Deep Dive: 
REST with ASP.NET 5

Overview
ASP.NET is Microsoft’s backend of choice for modern web and mobile applications that rely on RESTful web services.

Key Features and Benefits
Each module is designed to provide participants with in-depth expertise, tools, demos and hands-on experience to understand REST, implement and troubleshoot RESTful web services with ASP.NET Web API.

Technical Highlights
After completing this course, you will be able to:
• Understand the architectural style of REST and what resource oriented architectures are
• Understand the differences to SOAP and remote procedure calls
• Create RESTful web services with ASP.NET
• Leverage HTTP to build true web services
• Customize and extend ASP.NET in complex environments
• Understand in which scenario which web services technology should be used
• Identify action plans for migrations of old technologies

Target Audience:
This course is a hands-on workshops for software architects and developers.

Challenges:
• Which web service technology fits best in which scenario?
• Decision-making for REST or remote procedure call web services
• Building true RESTful web services with ASP.NET

Duration:
3 full days with hands-on labs and demos

Level: 300
Migration:
We look forward, if we can assist you with plans to migrate from WCF, ASMX or other older Microsoft web service technologies.

Go further:
If you need proof of concepts or an architecture design session for your next generation web service, please let us know. Architect or developer coaching on an ongoing basis is also available.

Syllabus

This workshop runs for 3 full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.


Module 2: Resource-Oriented Architecture: Resources, Resources vs. Remote Procedure Calls, Application State vs. Resource State

Module 3: Web API Fundamentals: History, Features, Routing, Tools

Module 4: HTTP: HTTP Messages Fundamentals, HTTP Verbs, HTTP Status Codes / Exception Handling, Caching, Conflict Detection

Module 5: Formats & Models: JSON, XML, BSON, Content Negotiation, Media Formatters, Model Validation

Module 6: Hosting: Different Options, OWIN & ASP.NET 5, Third Party & Custom Middleware


Module 8: Consuming Web API: HttpClient, HTML5 / JavaScript, Service Antipattern, Hypermedia Clients

Module 9: OData: What is OData? Web API OData Support, OData Client

Module 10: Quality Assurance: Testability (Unit Testing, Behavior Driven Development), Tracing, Troubleshooting

Module 11: Advanced: Versioning, Pipelines & Extensibility, Azure API Management

Module 12: WCF or ASP.NET?: SOAP vs. REST Recap, Summary & Decision Helper