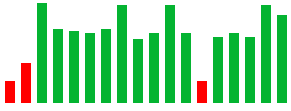
Build history for master (last 18 builds)
Max build time: 00:02:21
Min build time: 00:00:31
Avg build time: 00:01:41



Workshop Refit & Polly

Jacob Duijzer, January 2018

Refit

Refit: The automatic type-safe REST library for .NET Core, Xamarin and .NET

```
public interface IRemoteApi
{
        [Get("/posts")]
        Task<IEnumerable<Post>> GetAllPostsAsync();

        [Post("/posts")]
        [Headers("Authorization: Bearer")]
        Task<Post> AddPostAsync([Body]Post post);

        [Delete("/posts/{id}")]
        [Headers("Authorization: Bearer")]
        Task DeletePostByIdAsync(int id);
}
```

Refit - sample code

```
var remoteApi = RestService
        .For<IRemoteApi>("http://localhost:3000");


var posts = await remoteApi.GetAllPostsAsync();

var singlePost = await remoteApi.GetPostByIdAsync(1);
```

Refit - Scenario 1

Simple api calls

Refit - Scenario 2

Logging

Refit - Scenario 3

Authenticated api calls

Polly

Policies:

- Retry
- CircuitBreaker
- Timeout
- Bulkhead Isolation
- Cache
- Fallback
- PolicyWrap

Polly - sample code

```
// Retry multiple times, calling an action on each retry
// with the current exception, retry count and context
// provided to Execute()
var _retryPolicy = Policy.Handle<SomeExceptionType>()
        .Retry(3, (exception, retryCount, context) =>
        {
        // do something to prevent the next exception
        });

await _retryPolicy.ExecuteAsync(
        remoteApi.GetAllPostsAsync()
);
```

Polly - Scenario 1

Retry

Polly - Scenario 2

Fallback

Polly - Scenario 3

CircuitBreaker

Polly - Scenario 4

Retry with fallback

Polly - Scenario 5

CircuitBreakerWithRetryAndFallBack

HttpClientHandler

- MSDN Documentation
- Scott Hanselmans post With REFIT

Polly - Unit testing

Alternatives - Flurl

```
C#!
// Flurl will use 1 HttpClient instance per host
var person = await "https://api.com"
    .AppendPathSegment("person")
    .SetQueryParams(new { a = 1, b = 2 })
    .WithOAuthBearerToken("my_oauth_token")
    .PostJsonAsync(new
    {
        first_name = "Claire",
        last_name = "Underwood"
    })
    .ReceiveJson<Person>();
```

- Flur.io
- Blog post

Alteratives - DalSoft.RestClient

```
C#!
var config = new Config().UseFormUrlEncodedHandler();

dynamic restClient = new RestClient("https://jsonplaceholder.ty
var user = new User { name="foo", email="foo@bar.com" };

//POST name=foo&email=foo@bar.com  https://jsonplaceholder.typi
result = await client
  .Headers(new { ContentType = "application/x-www-form-urlencod
  .User(1)
  .Post(user);
```

- Blogpost
- Github

Setup sample project

- Get the source from GitHub
- in folder src/api: npm install
- in the folder src/api: npm run start
- configure & run the console app

Links

- Sample repository
- Refit
- Polly
- JSON Server
- Presentation created from markdown with Marp