

SHARING HOW WE GROW SRE PRACTICES

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**OPEN SOURCE SRE**

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**OPEN SOURCE SRE**



# ABOUT ME

- ▶ Red Hat Sr. SRE since Sept. 2018; SIG-SRE since Oct. 2021
- ▶ 🇨🇦 Canadian and American 🇺🇸
- ▶ Cat named Clyde
- ▶ Nerd
  - ▶ Ask me about my home Kubernetes Lab
- ▶ @thedoh on the bird site 🐦



# SIG-SRE



## WHAT DOES THE SIG DO?

- ▶ Goal: Level up SRE practices at Red Hat
- ▶ Several workstreams to focus the SIG's efforts
  - ▶ Service Level Objectives (SLOs)
  - ▶ Incident management
  - ▶ Toil management
  - ▶ And others
- ▶ Share with the world because that's the Open Source way

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## WHAT'S AN SLO

- ▶ Data driven performance target(s) for a service
- ▶ Examples include:
  - ▶ Latency - "We'll handle /login API requests in under 50ms, 99% of the time"
  - ▶ Duration - "After signup, 99.9% of new customers receive a welcome email in under 2 minutes"

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- ▶ Or else...?



## WHY AN SLO WORKSTREAM?

- ▶ SLOs as a tool for growth
- ▶ We want rapid growth
- ▶ SLOs focus service owner attention
  - ▶ Measure what matters
  - ▶ Customer-centric metrics
  - ▶ Accountability

## WHY AN SLO WORKSTREAM?

- ▶ SLOs as a tool for growth
- ▶ Alert on what matters
- ▶ Improve on-call experiences for SREs
- ▶ No more vanity alerts

## WHY AN SLO WORKSTREAM?

- ▶ SLOs as a tool for growth
- ▶ Improve on-call experiences for SREs
- ▶ **Capture experience**
- ▶ Some teams already doing it
- ▶ Capture their experiences
- ▶ Encourage engagement

## WHY AN SLO WORKSTREAM?

- ▶ SLOs as a tool for growth
- ▶ Improve on-call experiences for SREs
- ▶ Capture experience
  - ▶ Share inside Red Hat
- ▶ Not all teams use SLOs
- ▶ Be a central hub for sharing experience
- ▶ SIG as a way to onboard teams

## WHY AN SLO WORKSTREAM?

- ▶ SLOs as a tool for growth
- ▶ Improve on-call experiences for SREs
- ▶ Capture experience
  - ▶ Share inside Red Hat
  - ▶ Share outside Red Hat
- ▶ We're an open source org
- ▶ Sharing forces us to hone our work product



# PUBLISHED DOCS

## PUBLISHED DOCS

- ▶ **Personas**
  - ▶ Define the players in the game
  - ▶ Our "PM" only  $\sim$  your "PM"
  - ▶ Rosetta Stone

## PUBLISHED DOCS

- ▶ Personas
- ▶ SLO Lifecycle
  - ▶ Summarize lifecycle in three phases
    - ▶ Research
    - ▶ Implementation
    - ▶ Iteration
  - ▶ Error budget as an *additional* signal for planning
    - ▶ Avoid dogma: "no budget? no features!" 🚫

## PUBLISHED DOCS

- ▶ Personas
- ▶ SLO Lifecycle
- ▶ **SLO RACI Chart**
- ▶ Responsibility assignment matrix
- ▶ Links tasks from the lifecycle to personas
- ▶ Quick reference-style

PUBLISHED DOCS

- ▶ Personas
- ▶ SLO Lifecycle
- ▶ SLO RACI Chart

Step	Service Owner	Product Owner(s)	Engineering/Quality Lead	Sw. Eng/QE	SRE IC	Eng Manager/Director	Exec (VP)
Existence of SLO	A/R	C	R	A	C	C	I
Propose SLO	C	R	R	C	C	A	I
Agree on SLO	A	R	R	C	I	I	I
Measure+Track SLO	I	I	R	I	A/R	I	I
Propose SLO Roadmap	C	C	A/R	C	C	I	I
Agree SLO Roadmap	A/R	R	C	C	C	R	I
Execute SLO Roadmap	I	I	A	R	R	C	I
Handle Error Budget	C	A	R	C	I	R	I
Recalibrate/Planning	A	R	R	C	C	C	I

R: Responsible  
A: Accountable

C: Consulted  
I: Informed



## PUBLISHED DOCS

- ▶ Personas
- ▶ SLO Lifecycle
- ▶ SLO RACI Chart
- ▶ Picking Good SLIs & SLOs
- ▶ Provides tips to get newer teams going
- ▶ Call out common pitfalls

## PUBLISHED DOCS

- ▶ Personas
- ▶ SLO Lifecycle
- ▶ SLO RACI Chart
- ▶ Picking Good SLIs & SLOs
- ▶ **Error Budget Policy**
- ▶ A template for a team's own policy
- ▶ Uses practices from teams in Red Hat

## PUBLISHED DOCS

- ▶ Personas
- ▶ SLO Lifecycle
- ▶ SLO RACI Chart
- ▶ Picking Good SLIs & SLOs
- ▶ Error Budget Policy
- ▶ SLO Bootstrap Guide
- ▶ Roadmap for onboarding new teams
- ▶ Index to the important documents
- ▶ Five minute read

# MEETINGS

## WEEKLY SLO WORKSTREAM MEETING

- ▶ Alternating time zones
- ▶ Discussion venue for workstream and SLO topics
  - ▶ Volunteers for work
  - ▶ Collect the knowledge (for docs)
  - ▶ SLO howtos
  - ▶ Document review and collaboration



# TEAM ENGAGEMENT

## KEY TAKEAWAYS – LANGUAGE

- ▶ Define all new terms, be clear in language
  - ▶ Personas, SLO Lifecycle, RACI Chart help

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## KEY TAKEAWAYS – PROCESS

- ▶ Start small. No big bangs!
- ▶ Focus on what delights the customer
- ▶ Aspirational SLOs are just fine
  - ▶ SLOs can be a tool to indicate importance, even when there's not enough resources to dedicate right now
- ▶ Internal-only services are special cases

# THE END

- ▶ slides at [lisa.dev/conferences](https://lisa.dev/conferences)
- ▶ [github.com/operate-first/sre](https://github.com/operate-first/sre)
- ▶ [operate-first.cloud](https://operate-first.cloud)
- ▶ [redhat.com/sre](https://redhat.com/sre)