Understanding Microservices | A Technical Overview (TT7050)

Category: Software Development & Programming | **Vendor:** Trivera Tech

Duration: 8.00 hours (1 days) **6.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Microservices have rapidly emerged as a popular architectural style, breaking down applications into small, independent services that can be developed, deployed, and scaled individually. Microservices offer a robust method to address a variety of projects, such as e-commerce platforms and content management systems, enhancing scalability and boosting productivity. This technology, when employed correctly, can greatly increase software delivery speed and system resilience, making it a crucial skill set for modern technology professionals.Understanding Microservices - A Technical Overview is a one-day course ideally suited for technical professionals seeking an introduction to microservices architecture and its application within a business context. Under the guidance of an industry expert, this engaging class combines lecture-style learning with lively demonstrations, case study review and group discussions.Throughout the course you ll explore the principles and characteristics that define microservices, how to identify suitable projects for a microservices approach, the factors to consider when designing them, and the strategies to effectively manage and scale them within complex systems. You ll also learn about the best practices, patterns, and anti-patterns, arming you with the knowledge to make the right architectural choices. This course also explores the real-world implementation of microservices in a business enterprise. We'll discuss how to align the application of microservices with your organization's specific business capabilities, and offer strategies for smoothly integrating this technology within existing legacy systems.

About This Course

Microservices have rapidly emerged as a popular architectural style, breaking down applications into small, independent services that can be developed, deployed, and scaled individually. Microservices offer a robust method to address a variety of projects, such as e-commerce platforms and content management systems, enhancing scalability and boosting productivity. This technology, when employed correctly, can greatly increase software delivery speed and system resilience, making it a crucial skill set for modern technology professionals.Understanding Microservices - A Technical Overview is a one-day course ideally suited for technical professionals seeking an introduction to microservices architecture and its application within a business context. Under the guidance of an industry expert, this engaging class combines lecture-style learning with lively demonstrations, case study review and group discussions.Throughout the course you ll explore the principles and characteristics that define microservices, how to identify suitable projects for a microservices approach, the factors to consider when designing them, and the strategies to effectively manage and scale them within complex systems. You ll also learn about the best practices, patterns, and anti-patterns, arming you with the knowledge to make the right architectural choices. This course also explores the real-world implementation of microservices in a business enterprise. We'll discuss how to align the application of microservices with your organization's specific business capabilities, and offer strategies for smoothly integrating this technology within existing legacy systems.

Who Should Attend

This overview-level course is ideally suited for professionals seeking an introduction to microservices architecture and its application within a business context. Ideal attendee roles include software developers, system architects, technical managers, and IT professionals who are part of teams transitioning to a microservices approach. It’s also an excellent starting point for non-technical roles such as product owners or business analysts who work closely with technical teams and want to better understand and become conversant in the language and principles of microservices.

Prerequisites & Entry Requirements

General Prerequisites:

To ensure a smooth learning experience and maximize the benefits of attending this course, you should have the following

prerequisite skills:

- Basic Understanding of Software Development
- Knowledge of Software Architectures
- Conceptual Understanding of Cloud Services
- Familiarity with Business Operations
- Basic exposure to programming languages would be helpful but is not required.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

This course combines engaging instructor-led presentations and useful demonstrations with engaging group activities. Throughout the course you'll explore:
Understand the Basics of Microservices: Get to know the fundamental principles and characteristics of microservices and how they revolutionize traditional software development approaches.
Explore the Design of Microservices: Gain an overview of how microservices are designed based on business requirements and what makes them unique in the software architecture world.
Overview of Managing and Scaling Microservices: Get an introduction to how microservices are managed and scaled independently, and understand the significance of these features in your business operations.
Familiarize with the Microservices Ecosystem: Learn about the typical patterns, best practices, and common pitfalls in the microservices world, setting a foundation for future learning and implementation.
Introduction to Microservices in a Business Context: Acquire a basic understanding of how microservices can be aligned with specific business capabilities, and get a glimpse into how they can coexist with legacy systems in a business setting.

