

Data Sheet

Database Replication Across Multiple Accounts in Snowflake

Step-by-Step
Explanation

5201 GREAT AMERICAN PARKWAY, SUITE 320

SANTA CLARA, CA 95054

Tel: (855) 695-8636

E-mail: info@lumendata.com

Website: www.lumendata.com

This Snowflake feature helps us to replicate the databases between Snowflake accounts within the same organization. It is supported across the same or different regions, and same or different cloud providers. Database replication helps to synchronize the database objects periodically.

If we want to enable replication to any database, then the database is called the primary database, and the replica of that database across different accounts is called the secondary database. Any DML/DDI operations performed on the primary database will get synchronized on a periodical basis with the secondary databases. However, the secondary database is read-only.

Database replication is supported only for the Databases. If we want to replicate other objects like integration, pipes, stage, shares, users, etc., we need to use account replication.

Current Limitations of Database Replication

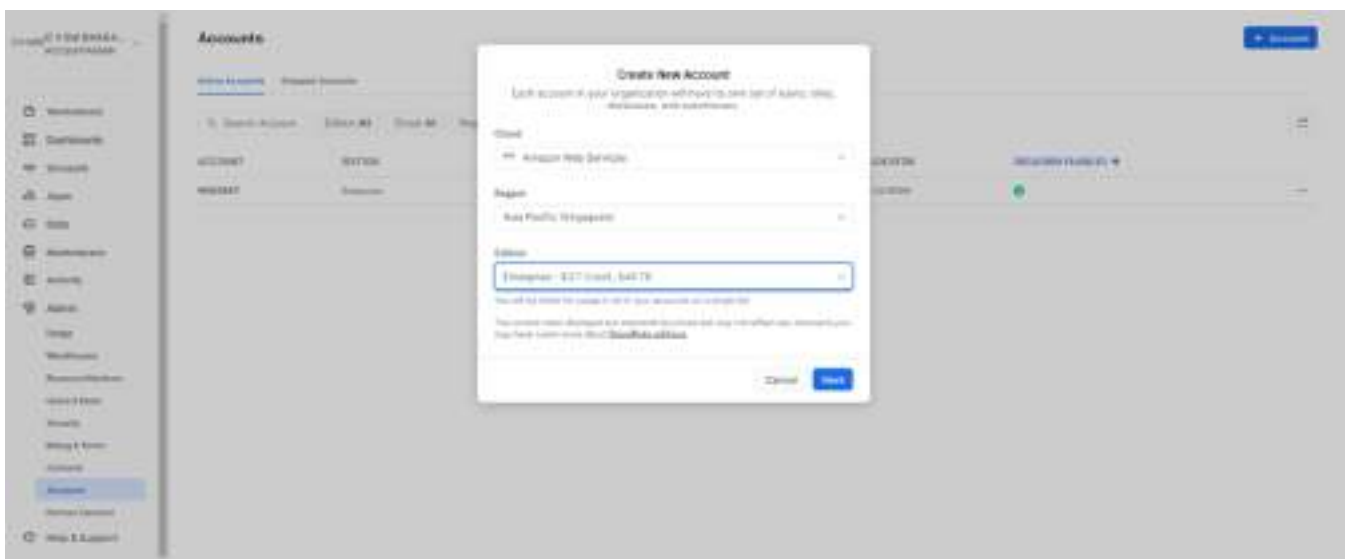
- Databases created from shares cannot be replicated.
- The refresh operation fails if a primary database contains an Event table and an External table.

Let's Create multiple accounts in Snowflake and replicate the databases.

1. In Snowflake when we create an account by default for an organization, there will be one internal account.
2. To view the number of accounts in the organization, go to ADMIN as shown below.

