



Vidyavardhini's College of Engineering & Technology

Department of Computer Engineering

Experiment No. 2
Use of Sqoop tool
Date of Performance:24/07/2023
Date of Submission:31/07/2023



AIM: To install SQOOP and execute basic commands of Hadoop eco system componentSqoop.

THEORY:

Installation and configuration of SQOOP

1) Download SQOOP from <https://sqoop.apache.org>

2) Unzip and Install SQOOP

After Downloading the SQOOP, we need to Unzip the sqoop-1.4.7.bin_hadoop-2.6.0.tar.gz file.

3) Create a folder and move the final extracted file in it.

4) Set up the environment variables

a. Set SQOOP_HOME

b. Set up path variable

5) Configure SQOOP

Basic SQOOP commands:

1. List Table

This command lists the particular table of the database in MYSQL server.

```
sqoop list - tables --connect jdbc:mysql://localhost/payment --username gatner
```

2. Target directory

This command import table in a specific directory in HDFS. -m denotes mapper argument. They have an integer value.

```
$ sqoop import --connect jdbc:mysql://localhost/inventory --username jony -table inventory --m 1 --target-dir/inv
```

3. sqoop-eval

This command runs quickly SQL queries of the respective database.

```
$ sqoop eval --connect --query "SQLQuery"
```



4. sqoop – version

This command displays version of the sqoop.

```
$ sqoop version      sqoop {revnumber}
```

5. sqoop-job

This command allows us to create a job, the parameters that are created can be invoked at any time. They take options like (–create,–delete,–show,–exit).

```
$ sqoop job --create --import --connect --table
```

6. code gen

This Sqoop command creates java class files which encapsulate the imported records. All the java files are recreated, and new versions of a class are generated. They generate code to interact with database records. Retrieves a list of all the columns and their datatypes.

```
$ sqoop codegen --connect -table
```

