Starburst 323e Release

Webinar - 11/19/2019

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Starburst 323e Release

- Parallel Snowflake connector
- IBM DB2 connector
- MapR connector
- RedHat Certification for Openshift
- LDAP support for built-in system access control
- Starburst Secrets - Encryption for security sensitive configurations, e.g. passwords in catalogs
- Hadoop 3 support, including Hive ORC ACID support
- On-premises Coordinator HA
- Direct Parallel Teradata connector
- Power BI DirectQuery connector

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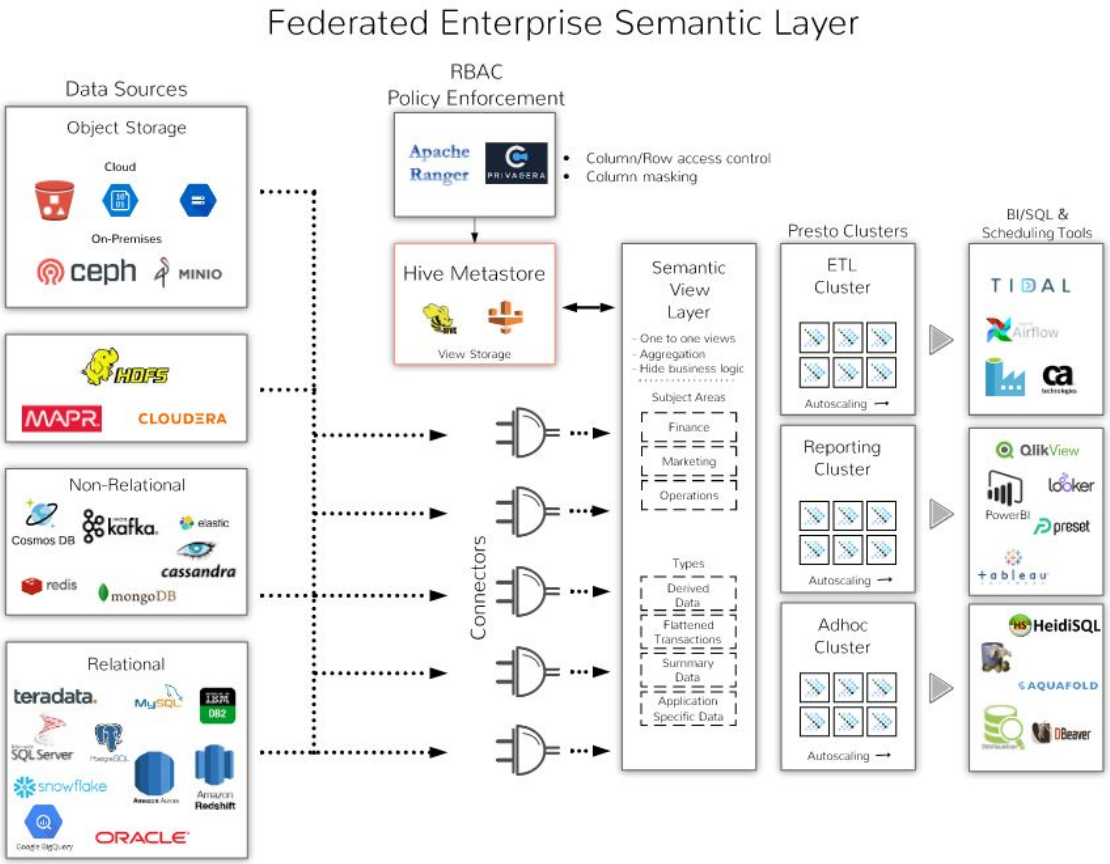
Snowflake Connector - Why?



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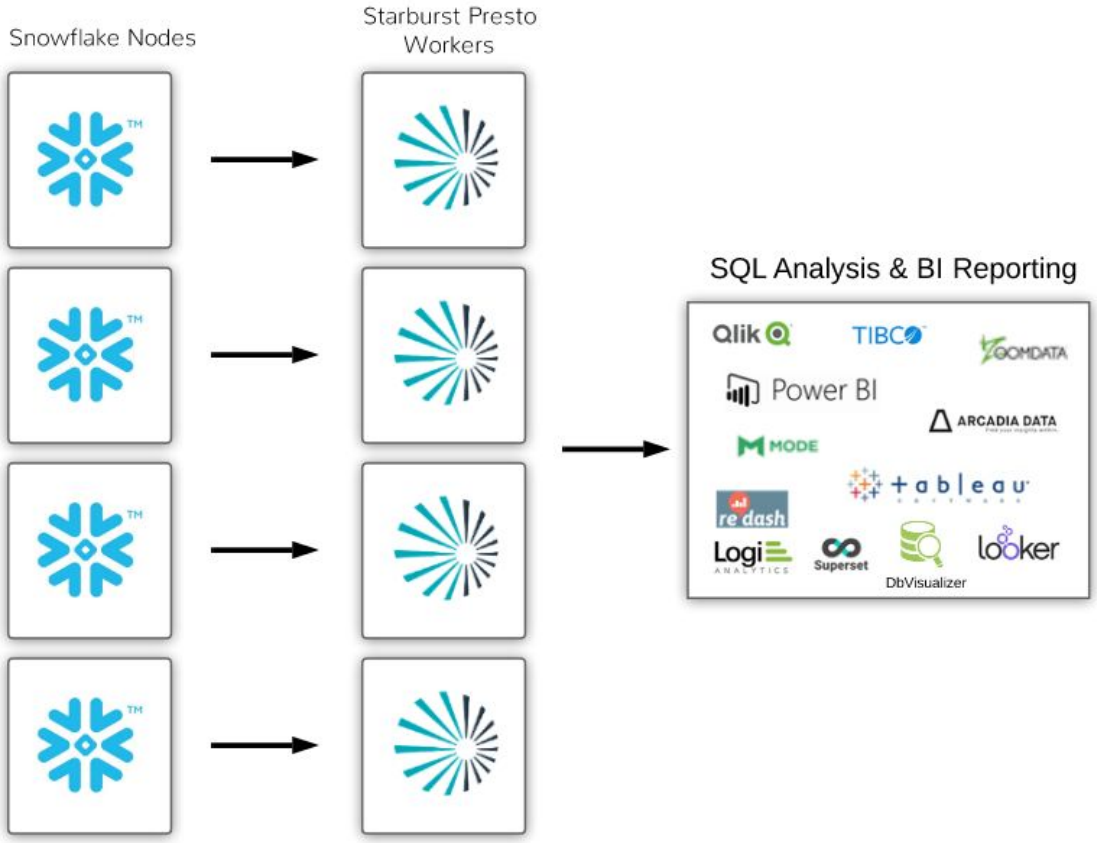
Snowflake Serial & Parallel Connectors

- Connect directly to Snowflake on any cloud
- Two options
  - JDBC - Great for when result sets are small
  - Distributed - Preferred when result sets are large
- Supports 1 Starburst Presto catalog for multiple Snowflake schemas
- Supports user impersonation
- Cost Based Optimizer uses statistics on Snowflake tables

Snowflake Distributed Option



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Snowflake Connector Demo

DB2 Connector

- Supports DB2 11.5
- Any flavor of DB2 that provides a JDBC driver
- Add JDBC driver to Presto plugins directory
- DB2-to-Presto type mapping
- User impersonation
- Cost Based Optimizer uses statistics on DB2 tables

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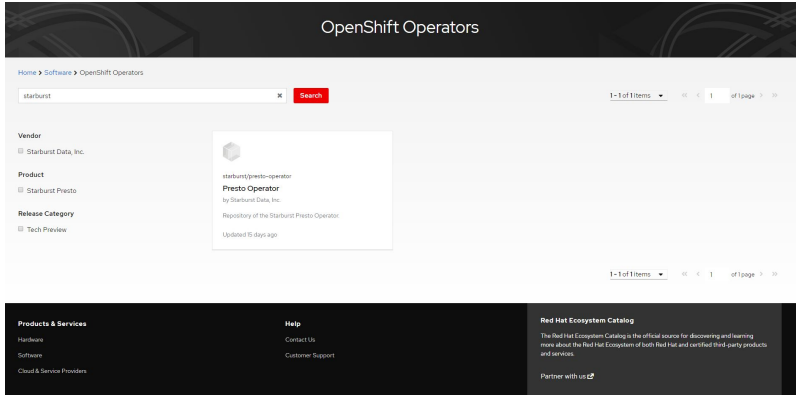
DB2 Connector

