# MuleSoft Certified Integration Architect – Level 1 Certification Exam

## Summary

A *MuleSoft Certified Integration Architect – Level 1* should be able to drive and be responsible for an organization's Anypoint Platform implementation and the technical quality, governance (ensuring compliance), and operationalization of the integration solutions. The *MCIA – Level 1* exam validates that an architect has the required knowledge and skills to work with technical and non-technical stakeholders to translate functional and non-functional requirements into integration interfaces and implementations. Certified candidates should be able to:

- Create the high-level design of integration solutions and guide implementation teams on the choice of Mule components and patterns to use in the detailed design and implementation.
- Select the deployment approach and configuration of Anypoint Platform with any of the available deployment options (MuleSoft-hosted or customer-hosted control plane and runtime plane).
- Design Mule applications for any of the available deployment options of the Anypoint Platform runtime plane.
- Apply standard development methods covering the full development lifecycle (project preparation, analysis, design, development, testing, deployment, and support) to ensure solution quality.
- Advise technical teams on performance, scalability, reliability, monitoring and other operational concerns of integration solutions on Anypoint Platform.
- Design reusable assets, components, standards, frameworks, and processes to support and facilitate API and integration projects.

## Format

- Format: Multiple-choice, closed book, proctored
- Length: 60 questions
- Duration: 120 minutes (2 hours)
- Pass score: 70%
- Language: English

You can take the exam a maximum of 5 times, with a 24-hour wait between each attempt.

## Cost

You can purchase the exam with one of the following. Each includes one free retake.

- $375
- 1.5 MuleSoft Training Credits (MTC)

Additional retakes (i.e. attempts 3 to 5) are $250 or 1 MTC and do not come with a free retake.

Two free exam attempts are also included with the purchase of the instructor-led *Anypoint Platform Architecture: Integration Solutions* course.

## Validity

The certification expires two years from the date you pass the exam. To extend the certification validity after this date, you can take the *MuleSoft Certified Integration Architect – Level 1 MAINTENANCE* exam.

## Preparation

You can best prepare for the exam by taking the instructor-led *Anypoint Platform Architecture: Integration Solutions* course. Candidates should be familiar with all of the content in the course and be able to apply the concepts.

The following resources are available to help you prepare:

- **Instructor-led training: *Anypoint Platform Architecture: Integration Solutions***
  - Recommended as the most effective and efficient method of preparation
  - 5-day class
  - Private, public, onsite, and online classes available
  - Includes two free attempts for this exam
- **Practice exam**
  - Same format, length, and duration as the certification exam
  - Questions are the same style and degree of difficulty as the exam

## Topics

The exam validates that you can perform the following tasks.

*Note: ARC: INT is the acronym for the Anypoint Platform Architecture: Integration Solutions course.*

| **Initiating integration solutions on Anypoint Platform** | Resources |
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| • Summarize the fundamental value proposition of MuleSoft Catalyst and Catalyst Knowledge Hub<br>• Differentiate between functional and non-functional requirements for integration solutions<br>• Select features of Anypoint Platform for designing and managing web and event-driven APIs<br>• Select deployment options of the Anypoint Platform control plane and runtime plane | • ARC:INT Module 1<br>• ARC:INT Module 2<br>• ARC:INT Module 3<br>• ARC:INT Module 7 |
| **Designing for the runtime plane technology architecture** | |
| • Analyze the mode of operation of a Mule runtime cluster that differentiates it from other deployment options<br>• Design integration solutions deployed to CloudHub to address specific requirements using CloudHub's network features<br>• Choose Mule runtime domains and domain-shared configuration only for those requirements that clearly benefit from their capabilities<br>• Design Mule applications making effective use of the implications of the Mule 4 class loader isolation of Mule modules<br>• Describe the characteristics and implications of the Mule 4 reactive event processing model | • ARC:INT Module 3<br>• ARC:INT Module 4<br>• ARC:INT Module 13<br>• ARC:INT Module 16 |
| **Designing architecture using integration paradigms** | |
| • Create high-level integration architectures using API-led connectivity<br>• Create high-level integration architectures using web APIs and HTTP<br>• Create high-level integration architectures using event-driven APIs and message brokers<br>• Design Mule applications and integration solutions using common messaging patterns and technologies | • ARC:INT Module 2<br>• ARC:INT Module 3<br>• ARC:INT Module 4<br>• ARC:INT Module 13 |
| **Designing and developing Mule applications** | |
| • Select among available options for setting Mule application properties<br>• Select and use fundamental features available to all Mule applications<br>• Design Mule applications using core routers available to all Mule applications<br>• Describe the fundamental features of the Salesforce connector<br>• Design Mule applications using common features of core connectors | • ARC:INT Module 2<br>• ARC:INT Module 3<br>• ARC:INT Module 4<br>• ARC:INT Module 5<br>• ARC:INT Module 10<br>• ARC:INT Module 12<br>• ARC:INT Module 13 |

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| • Select and use the available sources of metadata in the Transform Message component<br>• Design Mule applications and integration solutions using a Common/Canonical Data Model<br>• Correctly apply methods for validating data in Mule applications | • ARC:INT Module 15 |
| **Designing automated tests for Mule applications** | |
| • Design unit test suites using MUnit and Studio's related features<br>• Identify test requirements and scenarios that are best addressed using integration testing or performance testing | • ARC:INT Module 6 |
| **Designing integration solutions to meet persistence requirements** | |
| • Design Mule applications using VM queues and the Anypoint VM connector in all deployment options<br>• Design Mule applications using Object Stores, the OS connector, and OS services in all deployment options<br>• Design Mule applications and integration solutions using stateful components that may be configured with an Object Store | • ARC:INT Module 4<br>• ARC:INT Module 7<br>• ARC:INT Module 8<br>• ARC:INT Module 13 |
| **Designing integration solutions to meet reliability requirements** | |
| • Select alternatives to traditional transactions (local or XA) where appropriate and beneficial<br>• Recognize the purpose and characteristics of Until Successful scope, reconnection strategies, and redelivery policies<br>• Differentiate between disaster recovery and high availability and the basic approaches to achieving either in all deployment options<br>• Design Mule applications and integration solutions using local and XA transactions for all Mule connectors that support them | • ARC:INT Module 4<br>• ARC:INT Module 11<br>• ARC:INT Module 12<br>• ARC:INT Module 13 |
| **Designing integration solutions to meet performance requirements** | |
| • Design Mule applications and integration solutions to meet performance and capacity goals<br>• Design Mule applications using available streaming features in Mule<br>• Design Mule applications to process large sequences/streams of messages | • ARC:INT Module 4<br>• ARC:INT Module 8<br>• ARC:INT Module 13<br>• ARC:INT Module 14 |
| **Designing integration solutions to meet security requirements** | |
| • Design secure access to the Anypoint Platform control plane and APIs<br>• Design secure edge access using Anypoint Security<br>• Analyze and counteract potential security vulnerabilities of Mule applications<br>• Recognize the audit logging capabilities of Anypoint Platform | • ARC:INT Module 9<br>• ARC:INT Module 15<br>• ARC:INT Module 16 |

| Applying DevOps practices and operating integration solutions | |
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| • Create high-level designs of CI/CD pipelines for Mule applications using MuleSoft-provided Maven plugins<br>• Identify the features and characteristics for automating interactions with Anypoint Platform<br>• Design the logging configurations and options of Mule applications in all deployment options<br>• Identify the features and characteristics of Anypoint Monitoring in all deployment option | • ARC:INT Module 9<br>• ARC:INT Module 10 |

## More information

For more information, visit http://help.learn.mulesoft.com.