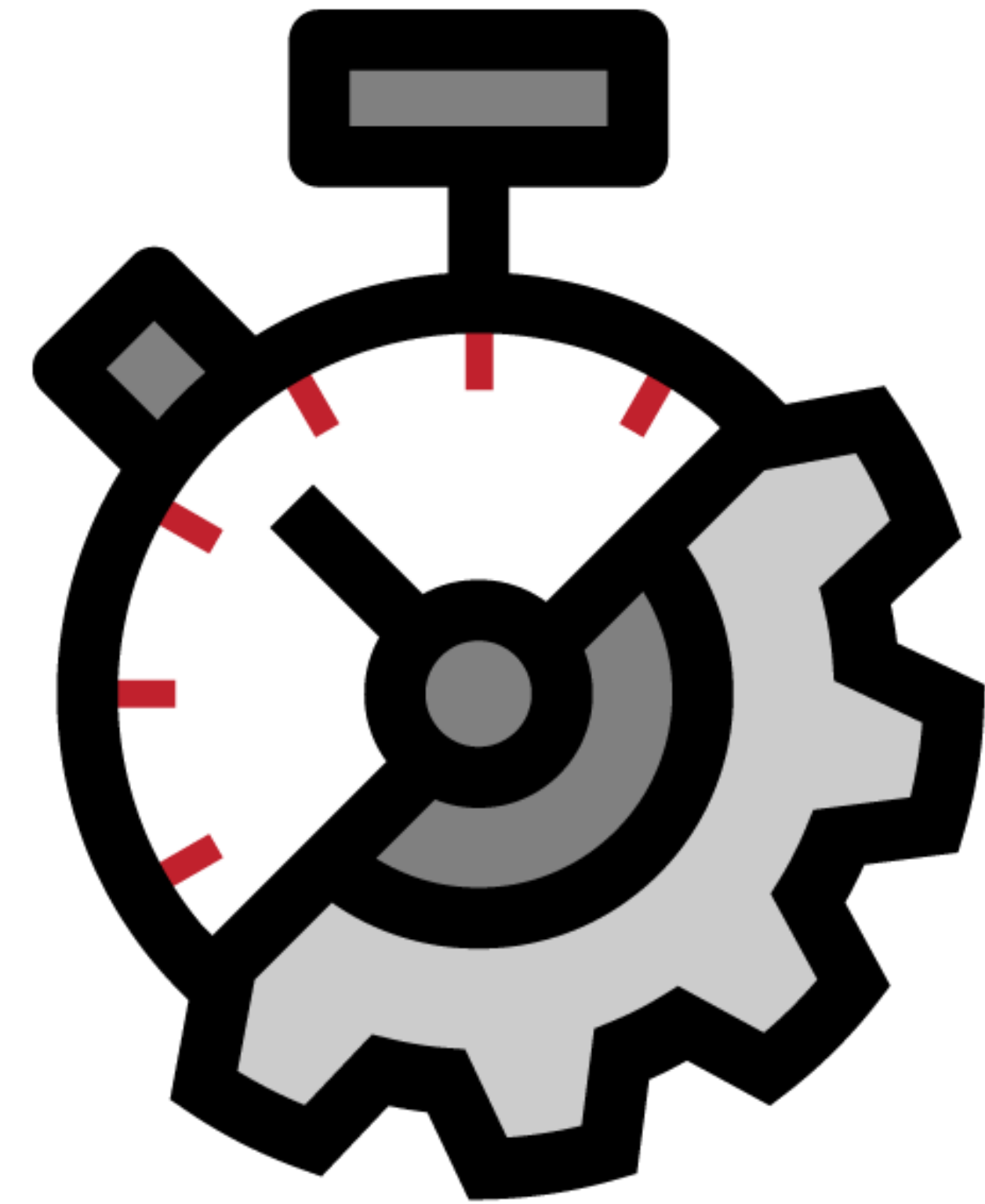


Incident Management and ChatOps



Daniella Niyonkuru (@niyodanie)





Production Engineering



#war-room

☆ | 👤 425 | 📌 0 | No incidents right now.



🔍 Search



Daniella Niyonkuru 5:42 PM

spy incident start me checkout is down



spy APP 5:42 PM

🔥 An incident was reported at 2017-02-23 22:42:36 UTC. [@daniella](#) is the IMOC.

