1) Which statements are true of micro-partitions? (Select all that apply)

They are approximately 16MB in size

They are stored compressed only if COMPRESS=TRUE on Table

They are immutable

They are only encrypted in the Enterprise edition and above

2) Micro-partition metadata enables some operations to be completed without requiring Compute

3)True or False: When data is staged to a Snowflake internal staging area using the PUT command, the data is encrypted on the client's machine'. True

4) Which of the following are examples of operations that require a Virtual Warehouse to complete, assuming no queries have been executed previous.

The longer the data retention period, the higher the resulting storage costs.

True or false Ans -true

5) warehouse- compute layer?

Yes

6) GRANT SELECT, INSERT, UPDATE, DELETE ON MYTABLE TO USER JOHN; will this fail ---?TRUE

7) Which of the following statements are true of VALIDATION\_MODE in Snowflake? (Select all that apply)

1The VALIDATION\_MODE option is used when creating an Internal Stage

2. VALIDATION\_MODE=RETURN\_ALL\_ERRORS is a parameter of the COPY command

3. The VALIDATION\_MODE option will validate data to be loaded by the COPY statement while completing the load and will return the rows that could not be loaded without error

8) What is the minimum Snowflake edition that provides data sharing?

Standard also has the feature?

9) A single database can exist in more than one Snowflake account.

T/f ans -false

10) You can query the files in an External Stage directly without having to load the data into a table.

T/F

Ans -True

11) True or False: A single schema can exist in more than one database. Ans True

12) A Virtual Warehouse can only be resized while suspended. -- T/F ans False

13) True or False: It is possible for a user to run a query against the query result cache without a requiring an active Warehouse.

14) True or False: Fail-safe can be disabled within a Snowflake account.

T? F ans -false

15) It is possible to load data into Snowflake without creating a named File Format object. ????True

16) True or False: You can define multiple columns within a clustering key on a table.,,yes

17) Snowpipe's underlying architecture utilizes the COPY command to ingest data into tables.

true

18) Which scenarios will benefit from the Snowflake cross-region replication feature?

19) Snowflake Virtual Warehouses are part of which layer of the Snowflake architecture? --

Global or compute Ans -compute

20) Snowflake data can only be accessed by the Compute instances that own its micro-partitions. ? False

21) Snow pipe's underlying architecture utilizes the COPY command to ingest data into tables. ? True

22) True or False: Multi-Factor Authentication (MFA) in Snowflake is only supported in conjunction with Single Sign-On (SSO).

23) Snow pipe''s underlying architecture utilizes the COPY command to ingest data into tables. ?yes

24) True or False: It is possible to load data into Snowflake without creating a named File Format object.

Yes ? ans -true

25) True or False: A single database can exist in more than one Snowflake account.

26) It is possible for a user to run a query against the query result cache without an requiring an active Warehouse. ???TRUE

27) Increasing the maximum number of clusters in a Multi-Cluster Warehouse is an example of:?scale-Out

28) What command is used to load files into an Internal Stage within Snowflake?Put

29) The default Time Travel retention period is: 1 day yes

30) Multi-Factor Authentication (MFA) is available only to customers with Enterprise edition and above. ????? False

31) True or False: Snowpipe via REST API can only reference External Stages as source.

32)True or False: Loading data via the COPY command only allows error handling on a per-file basis--all files are loaded in their entirety or marked as error, there are no partial loads.

33) True or False: It is possible to unload structured data to semi-structured formats such as JSON and Parquet.

34) True or False: Every object is owned by one and only one role; therefore a user must be using that role to access the object. ??

35) True or False: It is possible to set a user’s default role to a role they have not been granted access to.

36) True or False: A single schema can exist in more than one database.

37) True or False: The user has to specify which cluster a query will run on in a multi-cluster Warehouse.

38) When specifying a table''s clustering key, it is recommended you use a column with high cardinality. ??? T/F ??? False

39) True or False: The user has to specify which cluster a query will run on in a multi-cluster Warehouse.

40) True or False: Snowflake charges additional fees to Data Providers for each Share they create.

41) A single schema can exist in more than one database. ??? T/False ???

42) True or False: Snowflake charges additional fees to Data Providers for each Share they create.

43) True or False: Micro-partition metadata enables some operations to be completed without requiring Compute.

44) True or False: Snowflake charges additional fees to Data Providers for each Share they create.

45) Snowflake's Global Services Layer gathers and maintains statistics on all columns in all micro-partitions. ??? True /F ??

46)True or False: Loading data via the COPY command only allows error handling on a per-file basis--all files are loaded in their entirety or marked as error, there are no partial loads.

47)True or False: Loading data via the COPY command only allows error handling on a per-file basis--all files are loaded in their entirety or marked as error, there are no partial loads.

false

48) True or False: Users are able to see the result sets of queries executed by other users that share their same role.

49) AWS Private Link provides a secure connection from the Customer's on-premise data center to the Snowflake Virtual Private Cloud ??? True/F ??

50) When Snowflake is configured to use Single Sign-On (SSO), Snowflake receives the usernames and credentials from the SSO service and loads them into the customer's Snowflake account. ?????

True /F?

51) Every query should be expected to execute faster on a larger Virtual Warehouse than on a smaller Virtual Warehouse. ???? T/False ???

52) It is possible for a user to run a query against the query result cache without an requiring an active Warehouse. ??? True /F

53) Which statement best describes Snowflake tables?

It is possible to load data into Snowflake without creating a named File Format object. ???? True

Snowflake data can only be accessed by the Compute instances that own its micro- partitions? false

It is possible for a user to run a query against the query result cache without an requiring an active Warehouse. ??? True

54) When specifying a table's clustering key, it is recommended you use a column with high cardinality. ??? T/False ???

55) A single schema can exist in more than one database. ???? T/False ????

56) Snowflake's Global Services Layer gathers and maintains statistics on all columns in all micro-partitions. ??? True/F ???

57) True or False: Micro-partition metadata enables some operations to be completed without requiring Compute.

58) AWS Private Link provides a secure connection from the Customer's on-premise data center to the Snowflake Virtual Private Cloud ???? True/f

59) Every query should be expected to execute faster on a larger Virtual Warehouse than on a smaller Virtual Warehouse. T/False ???

--====================================== Screen shot

1) Which of the following terms best describes snowflake's database architecture?

columnar shared nothing

shared disk

multi-cluster,shared data

cloud-native shared memory

2) T or False :- it is best practise to define a clustering key on every table

3) True or F :- you can define multiple columns within a clustering key on a table

4) which of the following statements are true?

a.the copy command must refernce a stage or cloud storage location

b.a named file format is optinal when using the copy command

c.a file format option used in the copy command will override the one in stage

d.a file format object must be defined when creating a stage

5) snowflake collects which of the following metadata on each of its micro partitions?

a)range of values

b)numberof distince values

c)MIN/MAX values

d)NULL Count

6) which of the following commands sets the Virtual warehouse for a session?

a)COPY WAREHOUSE FROM <<config file>>;

b)SET WAREHOUSE FROM =<<warehouse name>>;

c)USE WAREHOUSE<<warehouse name>>;

d)USE VIRTUAL\_WAREHOUSE<<warehouse name>>;

7) which of the following are valid approaches to loading data into a snowflake table?

a)bulk copy from a external storage

b)continous load using snowpipe REST API

c)the snowflake web interface (UI)data loading wizard

d) bulk copy from intenal storage

8) The PUT command

a)Automatically creates a file format object

b)Automatically uses the last storage created

c)automatically compresses files using GZIP

d)Automatically encrypts files

9) True or F:- pipes can be suspended and resumed

10) True or F:- An Active warehouse is required to run a COPY INTO Statement

11)when should you consider disabling auto suspend for a virtual warehouse?

a)when users will be using compute at different time throughout a 24/7 period

b)when managing a steady workload

c)when the compute must be available with no delay or lag time

d)when you don’t want to have to manually turn on the warehouse each time as user needs it

12)which of the following statements are true of VALIDATION\_MODE in snowflake?

a)the validation\_mode option is used when creating the internal storage

b)validation\_mode = return\_all\_errors is a parameter of the copy command

c)the Validation\_mode option will validate data to be loaded by the copy statement while completing the load and will retrun the rows

that could not be loaded without error

d)the validation\_mode option will validate data to be loaded byt the copy statementwithout completing the load and will retrun possible errors

13)true or f you can define multiple columns within a clustering key on a table

14)t or false the copy command must specify a file format in order to execute

15)the information schema and account usage share provides storage information for which of the following objects?

a)users

b)tables

c)database

d)internal stages – pls cross check

16)A client uses a PUT command to upload a new file to an internal stage.at what point is the data encrypted?

a)when it reaches the virutal warehouse

b)when it gets micro-partitioned and stored in cloud storage

c)on the client's machine before being sent

d)clients must encrypts files before sending to snowflake

17)true ot f the follwing command will fail:-

GRANT SELECT,INSERT,UPDATE,DELETE, ON MYTABLE TO USERJOHN;

18)T Or False when active, a pipe requies a decdicated virtual warehouse to execute.

