










# Visual Studio 2022





## Open recent

Search recent (Alt+S)

### This week

|   |                    |
|---|--------------------|
|  <b>AWS_Sample2_setting_profile.sln</b><br>C:\...\Sample2 List S3 Buckets and Set profile\AWS_Sample2_setting_profile | 6/16/2023 5:26 PM  |
|  <b>AWS_Sample0.sln</b><br>C:\AWS SDK for .Net\Sample0 Create new S3 Bucket (easy way) OK                             | 6/16/2023 4:54 PM  |
|  <b>AzureFundamentals.sln</b><br>C:\Users\LEnriquez\3D Objects\Downloads\AzureFundamentals-master                     | 6/16/2023 1:40 PM  |
|  <b>FunctionApp1.sln</b><br>C:\Azure Functions\Sample1 AzureFuncino\FunctionApp1                                      | 6/16/2023 1:28 PM  |
|  <b>AuroraExamples.sln</b><br>C:\AWS SDK for .Net\Sample10 Arora  | 6/16/2023 10:28 AM |
|  <b>ListFacesExample.sln</b><br>C:\AWS SDK for .Net\Sample18 Rekognition\ListFacesExample                             | 6/16/2023 10:26 AM |
|  <b>CreateStreamExample.sln</b><br>C:\AWS SDK for .Net\Sample17 Kinesis\CreateStreamExample                          | 6/16/2023 10:12 AM |
|  <b>LambdaExamples.sln</b><br>C:\AWS SDK for .Net\Sample16 Lambda   | 6/16/2023 9:49 AM  |
|  <b>AWS_SNS.sln</b><br>C:\AWS SDK for .Net\Sample15 SNS   | 6/16/2023 9:45 AM  |

## Get started

- **Clone a repository**  
Get code from an online repository like GitHub or Azure DevOps
- **Open a project or solution**  
Open a local Visual Studio project or .sln file
- **Open a local folder**  
Navigate and edit code within any folder
- **Create a new project**  
Choose a project template with code scaffolding to get started

[Continue without code →](#)

- 1
- 2
- 3
- 4
- 5
- 6

## Create a new project

### Recent project templates

- Azure Functions C#
- Console App C#
- Service Fabric Application C#
- Blank Solution
- ASP.NET Core Web API C#
- Lambda Simple DynamoDB Function (AWS) C#
- ASP.NET Core with Angular C#
- Angular and ASP.NET Core (Preview) TypeScript
- ASP.NET Core with Reactjs and Redux C#
- ASP.NET Core with Reactjs C#

azure

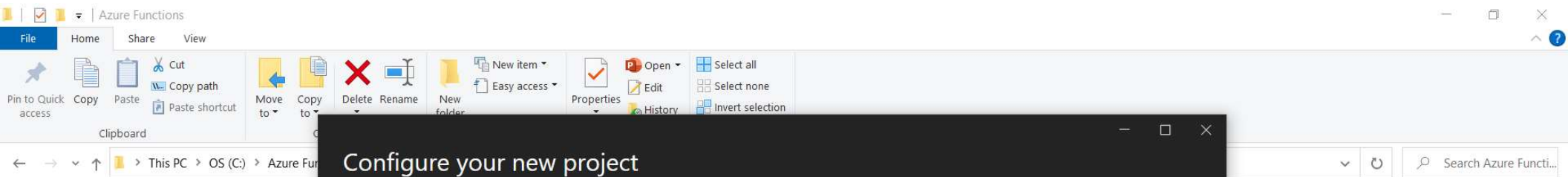
Clear all

All languages All platforms All project types

- Azure Functions**  
A template to create an Azure Function project.  
C# Azure Cloud
- Azure Resource Group**  
This template creates an Azure Resource Group deployment project. The deployment project will contain artifacts needed to provision Azure resources using Azure Resource Manager that will create an environment for your application.  
C# Azure Cloud
- Azure WebJob (.NET Framework)**  
A project template for creating WebJobs which allow you to run programs in your Azure Web Apps.  
C# Azure Cloud
- Azure WebJob (.NET Framework)**  
A project template for creating WebJobs which allow you to run programs in your Azure Web Apps.  
Visual Basic Azure Cloud
- Azure Resource Group**  
This template creates an Azure Resource Group deployment project. The