Status summary: checkout is down

Incident was bound to [#war-room](#). Please use [#war-room](#) for communications, or rebind the incident with `incident channel ...`.



spy APP 5:42 PM

set the channel topic: 🔥 @daniella is IMOC for incident: checkout is down



Camilo Lopez 🏠 5:42 PM ☆

shit

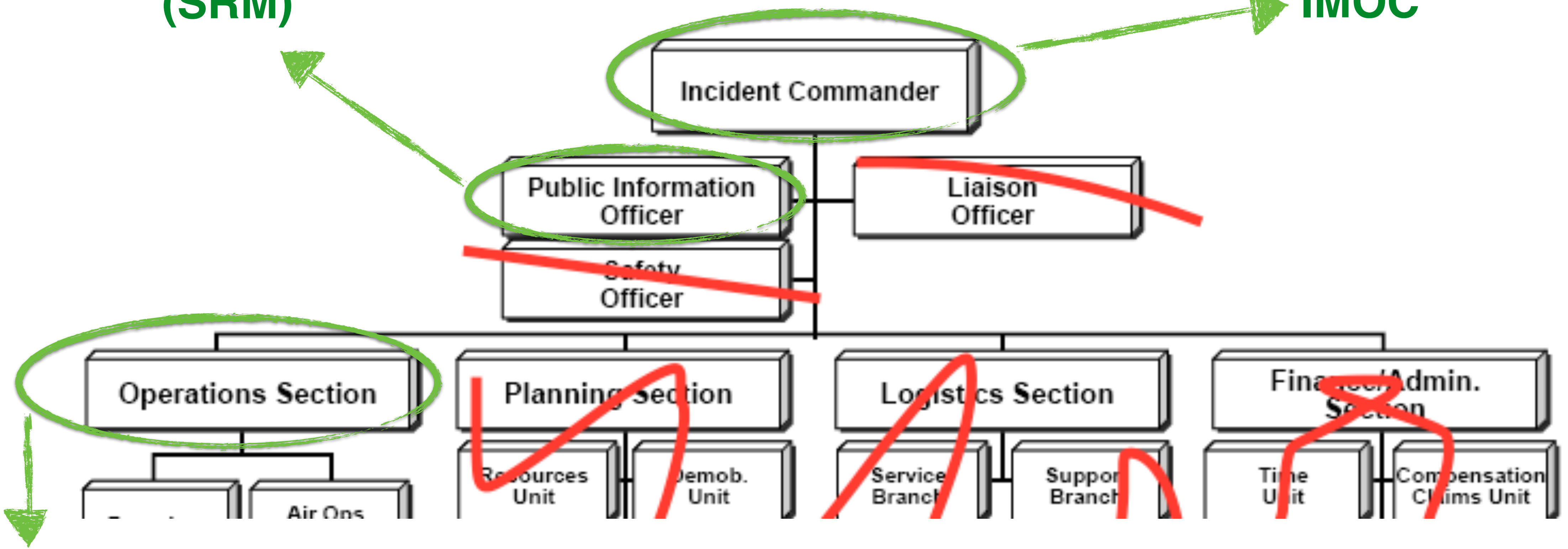


INCIDENT MANAGER ON-CALL (IMOC)



Support Response Manager (SRM)

IMOC



Component Experts

Incident Command System (ICS)

The IMOC is on-call for Incident Response;
NOT on-duty for fixing production issues.

Incident Response Funnel

- ➔ Shit breaks
- ➔ Detection
- ➔ Start Incident
- ➔ Communicate
- ➔ Fix
- ➔ Stop Incident
- ➔ Document (Service Disruption)
- ➔ Investigation
- ➔ Root Cause Analysis (RCA)
- ➔ Action Items
- ➔ Resolution



Pager Anxiety; What if ...

