SRE is a Service Management Framework

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Digital transformation is no longer optional.

You can’t be digital if you aren’t reliable.
“SRE is what happens when you ask a software engineer to design an operations function”
Ben Treynor Sloss, Google

https://landing.google.com/sre/books/
Guiding Principles of SRE (1)

- Service Level Objectives (SLOs) with consequences
- The ability to regulate their own workload
- Time to make tomorrow better than today
- Failure is an opportunity to improve
Embrace Risk

Service Level Objectives

Monitor Distributed Systems

Eliminate Toil

Automation

Simplicity

Release Engineering

Guiding Principles of SRE (2)
An SRE team is responsible for the availability, latency, performance, efficiency, change management, monitoring, emergency response and capacity planning of their service.

Rules are codified for how SRE teams interact with their environment – not only in production but with product development teams, testing teams, users, etc.

Google Considers SRE its Approach to Service Management
SRE is the most innovative approach to ITSM since the early days of ITIL®
Service Level Management

- Manage to Service Level Objectives (SLO)
- Measure by Service Level Indicators (SLI)

Per SRE, the term SLA is overloaded and takes on a number of meanings depending on context.
Change Management

- Error Budgets
- Automation
- Increased release velocity

Removing humans minimizes the number of users and operations exposed to bad changes and avoids normal problems of fatigue, familiarity/contempt and inattention to highly repetitive tasks.
Event Management (Monitoring)

- Latency
- Traffic
- Errors
- Saturation

Monitoring from an internal and external perspective (Observability)
Capacity Management

- Organic growth (natural usage)
- Inorganic growth (event driven)

Since capacity is critical to availability, SRE teams are in charge of capacity planning and provisioning.
Incident Management

- Incident Command System
- Recognized Command Post
- Live Incident State Document
- Clear, Live Handoff

An Incident Commander structures the incident response, assigns responsibilities, removes roadblocks and keeps a living incident document.
Problem Management (Effective Troubleshooting)

- Problem Report
- Triage
- Examine
- Diagnose
- Test/Treat
- Cure

Blameless post-mortems are a tenet of SRE culture and must focus on identifying the contributing causes of the incident without indicting any individual or team.
SRE Also Provides Tangible Guidance On

- Emergency Response On-Call
- Load Balancing
- Security
- Software Engineering in SRE
- Managing Operational Load
- Communication and Collaboration
- Reliable Product Launches
Isn’t SRE More Technical Than Traditional ITSM?

**YES**  
**NO**

Intelligent process is needed for intelligent automation.

- Durable focus on engineering
- Toil reduction
- Time allocation – learn new skills

We are information **technology**, right?
SRE is On the Rise

SRE ADOPTION HAS Risen FROM 10% ADOPTION IN 2019 TO 15% IN 2020 (UPSKILLING 2020: ENTERPRISE DEVOPS SKILLS REPORT)

SITE RELIABILITY ENGINEER IS THE FIFTH FASTEST GROWING IT ROLE FOR 2020 (LINKEDIN REPORT)
SRE is a Real Job!

Over 10,000 jobs listed in the US alone, most paying over $100K
Who Should Consider Learning More About SRE

- Software Engineers
- System Administrators
- Change Managers
- Release Managers
- Incident Managers
- Automation Architects
- Infrastructure Managers
- Everyone!
SKILup Playbooks

- Collaborative Bodies of Knowledge
- Dynamic
- Coming soon: SRE Playbook

https://devopsinstitute.com/devops-journey-playbook/
Thank You!

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