# Section 5 : MariaDB Backup and Management and MySQL Replication Creation

# Task 5.1: Backup MariaDB Database

* Install the necessary tools to perform database backups.





Connect to db



Create table and add sample data

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* Create a full backup of the database:

Create backup file



Created automated backup using cron jobs

Opening crontab



Addig this line



That run the cron job everyday at 2am, the backup files will be saved with the date of backup

* Test restoration

Create new db

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Restore backup into new db



* Verify restoration

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# Task 5.2: MariaDB Performance (tuning) and User Management

According to mariadb docs: memory use should be set to 80%

Added this to config file , as my vm has 4GB of ram

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Optimize thread pool size for multiple concurrent connections:



Enable slow query log, queries taking more than 2 seconds will be logged to that path

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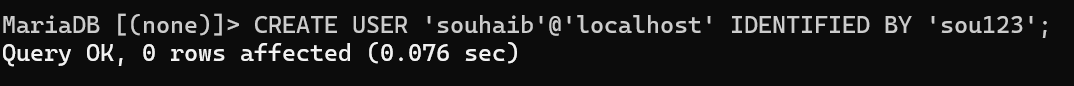
Apply changes



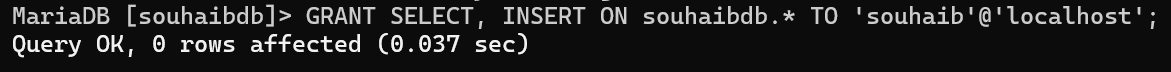
* Create a new database user with appropriate privileges and security

considerations.

Connect to mariadb and create user



Give select and insert privileges to “Souhaib” user on souhaibdb database



Flush privileges

* Set up monitoring or alerts for database performance or issues:

Install golang to install maridab exporter



Install mariadb exporter to export data to prometheus



Create and edit config file for exporter



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Run it

Now mariadb exporter export data to prometheus

# Task 5.3 : MySQL Replication

Create 2 ubuntu Vms, installed mysql on both

Created a db and a table in the master server and inserted data

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Edit mysql config file



//Ubuntu-server2 is the master server

Allow mysql server to listen to all networks



Uncomment this to give the server a unique id



Uncomment to enable binary logging



Specify db to replicate

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Apply changes and check status

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Then a replication nuser should be created

And give it replication privileges

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File and position values are need to configure the slave server

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* Configuring slave server (ubuntu-server1)







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Connect to mysql

Stop slave process



Configure slave to find the master server, provide replication user creds,binary log file and position

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Start slave process and check its status

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Unlock table in master server

// to ensure consistent state of table while configuring replication

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* Test replication

Add data to table on master server

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Now check it on slave server

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Description automatically generated

DONE