

Say goodbye to IConfiguration and embrace the power of the IOptions pattern



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**.NET DEVELOPER
CONFERENCE '24**

DIE KONFERENZ FÜR .NET-ENTWICKLER
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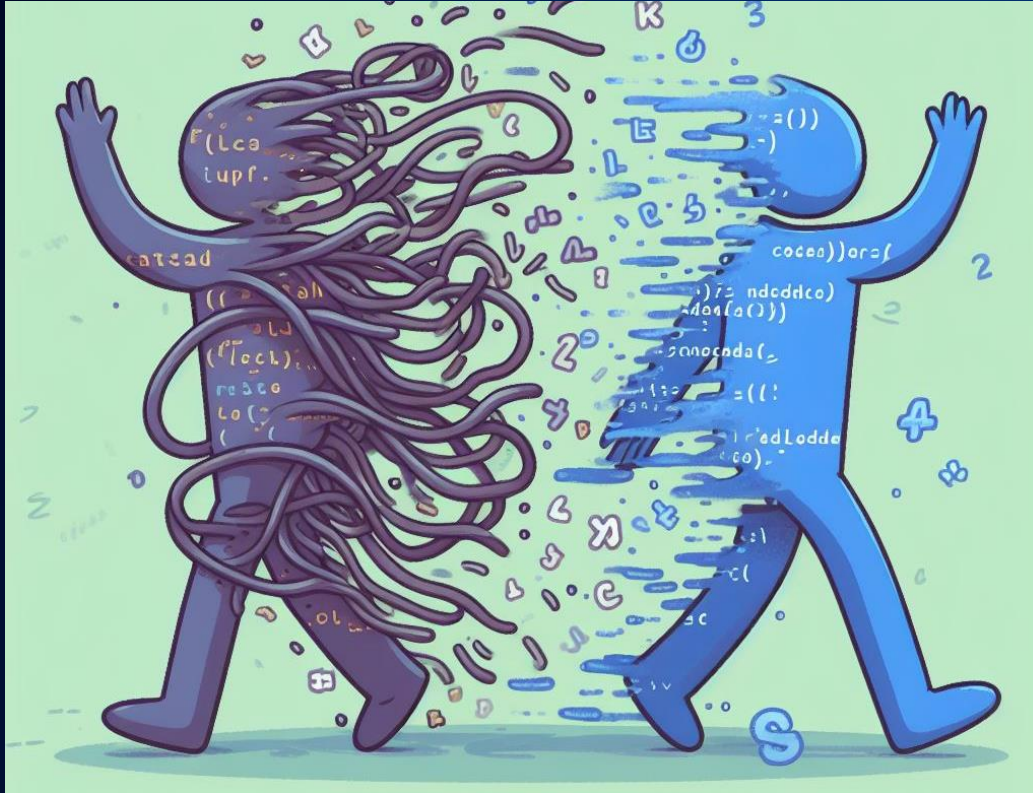
About me

- **Name:** Pieter Samyn
- **Title:** Technology lead
- **Company:** ZF
- **Professional Background:**
 - Backend development
 - AWS serverless ecosystem
 - Performance
 - Maintainability



[illegible]