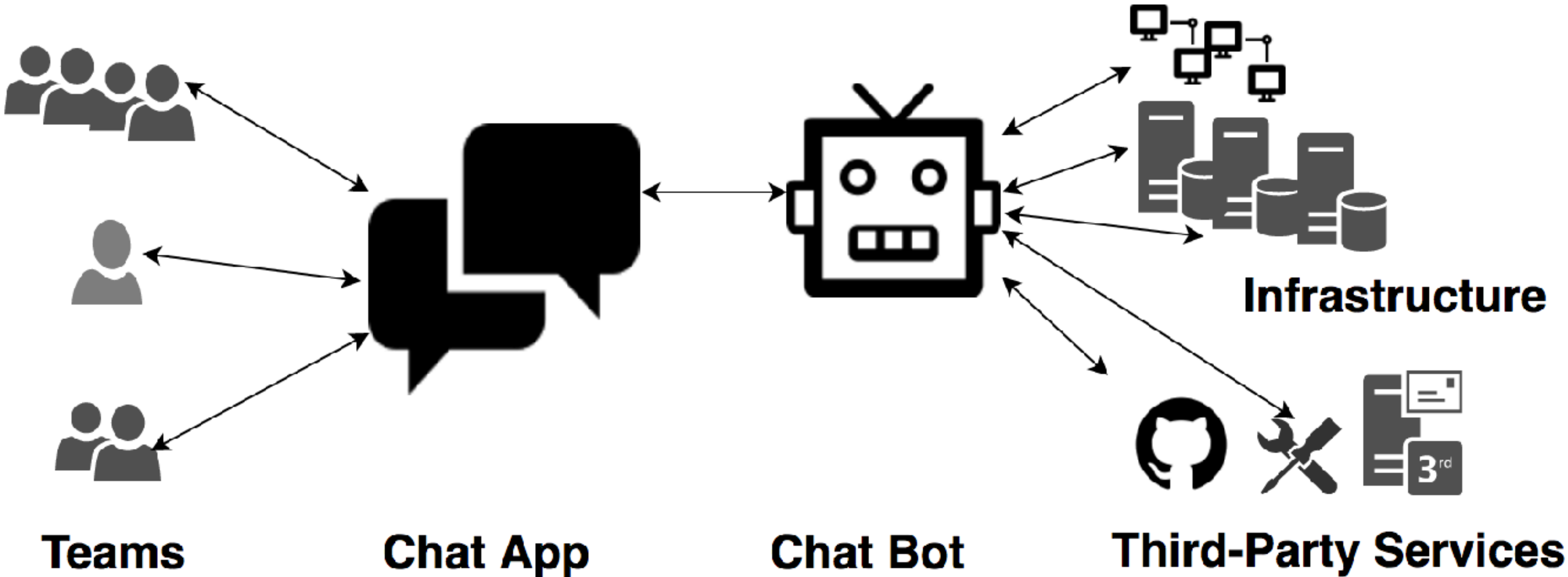
- Forget I'm on-call
- Phone in silent mode
- Forget to update the status page
- Don't know who to ping
- Too much context switching, can't focus
- Forget the incident response procedure



