

Module 4: Automating Backups

4.1 Scheduling Backups Using Cron Jobs

Overview

- **Cron Jobs:** A task scheduler in Unix/Linux systems for automating repetitive tasks.
- **Why Use Cron Jobs for Backups:**

Reliable and customizable for backing up files and databases.

Key Concepts

- **Cron Syntax:**

*** * * * * command_to_execute**

- | | | | |
- | | | | | ___ **Day of the week (0 - 7, where 0 and 7 = Sunday)**
- | | | | _____ **Month (1 - 12)**
- | | | _____ **Day of the month (1 - 31)**
- | | _____ **Hour (0 - 23)**
- | _____ **Minute (0 - 59)**

Example Cron Job for Backups:

- Daily backup at midnight:
0 0 * * * /path/to/backup_script.sh
- Weekly backup every Sunday at 1 AM:

0 1 * * 0 /path/to/backup_script.sh

Steps to Configure Automated Backups

1. Create a Backup Script:

- Example to back up `/var/www` directory and MySQL database:

```
#!/usr/bin/env bash
```

```
BACKUP_DIR="/backup/$(date +%Y-%m-%d)"
```

```
mkdir -p "$BACKUP_DIR"
```

```
tar -czf "$BACKUP_DIR/website_backup.tar.gz"  
/var/www
```

```
mysqldump -u root -p'password' database_name >  
"$BACKUP_DIR/database_backup.sql"
```

- Ensure the script is executable:

```
chmod +x /path/to/backup_script.sh
```

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2. Schedule the Script:

- Add it to the crontab:

```
crontab -e
```

- Enter the cron job syntax to execute the script at desired intervals.

3. Verify Cron Job:

- Check active cron jobs:

```
crontab -l
```

4.2 Using Control Panel

- **We do not support cPanel Backup Scheduling on our cPanel servers:** You can however manually generate backupss
 1. **Navigate to Backup Settings:**
 - Go to "Backup" > "Backup Wizard."
 2. **Configure Automated Backups:**Jetbackup
 - Enable scheduled backups.
 - Select files, databases, or entire accounts for backup.
 - Set the backup frequency (daily, weekly, monthly).
 - This setting is done by admin when configuring Jetbackup.
- **CyberPanel Backup Scheduler:**
 1. **Access Backup Feature:**
 - Go to "Backup" in CyberPanel's dashboard.
 2. **Set up Backup Jobs:.**
 - Define the schedule

SCHEDULE BACKUP - **REMOTE BACKUPS**

On this page you can schedule Backups to localhost or remote server (if you have added one)

Create New Backup Schedule

Select Destination

Name

Select Backup Frequency

Select Backup Retention. Leave 0 for no limit

[Add Schedule](#)

[Manage Existing Backup Schedules](#)

Advantages of Using Control Panel Schedulers

- User-friendly interface with less manual configuration.
- Built-in options for storage destinations (e.g., remote FTP, S3).

4.3 Third-Party Backup Automation Tools

Popular Tools

- **Acronis Backup:** Comprehensive data backup and disaster recovery.
- **JetBackup:** Integration with cPanel for flexible backup scheduling.

Advantages of Third-Party Tools

- Greater flexibility in customization.
 - Enhanced features like incremental backups and compression.
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4.4 Monitoring and Notifications

Importance of Monitoring

- Ensures backup success and data integrity.
- Reduces risks of undetected backup failures.

Setting Up Alerts

1. Email Notifications:

- Add email alerts in cron jobs:

MAILTO="admin@example.com"

- Configure alerts in control panel backup say Jetbackup.

2. Log File Monitoring:

- Save backup logs and monitor for errors:

**/path/to/backup_script.sh > /var/log/backup.log
2>&1**

- Use **grep** to identify failures:

```
grep -i "error" /var/log/backup.log
```

3. Integrating Notification Tools:

- Use tools like **Slack Webhooks** or **Twilio** for SMS alerts: