Development, Deployment and Collaboration at Etsy

Daniel Schauenberg

dschauenberg@etsy.com

@mrtazz

Etsy Stats

OVER

25 million

MEMBERS

18M

ITEMS

listed

Etsy Stats

60 MILLION
MONTHLY VISITORS

1.5 BILLION
PAGEVIEWS
per month

Item by TheBackPackShoppe

avg 50 deploys/ day

avg n > m deploys/day

How comfortable are you deploying a change right now?

small change

Config
Flags

Item by RocajoStudio

| | drawing a blank
nel | oh yeahhh
nel | definitely forkistan
sner | dannel: http://morgue.etsycorp.com/
stan | hey hey hey
nel | was just going there
ight | how many weeks are left to get an entry in?
ever | is it calendar or fiscal year?
nel | I don't think we've ever discussed it
nel | I thought it was "in the year since it was last awarded"
ight | so I still have time?
ever | get to it
nel | do it up
hony | by that metric I am out of the running
hony | for http://morgue.etsycorp.com/events/22
nel | If anyone has been following Twitch Plays Pokémon, they are at t
         | http://www.twitch.tv/twitchplayspokemon
rty | 105,000 people all playing the same game of pokemon at the same
         | future
tos | destiny:
tos | ?delight
ccat | http://imgshare.etsycorp.com/msantos/delight.gif
         | [dschauenberg away: away]
to Sat, 01 Mar 2014
to Sun, 02 Mar 2014
etsy{205}* [Act: 9:#chef]
auenberg(iwz)](away)

"If this is your first day at Etsy, you deploy the site"

Developer VMs

Developer VMs

- KVM

- Every engineer has one

- Fully Chef'd with the Etsy Stack

- Different sizes and Chef roles

VIRTUAL MADNESS

Create a virtual guest!

Type: [Dev VM ⬍]

Guest name: [   ]   User: [   ]   Base Role: [VMBase ⬍]

Target Virtual Host: [virt08.ny5 (10.100.8.0) ⬍]   Size: [cartman ⬍]   Environment: [developmer

(p.s. if user is left blank, it defaults to hostname)

Continuous Integration

Continuous Integration

- Run set of tests before each deploy

- Full QA suite

- Princess/Production smoker tests

- Try (yup, there is one)

The Bobs

- LXC virtualized hosts

- 14/physical hosts

- Spread over 3 SSDs

- Most of them attached to try

```
+|  ?help vms
 |  usage: ?vms (ping|status|guests|create)
+|  ?vms status
 |  Number of virts: 50, Number of VMS: 394.5, Virt
 |  71.73%, Number of Buildtests: 28, Number of BOB
 |  Buildtests occupied: 96.94%
```

Deployinator

Deployinator

- 2 Buttons, no ambiguity

- Overview of current state of deploy

- Links to Logwatcher and Dashboards

- Easy to add stacks for new tools to deploy

Account: dschauenberg logout
Deploy Host: deploy.etsycorp.com is up
Stack: web
Current Deploys: Watch

Version: Test: 4add615720-20140616-233728-UTC   Princess: 4add615720-20140616-233728-UTC   Production: 4add615720-20140616-233728-UTC

#push topic: clear

kchung

on prod
14h since 16, 2014 at 7:43

01. Get saved by the Princess
4add615720 → a3832bcecd

Get saved by the Princess

Princess Log Watcher (supergrep)

