Getting Started with Snowflake | Datawarehouse in the Cloud - TTSNW03

Gain practical expertise in Snowflake to simplify data workflows, optimize performance, and securely manage and analyze large datasets.

Duration: 3 Days
Skill Level: Introductory
Available Format: ; Instructor-Led, Onsite In Person ; On Public Schedule

Getting Started with Snowflake is hands-on course is the perfect starting point for anyone new to Snowflake. Designed for data professionals like analysts, engineers, and database administrators, it provides the foundational skills you need to manage data, optimize query performance, and integrate Snowflake with tools you already use. You'll learn how to use Snowflake's unique features, such as caching, time travel, and data protection, while solving real-world challenges in smarter and more efficient ways.

What You'll Learn

Overview

Snowflake is a cutting-edge cloud data platform that simplifies how organizations store, query, and manage data at scale. Its unique architecture combines the power of a data warehouse with the flexibility of the cloud, making it an ideal solution for professionals who work with large volumes of data or need seamless integration with analytics tools. Whether you are a data analyst, engineer, scientist, or database administrator, learning Snowflake can transform how you approach data challenges and unlock new possibilities for efficiency and insight.

Getting Started with Snowflake is a three-day, hands-on course designed to introduce you to Snowflake and build the foundational skills needed to thrive in today's data-driven environments. Whether you are a data analyst, engineer, scientist, or database administrator, this course will help you understand Snowflake's powerful features and

how to apply them effectively. Through a combination of practical exercises and clear instruction, you will explore how to manage data efficiently, optimize query performance, and integrate Snowflake with tools you already use.

You will also learn to apply Snowflake's unique features, such as caching, time travel, and data protection, to solve real-world problems more effectively. Through guided labs, demonstrations, and real-world scenarios, you will gain a solid understanding of Snowflake's core capabilities and how they provide value in your day-to-day work. By the end of the course, you will feel confident in using Snowflake to streamline workflows, enhance team collaboration, and support your organization's data goals.

Objectives

This course combines engaging instructor-led presentations and useful demonstrations with valuable hands-on labs and engaging group activities. This course provides a detailed introduction to Snowflake's Data Cloud, focusing on fundamental concepts, best practices, and tools for leveraging Snowflake as a modern data warehouse solution.

Over three days, you will explore:

- **Efficient Data Management:** Learn to load, store, and transform structured and semi-structured data in Snowflake using SQL and Python for streamlined data workflows.
- **Optimizing Query Performance:** Develop skills to write efficient queries, leverage Snowflake's caching features, and use query profiling tools to improve performance and concurrency.
- **Implementing Security and Governance:** Gain expertise in configuring role-based access controls, managing authentication, and applying Snowflake's advanced data protection features like cloning and time travel.
- **Integrating with Analytics Tools:** Build the ability to connect Snowflake with popular BI tools such as Tableau and Power BI, enabling seamless reporting and data visualization.
- **Real-World Application:** Master end-to-end workflows, combining data loading, querying, transformation, and visualization to solve practical business challenges effectively.

If your team requires different topics, additional skills or a custom approach, our team will collaborate with you to adjust the course to focus on your specific learning objectives and goals.

Audience

This course is tailored for professionals responsible for managing, analyzing, and architecting data solutions, including data analysts, data engineers, data scientists, database administrators, and architects. It's ideal for individuals who work with large datasets, design data-driven applications, or need to optimize workflows in a modern cloud environment. Whether you're looking to enhance your technical skills or streamline data processes for your organization, this course provides the practical knowledge and tools to succeed.

Pre-Requisites

To ensure a smooth learning experience and maximize the benefits of attending this course, you should have the following prerequisite skills:
- **Basic SQL Proficiency:** Ability to write and understand basic SQL queries, including SELECT, INSERT, and JOIN statements.
- **Introductory Python Knowledge:** Familiarity with Python basics, such as working with variables, loops, and simple data manipulation using libraries like pandas.
- **Understanding of Data Management Concepts:** General knowledge of data storage, formats, and workflows, including an awareness of how databases function.