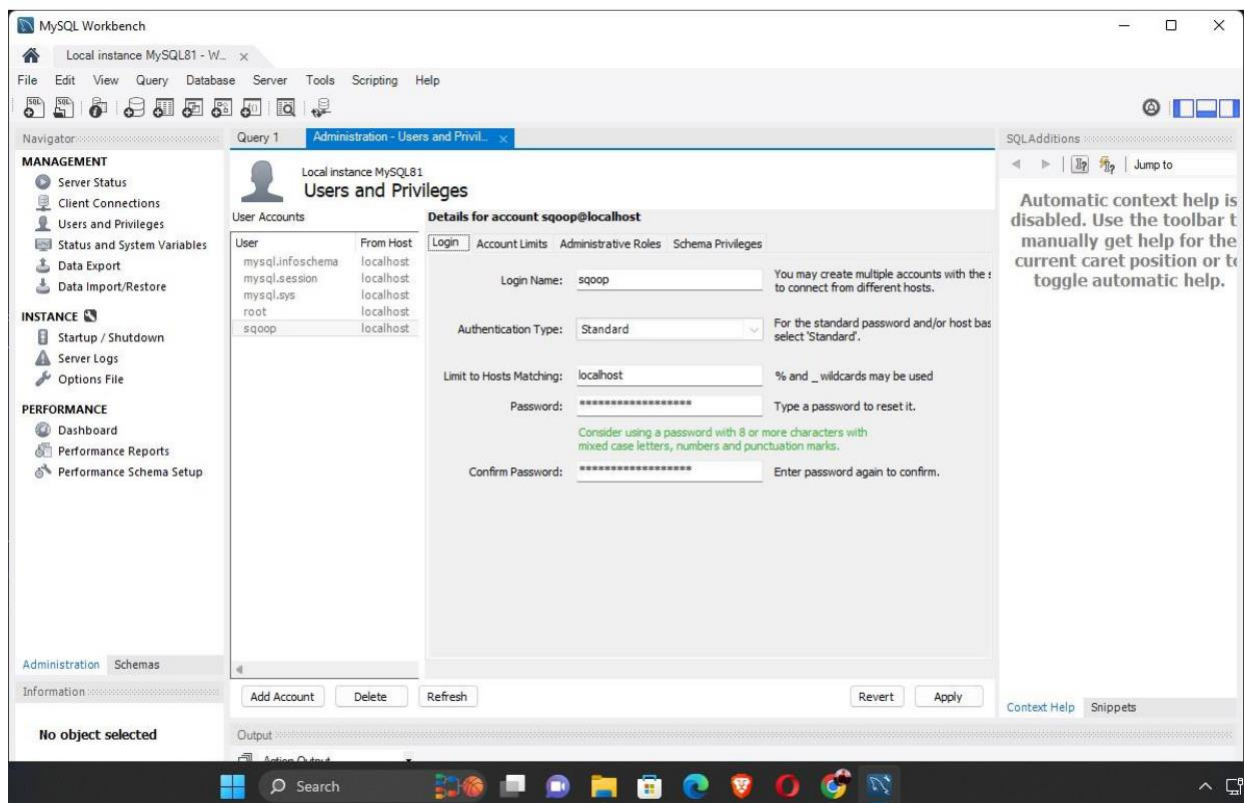
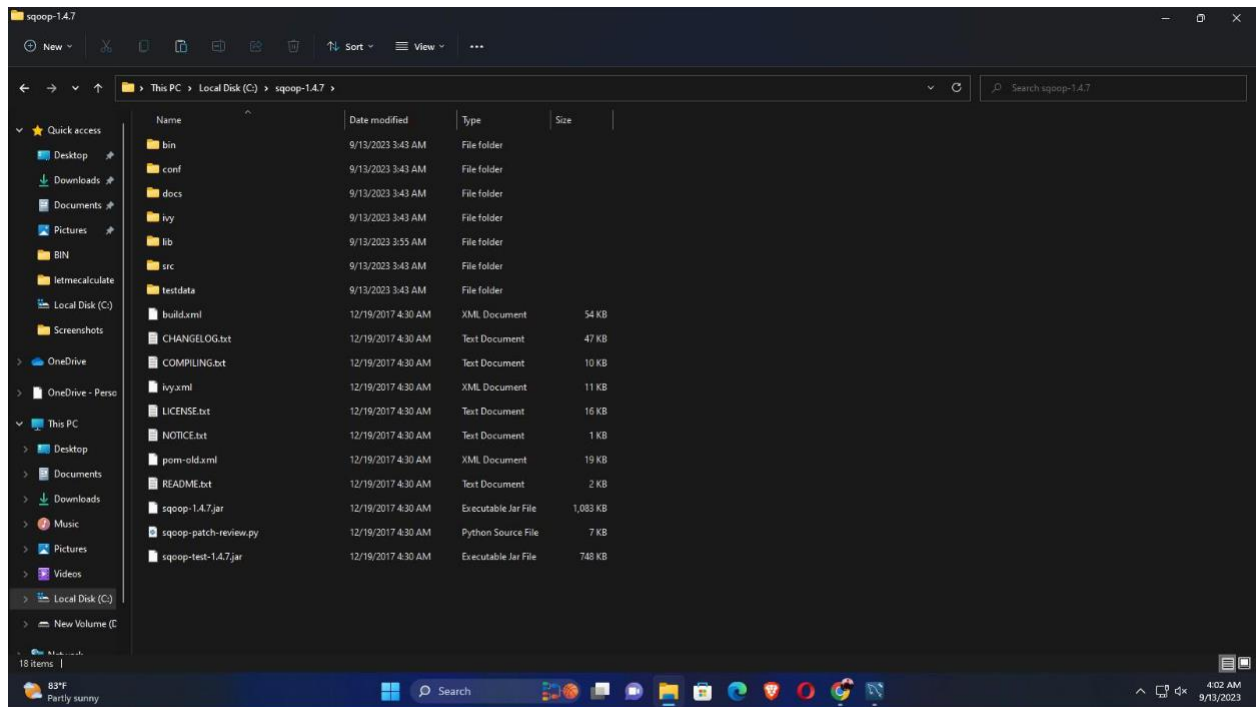
7. List Database

This Sqoop command lists have all the available database in the RDBMS server.

```
>$ sqoop list - database -- connect
```



OUTPUT:





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MySQL Workbench

Local instance MySQL81 - W...

File Edit View Query Database Server Tools Scripting Help

Navigator: Administration - Users and Priv...

MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Users and Privileges

User Accounts

User	From Host
mysql.infoschema	localhost
mysql.session	localhost
mysql.sys	localhost
root	localhost
sqoop	localhost

Details for account sqoop@localhost

Global Privileges

Privilege	Granted
ALTER	<input checked="" type="checkbox"/>
ALTER ROUTINE	<input checked="" type="checkbox"/>
CREATE	<input checked="" type="checkbox"/>
CREATE ROUTINE	<input checked="" type="checkbox"/>
CREATE TABLESPACE	<input checked="" type="checkbox"/>
CREATE TEMPORARY TABLES	<input checked="" type="checkbox"/>
CREATE USER	<input checked="" type="checkbox"/>
CREATE VIEW	<input checked="" type="checkbox"/>
DELETE	<input checked="" type="checkbox"/>
DROP	<input checked="" type="checkbox"/>
EVENT	<input checked="" type="checkbox"/>
EXECUTE	<input checked="" type="checkbox"/>
FILE	<input checked="" type="checkbox"/>
GRANT OPTION	<input checked="" type="checkbox"/>
INDEX	<input checked="" type="checkbox"/>
INSERT	<input checked="" type="checkbox"/>
LOCK TABLES	<input checked="" type="checkbox"/>
PROCESS	<input checked="" type="checkbox"/>
REFERENCES	<input checked="" type="checkbox"/>

Schema Privileges

Revoke All Privileges

Add Account Delete Refresh Revert Apply

Output

Context Help Snippets

MySQL Workbench

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mysql.infoschema	localhost
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mysql.sys	localhost
root	localhost
sqoop	localhost

Details for account sqoop@localhost

Schema Privileges

Schema	Privileges
%_bigdata%	ALTER, ALTER ROUTINE, CREATE, CREATE ROUTINE, CREATE TEMPORARY TABLES, CREATE VIEW, DE

Revoke All Privileges Delete Entry Add Entry...

Schema and Host fields may use % and _ wildcards.
The server will match specific entries before wildcarded ones.
The user 'sqoop'@'localhost' will have the following access rights to schemas matching '%_bigdata%':

Object Rights

Privilege	Granted
SELECT	<input checked="" type="checkbox"/>
INSERT	<input checked="" type="checkbox"/>
UPDATE	<input checked="" type="checkbox"/>
DELETE	<input checked="" type="checkbox"/>
EXECUTE	<input checked="" type="checkbox"/>
SHOW VIEW	<input checked="" type="checkbox"/>

DOL Rights

Privilege	Granted
CREATE	<input checked="" type="checkbox"/>
ALTER	<input checked="" type="checkbox"/>
REFERENCES	<input checked="" type="checkbox"/>
INDEX	<input checked="" type="checkbox"/>
CREATE VIEW	<input checked="" type="checkbox"/>
CREATE ROUTINE	<input checked="" type="checkbox"/>
ALTER ROUTINE	<input checked="" type="checkbox"/>
EVENT	<input checked="" type="checkbox"/>
DROP	<input checked="" type="checkbox"/>
TRIGGER	<input checked="" type="checkbox"/>

Other Rights

Privilege	Granted
GRANT OPTION	<input checked="" type="checkbox"/>
CREATE TEMPORARY TABLES	<input checked="" type="checkbox"/>
LOCK TABLES	<input checked="" type="checkbox"/>

The REFERENCES privilege currently is unused.