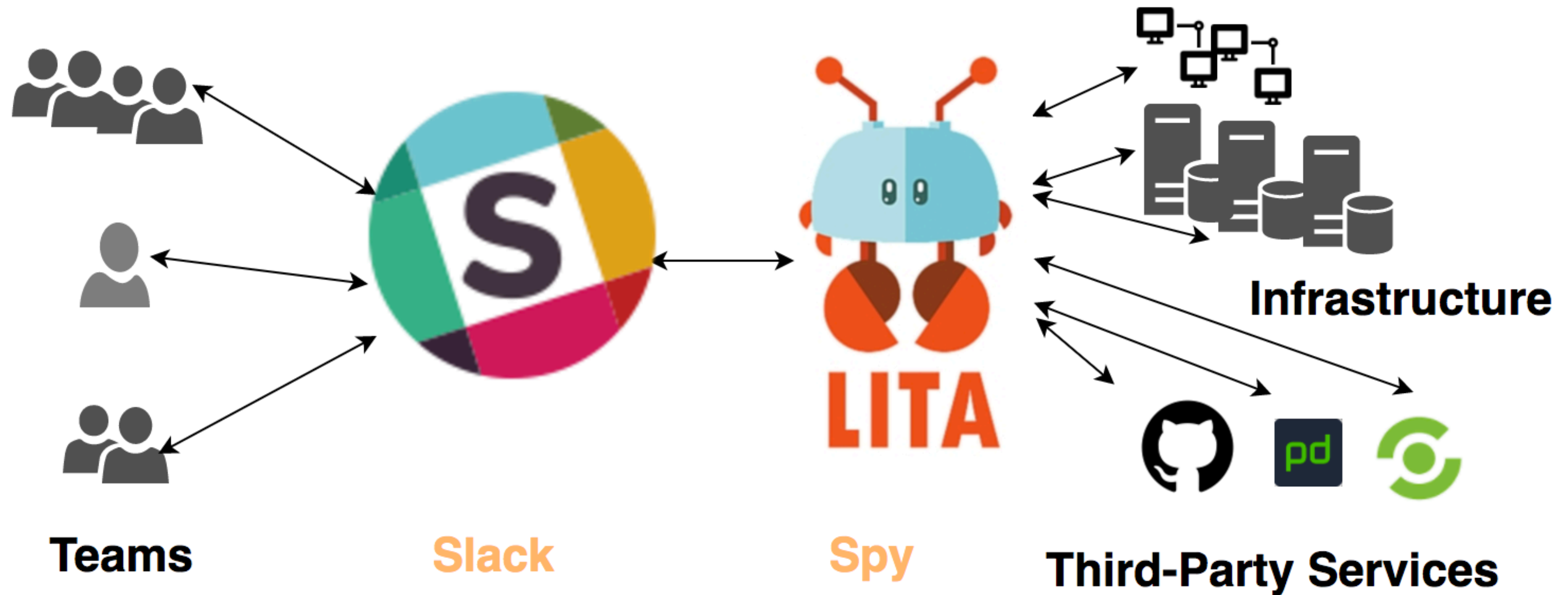
CHATOPS



Conversation-Driven Collaboration



Chatops at Shopify




INCIDENTS AND CHATOPS



Incident Management Tools

Three main sets of commands:

- **spy page**
- **spy incident**
- **spy status**

- 
- ➔ **Shit breaks**
 - ➔ Detection
 - ➔ **Start Incident**
 - ➔ **Communicate**
 - ➔ Fix
 - ➔ **Stop Incident**
 - ➔ **Document (SD)**
 - ➔ Investigation
 - ➔ RCA
 - ➔ Action Items
 - ➔ Resolution

Shit breaks

➔ `spy page imoc "order notifications not going out"`

Start incident

➔ spy incident start me order fraud analysis outage

The screenshot shows a Slack channel named **#war-room**. At the top, there are icons for voice call, info, settings, a search bar, and other channel actions. The channel statistics show 417 members and 1 pinned message, with a note that there are no incidents at the moment.

The conversation includes the following messages:

- Daniella Niyonkuru** (12:24 PM): spy incident start me order fraud analysis outage
- spy** (APP, 12:25 PM):
 - 🔥 An incident was reported at 2017-04-06 16:25:01 UTC. [@daniella](#) is the IMOC.
 - Status summary: order fraud analysis outage
 - Incident was bound to [#war-room](#). Please use [#war-room](#) for communications, or rebind the incident with `incident channel ...`.
- spy** (APP, 12:25 PM): set the channel topic: 🔥 @daniella is IMOC for incident: order fraud analysis outage
- izaak alpert** (12:25 PM): joined #war-room. Also, [@damian.polan](#) joined.
- spy** (APP, 12:25 PM):
 - Status Page Summary**
 - *** Components Report ***
 - Admin : operational
 - Checkout : operational
 - Reports and Dashboards : operational
 - Storefront : operational
 - API & Mobile : operational
 - Support : operational
 - Third party services : operational
 - *** Unresolved Incidents Report ***
 - No reported unresolved incidents.

Three red arrows point to the channel name, the first message, and the status page summary.

Communicate

➔ **spy incident tldr**

The screenshot shows a WhatsApp chat interface. At the top, the contact name is 'spy' with a star icon, and there are options for 'Messages' and 'About'. To the right, there are icons for information, settings, a search bar, and other actions. The main message is from 'Daniella Niyonkuru' at 2:49 PM, with the text 'incident tldr'. Below it is a message from 'spy' at 2:49 PM, which is highlighted with a blue border. This message contains a summary of an incident, including the title, timeline, incident commander, support response, channel, and incident start time. Red arrows point to specific parts of the message: one points to the 'Incident Commander (IMOC)' field, another points to the 'Support Response (SRM)' field, and a third points to the 'Incident Started' field.

☆ **spy**
Messages About

incident.

