



DevOps  
INSTITUTE

# Site Reliability Engineering (SRE) Foundation<sup>SM</sup>

## BLUEPRINT

Site Reliability Engineering (SRE) is a discipline and a role that incorporates aspects of software engineering and applies them to infrastructure and operations problems to create ultra scalable and highly reliable distributed software systems.

### Culture

Reliability @ Scale, Shift-Left “Wisdom of Production”, and Continuous Improvement

### Toil Reduction

Reduce Non-Value Add Work using Tooling and Automation

### SLAs/SLOs/SLIs

Metrics such as Availability, Latency, and Response Time with Error Budgets

### Measurements

Observability, Monitoring, Telemetry, and Instrumentation

### Anti-Fragility

Improve Resilience using Fire Drills, Chaos Monkey, Security and Automation

### Continuous Integration (CI)

Backlog & Design

Code & Test

Commit & Merge

Build & Test

### Pipeline

Artifacts

### Continuous Delivery / Deployment (CD)

SAT & UAT

Approve Release

Deploy to Prod

Post-Prod Tests

Plan

Operate

### Work Sharing

Work Technical Debt in Small Increments

Manage Load % for Ops, Dev and On-Call Work

### Deployments

Gradual Releases using Green/Blue, A/B, Canary Deployments, Automation Scripts, Testing and Monitoring

### Performance Management

Monitoring, APM, Capacity Testing & Auto-Scaling

### Incident Management

Emergency Response, 50% Ops/Dev Load, 25% On-Call Load, and Blameless Retrospectives