

Activate Azure with Application Insights

LAB

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Revision and Signoff Sheet

Change Record

Date	Author	Version	Change Reference
29 Sep 2020	Mubi Ali	1.0	First Version

Reviewers

Name	Version Approved	Position	Date

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1 Introduction

In this lab you will integrate Azure Application Insights into application.

1.1 Objectives

After completing this lab, you will be able to:

- Deploy Azure Application Insights into new ASP.NET Core application

1.2 Prerequisites

- Microsoft Azure Subscription
- Internet Connectivity
- Visual Studio 2019
- Access to Azure Portal
- Hands-on experience developing ASP.NET Core applications
- Basic understanding of Azure and its application development model

1.3 Estimated Time to Complete

60 Minutes

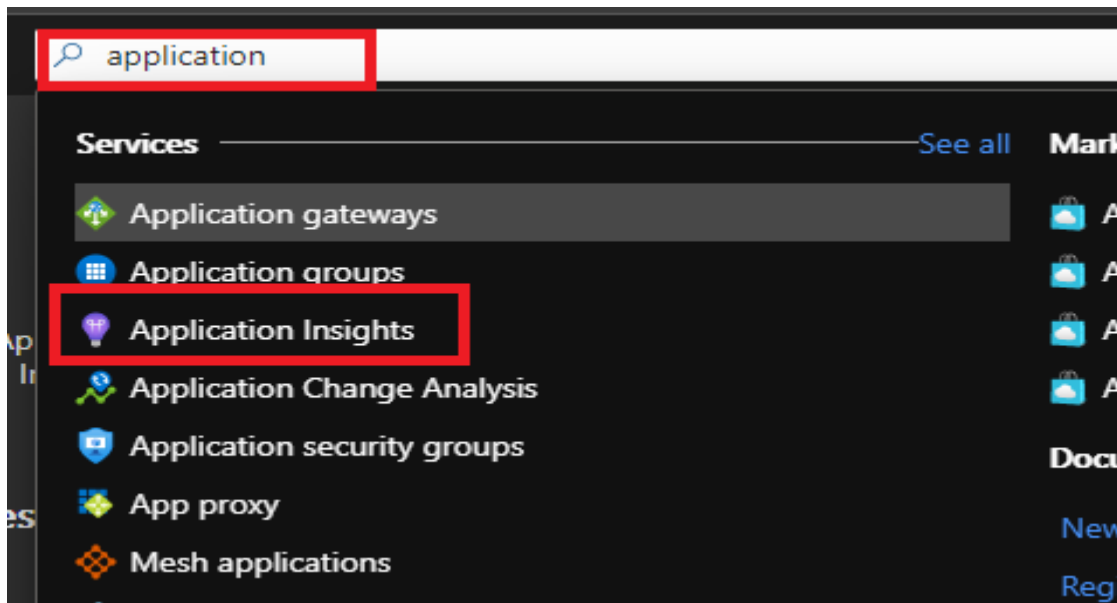
1.4 Scenario

To demonstrate the capabilities of the Azure Application Insights, You will be deploying a number of features that will touch on Azure application monitoring capabilities. This will include creating a new ASP.NET Core application and integrate it with Azure Application Insights.

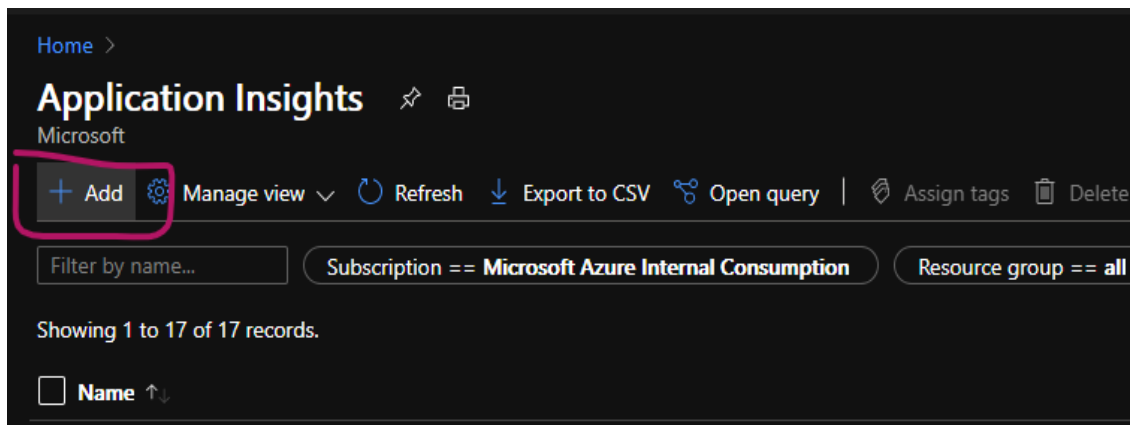
2 Exercise 1 – Creating Application Insight

In this exercise we will create App Insight instance.

