tretton37

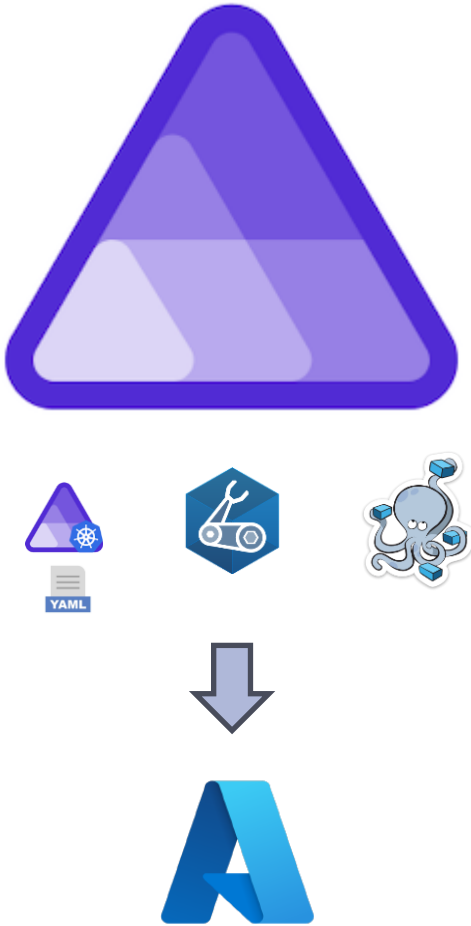
.NET 9 is the best platform for Cloud Native development

