

Snowflake Metadata Share Guide



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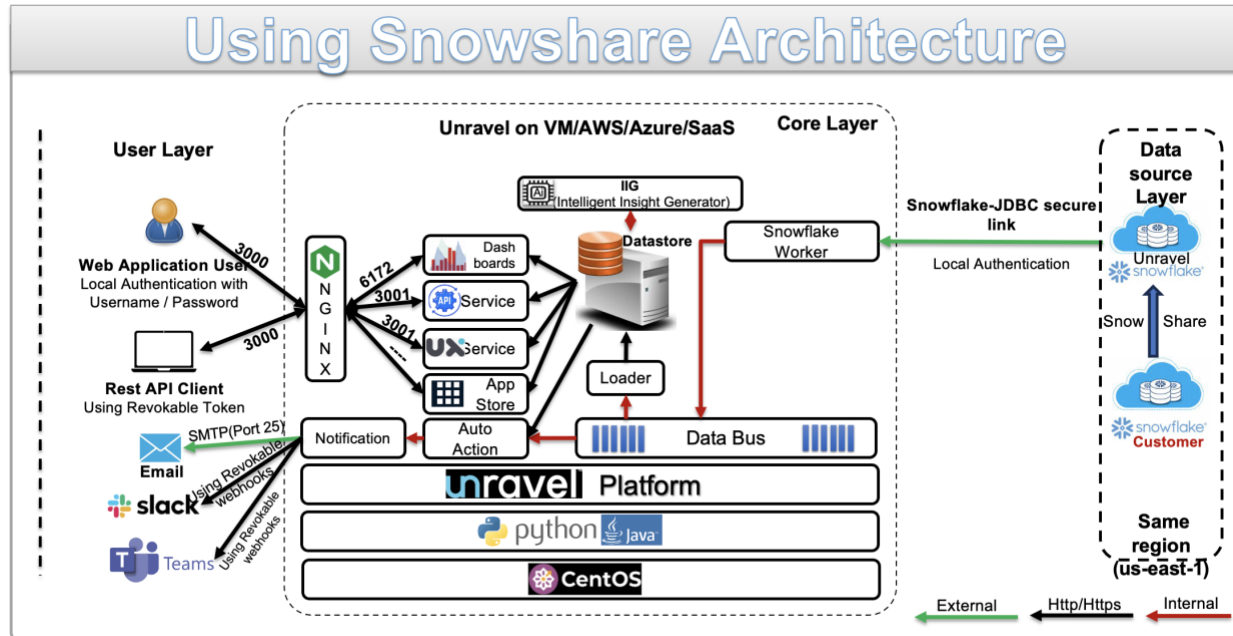
Document Version Record

Date	Version #	Author	Remarks / Reason
02-May-23	1.0	Dev Team	New Document

1. Objectives

Health check download for snowflake unravel product.

2. Architecture



3. Pre-requisite

A. Snowflake account Access through snowshare

- i. Create a unravel user in snowflake.
- ii. Grant select for unravel user on schema SNOWFLAKE.ACCOUNT_USAGE.
- iii. Create a database unraveldb and a schema unravelschema to create a stored procedure required for metadata collection from account_usage, information_schema & Profile and store in local schema.
- iv. Execute procedure to create tables and serverless task to populate the metadata from the account metadata.
- v. Need to have Snowshare access to share the local schema to unravel snowflake account , Execute the snowshare script to give access to "Unravel Snowflake account".
- vi. Based on the latency required the serverless/warehouse task will cost.

4. Share Snowflake Metadata with Snowflake secure share.

4.1. Execute below statement to create the procedure and necessary functions.

https://github.com/unraveldata-org/snowflake-data-loader/blob/ba204fad9def3de7ded263a59d462f669be5346c/script/replication/replication_query.sql

4.2. One time execution for POV for 2 days

```
CALL CREATE_TABLES('UNRAVEL_SHARE','SCHEMA_4823_T');
CALL REPLICATE_ACCOUNT_USAGE('UNRAVEL_SHARE','SCHEMA_4823_T',2);
CALL WAREHOUSE_PROC('UNRAVEL_SHARE','SCHEMA_4823_T');
CALL REPLICATE_REALTIME_QUERY('UNRAVEL_SHARE','SCHEMA_4823_T',10);
CALL CREATE_QUERY_PROFILE(dbname => 'UNRAVEL_SHARE',schemaname => 'SCHEMA_4823_T', cost
=> '1', days => '2');
```

