

DOTNET CORE-AZURE

MINI PROJECT

Create a Web API Project to store Product Information. Use Entity Framework to store the product information in the database. The user should be able to perform all the CRUD Operations. Configure GET, POST, PUT and DELETE.

The Product Entity should have the following properties:

- Product ID
- ProductName
- Price
- Brand
- Manufacture Date
- Expiration Date

Use Data Annotations to

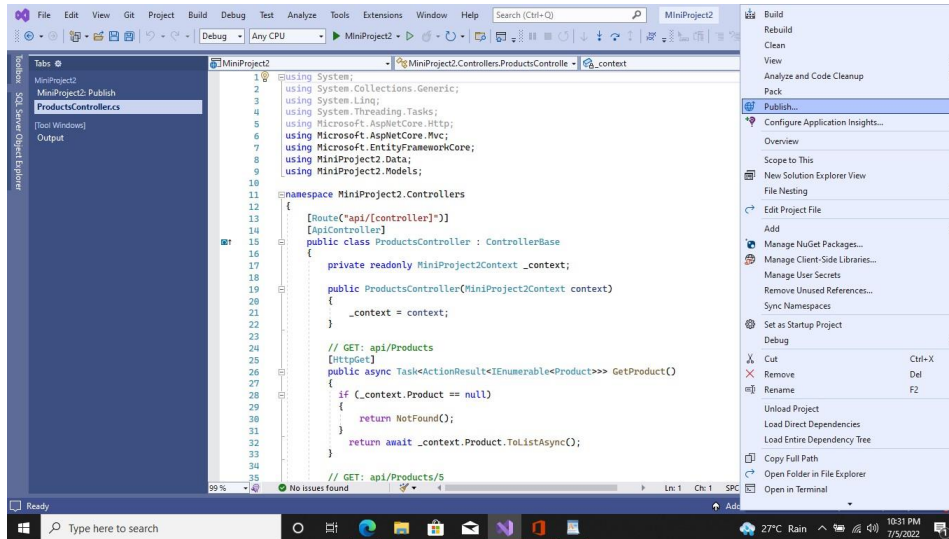
- Mark the Primary Key
- Make ProductName Mandatory
- Make Price a Number Create a jQuery and AJAX Client to consume the Web API and show the result.

Azure Hosting:

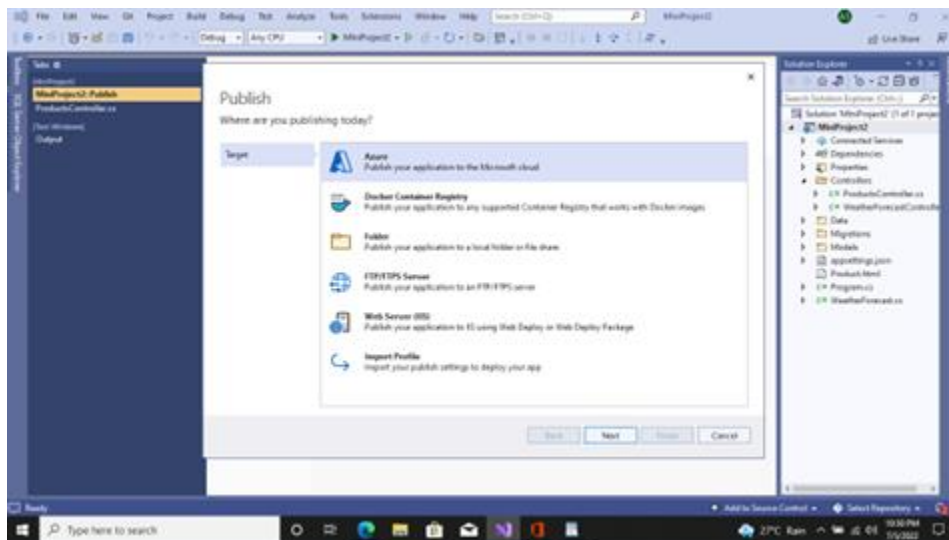
- Host the web Api in azure and consume the same using jQuery Client.
- Configure Scale out by adding rules for custom scaling.
- Configure Deployment slots for staging and production.
- Configure Application Insights for the project.
- Configure Swagger for the Api.
- Work with Log Analytics with the sample logs available.

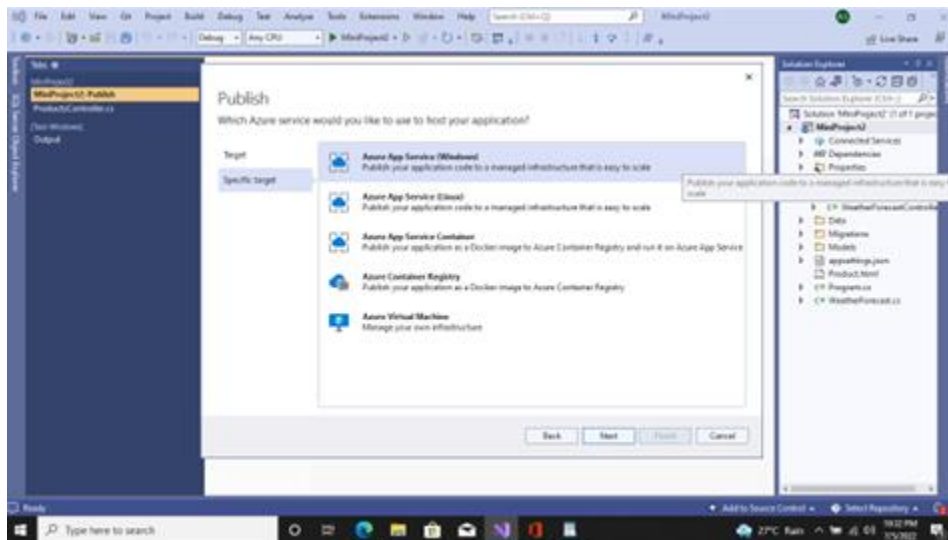
1.Host the web Api in azure and consume the same using jQuery Client.

Publishing the Web API from Visual Studio to Azure Portal.