1. Go to Azure Portal <https://portal.azure.com>
2. Search for Application Insights on the main search bar in Azure Portal



3. Click + Add



4. Provide the details

- Select subscription you want to use for this resource

- Provide name of resource group, you can select existing one or create new by clicking at create new
- Provide name of Application Insights Resource e.g AppInsights-Lab
- Select Regions, select nearest e.g. North Europe (Dublin)
- Select Classic, unless you want to retain data for longer period in that case select workspace-based

Home > Application Insights >

Application Insights

Monitor web app performance and usage

Create an Application Insights resource to monitor your live web application. With Application Insights, you have full observability into your application across all components and dependencies of your complex distributed architecture. It includes powerful analytics tools to help you diagnose issues and to understand what users actually do with your app. It's designed to help you continuously improve performance and usability. It works for apps on a wide variety of platforms including .NET, Node.js and Java EE, hosted on-premises, hybrid, or any public cloud. [Learn More](#)

PROJECT DETAILS

Select a subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource Group * ⓘ [Create new](#)

INSTANCE DETAILS

Name * ⓘ

Region * ⓘ

Resource Mode * ⓘ ☐ Classic ☒ Workspace-based

WORKSPACE DETAILS

Subscription * ⓘ

Log Analytics Workspace * ⓘ

[Review + create](#) [« Previous](#) [Next : Tags >](#)

- Instrument key will be displayed in the Overview tab, this is key which is needed for SDK integration.

myappinsight

Application Insights

Directory: Microsoft

Search (Ctrl+J)

Application Dashboard

Getting started

Search

Logs

Monitor resource group

Feedback

Favorites

Rename

Delete

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Investigate

Application map

Essentials

Resource group (change) : mynew-rg

Location : North Europe

Subscription (change) : Microsoft Azure Internal Consumption

Subscription ID : 3184ff26-27cb-4e97-8a37-4cdeff1251e7

Tags (change) : Click here to add tags

Instrumentation Key : d1111111-1111-1111-1111-111111111111

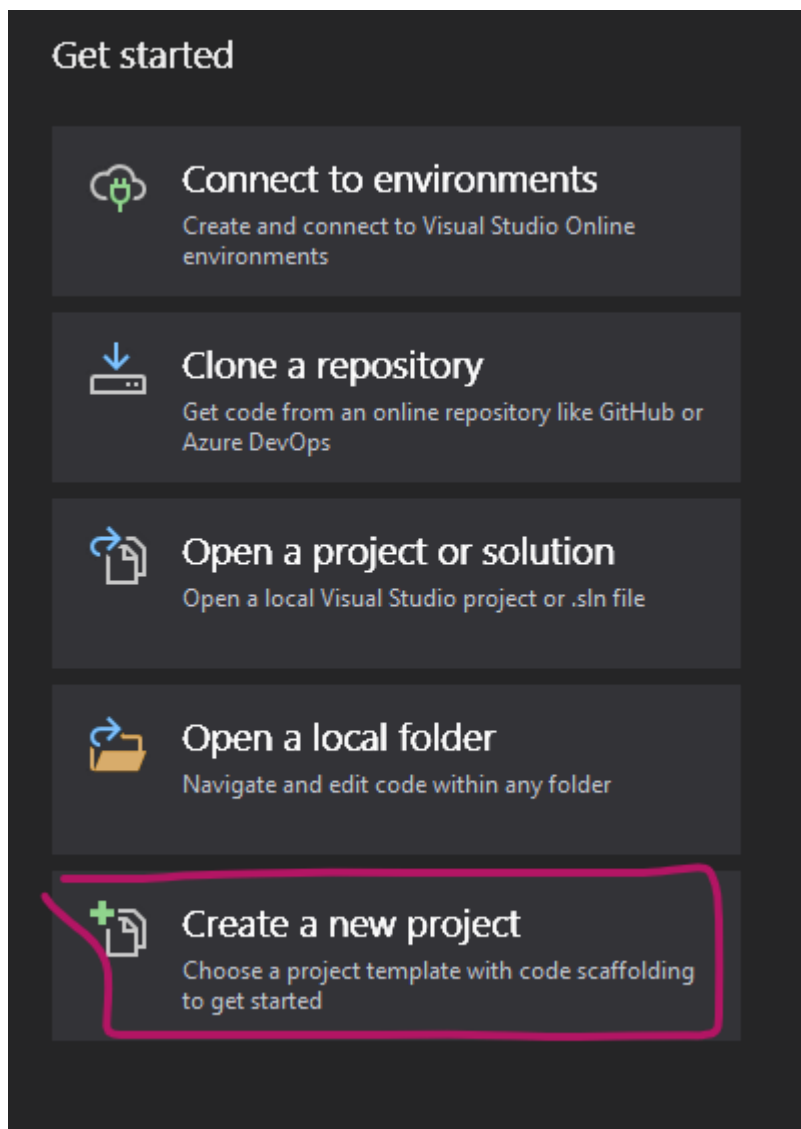
Connection String : InstrumentationKey=d1111111-1111-1111-1111-111111111111;IngestionEndpoint=https://centralus-0.in.applicationinsights.azure.com/;LiveEndpoint=https://centralus-0.in.applicationinsights.azure.com/

Show data for last: 30 minutes 1 hour 6 hours 12 hours 1 day 3 days 7 days 30 days

