Copilot

Certainly! Setting up MySQL replication securely on Ubuntu while adhering to the CIS benchmarks involves several steps. Let's break it down:

1. **Prerequisites**:
   - You'll need **three servers** running **Ubuntu 20.04**.
   - Each server should have a non-root administrative user with **sudo privileges**.
   - Ensure that **firewall rules** are configured using **UFW**.
   - **Install MySQL** on each server using the following commands:

     ```
     sudo apt update
     sudo apt install mysql-server
     ```

2. **Configure the Master Server**:
   - Edit the MySQL configuration file:

     ```
     sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf
     ```

   - Add the following lines under the `[mysqld]` section:

     ```
     bind-address = 192.168.121.190
     server-id = 1
     log_bin = /var/log/mysql/mysql-bin.log
     ```

   - Restart the MySQL service:

     ```
     sudo systemctl restart mysql
     ```

   - Create a new replication user:

     ```
     sudo mysql
     CREATE USER 'replica'@'192.168.121.236' IDENTIFIED BY 'replica_password';
     GRANT REPLICATION SLAVE ON *.* TO 'replica'@'192.168.121.236';
     ```

   - Execute the following command to get the binary filename and position:

     ```
     SHOW MASTER STATUS\G
     ```

3. **Configure the Slave Server**:
   - Log in to the slave server:

     ```
     mysql -u root -p
     ```

   - Stop slave threads:

     ```
     STOP SLAVE;
     ```

   - Set up the slave server to replicate the master:

     ```
     CHANGE MASTER TO
       MASTER_HOST='192.168.121.190',
       MASTER_USER='replica',
       MASTER_PASSWORD='replica_password',
       MASTER_LOG_FILE='mysql-bin.000003',
       MASTER_LOG_POS=1050;
     ```

   - Start the slave threads:

     ```
     START SLAVE;
     ```

By following these steps, you'll have a secure MySQL replication setup on Ubuntu 20.04. Remember to adjust the IP addresses and credentials according to your environment. If you need further assistance, feel free to ask! 🚀🔒

For more detailed information, you can refer to the DigitalOcean tutorial on MySQL group replication. Additionally, consider checking the CIS MySQL Enterprise Edition 8.0 Benchmark for security guidelines specific to MySQL. .