02. Deploy to Production
4add615720 → 4add615720

Deploy to Production

What to watch after a push
Log Watcher (supergrep)
Forums

Deploy Logs

web — 2014-06-16 23:43:29 | **PRODUCTION** | kchung | Production Deploy: old 3ee7f99bb3, new: 4add615720   RUN L

web — 2014-06-16 23:39:20 | **PRINCESS** | kchung | Princess Deploy: old: 6b3d7d7136, new: 4add615720   RUN LOG

web — 2014-06-16 23:31:33 | **PRINCESS** | kchung | Princess Deploy: old: 3ee7f99bb3, new: 6b3d7d7136   RUN LOG

web — 2014-06-16 23:23:08 | **PRODUCTION** | amorrison | Production Deploy: old 5870aa59df, new: 3ee7f99bb3   RUN

web — 2014-06-16 23:19:10 | **PRINCESS** | amorrison | Princess Deploy: old: 5870aa59df, new: 3ee7f99bb3   RUN LOG

web — 2014-06-16 23:05:38 | **PRODUCTION** | sbobo | Production Deploy: old d30076d5a6, new: 5870aa59df   RUN LO

web — 2014-06-16 23:01:39 | **PRINCESS** | sbobo | Princess Deploy: old: d30076d5a6, new: 5870aa59df   RUN LOG

web_config — 2014-06-16 22:57:37 | **CONFIG** | csmail | CONFIG PRODUCTION Deploy: old 62ec2e80ee, new: 22946

web_config — 2014-06-16 22:51:24 | **CONFIG** | csmail | CONFIG Princess Deploy: old 62ec2e80ee, new: 22946a70d6

web_config — 2014-06-16 22:46:25 | **CONFIG** | jkoh | CONFIG PRODUCTION Deploy: old e347b70dc2, new: 62ec2e8

web_config — 2014-06-16 22:39:49 | **CONFIG** | jkoh | CONFIG Princess Deploy: old e347b70dc2, new: 62ec2e80ee

web — 2014-06-16 22:35:52 | **PRODUCTION** | dschwarz | Production Deploy: old 690879857a, new: d30076d5a6   RU

Monitoring

shouldigraphit.com

Monitoring

- Devs do their feature monitoring

- Everybody can access all the graphs

- Dashboard All The Things!

- Stream All The Logs!

tsy.com : [Sun Mar 02 16:04:02 2014] [_DAh9xH-cNsFBKGSaS8rSdZdGk4Y] [error] [ClientLogger] [phplib/Logger.php:146] [0] Out of m

tsy.com : [Sun Mar 02 16:03:29 2014] [oDi0hUlMO6BLNd4sazCGAH87sFsy] [error] [ClientLogger] [phplib/Logger.php:146] [0] L'og

tsy.com : [Sun Mar 02 16:02:51 2014] [lO1mq9QNwbbD04U5Q8IDdMGxiQIc] [error] [ClientLogger] [phplib/Logger.php:146] [0] Object d

tsy.com : [Sun Mar 02 16:02:42 2014] [-cEj1YzgM9pD10dCs8aQ8GEyQyOj] [error] [ClientLogger] [phplib/Logger.php:146] [0] SyntaxEr

tsy.com : [Sun Mar 02 16:00:28 2014] [pSwPieCS69D6Z4_ulFNlZhYtZX9Z] [error] [ClientLogger] [phplib/ClientLogger.php:340] [0] Un

tsy.com : [Sun Mar 02 16:00:20 2014] [BcTifro-zxfkoCGR2ZEzHb1raraU] [error] [ClientLogger] [phplib/Logger.php:146] [0] SyntaxEr

tsy.com : [Sun Mar 02 16:00:10 2014] [vspppSI5uWrdvh4U9s60KNkmtpte] [error] [ClientLogger] [phplib/Logger.php:146] [0] Expected

tsy.com : [Sun Mar 02 16:00:00 2014] [XVv-lrOy2UVHh5uEkOrBCQMOLCu3] [error] [ClientLogger] [phplib/Logger.php:146] [0] Etsy.Con

tsy.com : [Sun Mar 02 15:59:27 2014] [vue89aLz97Fmg83nvRWW-dOZAI_2] [error] [ClientLogger] [phplib/Logger.php:146] [0] SyntaxEr

tsy.com : [Sun Mar 02 15:58:44 2014] [dp9bOR68e6chRsKNmXa7CoHmHVmn] [error] [ClientLogger] [phplib/Logger.php:146] [43440085] U