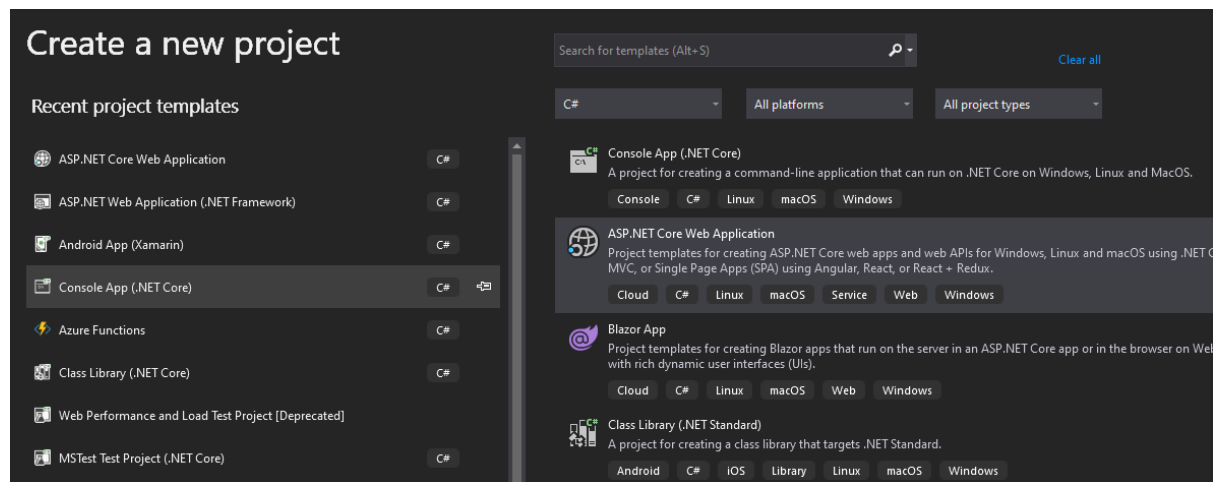
3 Exercise 2 – Add App Insights to .Net Core Project

In this exercise we will create a new ASP.NET Core Project and link it with App Insight created earlier.

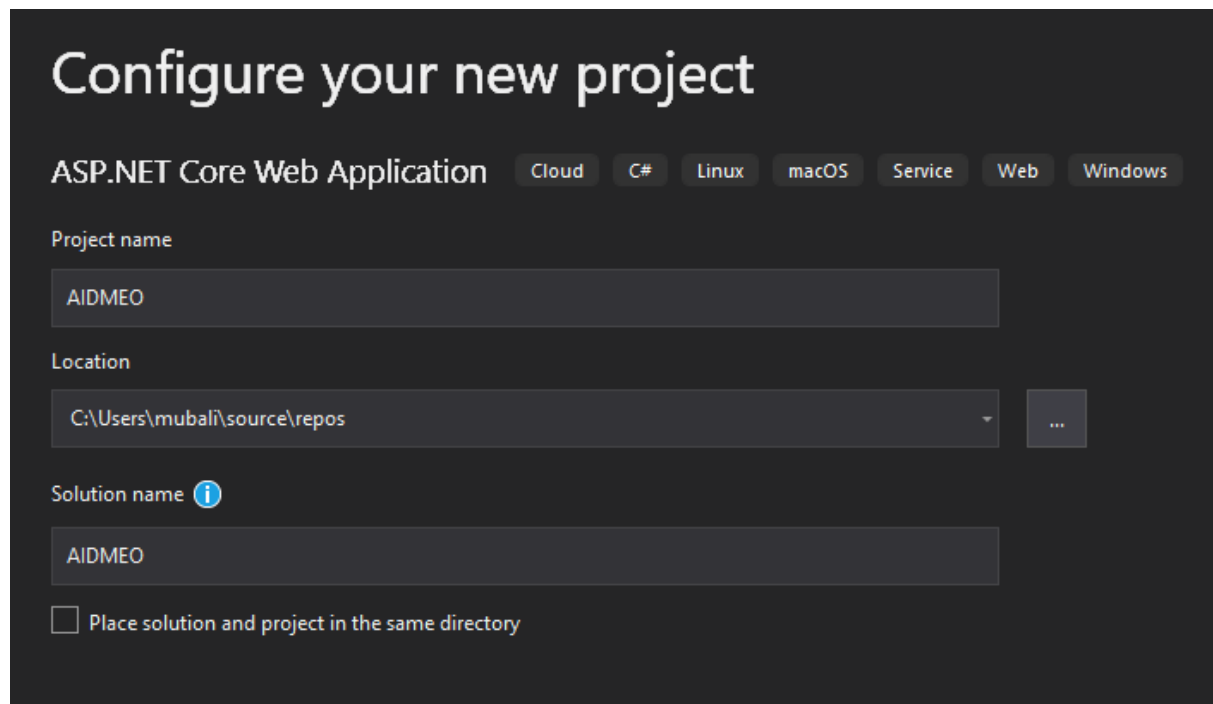
1. Open visual studio and create new project



