Angular Agentic Software Engineering (NGADV)

ID NGADV **Price** CHF 2,690.—(excl. VAT) **Duration** 4 days

Who should attend

- Experienced Angular developers adopting modern Angular v22 patterns
- Teams migrating from legacy patterns to signals, Signal Forms, and NgRx SignalStore
- Developers seeking structured coverage of advanced routing, testing, performance, compliance, and SSR

Prerequisites

- Solid experience with Angular (components, services, routing, forms)
- Familiarity with TypeScript and RxJS basics

Course Content

Module 01: Agentic Angular Software Engineering

- The Angular CLI MCP Server
- Harness Files: CLAUDE.md, AGENTS.md, copilot-instructions.md
- Angular Agent Skills
- The Angular Expert Subagent
- Hooks and Quality Gates

Module 02: Mastering Signals

- Signals Fundamentals: signal(), computed(), effect()
- Signal Patterns: inputs, model(), linkedSignal, equality
- Async Signals: httpResource(), resource chain(), debounced()
- @Service and injectAsync
- Signals Tooling: the DevTools signal graph

Module 03: Component Composition and Signal Queries

- Modern Template Syntax and Control Flow
- Signal Queries: viewChild, viewChildren, contentChild, contentChildren
- Content Projection, Directive Composition, Programmatic Components
- Data Loading with resource() and @defer
- Accessible Composition with @angular/aria
- Component Antipatterns and Agent-Driven Refactoring

Module 04: Signal Forms

- Signal Form Basics: form(), fields, submission
- Validation: validators, validateHttp, validateAsync, validateStandardSchema
- Error Handling with isSignalErrorState
- Advanced: arrays, nested objects, dynamic forms
- Signal Forms and Agents: AI-written tests

Module 05: RxJS Where It Still Matters

- Subscribe vs Stream vs Signal
- Flattening and Combining Strategies
- Error Handling and Custom Operators
- Signal Interop Both Ways, rxResource, debounce
- Agent-Assisted RxJS to Signals Migration

Module 06: State Management with NgRx SignalStore

- SignalStore Fundamentals: withState(), withComputed(), withMethods()
- Entity Management with withEntities()
- Store Composition: signalMethod, withFeature, withProps
- Resource Extensions and Linked State
- The Events Plugin and Deep Signals

Module 07: Advanced Routing and App Initialization

- provideAppInitializer with injectAsync, @Service
- Functional Guards, HTTP Interceptors, Error Handling
- Signal-Based Resolvers and Route Inputs
- animate.enter / animate.leave and View Transitions
- Route-Driven SignalStore

Module 08: Advanced Testing with Vitest and Playwright

- Karma to Vitest Migration
- Vitest Fundamentals: pipes, directives, services, components
- Signal Inputs, Forms and Store Testing
- Zoneless Async: whenStable, TestBed.tick, getLastFixture
- Playwright Fundamentals
- Agent-Written Specs, Proven by Mutation

Module 09: WebMCP - The Agentic Web

- A Counterpart Page for the Agent

- Signals as WebMCP Tools
- WebMCP in Components
- A Signal Form as an Agent Tool
- SignalStore Methods as Tools
- Navigation Tools for the Agent
- Testing WebMCP Tools End to End

Module 10: Optimization and Compliance

- Core Web Vitals Measurement with Lighthouse
- Bundle Optimization with Rolldown and Budgets
- @defer by Trigger, Zoneless, DevTools Profiling
- Virtual Scrolling and Image Optimization
- WCAG 2.2 AA with @angular/aria
- Compliance Gates on the Pull Request

