Incident Management and ChatOps

Daniella Niyonkuru (@niyodanie)
Production Engineering
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)

Incident Commander

Public Information Officer

Safety Officer

Liaison Officer

Operations Section

Planning Section

Logistics Section

Finance/Admin. Section

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

Credit: John Arthorne
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
Conversation-Driven Collaboration
INCIDENTS AND CHATOPS
Incident Management Tools

Three main sets of commands:

• **spy page**
• **spy incident**
• **spy status**
Shit breaks

→ spy page imoc “order notifications not going out”
Start incident

➡️ spy incident start me order fraud analysis outage
Communicate

→ spy incident tldr

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

- spy incident tell :team message
- spy page datastores

#support

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.

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 @ohsht and @social?
Emil Stolarsky - 4:52 PM
spy shipit unlock shopify/shopify/production

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

Actions

#war-room
Starred: 425 | 0 | No incidents right now.

spy shipit unlock shopify/shopify/production

spy APP 4:52 PM
shipify/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
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
  message: 'Please create a Service Disruptions report.'
```
Stop incident

➡  spy incident stop

#war-room

Daniella Nyonkuru  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 IMOCS?
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
• 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

spy pre-oncall reminders
spy check reminders
spy oncall
spy cmd #war-room
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