

Anypoint Platform Architecture: Solution Design

Summary

This instructor-led course is for architects and developers who want to learn best practices for designing enterprise integration solutions with Anypoint Platform. It is a hands-on course that requires prior experience developing Mule applications, but focuses on giving you the knowledge to make strategic decisions about your solutions instead of on implementation details. It includes a voucher code to take the *MuleSoft Certified Architect – Solution Design Specialist* exam. Note: This is not a development course; you will not be using Anypoint Studio or writing any code.

Duration

4 days in-person or 5 days online

Objectives

- Get familiar with enterprise integration architectural styles and patterns
- Learn about the design considerations for cloud solutions
- Design APIs and RESTful services using best practices
- Design Mule applications for modularity, reusability, and collaborative development
- Design Mule applications for performance, high availability, and security

Prerequisites

- Completion of the instructor-led *Anypoint Platform Development: Fundamentals* course, the self-paced *MuleSoft.U Development Fundamentals* course, or equivalent knowledge from 6+ months Mule development experience and passing of the *MCD - Integration and API Associate* exam

Note: If you have not taken one of these courses or passed the exam, you will be contacted to confirm your qualifications.

- (Recommended) Completion of the instructor-led *Anypoint Platform Development: Advanced* course

Outline

PART 1: Architectural Styles and Patterns

Module 1: Introducing Enterprise Integration

- Understand integration architecture challenges
- Learn about multi-speed/bi-modal IT
- Learn about API-led strategy
- Learn about MuleSoft architectural approaches
- Understand and position the Anypoint Platform and components

Module 2: Introducing Architectural Styles and Patterns

- Learn about integration styles including service oriented architecture and microservices
- Understand and distinguish between SOA, REST, microservices, generic, and enterprise integration patterns

PART 2: Integration Solution Design

Module 3: Designing APIs

- Become familiar with APIs and MuleSoft's approach to APIs
- Learn about API design essentials
- Understand the API development lifecycle

Module 4: Designing RESTful Services

- Understand REST principles
- Learn about REST design patterns
- Learn about the RESTful API Modeling Language (RAML)
- Design and implement APIs using RAML and REST

Module 5: Designing Integration Solutions

- Learn about general design considerations
- Learn about demand and capacity planning
- Make applications scalable and highly available
- Learn about deployment and runtime options
- Understand CloudHub architecture

PART 3: Implementation Patterns

Module 6: Understanding Mule Application Design

- Learn about Mule application architecture
- Learn about design considerations
- Structure applications for modularity and reusability
- Understand test driven development options
- Learn about software development lifecycle support
- Distinguish between on-prem, cloud-based, and hybrid designs

Module 7: Optimizing for High Availability and Reliability

- Understand design considerations
- Understand high availability concepts and scenarios
- Learn about achieving high availability
- Learn about achieving reliability
- Learn about zero message loss scenarios
- Optimize application architecture for reliability and availability

Module 8: Optimizing for Performance

- Learn about design considerations
- Learn how to optimize application architecture for performance based on a MuleSoft design pattern
- Optimize threads and thread pools for performance
- Use clusters and load balancing for performance

Module 9: Considering Security

- Understand security considerations
- Learn how to enhance security in Mule applications
- Review security recommendations
- Understand secure communications
- Learn how to harden Mule installations

Setup requirements

- A computer
- Unrestricted internet access
- A drawing/diagramming tool (like draw.io, Lucidchart, Visio, or OmniGraffle)
<https://www.draw.io>
<http://products.office.com/visio>
<http://www.omnigroup.com/omnigraffle>