

Introducing Arctic SRE Adoption Framework

- Vishnu Vardhan Chikoti

About me

- 16 years of experience across Site Reliability Engineering, Product Development and Business Analysis
- Currently, Senior Manager - SRE @ Fanatics, Inc
- Previously worked at Broadridge, Bank of America, Tectoro Consulting and DBS Bank
- Co-author of Hands-on Site Reliability Engineering, published July `21
- Personal blog: <https://www.xfgeek.com>
- Almost all the time at Hyderabad, India

Why a framework for SRE adoption?

Different views on “what is SRE”

- SRE is about availability
- SRE is about golden signals
- SRE is about automation for operations
- SRE is about infrastructure automation
- SRE is new title for Product Support Analyst

Different questions

- How is SRE different from ITIL?
- How is SRE different from DevOps?
- How do we structure SRE teams?
- Is capacity planning taken care of by SREs as it is already done during P&V testing?
- Can we have multiple SLOs for the same service?
- Is it fine if we just measure SLOs for our critical services?

Books

Videos

Blogs

Framework

Basic structure, a foundation

Hello Arctic !

Two pillars

Visibility

Accountability

Visibility

- Practices
- Tools and Platforms
- Policies/procedures

Practices

- Monitoring
- Observability
- Defined SLOs
- Measured SLIs and Error budgets
- Incident response
- Incident management
- Blameless postmortems
- Change management
- Release management
- Eliminating toil
- Capacity planning
- Infrastructure automation
- Elastic environments
- AIOps
- ChatOps
- Chaos Engineering
- Security best practices
- Compliance with regulatory standards

Tools and platforms

- Monitoring
- Observability
- Alerting
- Alert correlation
- On-call management
- Runtime platforms (on-prem or PaaS)
- Chat applications
- Ticketing
- Self-healing
- CI/CD tools
- Change management
- Infrastructure provisioning
- Backup and recovery
- Patch management
- Natural Language Understanding (NLU)
- Fault injection

Policies/procedures

- Incident management
- Change management
- Error budget
- SRE onboarding procedure

Metrics for derived value

- Toil elimination
- Reduction in Mean time to Acknowledge (MTTA)
- Reduction in Mean time to detect (MTTD)
- Reduction in Mean time to recover (MTTR)
- Reduction in Mean time to insight (MTTI)
- Reduction in Mean time between failures (MTBF)
- Reduction in resolution time for incident postmortem action items
- SLO breaches/error budget exhaustion

Benefits

- Better utilized/planned infrastructure
- Improved tech staff experience
- Improved productivity of tech staff
- Improved business launch experience
- Improved reputation through reduced downtime or reduced improper experience messages in social media

Accountability - Structure

- Central SRE
- Split by function
 - Infrastructure SRE
 - Data SRE
 - SRE Tools
- Embedded SRE
- Federated SRE

Accountability – R&R

- Decision maker for onboarding to SRE
- Actual onboarding
- Communication about new business launches
- Conflict resolution

Other concepts and frameworks

Frameworks

- Agile
 - Scrum
 - Kanban
 - XP
 - RAD
- Developer and SRE experience
 - SPACE

Concepts

- Product Engineering
- Design Thinking
- Chicken and egg

Personalities and skills

- Personality types
- Skills
 - Software Development + Operations
 - Software Development
 - Operations

Things to avoid

- No bandwagon bias – right tools/platforms for the given purpose
- No over-engineering
- Co-existence of traditional and SRE policies

Questions on Discord

Thank you