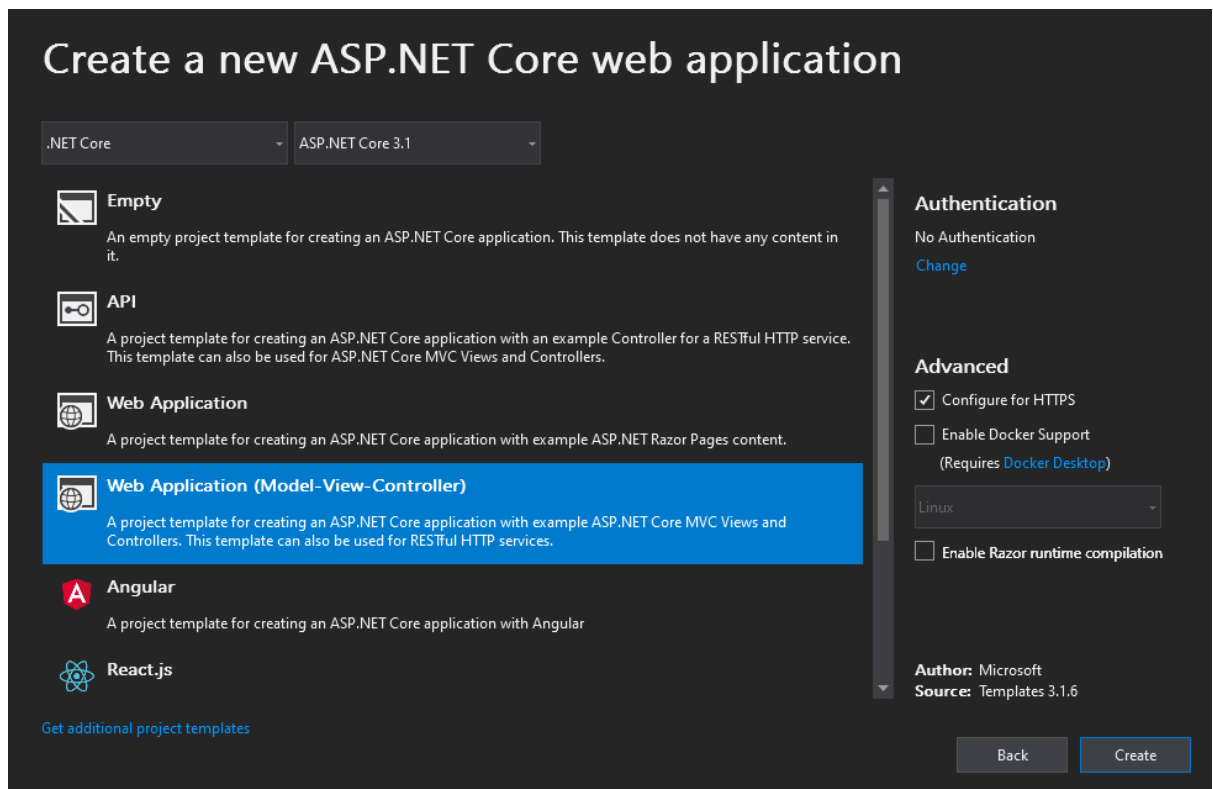
2. Select ASP.NET Core Web Application template



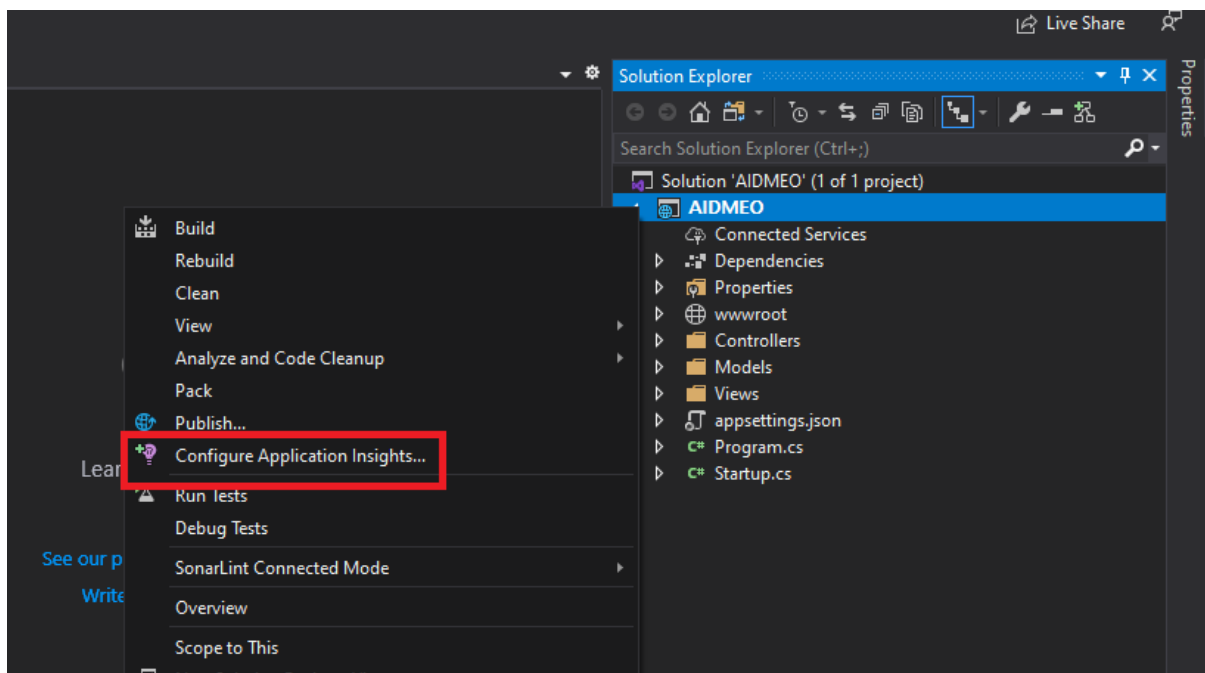
3. Configure new project, provide name and location