Introduction



ICongfiguration

Concept

Providers

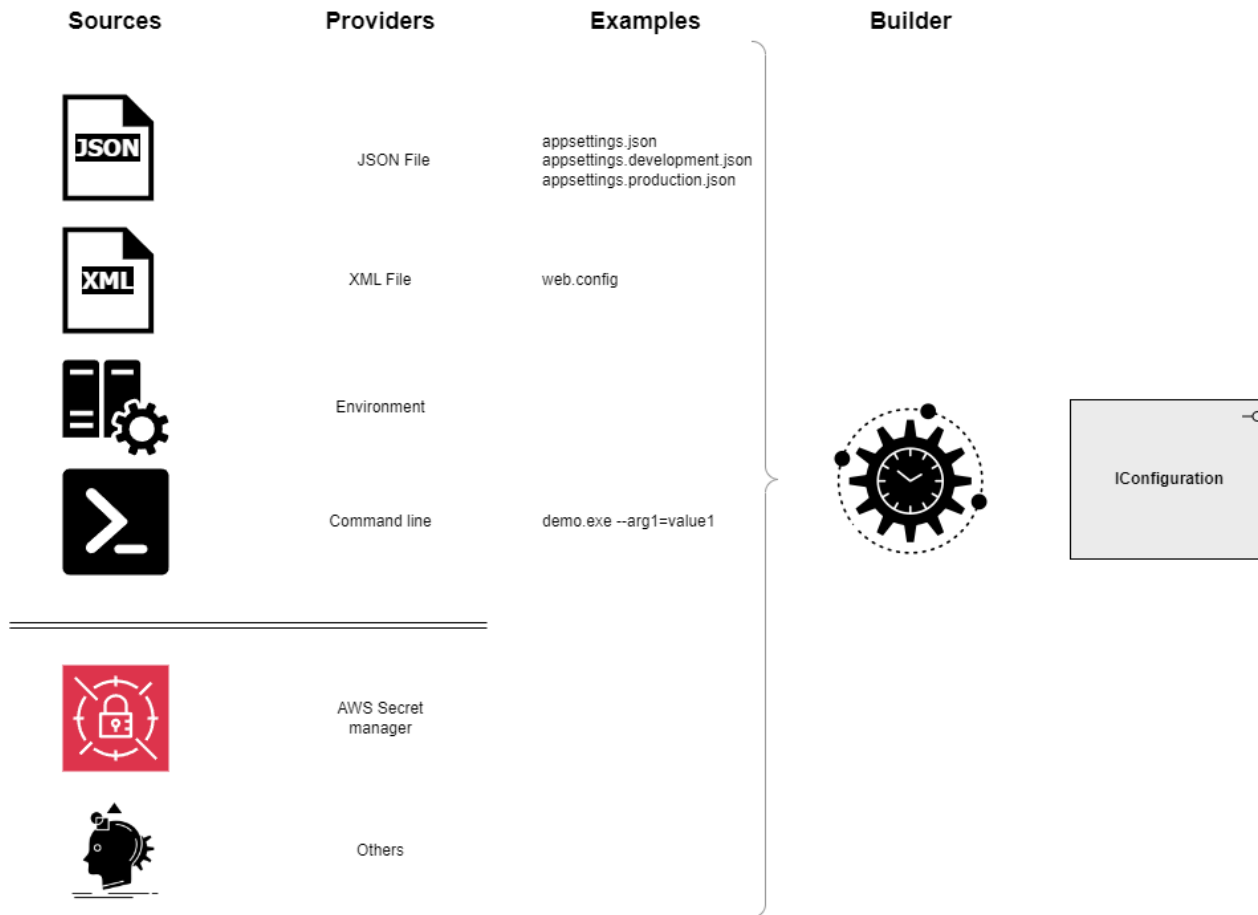
Binding



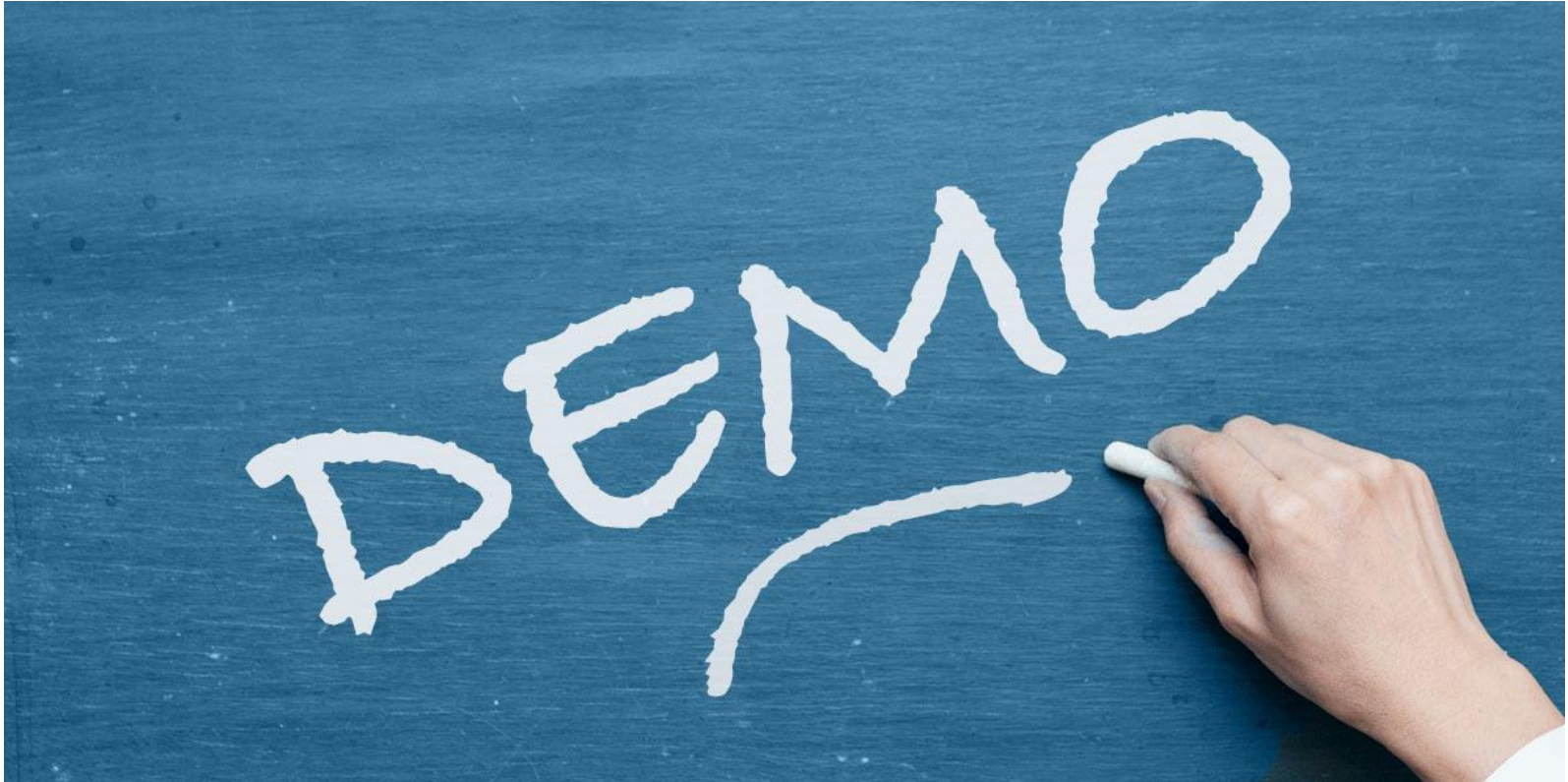
IConfiguration: Concept

- Settings: timeout, uri's, secrets, ...
- Read only, view
- When applied, static vs dynamic

