

Module 3: Backup Tools and Technologies

3.0 Introduction

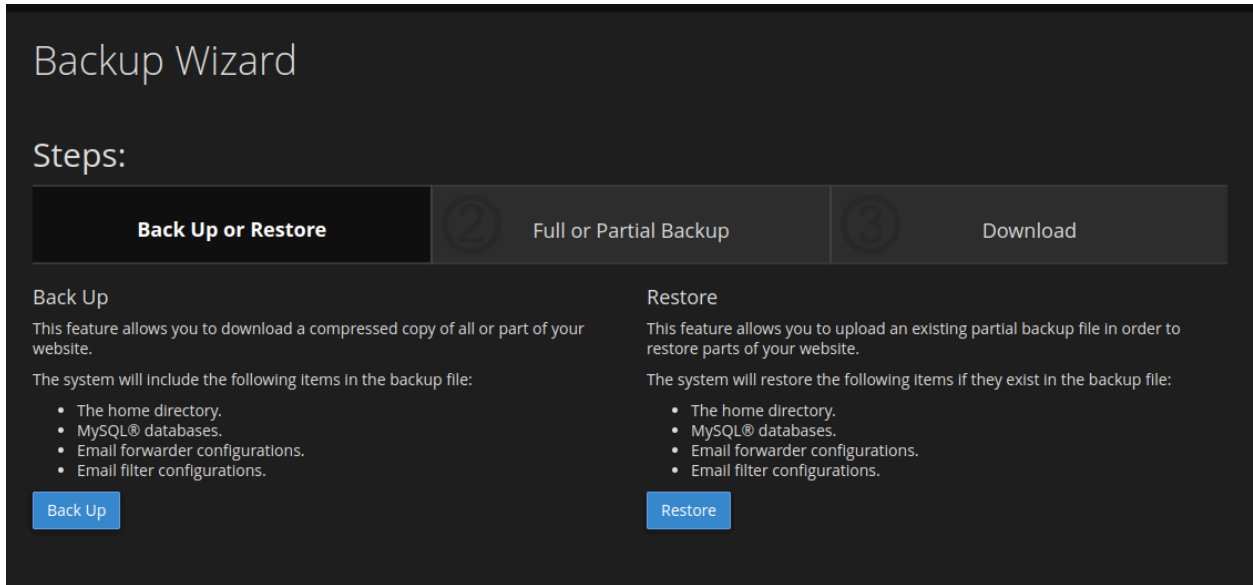
In this module, we explore various backup tools and technologies available for hosting environments, servers, and cloud services.

3.1 Hosting Control Panel Backup Tools

Hosting control panels provide built-in backup solutions for websites, databases, and configurations, simplifying the backup process for users.

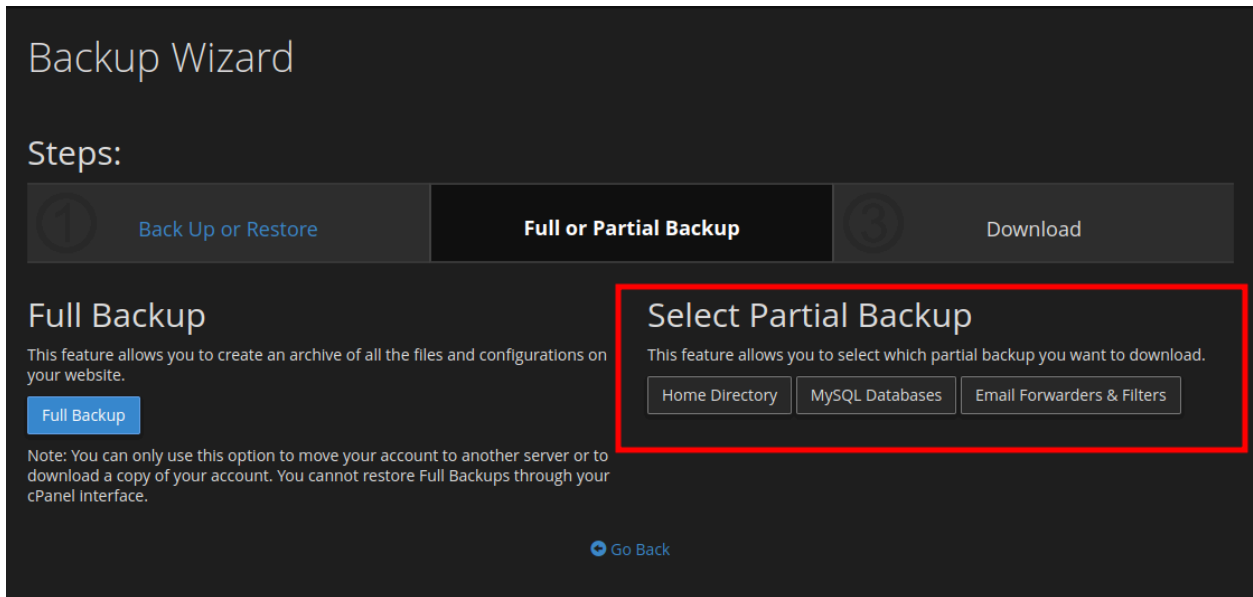
1. cPanel: File and Database Backups

- **File Backups:**
 - Back up entire home directories or specific files through the cPanel Backup Wizard.
 - Supports downloading backups to local storage.