Back Next

Click to add notes



## Configure your new project

Azure Functions

C#

Azure

Cloud

Project name

FunctionApp2

Location

C:\Azure Functions\Sample2 AzureFunction\

Solution name ⓘ

FunctionApp2

☒ Place solution and project in the same directory

Project will be created in "C:\Azure Functions\Sample2 AzureFunction\FunctionApp2\"

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Next

5 items 1 item selected 481 KB

Type here to search

Luxoft  
A DUC Technology Company



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US

10:57 AM  
6/19/2023

6

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7

Additional information

Azure Functions C# Azure Cloud

Functions worker .NET 7.0 Isolated

Function Http trigger

☒ Use Azurite for runtime storage account (AzureWebJobsStorage)

☐ Enable Docker

Authorization level Function

Back Create

Click to add notes

Designer

Sorry, no design ideas for this slide.

When we have design ideas, we'll show them to you right here.

[Learn more](#)

Visual Studio interface showing the development of an Azure Function project named **FunctionApp2**.

The main editor displays the code for **Function1.cs** within the **FunctionApp2.Function1** namespace. The code defines a **Function1** class with a constructor and a **Run** method.

```
1 using System.Net;
2 using Microsoft.Azure.Functions.Worker;
3 using Microsoft.Azure.Functions.Worker.Http;
4 using Microsoft.Extensions.Logging;
5
6 namespace FunctionApp2
7 {
8     2 references
9     public class Function1
10    {
11        private readonly ILogger _logger;
12
13        0 references
14        public Function1(ILoggerFactory loggerFactory)
15        {
16            _logger = loggerFactory.CreateLogger<Function1>();
17        }
18
19        [Function("Function1")]
20        0 references
21        public HttpResponseMessage Run([HttpTrigger(AuthorizationLevel.Function, "get", "post")] HttpRequestData req)
22        {
23            _logger.LogInformation("C# HTTP trigger function processed a request.");
24
25            var response = req.CreateResponse(HttpStatusCode.OK);
26            response.Headers.Add("Content-Type", "text/plain; charset=utf-8");
27
28            response.WriteString("Welcome to Azure Functions!");
29
30            return response;
31        }
32    }
```

The Solution Explorer on the right shows the project structure:

- Solution 'FunctionApp2' (1 of 1 project)
  - FunctionApp2
    - Connected Services
    - Dependencies
    - Properties
      - launchSettings.json
      - serviceDependencies.json
      - .gitignore
    - C# Function1.cs
    - host.json
    - local.settings.json
    - C# Program.cs

The Properties window at the bottom right shows the **Function1.cs** File Properties, with the File Name set to **Function1.cs**.

The status bar at the bottom indicates 100% zoom, no issues found, and the current line is 1, column 1.





Browser tabs: github.co x | Create se x | Azure Fur x | Azure Fur x | Cloudshii x | Cloudshii x | Triggers x | Azure Blo x | Azure Fur x | Azure/az x | localhost x

Address bar: localhost:7265/api/Function1

Browser icons: Gmail, YouTube, Maps, Noticias, Traducir, News, Translate, Elastic Container Se..., LattePanda 3 Delta..., Turkey launches TO..., ESP32 SIM800L GS..., Basic-ESP32-Tutori..., GPS Car Tracker Usi...

Welcome to Azure Functions!

Taskbar: Windows logo, Search (Type here to search), Luxoft, Task View, Chrome, Edge, Mail, Paint, File Explorer, Teams, OneDrive, Clock, Task View, Visual Studio, VS Code, Office, OneNote, Word, PowerPoint, Excel, Outlook, Calendar, Photos, Settings, Network, Volume, Temperature (71°F), Language (ENG US), Date/Time (11:00 AM 6/19/2023), Notifications (6)

Solution Explorer

Search Solution Explorer (Ctrl+)

- Solution 'Fu
- Function
- Conn
- Dep
- Prop
- la
- se
- .gitig
- C# Func
- host
- local
- C# Prog

Build

Rebuild

Clean

Analyze and Code Cleanup

Pack

Publish...

Publish to AWS...

Scope to This

New Solution Explorer View

File Nesting

Edit Project File

New Azure Function...

New Item... Ctrl+Shift+A

Existing Item... Shift+Alt+A

New Folder

Container Orchestrator Support...

Docker Support...

Machine Learning Model...

Project Reference...

Shared Project Reference...

COM Reference...

Service Reference...

Connected Service

Class...

New EditorConfig

New EditorConfig (IntelliCode)

Add

Manage NuGet Packages...

Manage User Secrets

Remove Unused References...

Sync Namespaces

Configure Startup Projects...

Set as Startup Project

Debug

Cut Ctrl+X

Remove Del

Rename F2

Unload Project

Load Direct Dependencies

Load Entire Dependency Tree

Copy Full Path

Open Folder in File Explorer

Open in Terminal

Properties Alt+Enter



File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) FunctionApp2

Debug Any CPU FunctionApp2

### Add New Item - FunctionApp2

Sort by: Default

Search (Ctrl+E)

Type: C# Items  
Add an Azure Function to the project.

- Class C# Items
- Azure Function C# Items**
- Class for U-SQL C# Items
- Interface C# Items
- Component Class C# Items
- ADO.NET Entity Data Model C# Items
- Application Configuration File C# Items
- Application Manifest File (Windows Only) C# Items
- Assembly Information File C# Items
- Bitmap File C# Items
- Code Analysis Rule Set C# Items
- Code File C# Items
- Cursor File C# Items
- DataSet C# Items

Name: Function2.cs

Add Cancel

### Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'FunctionApp2' (1 of 1 project)

- FunctionApp2
  - Connected Services
  - Dependencies
  - Properties
  - .gitignore
  - Function1.cs
  - host.json
  - local.settings.json
  - Program.cs

### Properties

FunctionApp2 Project Properties

File Name FunctionApp2.csproj

File Name  
Name of the project file.

Ready

Type here to search

Luxoft

Add to Source Control Select Repository

71°F ENG 11:01 AM 6/19/2023

File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) FunctionApp2

Debug Any CPU FunctionApp2

Sign in Live Share My First Project

### New Azure Function - Function2

- Service Bus Queue trigger
- Http trigger**
- Timer trigger
- Queue trigger
- Blob trigger
- SQL input binding isolated
- SQL output binding isolated
- Event Grid trigger
- Event Hub trigger
- Service Bus Topic trigger
- Durable Functions Orchestration
- Cosmos DB Trigger
- SignalR
- RabbitMQ trigger

Authorization level

- Function
- Function
- Anonymous
- Admin

Add Cancel

### Solution Explorer

Search Solution Explorer (Ctrl+)

Solution 'FunctionApp2' (1 of 1 project)

- FunctionApp2**
  - Connected Services
  - Dependencies
  - Properties
  - .gitignore
  - Function1.cs
  - host.json
  - local.settings.json
  - Program.cs

### Properties

FunctionApp2 Project Properties

File Name FunctionApp2.csproj

**File Name**  
Name of the project file.

Ready Type here to search Luxoft Add to Source Control Select Repository

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Visual Studio interface showing the development of an Azure Function project named **FunctionApp2**.

**Code Editor (Function2.cs):**

```
1 using System.Net;
2 using Microsoft.Azure.Functions.Worker;
3 using Microsoft.Azure.Functions.Worker.Http;
4 using Microsoft.Extensions.Logging;
5
6 namespace FunctionApp2
7 {
8     2 references
9     public class Function2
10    {
11        private readonly ILogger _logger;
12
13        0 references
14        public Function2(ILoggerFactory loggerFactory)
15        {
16            _logger = loggerFactory.CreateLogger<Function2>();
17        }
18
19        [Function("Function2")]
20        0 references
21        public HttpResponseMessage Run([HttpTrigger(AuthorizationLevel.Function, "get", "post")] HttpRequestData req)
22        {
23            _logger.LogInformation("C# HTTP trigger function processed a request.");
24
25            var response = req.CreateResponse(HttpStatusCode.OK);
26            response.Headers.Add("Content-Type", "text/plain; charset=utf-8");
27
28            response.WriteString("Welcome to Azure Functions!");
29
30            return response;
31        }
32    }
```

**Solution Explorer:** Shows the project structure for **FunctionApp2**, including **Function2.cs**, **host.json**, **local.settings.json**, and **Program.cs**.

**Properties Window:** Displays **Function2.cs File Properties**, showing the **Build Action** as **C# compiler**.

**Build Action:** How the file relates to the build and deployment processes.

**Status Bar:** Shows **100 %** zoom, **No issues found**, and **Ln: 1 Ch: 1 SPC CRLF**.

**Taskbar:** Includes the Windows taskbar with search, task view, and application icons. The system tray shows the date and time: **6/19/2023 11:02 AM**.

