SNOWPRO® CORE
COF-C02 AND COF-R02
EXAM STUDY GUIDE

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SNOWPRO® EXAM STUDY GUIDE OVERVIEW

Welcome to the **SnowPro® Core Certification** exam study guide. As you prepare for your upcoming exam, it is important to have a comprehensive understanding of the topics covered on the exam. Use this guide to develop a study plan, identify the areas you need to improve, and review the recommended resources.

This exam study guide is grouped into two sections:

➔ SnowPro Core Exam content and format
➔ Study and Training assets for exam preparation

If you are ready to register to take the exam, please navigate here for registration details.

RECOMMENDATIONS FOR USING THIS GUIDE

Before you start studying for an exam, it is important to understand the exam content and format. This is a self-paced guide and will outline the Snowflake domains, objectives, and topics that will be covered on the exam. Pay attention to the domain weightings as this can help you develop your study plan and outline what to expect on the exam.

With a clear understanding of the exam content and format, the next step is to start preparing for the exam. The second section of this exam study guide will provide you with tips and resources consisting of videos, whitepapers, blogs, and exercises to help you understand Snowflake. Some links may have more value than others depending on your experience, the same amount of time should not be spent on each link.

Prior to reviewing the exam study guide, please make sure you complete the following configurations:

o   Snowflake University (using your Community log in)
o   Snowflake 30-day free trial Account for Hands-On Labs

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SNOWPRO® CORE EXAM CONTENT AND FORMAT

CERTIFICATION OVERVIEW

This exam will validate knowledge to apply specific core expertise implementing and migrating to Snowflake. A SnowPro Core Certified individual has a thorough understanding of the Snowflake Data Cloud, and has the knowledge necessary to develop and manage secure, scalable Snowflake solutions to drive business objectives.

The candidate is expected to have knowledge of:

- Data Loading and Transformation in Snowflake
- Virtual Warehouse Performance and Concurrency
- DDL and DML Queries
- Using Semi-Structured and Unstructured Data
- Cloning and Time Travel
- Data Sharing
- Snowflake Account Structure and Management

Target Audience:

We recommend that individuals have at least 6 months of knowledge using the Snowflake platform prior to attempting this exam. Familiarity with basic ANSI SQL is recommended.

PREREQUISITE KNOWLEDGE

The exam does not cover cloud fundamentals or basics of SQL syntax, but some questions on the exam assume knowledge of these concepts. If you need assistance learning these concepts, we recommend you review some additional resources.

Database Basic Concepts
Basic Terminology Related to Databases and SQL
Tables and Data Types
Selecting and Manipulating Data
Views, Store Procedures, Functions
Security (Authentication and Authorization)

Basics of Cloud Fundamentals
Types of Cloud Computing and Benefits
Types of Cloud Services
Cloud Computing Architecture (Storage and Compute)

EXAM FORMAT FOR CORE CERTIFICATION

Exam Version:	COF-C02
Total Number of Questions:	100
Question Types:	Multiple Select, Multiple Choice
Time Limit:	115 minutes
Languages:	English and Japanese
Passing Score:	750 + Scaled Scoring from 0 - 1000

EXAM FORMAT FOR CORE RECERTIFICATION

The SnowPro Core Recertification exam offers candidates a route to maintain their certification status with Snowflake. The Recertification exam shares the same outline as the regular Core Certification exam, but is shorter and is offered at a reduced rate. You must hold the Core Certification in good standing to take the Core Recertification exam.

Exam Version:	COF-R02
Total Number of Questions:	60
Question Types:	Multiple Select, Multiple Choice, Interactive
Time Limit:	85 minutes
Languages:	English and Japanese
Passing Score:	750 + Scaled Scoring from 0 - 1000
Prerequisites:	SnowPro Core Certified

SUBJECT DOMAIN BREAKDOWNS

The following table contains the domains and weightings covered on the exam. It is not a comprehensive listing of all the content that will be presented on the exam.