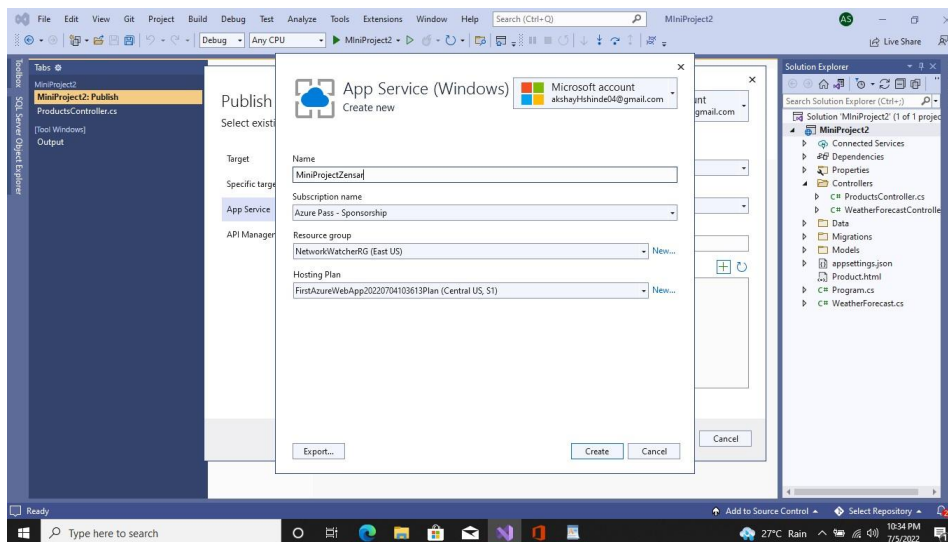


Configuring the Azure service



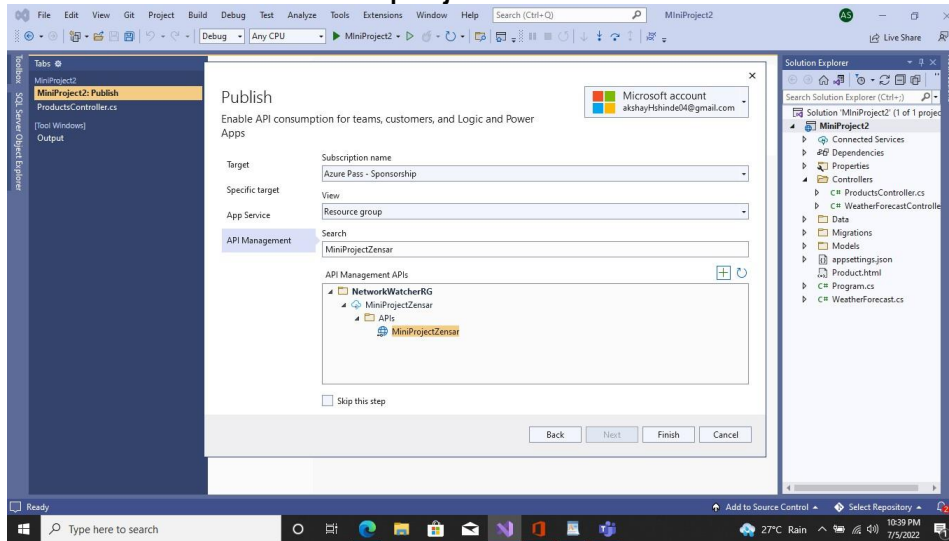


Publishing the Web API to Azure App Service (Windows)

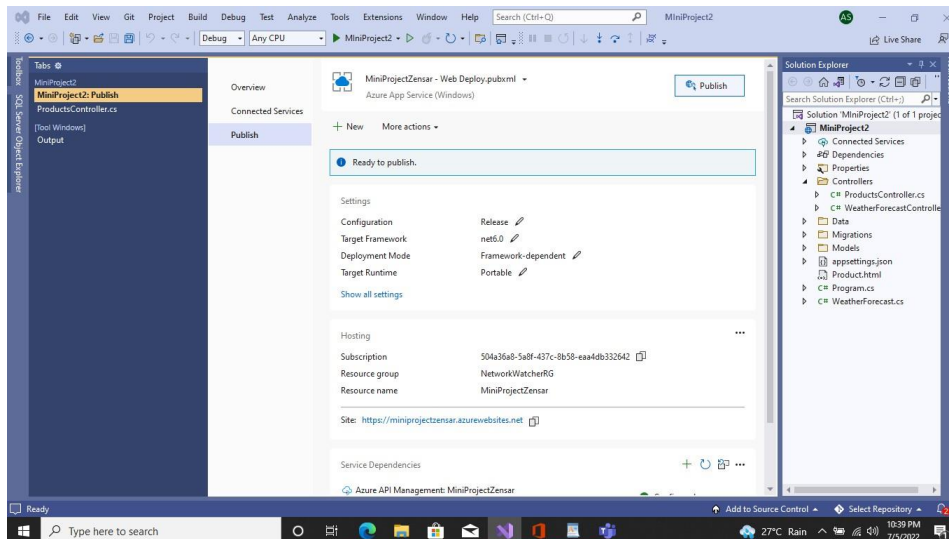


The screenshot shows the Visual Studio 2019 interface with the 'API in API Management' dialog box open. The dialog is for creating a new API. The 'API name' field is 'MiniProjectZensar'. The 'Subscription name' is 'Azure Pass - Sponsorship'. The 'Resource group' is 'NetworkWatcherRG (East US)'. The 'API Management service' is '*MiniProjectZensar (East US)'. The 'API URL suffix' field is empty. There is an 'Export...' button at the bottom left and 'Create' and 'Cancel' buttons at the bottom right. In the background, a Microsoft account login window is visible, showing the email 'akshaytshinde4@gmail.com'.

