

Course : Data Engineering on AWS

Official Course, AWS Certification Preparation

Practical course - 3d - 21h00 - Ref. AWN

Price : 2590 € E.T.

NEW

In this course, you'll learn how to design, deploy, and optimize data engineering solutions on AWS. You'll develop the skills needed to implement data lakes, data warehouses, and batch and streaming data pipelines.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Understanding the Fundamentals of Data Engineering and Key AWS Services
- ✓ Design and deploy data lakes and data warehouses on AWS
- ✓ Create batch and streaming data pipelines
- ✓ Optimize the performance, security, and orchestration of data solutions
- ✓ Leveraging AWS Services for Data Processing, Storage, and Analysis

Intended audience

Professionals who want to design, develop, optimize, and secure data engineering solutions using AWS services.

Prerequisites

Strong knowledge of the basic concepts of machine learning, proficiency in Python (NumPy, Pandas, Scikit-learn), and a basic understanding of cloud computing and the AWS platform. Knowledge of SQL and Git is a plus. A good understanding of written English is recommended.

Course schedule

1 Roles and Fundamentals of Data Engineering

- Role and Responsibilities of a Data Engineer.
- Data personas and data discovery.
- Overview of AWS Data Services.

PARTICIPANTS

Professionals who want to design, develop, optimize, and secure data engineering solutions using AWS services.

PREREQUISITES

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TRAINER QUALIFICATIONS

The experts who lead the training courses are specialists in the subjects covered. They are approved by the publisher and certified for the course. They have also been validated by our teaching teams in terms of both professional knowledge and teaching skills for each course they teach. They have at least three to ten years of experience in their field and hold or have held positions of responsibility in companies.

2 AWS Tools and Services for Data Engineering

Outils et méthodes

- Orchestration and automation.
- Security, monitoring, and CI/CD.
- Infrastructure as Code (IaC).
- Network and Cost Optimization.

3 Design and Implementation of a Data Lake

- Architecture and Storage.
- Data ingestion, cataloging, and processing.
- Data Availability.

Hands-on work

Creating a Data Lake on AWS.

4 Optimizing and Securing a Data Lake

- Open table formats.
- AWS Lake Formation.
- Permissions Management, Security, and Governance.
- Troubleshooting.

Hands-on work

Automating the creation of a data lake.

5 Data Warehouse Architecture and Design

- Principles of Data Warehouses.
- Amazon Redshift Serverless.
- Data ingestion, processing, and utilization.

Hands-on work

Deployment of a Data Warehouse.

6 Performance Optimization

- Monitoring and optimization.
- Data and Query Optimization.
- Orchestration.

7 Data Warehouse Security

- Authentication and Access Control.
- Security, Auditing, and Compliance.

Hands-on work

Access Management with Amazon Redshift.

ASSESSMENT TERMS

Assessment of targeted skills prior to training.

Assessment by the participant, at the end of the training course, of the skills acquired during the training course.

Validation by the trainer of the participant's learning outcomes, specifying the tools used: multiple-choice questions, role-playing exercises, etc.

At the end of each training course, ITTCERT provides participants with a course evaluation questionnaire, which is then analysed by our teaching teams. Participants also complete an official evaluation of the publisher.

An attendance sheet for each half-day of attendance is provided at the end of the training course, along with a certificate of completion if the participant has attended the entire session.

TEACHING AIDS AND TECHNICAL RESOURCES

The teaching resources used are the publisher's official materials and practical exercises.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training course.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you have specific accessibility requirements? Contact Ms FOSSE, disability advisor, at the following address: psh-accueil@orsys.fr so that we can assess your request and its feasibility.

8 Designing Batch Data Pipelines

- Design Principles.
- AWS Services for Batch Processing.

9 Implementing Batch Pipelines

- Processing, transformation, and cataloging.
- Data Dissemination.

Hands-on work

A Data Engineer's Work Scenario.

10 Optimizing and Securing Batch Pipelines

- Optimization, orchestration, and security.

Hands-on work

Orchestration with AWS Step Functions and Spark.

11 Streaming Data Architectures

- Real-time pipeline design.
- Intake, storage, processing, and analysis.

Hands-on work

Stream Processing with Apache Flink.

12 Optimizing and Securing Streaming Solutions

- Performance Optimization.
- Security and Compliance.

Hands-on work

Access Management with Amazon Managed Streaming for Apache Kafka (MSK).

Options

Certification : 200 € H.T.

"AWS Certified Data Engineer - Associate" (DEA-C01) Certification

[Comment passer votre examen ?](#)

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Dates and locations

2026 : 14 Dec.

2026 : 7 Dec.

2027 : 8 Mar., 14 June, 6 Sep., 1 Dec.

2027 : 1 Mar., 7 June, 30 Aug., 24 Nov.