

MS-AZ2010: DESIGNING AND IMPLEMENTING PLATFORM ENGINEERING



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Advanced	Azure	Instructor-led	NA

INTRODUCTION

This learning path provides a comprehensive guide to designing and implementing platform engineering within modern enterprises. It covers the foundational principles, strategic alignment with business goals, and the practical aspects of building scalable, secure, and future-proof platforms. By following this path, learners will gain the knowledge and skills needed to enhance developer productivity, ensure operational excellence, and drive continuous innovation.

AUDIENCE PROFILE

This course is crafted for professionals who are actively involved in building and managing platform solutions within modern enterprises. The primary audience for this course includes:

- Software engineers and developers looking to enhance developer productivity through platform engineering.
- DevOps practitioners aiming to streamline operations and accelerate innovation.
- IT architects and technical leaders responsible for designing scalable, secure, and future-proof platforms.
- Platform engineers focused on integrating tools and services to support development teams.
- Security and compliance professionals involved in ensuring governance and operational consistency.

PREREQUISITES

Successful learners will have prior knowledge and understanding of the following:

- Cloud computing concepts include understanding PaaS, SaaS, and IaaS implementations.
- Azure administration and Azure development with proven expertise in at least one of these areas.
- Intermediate to advanced DevOps concepts, including version control, Agile software development, and core software development principles. It would be helpful to have experience in an organization that delivers software.

COURSE OBJECTIVES

After completing this course, you will be able to:

- Understand the fundamentals of platform engineering and its role in enhancing developer productivity.
- Design secure, scalable, and compliant architectures that align with business goals.
- Implement automation to reduce manual errors and accelerate deployment cycles.
- Enable developer self-service to foster agility and innovation while maintaining governance.
- Leverage observability tools to monitor system performance and optimize resource utilization.

COURSE CONTENT

Module 1: Foundations of Platform Engineering

This module introduces the core concepts and importance of platform engineering. It explores how platform engineering enhances developer productivity, accelerates time-to-value, and supports digital transformation. Learners will understand the strategic value of platform engineering as the foundation for both technical success and alignment with broader business goals.

Lessons

- Introduction
- The Role of Platform Engineering in Modern Enterprises

- Core Principles of Platform Design
- Platform Engineering Capability Model
- Core Aspects of Platform Implementation
- Module assessment
- Summary

By the end of this module, you'll be able to:

- Understand the importance of platform engineering in enhancing developer productivity and accelerating time-to-value.
- Learn how to design and build integrated platforms that optimize the developer experience and streamline development efforts.

- Explore the role of platform engineering in driving digital transformation within an enterprise.
- Recognize the strategic value of platform engineering as the foundation for both technical success and alignment with broader business goals.
- Identify key stakeholders in platform engineering and understand their distinct expectations and requirements.

Module 2: Design Secure and Scalable Platform Architectures

In this module, learners will gain insights into designing platform architectures that are secure, scalable, and compliant with

regulatory standards. The module covers capacity planning, cost optimization, and the role of automation in maintaining consistency and reducing manual errors. Learners will also explore strategies for building scalable solutions that can handle increasing demand and complex workflows.

Lessons

- Introduction
- Core Principles of Secure and Scalable Platform Design
- Security Considerations in Platform Architecture
- Scale Platform Architectures for Growth and Adaptability
- Automation and Resiliency for Modern Platforms
- Module assessment
- Summary

By the end of this module, you'll be able to:

- Gain insights into designing platform architectures that are secure, scalable, and compliant with regulatory standards.
- Explore the role of automation in maintaining consistency, reducing manual errors, and accelerating deployments.
- Understand the importance of capacity planning and estimation for forecasting future resource needs.
- Learn cost optimization strategies to manage resources efficiently and avoid over-provisioning.
- Discover how to implement scalable solutions that can handle increasing demand and complex workflows.

Module 3: Implement Developer Self-Service

This module focuses on enabling developers to independently manage their resources and workflows, fostering agility and innovation. Learners will understand the importance of combining flexibility with robust governance to ensure security, compliance, and operational consistency. The module also covers best practices for implementing and managing self-service capabilities within an organization.

Lessons

- Introduction
- Introduction to Developer Self-Service
- Developer Self-Service Platform Architecture
- Governance and Security in Self-Service Workflows
- Developer Coding Environments
- Automation and Self-Service Tools

- Monitor and Audit Developer Activities
- Implement Microsoft Dev Box
- Module assessment
- Summary

By the end of this module, you'll be able to:

- Learn how to enable developers to independently manage their resources and workflows, fostering agility and innovation.
- Understand the importance of combining flexibility with robust governance to ensure security, compliance, and operational consistency.
- Explore the benefits of developer self-service in accelerating development cycles and reducing bottlenecks.
- Recognize the role of self-service platforms in enhancing developer satisfaction and productivity.
- Identify best practices for implementing and managing self-service capabilities within an organization.

Module 4: Observability and Continuous Improvement

Learners will discover the significance of observability in providing real-time insights into system performance and identifying inefficiencies. This module emphasizes the importance of continuous improvement through feedback loops, performance monitoring, and market analysis. Learners will explore strategies for adapting to market trends and fostering a culture of innovation within platform engineering teams.

Lessons

- Introduction.
- The Importance of Observability in Modern Platforms
- Build Observability into Platform Architecture
- Metrics, Monitoring, and Alerts
- Automation for Incident Detection and Resolution
- Continuous Improvement through Feedback Loops
- Implementing Real-Time Monitoring with Azure Monitor
- Module assessment
- Summary

By the end of this module, you'll be able to:

- Discover the significance of observability in providing real-time insights into system performance and identifying inefficiencies.
- Understand how continuous improvement creates a feedback loop that drives platform enhancements and optimizes resources.

- Learn about benchmarking and performance monitoring to track the success of the platform and identify areas for improvement.
- Explore strategies for adapting to market trends and anticipating shifts in user needs or technological landscapes.
- Foster a culture of innovation within platform engineering teams to continuously propose and test new ideas.

Module 5: Strategic Platform Road Mapping

This module covers the principles of strategic platform road mapping, including aligning platform initiatives with business objectives, preparing for technological advancements, and fostering innovation. Learners will understand how to develop actionable roadmaps that guide the platform's evolution, ensuring it remains efficient, reliable, and capable of evolving with future innovations.

Lessons

- Introduction
- Understand the Strategic Importance of Platform Engineering
- Develop a Scalable Platform Architecture
- Future-Proofing the Platform
- Continuous Improvement and Innovation Management
- Roadmap Development and Execution
- Risk Management in Platform Engineering
- Communicate the Roadmap to Stakeholders
- Implementing Self-Service Infrastructure with Bicep
- Module assessment
- Summary

By the end of this module, you'll be able to:

- Learn how to align platform engineering initiatives with long-term organizational goals and market trends.
- Explore key principles of strategic platform road mapping, including preparing for technological advancements and fostering innovation.
- Understand the importance of defining a clear platform vision that aligns with broader organizational goals.
- Discover how to build a platform roadmap with actionable milestones and specific deliverables.
- Learn techniques for phased implementation and prioritization to ensure the

platform evolves in a way that
supports business goals.

ASSOCIATED CERTIFICATIONS & EXAM

There is no Associated Certification or Exam for this course.