4.3. One time execution for health check for 7 days

```
CALL CREATE_TABLES('UNRAVEL_SHARE','SCHEMA_4823_T');
CALL REPLICATE_ACCOUNT_USAGE('UNRAVEL_SHARE','SCHEMA_4823_T',7);
CALL WAREHOUSE_PROC('UNRAVEL_SHARE','SCHEMA_4823_T');
CALL REPLICATE_REALTIME_QUERY('UNRAVEL_SHARE','SCHEMA_4823_T',10);
CALL CREATE_QUERY_PROFILE(dbname => 'UNRAVEL_SHARE',schemaname => 'SCHEMA_4823_T', cost
=> '1', days => '7');
```

4.4. To continue execution on certain interval this is created as tasks for POV not required for health check.

1. Based on requirement schedule time / lookbackdays /cost can be changed.

```
-- create account usage tables Task
CREATE OR REPLACE TASK replicate_metadata
  WAREHOUSE = UNRAVELDATA
  SCHEDULE = '60 MINUTE'
AS
CALL REPLICATE_ACCOUNT_USAGE('UNRAVEL_SHARE','SCHEMA_4823_T',2);

-- create warehouse replicate Task
CREATE OR REPLACE TASK createWarehouseTable
  WAREHOUSE = UNRAVELDATA
  SCHEDULE = '60 MINUTE'
AS
```

```
CALL warehouse_proc('UNRAVEL_SHARE','SCHEMA_4823_T');

-- create profile replicate task
CREATE OR REPLACE TASK createProfileTable
  WAREHOUSE = UNRAVELDATA
  SCHEDULE = '60 MINUTE'
AS
CALL create_query_profile(dbname => 'UNRAVEL_SHARE',schemaname => 'SCHEMA_4823_T', cost =>
'1', days => '1');

-- create Task for replicating information schema query history
CREATE OR REPLACE TASK replicate_realtime_query
  WAREHOUSE = UNRAVELDATA
  SCHEDULE = '30 MINUTE'
AS
CALL REPLICATE_REALTIME_QUERY('UNRAVEL_SHARE','SCHEMA_4823_T',10);

-- START ALL THE TASKS

ALTER TASK replicate_metadata RESUME;

ALTER TASK createWarehouseTable RESUME;

ALTER TASK createProfileTable RESUME;

ALTER TASK replicate_realtime_query RESUME;
```

5. Share the Transient tables to unravel account.

From SQL (Recommended):

```
-- Share tables
Create share RICOH_UNRAVEL_SHARE;
Grant Usage on database UNRAVEL_SHARE to share RICOH_UNRAVEL_SHARE;
Grant Usage on schema SCHEMA_4823_T to share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE WAREHOUSE_METERING_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE WAREHOUSE_EVENTS_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE WAREHOUSE_LOAD_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE TABLES to share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE METERING_DAILY_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE METERING_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE DATABASE_REPLICATION_USAGE_HISTORY to share
RICOH_UNRAVEL_SHARE;
```

```
GRANT SELECT ON TABLE REPLICATION_GROUP_USAGE_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE DATABASE_STORAGE_USAGE_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE STAGE_STORAGE_USAGE_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE SEARCH_OPTIMIZATION_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE DATA_TRANSFER_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE AUTOMATIC_CLUSTERING_HISTORY to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE SNOWPIPE_STREAMING_FILE_MIGRATION_HISTORY to
share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE TAG_REFERENCES to share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE QUERY_HISTORY to share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE ACCESS_HISTORY to share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE IS_QUERY_HISTORY to share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE WAREHOUSE_PARAMETERS to share
RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE WAREHOUSES to share RICOH_UNRAVEL_SHARE;
GRANT SELECT ON TABLE QUERY_PROFILE to share RICOH_UNRAVEL_SHARE;
alter share RICOH_UNRAVEL_SHARE add accounts = HFB47355;
```

6. Receive the data in recipient account (Sql mode).

```
--Validate that the inbound share is available to the consumer account.
Show shares like '%UNRAVEL%';
```

```
Use role AccountAdmin;
create database RICOH_SHARE from share
FWTTICE.PRIMARY_PG.RICOH_UNRAVEL_SHARE;
```