IConfiguration: Providers



IConfiguration: Providers



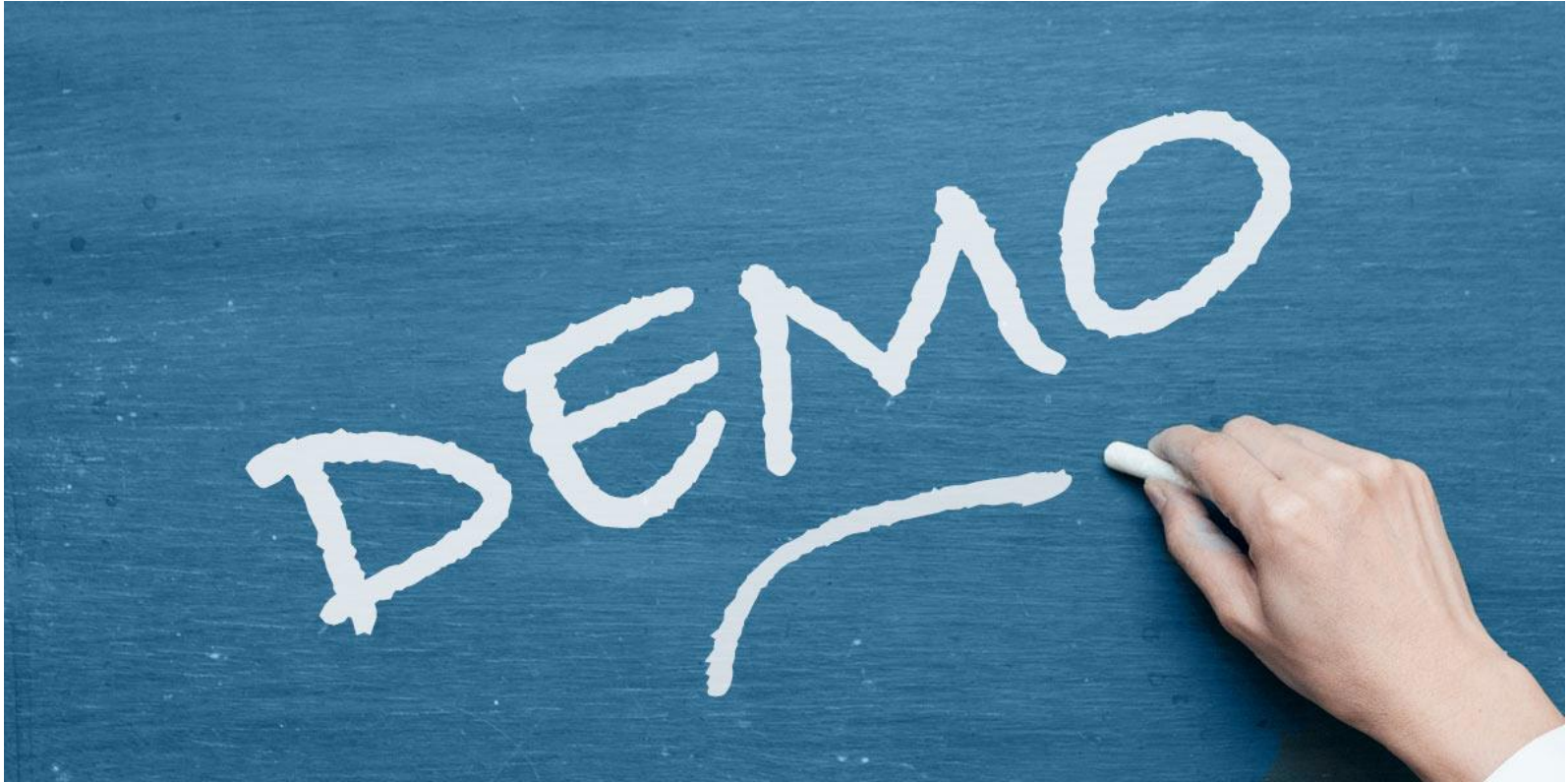
IConfiguration: Provider flavors

- Each provider is different

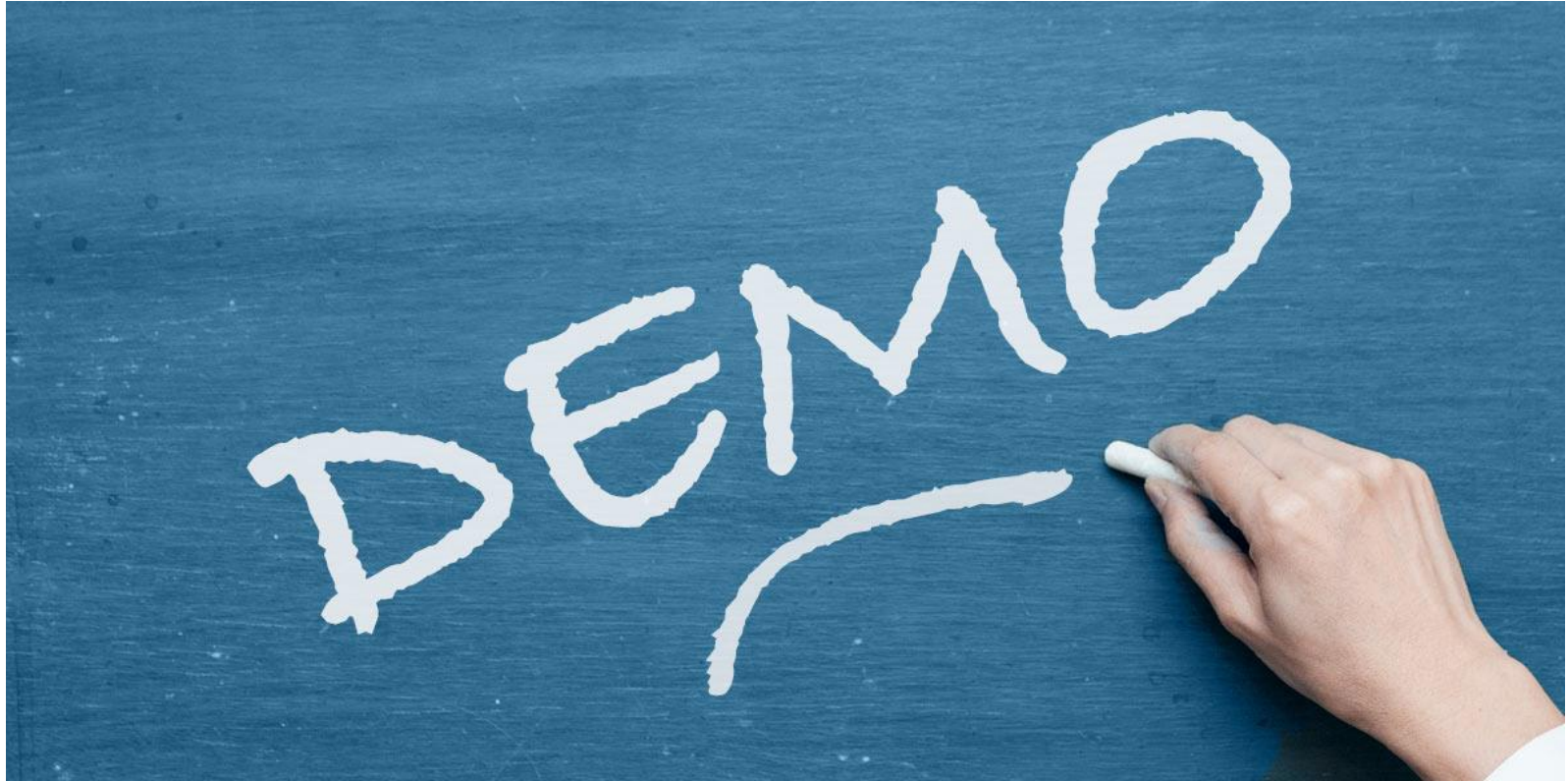
```
builder.Configuration.AddJsonFile(path: "provider.json", optional: true, reloadOnChange: true);  
builder.Configuration.AddEnvironmentVariables("EnvironmentPrefix_");  
builder.Configuration.AddKeyPerFile(directoryPath: "/kpf", optional: true, reloadOnChange: true);  
builder.Configuration.AddInMemoryCollection(new List<KeyValuePair<string, string?>> { new("memory", "value") }.AsReadOnly());  
builder.Configuration.AddYamlFile(path: "customProvider.yml", optional: true, reloadOnChange: true);
```

