eShop Telemetry

Arquiteturas de Software

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Chapter 1

Introduction

The repository related to this project is available at: https://github.com/Pedrinho-Dev01/eShop.

Modified/Relevant Files:

- eShop\src\Ordering.API\Program.cs:
  - Contains all the relevant modifications for both the tracing and metrics services to work.
- eShop\observability:
  - docker-compose: Configuration file for all the docker components to run.
  - **Deliverables Folder: Contains the requested files for delivery**.
- eShop\README.md:
  - Contains all relevant instructions of how to execute the project.

Local Connections:

- Grafana: http://localhost:3001
- Prometheus: http://localhost:9090
- Jaeger: http://localhost:16686

Chapter 2

Features

Comparing from the original repository, this project features data scraping for metrics using **Prometheus**, and API tracing using **Jaeger**. Both of these services are ran in **Docker** and presented using **Grafana**.

2.1 Prometheus

Added as a metric exporter in **Program.cs** in the **Ordering.API**:

```
builder.Services.AddOpenTelemetry()
    .WithMetrics(metricsBuilder =>
    {
        metricsBuilder.AddPrometheusExporter();
    });
```

Figure 2.1: Prometheus Exporter

2.2 Jaeger

Added as a tracer exporter in **Program.cs** in the **Ordering.API**:

```
17          .AddJaegerExporter(options =>
18          {
19              options.AgentHost = "localhost";
20              options.AgentPort = 6831;
21          });
22      });
```

Figure 2.2: Jaeger Tracing

2.3 Grafana

Uses a pre-configured dashboard to present all the relevant information. **Please** refer to README.md on instructions to visualize the dashboards.

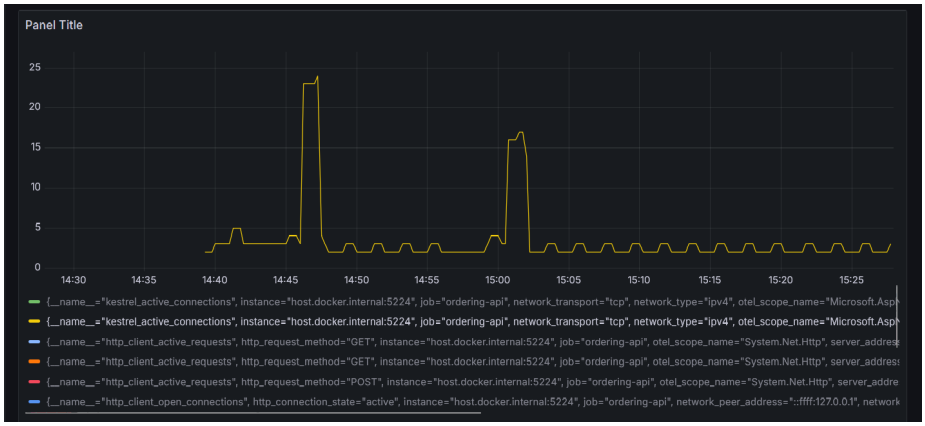

Figure 2.3: Caption

Chapter 3

AI Usage

Both ChatGPT and Github Copilot were used in this project, for deciding what technologies to used, and some code writing assistance, respectively.

Chapter 4

Final Thoughts

The assignment was very interesting, as it allowed me to learn technologies that I was not aware of before.

The assignment itself was of moderate difficulty, especially in the load testing related objectives, as I was not able to implement them due to problems with authentication.