- Secure and non-secure clusters supported
- MapR client installed on each Starburst Presto node
- DB2-to-Presto type mapping
- User impersonation
- Cost Based Optimizer uses statistics on DB2 tables

Starburst Kubernetes (K8S) RedHat Certified

- Presto K8S operator fully certified on OpenShift
- Deploy Starburst K8S anywhere
- Query data in CEPH, HDFS or Cloud Storage
- Available on the RedHat Ecosystem Catalog



redhat
CERTIFIED TECHNOLOGY

redhat
TECHNOLOGY PARTNER

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LDAP support for built-in system access control

- By default, all users have access to all catalogs. You can override this behavior by adding rules in Starburst's System Access Control Plugin

- The System Access Control will match an authenticated user to the access control rules for catalogs.

- The System Access Control can match groups to access control rules for catalogs. In this scenario, the authenticated user must be assigned to a group in LDAP

```
"catalogs": [
   {
     "user": "admin",
     "catalog": "(mysql|system)",
     "allow": "all"
   },
   {
     "groups": ["finance", "admin"],
     "catalog": "postgres",
     "allow": true
   },
   {
     "catalog": "hive",
     "allow": "all"
   },
   {
     "user": "alice",
     "catalog": "postgresql",
     "allow": "read-only"
   },
   {
     "catalog": "system",
     "allow": "none"
   }
 ]
}
```

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Starburst Secrets

- Encrypting sensitive information in Starburst Presto configuration files
- Handled by a industry standard Java keystore
- Any configuration value can be encrypted. e.g. catalogs, configurations
- Eases concerns of having sensitive information in plain text on Presto clusters
- Keystore can be maintained outside of Presto configurations

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Starburst Secrets

Demo

- Create a keystore for the Oracle catalog password
- Enable Starburst Presto to read secrets
- Replace password with secret variable in oracle.properties
- Query as normal

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Starburst Secrets

1. keytool -genseckey -alias oracle_connection_password -keyalg PBE -keystore presto-keystore.pfx -storetype PKCS12

2. create configuration-source.properties in /etc/presto

```
[root@ip-172-31-8-140 presto]# cat configuration-source.properties
keystore.enabled=true
keystore.file-path=etc/presto-keystore.pfx
keystore.password=changeit
```

3. Verify the alias:

```
[root@ip-172-31-8-140 presto]# keytool -list -v -keystore presto-keystore.pfx
Enter keystore password:
Keystore type: PKCS12
Keystore provider: SUN
Your keystore contains 1 entry
Alias name: oracle_connection_password
Creation date: Nov 19, 2019
Entry type: SecretKeyEntry
```

4. Modify the oracle connector password:

```
[root@ip-172-31-8-140 catalog]# cat oracle.properties
connector.name=oracle
connection-url=jdbc:oracle:thin:@74.115.253.196:1521/orclpdb
connection-user=presto
connection-password=${ENV:oracle_connection_password}
oracle.impersonation.enabled=true
```

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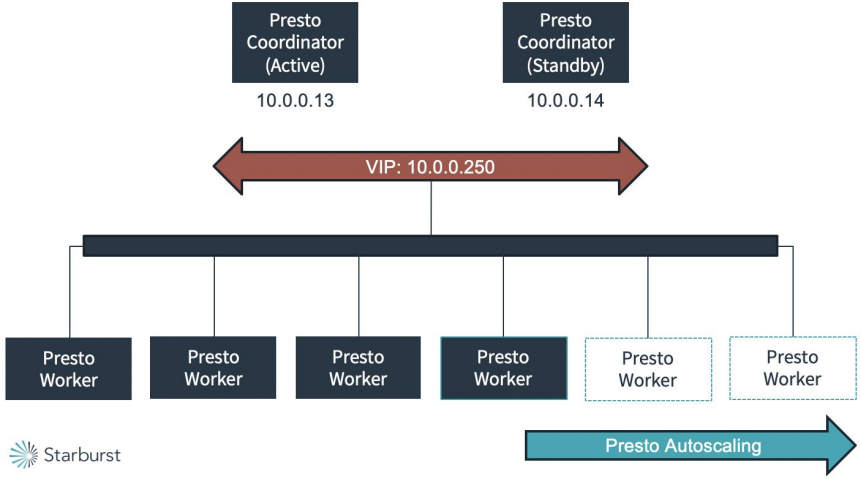
Starburst Hadoop 3.1 Support