- Custom providers

IConfiguration: Custom provider



IConfiguration: Binding



IOptions

Concept

Types

Validation

Configure



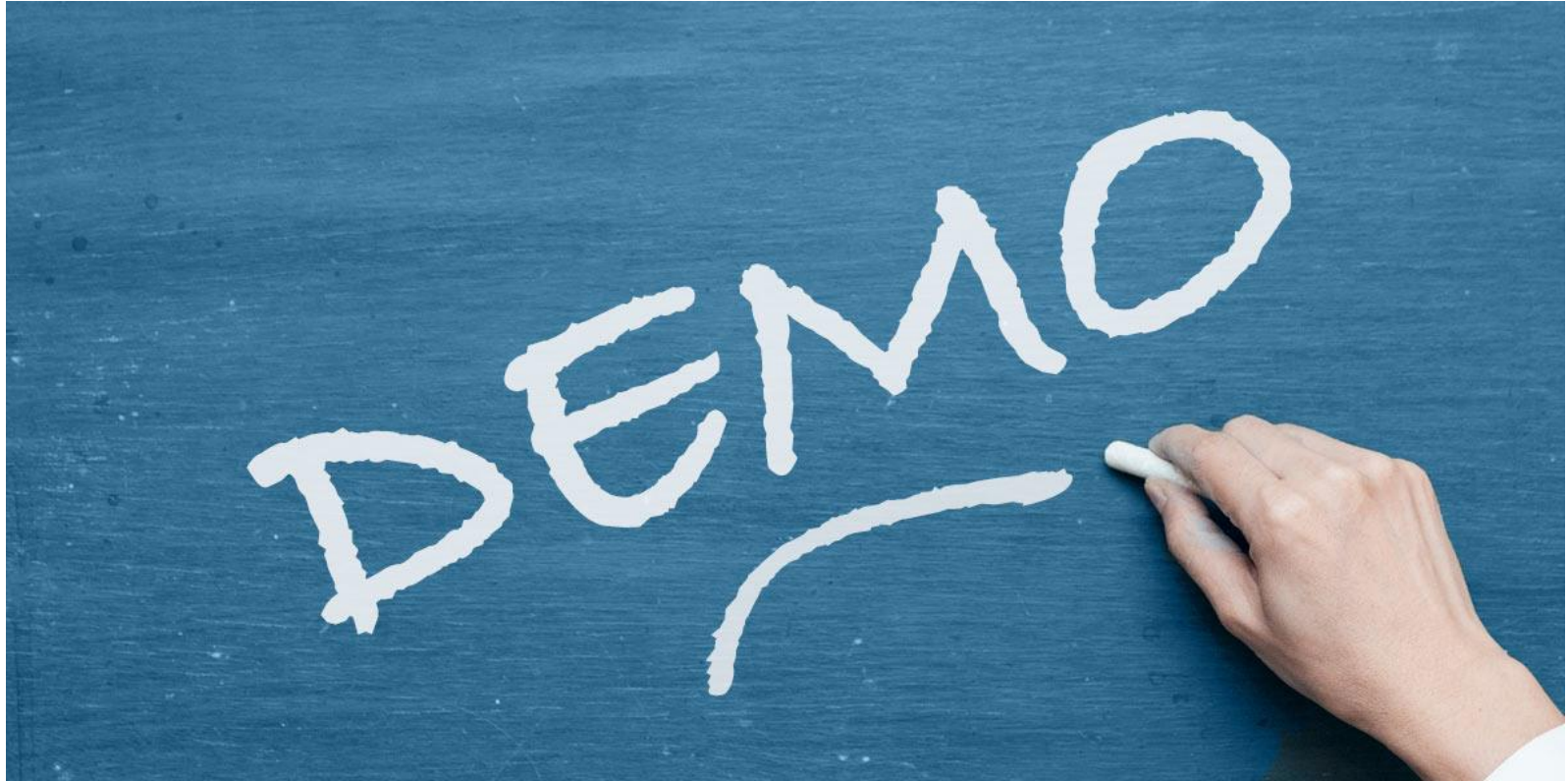
IOptions: Concept

- Interface Segregation Principle (ISP)
- Separation of Concerns
- Validation
- DI resolving

IOptions: Types

	Singleton	Reloadable	Named support
IOptions<T>	✓	✗	✗
IOptionsSnapshot<T>	✗	✓	✓
IOptionsMonitor<T>	✓	✓	✓