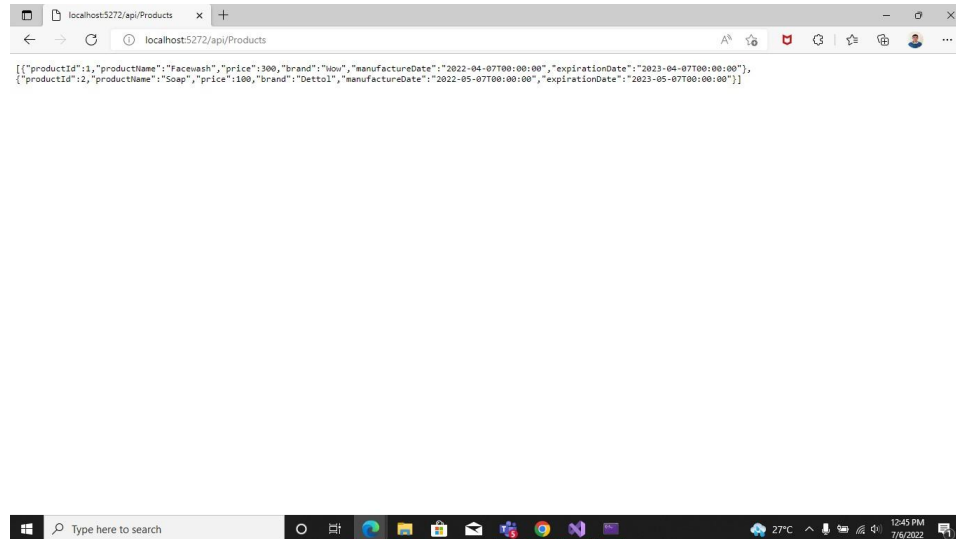
Select created instance project.



Successful configuration of API to Azure and ready to Publish.



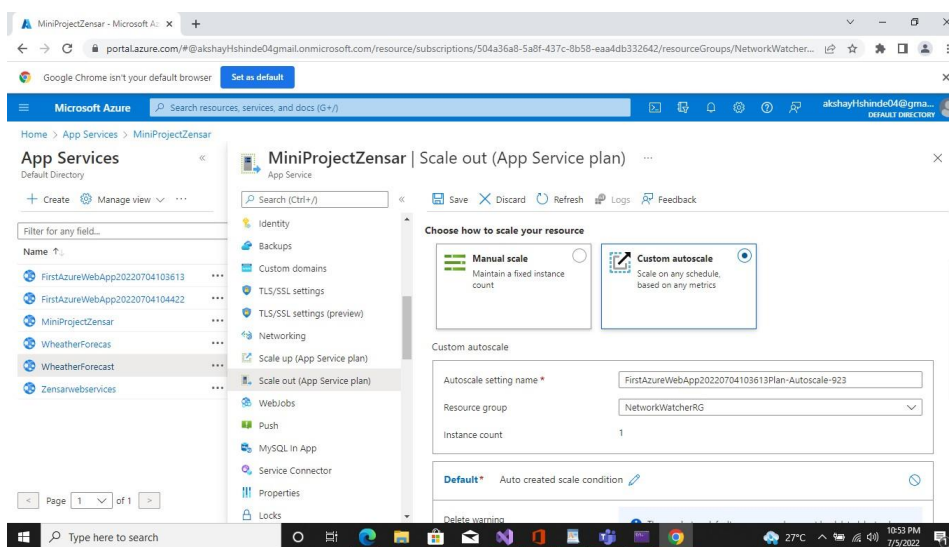
The web API will publish and the output open in web browser



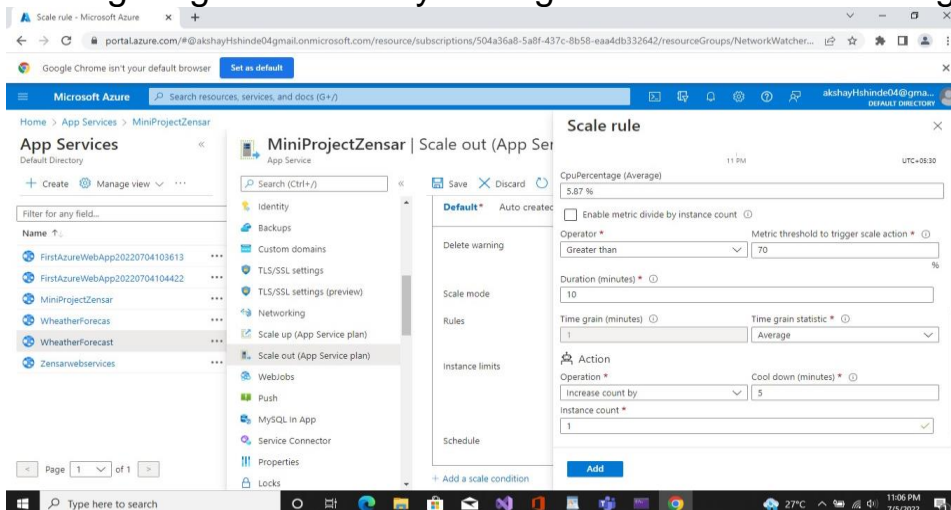
2. Configure Scale out by adding rules for custom scaling

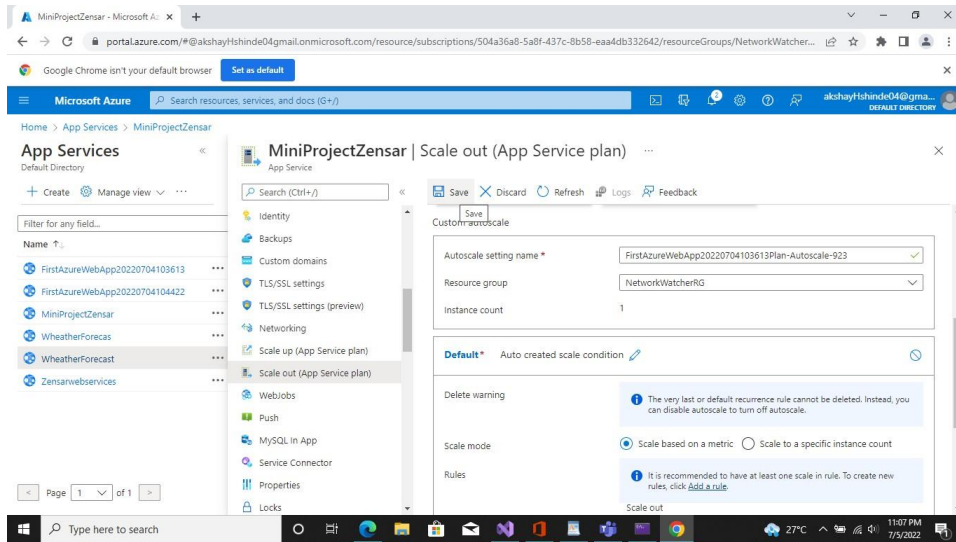
Switch to Azure portal, Select the API we created and following step to scale out