4. Select Web Application (Model-View-Controller)

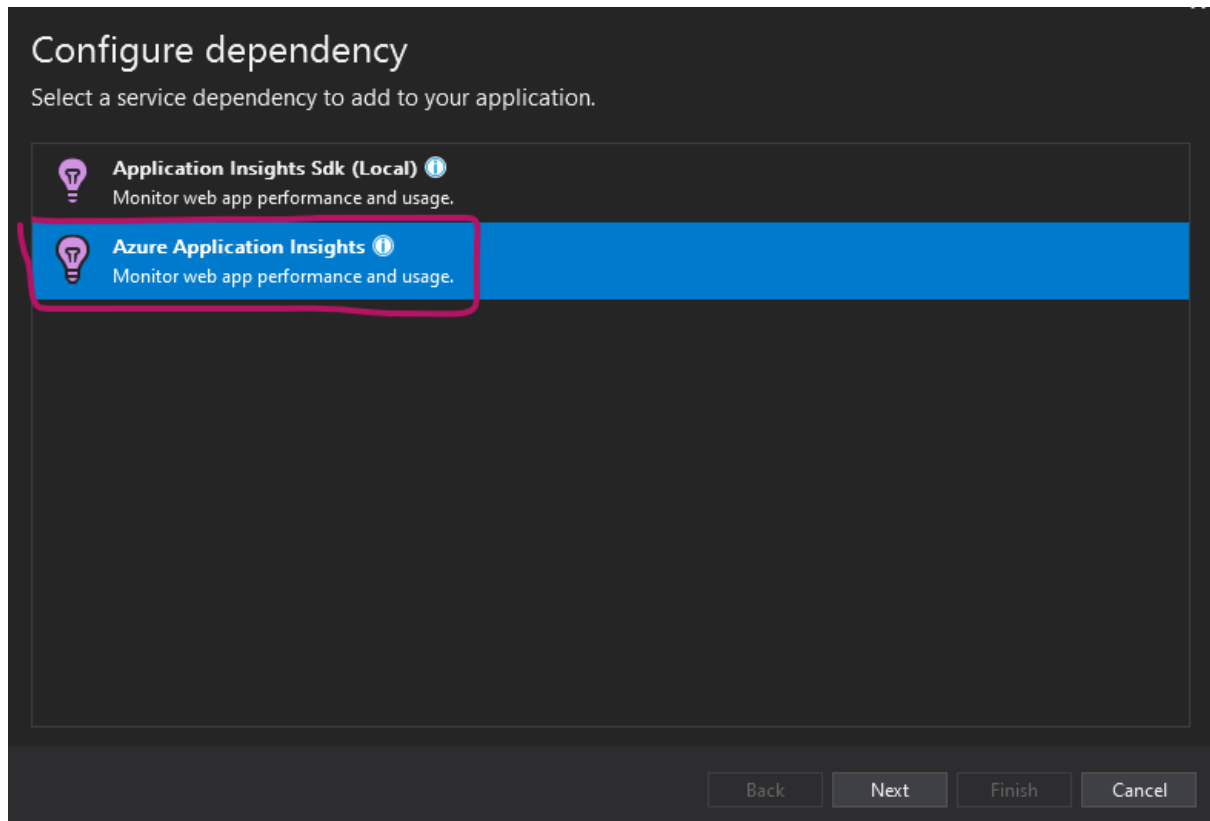


- After few seconds your project will be created, right click on your project file and click Configure Application Insights....



6. Select Azure Application Insights


- SDK option just add code and NuGet packages, where as second option will allow you to link Azure App Insights.

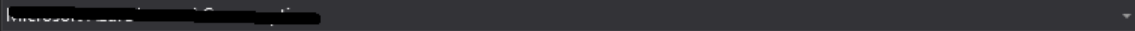


7. Select the App Insight that you have created for Lab, if you have not created one, create a new App Insights...

Configure Azure Application Insights

Select a service dependency to add to your application.

Microsoft  [Reenter your credentials](#)

Subscription: 

Name	Resource group	Location
...	...	North Europe
...	...	North Europe
...	...	North Europe
...	...	North Europe
myappinsight	mynew-rg	North Europe
...	...	North Europe
...	...	North Europe
...	...	North Europe
...	...	North Europe
...	...	North Europe
...	...	West Europe
...	...	West Europe

[+ Create a new Application Insights component](#) [Refresh](#)


[Back](#) [Next](#) [Finish](#) [Cancel](#)


8. Once you link App Insights, click Next

Configure Azure Application Insights

Provide connection string name and specify how to save it

Instrumentation key name:

Connection string value: 

 Tip: avoid pasting application secrets directly into your code.

Save connection string value in [Learn more](#)