7. Share the Transient tables to unravel account (UI Mode).

Sharing through UI :

E.g. URL : https://app.snowflake.com/fwttice/primary_pg/#/data/shared/outbound

Replace your account in above URL instead of “fwttice”

V

VISWA

ACCOUNTADMIN

Worksheets

Dashboards

Streamlit

Apps

Data

Databases

Private Sharing

Provider Studio

Governance

Marketplace

Activity

Admin

Help & Support

Classic Console

Shared With You Shared By Your Account Reader Accounts

Search

Sources All

Show All Data

C

Share

Direct Shares

SNOWFLAKE

ACCOUNT_USAGE

Shared 1 year ago

SFSALESSHARED.SFC_SAMPLES_VA3

SAMPLE_DATA

Shared 1 year ago

V

VISWA

ACCOUNTADMIN

Worksheets

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Private Sharing

Provider Studio

Governance

Marketplace

Activity

Admin

Help & Support

Classic Console

Shared With You Shared By Your Account Reader Accounts

Share

Publish to Specified Consumers

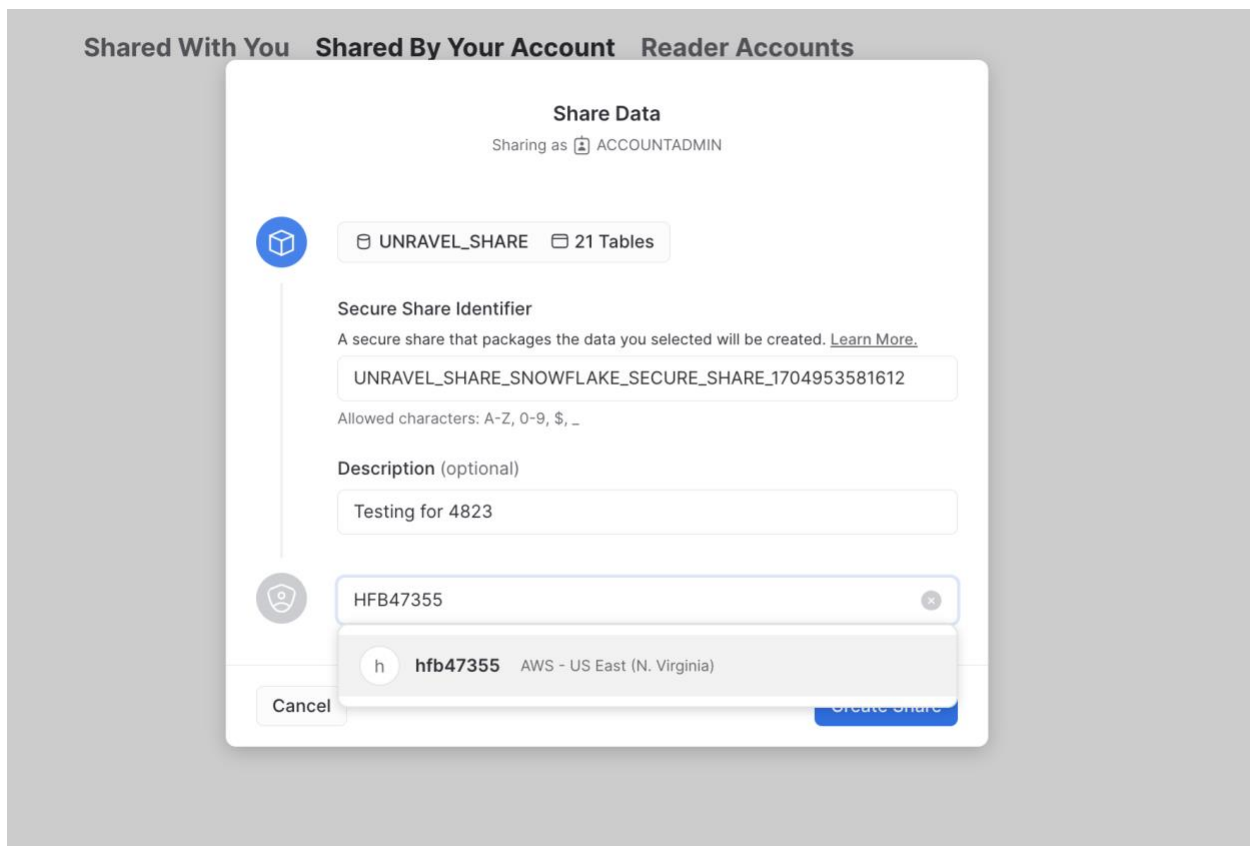
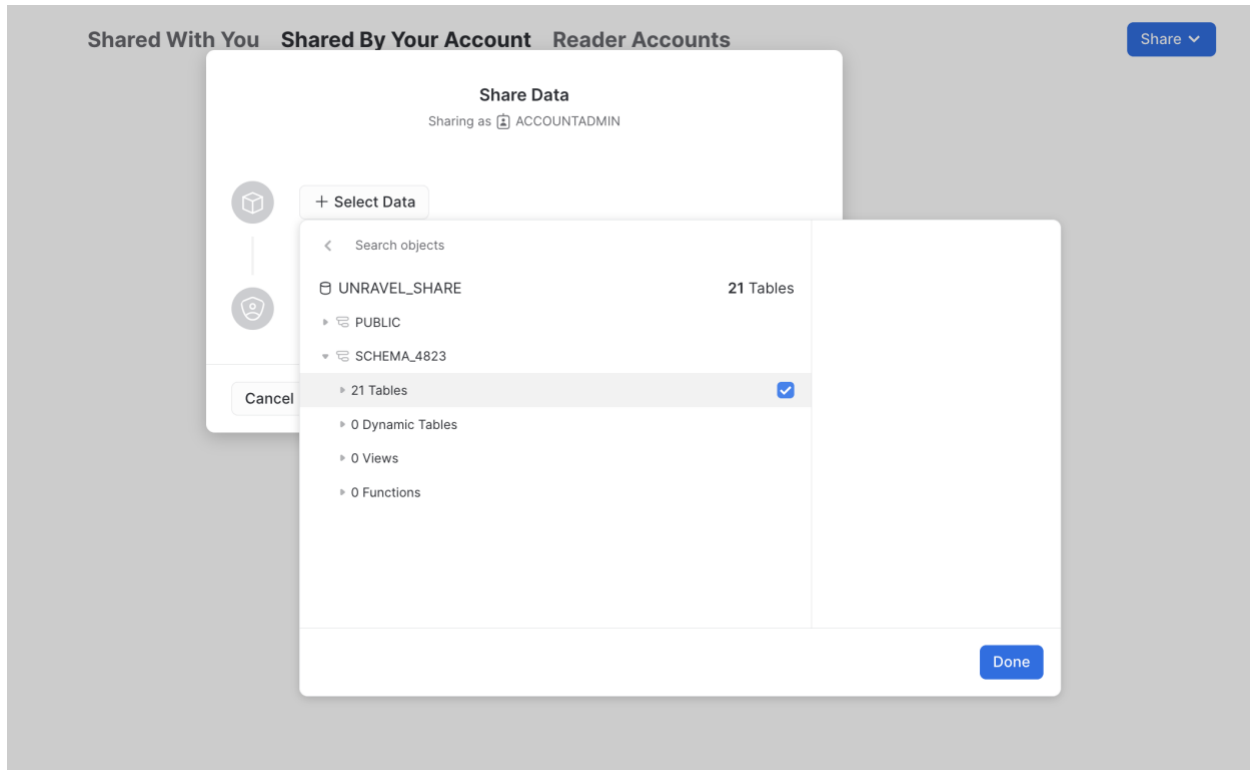
Publish to Marketplace

Create a Direct Share



No Shared Data

Data that has been shared by your account will appear here.



<
UNRAVEL_SHARE_SNOWFLAKE_SECURE_SHARE_1704953581612
...

ACCOUNTADMIN
Secure Share
Created: 1 minute ago
AWS - US East (N. Virginia)

Shared With

Add Consumers

NAME	TYPE	
FWTTICE.UNRAVEL_SECURE_SHARE	Account	...