.NET 8 investments

.NET 8 investments

Container Artifacts, Open Telemetry, Resilience, gRPC tooling etc

Aspire 1.0 GA – Summer - .NET 8


YAML


dapr


radius

.NET 9 platform for Cloud Native development

.NET 9 road map

.NET 9 road map

Aspire
AOT
Eventing
Distributed Cache
Minimal Apis
Blazor

.NET 9 road map

~~**Aspire**~~
AOT
Eventing
Minimal Apis
Distributed Cache
Blazor
WASM

.NET 9 road map

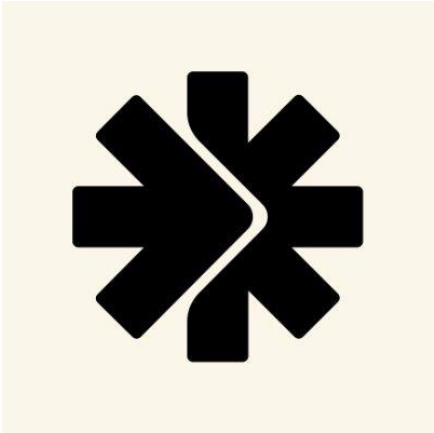
Minimal Apis

OPENAPI
INITIATIVE

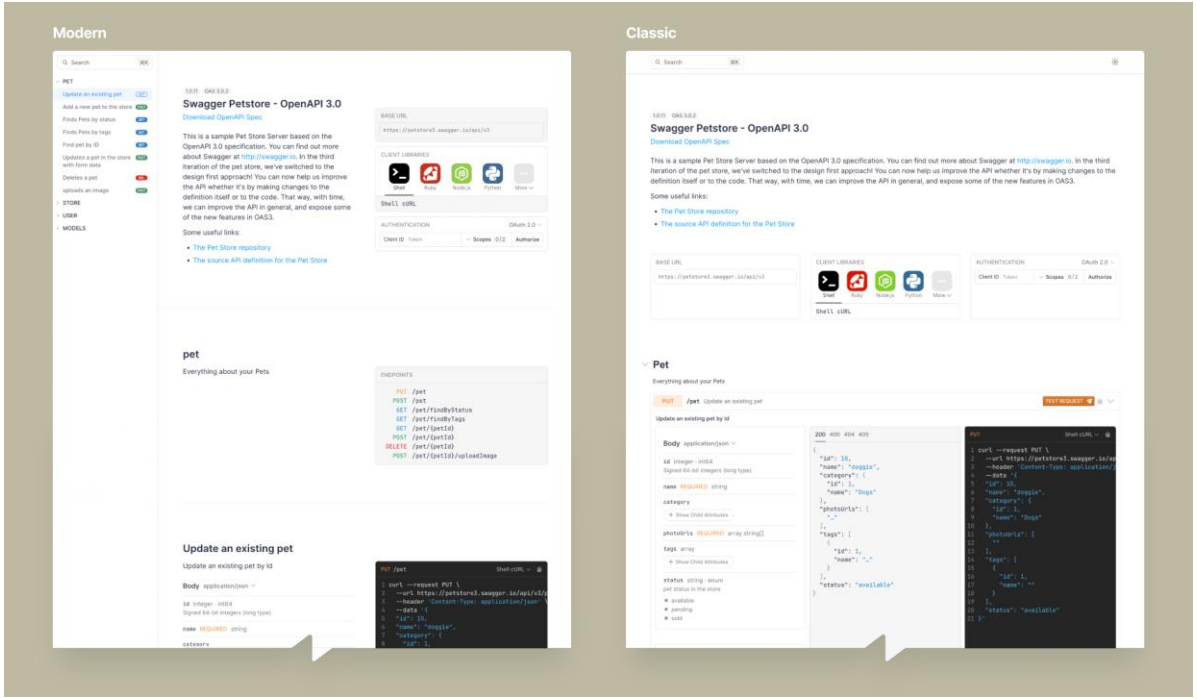
.NET 9 road map

Open Api v2 (swagger)
Open Api v3

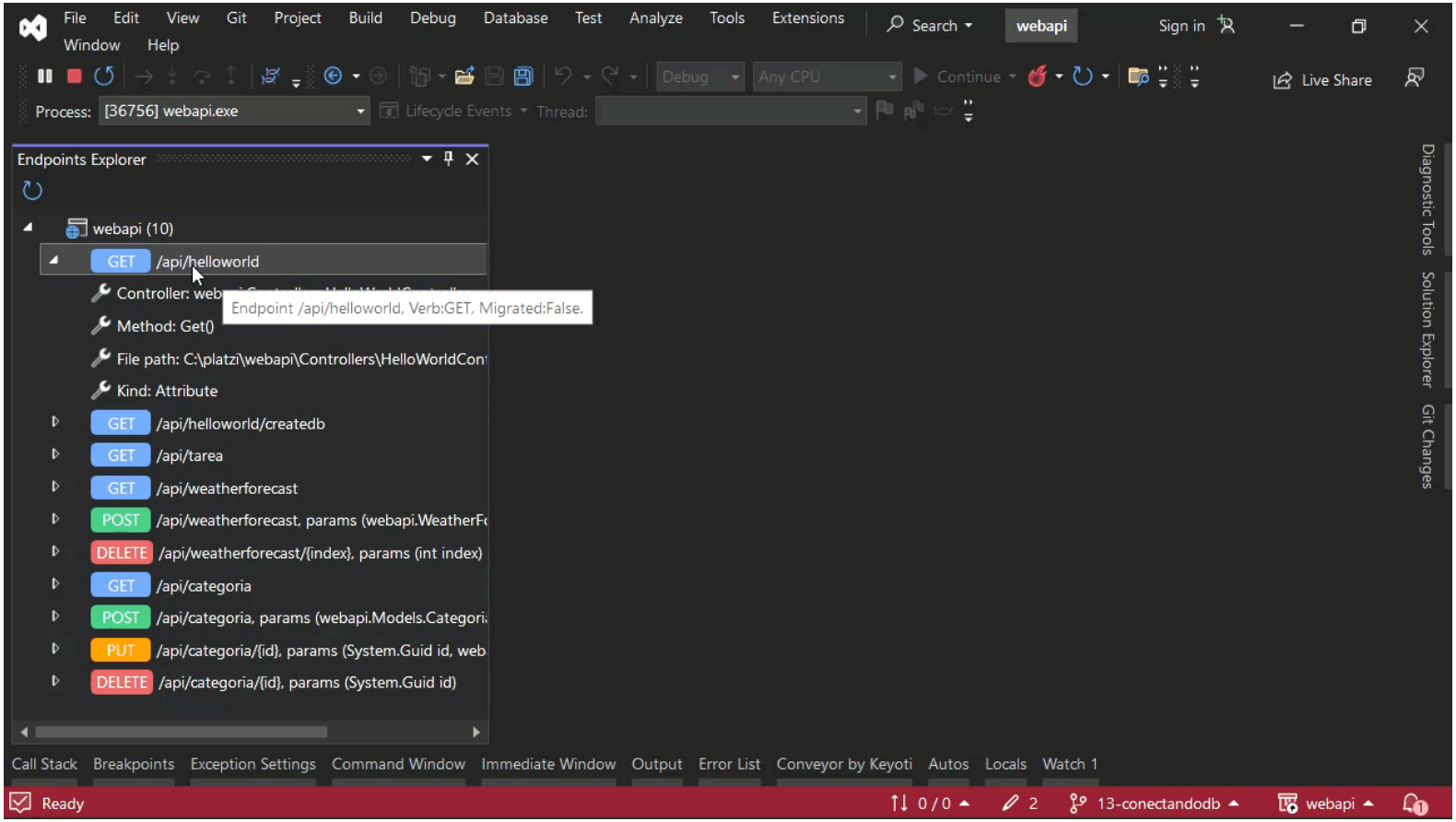
```
var builder = WebApplication.CreateBuilder();

builder.Services.AddOpenApi();

var app = builder.Build();

app.MapOpenApi();

app.MapGet("/", () => "Hello world!");

app.Run();
```



