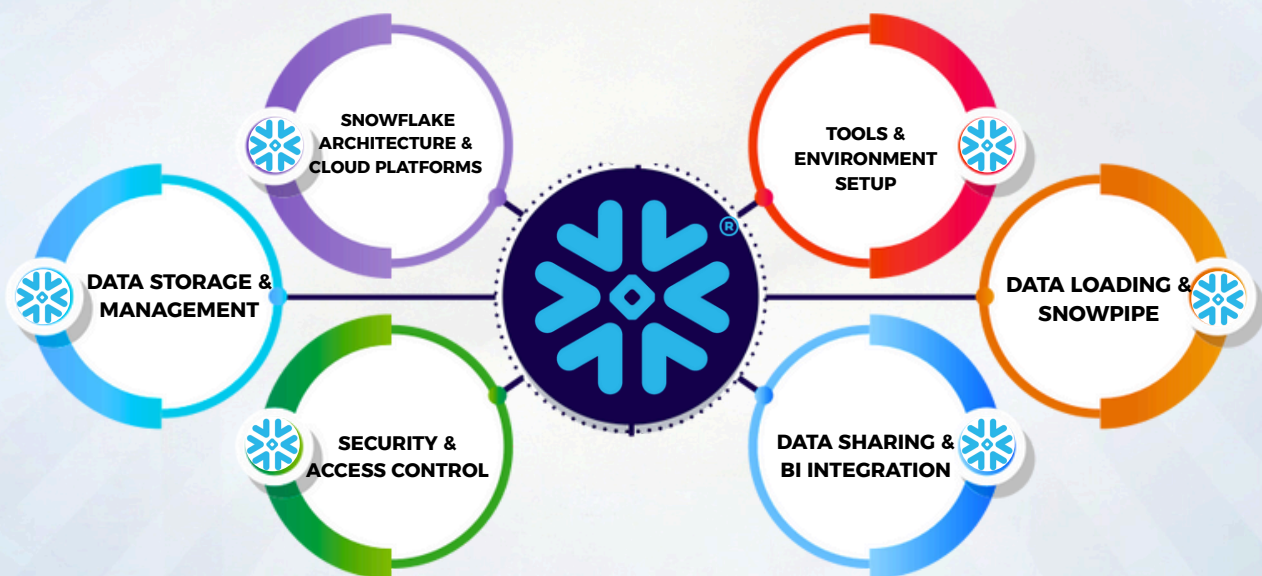




SNOWFLAKE CURRICULUM





SNOWFLAKE TRAINING CURRICULUM OUTLINE

1. MODULE 1: INTRODUCTION TO SNOWFLAKE & CLOUD DATA WAREHOUSING

- BRIEF: THIS MODULE INTRODUCES THE FUNDAMENTAL CONCEPTS OF CLOUD DATA WAREHOUSING AND POSITIONS SNOWFLAKE WITHIN THIS ECOSYSTEM, HIGHLIGHTING ITS UNIQUE ADVANTAGES AND USE CASES COMPARED TO TRADITIONAL DATA WAREHOUSES.

2. MODULE 2: GETTING STARTED

- BRIEF: COVERS THE INITIAL STEPS TO SET UP AND NAVIGATE THE SNOWFLAKE ENVIRONMENT, INCLUDING ACCOUNT CREATION, UNDERSTANDING THE WEB INTERFACE, AND EXECUTING BASIC SQL QUERIES TO GET FAMILIAR WITH THE PLATFORM.

3. MODULE 3: SNOWFLAKE ARCHITECTURE

- BRIEF: DELVES INTO SNOWFLAKE'S INNOVATIVE MULTI-CLUSTER SHARED DATA ARCHITECTURE, EXPLAINING ITS THREE KEY LAYERS (DATABASE STORAGE, QUERY PROCESSING/VIRTUAL WAREHOUSES, CLOUD SERVICES) AND HOW THEY ENABLE SCALABILITY, PERFORMANCE, AND CONCURRENCY.

4. MODULE 4: WORKING WITH DATABASES & TABLES

BRIEF: FOCUSES ON CORE DATABASE OBJECTS IN SNOWFLAKE. THIS MODULE TEACHES HOW TO CREATE, MANAGE, AND QUERY DATABASES, SCHEMAS, AND VARIOUS TYPES OF TABLES (E.G., PERMANENT, TRANSIENT, TEMPORARY) WITHIN THE SNOWFLAKE ENVIRONMENT.

5. MODULE 5: LOADING & STAGING DATA

- BRIEF: EXPLORES METHODS FOR INGESTING DATA INTO SNOWFLAKE, COVERING EXTERNAL STAGES, INTERNAL STAGES, AND THE COPY INTO COMMAND. IT DETAILS BEST PRACTICES FOR EFFICIENT DATA LOADING FROM VARIOUS FILE FORMATS.



