Toggly .NET client / desktop

Frontend App Key · evaluated-signed · console and desktop

Install

```
dotnet add package
  Toggly.FeatureManagement.Client.Desktop
```

No ASP.NET Core / Generic Host. Trusted server SDK: `/cheatsheets/dotnet`.

Initialize

```
using var http = new HttpClient {
  Timeout = TimeSpan.FromSeconds(10) };
await using var client = DesktopClient.Create(
  new TogglyClientOptions {
    AppKey = Environment.GetEnvironmentVariable(
      "TOGGLY_APP_KEY"),
    Environment = "Production",
    Context = new EvaluationContext(
      "user-123", ["beta"],
      new() { ["plan"] = "premium" }),
    Defaults = new() { ["new-dashboard"] = false }
  }, http);
client.Error += (_, e) ⇒
  Console.Error.WriteLine(e.Message);
await client.InitializeAsync();
if (client.IsEnabled("new-dashboard")) { … }
```

Caller owns `HttpClient`. Missing App Key selects offline defaults. Subscribe to `Error` before init.

Evaluate

```
client.Evaluate(["new-dashboard", "api-v2"]);
client.Evaluate(["new-dashboard", "api-v2"],
  Requirement.Any);
client.Evaluate(["new-dashboard"], negate: true);
```

Unknown keys use configured default, else false. Empty lists are true before negation. No variant-assignment API.

Context & entities

```
await client.SetContextAsync(
  new EvaluationContext("another-user", ["staff"],
    new() { ["role"] = "editor" }));
var order = new EntityContext("Order", "ord-vip",
  new() { ["Vip"] = true, ["Total"] = 250 });
bool on = client.IsEnabled("ExpressCheckout", order);
```

One client per user session. EntityGate without entity fails closed, even when a default is true.

Local gates

`LocalGates` map a flag to `Func<bool>`. ANDed at every read — can disable, cannot enable a remotely off flag. Throwing prerequisite fails closed.

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Signatures & snapshots

- All remote responses require ES256. Pass a directory as the third `DesktopClient.Create` argument for `FileSnapshotStore`.
- `MaximumSignatureAge` defaults to 30 days. `TrustedJwks` / `AllowedKeyIds` pin trust.
- `EnableLiveUpdates` defaults true. Marshal `Changed` to the UI thread (Avalonia: `Dispatcher.UIThread.Post`).

Pitfalls

- Front-end App Key — not the backend/management key. Gates do not authorize protected resources.
- Dispose the client before disposing HTTP resources.
- Usage metrics and middleware live on the trusted server SDK.

Resources

- Docs: `docs.toggly.io/sdks/dotnet-client`
- Server sheet: `/cheatsheets/dotnet`
- Sample: `Toggly.Samples/dotnet-client-sdk`