

Site Reliability Engineer

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INTRODUCTION TO SITE RELIABILITY ENGINEER

- **DevOps** is an approach to culture, automation, and platform design intended to deliver increased business value and responsiveness through rapid, high-quality service delivery.
- SRE can be considered an implementation of DevOps.
- Like DevOps, SRE is about team culture and relationships.
- Both SRE and DevOps work to bridge the gap between development and operations teams to deliver services faster.
- Benefits of Site Reliability Engineer (SRE)
 - It aims at automating tasks that require a human operator to manually work on a system.
 - SRE teams gain exposure to systems in both staging and production, as well as all technical teams.
 - SRE teams are in charge of proactively building and implementing services to make IT and support better at their jobs.
 - Site reliability engineers collaborate with other engineers, product owners, and customers to come up with targets and measures.

Agenda of the Site Reliability Engineer:-

- Software Development Models, Agile, DevOps, SRE & DevSecOps - Concept
- Software Development Architecture - Monolithic, SOA & Microservices - Concept
- Platform - Operating Systems - Centos and Ubuntu
- Platform - Virtualization & Systems - VirtualBox & Vagrant
- Platform - Cloud - AWS
- Platform - Containers - Docker
- Webserver - Nginx
- Configuration & Deployment Management - Ansible
- Securing infra & compliance - Chef InSpec
- Unit Testing - Junit & PyTest
- Container Orchestration - Kubernetes
- Infrastructure Coding – Terraform
- Kubernetes Package Management - Helm
- Services mesh Data planes - Envoy
- Services mesh Control Planes - Istio
- Service Discovery - Consul
- Securing credentials - HashiCorp Vault
- Securing Kubernetes (RASP) - Notary
- Infrastructure Monitoring Tool 1 - Datadog
- Infrastructure Monitoring Tool 2- Prometheus
- Log Monitoring Tool 1 - Splunk

- Log Monitoring Tool 2 - ELK stake
- Performance & RUM Monitoring - NewRelic
- Emergency Response & Alerting & Chat- Pagerduty & Slack
- Monitoring Dashboard Tool – Grafana