tsy.com : [Sun Mar 02 15:57:23 2014] [oghAWa0iD1hzJ4ZsgtPJfqx4zFjX] [error] [ClientLogger] [phplib/Logger.php:146] [0] Uncaught

tsy.com : [Sun Mar 02 15:57:22 2014] [tnhTDlKmCAy32uAf6c0iJPaYBh0T] [error] [ClientLogger] [phplib/Logger.php:146] [0] Unable t

tsy.com : [Sun Mar 02 15:56:56 2014] [uEJBGWlurU_g8_MxbiW-j9Ph5Vqx] [error] [ClientLogger] [phplib/Logger.php:146] [0] Object d

tsy.com : [Sun Mar 02 15:55:48 2014] [_pa0dV81jL3iiV0xFuVGadXnCaXo] [error] [ClientLogger] [phplib/Logger.php:146] [43709670] E

tsy.com : [Sun Mar 02 15:55:20 2014] [k-sIMrObgEqEDGUPPRcBc08q48VK] [error] [ClientLogger] [phplib/Logger.php:146] [0] Exceptio

tsy.com : [Sun Mar 02 15:55:06 2014] [SOcajAYhk0b74oWMWHGetPDlmPO1] [error] [ClientLogger] [phplib/Logger.php:146] [0] Uncaught
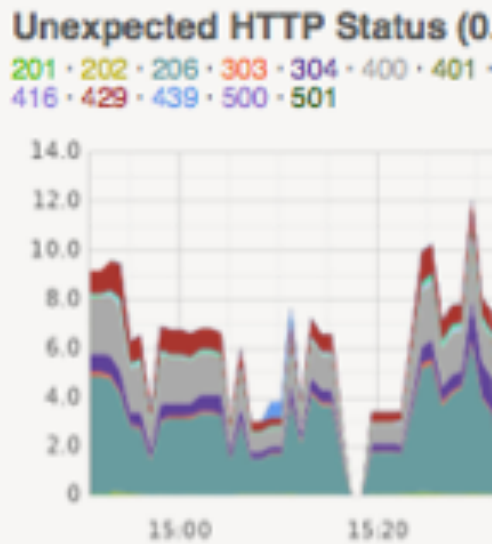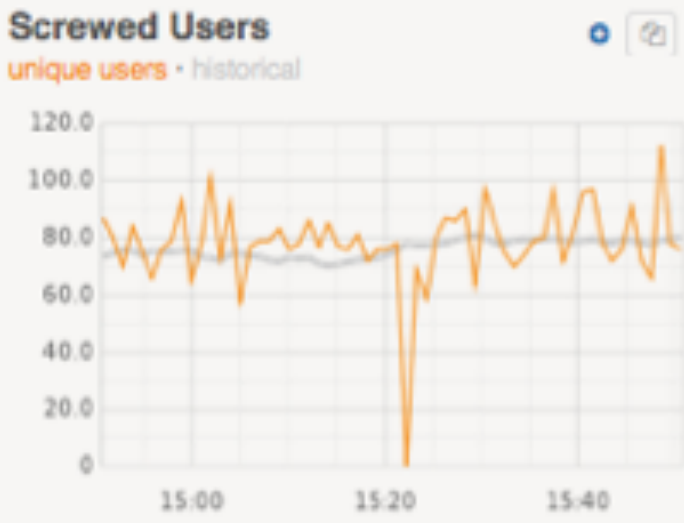
tsy.com : [Sun Mar 02 15:55:06 2014] [O2pCNQhj_aeJDQCx3GU6TvuTViKB] [error] [ClientLogger] [phplib/Logger.php:146] [12991892] R