Daniella Niyonkuru 2:49 PM
incident tldr

spy APP 2:49 PM ☆

"App store is down, data missing from database"
Timeline:
2017-08-21 18:47:38 UTC: Started tracking an incident with commander: hormoz

Incident Commander (IMOC) @hormoz	Support Response (SRM) @charliealamode
Channel #war-room	Failures Started
Incident Started 2017-08-21 18:47:38 UTC	Failures Mitigated
People Involved	

Other Teams

- ➔ `spy incident tell :team` message
- ➔ `spy page datastores`

#support

Jump • May 26th



Tamara Wieme 9:49 AM

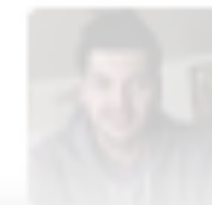
@macking: Head on over to #support-

spy BOT 9:50 AM ☆

⚠ Hey @marsh, an incident (502s on storefront) is active and has been bound to #war-room. You may contact the IMOC (@richard.mcgain) for more details.

#support

Jump • May 26th



Dumitro Ruday 10:05 AM

@diddymitch: you would need to create a

spy BOT 10:05 AM

✅ Hey @marsh, incident in #war-room is closed.



shy-daniella BOT 10:26 AM

🔴 Is this incident high-impact? If so, did you consider paging

ohshit and social?

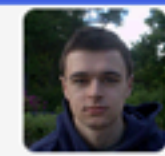
Actions

#war-room

☆ | 👤 425 | 🗨️ 0 | No incidents right now.



🔍 Search



Emil Stolarsky 🙄 4:52 PM ☆

spy shipit unlock shopify/shopify/production



spy APP 4:52 PM

🔓 [shopify/shopify/production](#) unlocked



Daniella Niyonkuru 4:52 PM

a 2 min dip from what I see



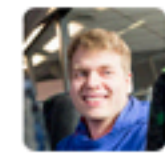
Felix Glaser 🌴 4:53 PM

checkouts don't look healthy for about 5 min from what I see here on DD



Daniella Niyonkuru 4:53 PM

[@elvinefendi](#) can you append/have another sd for that please?



