



PYTHON TRAINING

Python Microservices Course

Master Python microservices development. Build robust, scalable applications and deploy distributed systems efficiently.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

The Python Microservices Course offers an intensive, accelerated introduction to building scalable, resilient, and independently deployable services using Python. In just two hours, you'll delve into the core principles of microservices architecture, understanding its advantages over traditional monolithic applications and why Python is a powerhouse for developing these modern systems. This intermediate-level course is designed to equip you with the foundational knowledge and practical skills to begin architecting distributed applications.

You'll learn to leverage popular Python frameworks like Flask or FastAPI to create robust RESTful APIs, which form the backbone of inter-service communication. The curriculum also touches upon essential concepts such as containerization with Docker, enabling you to package and deploy your microservices efficiently. By focusing on practical, hands-on examples, this course ensures you grasp the workflow from service design to basic deployment.

Upon completion, you'll be capable of contributing to microservice-based projects, designing modular applications, and understanding the ecosystem required for modern software development. This empowers you to build more flexible, maintainable, and high-performing applications, significantly boosting your profile in the competitive IT landscape.

Duration	2 hours
Level	Intermediate
Vendor	Python

COURSE CURRICULUM

01 Module 1: Understanding Python Microservices Architecture

- Introduction to Microservices: Definition and Core Concepts
- Monolithic vs. Microservices: Architectural Comparisons
- Key Benefits and Challenges of Microservices
- Why Python is Ideal for Microservices Development
- Setting up a Minimal Python Development Environment for Microservices

02 Module 2: Building Your First Python Microservice

- Introduction to Python Microframeworks (e.g., Flask/FastAPI overview)
- Designing RESTful API Endpoints
- Implementing Basic API Logic (GET, POST)
- Handling Request and Response Data
- Testing Your Microservice Endpoints

03 Module 3: Inter-Service Communication and Data Concepts

- Synchronous Communication: HTTP/RESTful Interactions
- Brief Introduction to Asynchronous Communication (e.g., Message Queues basics)
- Considering Data Persistence Strategies in a Microservices Context
- Error Handling and Status Codes in APIs

04 Module 4: Containerization Basics with Docker

- Introduction to Docker for Microservice Deployment
- Creating a Dockerfile for a Python Microservice
- Building and Running Docker Images
- Basic Docker Commands for Managing Containers

- Essential Deployment Considerations for Microservices

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Junior Backend Developer (specializing in Python microservices)**
- > **API Developer**
- > **Microservices Integrator**

FREQUENTLY ASKED QUESTIONS

Q: What specific Python frameworks or libraries will I be using hands-on to build microservices in this course?

This course will provide an overview and practical examples using popular Python microframeworks such as Flask or FastAPI, demonstrating how to design and implement RESTful APIs that form the backbone of a microservices architecture. You'll gain practical exposure to creating endpoints and handling data within these environments.

Q: After completing this 2-hour course, what level of microservice complexity will I be equipped to build or contribute to immediately?

Upon successful completion of this course, you will be able to build simple, standalone Python microservices with well-defined RESTful APIs and understand the fundamentals of their containerization with Docker. You'll have the foundational knowledge to contribute to existing microservice projects and design basic services as part of a larger distributed system, understanding the principles required for more complex architectures.

Q: What are the essential prerequisites or prior knowledge I need before enrolling in this intermediate Python Microservices course?

To get the most out of this course, you should have a solid understanding of Python programming fundamentals, including functions, classes, data structures, and basic file I/O. Familiarity with command-line interfaces and basic web development concepts (like HTTP requests and responses) will also be highly beneficial.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

10,000+

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