ABSTRACT

Site reliability engineering (SRE) is a discipline that combines software engineering and operations to ensure the reliability, availability, and performance of large-scale distributed systems. SRE teams are responsible for designing, building, and operating systems and services that can handle high traffic loads, while also minimizing downtime and errors. This requires a combination of technical skills, including software development, automation, monitoring, and incident response. SRE also emphasizes the importance of communication and collaboration between teams, as well as a culture of continuous improvement through monitoring, testing, and learning from failures. By implementing SRE practices, organizations can improve the reliability of their digital services, reduce downtime and outages, and provide a better user experience for their customers. It uses a combination of network automation, performance monitoring, incident management, scalability strategies, compliance, cost optimization, training and documentation to ensure that the network infrastructure is reliable and performs well. The goal of SRE is to minimize downtime and outages, improve overall network performance, and reduce operational costs.