“Disorganizing” your SRE organization

Leonid Belkind

CTO and co-founder, StackPulse

“Disorganization can scarcely fail to result in efficiency”

Dwight D. Eisenhower

What I’m going to talk about today

1. The impacts of WFH on the teams responsible for reliability
2. How we ‘disorganized’ the SRE team to address
3. Lessons learned along the way
4. Suggested ‘Action Items’

What were our challenges?

- The agility and innovation in how we build and ship software has Increased velocity and fragmented knowledge

- Roles like SRE, collaboration tools like Slack, Confluence/Notion, and “shift-left” tooling that allows developers to build, test, deploy and monitor software services are widely adopted

- When WFH became the new normal - this status quo was no longer enough

62% of IT and DevOps practitioners are spending 10+ additional hours a week on incidents since COVID

Source: PagerDuty

Over 80% of SREs spend over half their time on operations - not engineering.

Source: Catchpoint

Our Journey: Biggest Challenges

- ➔ Training / Onboarding team members in a growing team
- ➔ Dealing with Increased Noise in a service with growing adoption
- ➔ Limited informal communication

What does “disorganizing” the SRE organization mean?

1. Democratize responsibility to all engineers
2. Empower autonomous but consistent action

Democratizing responsibility

- Treat reliability like a feature and build for it in every task
- Train developer teams on monitoring/alerting, observability, error budgets, SLOs and incident response metrics like MTTD /MTTR
- Make every developer part of on-call work – leadership too

Empowering Autonomy and consistency - Why

- People handling incidents should feel **empowered** to have all the relevant data and to take relevant remediation steps
- It is much easier to ask for help when you are in a room with people, not so easy to reach out remotely
- When Slacking / Zooming with people, it is harder to understand their underlying intentions / mood
- “Remote” collaboration should be about tasks / facts / findings

Empowering Autonomy and consistency - How

- Build playbooks for every workflow – never do the same thing manually twice
- Turn on-call / incident response into deterministic code –make available as “modules” to developers
- Common language and format for all playbooks – **no exceptions**
- Educate and train team with playbook artifacts vs. wiki articles

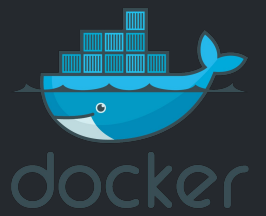
What does “turn into code” look like for us?

- **Declarative** playbooks/workflows
- **Encapsulated** process steps
- Four parts to each:
  - **Enrich** – append environment and application context, asses customer impact and assign severity
  - **Triage** – rule out possible causes, focus on suspicious signals
  - **Communicate** – open war rooms, create/update incidents, communicate with on-callers / stakeholders
  - **Remediate** – bring the service environment back to operating state

```yaml
apiVersion: stackpulse.io/v1
kind: Playbook
metadata:
  name: redis_incident_enrichment
  description: Playbook automating active data enrichment for REDIS incidents
steps:
  # Retrieve ConfigMap data with connection information to REDIS
  - id: get-configmap-data
    name: us-docker.pkg.dev/stackpulse/public/kubectl/get-configmap
    runner: prod
    env:
      CONFIGMAP_KEY: configmap
      NAMESPACE: 'prod'
    output_parser:
      name: us-docker.pkg.dev/stackpulse/public/json-parser
  # Retrieve generic info about the specified REDIS server
  - id: get-redis-info
    name: us-docker.pkg.dev/stackpulse/public/redis-info
    runner: prod
    env:
       REDIS_URL: 'redis://{{ secret "Redis_Secret" }}@{{ .RedisConnectionString }}:{{ .RedisPort }}/'
  # Provide high-level information about the REDIS server in Microsoft Teams
  - id: display-high-level-redis-info
    name: us-docker.pkg.dev/stackpulse/public/teams-message
    env:
      TEAMS_TITLE: 'High Level Information about REDIS Server {{ .RedisConnectionString }}'
      TEAMS_WEBHOOK: '{{ secret "Teams_Key" }}'
      TEAMS_CONTENT: 'Selected Parameters from REDIS:'
      TEAMS_URL_TITLE: "Execution Details"
      TEAMS_URL: https://app.stackpulse.io/execution/{{ .execution.id }}
      TEAMS_TABLE_DATA:  |
          {
            name: "Connected Clients",
            value: "{{ .Clients.connected_clients }}"
          },
```