FunctionApp2

Process: [17292] dotnet.exe Lifecycle Events Thread: Stack Frame:

Function2.cs

```
1 using System;
2 using Microsoft.Azure.Functions.CoreTools;
3 using Microsoft.Azure.Functions.CoreTools;
4 using Microsoft.Azure.Functions.CoreTools;
5
6 namespace FunctionApp2
7 {
8     public class Functions
9     {
10         public static void Function1([GET,POST] http://localhost:7265/api/Function1)
11         {
12         }
13
14         public static void Function2([GET,POST] http://localhost:7265/api/Function2)
15         {
16         }
17     }
18 }
19
20
21
22
```

Output

Show output from: Debug

'dotnet.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\7.0.5\System.Reflection.Emit.ILGeneration.dll'. Skipped loading symbols. Module is c

'dotnet.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\7.0.5\System.Runtime.InteropServices.RuntimeInformation.dll'. Skipped loading symbol

'dotnet.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\7.0.5\System.Numerics.Vectors.dll'. Skipped loading symbols. Module is optimized and

'dotnet.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\7.0.5\System.Text.RegularExpressions.dll'. Skipped loading symbols. Module is optimi

'dotnet.exe' (CoreCLR: clrhost): Loaded 'C:\Program Files\dotnet\shared\Microsoft.NETCore.App\7.0.5\System.Runtime.Loader.dll'. Skipped loading symbols. Module is optimized and t

'dotnet.exe' (CoreCLR: clrhost): Loaded 'C:\Azure Functions\Sample2 AzureFunction\FunctionApp2\bin\Debug\net7.0\Microsoft.Azure.Functions.Worker.Extensions.Http.dll'. Skipped loa

'dotnet.exe' (CoreCLR: clrhost): Loaded 'C:\Azure Functions\Sample2 AzureFunction\FunctionApp2\bin\Debug\net7.0\Microsoft.Azure.Functions.Worker.Extensions.Abstractions.dll'. Ski

Call Stack Breakpoints Exception Settings Command Window Immediate Window Output

Ready

Type here to search

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**Solution Explorer**

Search Solution Explorer (Ctrl+)

- Solution
- Func
  - C
  - D
  - Pi
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  - C# Fu
  - C# Fu
  - he
  - lc
  - C# P

**Build**

- Rebuild
- Clean
- Analyze and Code Cleanup
- Pack
- Publish...
- Publish to AWS...
- Scope to This
- New Solution Explorer View
- File Nesting
- Edit Project File
- Add
- Manage NuGet Packages...
- Manage User Secrets
- Remove Unused References...
- Sync Namespaces
- Configure Startup Projects...
- Set as Startup Project
- Debug
- Cut (Ctrl+X)
- Remove (Del)
- Rename (F2)
- Unload Project
- Load Direct Dependencies
- Load Entire Dependency Tree
- Copy Full Path
- Open Folder in File Explorer
- Open in Terminal
- Properties (Alt+Enter)

**Properties**

**FunctionApp2**

**File Name**

**File Name**

Name of the p



FileEditViewGitProjectBuildDebugTestAnalyzeToolsExtensionsWindowHelpSearch (Ctrl+Q)FunctionApp2Sign inLive ShareMy First Project

FunctionApp2: Publish

Connected Services

Publish

Publish profiles


To deploy


Add a profile


Publish


Where are you publishing today?

Target

 **Azure**  
Publish your application to the Microsoft cloud

 **Docker Container Registry**  
Publish your application to any supported Container Registry that works with Docker images

 **Folder**  
Publish your application to a local folder or file share

 **Import Profile**  
Import your publish settings to deploy your app

Back

Next

Finish

Cancel

Solution Explorer

Solution Explorer (Ctrl+)

Solution 'FunctionApp2' (1 of 1 project)

**FunctionApp2**

Connected Services

Dependencies

Properties

.gitignore

Function1.cs

Function2.cs

host.json

local.settings.json

Program.cs


Git Changes


Error List

Output

Ready

Type here to search





Add to Source Control

Select Repository

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FunctionApp2Sign inLive ShareMy First Project

FunctionApp2: Publish

Connected Services

Publish


Publish profiles


To deploy


Add a profile


Target

Specific target

 **Azure Function App (Windows)**  
Publish your application code to a serverless compute that scales dynamically and runs code on-demand

 **Azure Function App (Linux)**  
Publish your application code to a serverless compute that scales dynamically and runs code on-demand

 **Azure Function App Container**  
Publish your application as a Docker image to Azure Container Registry and run it on Azure Function App

 **Azure Container Registry**  
Publish your application as a Docker image to Azure Container Registry

Back

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Finish

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Solution 'FunctionApp2' (1 of 1 project)

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Visual Studio interface showing the "Publish" dialog for "FunctionApp2".