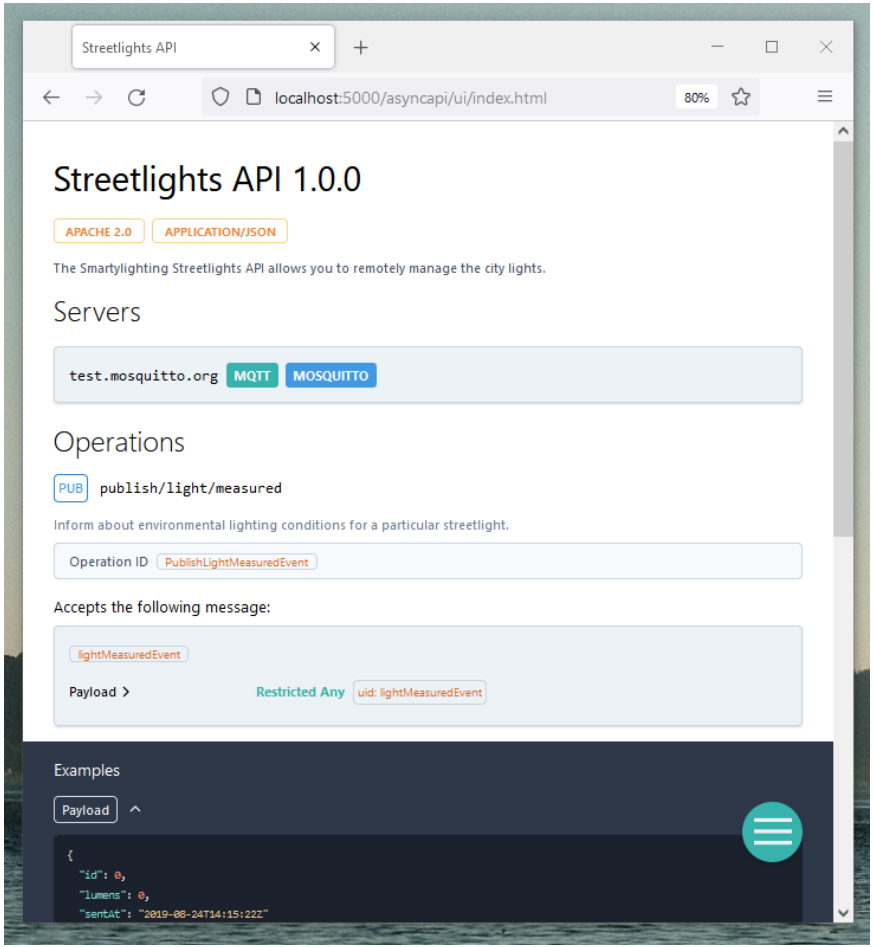
```
app.MapScalarApiReference();
```


Modern
Swagger Petstore - OpenAPI 3.0
pet
Update an existing pet
Classic
Swagger Petstore - OpenAPI 3.0
Pet

System.Text.Json
Json Schema


File Edit View Git Project Build Debug Database Test Analyze Tools Extensions
Search
webapi
Sign in
Window Help
Debug
Any CPU
Continue
Live Share
Process: [36756] webapi.exe
Lifecycle Events
Thread:
Endpoints Explorer
webapi (10)
GET /api/helloworld
Controller: web
Endpoint /api/helloworld, Verb:GET, Migrated:False.
Method: Get()
File path: C:\platzi\webapi\Controllers\HelloWorldCon
Kind: Attribute
GET /api/helloworld/createdb
GET /api/tarea
GET /api/weatherforecast
POST /api/weatherforecast, params (webapi.WeatherF
DELETE /api/weatherforecast/{index}, params (int index)
GET /api/categoria
POST /api/categoria, params (webapi.Models.Categori
PUT /api/categoria/{id}, params (System.Guid id, web
DELETE /api/categoria/{id}, params (System.Guid id)
Diagnostic Tools
Solution Explorer
Git Changes
Call Stack
Breakpoints
Exception Settings
Command Window
Immediate Window
Output
Error List
Conveyor by Keyoti
Autos
Locals
Watch 1
Ready
0 / 0
2
13-conectandodb
webapi