Scale Out: A scale out operation is the equivalent of creating multiple copies of your web site and adding a load balancer to distribute the demand between them. When you scale out a web site in Windows Azure Web Sites there is no need to configure load balancing separately since this is already provided by the platform.

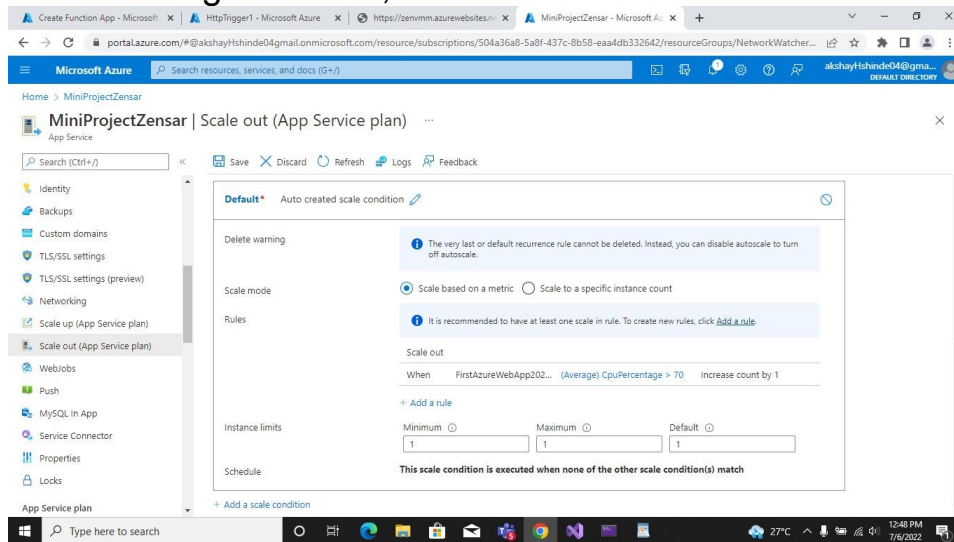


Configuring Scale Out by adding rules for custom scaling.





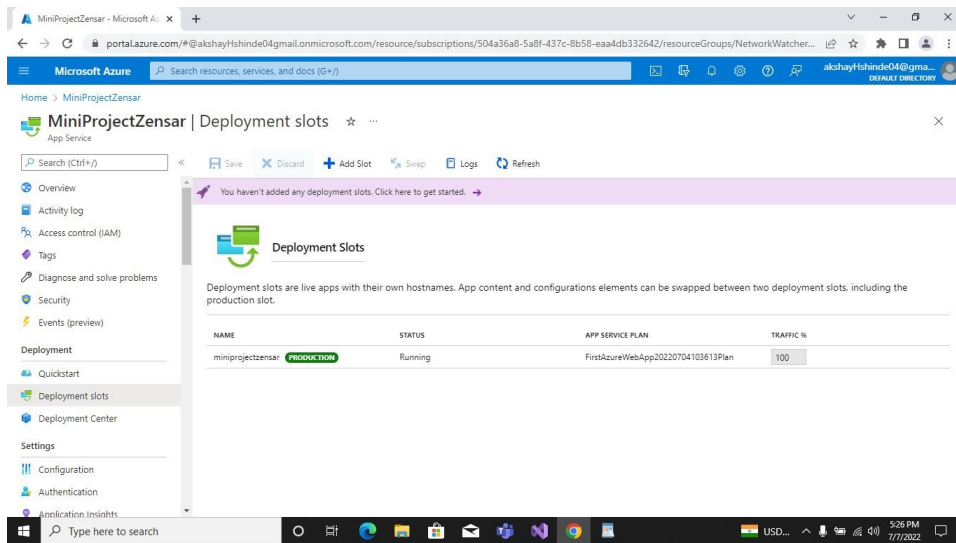
After adding the scale, it shows rules



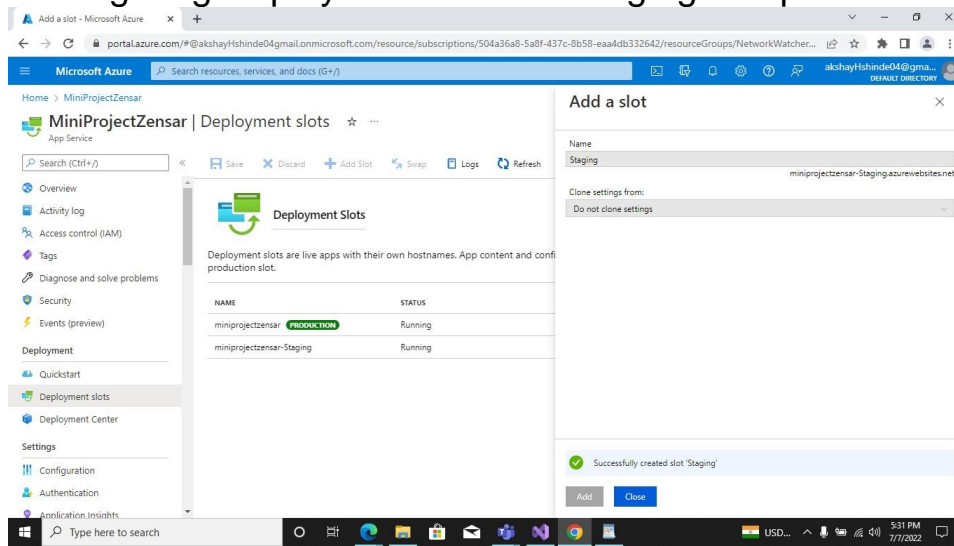
3. Configure Deployment slots for staging and production

Deployment Slots: In Azure App Services, you can very easily add an additional deployment slot. This is a full-fledged App Service – in this case, another Web App – that sits next to your original Web App. The deployment slot has a different URL, maybe something like staging.website.com

Adding a Deployment Slot.