**Menu Bar:** File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help, Search (Ctrl+Q), FunctionApp2

**Toolbar:** Debug, Any CPU, FunctionApp2

**Windows:**

- FunctionApp2: Publish**
  - Connected Services
  - Publish profiles
- Publish Dialog**
  - Microsoft account: luiscoenriquez@hotmail.com
  - Warning: Re-enter your credentials
  - Target: Subscription name: Azure subscription 1
  - Specific target: Functions instance
  - Search: [Search bar]
  - Results: azure\_function
    - luisazurefunction (Consumption)
    - Deployment Slots
  - Run from package file (recommended) [checked]
  - Buttons: Back, Next, Finish, Cancel
- Solution Explorer**
  - Solution 'FunctionApp2' (1 of 1 project)
  - FunctionApp2
    - Connected Services
    - Dependencies
    - Properties
    - .gitignore
    - Function1.cs
    - Function2.cs
    - host.json
    - local.settings.json
    - Program.cs
- Properties**

**Taskbar:** Ready, Search, Luxoft, Taskbar icons, System tray: 71°F, ENG US, 11:07 AM, 6/19/2023

FileEditViewGitProjectBuildDebugTestAnalyzeToolsExtensionsWindowHelpSearch (Ctrl+Q)FunctionApp2

FunctionApp2: Publish

Connected Services

Publish

luisazurefunction - Zip Deploy.pubxml

Azure Function App (Windows)

Publish

Publish profile creation progress

Target

Specific target

Functions instance

Finish

✔ Publish profile 'C:\Azure Functions\Sample2 AzureFunction\FunctionApp2\Properties\PublishProfiles\luisazurefunction - Zip Deploy.pubxml' created.

ⓘ Configuring service dependency 'applsights1' in your application...

✔ Service dependency 'applsights1' is configured in your application.

ⓘ Configuring service dependency 'storage1' in your application...

✔ Service dependency 'storage1' is configured in your application.

☐ Automatically close when succeeded

Back

Next

Close

Cancel

Connection settings: APPLICATIONINSIGHTS\_CONNECTION\_STRING

Connected

Solution Explorer

Search Solution Explorer (Ctrl+)

Solution 'FunctionApp2' (1 of 1 project)

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FunctionApp2

Sign inLive ShareMy First Project

FunctionApp2: Publish

Connected Services

Publish

luisazurefunction - Zip Deploy.pubxml

Azure Function App (Windows)

Publish

+ New profileMore actions

Ready to publish.

Settings

ConfigurationRelease

Target RuntimePortable

Show all settings

Hosting

Subscription846901e6-da09-45c8-98ca-7cca2353ff0e

Resource groupazure\_function

Resource nameluisazurefunction

User name\$luisazurefunction

Password\*\*\*\*\*

Site: https://luisazurefunction.azurewebsites.net

Service Dependencies

Azure Application Insights: luisazurefunction

Connection settings: APPLICATIONINSIGHTS\_CONNECTION\_STRING

Connected

Solution Explorer

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Solution 'FunctionApp2' (1 of 1 project)

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Google

Edge

Outlook

File Explorer

Teams

Visual Studio

PowerShell

Terminal

Task View

Search

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FunctionApp2

Sign inLive ShareMy First Project

FunctionApp2: Publish

Connected Services

Publish

+ New profileMore actions

Ready to publish.

Settings

ConfigurationRelease

Target RuntimePortable

Show all settings

Hosting

Subscription846901e6-da09-45c8-98ca-7cca2353ff0e

Resource groupazure\_function

Resource name Luisazurefunction

User name \$Luisazurefunction

Password\*\*\*\*\*

Site: https://luisazurefunction.azurewebsites.net

Service Dependencies

Azure Application Insights: luisazurefunctionConnected

Azure Storage: azurefunction9cbbConnected

Solution Explorer

Search Solution Explorer (Ctrl+)

Solution 'FunctionApp2' (1 of 1 project)

FunctionApp2

Connected Services

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<https://luisazurefunction.azurewebsites.net>