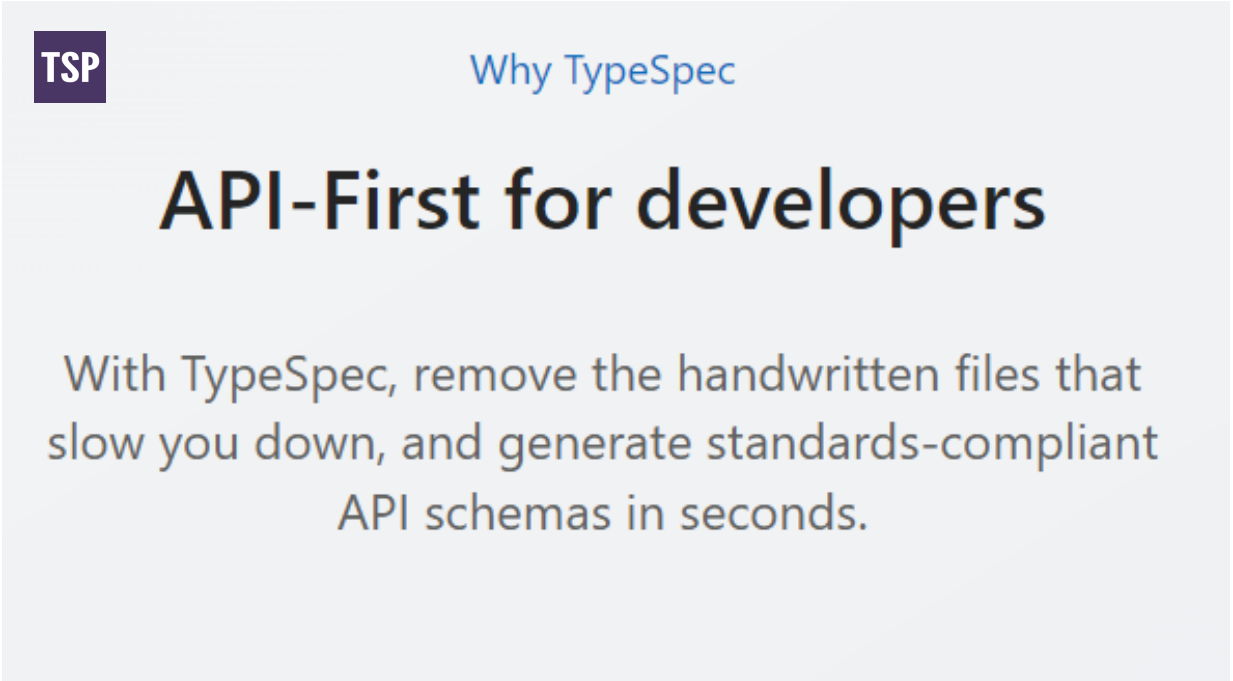

AsyncAPI



GitHub https://github.com/asyncapi/saunter

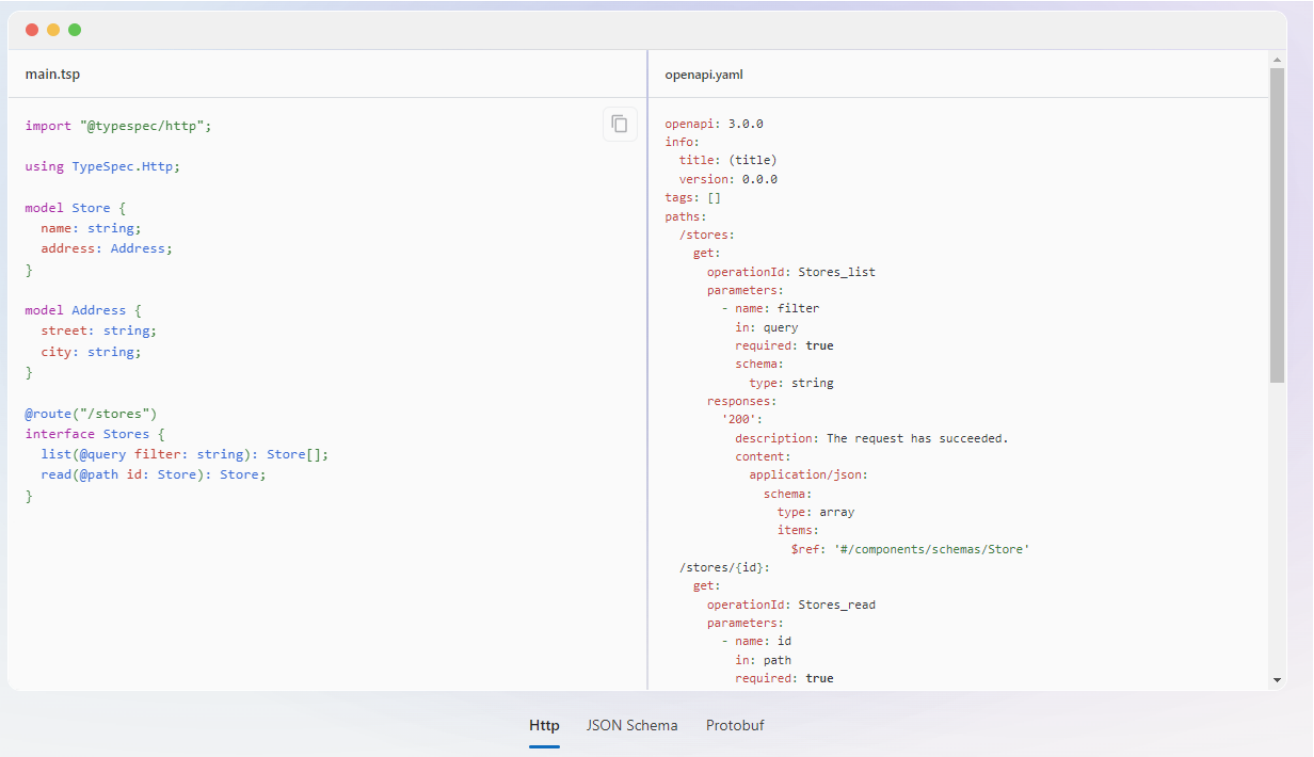
GitHub https://github.com/cloudevents/spec