Add Account Delete Refresh Revert Apply

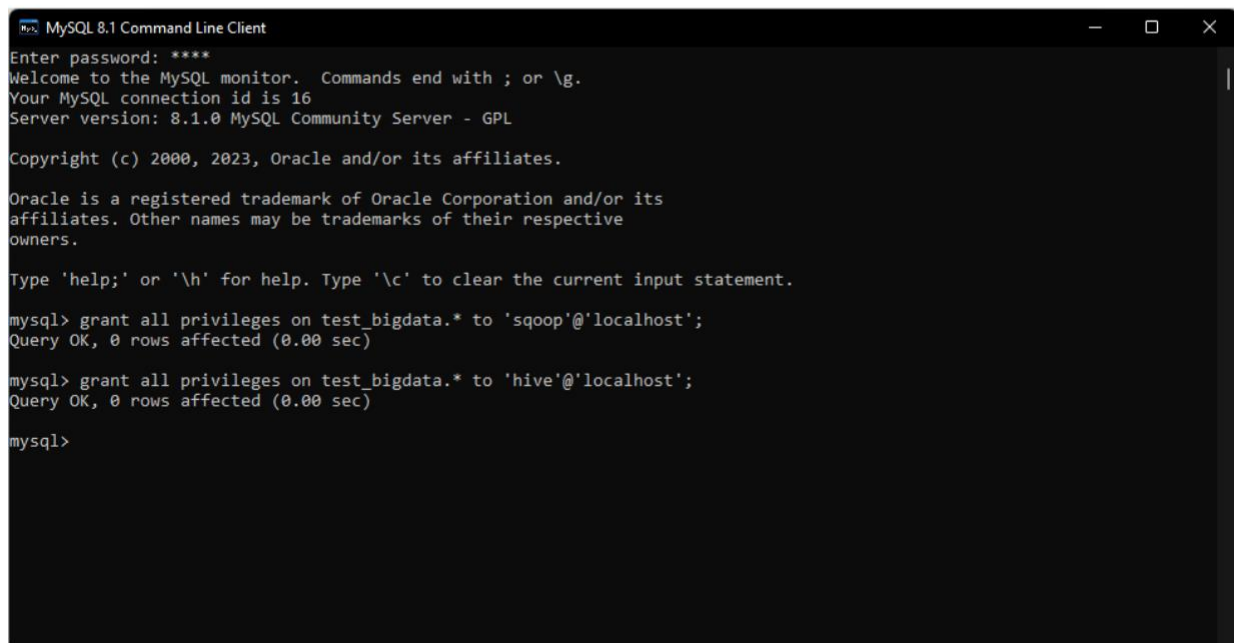
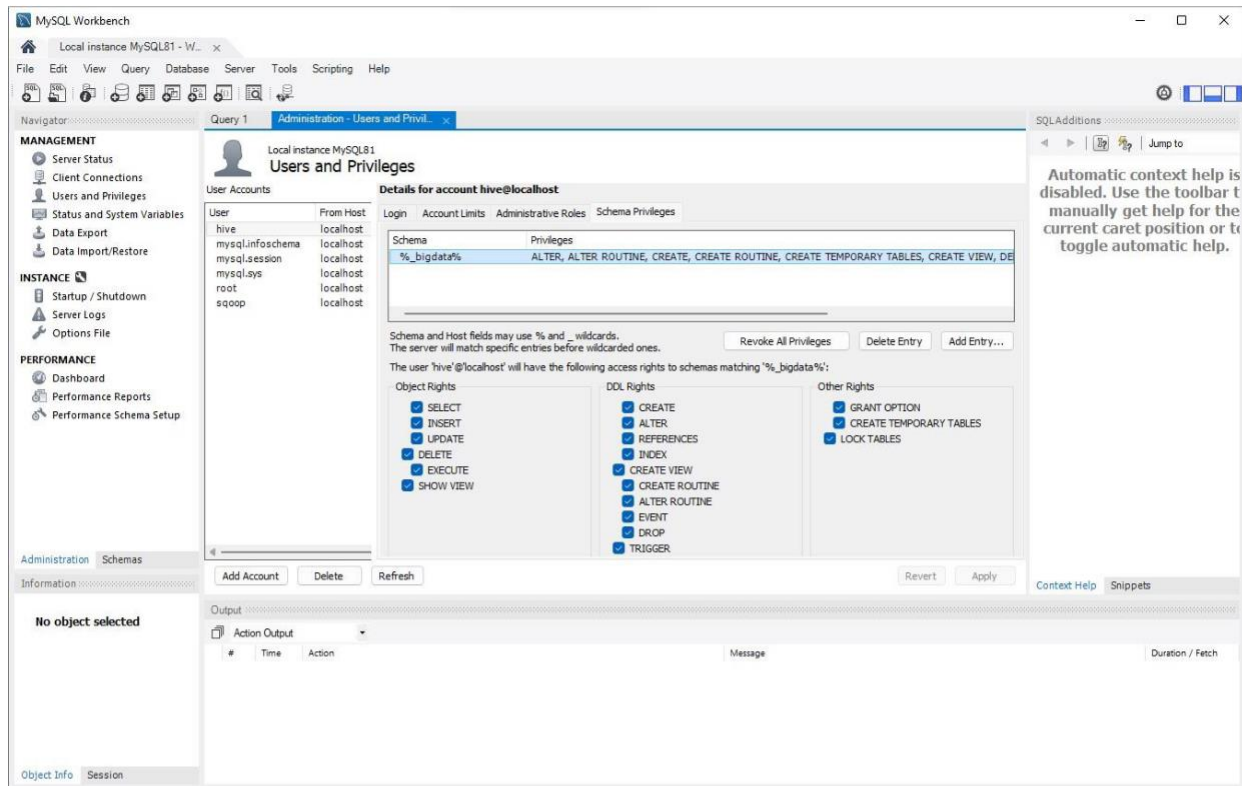
Output