Configuring Deployment slots for Staging and production.



MiniProjectZensar - Microsoft Azure

portal.azure.com/#@akshayhshinde04gmail.onmicrosoft.com/resource/subscriptions/504a36a8-5a8f-437c-8b58-aa4db332642/resourceGroups/NetworkWatcher...

Microsoft Azure Search resources, services, and docs (G+)

Home > MiniProjectZensar

MiniProjectZensar | Deployment slots

App Service

Search (Ctrl+F)

Save Discard Add Slot Swap Logs Refresh

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
Authentication

Deployment Slots

Deployment slots are live apps with their own hostnames. App content and configurations elements can be swapped between two deployment slots, including the production slot.

NAME	STATUS	APP SERVICE PLAN	TRAFFIC %
miniprojectzensar	Running	FirstAzureWebApp20220704103613Plan	100
miniprojectzensar-Staging	Running	FirstAzureWebApp20220704103613Plan	0

https://portal.azure.com/#@akshayhshinde04gmail.onmicrosoft.com/resource/subscriptions/504a36a8-5a8f-437c-8b58-aa4db332642/resourceGroups/NetworkWatcherRG/providers/Microsoft.Web/sites/MiniProjectZensar/deploymentSlots/2

Type here to search

5:31 PM 7/7/2022

Swapping the Source and Target.

Swap - Microsoft Azure

portal.azure.com/#@akshayhshinde04gmail.onmicrosoft.com/resource/subscriptions/504a36a8-5a8f-437c-8b58-aa4db332642/resourceGroups/NetworkWatcher...

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Deployment Slots

Deployment slots are live apps with their own hostnames. App content and configurations elements can be swapped between two deployment slots, including the production slot.

NAME	STATUS
miniprojectzensar	Running
miniprojectzensar-Staging	Running

Swap

Source: miniprojectzensar-Staging

Target: miniprojectzensar

Swap with preview can only be used with sites that have deployment slot settings enabled

Perform swap with preview

Config Changes

This is a summary of the final set of configuration changes on the source and target deployment slots after the swap has completed.

SETTING	TYPE	OLD VALUE	NEW VALUE
NetFrameworkVersion	General	v4.0	v5.0

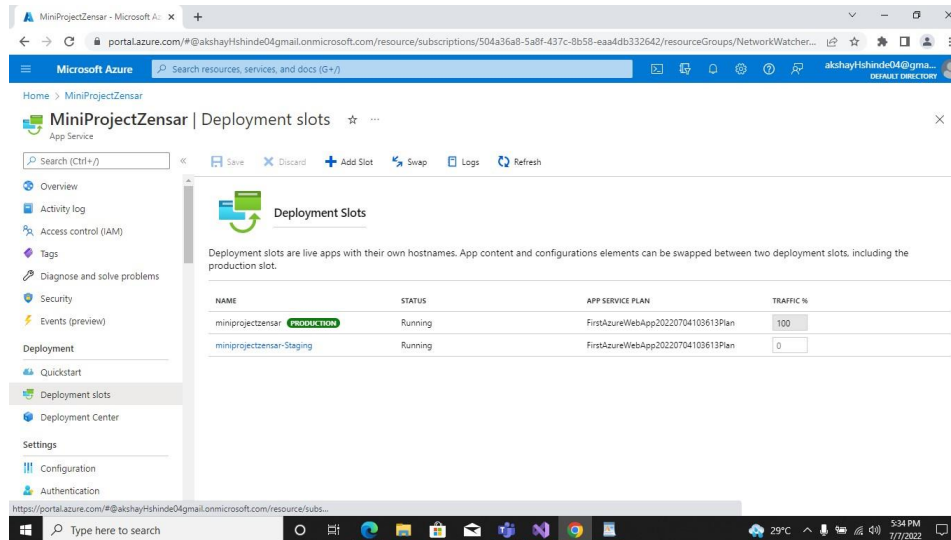
Successfully completed swap between slot 'Staging' and slot 'production'

Swap Close

Type here to search

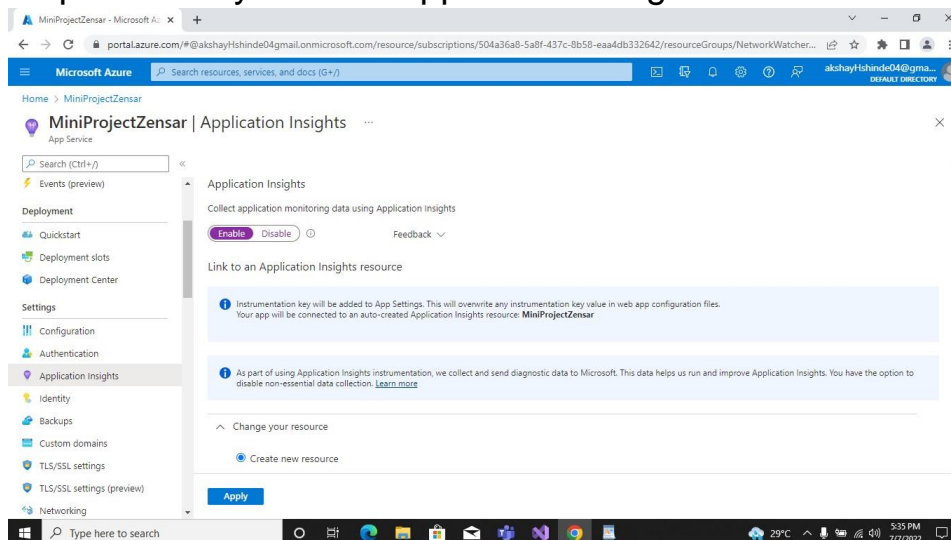
5:34 PM 7/7/2022

Successful Creation of Deployment Slots.