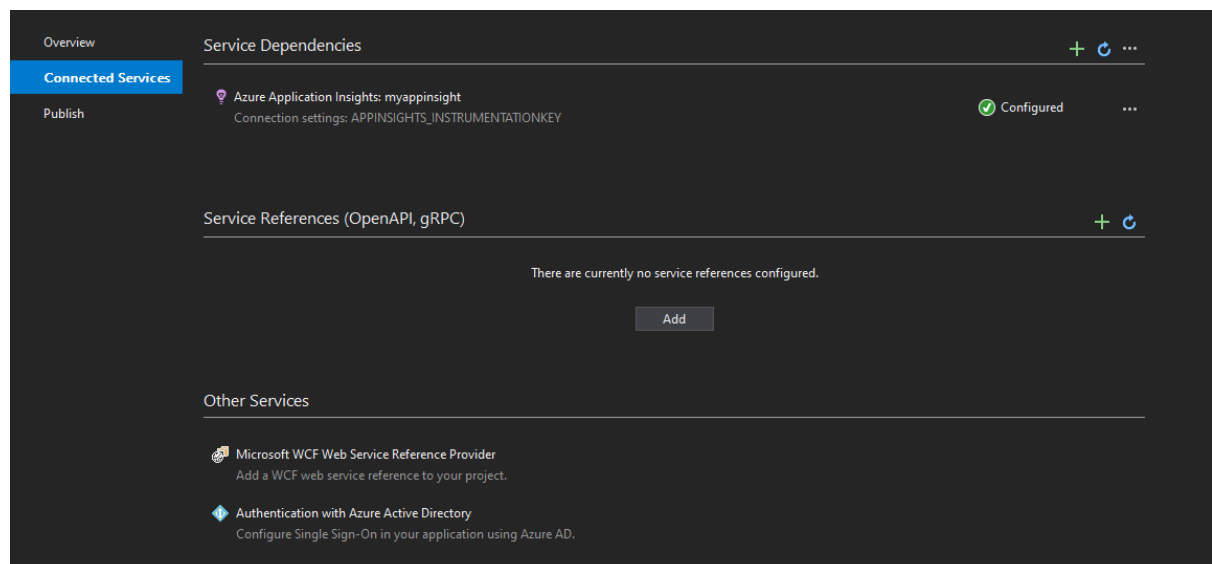
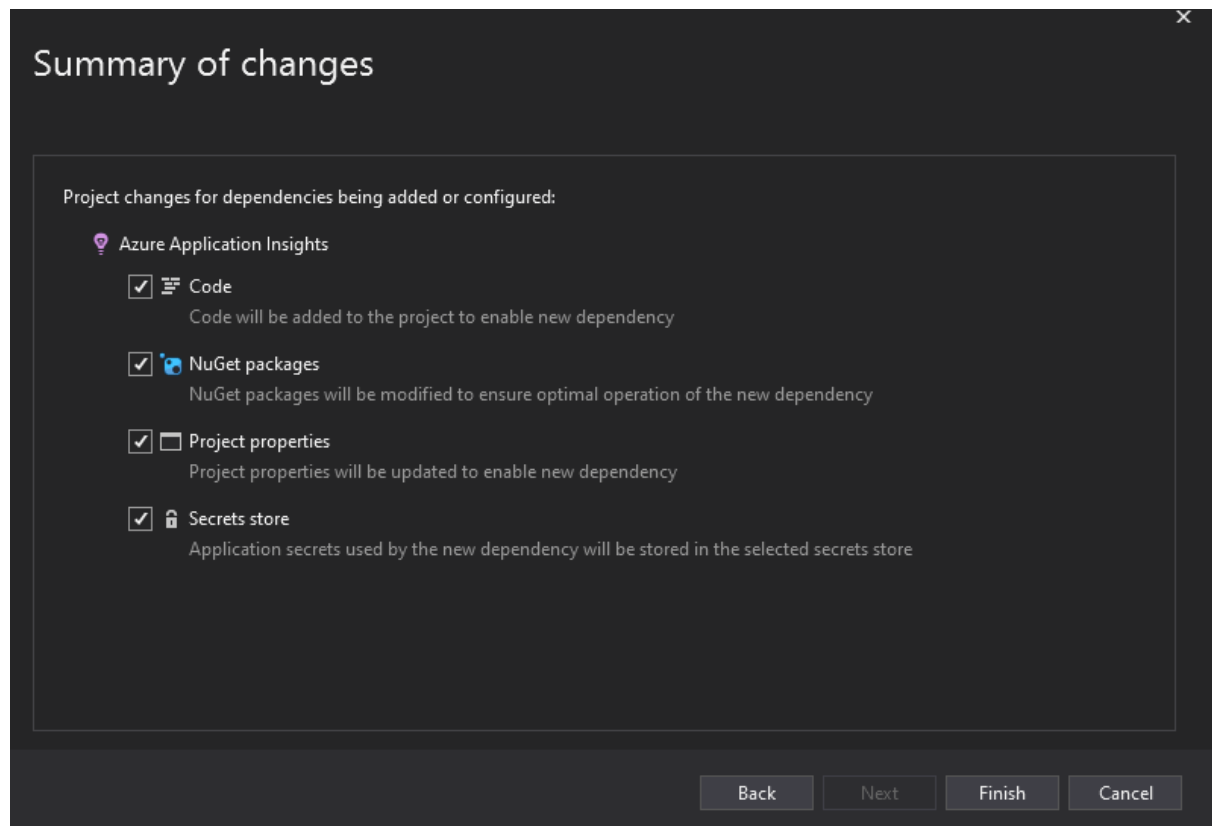
☐ Local user secrets file

☒ None

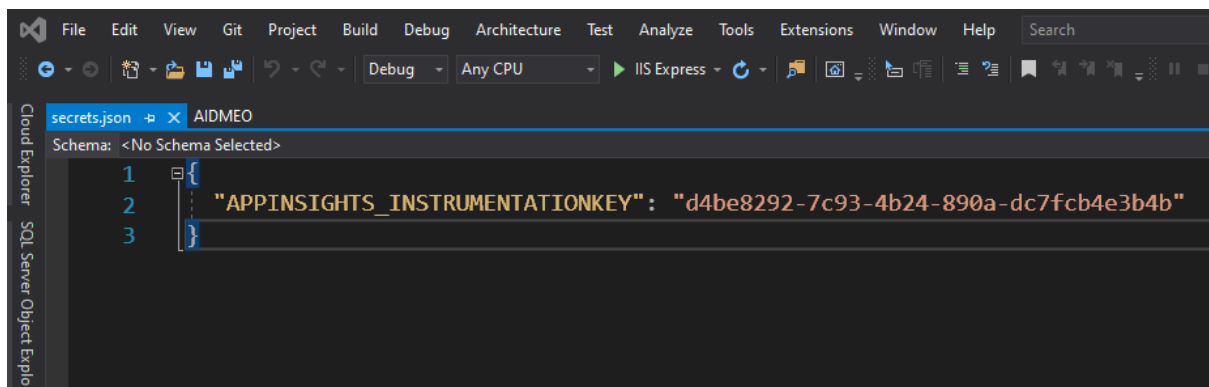
[Back](#) [Next](#) [Finish](#) [Cancel](#)