Our Journey: Getting Started

- 1 Month: On-call and playbook writing spread across developers
- 3 Months: Weekly review of incidents and their resolution metrics, outlining missing pieces and scheduling their development



etiquette

Our biggest lessons learned were about the human part of the process

1. Accept the new normal
2. Build to the individual
3. Explicitly build culture
4. Terminate loops locally

Accept the new normal

- Trying to ‘keep everyone in the room’ with Slack, Zoom, Discord doesn’t work.

- Increased fatigue, poor responsiveness, low morale

Build to individual need

- People have different preferences for interruptions, privacy, communication style

- Work with individuals to find what's right for them

- Balance critical need with personal preference

Explictly build a new culture

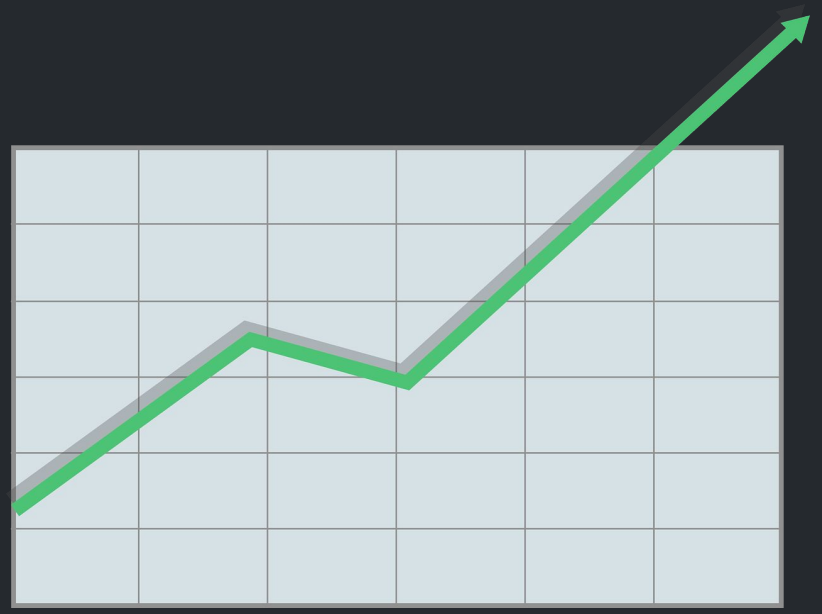
- Directly share that you're working on culture as a project
- Define changes in day-to-day responsibilities
- Build opportunities for informal interaction that use different formats

Terminate loops locally

- Re-divide responsibilities
- Empower with playbooks as documentation
- “4 eyes” verification only for critical issues
- Measure performance, share with the team

Our Journey: 6 Months In

- ➔ Enrichment, RCA over 60% automated
- ➔ MTTR reduced by 35%
- ➔ Playbooks used to manage incidents from create to post-mortem.
- ➔ Over half the team has led incident response



Thoughts on how to get started

1. Be open with your teams. **Explicitly explain that the organization is embarking on a journey** (to change its culture)
2. **Identify individuals that are passionate about it** and involve them in leading the efforts
3. Let the teams drive choices of automation tools. **Technologists enjoy solving problems with tools much more than they do with manual processes.** Tools do matter
4. Don’t assume that people will tell you how they feel or how confident they are. **Constantly monitor the “soft” metrics**

Thank You!

Questions?
leonid@stackpulse.com

StackPulse