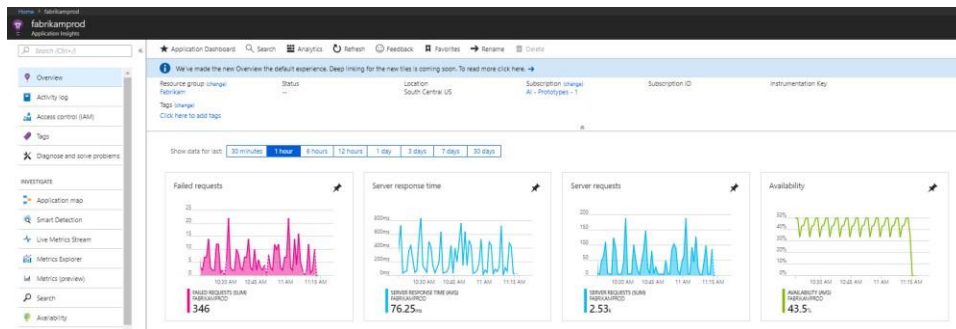


4. Configure Application Insights for the project

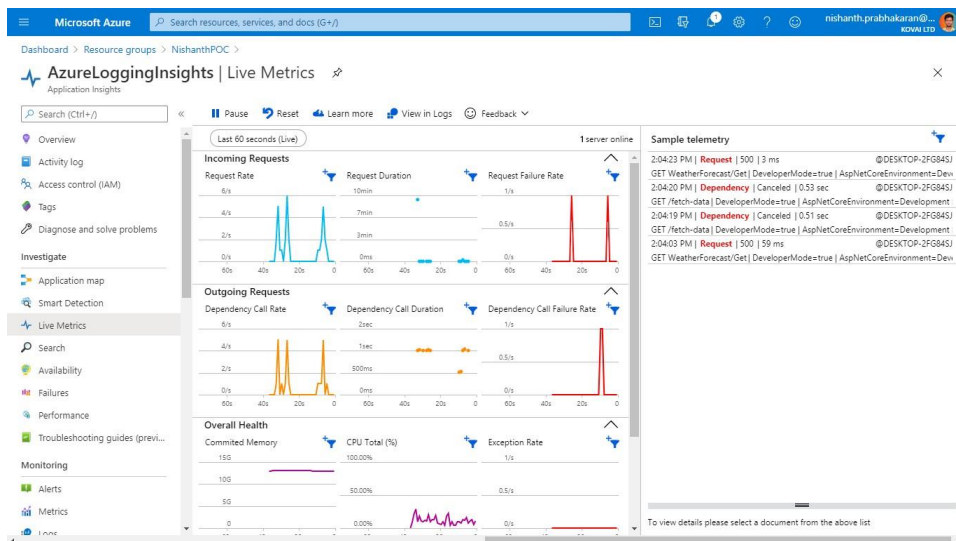
Application Insights: Application Insights, a feature of Azure Monitor, is widely used within the enterprise landscape for monitoring and diagnostics. Data that has already been collected from a specific tenant or environment is pushed to your own Application Insights environment.

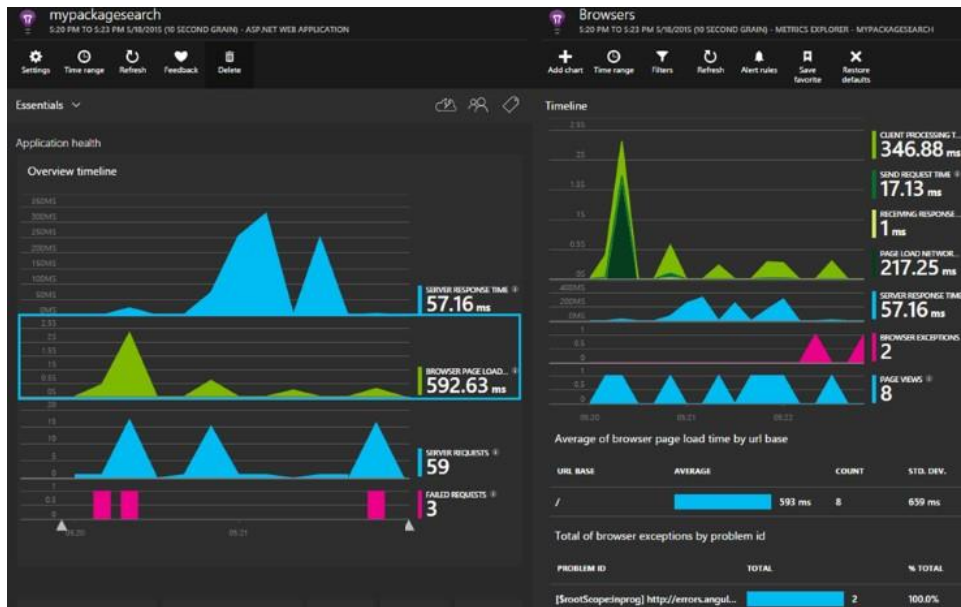


Application Insights Overview



Application insights provides different views. The Overview panel shows a summary of the key diagnostic metrics of your app and is a gateway to the other features of the portal