GitHub https://github.com/microsoft/typespec



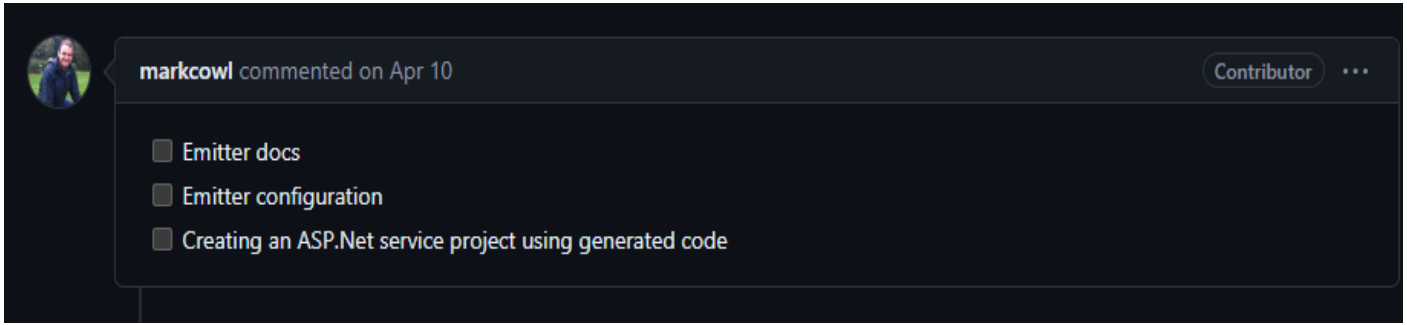
https://typespec.io

TSP



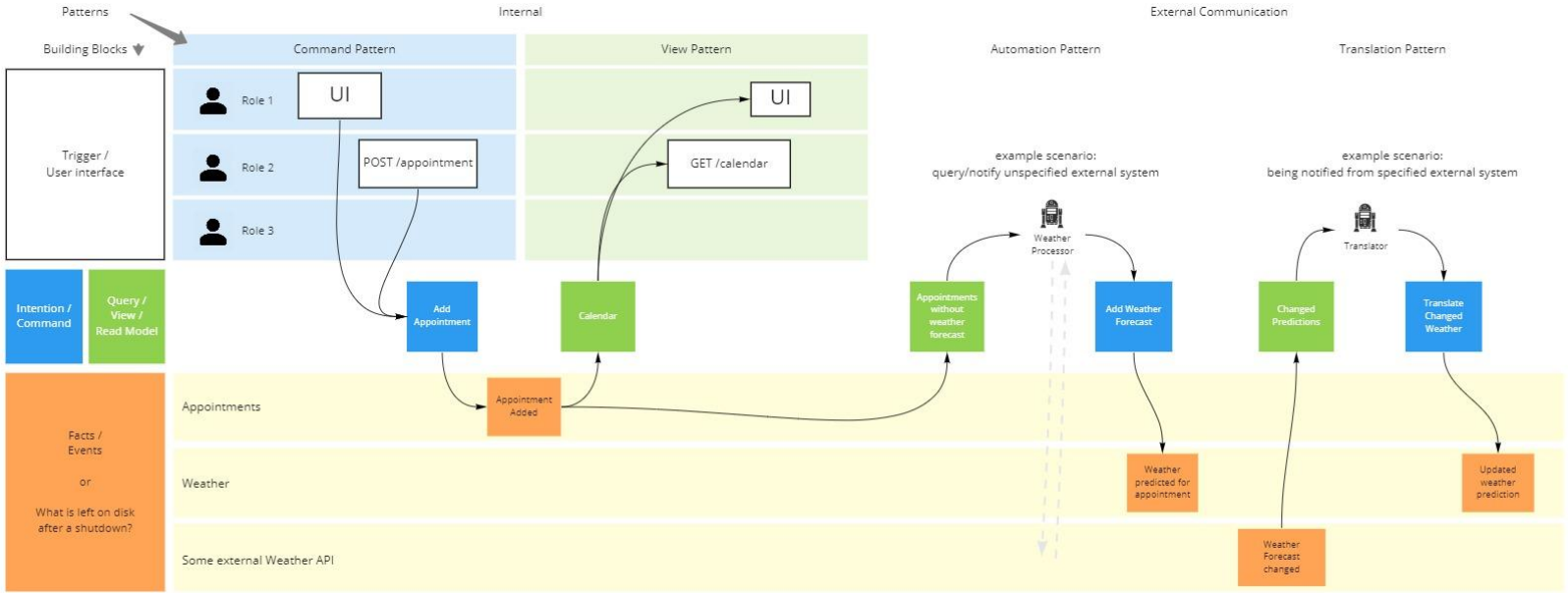
https://typespec.io

TSP



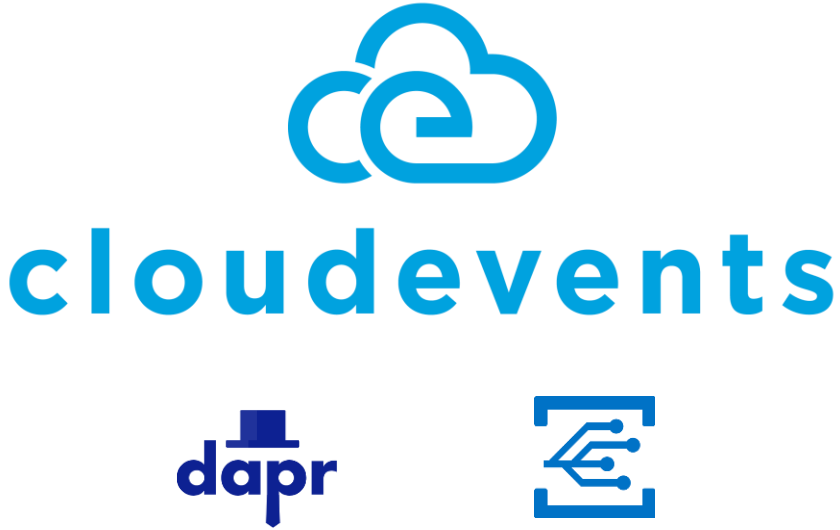
GitHub https://github.com/microsoft/typespec/issues/3144

