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# Kestra training

3 days (21 hours)

## Presentation

Kestra is an open-source workflow management platform. Our Kestra training course will enable you to orchestrate, automate and supervise complex tasks. It's a tool that can be deployed on multiple tools such as Cloud Compute, Docker or Kubernetes.

During this training course, your developers will learn how to create, manage and configure complex workflows with Kestra. You'll be able to define tasks, configure triggers and use Kestra with Docker or [Kubernetes](#).

We'll cover advanced topics such as database systems, error management and workflow recovery for performance optimization.

With this course, you'll develop skills in workflow orchestration, process automation and data management. You'll be able to deploy and manage robust, scalable solutions for your organization's specific needs.

As with all our training courses, this one will include the [latest news](#) from Kestra.

## Objectives

- Understanding Kestra's objectives and use cases
- Install and configure Kestra on various platforms
- Create and manage simple workflows
- Explore the key components of Kestra workflows
- Deploy Kestra on different tools

## Target audience

- Developers
- DevOps engineers
- Data Analyst
- System administrators

## Prerequisites

- Good understanding of basic programming and scripting concepts
- Experience with workflow management systems or automation tools

# KESTRA TRAINING PROGRAM

## INTRODUCTION TO KESTRA

- Introducing Kestra (objectives and contexts of use)
- Differentiation between Kestra versions
- Key benefits and use cases
- Overview of the Kestra ecosystem
- The importance of workflow automation

## INSTALLATION AND CONFIGURATION

- Detailed instructions for installing Kestra on different platforms
- Initial configuration and system check
- Installation safety tips
- Common installation problems and solutions
- Configuring development and production environments
- Installing Kestra in a Kubernetes cluster
  - Using a Kubernetes ConfigMap via Helm value configuration
  - Using Kubernetes Secret via Helm value secrets
- Start Kestra in a single Docker container

## GETTING STARTED WITH KESTRA

- Create and manage your first workflows
- Kestra user interface: navigation and key features
- Run a simple workflow and analyze results
- Using workflow templates
- Best practices for task and workflow management

## WORKFLOW COMPONENTS AND KEY CONCEPTS

- Exploring the different workflow components in Kestra
- Understanding triggers, tasks and decisions

- Using expressions to manipulate data
- Error and condition management in workflows
- Data integration and interoperability with other systems

## ARCHITECTURE AND COMPANY KESTRA

- Kestra architecture: components and their interaction
- Kestra Enterprise features: advanced functionalities
- Scalability and high availability with Kestra
- Security and compliance in Kestra Enterprise
- Performance monitoring and optimization

## CUSTOMIZATION AND EXPANSION

- Development of custom plugins and extensions
- Kestra API and integration with other applications
- Guided development of a simple plugin
- Documentation and support for developers

## MANAGEMENT AND MAINTENANCE

- Daily maintenance routine for administrators
- Monitoring, logging and diagnosing problems
- Version upgrades and migration
- Backup and restore strategies
- Optimization of resources and associated costs

## BEST PRACTICES AND ADVANCED STRATEGIES

- Workflow optimization tips
- Advanced error handling strategies
- Efficient use of cloud resources with Kestra
- Secure workflows and regulatory compliance
- Feedback and case studies

## Companies concerned

This 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 on entry to training complies with Qualiopi quality criteria. As soon as enrolment is confirmed, the learner receives a self-assessment questionnaire enabling us to

assess their estimated level of proficiency in different types of technology, and their 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 could be 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.