

Resilient Systems, Resilient Teams

A CTO's Blueprint for SRE Excellence

Evgenii Korneev, 2024

Intro

Topics

- Do Startups Need SRE?
- «Availability» fundamentals
- On-call Duties
- When Do You Need a Dedicated SRE Engineer or SRE Team?
- Communications

Do Startups Need SRE?

What should we start from

- Define criteria of «availability»
- Define your first SLI indicators (and then SLA/SLO)
- Calculate your Error Budget

Availability criteria example:

More than 50 users per hour have issues with auth

More than 10 payments per hour is failed by internal reasons

More than 100 users had troubles with posting articles today

The web application has been unavailable from more than one location for over 10 minutes

Simple SLI example:

Successful users auths: 95% / month

Successful payments: 99% / month

Successful article posted: 99,5% / month

Front-end app availability: 99,8% / month

Do Startups Need SRE?

What should we start from

- Set up monitoring and alerts
- Automate the processes of code building and deployment
- Cover code by tests
- Use modern DevOps practices
- Limit access to production systems
- Create tools for your team

On-call Duties

An alternative to SRE Team

- System growth => troubles growth
- On-call engineer has more «work» than «life» for a week
- «Relaxed» vs «Too busy»

On-call Duties

An alternative to SRE Team

- On-call roster
- Weekly on-call duties usually the best
- Do not overload on-call person

Week 1:	Week 2:	Week 3:
John	Andrew	Eugene
Andrew	Eugene	John
Eugene	John	Andrew

When Do You Need a Dedicated SRE Engineer or SRE Team?

Evaluate this points:

- How strict are the availability requirements for your product?
- How heavy is the load on the service, or how popular is it?
- How well is your development team performing?
- How complex is your system?
- What does your budget allow?

Communications

Build transparent knowledge sharing

- Communicate in shared chats
- Organize all-team meetups
- Team leaders meetings
- Documentation and knowledge transfer

Strong Leads are Key to Success

Aquire best employers as tech leads

- Push up your team's talent
- Less devs but higher skills is usually better
- More experienced specialists => more issues pre-solved

System Resilience is a Comprehensive Set of Measures

Path to success:

- Determine your availability criteria and SLI
- Conduct improvements in alerting and monitoring
- Ensure maximum transparency in team communication
- Improve code quality. Testing, code reviews, quality control, CI/CD
- Develop an on-call duty policy
- Has the project grown? Assess the need to create an SRE department
- Develop an SRE engineer within your company
- If necessary, build an SRE team around them, which they will train

Thank you!

ekorneeff@gmail.com

[linkedin.com/in/ekorneeff/](https://www.linkedin.com/in/ekorneeff/)