**Introduction**

Technologies used in this project:

DOTNET CORE, API,MSSQL,GRPC, DOCKER,KUBERNET,INGRESS.

First of all, I wanted to use the api I wrote instead of using the ready-made api from the internet. So I planned to show you my ability to write api. All I had to do was set up a good scenario. I apologize in advance for not being able to create a scenario with the feature specified in the task you gave. Because I didn't know what data api to create for opening a camera or reaching an item.

This Project consists of 3 main materials.

PlartformService Folder : Use inMemory data and Mssql data. if you are working locally you will use inmemory data . In other words if you are running in docker you will be using mssql data.

There is also a dockerfile file used to move the project's files to the docker platform. However, there is a .proto file to determine the grpc technology content and communication model.

CommandService Folder : Almost the same logical operations were performed in the ServicePlatform

K8S Folder: This folder just include .yaml file. You know .yaml file carry kubernet’s command. I adjust the communications between pods thanks to .yaml files.

GRPC Diagram

PlatformService

Rest

SQL

GRPC

HTTP

API Getway

GRPC

InMem

CommandService

Rest

Communication Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NAME | TYPE | CLUSTER-IP | EXTERNAL-IP | PORT(S) |
| commands-clusterip-srv | ClusterIP | 10.107.207.53 | <none> | 80/TCP |
| kubernetes | ClusterIP | 10.96.0.1 | <none> | 443/TCP |
| mssql-clusterip-srv | ClusterIP | 10.111.167.234 | <none> | 1433/TCP |
| mssql-loadbalancer | LoadBalancer | 10.104.4.229 | localhost | 1433:30265/TCP |
| platformnpservice-srv | NodePort | 10.96.16.70 | <none> | 80:30353/TCP |
| platforms-clusterip-srv | ClusterIP | 10.99.243.154 | <none> | 80/TCP,666/TCP |

Communication Diagram

666 for GRPC

1433

Cluster Ip

1433

Mssql server

Container

Ingress Nginx LoadBalancer

80

80

80

Cluster Ip

Cluster Ip

80

80

Command Pltfrm

Container

Ingress Port

Node Port

3XXXX

80

80

Service Pltfrm

Container