Description

Edit

Testing for 4823

Data

Edit

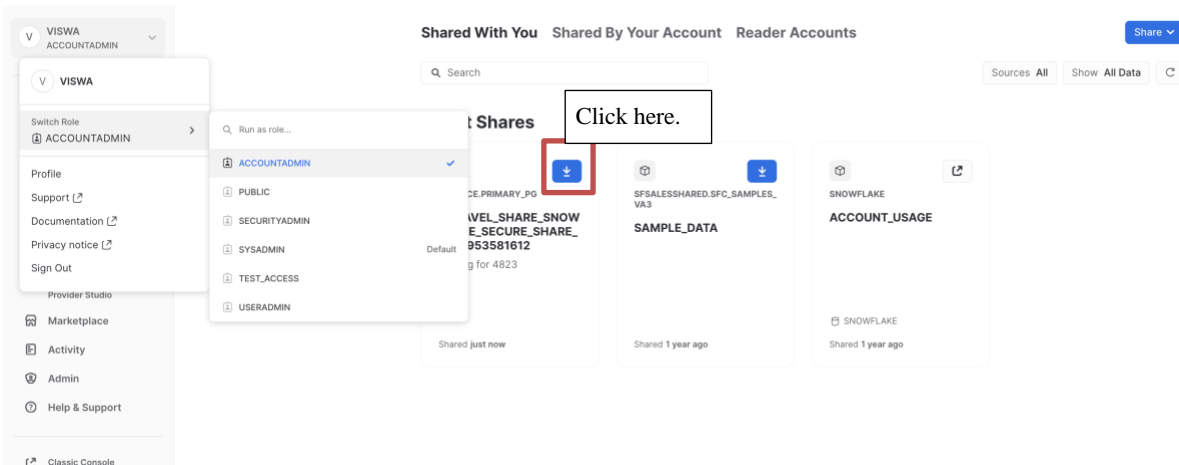
UNRAVEL_SHARE
21 Tables

NAME	TYPE	SCHEMA
ACCESS_HISTORY	Table	SCHEMA_4823
AUTOMATIC_CLUSTERING_HISTORY	Table	SCHEMA_4823
DATABASE_REPLICATION_USAGE_HISTOR	Table	SCHEMA_4823

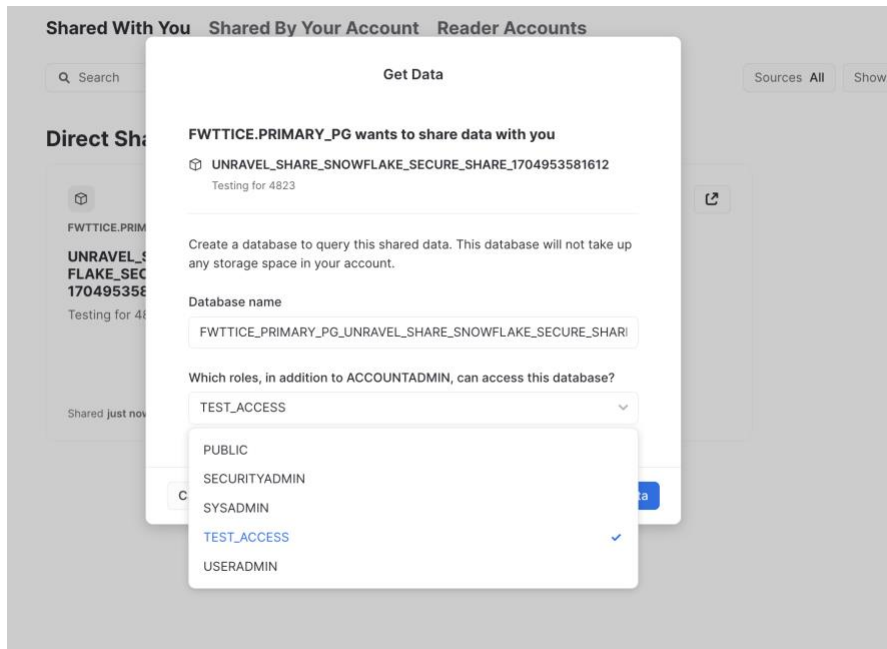
Now the tables are shared to **HFB47355 Account**

8. Receive the data in recipient account ui mode.

Login as account admin.



Select the role.



Shared With You Shared By Your Account Reader Accounts

Share

Search

Sources All

Show All Data

Direct Shares

SFSALESSHARED.SFC_SAMPLES_VA3

SAMPLE_DATA

Shared 1 year ago

FWTTICE.PRIMARY_PG

UNRAVEL_SHARE_SNOWFLAKE_SECURE_SHARE_1704953581612

Testing for 4823

FWTTICE_PRIMARY_PG_UNR...

Shared just now

SNOWFLAKE

ACCOUNT_USAGE

Shared 1 year ago

SNOWFLAKE

Now data is available in recipient account.

Worksheets 2024-01-08 10:12am

Databases Worksheets

Pinned (0)

No pinned objects

Search objects

FWTTICE_PRIMARY_PG_UNRAVEL_SHARE_SNOWFLAKE_SECURE_SHARE_1704953581612

INFORMATION_SCHEMA

SCHEMA_4823

Tables

- ACCESS_HISTORY
- AUTOMATIC_CLUSTERING_HISTORY
- DATABASE_REPLICATION_USAGE_HISTORY
- DATABASE_STORAGE_USAGE_HISTORY
- DATA_TRANSFER_HISTORY
- METERING_DAILY_HISTORY
- METERING_HISTORY
- QUERY_PROFILE
- REPLICATION_GROUP_USAGE_HISTORY
- REPLICATION_LOG
- SEARCH_OPTIMIZATION_HISTORY
- SNOWPIPE_STREAMING_FILE_MIGRATION_HISTORY
- STAGE_STORAGE_USAGE_HISTORY
- TABLES
- TAG_REFERENCES
- WAREHOUSES
- WAREHOUSE_EVENTS_HISTORY
- WAREHOUSE_LOAD_HISTORY
- WAREHOUSE_METERING_HISTORY
- WAREHOUSE_PARAMETERS

SNOWFLAKE

No Database selected Settings

Code Versions

```

1 select * from FWTTICE_PRIMARY_PG_HC_SNOWFLAKE_SECURE_SHARE_1704688301683.ARC.WAREHOUSES;
2
3 show warehouses;
4
5 select * from snowflake.account_usage.query_history ;
6
7 FWTTICE_PRIMARY_PG_UNRAVEL_SHARE_SNOWFLAKE_SECURE_SHARE_1704797995611.SCHEMA_4823.ACCESS_HISTORY
8
9
10
11
12 select * from FWTTICE_PRIMARY_PG_UNRAVEL_SHARE_SNOWFLAKE_SECURE_SHARE_1704809525178.SCHEMA_4823.WAREHOUSES;
13
14 select * from UNRAVEL_SHARE_SNOWFLAKE_SECURE_SHARE_1704953581612.SCHEMA_4823.

```

Results Chart

	name	state	type	size	min_cluster_count	max_cluster_count
1	AFTER_CONSOLIDATION_WH	SUSPENDED	STANDARD	Small	1	3
2	COMPUTE_WH	STARTED	STANDARD	X-Small	1	1
3	CONSOLIDATED_WH	SUSPENDED	STANDARD	Small	1	1
4	CONSOLIDATE_AFTER_WH	SUSPENDED	STANDARD	Medium	1	1
5	DOWNSIZED_WH	STARTED	STANDARD	X-Small	1	1
6	FOOD_ESTABLISHMENT_WH	SUSPENDED	STANDARD	X-Small	1	2
7	GOVERNANCE	SUSPENDED	STANDARD	X-Small	1	1
8	LARGEWH	SUSPENDED	STANDARD	Large	1	1
9	RT_M	SUSPENDED	STANDARD	Medium	1	1
10	SF_TUTS_WH	SUSPENDED	STANDARD	X-Small	1	1
11	SMALLWH	SUSPENDED	STANDARD	X-Small	1	1
12	SMALL_WH1	SUSPENDED	STANDARD	Small	1	1
13	SMALL_WH2	SUSPENDED	STANDARD	Small	1	1

Query Details

Query duration 702ms

Rows 36

Query ID 01b18e38-9404-a3b4c...

name 100% filled

state SUSPENDED 33 STARTED 3

type STANDARD 36

9. Configure recipient account in unravel.

Show shares like '%UNRAVEL%';

Use role AccountAdmin;

create database RICOH_SHARE from share
FWTTICE.PRIMARY_PG.RICOH_UNRAVEL_SHARE;

Database: RICOH_SHARE

Other configurations are same.