Detailed Course Outline

Introduction to Microservices

- Understand what microservices are and their role in modern software development.
- Introduction to Microservices: what they are and why they matter.
- Monolithic vs Microservices: highlighting the shift and benefits.
- Key principles and characteristics of microservices.
- Identifying suitable applications for microservices transformation.
- Demo: Analyzing a sample application and identifying potential microservices

Architecting and Managing Microservices

- Learn the basic strategies for scaling and managing microservices.
- Scaling Microservices: from a single service to hundreds.
- Key components of a microservices architecture.
- Introduction to resilience patterns: Circuit-Breakers and Bulkheads.
- Load management and provisioning in a microservices setup.
- Understanding the role of cloud services in microservices.
- Optional Demo: Illustrating how a microservice-based application scales in real-time

Designing Microservices

- Learn the key aspects to consider when designing microservices.
- Defining microservice boundaries: Deciding the scope of a microservice.
- Communication patterns in microservices.
- Understanding Microservice endpoints.
- Exploring data stores and transaction boundaries in microservices.
- Overcoming challenges in Microservices design.
- Demo: Designing microservices for a hypothetical business requirement

Implementing Microservices in a Business Enterprise

- Understand the process and considerations for implementing microservices in an enterprise context.
- Assessing enterprise readiness for microservices.
- Building the business case for microservices: strategic advantages and potential challenges.
- Aligning microservices with business capabilities.
- Organizational changes: Team structures and processes for microservices.
- Dealing with Legacy Systems: Strategies for microservices integration.
- Demo: Exploring a case study of successful microservices implementation in a business enterprise

The Microservices Ecosystem

- Understand the key tools and best practices in the Microservices ecosystem.
- Understanding the typical Microservices Stack.
- Monitoring and Logging in Microservices.
- Introduction to Docker: Containerization of Microservices.
- Deployment strategies in a Microservices setup.
- Introduction to Orchestration in Microservices
- Demo: Containerizing and deploying a simple microservice

Microservices Deployment Strategies

- Understand various ways to safely introduce changes in a microservices environment.
- The concept of Blue-Green Deployment: changing services without downtime.
- Canary Releases and Feature Toggles: slowly rolling out changes to users.
- Database changes in a microservices environment: keeping data consistent.
- Demo: Examining various deployment strategies

Microservices Best Practices and DevOps

- Learn key strategies to ensure a smooth operation of your microservices setup.
- The DevOps culture in Microservices: collaboration for efficiency.
- Defining a Minimum Viable Product in a Microservices setup: building small, delivering fast.
- Dealing with data in a distributed setup: managing Data Islands.
- The importance of Continuous Integration/Continuous Delivery in a microservices setup.
- Governance: Keeping track of your services and their consumers.
- Demo: Visualizing a simple continuous delivery pipeline

Microservices Patterns and Anti-Patterns

- Learn about common do's and don'ts when working with microservices.
- Understanding patterns that help with efficient microservices operation.
- Recognizing and avoiding anti-patterns that can hinder performance.
- Dealing with common challenges: dependencies between services, managing service boundaries.
- Demo: Examples of real-world patterns and anti-patterns

Simple Overview of OAuth and OpenID for Microservices

- Introduction to OAuth and OpenID: What they are and why they matter in Microservices.
- The role of tokens in OAuth 2.0: How they help in securing communications.
- A simplified look at OpenID Connect: Linking identities across services.
- Demo

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Demo: Analyzing a sample application and identifying potential microservices

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Understanding the role of cloud services in microservices.

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Bonus Chapter / Time Permitting

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Demo

Additional Course Details

Nexus Humans Understanding Microservices | A Technical Overview (TT7050) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Understanding Microservices | A Technical Overview (TT7050) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Understanding Microservices | A Technical Overview (TT7050)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 1-day Understanding Microservices | A Technical Overview (TT7050) course provides up to 6.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Understanding Microservices | A Technical Overview (TT7050) training?

The training takes place over 1 day(s), with each day lasting approximately 8.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Understanding Microservices | A Technical Overview (TT7050)?

Yes, we provide corporate training, dedicated training, and closed classes for Understanding Microservices | A Technical Overview (TT7050). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Java; Microservices

Q: Why choose Nexus Human for Understanding Microservices | A Technical Overview (TT7050)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Understanding Microservices | A Technical Overview (TT7050) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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