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## Trino training

3 days (21 hours)

### Presentation

Formerly known as PrestoSQL, our Trino training course will teach you how to process large datasets quickly and flexibly on this distributed data analysis platform.

During this course, you'll discover Trino's ability to execute SQL queries on a variety of data sources, including relational databases, [data lakes](#) and CSV files.

You'll explore in depth several of Trino's features such as query optimization, resource management and integration with popular data analysis tools such as Apache Superset and Tableau.

By mastering Trino, you will acquire essential skills in distributed data analysis that will prepare you to meet the challenges of large-scale data processing in a variety of professional contexts.

As with all our training courses, this one will feature the very [latest](#) from Trino.

### Objectives

- Understanding Trino's architecture and use cases
- Administer, monitor and optimize Trino performance
- Develop advanced SQL and data integration skills

### Target audience

- **Data Analysts**
- Data Engineer

## Prerequisites

- Basic knowledge of SQL
- Understanding relational database concepts
- IT systems deployment and administration skills
- Familiarity with cloud computing environments and orchestration tools (Kubernetes)

## OUR TRINO TRAINING PROGRAM

### INTRODUCTION AND BASIC CONCEPTS

- Introducing Trino and its typical use cases
- Trino architecture and operating principles
- Overview of key features and the Trino ecosystem

### INSTALLATION AND DEPLOYMENT

- Installing Trino on Kubernetes with Helm
- Initial configuration and optimization
- Deploying Trino with the RPM package
- Configuration and environment management

### CUSTOMER INTERFACES AND SECURITY

- Using Trino's command line interface
- Configuring and using JDBC drivers
- Overview of security mechanisms: TLS/HTTPS, authentication
- Authentication configuration (LDAP, OAuth 2.0, Kerberos)
- Access control and user management

### ADMINISTRATION AND SUPERVISION

- Using Trino's Web UI interface
- Tuning techniques to optimize Trino performance
- Trino monitoring with JMX and OpenTelemetry
- Log and system event management
- Advanced resource and query management practices

### SQL AND QUERY ENVIRONMENT

- SQL fundamentals in Trino
- Trino-specific SQL functions and operations
- Optimizing queries and catalog management
- Advanced techniques such as spilling to disk and dynamic filtering

## CONNECTORS AND DATA INTEGRATION

- Configure and use connectors for various data sources
- Integration scenarios with Hive, Cassandra, Kafka
- Metadata management and data access optimization
- Custom connector development

## OPTIMIZATIONS AND ADVANCED FUNCTIONS

- Understand and implement cost-based optimizations
- Explore Trino's advanced data analysis capabilities
- Use extensions such as Machine Learning and Geospatial
- Strategies for scaling and distributing requests
- Efficient management of large amounts of data

## 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 security difficulties within the company (intra-company or virtual classroom) which 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.