

Module 6: Case Studies

6.1 Real-World Scenarios

Case Study: Server GRA110 Outage

On the morning of April 2024, the server `gra110.truehsot.cloud` (GRA110) encountered a significant disruption due to MySQL database downtime.

This disruption led to widespread website outage affecting all websites hosted on the server that relied on MySQL database service.

Users attempting to access these websites would have experienced error messages indicating inability to connect to the database.

E.g Error establishing database connection. For cPanel servers, our disaster recovery is done via Jetbackup.

We conduct backups to an external backup server - sourced from a different provider.

A full restore on a new server was done using Jetbackup5.

For a full report, check the postmortem report at [cloudoon wiki](#).

Incident Summary

- **Event:** MySQL downtime caused a significant disruption on the server **`gra110.truehost.cloud`** (GRA110).
- **Impact:**
 - Websites hosted on the server relying on MySQL displayed "Error establishing a database connection."
 - Widespread outages affected all users accessing the affected websites.

1. Backup Strategy:

- Backups are managed using **JetBackup**.
- Backups are stored on an **external server** sourced from a different provider to ensure availability in case of local server issues.

2. Disaster Recovery Execution:

- The restoration process utilized **JetBackup5** for a full restore on a new server.
- A **clean server environment** was prepared to avoid carrying over potential issues from the previous server.
- Full system restoration included:
 - User accounts.
 - Databases.
 - Website files.

3. Outcome:

- Websites were successfully restored with minimal data loss.
- Service disruptions were resolved promptly, showcasing the importance of an effective disaster recovery plan.

4. Postmortem Documentation:

- A full postmortem report is available on the **Cloudoon Wiki**, outlining:
 - Root cause analysis.
 - Lessons learned.
 - Recommendations for improving future response times.

Key Learnings

- **Backup Redundancy:** Storing backups on an external server minimizes risk during a localized server failure.
- **Backup Automation:** Automated tools like JetBackup streamline the restoration process and reduce human error.
- **Proactive Monitoring:** Regular health checks and early alerts for MySQL could prevent similar outages.

- **Documentation:** Maintaining a postmortem report ensures transparency and helps refine future disaster recovery protocols.
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6.2 Hands-On Exercises

Exercise 1: Configure and Test Backups on a Truehost-Hosted VPS Server

1. Objective:

- Set up automated backups for a VPS server using any control panel.

2. Steps:

- Log in to the VPS server control panel (e.g., CyberPanel).
- Navigate to the **Backup Configuration** section.
- Configure:
 - Backup frequency (daily, weekly, or monthly).
 - Backup retention period (e.g., keep 7 most recent backups).
 - Destination: Local storage or external remote server (e.g., SFTP or cloud storage).
- Test the backup process:
 - Create a manual backup.
 - Verify backup integrity by downloading and extracting files.

3. Validation:

- Check the backup directory for the new backup file.
 - Ensure all files and databases are included in the backup.
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Expected Outcomes

- Participants will understand how to configure reliable backups.
- They will gain hands-on experience restoring websites and databases, preparing them for real-world recovery scenarios.

The END.