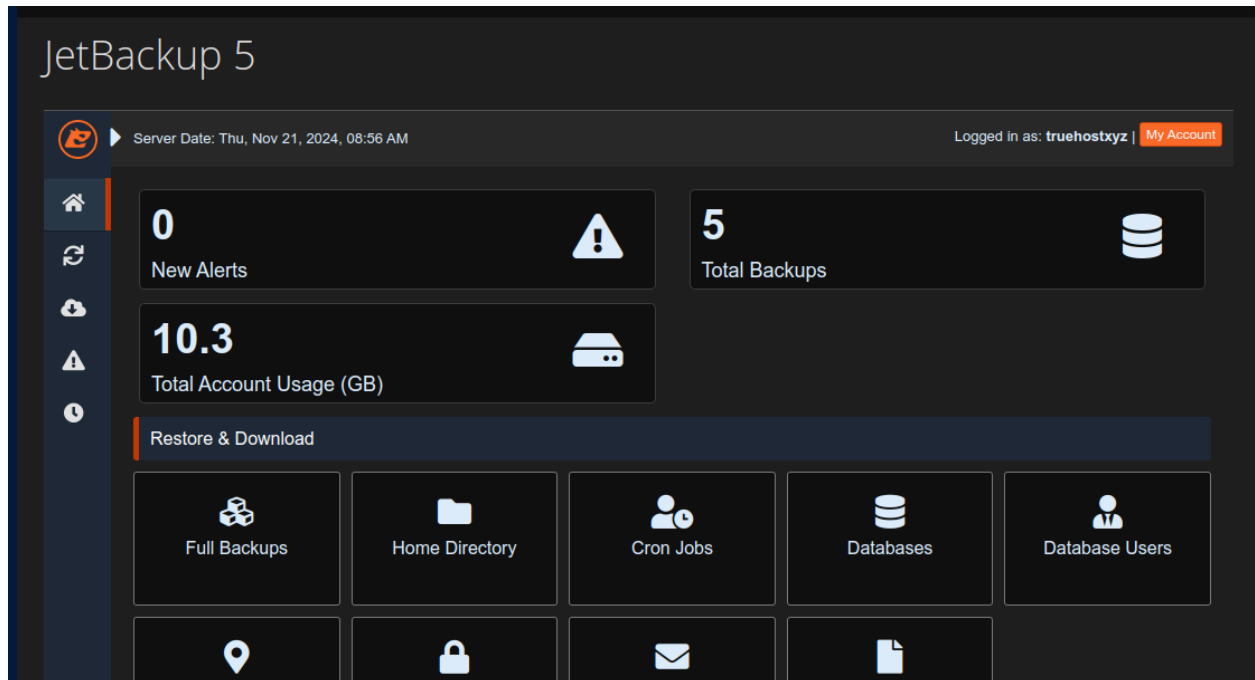
- **Database Backups:**

- Use the "Backup Wizard" feature to generate and download database backups.



- Automated backups with third-party integrations like JetBackup.

This is already configured on all our cPanel Shared hosting servers.



- **Scheduling Backups:**

- cPanel supports cron jobs for periodic backups.
- JetBackup offers advanced scheduling and retention policies.
- However on our shared hosting servers, we do not allow scheduling of backups on the cPanel by the clients.

2. CyberPanel: Scheduling Backups

- **Built-in Backup Feature:**

- CyberPanel provides options to back up websites, databases, and emails.
- Offers scheduling for automated backups to local or remote storage.

- **Restore Options:**

- Easily restore backups from within the panel for seamless recovery.


BACKUP

Backup and restore sites.