Domain	Domain Weightings on Exams
1.0 Snowflake Data Cloud Features and Architecture	25%
2.0 Account Access and Security	20%
3.0 Performance Concepts	15%
4.0 Data Loading and Unloading	10%
5.0 Data Transformations	20%
6.0 Data Protection and Data Sharing	10%

EXAM OUTLINE: OBJECTIVES AND TOPICS

This exam outline includes test domains, objectives, and topics. It is not a comprehensive listing of all the content that will be presented on the exam.

Domain 1.0: Snowflake Data Cloud Features and Architecture

   1.1 Outline key features of the Snowflake Data Cloud.
   - Elastic storage
   - Elastic compute
   - Snowflake's three distinct layers
   - Cloud partner categories
   - Overview of Snowflake editions

   1.2 Outline key Snowflake tools and user interfaces.
   - Snowsight
   - SnowSQL
   - Snowflake connectors
   - Snowflake drivers
   - Snowpark
   - SnowCD

1.3 Outline Snowflake's catalog and objects.
- Databases
- Stages
- Schema types
- Table types
- View types
- Data types
- User-Defined Functions (UDFs)
- User Defined Table Functions (UDTFs)
- Stored procedures
- Streams
- Tasks
- Pipes
- Shares
- Sequences

1.4 Outline Snowflake storage concepts.
- Micro-partitions
- Data clustering
- Data storage monitoring

Domain 2.0: Account Access and Security

2.1 Outline security principles.
- Network security and policies
- Multi-Factor Authentication (MFA)
- Federated authentication
- Key pair authentication
- Single Sign-On (SSO)

2.2 Define the entities and roles that are used in Snowflake.
- Overview of access control
  - Access control frameworks
  - Access control privileges
- Outline how privileges can be granted and revoked
- Explain role hierarchy and privilege inheritance

2.3 Outline data governance capabilities in Snowflake.
- Accounts
- Organizations

- Secure views
- Secure functions
- Information schemas
- Access history
  - Tracking read/write operations
- Overview of row/column-level security
- Object tags

Domain 3.0: Performance Concepts

3.1 Explain the use of the Query Profile.
- Explain plans
- Data spilling
- Use of the data cache
- Micro-partition pruning
- Query history

3.2 Explain virtual warehouse configurations.
- Types of warehouses
- Multi-clustering warehouses
  - Scaling policies
  - Scaling modes
- Warehouse sizing
- Warehouse settings and access

3.3 Outline virtual warehouse performance tools.
- Monitoring warehouse loads
- Scaling up compared to scaling out
- Resource monitors
- Query acceleration service

3.4 Optimize query performance.
- Describe the use of materialized views
- Use of specific SELECT commands
- Clustering
- Search optimization service
- Persisted query results
- Understanding the impact of different types of caching
  - Metadata cache
  - Result cache
  - Warehouse cache

Domain 4.0: Data Loading and Unloading

4.1 Define concepts and best practices that should be considered when loading data.
- Stages and stage types
- File size and formats
- Folder structures
- Ad hoc/bulk loading
- Snowpipe

4.2 Outline different commands used to load data and when they should be used.
- CREATE STAGE
- CREATE FILE FORMAT
- CREATE PIPE
- CREATE EXTERNAL TABLE
- COPY INTO
- INSERT/INSERT OVERWRITE
- PUT
- VALIDATE

4.3 Define concepts and best practices that should be considered when unloading data.
- File size and formats
  - Overview of compression methods
- Empty strings and NULL values
- Unloading to a single file
- Unloading relational tables

4.4 Outline the different commands used to unload data and when they should be used.
- GET
- LIST
- COPY INTO
- CREATE STAGE
- CREATE FILE FORMAT

Domain 5.0: Data Transformations

5.1 Explain how to work with standard data.
- Estimation functions
- Sampling
  - SAMPLE command
  - /TABLESAMPLE command
  - Sampling methods
    - Fraction-based