LAB, Version **Error! Unknown document property name.**

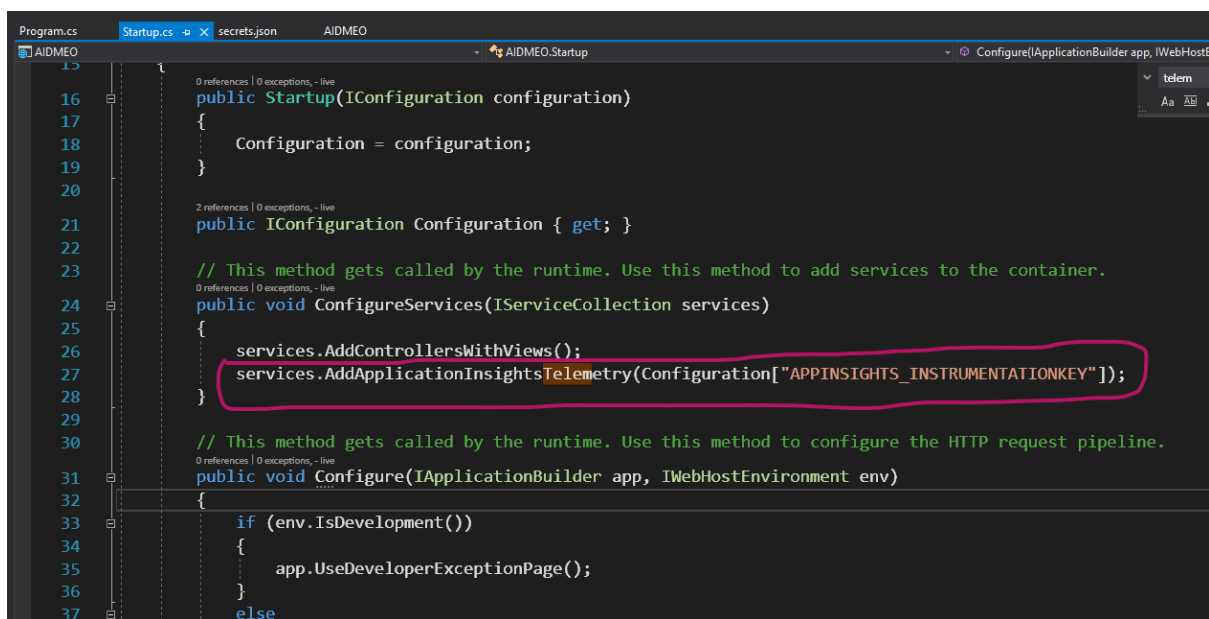
9. Click Finish and App Insights will be added to your project.



- Right click on your project and click “Manage User Secrets”, you should be able to see App Insights Key.



10. Application Insight has been added to your project

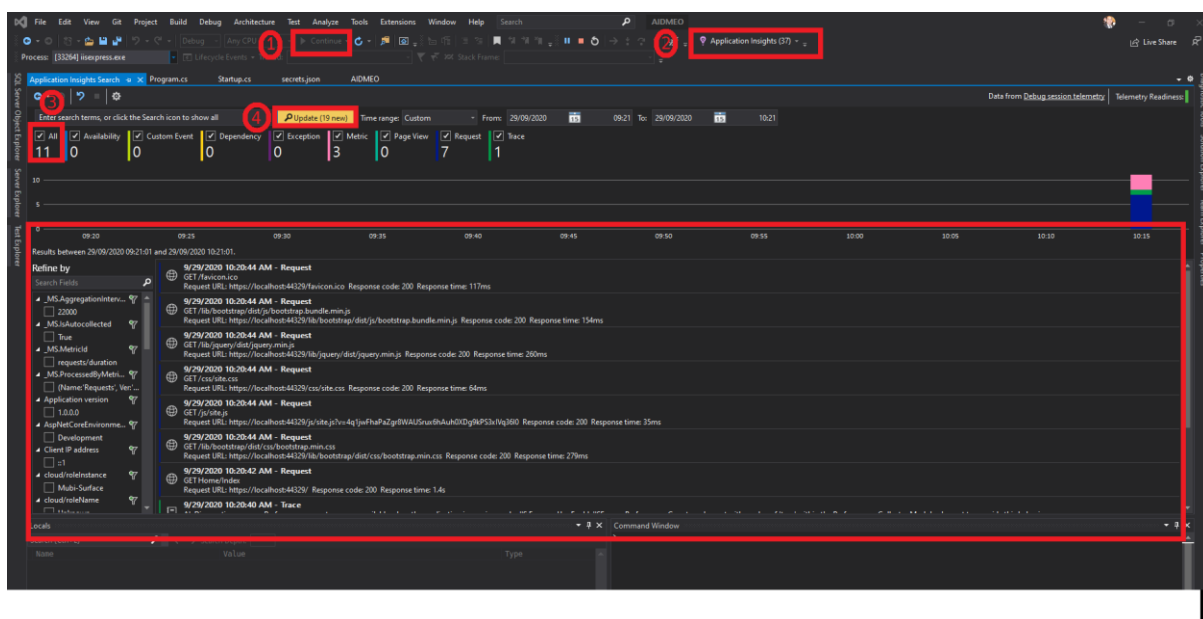


4 Exercise 3 – Getting Telemetry

4.1 Telemetry in Visual Studio

Viewing Telemetry locally in Visual Studio

- Click Run web app
- Click on App Insights (right top corner as shown in image)
- Tick [All]
- Click Update
- Browse web page, you will see telemetry events being loaded...