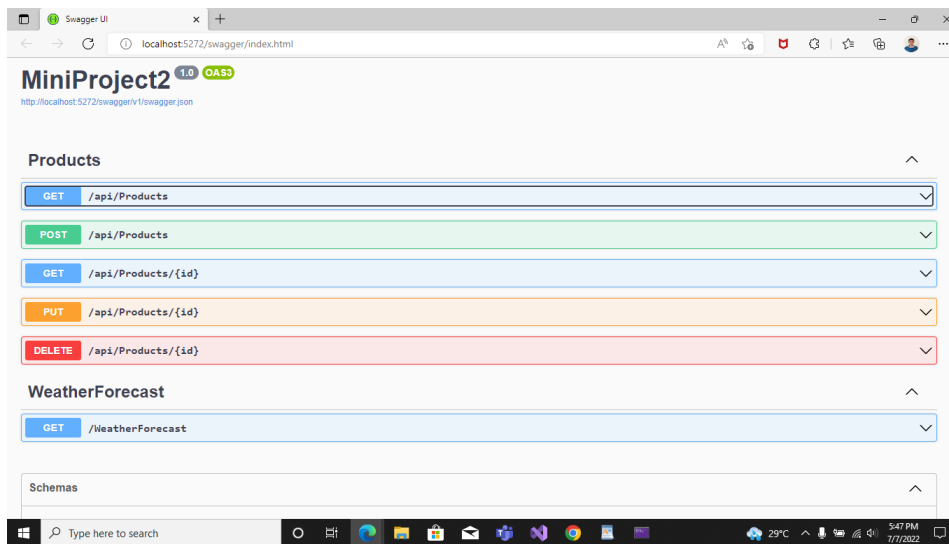


Application Insights has a wide range of features to help you use this data:

- Create a dashboard for an overview of the health of your org.
- Perform proactive monitoring by using Smart Detection.
- Set up alerts for important scenarios based on your org.
- Visualize and track common navigation patterns from a usage perspective. This will help you understand, for example, whether a user always selects a specific tab first before navigating back to the main tab and closing the form. If so, this might indicate that a field should be positioned on the first tab, instead of another tab, to save the user time every time they open this record.
- Create custom queries to troubleshoot performance and errors by using the Logs panel under Monitoring on the left pane.

5. Configure Swagger for the API

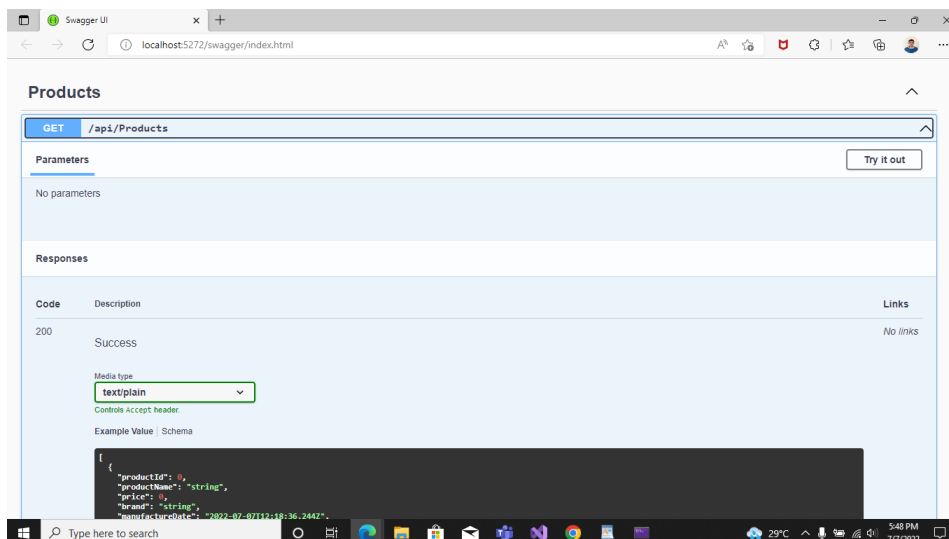
Swagger UI allows anyone be it your development team or your end consumers to visualize and interact with the API's resources without having any of the implementation logic in place. It's automatically generated from your Open API (formerly known as Swagger) Specification, with the visual documentation making it easy for back-end implementation and client-side consumption.



Advantages of Swagger:

- Synchronizes the API documentation with the server and client at the same pace.
- Allows us to generate REST API documentation and interact with the REST API. The interaction with the REST API using the Swagger UI Framework gives clear insight into how the API responds to parameters.
- Provides responses in the format of JSON and XML.
- Implementations are available for various technologies, such as Scala, Java, and HTML5.

GET



POST

The image shows the Swagger UI for a POST endpoint at `/api/Products`. The interface is divided into several sections:

- Parameters:** A section with the heading "Parameters" and a "Try it out" button. Below it, it states "No parameters".
- Request body:** A section with a dropdown menu set to "application/json".
- Example Value | Schema:** A section containing a JSON example:

```
{  "productId": 0,  "productName": "string",  "price": 0,  "brand": "string",  "manufactureDate": "2022-07-07T12:19:02.252Z",  "expirationDate": "2022-07-07T12:19:02.252Z"}
```
- Responses:** A section with a table showing response details.

Code	Description	Links
200	Success	No links

The bottom of the image shows a Windows taskbar with the search bar, taskbar icons, and system tray showing 29°C and 5:49 PM on 7/7/2022.

PUT

The image shows the Swagger UI for a PUT endpoint at `/api/Products/{id}`. The interface is divided into several sections:

- Parameters:** A section with the heading "Parameters" and a "Try it out" button. Below it, there is a table with columns "Name" and "Description".

Name	Description
id * required	id
- Request body:** A section with a dropdown menu set to "application/json".
- Example Value | Schema:** A section containing a JSON example:

```
{  "productId": 0,  "productName": "string",  "price": 0,  "brand": "string",  "manufactureDate": "2022-07-07T12:23:43.310Z",  "expirationDate": "2022-07-07T12:23:43.310Z"}
```
- Responses:** A section with a table showing response details.

Code	Description	Links
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The bottom of the image shows a Windows taskbar with the search bar, taskbar icons, and system tray showing 29°C and 5:53 PM on 7/7/2022.