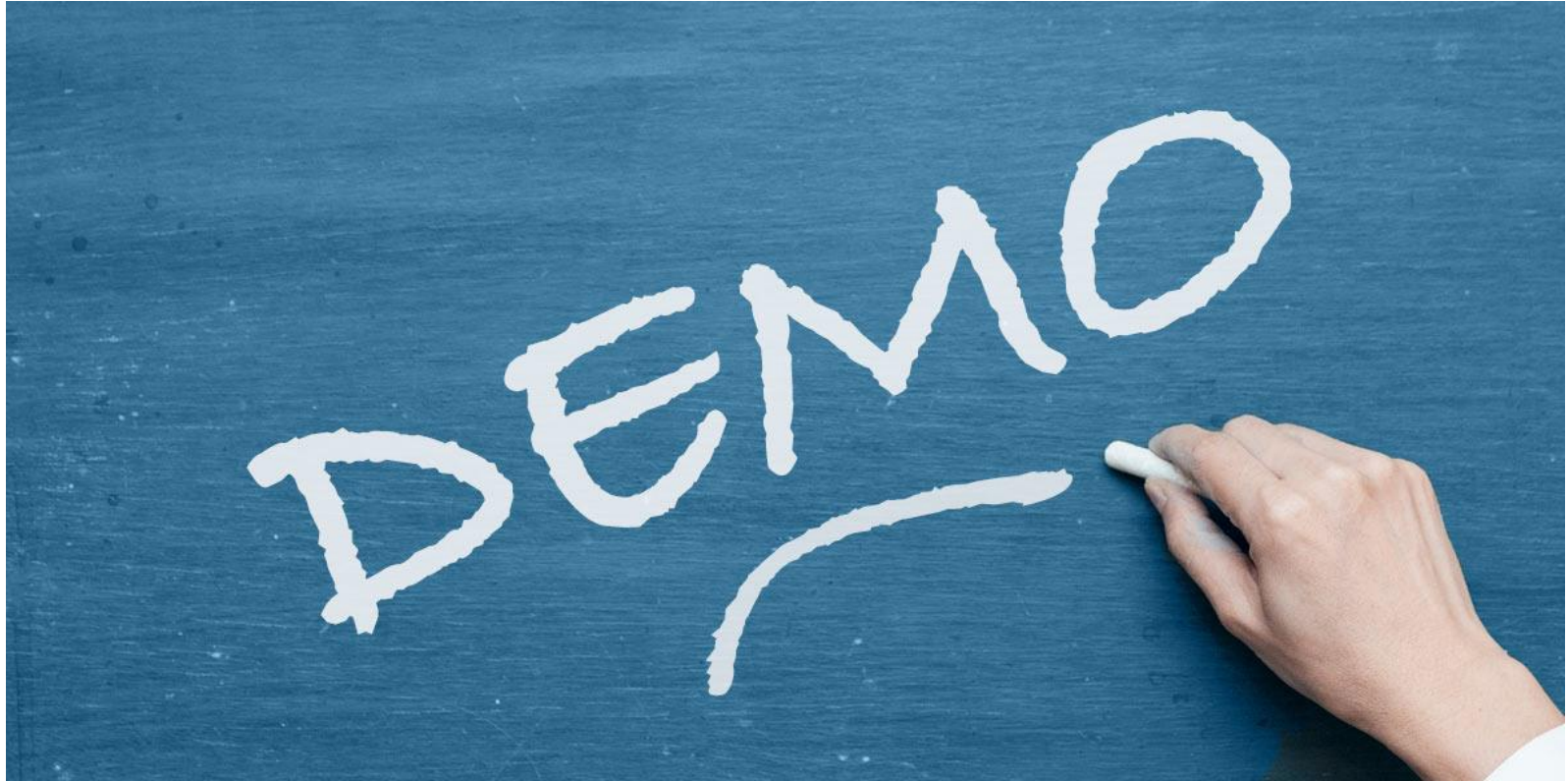
IOptions: Types



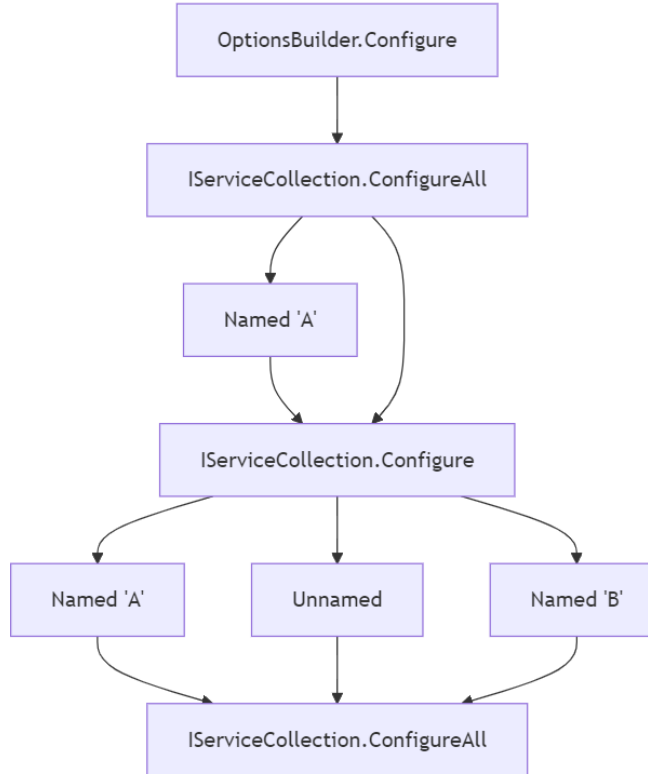
Options: Validation

- Microsoft.Extensions.Options.DataAnnotations
- On first usage
- On startup
- Custom validation
- Validation in a separate class
- Source generated