Context Help Snippets



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```
Command Prompt
Microsoft Windows [Version 10.0.22000.2295]
(c) Microsoft Corporation. All rights reserved.

C:\Users\admin>echo %SQOOP_HOME%
C:\sqoop-1.4.7

C:\Users\admin>sqoop list-databases --connect jdbc:mysql://localhost/ --username sqoop -P
Warning: HBASE_HOME and HBASE_VERSION not set.
Warning: HCAT_HOME not set
Warning: HCATALOG_HOME does not exist HCatalog imports will fail.
Please set HCATALOG_HOME to the root of your HCatalog installation.
Warning: ACCUMULO_HOME not set.
Warning: ZOOKEEPER_HOME not set.
Warning: HBASE_HOME does not exist HBase imports will fail.
Please set HBASE_HOME to the root of your HBase installation.
Warning: ACCUMULO_HOME does not exist Accumulo imports will fail.
Please set ACCUMULO_HOME to the root of your Accumulo installation.
Warning: ZOOKEEPER_HOME does not exist Accumulo imports will fail.
Please set ZOOKEEPER_HOME to the root of your Zookeeper installation.
2023-09-13 04:22:22,757 INFO sqoop.Sqoop: Running Sqoop version: 1.4.7
Enter password:
2023-09-13 04:22:26,809 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
Loading class 'com.mysql.jdbc.Driver'. This is deprecated. The new driver class is 'com.mysql.cj.jdbc.Driver'. The drive
r is automatically registered via the SPI and manual loading of the driver class is generally unnecessary.
mysql
information_schema
performance_schema
sys
C:\Users\admin>
```

```
Command Prompt
No such sqoop tool: list. See 'sqoop help'.

C:\Users\admin>sqoop list-tables --connect jdbc:mysql://localhost/ --username sqoop -P
Warning: HBASE_HOME and HBASE_VERSION not set.
Warning: HCAT_HOME not set
Warning: HCATALOG_HOME does not exist HCatalog imports will fail.
Please set HCATALOG_HOME to the root of your HCatalog installation.
Warning: ACCUMULO_HOME not set.
Warning: ZOOKEEPER_HOME not set.
Warning: HBASE_HOME does not exist HBase imports will fail.
Please set HBASE_HOME to the root of your HBase installation.
Warning: ACCUMULO_HOME does not exist Accumulo imports will fail.
Please set ACCUMULO_HOME to the root of your Accumulo installation.
Warning: ZOOKEEPER_HOME does not exist Accumulo imports will fail.
Please set ZOOKEEPER_HOME to the root of your Zookeeper installation.
2023-09-13 04:25:49,023 INFO sqoop.Sqoop: Running Sqoop version: 1.4.7
Enter password:
2023-09-13 04:25:53,985 INFO manager.MySQLManager: Preparing to use a MySQL streaming resultset.
Loading class 'com.mysql.jdbc.Driver'. This is deprecated. The new driver class is 'com.mysql.cj.jdbc.Driver'. The drive
r is automatically registered via the SPI and manual loading of the driver class is generally unnecessary.

C:\Users\admin>
```

CONCLUSION:

The experiment focused on installing and using Sqoop, an important tool in the Hadoop ecosystem. It showed that Sqoop can connect to various databases, import and export data between Hadoop and relational databases, and transform data during the process. Sqoop can also transfer data in parallel and integrates seamlessly with Hadoop components. This experiment highlighted Sqoop's role in bridging the gap between Hadoop's distributed storage and relational databases, making it a valuable tool for organizations managing diverse data sources. Learning Sqoop gives data professionals the skills they need to streamline data workflows and maximize the potential of big data projects.