**Demo Project**

# High architecture of demo project

Diagram

Description automatically generated

# Overall description

The demo has the following main projects:

* API Gateway: Ocelot Gateway
* Identity Provider: IdentityProvider
* Consumer: ConsumerApplication1
* API: WebApi1, WebApi2
* Requests:
  + GetExternalCall: Consumer1 -> IdP -> Ocelot -> WebApi1 -> WebApi2
  + Get1: Consumer1 -> IdP -> Ocelot -> WebApi1
  + Get2: Consumer1 -> Ocelot -> WebApi2

# How to run solution

* Run infrastructure: Open the solution’s folder and run docker-compose up -d  
  Infrastructure includes:
  + Seq
  + Consul
  + Jaeger
  + Mssql
  + Prometheus
  + Grafana
* F5 to run main projects
* Call API to ConsumerApplication1 to test the result
* Run localhost:16686 to view traces of request
* Runt localhost:5342 to view the log of request

# Detail description

## ConsumerApplication1

### Connect to IdentityProvider to get access token

Text

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Graphical user interface, text, application, email

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Graphical user interface, text

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### Export open telemetry to Jaeger for tracing

Text

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Graphical user interface, text, application

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### Configure HttpClient

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Graphical user interface, text, application

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Graphical user interface, text, application

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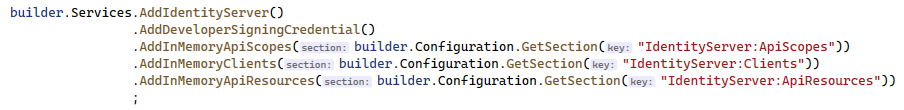
Graphical user interface, text

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## IdentityProvider

### Add IdentityServer4





### Configure ApiScopes

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### Configure Clients

Graphical user interface, text

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### Configure ApiResources

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## Ocelot Gateway

### Add Ocelot

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Text

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Text

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### Verify with IdentityProvider

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Graphical user interface, text

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A picture containing text

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### Configure Serilog into Seq

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### Export open telemetry to Jaeger for tracing

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Graphical user interface, text, application

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### Add Consul

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### Configure Routing

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## WebApi1

### Configure Serilog into Seq

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### Verify with IdentityProvider

Graphical user interface, text, application

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### Configure HttpClient

Graphical user interface

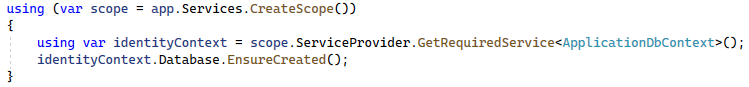
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* Add Entity Framework

Text

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### Configure Consul

A screenshot of a video game

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Graphical user interface, text, application

Description automatically generated with medium confidence

Text

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### Export open telemetry to Jaeger for tracing

Graphical user interface, text, application, email

Description automatically generated

### Create metrics endpoint for prometheus

Text

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Text

Description automatically generated

# Install software in Windows Server

## Install Seq

Download and install following GUI

## Install Consul

## Install Jaeger

#### Install ElasticSearch

#### Install Jaeger

## Install Prometheus

## Install Grafana

## Install Ocelot

Like all Asp.Net Core applications

## Install IdentityProvider

#### Create Certificate and Install

docker run --rm -it -v /D/Work/GeneratedCertificates:/work nginx bin/bash

openssl req -x509 -sha512 -newkey rsa:4096 -days 3650 -keyout /work/crawler.key -out /work/crawler.crt

openssl pkcs12 -inkey /work/crawler.key -in /work/crawler.crt -export -out /work/crawler.pfx

In windows server, type mmc command

Graphical user interface, text, application, email

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Graphical user interface, application

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Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, application

Description automatically generated

Choose pfx and import

Add certification’s permission for IIS\_IUSRS and NETWORK\_SERVICE

Copy certificate into folder Trusted Root Certification Authorities

#### Install IdentityProvider and configure certificate

IdentityProvider can use certificate of host through thumbprint of certificate which installed into server

Graphical user interface, text, application

Description automatically generated