**Demo Project**

# High architecture of demo project

Diagram

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# 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

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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

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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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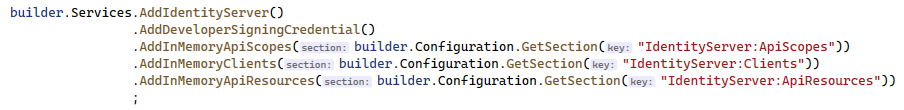
Graphical user interface, text

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## IdentityProvider

### Add IdentityServer4





### Configure ApiScopes

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### Configure Clients

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### Configure ApiResources

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## Ocelot Gateway

### Add Ocelot

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Text

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### Verify with IdentityProvider

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Graphical user interface, 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

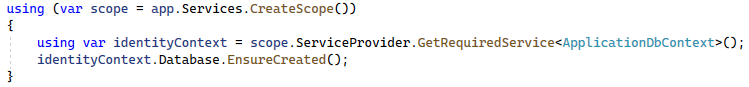
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* Add Entity Framework

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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

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### Create metrics endpoint for prometheus

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Text

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# 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

#### Install IdentityProvider and configure certificate

IdentityProvider can use certificate of host through thumbprint or use certificate file in local

Text

Description automatically generated