- - ■ Fixed-size
  - Supported function types
    - System functions
    - Table functions
    - External functions
    - User-Defined Functions (UDFs)
  - Stored procedures
  - Streams
  - Tasks

5.2 Explain how to work with semi-structured data.
- Supported data formats, data types, and sizes
- VARIANT column
- Flattening the nested structure
  - FLATTEN command
  - LATERAL FLATTEN command
- Semi-structured data functions
  - ARRAY/OBJECT creation and manipulation
  - Extracting values
  - Type predicates

5.3 Explain how to work with unstructured data.
- Define and use directory tables
- SQL file functions
  - Types of URLs available to access files
- Outline the purpose of User-Defined Functions (UDFs) for data analysis

Domain 6.0: Data Protection and Data Sharing

6.1 Outline Continuous Data Protection with Snowflake.
- Time Travel
- Fail-safe
- Data encryption
- Cloning
- Replication

6.2 Outline Snowflake data sharing capabilities.
- Account types
- Snowflake Marketplace
- Data Exchange
- Access control options

- - DDL commands to create and manage shares
  - Privileges required for working with shares
- Secure Data Sharing (for example, Direct Share, Listing)

STUDY AND TRAINING ASSETS FOR EXAM PREPARATION

Effective exam preparation requires more than reading and attending a training course. It involves using a variety of study and training assets to enhance your understanding of the exam content. This section will provide you with an overview of the different study and training assets aligned to each domain covered on the **SnowPro Core Certification** exam.

First, let's review some effective strategies for exam preparation:

1) **Set a timeline**: Schedule your exam and use that date as your target date. Plan ahead and create a study plan.
2) **Understand the exam format and content:** When reviewing the exam domain percentages, pay attention to the weightings in each domain and plan your study time accordingly. Some domains will have more questions than others.
3) **Study with Snowflake assets**: Use the exam outline as a checklist. Identify the objectives and topics you understand and the objectives you feel like you need more experience with. The next section of this guide will list recommended free resources for each domain.
4) **Review Snowflake Documentation:** All Core exam questions are 100% referenceable with Snowflake Documentation.
5) **Practice with sample questions**: Gain familiarity with the question formats. Sample questions can be found at the end of this guide.

Learning is different for everyone! If you learn better with an instructor leading the way, consider our Snowflake Instructor-Led Training recommendations:

➔ Snowflake Fundamentals Course

➔ SnowPro Core OnDemand Preparation Course

RECOMMENDED STUDY RESOURCES

Snowflake Documentation
As the SnowPro Core Certification is Snowflake's foundational-level certification, the best place to review Snowflake concepts and features is the Snowflake Documentation. Core exam questions are tightly aligned to and referenceable from the Snowflake Documentation.

Domain 1.0: Snowflake Data Cloud Features and Architecture Study Resources

Snowflake University On Demand Trainings
Snowflake University, LevelUp: Snowflake's Key Concepts
Snowflake University, Level Up: Snowflake Ecosystem

Getting Started With Snowflake
Module 2: Prepare your Lab Environment
Module 3: The Snowflake User Interface & Lab Story

Domain 2.0: Account Access and Security Study Resources

Snowflake University On Demand Trainings
Snowflake University, LevelUp: Accounts & Assurances
Snowflake University, Level Up: Container Hierarchy

Getting Started With Snowflake
Module 9: Working with Roles, Account Admin & Account Usage

Video
Snowflake Security Overview (Video)

Reading Asset
Quickly Visualize Snowflake's Roles, Grants and Privileges (Article)

Domain 3.0: Performance Concepts Study Resources

Snowflake University On Demand Trainings
Snowflake University, Level Up: Query History & Caching
Snowflake University, LevelUp: Query & Result
Snowflake University, LevelUp: Context
Snowflake University: LevelUp: Resource Monitoring
Snowflake University, Essentials - Data Warehousing Workshop