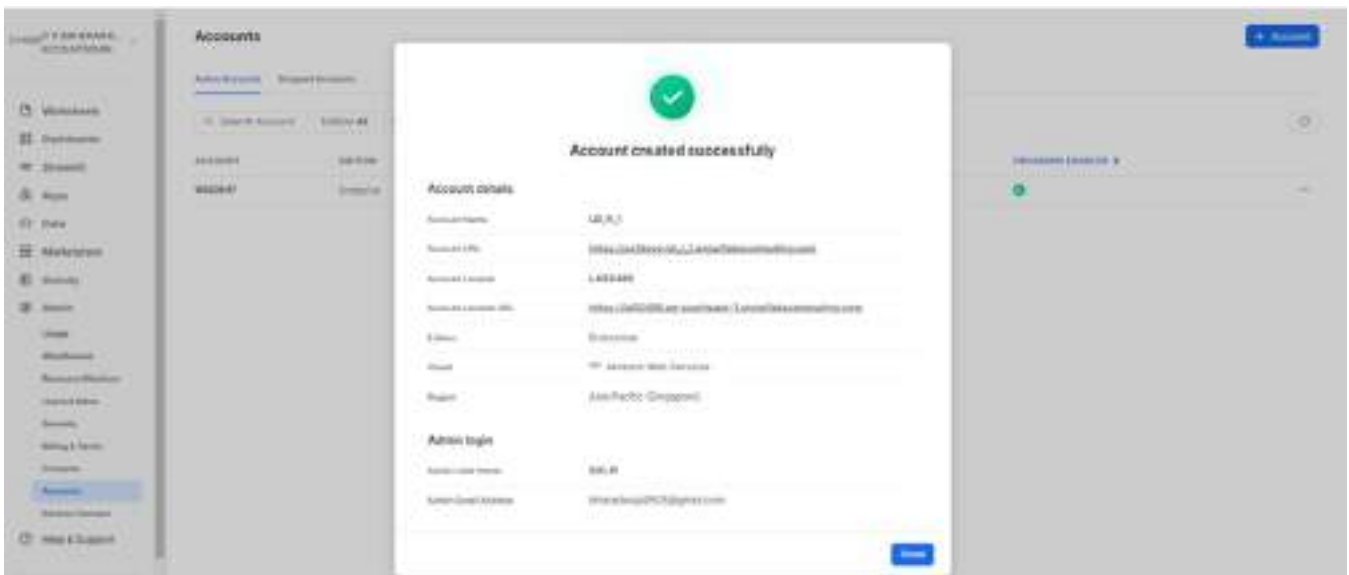


3. As we need to perform database replication, we need to create another account within the same organization.
4. Click on **+Account** and select the appropriate cloud provider, region, and edition.



5. Once we click on **NEXT**, it will ask for the Account Name, Username, Email Address, and Password. Click on Create Account.

Database Replication Across Multiple Accounts in Snowflake



6. Log into the account using the username and password.
7. Now, in the Organization account, you can view two different internal accounts.



8. We will now try to log into the internal account that we created.



9. As we observed, we have two active internal accounts, we will start database replication from one account to another account.
10. On the first account, I have a database named "LD" with the "PUBLIC" schema. Let's create two tables using the script below:

```
create or replace table customer(customer_id string(2),customer_name string(100),customer_address string(100));
```

```
insert into customer
(CUSTOMER_ID, CUSTOMER_NAME, CUSTOMER_ADDRESS)
VALUES
('c1','john','bangalore'),
('c2','sai','mumbai'),
('c3','siva','delhi');
```

```
create table employee(employee_id string(2),employee_name string(100),employee_address string(100));
```

```
insert into employee
(EMPLOYEE_ID, EMPLOYEE_NAME, EMPLOYEE_ADDRESS)
VALUES
('c1','john','bangalore'),
('c2','sai','mumbai'),
('c3','siva','delhi');
```

```
select * from customer;
select * from employee;
```



