Development, Deployment and Collaboration at Etsy

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@mrtazz

OVER

25
million

MEMBERS

18^M

ITEMS

listed

Etsy

@mrtazz

60 MILLION MONTHLY VISITORS

1.5 BILLION PAGEVIEWS per month

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
 ner      |  dannel: http://morgue.etsycorp.com/
 tan      |  hey hey hey
 nel      |  was just going there
ght       |  how many weeks are left to get an entry in?
ver       |  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"
ght       |  so I still have time?
ver       |  get to it
 nel      |  do it up
ony       |  by that metric I am out of the running
ony       |  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
cat       |  http://imgshare.etsycorp.com/msantos/delight.gif
          |  [dschauenberg away: away]
o Sat, 01 Mar 2014
o Sun, 02 Mar 2014
tsy{205}* [Act: 9:#chef]
uenberg(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

@mrtazz

```
┼│  ?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%
```
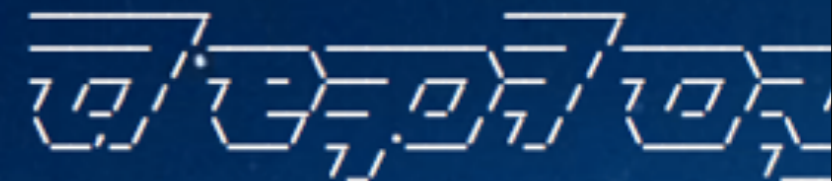
Deployinator

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

rsion: Test: **833d50eef5-20140228-000306-UTC**   Princess: **833d50eef5-20140228-000306-UTC**   Production: **833d50eef5-20140228-000306-UTC**

#push topic: clear

bsudol

on prod
55m since Feb 27 19:11

01. Save the Princess with Tests
833d50eef5 → b040b70f02

[**Save the Princess with Tests**]

Princess Log Watcher (supergrep)

02. Deploy to Production
833d50eef5 → 833d50eef5

[**Deploy to Production**]

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

Deploy Logs

web_config — 2014-02-28 00:17:48 | **CONFIG** | tmizohata | CONFIG PRODUCTION Deploy: old 1111a4ae0c, new: b040b7

web_config — 2014-02-28 00:12:20 | **CONFIG** | tmizohata | CONFIG Princess Deploy: old 1111a4ae0c, new: b040b70f02 |

web — 2014-02-28 00:11:06 | **PRODUCTION** | bsudol | Production Deploy: old ec937361ae, new: 833d50eef5 | RUN LOG

web — 2014-02-28 00:05:50 | **PRINCESS** | bsudol | Princess Deploy: old: ec937361ae, new: 833d50eef5 | RUN LOG   DIF

web — 2014-02-27 23:57:21 | **PRODUCTION** | pkeane | Production Deploy: old 735429a8e9, new: ec937361ae | RUN LOG

web — 2014-02-27 23:48:27 | **PRINCESS** | pkeane | Princess Deploy: old: 735429a8e9, new: ec937361ae | RUN LOG   D

web — 2014-02-27 23:21:31 | **PRODUCTION** | tmizohata | Production Deploy: old e7775a6122, new: 735429a8e9 | RUN L

web — 2014-02-27 23:06:20 | **PRINCESS** | tmizohata | Princess Deploy: old: e7775a6122, new: 735429a8e9 | RUN LOG

web_config — 2014-02-27 23:03:42 | **CONFIG** | mpascual | CONFIG PRODUCTION Deploy: old 9affbc1f51, new: 1111a4ae

web_config — 2014-02-27 22:58:25 | **CONFIG** | mpascual | CONFIG Princess Deploy: old 9affbc1f51, new: 1111a4ae0c |

web — 2014-02-27 22:37:28 | **PRODUCTION** | asaponara | Production Deploy: old c94d86924d, new: e7775a6122 | RUN

Monitoring

shouldigraphit.com

Does it move?

YES   NO

by @mrtazz, hosted on Github, inspired by @lozzd and The Church of Graphs

Monitoring

- Devs do their feature monitoring

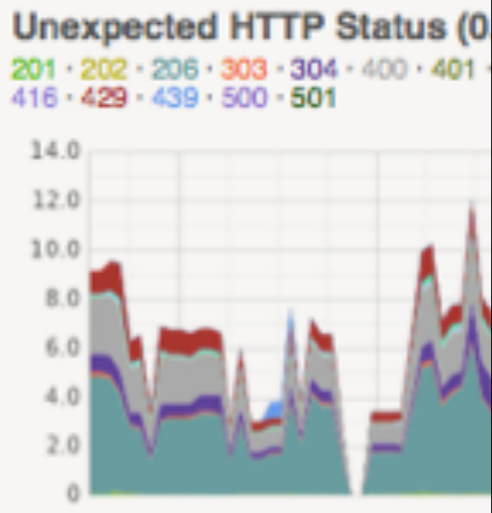- Everybody can access all the graphs

- Dashboard All The Things!

