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(57) Abstract :

The invention proposes a system and method for a reverse proxy in securing and optimizing a cloud infrastructure. Situated between client devices and backend servers, it intercepts client requests and intelligently routes them to the appropriate servers. By evenly distributing incoming client traffic across multiple backend servers, it ensures efficient resource utilization and prevents server overload through load balancing. The reverse proxy server also incorporates caching mechanisms to store frequently accessed content, reducing the load on backend servers and improving response times. It handles SSL/TLS encryption and decryption, offloading this task from the backend servers and ensuring secure communication. Additionally, it implements security measures such as acting as a firewall, enforcing IP whitelisting, and integrating web application firewalls to protect against malicious traffic and web vulnerabilities. Through protocol translation and proxying, the reverse proxy server enables communication with diverse backend servers. With optimizations like compression and request/response optimization, it enhances performance and minimizes latency.

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