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Sign up

Prefect training: workflow automation

3 days (21 hours)

Presentation

Our Prefect training course will give you the expertise you need to orchestrate and automate complex workflows efficiently. You'll learn how to leverage the power and simplicity of this Python tool for optimal workflow management.

The course will familiarize you with the basic concepts of Prefect, including its architecture, core functionality and the differences between Prefect 1.0 and 2.0. You'll also learn about creating dynamic workflows, managing deployments, caching strategies, and using Prefect Cloud for enhanced orchestration.

This training will equip you not only with theoretical skills, but also with practical applications, ensuring that you understand not only Prefect's capabilities, but also how to apply them effectively.

Like all our training courses, it will be run on the latest version of Prefect.

Objectives

- **Configuring Prefect IO**
- Create dynamic workflows
- Integrate Prefect with cloud solutions like AWS

Target audience

- **Data engineers**
- Developers

Prerequisites

- Beginner level on Python
- Basic concepts of workflow automation

Prefect IO training program

Introduction to Prefect IO

- Overview
- Basic concept
- Prefect 1 vs 2.0
- Configuration
- Execution model

Prefect 2.0

- Simplified workflows
- Greater flexibility
- Block system
- Asynchronous support
- Pydantic validation
- Notifications and sub-flows

Building dynamic workflows

- Introduction to dynamic workflows
- Python functions in workflows
- Modular underflows
- ETL process
- Efficient pipeline management

Advanced flow management

- Deployment models
- API REST
- Agent orchestration
- Work pools
- Workflow planning

Caching and optimization

- **Caching**
- Implementing key cache functions
- Cache expiration
- Input-based cache
- Cache refresh

Server management

- Introduction to server management
- Users and roles (RBAC)
- API keys
- Single signature and audit trail
- Access control lists

Integration with Prefect

- Integration with cloud providers (AWS, GCP)
- Github workflows
- Prefect and databrick
- Prefect and Kubernetes
- Machine learning workflows

Monitoring and scaling

- Debugging
- Workflow scaling
- Observability
- Best management practices

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Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or internal security difficulties within the company (intra-company or virtual classroom) that might be encountered.

problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.