19) which of the following are options when creating a virtual warehouse?

a)auto drop

b)auto resize

c)auto resume

d)auto suspend

20)true or f it is possible for a user to run a query against the query result cache without an requiring an active warehouse.

21)which of the following are options when creating a virtual warehouse?

a)auto-drop

b)auto-resize

c)auto-resume

d)auto-suspend

22)T or F :- it is possible for a user to run a query against the query result cache without an requiring an active windows?

23)which of the following are use cases that fit well in snowflake?

a)data lake

b)enterprise warehouse

c)online transaction processing

d)datamart consolidation

24)An client uses a PUT command to upload a new file to an internal stage.at what point is that data encrypted?

a)when it reaches the virtual warehouse

b)when it gets micro partitioned and stored in cloud storage

c)on the client's machine before being sent

d)clients must encrypt files before sending to snowflake

25)True or F:- the follwoing command will fail:-

GRANT SELECT,INSERT,UPDATE,DELETE ON MYTABLE TO USERJOHN;

26)T or False:- multi factor authentication (MFA) in snowflake is only supported in conjunction with single sign-on(SSO).

27)which of the following commands are not blocking operations?

a)UPDATE

b)INSERT

c)MERGE

d)COPY

28)T or False snowflake data warehouse was built from the ground up for the cloud in lieu of using on the existing database or a platform

like hadoop as a base.

29)the default time travel rentention period is :

a)1 day

b)7 days

c)45 days

d)90 days

30)t or false :- a virtual warehouse can only be resized while suspended

31)true or f :- reader accounts incur no additional storage costs to data provider since they are simply reading the shared data without making changes

32)t or false :- loading data via the copy command only allows error handling on a per file basis -- all files are loaded in their entirety or marked as error, there are no partial loads.

33)true or f:- snowpipe's underlying architecture utilizes the copy command to ingest data into tables.

34)what is the most performant file format for loading?

a)CSV(unzipped)

b)parquet

c)CSV(gZipped)

d)ORC

35)what is the minimum snowflake edition that provides the multi cluster warehouses and up to 90 days of timetravel?

a)standard

b)premier

c)enterprise

d)enterprise for sensitive data

36)t or false :- loading data into snowflake requires that source data files be no larger than 16 MB

37)which of the following are options for the ON\_ERROR property when using the copy command?

a)continue

b)abort\_statement

c)skip\_file

d)stop\_statement

38)which of the following options when creating a virutal warehouse?

a)auto suspend

b)auto resume

c)Local SSD Size

d)User Count

39)t or false :- snowflake enforces unique, primary key and foreign key constraints during DML operations.

40)which of the following languages can be used to implement snowflake user defined functions(UDFS)

a)Java

b)Javascript

c)SQL

d)python

41)storage is calculated based on data in which of the following statuses?

a)Active

b)time travel

c)fail safe

d)purged

42) which of the following are examples of operations that require a virtual warehouse to complete, assuming no queries have been executed previously?

a)MIN(<<column value>>)

b)COPY

c)SUM(<<column value>>)

d)UPDATE

43) t or false :- A snowflake account is charged for data stored in both internal and external stages

44) which of the following are main sections of the top navigation of the snowflake web interface(UI)?

a)Databases

b)tables

c)warehouses

d)worksheets

45)t or false:- multi factor authentication (MFA) is available only to customers with enterprise edition and above.

46)what are the three things customers want most from their enterprise data warehouse solution?

a)on premise availability

b)simplicity

c)open source based

d)concurrency

e)performance

47)when scaling up virtual warehouses by increasing virtual warehouse

t-shirt size, you are primarily scaling for improved.

a)concurrency

b)Performance

48)which of the following items does the global services layer manage?

a)user authentication

b)metadata

c)query compilation and optimization

d)external blob storage

e)data security

49)True or f:- you can query the files in an external stage directly without having to load the data into the table?

50)snowsql can unload query results to a local file system in the following file formats:-

a)JSON

b)parquet

c)orc

d)CSV and any other delimted formats

51)which of the following statements are true of transient tables? Transient tables:-

a)Are tied to a snowflake session

b)have a fail safe period of 7 days

c)have a maximum time travel data retention period of 1 day

d)are visible to all users with roles that have permissions to access that table

52)query results are stored in the result cache for how long after they are last accessed, assuming no data changes have occurred?

a)1 hour

b)3 hours

c)12 hours

d)24 hours

53)true or f:- once created, a micro partition will never be changed

54)t or false :- accountadmins are able to see the results sets of queries executed by all users witin a snowflake account

55)which snowflake object enables loading data from files as soon as they are available in a cloud stoarge location?

a)pipe

b)external storage

c)file format

d)VARIANT

56)when a pipe is recreated using the CREATE OR REPLACE PIPE command?

a)the pipe load history is resset

b)the Refresh parameter is set to true

c)previoulsy loaded files will be ignored

d)All of the above

57)which transformations are available when using the COPY into command to load data files into

snowflake from a stage?

a)filters

b)aggregates

c)column data type conversion

d)column concatenation

58)the information schema and account usage share provide storage information for which of the following objects?

a)users

b)tables

c)databases

d)internal stages

59)snowflake provides a mechanism for its customers to override its natural clustering algorithms. this method is?

a)Micro Partitions

b)clustering keys

c)Key partitions

d)clustered partitions

60)what is the most granular object that the time travel retention period can be defined on?

a)Account

b)database

c)schema

d)table

61) fail-safe is unavailable on which table types?

a)temporary

b)transient

c)provisional

d)permanent

62)true or f :- although a user can be granted multiple roles, each session has a single current role which dertermines current privileges?

63)in which layer of its architecture does snowflake store its metdata statistics?

a)storage layer

b)compute layer

c)database layer

d)global service layer

63) which interface can be used to create and/or manage virtual warehouse?

a)the snowflake web interface(UI)

b)SQL commands

c)data integartion tools

d)all of the above

64)what parameter controls if the virtual warehouse starts immediately after the create warehouse statement?

A)INITIALLY\_SUSPENDED = TRUE/FALSE

B)START\_AFTER\_CREATE = TRUE/FALSE

C)START\_TIME = 60//(Seconds from now)

D)START\_TIME = CURRENT\_DATE()

65)which formats are supported for unloading data from snowflake?

a)Delimited(CSV,TSV,etc).

b)Avro

c)JSON

d)ORC

66)true or false :-when active, a pipe requires a dedicated virtual warehouse to execute

67)to run a multi-cluster warehouse in auto scale mode, a user would:-

a)configure the maximum clusters setting to "Auto Scale"

b)Set the warehouse type to Auto

c)Set the minimum clusters and Maximum clusters settings to the same value

d)set the minimum cluster and maximum clusters settings to the different value

68)what is share?

a)a named, first class snowflake object that encapsulates all the information required to share objects within a database

b)the name of the database created by the data provider and shared with data consumers

c)a virtual warehouse that is used by data consumers to query a data provider's shared database

d)the name of the snowflake account that has shared objects with data consumers

69)which of the following statements are true of VALIADATION\_MODE in snowflake?

a)the validation\_mode option is used when creating a internal storage

b)validation\_mode = retrun\_all\_errors is a parameter of the copy command

c)the validation\_mode option will validate data to be loaded by the copy statements while completing the load and will retrun the rows that could not be loaded without error.

d)the validation\_mode option will validate data to be loaded by the copy stmt without completing the load and will retrun possible errors

70) which of the following statement is true of snowflake micro-partitioning? Micro-Partitioning?

a)has been known to introduce data skew

b)requires a partitioning schema to be defined up front

c)is transparently completed using the ordering that occurs when the data is inserted/loaded

d)can be disabled within a snowflake account

71)t or f:- snowflake requires that a single run its ETL , reporting, and data science workloads on the same virtual warehouse

72)what happens when a data providers revokes privileges to a share on a object in their source database?

a)the object immediately becomes unavailable for all data consumers

b)any additional data arriving after this point in time will not be visible to data consumer

c)the data consumer stop seeing the data updates and become responsible for storage charges in a object

d)a static copy of the object at the time the privilege was revoked is created is created in the data consumers accounts

73)t or false :- a single database can exist in more than one snowflake account?

