On-call Training Guide

This document is a guide for the person training the new group of on-call engineers (the trainer). However, the trainees can also make use of this document to get a general overview of the training process.

On-call prerequisites checklist

Share this prerequisite checklist with your trainee. This list covers topics that a dev should be familiar with before becoming part of the on-call rotation.

- General engineering org knowledge (the basics, should learn while on-point)
    - Service discovery
    - Process scheduling, dependencies
    - Datacenter hierarchical structure (regions)
    - CI/CD pipelines (deployment process)
    - Container architecture and scaling
    - Cloud infrastructure and instance monitoring (e.g. AWS console, AWS CLI)
    - Logging
- Permission checklist
    - AWS
    - Production instances
    - Databases
    - PagerDuty account setup
- Critical systems
    - Input/output
    - Upstream/downstream dependencies
    - Business value
    - SLAs
- Business jargon or terminology used by the team/org
- Data schemas and ORM models
    - How we represent data in the database for a business, user, etc.
- Investigation/Debugging tools
    - Dashboards, error logs, etc.

Join on-point rotation

New devs should be put into an on-point rotation (fielding/answering questions in the team's slack channel + consuming bug rotation tickets) 3-6 months after they join the team. Not everybody on-point is expected to know everything. It's fine to be the first point of contact and then triage out to more senior devs if necessary.

On-call Kick-Off Meeting

Have a kick off meeting (we expect this to happen 6-9 months after they join the team).
Discuss expectations and responsibility and go over the process.

Shadowing

New members should start shadowing 9 months after they join the team.
Put the trainees in the on-call shadow rotation. They will get paged at the same time as whoever is normally on-call that week.

Trainees will shadow for a total of 3 weeks or until they experience their first p0 incident. This is recommended to be done every other week to avoid burnout.

Trainees are expected to run the deploy that week with the help of the regular on-call engineer.

Trainees should be as autonomous and proactive as possible! They should respond to pages as if they were the only on-call engineer. When there is a knowledge gap, trainees should follow along and learn as they go how parts of the system work. The person on-call should help them understand what's going on and be available to answer questions.

This is an especially valuable time to scrutinize pages and process! Trainees will have fresh eyes and be able to give good feedback on how clear pages are and how noisy the system is.

Trainer note: give the person on-call that week a heads up they'll be shadowed and what's expected of them.

Check-ins

Make sure to do a check-in after the first week of shadowing. This creates a space to ask questions. Other periodic check-ins are valuable as well.

Wargames

Near the end of the 3 weeks, run at least one wargame scenario with the trainees. In this scenario, the trainee should be on-call and have to respond to a page alone. The goal is to practice the mechanics of assessment and incident response. Games don't have to be major site-down level to be effective. Having previously unseen pages is enough to practice with and generate discussion.

Good ways to develop scenarios are:

- Look through recent pages and find some good candidates

- Hypothesize what would happen if a part of the system broke

Wargame mechanics

- Run the games out of a separate slack channel
- Use slack italics to describe the thing you're wanting to do or what you're looking at
- If you have charts and links from splunk from real incidents, great!
  - If not, you'll have to get creative by drawing charts or describing outputs
- Nominate a game master (GM) (this will usually be the trainer)
  - The GM will respond to italicized messages with a direct message telling you what you saw.
    - Doing this forces information sharing and communication
  - The GM will play the part of pagerduty and send pages to the channel when appropriate
- Nominate an on-call trainee. This will be the first responder to the incident.
- Other trainees are expected to pitch in as if it was a real incident
- Trainees should practice the role of incident investigator
- Other engineers may pitch in as they see fit as if it was a real incident
  - **Remember this is an exercise for the trainees!**
  - It's OK to let trainees struggle a bit as they learn and figure things out
  - When you do chip in, it's helpful to ask guiding questions as hints so trainees can figure out the process on their own
  - It's helpful if you take a comms or coordinator role here

Knight your new trainees

Congratulations! Your trainees are ready to be in the on-call rotation.

Celebrate and commemorate the occasion!

Don't forget to add them to the PagerDuty rotation.