TTPS4800	Introduction to Python Programming Basics
TTSQL002	Introduction to SQL Programming Basics

Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We'll work with you to tune this course and level of coverage to target the skills you need most. Topics, agenda and labs are subject to change, and may adjust during live delivery based on audience skill level, interests and participation.

Day 1: Snowflake Fundamentals

Morning Session

1. **Introduction to Snowflake**
   - Key features and benefits of Snowflake.
   - Understanding Snowflake's architecture (storage, compute, and cloud services).
   - Navigating Snowsight and its interface.

2.   **Connecting to Snowflake**
- Options for connecting (Snowsight, SnowSQL, Python connectors).
- Establishing secure connections.
- Hands-On Lab:
- Setting up a Snowflake account.
- Exploring the Snowflake interface and connection options.

3.   **Core Data Operations**
- Introduction to Data Definition Language (DDL) and Data Manipulation Language (DML).
- Creating and managing tables and views.
- Writing basic SQL queries for data exploration.

4.   **Data Loading Basics**
- Understanding data loading objects and formats.
- Loading data using the COPY command.
- Managing bulk data imports.
- Hands-On Lab:
- Creating tables and loading sample data into Snowflake.
- Writing simple queries to retrieve and analyze data.

Day 2: Querying, Caching, and Data Transformation

5.   **Advanced Querying**
- Using window functions, groupings, and joins.
- Implementing estimation and sampling functions.
- Writing efficient queries with query tags and parameters.

6.   **Caching and Metadata Management**
- Overview of Snowflake's caching layers (result and data cache).
- Understanding metadata for optimizing query performance.
- Hands-On Lab:
- Writing advanced SQL queries.
- Exploring query performance using Query Profile.

7.   **Data Transformation and Optimization**
- Using Python to transform data in Snowflake.
- Managing and transforming semi-structured data (e.g., JSON).
- Optimizing queries for performance and concurrency.
- Hands-On Lab:

- Performing data transformations with Python.
- Querying and flattening semi-structured data.

Day 3: Security, Protection, and Integration

8. Data Security and Governance
- Overview of access control and authentication.
- Role-based access control (RBAC) and grants.
- Protecting data with encryption and masking.

9. Data Protection Features
- Cloning, time travel, and fail-safe recovery.
- Introduction to replication for disaster recovery.
- Hands-On Lab:
- Configuring roles and permissions.
- Exploring data protection with cloning and time travel.

10. Integration and Reporting
- Integrating Snowflake with BI tools (Tableau, Power BI).
- Exporting data for visualization and reporting.

11. End-to-End Workflow
- Combining loading, querying, and visualization in a real-world scenario.
- Hands-On Lab:
- Connecting Snowflake to a BI tool.
- Completing an end-to-end workflow: loading, querying, and visualizing data.

Related Courses

TTSNW04	Intermediate Snowflake | Datawarehouse in the Cloud
TTSNW03	Getting Started with Snowflake | Datawarehouse in the Cloud
TTSNW06	Snowflake for Technologists
TTSNW02	Snowflake for End Users
TTSNW07	Advanced Data Handling and Automation with Snowflake

Setup Made Simple! Learning Experience Platform (LXP)

All applicable course software, digital courseware files or course notes, labs, data sets and solutions, live coaching support channels and rich extended learning and post training resources are provided for you in our "easy access, single source, no install required" online Learning Experience Platform (LXP), remote lab and content environment. Access periods vary by course. We will collaborate with you to ensure your team is set up and ready to go well in advance of the class. Please inquire about set up details and options for your specific course of interest.

For More Information

Please contact us or call 844-475-4559 toll free for more information about our training services (instructor-led, self-paced or blended), coaching and mentoring services, public course enrollment or questions, partner programs, courseware licensing options and more.