74)what command is used to delete files from a stage?

a)Truncate

b)delete

c)remove

d)purge

75)which of the following is true of snowpipe via REST API ?

a)you can only use it on internal stages

b)All copy into options are available during pipe creation

c)Snowflake automatically manages that compute required to execute the pipe's copy into commands

d)Snowpipe keeps track of which files it has loaded

76)which of the following commands are not blocking operations?

a)update

b)insert

c)merge

d)copy

77)the query history in the snowflake web interface (UI) is kept for approximately?

a)60 mins

b)24 hrs

c)14 days

d)30 days

e)1 year

78)the information schema and account usage share provides storage information for which of the following objects?

a)Users

b)tables

c)databases

d)internal stages

79)The PUT command is used to place local files into:-

a)an external stage

b)a stage zone

c)a transient stage

d)an internal stage

80) true or f :- pipes can be suspended and resumed

81)when loading data into snowflake, the copy commands supports:-

a)Joins

b)filters

c)data type conversions

d)column reordering

e)aggregates

82)true or f:- it is possible to load data into snowflake without creating a name file format object?

83)true or f :- it is possible to set a user's default role to a role they have not been granted access to.

84)the following factors affect the data load rates?

a)physical location on the stage

b)RAM on the Virtual warehouse

c)GZip compression efficiency

d)Thread Size

85)which of the following roles is recommended to be used to create and manage users and roles?

a)SYSADMIN

b)SECURITYADMIN

c)PUBLIC

D)ACCOUNTADMIN

-=======================================================

1.True or False: IN snowflake, Data unloading can be done only to CSV, JSON in compressed format

a. False

2.Minimum snowflake edition that supports data sharing

a. Standard

b. Premium

c. Enterprise

d. ESD

e. VPS

3.Which of the following are valid data sharing accounts

a. Consumer account

b. Reader account

c. Provider account

d. None

4.SSO can be done in how many ways. Select all applicable:

a. Web UI

b. SnowSQL

c. Python

d. ODBC

e. JDBC

f. Etc..

5A third party tool which can support JDBC Or ODBC but doesn’t have snowflake drivers. Can it still connect to Snowflake

a. True

b. False

6.Min level of account required for MFA

a. Standard

b. Premium

c. Enterprise

d. ESD

e. VPS

7.True or False: When a user creates a role, The user owns that role until he transfers the role

a. True

b. False

8.When a user creates an object with a role, And that role is dropped, What happens?

a. Answer: Role which dropped the original role will own the object

9. True or False: Data share can happen between any edition without Snowflake support ( b/w E & ESD editions )

a. True

b. False

10.True or False: When a reader account is created, No extra charges will be applied to provider

a. True

b. False ( Answer )

11.Best practice: When a role creates an object, Best practice to give grants on the object to

a. ACCOUNT ADMIN

b. SYSADMIN ( Answer ) -> Please recheck

c. SECURITYADMIN

12.What are the activities to be done by the customer, when an on-premise installation is done

a. Physical security

b. Applying releases and patches

c. Managing partitions

d. Etc.. ( pl check ) Answer is to check all options

13.Regarding Snowflake releases, Select all that apply

a. Weekly once

b. During the release transparently user queries will be redirected to new version

14.Clustering information can be checked with below commands

a. SYSTEM$CLUSTERING\_INFORMATION

b. SYSTEM$CLUSTERING\_DEPTH

15.FLATTEN is used when loading

a. Structured data

b. Semi structured data ( Answer )

c. None

d. Both

16.While unloading, file format can be

a. CSV – yes

b. XML – Yes

c. Parquet – Yes

d. ORC – No

e. Avro – No

f. Json – Yes

17.While uploading , to convert semi structured null values to structured null values, What option will be used

a. STRIP\_TO\_TULL is the answer

18.While loading data what are the factors that impacts rate : below are the answers

a. Location of the stage

b. Thread size

19.Ideal file size should be 16MB because micro partition size is 16MB

a. True

b. False ( Answer )

20.What are all the RECOMMENDATIONS when new user is created, Below are all answers

a. Password reset

b. Giving default role

21.Data replication use cases

a. Catastrophy

b. For Migration activities

c. Data sharing

d. Schema sharing ( wrong )

22.True or False: provisioning a 4XL warehouse can take more time than XS WH ? True

23.Can a reader account incurs charges to data providers : Storage no and compute Yes.

24.Can a reader account extract data to use outside snowflake : True

25.Default time-period for auto-suspend for WH through WEB UI ? 10 mins

26.Each worksheet in WEB UI can have multiple warehouses, schemas, databases : True

27.Does a snow-pipe requires an active warehouse ? False

28.Which maintains the credits for snowflake account : Resource Monitor

29.When we can resize the WH ? ? at any time

30.Which DML is not supported in Snowflake ? Upsert

31.Facts about Multi clusters :

a. Can scale up and down

b. Can auto suspend and auto resume

32.From where we can see account billing ? Account : Billing and Usage

33.What are the factors to count credits will be accounted on WH Usage

a. Ware house Size and Num. of Clusters used to process

34.Small WH will have 2 clusters. Then how many clusters will M have ? ? 4

35.How billing is done in pipe ? per second/per core granularity

36. At the client local area only file will get encrypted.

37.Which of these DML doesn’t require a WH

a. Insert

b. Update

c. Merge

d. Drop ? because it’s an metadata operation.

38.WH will fit into which layer of architecture ? Compute

39.When a query is executed a query result cache, will it require an active WH ? ? False

40.Account admin can see all the query results executed by the other roles ? False

41.Result cache can be accessed by other users of same role ? False

42.How can we view the storage of a tables :

a. SHOW TABLES and INFORMATION\_SCHEMA : TABLE\_STORAGE\_METRICS

43.While migrating from different databases to snowflake, what will be migrated > -? Tables, schemas and pipes. ( No indexes can be migrated)

44.Minimum Edition to maintain secure data ? ESD

45.Default time travel for transient tables ? 1 day.

46.Fail safe can be disabled -? False

47.Does stages have time travel and failsafe ? False

48.Snowflake Billing will be done for both internal and external stages ? False.

49.What objects can be shared ? Tables, Schemas , databases, file formats.

50.Which operations can be done while loading data from stage ? ? concatenation, column ordering

51.Can regular expression be used in copy command ? (explore)

52.User has Account\_admin/sysadmin roles , recommended practices

a. Default role is sys admin (which is min)

b. Only login thru account\_admin for some critical options.

c. Other two options needed to be confirmed

--==================================================================

Factors that impact Unit Cost

Differences in unit costs for credits and data storage are calculated by Snowflake Region and not by cloud platform.

another factor that impacts unit costs is whether your Snowflake account is On Demand or Capacity.

Pay for compute and query.

snowflake supports loading data from files staged in any of the following locations, regardless of the cloud platform for your Snowflake account:

Internal (i.e. Snowflake) stages

Amazon S3

Microsoft Azure Blob storage

Limitations of Azure network

Virtual Private Snowflake (VPS) is not currently offered for Snowflake accounts hosted on the Azure cloud platform.

No support for secure connectivity to customer-owned virtual networks (similar to AWS PrivateLink).

No support for accessing an external AWS S3 stage using policies attached to an IAM role.

Regions :

Note that regions do not limit user access to Snowflake; they only dictate the geographic location where data is stored and compute resources are provisioned.

Each Snowflake account is located in a single region (i.e. multi-region accounts are not supported).

In addition, Snowflake does not yet support accessing or sharing data between regions. If you wish to use Snowflake across multiple regions, you must maintain a separate Snowflake account in each region.

If your account is hosted on AWS and latency is a concern, you should choose the available region with the closest geographic proximity to your end users.

Disaster recovery of modified/deleted data (for 7 days beyond Time Travel

Snowflake Time Travel (1 day)

Access Control in Snowflake

Snowflake provides granular control over access to objects — who can access what objects, what operations can be performed on those objects, and who can create or alter access control policies.

Discretionary Access Control (DAC): Each object has an owner, who can in turn grant access to that object.

Role-based Access Control (RBAC):

**Company History :**

Founded 2012

SNOWFLAKE VS. TRADITIONAL ARCHITECTURES

Snowflake uses the cloud to enable elasticity Varies Traditional databases are inflexible

• Complete sql database

• Zero management

• All of your data

• All of your users

• Pay for what you use

• Instant live data sharing.

• Structured and semi

• Pay for only

• what you use with no

• overprovisioning

• Eliminate

• overbuy

• Scale compute

• up and down, transparently

• and automatically

• No need for capacity

• planning, make capacity

• decisions on the fly

• -

structured data

(JSON, XML, Avro)

Centralized storage of data, accessible

by any user and application

Multi

-

petabyte scale

SCALE & CONCURRENCY

Up to 200x faster than solutions

not built for the cloud

Maintains a consistent SLA

–

resources grow and shrink automatically

Loading data does not impact

query performance

Multiple groups access data

at the same time with no

performance degradation

Supports an unlimited number

of simultaneous users

Diverse applications

ZERO MANAGEMENT

• Load data and run queries,

• we do all the rest

• Zero infrastructure and admin costs

• Secure and highly available

• Fully managed with no knobs

• or tuning required

• No indexes, distribution keys,

• partitioning, or vacuuming

INSTANT, LIVE DATA SHARING

• Share with unlimited number

• of consumers, without duplicating storage.