AVAILABLE FUNCTIONS

 BACKUP


 RESTORE

 ADD/DELETE
DESTINATIONS

 SCHEDULE BACKUP

 REMOTE BACKUPS

Generating backup


Backup Website 

Configure automatic backups to our secure servers in 60 seconds. [Set-up now.](#)

Select Website

Destination

File Name

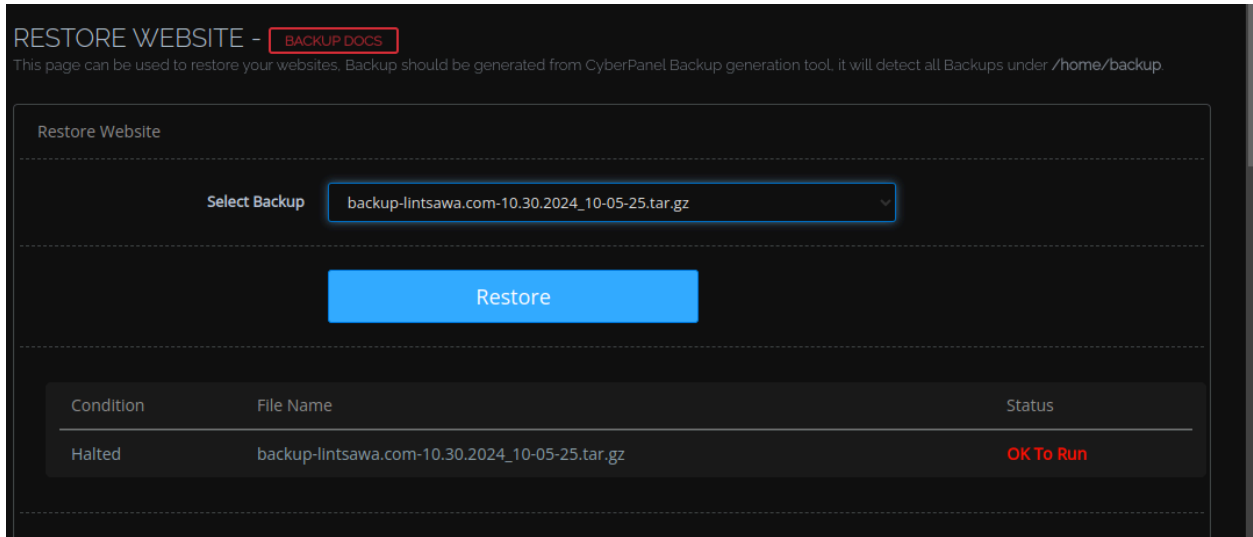
Status 

Running backup-cyberdj.lintsawa.com-11.19.2024_12-26-16

Preparing final compressed package..

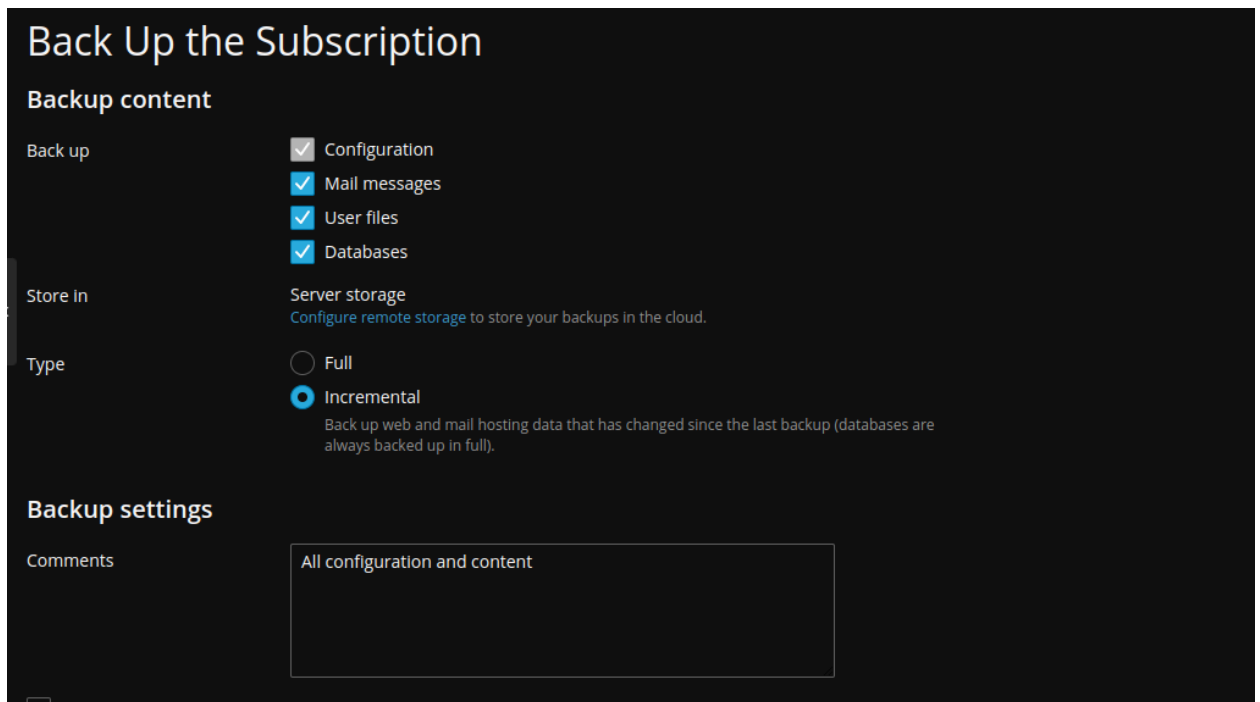
Create Backup

Cancel Backup



3. Plesk

- **Integrated Backup Manager:**
 - Plesk offers full and incremental backups.
 - Supports storing backups locally or on remote FTP/SFTP servers.



