Here's a comprehensive guide to backing up your MariaDB database before performing upgrades:

1. Recommended Backup Methods:

A. Using mysqldump (Most Reliable)

bash

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*# Single database backup (recommended)*

mysqldump -u root -p stargate\_v33 > ~/stargate\_v33\_backup\_$(date +%Y%m%d).sql

*# Backup all databases (including users and privileges)*

mysqldump -u root -p --all-databases --events --routines --triggers > ~/full\_mysql\_backup\_$(date +%Y%m%d).sql

B. Using MariaDB's Built-in Tools

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*# Create a compressed backup*

mariabackup --backup --user=root --password --target-dir=~/mariadb\_backup/

2. Verification Steps:

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*# Check backup file size*

ls -lh ~/stargate\_v33\_backup\_\*.sql

*# Verify backup integrity*

head -n 10 ~/stargate\_v33\_backup\_\*.sql *# Should show SQL comments*

tail -n 5 ~/stargate\_v33\_backup\_\*.sql *# Should show "Dump completed"*

3. Restoration Guide (Keep Handy):

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*# Restore to existing database*

mysql -u root -p stargate\_v33 < ~/stargate\_v33\_backup\_20240506.sql

*# Create new database and restore*

mysql -u root -p -e "CREATE DATABASE stargate\_v33\_restore"

mysql -u root -p stargate\_v33\_restore < ~/stargate\_v33\_backup\_20240506.sql

4. Upgrade Preparation:

1. **Check current version**:

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mysql -u root -p -e "SELECT VERSION();"

1. **Stop MariaDB service**:

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brew services stop mariadb

1. **Perform upgrade**:

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brew upgrade mariadb

5. Post-Upgrade Checklist:

1. **Start MariaDB**:

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brew services start mariadb

1. **Verify upgrade**:

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mysql -u root -p -e "SELECT VERSION(); SHOW DATABASES;"

1. **Check table integrity**:

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mysqlcheck -u root -p --all-databases --check-upgrade --auto-repair

Important Notes:

1. **Storage**: Ensure you have 2-3x your database size free (a 1GB DB needs 2-3GB free space)
2. **Backup Locations**:
   * Ideal: External drive + cloud storage
   * Minimum: ~/Downloads/ and another local drive
3. **Automation** (for future):

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*# Add to crontab -e (runs daily at 2AM)*

0 2 \* \* \* mysqldump -u root -pYOURPASSWORD stargate\_v33 > /path/to/backups/stargate\_v33\_$(date +\%Y\%m\%d).sql

Would you like me to provide specific guidance for any particular upgrade scenario you're planning?