• Data consumers immediately see all updates

• Consumers can immediately start querying

• Reader Accounts enable sharing with non

Snowflake customers

What customers want

Perf

Concurr

Simplicity

200 X faster

1/10th cost

Avro,parquet,xml

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THE IMPACT OF DATABASE PROBLEMS AT ?

Slow queries

With massive concurrency

across dozens of business

units, database performance

was strained to the maximum,

slowing analysis times and

limiting data to a few.

Couldn’t meet the analytics needs of the business System

Data scientists were unable to

scale the service to larger

queries, significantly inhibiting

their ability to find new ways

to deliver personalized

experiences

High Availability

Without a way to failover

between regions, the existing

solution lacked a critical

capability in delivering and

protecting data

Comprehensive Security

Without the built

-in security

they needed, ? had to

painstakingly secure their

data warehouse from scratch.

Changes or updates had

significant implication

Unlimited storage because of s3

It is not for high frequency changing data but analytics warehouse.

Services :

• Management

• Optimization

• Security

• Transaction

• Metadata

Transaction recommitted.

Table level lock and who starts first gets privilege.

Within snowflake https transaction.

AWS is more secure.

Questions :

How many editions of snowflake are supported : 5

How many regions is Snowflake deployed in today? 11

Where will you download snowsql from ( help ---downloads)

Which tools are supported All of the above

Biggest connector : jdbc

Micropartitions are immutable

Micro partition column level ( min/max, distinct,null) --- for any query using this snowfalke does not use warehouse.

Metadata only operations ( deleting all rows from a table)

Truncate

Query pruning :

At a micro partition level we store the min max value of every column.

Clustered by determines the distribution of data

Data Clustering :

Clustering is sorting and ordering

Typically done naturally by date.( time series analysis)

Depending on the query you will need clustering

As data is loaded, Snowflake co-locates column data with the same values in the same micro-partition, if possible.

If you know clustering is needed use order by while loading . This reduces the cost.

How to choose clustering keys : Order of clustered columns is imp

Cluster by datetime is bad

When to turn on clustering

Table over 1 TB

More partitions

With Alter new virtual cluster gets created.

Hoe to choose cluster key

Low cardinality

Time dimention

Join columns

More keys in cluster key is bad ( 5 )

Clustering on semi structured data : sub object can be used

One table can have only one cluster.

foundation database --- snowflake used it internally)

How to get 90 days of time travel ( enterprise edition)

Only way to eliminate fail safe is to use transient tables.

When the retention period ends for an object, the historical data is purged from Snowflake

Purged data is not available for querying.

Purged objects can no longer be cloned.

Purged objects can no longer be restore

How to reduce CDP

Create these tables as transient with zero Time Travel retention

Copy these tables on a periodic basis into a permanent table (full backup)

Once the new backup has been created, delete the old one

Time Travel cannot be cloned.

1 TB database can be cloned in 1 min.

When a Clone of a Table is created, the original Table’s data is physically copied.

From <https://mediaplayer.mindtickle.com/pdfViewer/?width=547&height=401&showPreviousViewOnLoad=false&reset\_to\_page=1>

Data is never stored in cluster.it gets stored in global storage.

Compute :

Each virtual machine has 8 V cpu/threads.

The access to a compute cluster is controlled by roles.

8 concurrent users

60 secs and then per second billing.

If query runs more than 60 secs let it scale and once it executes turn it off.

Scale out -- concurrency , Scale up - performance

Cost and performance :

Warehouse size, manual vs automated

True or False: When a Resource Monitor shuts down a Warehouse, the Customer can issue an ALTER WAREHOUSE command and it will manually resume.

Result set cache sits on global storage and lives for 24 hours and if the cache accessed in the 23 rd hour it lives for another 24 hours.

Tableau optimization .

Query history stays for 14 days / 1 year. The cache is always the result set of the role.Set of features that help protect data stored in Snowflake against human error, malicious acts, and software or hardware failure

Is the query id,timetravel accessible to other users ? Only if the role is the same.

The database snowflake has query history .

Every DB has a information schema ( metadata)

Time travel is sliding window on micro partitions .each micro partition Is timestamped on date of creation.

Cloning cannot be done across accounts. Sharing can be done across accounts.

Timetravel cannot be disabled at account level.

Time travel can be at table or db or schema

The longer the data retention period more is the cost.

Encryption :

AES -256

SOC 2 Type II certified with support for PHI (HIPAA) and PCI DSS

Only enterprise has PHI (HIPAA) and PCI DSS every one has SOC2 Type2

Tri Secret secure : only available for enterprise sensitive data.

CMK, KMS

Third key : password to snowflake account.

If cmk is unavailable for 10 mins then snowflake looses access.

Copy command source, destination, fileformat

Default file format is .csv

File format is in the schema.

Snow pipe : through rest API

Small files , infrequent less than 100 MB --- snowpipe

Stage does not have failsafe and timetravel.

It is possible to load directly from a Cloud Storage location without creating a named Stage(Y)

File that loads faster csv gzip ( 3 times faster)

10 MB to 100 MB ( File Size)

File locAtions ( Many locations , each with few files)

Designed for Bulk Loading not for large transaction.

Concurrency --- Partition lock, Table lock.

Single updfste statement is better.

Copy Command :

NOT SUPPORTED: Joins, filters, aggregations

Can include SEQUENCE columns, current\_timestamp(), or other column

functions during data load

Execute copy in validation mode.

Best practices for JSON

Validation

Null handling

Staging

Extraction

Skip the file or number of rows.

Strip\_null\_value

Talking to metadata does not need compute.

Snow pipe si near real time.

Pipe is wrapper for copy command.

Rest Api , Auto ingest.

Snowflake has

Recommended size for snowpipe 1 to 10 mb

If something is in Public preview do not put it in production.

Auto ingest needs external storage.

Notification channel is on auto ingest.

Copy command looks for hash name and pipe looks for a name.

Max file size snowflake can output to is 5 GB

Variant datatype is composed of Variant , Array , Object

Normalization best practices:

Variant ( flexible access, no dupliczte ,changes to str imply changes to query and view)

What are integers stored as in json documents (strings)

Material views better pruning.

Keep variant and MV in the same table

Data sharing :

Pay for compute share storage.

3 types of account data providers

Data consumers

Reader account

There is no limit on share.

Access is provided to selected objects.

Consumers can share unlimited number of shares.

Consumers can make only 1 DB per share.

No access to time travel

Cannot clone.

Reader Account :

Data provider pays for it .

Cost effective way to share data

Consumer cannot write data to that account

Cost of reader account will be same as the main provider account.

When editing a share

Add or remove tables and secure views

Add/ revoke access for data consumers.

Shares cannot span multiple data bases ( F)

If a table is dropped and recreated it needs to be shared again.

Secure view :

Secure UDF's.

ESD

1 ec2 x small

Aws customer can share data with another AWS cutomer but not with Azure in that across regions.

Pod is effectively in a region.

Fail over is through replication.

Standard cannot scale out . Multi cluster can

Auto scale ---- scale out

Secure View --- definition is visible to all the roles.

Materialized view ---- only chance when the data changes

Even if we use result set cache

NOTE: compilation is STILL REQUIRED

How to find the best warehouse size ( use query profiler and go from large to small & small to large)

Can there be a resource monitor on user … NO

History of queries for more than 14 days snowflake (account usage)

Accessing Account usage uses a warehouse.

Information schema is not case sensitive.

Can u get the query history lookinmg at query profile no

Practice questions :

1.when does a virtual warehouse start consuming ( active)

2.why good to keep it on ( cache will be gone)

3. TP ( N)

4. UI or Script

5. Best arch ( Multicluster shared data)

6. Concurrency(work load separation,elasticity) , performance,

7. Always load JSON into varient dataype.

8. Read ( JSON, PARQUET, AVRO, ORC) Unload ( ORC not possible)

9. Data sharing -- compute cost ( provider)

• With snowflake customer ( compute consumer pays , storage provider)

• With reader account compute provider ,storage provider

10. See data instantly

11. If access is taken away instantly the changes reflect

12. I have shared data with you and I have deleted data then it will let the query run

13. If a query is running and WH is suspended can I do it ( Y)

14. How often snowflake updates ( weekly on fridays)

15. Is there any downtime for users while snowfalke updates ( NO)

16. When snowflake updates which reason gets it forst ( all)

17. Created a WH in the UI and want to suspend it ( initially suspend)

18. Created a user( assign to role) , change password, get them with multifactor authentication

19. MFA through script ( yes)

20. Enable MFA through account preferences .

21. If MFA is lost we can ask admin to temporarily disable MFA.

22. How to create a Dataware house that is initially suspended ( add intially suspeneded to the sql script)

23. Where does table reside (N)

24. Never update statistics

25. Micro partition gets updated ( N)

26. When there is a change we pay for 2 micro partition .

27. Can range of a micro part over lap yes

28. Data 50

29. Snow pipe ( 1 to 10 )

30. Optimum for copy ( 10 to 100)

31. Query min max use compute (N)

32. Get more data added to snowflake

33. Copy command use a file format (no)

34. Is defalut compressed in copy command (n)

35. Copy command ---- stage name , destination , file format

36. Source

37. Destination

38. Pipe ---- wrapper for copy command, continuous load

39. Admin can see the query not the query results.

40. Stages in snowflake ( table , named, user)

41. Table stage ( internal)

42. Named ( internal/external)

43. User(internal)

44. Variant contain variant, array, object

45. Array contain variant

46. How to set the context ( use command)

47. What users, roles, DW,resource monitor, database.

48. Every object must be owned by a role.

49. Security admin(users, roles)

50. Sysadmin(objects)

51. Insert gives access to copy.

52. A user not having access to Ware house can access metadata.

53. Role owns the object.

54. Sys admin does not have managed access

55. HIPPA ( ESD, Enterprise, VPC)

56. Encryption AES 256

57. Function and sequence exist inside schema.

58. Sequence one schema accessible from another schema yes if the role permits it

59. Case sensitive and if double quote is added then it retains the name with double quote.

60. Metadata is case insensitive.

61. 3 types of views standard, secure, materialized view

62. Secure views can bypass optimizations

63. MV can speak only to one view ,Cannot use window functions.

64. Functions( Table, Secure), can be shared only if secure.

65. Pipe Wrapper over copy command for continuous loading

66. Stored procedures ( Java script) can execute a sql .

67. Stored procedure runs with the privilege of the role that owns it.

Stored procedure Transaction control statements are not permitted in a stored procedure

Stored procedure is executed within a single transaction (explicitly or implicitly)

Stored procedure Can run out of memory

Stored procedure Executed through API objects

68. Stored procedure May return a value , UDF must return a value.

69. Stored procedure ( DDL , DML ) , UDF ( NO DDL , DML)

70. UDF's ( Java script, sql)

UDF 's can Return a singular scalar value or, if defined as

a table function, a set of rows

71. Sql variables can be a varient cannot be a table, only valid within a session.

72. Constraints ( only enforces not null constraints)

73. String : Max legth of string by default is 16 mb

74. String : case sensitive.

75. Max row size 16mb

76. Date format is controlled by session parameters.

77. Timestamp ( timestamp with local timestamp

78. timestamp with no timezone

79. timestamp)

80. Show parameters.

81. Boolean ( only 0 is false rest of the numbers are 1)

82. Session context using set command

Role is an Entity to which we can give access.

At any point of time there can be only 1 role against the session.

Users

Roles can inherit other roles.

Privileges can be un granted.

User assumes role and roles are given privileges.

Snowflake DB

Account usage

Reader account usage.

SNOWFLAKE TOPOLOGY

A deployment is a "multi

-

tenant" system

?

Some resources are SHARED across multiple accounts

?

Increases peak capacity to customers (performance)

?

Achieves better overall resource utilization (cost)

?

Leads to higher bang for the buck for our customers (value)

Security is through IM role

Encryption

?

Web UI, command line client, and drivers

communicate solely over HTTPS

?

Connections encrypted using TLS 1.2 from

client through to Snowflake Service

All access controlled

?

Authentication required for all connections

?

IP whitelisting available to restrict client

communication to specific IP addresses

All access are controlled

Authentication required for all connections

?

IP whitelisting available to restrict client

communication to specific IP addresses

Compression : 5 times

Data gets saved to micro partitions 16 MB each

Comprehensive data protection

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COMPREHENSIVE DATA PROTECTION

44

Protection against infrastructure failures

Protection against corruption & user errors

Long

-

term data protection

ADAPTIVE CACHING

• Metadata cached for fast access during query planning

• Active working set transparently cached on virtual warehouse SSD

• Results sets cached for reuse without requiring compute

Interfaces and connectivity :

Shares : Inbound , Outbound

Reader Account : To share data with users not part of snowflake.

Cloud Storage Layer :

Staging ( S3, AWS)

Maximum size of micropartition is 16 MB'

FDN -- Flick on the edge

No indexes.

Key differentiators(timetravel,zero copy cloning)

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TABLE & MICRO

-

PARTITION METADATA

13

•

Snowflake automatically collects and maintains metadata

about tables and their underlying micro

-

partitions, including:

?

Table

¦

Row count

¦

Table size (in bytes)

¦

File references and table versions

?

Micro

-

Partition Column Level:

¦

MIN/MAX values (range of values)

¦

Number of distinct values

¦

NULL count

•

Essentially a zone map

USE ROLE ANALYTICS\_USER;

USE DATABASE SNOWFLAKE\_SAMPLE\_DATA;

USE SCHEMA TPCH\_SF100;

SELECT

MIN(L\_SHIPDATE),

MAX(L\_SHIPDATE)

FROM LINEITEM;

Snowflake’s metadata allows

some queries to be serviced

as metadata only operations.

No compute required!

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METADATA TYPES & STORAGE

14

Statistical

All Other

•

Stored in the Global Services Layer

•

Entry is an “Expression Property” (or “EP”)

•

This type of metadata includes:

?

FDN

-

level

¦

Row Count

?

FDN

-

column

-

level

¦

MIN/MAX values

¦

Number of distinct values

¦

Number of NULLs

•

Stored in FDB

•

This type of metadata includes:

?

Reference to physical file/objects

(FDNs) in Cloud Storage

?

Table versions (supports Time Travel

and Zero

-

Copy Cloning)

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IMPACT OF METADATA

15

DML

Query Pruning

•

All DML operations take advantage micro

-

partition metadata for table maintenance

•

Some operations are metadata

-

only

operations and require no Compute to

complete

--

ex: deleting all rows from a table

•

Micro

-

partition metadata enables precise

pruning of columns in micro

-

partitions at query

run

-

time, including columns containing semi

-

structured data

•

Snowflake’s pruning algorithm first identifies

the micro

-

partitions required to answer a

query, and then scans only the portion of

these micro

-

partitions that contain the required

columns

•

Snowflake uses columnar scanning of

partitions so that an entire partition is not

scanned if a query only filters by one column

Storage Management:

Data Encryption:

Network Policy :

Account level, IP Address access control

Supports whitelists and blacklists using explicit IP addresses

Management available through the Snowflake Web UI under

Account

-

> Policies

User level support in private preview

Create the policy and set the policy .

Private link is only for AWS customers.

C:\Users\ni74075\Downloads\data\_loading\_lab

PUT file://C:\Users\ni74075\Downloads\data\_loading\_lab\region.tbl@%REGION auto\_compress=false;

TrainMe1

PUT "file://C:\\Users\ni74075\Downloads\data\_loading\_lab.zip\data\_loading\_lab\region.tbl"

@%REGION auto\_compress=false;

TrainMe1

28

PUT file:///C:/Users/ni74075/Downloads/data\_loading\_lab/data\_loading\_lab/region.tbl

@%REGION auto\_compress=false;

COPY INTO @dbhol.schol.aws\_unload1/INANDA\_TECHMAHINDRA\_parquet\_region

FROM (select \* from INANDA\_TECHMAHINDRA.public.region)

FILE\_FORMAT = ( TYPE = parquet );

COPY INTO @dbhol.schol.aws\_unload1/INANDA\_TECHMAHINDRA\_parquet\_region

FROM (select object\_construct(\*) from

INANDA\_TECHMAHINDRA\_DB.public.region)

FILE\_FORMAT = ( TYPE = PARQUET );

COPY INTO @dbhol.schol.aws\_unload1/[login]\_json\_region

FROM (select object\_construct(\*) from

[login]\_DB.public.region)

FILE\_FORMAT = ( TYPE = JSON );

COPY INTO @dbhol.schol.aws\_unload1/

INANDA\_TECHMAHINDRA\_DB\_parquet\_region

FROM (select \* from [login\_DB].public.region)

FILE\_FORMAT = ( TYPE = parquet );

--===========================================

For PUT command:

1. AUTO\_COMPRESS option is by default TRUE and compresses in GZIP format

2.