Module 11: Hybrid Rendering and Hydration

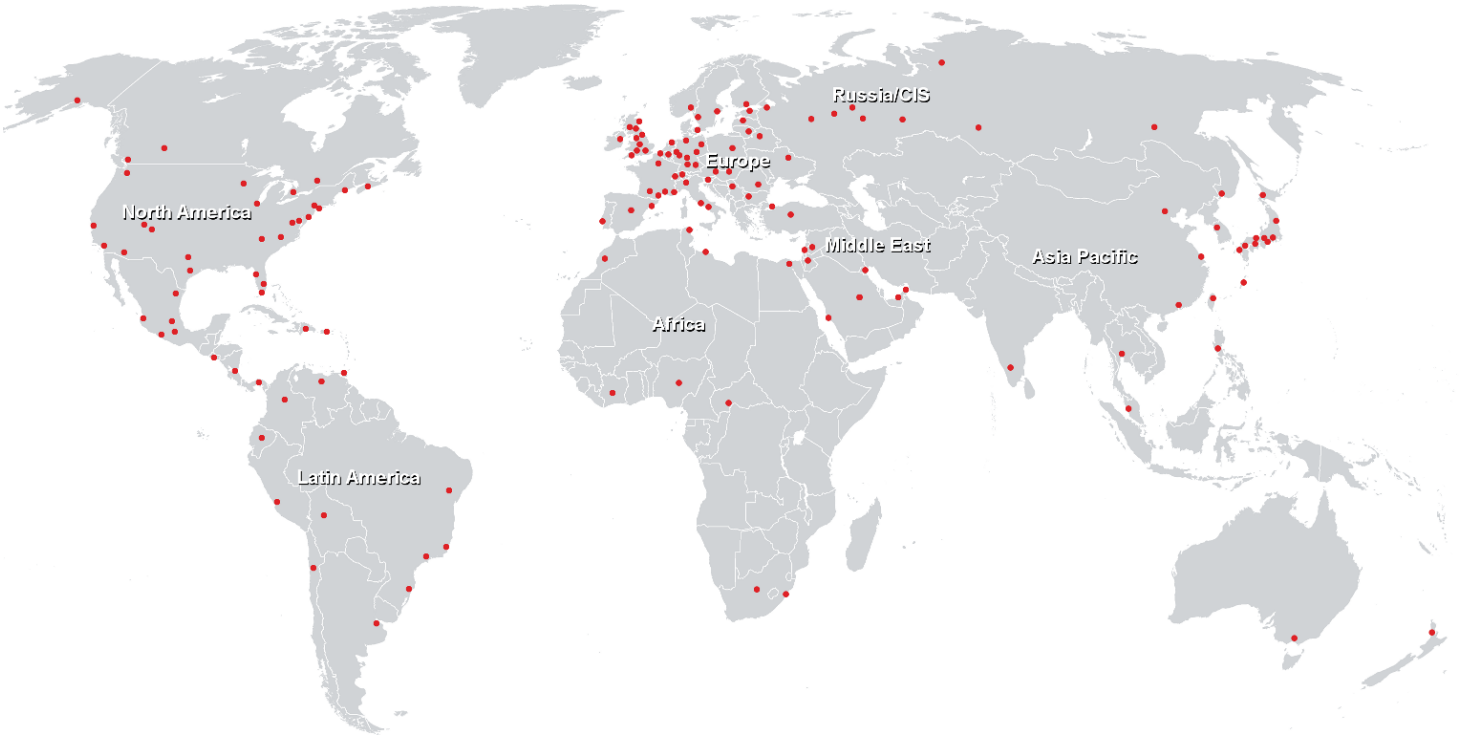
- Server Routes with RenderMode and getPrerenderParams
- Express 5 with AngularNodeAppEngine
- Incremental Hydration and Hydrate Triggers
- Transfer Cache with httpResource
- CSR vs SSR Measured Delta

Module 12: Agentic Angular DevOps

- The Deployment Agent: Allowlists and Manifest
- Bootstrapping and Hardening an Ubuntu Box
- Multi-Stage Container serving with Caddy
- DNS before the First ACME Attempt
- Core Web Vitals and SEO Loop

Angular Agentic Software Engineering (NGADV)

Training Centres worldwide





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