tsy.com : [Sun Mar 02 15:55:04 2014] [dJEtiqUMhrgwkWdLwKH24qDGccvE] [error] [ClientLogger] [phplib/Logger.php:146] [0] Out of m
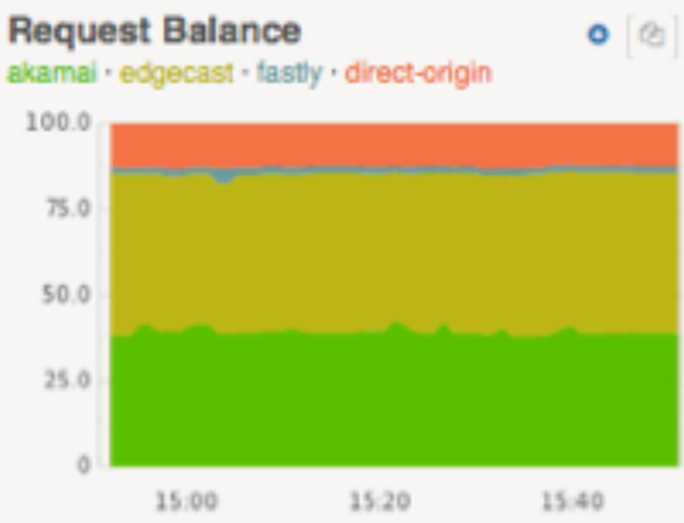
tsy.com : [Sun Mar 02 15:55:02 2014] [GofFEtr_teTVJulnVjvOH2PZ8-DK] [error] [ClientLogger] [phplib/Logger.php:146] [17154558] E

tsy.com : [Sun Mar 02 15:54:35 2014] [f2OlCSE-TMTQ3sfgZe6Fg4B6_JOe] [error] [ClientLogger] [phplib/Logger.php:146] [0] Tekenree
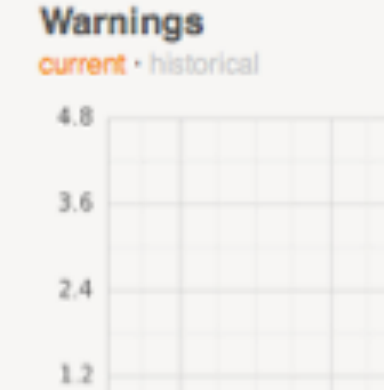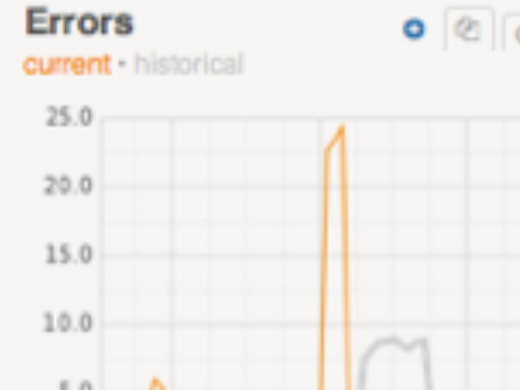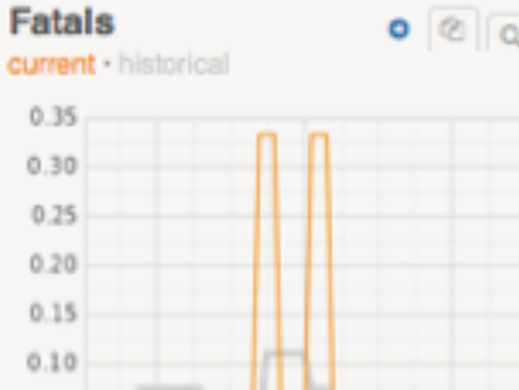
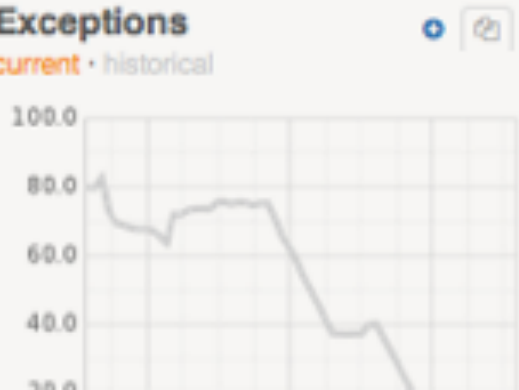# End-User (1 hour) 🔖