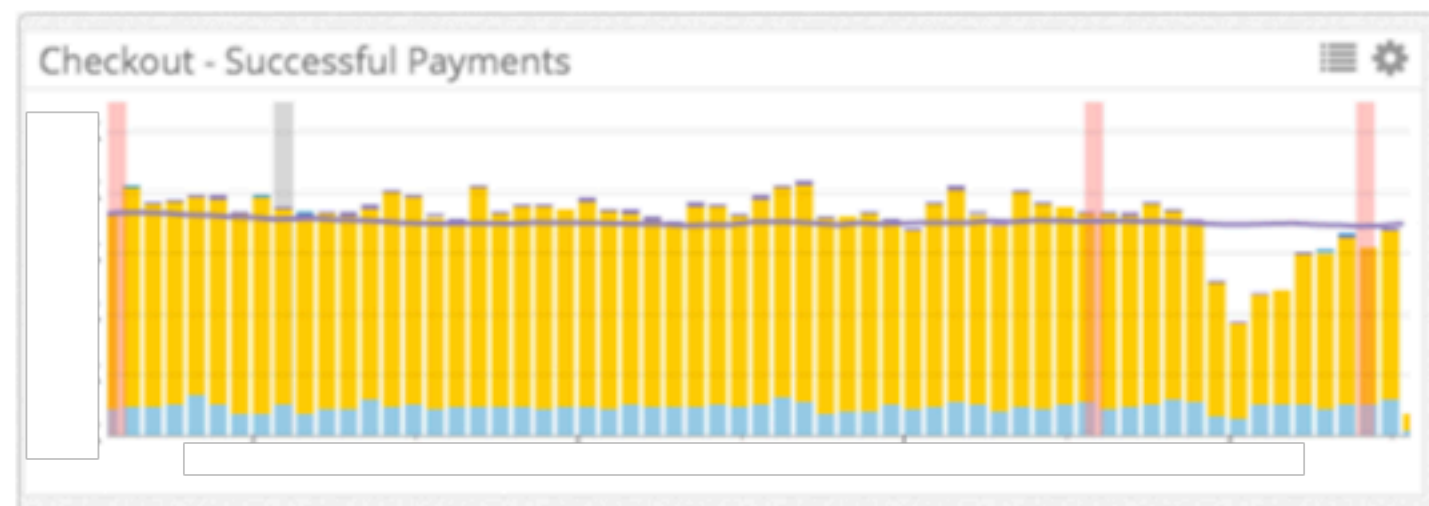
Felix Glaser 🌴 4:53 PM

but let's wait for DD to catch up



Daniella Niyonkuru 4:53 PM

uploaded this image: [Recovering](#) ▾

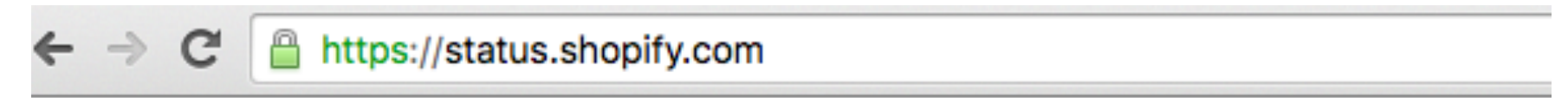


Third-Party Services

➔ `spy status`

➔ `spy status :provider :status for :feature`

➔ `spy pager imoc res 123`



☆ **spy**
Messages About

Daniella Niyonkuru 9:20 PM
status

spy APP 9:20 PM ☆
Admin : Operational
Checkout : Operational
Reports and Dashboards : Operational
Storefront : Operational
API & Mobile : Operational
Support : Operational
Third party services : Operational

Daniella Niyonkuru 9:20 PM
status incidents

spy APP 9:20 PM
No unresolved incidents 😊

new messages



Current status

All Systems Operational

Refreshed less than one minute ago

- ✓ Admin
- ✓ Checkout
- ✓ Reports and Dashboards
- ✓ Storefront
- ✓ API & Mobile
- ✓ Support
- ✓ Third party services

Reminders

```
when: [30, stop]
command: :check_status_page
-
when: 120
command: :notify_support_atc
message: 'Spy has notified the Support Response Manager (SRM) on your behalf.'
-
when: 120
command: :srm_fill_out_doc
-
when: 300
message: 'You should coordinate external comms with the support incident responder.'
-
when: 600
command: :srm_checking_in
-
when: [3600]
command: :notify_imoc_team
-
when: stop
message: 'Please create a Service Disruptions report.'
```

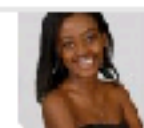
Milestones

Stop incident

➔ spy incident stop

#war-room

☆ | 👤 409 | 🗨️ 1 | No incidents right now.



Daniella Niyonkuru 4:54 PM

spy incident stop



spy APP 4:54 PM

✅ Incident stopped at 2017-02-23 21:54:59 UTC. Thanks for letting us know.

Status Page Summary

*** Components Report ***

Admin : operational

Checkout : operational

Reports and Dashboards : operational

Storefront : operational

API & Mobile : operational

Support : operational

Third party services : operational

*** Unresolved Incidents Report ***

No reported unresolved incidents.



spy APP 4:55 PM

cleared the channel topic

And much more

- SD content generation (``spy incident note``)
- Preventing on-call fatigue (``spy incident handoff``)
- Reducing context switching (``spy pager stfu``)
- Reminders (before, during and after the incident)

HOW DID SPY AFFECT IMOCSS?

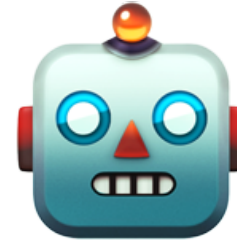


Benefits

- Increased sharing and focus
- Shortened feedback loop
- Eliminated manual toil
- Smoother incident handling
- Faster onboarding experience

Fears, What if ...

- Forget I'm on-call → **spy pre-oncall reminders**
- Phone is silent
- Forget to check the status page → **spy check reminders**
- Don't know how to ping → **spy oncall**
- Too many context switching, can't focus → **spy cmd #war-room**
- Forget the incident response procedure → **spy incident**



- Flexible and powerful
- A very important member of our team
- Enables us to really **lead an incident response**
- Reduce **incident impact** and **duration**

THANK YOU!

Questions?

@niyodanie



Shopify Talks

Thursday

5:00 pm to 6:00 pm: Six Ways a Culture of Communication Strengthens Your Team's Resiliency (Lightning Talk) - Jaime Woo

Friday

11:30 am to 12:00 pm: Building an On-Premise Kubernetes Cluster For a Large Web Application - Daniel Turner

Check out our blog at engineering.shopify.com
Follow us on Twitter at [@shopifyeng](https://twitter.com/shopifyeng)