Flash Sale Engineering

by @EmilStolarsky
Who’s this ugly baby?
Flash Sales
Kanye West
Have you met the girl named Goldie Blox?
She likes to think outside the box.

Super Bowl Ads
#KylieLipKit
tl;dr This is a big deal
Write Heavy Traffic
Omg I was sooo close of getting a Posie K
WHYYY YOU CRASHHHH 😠😠😠😠😠
#KYLIECOSMETICS #KylieLipKit
Xaiyanh
@X81YAN

Omg I was soooo close of getting a Posie K
WHYYYY YOU CR
#KYLIECOSMETICS

yvette gonzales
@XoEvet

Why meeeeee!
I'm just so sad right now. I'm gonna cry.
@KylieJenner its not your fault but this REALLY FUCKEN SUCKS!
#KYLIECOSMETICS
The epitome of @kyliecosmetics
#KYLIECOSMETICS

And now everything is sold out what the F
@KylieJenner #KylieLipKit #KYLIECOSMETICS 😞😞😞

7:19 PM - 28 Mar 2016

 стремляюсь за посиланием

Why meeeee !
I'm just so sad right now. I'm gonna cry.
@KylieJenner its not your fault but this REALLY FUCKEN SUCKS !
#KYLIECOSMETICS

7:20 PM - 28 Mar 2016
The epitome of @kyliecosmetics #KYLIECOSMETICS

And now everything is sold out what the F @KylieJenner #Kyliejenner #KYLIETrademe #KYLIECOSMETICS

I find it ridiculous how hard it is to get #Kyliecosmetics

I'm just so sad right now. I'm gonna cry. @KylieJenner its not your fault but this REALLY FUCKEN SUCKS ! #KYLIECOSMETICS
DAMN😭😭😭 #KylieLipKit #KYLIECOSMETICS

Due to an unexpected technical problem, shop.kyliecosmetics.com is temporarily unavailable; check back in a few minutes – we’ll be up and no time!

What can I do?

If you're a visitor to this store
Please try again in 5 or 10 minutes by refresh!

I'm hot now I got this after it said processing order in 2 mins #KylieLipKit #KYLIECOSMETICS

@KylieJenner fix it

WHHHHHYYYY. It's happened 6 times now!! #KylieLipKit #KYLIECOSMETICS
DAMN😭😭😭 #KylieLipKit #KYLIECOSMETICS

is anyone else getting this error?! 😞😞😞 #KYLIECOSMETICS #KylieLipKit @kyliecosmetics @KylieJenner

Bad one today hais #kyliecosmetics

Why😭😭😭#KylieLipKit #KYLIECOSMETICS @kyliecosmetics @KylieJenner

Trying to buy #DolceK #KylieLipKit and i want to cry because #KYLIECOSMETICS is having difficulties 😞
How Shopify works
GitHub Shop

Water Bottle
$16

Add to cart

Take your GitHub with you, whether it's while working or enjoying the great outdoors. There is a convenient place for you to store your code and files, so you can always take your GitHub with you on the go.

The 16 oz. stainless steel water bottle is BPA free and comes with a silicone sleeve to provide protection against it's rougher moments. This bottle is easy to clean and fits in a standard water bottle holder. Be sure to remove the silicone sleeve when not in use.

Note: a regular ball point pen works best for writing on the black space on the bottle.

THE INTERNET

LB

RAILS

MYSQL
MEMCACHED
REDIS

RESQUE WORKER
THE INTERNET

LB

RAILS

MYSQL  MEMCACHED  REDIS

RESQUE WORKER
1. Right Tool
2. Heat Shield
3. Order out of Chaos
Robust Piece of Software
Lua
1. Right Tool
2. Heat Shield
3. Order out of Chaos
Back Pressure
LIKE. LITERALLY. SO MUCH DEMAND.

We are experiencing overwhelming demand for today’s sale. Please hold tight and do not refresh this page or you will lose your spot.

If a spot opens up before your product sells out, you will be sent to your shopping cart; however we can’t guarantee you will get your products during today’s sale. There are “literally” so many people trying to check out at the same time that we have created this holding zone so that the site won’t crash. We can guarantee that we’re making more and will be back as soon as we can with another sale.

Thank you for your patience and support, and good luck!

EXCUSE US FOR THE WAIT & HEARTBREAK

BUT THERE’S SO MUCH DEMAND

WE’RE TRYING TO GET YOU TO THE CHECKOUT. WHEN A SPOT OPENS UP, WE’LL AUTOMATICALLY REDIRECT YOU. DO NOT REFRESH OR YOU’LL LOSE YOUR SPOT.
GET /checkout
200: throttle page

GET /throttle_page
200: (cached by LB)
GET /checkout
200: throttle page

GET /throttle_page
200: (cached by LB)

GET /checkout?poll=1
200: throttle page
GET /checkout

200: throttle page

GET /checkout?poll=1

200: throttle page

GET /checkout?poll=1

200: (cached by LB)

GET /checkout?poll=1

302: set checkout pass

302: /checkout
1. Right Tool
2. Heat Shield
3. Order out of Chaos
Stateless* fair queueing
* - Almost Stateless
Feedback System

PID CONTROLLER

SENSOR

Setpoint

Disturbances

Controller Output

PROCESS

Process Variable

Measured Process Variable
Stateless fair queueing

Timeline of timestamp in cookie
Stateless fair queueing

Lag delimiter
Stateless fair queueing

high priority

low priority

t
Stateless fair queueing

Bucket of high priority requests (max 16)
Stateless fair queueing

high priority
Stateless Fair queueing

high priority

low priority

16

$t$
Stateless Fair queueing

high priority

low priority

\( t \)
Stateless Fair queueing

high priority

low priority

$t$
Stateless Fair queueing

high priority

low priority

10

\[ t \]
Stateless fair queueing

high priority
But... Why?
Reputation
Gaming Tweets
Nginx
Throttling Queueing
We’re hiring!
Thanks!

Follow me on Twitter @EmilStolarsky