DELETE

Swagger UI

localhost:5272/swagger/index.html

DELETE /api/Products/{id}

Try it out

Parameters

Name	Description
id * required	
Integer (\$int32)	id
(path)	

Responses

Code	Description	Links
200	Success	No links

WeatherForecast

GET /WeatherForecast

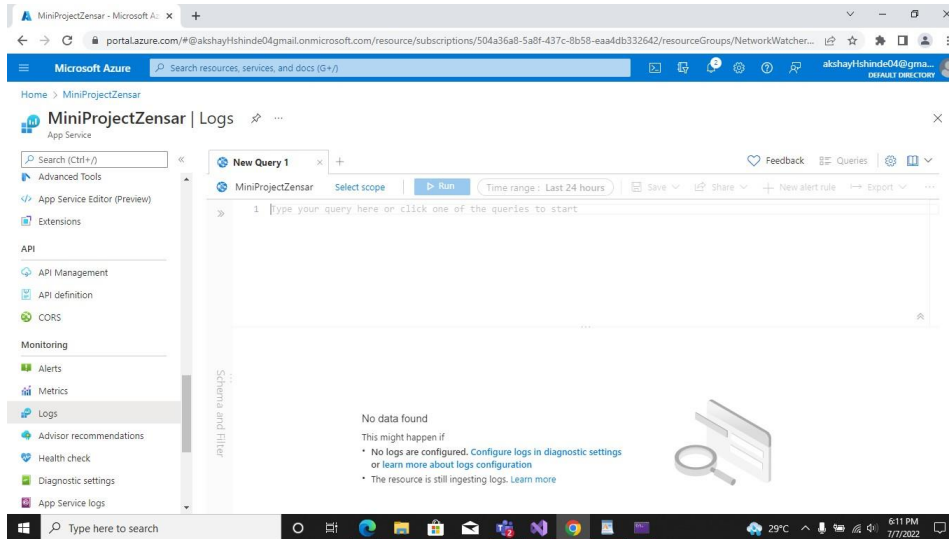
Type here to search

29°C

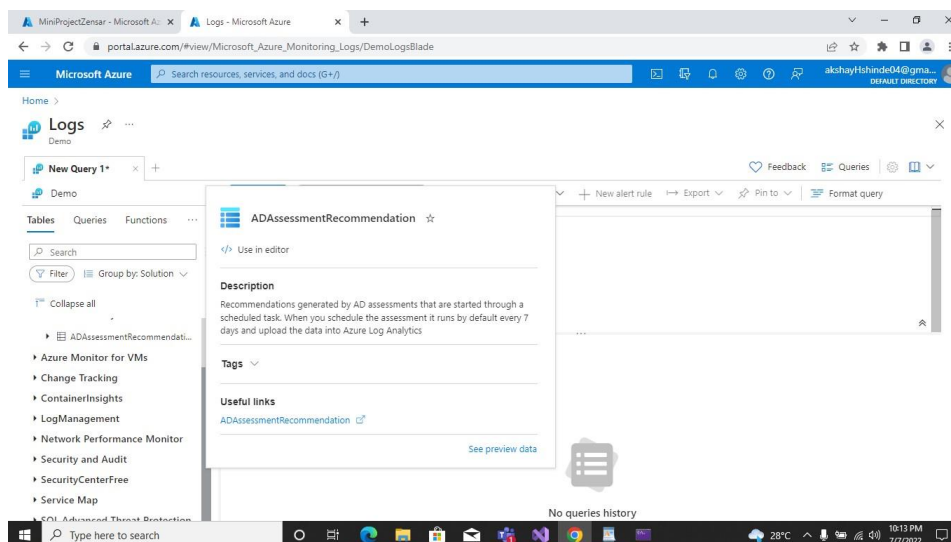
5:54 PM 7/17/2022

6. Work with Log Analytics with the sample logs available

Log Analytics: Log Analytics is a tool in the Azure portal that's used to edit and run log queries with data in Azure Monitor Logs.



Working with Log Analytics.



The query ADAssessmentRecommendation | where _ResourceId contains "ab" returns result to get records.

The screenshot shows the Microsoft Azure portal interface. At the top, there's a navigation bar with 'Microsoft Azure' and a search bar. Below that, the 'Logs' section is active, showing a query editor with the query: `ADAssessmentRecommendation | where _ResourceId contains "ab"`. The query is run, and the results are displayed in a table. The table has 6 columns: TimeGenerated [UTC], AssessmentId, AssessmentName, RecommendationId, Recommendation, and Description. The results show 6 records, all with a TimeGenerated of 7/5/2022, 9:52:30:726 AM. The AssessmentId for all records is 22141292-68bc-4904-b030-5e894a7b1cb3. The AssessmentName is 'AD' for all. The RecommendationId and Recommendation vary, and the Description is truncated for some records.

TimeGenerated [UTC]	AssessmentId	AssessmentName	RecommendationId	Recommendation	Description
7/5/2022, 9:52:30:696 AM	22141292-68bc-4904-b030-5e894a7b1cb3	AD	e1fc9908-1810-455a-97de-5f35738141eb	Resolve Directory System Agent (DSA) issues that are preve...	One...
7/5/2022, 9:52:30:726 AM	22141292-68bc-4904-b030-5e894a7b1cb3	AD	cfeb7e0c-b86a-438f-9dce-9fb50293dc9	Unless specifically required always enable strict replication c...	Enf...
7/5/2022, 9:52:30:726 AM	22141292-68bc-4904-b030-5e894a7b1cb3	AD	4eabc96c-682a-4d01-9919-0c32af52aa3f	Amend dynamic port configuration on domain controllers.	One...
7/5/2022, 9:52:30:726 AM	22141292-68bc-4904-b030-5e894a7b1cb3	AD	1676b73a-7a9b-4355-962f-6064c3569536	Dynamic Port Ranges Configuration - Range Includes Less T...	One...
7/5/2022, 9:52:30:726 AM	22141292-68bc-4904-b030-5e894a7b1cb3	AD	11d49a22-7cad-43b7-81cf-4466cf77189	Amend dynamic port configuration settings on domain con...	One...
7/5/2022, 9:52:30:726 AM	22141292-68bc-4904-b030-5e894a7b1cb3	AD	d8640839-78cd-45a1-a942-10b536923f52	Domain Controllers with a disjoined DNS namespace shoul...	Don...
7/5/2022, 9:52:30:726 AM	22141292-68bc-4904-b030-5e894a7b1cb3	AD	4bcc1c2a-4168-49b8-b5bb-1d1c10d67796	Disable the Allow Replication With Divergent and Corrupt R...	One...