Three-Armed Sweaters
error pages · historical

480.0
360.0
240.0
120.0
0

15:00   15:20   15:40

Screwed Users
unique users · historical

120.0
100.0
80.0
60.0
40.0
20.0
0

15:00   15:20   15:40

HTTP 404 (0.32%)
current · historical

25.0
20.0
15.0
10.0
5.0
0

15:00   15:20   15:40

Unexpected HTTP Status (0...
201 · 202 · 206 · 303 · 304 · 400 · 401 ·
416 · 429 · 439 · 500 · 501

14.0
12.0
10.0
8.0
6.0
4.0
2.0
0

15:00   15:20

CDN (1 hour) 🔖

Request Balance
akamai · edgecast · fastly · direct-origin

100.0
75.0
50.0
25.0
0

15:00   15:20   15:40

Akamai Whoopsies
origin failures · historical

6.0
4.8
3.6
2.4
1.2
0

15:00   15:20   15:40

Edgecast Whoopsies
origin failures · historical

6.0
4.5
3.0
1.5
0

15:00   15:20   15:40

Fastly Whoopsies
origin failures · historical

0.30
0.25
0.20
0.15
0.10
0.05
0

15:00   15:20

Error Logs (All) (1 hour) 🔖

File/Script Not Found
current · historical

600.0
500.0
400.0
300.0
200.0

Exceptions
current · historical

100.0
80.0
60.0
40.0

Fatals
current · historical

0.35
0.30
0.25
0.20
0.15
0.10

Errors
current · historical

25.0
20.0
15.0
10.0

Warnings
current · historical

4.8
3.6
2.4
1.2

Etsy

Uh oh!

Sorry, the page you were looking for was not found.

Search for items and shops | Search

On Call

If you are writing code, you are on-call

On-Call Schedules

- ops on-call

- dev on-call

- payments on-call

- support on-call

Etsy 911: Page Any Team

Ops911 Click to Page	**Search911** Click to Page	**Payments911** Click to Page

If you're not sure who to page, page Ops911.

Autobots 911 Click to Page	**Av911** Click to Page	**Blog911** Click to Page
Comm911 Click to Page	**Core911** Click to Page	**Dev911** Click to Page
Devtools 911 Click to Page	**Etsydoop911** Click to Page	**Etsytest** Click to Page
Forums Emergencies Click to Page	**Intl911** Click to Page	**Marcom** Click to Page
Mobile911 Click to Page	**Ops911** Click to Page	**Payments Yellow Light** Click to Page
Payments911 Click to Page	**PCI Ops 911** Click to Page	**Risk 911** Click to Page