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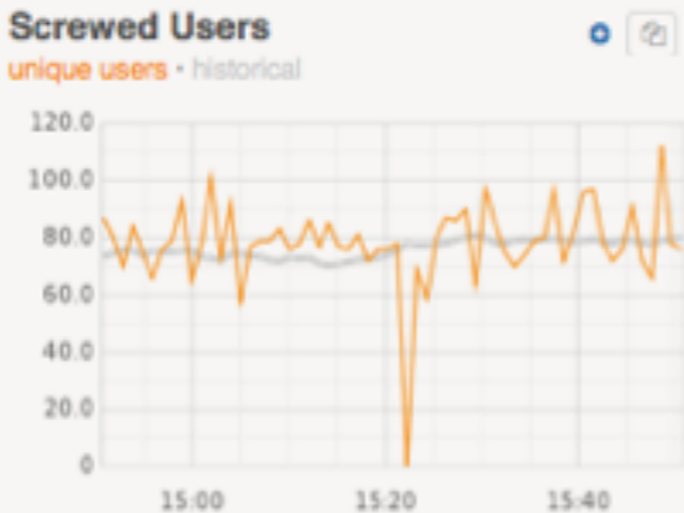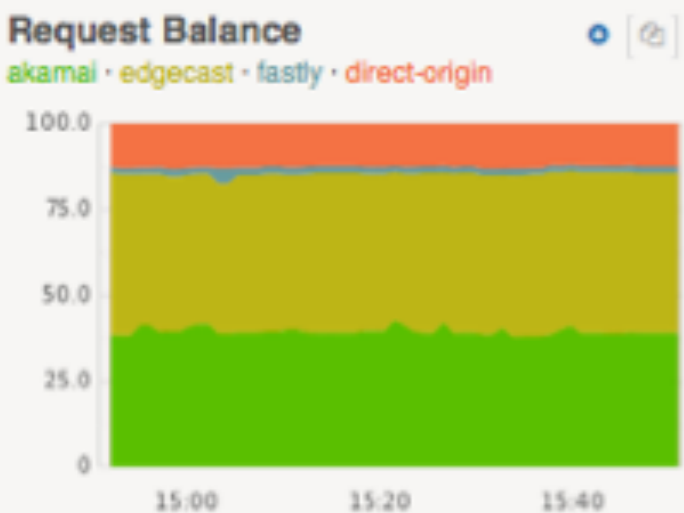
tsy.com : [Sun Mar 02 16:04:02 2014] [_DAh9xH-cNsFBKGSaS8rSdZdGk4Y] [error] [ClientLogger] [phplib/Logger.php:146] [0] Out of m

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] [dp9b0R68e6chRsKNmXa7CoHmHVmn] [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
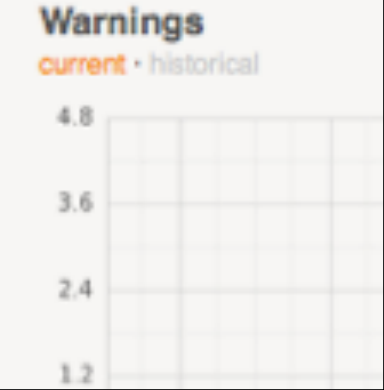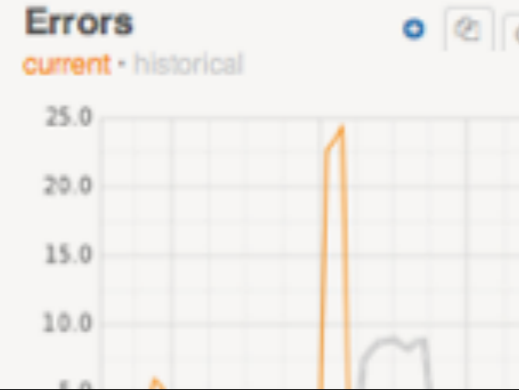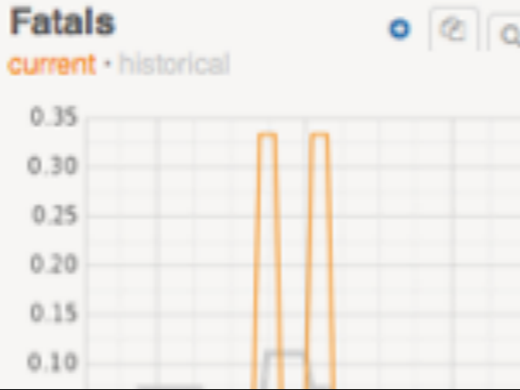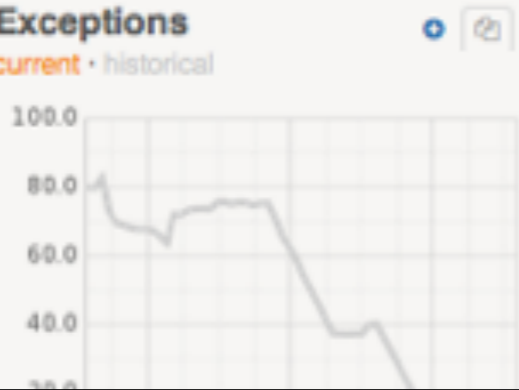
End-User (1 hour)

Three-Armed Sweaters
error pages · historical

Screwed Users
unique users · historical

HTTP 404 (0.32%)
current · historical

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

CDN (1 hour)

Request Balance
akamai · edgecast · fastly · direct-origin

Akamai Whoopsies
origin failures · historical

Edgecast Whoopsies
origin failures · historical

Fastly Whoopsies
origin failures · historical

Error Logs (All) (1 hour)

File/Script Not Found
current · historical

Exceptions
current · historical

Fatals
current · historical

Errors
current · historical

Warnings
current · historical

Etsy

Uh oh!