Event modeling overview

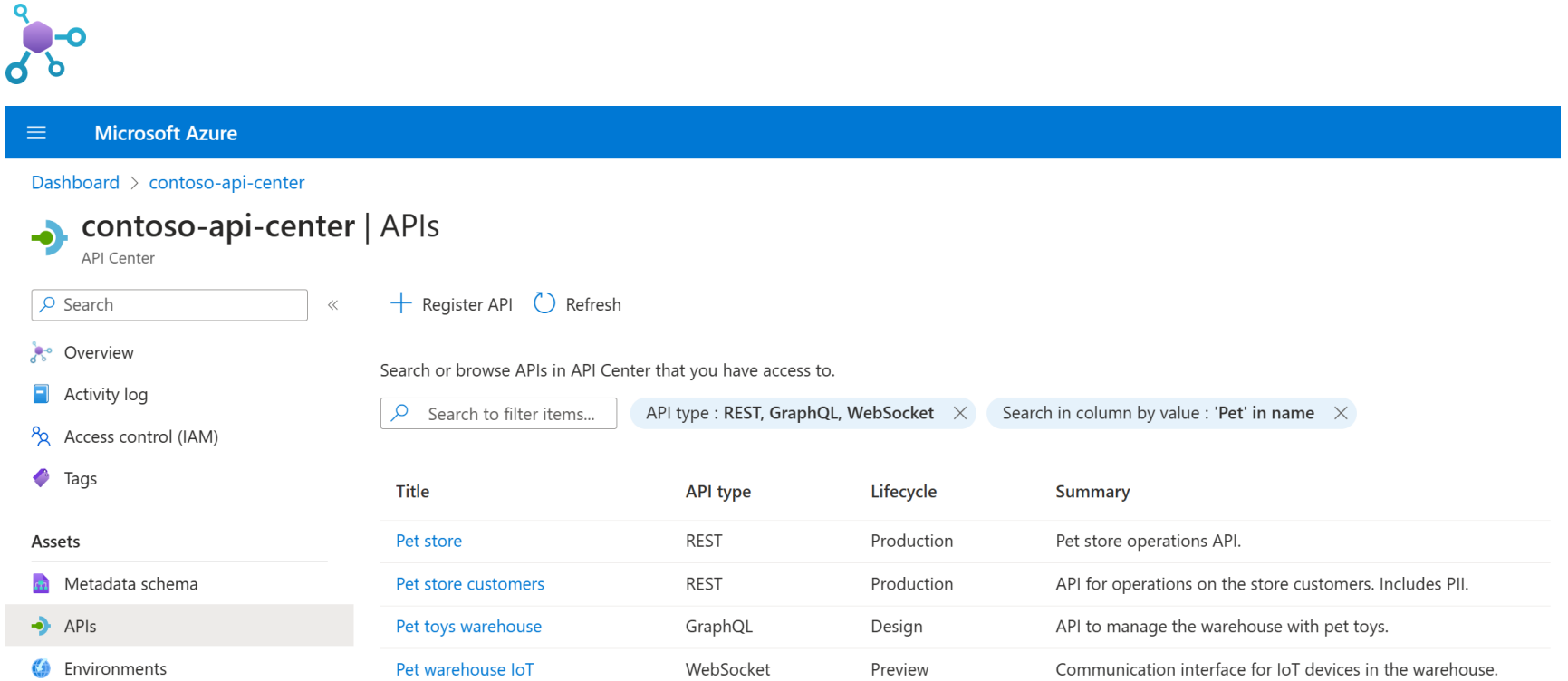


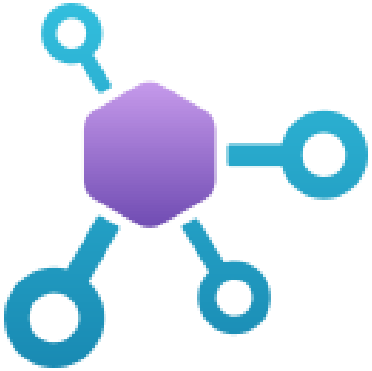
Azure

Azure Container Apps Open Telemetry Agent


cloudevents
dapr


YARP


Microsoft Azure
Dashboard > contoso-api-center
contoso-api-center | APIs
API Center
Search
Register API
Refresh
Overview
Activity log
Access control (IAM)
Tags
Assets
Metadata schema
APIs
Environments
Search or browse APIs in API Center that you have access to.
Search to filter items...
API type : REST, GraphQL, WebSocket
Search in column by value : 'Pet' in name
Title
API type
Lifecycle
Summary
Pet store
REST
Production
Pet store operations API.
Pet store customers
REST
Production
API for operations on the store customers. Includes PII.
Pet toys warehouse
GraphQL
Design
API to manage the warehouse with pet toys.
Pet warehouse IoT
WebSocket
Preview
Communication interface for IoT devices in the warehouse.