- **Third-Party Integration:**

- Plesk integrates with Acronis backup for advanced backup and recovery, especially for Windows servers.

4. CWP (Control Web Panel)

- **Backup Modules:**
 - CWP provides backup modules for databases and website files.
 - Offers remote backup options via SFTP or external servers.
 - **Scheduling and Automation:**
 - Allows creating automated backup schedules directly within the panel.
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3.2 Server Backup Tools

For non-panel environments, administrators can utilize server-based tools to configure and manage backups manually.

1. Linux-based Tools

- **rsync:**
 - Synchronize files between local and remote servers.
 - Commonly used for incremental backups.
 - Usage:
 - Sync a local directory to a remote server:
 - `rsync -avz /local/path/ user@remote_host:/remote/path/`
 - Sync a remote directory to local:
`rsync -avz user@remote_host:/remote/path/ /local/path/`
 - Exclude certain files or directories:
`rsync -avz --exclude='*.log' /local/path/ user@remote_host:/remote/path/`
- **tar:**

- Archive and compress files into **.tar.gz** or **.tar.bz2** formats.
- Useful for compact, portable backups.
- Usage
 - Create a compressed tarball with gzip

```
tar -czvf archive.tar.gz /path/to/directory/
```
 - Extract a tarball

```
tar -xvf archive.tar
```
 - Extract a compressed tarball

```
tar -xzvf archive.tar.gz
```
- **scp:**
 - Securely copy files between servers.
 - Ideal for transferring backups to remote locations.
 - Usage:
 - Copy a file to a remote server

```
scp /local/path/file.txt user@remote_host:/remote/path/
```
 - Copy a directory to a remote server

```
scp -r /local/directory/
user@remote_host:/remote/directory/
```
 - Copy a file from a remote server

```
scp user@remote_host:/remote/path/file.txt /local/path/
```

2. Windows-based Tools

- **Shadow Copy:**
 - Create point-in-time copies of files and volumes.

- Ideal for backing up open or in-use files.
- **File History:**
 - Automatically save copies of personal files to external or network drives.
 - Provides version control for file changes.

3. Database-Specific Tools

- **mysqldump:**

- Backup MySQL or MariaDB databases in **.sql** format.
- Commonly used for full or selective database backups.
- Usage:

- Backup a single database

```
mysqldump -u username -p database_name > backup.sql
```

- Backup all databases

```
mysqldump -u username -p --all-databases > all_databases_backup.sql
```

- Backup a database with gzip compression

```
mysqldump -u username -p database_name | gzip > backup.sql.gz
```

- Restore a MySQL database

```
mysql -u username -p database_name < backup.sql
```

- **pg_dump:**

- Backup PostgreSQL databases.
- Supports custom formats and data-only backups.
- Usage :

- Backup a single database

```
pg_dump -U username -d database_name -f backup.sql
```

- Backup with gzip compression

```
pg_dump -U username -d database_name | gzip > backup.sql.gz
```

- Backup all databases

```
pg_dumpall -U username > all_databases_backup.sql
```

- Restore a PostgreSQL database

```
psql -U username -d database_name -f backup.sql
```

3.3 Cloud and Third-Party Backup Services

Cloud and third-party tools provide scalable and feature-rich solutions for advanced backup management.

1. Acronis for Plesk (Windows Servers)

- **Features:**
 - Full and incremental backups.
 - Disaster recovery and data deduplication.
 - Cloud-based storage options for redundancy.
- **Integration:**
 - Seamlessly integrates with Plesk for managing and automating backups.

2. JetBackup for cPanel

- **Features:**
 - Supports file, email, and database backups.
 - Allows restoring individual files or full accounts.
 - Advanced scheduling and retention policies.

- **Storage Options:**
 - Local, remote, and cloud-based storage compatibility.

3. Cloud Backup Services

- **Truehost Cloud Backup:**
 - Truehost Provides automated backups for websites, files, and databases using Jetbackup5 for shared hosting environments.
- **Google Drive Backup:**
 - Easy integration for personal and small-scale backups.