11. Now we will replicate the database "LD" with the below script to another account that we created.
12. First, we need to enable the database replication on both the primary and secondary account.

```
USE ROLE ORGADMIN;
SELECT
SYSTEM$GLOBAL_ACCOUNT_SET_PARAMETER('USFDGVP.LD_R_1','ENABLE_ACCOUNT_DATABASE_REPLICATION', 'true');
```

```
USE ROLE ORGADMIN;
SELECT
SYSTEM$GLOBAL_ACCOUNT_SET_PARAMETER('USFDGVP.WS03647','ENABLE_ACCOUNT_DATABASE_REPLICATION', 'true');
```




```

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Results: 1 of 1 rows

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1 DIFFERENTIAL_ACCOUNT_REPLICATION_ENABLED: ENABLE_ACCOUNT_DATABASE_REPLICATION: TRUE

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1 SUCCESS

13. Now replicate the database "LD" in the first account using the below command.

ALTER DATABASE LD ENABLE REPLICATION TO ACCOUNTS USFDGVP.LD_R_1;

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Results: 1 of 1 rows

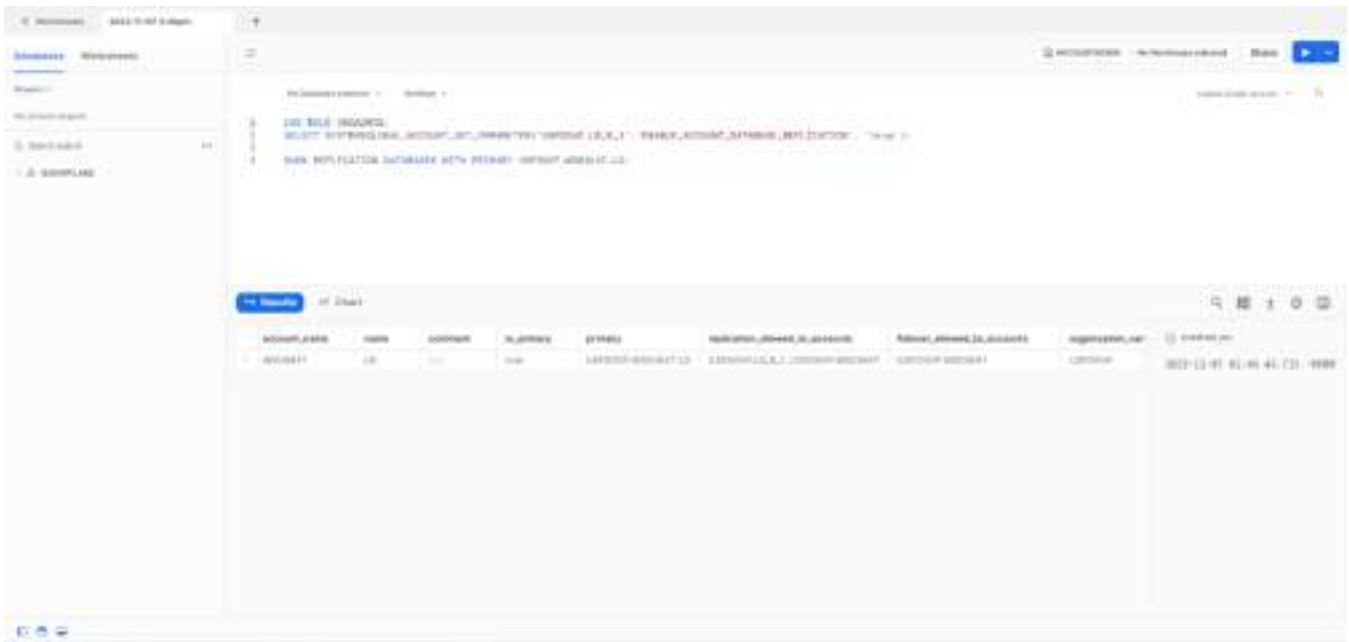
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1 Database replicated successfully.

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14. Let's view the replica of this database in secondary account using the command:

SHOW REPLICATION DATABASES WITH PRIMARY USFDGVP.WS03647.LD;



15. We can conclude that Snowflake database replication helps us to recover the data instantly during an outage with Tri-Secret secure compatibility.

Authors



Sai Bharadwaja
Consultant



Ankit Kumar
Technical Lead

About LumenData

LumenData is a leading provider of **Enterprise Data Management, Cloud & Analytics** solutions. We help businesses navigate their data visualization and analytics anxieties and enable them to accelerate their innovation journeys.

Founded in 2008, with locations in multiple countries, LumenData is privileged to serve over 100 leading companies. LumenData is **SOC2 certified** and has instituted extensive controls to protect client data, including adherence to GDPR and CCPA regulations.



Get in touch with us:
info@lumendata.com

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