Spotify

.NET 9 road map

Minimal Apis

```
using System.ComponentModel.DataAnnotations;

var app = WebApplication.Create();
var todos = new List<Todo>();

// Validating a single complex parameter
app.MapPost("/todo", (Todo todo) => todos.Add(todo))
    .WithValidation();

// Validate a single simple parameter
app.MapPost("/todo/{id}", ([Required] [Range(1, int.MaxValue)] int id) => todos.SingleOrDefault(todo => todo.Id == id))
    .WithValidation();

// // Validate two parameters, one simple and one complex
app.MapPut("/todo/{id}", ([Required] [Range(1, int.MaxValue)] int id, Todo todo) =>
    {
        var index = todos.FindIndex(todo => todo.Id == id);
        todos[index] = todo;
    })
    .WithValidation();

// Validate with IEnumerable types
// For each validatable type, we produce a `Validate` overload that takes `IEnumerable<T>`
app.MapPost("/todos", (List<Todo> todosIn) => todos.AddRange(todosIn))
    .WithValidation();

// Validate with polymorphic types
// Under the hood, we produce two `Validate` calls. One that takes a `TodoWithProject` and another
// that takes `Todo`.
app.MapPost("/todos-with-project", (TodoWithProject todosIn) => todos.Add(todosIn))
    .WithValidation();

// Validate with recursive types
// In MVC, when MaxValidationDepth is lower than the amount of recursion in the stack, then
// an exception will be thrown. In this implementation, we present a warning to the user.
app.MapPost("/recursive-todos", (RecursiveTodo todo) => Results.Ok("Valid!"));
```

GitHub **https://github.com/captainsafia/ValidationSourceGenerator/**

.NET 9 road map

~~**Aspire**~~
AOT
~~**Eventing**~~
~~**Minimal Apis**~~
Distributed Cache
Blazor
WASM

.NET 9 road map

Distributed Cache

Hybrid cache

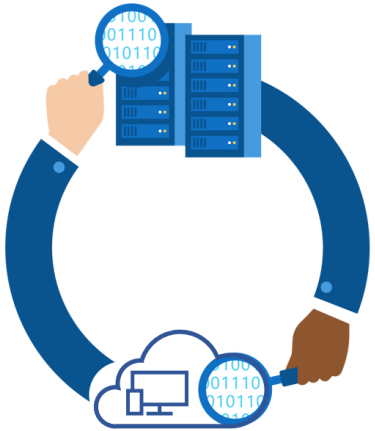
Hybrid cache

L1/L2
Stampede
Tag eviction

C# Copy

```
// Add services to the container.
var builder = WebApplication.CreateBuilder(args);

// Add services to the container.
builder.Services.AddAuthorization();

builder.Services.AddHybridCache();
```

The preceding code registers the `HybridCache` service with default options. The registration API can also configure options and serialization.



FASTER

GitHub https://microsoft.github.io/FASTER/

.NET 9 road map

WASM

web assembly

WASM
WASI
Web Assembly Component Model & (WIT)


WA
SI


BYTECODE
ALLIANCE

```
Installed Workload Id      Manifest Version      Installation Source
----------------------------------------------------------------------------------
aspire                     8.0.0/8.0.100         SDK 8.0.300, VS 17.11.34929.205
wasi-experimental          8.0.4/8.0.100         SDK 8.0.300
```

.NET 9 road map

WASM

“With .NET 9, they’re planning on including WASI Preview 2 support. Their WASI work is expected to remain experimental until WASI 1.0 is released.”

Hyper light

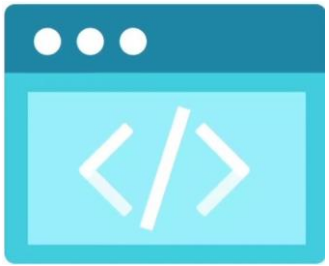
“Hyperlight as a solution for improving the management and security of Web Assembly (Wasm) workloads on Azure

Web scenarios

“A lot of the interest in WASI is to enable hosting small and portable Wasm functions and apps. A key aspect of that is using some form of web programming model.

At the moment, we don’t have ASP.NET Core enabled with WASI. For now, we’ve exposed the http-server WASI type.”

Azure



Distributed Functions for Azure Static Web Apps


















Thank You

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