Dev On-Call

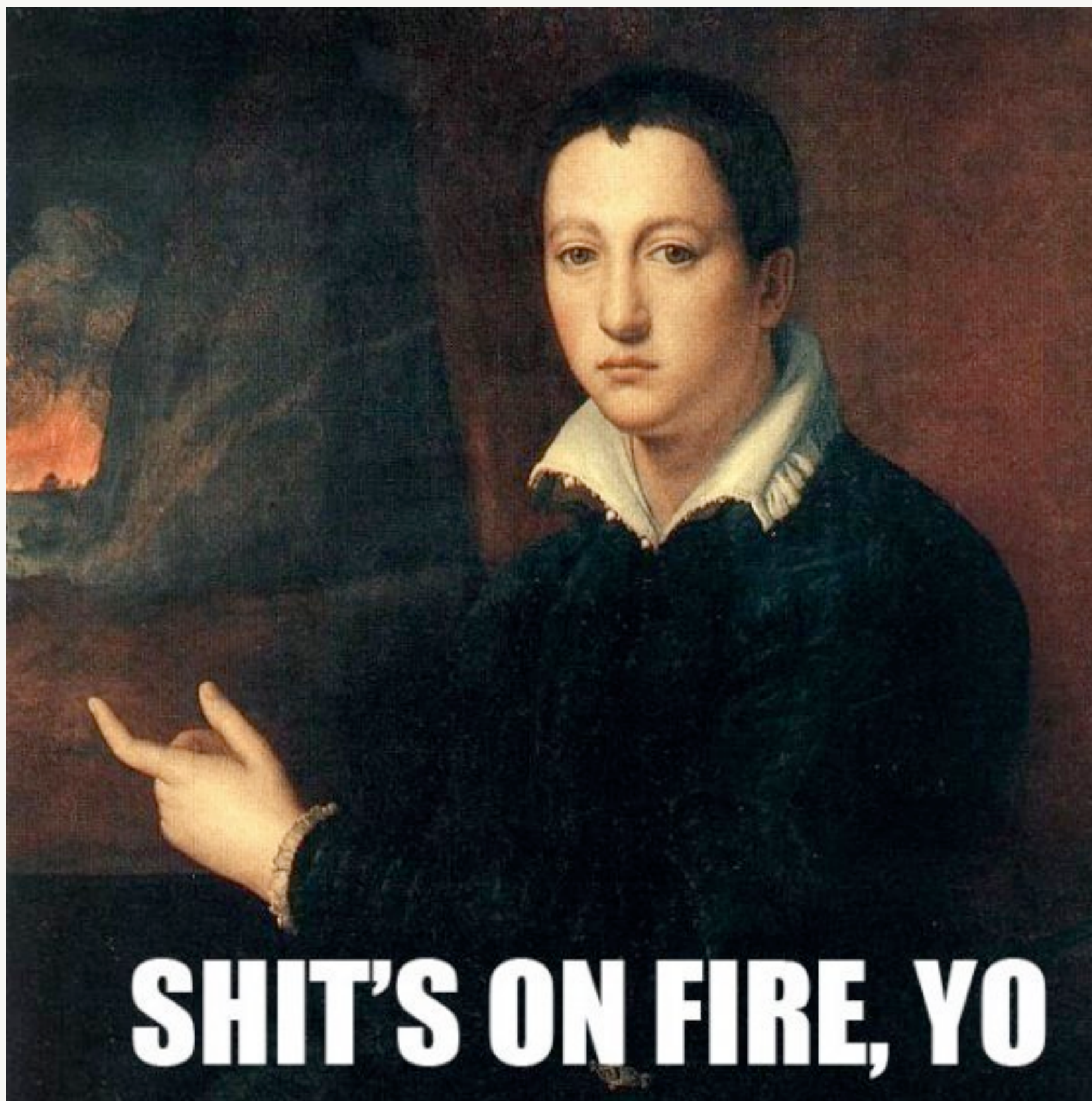- On-call for 3 days

- All developers who are not in another rotation

- L1 and L2 escalations

- L1 if it's your first time

Etsy

@mrtazz

Incident Response

Incident Response

- "This graph looks funny"

- "Hey I just got paged for elevated error rate after deploys"

- "Supergrep is going crazy!!"

Is the site down?

SHIT'S ON FIRE, YO

#warroom

#warroom

- only outage related conversations

- coordinate investigation, communication, countermeasures and monitoring

- good place to lurk for new engineers

Post Mortems

blameless

Everybody's invited

Learning Opportunity

Summary

Summary

- These are things that work for *us*

- Culture is an on-going effort

- Share everything

- Encourage learning/teaching

Summary

- Lunch 'n learns

- DC visits

- On-call for a day

- Bootcamps/Senior rotations

codeascraft.com
etsy.com/codeascraft/talks
etsy.github.com
etsy.com/careers

Questions?

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