

# A Cloud Secure Storage Mechanism Based on Load Balancing

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**Abstract:** *Imagine one day you wake up and your application is suddenly flooded with unexpected traffic. Sounds exciting, right? But the real question is—is your application prepared to handle this surge? Can it maintain performance and availability under pressure?*

*To tackle such challenges, we propose using an Elastic Load Balancer (ELB)—a powerful service offered by Amazon Web Services (AWS). ELB automatically distributes incoming application traffic across multiple EC2 instances, which may be spread across various availability zones. This helps in enhancing both the speed and responsiveness of web-based applications.*

*Modern load balancers, like ELB, typically use the Round Robin algorithm to efficiently balance traffic. ELB plays a critical role in real-world scenarios such as high-traffic websites, e-commerce platforms, online games, media streaming services, and mobile applications.*

*By integrating ELB into your system architecture, you ensure improved scalability, availability, and fault tolerance, making your applications more resilient and performance-ready.*

**Keywords:** Elastic Load Balancer (ELB), Amazon Web Services (AWS), EC2 (Elastic Compute Cloud), Round Robin Algorithm, Application Scalability