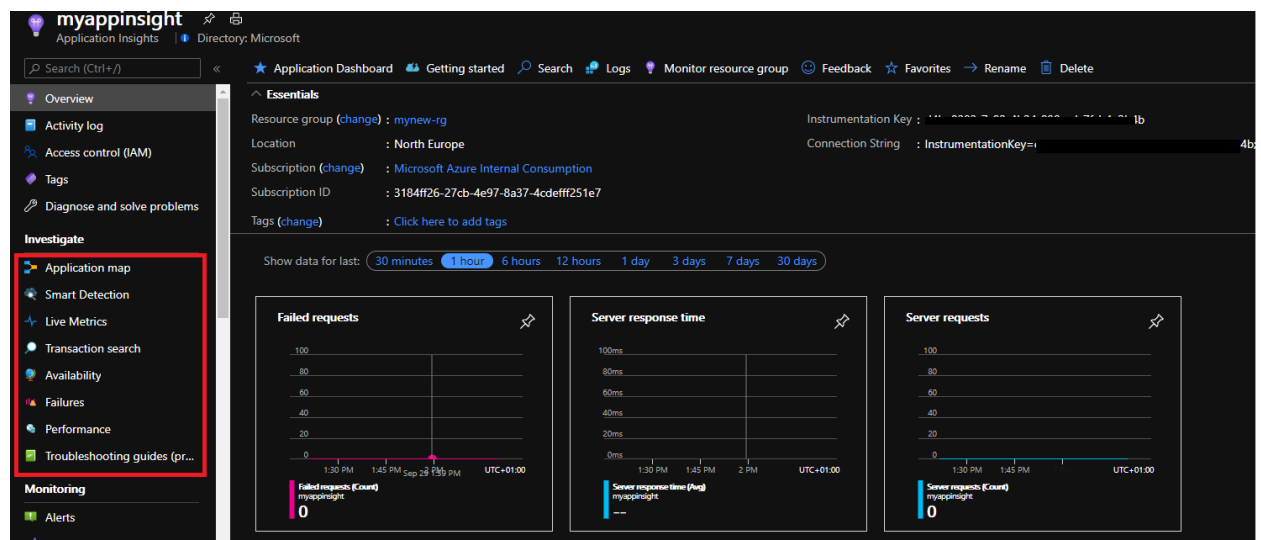


4.2 Telemetry in Azure Portal

Go to Azure portal, open App Insights you created, to view Telemetry.

See telemetry data on following tabs.

- Application Map
- Smart Detection
- Live Metrics
- Transaction Search
- Availability
- Failure
- Performance



5 Exercise 3 – Adding Custom Events

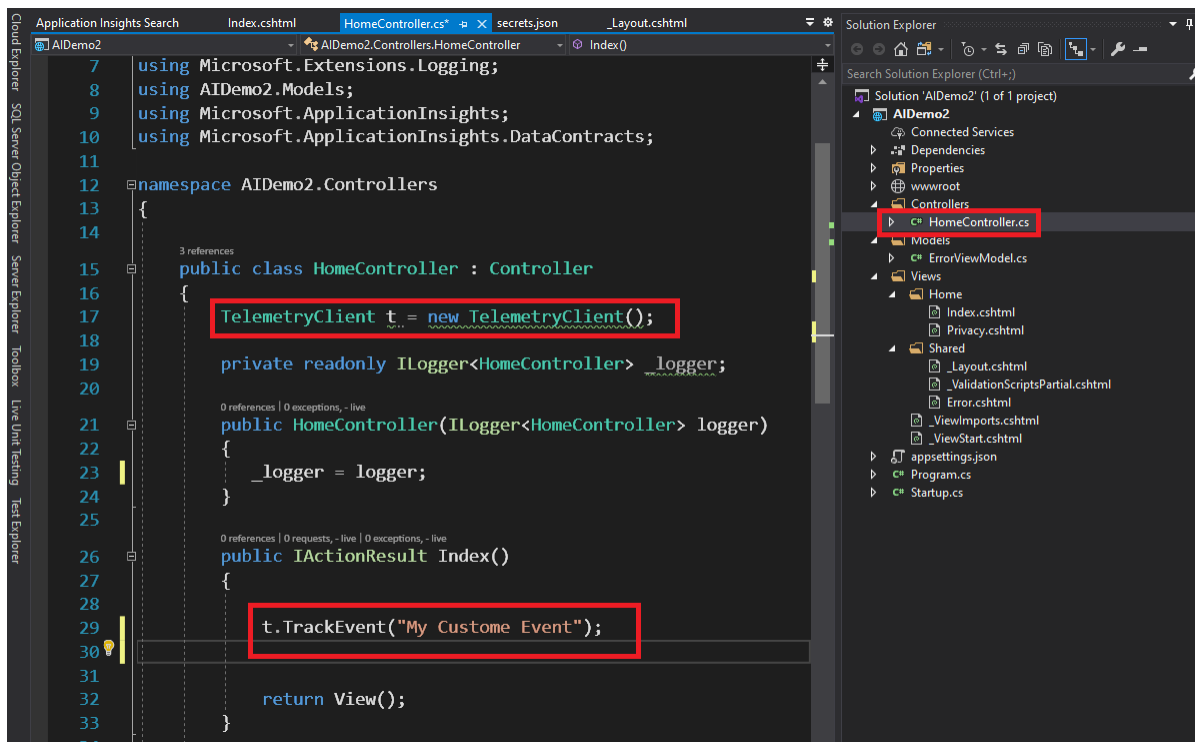
Adding custom events

1. Go to Controllers/HomeController.cs
2. In the main class declare

```
TelemetryClient t = new TelemetryClient();
```

3. In Index method add

```
t.TrackEvent("My Custome Event");
```



4. Navigate to App Insights screen and view your custom event

The screenshot shows the Visual Studio interface with the Application Insights search results pane open. The search results show a list of events, including a custom event named "My Custom Event" at 9/29/2020 3:53:15 PM. The details pane on the right shows the properties of this custom event, including the event name, time, and other metadata. The event name "My Custom Event" is highlighted in the details pane.

5. Try some other custom events...

- Exception
- Page View
- Metric
- TrackTrace