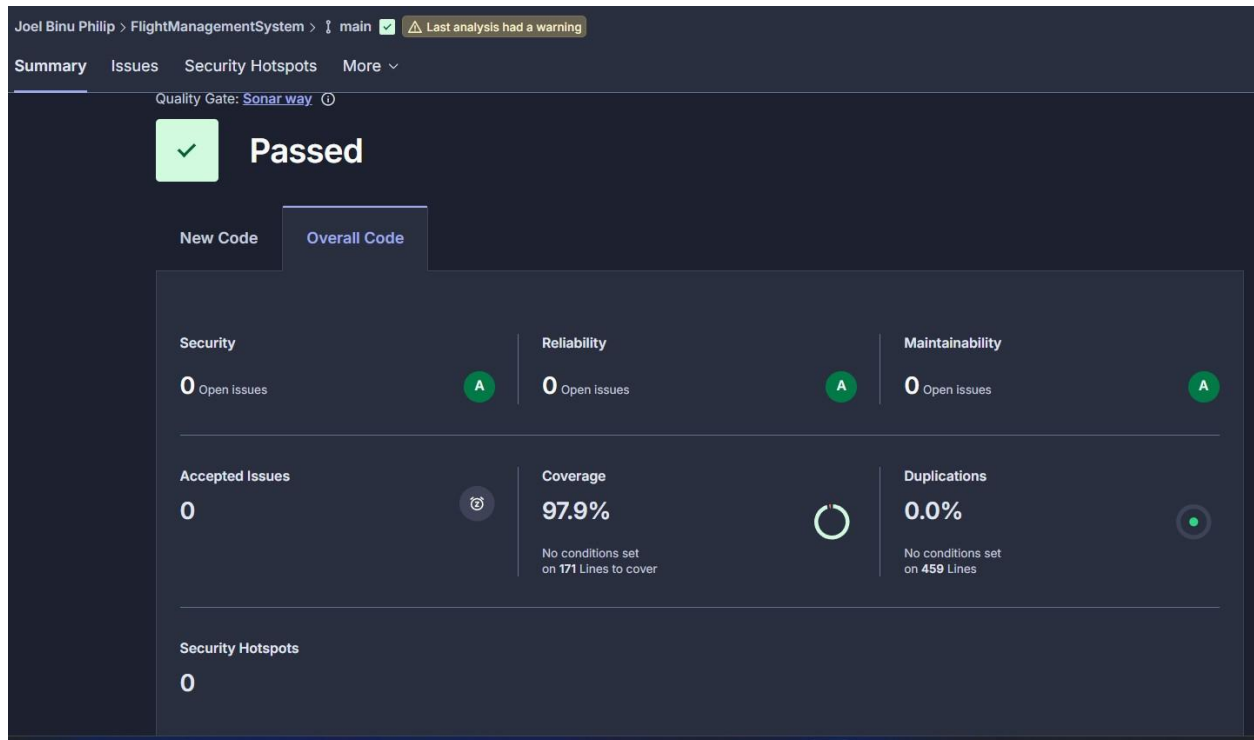


## Issue fixing history graph





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
```

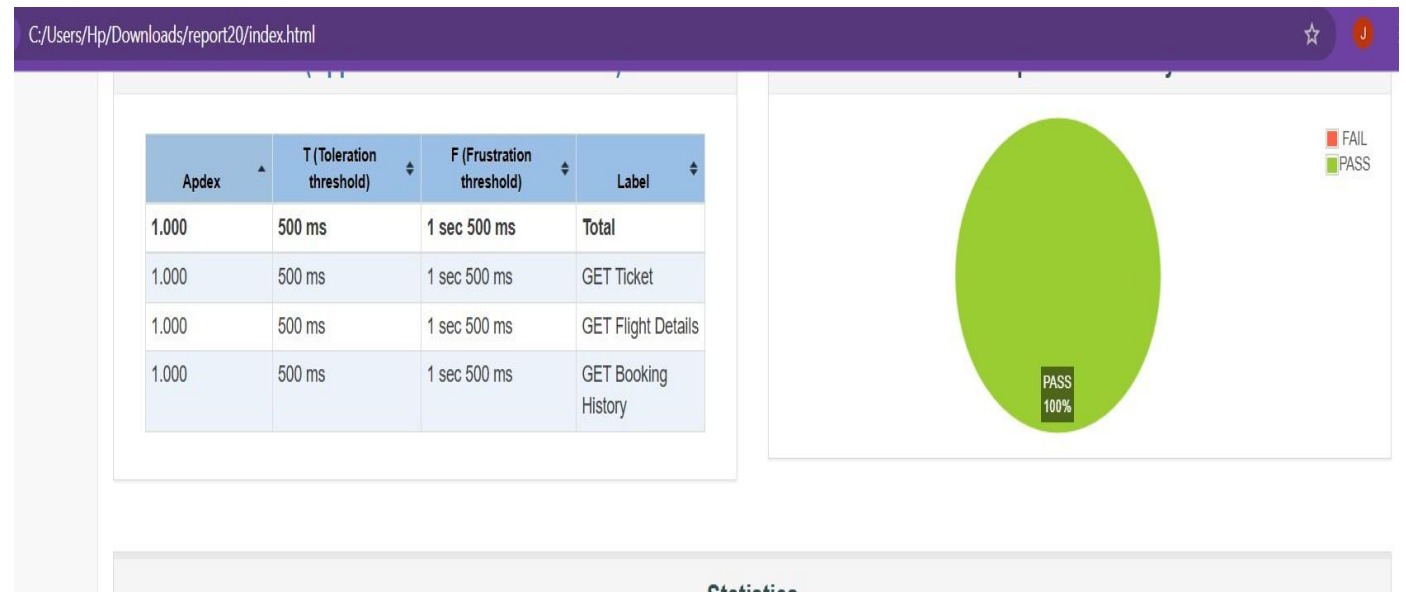
## 50 threads

```
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



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

New tab

Apache JMeter Dashboard

+

Downloads/report50/index.html

☆

J

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	""

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



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%	5.17	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

New tab

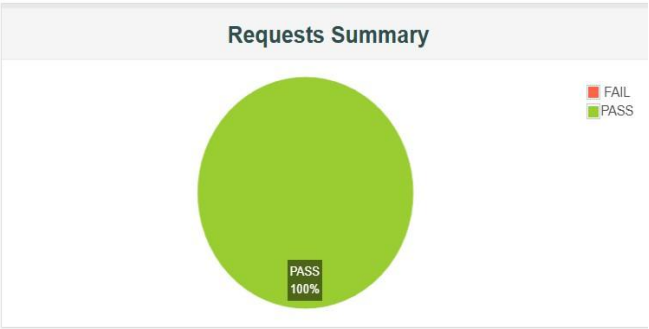
Apache JMeter Dashboard

Apache JMeter Dashboard

downloads/report100/index.html

Test and Report information	
Source file	"results100.jtl"
Start Time	"12/2/25, 7:25 AM"
End Time	"12/2/25, 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



## 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 :-

The screenshot displays a REST client interface for a POST request. The URL bar shows `http://localhost:8080/api/flight/airline`. The request body is a JSON object: `{ "name": "Spice Jet", "logoUrl": "https://airindia.com/logo.png" }`. The response body shows the message `Airline created successfully`.

**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 

201 Created 

 Raw   Preview  Visualize 

1 Flight inventory added successfully

# POST Search flights

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    },
14  ]
15 }
```



# 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 http://localhost:8080/api/book/book

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    |   "pni": "E93CA33A",
3    |   "status": "CANCELLED"
4  }
```

# GET Get Booking History

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	Descrip
Key	Value	Descrip

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",
```

# 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"  
  }  
}
```