**\*\*Timeline:\*\***

During an outage that spanned from April 26, 2024, 10:00 PM (UTC) to April 27, 2024, 2:00 AM (UTC), our file storage service experienced a complete outage, resulting in significant disruption for our users. Approximately 80% of our user base was affected, unable to upload or retrieve files during this period. The impact on user experience was substantial, with many users experiencing frustration and inconvenience due to the inability to access essential files and data.

**\*\*Issue Detected:\*\***

The issue was first detected at 10:15 PM (UTC) when monitoring alerts indicated a sudden spike in server errors. This prompted immediate attention from our operations team, who swiftly began investigating the root cause of the problem. Initially, we suspected a network issue, especially considering recent changes to our infrastructure. As a precautionary measure, we engaged the network team to assist in troubleshooting and resolving the issue.

**\*\*Actions Taken:\*\***

However, our initial assumptions proved to be misleading. Despite our efforts to investigate network configurations and firewall settings, we were unable to identify the underlying cause of the outage. As the outage persisted, we realized that the problem likely resided elsewhere in our system and decided to escalate the incident to both the network and database teams for further analysis.

**\*\*Misleading Investigation Paths:\*\***

The escalation prompted a collaborative effort to diagnose and address the issue. Through meticulous investigation, we discovered that the root cause of the outage was actually database overload, triggered by a sudden surge in file uploads. This overload was exacerbated by inefficient database queries, which put undue strain on our servers and led to performance degradation.

**\*\*Escalation:\*\***

With the root cause identified, our team immediately set to work on resolving the issue. We implemented temporary measures to offload database traffic and redistribute file storage requests to alternative servers. Additionally, we optimized our database queries to improve efficiency and reduce resource consumption. Furthermore, we increased server capacity to better handle peak loads during file upload spikes.

**\*\*Resolution:\*\***

These efforts culminated in the successful restoration of normal service by 2:00 AM (UTC) on April 27, 2024. However, the outage served as a valuable learning experience for our team, highlighting areas for improvement in our systems and processes. Moving forward, we plan to review and optimize database queries across the file storage service, implement automated scaling policies to dynamically adjust server capacity based on traffic patterns, and enhance our monitoring and alerting systems to provide early detection of similar issues in the future. Tasks have been assigned accordingly: optimizing database queries to the Database Team, implementing automated scaling policies to the DevOps Team, and enhancing monitoring and alerting thresholds to the Monitoring Team.