Uploads (i.e. stages) data files from a local directory/folder on a client machine to one of the following Snowflake stages:

• Named internal stage.

• Internal stage for a specified table.

• Internal stage for the current user.

Recreate the pipe (using the CREATE OR REPLACE PIPE syntax). Internally, the pipe is dropped and created.

The file loading metadata is associated with the pipe object rather than the table. Recreating the pipe removes the history of files loaded. Ensure that files already loaded by Snowpipe are not accidentally resubmitted to the pipe and loaded into the target table again

For snowflake with rest api ( Select all that apply )

1. you can only use it on internal stages -> Definitely false. we can use for both internal and external stages

2. ALL COPY INTO OPTIONS ARE AVAILABLE DURING PIPE CREATION -> Couldn't confirm from documentation, But usually it allows

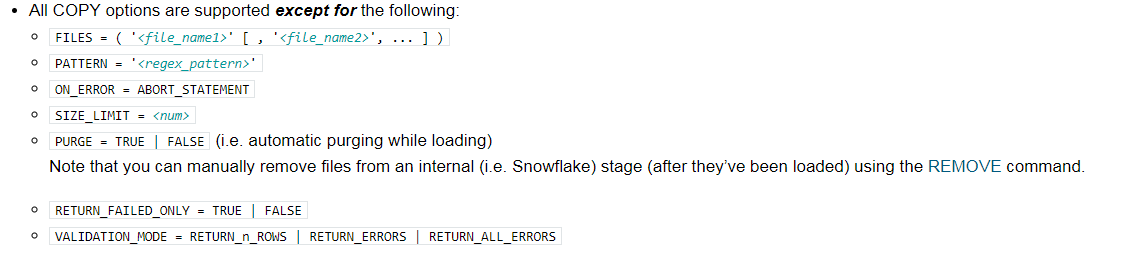
3. Snowflake automatically manages the compute required to execute the pipe's COPY INTO command -> True

4. Snowpipe keeps track of which files it has loaded -> True

--================================

. ALL COPY INTO OPTIONS ARE AVAILABLE DURING PIPE CREATION -> False.

Found in the documentation regarding it.

​

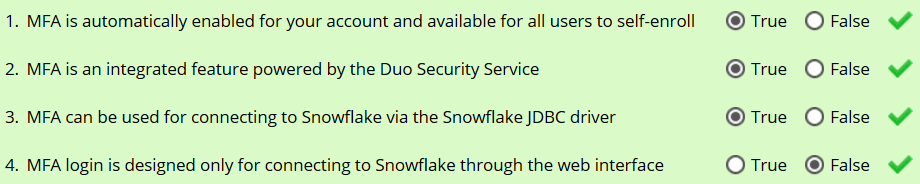
1. Which of the following statements is true of Virtual Warehouse resizing?
2. A resize requires the warehouse to be in suspended status
3. A resize can be completed at any time
4. A resize will affect running, queued, and new queries
5. A resize can only be completed once per day
6. Once created, a micro-partition will never be changed.

Ans: TRUE/FALSE. (bcz micro partitions are immutable)

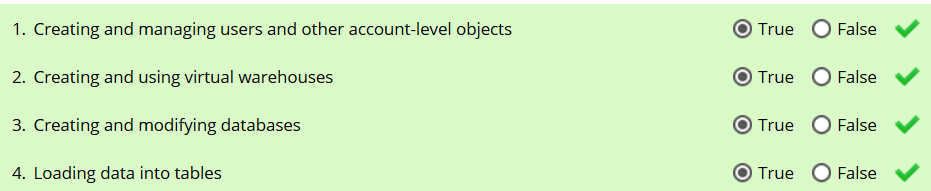
1. It is best practice to define a clustering key on every table:

Ans: TRUE/FALSE

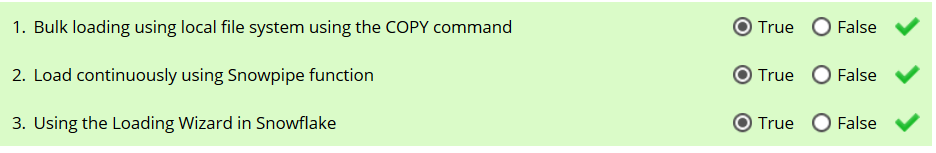
1. Snowflake provides standard and powerful features that ensure the highest levels of security for your account and users if used properly. Which aare the true statements about Snowflake security?
2. Tri-secret requires that customer manage their own keys
3. Federated authentication in Snowflake is compliant with SAML 2.0
4. Snowflake support user-based access control.
5. Query statement encryption is supported on \_\_\_\_ accounts.
6. Standard
7. Enterprise
8. Enterprise for Sensitive Data (ESD)
9. Virtual Private Snowflake (VPS).
10. All security information is stored in the \_\_\_\_ layer in the Snowflake architecture.
11. Storage
12. Compute
13. Service
14. All the above.
15. The benefits of client-side encryption are:
16. It provides a secure system for managing data in cloud storage(True)
17. Data is encrypted before loading into storage layer(False)
18. The storage service layer only contains encrypted version of the data(True)
19. Queries can be encrypted on the client side(False)
20. Snowflake supports multi-factor authentication (MFA) to provide increased login security for users connecting to Snowflake. Which statements are true about MFA security?



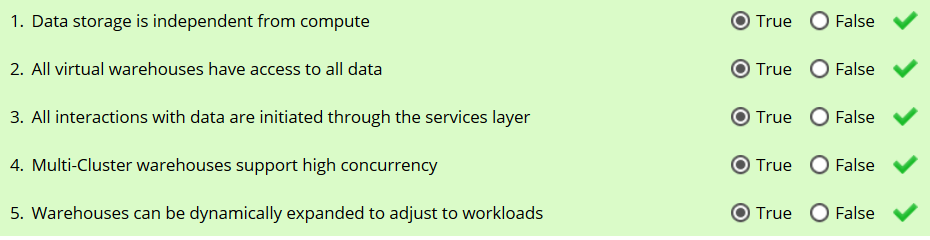
1. With an IdP configured for your account, (e.g. Okta, ADFS, or any of the other supported SAML 2.0-compliant service/applications) Snowflake supports using SSO to connect and authenticate with the following clients:
2. Python Connector
3. JDBC Driver
4. SnowSQL
5. ODBC Driver
6. Snowflake includes Role-Based Access Control to enable administrators to:
7. Linit access to data and privileges
8. Manage secure access to the Snowflake account and data
9. Establish role hierarchy and privilege inheritance to align access
10. All of the above.
11. The snowflake user interface can execute many tasks that can be performed using SQL and the command line, including:



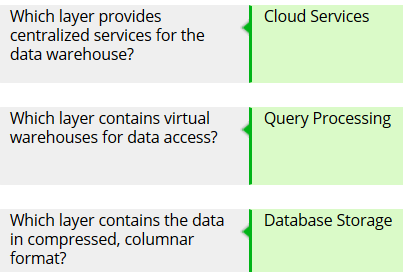
1. You can manage user preferences in the following areas through the Snowflake user interface except:
2. Adding users and permissions
3. Enrolling in multi-factor authentication
4. Executing Fail-Safe recovery
5. Monitoring queries using the History page.
6. Mark the processes that are used to load data into the Snowflake system as True:



1. Select the features that are true about the Snowflake Data Warehouse Architecture:

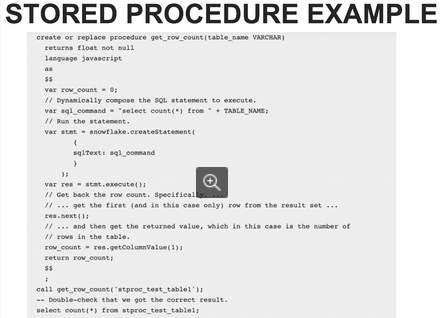


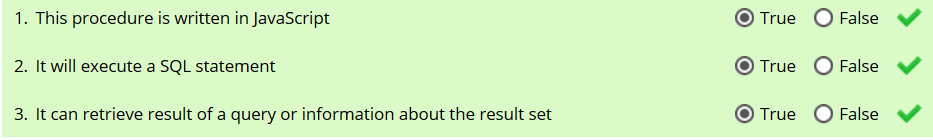
1. The Snowflake Architecture consists of 3 layers. Match the labels of the layers that deliver the functionality described:



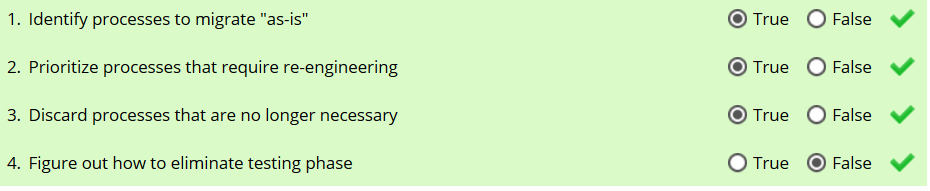
1. The Snowflake platform prioritizes security and authentication and includes the following key features:
2. Multi-factor authentication (MFA) -- TRUE
3. Snowflake failure alerts -- FALSE
4. Data encryption using Snowflake-managed keys -- FLASE
5. Object-level access control -- TRUE
6. The Snowflake architecture includes advanced capabilities in the cloud services layer that deliver:
7. Transaction management for consistent operation on the same data at the same time.
8. Matadata service
9. Security and authentication control
10. Query optimization
11. What are the layers of the Snowflake architecture?
12. Storage
13. Severs
14. Nodes
15. Compute
16. Services
17. Metadata
18. What can you use the worksheet for in the Snowflake Web Interface?
19. Crate and execute SQL queries
20. Load data
21. View query history
22. Access Snowflake Tutorials
23. Manage Metadata
24. A virtual warehouse is part of what laye in the snowflake architecture.
25. Servers
26. Compute
27. Storage
28. Other
29. A zero-copy clone uses additional storage when?
30. When create
31. When accessed
32. When data is added
33. When scanned
34. When data is modified
35. Snowflake uses what command to move data into Snowflake?
36. Create
37. Clone
38. Copy
39. Drop
40. Insert
41. A database transaction is said to have ACID properties if it is:
42. Atomic
43. Consistent
44. Isolated
45. Durable
46. All of the above
47. Which statement is accurate when discussing the difference between the commands CREATE OR REPLACE table vs. CREATE table if none exists?
48. If a table already exists, create or replace will simply remove that table and replace it with new definition
49. User CREATE TABLE if none exists; if the table already exists, then the statement will just be skipped
50. Both statements above are accurate
51. Neither statement above is accurate.
52. Stored procedures enable procedural logic (branching and looping) and error handling, which straight SQL may not support. It is capable of dynamically creating a SQL statement and executing it.

Review the example below and confirm which statements are true:

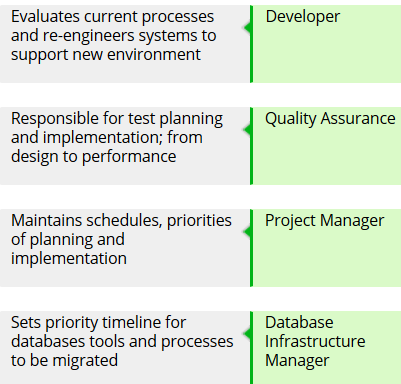




1. Which of the following methods for traversing data or paths is effective in Snowflake?
2. Insert a colon: between VARIANT column name and first-level element
3. Dot notation to traverse a path in a JSON object: <column>:<level1\_element>.>level2\_element>.
4. All of the above.
5. Which of these items are necessary when preparing to migrate a data warehouse to the cloud?
6. List of databases to migrate
7. List of database objects to migrate
8. List of processes and tools that populate and access the data warehouse
9. List of security roles, users and permissions
10. All of the above.
11. When preparing for migration, what’s the objective of examining current processes and data structures? (mark TRUE for those that apply)



1. A data warehouse migration plan requires a project team to cover all aspects of requirements, preparation and execution. Match the role with the description:



1. Which of the following can not be migrated or administered using the user interface in Snowflake.
2. Stored procedures.
3. SQL scripts and commands
4. Security / user roles settings
5. Resource or credit usage limits.
6. The longer the data retention period, the higher the resulting storage costs

Ans: TRUE/FALSE

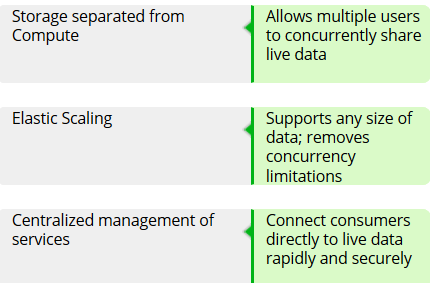
1. Warehouse – compute layer?

Ans: TRUE/FALSE

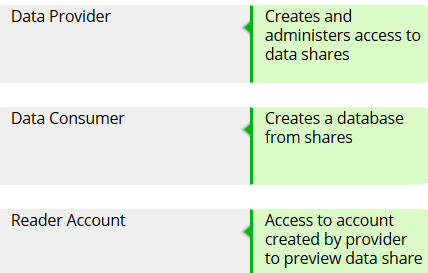
1. Fail-safe can be disables within a Snowflake account

Ans: TRUE/FALSE

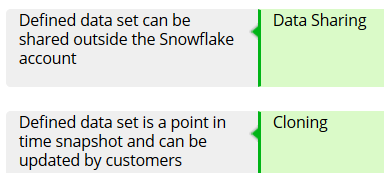
1. Match the key feature of Snowflake’s Data Warehouse architecture to data sharing benefits:



1. Data provides can manage access to Snowflake data shares using:
2. Role-based account privileges
3. Account mapping tables
4. Manual updates to user tables.
5. Which of the following conditions are required for sharing data in Snowflake?
6. Data providers with ACCOUNTADMIN role can set up shares
7. Consumer accounts must be in same Snowflake region as the provider account
8. Secure views are not required when query performance is priority
9. Each data share must contain a single database
10. Any object in a share can be from different databases
11. What are the 3 data sharing account profiles provided by Snowflake?



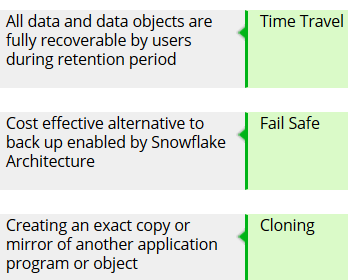
1. Zero copy cloning allows users to have multiple copies of your data without the additional cost of storage usually associated with replication data. Which other statements about the cloning features in Snowflake are True?
2. Clone is a “point in time version” of the table data as of the time the clone was made
3. The clone is a pointer to the original table data
4. Cloning is an efficient and cost effective approach for code migration for Agile Release Management.
5. The cloning feature in Snowflake requires less storage because:
6. Only metadata is copied; no physical data is copied
7. The cloned data is constantly updated to synchronize with original table data
8. Data is replicated to ensure integrity of data in the original table data.
9. Which of the following database objects can be cloned in Snowflake?
10. Tables
11. Schemas
12. Databases
13. All of the above
14. Which SQL statements can work on a cloned table?
15. SHOW command
16. DROP command
17. SELECT command
18. All of the above
19. Which of the following is a common case for cloning in Snowflake? (Select all that apply)
20. “point in time” snapshot
21. Agile release and development
22. Data life cycle management
23. Data encryption protection.
24. Choosing separate accounts in Snowflake enables users to have:
25. Different editions of Snowflake and different regions
26. Billing at the account level
27. Simpler database object deployment between environments
28. All of the above
29. Account structure is a strategic decision that impacts access to different capabilities in Snowflake because:
30. Different editions of Snowflake instances require separate accounts
31. Snowflake instances in different regions require separate accounts
32. Data can be shared READ ONLY across accounts, and can be cloned across accounts.
33. Compare data sharing vs. data cloning in snowflake:



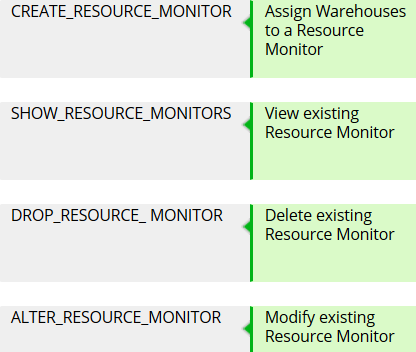
1. An enterprise view of data is useful because:
2. A data set can be stored once and shared multiple times
3. Data set provisioning is assigned to the owner of the data set
4. Data sets can be shared securely
5. All of the above.
6. The ability to clone and share data between accounts factors into the decision to set up separate accounts in Snowflake because:
7. Data sharing is only supported between accounts in the same Snowflake region
8. A share can’t be cloned by a consumer account but the shared data can be copied into a table
9. Data can be shared READ-ONLY across Snowflake accounts and can also be cloned
10. There are cases where separate accounts are required such as different editions or regions
11. A micro-partition will be updated as updates are made to the rows of data it contains

