

Update #4 - Automated Backups for BookStack on VPS - Secure & Scheduled

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As part of hardening and maintaining my public BookStack instance hosted on a VPS, I implemented a secure, automated backup system using shell scripting and cron. This ensures my database and uploaded files are regularly archived and protected against data loss - without exposing sensitive information in scripts.

The Setup

- **VPS:** Ubuntu 22.04 LTS (Hostinger)
 - **Web Stack:** Apache, MySQL, PHP 8.2 (LAMP stack)
 - **Application:** BookStack (latest stable)
 - **Backup Destination:** `/opt/bookstack_backups/` on the VPS
 - **Security Enhancements:**
 - `fail2ban` active
 - SSH hardening complete
 - UFW configured to allow only necessary services
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The Process

1. Created a Shell Script

- A custom script (`/usr/local/bin/bookstack-backup.sh`) was written to:
 - Dump the MySQL `bookstack` database

- Archive important BookStack directories (such as `/var/www/bookstack/public/uploads` and `/var/www/bookstack/storage/uploads`)
- Rotate old backups by removing any older than 7 days

2. Secured MySQL Credentials

- Rather than placing the database password in the script (which is insecure), credentials were stored securely in the root user's `~/.my.cnf` file:

```
[client]
user=bookstack
password=your_db_password
```

3. Tested the Script

- Verified manual execution of the script:
 - Confirmed `.sql` dumps and `.tar.gz` files were created correctly
 - Ensured proper permissions and ownership of backup files

4. Scheduled Daily Cron Job

- Added the script to root's crontab to run automatically at **2:00 AM** each day:

```
0 2 *** /usr/local/bin/bookstack-backup.sh
```

Sample Output

Backup files generated daily look like:

- `/opt/bookstack_backups/bookstack_2025-05-09.sql`
- `/opt/bookstack_backups/bookstack_files_2025-05-09.tar.gz`

What I Learned

- Avoid using `mysqldump` passwords in scripts — `~/.my.cnf` is a secure alternative.
- Giving the database user `PROCESS` privilege was necessary to prevent dump errors.
- Always verify permissions and script execution manually before automating via cron.
- Storing backups under `/opt/` keeps them cleanly separated from web content.

Revision #2

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