6. MODULE 6: HANDLING UNSTRUCTURED & SEMI-STRUCTURED DATA

- BRIEF: ADDRESSES SNOWFLAKE'S CAPABILITIES FOR WORKING WITH FLEXIBLE DATA FORMATS LIKE JSON, AVRO, PARQUET, AND XML. IT COVERS CONCEPTS LIKE THE VARIANT DATA TYPE, SEMI-STRUCTURED DATA FUNCTIONS, AND QUERYING UNSTRUCTURED FILES.

7. MODULE 7: PERFORMANCE OPTIMIZATION

- BRIEF: PROVIDES TECHNIQUES AND BEST PRACTICES FOR OPTIMIZING QUERY PERFORMANCE IN SNOWFLAKE, INCLUDING UNDERSTANDING VIRTUAL WAREHOUSE SIZING, QUERY PROFILING, CLUSTERING KEYS, SEARCH OPTIMIZATION SERVICE, AND MATERIALIZED VIEWS.

8. MODULE 8: LOADING DATA FROM AWS

- BRIEF: SPECIFICALLY COVERS INTEGRATING SNOWFLAKE WITH AWS SERVICES FOR DATA LOADING, FOCUSING ON USING AMAZON S3 AS A STAGING AREA AND CONFIGURING EXTERNAL STAGES TO ACCESS DATA STORED IN AWS.

9. MODULE 9: CONTINUOUS DATA INGESTION WITH SNOWPIPE

- BRIEF: INTRODUCES SNOWPIPE, SNOWFLAKE'S CONTINUOUS DATA INGESTION SERVICE. THIS MODULE EXPLAINS HOW TO AUTOMATE DATA LOADING AS SOON AS NEW FILES ARRIVE IN AN EXTERNAL STAGE, MINIMIZING LATENCY.

10. MODULE 10: TIME TRAVEL & FAIL SAFE

- BRIEF: EXPLORES SNOWFLAKE'S POWERFUL DATA RETENTION FEATURES. IT COVERS TIME TRAVEL FOR QUERYING HISTORICAL DATA AND RESTORING ACCIDENTAL DROPS, AND FAIL-SAFE FOR LONG-TERM DATA RECOVERY PROVIDED BY SNOWFLAKE.



11. MODULE 11: DATA SHARING

- BRIEF: DETAILS SNOWFLAKE'S SECURE DATA SHARING CAPABILITIES, ALLOWING ORGANIZATIONS TO SHARE LIVE, GOVERNED DATA WITH CONSUMERS (OTHER SNOWFLAKE ACCOUNTS OR NON-SNOWFLAKE USERS) WITHOUT COPYING OR MOVING DATA.

12. MODULE 12: TASKS & AUTOMATION

- BRIEF: TEACHES HOW TO SCHEDULE AND AUTOMATE SQL STATEMENTS AND STORED PROCEDURES IN SNOWFLAKE USING TASKS, ENABLING RECURRING DATA TRANSFORMATIONS AND MAINTENANCE OPERATIONS.

13. MODULE 13: STREAMS & CDC

- BRIEF: COVERS STREAMS IN SNOWFLAKE, WHICH PROVIDE CHANGE DATA CAPTURE (CDC) CAPABILITIES. THIS MODULE EXPLAINS HOW TO TRACK CHANGES TO TABLES AND PROCESS ONLY THE NEW OR UPDATED ROWS EFFICIENTLY.

14. MODULE 14: MATERIALIZED VIEWS

BRIEF: EXPLAINS MATERIALIZED VIEWS IN SNOWFLAKE, WHICH PRE-COMPUTE AND STORE RESULTS OF QUERIES, ENHANCING QUERY PERFORMANCE FOR FREQUENTLY ACCESSED AND COMPLEX DATA, WITH AUTOMATIC REFRESH CAPABILITIES.

15. MODULE 15: SECURITY & DATA MASKING

- BRIEF: FOCUSES ON SNOWFLAKE'S ROBUST SECURITY FRAMEWORK, INCLUDING NETWORK POLICIES, AUTHENTICATION, AUTHORIZATION (RBAC), AND IMPLEMENTING DYNAMIC DATA MASKING FOR PROTECTING SENSITIVE INFORMATION.

16. MODULE 16: ACCESS MANAGEMENT & BEST PRACTICES

- BRIEF: DISCUSSES MANAGING USER ACCESS, ROLES, AND PRIVILEGES IN SNOWFLAKE USING ROLE-BASED ACCESS CONTROL (RBAC). IT COVERS SECURITY BEST PRACTICES FOR ORGANIZING AND GOVERNING ACCESS TO DATA AND OBJECTS.

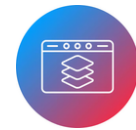
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