Ans: TRUE/FALES

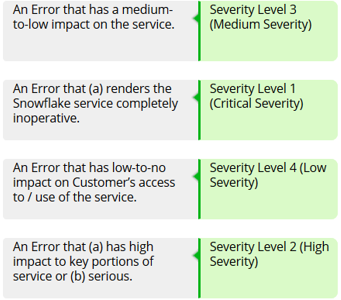
1. Snowflake clients include connection and drivers for:
2. Data integration tools
3. Business intelligence tools
4. Advanced analytics tools
5. All of above.
6. Connectors and drivers available to Snowflake users include:
7. Native ones built by Snowflake
8. Partner provided solutions
9. Standardized general purpose ones
10. All of above.
11. The Snowflake connector for Spark support:
12. Exporting Snowflake data into external stage for Spark consumption
13. Exporting Snowflake data to on premise data center for Spark consumption
14. Importing Spark data in internal stage into Snowflake table
15. Importing Spark data in external stage into Snowflake table
16. SQLAlchemy is a database toolkit for developers of the following programming interface:
17. ODBC
18. Node.js
19. Python
20. C/C++
21. Which of the following application tools can work with Snowflake?
22. Querying tools using JDBC interface such as DBeaver
23. Modern data science notebooks such as Jupyter Notebook
24. Cobol application.
25. Map the basic backup and recovery capability in Snowflake with their use case:



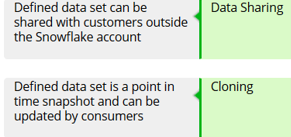
1. Snowflake Time Travel enables access to data that has been changes or deleted at any point within a defined period. With Time Travel, a Snowflake administrator can:
2. Query data in the past that has since been updated or deleted
3. Create clones of entire tables, schemas, and databases at or before specific points in the past
4. Restore tables, schemas, and databases that have been dropped after the retention period lapses
5. Analyzing data usage/manipulation over specified periods of time
6. Fail-Safe ensures historical data is protected in the event of a system failure or other catastrophic event, e.g. a hardware failure or security breach. Under what circumstances would Fail-Safe NOT be an effective method for data recovery?
7. As a means for accessing historical data after the Time Travel retention period has ended
8. To recover data that may have been lost or damaged due to extreme operational failures
9. To protect data in the event of a system failure or other catastrophic event, e.g. a hardware failure or security breach.
10. What is the maximum data retention period that an enterprise account can have?
11. 90 days
12. 120 days
13. 30 days
14. What is the maximum data retention for Fail-Safe access?
15. 30 days
16. 7 days
17. 60 days
18. Snowflake Resource Monitor allows administrators to set thresholds and triggers to track credit usage. What method are most effective for resource monitoring? (Check all that apply)
19. Tracking consumption on an hourly basis
20. Tracking and controlling credit consumption on a monthly basis
21. Setting quota thresholds for trigger actions and notifications
22. Control global monthly credit usage for an account
23. The Snowflake resource monitor feature enables administrators to execute the following actions based on thresholds and notifications:
24. Limiting the credit for a group warehouse
25. Suspending a specific warehouse
26. Resuming suspended warehouse when the monitor is dropped
27. Changing credit quotas after a resource monitor is created.
28. Snowflake resource monitors can be managed using DDL commands. Match the command with the action:



1. Suspended warehouses cannot be resumed until one of the following conditions is met:
2. New monthly billing cycle starts
3. Credit quota for the monitor is increased
4. Credit threshold for the trigger is increased
5. The monitor is dropped
6. Anyone of the above will meet the required condition.
7. Snowflake notification are disabled by default. How do administrators enable resource monitor notifications? (check all that apply)
8. Enable notification through the preferences in the Snowflake web interface
9. Provide and verify valid email address if email notification is preferred
10. Include notifications in the resource monitoring reports.
11. Which of the following are valid approaches to loading data into a snowflake table? (select all that applu)
12. Bulk copy from an external stage.
13. Continuous load using Snowpipe REST API
14. The snowflake web interface(UI) data loading wizard
15. Bulk copy from an internal stage.
16. Which approach would result in improved performance through linear scaling of data ingestion workload?
17. Resize virtual warehouse.
18. Consider the practice of organizing data by granular path
19. Consider the practice of splitting input file batch the recommended range of 10 MB to 100MB
20. All of the above.
21. Snowflake support service addresses customer issues covering:
22. Product usage questions
23. Troubleshooting failed queries
24. Individual query syntax improvement
25. 3rd party application configuration support.
26. Snowflake users with support contracts that have a Severity-1 issues should contact Snowflake in these ways EXCEPT:
27. Snowflake lodge – set sppropriate Severity(1-4)
28. Send email
29. 844-SNOWFLAKE
30. The snowflake lodge is a community site that
31. Has technical information for support customers only
32. Is the recommended place to submit support cases
33. Contains the most up to date security alerts and product release information
34. Does not allow members to post questions
35. Map the severity levels to their definition:



1. Snowflake includes parameters that allow administrators to control the behavior of individual user sessions and objects within a Snowflake account including:
2. DATA\_RETENTION\_TIME\_IN\_DAYS
3. MAX\_CONCURRENCY\_LEVEL
4. STATEMENT\_QUEUED\_TIMEOUT\_IN\_SECONDS
5. All the above.
6. Which of the following are options when creating a virtual warehouse? (select all that apply)
7. Auti-suspend
8. Auto-resume
9. Local SSD size
10. User count.
11. Snowflake included administration settings for resource consumption in order to:
12. Help control costs associated with unexpected credit usage of warehouses.
13. Manage access to data warehouses for specified users
14. Maintain data availability
15. Which roles and permissions can be granted within a Snowflake account by the administrator?
16. Create role
17. Drop role
18. Create user
19. Drop user
20. Grant privilege
21. Snowflake provided specific administration features and capabilities to support the following activities except:
22. Managing databases and warehouses within a Snowflake account
23. Managing roles and users within a Snowflake account
24. Monitoring usages and manage resources to control costs in a Snowflake Account
25. Manage 3rd party applications providing data to a Snowflake account.
26. Compare Data Sharing vs. Data Cloning in Snowflake:



1. The following performance optimizing query methods are support by Snowflake:
2. Caching techniques
3. B-tree type indexes
4. Retrieving results if previous query from cache
5. Which of the concepts should be considered when loading data into snowflake?
6. Stage objects
7. File format
8. Transformation and error validation
9. All of the above.
10. Which of the following are unique database objects in snowflake?
11. Stage
12. Pipe
13. Table
14. The compute resource used by Snowflake for data loading jobs can be provided by
15. User managed virtual warehouse
16. Snowflake managed services
17. Hardware provisioned by user directly from cloud providers
18. Snowflake supports loading data into
19. Internal stage on cloud storage platform
20. External stage on cloud storage platform
21. Bring your own device
22. Which of the following objects is not covered by rest
23. Tables
24. Schemas
25. Databases
26. Stages

1. Snowflake notifications are disabled by default. How do administrators enable resource monitor notifications? (check all that apply)
2. Enable notifications through the preferences in the Snowflake web interface
3. Provide and verify valid email address if email notification is preferred
4. Include notifications in the Resource Monitoring reports.
5. Snowflake administrators should utilize resource monitors to help control costs and avoid unexpected credit usage. Which of the following actions can Snowflake’s resource monitor triggers initiate automatically? (Check all that apply)
6. Impose limits on the number of credits that warehouses consume each month
7. Trigger alert notifications for high usage
8. Roll over query executions to under-utilized warehouses
9. Trigger warehouse suspension for high usage.
10. The snowflake architecture consists of:
11. A monolithic, integrate stack
12. Tightly coupled storage and compute layers
13. Three layers: Cloud Services, Virtual Warehouse, Hybrid Columnar Storage.
14. None of the above.
15. Which statement accurately describes the snowflake cloud services layer?
16. A set of cloud provider’s general services made available to users via the internet
17. A collection of independent, scalable, and stateless services providing crucial data management capabilities
18. A collection of tightly coupled database management feature
19. Managed and scaled by the user
20. Which statement is the most accurate regarding the snowflake metadata service?
21. Snowflake MDD service is a separate product offering from snowflake
22. It provides crucial, built-in management services for all metadata from capabilities such as query
23. Snowflake MDD services can be managed by the user
24. Snowflake MDD services capabilities do not impact data sharing, time travel or cloning capabilities
25. Which statement is most accurate regarding Snowflake’s transaction support?
26. Snowflake’s transaction support is ACID-compliant
27. It does not require updates
28. Snowflake transaction support requires special user configuration
29. Snowflake transaction support allows only statement
30. How does Snowflake’s support for High Availability work?
31. The feature requires users to manage provisioning & replication of the cloud provider’s virtual instances
32. Snowflake’s support for High Availability provides built-in, resilient capabilities in all three architectural layers
33. It does not support fault tolerance
34. High availability capability is limited to the storage layer.
35. Which security feature is supported in Snowflake?
36. Role-Based Access Control
37. Multi-Factor Authentication
38. Tri-Secret Secure Encryption
39. All of the above.