Issue Summary

Duration: The outage lasted for 2 hours, from 10:00 AM to 12:00 PM UTC on June 8, 2024.

Impact: The API endpoint `/user/profile` was down, resulting in 60% of users being unable to access or update their profile information. Users experienced 500 Internal Server Error responses when attempting to interact with the affected endpoint.

Root Cause: The root cause was a misconfiguration in the routing logic, where changes intended for the `/user/profile` route were mistakenly applied to the `/user/settings` route during debugging and testing.

Timeline

- **10:00 AM:** Issue detected via a monitoring alert indicating a spike in 500 Internal Server Errors on the `/user/profile` endpoint.
- **10:05 AM:** An engineer begins investigating the issue by reviewing the recent deployment logs.
- **11:45 AM:** Routing misconfiguration identified as the cause.
- **12:00 PM:** Issue resolved by correcting the routing configuration and redeploying the application.

Root Cause and Resolution

Root Cause:

The root cause of the issue was a misconfiguration in the routing logic. During a debugging session, changes meant for the `/user/profile` route were mistakenly applied and tested on the `/user/settings` route. This error occurred due to a mix-up in the routing paths during development. As a result, the `/user/profile` endpoint was left in a broken state when the changes were deployed to production.

Resolution:

The issue was resolved by taking the following steps:

1. **Reverting Incorrect Changes:** The first step involved reverting the unintended changes made to the `/user/settings` route. This ensured that the `settings` endpoint remained functional.
2. **Applying Correct Changes:** The intended modifications for the `/user/profile` route were then correctly implemented. This included validating the logic to ensure it addressed the necessary functionality without impacting other routes.

3. **Staging Environment Verification:** Before deploying the corrected changes to production, a thorough validation was conducted in the staging environment. Automated tests were run to confirm that the `/user/profile` route was functioning correctly and that no other routes were inadvertently affected.
4. **Redeployment:** The application was redeployed to the production environment with the correct routing configuration. Monitoring tools were used to verify the successful resolution of the issue, confirming that the `/user/profile` endpoint was operational and error-free.

Corrective and Preventative Measures

Improvements:

- **Enhance Code Review Process:** Strengthen the code review process to ensure routing changes are correctly implemented and thoroughly reviewed.
- **Improve Deployment Scripts:** Update deployment scripts to include automated route testing to catch misconfigurations early.

Tasks:

1. **Conduct Training Sessions:** Provide training sessions for developers focused on best practices for managing route configurations and avoiding common pitfalls.
2. **Enhance Monitoring and Alerting:** Add detailed monitoring and alerting for each API endpoint to quickly detect and isolate issues, enabling faster response times.
3. **Update Documentation:** Update the deployment and testing documentation to highlight common pitfalls and best practices in managing route configurations, ensuring that all team members are aware of the correct procedures.

By implementing these measures, we aim to improve the reliability of our deployment process and reduce the risk of similar outages in the future.