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

Search for items and shops   Search

Go back to Etsy.com

On Call

If you are writing code, you are on-call

On-Call Schedules

- ops on-call
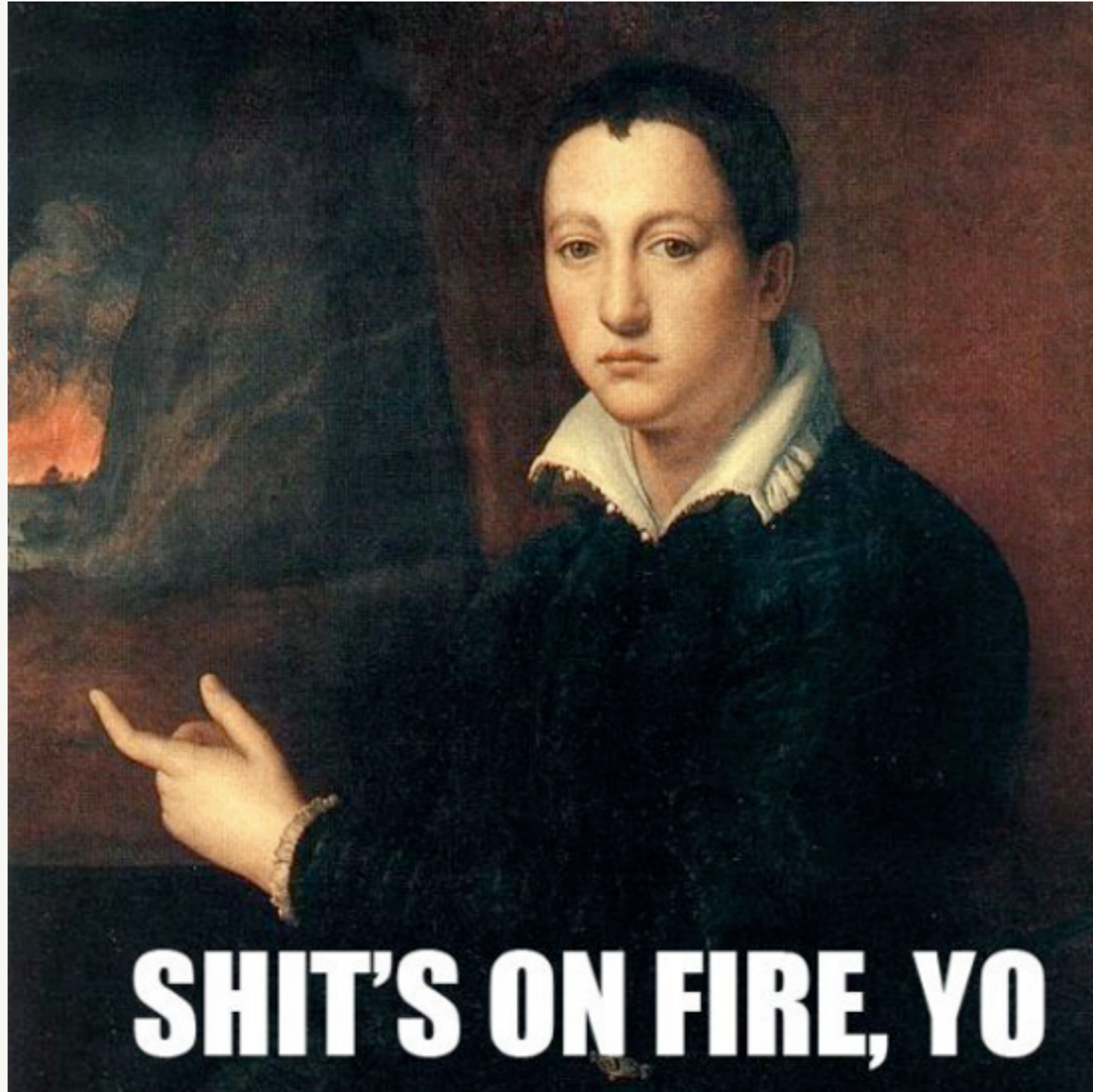
- dev on-call

- payments on-call

- support on-call

Etsy

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Dev On-Call

- Scheduled for 6 months

- On-call roughly every 4 weeks for 1 week

- L1 and L2 escalations

- L1 if it's your first time

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Incident Response

Incident Response

- "This graph looks funny"

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

- "Supergrep is going crazy!!"

SHIT'S ON FIRE, YO

#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?

Development, Deployment and Collaboration at Etsy

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