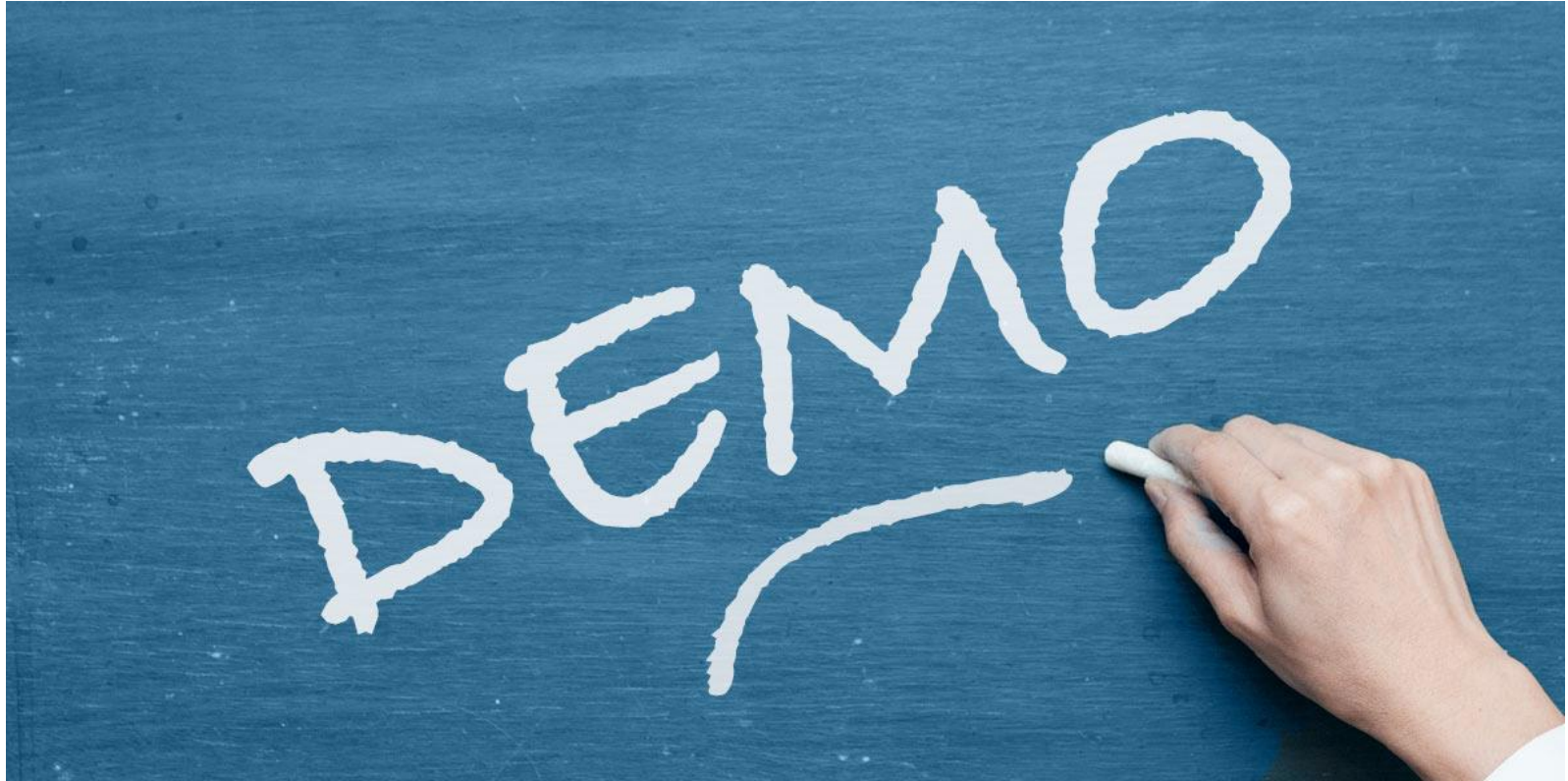
IOptions: Validation



IOptions: Configure



IOptions: Configure



Summary

- IConfiguration
 - Providers
 - Binding
- IOptions
 - Types
 - Validation
 - Configuration