- Starburst Presto is certified to work with Hadoop 3.1
- Including:
  - Read support for Hive transactional tables (ORC ACID)
  - Read and write for HDFS locations utilizing Erasure Coding
  - Support for Hive materialized views
  - Compatibility with the newer Apache Ranger version on HDP 3.1
  - Compatibility with the newer Hive Metastore version in 3.1
  - Compatibility with new Hive bucketing support in 3.1

Starburst On-Premises Coordinator High Availability

- Available for on-premises deployments
- Ensures 24/7 uptime of critical Starburst Presto deployments
- Uses a “keepalived” process that constantly monitors health
- Included in Starburst Enterprise Edition



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Teradata Parallel Direct Connector

teradata.

- Connects at the Worker to AMP level in Teradata
- Teradata Table Operator UDF and custom transmitter components
- Direct access to storage on Teradata via UDF
- Presto controller and many receivers for parallel run of many queries
- High performance for SELECT queries
- Already in successful deployment at large media customer

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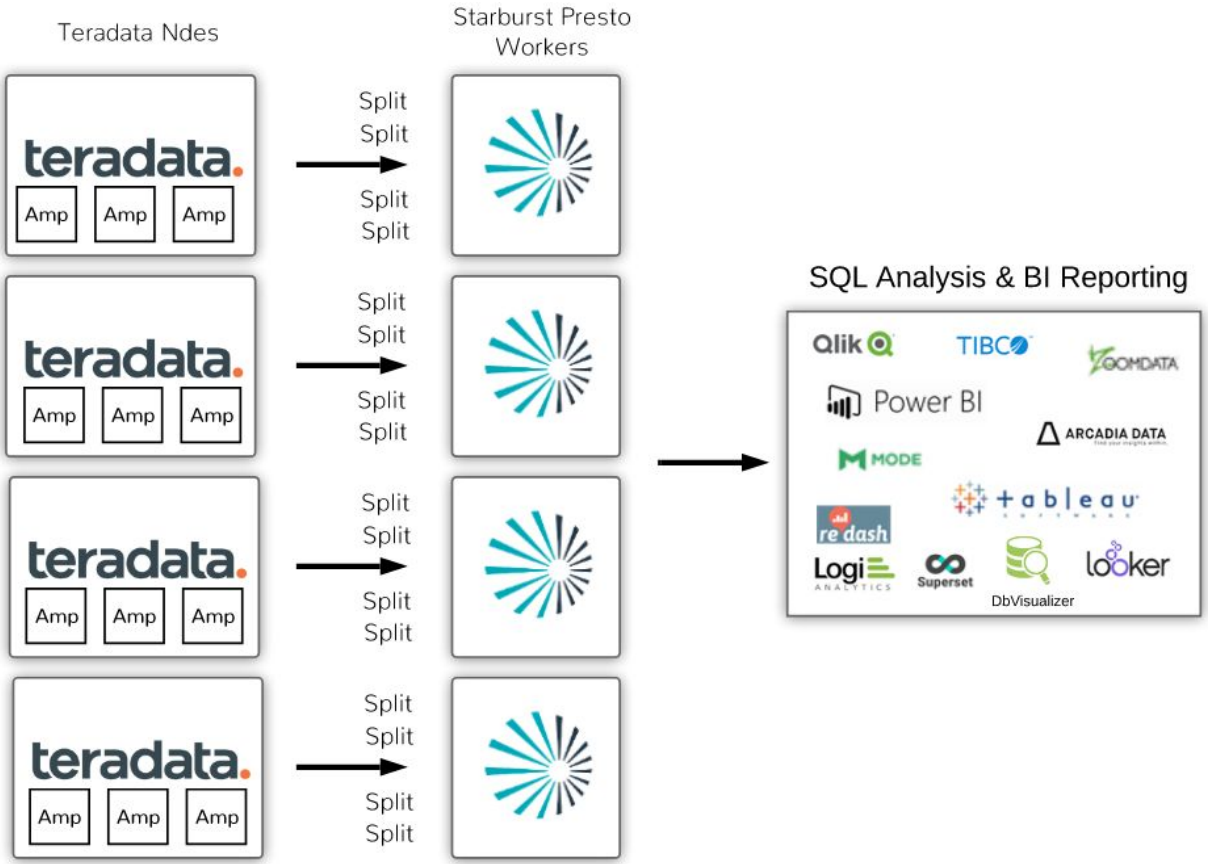
Teradata Parallel Direct Connector



