Postmortem - CPU Saturation on Application Server

Incident Summary: On August 20th, 2024, from 9:00 AM to 10:30 AM UTC, users experienced significant slowdowns in the main web application due to CPU saturation on one of the primary application servers. The issue caused delays in page rendering and data processing for around 50% of users.

Root Cause: The root cause was an inefficient loop in a recently deployed update to the application code. A background task responsible for processing user data ran continuously without terminating, leading to excessive CPU consumption. As a result, the server was unable to handle additional requests, leading to slow response times.

Impact:

- 50% of users experienced slow page loads and delays in data processing.
- Background tasks were delayed by up to 300%, leading to a backlog in scheduled operations.
- Customer support reported an increase in complaints regarding application performance.

Resolution:

- Rolled back the recent code update to stop the inefficient task from running.
- Manually terminated the process consuming excessive CPU resources.
- Refactored the code to ensure proper termination of background tasks.

Preventive Measures:

- Conduct rigorous load testing on new code deployments to identify potential performance bottlenecks.
- Implement CPU usage monitoring with automated alerts for excessive consumption.
- Ensure that background tasks have timeouts and resource limits to prevent runaway processes.