Getting Started With Snowflake
Module 6: Working with Queries, The Results Cache & Cloning

Videos
Accelerating BI Queries with Caching in Snowflake (Video)
Snowflake Workloads Explained: Data Warehouse (Video)
Tackling High Concurrency with Multi-Cluster Warehouses (Video)

Reading Assets
Caching in Snowflake Data Warehouse (Article)
How to: Understand Result Caching (Article)
Managing Snowflake's Compute Resources (Blog)
Performance Impact from Local and Remote Disk Spilling (Article)
Search Optimization: When & How to Use (Article)
Snowflake Materialized Views: A Fast, Zero-Maintenance Accurate Solution (Blog)
Tuning Snowflake (Article)
Using Materialized Views to Solve Multi-Clustering Performance Problems (Article)

Domain 4.0: Data Loading and Unloading Study Resources

Snowflake University On Demand Trainings
Snowflake University, Level Up: Data Loading
Badge 1: Data Warehousing Workshop

Getting Started With Snowflake
Module 4: Preparing to Load Data
Module 5: Loading Data

Videos
Building and Deploying Continuous Data Pipelines (Video)
Easily Loading and Analyzing Semi-Structured Data in Snowflake (Video)

Reading Assets
Best Practices for Data Unloading (Article)
Best Practices for Using Tableau with Snowflake (White Paper, requires email for access)
How to Load Terabytes into Snowflake - Speeds, Feeds and Techniques (Blog)

Domain 5.0: Data Transformations Study Resources

Snowflake University On Demand Training
Badge 2: Data Application Builders Workshop

Getting Started With Snowflake
Module 7: Working with Semi-Structured Data, Views & Joins

Video
Easily Loading and Analyzing Semi-Structured Data in Snowflake (Video)

Reading Assets
Best Practices for Managing Unstructured Data (E-book)
Structured vs Unstructured vs Semi-Structured Data (Blog)
Understanding Unstructured Data With Language Models (Blog)

Domain 6.0: Data Protection and Data Sharing Study Resources

Snowflake University On Demand Trainings
Snowflake University, Level Up: Container Hierarchy
Snowflake University, Level Up: Backup and Recovery
Snowflake University, Essentials - Sharing, Marketplace & Exchanges Workshop
Badge 3: Sharing, Marketplace, & Exchanges Workshop

Getting Started With Snowflake
Module 8: Using Time Travel
Module 10: Data Sharing

Videos
Data Protection with Time Travel in Snowflake (Video)
Getting Started on Snowflake with Partner Connect (Video)
Top 10 Cool Snowflake Features, #7: Snowflake Fast Clone (Blog + Video)

Reading Assets
Meta Data Archiving with Snowflake (Article)
Snowflake Continuous Data Protection (White Paper)

Snowflake Product Releases

If you are studying for the SnowPro Core Recertification exam, make sure you are up to date with what's new with Snowflake:

Snowflake Documentation: What's New?

SNOWPRO® CORE CERTIFICATION SAMPLE QUESTIONS

1.   Which type of data integration tools leverage Snowflake's scalable compute for data transformation?

   A.   Database replication
   B.   ELT
   C.   ETL
   D.   Streaming

2.   What is the maximum number of consumer accounts that can be added to a share object?

   A.   1
   B.   10
   C.   100
   D.   Unlimited

3.   What technique does Snowflake use to limit the number of micro-partitions scanned by each query?

   A.   Pruning
   B.   Indexing
   C.   Map Reduce
   D.   B-Tree

4.   Which of the following are options when creating a virtual warehouse? (Select TWO).

   A.   Auto-suspend
   B.   Storage size
   C.   Auto-resume
   D.   Cache size
   E.   Default role

5.   Which role in Snowflake allows a user to administer users and manage all database objects?

   A.   SYSADMIN
   B.   SECURITYADMIN
   C.   ACCOUNTADMIN
   D.   ROOT

Ready to sign up for an exam? Navigate here to get started.