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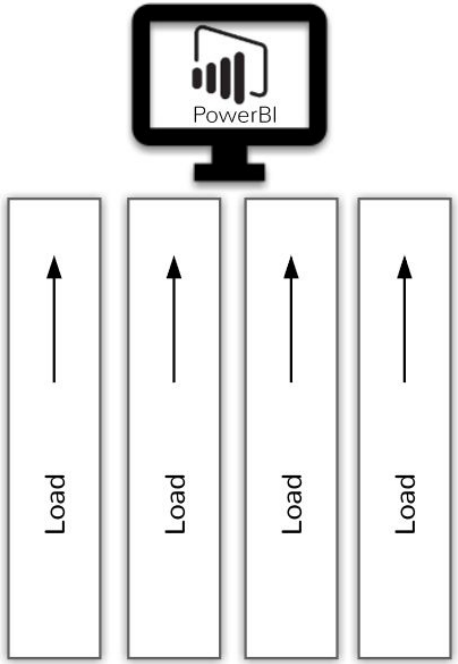
Power BI - Import Function



Limited Sources

- Data is loaded into the Power BI desktop
- Connectors are limited
- Not recommended for data > 1GB
- Limited to the resources at the desktop

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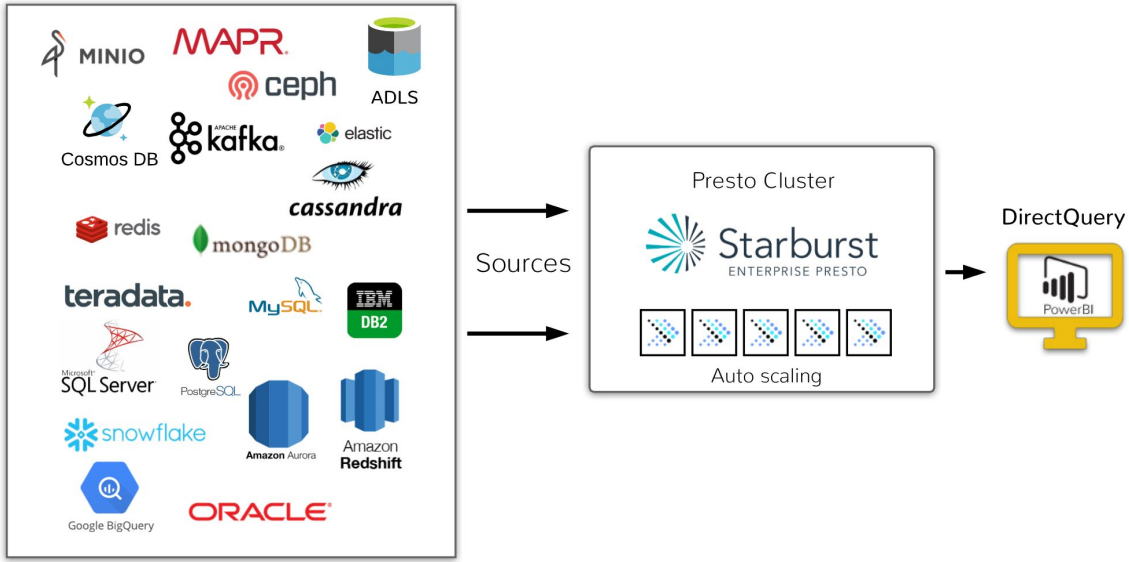
Power BI - DirectQuery Connector



- Starburst Presto handles data federation and querying
- No data limits using the power of Starburst Presto
- Develop reports & dashboards from data living anywhere

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